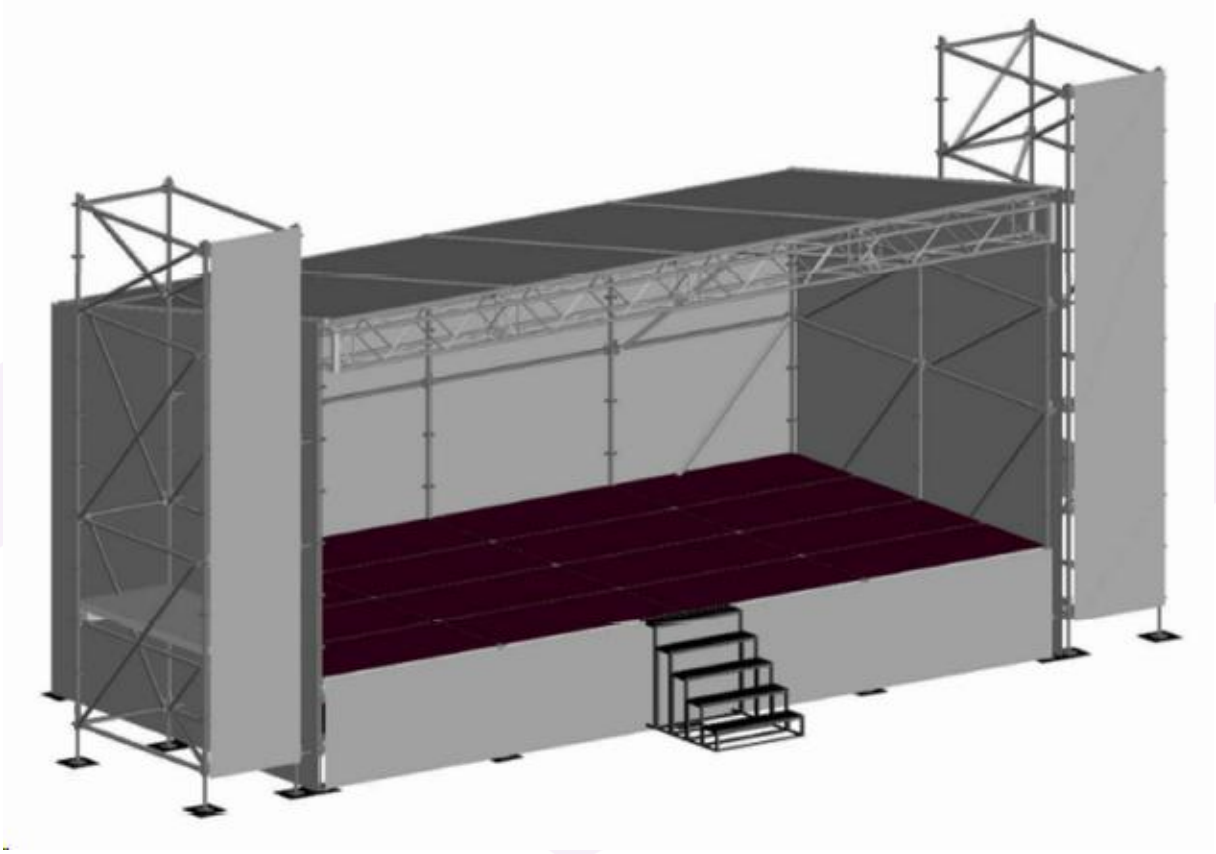
PODIUM - BOEK

GE

Eekels Verhuur 072026-08



Inhoudsopgave

Voorwoord 3
1. Algemene informatie 5
1.1 Algemene gegevens fabrikant(en); 5
1.2 Algemene gegevens; 5
2 Gegevens verhuurder of leverancier 6
3 Algemene technische gegevens van de overdekte podia 7
3.1 Algemeen 7
3.2 Bijzonderheden 7
4 Basis instandhouding- en ontruimingsprotocol 8
5 Verklaring weeromstandigheden 9
6 Bijlage I: Tekening(en) 11
7 Bijlage II: Ballastplan 13
8 Bijlage III: Riggingscapaciteit 15
9 Bijlage IV: Beheersmaatregelen (WMP; Wind Management Plan) 16
10 Bijlage V: Zeilcertificaat 17
11 Bijlage VI: Berekening 18

Voorwoord

Opdrachtgevers en organisatoren, alsmede gemeentelijke diensten hebben behoefte aan handvatten voor de beoordeling van kwaliteit en specificaties van overdekte podia die tijdelijk geplaatst worden. Met als doel het inzichtelijk krijgen van waar gehuurde overdekte podia aan moeten voldoen op gebied van onder meer brandveiligheid- en constructieve veiligheid. Een van de is om een podium-boek op te stellen waarin deze zaken overzichtelijk en begrijpelijk worden weergeven, dit op een vergelijkbare manier hoe een tentboek wordt samengesteld.

In het veld worden diverse termen gebruikt voor het overdekken van een podium; kap, dak, stage, overkapping. In essentie betreft het in dit bouwboek een podium wat voorzien is van een constructie welke zorgdraagt voor (gedeeltelijke) beschutting van de elementen.

In de bijlagen komen zaken aan de orde als tekeningen, kwaliteitsverklaringen, constructieve berekenen en andere informatie welke verder relevant is.
In de normen welke gaan over de overdekte podia worden kwaliteitsverklaringen, constructieve berekeningen en andere relevante stukken genoemd. Hierin staat gesteld dat deze stukken niet in de Nederlandse taal opgesteld hoeven te zijn, eventuele aanvullende toelichtingen en handleidingen wel. Het voorwoord en handleidingen die minimaal in het podium-boek moeten staan worden gezien als toelichting. Andere zaken dan de toelichting(en) in het podium-boek mogen in het Duits, Frans of Engels aangeleverd worden.

Het gebruik van het overdekte podium is geen onderwerp van het podium-boek.

Binnen het NEN lopen nog een aantal andere trajecten die te maken hebben met evenementen, allemaal beginnende met: 8020-

Een aantal, al dan niet Europese, algemeen gehanteerde normen en richtlijnen die te maken hebben met overdekte podia welke tijdelijk geplaatst worden zijn o.a.:

NPR 8020-50 Evenementen – Podiumconstructies – Verantwoordelijkheden
NPR 8020-51 Evenementen – Podiumconstructies – Belastingen en constructieve uitgangspunten

NEN-EN 13814 Machines en constructies op kermisterreinen en amusementsparken – Veiligheid
NEN-EN 1990 Grondslagen van het constructief ontwerp
NEN-EN 1991 Belastingen op constructies
NEN-EN 1993 Staalconstructies

Bovenstaande normen- en richtlijnen refereren o.a. aan de Eurocodes NEN-EN 1991-1-4/NB;

Deel 1: Belastingen op constructies
Deel 1-4: Algemene belastingen – Windbelasting.

Een tijdelijk geplaatst overdekt podium is in beginsel geen bouwwerk in de zin van het bouwbesluit. Hieruit voortvloeiende kan er daarom niet automatisch naar het bouwbesluit of andere zaken worden gekeken als het gaat om beoordeling van een tijdelijk geplaatst overdekt podium. Hier moeten dus ook de eerder genoemde normen- en richtlijnen naast gehouden worden.

Keuringsrapporten voor zeil, bijvoorbeeld bepaald volgens B1 of M1, zijn doorgaans voorzien van een geldigheidsdatum. Deze datum heeft alleen betrekking op het productieproces van het zeil en niet op het product. Het zegt niets over het (brand)verloop van de kwaliteit van het materiaal. Zeil dat voldoet aan de gestelde eisen blijft zelfdovend. Dit gegeven is mede onderschreven door het LNB, cluster brandveilig gebruik.

Overdekte podia zijn onder te verdelen in:

- (gedeeltelijk) met zijwanden van harde panelen of zeil
- zonder zijwanden
- voorzien van meer bouwlagen

Het gebruik van dit podium-boek is slechts voorbehouden aan Eekels Verhuur B.V..

Hallenstraat 20
P.O. Box 175
5530 AB Bladel
T: +31 0 73 6136867
E: info@eekelsverhuur.nl
I: www.eekelsverhuur.nl

NOODNUMMER: +31 0 467 870 112

1. Algemene informatie

In dit hoofdstuk worden alle gegevens van de fabrikant en algemene gegevens overdekte podia indien deze buiten Europa is geproduceerd, tevens naam van importeur.

1.1 Algemene gegevens fabrikant(en);

Zeil	**POLYMAR – FR COLOR 700**
Constructie	H40V Truss
Type zeil	PVC; artikel 8509 5240

1.2 Algemene gegevens;

Naam	**GE**
Type	GE 24 - 32
Configuratie(s)	8.28x3.11 – 8.28x4.14 meter

2 Gegevens verhuurder of leverancier

Hieronder wordt alle huidige en relevante informatie weergegeven van de verhuurder/leverancier.

Rechtsvorm	Besloten Vennootschap
Handelsnaam	Eekels Verhuur B.V.
Bezoekadres	Hallenstraat 20 5531 AB BLADEL
Postadres	P.O. Box 175 5530 AD BLADEL
Telefoonnummer	0031 73 6136867
Website	www.eekelsverhuur.nl
Mailadres	info@eekelsverhuur.nl
K.v.K. nummer	84151722
Omzetbelasting nummer	NL863114192B01
Bank	Rabobank de Kempen
IBAN Rekening nummer	NL43RABO0374476608
BIC	RABONL2U

3 Algemene technische gegevens van de overdekte podia

Waar dient de huurder ten alle tijden rekening mee te houden bij de ingebruikname van het overdekte podium.

3.1 Algemeen

- Geen sneeuw- en/of hagelbelasting gerekend
- Podiumvloer is geschikt voor een belasting tot 750 kg/m2
- Obstakels moeten ten minste 0,5 meter van het doek verwijderd zijn (zowel binnen als buiten).

3.2 Bijzonderheden

Voor de berekeningen is aangehouden:

- Onbebouwde omgeving;
- Tekeningen volgens het bouwboek;
- Toetsing volgens NEN-EN 13814;
- Afmeting van de constructie: 8.28x3.11 – 8.28x4.14 meter

4 Basis instandhouding- en ontruimingsprotocol

Er zijn zaken welke in basis ten alle tijden van toepassing zijn bij een overdekt podium.

- De constructie van de overdekte podia mogen na oplevering nooit zo worden aangetast dat de constructieve veiligheid in het geding komt.
- Organisator moet grondankers, ballast, windverbanden, spanbanden, palen, wandpanelen, zeilen of andere zaken na losmaken voor welk doel dan ook direct weer terugplaatsen/vastmaken.
- Bij het verlaten van het terrein en/of afsluiten van dagelijkse werkzaamheden en/of na afloop van het evenement moet organisator waar mogelijk de toegang tot het overdekte podia sluiten of niet toegankelijk maken.
- Het overdekte podia moet(en) te allen tijde door organisator sneeuw- en of hagelvrij gehouden worden.
- Cumulatie van water, z.g. waterzakken, moeten door organisator direct verwijderd worden, indien dit niet lukt moet verhuurder meteen verwittigd worden.
- Eventuele loskomende grondverankering of verschuivende ballast moet door organisator direct gemeld worden aan verhuurder.
- Voor opgave gemiddelde wind in Bft. en windstoten. (piekwind) in relatie tot de grenswaarden, het sluiten of buiten gebruik stellen van het overdekte podium zie windtabel(len) elders in dit stuk. Daarbij dienen de beheersmaatregelen uit bijlage 4 in acht genomen te worden.
- Equipotentiaalverbinding. Al het blootliggende metaalwerk binnen een structuur dat in contact zou kunnen komen met een bron van elektrische stroom moet op adequate wijze geaard zijn. Er moet rekening worden gehouden met de mate van blootstelling en het risico op blikseminslag en, waar van toepassing, moet de constructie voldoende worden beschermd. Advies over verlichtingsniveaus voor normaal en noodgebruik valt buiten het toepassingsgebied van deze norm en is elders beschikbaar.
- Blikseminslag in de constructie die voldoet aan gestelde (brandveiligheidseisen levert geen schade op aan de overdekte podia).
- Bij acute dreiging van zwaar onweer gepaard gaande met z.g. valwind en/of hagel moet het overdekte podium en directe omgeving ontruimd-, en indien mogelijk gesloten worden. Het overdekte podium is hierin van ondergeschikt belang.
- Organisator moet het lokale weer tijdens het evenement adequaat bewaken en actie ondernemen waar eigen organisatieprotocollen of overdekte podiumspecificaties dit aangeven.

5 Verklaring weeromstandigheden

Met welke weersomstandigheden dient de huurder rekening te houden.

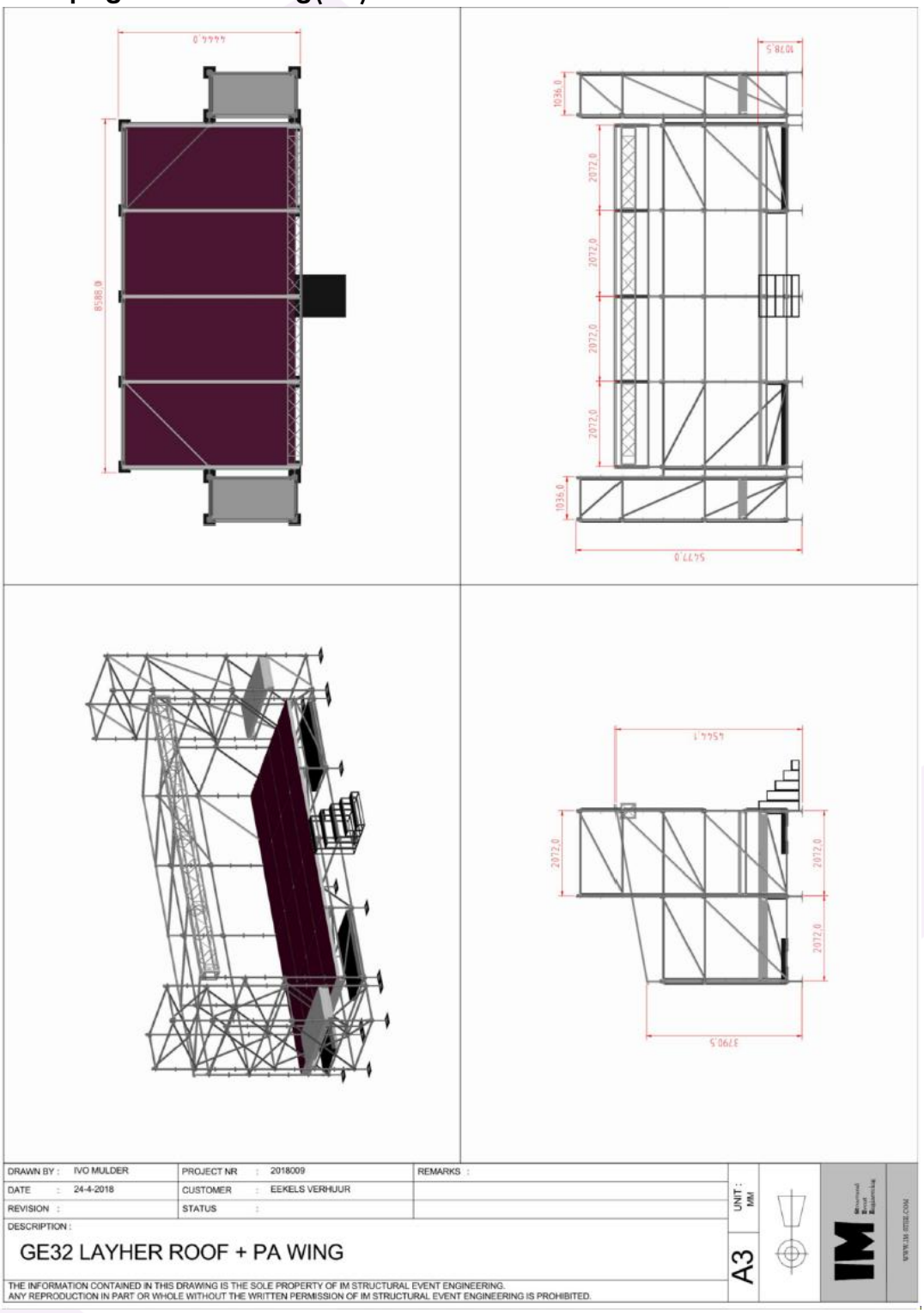
- Een constructie wordt berekend op een stuwdruk (de windbelasting per m2). De stuwdruk ontstaat door de windsnelheid. De windsnelheid is opgebouwd uit een stationair deel en een turbulent deel. Hierdoor ontstaan er pieken in de windsnelheid.
- Windsnelheid wordt standaard gemeten op 10 meter hoogte in het vrije veld, zonder obstakels. Er kan gesproken worden over een piekwindsnelheid, een 10-minuten gemiddelde windsnelheid of een uurgemiddelde windsnelheid. Hoe langer de tijd is, hoe lager het gemiddelde.
- De in de berekeningen gehanteerde beaufort-windschaal wordt in Nederland weergegeven in een 10-minuten **gemiddelde windsnelheid** op 10 meter hoogte in het vrije veld.
- **De stuwdruk waarop een overkapping berekend is, is bepalend voor de sterkte van de overkapping. Het gaat er dus om dat op de juiste manier wordt vastgesteld welke windsnelheid moet worden aangehouden om te kunnen bepalen of de stuwdruk overschreden wordt.**
- Als er niet op locatie gemeten wordt, moet gebruik worden gemaakt van de dichtstbijzijnde meteostation en moet de 10-minuten-gemiddelde windsnelheid op 10 meter hoogte worden opgevraagd. Als de grens-10 minutengemiddelde snelheid wordt bereikt, is de grens-stuwdruk bereikt. De opgegeven waarden gelden voor onbebouwd terrein (buiten de bebouwde kom) en niet voor het strand.
- Onderscheid tussen gemiddelde- en piekwindsnelheid in acht nemen.

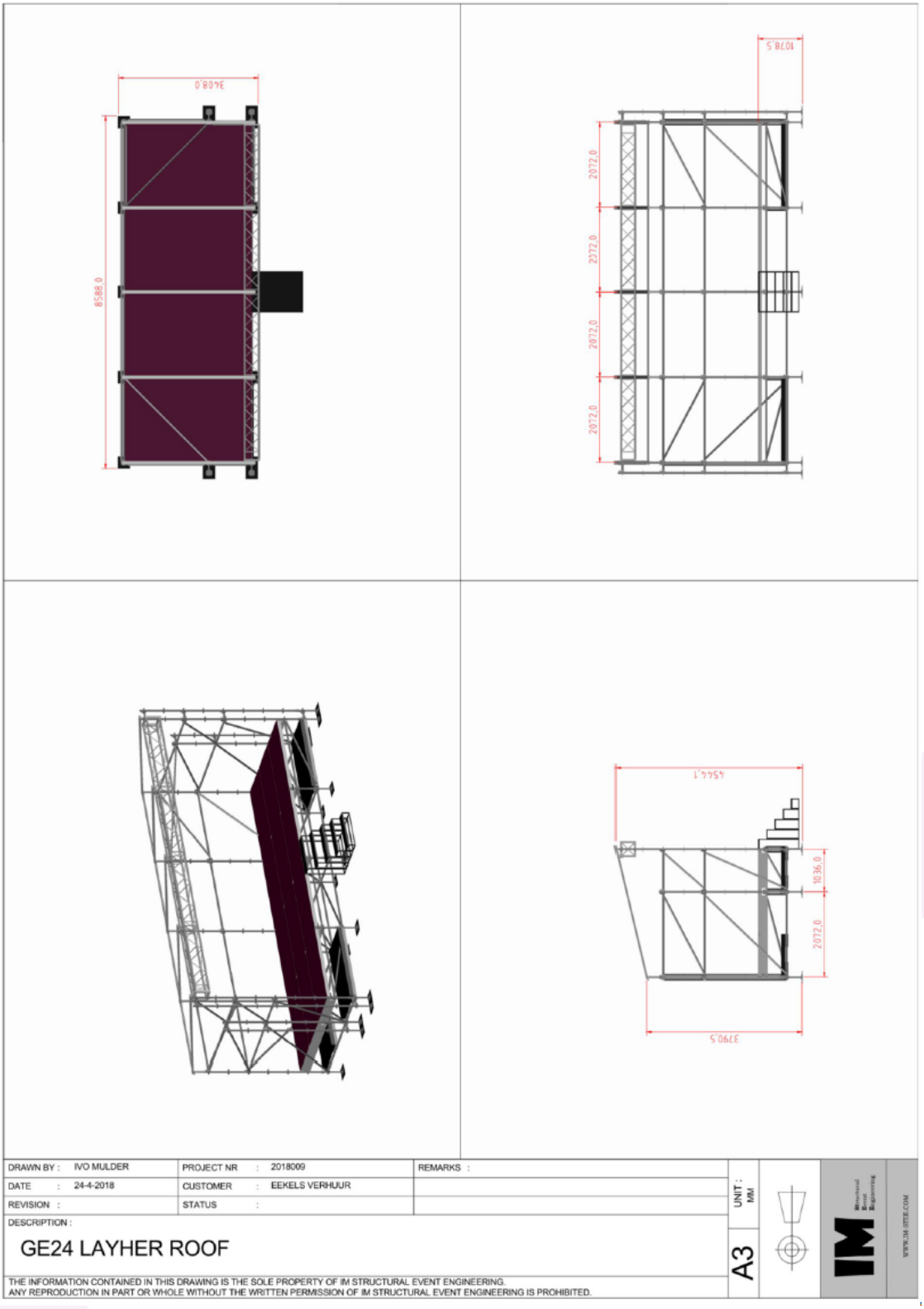
De windkracht volgens de Schaal van Beaufort (bron: KNMI). De schaal van Beaufort wordt gebruikt voor de gemiddelde windsnelheid, over minstens 10 minuten gemeten, níet voor de snelheid van rukwinden/windstoten(piekwind).

Kracht	Benaming van KNMI	Benaming in Zeevaart	Snelheid in km/h*	Snelheid in m/s*	Snelheid in knopen
0	Stil	Windstil	0-1	0-0,2	0-1
1	Zwak	Flauw en stil	1-5	0,3-1,5	1-3
2	Zwak	Flauwe koelte	6-11	1,6-3,3	4-6
3	Matig	Lichte koelte	12-19	3,4-5,4	7-10
4	Matig	Matige koelte	20-28	5,5-7,9	11-16
5	Vrij krachtig	Frisse bries	29-38	8,0-10,7	17-21
6	Vrij krachtig	Stijve bries	39-49	10,8-13,8	22-27
7	Hard	Harde wind	50-61	13,9-17,1	28-33
8	Stormachtig		62-74	17,2-20,7	34-40
9	Storm		75-88	20,8-24,4	41-47
10	Zware storm		89-102	24,5-28,4	48-55
11	Zeer zware storm / orkaanachtig		103-117	28,5-32,6	56-63
12	Orkaan		>117	>32,7	>63

De Nederlandse weerstations onder andere vinden op: www.meteovista.nl, www.knmi.nl, www.meteoconsult.nl en www.meteostation.nl.
Organisator kan ook bij onder andere Meteovista en Meteoconsult gedurende de duur van het evenement een weerbewakingscontract aangaan om nog beter op de hoogte te zijn van de lokale weersomstandigheden.

6 Bijlage I: Tekening(en)





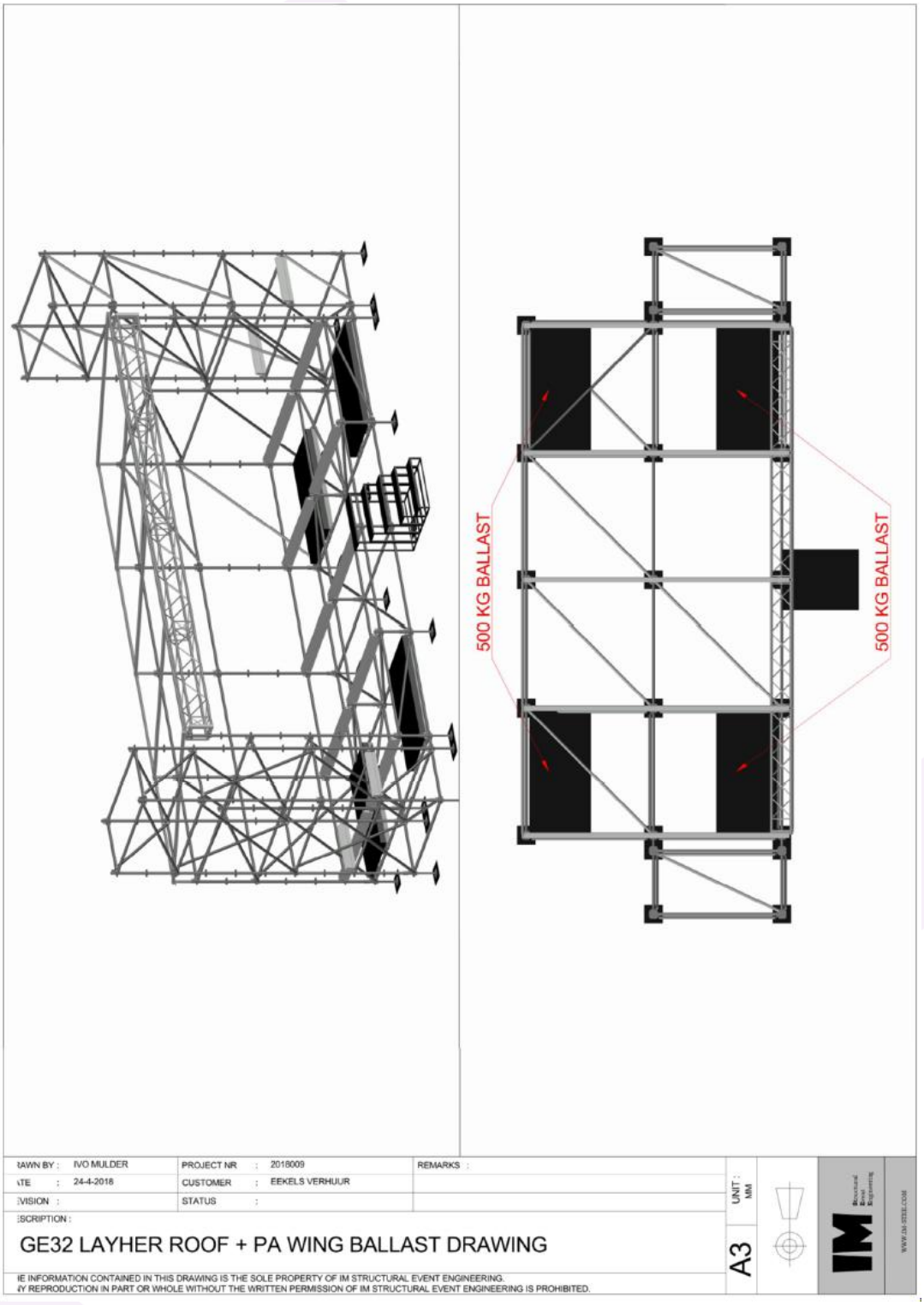
DRAWN BY : IVO MULDER	PROJECT NR : 2018009	REMARKS :	
DATE : 24-4-2018	CUSTOMER : EEKELS VERHUUR		UNIT : MM
REVISION :	STATUS :		A3

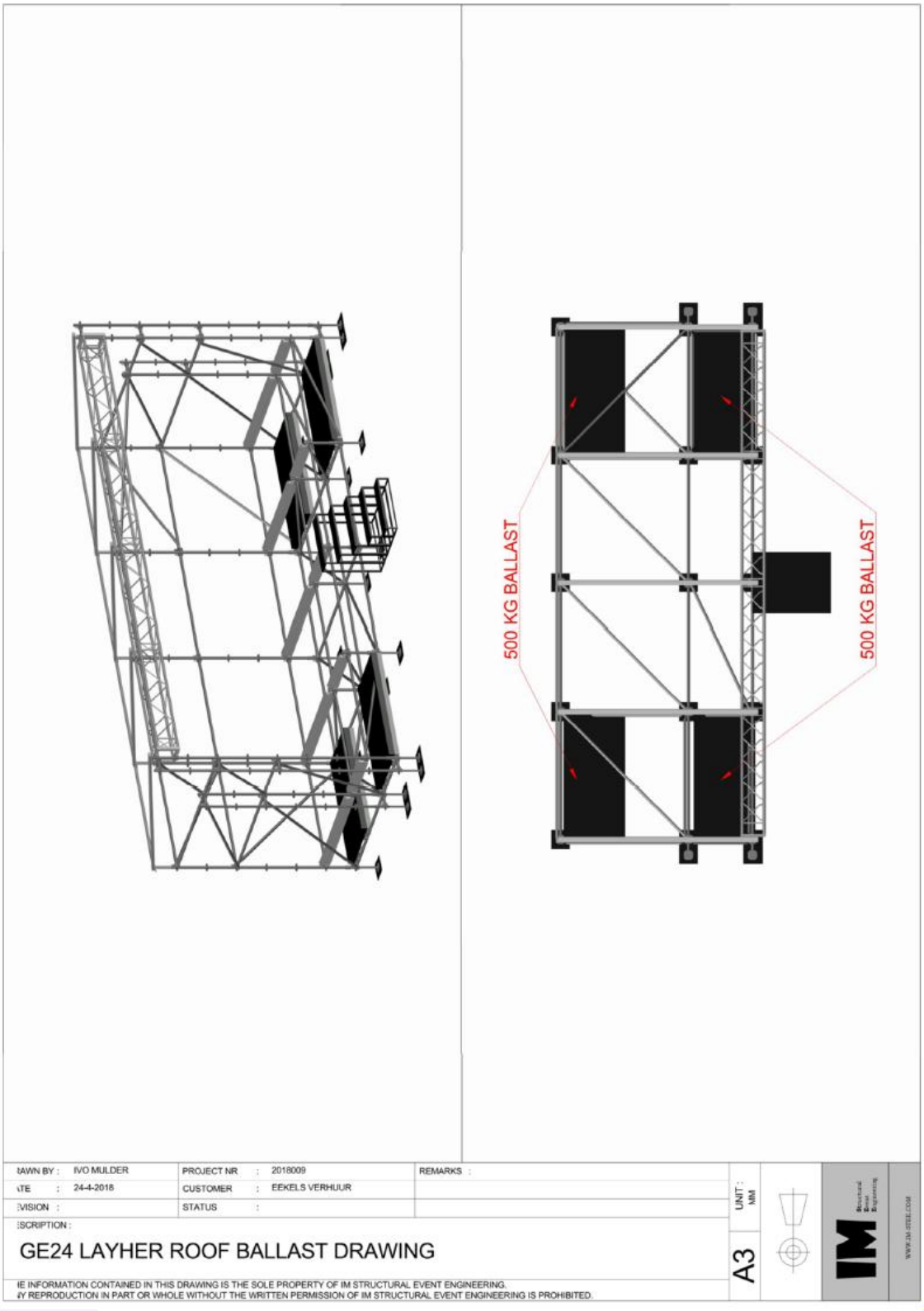
DESCRIPTION :

GE24 LAYHER ROOF

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF IM STRUCTURAL EVENT ENGINEERING.
ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF IM STRUCTURAL EVENT ENGINEERING IS PROHIBITED.

7 Bijlage II: Ballastplan

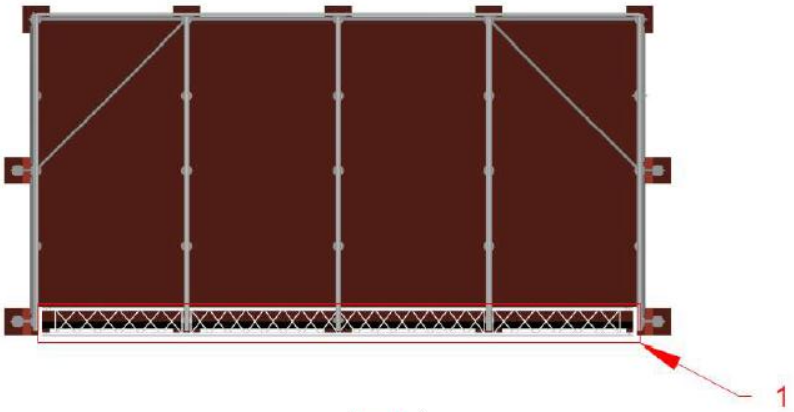



500 KG BALLAST
500 KG BALLAST
AWN BY : IVO MULDER
TE : 24-4-2018
VISION :
SCRIPTION :
PROJECT NR : 2018009
CUSTOMER : EEKELS VERHUUR
STATUS :
REMARKS :
UNIT : MM
A3
GE24 LAYHER ROOF BALLAST DRAWING
IE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF IM STRUCTURAL EVENT ENGINEERING.
Y REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF IM STRUCTURAL EVENT ENGINEERING IS PROHIBITED.

8 Bijlage III: Riggingscapaciteit

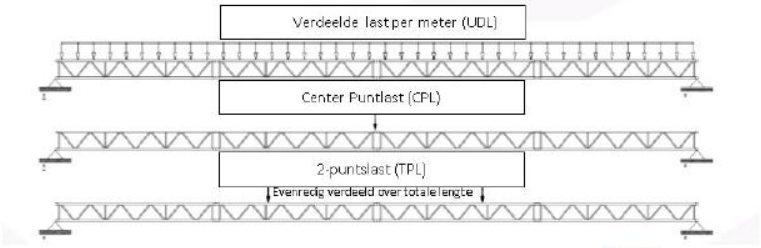
Riggingscapaciteit GE 32/24

Rear



Front

Naam	Waarde	Maximale Gebruiksbelasting per punt
		1
A. Verdeelde last per meter (UDL)	kg/m	50
B. Center puntlast (CPL)	kg	500
C. 2-puntslast (TPL	kg	500
D. 4-puntslast (FPL)	kg	300



Figuur 1

Let op:
Bij Dynamische lasten dient een extra veiligheidsfactor gehanteerd te worden in overleg met constructeur Eekels verhuur!

+31 497 870 136 sales@eekelsverhuur.nl www.eekelsverhuur.nl Eekels Verhuur BV
Hallenstraat 20
5531 AB Bladel

9 Bijlage IV: Beheersmaatregelen (WMP; Wind Management Plan)

In dit Beheersplan wordt kort omschreven welke stappen bij welke windsnelheid gezet dienen te worden. De waarde waarbij deze stappen gezet dienen te worden verschillen per windgebied.

Hieronder een opsomming van de 10-minuten gemiddelde windsnelheid per locatie (omschreven in de NEN-EN 1991-1-4:2005)

In de bovenstaande hoofdstukken is uitgelegd hoe de berekening is opgebouwd. Conform de Geldende normen dient dan het onderstaande Beheersingsplan toegepast te worden.

1. Zij- en achterzeilen dienen verwijderd te zijn bij het bereiken van onderstaande waarde;

Gebied	**10 minuten gemiddelde windsnelheid (m/s)**	**Beaufort (Bft)**	**Piekwindsnelheid (m/s)**	**Stuwdruk (kN/m²)**
Kust	10.58	5	17.89	0.20 kN/m²
Onbebouwd	12.03	6	17.89	0.20 kN/m²
Bebouwd	17.57	7	17.89	0.20 kN/m²

2. Het podium dient UIT-SERVICE (out-service) gesteld te zijn bij het bereiken van onderstaande waarde;
   - Tevens dient de directe omgeving ontruimd te zijn

Gebied	**10 minuten gemiddelde windsnelheid (m/s)**	**Beaufort (Bft)**	**Piekwindsnelheid (m/s)**	**Stuwdruk (kN/m²)**
Kust	15.65	7	26.46	0.4375kN/m²
Onbebouwd	17.79	8	26.46	0.4375kN/m²
Bebouwd	25.99	10	26.46	0.4375kN/m²

3. Bij acute dreiging van zwaar onweer gepaard gaande met z.g. valwind en/of hagel moet de constructie en directe omgeving ontruimd-, en indien mogelijk, gesloten worden. De overkapping is hierin van ondergeschikt belang.

NOTE; de 10-minuten gemiddelde windsnelheid wordt alleen weergegeven als referentie windsnelheid. Acties omtrent de constructie dienen ondernomen te worden aan de hand van de piekwindsnelheid.

Voor andere configuraties of bij vragen of twijfel over dit plan kunt u altijd contact opnemen met Eekels Verhuur B.V.

10 Bijlage V: Zeilcertificaat

MEHLER TEXNOLOGIES
A Low&Bonar solution

Technisches Datenblatt Nr.: **1017.14**

Produkt: **POLYMAR®** FR COLOR 700

Artikel Nr.: 8509 5240

Beschichtung und Ausrüstung				
Beschichtungsart	**PVC**			
Ausrüstung	**beidseitig mit Acryllack, mikrobiozid, UV-geschützt**			
Brennverhalten	**BS 7837, D.M. 26.06.84 (UNI 9177): CL. 2, DIN 4102: B1, NFP 92507: M2, GOST: G1, NFPA 701 Test 2, EN 13501-1: B-s2-d0**			
zu Brennverhalten	**stets die Aktualität der FR-Zulassung, sowie länderspezifische Gültigkeit prüfen**			
Gesamtgewicht		**680**	g/m²	DIN EN ISO 2286-2
Reißkraft Kette/Schuss		**3000 / 3000**	N/50 mm	DIN EN ISO 1421/V1
Weiterreißfestigkeit Kette/Schuss		**300 / 300**	N	DIN 53363
Haftfestigkeit		**20**	N/cm	PA 09.03 (intern)
Kältebeständigkeit.		**-40**	°C	DIN EN 1876-1
Wärmebeständigkeit		**+70**	°C	PA 07.04 (intern)
Lichtechtheit		**>6**	Note, Value	DIN EN ISO 105 B02
Knickfestigkeit	keine Risse	**100000 x**		DIN 53359 A
Trägergewebe				
Material		**PES**		DIN EN ISO 2076
Fadenstärke		**1100**	dtex	DIN EN ISO 2060
Bindung		**L 1/1**		ISO 3572

Bei den technischen Daten handelt es sich um ca. Werte, die auf Basis von ermittelten Durchschnittswerten erstellt wurden. Aus fertigungstechnischen Gründen sind Abweichungen bis zu -5% möglich. Diese technischen Angaben entsprechen dem heutigen Stand der Kenntnisse und sollen über unsere Produkte ohne Rechtsverbindlichkeit informieren. Diese Daten gelten für neue Ware. Einsatzvorschläge entbinden den Käufer nicht, selbst zu prüfen, ob das Material für den von ihm gewünschten Einsatz geeignet ist.

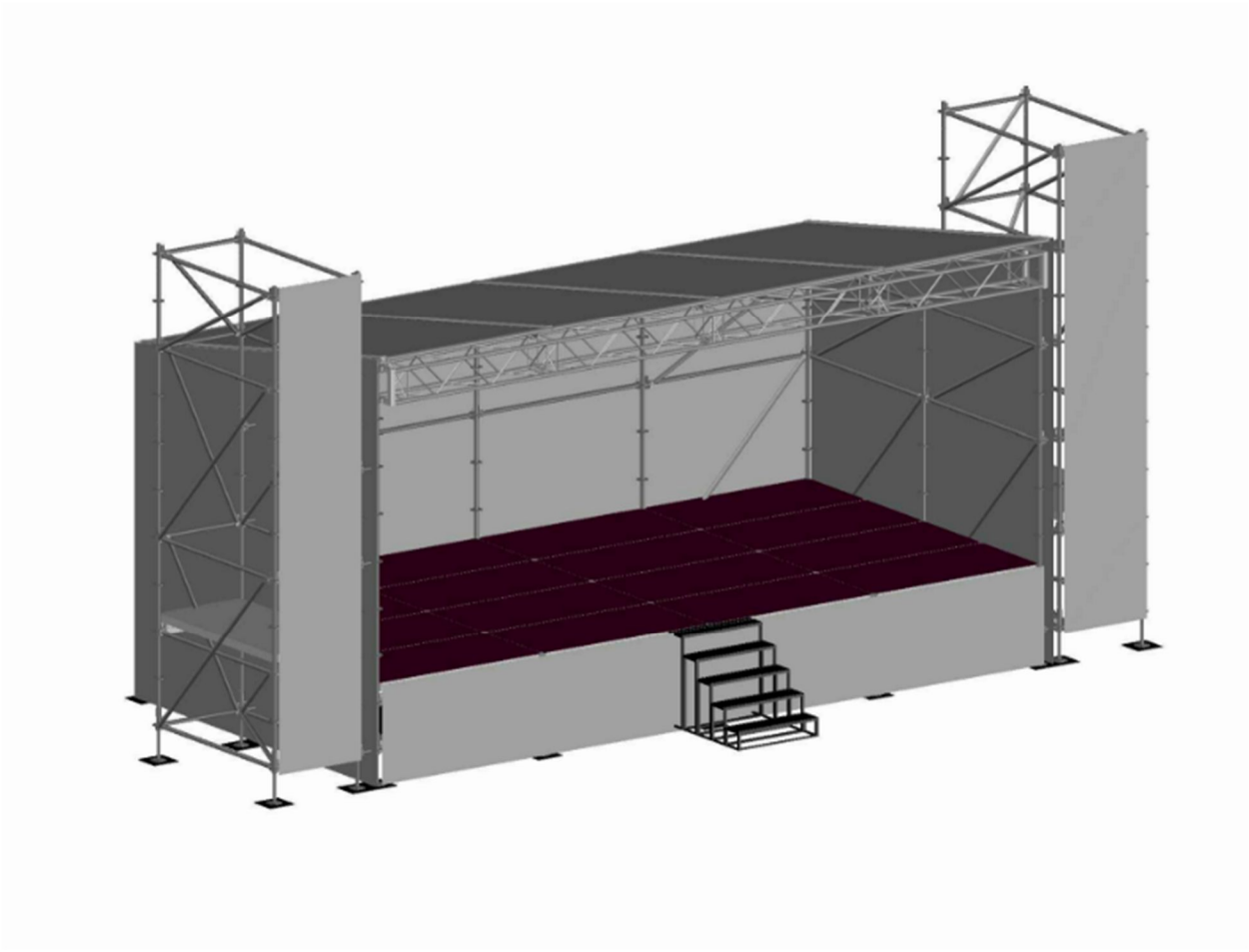
VL/LB:

QM-071/3-08/00 EA/007-06/98 Datum 17.05.2019

11 Bijlage VI: Berekening

Structural
Event
Engineering

WWW.IM-STEE.COM

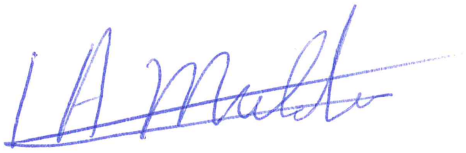


Project number: 2018009
Structural calculation Report
GE24 and GE32 Layher roof
Eekels verhuur

This calculation report has been specific prepared for the company Eekels verhuur based at Gruttostraat 9 5212 VM 's-Hertogenbosch. It is not allowed to copy or print any part of this calculation other than for the intern use at Eekels verhuur. The first chapter of this calculation report can be passed on as annex to a permit application. In all other situations it is obligated to obtain a written permission from the company IM Structural Event Engineering.

Date: 25-04-2018

Ivo Mulder BCs



IM Structural Event Engineering
Jellen 4
8603 DK, Sneek
The Netherlands
+31 (0) 646597297
imulder@im-stee.com

Index

1 General preliminary notes.
1.1. Project description.
1.2. Construction drawing of the different Layher roof systems.
1.3. Used normalisations.
1.4. General Load assumption explanation.
1.5. Used materials.
1.6. Load assumption.
1.7. Loading configurations.
1.8. Necessary ballast loading.
2 General calculation input.
2.1. Information About the calculation program.
2.2. Construction model of the GE32 Layher Roof + PA wings.
2.3. Single Load cases for the different Layher roofs.
2.4. Load case input for the GE32 Layher roofs + Pa wing.
2.5. Load cases concerning wing loading for the GE32 Layher roofs + Pa wing.
2.6. load combinations.
2.7. Result combinations.
3 Calculation results for different Load Cases and Load Combinations.
3.1. General calculation of the GE32 Layher Roof + PA wings.
3.2. Calculation summary GE32 Layher Roof + PA wings.
3.3. Calculation result of the separate load cases.
3.4. Calculation result of RC1 - General loading without wind 1 * (CO1 – CO4)
3.5. Calculation result of RC2 - Design Values In-service: 1 * (CO10 – CO38)
3.6. Calculation result of RC4 - Design Values Out-service: 1 * (CO100 – CO124)
3.7. Stress analyse GE32 Layher roof + PA wing.
3.8. General calculation of the GE32 Layher Roof.
3.9. Calculation summary GE32 Layher Roof.
3.10. Calculation result of the separate load cases.
3.11. Calculation result of RC1 - General loading without wind 1 * (CO1 – CO4)
3.12. Calculation result of RC2 - Design Values In-service: 1 * (CO10 – CO38)
3.13. Calculation result of RC4 - Design Values Out-service: 1 * (CO100 – CO124)
3.14. Stress analyse GE32 Layher roof.
3.15. General calculation of the GE24 Layher Roof.
3.16. Calculation summary GE24 Layher Roof.
3.17. Calculation result of the separate load cases.
3.18. Calculation result of RC1 - General loading without wind 1 * (CO1 – CO4)
3.19. Calculation result of RC2 - Design Values In-service: 1 * (CO10 – CO38)
3.20. Calculation result of RC4 - Design Values Out-service: 1 * (CO100 – CO124)
3.21. Stress analyse GE24 Layher roof.
4 Detail calculations for different parts.
4.1. Check of the Keder profile for the roof canopy.
4.2. Layher information design values.
4.3. Check of the Layher diagonals.
4.4. Check of the Layher Spindle's..
4.5. Check of the Layher columns.
4.6. Check of the Event Layher staging system.
5 Necessary Ballast.
5.1. Ballast calculation.
5.2. Ballast drawing.
5.3. Calculation of ballast against overturning and slipping.

Truss information.

1 General Preliminary notes.

1.1 Project description.

This project concerns the calculation of The Layher roof systems GE24 and GE32.
These roof systems are constructed from Layher all-round material.

The dimensions are
GE32 = 8x4 meter.
GE24 = 8x3 meter.

The GE32 can also be built with a PA wing with a minimum depth of 2.07 meter.

The stage is calculated with a floor height of 1 meter, it is also possible to build the Layher roof with a stage height of 1.5 or 2 meter.

The main rigging loads in the main roof need to be suspended from the H40V Truss.

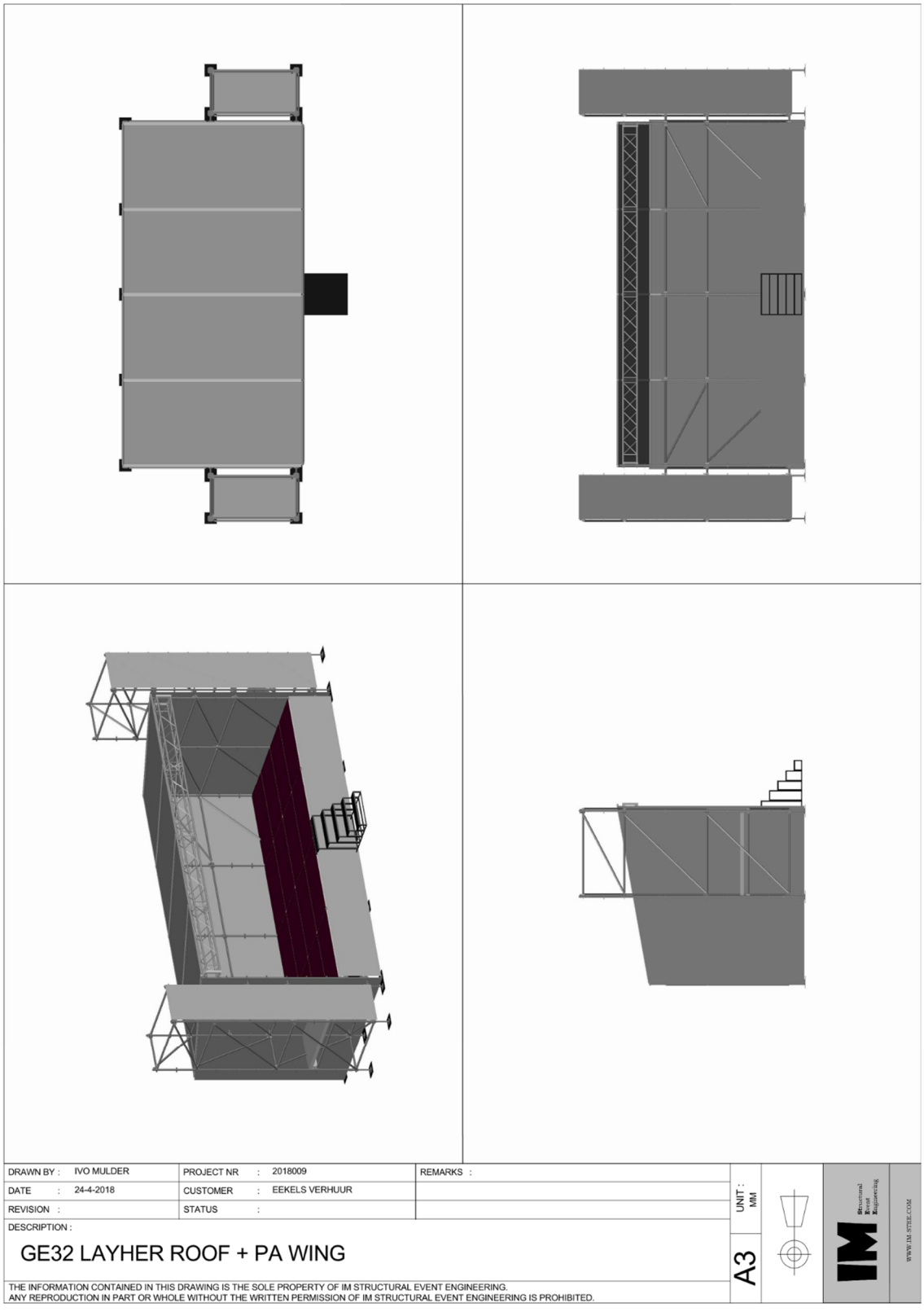
The roof canopy of the GE32 is mounted by the use of a Layher keder profile. Part number 5574600.
This keder profile has the dimensions of 65x74 mm.

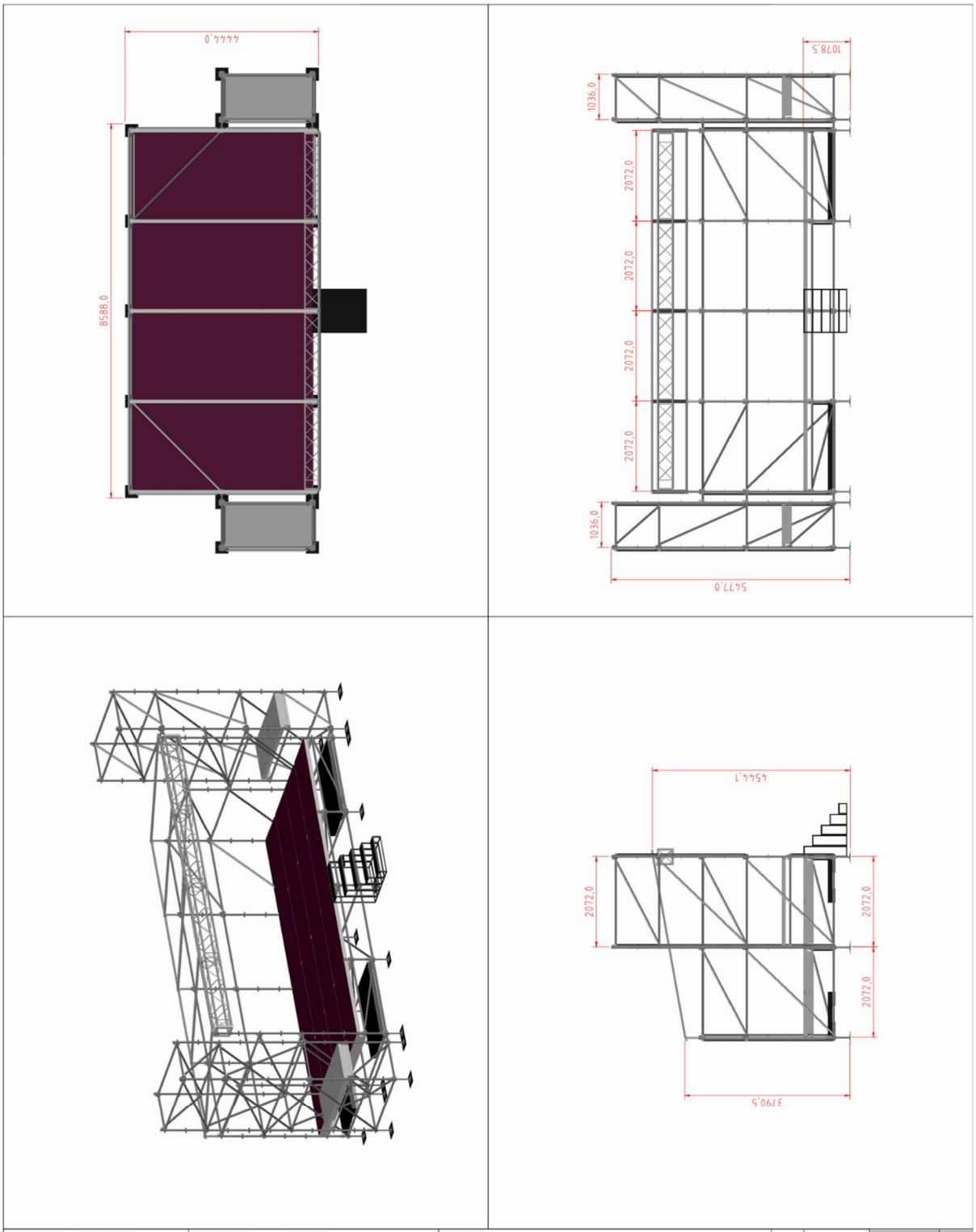
The roof canopy of the GE24 is mounted by the use of a Layher keder profile. Part number 4200400.
This keder profile has the dimensions of 51x76 mm.

Before the wind gust exceeds the maximum In-service wind speed of 21 m/s the back and side walls and big scenery objects need to be removed, so the wind can pass underneath the roof.

1.2 Construction drawing of the different Layher roof systems.

1.2.1 GE32 Layher roof + PA wings.





DRAWN BY : IVO MULDER	PROJECT NR : 2018009	REMARKS :	
DATE : 24-4-2018	CUSTOMER : EEKELS VERHUUR		
REVISION :	STATUS :		

DESCRIPTION :

GE32 LAYHER ROOF + PA WING

UNIT : MM

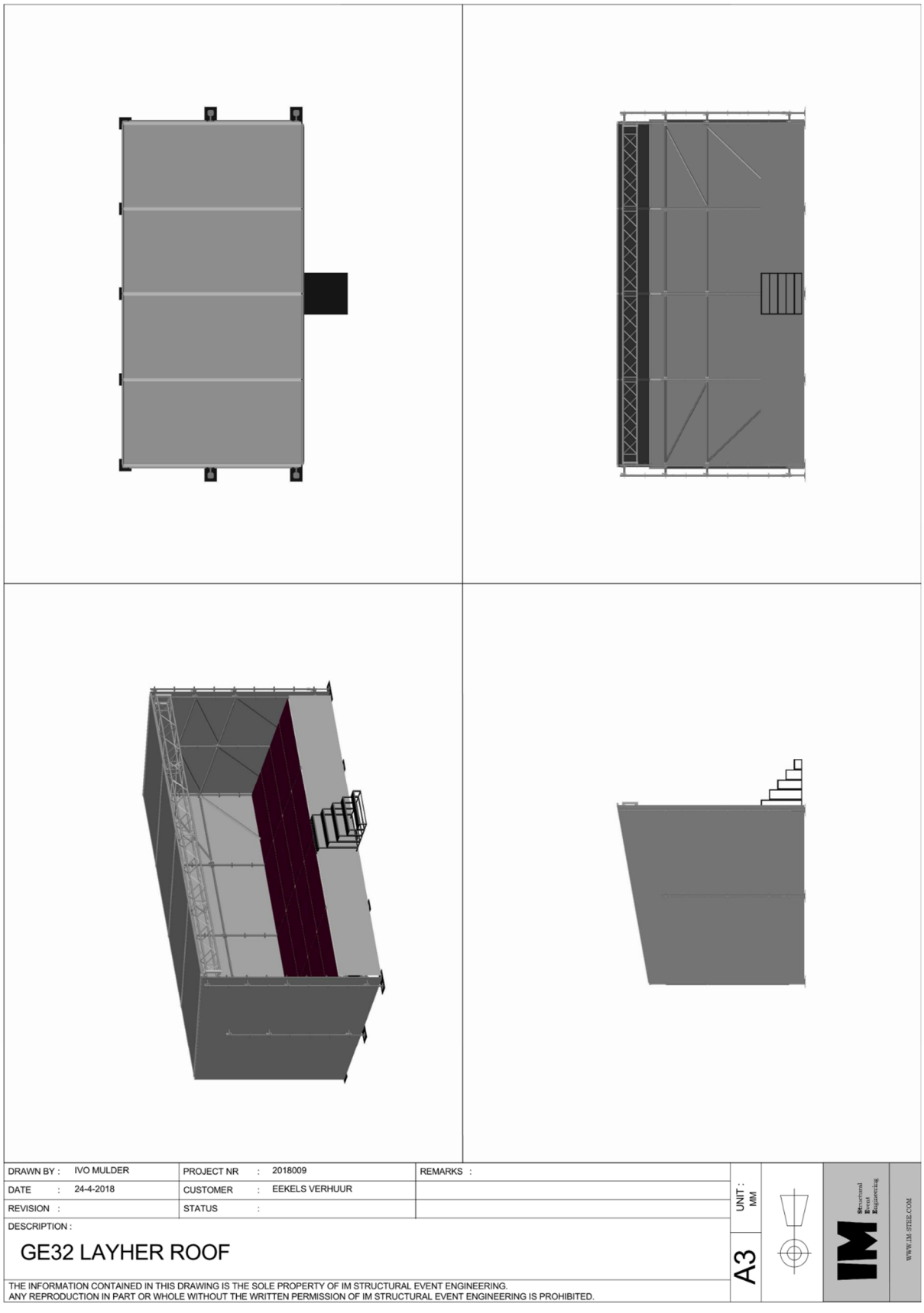
A3

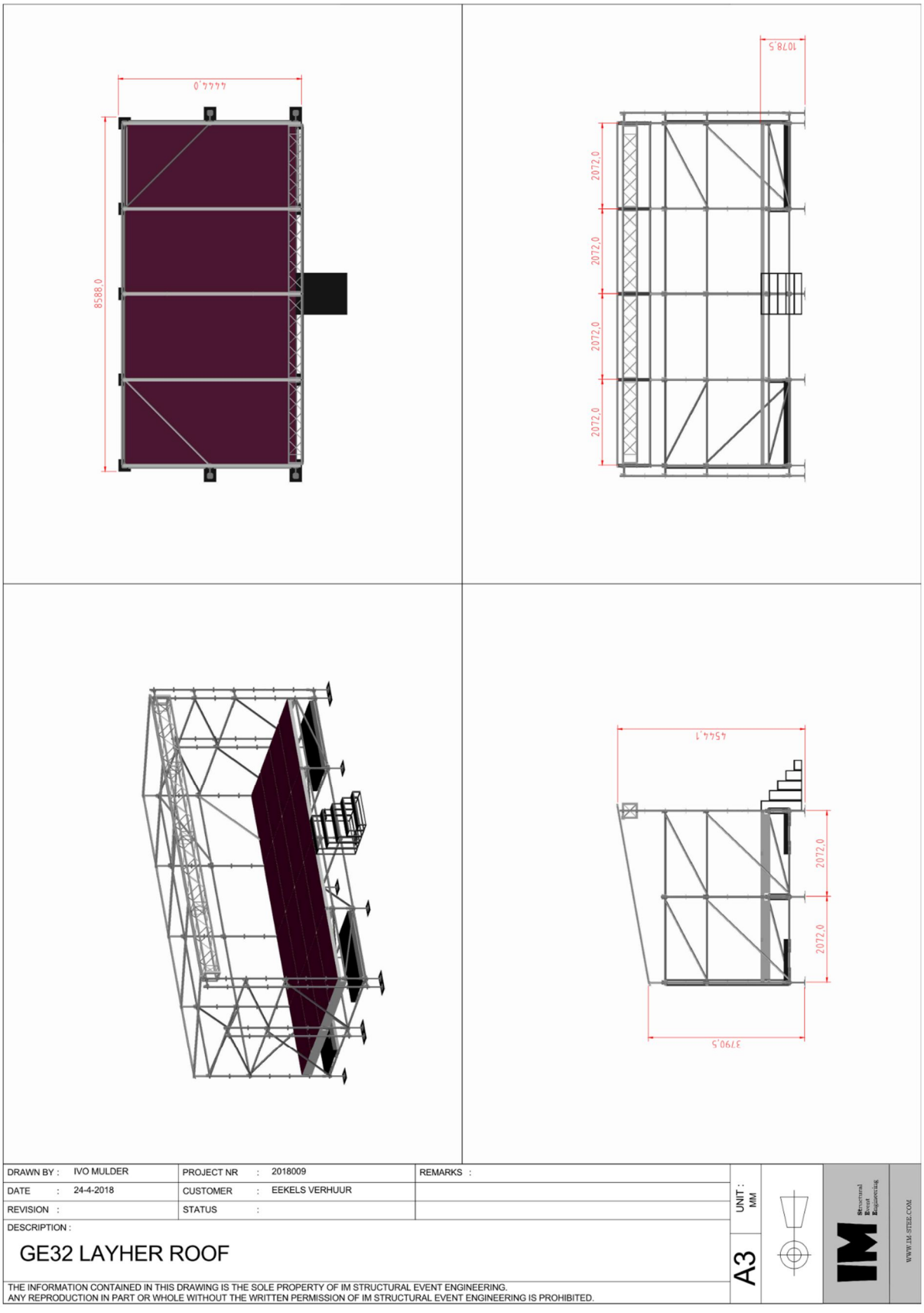
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF IM STRUCTURAL EVENT ENGINEERING.
ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF IM STRUCTURAL EVENT ENGINEERING IS PROHIBITED.

IM Structural Event Engineering

WWW.IM-STEE.COM

1.2.2 GE32 Layher roof





DRAWN BY : IVO MULDER	PROJECT NR : 2018009	REMARKS :	UNIT : MM
DATE : 24-4-2018	CUSTOMER : EEKELS VERHUUR		A3
REVISION :	STATUS :		

DESCRIPTION :

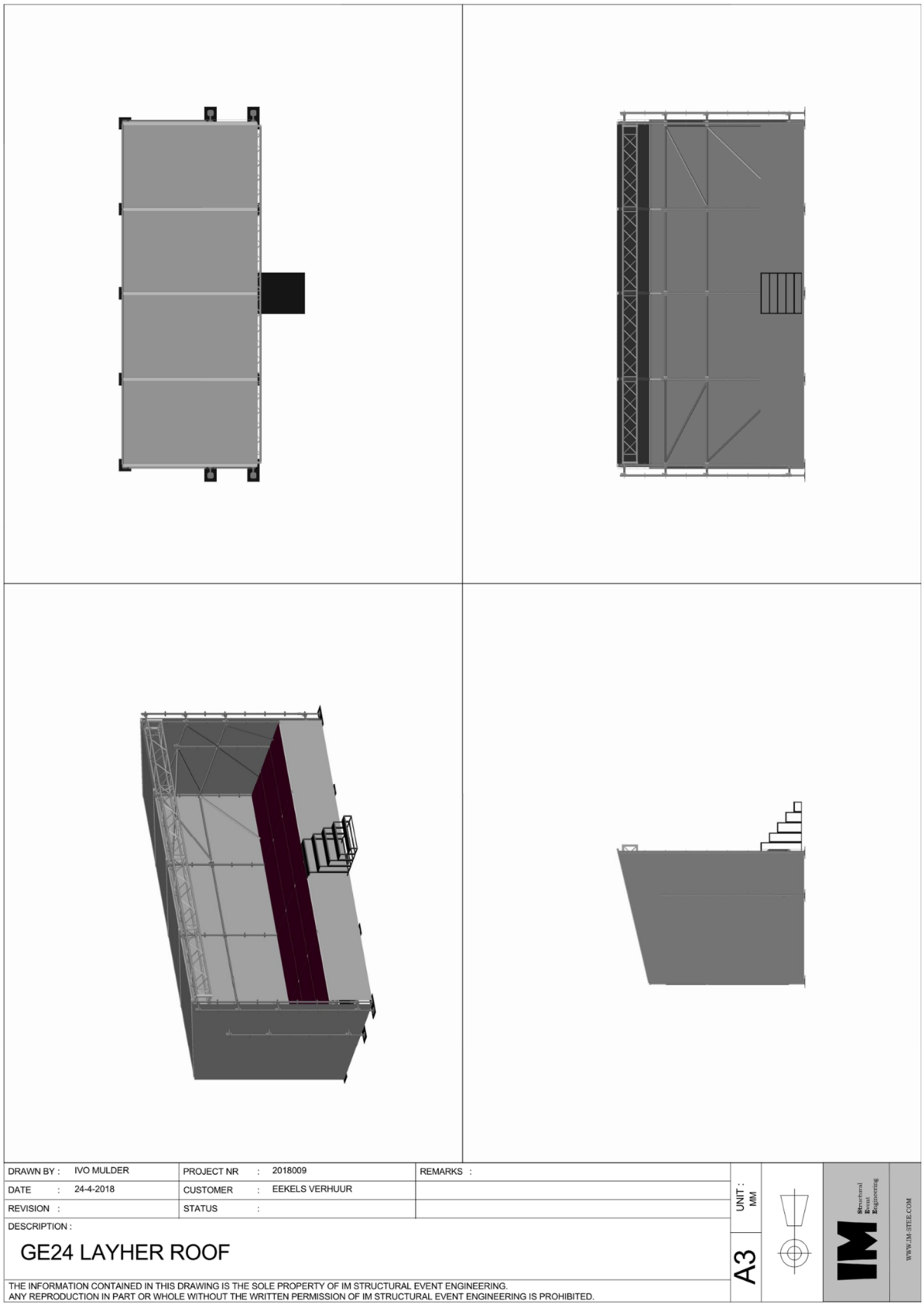
GE32 LAYHER ROOF

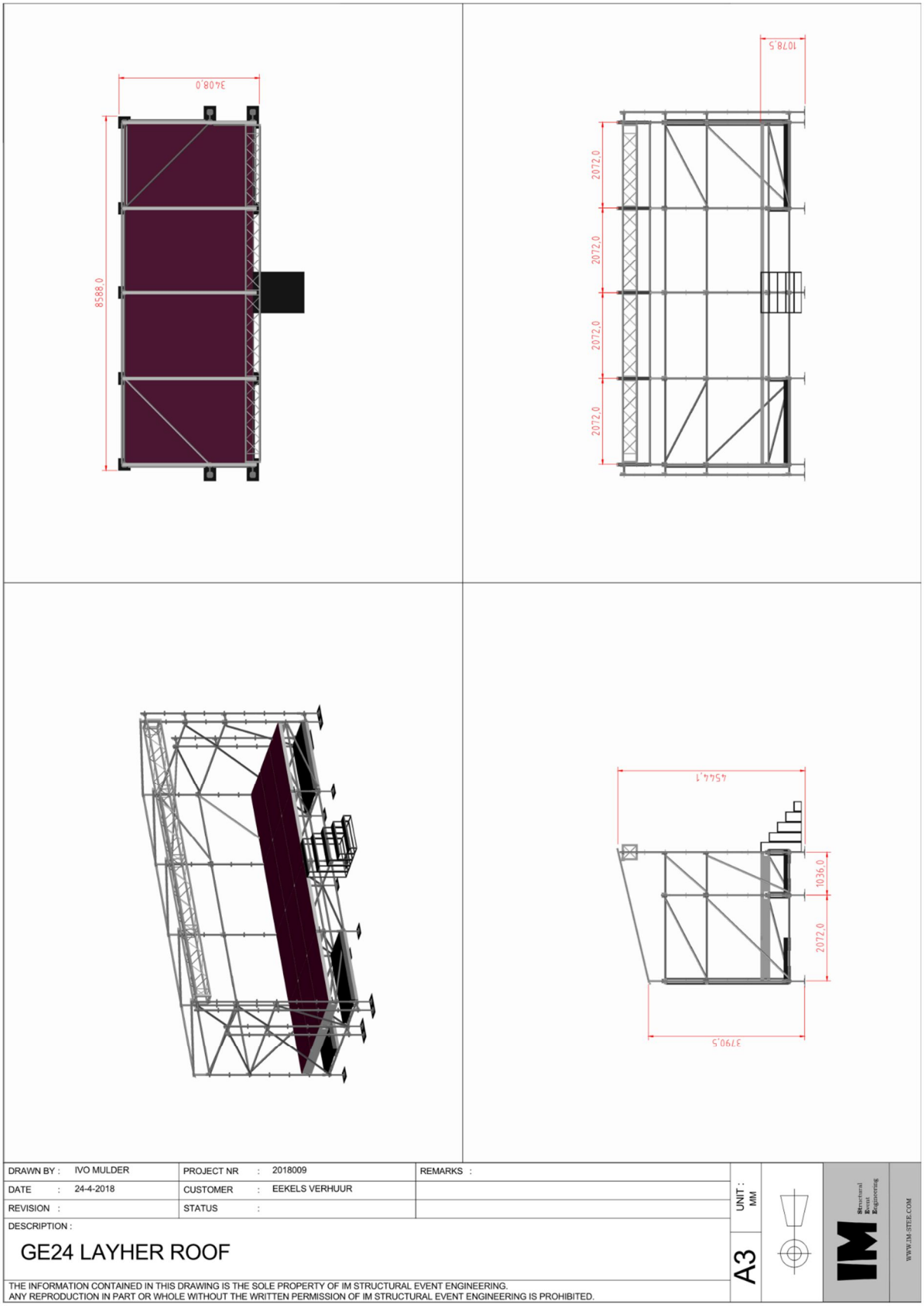
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF IM STRUCTURAL EVENT ENGINEERING.
ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF IM STRUCTURAL EVENT ENGINEERING IS PROHIBITED.

IM Structural Event Engineering

WWW.IM-STEE.COM

1.2.3 GE24 Layher roof





DRAWN BY :	IVO MULDER	PROJECT NR :	2018009	REMARKS :	
DATE :	24-4-2018	CUSTOMER :	EEKELS VERHUUR		
REVISION :		STATUS :			

DESCRIPTION :

GE24 LAYHER ROOF

UNIT : MM

A3

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF IM STRUCTURAL EVENT ENGINEERING.
ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF IM STRUCTURAL EVENT ENGINEERING IS PROHIBITED.

IM Structural Event Engineering

WWW.IM-STEE.COM

1.3 Used normalisation.

This calculation is based on the next parts of the Eurocodes.

NEN-EN 1990	(Eurocode 0) Basis of structural design.
NEN-EN 1991	(Eurocode 1) Action on structures.
NEN-EN 1993	(Eurocode 3) Design of steel structures.
NEN-EN 1999	(Eurocode 9) Design of Aluminium structures.
NEN-EN 13814	Fair ground and amusement park machinery and structures
NEN-EN 13782	Temporary Structures-Tents-Safety.
NEN-EN 12385	Steel wire ropes.

1.4 General load assumption explanation.

The loads which are taken into account in this calculation are based on the information gattered from the different parts of the Eurocodes. Some of the loading information's from the Eurocode are based on permanent building constructions which makes it not feasible to use these information for a temporary demountable construction. In these specific cases there will be an explanation of a well weighted decision why the calculation deviates from the information presented in the Eurocode.

1.5 Used materials.

Stage Support system	Layher Event system K2000
Flooring system	Layher event system
Back and side wall	Layher Event system K2000
Front Truss bridge	Prolyte H40V truss

Information about the truss could be found in the Annex of this repport.

1.6 Load assumptions.

1.6.1 Wind loading.

According to the Eurocode 13814, two wind situation calculations have to be made for a temporary demountable structure. The first situation has a wind speed from 0 to 21 m/s and is called the In-service situation and the second situation has a wind speed from 21 m/s to 28 m/s and is called the Out-service situation. These maximum wind speeds are the maximum wind gust measured at 10 meters high in a free environment. The In-service situation is the situation where the construction can be used for events. In this situation the back and side walls are mounted. There is no danger concerning the structural integrity of the temporary demountable structure. Before the wind gust exceeds the maximum In-service wind speed of 21 m/s the back and side walls and big scenery objects need to be removed, so the wind can pass underneath the roof. All these actions, and how they are executed need to be written in a method statement. When all the actions are finished the Out-service situation is in place. In the Out-service situation the only people who can be in the neighbourhood of the stage are professionals who know and understand the risk involved in temporary demountable structures and are well aware of the method statement. When there are wind gusts higher than the 28 m/s the construction site need to be completely cleared from all people.

The values of the extreme thrust are based on area's which have a reference wind speed of $V_{b,o}$, less or equal to 28 m/s with a return period of 5 years according to the NEN-EN 13814. If the construction will be used in an area which requires a higher extreme thrust, the user need to be aware that using the same extreme thrust value the return period will be less than 5 years.

In the NEN-EN 1991 there are 5 different terrain categories determined. In the tables on the next pages the maximum wind gust is presented which the construction can withstand in the In-service and the Out-service situations, in conjunction with the height and the terrain category. The figure in the column with the head V_b in m/s is the mean wind velocity measured on 10m height in the concerning terrain category, it is recommended to use a professional weather station near to the place where the construction is build. The column with the head Max. wind gust is the maximum peak wind which is determined from the peak wind velocity by the law of Bernoulli.

Because the maximum height of the construction with a stage of 2-meter floor level is just below 8 meters, only the table from 0 < 8 m is presented on the next page.

1.6.2 In-service situation.

The 21 m/s which is mentioned as the maximum wind gust for the In-service situation is based on an average between the wind gust of 17.89 m/s for 0 < 8 m and the wind gust 21.91 m/s for 8 < 20 m.

0 < 8 meter 0.20 kN/m²

Terrain category	Vb in m/s (1)	Max. wind gust (2)
Sea or coastal area exposed to open sea	10.58	17.89
Lakes or flat and horizontal area with negligible vegetation and without obstacles	11.02	17.89
Area with low vegetation such as grass and isolated obstacles (trees, buildings) with separations of at least 20 obstacle heights	12.03	17.89
Area with regular cover of vegetation or buildings with isolated obstacles with separations of maximum 20 obstacles heights (such as villages, suburban terrain permanent forest)	14.29	17.89
Area in which at least 15% of the surface is covered with buildings and their average heights exceeds 15 m.	17.57	17.89

1.6.3 Out-service situation.

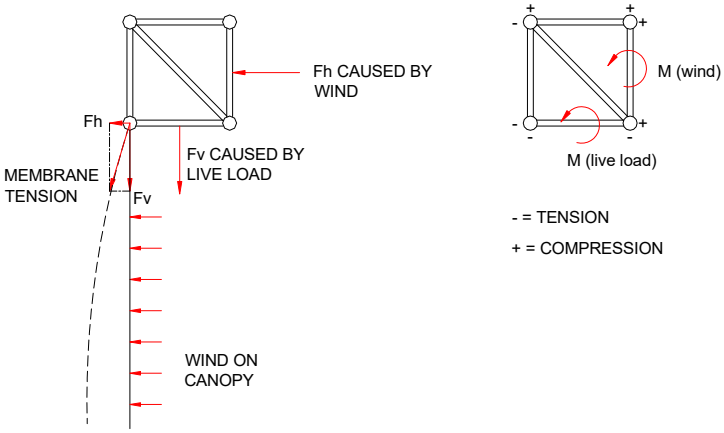
The 28m m/s which is mentioned as the maximum wind gust for the Out-service situation is based on an average between the wind gust 26.46 m/s for 0 < 8 m and the wind gust 31.62 m/s for 8 < 20 m. The wind pressure which is mentioned in the table below is increased with 20 % in comparison to the Eurocode 13814. This because the factor C_{tem}, which is 0.80 is taken out of the wind pressure values. Intentionally the factor C_{tem} is applied due to the fact that protection, reinforcement and sheltering is possible. In the case of these kind of structure's this is not possible to do.

0 < 8 meter 0.4375 kN/m²

Terrain category	Vb in m/s (1)	Max. wind gust (2)
Sea or coastal area exposed to open sea	15.65	26.46
Lakes or flat and horizontal area with negligible vegetation and without obstacles	16.3	26.46
Area with low vegetation such as grass and isolated obstacles (trees, buildings) with separations of at least 20 obstacle heights	17.79	26.46
Area with regular cover of vegetation or buildings with isolated obstacles with separations of maximum 20 obstacles heights (such as villages, suburban terrain permanent forest)	21.14	26.46
Area in which at least 15% of the surface is covered with buildings and their average heights exceeds 15 m.	25.99	26.46

1.6.4 Membrane tension of the canopy due to wind influences.

If there is a wind pressure applied to a membrane this membrane will have reaction forces in two directions on the connection to the construction. This phenomenon is called membrane tension. And in some cases, this extra loading need to be applied.



With a dynamic loading q=0.50 kN/m^2 applying an aerodynamic coefficient C_f =0.40 and a span of l=5.00 m a resulting membrane tension of Z=0.80 kN/m is derived.

$Z=(Zy^2+Zz^2)^{1/2}$ =0.80 kN/m with

Zz =0.5*0.4*5.0/2=0.50 kN/m

$Zy=(Z^2-Zz^2)^{1/2}$ =(0.80²-0.50²)$^{1/2}$ =0.624

Zy/Zz=0.624/0.50=1.25 = 1 / 0.8

1.6.5 Snow Loads.

Snow loads are not taken into account in this calculation. Erection of the construction is initially intended to be in appropriate weather conditions. If the construction should be built in winter season, the construction need to be reinforced or kept free from snow, the method how the structure will be kept free from snow need to be written in the method statement.

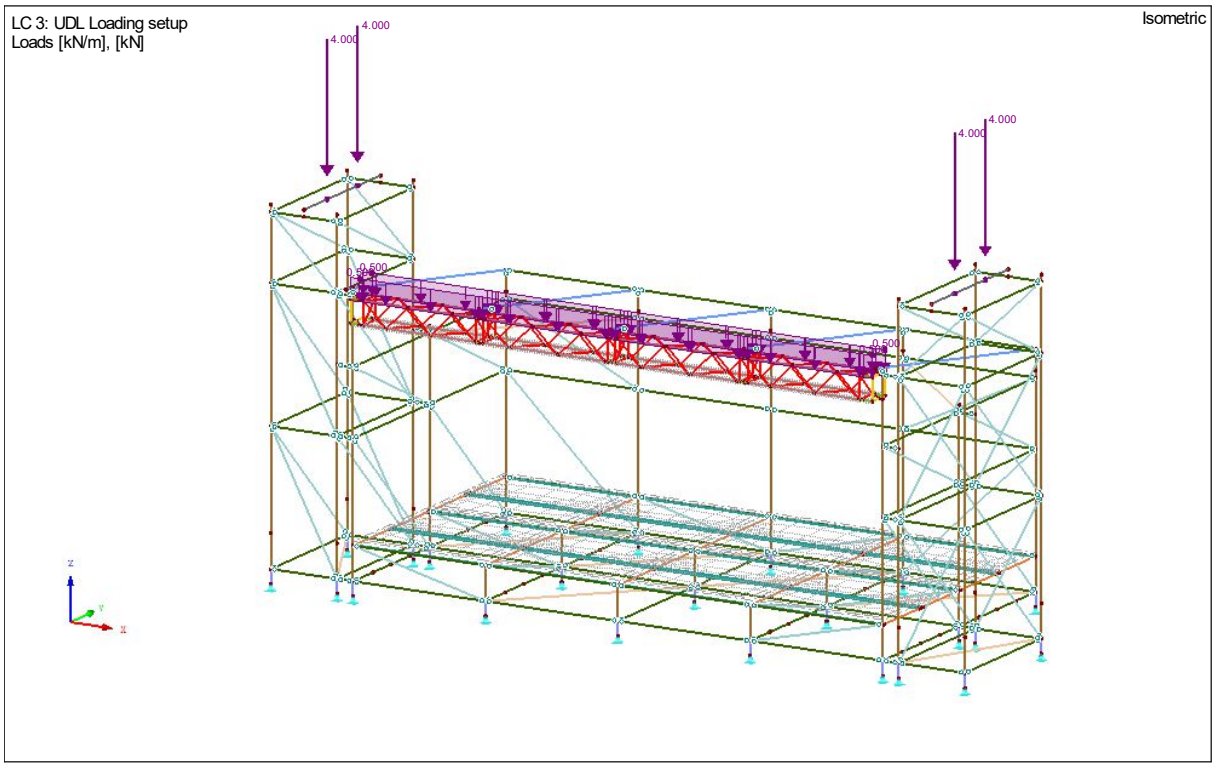
1.6.6 Live load.

In this structural report there are Live load configurations presented. These are intended to give an indication of the Rigging possibilities in the construction. If the actual loading of the construction deviates from these Rigging plots an additional calculation need to be made.
The shifting of Rigging point can influence the maximum loading of the construction.
Each Rigging point need to be attached to the node point of the truss.

1.7 Loading Configurations.

In the next 4 paragraphs the different live load configurations are presented. These loads are possible in all the roof setup options.

1.7.1 UDL Loading setup.



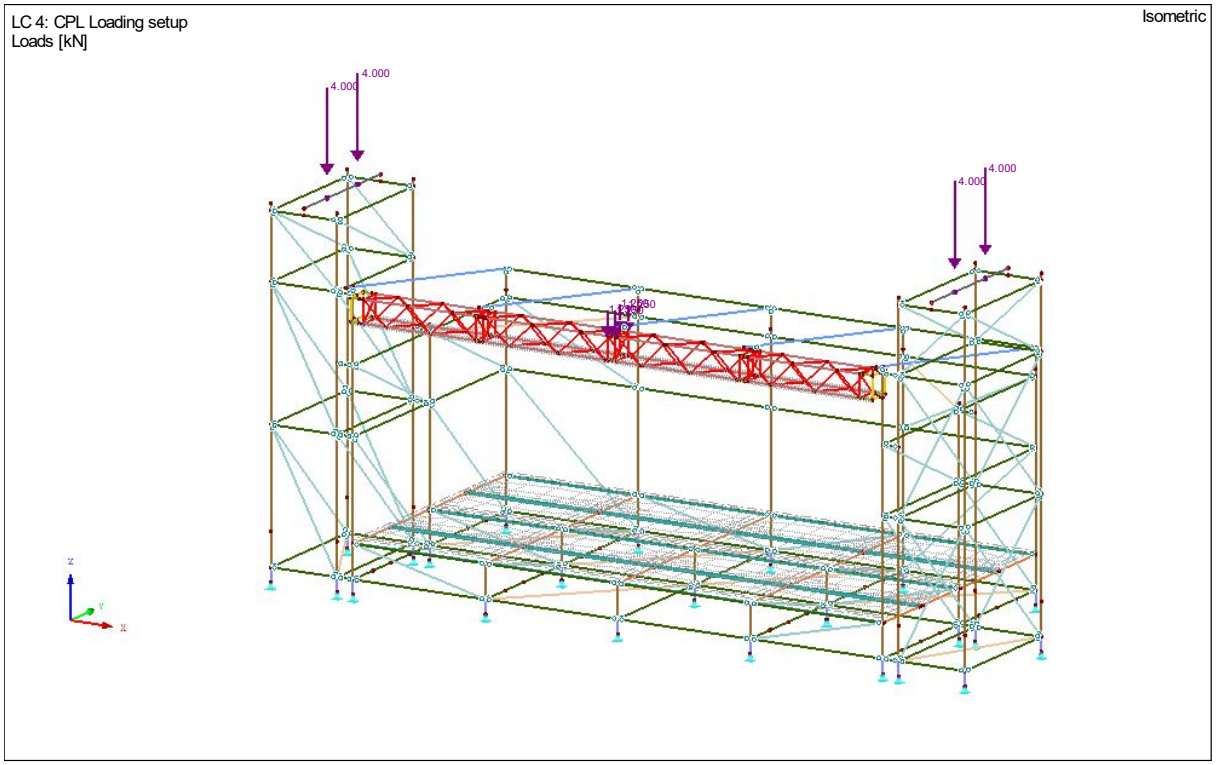
The loading which is taken into account in the UDL Loading setup are:

Truss = 50 kg/m

The total load on the main system is ~ 800 kg

PA wing per side = 800 kg (2x 400 kg)

1.7.2 Center point loading setup.



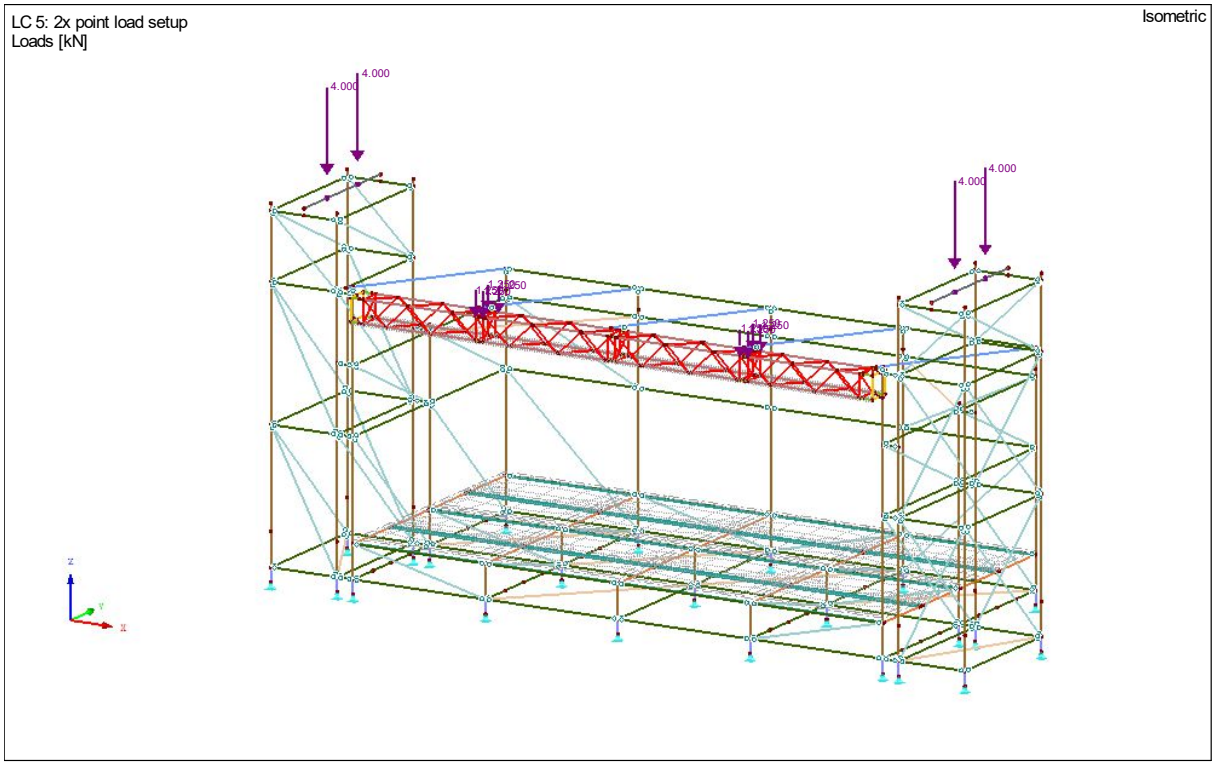
The loading which is taken into account in the Centre point Load setup are:

Truss = 500 kg/m

The total load on the main system is ~ 500 kg

PA wing per side = 800 kg (2x 400 kg)

1.7.3 2x Point load setup.



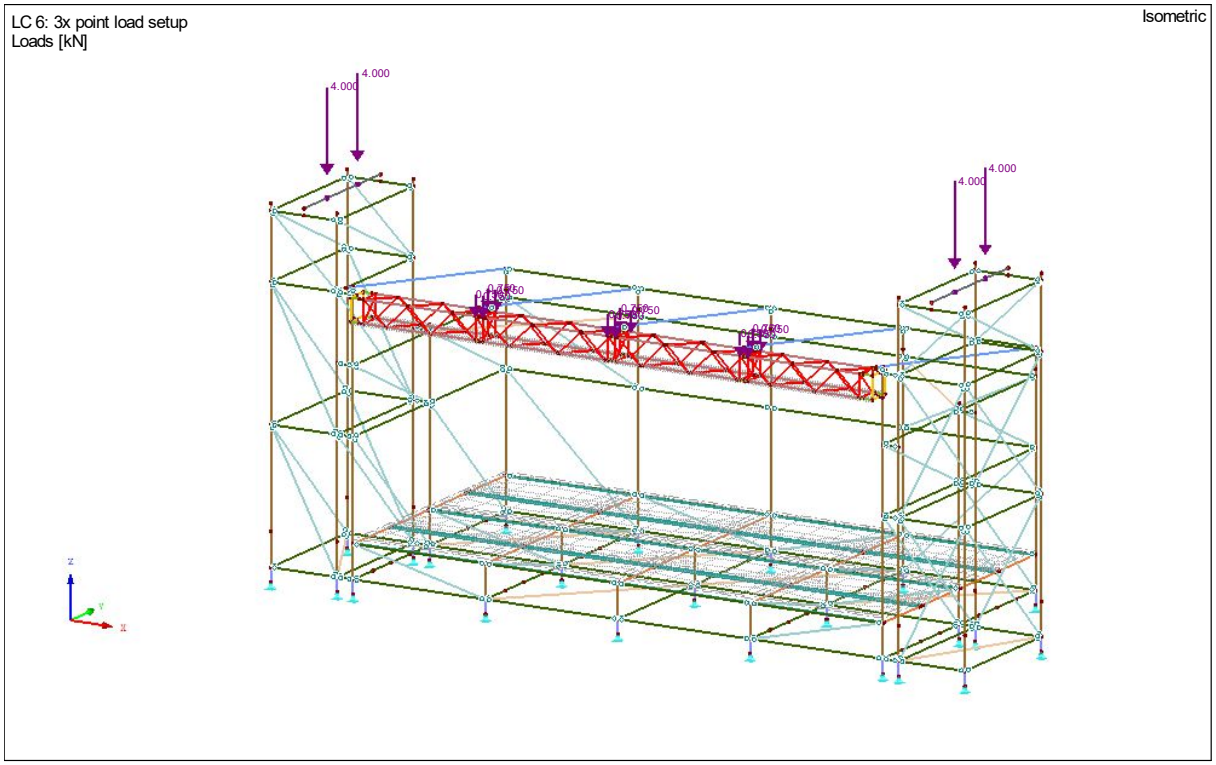
The loading which is taken into account in 2x point load setup:

Truss = 2x 500 kg/m

The total load on the main system is ~ 1000 kg

PA wing per side = 800 kg (2x 400 kg)

1.7.4 3x Point load setup.



The loading which is taken into account in 3x point load setup:

Truss = 3x 300 kg/m

The total load on the main system is ~ 900 Kg

PA wing per side = 800 Kg (2x 400 Kg)

1.8 Necessary Ballast loading.

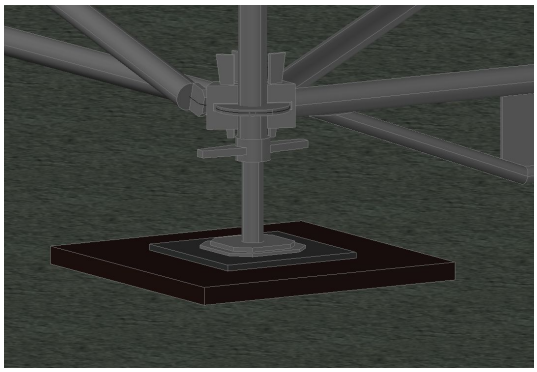
The ballast is checked for overturning and sliding. The Layher stage which is designed as a ridged stage will be taken into account. The uplift of the system is not limited due to the high self-weight in comparison with the relative small area.

All permanent installed loading can be subtracted from the nearest Ballast position

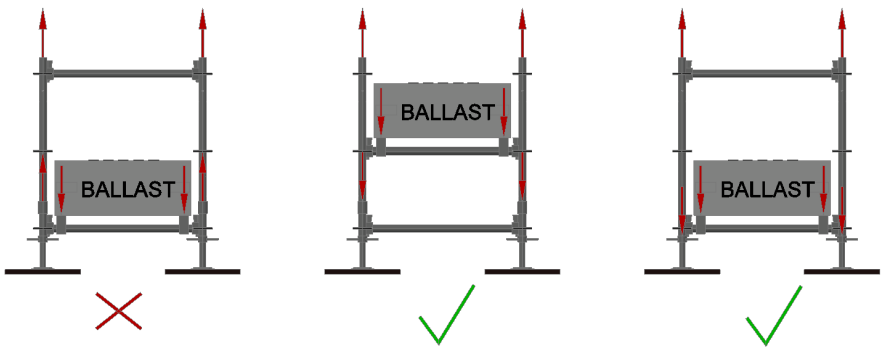
The safety factor for the ballast calculation against slipping is set to 1.2 according to the NEN-EN 13814. This is based on a horizontal load which is relying on friction.
For the friction coefficient the factor of 0.6 has been taken into account.
The Ballast calculation with factor 0.6 can be justified because rubber underlayment plate is used.

Table 3 — Coefficients of friction μ

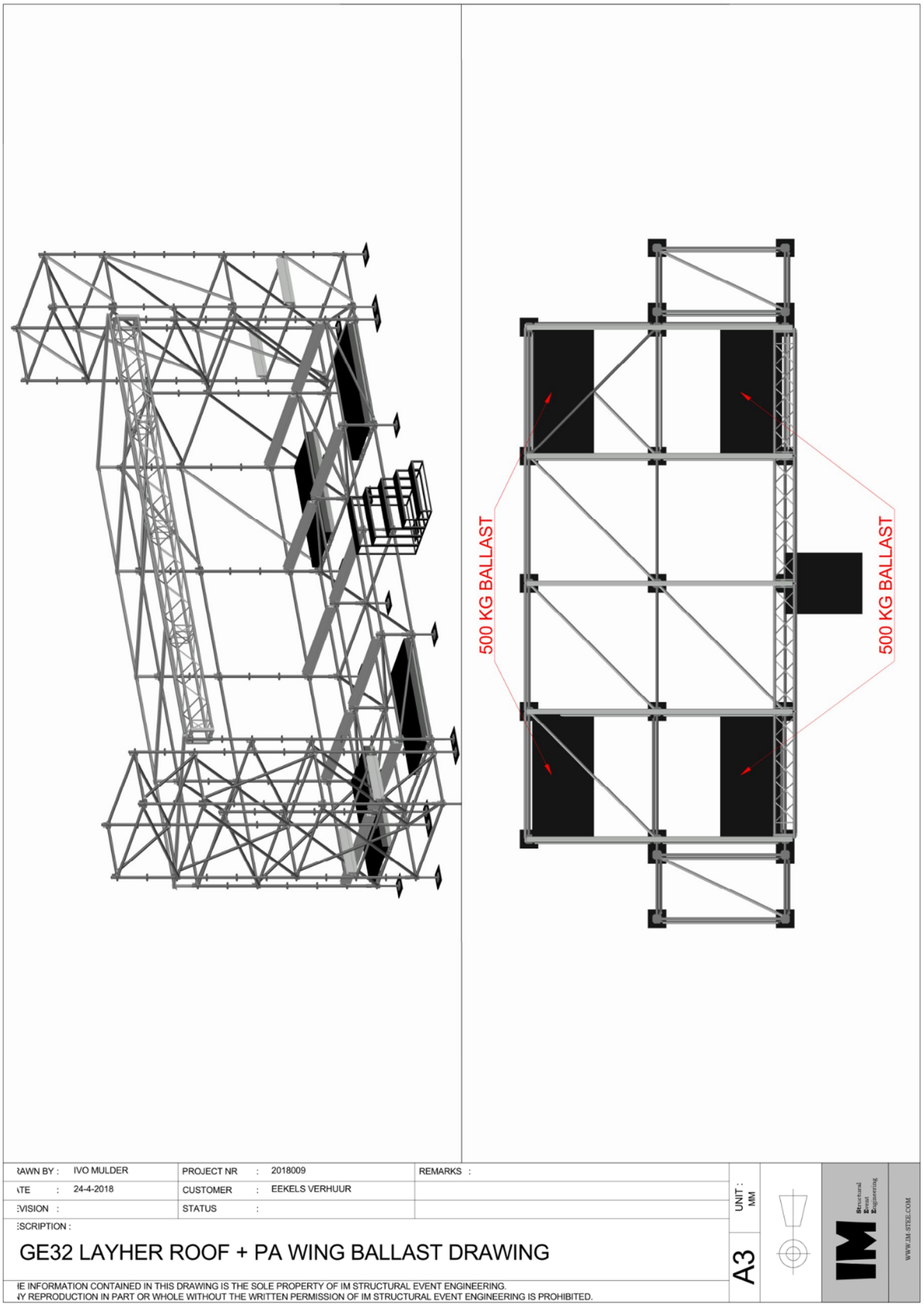
	Wood	Steel	Concrete
Wood	0,4	0,4	0,6
Steel	0,4	0,1	0,2
Concrete	0,6	0,2	0,5
Clay[a]	0,25	0,2	0,25
Loam[a]	0,4	0,2	0,4
Sand and gravel	0,65	0,2	0,65
[a] At least of stiff consistency in accordance with ENV 1997-1.			



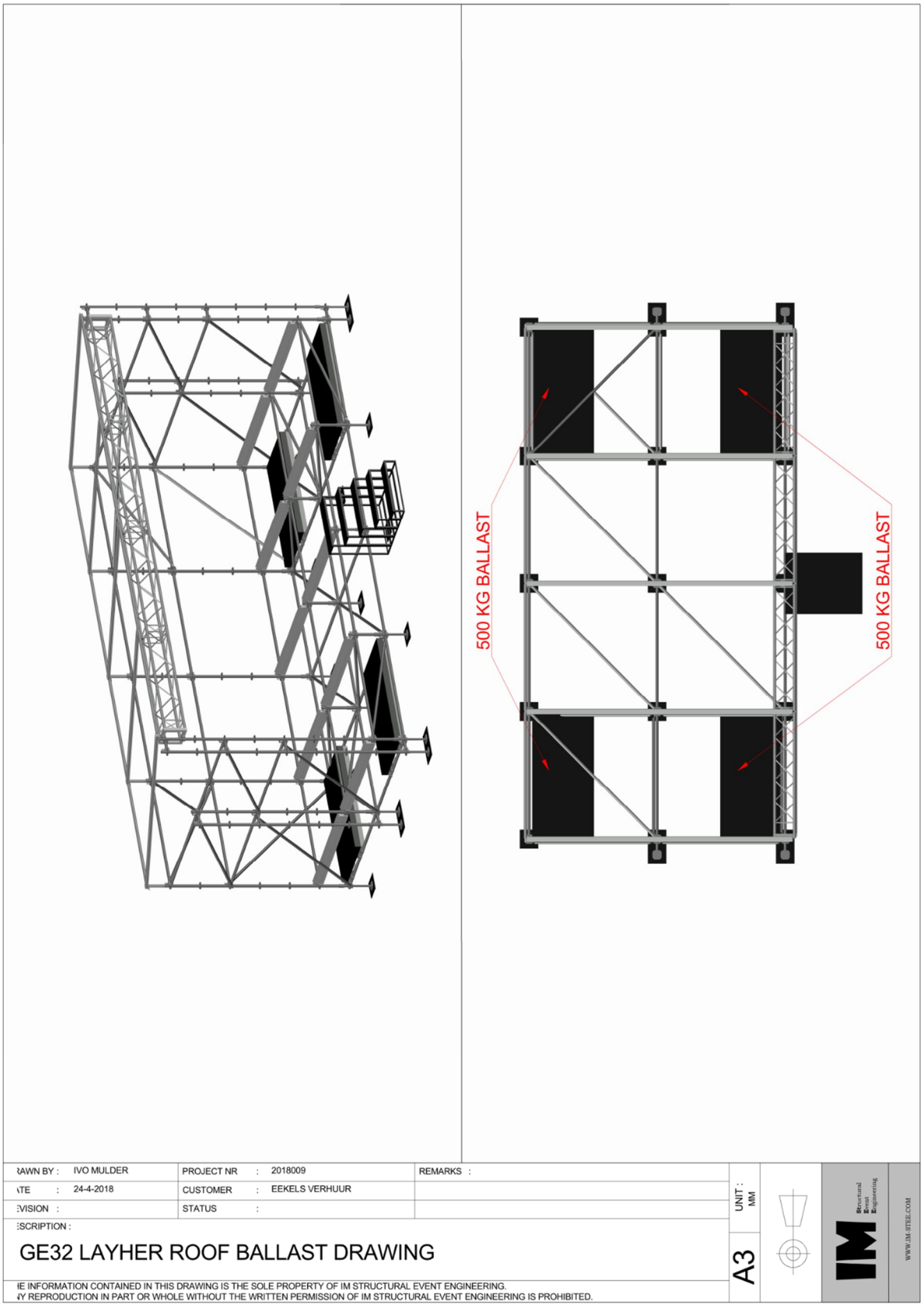
The ballast need to be placed in such a way that it will be activated when lifting forces are applied. If the ballast is placed on the bottom level the use of Layher uprights with connected base collar or connection pieces between the bottom two rosettes is necessary.



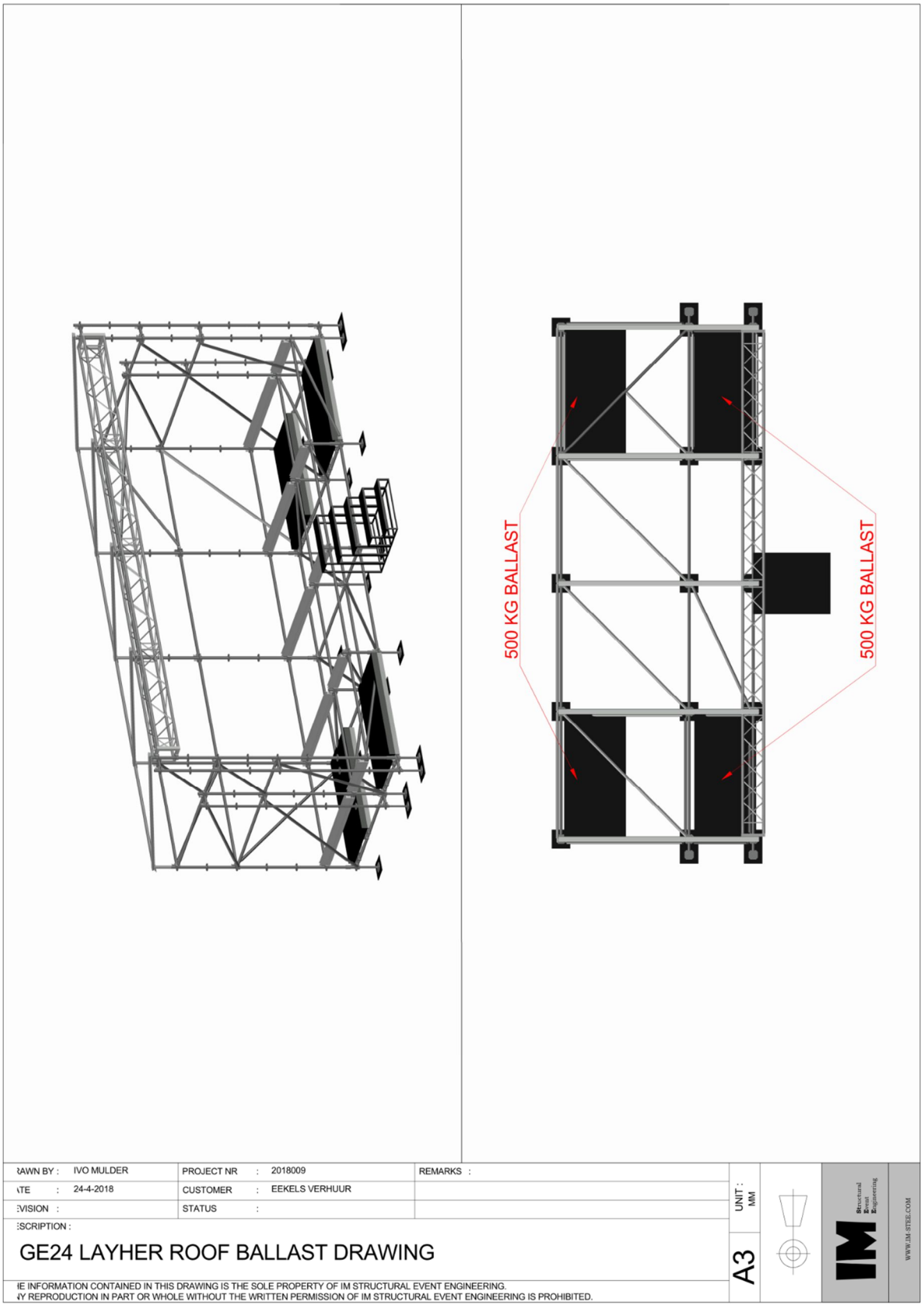
1.8.1 Ballast drawing GE32 Layher Roof + PA wings



1.8.2 Ballast drawing GE32 Layher Roof



1.8.3 Ballast drawing GE24 Layher Roof

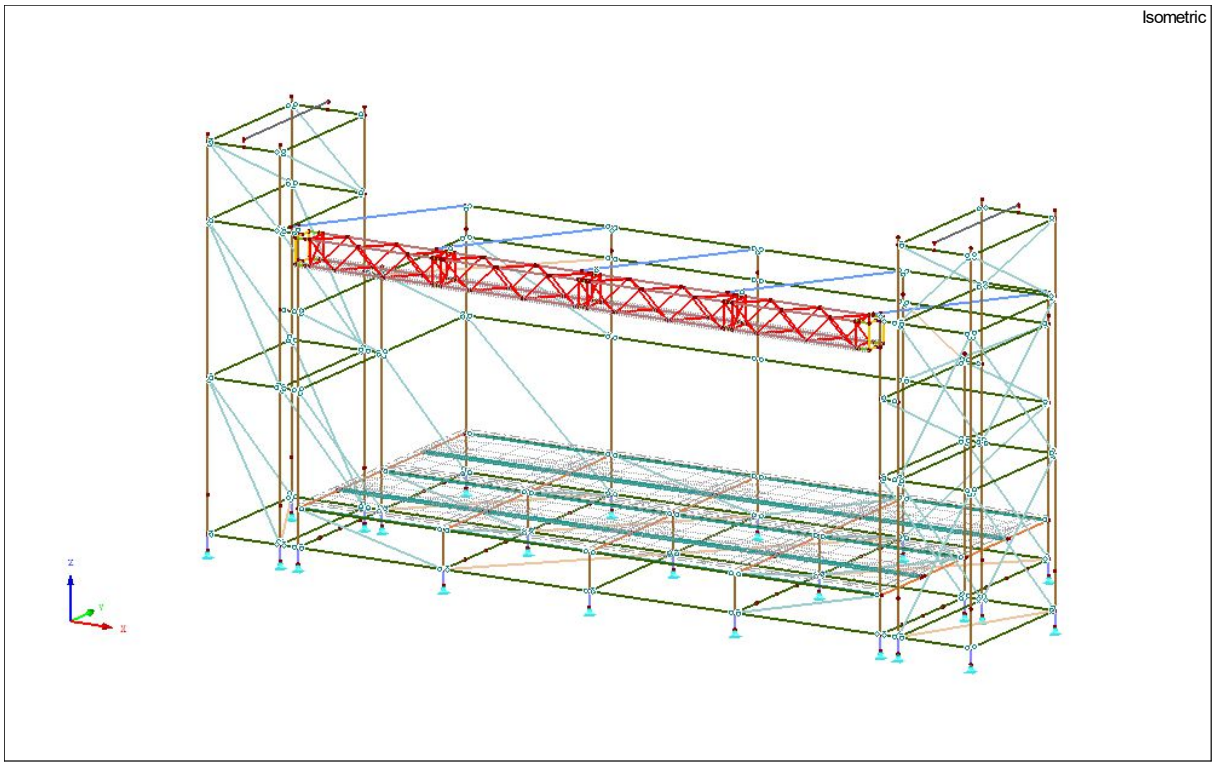


2.0 General calculation input.

2.1 Information About the calculation program.

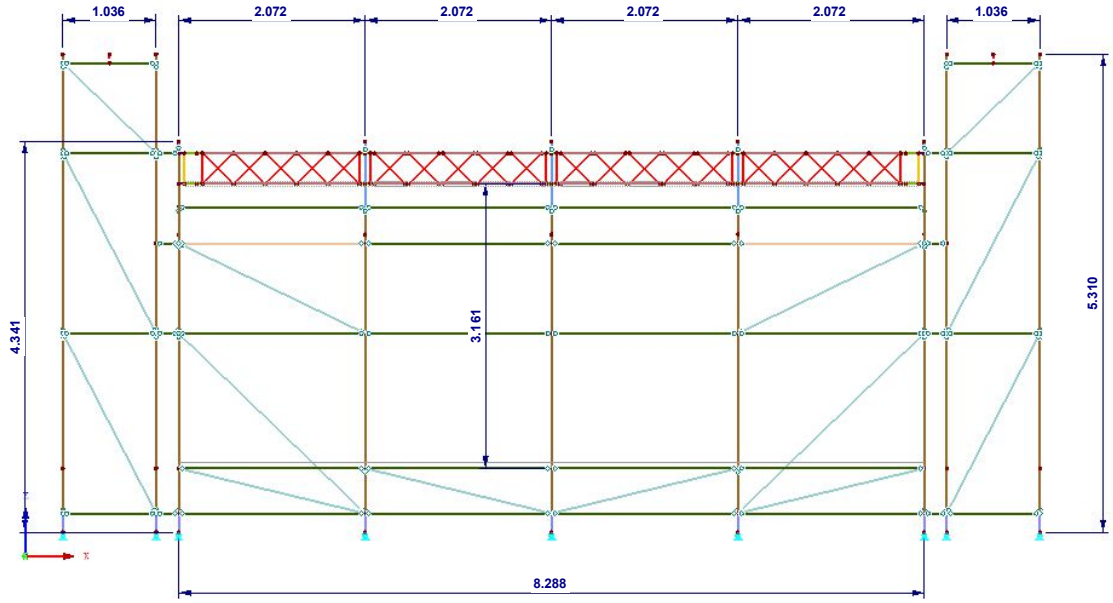
For the calculation of the construction the program RFem from Dlubal software GmbH has been used. The calculation of the Load cases has been made according to the Geometrically Linear analyses principle. The calculation of the Load combinations has been made according to the second order analysis (nonlinear) principle. For all three different roof systems there is a model. The wind loading on the three different models is calculated all in the same way. Therefor the wind loading calculation of the GE32 Layher Roof + pa wings is only printed.

2.2 Construction model of the GE32 Layher Roof + PA wings.

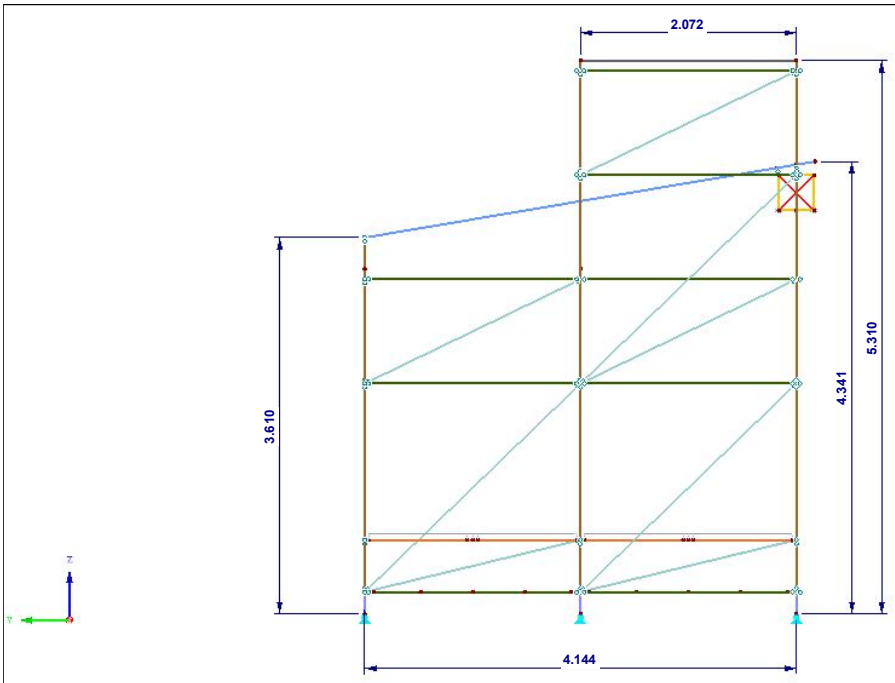


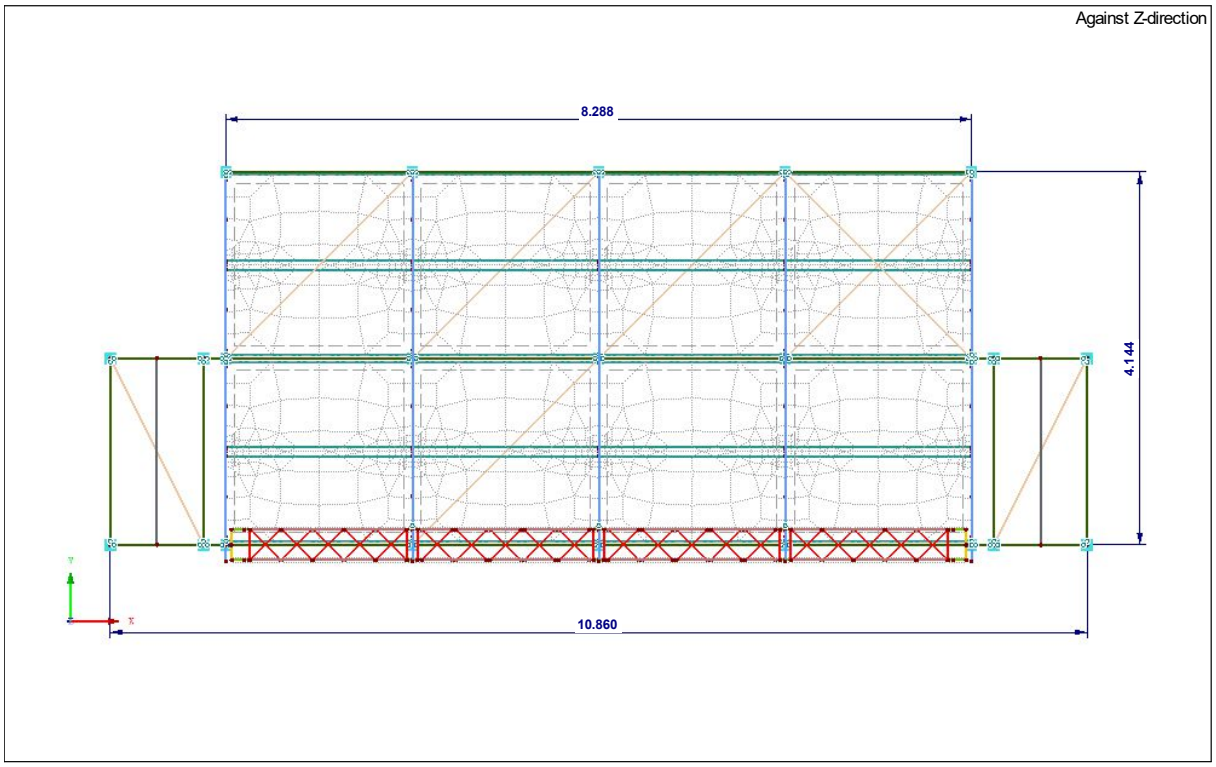
Cross-Sections
- 1: SHAPE-THIN KEDER PROFIEL 3000; Aluminum EN-AW 6082 (EP,ET) T6
- 2: QRO 50x4 (Hot Formed); Aluminum EN-AW 6082 (EP,ET) T6
- 3: Ring 48/3; Aluminum EN-AW 6082 (EP,ET) T6
- 4: Ring 48/6; Aluminum EN-AW 6082 (EP,ET) T6
- 5: Ring 20/2; Aluminum EN-AW 6082 (EP,ET) T6
- 6: RO 38x4.5 | DIN EN 10220; Steel S 355 JR
- 7: RO 48.3x3.2 (Hot Formed); S320GD 1.0250
- 8: RO 48.3x3.2 (Hot Formed); S320GD 1.0250
- 9: RO 48.3x3.2 (Hot Formed); S320GD 1.0250
- 10: RO 48.3x2.6 (Hot Formed); Steel S 235 JR
- 11: EV transom; Aluminum EN-AW 6005A (EP/O,ER/B) T6
- 12: HK 50/30/4/4/4/4; Aluminum EN-AW 6005A (EP/O,ER/B) T6
- 13: IPE 160; Steel S 235 JR
- 16: Rectangle 50/50; Aluminum EN-AW 6082 (EP,ET) T6

In Y-direction



In X-direction




Against Z-direction
8.288
4.144
10.860

2.3 Single Load cases for the different Layher roofs.

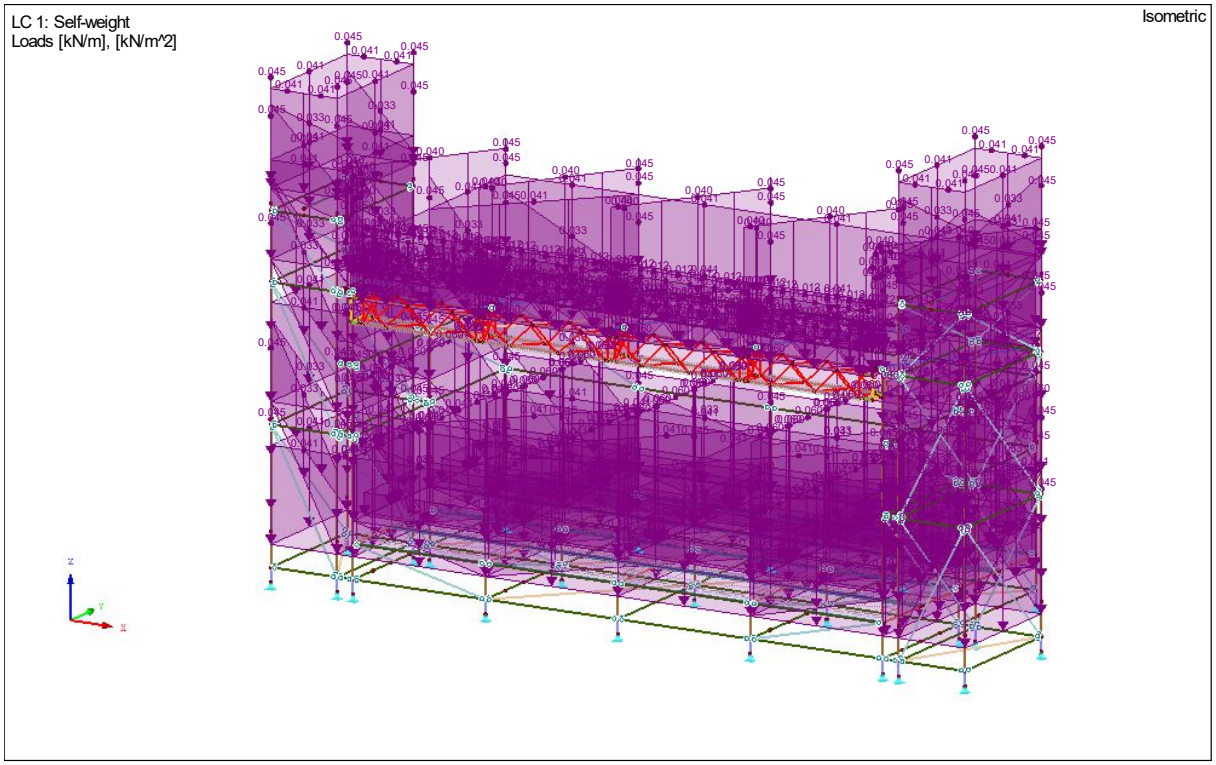
For the calculation different load cases have been constructed in the program.

Load Case	Load Case Description	To Solve	EN 1990 | CEN Action Category	Self-Weight - Factor in Direction Active	X	Y	Z
LC1	Self-weight	+	Permanent	-	0,000	0,000	-1,000
LC2	ballast loading	+	Permanent/Imposed	-	0,000	0,000	0,000
LC3	UDL Loading setup	+	Permanent/Imposed	-	0,000	0,000	-1,000
LC4	CPL Loading setup	+	Permanent/Imposed	-	0,000	0,000	0,000
LC5	2x point load setup	+	Permanent/Imposed	-	0,000	0,000	0,000
LC6	3x point load setup	+	Permanent/Imposed	-	0,000	0,000	0,000
LC7	floor loading wind 0°	+	Permanent/Imposed	-	0,000	0,000	0,000
LC8	floor loading wind 90°	+	Permanent/Imposed	-	0,000	0,000	0,000
LC9	floor loading wind 180°	+	Permanent/Imposed	-	0,000	0,000	0,000
LC10	In-service wind 0°	-	Wind	-	0,000	0,000	0,000
LC11	In-service wind 90°	-	Wind	-	0,000	0,000	0,000
LC12	In-service wind 180°	-	Wind	-	0,000	0,000	0,000
LC13	Out-service wind 0°	-	Wind	-	0,000	0,000	0,000
LC14	Out-service wind 90°	-	Wind	-	0,000	0,000	0,000
LC15	Out-service wind 180°	-	Wind	-	0,000	0,000	-1,000

2.4 Load case input for the GE32 Layher roofs + Pa wing.

The presented load calculation of the GE32 Layher roofs + Pa wing is also used for the other Layher roof systems.

2.4.1 LC1 Self-Weight.



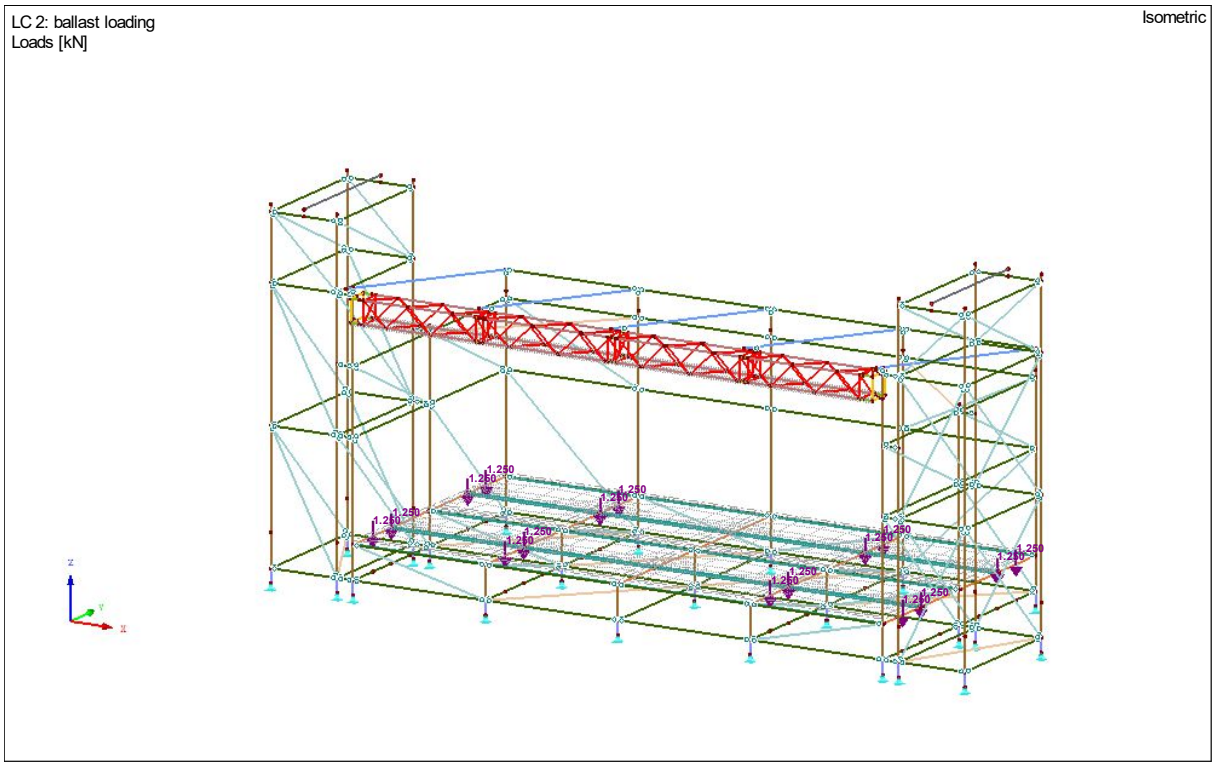
Layher pole = 0.045 kN/m^{-1}
Layher Ledger = 0.041 kN/m^{-1}
Layher Diagonal = 0.033 kN/m^{-1}
Layher event Ledger = 0.06 kN/m^{-1}

Truss Main tube 48x3 =0.012 kN/m^{-1}
Truss diagonal tube 20x2 =0.003 kN/m^{-1}

Layher event deck 18 kg/m²

Total self-weight complete Layher state 23 kN

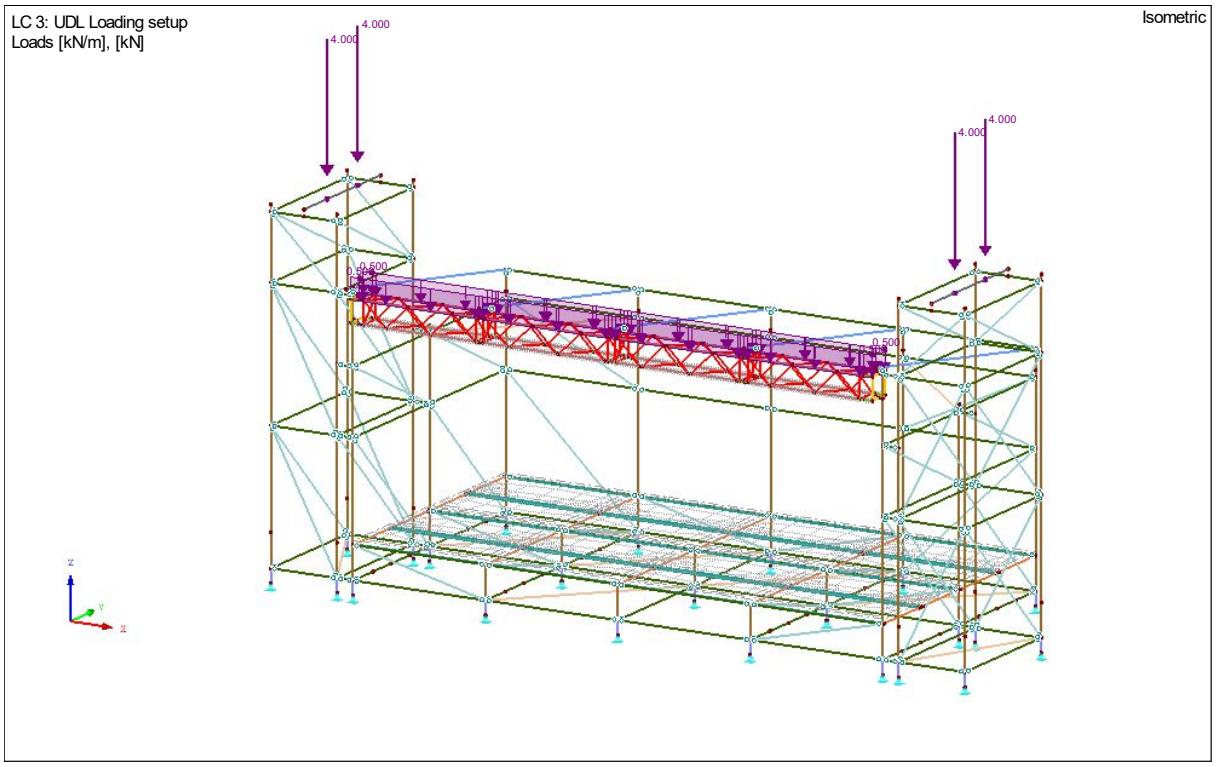
2.4.2 LC2 ballast loading



The loading which is taken into account in the UDL Loading setup are:

16 points of 1.25 kN = 20 kN total

2.4.3 LC3 UDL Loading setup.



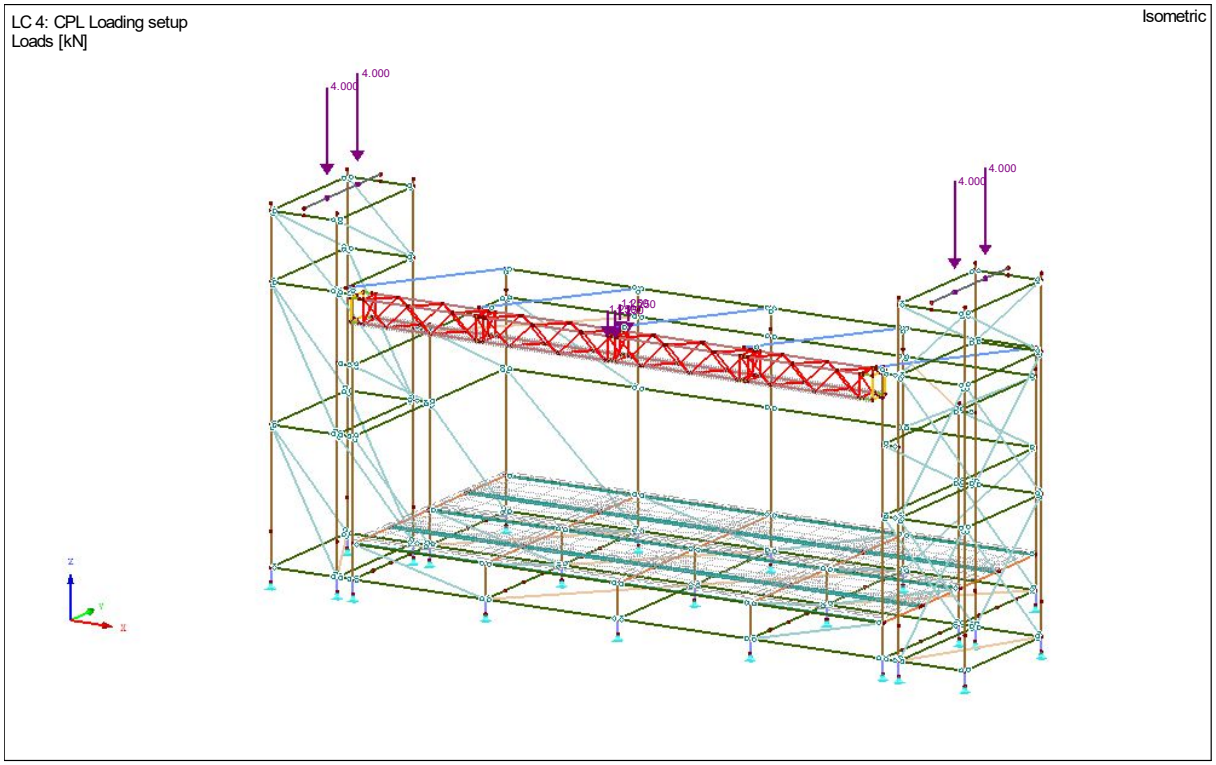
The loading which is taken into account in the UDL Loading setup are:

Truss = 0.50 kN/m

The total load on the main system is ~ 8.0 kN

PA wing per side = 8.0 kN (2x 4.0 kN)

2.4.4 LC4 Center point loading Setup



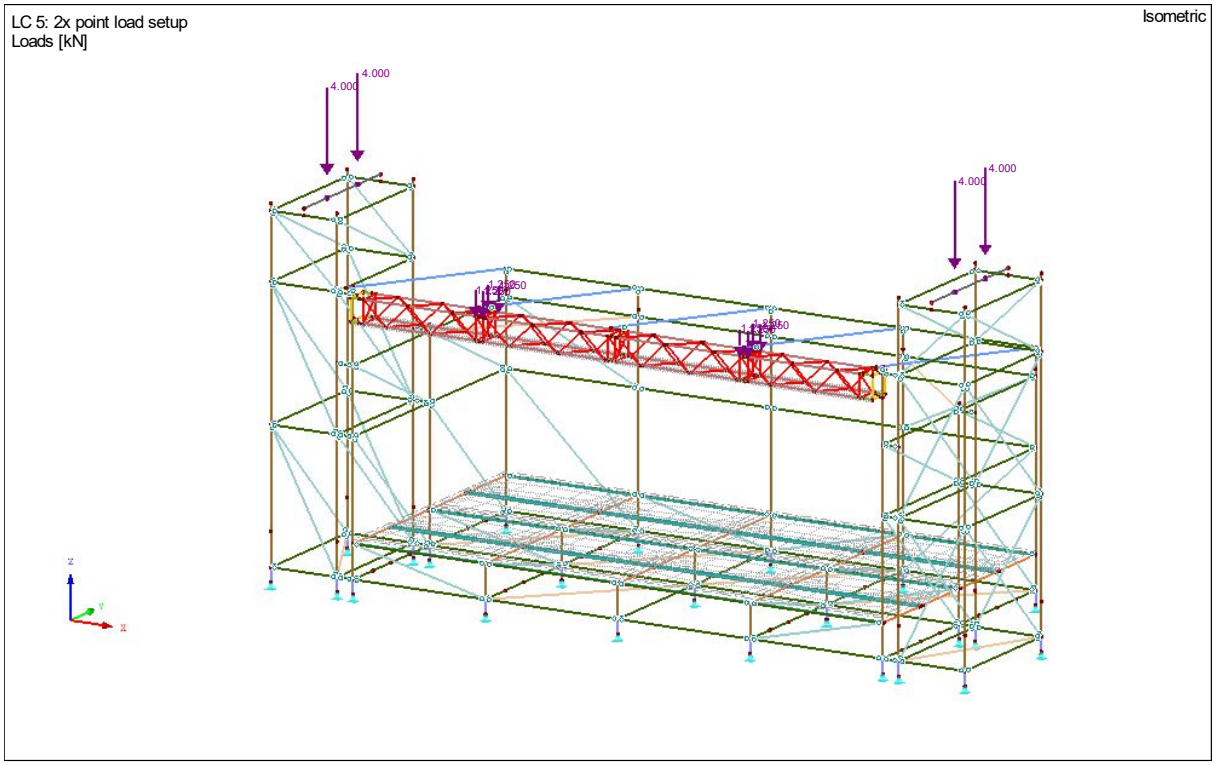
The loading which is taken into account in the Centre point Load setup are:

Truss = 5.00 kN/m

The total load on the main system is ~ 5.00 kN

PA wing per side = 8.0 kN (2x 4.0 kN)

2.4.5 LC5 2x Point load Setup



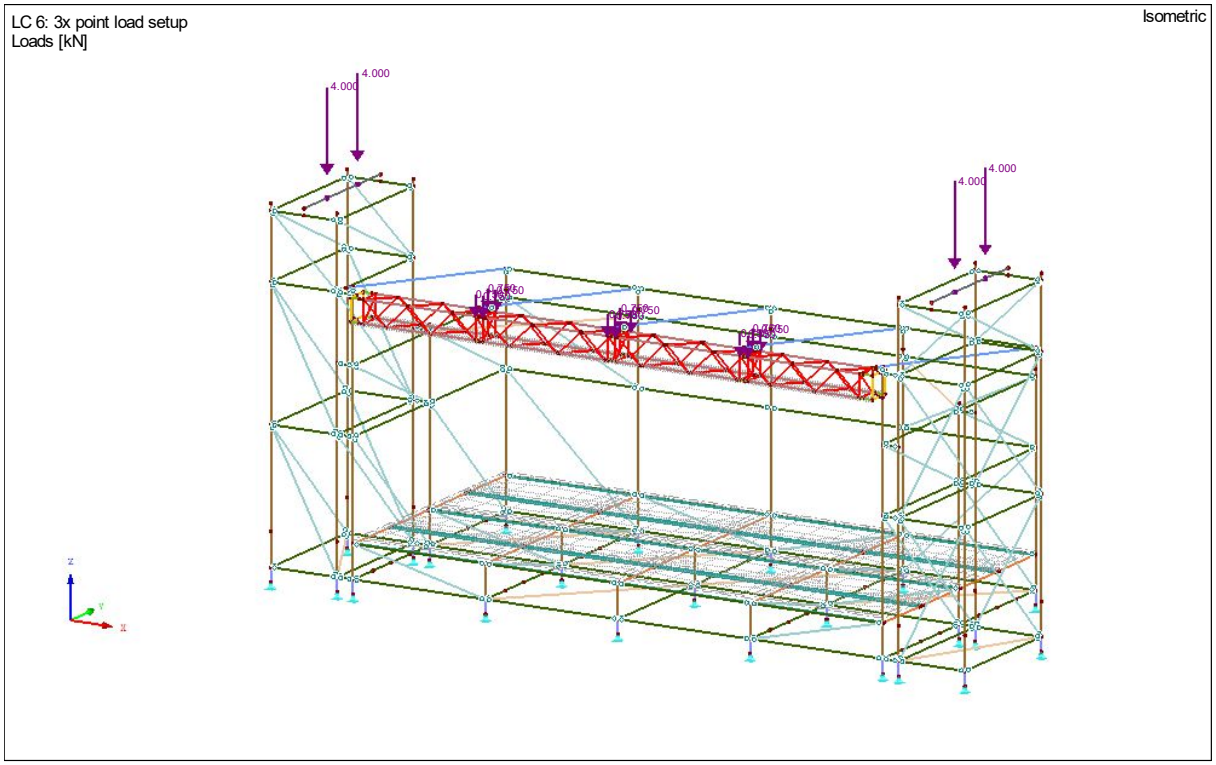
The loading which is taken into account in 2x point load setup:

Truss = 2x 5.00 kN/m

The total load on the main system is ~ 10.00 kN

PA wing per side = 8.0 kN (2x 4.0 kN)

2.4.6 LC6 3x Point load setup.



The loading which is taken into account in 2x point load setup:

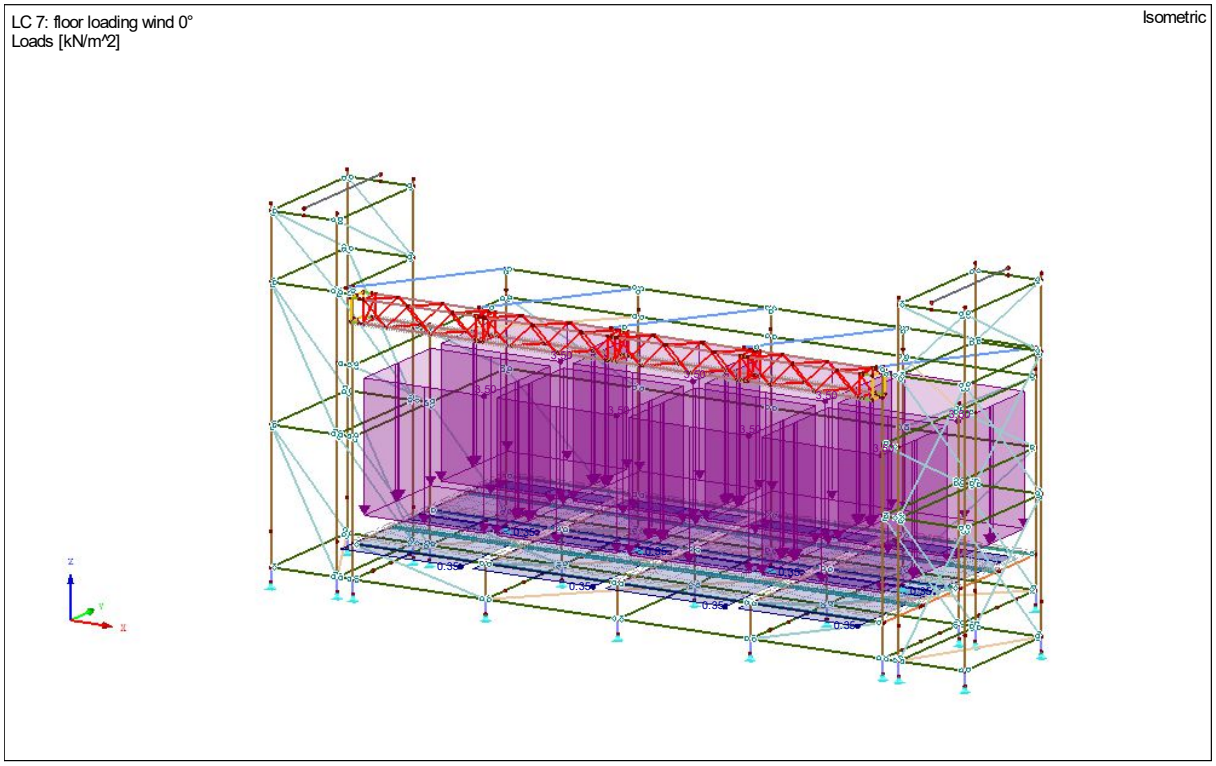
Truss = 3x 3.00 kN/m

The total load on the main system is ~ 9.00 kN

PA wing per side = 8.0 kN (2x 4.0 kN)

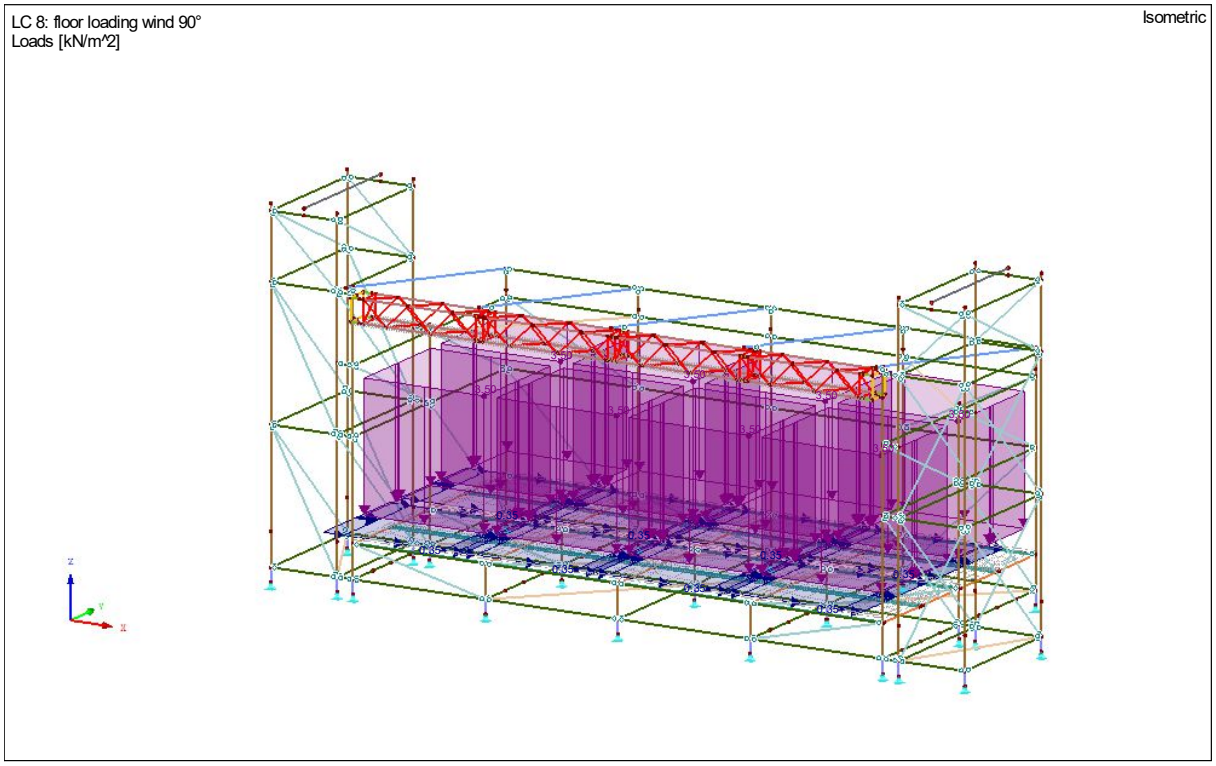
2.4.7 LC7: Floor loading wind 0°.

The floor loading which is taken into account is 350 kg/m² which is according to the NEN-EN 13814. For the horizontal stability check an extra loading of 10% of the vertical loading is set as an extra horizontal force. This horizontal force has been set in the direction of the wind.



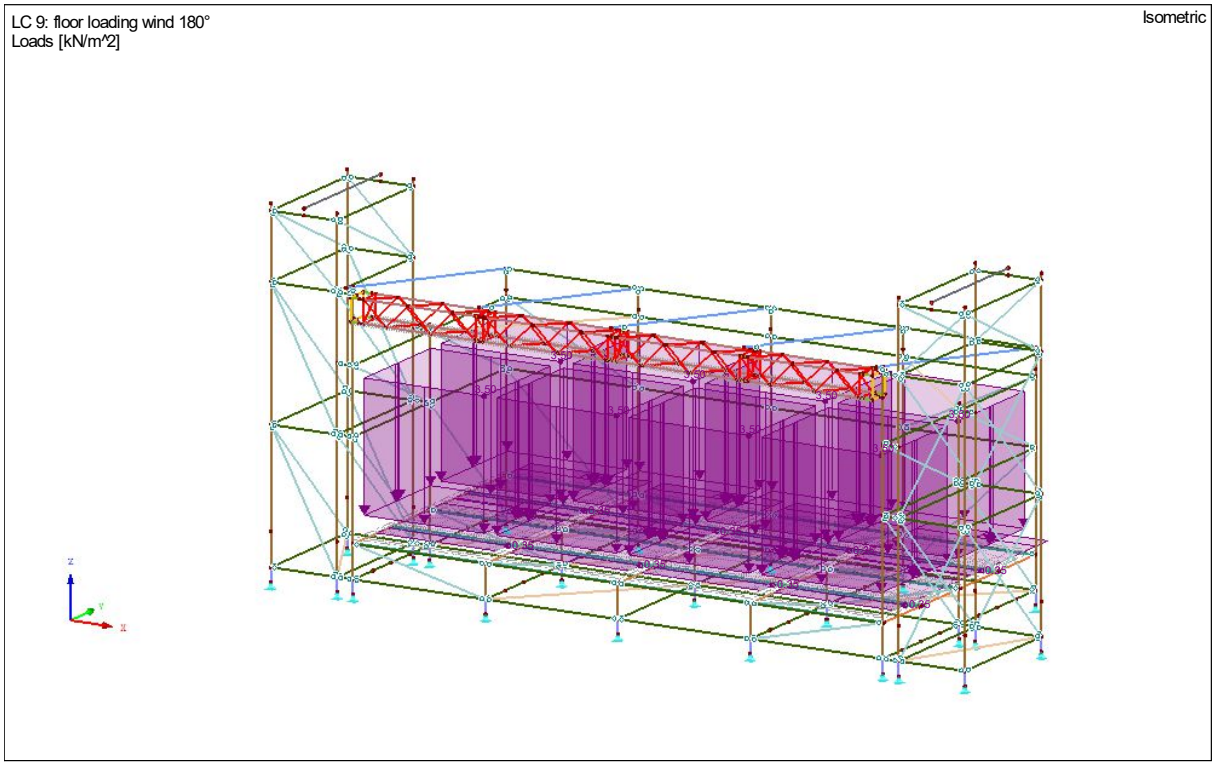
2.4.8 LC8: Floor loading wind 90°.

The floor loading which is taken into account is 350 kg/m² which is according to the NEN-EN 13814. For the horizontal stability check an extra loading of 10% of the vertical loading is set as an extra horizontal force. This horizontal force has been set in the direction of the wind.



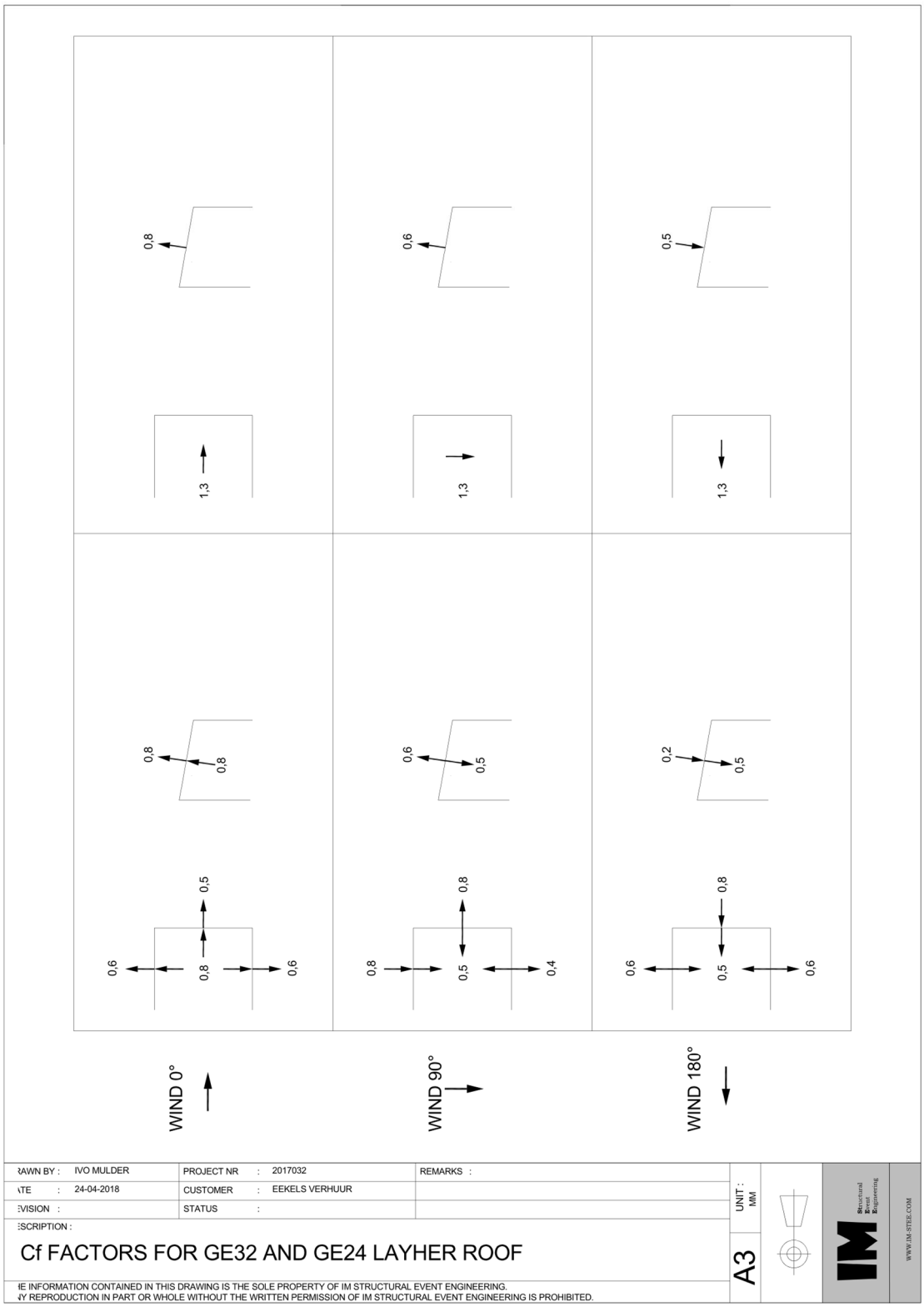
2.4.9 LC9: Floor loading wind 180°.

The floor loading which is taken into account is 350 kg/m² which is according to the NEN-EN 13814. For the horizontal stability check an extra loading of 10% of the vertical loading is set as an extra horizontal force. This horizontal force has been set in the direction of the wind.

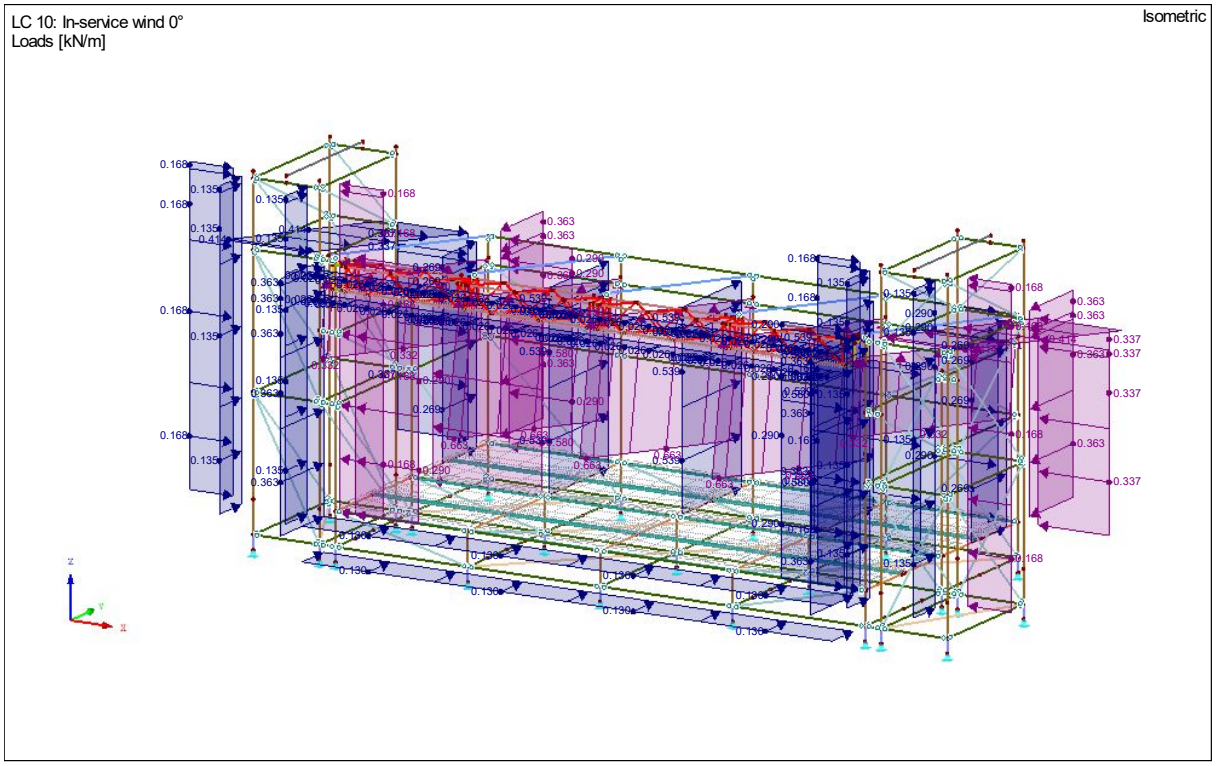


2.5 Load cases concerning wing loading for the GE32 Layher roofs + Pa wing.

For the calculation of the wind loading the next wind coefficient are used. These factors are subtracted from the Eurocode NEN-EN 1991-1 1-4: general actions – wind actions and NEN-EN 13814: Fairground and amusement park machinery and structures safety.



2.5.1 load case 10 In-service wind 0°.



Wind calculations of the main roof canopy.

$q_{w,\ roof\ profile\ 1\ and\ 4} = 1.6 * 0.2 * 1.036 = 0.332$ kN/m
$q_{w,\ roof\ profile\ 2\ and\ 3} = 1.6 * 0.2 * 2.072 = 0.663$ kN/m

Membrane tension of the main roof canopy.

$q_{mt,\ roof\ profile\ 1\ and\ 4} = 0.332 / 0.8 = 0.414$ kN/m
$q_{mt,\ roof\ profile\ 2\ and\ 3} = 0$ kN/m

Wind on the back-wall canopy.

$q_{w,\ back\ wall\ mid} = 1.3 * 0.2 * 2.072 = 0.539$ kN/m
$q_{w,\ back\ wall\ side} = 1.3 * 0.2 * 1.036 = 0.269$ kN/m

Membrane tension of the back-wall canopy.

$q_{mt,\ back\ wall\ mid} = 0$ kN/m
$q_{mt,\ back\ wall\ side} = 0.269 / 0.8 = 0.337$ kN/m

Wind on the side-wall canopy.

$q_{w,\ side\ wall\ mid} = 1.4 * 0.2 * 2.072 = 0.580$ kN/m
$q_{w,\ side\ wall\ side} = 1.4 * 0.2 * 1.036 = 0.290$ kN/m

Membrane tension of the back-wall canopy.

$q_{mt,\ side\ wall\ mid} = 0$ kN/m
$q_{mt,\ side\ wall\ side} = 0.290 / 0.8 = 0.363$ kN/m

Wind on the PA wing canopy.
Membrane tension of PA wing canopy.

$q_{w,\ PA\ Wing} = 1.3 * 0.2 * 1.036 = 0.135$ kN/m
$q_{mt,\ PA\ Wing} = 0.135 / 0.8 = 0.168$ kN/m

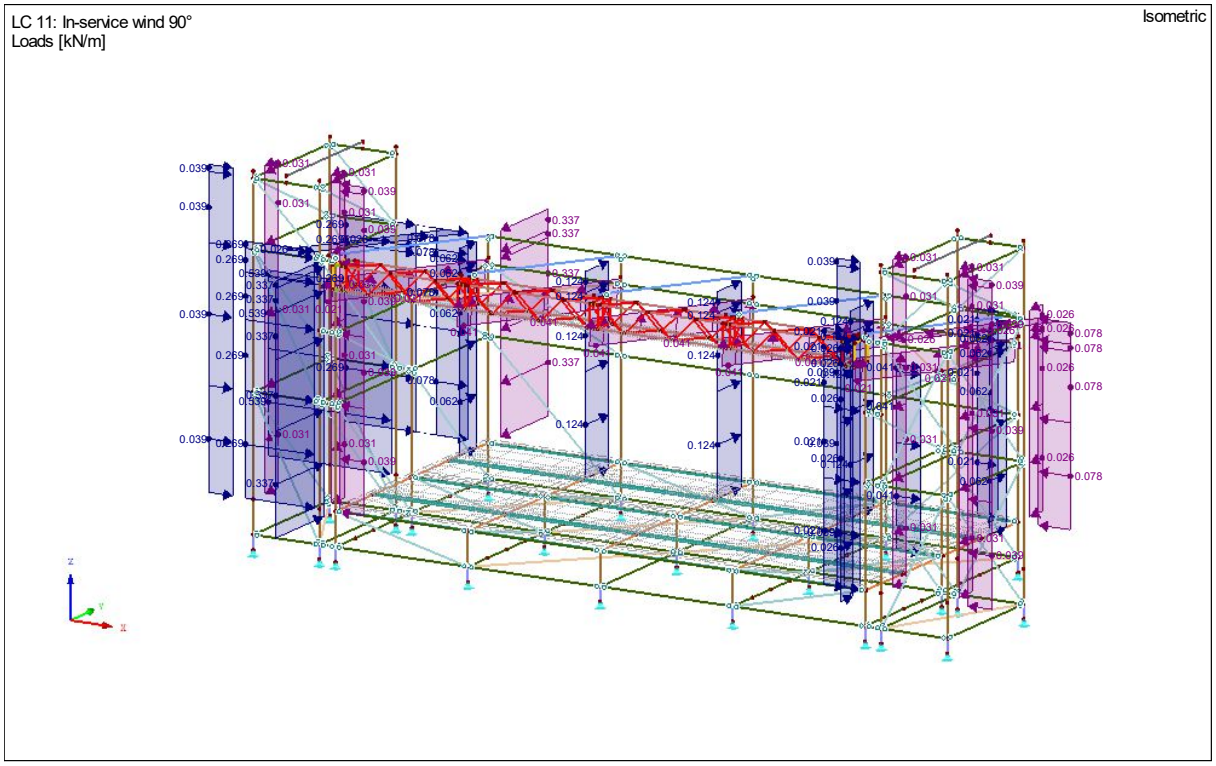
Wind on Truss.

$q_{w,\ Truss} = 1.3 * 0.2 * (0.4 / 2) * 0.5 = 0.026$ kN/m

Wind on Stage

$q_{w,\ stage} = 1.3 * 0.2 * 1 * 0.5 = 0.13$ kN/m

2.5.2 load case 11 In-service situation wind direction 90°.



Wind calculations of the main roof canopy.

$q_{w,\text{ roof profile 1 and 4}} = 0.1 * 0.2 * 1.036 = 0.021$ kN/m
$q_{w,\text{ roof profile 2 and 3}} = 0.1 * 0.2 * 2.072 = 0.124$ kN/m

Membrane tension of the main roof canopy.

$q_{mt,\text{ roof profile 1 and 4}} = 0.021 / 0.8 = 0.026$ kN/m
$q_{mt,\text{ roof profile 2 and 3}} = 0$ kN/m

Wind on the back-wall canopy.

$q_{w,\text{ back wall mid}} = 0.3 * 0.2 * 2.072 = 0.124$ kN/m
$q_{w,\text{ back wall side}} = 0.3 * 0.2 * 1.036 = 0.062$ kN/m

Membrane tension of the back-wall canopy.

$q_{mt,\text{ back wall mid}} = 0$ kN/m
$q_{mt,\text{ back wall side}} = 0.062 / 0.8 = 0.078$ kN/m

Wind on the side-wall canopy 1

$q_{w,\text{ side wall mid}} = 1.3 * 0.2 * 2.072 = 0.539$ kN/m
$q_{w,\text{ side wall side}} = 1.3 * 0.2 * 1.036 = 0.269$ kN/m

Membrane tension of the back-wall canopy1

$q_{mt,\text{ side wall mid}} = 0$ kN/m
$q_{mt,\text{ side wall side}} = 0.269 / 0.8 = 0.337$ kN/m

Wind on the side-wall canopy 2

$q_{w,\text{ side wall mid}} = 0.1 * 0.2 * 2.072 = 0.041$ kN/m
$q_{w,\text{ side wall side}} = 0.1 * 0.2 * 1.036 = 0.021$ kN/m

Membrane tension of the back-wall canopy1

$q_{mt,\text{ side wall mid}} = 0$ kN/m
$q_{mt,\text{ side wall side}} = 0.021 / 0.8 = 0.026$ kN/m

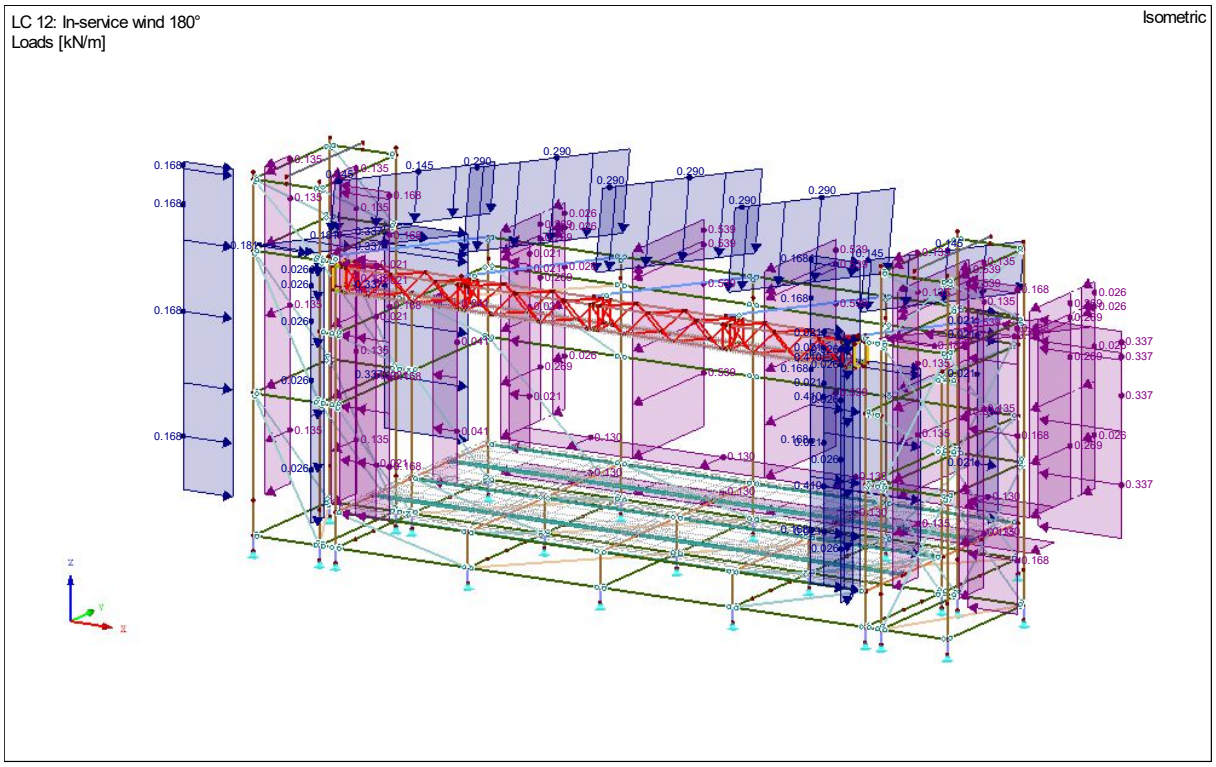
Wind on the PA wing canopy.

$q_{w,\text{ PA Wing}} = 0.3 * 0.2 * 1.036 = 0.031$ kN/m

Membrane tension of PA wing canopy.

$q_{mt,\text{ PA Wing}} = 0.031 / 0.8 = 0.039$ kN/m

2.5.3 load case 12 In-service wind 180°.



Wind calculations of the main roof canopy.

$q_{w,\ roof\ profile\ 1\ and\ 4} = 0.7 * 0.2 * 1.036 = 0.145$ kN/m
$q_{w,\ roof\ profile\ 2\ and\ 3} = 0.7 * 0.2 * 2.072 = 0.290$ kN/m

Membrane tension of the main roof canopy.

$q_{mt,\ roof\ profile\ 1\ and\ 4} = 0.145 / 0.8 = 0.181$ kN/m
$q_{mt,\ roof\ profile\ 2\ and\ 3} = 0$ kN/m

Wind on the back-wall canopy.

$q_{w,\ back\ wall\ mid} = 1.3 * 0.2 * 2.072 = 0.539$ kN/m
$q_{w,\ back\ wall\ side} = 1.3 * 0.2 * 1.036 = 0.269$ kN/m

Membrane tension of the back-wall canopy.

$q_{mt,\ back\ wall\ mid} = 0$ kN/m
$q_{mt,\ back\ wall\ side} = 0.269 / 0.8 = 0.337$ kN/m

Wind on the side-wall canopy.

$q_{w,\ side\ wall\ mid} = 0.1 * 0.2 * 2.072 = 0.041$ kN/m
$q_{w,\ side\ wall\ side} = 0.1 * 0.2 * 1.036 = 0.021$ kN/m

Membrane tension of the back-wall canopy.

$q_{mt,\ side\ wall\ mid} = 0$ kN/m
$q_{mt,\ side\ wall\ side} = 0.021 / 0.8 = 0.026$ kN/m

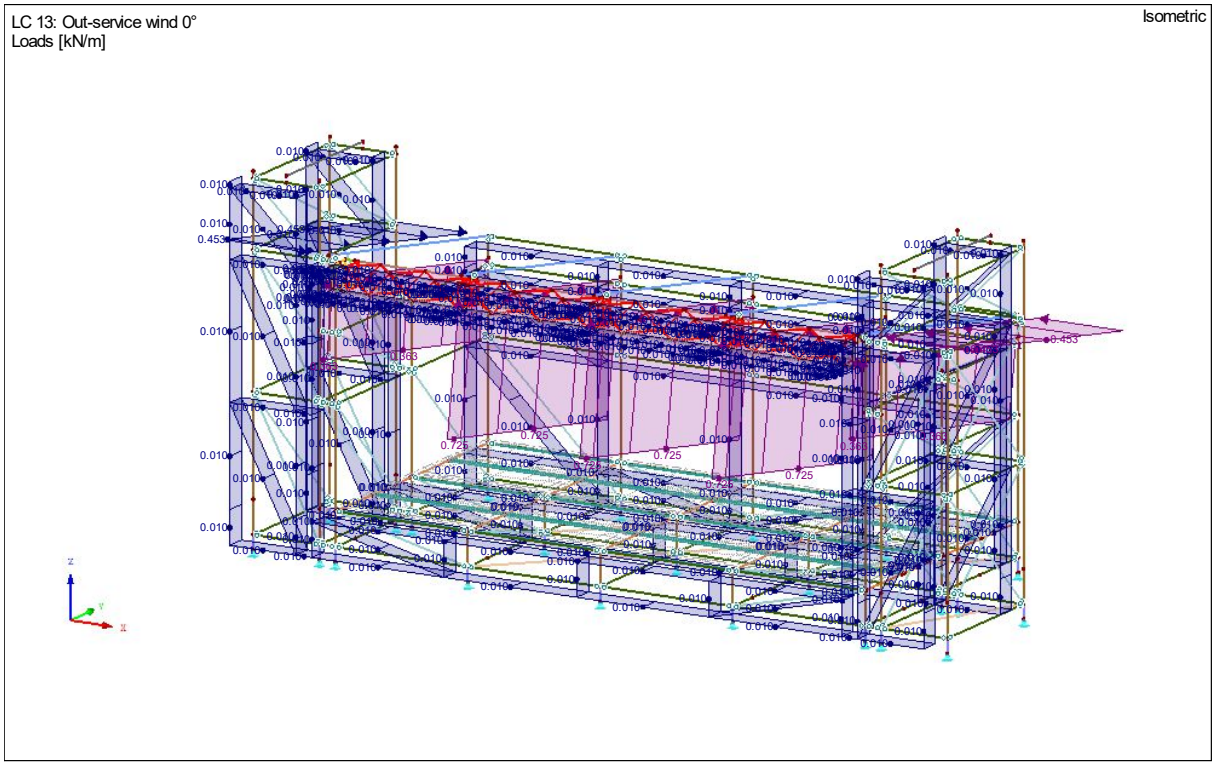
Wind on the PA wing canopy.
Membrane tension of PA wing canopy.

$q_{w,\ PA\ Wing} = 1.3 * 0.2 * 1.036 = 0.135$ kN/m
$q_{mt,\ PA\ Wing} = 0.135 / 0.8 = 0.168$ kN/m

Wind on Stage

$q_{w,\ stage} = 1.3 * 0.2 * 1 * 0.5 = 0.13$ kN/m

2.5.4 load case 13 Out-service wind 0°.



Wind calculations of the main roof canopy.

$q_{w,\ roof\ profile\ 1\ and\ 4} = 0.8 * 0.4375 * 1.036 = 0.363$ kN/m
$q_{w,\ roof\ profile\ 2\ and\ 3} = 0.8 * 0.4375 * 2.072 = 0.725$ kN/m

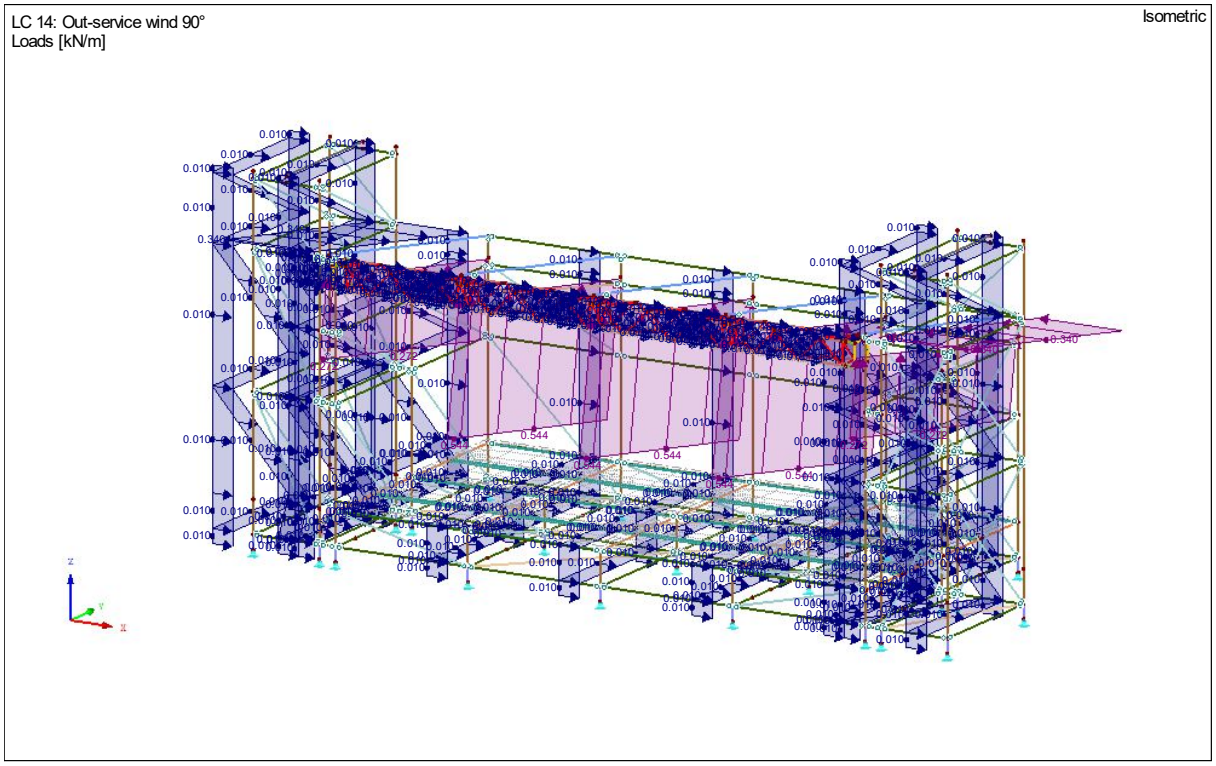
Membrane tension of the main roof canopy.

$q_{mt,\ roof\ profile\ 1\ and\ 4} = 0.363 / 0.8 = 0.453$ kN/m
$q_{mt,\ roof\ profile\ 2\ and\ 3} = 0$ kN/m

In the Out-service situation all the wall canopy's need to be removed.

A wind loading of 0.01 kN/m is set to all the profiles which lays perpendicular to the wind direction.

2.5.5 load case 14 Out-service situation wind direction 90°.



Wind calculations of the main roof canopy.

$q_{w,\ roof\ profile\ 1\ and\ 4} = 0.6 * 0.4375 * 1.036 = 0.272$ kN/m
$q_{w,\ roof\ profile\ 2\ and\ 3} = 0.6 * 0.4375 * 2.072 = 0.544$ kN/m

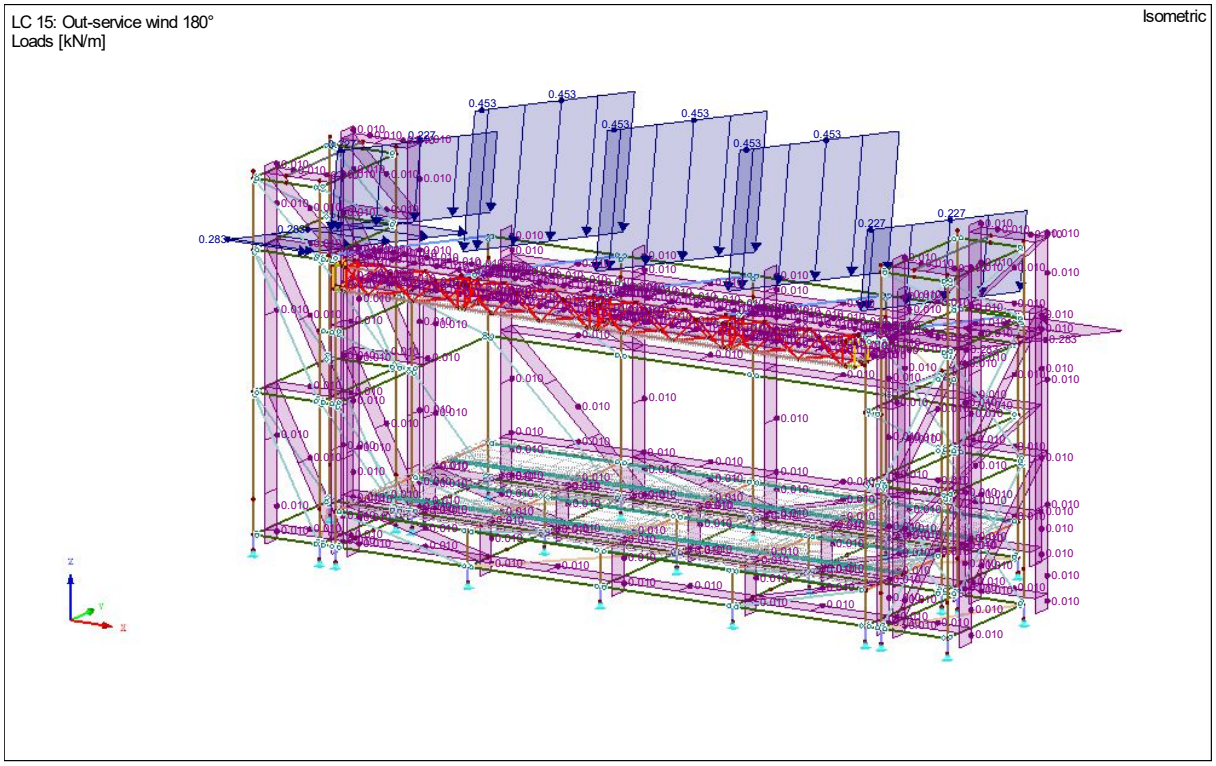
Membrane tension of the main roof canopy.

$q_{mt,\ roof\ profile\ 1\ and\ 4} = 0.272 / 0.8 = 0.340$ kN/m
$q_{mt,\ roof\ profile\ 2\ and\ 3} = 0$ kN/m

In the Out-service situation all the wall canopy's need to be removed.

A wind loading of 0.01 kN/m is set to all the profiles which lays perpendicular to the wind direction.

2.5.6 load case 15 Out-service wind 180°.



Wind calculations of the main roof canopy.

$q_{w,\ roof\ profile\ 1\ and\ 4} = 0.5 * 0.4375 * 1.036 = 0.227$ kN/m
$q_{w,\ roof\ profile\ 2\ and\ 3} = 0.5 * 0.4375 * 2.072 = 0.453$ kN/m

Membrane tension of the main roof canopy.

$q_{mt,\ roof\ profile\ 1\ and\ 4} = 0.227 / 0.8 = 0.283$ kN/m
$q_{mt,\ roof\ profile\ 2\ and\ 3} = 0$ kN/m

In the Out-service situation all the wall canopy's need to be removed.

A wind loading of 0.01 kN/m is set to all the profiles which lays perpendicular to the wind direction.

2.6 load combinations.

For all the models the same load combinations are generated.

CO1-CO4	Live load without wind
CO10-CO38	Design Values In-service situation
CO50-CO74	Characteristic Values In-service situation
CO100-CO124	Design Values Out-service situation
CO150-CO174	Characteristic Values Out-service situation

Load		Load Combination		LC.1		LC.2		LC.3		LC.4		LC.5	
Combin.	DS	Description	To Solve	Factor	No.	Factor	No.	Factor	No.	Factor	No.	Factor	No.
CO1	0	1.15*LC1 + 1.15*LC2 + 1.35*LC3	+	1,150	LC1	1,150	LC2	1,350	LC3				
CO2	0	1.15*LC1 + 1.15*LC2 + 1.35*LC4	+	1,150	LC1	1,150	LC2	1,350	LC4				
CO3	0	1.15*LC1 + 1.15*LC2 + 1.35*LC5	+	1,150	LC1	1,150	LC2	1,350	LC5				
CO4	0	1.15*LC1 + 1.15*LC2 + 1.35*LC6	+	1,150	LC1	1,150	LC2	1,350	LC6				
CO10	0	1.15*LC1 + 1.15*LC2 + 1.35*LC10	+	1,150	LC1	1,150	LC2	1,350	LC10				
CO11	0	1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC10	+	1,150	LC1	1,150	LC2	1,350	LC3	1,350	LC10		
CO12	0	1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC10	+	1,150	LC1	1,150	LC2	1,350	LC4	1,350	LC10		
CO13	0	1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC10	+	1,150	LC1	1,150	LC2	1,350	LC5	1,350	LC10		
CO14	0	1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC10	+	1,150	LC1	1,150	LC2	1,350	LC6	1,350	LC10		
CO15	0	1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC7 + 1.35*LC10	+	1,150	LC1	1,150	LC2	1,350	LC3	1,350	LC7	1,350	LC10
CO16	0	1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC7 + 1.35*LC10	+	1,150	LC1	1,150	LC2	1,350	LC4	1,350	LC7	1,350	LC10
CO17	0	1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC7 + 1.35*LC10	+	1,150	LC1	1,150	LC2	1,350	LC5	1,350	LC7	1,350	LC10
CO18	0	1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC7 + 1.35*LC10	+	1,150	LC1	1,150	LC2	1,350	LC6	1,350	LC7	1,350	LC10
CO20	0	1.15*LC1 + 1.15*LC2 + 1.35*LC11	+	1,150	LC1	1,150	LC2	1,350	LC11				
CO21	0	1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC11	+	1,150	LC1	1,150	LC2	1,350	LC3	1,350	LC11		
CO22	0	1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC11	+	1,150	LC1	1,150	LC2	1,350	LC4	1,350	LC11		
CO23	0	1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC11	+	1,150	LC1	1,150	LC2	1,350	LC5	1,350	LC11		
CO24	0	1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC11	+	1,150	LC1	1,150	LC2	1,350	LC6	1,350	LC11		
CO25	0	1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC8 + 1.35*LC11	+	1,150	LC1	1,150	LC2	1,350	LC3	1,350	LC8	1,350	LC11
CO26	0	1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC8 + 1.35*LC11	+	1,150	LC1	1,150	LC2	1,350	LC4	1,350	LC8	1,350	LC11
CO27	0	1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC8 + 1.35*LC11	+	1,150	LC1	1,150	LC2	1,350	LC5	1,350	LC8	1,350	LC11
CO28	0	1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC8 + 1.35*LC11	+	1,150	LC1	1,150	LC2	1,350	LC6	1,350	LC8	1,350	LC11
CO30	0	1.15*LC1 + 1.15*LC2 + 1.35*LC12	+	1,150	LC1	1,150	LC2	1,350	LC12				
CO31	0	1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC12	+	1,150	LC1	1,150	LC2	1,350	LC3	1,350	LC12		
CO32	0	1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC12	+	1,150	LC1	1,150	LC2	1,350	LC4	1,350	LC12		
CO33	0	1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC12	+	1,150	LC1	1,150	LC2	1,350	LC5	1,350	LC12		
CO34	0	1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC12	+	1,150	LC1	1,150	LC2	1,350	LC6	1,350	LC12		
CO35	0	1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC9 + 1.35*LC12	+	1,150	LC1	1,150	LC2	1,350	LC3	1,350	LC9	1,350	LC12
CO36	0	1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC9 + 1.35*LC12	+	1,150	LC1	1,150	LC2	1,350	LC4	1,350	LC9	1,350	LC12
CO37	0	1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC9 + 1.35*LC12	+	1,150	LC1	1,150	LC2	1,350	LC5	1,350	LC9	1,350	LC12
CO38	0	1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC9 + 1.35*LC12	+	1,150	LC1	1,150	LC2	1,350	LC6	1,350	LC9	1,350	LC12
CO50	0	LC1 + LC2 + LC10	+	1,000	LC1	1,000	LC2	1,000	LC10				
CO51	0	LC1 + LC2 + LC3 + LC10	+	1,000	LC1	1,000	LC2	1,000	LC3	1,000	LC10		
CO52	0	LC1 + LC2 + LC4 + LC10	+	1,000	LC1	1,000	LC2	1,000	LC4	1,000	LC10		
CO53	0	LC1 + LC2 + LC5 + LC10	+	1,000	LC1	1,000	LC2	1,000	LC5	1,000	LC10		
CO54	0	LC1 + LC2 + LC6 + LC10	+	1,000	LC1	1,000	LC2	1,000	LC6	1,000	LC10		
CO60	0	LC1 + LC2 + LC11	+	1,000	LC1	1,000	LC2	1,000	LC11				
CO61	0	LC1 + LC2 + LC3 + LC11	+	1,000	LC1	1,000	LC2	1,000	LC3	1,000	LC11		
CO62	0	LC1 + LC2 + LC4 + LC11	+	1,000	LC1	1,000	LC2	1,000	LC4	1,000	LC11		
CO63	0	LC1 + LC2 + LC5 + LC11	+	1,000	LC1	1,000	LC2	1,000	LC5	1,000	LC11		
CO64	0	LC1 + LC2 + LC6 + LC11	+	1,000	LC1	1,000	LC2	1,000	LC6	1,000	LC11		
CO70	0	LC1 + LC2 + LC12	+	1,000	LC1	1,000	LC2	1,000	LC12				
CO71	0	LC1 + LC2 + LC3 + LC12	+	1,000	LC1	1,000	LC2	1,000	LC3	1,000	LC12		
CO72	0	LC1 + LC2 + LC4 + LC12	+	1,000	LC1	1,000	LC2	1,000	LC4	1,000	LC12		
CO73	0	LC1 + LC2 + LC5 + LC12	+	1,000	LC1	1,000	LC2	1,000	LC5	1,000	LC12		
CO74	0	LC1 + LC2 + LC6 + LC12	+	1,000	LC1	1,000	LC2	1,000	LC6	1,000	LC12		
CO100	0	1.15*LC1 + 1.15*LC2 + 1.35*LC13	+	1,150	LC1	1,150	LC2	1,350	LC13				
CO101	0	1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC13	+	1,150	LC1	1,150	LC2	1,350	LC3	1,350	LC13		
CO102	0	1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC13	+	1,150	LC1	1,150	LC2	1,350	LC4	1,350	LC13		
CO103	0	1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC13	+	1,150	LC1	1,150	LC2	1,350	LC5	1,350	LC13		
CO104	0	1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC13	+	1,150	LC1	1,150	LC2	1,350	LC6	1,350	LC13		
CO110	0	1.15*LC1 + 1.15*LC2 + 1.35*LC14	+	1,150	LC1	1,150	LC2	1,350	LC14				
CO111	0	1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC14	+	1,150	LC1	1,150	LC2	1,350	LC3	1,350	LC14		
CO112	0	1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC14	+	1,150	LC1	1,150	LC2	1,350	LC4	1,350	LC14		
CO113	0	1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC14	+	1,150	LC1	1,150	LC2	1,350	LC5	1,350	LC14		

CO114	0	1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC14	+	1,150	LC1	1,150	LC2	1,350	LC6	1,350	LC14		
CO120	0	1.15*LC1 + 1.15*LC2 + 1.35*LC15	+	1,150	LC1	1,150	LC2	1,350	LC15				
CO121	0	1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC15	+	1,150	LC1	1,150	LC2	1,350	LC3	1,350	LC15		
CO122	0	1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC15	+	1,150	LC1	1,150	LC2	1,350	LC4	1,350	LC15		
CO123	0	1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC15	+	1,150	LC1	1,150	LC2	1,350	LC5	1,350	LC15		
CO124	0	1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC15	+	1,150	LC1	1,150	LC2	1,350	LC6	1,350	LC15		
CO150	0	LC1 + LC2 + LC13	+	1,000	LC1	1,000	LC2	1,000	LC13				
CO151	0	LC1 + LC2 + LC3 + LC13	+	1,000	LC1	1,000	LC2	1,000	LC3	1,000	LC13		
CO152	0	LC1 + LC2 + LC4 + LC13	+	1,000	LC1	1,000	LC2	1,000	LC4	1,000	LC13		
CO153	0	LC1 + LC2 + LC5 + LC13	+	1,000	LC1	1,000	LC2	1,000	LC5	1,000	LC13		
CO154	0	LC1 + LC2 + LC6 + LC13	+	1,000	LC1	1,000	LC2	1,000	LC6	1,000	LC13		
CO160	0	LC1 + LC2 + LC14	+	1,000	LC1	1,000	LC2	1,000	LC14				
CO161	0	LC1 + LC2 + LC3 + LC14	+	1,000	LC1	1,000	LC2	1,000	LC3	1,000	LC14		
CO162	0	LC1 + LC2 + LC4 + LC14	+	1,000	LC1	1,000	LC2	1,000	LC4	1,000	LC14		
CO163	0	LC1 + LC2 + LC5 + LC14	+	1,000	LC1	1,000	LC2	1,000	LC5	1,000	LC14		
CO164	0	LC1 + LC2 + LC6 + LC14	+	1,000	LC1	1,000	LC2	1,000	LC6	1,000	LC14		
CO170	0	LC1 + LC2 + LC15	+	1,000	LC1	1,000	LC2	1,000	LC15				
CO171	0	LC1 + LC2 + LC3 + LC15	+	1,000	LC1	1,000	LC2	1,000	LC3	1,000	LC15		
CO172	0	LC1 + LC2 + LC4 + LC15	+	1,000	LC1	1,000	LC2	1,000	LC4	1,000	LC15		
CO173	0	LC1 + LC2 + LC5 + LC15	+	1,000	LC1	1,000	LC2	1,000	LC5	1,000	LC15		
CO174	0	LC1 + LC2 + LC6 + LC15	+	1,000	LC1	1,000	LC2	1,000	LC6	1,000	LC15		

2.7 Result combinations.

Different Result calculation have been generated in the program.
RC1 - Live loading without wind : 1 * (CO1 - CO4)
RC2 - Design Values In-service : 1 * (CO10 – CO38)
RC3 - Characteristic Values In-service : 1 * (CO50 – CO74)
RC4 - Design Values Out-service : 1 * (CO100 – CO124)
RC5 - Characteristic Values Out-service : 1 * (CO150 – CO174)

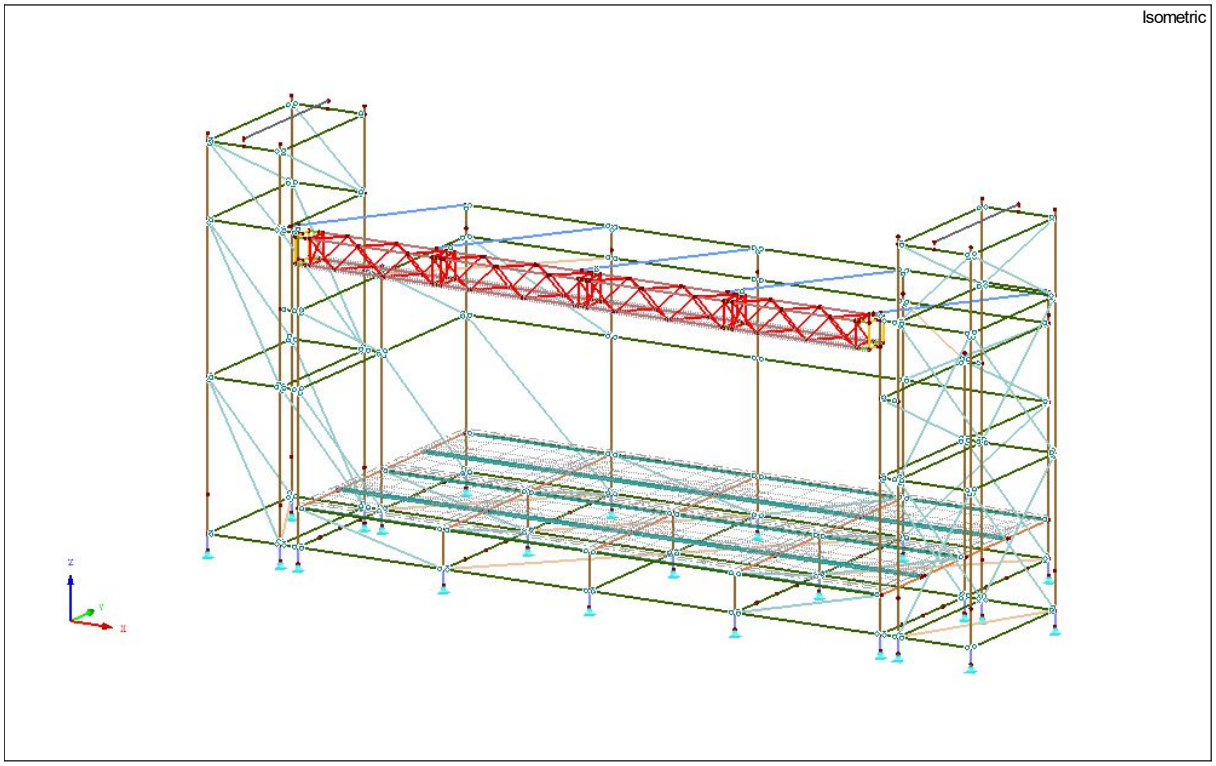
In the RC2 there are extra load combinations which includes the floor loading, these are not calculated in RC3. These are for the structural integrity check of the flooring system.

3 Calculation results for different Load Cases and Load Combinations.

In this chapter the results of the different load cases and load combinations of the GE32 Layher roof + pa wing are presented. The design calculations will be used to check the structural integrity of separate parts of the structure. The results for the characteristic calculations will be used to determine the deflection of the system and the steel wires which need to be used. These results will not be presented for each load combination. If the use of these results is necessary, the particular information will be given. For each different system there is also a stress analyse calculation.

3.1 General calculation of the GE32 Layher Roof + PA wings

3.1.1 construction scheme.



Cross-Sections
- 1: SHAPE-THIN KEDER PROFIEL 3000; Aluminum EN-AW 6082 (EP,ET) T6
- 2: QRO 50x4 (Hot Formed); Aluminum EN-AW 6082 (EP,ET) T6
- 3: Ring 48/3; Aluminum EN-AW 6082 (EP,ET) T6
- 4: Ring 48/6; Aluminum EN-AW 6082 (EP,ET) T6
- 5: Ring 20/2; Aluminum EN-AW 6082 (EP,ET) T6
- 6: RO 38x4.5 | DIN EN 10220; Steel S 355 JR
- 7: RO 48.3x3.2 (Hot Formed); S320GD 1.0250
- 8: RO 48.3x3.2 (Hot Formed); S320GD 1.0250
- 9: RO 48.3x3.2 (Hot Formed); S320GD 1.0250
- 10: RO 48.3x2.6 (Hot Formed); Steel S 235 JR
- 11: EV transom; Aluminum EN-AW 6005A (EP/O,ER/B) T6
- 12: HK 50/30/4/4/4/4; Aluminum EN-AW 6005A (EP/O,ER/B) T6
- 13: IPE 160; Steel S 235 JR
- 16: Rectangle 50/50; Aluminum EN-AW 6082 (EP,ET) T6

3.1.2 Used Materials.

Material No.	Material Description	Modulus of Elasticity E [kN/cm²]	Shear Modulus G [kN/cm²]	Poisson's Ratio ν [-]	Specific Weight γ [kN/m³]	Coeff. of Th. Exp. α [1/°C]	Partial Factor γ_M [-]	Material Model
1	Steel S 235 JR | EN 10025-2:2004-11	21000,00	8076,92	0,300	78,50	1,20E-05	1,000	Isotropic Linear Elastic
2	S320GD 1.0250 | EN 10346:2009-03	21000,00	8076,92	0,300	78,50	1,20E-05	1,000	Isotropic Linear Elastic
3	Steel S 355 JR | EN 10025-2:2004-11	21000,00	8076,92	0,300	78,50	1,20E-05	1,000	Isotropic Linear Elastic
4	Plywood, Class F20/10 E40/20, Plate Stress, Perpendicular | EN 12369-2:2011-06	200,00	3,50	3,286	5,00	5,00E-06	1,200	Orthotropic Elastic 2D...
5	Aluminum EN-AW 6005A (EP/O,ER/B) T6 | EN 1999-1-1:2007	7000,00	2700,00	0,296	27,00	2,30E-05	1,000	Isotropic Linear Elastic
6	Aluminum EN-AW 6082 (EP,ET) T6 | EN 1999-1-1:2007	7000,00	2700,00	0,296	27,00	2,30E-05	1,000	Isotropic Linear Elastic

3.1.3 Used cross sections.

Section No.	Cross-Section Description [mm]	Material No.	Moments of inertia [cm⁴] Torsion J	Bending I_y	Bending I_z	Cross-Sectional Areas [cm²] Axial A	Shear A_y	Shear A_z	Principal Axes α [°]	Rotation α' [°]	Overall Dimensions [mm] Width b	Depth h
1	SHAPE-THIN KEDER PROFIEL 3000	6	39,02	60,82	62,04	11,33	3,25	3,65	0,00	0,00	73,9	65,0
2	QRO 50x4 (Hot Formed)	6	40,40	25,00	25,00	7,19	3,12	3,12	0,00	0,00	50,0	50,0
3	Ring 48/3	6	21,57	10,78	10,78	4,24	2,14	2,14	0,00	0,00	48,0	48,0
4	Ring 48/6	6	35,63	17,81	17,81	7,92	4,09	4,09	0,00	0,00	48,0	48,0
5	Ring 20/2	6	0,93	0,46	0,46	1,13	0,58	0,58	0,00	0,00	20,0	20,0
6	RO 38x4.5 | DIN EN 10220	3	13,53	6,76	6,76	4,74	2,38	2,38	0,00	0,00	38,0	38,0
7	RO 48.3x3.2 (Hot Formed)	2	23,20	11,60	11,60	4,53	2,26	2,26	0,00	0,00	48,3	48,3
8	RO 48.3x3.2 (Hot Formed)	2	23,20	11,60	11,60	4,53	2,26	2,26	0,00	0,00	48,3	48,3
9	RO 48.3x3.2 (Hot Formed)	2	23,20	11,60	11,60	4,53	2,26	2,26	0,00	0,00	48,3	48,3
10	RO 48.3x2.6 (Hot Formed)	1	19,60	9,78	9,78	3,73	1,85	1,85	0,00	0,00	48,3	48,3
11	EV transom	5	50,00	554,00	70,00	18,78	18,00	18,00	0,00	0,00	49,0	172,5
12	HK 50/30/4/4/4/4	5	16,87	17,67	7,52	5,76	1,62	3,48	0,00	0,00	30,0	50,0
13	IPE 160	1	3,60	869,30	68,31	20,09	10,17	7,33	0,00	0,00	82,0	160,0
14	Rectangle 50/50	6	87,92	52,08	52,08	25,00	20,83	20,83	0,00	0,00	50,0	50,0

3.2 Calculation summary GE32 Layher Roof + PA wings

	Description	Value	Unit	Comment
	Summary			
	Calculation Status	OK		
	Maximum displacement in X-direction	-27,3	mm	CO104, Member No. 833, x: 2.101 m
	Maximum displacement in Y-direction	34,4	mm	CO10, Member No. 170, x: 0.100 m
	Maximum displacement in Z-direction	77,6	mm	CO100, Member No. 243, x: 2.009 m
	Maximum vectorial displacement	79,1	mm	CO100, Member No. 243, x: 2.009 m
	Maximum rotation about X-axis	-59,3	mrad	CO100, Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	-46,2	mrad	CO30, Member No. 662, x: 0.250 m
	Maximum rotation about Z-axis	-82,7	mrad	CO10, Member No. 710, x: 0.250 m
	Number of 1D finite elements (member elements)	1408		
	Number of 2D finite elements (surface elements)	1040		
	Number of 3D finite elements (solid elements)	0		
	Number of FE mesh nodes	1587		
	Number of equations	9522		
	Matrix solver method	Direct		
	Maximum number of iterations	100		
	Number of divisions for member results	10		
	Number of divisions of members with cable, elastic foundation, taper, or plastic characteristic	10		
	Activate shear stiffness of members (A-y, A-z)	+		
	Plate bending theory	Mindlin		
	Activate ineffective supports	+		
	Precision of convergence criteria of nonlinear calculation	1,0		

3.3 Calculation result of the separate load cases.

	Description	Value	Unit	Comment
	LC1 - Self-weight			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-23,04	kN	
	Sum of support forces in Z	-23,04	kN	Deviation: 0.00 %
	Resultant of reactions about X	-0,588	kNm	At center of gravity of model (X: 5.175, Y: -2.268, Z: 0.955 m)
	Resultant of reactions about Y	-0,478	kNm	At center of gravity of model
	Resultant of reactions about Z	0,000	kNm	At center of gravity of model
	Maximum displacement in X-direction	-0,7	mm	Member No. 738, x: 1.440 m
	Maximum displacement in Y-direction	-1,6	mm	Member No. 726, x: 1.440 m
	Maximum displacement in Z-direction	-4,1	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	4,1	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	2,9	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	1,4	mrad	Member No. 703, x: 2.930 m
	Maximum rotation about Z-axis	0,2	mrad	Member No. 863, x: 0.266 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC2 - ballast loading			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-20,00	kN	
	Sum of support forces in Z	-20,00	kN	Deviation: 0.00 %
	Resultant of reactions about X	-3,928	kNm	At center of gravity of model (X: 5.175, Y: -2.268, Z: 0.955 m)
	Resultant of reactions about Y	0,107	kNm	At center of gravity of model
	Resultant of reactions about Z	0,000	kNm	At center of gravity of model
	Maximum displacement in X-direction	0,0	mm	Member No. 223, x: 0.375 m
	Maximum displacement in Y-direction	0,0	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-16,3	mm	Member No. 219, x: 0.444 m
	Maximum vectorial displacement	16,3	mm	Member No. 219, x: 0.444 m
	Maximum rotation about X-axis	-26,0	mrad	Member No. 664, x: 0.000 m
	Maximum rotation about Y-axis	0,0	mrad	Member No. 707, x: 0.000 m
	Maximum rotation about Z-axis	0,0	mrad	Member No. 400, x: 0.031 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC3 - UDL Loading setup			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-24,17	kN	
	Sum of support forces in Z	-24,21	kN	Deviation: -0.17 %
	Resultant of reactions about X	28,743	kNm	At center of gravity of model (X: 5.175, Y: -2.268, Z: 0.955 m)
	Resultant of reactions about Y	0,130	kNm	At center of gravity of model
	Resultant of reactions about Z	0,000	kNm	At center of gravity of model
	Maximum displacement in X-direction	1,6	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	-1,9	mm	Member No. 45, x: 0.368 m
	Maximum displacement in Z-direction	-19,0	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	19,1	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	4,7	mrad	Member No. 991, x: 0.000 m
	Maximum rotation about Y-axis	11,3	mrad	Member No. 192, x: 0.000 m
	Maximum rotation about Z-axis	-1,6	mrad	Member No. 710, x: 0.250 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC4 - CPL Loading setup			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-21,00	kN	
	Sum of support forces in Z	-21,00	kN	Deviation: -0.01 %
	Resultant of reactions about X	22,818	kNm	At center of gravity of model (X: 5.175, Y: -2.268, Z: 0.955 m)
	Resultant of reactions about Y	0,112	kNm	At center of gravity of model
	Resultant of reactions about Z	0,000	kNm	At center of gravity of model
	Maximum displacement in X-direction	1,4	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	-1,7	mm	Member No. 45, x: 0.368 m
	Maximum displacement in Z-direction	-18,9	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	19,0	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	4,7	mrad	Member No. 991, x: 0.000 m
	Maximum rotation about Y-axis	11,2	mrad	Member No. 192, x: 0.000 m
	Maximum rotation about Z-axis	-1,2	mrad	Member No. 878, x: 0.239 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC5 - 2x point load setup			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	

	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-26,00	kN	
	Sum of support forces in Z	-26,05	kN	Deviation: -0.20 %
	Resultant of reactions about X	32,181	kNm	At center of gravity of model (X: 5.175, Y: -2.268, Z: 0.955 m)
	Resultant of reactions about Y	0,196	kNm	At center of gravity of model
	Resultant of reactions about Z	0,000	kNm	At center of gravity of model
	Maximum displacement in X-direction	2,2	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	-2,4	mm	Member No. 45, x: 0.368 m
	Maximum displacement in Z-direction	-24,8	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	24,9	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	6,1	mrad	Member No. 991, x: 0.000 m
	Maximum rotation about Y-axis	11,3	mrad	Member No. 192, x: 0.000 m
	Maximum rotation about Z-axis	-2,1	mrad	Member No. 710, x: 0.250 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC6 - 3x point load setup			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-25,00	kN	
	Sum of support forces in Z	-25,00	kN	Deviation: -0.02 %
	Resultant of reactions about X	30,324	kNm	At center of gravity of model (X: 5.175, Y: -2.268, Z: 0.955 m)
	Resultant of reactions about Y	0,168	kNm	At center of gravity of model
	Resultant of reactions about Z	0,000	kNm	At center of gravity of model
	Maximum displacement in X-direction	2,2	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	-2,4	mm	Member No. 45, x: 0.368 m
	Maximum displacement in Z-direction	-26,2	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	26,3	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	6,5	mrad	Member No. 991, x: 0.000 m
	Maximum rotation about Y-axis	11,3	mrad	Member No. 192, x: 0.000 m
	Maximum rotation about Z-axis	-2,0	mrad	Member No. 710, x: 0.250 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC7 - floor loading wind 0°			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	11,60	kN	
	Sum of support forces in Y	11,60	kN	Deviation: 0.00 %
	Sum of loads in Z	-116,03	kN	
	Sum of support forces in Z	-116,05	kN	Deviation: -0.02 %
	Resultant of reactions about X	-10,245	kNm	At center of gravity of model (X: 5.175, Y: -2.268, Z: 0.955 m)
	Resultant of reactions about Y	0,508	kNm	At center of gravity of model
	Resultant of reactions about Z	0,062	kNm	At center of gravity of model
	Maximum displacement in X-direction	-0,9	mm	FE Mesh Node No. 228 (X: 7.523, Y: -1.527, Z: -0.186 m)
	Maximum displacement in Y-direction	1,9	mm	Member No. 172, x: 0.000 m
	Maximum displacement in Z-direction	-9,1	mm	FE Mesh Node No. 247 (X: 8.289, Y: -1.631, Z: -0.186 m)
	Maximum vectorial displacement	9,2	mm	FE Mesh Node No. 125 (X: 8.289, Y: -2.513, Z: -0.186 m)
	Maximum rotation about X-axis	-13,4	mrad	Member No. 813, x: 1.036 m
	Maximum rotation about Y-axis	-16,8	mrad	FE Mesh Node No. 226 (X: 9.052, Y: -1.528, Z: -0.186 m)
	Maximum rotation about Z-axis	-4,1	mrad	Member No. 710, x: 0.250 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC8 - floor loading wind 90°			
	Sum of loads in X	11,60	kN	
	Sum of support forces in X	11,60	kN	Deviation: 0.00 %
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-116,03	kN	
	Sum of support forces in Z	-116,40	kN	Deviation: -0.31 %
	Resultant of reactions about X	-22,105	kNm	At center of gravity of model (X: 5.175, Y: -2.268, Z: 0.955 m)
	Resultant of reactions about Y	-10,325	kNm	At center of gravity of model
	Resultant of reactions about Z	-2,279	kNm	At center of gravity of model
	Maximum displacement in X-direction	1,4	mm	FE Mesh Node No. 704 (X: 2.836, Y: -1.528, Z: -0.186 m)
	Maximum displacement in Y-direction	-1,2	mm	Member No. 274, x: 1.250 m
	Maximum displacement in Z-direction	-9,1	mm	FE Mesh Node No. 1146 (X: 2.073, Y: -2.513, Z: -0.186 m)
	Maximum vectorial displacement	9,1	mm	FE Mesh Node No. 1146 (X: 2.073, Y: -2.513, Z: -0.186 m)
	Maximum rotation about X-axis	-13,4	mrad	Member No. 828, x: 1.036 m
	Maximum rotation about Y-axis	-16,8	mrad	FE Mesh Node No. 100 (X: 9.052, Y: -2.616, Z: -0.186 m)
	Maximum rotation about Z-axis	-1,2	mrad	Member No. 666, x: 0.000 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC9 - floor loading wind 180°			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	-11,60	kN	
	Sum of support forces in Y	-11,60	kN	Deviation: 0.00 %
	Sum of loads in Z	-116,03	kN	
	Sum of support forces in Z	-116,03	kN	Deviation: 0.00 %
	Resultant of reactions about X	-35,336	kNm	At center of gravity of model (X: 5.175, Y: -2.268, Z: 0.955 m)
	Resultant of reactions about Y	0,621	kNm	At center of gravity of model
	Resultant of reactions about Z	-0,062	kNm	At center of gravity of model

	Maximum displacement in X-direction	0,9	mm	FE Mesh Node No. 1032 (X: 2.836, Y: -2.616, Z: -0.186 m)
	Maximum displacement in Y-direction	-2,5	mm	Member No. 190, x: 0.000 m
	Maximum displacement in Z-direction	-9,1	mm	FE Mesh Node No. 1146 (X: 2.073, Y: -2.513, Z: -0.186 m)
	Maximum vectorial displacement	9,1	mm	FE Mesh Node No. 725 (X: 2.073, Y: -1.631, Z: -0.186 m)
	Maximum rotation about X-axis	-13,4	mrad	Member No. 813, x: 1.036 m
	Maximum rotation about Y-axis	-16,8	mrad	FE Mesh Node No. 100 (X: 9.052, Y: -2.616, Z: -0.186 m)
	Maximum rotation about Z-axis	5,9	mrad	Member No. 710, x: 0.250 m
	Method of analysis	Linear		Geometrically Linear Analysis

3.4 Calculation result of RC1 - General loading without wind 1 * (CO1 – CO4)

	Description	Value	Unit	Comment
	CO1 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-82,12	kN	
	Sum of support forces in Z	-82,12	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	2,4	mm	Member No. 23, x: 0.330 m
	Maximum displacement in Y-direction	-2,3	mm	Member No. 45, x: 0.368 m
	Maximum displacement in Z-direction	-27,1	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	27,2	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,9	mrad	Member No. 670, x: 0.000 m
	Maximum rotation about Y-axis	15,3	mrad	Member No. 192, x: 0.000 m
	Maximum rotation about Z-axis	1,9	mrad	Member No. 863, x: 0.239 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO2 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-77,85	kN	
	Sum of support forces in Z	-77,85	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	2,2	mm	Member No. 23, x: 0.330 m
	Maximum displacement in Y-direction	2,4	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-27,0	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	27,0	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,8	mrad	Member No. 670, x: 0.000 m
	Maximum rotation about Y-axis	15,3	mrad	Member No. 192, x: 0.000 m
	Maximum rotation about Z-axis	-1,8	mrad	Member No. 878, x: 0.239 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO3 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-84,60	kN	
	Sum of support forces in Z	-84,60	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	3,2	mm	Member No. 23, x: 0.330 m
	Maximum displacement in Y-direction	-3,0	mm	Member No. 45, x: 0.368 m
	Maximum displacement in Z-direction	-34,9	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	35,1	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,9	mrad	Member No. 670, x: 0.000 m
	Maximum rotation about Y-axis	15,4	mrad	Member No. 192, x: 0.000 m
	Maximum rotation about Z-axis	2,4	mrad	Member No. 863, x: 0.239 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO4 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-83,25	kN	
	Sum of support forces in Z	-83,25	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	3,2	mm	Member No. 23, x: 0.330 m
	Maximum displacement in Y-direction	-3,1	mm	Member No. 45, x: 0.368 m
	Maximum displacement in Z-direction	-36,8	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	36,9	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,9	mrad	Member No. 670, x: 0.000 m
	Maximum rotation about Y-axis	15,4	mrad	Member No. 192, x: 0.000 m
	Maximum rotation about Z-axis	-2,2	mrad	Member No. 710, x: 0.250 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T

3.5 Calculation result of RC2 – Design Values In-service: 1 * (CO10 – CO38)

	Description	Value	Unit	Comment
	CO10 - 1.15*LC1 + 1.15*LC2 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	18,58	kN	
	Sum of support forces in Y	18,58	kN	Deviation: 0.00 %
	Sum of loads in Z	-34,01	kN	
	Sum of support forces in Z	-34,01	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-24,3	mm	Member No. 833, x: 1.681 m
	Maximum displacement in Y-direction	34,4	mm	Member No. 170, x: 0.100 m
	Maximum displacement in Z-direction	68,8	mm	Member No. 243, x: 2.009 m
	Maximum vectorial displacement	71,2	mm	Member No. 243, x: 2.009 m
	Maximum rotation about X-axis	-53,1	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	44,6	mrad	Member No. 706, x: 0.000 m
	Maximum rotation about Z-axis	-82,7	mrad	Member No. 710, x: 0.250 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO11 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	18,58	kN	
	Sum of support forces in Y	18,58	kN	Deviation: 0.00 %
	Sum of loads in Z	-66,63	kN	
	Sum of support forces in Z	-66,63	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-24,6	mm	Member No. 833, x: 2.101 m
	Maximum displacement in Y-direction	15,9	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	60,0	mm	Member No. 245, x: 2.009 m
	Maximum vectorial displacement	61,6	mm	Member No. 245, x: 2.009 m
	Maximum rotation about X-axis	52,0	mrad	Member No. 992, x: 0.000 m
	Maximum rotation about Y-axis	-15,2	mrad	Member No. 246, x: 0.518 m
	Maximum rotation about Z-axis	-19,7	mrad	Member No. 833, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO12 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	18,58	kN	
	Sum of support forces in Y	18,58	kN	Deviation: 0.00 %
	Sum of loads in Z	-62,36	kN	
	Sum of support forces in Z	-62,36	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-24,6	mm	Member No. 833, x: 2.101 m
	Maximum displacement in Y-direction	16,1	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	60,6	mm	Member No. 245, x: 2.009 m
	Maximum vectorial displacement	62,2	mm	Member No. 245, x: 2.009 m
	Maximum rotation about X-axis	51,6	mrad	Member No. 992, x: 0.000 m
	Maximum rotation about Y-axis	-15,1	mrad	Member No. 246, x: 0.518 m
	Maximum rotation about Z-axis	-19,6	mrad	Member No. 833, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO13 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	18,58	kN	
	Sum of support forces in Y	18,58	kN	Deviation: 0.00 %
	Sum of loads in Z	-69,11	kN	
	Sum of support forces in Z	-69,11	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-24,8	mm	Member No. 833, x: 2.101 m
	Maximum displacement in Y-direction	15,9	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	57,4	mm	Member No. 245, x: 2.009 m
	Maximum vectorial displacement	59,0	mm	Member No. 245, x: 2.009 m
	Maximum rotation about X-axis	54,0	mrad	Member No. 992, x: 0.000 m
	Maximum rotation about Y-axis	-15,3	mrad	Member No. 246, x: 0.518 m
	Maximum rotation about Z-axis	-19,7	mrad	Member No. 833, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO14 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	18,58	kN	
	Sum of support forces in Y	18,58	kN	Deviation: 0.00 %
	Sum of loads in Z	-67,76	kN	
	Sum of support forces in Z	-67,76	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-24,8	mm	Member No. 833, x: 2.101 m

	Maximum displacement in Y-direction	16,0	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	57,3	mm	Member No. 244, x: 2.009 m
	Maximum vectorial displacement	59,0	mm	Member No. 244, x: 2.009 m
	Maximum rotation about X-axis	53,9	mrad	Member No. 992, x: 0.000 m
	Maximum rotation about Y-axis	-15,3	mrad	Member No. 246, x: 0.518 m
	Maximum rotation about Z-axis	-19,7	mrad	Member No. 833, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO15 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC7 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	34,24	kN	
	Sum of support forces in Y	34,24	kN	Deviation: 0.00 %
	Sum of loads in Z	-223,27	kN	
	Sum of support forces in Z	-223,27	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-24,7	mm	Member No. 833, x: 2.101 m
	Maximum displacement in Y-direction	16,6	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	60,0	mm	Member No. 245, x: 2.009 m
	Maximum vectorial displacement	61,7	mm	Member No. 245, x: 2.009 m
	Maximum rotation about X-axis	52,1	mrad	Member No. 992, x: 0.000 m
	Maximum rotation about Y-axis	-30,0	mrad	FE Mesh Node No. 226 (X: 9.052, Y: -1.528, Z: -0.186 m)
	Maximum rotation about Z-axis	19,7	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO16 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC7 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	34,24	kN	
	Sum of support forces in Y	34,24	kN	Deviation: 0.00 %
	Sum of loads in Z	-219,00	kN	
	Sum of support forces in Z	-219,00	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-24,6	mm	Member No. 833, x: 2.101 m
	Maximum displacement in Y-direction	16,7	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	60,6	mm	Member No. 245, x: 2.009 m
	Maximum vectorial displacement	62,3	mm	Member No. 245, x: 2.009 m
	Maximum rotation about X-axis	51,6	mrad	Member No. 992, x: 0.000 m
	Maximum rotation about Y-axis	-30,0	mrad	FE Mesh Node No. 226 (X: 9.052, Y: -1.528, Z: -0.186 m)
	Maximum rotation about Z-axis	19,7	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO17 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC7 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	34,24	kN	
	Sum of support forces in Y	34,24	kN	Deviation: 0.00 %
	Sum of loads in Z	-225,75	kN	
	Sum of support forces in Z	-225,75	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-24,9	mm	Member No. 833, x: 2.101 m
	Maximum displacement in Y-direction	16,5	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	57,3	mm	Member No. 245, x: 2.009 m
	Maximum vectorial displacement	59,1	mm	Member No. 245, x: 2.009 m
	Maximum rotation about X-axis	54,0	mrad	Member No. 992, x: 0.000 m
	Maximum rotation about Y-axis	-30,0	mrad	FE Mesh Node No. 226 (X: 9.052, Y: -1.528, Z: -0.186 m)
	Maximum rotation about Z-axis	19,8	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO18 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC7 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	34,24	kN	
	Sum of support forces in Y	34,24	kN	Deviation: 0.00 %
	Sum of loads in Z	-224,40	kN	
	Sum of support forces in Z	-224,40	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-24,9	mm	Member No. 833, x: 2.101 m
	Maximum displacement in Y-direction	16,7	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	57,3	mm	Member No. 245, x: 2.009 m
	Maximum vectorial displacement	59,1	mm	Member No. 245, x: 2.009 m
	Maximum rotation about X-axis	53,9	mrad	Member No. 992, x: 0.000 m
	Maximum rotation about Y-axis	-30,0	mrad	FE Mesh Node No. 226 (X: 9.052, Y: -1.528, Z: -0.186 m)
	Maximum rotation about Z-axis	19,8	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO20 - 1.15*LC1 + 1.15*LC2 + 1.35*LC11			
	Sum of loads in X	4,58	kN	
	Sum of support forces in X	4,58	kN	Deviation: 0.00 %

	Sum of loads in Y	1,68	kN	
	Sum of support forces in Y	1,68	kN	Deviation: 0.00 %
	Sum of loads in Z	-48,53	kN	
	Sum of support forces in Z	-48,53	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	5,5	mm	Member No. 173, x: 0.000 m
	Maximum displacement in Y-direction	4,2	mm	Member No. 227, x: 0.375 m
	Maximum displacement in Z-direction	-19,2	mm	Member No. 202, x: 0.444 m
	Maximum vectorial displacement	19,2	mm	Member No. 202, x: 0.444 m
	Maximum rotation about X-axis	30,6	mrad	Member No. 647, x: 0.000 m
	Maximum rotation about Y-axis	-2,6	mrad	Member No. 659, x: 0.250 m
	Maximum rotation about Z-axis	5,4	mrad	Member No. 710, x: 0.250 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO21 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC11			
	Sum of loads in X	4,58	kN	
	Sum of support forces in X	4,58	kN	Deviation: 0.00 %
	Sum of loads in Y	1,68	kN	
	Sum of support forces in Y	1,68	kN	Deviation: 0.00 %
	Sum of loads in Z	-81,16	kN	
	Sum of support forces in Z	-81,16	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	3,9	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	4,5	mm	Member No. 285, x: 0.750 m
	Maximum displacement in Z-direction	-27,6	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	27,6	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,8	mrad	Member No. 670, x: 0.000 m
	Maximum rotation about Y-axis	15,7	mrad	Member No. 193, x: 0.000 m
	Maximum rotation about Z-axis	3,5	mrad	Member No. 710, x: 0.250 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO22 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC11			
	Sum of loads in X	4,58	kN	
	Sum of support forces in X	4,58	kN	Deviation: 0.00 %
	Sum of loads in Y	1,68	kN	
	Sum of support forces in Y	1,68	kN	Deviation: 0.00 %
	Sum of loads in Z	-76,88	kN	
	Sum of support forces in Z	-76,88	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	3,5	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	4,6	mm	Member No. 285, x: 0.750 m
	Maximum displacement in Z-direction	-27,4	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	27,5	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,7	mrad	Member No. 670, x: 0.000 m
	Maximum rotation about Y-axis	15,6	mrad	Member No. 193, x: 0.000 m
	Maximum rotation about Z-axis	3,7	mrad	Member No. 710, x: 0.250 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO23 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC11			
	Sum of loads in X	4,58	kN	
	Sum of support forces in X	4,58	kN	Deviation: 0.00 %
	Sum of loads in Y	1,68	kN	
	Sum of support forces in Y	1,68	kN	Deviation: 0.00 %
	Sum of loads in Z	-83,63	kN	
	Sum of support forces in Z	-83,63	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	5,2	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	5,0	mm	Member No. 285, x: 0.875 m
	Maximum displacement in Z-direction	-35,5	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	35,6	mm	FE Mesh Node No. 485 (X: 5.180, Y: -4.325, Z: 3.445 m)
	Maximum rotation about X-axis	30,8	mrad	Member No. 670, x: 0.000 m
	Maximum rotation about Y-axis	15,9	mrad	Member No. 192, x: 0.000 m
	Maximum rotation about Z-axis	3,2	mrad	Member No. 710, x: 0.250 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO24 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC11			
	Sum of loads in X	4,58	kN	
	Sum of support forces in X	4,58	kN	Deviation: 0.00 %
	Sum of loads in Y	1,68	kN	
	Sum of support forces in Y	1,68	kN	Deviation: 0.00 %
	Sum of loads in Z	-82,28	kN	
	Sum of support forces in Z	-82,28	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	5,1	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	5,2	mm	Member No. 479, x: 2.072 m
	Maximum displacement in Z-direction	-37,4	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	37,5	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,8	mrad	Member No. 670, x: 0.000 m
	Maximum rotation about Y-axis	15,9	mrad	Member No. 192, x: 0.000 m
	Maximum rotation about Z-axis	3,2	mrad	Member No. 710, x: 0.250 m

	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO25 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC8 + 1.35*LC11			
	Sum of loads in X	20,24	kN	
	Sum of support forces in X	20,24	kN	Deviation: 0.00 %
	Sum of loads in Y	1,68	kN	
	Sum of support forces in Y	1,68	kN	Deviation: 0.00 %
	Sum of loads in Z	-237,80	kN	
	Sum of support forces in Z	-237,80	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	4,7	mm	Member No. 173, x: 0.000 m
	Maximum displacement in Y-direction	4,1	mm	Member No. 28, x: 0.300 m
	Maximum displacement in Z-direction	-27,7	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	27,8	mm	FE Mesh Node No. 485 (X: 5.180, Y: -4.325, Z: 3.445 m)
	Maximum rotation about X-axis	30,4	mrad	Member No. 581, x: 0.000 m
	Maximum rotation about Y-axis	-30,3	mrad	FE Mesh Node No. 100 (X: 9.052, Y: -2.616, Z: -0.186 m)
	Maximum rotation about Z-axis	3,8	mrad	Member No. 710, x: 0.250 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO26 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC8 + 1.35*LC11			
	Sum of loads in X	20,24	kN	
	Sum of support forces in X	20,24	kN	Deviation: 0.00 %
	Sum of loads in Y	1,68	kN	
	Sum of support forces in Y	1,68	kN	Deviation: 0.00 %
	Sum of loads in Z	-233,53	kN	
	Sum of support forces in Z	-233,53	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	4,4	mm	Member No. 173, x: 0.000 m
	Maximum displacement in Y-direction	4,2	mm	Member No. 28, x: 0.300 m
	Maximum displacement in Z-direction	-27,6	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	27,7	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,3	mrad	Member No. 581, x: 0.000 m
	Maximum rotation about Y-axis	-30,3	mrad	FE Mesh Node No. 100 (X: 9.052, Y: -2.616, Z: -0.186 m)
	Maximum rotation about Z-axis	4,1	mrad	Member No. 710, x: 0.250 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO27 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC8 + 1.35*LC11			
	Sum of loads in X	20,24	kN	
	Sum of support forces in X	20,24	kN	Deviation: 0.00 %
	Sum of loads in Y	1,68	kN	
	Sum of support forces in Y	1,68	kN	Deviation: 0.00 %
	Sum of loads in Z	-240,28	kN	
	Sum of support forces in Z	-240,28	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	5,8	mm	Member No. 173, x: 0.000 m
	Maximum displacement in Y-direction	4,9	mm	Member No. 28, x: 0.300 m
	Maximum displacement in Z-direction	-35,7	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	35,8	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,4	mrad	Member No. 581, x: 0.000 m
	Maximum rotation about Y-axis	30,3	mrad	FE Mesh Node No. 1034 (X: 1.307, Y: -2.617, Z: -0.186 m)
	Maximum rotation about Z-axis	3,5	mrad	Member No. 710, x: 0.250 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO28 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC8 + 1.35*LC11			
	Sum of loads in X	20,24	kN	
	Sum of support forces in X	20,24	kN	Deviation: 0.00 %
	Sum of loads in Y	1,68	kN	
	Sum of support forces in Y	1,68	kN	Deviation: 0.00 %
	Sum of loads in Z	-238,93	kN	
	Sum of support forces in Z	-238,93	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	5,8	mm	Member No. 173, x: 0.000 m
	Maximum displacement in Y-direction	5,1	mm	Member No. 28, x: 0.300 m
	Maximum displacement in Z-direction	-37,6	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	37,7	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,4	mrad	Member No. 581, x: 0.000 m
	Maximum rotation about Y-axis	30,3	mrad	FE Mesh Node No. 1034 (X: 1.307, Y: -2.617, Z: -0.186 m)
	Maximum rotation about Z-axis	3,6	mrad	Member No. 710, x: 0.250 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO30 - 1.15*LC1 + 1.15*LC2 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-15,79	kN	
	Sum of support forces in Y	-15,79	kN	Deviation: 0.00 %
	Sum of loads in Z	-56,27	kN	
	Sum of support forces in Z	-56,27	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	12,3	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-29,4	mm	Member No. 170, x: 0.100 m

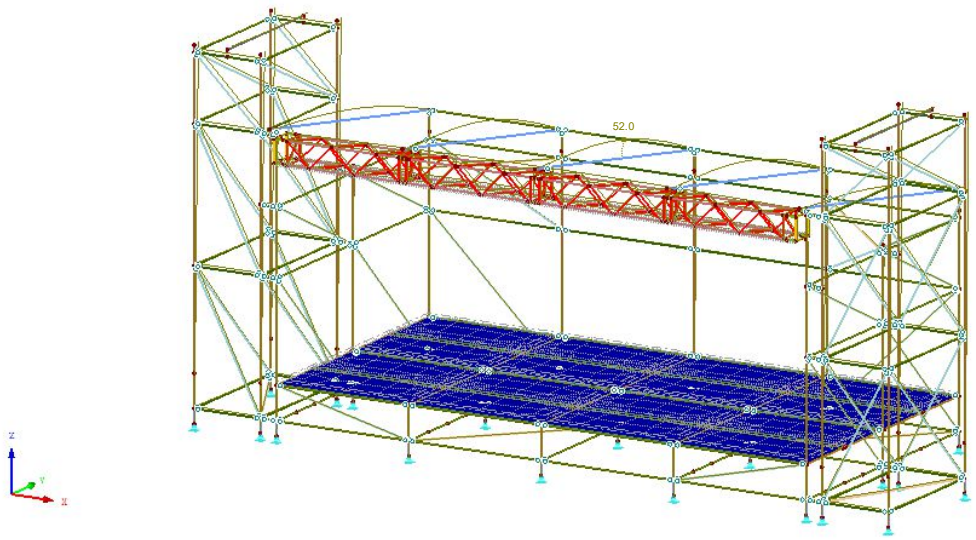
	Maximum displacement in Z-direction	-37,5	mm	Member No. 243, x: 2.009 m
	Maximum vectorial displacement	39,5	mm	Member No. 243, x: 2.009 m
	Maximum rotation about X-axis	-31,6	mrad	Member No. 664, x: 0.000 m
	Maximum rotation about Y-axis	-46,2	mrad	Member No. 662, x: 0.250 m
	Maximum rotation about Z-axis	-80,6	mrad	Member No. 666, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO31 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-15,79	kN	
	Sum of support forces in Y	-15,79	kN	Deviation: 0.00 %
	Sum of loads in Z	-88,89	kN	
	Sum of support forces in Z	-88,89	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	12,9	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-12,7	mm	Member No. 285, x: 0.125 m
	Maximum displacement in Z-direction	-50,5	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	51,7	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	33,9	mrad	Member No. 243, x: 0.000 m
	Maximum rotation about Y-axis	15,4	mrad	Member No. 192, x: 0.000 m
	Maximum rotation about Z-axis	9,5	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO32 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-15,79	kN	
	Sum of support forces in Y	-15,79	kN	Deviation: 0.00 %
	Sum of loads in Z	-84,62	kN	
	Sum of support forces in Z	-84,62	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	12,8	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-12,6	mm	Member No. 285, x: 0.125 m
	Maximum displacement in Z-direction	-50,3	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	51,5	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	33,8	mrad	Member No. 243, x: 0.000 m
	Maximum rotation about Y-axis	15,4	mrad	Member No. 192, x: 0.000 m
	Maximum rotation about Z-axis	9,5	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO33 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-15,79	kN	
	Sum of support forces in Y	-15,79	kN	Deviation: 0.00 %
	Sum of loads in Z	-91,37	kN	
	Sum of support forces in Z	-91,37	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	13,1	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-12,6	mm	Member No. 285, x: 0.125 m
	Maximum displacement in Z-direction	-54,7	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	55,8	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	35,5	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	17,2	mrad	Member No. 851, x: 0.030 m
	Maximum rotation about Z-axis	9,6	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO34 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-15,79	kN	
	Sum of support forces in Y	-15,79	kN	Deviation: 0.00 %
	Sum of loads in Z	-90,02	kN	
	Sum of support forces in Z	-90,02	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	13,1	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-12,4	mm	Member No. 285, x: 0.125 m
	Maximum displacement in Z-direction	-55,6	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	56,7	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	35,8	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	16,9	mrad	Member No. 851, x: 0.030 m
	Maximum rotation about Z-axis	9,6	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO35 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC9 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-31,46	kN	

	Sum of support forces in Y	-31,46	kN	Deviation: 0.00 %
	Sum of loads in Z	-245,54	kN	
	Sum of support forces in Z	-245,54	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	12,9	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-15,3	mm	Member No. 285, x: 0.125 m
	Maximum displacement in Z-direction	-50,5	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	51,9	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	33,9	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	30,2	mrad	FE Mesh Node No. 1034 (X: 1.307, Y: -2.617, Z: -0.186 m)
	Maximum rotation about Z-axis	9,5	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO36 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC9 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-31,46	kN	
	Sum of support forces in Y	-31,46	kN	Deviation: 0.00 %
	Sum of loads in Z	-241,26	kN	
	Sum of support forces in Z	-241,26	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	12,8	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-15,2	mm	Member No. 285, x: 0.125 m
	Maximum displacement in Z-direction	-50,4	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	51,7	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	33,8	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	30,2	mrad	FE Mesh Node No. 1034 (X: 1.307, Y: -2.617, Z: -0.186 m)
	Maximum rotation about Z-axis	9,5	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO37 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC9 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-31,46	kN	
	Sum of support forces in Y	-31,46	kN	Deviation: 0.00 %
	Sum of loads in Z	-248,01	kN	
	Sum of support forces in Z	-248,01	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	13,1	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-15,1	mm	Member No. 285, x: 0.125 m
	Maximum displacement in Z-direction	-54,7	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	56,0	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	35,5	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	30,2	mrad	FE Mesh Node No. 1034 (X: 1.307, Y: -2.617, Z: -0.186 m)
	Maximum rotation about Z-axis	9,6	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO38 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC9 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-31,46	kN	
	Sum of support forces in Y	-31,46	kN	Deviation: 0.00 %
	Sum of loads in Z	-246,66	kN	
	Sum of support forces in Z	-246,66	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	13,1	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-15,0	mm	Member No. 285, x: 0.125 m
	Maximum displacement in Z-direction	-55,6	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	56,9	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	35,8	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	30,2	mrad	FE Mesh Node No. 1034 (X: 1.307, Y: -2.617, Z: -0.186 m)
	Maximum rotation about Z-axis	9,6	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T

3.5.1 Deformation of the In-service situation characteristic max and min values.

RC 3: CO50 or to CO54 or CO60 or to CO64 or CO70 or to CO74
Global Deformations u
Result Combinations: Max Values

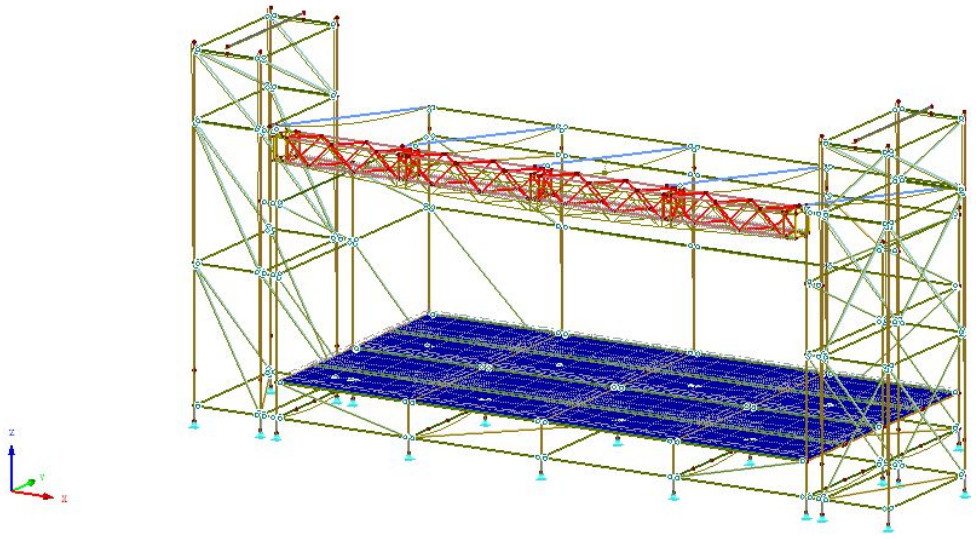
Isometric



Max u: 52.0, Min u: 0.0 [mm]
Factor of deformations: 5.00

RC 3: CO50 or to CO54 or CO60 or to CO64 or CO70 or to CO74
Global Deformations u
Result Combinations: Min Values

Isometric

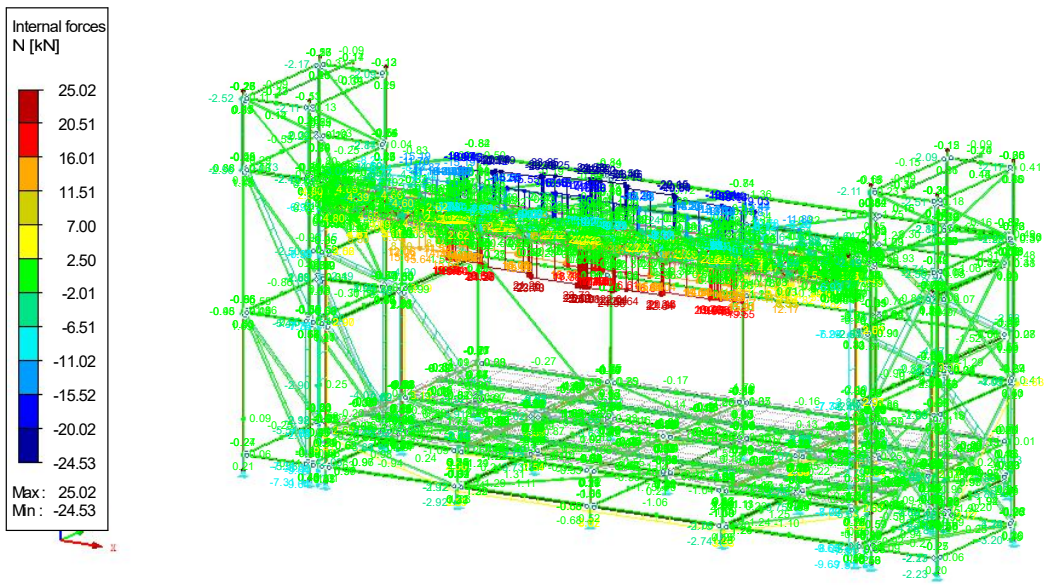


Max u: 42.6, Min u: 0.0 [mm]
Factor of deformations: 5.00

3.5.2 Internal force diagram RC2 Design values In-service.

RC 3: CO50 or to CO54 or CO60 or to CO64 or CO70 or to CO74
Members Internal Forces N
Result Combinations: Max and Min Values

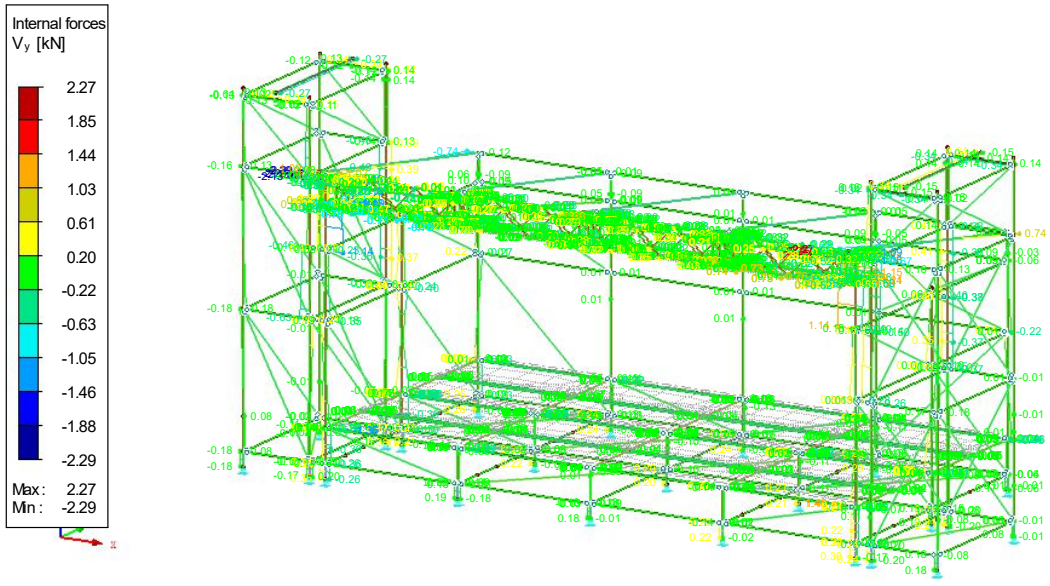
Isometric



Members Max N: 25.02, Min N: -24.53 [kN]

RC 3: CO50 or to CO54 or CO60 or to CO64 or CO70 or to CO74
Members Internal Forces V-y
Result Combinations: Max and Min Values

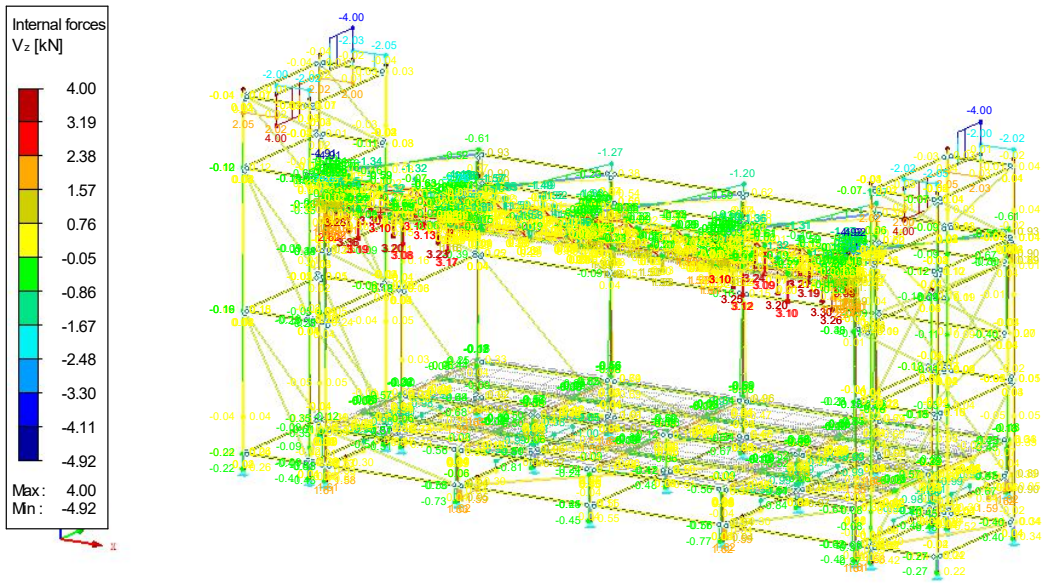
Isometric



Members Max V-y: 2.27, Min V-y: -2.29 [kN]

RC 3: CO50 or to CO54 or CO60 or to CO64 or CO70 or to CO74
Members Internal Forces V-z
Result Combinations: Max and Min Values

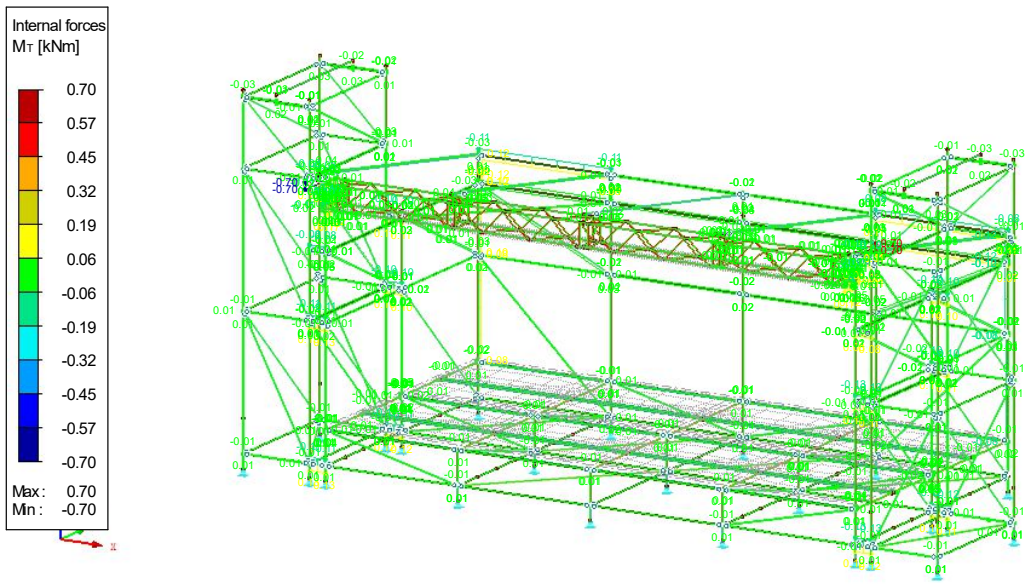
Isometric



Members Max V-z: 4.00, Min V-z: -4.92 [kN]

RC 3: CO50 or to CO54 or CO60 or to CO64 or CO70 or to CO74
Members Internal Forces M-T
Result Combinations: Max and Min Values

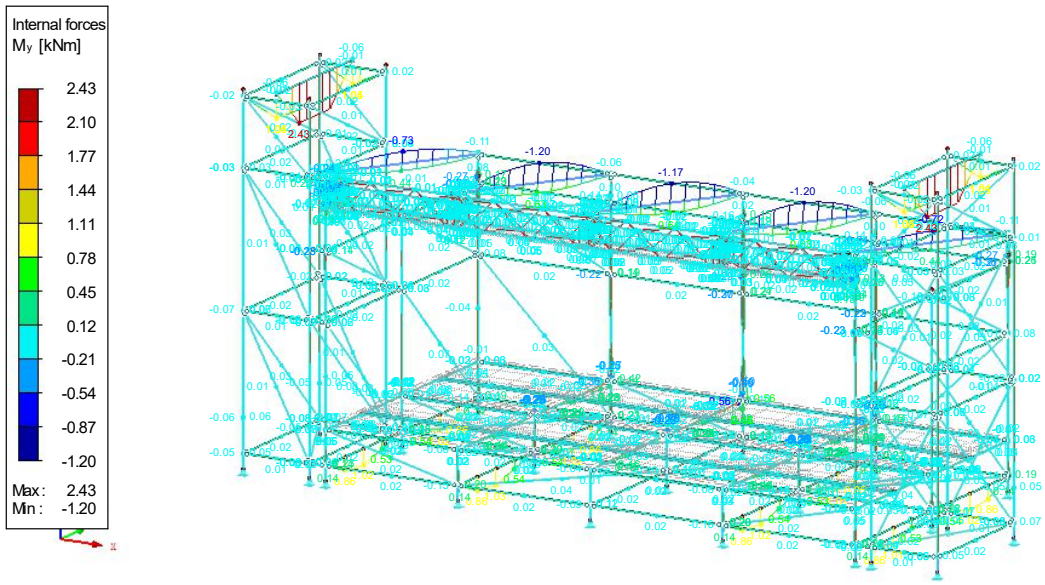
Isometric



Members Max M-T: 0.70, Min M-T: -0.70 [kNm]

RC 3: CO50 or to CO54 or CO60 or to CO64 or CO70 or to CO74
Members Internal Forces M-y
Result Combinations: Max and Min Values

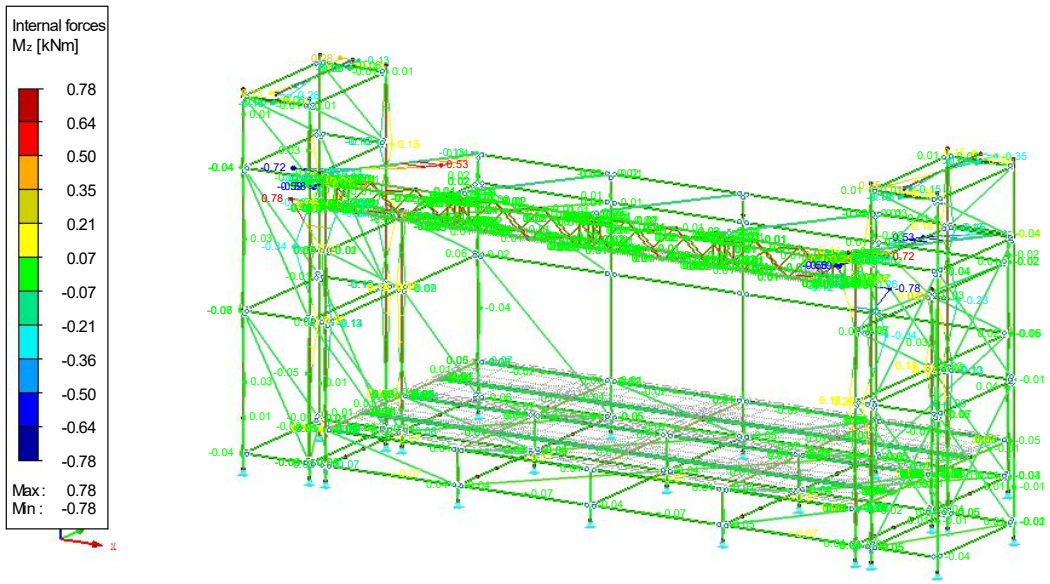
Isometric



Members Max M-y: 2.43, Min M-y: -1.20 [kNm]

RC 3: CO50 or to CO54 or CO60 or to CO64 or CO70 or to CO74
Members Internal Forces M-z
Result Combinations: Max and Min Values

Isometric



Members Max M-z: 0.78, Min M-z: -0.78 [kNm]

3.6 Calculation result of RC4 - Design Values Out-service: 1 * (CO100 – CO124)

	Description	Value	Unit	Comment
	CO100 - 1.15*LC1 + 1.15*LC2 + 1.35*LC13			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	6,27	kN	
	Sum of support forces in Y	6,27	kN	Deviation: 0.00 %
	Sum of loads in Z	-32,56	kN	
	Sum of support forces in Z	-32,56	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-26,6	mm	Member No. 833, x: 1.681 m
	Maximum displacement in Y-direction	15,0	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	77,6	mm	Member No. 243, x: 2.009 m
	Maximum vectorial displacement	79,1	mm	Member No. 243, x: 2.009 m
	Maximum rotation about X-axis	-59,3	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	-6,8	mrad	Member No. 837, x: 3.362 m
	Maximum rotation about Z-axis	-21,5	mrad	Member No. 833, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO101 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC13			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	6,27	kN	
	Sum of support forces in Y	6,27	kN	Deviation: 0.00 %
	Sum of loads in Z	-65,18	kN	
	Sum of support forces in Z	-65,18	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-27,1	mm	Member No. 833, x: 2.101 m
	Maximum displacement in Y-direction	14,3	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	66,3	mm	Member No. 243, x: 2.009 m
	Maximum vectorial displacement	67,8	mm	Member No. 243, x: 2.009 m
	Maximum rotation about X-axis	56,6	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	-15,1	mrad	Member No. 246, x: 0.518 m
	Maximum rotation about Z-axis	-21,6	mrad	Member No. 833, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO102 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC13			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	6,27	kN	
	Sum of support forces in Y	6,27	kN	Deviation: 0.00 %
	Sum of loads in Z	-60,91	kN	
	Sum of support forces in Z	-60,91	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-27,0	mm	Member No. 833, x: 2.101 m
	Maximum displacement in Y-direction	14,5	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	66,5	mm	Member No. 245, x: 2.009 m
	Maximum vectorial displacement	67,9	mm	Member No. 243, x: 2.009 m
	Maximum rotation about X-axis	56,6	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	-15,1	mrad	Member No. 246, x: 0.518 m
	Maximum rotation about Z-axis	-21,6	mrad	Member No. 833, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO103 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC13			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	6,27	kN	
	Sum of support forces in Y	6,27	kN	Deviation: 0.00 %
	Sum of loads in Z	-67,66	kN	
	Sum of support forces in Z	-67,66	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-27,3	mm	Member No. 833, x: 2.101 m
	Maximum displacement in Y-direction	14,3	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	63,2	mm	Member No. 244, x: 2.009 m
	Maximum vectorial displacement	64,5	mm	Member No. 245, x: 2.009 m
	Maximum rotation about X-axis	58,5	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	-15,2	mrad	Member No. 246, x: 0.518 m
	Maximum rotation about Z-axis	-21,7	mrad	Member No. 833, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO104 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC13			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	6,27	kN	
	Sum of support forces in Y	6,27	kN	Deviation: 0.00 %
	Sum of loads in Z	-66,31	kN	
	Sum of support forces in Z	-66,31	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-27,3	mm	Member No. 833, x: 2.101 m
	Maximum displacement in Y-direction	14,4	mm	Member No. 243, x: 2.009 m

	Maximum displacement in Z-direction	63,1	mm	Member No. 244, x: 2.009 m
	Maximum vectorial displacement	64,4	mm	Member No. 244, x: 2.009 m
	Maximum rotation about X-axis	59,0	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	-15,2	mrad	Member No. 246, x: 0.518 m
	Maximum rotation about Z-axis	-21,7	mrad	Member No. 833, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO110 - 1.15*LC1 + 1.15*LC2 + 1.35*LC14			
	Sum of loads in X	3,96	kN	
	Sum of support forces in X	3,96	kN	Deviation: 0.00 %
	Sum of loads in Y	2,15	kN	
	Sum of support forces in Y	2,15	kN	Deviation: 0.00 %
	Sum of loads in Z	-36,79	kN	
	Sum of support forces in Z	-36,79	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	23,5	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	9,5	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	57,2	mm	Member No. 243, x: 2.009 m
	Maximum vectorial displacement	58,1	mm	Member No. 243, x: 2.009 m
	Maximum rotation about X-axis	-43,8	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	-5,2	mrad	Member No. 659, x: 0.250 m
	Maximum rotation about Z-axis	17,6	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO111 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC14			
	Sum of loads in X	3,96	kN	
	Sum of support forces in X	3,96	kN	Deviation: 0.00 %
	Sum of loads in Y	2,15	kN	
	Sum of support forces in Y	2,15	kN	Deviation: 0.00 %
	Sum of loads in Z	-69,41	kN	
	Sum of support forces in Z	-69,41	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	21,2	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	9,7	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	46,6	mm	Member No. 245, x: 2.009 m
	Maximum vectorial displacement	47,4	mm	Member No. 245, x: 2.009 m
	Maximum rotation about X-axis	43,8	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	15,4	mrad	Member No. 192, x: 0.000 m
	Maximum rotation about Z-axis	16,5	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO112 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC14			
	Sum of loads in X	3,96	kN	
	Sum of support forces in X	3,96	kN	Deviation: 0.00 %
	Sum of loads in Y	2,15	kN	
	Sum of support forces in Y	2,15	kN	Deviation: 0.00 %
	Sum of loads in Z	-65,14	kN	
	Sum of support forces in Z	-65,14	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	21,1	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	9,8	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	47,2	mm	Member No. 245, x: 2.009 m
	Maximum vectorial displacement	47,9	mm	Member No. 245, x: 2.009 m
	Maximum rotation about X-axis	43,9	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	15,3	mrad	Member No. 192, x: 0.000 m
	Maximum rotation about Z-axis	16,5	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO113 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC14			
	Sum of loads in X	3,96	kN	
	Sum of support forces in X	3,96	kN	Deviation: 0.00 %
	Sum of loads in Y	2,15	kN	
	Sum of support forces in Y	2,15	kN	Deviation: 0.00 %
	Sum of loads in Z	-71,89	kN	
	Sum of support forces in Z	-71,89	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	21,7	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	9,8	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	43,9	mm	Member No. 245, x: 2.009 m
	Maximum vectorial displacement	44,7	mm	Member No. 245, x: 2.009 m
	Maximum rotation about X-axis	45,8	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	15,6	mrad	Member No. 192, x: 0.000 m
	Maximum rotation about Z-axis	16,7	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO114 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC14			
	Sum of loads in X	3,96	kN	
	Sum of support forces in X	3,96	kN	Deviation: 0.00 %
	Sum of loads in Y	2,15	kN	
	Sum of support forces in Y	2,15	kN	Deviation: 0.00 %
	Sum of loads in Z	-70,54	kN	
	Sum of support forces in Z	-70,54	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	21,7	mm	Member No. 837, x: 2.101 m

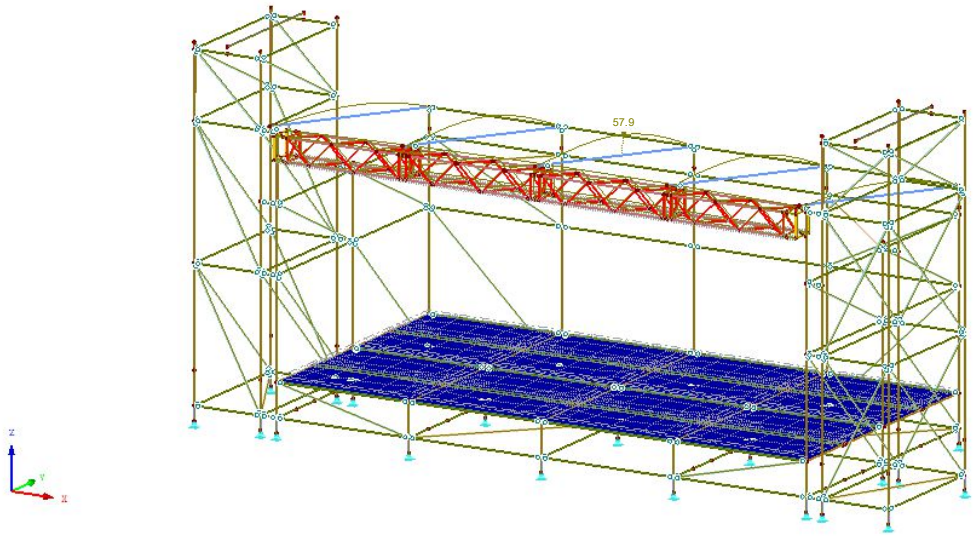
	Maximum displacement in Y-direction	9,9	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	43,8	mm	Member No. 245, x: 2.009 m
	Maximum vectorial displacement	44,7	mm	Member No. 245, x: 2.009 m
	Maximum rotation about X-axis	46,3	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	15,6	mrad	Member No. 192, x: 0.000 m
	Maximum rotation about Z-axis	16,7	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO120 - 1.15*LC1 + 1.15*LC2 + 1.35*LC15			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	-5,11	kN	
	Sum of support forces in Y	-5,11	kN	Deviation: 0.00 %
	Sum of loads in Z	-60,08	kN	
	Sum of support forces in Z	-60,08	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	18,5	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-11,9	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	-57,4	mm	Member No. 243, x: 2.009 m
	Maximum vectorial displacement	58,6	mm	Member No. 243, x: 2.009 m
	Maximum rotation about X-axis	43,6	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	6,0	mrad	Member No. 851, x: 0.030 m
	Maximum rotation about Z-axis	14,4	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO121 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC15			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	-5,11	kN	
	Sum of support forces in Y	-5,11	kN	Deviation: 0.00 %
	Sum of loads in Z	-92,71	kN	
	Sum of support forces in Z	-92,71	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	19,1	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-12,1	mm	Member No. 243, x: 2.411 m
	Maximum displacement in Z-direction	-69,9	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	71,0	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	48,7	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	16,0	mrad	Member No. 851, x: 0.030 m
	Maximum rotation about Z-axis	14,5	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO122 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC15			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	-5,11	kN	
	Sum of support forces in Y	-5,11	kN	Deviation: 0.00 %
	Sum of loads in Z	-88,43	kN	
	Sum of support forces in Z	-88,43	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	19,0	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-11,9	mm	Member No. 243, x: 2.411 m
	Maximum displacement in Z-direction	-69,8	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	70,8	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	48,5	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	15,4	mrad	Member No. 192, x: 0.000 m
	Maximum rotation about Z-axis	14,5	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO123 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC15			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	-5,11	kN	
	Sum of support forces in Y	-5,11	kN	Deviation: 0.00 %
	Sum of loads in Z	-95,18	kN	
	Sum of support forces in Z	-95,18	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	19,3	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-12,1	mm	Member No. 243, x: 2.411 m
	Maximum displacement in Z-direction	-74,2	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	75,2	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	50,3	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	19,3	mrad	Member No. 851, x: 0.030 m
	Maximum rotation about Z-axis	14,5	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO124 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC15			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	-5,11	kN	
	Sum of support forces in Y	-5,11	kN	Deviation: 0.00 %
	Sum of loads in Z	-93,83	kN	
	Sum of support forces in Z	-93,83	kN	Deviation: 0.00 %

	Maximum displacement in X-direction	19,3	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-12,0	mm	Member No. 243, x: 2.411 m
	Maximum displacement in Z-direction	-75,1	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	76,1	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	50,6	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	19,0	mrad	Member No. 851, x: 0.030 m
	Maximum rotation about Z-axis	14,5	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T

3.6.1 Deformation of the Out-service situation characteristic max and min values.

RC 5: CO150 or to CO154 or CO160 or to CO164 or CO170 or to CO174
Global Deformations u
Result Combinations: Max Values

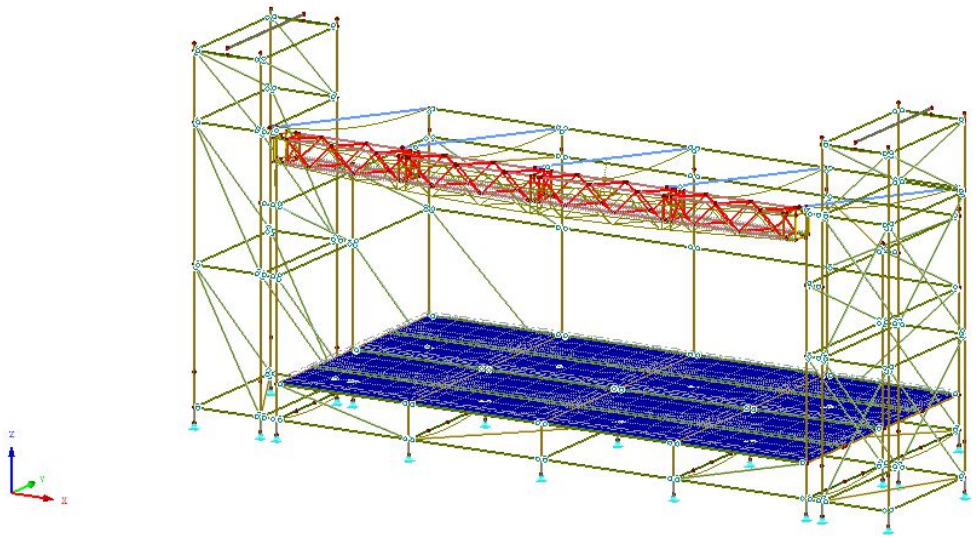
Isometric



Max u: 57.9, Min u: 0.0 [mm]
Factor of deformations: 5.00

RC 5: CO150 or to CO154 or CO160 or to CO164 or CO170 or to CO174
Global Deformations u
Result Combinations: Min Values

Isometric

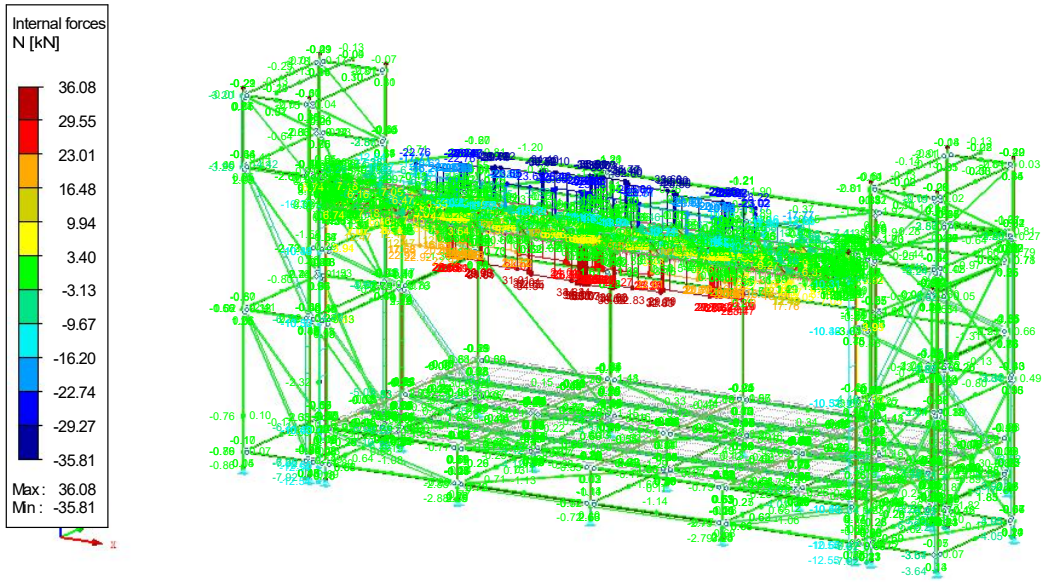


Max u: 56.9, Min u: 0.0 [mm]
Factor of deformations: 5.00

3.6.2 Internal force diagram RC4 Design Values Out-service.

RC 4: CO100 or to CO104 or CO110 or to CO114 or CO120 or to CO124
Members Internal Forces N
Result Combinations: Max and Min Values

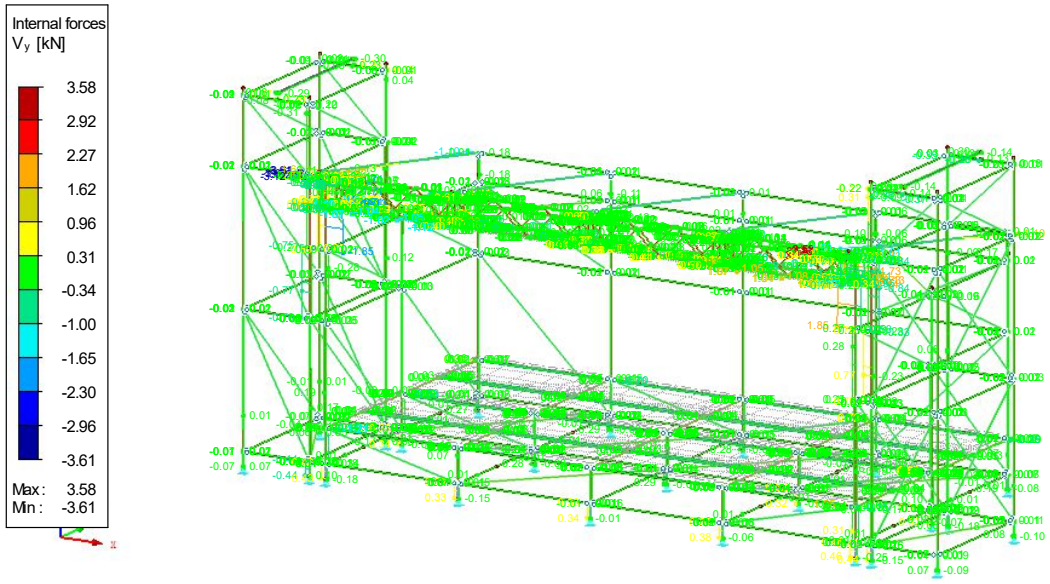
Isometric



Members Max N: 36.08, Min N: -35.81 [kN]

RC 4: CO100 or to CO104 or CO110 or to CO114 or CO120 or to CO124
Members Internal Forces V-y
Result Combinations: Max and Min Values

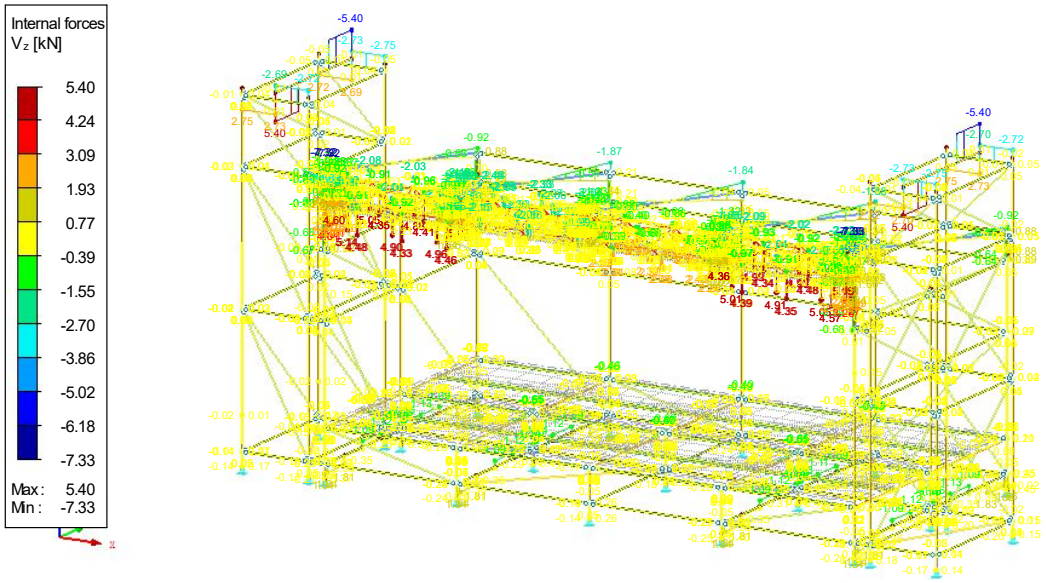
Isometric



Members Max V-y: 3.58, Min V-y: -3.61 [kN]

RC 4: CO100 or to CO104 or CO110 or to CO114 or CO120 or to CO124
Members Internal Forces V-z
Result Combinations: Max and Min Values

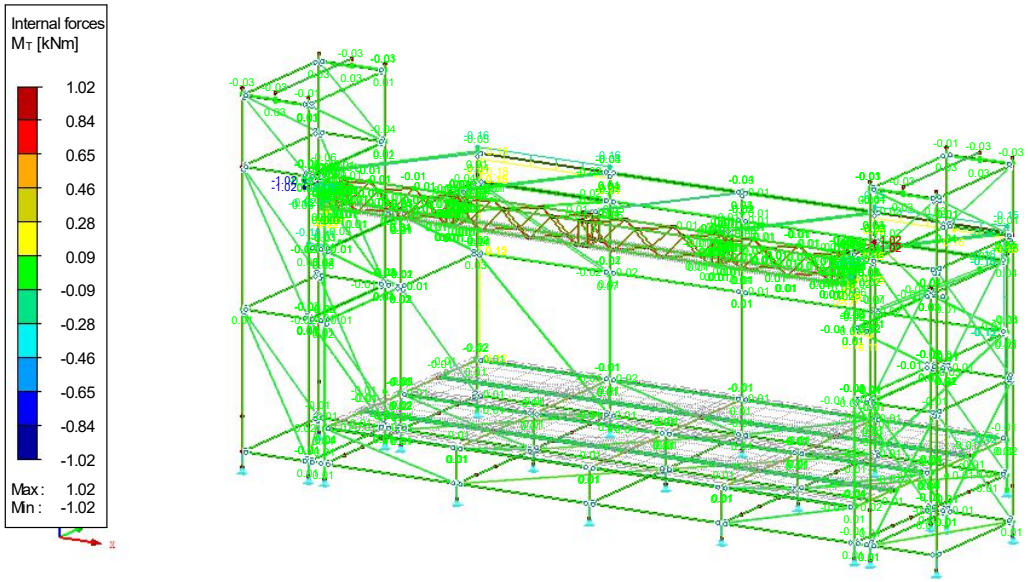
Isometric



Members Max V-z: 5.40, Min V-z: -7.33 [kN]

RC 4: CO100 or to CO104 or CO110 or to CO114 or CO120 or to CO124
Members Internal Forces M-T
Result Combinations: Max and Min Values

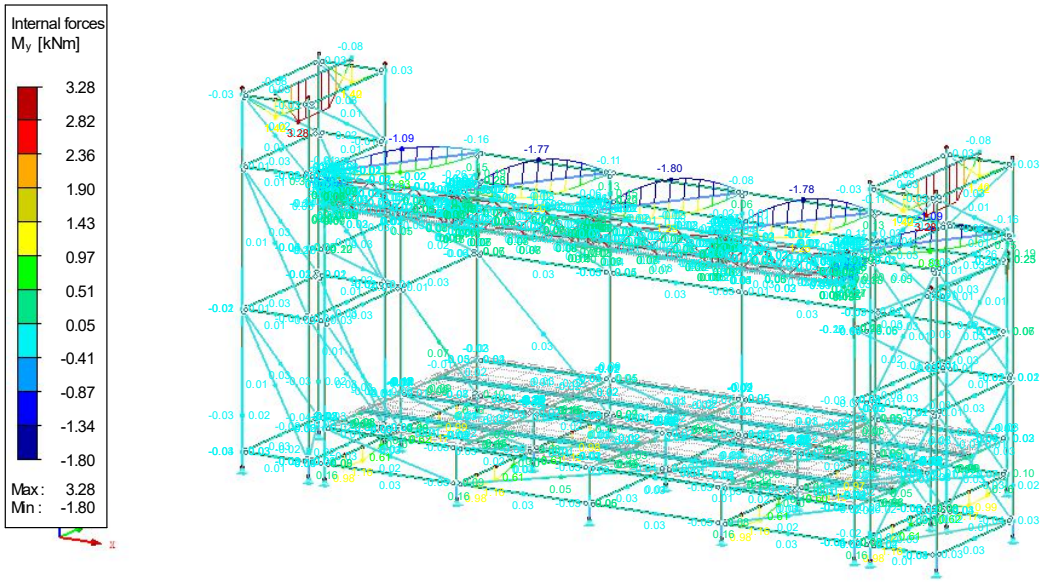
Isometric



Members Max M-T: 1.02, Min M-T: -1.02 [kNm]

RC 4: CO100 or to CO104 or CO110 or to CO114 or CO120 or to CO124
Members Internal Forces M-y
Result Combinations: Max and Min Values

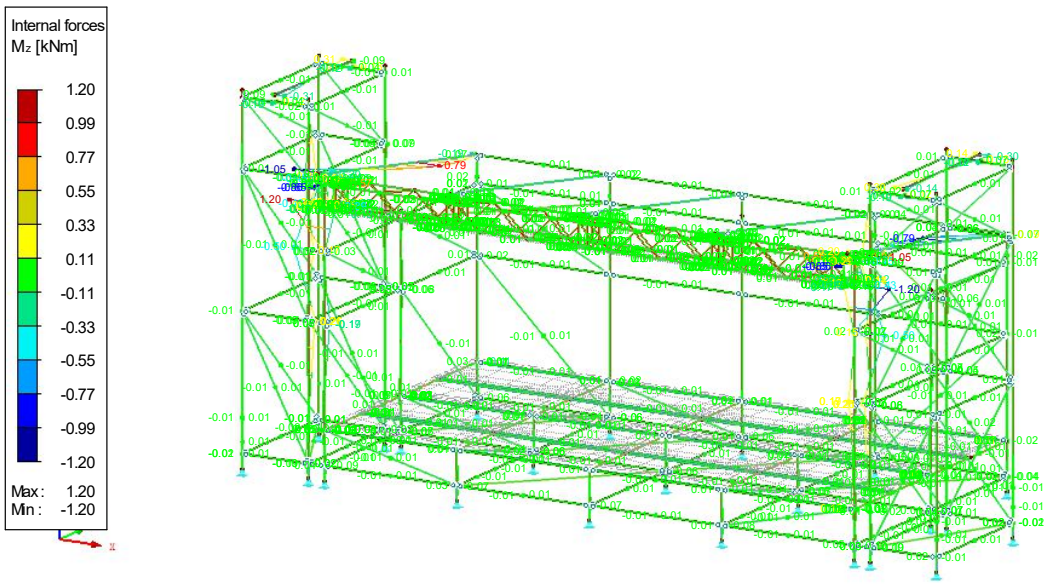
Isometric



Members Max M-y: 3.28, Min M-y: -1.80 [kNm]

RC 4: CO100 or to CO104 or CO110 or to CO114 or CO120 or to CO124
Members Internal Forces M-z
Result Combinations: Max and Min Values

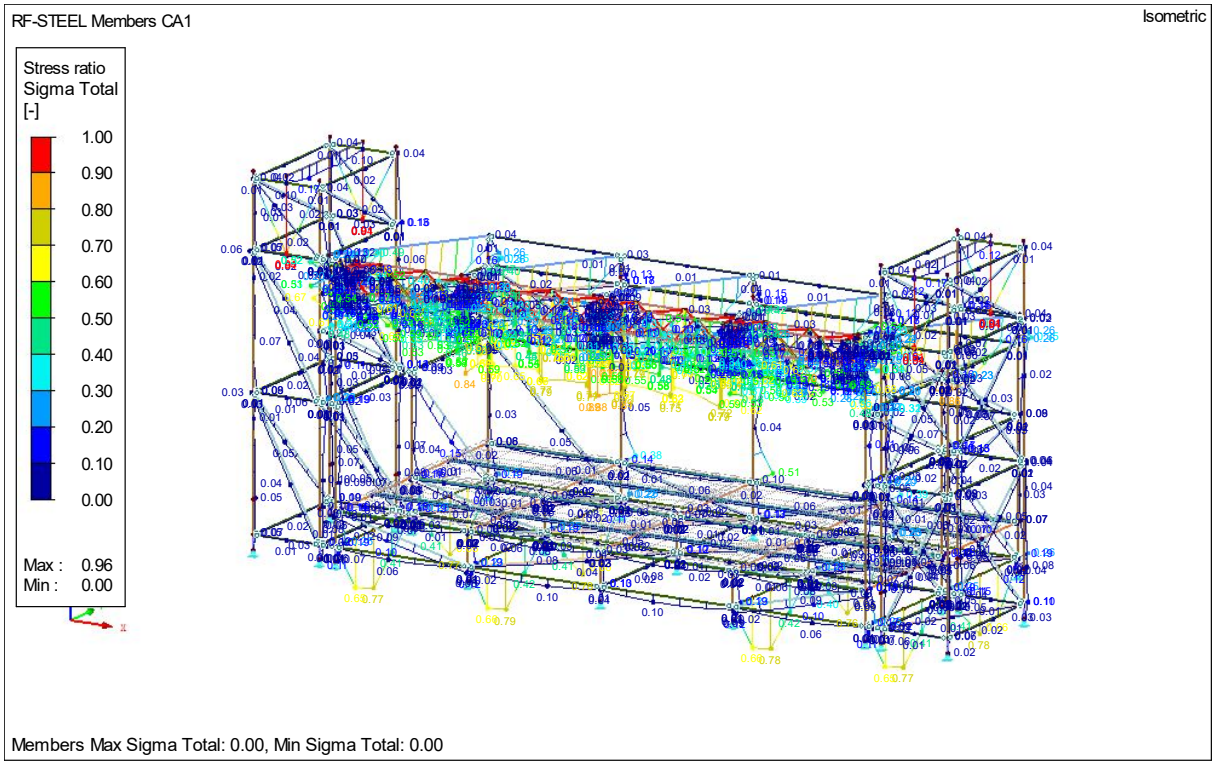
Isometric

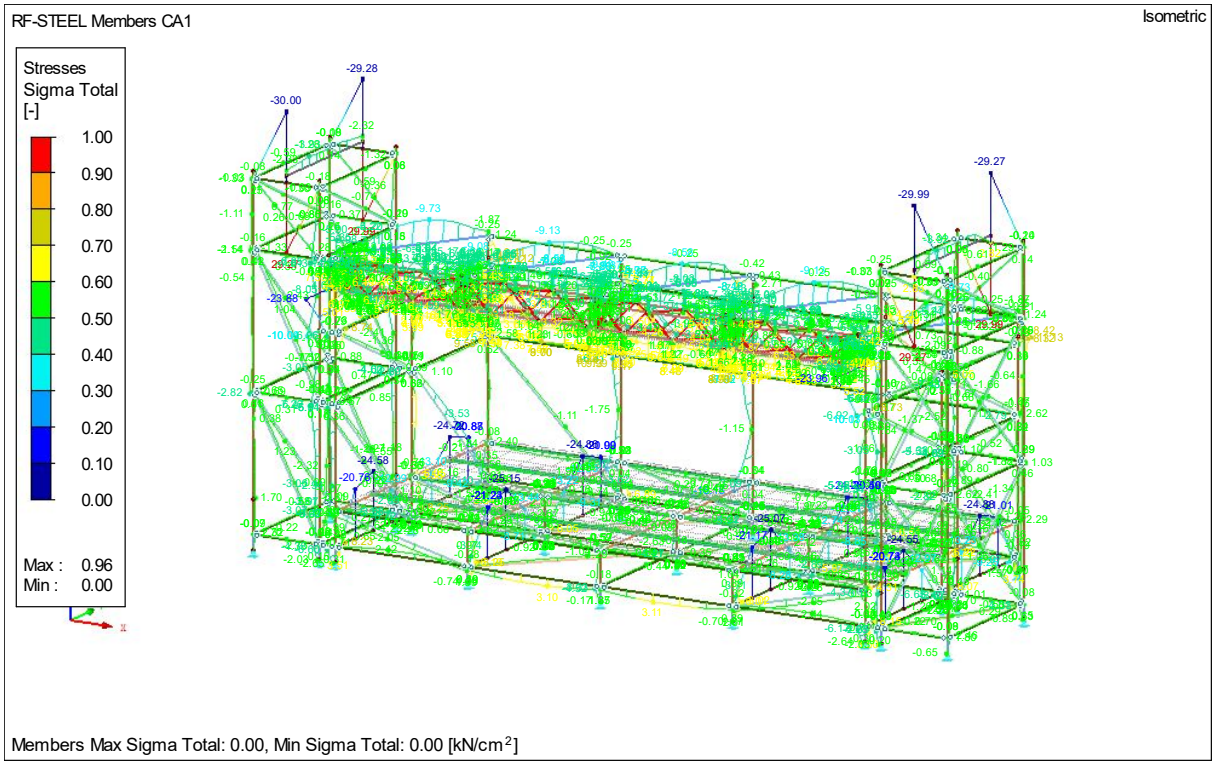


Members Max M-z: 1.20, Min M-z: -1.20 [kNm]

3.7 Stress analyse GE32 Layher roof + PA wing.

3.7.1 In service Stress calculation

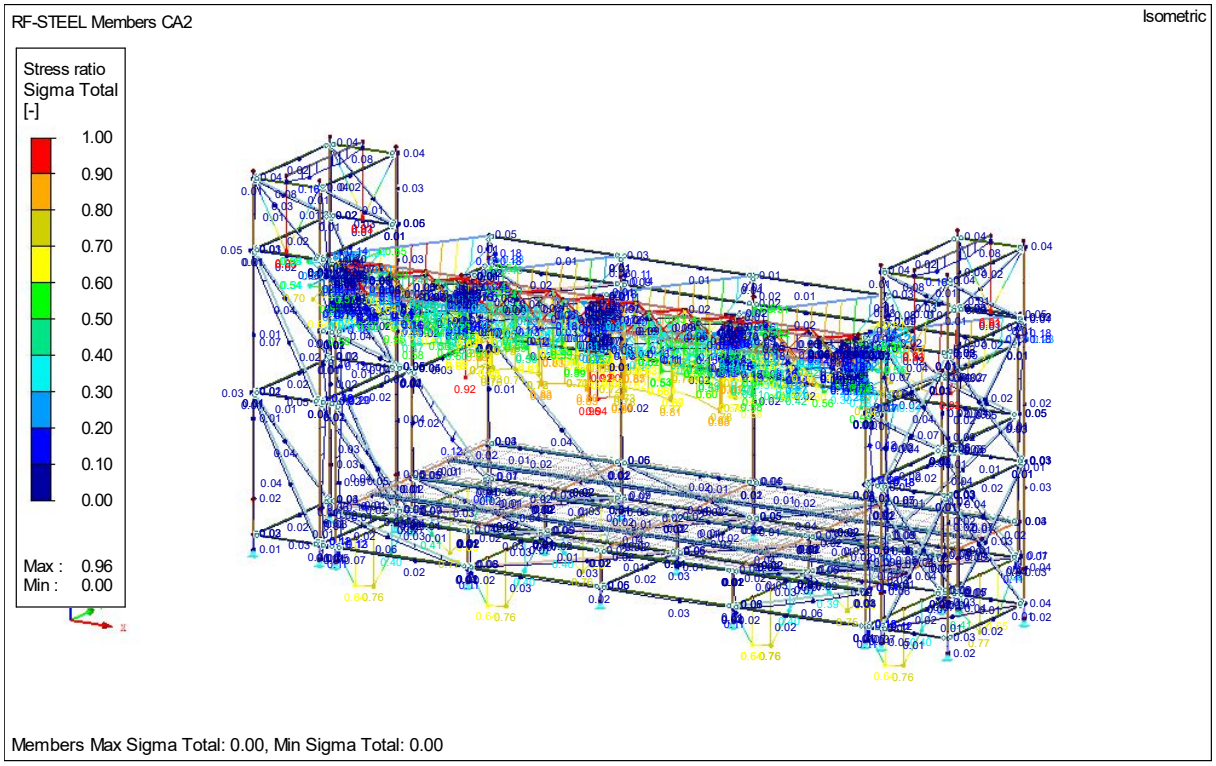


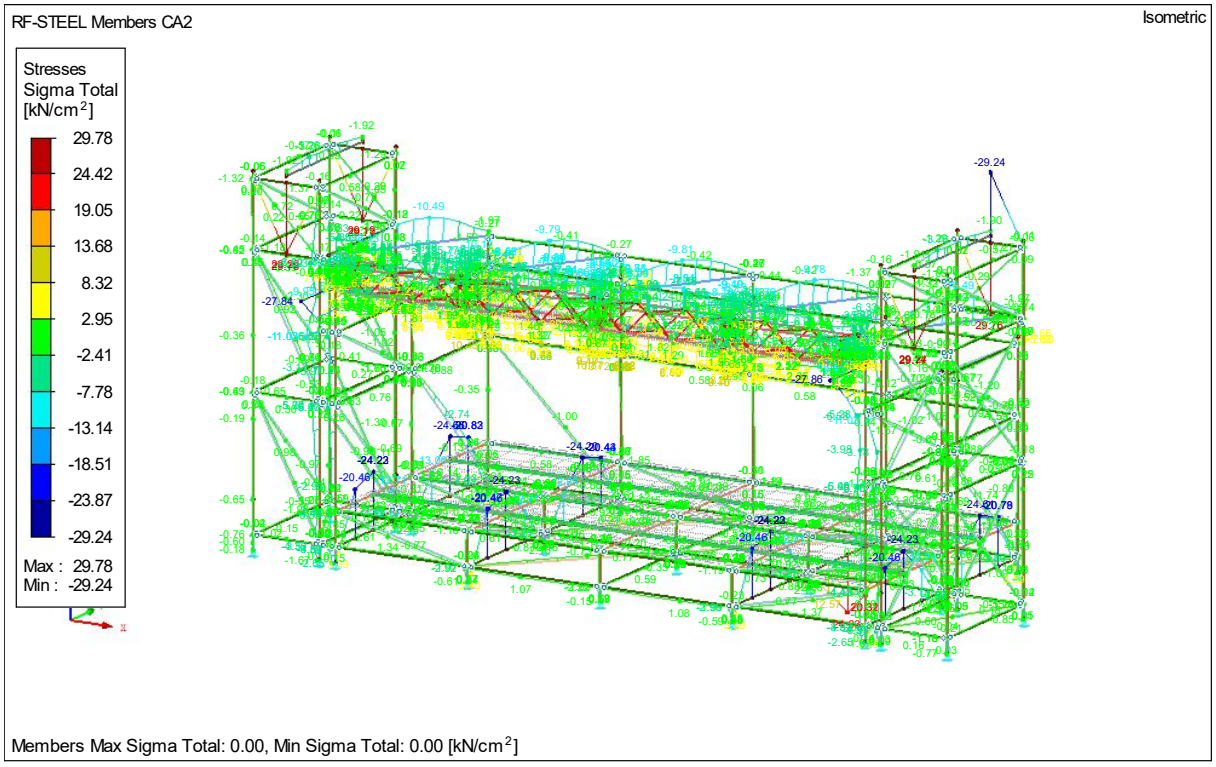


3.7.2 Utilisation per cross section in the In service.

Section No.	Member No.	Location x [m]	S-Point No.	Load-ing	Stress Type	Stress [kN/cm²] Existing	Limit	Stress Ratio
1	SHAPE-THIN KEDER PROFIEL 3000							
	833	1,681	143	CO10	Sigma Total	-9,73	11,36	0,86
	833	4,203	19	CO13	Tau Total	1,04	6,56	0,16
	833	1,681	143	CO10	Sigma-eqv	9,73	11,36	0,86
2	QRO 50x4 (Hot Formed)							
	968	0,169	11	CO33	Sigma Total	-5,49	11,36	0,48
	42	0,169	15	CO33	Tau Total	2,19	6,56	0,33
	968	0,169	2	CO33	Sigma-eqv	5,67	11,36	0,50
3	Ring 48/3							
	144	0,000	12	CO34	Sigma Total	10,13	11,36	0,89
	67	0,000	2	CO33	Tau Total	2,15	6,56	0,33
	144	0,000	12	CO34	Sigma-eqv	10,13	11,36	0,89
4	Ring 48/6							
	129	0,060	31	CO34	Sigma Total	-5,69	23,64	0,24
	842	0,000	19	CO33	Tau Total	-0,66	13,65	0,05
	129	0,060	31	CO34	Sigma-eqv	5,69	23,64	0,24
5	Ring 20/2							
	868	0,479	10	CO33	Sigma Total	7,76	11,36	0,68
	892	0,000	11	CO33	Tau Total	0,24	6,56	0,04
	868	0,479	10	CO33	Sigma-eqv	7,76	11,36	0,68
6	RO 38x4.5 | DIN EN 10220							
	212	0,210	10	CO10	Sigma Total	-9,42	35,50	0,27
	211	0,000	1	CO10	Tau Total	0,76	20,50	0,04
	212	0,210	10	CO10	Sigma-eqv	9,42	35,50	0,27
7	RO 48.3x3.2 (Hot Formed)							
	23	0,661	20	CO33	Sigma Total	-23,96	32,00	0,75
	41	0,100	31	CO10	Tau Total	-11,37	18,48	0,62
	23	0,661	20	CO33	Sigma-eqv	23,97	32,00	0,75
8	RO 48.3x3.2 (Hot Formed)							
	192	0,518	11	CO33	Sigma Total	-30,00	32,00	0,94
	711	0,250	19	CO10	Tau Total	3,01	18,48	0,16
	192	0,518	11	CO33	Sigma-eqv	30,01	32,00	0,94
9	RO 48.3x3.2 (Hot Formed)							
	699	1,674	10	CO10	Sigma Total	-1,56	32,00	0,05
	703	2,930	19	CO34	Tau Total	0,24	18,48	0,01
	699	1,674	10	CO10	Sigma-eqv	1,56	32,00	0,05
10	RO 48.3x2.6 (Hot Formed)							
	726	1,646	10	CO10	Sigma Total	-3,53	23,50	0,15
	746	0,000	19	CO10	Tau Total	-0,94	13,57	0,07
	726	1,646	10	CO10	Sigma-eqv	3,53	23,50	0,15
12	HK 50/30/4/4/4/4							
	813	0,000	10	CO10	Sigma Total	-1,10	20,45	0,05
	350	0,000	8	CO10	Tau Total	0,14	11,81	0,01
	813	0,000	10	CO10	Sigma-eqv	1,11	20,45	0,05
13	IPE 160							
	1910	0,622	1	CO33	Sigma Total	-3,93	23,50	0,17
	1910	1,450	13	CO33	Tau Total	-0,78	13,57	0,06
	1910	0,622	1	CO33	Sigma-eqv	3,93	23,50	0,17
14	Rectangle 50/50							
	1022	0,000	4	CO13	Sigma Total	4,31	21,27	0,20
	996	0,000	1	CO11	Tau Total	0,91	12,28	0,07
	1022	0,000	4	CO13	Sigma-eqv	4,31	21,27	0,20

3.7.3 Out service Stress calculation



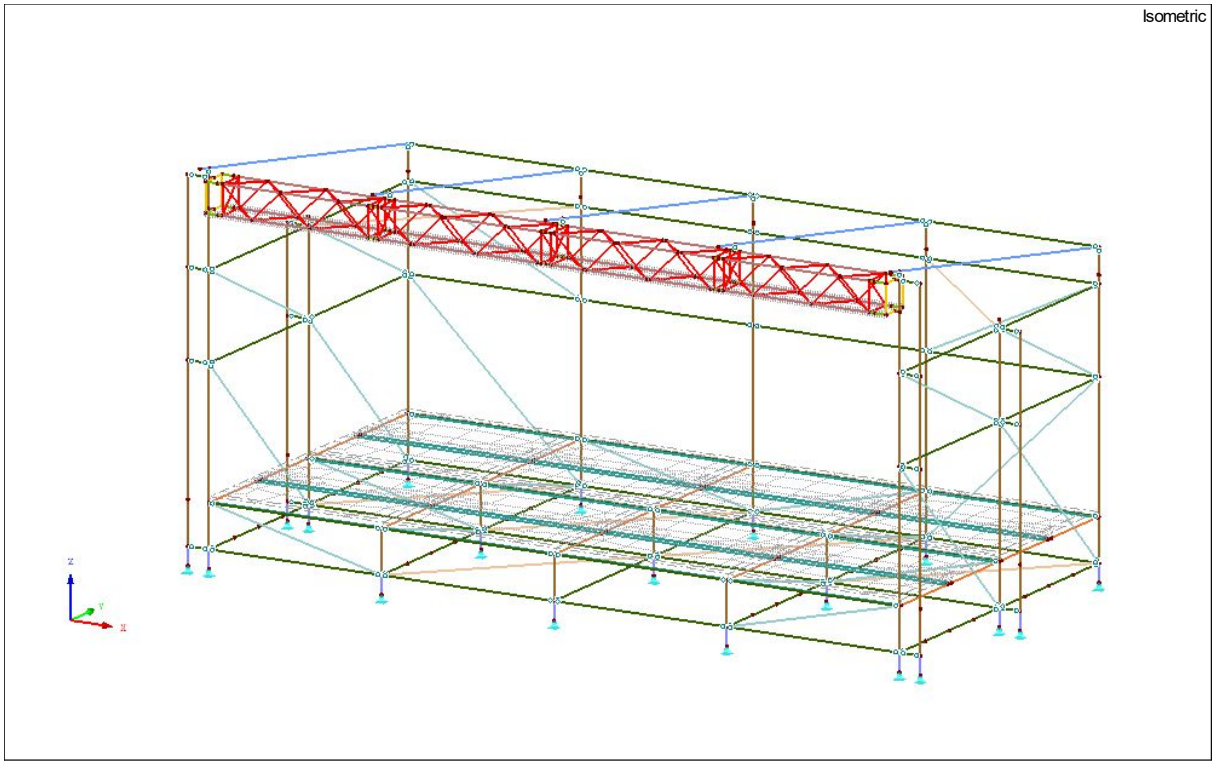


3.7.4 Utilisation per cross section in the Out service.

Section No.	Member No.	Location x [m]	S-Point No.	Load-ing	Stress Type	Stress [kN/cm²] Existing	Limit	Stress Ratio
1	SHAPE-THIN KEDER PROFIEL 3000							
	833	1,681	143	CO100	Sigma Total	-10,49	11,36	0,92
	833	4,203	19	CO103	Tau Total	1,13	6,56	0,17
	833	1,681	143	CO100	Sigma-eqv	10,49	11,36	0,92
2	QRO 50x4 (Hot Formed)							
	968	0,169	10	CO123	Sigma Total	-6,62	11,36	0,58
	42	0,169	15	CO123	Tau Total	2,59	6,56	0,39
	968	0,169	11	CO123	Sigma-eqv	6,79	11,36	0,60
3	Ring 48/3							
	144	0,000	12	CO124	Sigma Total	10,87	11,36	0,96
	67	0,000	1	CO123	Tau Total	2,50	6,56	0,38
	144	0,000	12	CO124	Sigma-eqv	10,87	11,36	0,96
4	Ring 48/6							
	843	0,000	8	CO123	Sigma Total	-6,48	23,64	0,27
	842	0,000	18	CO123	Tau Total	-0,75	13,65	0,05
	843	0,000	8	CO123	Sigma-eqv	6,49	23,64	0,27
5	Ring 20/2							
	868	0,479	10	CO123	Sigma Total	8,90	11,36	0,78
	892	0,000	11	CO123	Tau Total	0,30	6,56	0,05
	868	0,479	10	CO123	Sigma-eqv	8,90	11,36	0,78
6	RO 38x4.5 | DIN EN 10220							
	574	0,210	23	CO123	Sigma Total	-4,54	35,50	0,13
	211	0,000	1	CO100	Tau Total	0,36	20,50	0,02
	574	0,210	23	CO123	Sigma-eqv	4,54	35,50	0,13
7	RO 48.3x3.2 (Hot Formed)							
	23	0,661	20	CO123	Sigma Total	-27,86	32,00	0,87
	31	0,100	27	CO103	Tau Total	12,16	18,48	0,66
	23	0,661	20	CO123	Sigma-eqv	27,87	32,00	0,87
8	RO 48.3x3.2 (Hot Formed)							
	192	0,518	29	CO124	Sigma Total	29,78	32,00	0,93
	481	0,000	10	CO100	Tau Total	-1,77	18,48	0,10
	192	0,518	29	CO124	Sigma-eqv	29,79	32,00	0,93
9	RO 48.3x3.2 (Hot Formed)							
	702	1,256	10	CO110	Sigma Total	-1,25	32,00	0,04
	702	0,000	1	CO110	Tau Total	0,18	18,48	0,01
	702	1,674	10	CO110	Sigma-eqv	1,28	32,00	0,04
10	RO 48.3x2.6 (Hot Formed)							
	726	1,646	10	CO100	Sigma Total	-2,74	23,50	0,12
	746	0,000	17	CO100	Tau Total	-0,89	13,57	0,07
	726	1,646	10	CO100	Sigma-eqv	2,74	23,50	0,12
12	HK 50/30/4/4/4/4							
	813	0,000	10	CO100	Sigma Total	-0,61	20,45	0,03
	441	0,000	8	CO100	Tau Total	0,12	11,81	0,01
	813	0,000	10	CO100	Sigma-eqv	0,63	20,45	0,03
13	IPE 160							
	1910	0,622	1	CO124	Sigma Total	-3,76	23,50	0,16
	1910	0,000	13	CO124	Tau Total	0,78	13,57	0,06
	1910	0,622	1	CO124	Sigma-eqv	3,76	23,50	0,16
14	Rectangle 50/50							
	1022	0,000	4	CO103	Sigma Total	4,52	21,27	0,21
	994	0,062	1	CO100	Tau Total	0,86	12,28	0,07
	1022	0,000	4	CO103	Sigma-eqv	4,52	21,27	0,21

3.8 General calculation of the GE32 Layher Roof

3.8.1 construction scheme.



Cross-Sections
- 1: SHAPE-THIN KEDER PROFIEL 3000; Aluminum EN-AW 6082 (EP,ET) T6
- 2: QRO 50x4 (Hot Formed); Aluminum EN-AW 6082 (EP,ET) T6
- 3: Ring 48/3; Aluminum EN-AW 6082 (EP,ET) T6
- 4: Ring 48/6; Aluminum EN-AW 6082 (EP,ET) T6
- 5: Ring 20/2; Aluminum EN-AW 6082 (EP,ET) T6
- 6: RO 38x4.5 | DIN EN 10220; Steel S 355 JR
- 7: RO 48.3x3.2 (Hot Formed); S320GD 1.0250
- 8: RO 48.3x3.2 (Hot Formed); S320GD 1.0250
- 9: RO 48.3x3.2 (Hot Formed); S320GD 1.0250
- 10: RO 48.3x2.6 (Hot Formed); Steel S 235 JR
- 11: EV transom; Aluminum EN-AW 6005A (EP/O,ER/B) T6
- 12: HK 50/30/4/4/4/4; Aluminum EN-AW 6005A (EP/O,ER/B) T6
- 13: IPE 160; Steel S 235 JR
- 16: Rectangle 50/50; Aluminum EN-AW 6082 (EP,ET) T6

3.8.2 Used Materials.

Material No.	Material Description	Modulus of Elasticity E [kN/cm²]	Shear Modulus G [kN/cm²]	Poisson's Ratio ν [-]	Specific Weight γ [kN/m³]	Coeff. of Th. Exp. α [1/°C]	Partial Factor γ_M [-]	Material Model
1	Steel S 235 JR | EN 10025-2:2004-11	21000,00	8076,92	0,300	78,50	1,20E-05	1,000	Isotropic Linear Elastic
2	S320GD 1.0250 | EN 10346:2009-03	21000,00	8076,92	0,300	78,50	1,20E-05	1,000	Isotropic Linear Elastic
3	Steel S 355 JR | EN 10025-2:2004-11	21000,00	8076,92	0,300	78,50	1,20E-05	1,000	Isotropic Linear Elastic
4	Plywood, Class F20/10 E40/20, Plate Stress, Perpendicular | EN 12369-2:2011-06	200,00	3,50	3,286	5,00	5,00E-06	1,200	Orthotropic Elastic 2D...
5	Aluminum EN-AW 6005A (EP/O,ER/B) T6 | EN 1999-1-1:2007	7000,00	2700,00	0,296	27,00	2,30E-05	1,000	Isotropic Linear Elastic
6	Aluminum EN-AW 6082 (EP,ET) T6 | EN 1999-1-1:2007	7000,00	2700,00	0,296	27,00	2,30E-05	1,000	Isotropic Linear Elastic

3.8.3 Used cross sections.

Section No.	Cross-Section Description [mm]	Material No.	Moments of inertia [cm⁴] Torsion J	Bending I_y	Bending I_z	Cross-Sectional Areas [cm²] Axial A	Shear A_y	Shear A_z	Principal Axes α [°]	Rotation α' [°]	Overall Dimensions [mm] Width b	Depth h
1	SHAPE-THIN KEDER PROFIEL 3000	6	39,02	60,82	62,04	11,33	3,25	3,65	0,00	0,00	73,9	65,0
2	QRO 50x4 (Hot Formed)	6	40,40	25,00	25,00	7,19	3,12	3,12	0,00	0,00	50,0	50,0
3	Ring 48/3	6	21,57	10,78	10,78	4,24	2,14	2,14	0,00	0,00	48,0	48,0
4	Ring 48/6	6	35,63	17,81	17,81	7,92	4,09	4,09	0,00	0,00	48,0	48,0
5	Ring 20/2	6	0,93	0,46	0,46	1,13	0,58	0,58	0,00	0,00	20,0	20,0
6	RO 38x4.5 | DIN EN 10220	3	13,53	6,76	6,76	4,74	2,38	2,38	0,00	0,00	38,0	38,0
7	RO 48.3x3.2 (Hot Formed)	2	23,20	11,60	11,60	4,53	2,26	2,26	0,00	0,00	48,3	48,3
8	RO 48.3x3.2 (Hot Formed)	2	23,20	11,60	11,60	4,53	2,26	2,26	0,00	0,00	48,3	48,3
9	RO 48.3x3.2 (Hot Formed)	2	23,20	11,60	11,60	4,53	2,26	2,26	0,00	0,00	48,3	48,3
10	RO 48.3x2.6 (Hot Formed)	1	19,60	9,78	9,78	3,73	1,85	1,85	0,00	0,00	48,3	48,3
11	EV transom	5	50,00	554,00	70,00	18,78	18,00	18,00	0,00	0,00	49,0	172,5
12	HK 50/30/4/4/4/4	5	16,87	17,67	7,52	5,76	1,62	3,48	0,00	0,00	30,0	50,0
13	IPE 160	1	3,60	869,30	68,31	20,09	10,17	7,33	0,00	0,00	82,0	160,0
14	Rectangle 50/50	6	87,92	52,08	52,08	25,00	20,83	20,83	0,00	0,00	50,0	50,0

3.9 Calculation summary GE32 Layher Roof

	Description	Value	Unit	Comment
	Summary			
	Calculation Status	OK		
	Maximum displacement in X-direction	37,0	mm	CO113, Member No. 837, x: 2.522 m
	Maximum displacement in Y-direction	20,2	mm	CO18, Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	78,0	mm	CO100, Member No. 243, x: 2.009 m
	Maximum vectorial displacement	79,5	mm	CO100, Member No. 243, x: 2.009 m
	Maximum rotation about X-axis	-59,5	mrad	CO100, Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	30,7	mrad	CO28, FE Mesh Node No. 1034 (X: 1.307, Y: -2.617, Z: -0.186 m)
	Maximum rotation about Z-axis	-23,7	mrad	CO37, Member No. 720, x: 0.000 m
	Number of 1D finite elements (member elements)	1190		
	Number of 2D finite elements (surface elements)	1040		
	Number of 3D finite elements (solid elements)	0		
	Number of FE mesh nodes	1425		
	Number of equations	8550		
	Matrix solver method	Direct		
	Maximum number of iterations	100		
	Number of divisions for member results	10		
	Number of divisions of members with cable, elastic foundation, taper, or plastic characteristic	10		
	Activate shear stiffness of members (A-y, A-z)	+		
	Plate bending theory	Mindlin		
	Activate ineffective supports	+		
	Precision of convergence criteria of nonlinear calculation	1,0		

3.10 Calculation result of the separate load cases.

	Description	Value	Unit	Comment
	LC1 - Self-weight			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-17,95	kN	
	Sum of support forces in Z	-17,95	kN	Deviation: 0.00 %
	Resultant of reactions about X	0,392	kNm	At center of gravity of model (X: 5.173, Y: -1.981, Z: 0.499 m)
	Resultant of reactions about Y	-0,472	kNm	At center of gravity of model
	Resultant of reactions about Z	0,000	kNm	At center of gravity of model
	Maximum displacement in X-direction	-0,7	mm	Member No. 738, x: 1.440 m
	Maximum displacement in Y-direction	-1,6	mm	Member No. 726, x: 1.440 m
	Maximum displacement in Z-direction	-4,2	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	4,2	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	3,0	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	-1,4	mrad	Member No. 702, x: 0.000 m
	Maximum rotation about Z-axis	0,3	mrad	Member No. 681, x: 0.000 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC2 - ballast loading			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-20,00	kN	
	Sum of support forces in Z	-20,00	kN	Deviation: 0.00 %
	Resultant of reactions about X	1,825	kNm	At center of gravity of model (X: 5.173, Y: -1.981, Z: 0.499 m)
	Resultant of reactions about Y	0,144	kNm	At center of gravity of model
	Resultant of reactions about Z	0,000	kNm	At center of gravity of model
	Maximum displacement in X-direction	0,0	mm	Member No. 223, x: 0.375 m
	Maximum displacement in Y-direction	0,0	mm	Member No. 710, x: 0.000 m
	Maximum displacement in Z-direction	-16,3	mm	Member No. 219, x: 0.444 m
	Maximum vectorial displacement	16,3	mm	Member No. 219, x: 0.444 m
	Maximum rotation about X-axis	-26,0	mrad	Member No. 664, x: 0.000 m
	Maximum rotation about Y-axis	0,0	mrad	Member No. 707, x: 0.000 m
	Maximum rotation about Z-axis	0,0	mrad	Member No. 723, x: 0.000 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC3 - UDL Loading			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-8,17	kN	
	Sum of support forces in Z	-8,17	kN	Deviation: 0.00 %
	Resultant of reactions about X	17,667	kNm	At center of gravity of model (X: 5.173, Y: -1.981, Z: 0.499 m)
	Resultant of reactions about Y	0,059	kNm	At center of gravity of model
	Resultant of reactions about Z	0,000	kNm	At center of gravity of model
	Maximum displacement in X-direction	3,4	mm	Member No. 360, x: 0.625 m
	Maximum displacement in Y-direction	2,3	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-20,4	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	20,4	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	5,0	mrad	Member No. 991, x: 0.000 m
	Maximum rotation about Y-axis	-8,0	mrad	Member No. 847, x: 0.030 m
	Maximum rotation about Z-axis	2,1	mrad	Member No. 681, x: 0.000 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC4 - CPL Loading setup			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-5,00	kN	
	Sum of support forces in Z	-5,00	kN	Deviation: -0.07 %
	Resultant of reactions about X	10,823	kNm	At center of gravity of model (X: 5.173, Y: -1.981, Z: 0.499 m)
	Resultant of reactions about Y	0,035	kNm	At center of gravity of model
	Resultant of reactions about Z	0,000	kNm	At center of gravity of model
	Maximum displacement in X-direction	3,0	mm	Member No. 360, x: 0.625 m
	Maximum displacement in Y-direction	2,3	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-20,1	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	20,2	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	5,0	mrad	Member No. 991, x: 0.000 m
	Maximum rotation about Y-axis	-6,7	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	1,9	mrad	Member No. 681, x: 0.000 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC5 - 2x point load per truss			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	

	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-10,00	kN	
	Sum of support forces in Z	-10,00	kN	Deviation: 0.00 %
	Resultant of reactions about X	21,635	kNm	At center of gravity of model (X: 5.173, Y: -1.981, Z: 0.499 m)
	Resultant of reactions about Y	0,129	kNm	At center of gravity of model
	Resultant of reactions about Z	0,000	kNm	At center of gravity of model
	Maximum displacement in X-direction	4,6	mm	Member No. 360, x: 0.625 m
	Maximum displacement in Y-direction	3,0	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-26,6	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	26,7	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	6,6	mrad	Member No. 991, x: 0.000 m
	Maximum rotation about Y-axis	-10,6	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	2,9	mrad	Member No. 681, x: 0.000 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC6 - 3x point load per truss			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-9,00	kN	
	Sum of support forces in Z	-9,00	kN	Deviation: -0.01 %
	Resultant of reactions about X	19,471	kNm	At center of gravity of model (X: 5.173, Y: -1.981, Z: 0.499 m)
	Resultant of reactions about Y	0,104	kNm	At center of gravity of model
	Resultant of reactions about Z	0,000	kNm	At center of gravity of model
	Maximum displacement in X-direction	4,6	mm	Member No. 360, x: 0.625 m
	Maximum displacement in Y-direction	3,2	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-28,0	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	28,0	mm	FE Mesh Node No. 485 (X: 5.180, Y: -4.325, Z: 3.445 m)
	Maximum rotation about X-axis	6,9	mrad	Member No. 991, x: 0.000 m
	Maximum rotation about Y-axis	-10,4	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	2,9	mrad	Member No. 681, x: 0.000 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC7 - floor loading wind 0°			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	11,60	kN	
	Sum of support forces in Y	11,60	kN	Deviation: 0.00 %
	Sum of loads in Z	-116,03	kN	
	Sum of support forces in Z	-116,03	kN	Deviation: 0.00 %
	Resultant of reactions about X	17,841	kNm	At center of gravity of model (X: 5.173, Y: -1.981, Z: 0.499 m)
	Resultant of reactions about Y	0,838	kNm	At center of gravity of model
	Resultant of reactions about Z	0,084	kNm	At center of gravity of model
	Maximum displacement in X-direction	-1,0	mm	Member No. 351, x: 0.750 m
	Maximum displacement in Y-direction	2,0	mm	Member No. 725, x: 0.000 m
	Maximum displacement in Z-direction	-9,1	mm	FE Mesh Node No. 247 (X: 8.289, Y: -1.631, Z: -0.186 m)
	Maximum vectorial displacement	9,2	mm	FE Mesh Node No. 125 (X: 8.289, Y: -2.513, Z: -0.186 m)
	Maximum rotation about X-axis	-13,4	mrad	Member No. 813, x: 1.036 m
	Maximum rotation about Y-axis	-16,8	mrad	FE Mesh Node No. 226 (X: 9.052, Y: -1.528, Z: -0.186 m)
	Maximum rotation about Z-axis	-6,1	mrad	Member No. 725, x: 0.000 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC8 - floor loading wind 90°			
	Sum of loads in X	11,60	kN	
	Sum of support forces in X	11,60	kN	Deviation: 0.00 %
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-116,03	kN	
	Sum of support forces in Z	-116,03	kN	Deviation: 0.00 %
	Resultant of reactions about X	10,589	kNm	At center of gravity of model (X: 5.173, Y: -1.981, Z: 0.499 m)
	Resultant of reactions about Y	-6,414	kNm	At center of gravity of model
	Resultant of reactions about Z	1,059	kNm	At center of gravity of model
	Maximum displacement in X-direction	1,6	mm	Member No. 225, x: 0.750 m
	Maximum displacement in Y-direction	-1,2	mm	Member No. 274, x: 1.250 m
	Maximum displacement in Z-direction	-9,1	mm	FE Mesh Node No. 1055 (X: 2.073, Y: -2.513, Z: -0.186 m)
	Maximum vectorial displacement	9,1	mm	FE Mesh Node No. 1055 (X: 2.073, Y: -2.513, Z: -0.186 m)
	Maximum rotation about X-axis	-13,4	mrad	Member No. 828, x: 1.036 m
	Maximum rotation about Y-axis	-16,8	mrad	FE Mesh Node No. 100 (X: 9.052, Y: -2.616, Z: -0.186 m)
	Maximum rotation about Z-axis	-2,3	mrad	Member No. 666, x: 0.000 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC9 - floor loading wind 180°			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	-11,60	kN	
	Sum of support forces in Y	-11,60	kN	Deviation: 0.00 %
	Sum of loads in Z	-116,03	kN	
	Sum of support forces in Z	-116,03	kN	Deviation: 0.00 %
	Resultant of reactions about X	3,337	kNm	At center of gravity of model (X: 5.173, Y: -1.981, Z: 0.499 m)
	Resultant of reactions about Y	0,838	kNm	At center of gravity of model
	Resultant of reactions about Z	-0,084	kNm	At center of gravity of model

	Maximum displacement in X-direction	1,0	mm	Member No. 225, x: 0.750 m
	Maximum displacement in Y-direction	-2,5	mm	Member No. 710, x: 0.000 m
	Maximum displacement in Z-direction	-9,1	mm	FE Mesh Node No. 1055 (X: 2.073, Y: -2.513, Z: -0.186 m)
	Maximum vectorial displacement	9,2	mm	FE Mesh Node No. 725 (X: 2.073, Y: -1.631, Z: -0.186 m)
	Maximum rotation about X-axis	13,4	mrad	Member No. 459, x: 1.036 m
	Maximum rotation about Y-axis	-16,9	mrad	FE Mesh Node No. 100 (X: 9.052, Y: -2.616, Z: -0.186 m)
	Maximum rotation about Z-axis	7,9	mrad	Member No. 710, x: 0.094 m
	Method of analysis	Linear		Geometrically Linear Analysis

3.11 Calculation result of RC1 - General loading without wind 1 * (CO1 – CO4)

	Description	Value	Unit	Comment
	CO1 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-54,66	kN	
	Sum of support forces in Z	-54,66	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	5,2	mm	Member No. 360, x: 0.625 m
	Maximum displacement in Y-direction	3,8	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-29,3	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	29,3	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,9	mrad	Member No. 670, x: 0.000 m
	Maximum rotation about Y-axis	11,9	mrad	Member No. 851, x: 0.030 m
	Maximum rotation about Z-axis	3,3	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO2 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-50,39	kN	
	Sum of support forces in Z	-50,39	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	4,6	mm	Member No. 360, x: 0.625 m
	Maximum displacement in Y-direction	3,8	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-29,0	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	29,0	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,8	mrad	Member No. 670, x: 0.000 m
	Maximum rotation about Y-axis	10,1	mrad	Member No. 851, x: 0.023 m
	Maximum rotation about Z-axis	3,0	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO3 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-57,14	kN	
	Sum of support forces in Z	-57,14	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	6,9	mm	Member No. 360, x: 0.625 m
	Maximum displacement in Y-direction	4,8	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-37,8	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	37,8	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,9	mrad	Member No. 670, x: 0.000 m
	Maximum rotation about Y-axis	15,4	mrad	Member No. 851, x: 0.023 m
	Maximum rotation about Z-axis	4,4	mrad	Member No. 681, x: 0.829 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO4 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-55,79	kN	
	Sum of support forces in Z	-55,79	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	6,8	mm	Member No. 360, x: 0.625 m
	Maximum displacement in Y-direction	5,0	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-39,6	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	39,7	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,9	mrad	Member No. 670, x: 0.000 m
	Maximum rotation about Y-axis	15,1	mrad	Member No. 851, x: 0.023 m
	Maximum rotation about Z-axis	4,4	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T

3.12 Calculation result of RC2 – Design Values In-service: 1 * (CO10 – CO38)

	Description	Value	Unit	Comment
	CO10 - 1.15*LC1 + 1.15*LC2 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	15,22	kN	
	Sum of support forces in Y	15,22	kN	Deviation: 0.00 %
	Sum of loads in Z	-28,15	kN	
	Sum of support forces in Z	-28,15	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-24,1	mm	Member No. 833, x: 1.681 m
	Maximum displacement in Y-direction	19,2	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	68,3	mm	Member No. 243, x: 2.009 m
	Maximum vectorial displacement	71,0	mm	Member No. 243, x: 2.009 m
	Maximum rotation about X-axis	-52,7	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	8,4	mrad	Member No. 666, x: 0.000 m
	Maximum rotation about Z-axis	-19,5	mrad	Member No. 833, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO11 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	15,22	kN	
	Sum of support forces in Y	15,22	kN	Deviation: 0.00 %
	Sum of loads in Z	-39,17	kN	
	Sum of support forces in Z	-39,17	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-24,4	mm	Member No. 833, x: 2.101 m
	Maximum displacement in Y-direction	18,9	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	58,0	mm	Member No. 244, x: 2.009 m
	Maximum vectorial displacement	60,2	mm	Member No. 244, x: 2.009 m
	Maximum rotation about X-axis	51,0	mrad	Member No. 992, x: 0.070 m
	Maximum rotation about Y-axis	-8,5	mrad	Member No. 362, x: 1.000 m
	Maximum rotation about Z-axis	-19,5	mrad	Member No. 833, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO12 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	15,22	kN	
	Sum of support forces in Y	15,22	kN	Deviation: 0.00 %
	Sum of loads in Z	-34,90	kN	
	Sum of support forces in Z	-34,90	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-24,4	mm	Member No. 833, x: 2.101 m
	Maximum displacement in Y-direction	19,0	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	58,7	mm	Member No. 244, x: 2.009 m
	Maximum vectorial displacement	60,9	mm	Member No. 244, x: 2.009 m
	Maximum rotation about X-axis	50,6	mrad	Member No. 992, x: 0.070 m
	Maximum rotation about Y-axis	-8,4	mrad	Member No. 362, x: 1.000 m
	Maximum rotation about Z-axis	-19,5	mrad	Member No. 833, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO13 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	15,22	kN	
	Sum of support forces in Y	15,22	kN	Deviation: 0.00 %
	Sum of loads in Z	-41,65	kN	
	Sum of support forces in Z	-41,65	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	24,7	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	19,3	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	54,9	mm	Member No. 244, x: 2.009 m
	Maximum vectorial displacement	57,4	mm	Member No. 244, x: 2.009 m
	Maximum rotation about X-axis	52,8	mrad	Member No. 992, x: 0.070 m
	Maximum rotation about Y-axis	-9,4	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	19,6	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO14 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	15,22	kN	
	Sum of support forces in Y	15,22	kN	Deviation: 0.00 %
	Sum of loads in Z	-40,30	kN	
	Sum of support forces in Z	-40,30	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	24,7	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	19,4	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	54,9	mm	Member No. 244, x: 2.009 m
	Maximum vectorial displacement	57,3	mm	Member No. 244, x: 2.009 m

	Maximum rotation about X-axis	52,8	mrad	Member No. 992, x: 0.070 m
	Maximum rotation about Y-axis	-9,1	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	19,6	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO15 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC7 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	30,89	kN	
	Sum of support forces in Y	30,89	kN	Deviation: 0.00 %
	Sum of loads in Z	-195,81	kN	
	Sum of support forces in Z	-195,81	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-24,5	mm	Member No. 833, x: 2.101 m
	Maximum displacement in Y-direction	19,7	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	57,9	mm	Member No. 244, x: 2.009 m
	Maximum vectorial displacement	60,4	mm	Member No. 245, x: 2.009 m
	Maximum rotation about X-axis	50,9	mrad	Member No. 992, x: 0.070 m
	Maximum rotation about Y-axis	-29,9	mrad	FE Mesh Node No. 226 (X: 9.052, Y: -1.528, Z: -0.186 m)
	Maximum rotation about Z-axis	19,6	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO16 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC7 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	30,89	kN	
	Sum of support forces in Y	30,89	kN	Deviation: 0.00 %
	Sum of loads in Z	-191,54	kN	
	Sum of support forces in Z	-191,54	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-24,5	mm	Member No. 833, x: 2.101 m
	Maximum displacement in Y-direction	19,8	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	58,6	mm	Member No. 244, x: 2.009 m
	Maximum vectorial displacement	61,0	mm	Member No. 245, x: 2.009 m
	Maximum rotation about X-axis	50,4	mrad	Member No. 992, x: 0.070 m
	Maximum rotation about Y-axis	-29,9	mrad	FE Mesh Node No. 226 (X: 9.052, Y: -1.528, Z: -0.186 m)
	Maximum rotation about Z-axis	19,6	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO17 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC7 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	30,89	kN	
	Sum of support forces in Y	30,89	kN	Deviation: 0.00 %
	Sum of loads in Z	-198,29	kN	
	Sum of support forces in Z	-198,29	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-24,7	mm	Member No. 833, x: 2.101 m
	Maximum displacement in Y-direction	20,1	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	54,8	mm	Member No. 244, x: 2.009 m
	Maximum vectorial displacement	57,5	mm	Member No. 245, x: 2.009 m
	Maximum rotation about X-axis	52,7	mrad	Member No. 992, x: 0.070 m
	Maximum rotation about Y-axis	-29,9	mrad	FE Mesh Node No. 226 (X: 9.052, Y: -1.528, Z: -0.186 m)
	Maximum rotation about Z-axis	19,7	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO18 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC7 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	30,89	kN	
	Sum of support forces in Y	30,89	kN	Deviation: 0.00 %
	Sum of loads in Z	-196,94	kN	
	Sum of support forces in Z	-196,94	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-24,7	mm	Member No. 833, x: 2.101 m
	Maximum displacement in Y-direction	20,2	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	54,8	mm	Member No. 244, x: 2.009 m
	Maximum vectorial displacement	57,5	mm	Member No. 244, x: 2.009 m
	Maximum rotation about X-axis	52,8	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	-29,9	mrad	FE Mesh Node No. 226 (X: 9.052, Y: -1.528, Z: -0.186 m)
	Maximum rotation about Z-axis	19,7	mrad	Member No. 837, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO20 - 1.15*LC1 + 1.15*LC2 + 1.35*LC11			
	Sum of loads in X	4,58	kN	
	Sum of support forces in X	4,58	kN	Deviation: 0.00 %
	Sum of loads in Y	2,45	kN	
	Sum of support forces in Y	2,45	kN	Deviation: 0.00 %
	Sum of loads in Z	-42,68	kN	
	Sum of support forces in Z	-42,68	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	21,1	mm	Member No. 44, x: 0.368 m
	Maximum displacement in Y-direction	7,8	mm	Member No. 227, x: 0.500 m
	Maximum displacement in Z-direction	-19,2	mm	Member No. 239, x: 0.444 m

	Maximum vectorial displacement	21,6	mm	Member No. 44, x: 0.368 m
	Maximum rotation about X-axis	30,6	mrad	Member No. 581, x: 0.000 m
	Maximum rotation about Y-axis	10,6	mrad	Member No. 226, x: 1.000 m
	Maximum rotation about Z-axis	10,0	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO21 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC11			
	Sum of loads in X	4,58	kN	
	Sum of support forces in X	4,58	kN	Deviation: 0.00 %
	Sum of loads in Y	2,45	kN	
	Sum of support forces in Y	2,45	kN	Deviation: 0.00 %
	Sum of loads in Z	-53,70	kN	
	Sum of support forces in Z	-53,70	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	25,5	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	9,2	mm	Member No. 227, x: 0.625 m
	Maximum displacement in Z-direction	-29,5	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	37,5	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,8	mrad	Member No. 581, x: 0.000 m
	Maximum rotation about Y-axis	13,0	mrad	Member No. 355, x: 1.000 m
	Maximum rotation about Z-axis	13,8	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO22 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC11			
	Sum of loads in X	4,58	kN	
	Sum of support forces in X	4,58	kN	Deviation: 0.00 %
	Sum of loads in Y	2,45	kN	
	Sum of support forces in Y	2,45	kN	Deviation: 0.00 %
	Sum of loads in Z	-49,43	kN	
	Sum of support forces in Z	-49,43	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	24,4	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	9,0	mm	Member No. 227, x: 0.625 m
	Maximum displacement in Z-direction	-29,2	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	36,8	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,8	mrad	Member No. 581, x: 0.000 m
	Maximum rotation about Y-axis	12,2	mrad	Member No. 355, x: 1.000 m
	Maximum rotation about Z-axis	13,1	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO23 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC11			
	Sum of loads in X	4,58	kN	
	Sum of support forces in X	4,58	kN	Deviation: 0.00 %
	Sum of loads in Y	2,45	kN	
	Sum of support forces in Y	2,45	kN	Deviation: 0.00 %
	Sum of loads in Z	-56,18	kN	
	Sum of support forces in Z	-56,18	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	26,9	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	9,7	mm	Member No. 227, x: 0.750 m
	Maximum displacement in Z-direction	-38,0	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	44,7	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,9	mrad	Member No. 581, x: 0.000 m
	Maximum rotation about Y-axis	15,1	mrad	Member No. 851, x: 0.023 m
	Maximum rotation about Z-axis	15,0	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO24 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC11			
	Sum of loads in X	4,58	kN	
	Sum of support forces in X	4,58	kN	Deviation: 0.00 %
	Sum of loads in Y	2,45	kN	
	Sum of support forces in Y	2,45	kN	Deviation: 0.00 %
	Sum of loads in Z	-54,83	kN	
	Sum of support forces in Z	-54,83	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	26,6	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	9,7	mm	Member No. 227, x: 0.750 m
	Maximum displacement in Z-direction	-39,8	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	46,2	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,9	mrad	Member No. 581, x: 0.000 m
	Maximum rotation about Y-axis	14,8	mrad	Member No. 851, x: 0.023 m
	Maximum rotation about Z-axis	14,9	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO25 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC8 + 1.35*LC11			
	Sum of loads in X	20,24	kN	
	Sum of support forces in X	20,24	kN	Deviation: 0.00 %
	Sum of loads in Y	2,45	kN	
	Sum of support forces in Y	2,45	kN	Deviation: 0.00 %
	Sum of loads in Z	-210,34	kN	
	Sum of support forces in Z	-210,34	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	27,0	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	8,6	mm	Member No. 227, x: 0.750 m

	Maximum displacement in Z-direction	-29,4	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	38,4	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,4	mrad	Member No. 581, x: 0.000 m
	Maximum rotation about Y-axis	30,7	mrad	FE Mesh Node No. 1034 (X: 1.307, Y: -2.617, Z: -0.186 m)
	Maximum rotation about Z-axis	13,9	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO26 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC8 + 1.35*LC11			
	Sum of loads in X	20,24	kN	
	Sum of support forces in X	20,24	kN	Deviation: 0.00 %
	Sum of loads in Y	2,45	kN	
	Sum of support forces in Y	2,45	kN	Deviation: 0.00 %
	Sum of loads in Z	-206,07	kN	
	Sum of support forces in Z	-206,07	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	25,9	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	8,5	mm	Member No. 227, x: 0.750 m
	Maximum displacement in Z-direction	-29,1	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	37,7	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,3	mrad	Member No. 581, x: 0.000 m
	Maximum rotation about Y-axis	30,7	mrad	FE Mesh Node No. 1034 (X: 1.307, Y: -2.617, Z: -0.186 m)
	Maximum rotation about Z-axis	13,3	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO27 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC8 + 1.35*LC11			
	Sum of loads in X	20,24	kN	
	Sum of support forces in X	20,24	kN	Deviation: 0.00 %
	Sum of loads in Y	2,45	kN	
	Sum of support forces in Y	2,45	kN	Deviation: 0.00 %
	Sum of loads in Z	-212,82	kN	
	Sum of support forces in Z	-212,82	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	28,5	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	9,2	mm	Member No. 227, x: 0.875 m
	Maximum displacement in Z-direction	-37,9	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	45,5	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,5	mrad	Member No. 581, x: 0.000 m
	Maximum rotation about Y-axis	30,7	mrad	FE Mesh Node No. 1034 (X: 1.307, Y: -2.617, Z: -0.186 m)
	Maximum rotation about Z-axis	15,2	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO28 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC8 + 1.35*LC11			
	Sum of loads in X	20,24	kN	
	Sum of support forces in X	20,24	kN	Deviation: 0.00 %
	Sum of loads in Y	2,45	kN	
	Sum of support forces in Y	2,45	kN	Deviation: 0.00 %
	Sum of loads in Z	-211,47	kN	
	Sum of support forces in Z	-211,47	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	28,2	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	9,4	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-39,8	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	47,0	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,5	mrad	Member No. 581, x: 0.000 m
	Maximum rotation about Y-axis	30,7	mrad	FE Mesh Node No. 1034 (X: 1.307, Y: -2.617, Z: -0.186 m)
	Maximum rotation about Z-axis	15,1	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO30 - 1.15*LC1 + 1.15*LC2 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-12,44	kN	
	Sum of support forces in Y	-12,44	kN	Deviation: 0.00 %
	Sum of loads in Z	-50,41	kN	
	Sum of support forces in Z	-50,41	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	13,8	mm	Member No. 21, x: 0.100 m
	Maximum displacement in Y-direction	-18,3	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	-37,4	mm	Member No. 243, x: 2.009 m
	Maximum vectorial displacement	41,6	mm	Member No. 243, x: 2.009 m
	Maximum rotation about X-axis	-31,5	mrad	Member No. 664, x: 0.000 m
	Maximum rotation about Y-axis	8,3	mrad	Member No. 351, x: 0.750 m
	Maximum rotation about Z-axis	-10,5	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO31 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-12,44	kN	
	Sum of support forces in Y	-12,44	kN	Deviation: 0.00 %
	Sum of loads in Z	-61,44	kN	
	Sum of support forces in Z	-61,44	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	13,8	mm	Member No. 837, x: 2.101 m

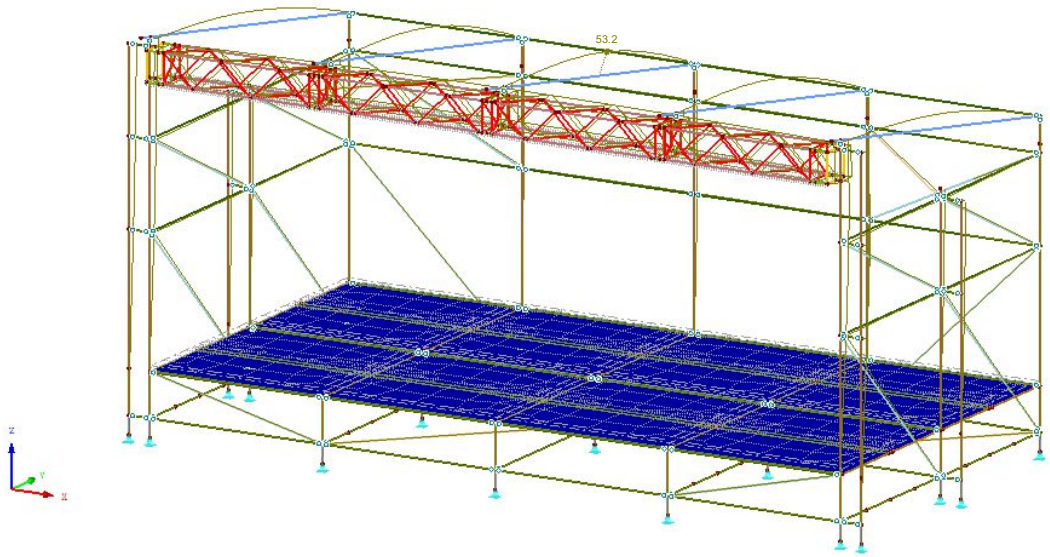
	Maximum displacement in Y-direction	-17,5	mm	Member No. 243, x: 2.411 m
	Maximum displacement in Z-direction	-51,1	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	54,0	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	34,1	mrad	Member No. 243, x: 0.000 m
	Maximum rotation about Y-axis	-14,8	mrad	Member No. 847, x: 0.030 m
	Maximum rotation about Z-axis	-11,4	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO32 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-12,44	kN	
	Sum of support forces in Y	-12,44	kN	Deviation: 0.00 %
	Sum of loads in Z	-57,16	kN	
	Sum of support forces in Z	-57,16	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	13,7	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-17,4	mm	Member No. 243, x: 2.411 m
	Maximum displacement in Z-direction	-50,9	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	53,8	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	33,9	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	-13,0	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	-11,3	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO33 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-12,44	kN	
	Sum of support forces in Y	-12,44	kN	Deviation: 0.00 %
	Sum of loads in Z	-63,91	kN	
	Sum of support forces in Z	-63,91	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	14,0	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-17,3	mm	Member No. 243, x: 2.411 m
	Maximum displacement in Z-direction	-55,7	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	58,3	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	35,9	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	-18,3	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	-11,8	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO34 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-12,44	kN	
	Sum of support forces in Y	-12,44	kN	Deviation: 0.00 %
	Sum of loads in Z	-62,56	kN	
	Sum of support forces in Z	-62,56	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	14,0	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-17,2	mm	Member No. 243, x: 2.411 m
	Maximum displacement in Z-direction	-56,6	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	59,1	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	36,1	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	-18,0	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	-11,8	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO35 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC9 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-28,11	kN	
	Sum of support forces in Y	-28,11	kN	Deviation: 0.00 %
	Sum of loads in Z	-218,08	kN	
	Sum of support forces in Z	-218,08	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	13,8	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-18,8	mm	Member No. 285, x: 0.250 m
	Maximum displacement in Z-direction	-51,1	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	54,2	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	34,1	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	30,1	mrad	FE Mesh Node No. 706 (X: 1.307, Y: -1.527, Z: -0.186 m)
	Maximum rotation about Z-axis	-23,2	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO36 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC9 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-28,11	kN	
	Sum of support forces in Y	-28,11	kN	Deviation: 0.00 %
	Sum of loads in Z	-213,81	kN	
	Sum of support forces in Z	-213,81	kN	Deviation: 0.00 %

	Maximum displacement in X-direction	13,7	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-18,7	mm	Member No. 285, x: 0.250 m
	Maximum displacement in Z-direction	-50,8	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	54,0	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	33,9	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	30,1	mrad	FE Mesh Node No. 706 (X: 1.307, Y: -1.527, Z: -0.186 m)
	Maximum rotation about Z-axis	-23,1	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO37 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC9 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-28,11	kN	
	Sum of support forces in Y	-28,11	kN	Deviation: 0.00 %
	Sum of loads in Z	-220,56	kN	
	Sum of support forces in Z	-220,56	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	14,0	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-18,3	mm	Member No. 285, x: 0.250 m
	Maximum displacement in Z-direction	-55,6	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	58,4	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	35,8	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	30,1	mrad	FE Mesh Node No. 706 (X: 1.307, Y: -1.527, Z: -0.186 m)
	Maximum rotation about Z-axis	-23,7	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO38 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC9 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-28,11	kN	
	Sum of support forces in Y	-28,11	kN	Deviation: 0.00 %
	Sum of loads in Z	-219,21	kN	
	Sum of support forces in Z	-219,21	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	14,0	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-18,2	mm	Member No. 285, x: 0.250 m
	Maximum displacement in Z-direction	-56,5	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	59,3	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	36,1	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	30,1	mrad	FE Mesh Node No. 706 (X: 1.307, Y: -1.527, Z: -0.186 m)
	Maximum rotation about Z-axis	-23,7	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T

3.12.1 Deformation of the In-service situation characteristic max and min values.

RC 3: CO50 or to CO54 or CO60 or to CO64 or CO70 or to CO74
Global Deformations u
Result Combinations: Max Values

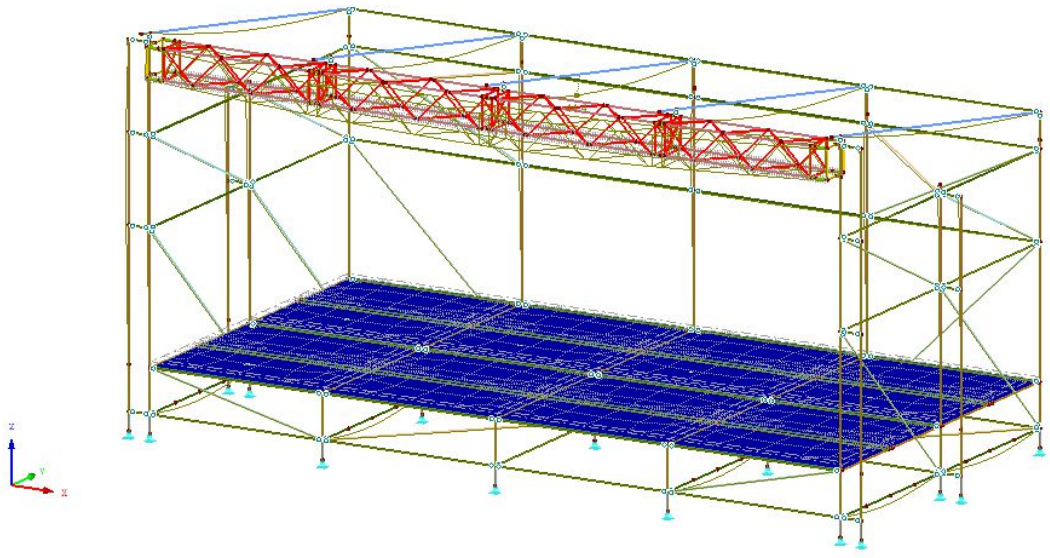
Isometric



Max u: 53.2, Min u: 0.0 [mm]
Factor of deformations: 5.00

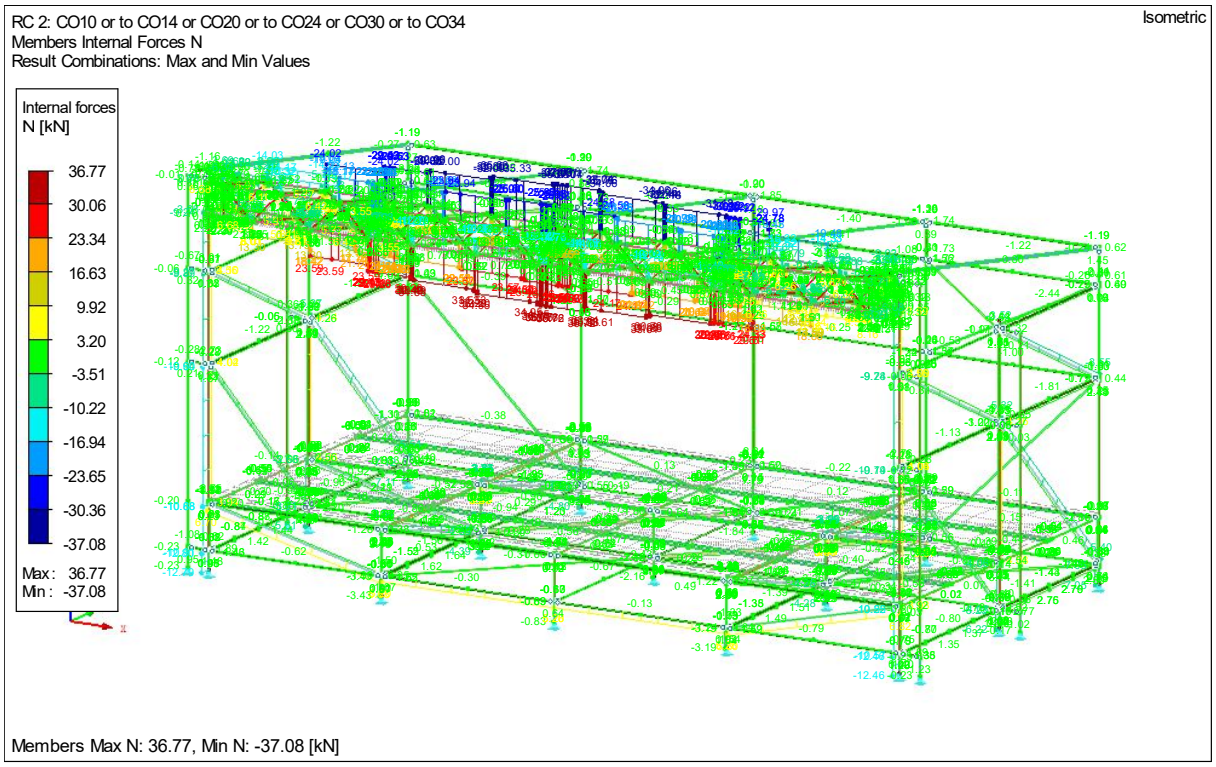
RC 3: CO50 or to CO54 or CO60 or to CO64 or CO70 or to CO74
Global Deformations u
Result Combinations: Min Values

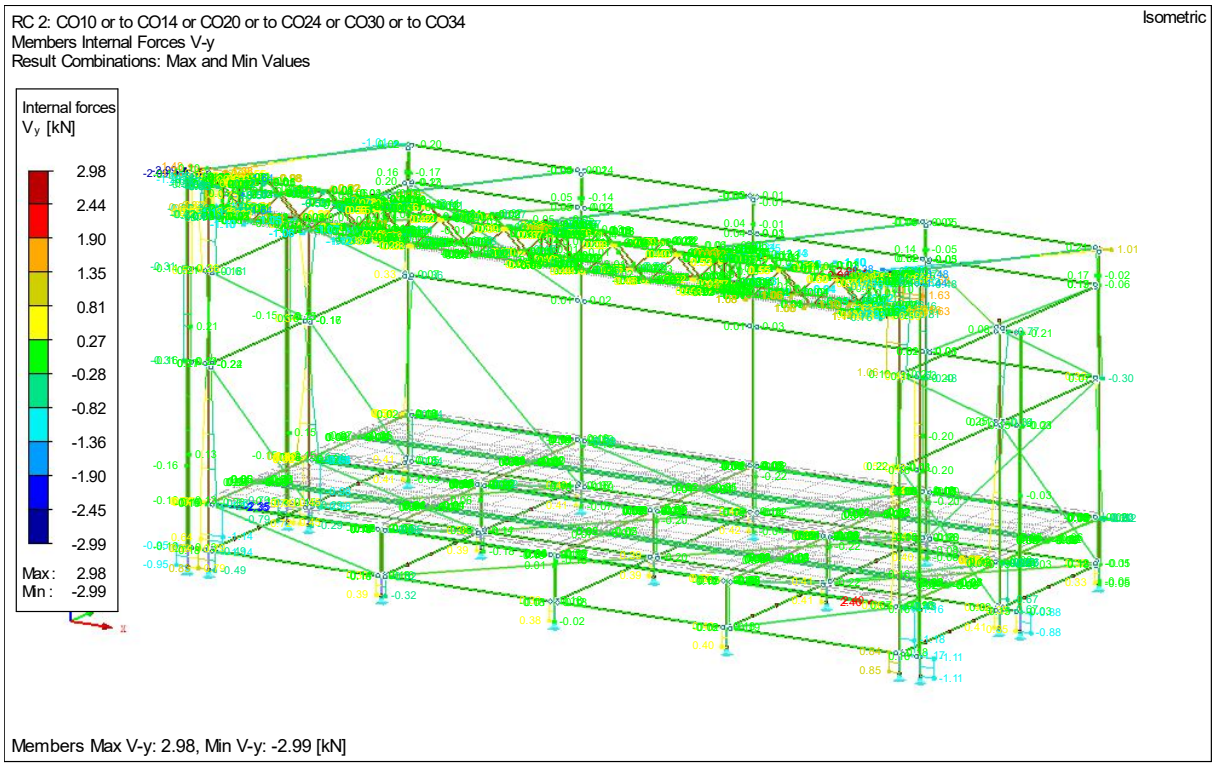
Isometric



Max u: 44.4, Min u: 0.0 [mm]
Factor of deformations: 5.00

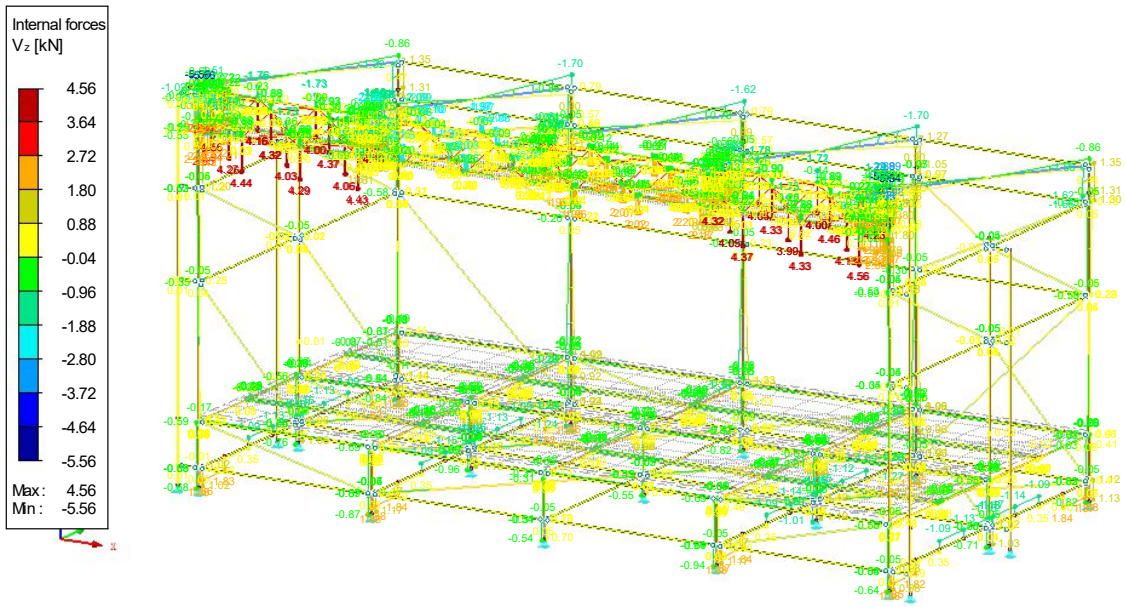
3.12.2 Internal force diagram RC2 Design values In-service.





RC 2: CO10 or to CO14 or CO20 or to CO24 or CO30 or to CO34
Members Internal Forces V-z
Result Combinations: Max and Min Values

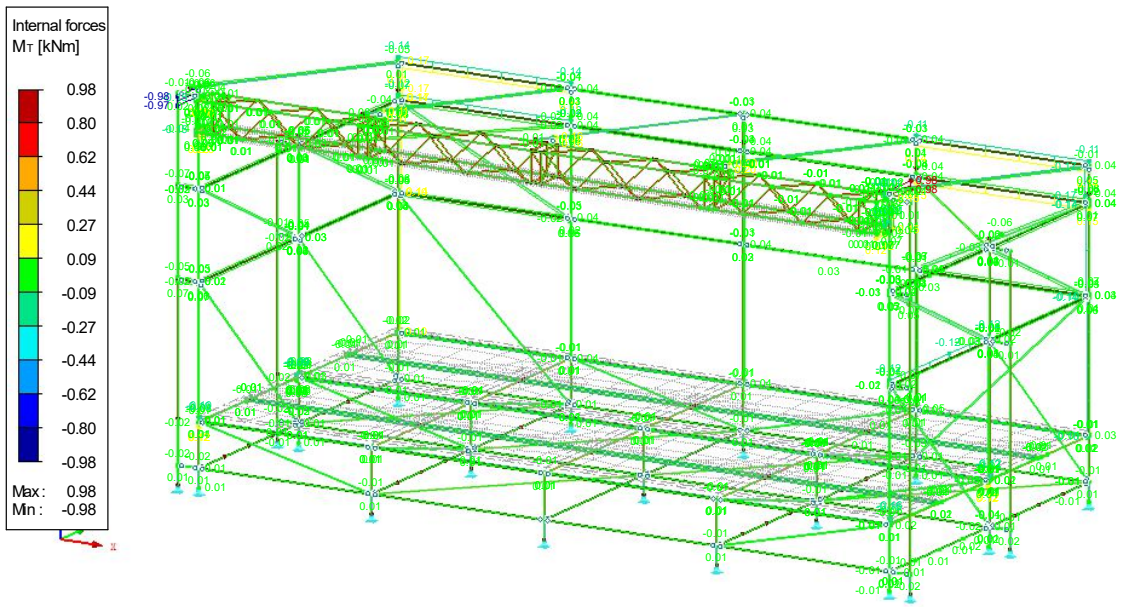
Isometric



Members Max V-z: 4.56, Min V-z: -5.56 [kN]

RC 2: CO10 or to CO14 or CO20 or to CO24 or CO30 or to CO34
Members Internal Forces M-T
Result Combinations: Max and Min Values

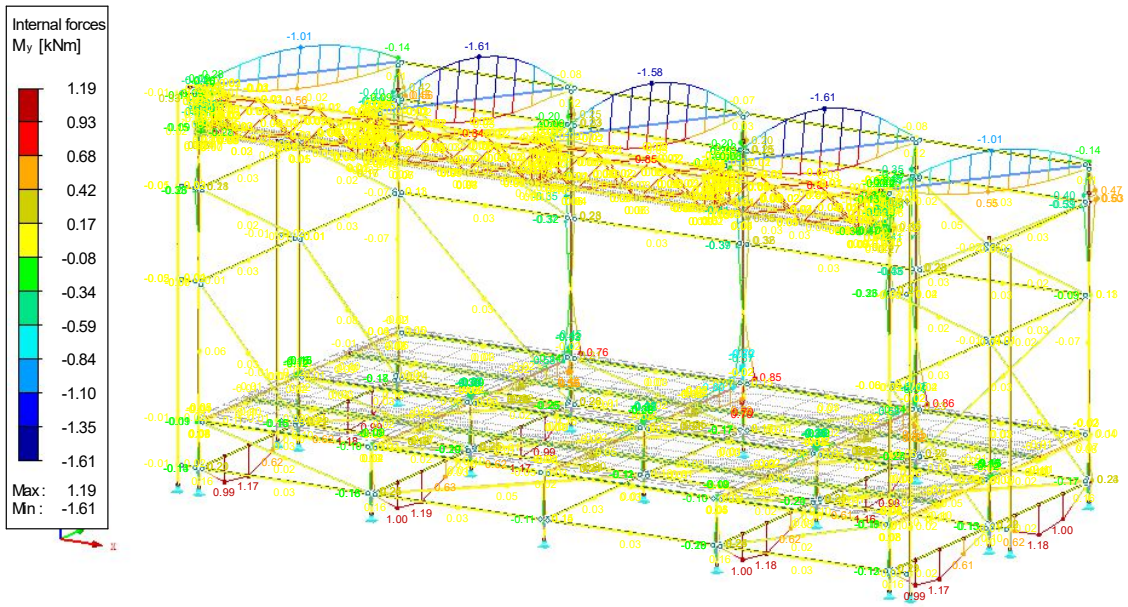
Isometric



Members Max M-T: 0.98, Min M-T: -0.98 [kNm]

RC 2: CO10 or to CO14 or CO20 or to CO24 or CO30 or to CO34
Members Internal Forces M-y
Result Combinations: Max and Min Values

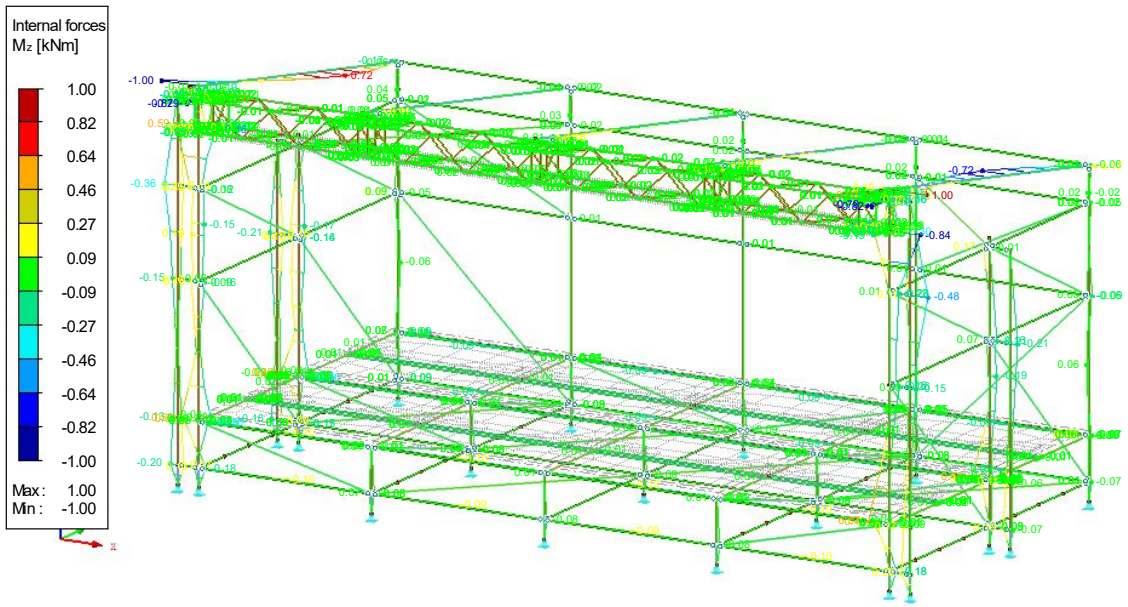
Isometric



Members Max M-y: 1.19, Min M-y: -1.61 [kNm]

RC 2: CO10 or to CO14 or CO20 or to CO24 or CO30 or to CO34
Members Internal Forces M-z
Result Combinations: Max and Min Values

Isometric



Members Max M-z: 1.00, Min M-z: -1.00 [kNm]

3.13 Calculation result of RC4 - Design Values Out-service: 1 * (CO100 – CO124)

	Description	Value	Unit	Comment
	CO100 - 1.15*LC1 + 1.15*LC2 + 1.35*LC13			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	5,37	kN	
	Sum of support forces in Y	5,37	kN	Deviation: 0.00 %
	Sum of loads in Z	-26,70	kN	
	Sum of support forces in Z	-26,70	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-26,7	mm	Member No. 833, x: 2.101 m
	Maximum displacement in Y-direction	15,4	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	78,0	mm	Member No. 243, x: 2.009 m
	Maximum vectorial displacement	79,5	mm	Member No. 243, x: 2.009 m
	Maximum rotation about X-axis	-59,5	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	-7,2	mrad	Member No. 837, x: 3.362 m
	Maximum rotation about Z-axis	-21,6	mrad	Member No. 833, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO101 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC13			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	5,37	kN	
	Sum of support forces in Y	5,37	kN	Deviation: 0.00 %
	Sum of loads in Z	-37,72	kN	
	Sum of support forces in Z	-37,72	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-27,1	mm	Member No. 833, x: 2.101 m
	Maximum displacement in Y-direction	15,8	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	65,7	mm	Member No. 243, x: 2.009 m
	Maximum vectorial displacement	67,6	mm	Member No. 243, x: 2.009 m
	Maximum rotation about X-axis	56,8	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	-4,8	mrad	Member No. 847, x: 0.038 m
	Maximum rotation about Z-axis	21,7	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO102 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC13			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	5,37	kN	
	Sum of support forces in Y	5,37	kN	Deviation: 0.00 %
	Sum of loads in Z	-33,45	kN	
	Sum of support forces in Z	-33,45	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-27,0	mm	Member No. 833, x: 2.101 m
	Maximum displacement in Y-direction	15,9	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	65,9	mm	Member No. 243, x: 2.009 m
	Maximum vectorial displacement	67,8	mm	Member No. 243, x: 2.009 m
	Maximum rotation about X-axis	56,8	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	3,7	mrad	Member No. 164, x: 0.034 m
	Maximum rotation about Z-axis	-21,6	mrad	Member No. 833, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO103 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC13			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	5,37	kN	
	Sum of support forces in Y	5,37	kN	Deviation: 0.00 %
	Sum of loads in Z	-40,20	kN	
	Sum of support forces in Z	-40,20	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	27,3	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	16,1	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	62,0	mm	Member No. 243, x: 2.009 m
	Maximum vectorial displacement	64,1	mm	Member No. 243, x: 2.009 m
	Maximum rotation about X-axis	58,9	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	-8,3	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	22,1	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO104 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC13			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	5,37	kN	
	Sum of support forces in Y	5,37	kN	Deviation: 0.00 %
	Sum of loads in Z	-38,85	kN	
	Sum of support forces in Z	-38,85	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	27,3	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	16,3	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	61,8	mm	Member No. 244, x: 2.009 m
	Maximum vectorial displacement	63,4	mm	Member No. 244, x: 2.009 m

	Maximum rotation about X-axis	59,4	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	-8,0	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	22,1	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO110 - 1.15*LC1 + 1.15*LC2 + 1.35*LC14			
	Sum of loads in X	2,64	kN	
	Sum of support forces in X	2,64	kN	Deviation: 0.00 %
	Sum of loads in Y	2,15	kN	
	Sum of support forces in Y	2,15	kN	Deviation: 0.00 %
	Sum of loads in Z	-30,93	kN	
	Sum of support forces in Z	-30,93	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	34,1	mm	Member No. 837, x: 2.522 m
	Maximum displacement in Y-direction	9,3	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	57,4	mm	Member No. 243, x: 2.009 m
	Maximum vectorial displacement	59,9	mm	Member No. 243, x: 2.009 m
	Maximum rotation about X-axis	-43,9	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	11,1	mrad	Member No. 226, x: 1.125 m
	Maximum rotation about Z-axis	22,4	mrad	Member No. 837, x: 0.420 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO111 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC14			
	Sum of loads in X	2,64	kN	
	Sum of support forces in X	2,64	kN	Deviation: 0.00 %
	Sum of loads in Y	2,15	kN	
	Sum of support forces in Y	2,15	kN	Deviation: 0.00 %
	Sum of loads in Z	-41,96	kN	
	Sum of support forces in Z	-41,96	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	36,3	mm	Member No. 837, x: 2.522 m
	Maximum displacement in Y-direction	10,4	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	46,3	mm	Member No. 245, x: 2.009 m
	Maximum vectorial displacement	49,6	mm	Member No. 245, x: 2.009 m
	Maximum rotation about X-axis	44,1	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	12,4	mrad	Member No. 355, x: 1.125 m
	Maximum rotation about Z-axis	23,0	mrad	Member No. 837, x: 0.420 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO112 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC14			
	Sum of loads in X	2,64	kN	
	Sum of support forces in X	2,64	kN	Deviation: 0.00 %
	Sum of loads in Y	2,15	kN	
	Sum of support forces in Y	2,15	kN	Deviation: 0.00 %
	Sum of loads in Z	-37,69	kN	
	Sum of support forces in Z	-37,69	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	35,6	mm	Member No. 837, x: 2.522 m
	Maximum displacement in Y-direction	10,4	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	47,0	mm	Member No. 245, x: 2.009 m
	Maximum vectorial displacement	50,1	mm	Member No. 245, x: 2.009 m
	Maximum rotation about X-axis	44,1	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	11,7	mrad	Member No. 355, x: 1.125 m
	Maximum rotation about Z-axis	22,7	mrad	Member No. 837, x: 0.420 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO113 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC14			
	Sum of loads in X	2,64	kN	
	Sum of support forces in X	2,64	kN	Deviation: 0.00 %
	Sum of loads in Y	2,15	kN	
	Sum of support forces in Y	2,15	kN	Deviation: 0.00 %
	Sum of loads in Z	-44,44	kN	
	Sum of support forces in Z	-44,43	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	37,0	mm	Member No. 837, x: 2.522 m
	Maximum displacement in Y-direction	10,7	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	43,2	mm	Member No. 245, x: 2.009 m
	Maximum vectorial displacement	49,3	mm	Member No. 837, x: 2.101 m
	Maximum rotation about X-axis	46,2	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	13,7	mrad	Member No. 355, x: 1.000 m
	Maximum rotation about Z-axis	23,1	mrad	Member No. 837, x: 0.420 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO114 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC14			
	Sum of loads in X	2,64	kN	
	Sum of support forces in X	2,64	kN	Deviation: 0.00 %
	Sum of loads in Y	2,15	kN	
	Sum of support forces in Y	2,15	kN	Deviation: 0.00 %
	Sum of loads in Z	-43,08	kN	
	Sum of support forces in Z	-43,08	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	36,8	mm	Member No. 837, x: 2.522 m
	Maximum displacement in Y-direction	10,8	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	43,2	mm	Member No. 245, x: 2.009 m

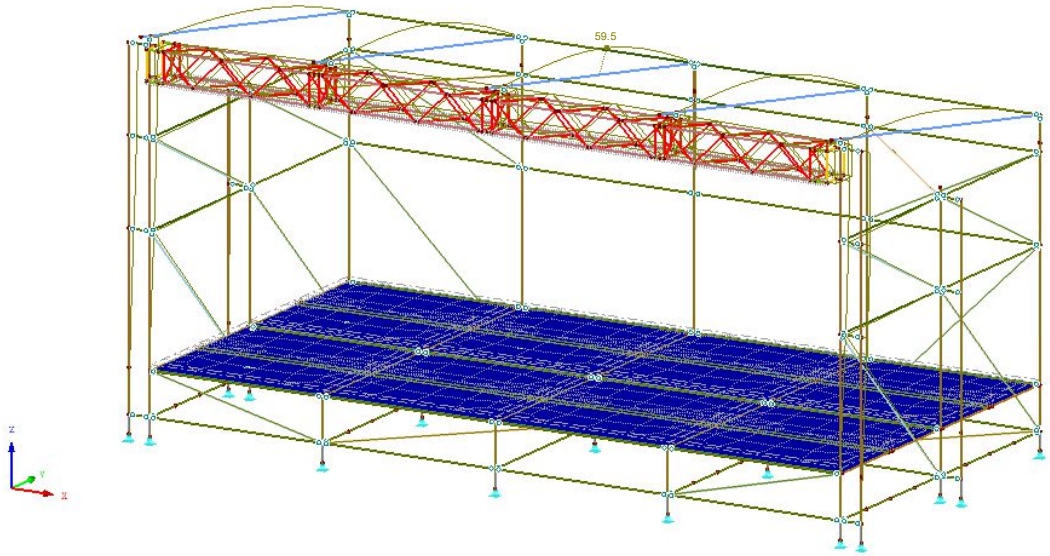
	Maximum vectorial displacement	49,2	mm	Member No. 837, x: 2.101 m
	Maximum rotation about X-axis	46,7	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	13,6	mrad	Member No. 355, x: 1.000 m
	Maximum rotation about Z-axis	23,0	mrad	Member No. 837, x: 0.420 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO120 - 1.15*LC1 + 1.15*LC2 + 1.35*LC15			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	-4,19	kN	
	Sum of support forces in Y	-4,19	kN	Deviation: 0.00 %
	Sum of loads in Z	-54,23	kN	
	Sum of support forces in Z	-54,23	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	18,7	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-12,8	mm	Member No. 243, x: 2.009 m
	Maximum displacement in Z-direction	-57,8	mm	Member No. 243, x: 2.009 m
	Maximum vectorial displacement	59,2	mm	Member No. 243, x: 2.009 m
	Maximum rotation about X-axis	43,7	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	6,3	mrad	Member No. 851, x: 0.023 m
	Maximum rotation about Z-axis	-20,7	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO121 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC15			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	-4,19	kN	
	Sum of support forces in Y	-4,19	kN	Deviation: 0.00 %
	Sum of loads in Z	-65,25	kN	
	Sum of support forces in Z	-65,25	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	19,3	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-11,9	mm	Member No. 243, x: 2.411 m
	Maximum displacement in Z-direction	-71,5	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	72,4	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	49,2	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	17,2	mrad	Member No. 851, x: 0.030 m
	Maximum rotation about Z-axis	-21,7	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO122 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC15			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	-4,19	kN	
	Sum of support forces in Y	-4,19	kN	Deviation: 0.00 %
	Sum of loads in Z	-60,98	kN	
	Sum of support forces in Z	-60,98	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	19,3	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-11,8	mm	Member No. 243, x: 2.411 m
	Maximum displacement in Z-direction	-71,2	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	72,2	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	49,1	mrad	Member No. 243, x: 0.000 m
	Maximum rotation about Y-axis	15,4	mrad	Member No. 851, x: 0.023 m
	Maximum rotation about Z-axis	-21,6	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO123 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC15			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	-4,19	kN	
	Sum of support forces in Y	-4,19	kN	Deviation: 0.00 %
	Sum of loads in Z	-67,73	kN	
	Sum of support forces in Z	-67,73	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	19,6	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-11,7	mm	Member No. 243, x: 2.411 m
	Maximum displacement in Z-direction	-76,0	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	76,9	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	51,0	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	20,7	mrad	Member No. 851, x: 0.023 m
	Maximum rotation about Z-axis	22,1	mrad	Member No. 723, x: 0.250 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO124 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC15			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	-4,19	kN	
	Sum of support forces in Y	-4,19	kN	Deviation: 0.00 %
	Sum of loads in Z	-66,38	kN	
	Sum of support forces in Z	-66,38	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	19,6	mm	Member No. 837, x: 2.101 m
	Maximum displacement in Y-direction	-11,6	mm	Member No. 243, x: 2.411 m

	Maximum displacement in Z-direction	-76,9	mm	Member No. 243, x: 2.411 m
	Maximum vectorial displacement	77,8	mm	Member No. 243, x: 2.411 m
	Maximum rotation about X-axis	51,3	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	20,4	mrad	Member No. 851, x: 0.023 m
	Maximum rotation about Z-axis	-22,1	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T

3.13.1 Deformation of the Out-service situation characteristic max and min values.

RC 5: CO150 or to CO154 or CO160 or to CO164 or CO170 or to CO174
Global Deformations u
Result Combinations: Max Values

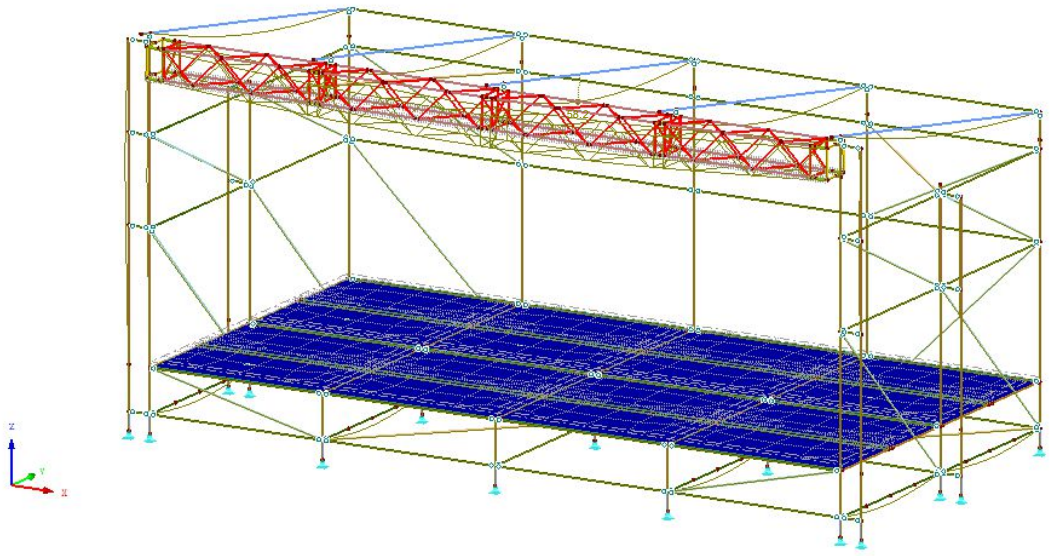
Isometric



Max u: 59.5, Min u: 0.0 [mm]
Factor of deformations: 5.00

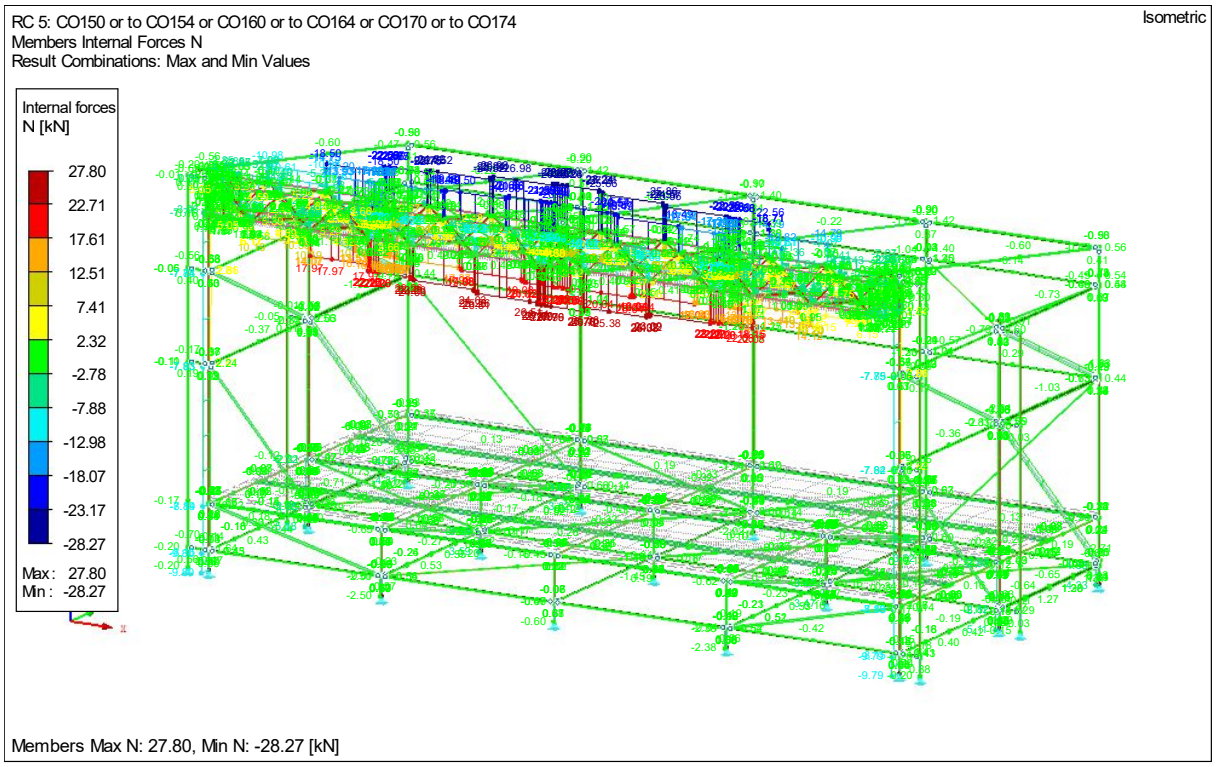
RC 5: CO150 or to CO154 or CO160 or to CO164 or CO170 or to CO174
Global Deformations u
Result Combinations: Min Values

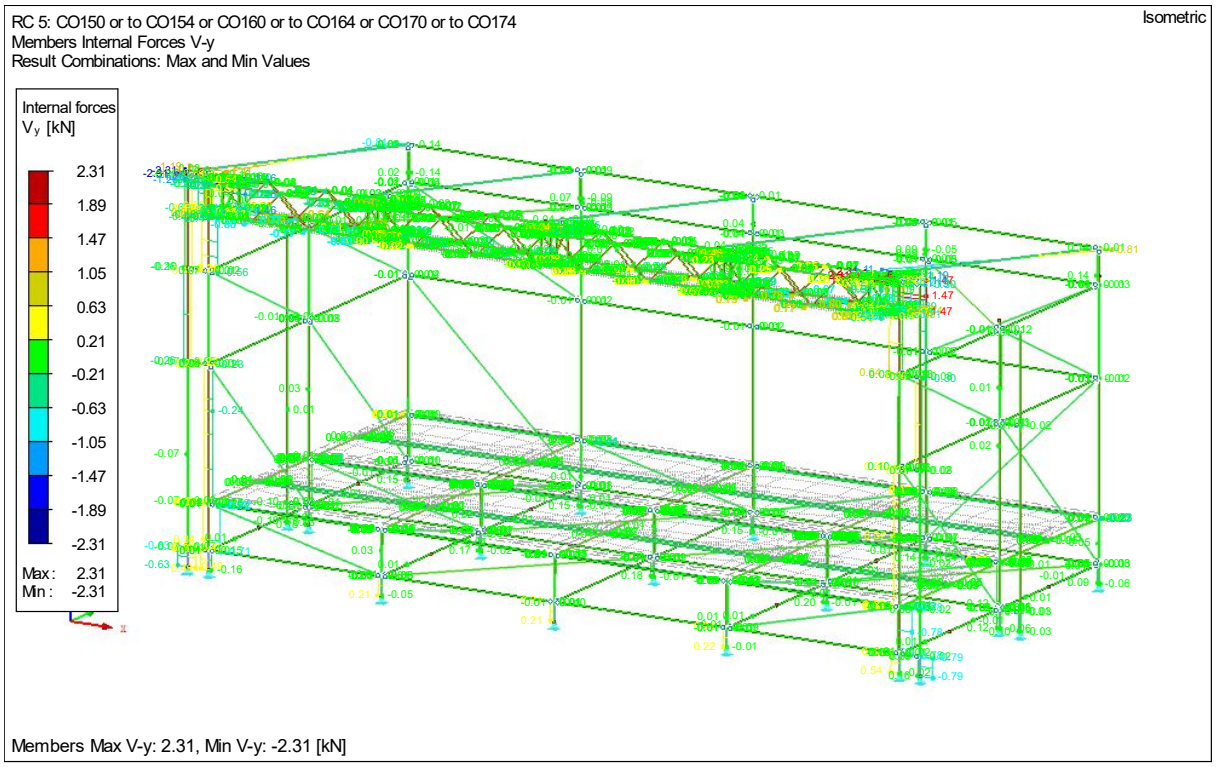
Isometric



Max u: 58.2, Min u: 0.0 [mm]
Factor of deformations: 5.00

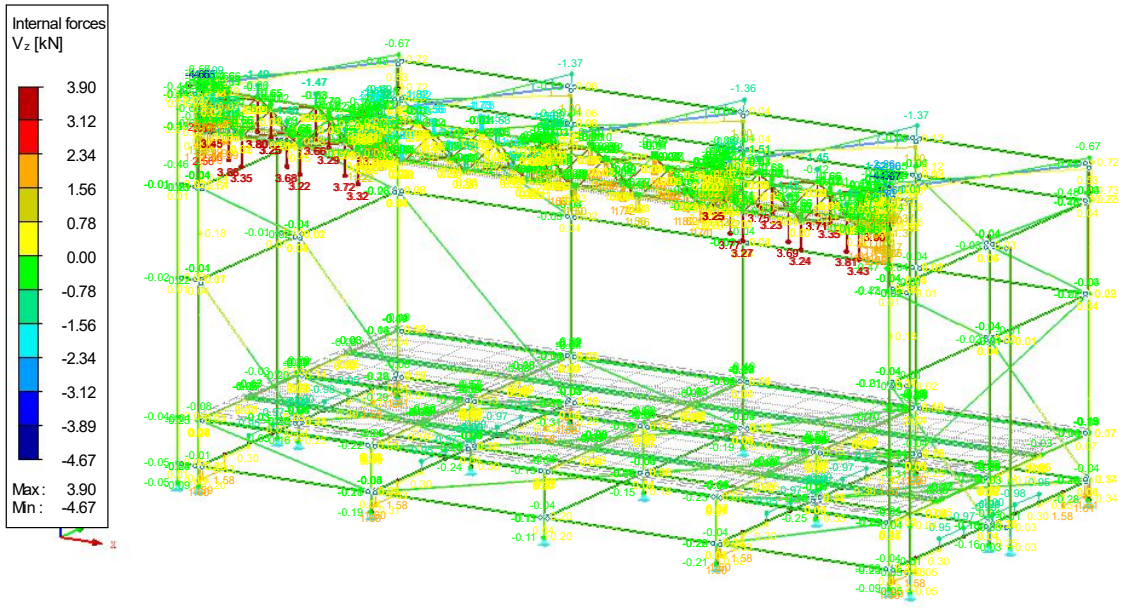
3.13.2 Internal force diagram RC4 Design Values Out-service.





RC 5: CO150 or to CO154 or CO160 or to CO164 or CO170 or to CO174
Members Internal Forces V-z
Result Combinations: Max and Min Values

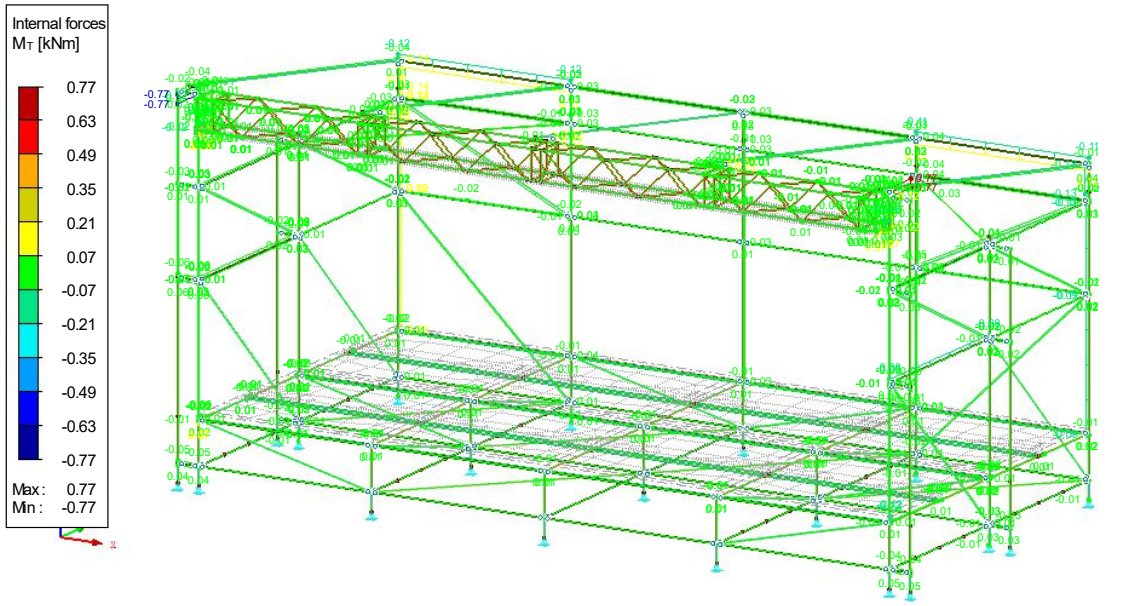
Isometric



Members Max V-z: 3.90, Min V-z: -4.67 [kN]

RC 5: CO150 or to CO154 or CO160 or to CO164 or CO170 or to CO174
Members Internal Forces M-T
Result Combinations: Max and Min Values

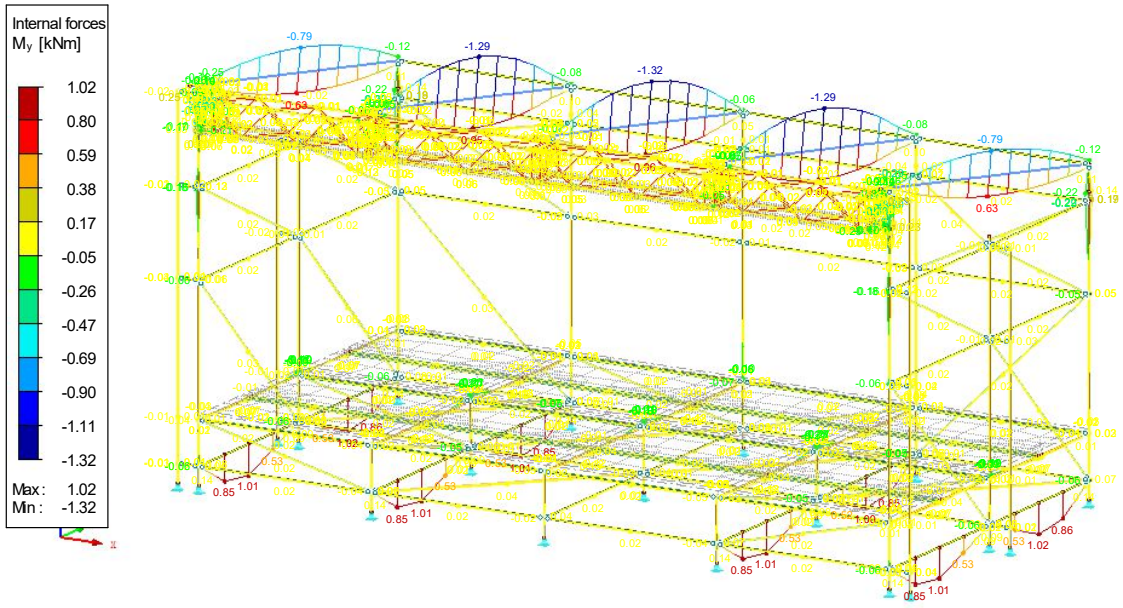
Isometric



Members Max M-T: 0.77, Min M-T: -0.77 [kNm]

RC 5: CO150 or to CO154 or CO160 or to CO164 or CO170 or to CO174
Members Internal Forces M-y
Result Combinations: Max and Min Values

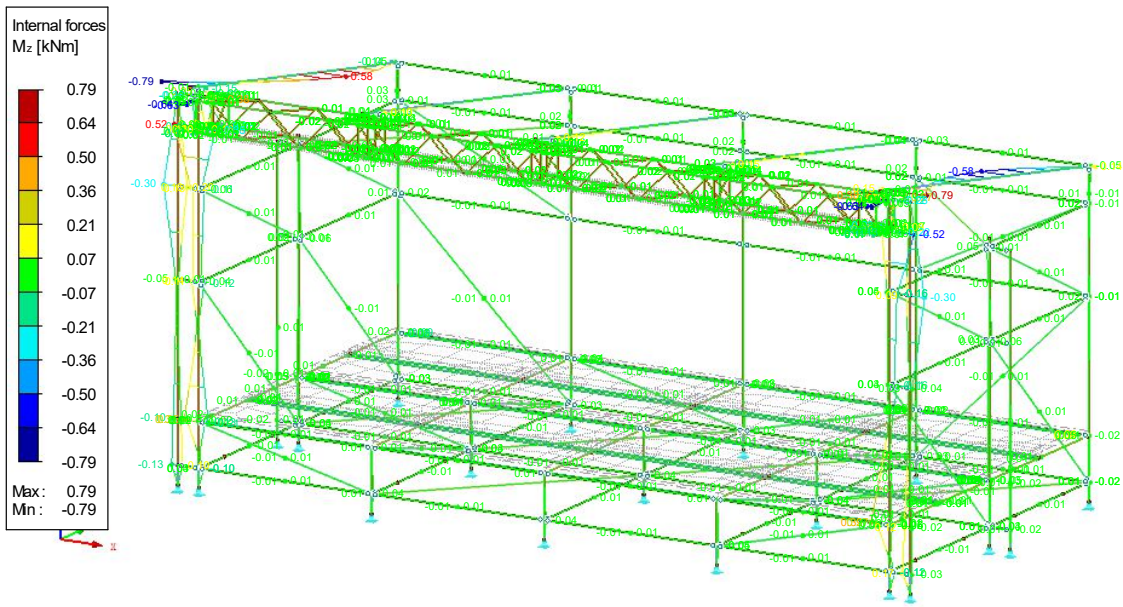
Isometric



Members Max M-y: 1.02, Min M-y: -1.32 [kNm]

RC 5: CO150 or to CO154 or CO160 or to CO164 or CO170 or to CO174
Members Internal Forces M-z
Result Combinations: Max and Min Values

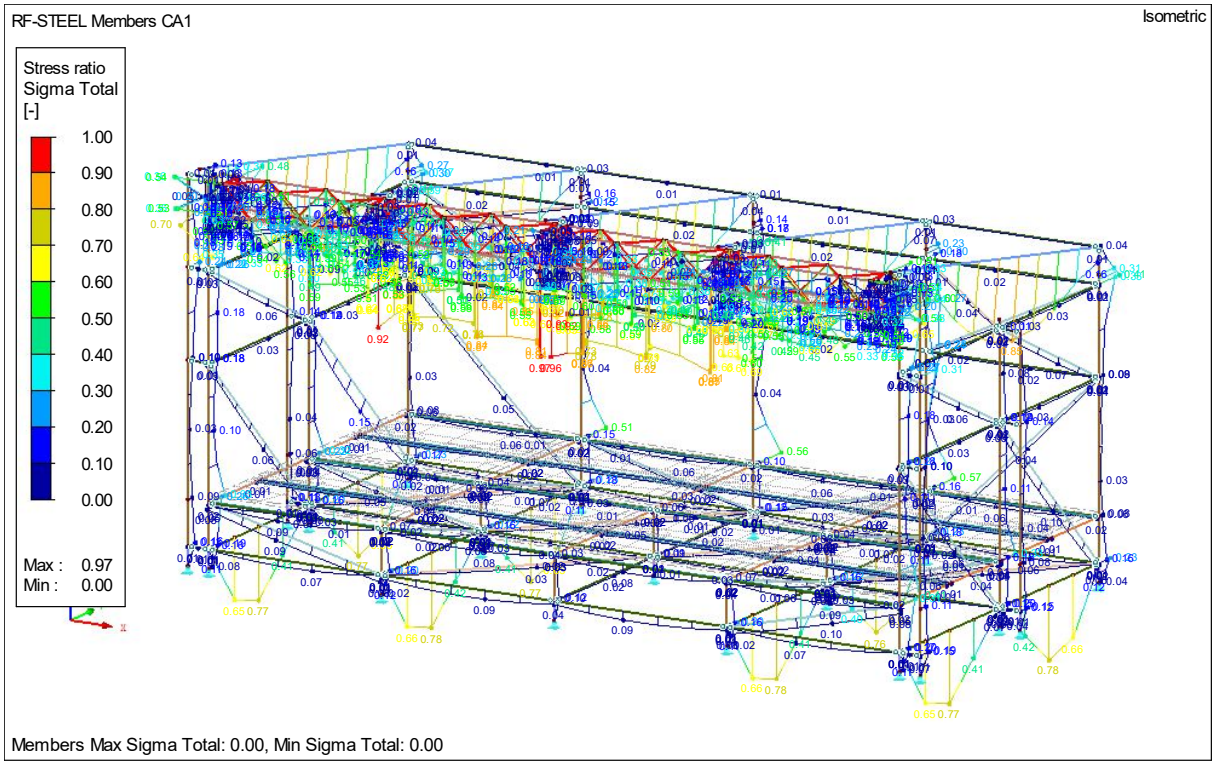
Isometric

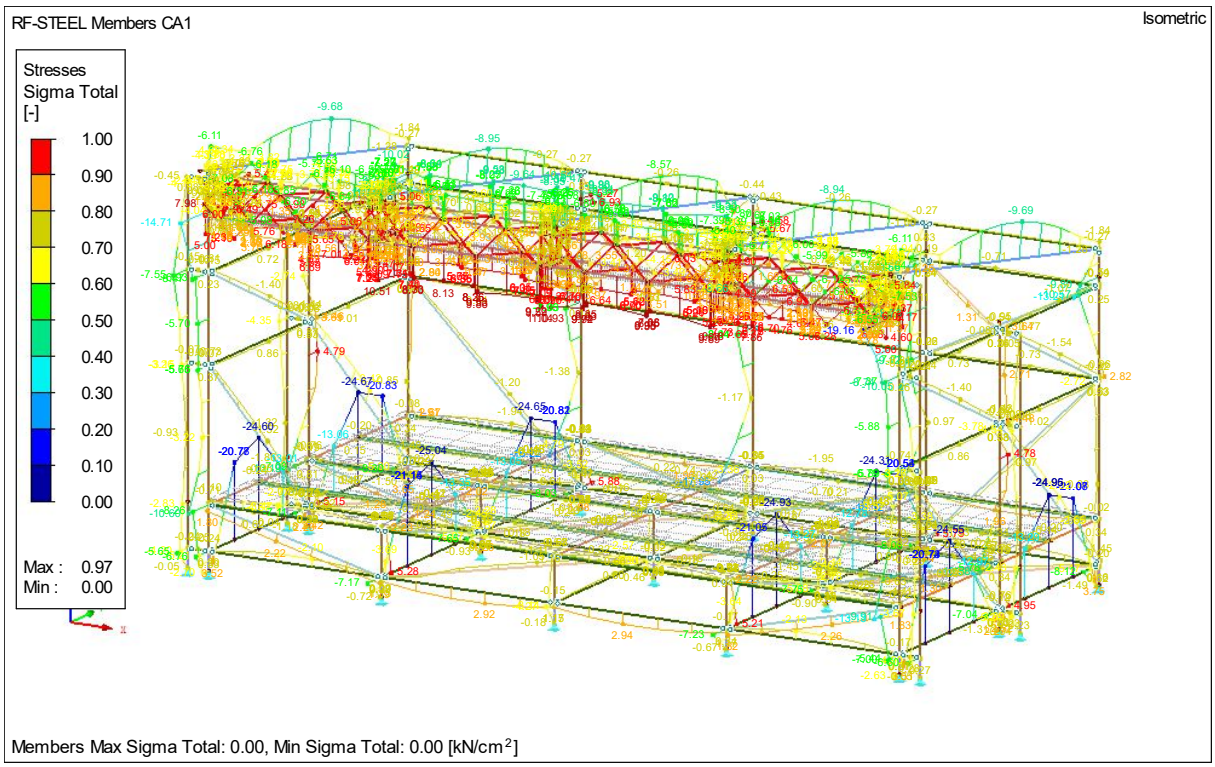


Members Max M-z: 0.79, Min M-z: -0.79 [kNm]

3.14 stress analyse GE32 Layher roof.

3.14.1 In service Stress calculation

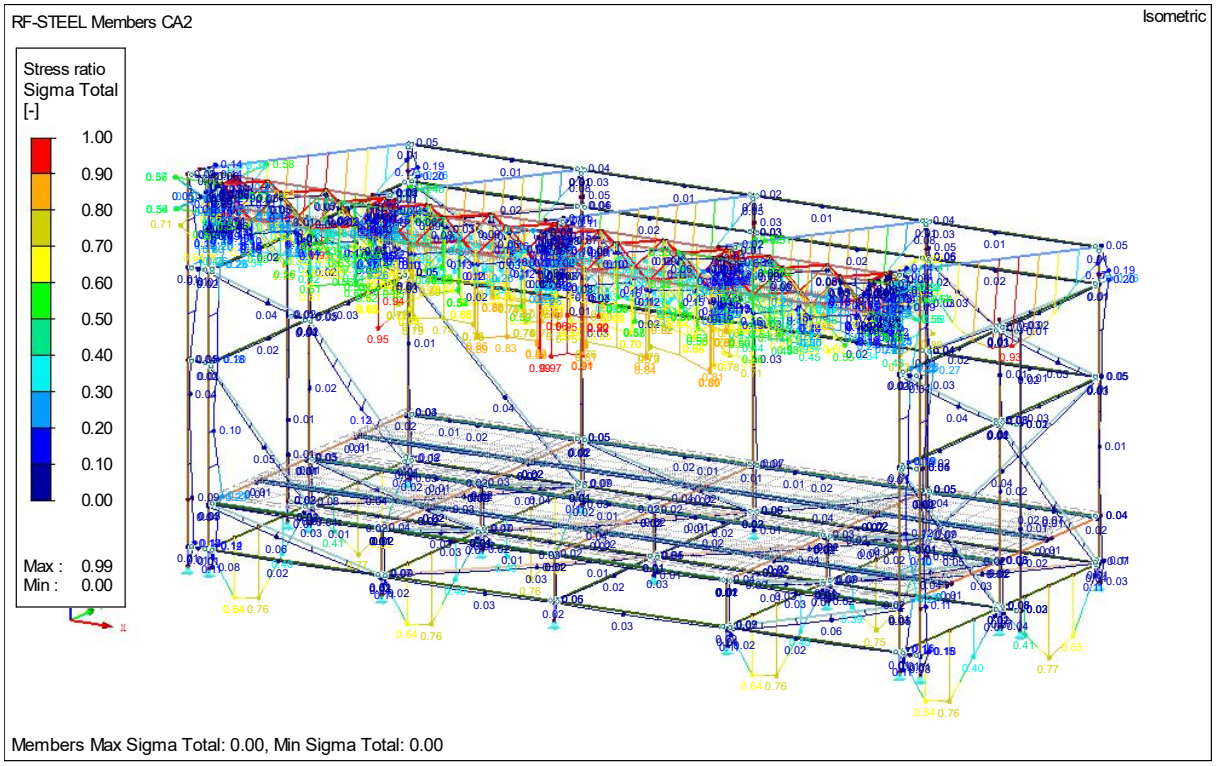


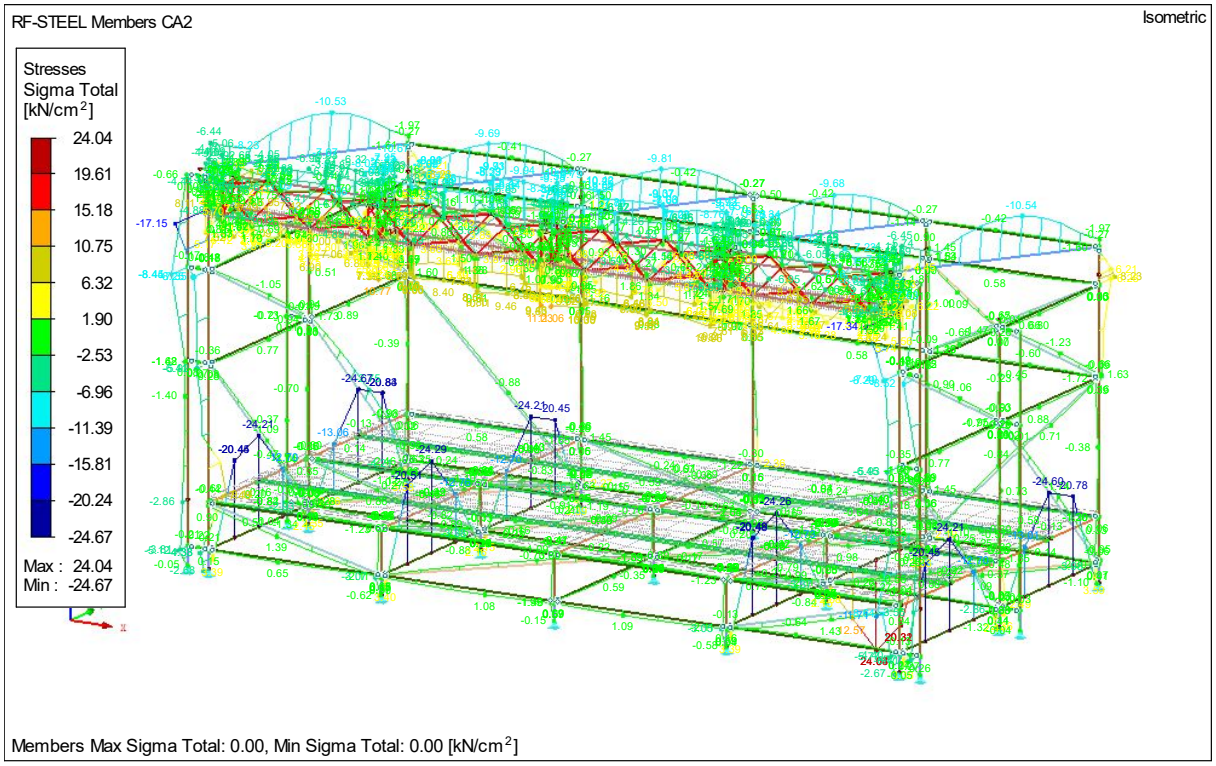


3.14.2 Utilisation per cross section in the In service.

Section No.	Member No.	Location x [m]	S-Point No.	Load-ing	Stress Type	Stress [kN/cm²] Existing	Limit	Stress Ratio
1	SHAPE-THIN KEDER PROFIEL 3000							
	833	1,681	143	CO10	Sigma Total	-9,69	11,36	0,85
	833	4,203	19	CO13	Tau Total	1,08	6,56	0,16
	833	1,681	143	CO10	Sigma-eqv	9,69	11,36	0,85
2	QRO 50x4 (Hot Formed)							
	35	0,000	7	CO13	Sigma Total	6,02	11,36	0,53
	39	0,000	16	CO23	Tau Total	1,64	6,56	0,25
	35	0,000	7	CO13	Sigma-eqv	6,03	11,36	0,53
3	Ring 48/3							
	144	0,000	12	CO34	Sigma Total	11,04	11,36	0,97
	95	0,006	36	CO33	Tau Total	2,21	6,56	0,34
	144	0,000	12	CO34	Sigma-eqv	11,04	11,36	0,97
4	Ring 48/6							
	129	0,060	31	CO34	Sigma Total	-6,26	23,64	0,26
	839	0,000	2	CO33	Tau Total	0,62	13,65	0,05
	129	0,060	31	CO34	Sigma-eqv	6,26	23,64	0,26
5	Ring 20/2							
	884	0,479	10	CO33	Sigma Total	7,98	11,36	0,70
	960	0,479	15	CO33	Tau Total	0,23	6,56	0,03
	884	0,479	10	CO33	Sigma-eqv	7,98	11,36	0,70
6	RO 38x4.5 | DIN EN 10220							
	212	0,210	10	CO10	Sigma Total	-8,30	35,50	0,23
	211	0,000	18	CO30	Tau Total	0,70	20,50	0,03
	212	0,210	10	CO10	Sigma-eqv	8,31	35,50	0,23
7	RO 48.3x3.2 (Hot Formed)							
	23	0,661	19	CO23	Sigma Total	-19,16	32,00	0,60
	31	0,100	25	CO13	Tau Total	11,71	18,48	0,63
	31	0,100	23	CO13	Sigma-eqv	20,51	32,00	0,64
8	RO 48.3x3.2 (Hot Formed)							
	214	0,500	10	CO34	Sigma Total	-25,04	32,00	0,78
	476	0,000	1	CO34	Tau Total	1,66	18,48	0,09
	214	0,500	10	CO34	Sigma-eqv	25,04	32,00	0,78
9	RO 48.3x3.2 (Hot Formed)							
	699	1,256	10	CO12	Sigma Total	-1,49	32,00	0,05
	703	0,000	1	CO34	Tau Total	0,49	18,48	0,03
	699	1,256	10	CO12	Sigma-eqv	1,49	32,00	0,05
10	RO 48.3x2.6 (Hot Formed)							
	726	1,646	10	CO10	Sigma Total	-3,42	23,50	0,15
	746	0,000	19	CO10	Tau Total	-0,84	13,57	0,06
	726	1,646	10	CO10	Sigma-eqv	3,43	23,50	0,15
12	HK 50/30/4/4/4/4							
	813	0,000	10	CO10	Sigma Total	-1,11	20,45	0,05
	813	0,000	8	CO23	Tau Total	0,16	11,81	0,01
	813	0,000	10	CO10	Sigma-eqv	1,12	20,45	0,05
13	Rectangle 50/50							
	1022	0,000	2	CO13	Sigma Total	-4,68	21,27	0,22
	996	0,000	1	CO13	Tau Total	0,88	12,28	0,07
	1022	0,000	2	CO13	Sigma-eqv	4,68	21,27	0,22

3.14.3 Out service Stress calculation



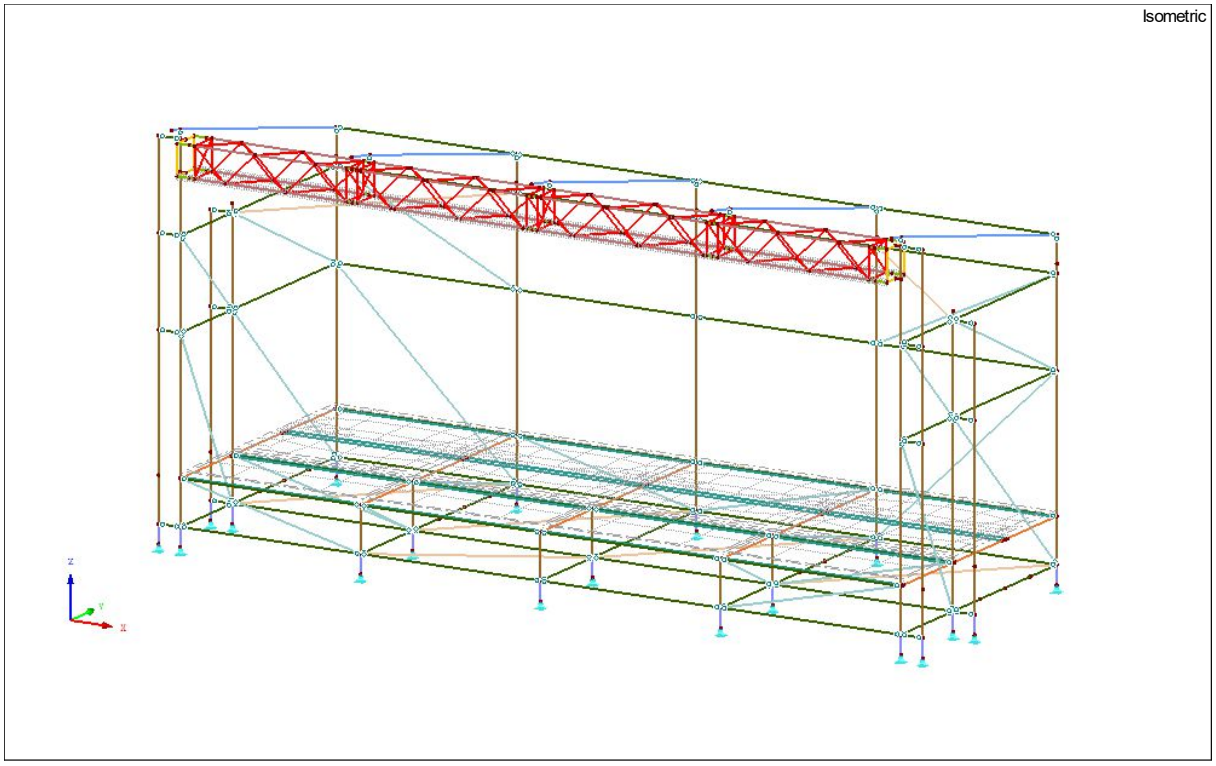


3.14.4 Utilisation per cross section in the Out service.

Section No.	Member No.	Location x [m]	S-Point No.	Load-ing	Stress Type	Stress [kN/cm²] Existing	Limit	Stress Ratio
1	SHAPE-THIN KEDER PROFIEL 3000							
	833	1,681	143	CO100	Sigma Total	-10,54	11,36	0,93
	833	4,203	19	CO103	Tau Total	1,16	6,56	0,18
	833	1,681	143	CO100	Sigma-eqv	10,54	11,36	0,93
2	QRO 50x4 (Hot Formed)							
	35	0,000	7	CO103	Sigma Total	5,71	11,36	0,50
	42	0,169	16	CO123	Tau Total	1,77	6,56	0,27
	970	0,169	7	CO103	Sigma-eqv	5,74	11,36	0,51
3	Ring 48/3							
	144	0,000	12	CO124	Sigma Total	11,23	11,36	0,99
	67	0,000	1	CO123	Tau Total	2,52	6,56	0,38
	144	0,000	12	CO124	Sigma-eqv	11,23	11,36	0,99
4	Ring 48/6							
	129	0,060	30	CO124	Sigma Total	-6,58	23,64	0,28
	108	0,000	18	CO124	Tau Total	-0,72	13,65	0,05
	129	0,060	30	CO124	Sigma-eqv	6,58	23,64	0,28
5	Ring 20/2							
	868	0,479	10	CO123	Sigma Total	9,08	11,36	0,80
	892	0,000	11	CO123	Tau Total	0,29	6,56	0,04
	868	0,479	10	CO123	Sigma-eqv	9,08	11,36	0,80
6	RO 38x4.5 | DIN EN 10220							
	654	0,210	1	CO113	Sigma Total	-6,41	35,50	0,18
	654	0,210	28	CO113	Tau Total	0,45	20,50	0,02
	654	0,210	1	CO113	Sigma-eqv	6,41	35,50	0,18
7	RO 48.3x3.2 (Hot Formed)							
	23	0,661	21	CO123	Sigma Total	-17,34	32,00	0,54
	31	0,100	26	CO103	Tau Total	12,36	18,48	0,67
	31	0,100	24	CO103	Sigma-eqv	21,54	32,00	0,67
8	RO 48.3x3.2 (Hot Formed)							
	239	0,500	10	CO123	Sigma Total	-24,67	32,00	0,77
	481	0,000	10	CO100	Tau Total	-1,76	18,48	0,10
	239	0,500	10	CO123	Sigma-eqv	24,67	32,00	0,77
9	RO 48.3x3.2 (Hot Formed)							
	699	1,674	10	CO100	Sigma Total	-1,19	32,00	0,04
	703	0,000	1	CO114	Tau Total	0,15	18,48	0,01
	699	1,674	10	CO100	Sigma-eqv	1,19	32,00	0,04
10	RO 48.3x2.6 (Hot Formed)							
	726	1,646	10	CO100	Sigma Total	-2,75	23,50	0,12
	746	0,000	17	CO100	Tau Total	-0,91	13,57	0,07
	726	1,646	10	CO100	Sigma-eqv	2,75	23,50	0,12
12	HK 50/30/4/4/4/4							
	813	0,000	14	CO113	Sigma Total	-1,04	20,45	0,05
	813	0,000	8	CO113	Tau Total	0,15	11,81	0,01
	813	0,000	14	CO113	Sigma-eqv	1,07	20,45	0,05
13	Rectangle 50/50							
	1022	0,000	2	CO103	Sigma Total	-4,70	21,27	0,22
	996	0,000	1	CO103	Tau Total	0,82	12,28	0,07
	1022	0,000	2	CO103	Sigma-eqv	4,70	21,27	0,22

3.15 General calculation of the GE24 Layher Roof.

3.15.1 construction scheme.



Cross-Sections

- 1: SHAPE-THIN KEDER PROFIEL ZEILREGEL; Aluminum EN-AW 6063 (EP,ET,ER/B) T66
- 2: QRO 50x4 (Hot Formed); Aluminum EN-AW 6082 (EP,ET) T6
- 3: Ring 48/3; Aluminum EN-AW 6082 (EP,ET) T6
- 4: Ring 48/6; Aluminum EN-AW 6082 (EP,ET) T6
- 5: Ring 20/2; Aluminum EN-AW 6082 (EP,ET) T6
- 6: RO 38x4.5 | DIN EN 10220; Steel S 355 JR
- 7: RO 48.3x3.2 (Hot Formed); S320GD 1.0250
- 8: RO 48.3x3.2 (Hot Formed); S320GD 1.0250
- 9: RO 48.3x3.2 (Hot Formed); S320GD 1.0250
- 10: RO 48.3x2.6 (Hot Formed); Steel S 235 JR
- 11: EV transom; Aluminum EN-AW 6005A (EP/O,ER/B) T6
- 12: HK 50/30/4/4/4/4; Aluminum EN-AW 6005A (EP/O,ER/B) T6
- 13: Rectangle 50/50; Aluminum EN-AW 6082 (EP,ET) T6

3.15.2 Used Materials.

Material No.	Material Description	Modulus of Elasticity E [kN/cm²]	Shear Modulus G [kN/cm²]	Poisson's Ratio ν [-]	Specific Weight γ [kN/m³]	Coeff. of Th. Exp. α [1/°C]	Partial Factor γ_M [-]	Material Model
1	Steel S 235 JR | EN 10025-2:2004-11	21000,00	8076,92	0,300	78,50	1,20E-05	1,000	Isotropic Linear Elastic
2	S320GD 1.0250 | EN 10346:2009-03	21000,00	8076,92	0,300	78,50	1,20E-05	1,000	Isotropic Linear Elastic
3	Steel S 355 JR | EN 10025-2:2004-11	21000,00	8076,92	0,300	78,50	1,20E-05	1,000	Isotropic Linear Elastic
4	Plywood, Class F20/10 E40/20, Plate Stress, Perpendicular | EN 12369-2:2011-06	200,00	3,50	3,286	5,00	5,00E-06	1,200	Orthotropic Elastic 2D...
5	Aluminum EN-AW 6005A (EP/O,ER/B) T6 | EN 1999-1-1:2007	7000,00	2700,00	0,296	27,00	2,30E-05	1,000	Isotropic Linear Elastic
6	Aluminum EN-AW 6082 (EP,ET) T6 | EN 1999-1-1:2007	7000,00	2700,00	0,296	27,00	2,30E-05	1,000	Isotropic Linear Elastic
7	Aluminum EN-AW 6063 (EP,ET,ER/B) T66 | EN 1999-1-1:2007	7000,00	2700,00	0,296	27,00	2,30E-05	1,000	Isotropic Linear Elastic

3.15.3 Used cross sections.

Section No.	Cross-Section Description [mm]	Material No.	Moments of inertia [cm⁴] Torsion J	Bending I_y	Bending I_z	Cross-Sectional Areas [cm²] Axial A	Shear A_y	Shear A_z	Principal Axes α [°]	Rotation α' [°]	Overall Dimensions [mm] Width b	Depth h
1	SHAPE-THIN KEDER PROFIEL ZEILREGEL	7	0,50	18,36	46,49	10,04	2,43	2,74	0,00	0,00	75,5	48,5
2	QRO 50x4 (Hot Formed)	6	40,40	25,00	25,00	7,19	3,12	3,12	0,00	0,00	50,0	50,0
3	Ring 48/3	6	21,57	10,78	10,78	4,24	2,14	2,14	0,00	0,00	48,0	48,0
4	Ring 48/6	6	35,63	17,81	17,81	7,92	4,09	4,09	0,00	0,00	48,0	48,0
5	Ring 20/2	6	0,93	0,46	0,46	1,13	0,58	0,58	0,00	0,00	20,0	20,0
6	RO 38x4.5 | DIN EN 10220	3	13,53	6,76	6,76	4,74	2,38	2,38	0,00	0,00	38,0	38,0
7	RO 48.3x3.2 (Hot Formed)	2	23,20	11,60	11,60	4,53	2,26	2,26	0,00	0,00	48,3	48,3
8	RO 48.3x3.2 (Hot Formed)	2	23,20	11,60	11,60	4,53	2,26	2,26	0,00	0,00	48,3	48,3
9	RO 48.3x3.2 (Hot Formed)	2	23,20	11,60	11,60	4,53	2,26	2,26	0,00	0,00	48,3	48,3
10	RO 48.3x2.6 (Hot Formed)	1	19,60	9,78	9,78	3,73	1,85	1,85	0,00	0,00	48,3	48,3
11	EV transom	5	50,00	554,00	70,00	18,78	18,00	18,00	0,00	0,00	49,0	172,5
12	HK 50/30/4/4/4/4	5	16,87	17,67	7,52	5,76	1,62	3,48	0,00	0,00	30,0	50,0
13	IPE 160	1	3,60	869,30	68,31	20,09	10,17	7,33	0,00	0,00	82,0	160,0
14	Rectangle 50/50	6	87,92	52,08	52,08	25,00	20,83	20,83	0,00	0,00	50,0	50,0

3.16 Calculation summary GE24 Layher Roof

	Description	Value	Unit	Comment
	Summary			
	Calculation Status	OK		
	Maximum displacement in X-direction	22,6	mm	CO113, Member No. 837, x: 2.230 m
	Maximum displacement in Y-direction	24,3	mm	CO18, Member No. 243, x: 1.334 m
	Maximum displacement in Z-direction	72,9	mm	CO100, Member No. 243, x: 1.501 m
	Maximum vectorial displacement	75,3	mm	CO100, Member No. 243, x: 1.501 m
	Maximum rotation about X-axis	78,3	mrad	CO104, Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	30,8	mrad	CO28, FE Mesh Node No. 382 (X: 1.307, Y: -1.527, Z: -0.186 m)
	Maximum rotation about Z-axis	26,1	mrad	CO23, Member No. 681, x: 0.000 m
	Number of 1D finite elements (member elements)	982		
	Number of 2D finite elements (surface elements)	552		
	Number of 3D finite elements (solid elements)	0		
	Number of FE mesh nodes	993		
	Number of equations	5958		
	Matrix solver method	Direct		
	Maximum number of iterations	100		
	Number of divisions for member results	10		
	Number of divisions of members with cable, elastic foundation, taper, or plastic characteristic	10		
	Activate shear stiffness of members (A-y, A-z)	+		
	Plate bending theory	Mindlin		
	Activate ineffective supports	+		
	Precision of convergence criteria of nonlinear calculation	1,0		

3.17 Calculation result of the separate load cases.

	Description	Value	Unit	Comment
	LC1 - Self-weight			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-15,30	kN	
	Sum of support forces in Z	-15,30	kN	Deviation: 0.00 %
	Resultant of reactions about X	0,245	kNm	At center of gravity of model (X: 5.173, Y: -1.541, Z: 0.530 m)
	Resultant of reactions about Y	-0,468	kNm	At center of gravity of model
	Resultant of reactions about Z	0,000	kNm	At center of gravity of model
	Maximum displacement in X-direction	-0,7	mm	Member No. 738, x: 1.440 m
	Maximum displacement in Y-direction	-1,6	mm	Member No. 726, x: 1.440 m
	Maximum displacement in Z-direction	-4,1	mm	Member No. 243, x: 1.668 m
	Maximum vectorial displacement	4,1	mm	Member No. 243, x: 1.668 m
	Maximum rotation about X-axis	4,0	mrad	Member No. 833, x: 0.000 m
	Maximum rotation about Y-axis	-1,4	mrad	Member No. 702, x: 0.000 m
	Maximum rotation about Z-axis	0,7	mrad	Member No. 681, x: 0.000 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC2 - ballast loading			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-20,00	kN	
	Sum of support forces in Z	-20,00	kN	Deviation: 0.00 %
	Resultant of reactions about X	2,933	kNm	At center of gravity of model (X: 5.173, Y: -1.541, Z: 0.530 m)
	Resultant of reactions about Y	0,133	kNm	At center of gravity of model
	Resultant of reactions about Z	0,000	kNm	At center of gravity of model
	Maximum displacement in X-direction	0,0	mm	Member No. 223, x: 0.300 m
	Maximum displacement in Y-direction	0,0	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-16,3	mm	Member No. 234, x: 0.438 m
	Maximum vectorial displacement	16,3	mm	Member No. 234, x: 0.438 m
	Maximum rotation about X-axis	26,0	mrad	Member No. 647, x: 0.000 m
	Maximum rotation about Y-axis	0,0	mrad	Member No. 707, x: 0.000 m
	Maximum rotation about Z-axis	0,0	mrad	Member No. 723, x: 0.000 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC3 - UDL Loading			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-8,17	kN	
	Sum of support forces in Z	-8,17	kN	Deviation: -0.02 %
	Resultant of reactions about X	12,796	kNm	At center of gravity of model (X: 5.173, Y: -1.541, Z: 0.530 m)
	Resultant of reactions about Y	0,047	kNm	At center of gravity of model
	Resultant of reactions about Z	0,000	kNm	At center of gravity of model
	Maximum displacement in X-direction	3,4	mm	Member No. 360, x: 0.667 m
	Maximum displacement in Y-direction	2,9	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-21,1	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	21,2	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	7,2	mrad	Member No. 991, x: 0.000 m
	Maximum rotation about Y-axis	-8,0	mrad	Member No. 847, x: 0.030 m
	Maximum rotation about Z-axis	4,7	mrad	Member No. 681, x: 0.000 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC4 - CPL Loading setup			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-5,00	kN	
	Sum of support forces in Z	-5,00	kN	Deviation: -0.02 %
	Resultant of reactions about X	7,835	kNm	At center of gravity of model (X: 5.173, Y: -1.541, Z: 0.530 m)
	Resultant of reactions about Y	0,029	kNm	At center of gravity of model
	Resultant of reactions about Z	0,000	kNm	At center of gravity of model
	Maximum displacement in X-direction	3,0	mm	Member No. 360, x: 0.667 m
	Maximum displacement in Y-direction	3,0	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-20,9	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	21,0	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	7,2	mrad	Member No. 991, x: 0.000 m
	Maximum rotation about Y-axis	-6,7	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	4,2	mrad	Member No. 681, x: 0.000 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC5 - 2x point load per truss			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	

	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-10,00	kN	
	Sum of support forces in Z	-10,00	kN	Deviation: -0.02 %
	Resultant of reactions about X	15,670	kNm	At center of gravity of model (X: 5.173, Y: -1.541, Z: 0.530 m)
	Resultant of reactions about Y	0,114	kNm	At center of gravity of model
	Resultant of reactions about Z	0,000	kNm	At center of gravity of model
	Maximum displacement in X-direction	4,6	mm	Member No. 360, x: 0.667 m
	Maximum displacement in Y-direction	3,8	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-27,6	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	27,7	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	9,4	mrad	Member No. 991, x: 0.000 m
	Maximum rotation about Y-axis	-10,6	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	6,3	mrad	Member No. 681, x: 0.000 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC6 - 3x point load per truss			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-9,00	kN	
	Sum of support forces in Z	-9,00	kN	Deviation: -0.02 %
	Resultant of reactions about X	14,103	kNm	At center of gravity of model (X: 5.173, Y: -1.541, Z: 0.530 m)
	Resultant of reactions about Y	0,086	kNm	At center of gravity of model
	Resultant of reactions about Z	0,000	kNm	At center of gravity of model
	Maximum displacement in X-direction	4,6	mm	Member No. 360, x: 0.667 m
	Maximum displacement in Y-direction	4,1	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-29,0	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	29,2	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	9,9	mrad	Member No. 991, x: 0.000 m
	Maximum rotation about Y-axis	-10,4	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	6,3	mrad	Member No. 681, x: 0.000 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC7 - floor loading wind 0°			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	8,56	kN	
	Sum of support forces in Y	8,56	kN	Deviation: 0.00 %
	Sum of loads in Z	-85,57	kN	
	Sum of support forces in Z	-85,57	kN	Deviation: 0.00 %
	Resultant of reactions about X	4,999	kNm	At center of gravity of model (X: 5.173, Y: -1.541, Z: 0.530 m)
	Resultant of reactions about Y	0,568	kNm	At center of gravity of model
	Resultant of reactions about Z	0,057	kNm	At center of gravity of model
	Maximum displacement in X-direction	1,1	mm	FE Mesh Node No. 269 (X: 2.590, Y: -2.583, Z: -0.186 m)
	Maximum displacement in Y-direction	1,6	mm	Member No. 666, x: 0.250 m
	Maximum displacement in Z-direction	-9,3	mm	FE Mesh Node No. 135 (X: 8.289, Y: -1.631, Z: -0.186 m)
	Maximum vectorial displacement	9,3	mm	FE Mesh Node No. 135 (X: 8.289, Y: -1.631, Z: -0.186 m)
	Maximum rotation about X-axis	13,8	mrad	Member No. 459, x: 1.036 m
	Maximum rotation about Y-axis	17,2	mrad	FE Mesh Node No. 11 (X: 7.770, Y: -2.583, Z: -0.186 m)
	Maximum rotation about Z-axis	4,8	mrad	Member No. 666, x: 0.000 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC8 - floor loading wind 90°			
	Sum of loads in X	8,56	kN	
	Sum of support forces in X	8,56	kN	Deviation: 0.00 %
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-85,57	kN	
	Sum of support forces in Z	-85,57	kN	Deviation: 0.00 %
	Resultant of reactions about X	-0,613	kNm	At center of gravity of model (X: 5.173, Y: -1.541, Z: 0.530 m)
	Resultant of reactions about Y	-5,044	kNm	At center of gravity of model
	Resultant of reactions about Z	-0,061	kNm	At center of gravity of model
	Maximum displacement in X-direction	1,5	mm	FE Mesh Node No. 269 (X: 2.590, Y: -2.583, Z: -0.186 m)
	Maximum displacement in Y-direction	-1,5	mm	Member No. 274, x: 1.200 m
	Maximum displacement in Z-direction	-9,3	mm	FE Mesh Node No. 768 (X: 2.073, Y: -1.631, Z: -0.186 m)
	Maximum vectorial displacement	9,3	mm	FE Mesh Node No. 768 (X: 2.073, Y: -1.631, Z: -0.186 m)
	Maximum rotation about X-axis	13,8	mrad	Member No. 441, x: 1.036 m
	Maximum rotation about Y-axis	-17,2	mrad	FE Mesh Node No. 269 (X: 2.590, Y: -2.583, Z: -0.186 m)
	Maximum rotation about Z-axis	-1,4	mrad	Member No. 724, x: 0.000 m
	Method of analysis	Linear		Geometrically Linear Analysis
	LC9 - floor loading wind 180°			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	-8,56	kN	
	Sum of support forces in Y	-8,56	kN	Deviation: 0.00 %
	Sum of loads in Z	-85,57	kN	
	Sum of support forces in Z	-85,57	kN	Deviation: 0.00 %
	Resultant of reactions about X	-6,225	kNm	At center of gravity of model (X: 5.173, Y: -1.541, Z: 0.530 m)
	Resultant of reactions about Y	0,568	kNm	At center of gravity of model
	Resultant of reactions about Z	-0,057	kNm	At center of gravity of model

	Maximum displacement in X-direction	1,1	mm	FE Mesh Node No. 269 (X: 2.590, Y: -2.583, Z: -0.186 m)
	Maximum displacement in Y-direction	-2,1	mm	Member No. 274, x: 1.200 m
	Maximum displacement in Z-direction	-9,3	mm	FE Mesh Node No. 768 (X: 2.073, Y: -1.631, Z: -0.186 m)
	Maximum vectorial displacement	9,3	mm	FE Mesh Node No. 768 (X: 2.073, Y: -1.631, Z: -0.186 m)
	Maximum rotation about X-axis	13,8	mrad	Member No. 459, x: 1.036 m
	Maximum rotation about Y-axis	17,1	mrad	FE Mesh Node No. 11 (X: 7.770, Y: -2.583, Z: -0.186 m)
	Maximum rotation about Z-axis	5,4	mrad	Member No. 725, x: 0.000 m
	Method of analysis	Linear		Geometrically Linear Analysis

3.18 Calculation result of RC1 - General loading without wind 1 * (CO1 – CO4)

	Description	Value	Unit	Comment
	CO1 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-51,62	kN	
	Sum of support forces in Z	-51,62	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	5,1	mm	Member No. 360, x: 0.667 m
	Maximum displacement in Y-direction	4,9	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-29,8	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	29,9	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,9	mrad	Member No. 670, x: 0.000 m
	Maximum rotation about Y-axis	11,8	mrad	Member No. 851, x: 0.030 m
	Maximum rotation about Z-axis	7,1	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO2 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-47,35	kN	
	Sum of support forces in Z	-47,35	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	4,5	mm	Member No. 360, x: 0.667 m
	Maximum displacement in Y-direction	5,0	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-29,5	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	29,6	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,8	mrad	Member No. 670, x: 0.000 m
	Maximum rotation about Y-axis	10,0	mrad	Member No. 851, x: 0.023 m
	Maximum rotation about Z-axis	6,5	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO3 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-54,10	kN	
	Sum of support forces in Z	-54,10	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	6,8	mm	Member No. 360, x: 0.571 m
	Maximum displacement in Y-direction	6,2	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-38,6	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	38,7	mm	FE Mesh Node No. 485 (X: 5.180, Y: -3.289, Z: 3.445 m)
	Maximum rotation about X-axis	31,0	mrad	Member No. 670, x: 0.000 m
	Maximum rotation about Y-axis	-15,3	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	9,5	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO4 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	0,00	kN	
	Sum of support forces in Y	0,00	kN	
	Sum of loads in Z	-52,75	kN	
	Sum of support forces in Z	-52,75	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	6,7	mm	Member No. 360, x: 0.571 m
	Maximum displacement in Y-direction	6,5	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-40,5	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	40,6	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,9	mrad	Member No. 670, x: 0.000 m
	Maximum rotation about Y-axis	-15,0	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	9,4	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T

3.19 Calculation result of RC2 – Design Values In-service: 1 * (CO10 – CO38)

	Description	Value	Unit	Comment
	CO10 - 1.15*LC1 + 1.15*LC2 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	15,22	kN	
	Sum of support forces in Y	15,22	kN	Deviation: 0.00 %
	Sum of loads in Z	-28,82	kN	
	Sum of support forces in Z	-28,82	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-10,0	mm	Member No. 833, x: 1.274 m
	Maximum displacement in Y-direction	23,3	mm	Member No. 243, x: 1.501 m
	Maximum displacement in Z-direction	64,0	mm	Member No. 245, x: 1.501 m
	Maximum vectorial displacement	67,5	mm	Member No. 245, x: 1.501 m
	Maximum rotation about X-axis	-66,8	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	8,7	mrad	Member No. 666, x: 0.000 m
	Maximum rotation about Z-axis	-10,7	mrad	Member No. 833, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO11 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	15,22	kN	
	Sum of support forces in Y	15,22	kN	Deviation: 0.00 %
	Sum of loads in Z	-39,84	kN	
	Sum of support forces in Z	-39,84	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	10,4	mm	Member No. 837, x: 1.593 m
	Maximum displacement in Y-direction	22,9	mm	Member No. 243, x: 1.334 m
	Maximum displacement in Z-direction	55,1	mm	Member No. 244, x: 1.501 m
	Maximum vectorial displacement	58,7	mm	Member No. 245, x: 1.501 m
	Maximum rotation about X-axis	67,3	mrad	Member No. 992, x: 0.070 m
	Maximum rotation about Y-axis	-8,6	mrad	Member No. 362, x: 1.000 m
	Maximum rotation about Z-axis	11,6	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO12 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	15,22	kN	
	Sum of support forces in Y	15,22	kN	Deviation: 0.00 %
	Sum of loads in Z	-35,57	kN	
	Sum of support forces in Z	-35,57	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	10,3	mm	Member No. 837, x: 1.593 m
	Maximum displacement in Y-direction	23,1	mm	Member No. 243, x: 1.334 m
	Maximum displacement in Z-direction	55,8	mm	Member No. 244, x: 1.501 m
	Maximum vectorial displacement	59,3	mm	Member No. 245, x: 1.501 m
	Maximum rotation about X-axis	66,6	mrad	Member No. 992, x: 0.070 m
	Maximum rotation about Y-axis	-8,5	mrad	Member No. 362, x: 1.000 m
	Maximum rotation about Z-axis	10,9	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO13 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	15,22	kN	
	Sum of support forces in Y	15,22	kN	Deviation: 0.00 %
	Sum of loads in Z	-42,32	kN	
	Sum of support forces in Z	-42,32	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	10,6	mm	Member No. 837, x: 1.593 m
	Maximum displacement in Y-direction	23,5	mm	Member No. 243, x: 1.334 m
	Maximum displacement in Z-direction	52,3	mm	Member No. 244, x: 1.334 m
	Maximum vectorial displacement	56,1	mm	Member No. 245, x: 1.334 m
	Maximum rotation about X-axis	70,0	mrad	Member No. 992, x: 0.070 m
	Maximum rotation about Y-axis	-10,8	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	13,9	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO14 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	15,22	kN	
	Sum of support forces in Y	15,22	kN	Deviation: 0.00 %
	Sum of loads in Z	-40,97	kN	
	Sum of support forces in Z	-40,97	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	10,6	mm	Member No. 837, x: 1.593 m
	Maximum displacement in Y-direction	23,7	mm	Member No. 243, x: 1.334 m
	Maximum displacement in Z-direction	52,2	mm	Member No. 244, x: 1.334 m
	Maximum vectorial displacement	56,1	mm	Member No. 245, x: 1.334 m

	Maximum rotation about X-axis	69,9	mrad	Member No. 992, x: 0.070 m
	Maximum rotation about Y-axis	-10,5	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	13,8	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO15 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC7 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	26,77	kN	
	Sum of support forces in Y	26,77	kN	Deviation: 0.00 %
	Sum of loads in Z	-155,36	kN	
	Sum of support forces in Z	-155,36	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-10,4	mm	Member No. 833, x: 1.593 m
	Maximum displacement in Y-direction	23,5	mm	Member No. 243, x: 1.334 m
	Maximum displacement in Z-direction	55,0	mm	Member No. 245, x: 1.501 m
	Maximum vectorial displacement	58,8	mm	Member No. 245, x: 1.501 m
	Maximum rotation about X-axis	67,1	mrad	Member No. 992, x: 0.070 m
	Maximum rotation about Y-axis	-30,1	mrad	FE Mesh Node No. 114 (X: 9.052, Y: -1.528, Z: -0.186 m)
	Maximum rotation about Z-axis	-17,1	mrad	Member No. 723, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO16 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC7 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	26,77	kN	
	Sum of support forces in Y	26,77	kN	Deviation: 0.00 %
	Sum of loads in Z	-151,09	kN	
	Sum of support forces in Z	-151,09	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-10,3	mm	Member No. 833, x: 1.593 m
	Maximum displacement in Y-direction	23,6	mm	Member No. 243, x: 1.334 m
	Maximum displacement in Z-direction	55,6	mm	Member No. 244, x: 1.501 m
	Maximum vectorial displacement	59,3	mm	Member No. 245, x: 1.501 m
	Maximum rotation about X-axis	66,4	mrad	Member No. 992, x: 0.070 m
	Maximum rotation about Y-axis	-30,1	mrad	FE Mesh Node No. 114 (X: 9.052, Y: -1.528, Z: -0.186 m)
	Maximum rotation about Z-axis	-16,9	mrad	Member No. 723, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO17 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC7 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	26,77	kN	
	Sum of support forces in Y	26,77	kN	Deviation: 0.00 %
	Sum of loads in Z	-157,84	kN	
	Sum of support forces in Z	-157,84	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	10,6	mm	Member No. 837, x: 1.593 m
	Maximum displacement in Y-direction	24,1	mm	Member No. 243, x: 1.334 m
	Maximum displacement in Z-direction	52,1	mm	Member No. 245, x: 1.334 m
	Maximum vectorial displacement	56,3	mm	Member No. 245, x: 1.334 m
	Maximum rotation about X-axis	69,8	mrad	Member No. 992, x: 0.070 m
	Maximum rotation about Y-axis	-30,1	mrad	FE Mesh Node No. 114 (X: 9.052, Y: -1.528, Z: -0.186 m)
	Maximum rotation about Z-axis	-17,5	mrad	Member No. 723, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO18 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC7 + 1.35*LC10			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	26,77	kN	
	Sum of support forces in Y	26,77	kN	Deviation: 0.00 %
	Sum of loads in Z	-156,49	kN	
	Sum of support forces in Z	-156,49	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	10,6	mm	Member No. 837, x: 1.593 m
	Maximum displacement in Y-direction	24,3	mm	Member No. 243, x: 1.334 m
	Maximum displacement in Z-direction	52,1	mm	Member No. 244, x: 1.334 m
	Maximum vectorial displacement	56,2	mm	Member No. 245, x: 1.334 m
	Maximum rotation about X-axis	69,7	mrad	Member No. 992, x: 0.070 m
	Maximum rotation about Y-axis	-30,1	mrad	FE Mesh Node No. 114 (X: 9.052, Y: -1.528, Z: -0.186 m)
	Maximum rotation about Z-axis	-17,4	mrad	Member No. 723, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO20 - 1.15*LC1 + 1.15*LC2 + 1.35*LC11			
	Sum of loads in X	4,58	kN	
	Sum of support forces in X	4,58	kN	Deviation: 0.00 %
	Sum of loads in Y	2,45	kN	
	Sum of support forces in Y	2,45	kN	Deviation: 0.00 %
	Sum of loads in Z	-39,86	kN	
	Sum of support forces in Z	-39,86	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	16,9	mm	Member No. 44, x: 0.368 m
	Maximum displacement in Y-direction	8,0	mm	Member No. 227, x: 0.571 m
	Maximum displacement in Z-direction	-19,2	mm	Member No. 202, x: 0.438 m

	Maximum vectorial displacement	19,2	mm	Member No. 202, x: 0.438 m
	Maximum rotation about X-axis	30,6	mrad	Member No. 647, x: 0.000 m
	Maximum rotation about Y-axis	9,6	mrad	Member No. 749, x: 1.440 m
	Maximum rotation about Z-axis	16,5	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO21 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC11			
	Sum of loads in X	4,58	kN	
	Sum of support forces in X	4,58	kN	Deviation: 0.00 %
	Sum of loads in Y	2,45	kN	
	Sum of support forces in Y	2,45	kN	Deviation: 0.00 %
	Sum of loads in Z	-50,88	kN	
	Sum of support forces in Z	-50,88	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	20,2	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	9,8	mm	Member No. 227, x: 0.714 m
	Maximum displacement in Z-direction	-30,5	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	35,4	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,8	mrad	Member No. 581, x: 0.000 m
	Maximum rotation about Y-axis	12,0	mrad	Member No. 749, x: 1.440 m
	Maximum rotation about Z-axis	23,6	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO22 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC11			
	Sum of loads in X	4,58	kN	
	Sum of support forces in X	4,58	kN	Deviation: 0.00 %
	Sum of loads in Y	2,45	kN	
	Sum of support forces in Y	2,45	kN	Deviation: 0.00 %
	Sum of loads in Z	-46,61	kN	
	Sum of support forces in Z	-46,61	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	19,5	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	9,7	mm	Member No. 227, x: 0.714 m
	Maximum displacement in Z-direction	-30,3	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	34,9	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,7	mrad	Member No. 581, x: 0.000 m
	Maximum rotation about Y-axis	11,6	mrad	Member No. 749, x: 1.440 m
	Maximum rotation about Z-axis	22,6	mrad	Member No. 681, x: 0.296 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO23 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC11			
	Sum of loads in X	4,58	kN	
	Sum of support forces in X	4,58	kN	Deviation: 0.00 %
	Sum of loads in Y	2,45	kN	
	Sum of support forces in Y	2,45	kN	Deviation: 0.00 %
	Sum of loads in Z	-53,36	kN	
	Sum of support forces in Z	-53,36	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	21,4	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	10,6	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-39,3	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	43,2	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,9	mrad	Member No. 581, x: 0.000 m
	Maximum rotation about Y-axis	15,2	mrad	Member No. 851, x: 0.023 m
	Maximum rotation about Z-axis	26,1	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO24 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC11			
	Sum of loads in X	4,58	kN	
	Sum of support forces in X	4,58	kN	Deviation: 0.00 %
	Sum of loads in Y	2,45	kN	
	Sum of support forces in Y	2,45	kN	Deviation: 0.00 %
	Sum of loads in Z	-52,01	kN	
	Sum of support forces in Z	-52,01	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	21,2	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	11,0	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-41,3	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	45,0	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,9	mrad	Member No. 581, x: 0.000 m
	Maximum rotation about Y-axis	14,9	mrad	Member No. 851, x: 0.023 m
	Maximum rotation about Z-axis	26,0	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO25 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC8 + 1.35*LC11			
	Sum of loads in X	16,13	kN	
	Sum of support forces in X	16,13	kN	Deviation: 0.00 %
	Sum of loads in Y	2,45	kN	
	Sum of support forces in Y	2,45	kN	Deviation: 0.00 %
	Sum of loads in Z	-166,41	kN	
	Sum of support forces in Z	-166,41	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	21,2	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	9,3	mm	Member No. 483, x: 2.072 m

	Maximum displacement in Z-direction	-30,5	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	35,8	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,5	mrad	Member No. 581, x: 0.000 m
	Maximum rotation about Y-axis	30,8	mrad	FE Mesh Node No. 382 (X: 1.307, Y: -1.527, Z: -0.186 m)
	Maximum rotation about Z-axis	23,4	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO26 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC8 + 1.35*LC11			
	Sum of loads in X	16,13	kN	
	Sum of support forces in X	16,13	kN	Deviation: 0.00 %
	Sum of loads in Y	2,45	kN	
	Sum of support forces in Y	2,45	kN	Deviation: 0.00 %
	Sum of loads in Z	-162,14	kN	
	Sum of support forces in Z	-162,14	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	20,4	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	9,4	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-30,2	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	35,4	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,4	mrad	Member No. 581, x: 0.000 m
	Maximum rotation about Y-axis	30,8	mrad	FE Mesh Node No. 382 (X: 1.307, Y: -1.527, Z: -0.186 m)
	Maximum rotation about Z-axis	22,4	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO27 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC8 + 1.35*LC11			
	Sum of loads in X	16,13	kN	
	Sum of support forces in X	16,13	kN	Deviation: 0.00 %
	Sum of loads in Y	2,45	kN	
	Sum of support forces in Y	2,45	kN	Deviation: 0.00 %
	Sum of loads in Z	-168,89	kN	
	Sum of support forces in Z	-168,89	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	22,3	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	10,6	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-39,3	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	43,6	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,5	mrad	Member No. 581, x: 0.000 m
	Maximum rotation about Y-axis	30,8	mrad	FE Mesh Node No. 382 (X: 1.307, Y: -1.527, Z: -0.186 m)
	Maximum rotation about Z-axis	25,9	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO28 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC8 + 1.35*LC11			
	Sum of loads in X	16,13	kN	
	Sum of support forces in X	16,13	kN	Deviation: 0.00 %
	Sum of loads in Y	2,45	kN	
	Sum of support forces in Y	2,45	kN	Deviation: 0.00 %
	Sum of loads in Z	-167,54	kN	
	Sum of support forces in Z	-167,54	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	22,1	mm	Member No. 47, x: 0.184 m
	Maximum displacement in Y-direction	11,0	mm	Member No. 483, x: 2.072 m
	Maximum displacement in Z-direction	-41,2	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	45,3	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	30,5	mrad	Member No. 581, x: 0.000 m
	Maximum rotation about Y-axis	30,8	mrad	FE Mesh Node No. 382 (X: 1.307, Y: -1.527, Z: -0.186 m)
	Maximum rotation about Z-axis	25,8	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO30 - 1.15*LC1 + 1.15*LC2 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-12,44	kN	
	Sum of support forces in Y	-12,44	kN	Deviation: 0.00 %
	Sum of loads in Z	-45,75	kN	
	Sum of support forces in Z	-45,75	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	13,4	mm	Member No. 21, x: 0.100 m
	Maximum displacement in Y-direction	-19,5	mm	Member No. 243, x: 1.501 m
	Maximum displacement in Z-direction	-35,0	mm	Member No. 243, x: 1.501 m
	Maximum vectorial displacement	40,1	mm	Member No. 243, x: 1.501 m
	Maximum rotation about X-axis	36,5	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	8,3	mrad	Member No. 351, x: 0.750 m
	Maximum rotation about Z-axis	-11,5	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO31 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-12,44	kN	
	Sum of support forces in Y	-12,44	kN	Deviation: 0.00 %
	Sum of loads in Z	-56,77	kN	
	Sum of support forces in Z	-56,77	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	11,0	mm	Member No. 21, x: 0.100 m

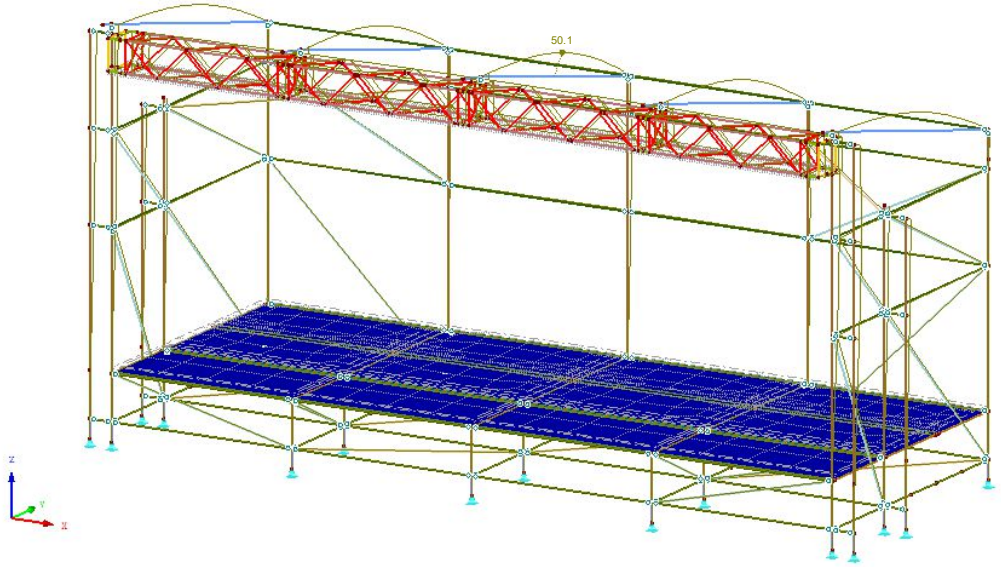
	Maximum displacement in Y-direction	-18,2	mm	Member No. 243, x: 1.668 m
	Maximum displacement in Z-direction	-47,6	mm	Member No. 243, x: 1.668 m
	Maximum vectorial displacement	51,0	mm	Member No. 243, x: 1.668 m
	Maximum rotation about X-axis	42,9	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	-13,9	mrad	Member No. 847, x: 0.030 m
	Maximum rotation about Z-axis	-11,2	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO32 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-12,44	kN	
	Sum of support forces in Y	-12,44	kN	Deviation: 0.00 %
	Sum of loads in Z	-52,50	kN	
	Sum of support forces in Z	-52,50	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	11,2	mm	Member No. 21, x: 0.100 m
	Maximum displacement in Y-direction	-18,1	mm	Member No. 243, x: 1.668 m
	Maximum displacement in Z-direction	-47,4	mm	Member No. 243, x: 1.668 m
	Maximum vectorial displacement	50,7	mm	Member No. 243, x: 1.668 m
	Maximum rotation about X-axis	42,7	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	-12,1	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	-11,1	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO33 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-12,44	kN	
	Sum of support forces in Y	-12,44	kN	Deviation: 0.00 %
	Sum of loads in Z	-59,25	kN	
	Sum of support forces in Z	-59,25	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	10,1	mm	Member No. 21, x: 0.100 m
	Maximum displacement in Y-direction	-18,0	mm	Member No. 243, x: 2.002 m
	Maximum displacement in Z-direction	-52,3	mm	Member No. 243, x: 2.002 m
	Maximum vectorial displacement	55,3	mm	Member No. 243, x: 2.002 m
	Maximum rotation about X-axis	45,0	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	-17,4	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	-11,6	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO34 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-12,44	kN	
	Sum of support forces in Y	-12,44	kN	Deviation: 0.00 %
	Sum of loads in Z	-57,90	kN	
	Sum of support forces in Z	-57,90	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	10,1	mm	Member No. 21, x: 0.100 m
	Maximum displacement in Y-direction	-17,9	mm	Member No. 243, x: 2.002 m
	Maximum displacement in Z-direction	-53,3	mm	Member No. 243, x: 2.002 m
	Maximum vectorial displacement	56,2	mm	Member No. 243, x: 2.002 m
	Maximum rotation about X-axis	45,3	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	-17,1	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	-11,6	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO35 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC9 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-23,99	kN	
	Sum of support forces in Y	-23,99	kN	Deviation: 0.00 %
	Sum of loads in Z	-172,29	kN	
	Sum of support forces in Z	-172,29	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	11,5	mm	Member No. 21, x: 0.100 m
	Maximum displacement in Y-direction	-18,7	mm	Member No. 243, x: 1.668 m
	Maximum displacement in Z-direction	-47,5	mm	Member No. 243, x: 1.668 m
	Maximum vectorial displacement	51,1	mm	Member No. 243, x: 1.668 m
	Maximum rotation about X-axis	42,8	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	30,2	mrad	FE Mesh Node No. 382 (X: 1.307, Y: -1.527, Z: -0.186 m)
	Maximum rotation about Z-axis	-17,3	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO36 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC9 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-23,99	kN	
	Sum of support forces in Y	-23,99	kN	Deviation: 0.00 %
	Sum of loads in Z	-168,02	kN	
	Sum of support forces in Z	-168,02	kN	Deviation: 0.00 %

	Maximum displacement in X-direction	11,7	mm	Member No. 21, x: 0.100 m
	Maximum displacement in Y-direction	-18,5	mm	Member No. 243, x: 1.668 m
	Maximum displacement in Z-direction	-47,3	mm	Member No. 243, x: 1.668 m
	Maximum vectorial displacement	50,8	mm	Member No. 243, x: 1.668 m
	Maximum rotation about X-axis	42,6	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	30,2	mrad	FE Mesh Node No. 382 (X: 1.307, Y: -1.527, Z: -0.186 m)
	Maximum rotation about Z-axis	-17,2	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO37 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC9 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-23,99	kN	
	Sum of support forces in Y	-23,99	kN	Deviation: 0.00 %
	Sum of loads in Z	-174,77	kN	
	Sum of support forces in Z	-174,77	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	10,6	mm	Member No. 21, x: 0.100 m
	Maximum displacement in Y-direction	-18,4	mm	Member No. 243, x: 2.002 m
	Maximum displacement in Z-direction	-52,2	mm	Member No. 243, x: 2.002 m
	Maximum vectorial displacement	55,4	mm	Member No. 243, x: 2.002 m
	Maximum rotation about X-axis	44,9	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	30,2	mrad	FE Mesh Node No. 382 (X: 1.307, Y: -1.527, Z: -0.186 m)
	Maximum rotation about Z-axis	-17,8	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO38 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC9 + 1.35*LC12			
	Sum of loads in X	1,30	kN	
	Sum of support forces in X	1,30	kN	Deviation: 0.00 %
	Sum of loads in Y	-23,99	kN	
	Sum of support forces in Y	-23,99	kN	Deviation: 0.00 %
	Sum of loads in Z	-173,42	kN	
	Sum of support forces in Z	-173,42	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	10,6	mm	Member No. 21, x: 0.100 m
	Maximum displacement in Y-direction	-18,3	mm	Member No. 243, x: 2.002 m
	Maximum displacement in Z-direction	-53,2	mm	Member No. 243, x: 2.002 m
	Maximum vectorial displacement	56,3	mm	Member No. 243, x: 2.002 m
	Maximum rotation about X-axis	45,2	mrad	Member No. 243, x: 0.000 m
	Maximum rotation about Y-axis	30,2	mrad	FE Mesh Node No. 382 (X: 1.307, Y: -1.527, Z: -0.186 m)
	Maximum rotation about Z-axis	-17,8	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T

3.19.1 Deformation of the In-service situation characteristic max and min values.

RC 3: CO50 or to CO54 or CO60 or to CO64 or CO70 or to CO74
Global Deformations u
Result Combinations: Max Values

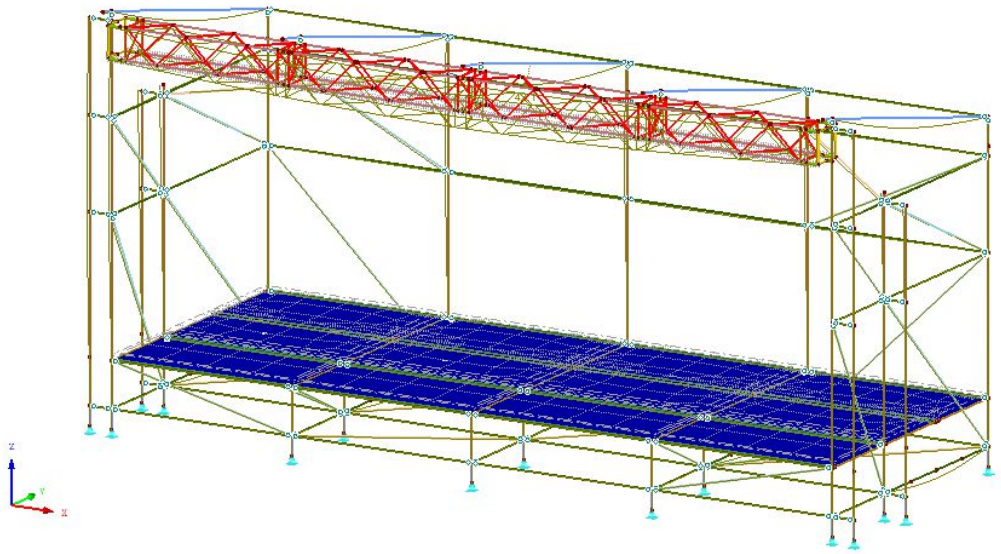
Isometric



Max u: 50.1, Min u: 0.0 [mm]
Factor of deformations: 5.00

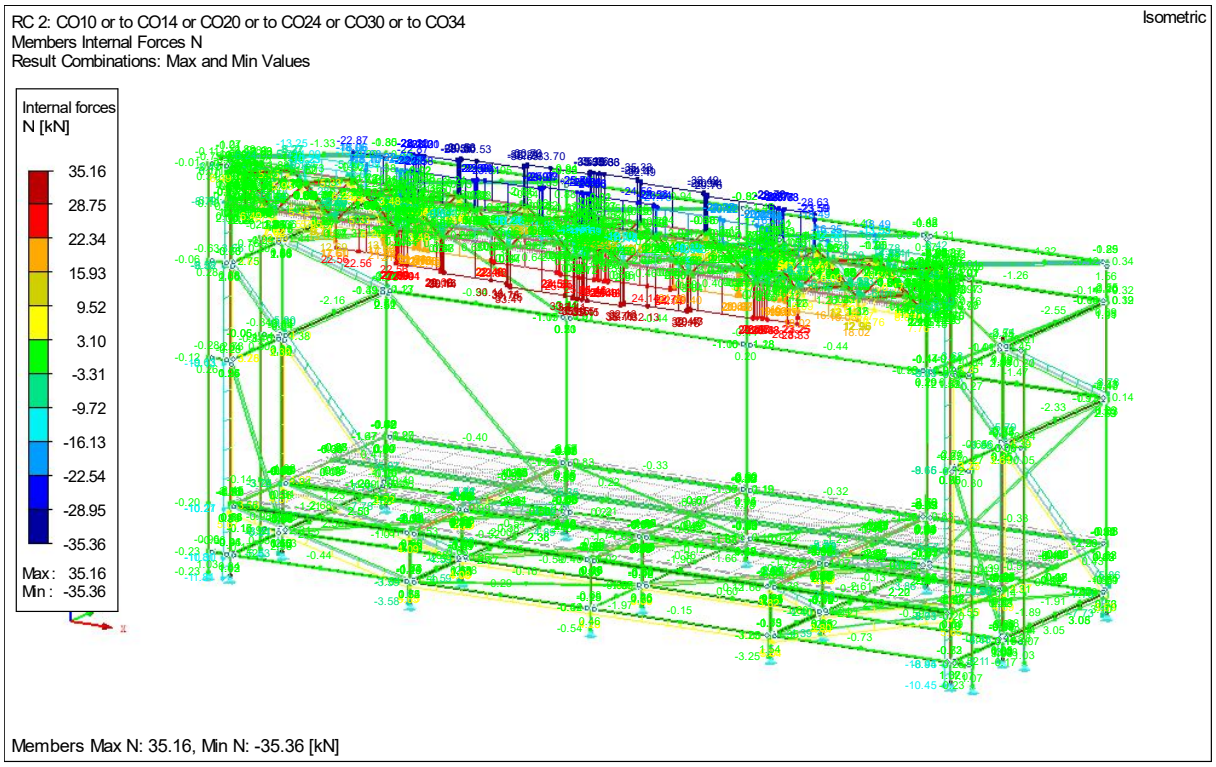
RC 3: CO50 or to CO54 or CO60 or to CO64 or CO70 or to CO74
Global Deformations u
Result Combinations: Min Values

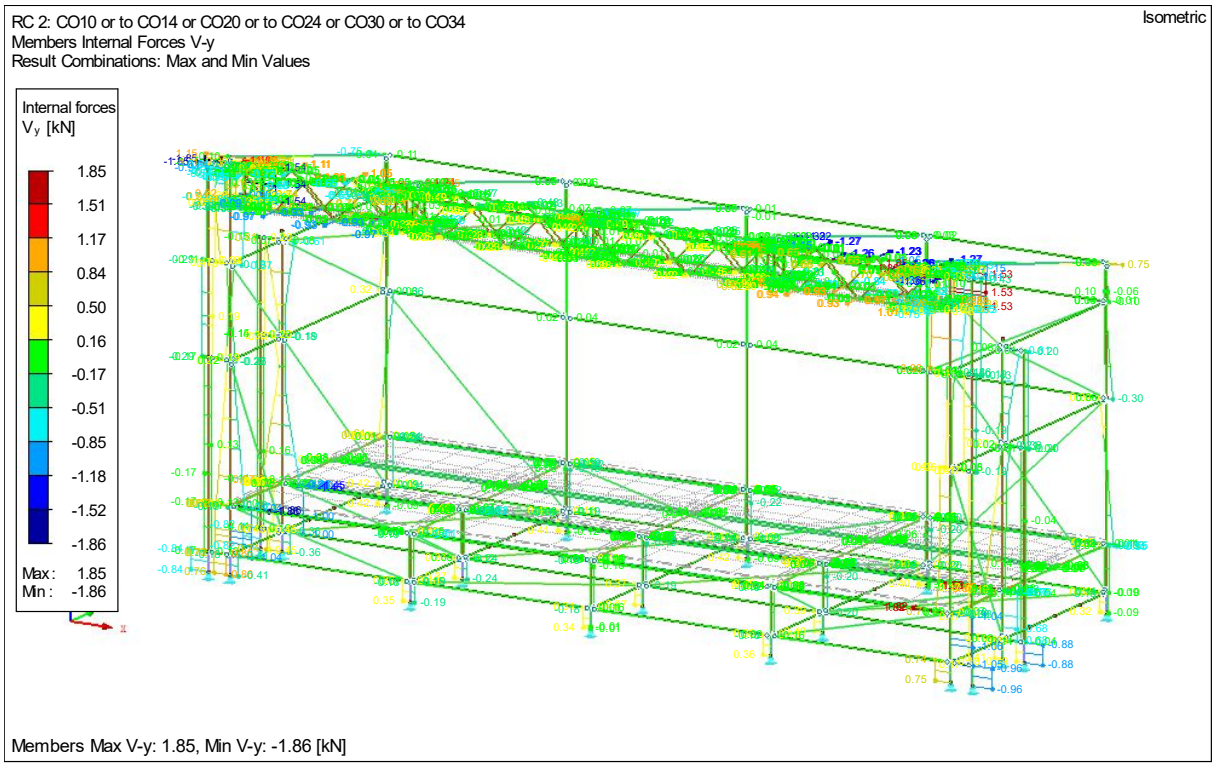
Isometric



Max u: 42.1, Min u: 0.0 [mm]
Factor of deformations: 5.00

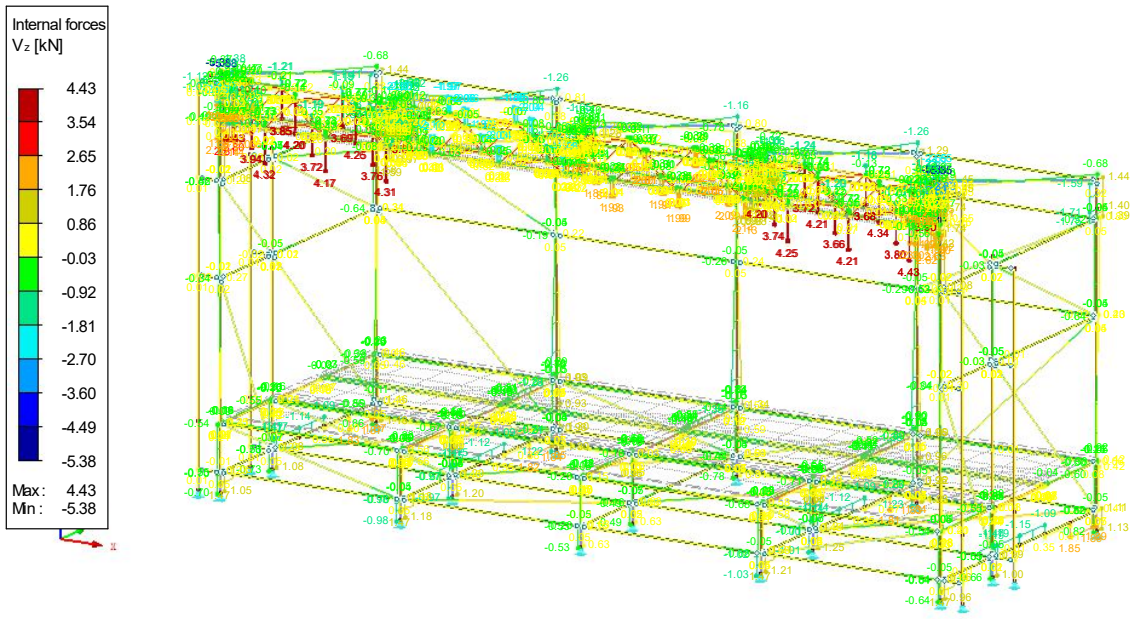
3.19.2 Internal force diagram RC2 Design values In-service.





RC 2: CO10 or to CO14 or CO20 or to CO24 or CO30 or to CO34
Members Internal Forces V-z
Result Combinations: Max and Min Values

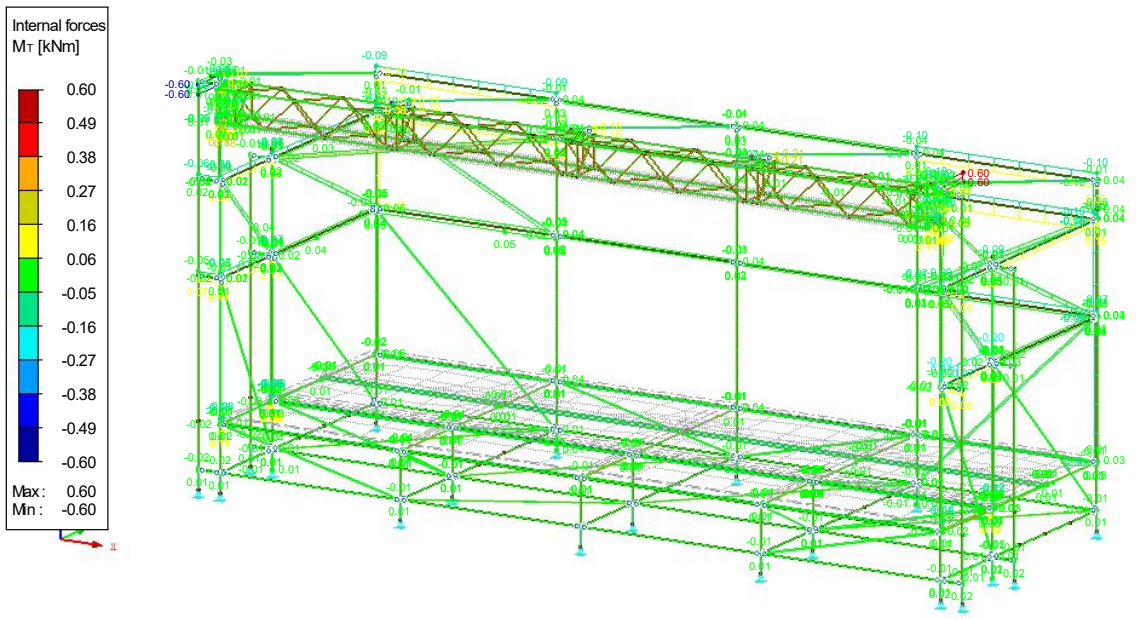
Isometric



Members Max V-z: 4.43, Min V-z: -5.38 [kN]

RC 2: CO10 or to CO14 or CO20 or to CO24 or CO30 or to CO34
Members Internal Forces M-T
Result Combinations: Max and Min Values

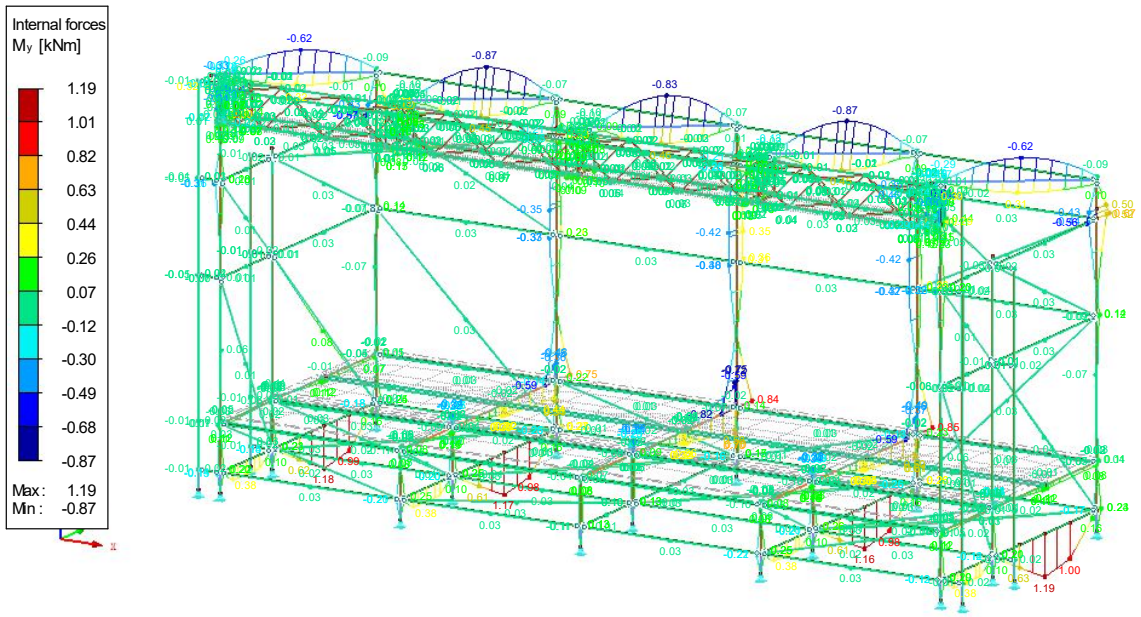
Isometric



Members Max M-T: 0.60, Min M-T: -0.60 [kNm]

RC 2: CO10 or to CO14 or CO20 or to CO24 or CO30 or to CO34
Members Internal Forces M-y
Result Combinations: Max and Min Values

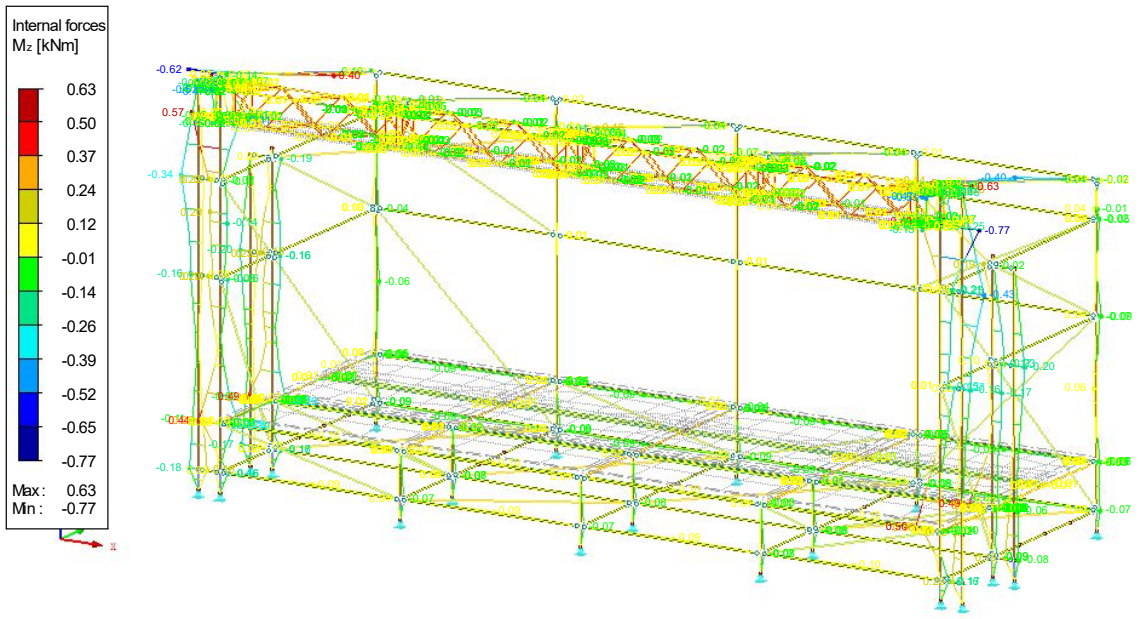
Isometric



Members Max M-y: 1.19, Min M-y: -0.87 [kNm]

RC 2: CO10 or to CO14 or CO20 or to CO24 or CO30 or to CO34
Members Internal Forces M-z
Result Combinations: Max and Min Values

Isometric



Members Max M-z: 0.63, Min M-z: -0.77 [kNm]

3.20 Calculation result of RC4 - Design Values Out-service: 1 * (CO100 – CO124)

	Description	Value	Unit	Comment
	CO100 - 1.15*LC1 + 1.15*LC2 + 1.35*LC13			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	5,37	kN	
	Sum of support forces in Y	5,37	kN	Deviation: 0.00 %
	Sum of loads in Z	-27,71	kN	
	Sum of support forces in Z	-27,71	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	-11,2	mm	Member No. 833, x: 1.274 m
	Maximum displacement in Y-direction	19,1	mm	Member No. 243, x: 1.501 m
	Maximum displacement in Z-direction	72,9	mm	Member No. 243, x: 1.501 m
	Maximum vectorial displacement	75,3	mm	Member No. 243, x: 1.501 m
	Maximum rotation about X-axis	-75,7	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	-5,5	mrad	Member No. 837, x: 2.549 m
	Maximum rotation about Z-axis	-20,9	mrad	Member No. 723, x: 0.250 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO101 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC13			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	5,37	kN	
	Sum of support forces in Y	5,37	kN	Deviation: 0.00 %
	Sum of loads in Z	-38,74	kN	
	Sum of support forces in Z	-38,74	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	11,6	mm	Member No. 837, x: 1.593 m
	Maximum displacement in Y-direction	20,3	mm	Member No. 243, x: 1.501 m
	Maximum displacement in Z-direction	61,5	mm	Member No. 244, x: 1.501 m
	Maximum vectorial displacement	64,7	mm	Member No. 243, x: 1.501 m
	Maximum rotation about X-axis	74,6	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	-6,3	mrad	Member No. 847, x: 0.038 m
	Maximum rotation about Z-axis	22,5	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO102 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC13			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	5,37	kN	
	Sum of support forces in Y	5,37	kN	Deviation: 0.00 %
	Sum of loads in Z	-34,46	kN	
	Sum of support forces in Z	-34,46	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	11,6	mm	Member No. 837, x: 1.593 m
	Maximum displacement in Y-direction	20,4	mm	Member No. 243, x: 1.501 m
	Maximum displacement in Z-direction	62,1	mm	Member No. 244, x: 1.501 m
	Maximum vectorial displacement	64,9	mm	Member No. 243, x: 1.501 m
	Maximum rotation about X-axis	74,6	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	4,8	mrad	Member No. 164, x: 0.039 m
	Maximum rotation about Z-axis	22,4	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO103 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC13			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	5,37	kN	
	Sum of support forces in Y	5,37	kN	Deviation: 0.00 %
	Sum of loads in Z	-41,21	kN	
	Sum of support forces in Z	-41,21	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	11,9	mm	Member No. 837, x: 1.593 m
	Maximum displacement in Y-direction	20,8	mm	Member No. 243, x: 1.334 m
	Maximum displacement in Z-direction	58,6	mm	Member No. 244, x: 1.501 m
	Maximum vectorial displacement	61,7	mm	Member No. 243, x: 1.334 m
	Maximum rotation about X-axis	77,6	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	-9,8	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	22,9	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO104 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC13			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	5,37	kN	
	Sum of support forces in Y	5,37	kN	Deviation: 0.00 %
	Sum of loads in Z	-39,86	kN	
	Sum of support forces in Z	-39,86	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	11,9	mm	Member No. 837, x: 1.593 m
	Maximum displacement in Y-direction	21,0	mm	Member No. 243, x: 1.334 m

	Maximum displacement in Z-direction	58,5	mm	Member No. 244, x: 1.501 m
	Maximum vectorial displacement	61,4	mm	Member No. 244, x: 1.501 m
	Maximum rotation about X-axis	78,3	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	-9,5	mrad	Member No. 847, x: 0.023 m
	Maximum rotation about Z-axis	22,9	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO110 - 1.15*LC1 + 1.15*LC2 + 1.35*LC14			
	Sum of loads in X	2,38	kN	
	Sum of support forces in X	2,38	kN	Deviation: 0.00 %
	Sum of loads in Y	2,15	kN	
	Sum of support forces in Y	2,15	kN	Deviation: 0.00 %
	Sum of loads in Z	-30,93	kN	
	Sum of support forces in Z	-30,93	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	20,1	mm	Member No. 837, x: 1.912 m
	Maximum displacement in Y-direction	12,2	mm	Member No. 243, x: 1.501 m
	Maximum displacement in Z-direction	54,0	mm	Member No. 243, x: 1.501 m
	Maximum vectorial displacement	56,4	mm	Member No. 243, x: 1.501 m
	Maximum rotation about X-axis	-56,1	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	9,2	mrad	Member No. 751, x: 1.440 m
	Maximum rotation about Z-axis	16,0	mrad	Member No. 683, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO111 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC14			
	Sum of loads in X	2,38	kN	
	Sum of support forces in X	2,38	kN	Deviation: 0.00 %
	Sum of loads in Y	2,15	kN	
	Sum of support forces in Y	2,15	kN	Deviation: 0.00 %
	Sum of loads in Z	-41,96	kN	
	Sum of support forces in Z	-41,96	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	22,0	mm	Member No. 837, x: 2.230 m
	Maximum displacement in Y-direction	13,9	mm	Member No. 243, x: 1.334 m
	Maximum displacement in Z-direction	44,2	mm	Member No. 245, x: 1.501 m
	Maximum vectorial displacement	47,4	mm	Member No. 245, x: 1.501 m
	Maximum rotation about X-axis	58,5	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	11,2	mrad	Member No. 749, x: 1.440 m
	Maximum rotation about Z-axis	19,0	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO112 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC14			
	Sum of loads in X	2,38	kN	
	Sum of support forces in X	2,38	kN	Deviation: 0.00 %
	Sum of loads in Y	2,15	kN	
	Sum of support forces in Y	2,15	kN	Deviation: 0.00 %
	Sum of loads in Z	-37,68	kN	
	Sum of support forces in Z	-37,68	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	21,5	mm	Member No. 837, x: 2.230 m
	Maximum displacement in Y-direction	14,0	mm	Member No. 243, x: 1.334 m
	Maximum displacement in Z-direction	44,9	mm	Member No. 245, x: 1.501 m
	Maximum vectorial displacement	47,9	mm	Member No. 245, x: 1.501 m
	Maximum rotation about X-axis	58,4	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	10,8	mrad	Member No. 749, x: 1.440 m
	Maximum rotation about Z-axis	18,0	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO113 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC14			
	Sum of loads in X	2,38	kN	
	Sum of support forces in X	2,38	kN	Deviation: 0.00 %
	Sum of loads in Y	2,15	kN	
	Sum of support forces in Y	2,15	kN	Deviation: 0.00 %
	Sum of loads in Z	-44,43	kN	
	Sum of support forces in Z	-44,43	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	22,6	mm	Member No. 837, x: 2.230 m
	Maximum displacement in Y-direction	14,5	mm	Member No. 243, x: 1.334 m
	Maximum displacement in Z-direction	-45,6	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	49,7	mm	FE Mesh Node No. 485 (X: 5.180, Y: -3.289, Z: 3.445 m)
	Maximum rotation about X-axis	61,4	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	12,0	mrad	Member No. 749, x: 1.440 m
	Maximum rotation about Z-axis	21,5	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO114 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC14			
	Sum of loads in X	2,38	kN	
	Sum of support forces in X	2,38	kN	Deviation: 0.00 %
	Sum of loads in Y	2,15	kN	
	Sum of support forces in Y	2,15	kN	Deviation: 0.00 %
	Sum of loads in Z	-43,08	kN	
	Sum of support forces in Z	-43,08	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	22,5	mm	Member No. 837, x: 2.230 m

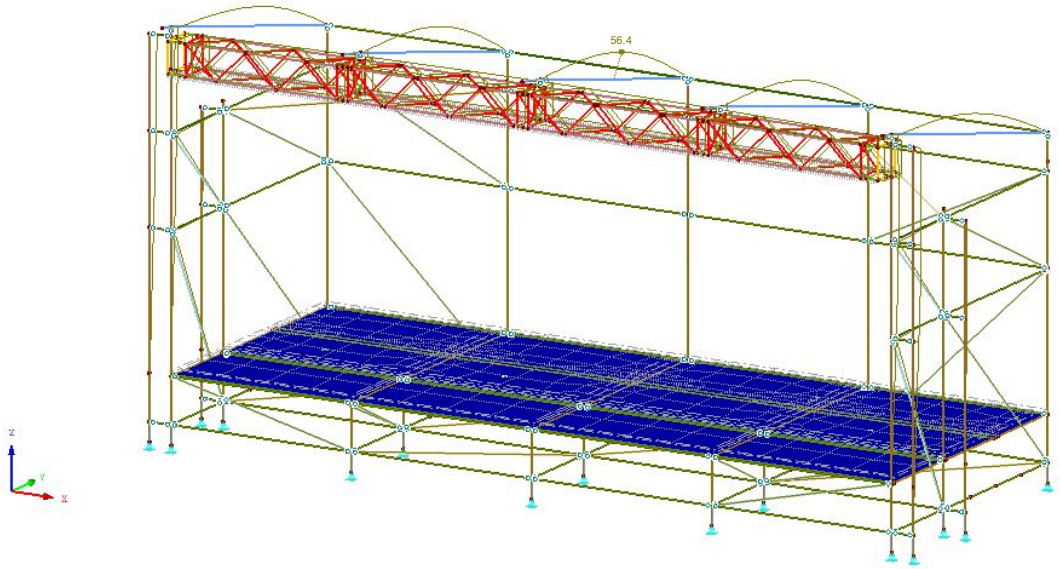
	Maximum displacement in Y-direction	14,6	mm	Member No. 243, x: 1.334 m
	Maximum displacement in Z-direction	-47,5	mm	Member No. 45, x: 0.368 m
	Maximum vectorial displacement	51,5	mm	Member No. 45, x: 0.368 m
	Maximum rotation about X-axis	62,1	mrad	Member No. 991, x: 0.070 m
	Maximum rotation about Y-axis	11,9	mrad	Member No. 749, x: 1.440 m
	Maximum rotation about Z-axis	21,4	mrad	Member No. 681, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO120 - 1.15*LC1 + 1.15*LC2 + 1.35*LC15			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	-4,19	kN	
	Sum of support forces in Y	-4,19	kN	Deviation: 0.00 %
	Sum of loads in Z	-48,65	kN	
	Sum of support forces in Z	-48,65	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	8,7	mm	Member No. 837, x: 1.593 m
	Maximum displacement in Y-direction	-14,6	mm	Member No. 243, x: 1.501 m
	Maximum displacement in Z-direction	-55,1	mm	Member No. 243, x: 1.501 m
	Maximum vectorial displacement	57,0	mm	Member No. 243, x: 1.501 m
	Maximum rotation about X-axis	56,4	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	5,0	mrad	Member No. 851, x: 0.023 m
	Maximum rotation about Z-axis	20,6	mrad	Member No. 723, x: 0.250 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO121 - 1.15*LC1 + 1.15*LC2 + 1.35*LC3 + 1.35*LC15			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	-4,19	kN	
	Sum of support forces in Y	-4,19	kN	Deviation: 0.00 %
	Sum of loads in Z	-59,67	kN	
	Sum of support forces in Z	-59,67	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	9,5	mm	Member No. 837, x: 1.593 m
	Maximum displacement in Y-direction	-13,3	mm	Member No. 243, x: 1.668 m
	Maximum displacement in Z-direction	-67,9	mm	Member No. 243, x: 1.668 m
	Maximum vectorial displacement	69,2	mm	Member No. 243, x: 1.668 m
	Maximum rotation about X-axis	62,9	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	15,8	mrad	Member No. 851, x: 0.030 m
	Maximum rotation about Z-axis	-21,6	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO122 - 1.15*LC1 + 1.15*LC2 + 1.35*LC4 + 1.35*LC15			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	-4,19	kN	
	Sum of support forces in Y	-4,19	kN	Deviation: 0.00 %
	Sum of loads in Z	-55,40	kN	
	Sum of support forces in Z	-55,40	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	9,4	mm	Member No. 837, x: 1.593 m
	Maximum displacement in Y-direction	-13,2	mm	Member No. 243, x: 1.668 m
	Maximum displacement in Z-direction	-67,7	mm	Member No. 243, x: 1.668 m
	Maximum vectorial displacement	68,9	mm	Member No. 243, x: 1.668 m
	Maximum rotation about X-axis	62,7	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	14,1	mrad	Member No. 851, x: 0.023 m
	Maximum rotation about Z-axis	-21,5	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO123 - 1.15*LC1 + 1.15*LC2 + 1.35*LC5 + 1.35*LC15			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	-4,19	kN	
	Sum of support forces in Y	-4,19	kN	Deviation: 0.00 %
	Sum of loads in Z	-62,15	kN	
	Sum of support forces in Z	-62,15	kN	Deviation: 0.00 %
	Maximum displacement in X-direction	9,7	mm	Member No. 837, x: 1.593 m
	Maximum displacement in Y-direction	-12,9	mm	Member No. 243, x: 1.668 m
	Maximum displacement in Z-direction	-71,9	mm	Member No. 243, x: 1.668 m
	Maximum vectorial displacement	73,1	mm	Member No. 243, x: 1.668 m
	Maximum rotation about X-axis	65,0	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	19,4	mrad	Member No. 851, x: 0.023 m
	Maximum rotation about Z-axis	22,1	mrad	Member No. 723, x: 0.250 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T
	CO124 - 1.15*LC1 + 1.15*LC2 + 1.35*LC6 + 1.35*LC15			
	Sum of loads in X	0,00	kN	
	Sum of support forces in X	0,00	kN	
	Sum of loads in Y	-4,19	kN	
	Sum of support forces in Y	-4,19	kN	Deviation: 0.00 %
	Sum of loads in Z	-60,80	kN	
	Sum of support forces in Z	-60,80	kN	Deviation: 0.00 %

	Maximum displacement in X-direction	9,7	mm	Member No. 837, x: 1.593 m
	Maximum displacement in Y-direction	-12,7	mm	Member No. 243, x: 1.668 m
	Maximum displacement in Z-direction	-72,7	mm	Member No. 243, x: 1.668 m
	Maximum vectorial displacement	73,8	mm	Member No. 243, x: 1.668 m
	Maximum rotation about X-axis	65,3	mrad	Member No. 483, x: 2.072 m
	Maximum rotation about Y-axis	19,1	mrad	Member No. 851, x: 0.023 m
	Maximum rotation about Z-axis	-22,1	mrad	Member No. 720, x: 0.000 m
	Method of analysis	2nd Order		Second order analysis (Nonlinear)
	Internal forces referred to deformed system for...	+		N, V_y, V_z, M_y, M_z, M_T

3.20.1 Deformation of the Out-service situation characteristic max and min values.

RC 5: CO150 or to CO154 or CO160 or to CO164 or CO170 or to CO174
Global Deformations u
Result Combinations: Max Values

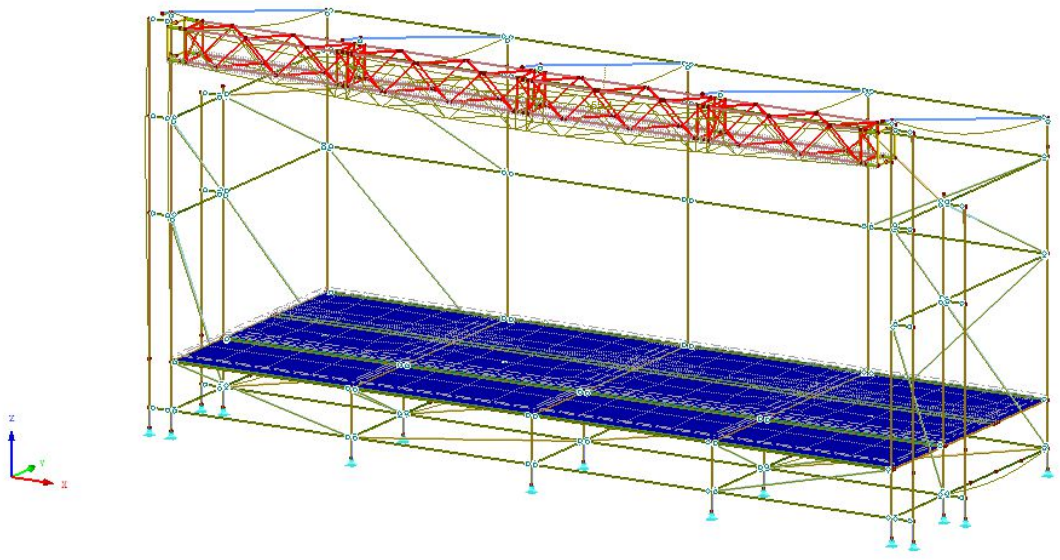
Isometric



Max u: 56.4, Min u: 0.0 [mm]
Factor of deformations: 5.00

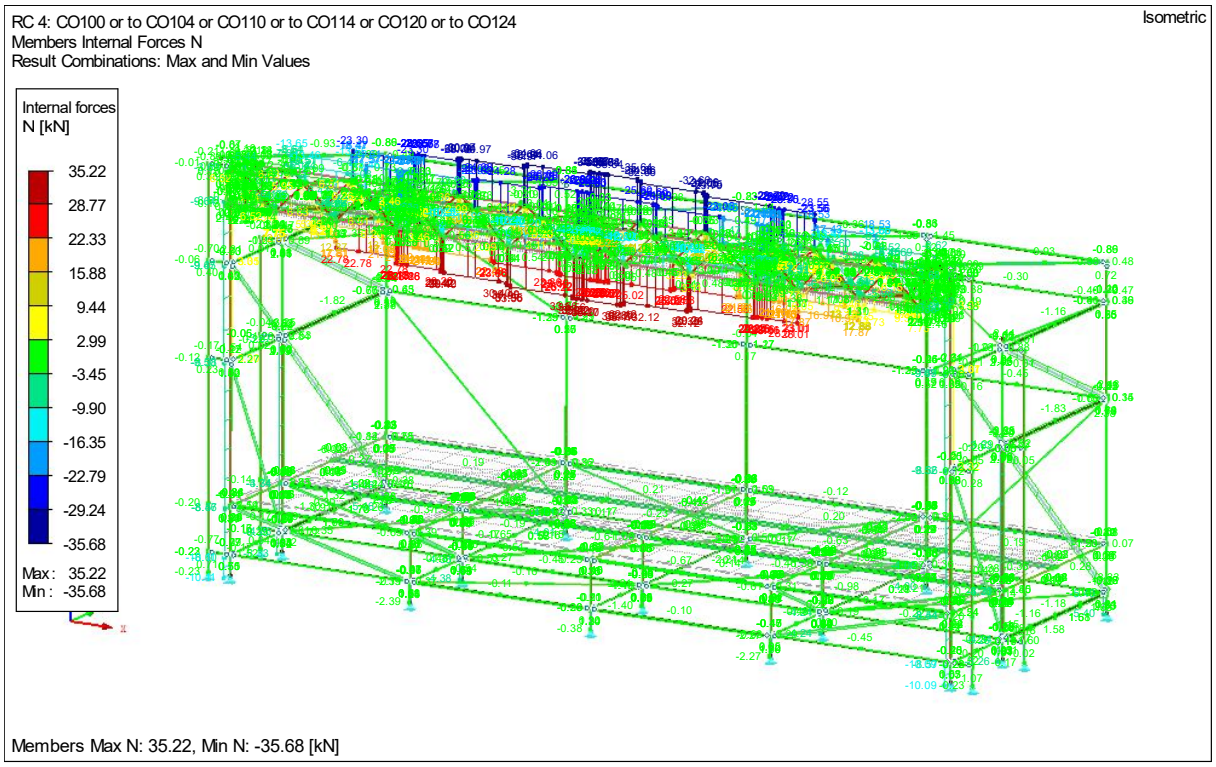
RC 5: CO150 or to CO154 or CO160 or to CO164 or CO170 or to CO174
Global Deformations u
Result Combinations: Min Values

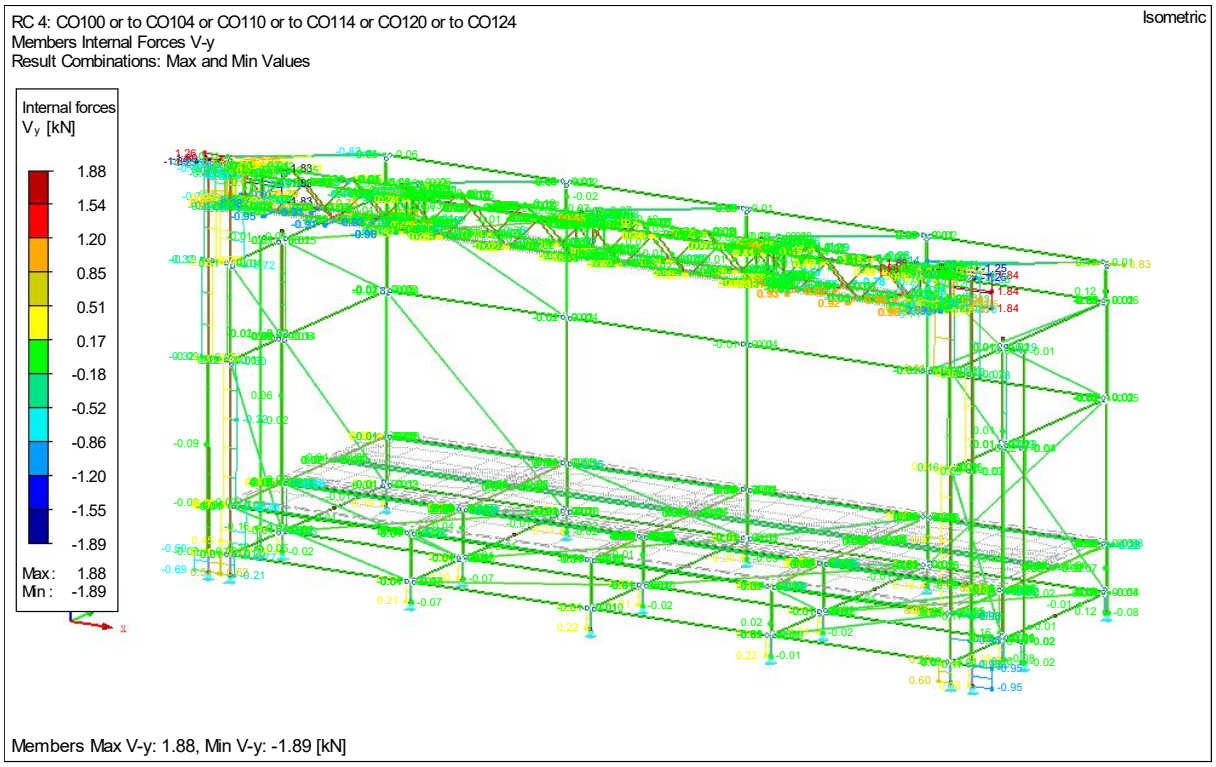
Isometric



Max u: 55.4, Min u: 0.0 [mm]
Factor of deformations: 5.00

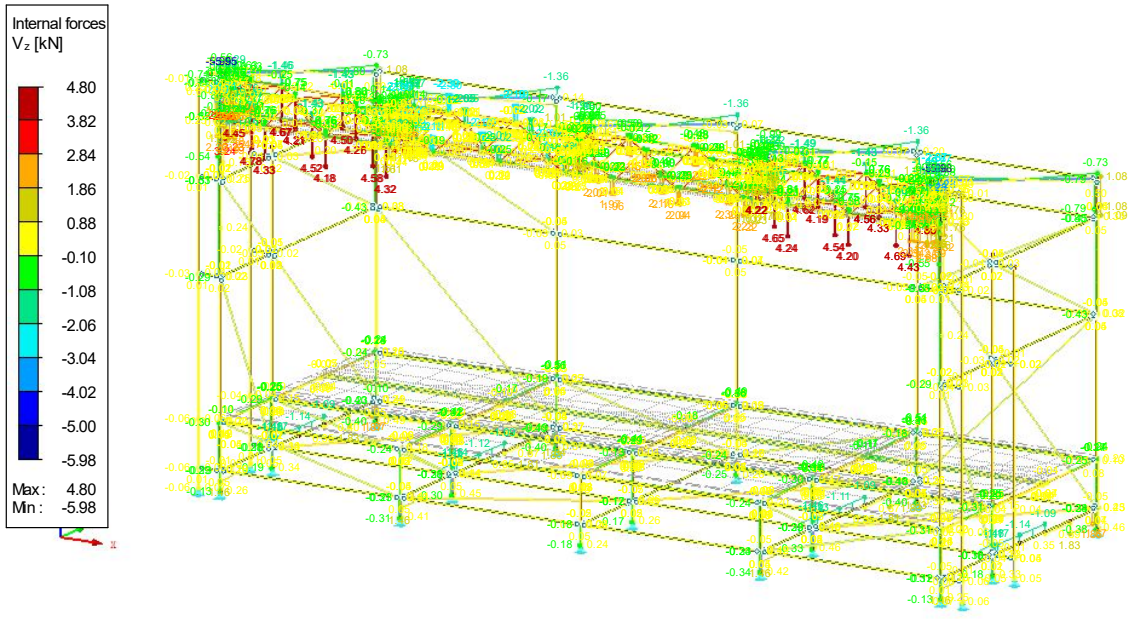
3.20.2 Internal force diagram RC4 Design Values Out-service.





RC 4: CO100 or to CO104 or CO110 or to CO114 or CO120 or to CO124
Members Internal Forces V-z
Result Combinations: Max and Min Values

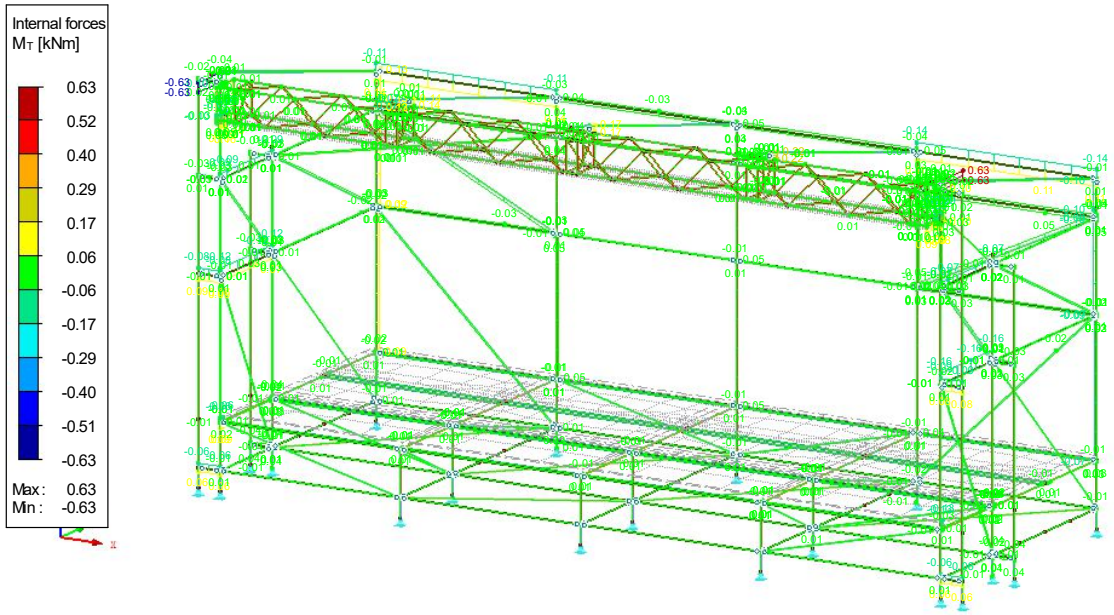
Isometric



Members Max V-z: 4.80, Min V-z: -5.98 [kN]

RC 4: CO100 or to CO104 or CO110 or to CO114 or CO120 or to CO124
Members Internal Forces M-T
Result Combinations: Max and Min Values

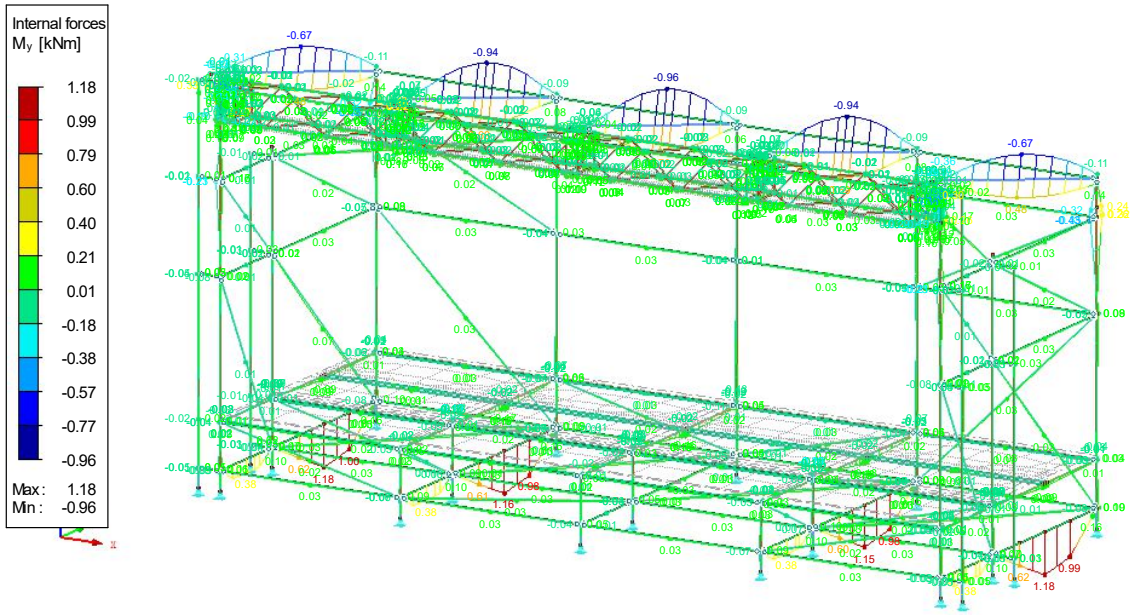
Isometric



Members Max M-T: 0.63, Min M-T: -0.63 [kNm]

RC 4: CO100 or to CO104 or CO110 or to CO114 or CO120 or to CO124
Members Internal Forces M-y
Result Combinations: Max and Min Values

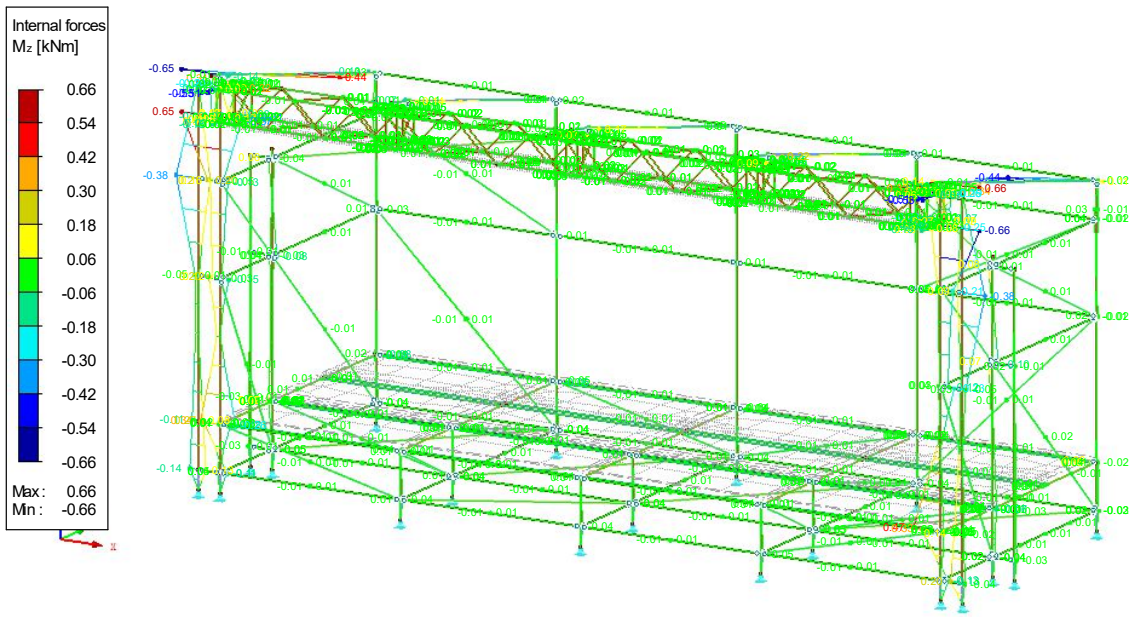
Isometric



Members Max M-y: 1.18, Min M-y: -0.96 [kNm]

RC 4: CO100 or to CO104 or CO110 or to CO114 or CO120 or to CO124
Members Internal Forces M-z
Result Combinations: Max and Min Values

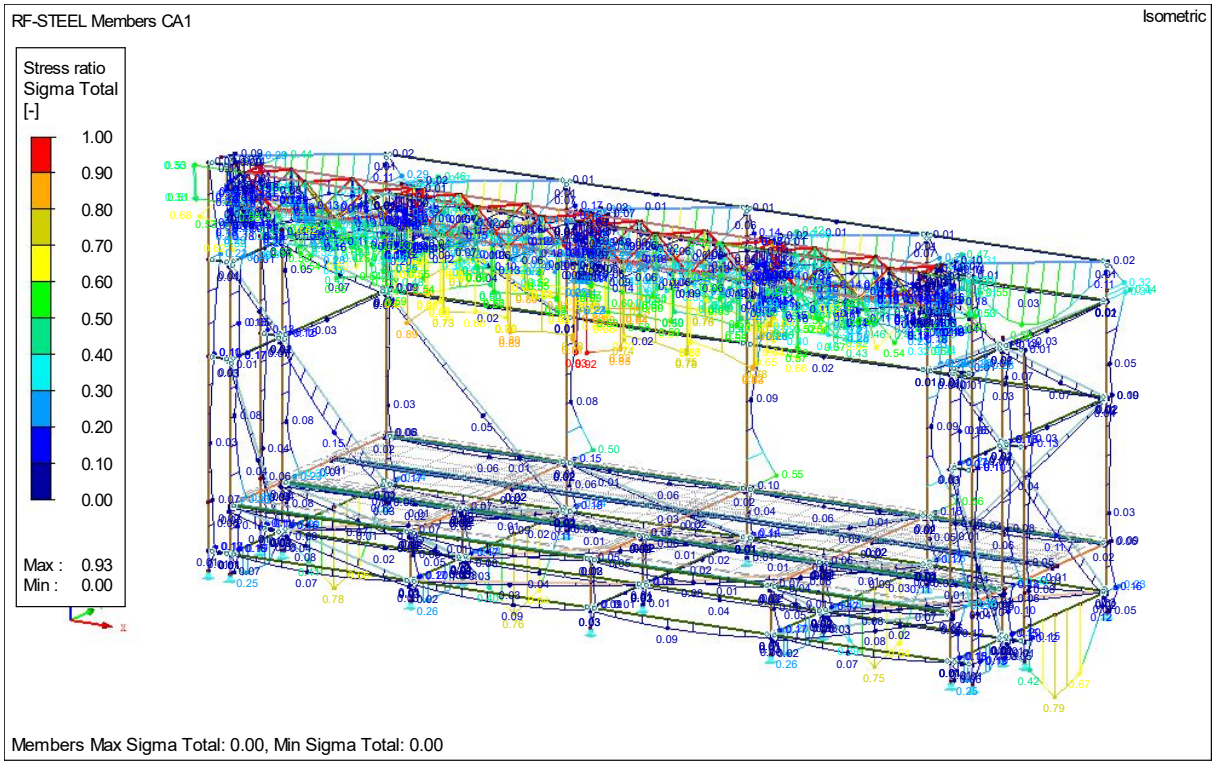
Isometric

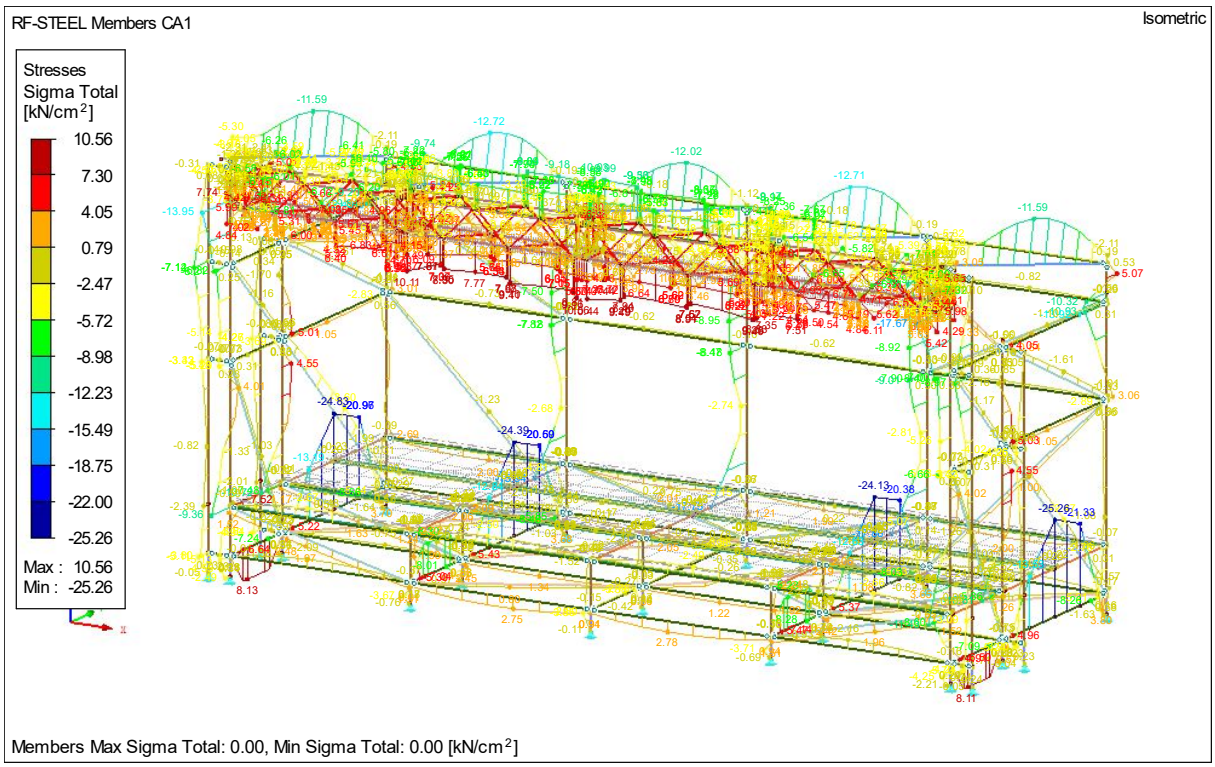


Members Max M-z: 0.66, Min M-z: -0.66 [kNm]

3.21 stress analyse GE24 Layher roof.

3.21.1 In service Stress calculation.

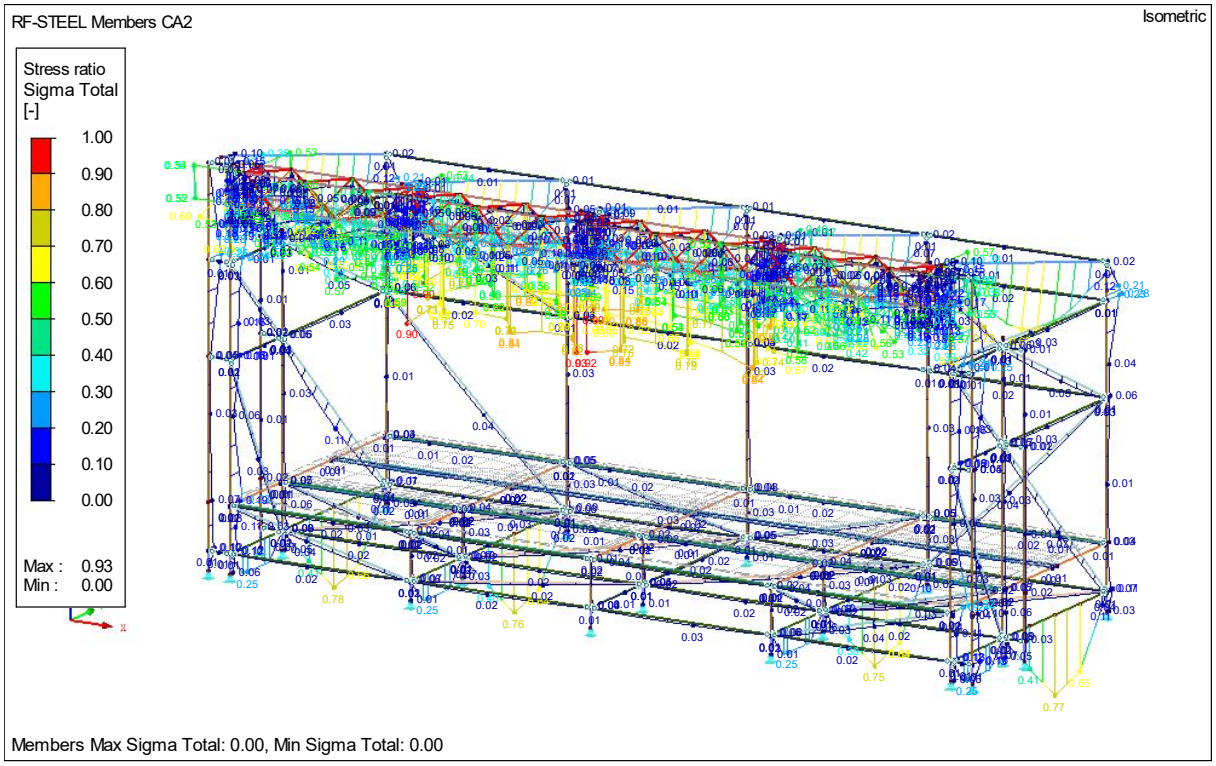




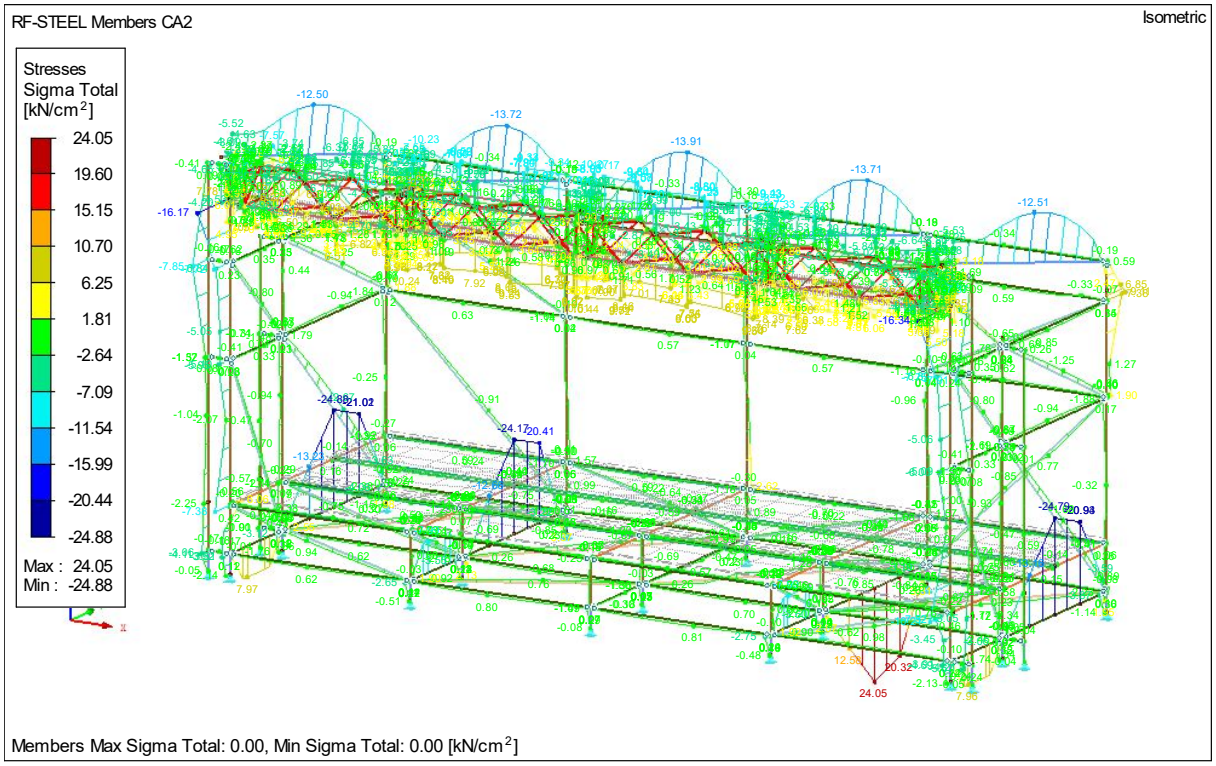
3.21.2 Utilisation per cross section in the In service.

Section No.	Member No.	Location x [m]	S-Point No.	Load-ing	Stress Type	Stress [kN/cm²] Existing	Limit	Stress Ratio
1	SHAPE-THIN KEDER PROFIEL ZEILREGEL							
	244	1,668	79	CO13	Sigma Total	-12,72	20,00	0,64
	833	3,186	49	CO13	Tau Total	-3,60	11,55	0,31
	244	1,668	79	CO13	Sigma-eqv	12,74	20,00	0,64
2	QRO 50x4 (Hot Formed)							
	35	0,000	6	CO13	Sigma Total	4,44	11,36	0,39
	39	0,000	16	CO23	Tau Total	1,55	6,56	0,24
	35	0,000	6	CO13	Sigma-eqv	4,44	11,36	0,39
3	Ring 48/3							
	144	0,000	12	CO34	Sigma Total	10,56	11,36	0,93
	95	0,006	36	CO33	Tau Total	2,19	6,56	0,33
	144	0,000	12	CO34	Sigma-eqv	10,56	11,36	0,93
4	Ring 48/6							
	129	0,060	32	CO34	Sigma Total	-5,92	23,64	0,25
	846	0,060	20	CO33	Tau Total	-0,59	13,65	0,04
	129	0,060	32	CO34	Sigma-eqv	5,92	23,64	0,25
5	Ring 20/2							
	884	0,479	10	CO33	Sigma Total	7,74	11,36	0,68
	876	0,339	2	CO33	Tau Total	0,23	6,56	0,03
	884	0,479	10	CO33	Sigma-eqv	7,74	11,36	0,68
6	RO 38x4.5 | DIN EN 10220							
	212	0,210	10	CO10	Sigma Total	-8,56	35,50	0,24
	211	0,000	19	CO30	Tau Total	0,65	20,50	0,03
	212	0,210	10	CO10	Sigma-eqv	8,56	35,50	0,24
7	RO 48.3x3.2 (Hot Formed)							
	282	0,000	10	CO30	Sigma Total	-17,86	32,00	0,56
	31	0,100	24	CO13	Tau Total	7,42	18,48	0,40
	282	0,000	10	CO30	Sigma-eqv	17,86	32,00	0,56
8	RO 48.3x3.2 (Hot Formed)							
	207	0,500	10	CO33	Sigma Total	-25,26	32,00	0,79
	680	1,036	1	CO23	Tau Total	-2,20	18,48	0,12
	207	0,500	10	CO33	Sigma-eqv	25,26	32,00	0,79
9	RO 48.3x3.2 (Hot Formed)							
	699	1,302	10	CO14	Sigma Total	-1,49	32,00	0,05
	703	0,000	1	CO33	Tau Total	0,56	18,48	0,03
	703	1,628	28	CO33	Sigma-eqv	1,50	32,00	0,05
10	RO 48.3x2.6 (Hot Formed)							
	726	1,600	10	CO10	Sigma Total	-3,60	23,50	0,15
	750	0,000	19	CO13	Tau Total	-0,70	13,57	0,05
	726	1,600	10	CO10	Sigma-eqv	3,60	23,50	0,15
12	HK 50/30/4/4/4/4							
	473	2,072	10	CO10	Sigma Total	-1,00	20,45	0,05
	467	0,000	8	CO23	Tau Total	0,15	11,81	0,01
	473	2,072	10	CO10	Sigma-eqv	1,01	20,45	0,05
13	Rectangle 50/50							
	1022	0,000	2	CO13	Sigma Total	-3,18	21,27	0,15
	992	0,000	1	CO24	Tau Total	0,81	12,28	0,07
	1022	0,000	2	CO13	Sigma-eqv	3,20	21,27	0,15

3.21.3 Out service Stress calculation



Members Max Sigma Total: 0.00, Min Sigma Total: 0.00



Members Max Sigma Total: 0.00, Min Sigma Total: 0.00 [kN/cm²]

3.21.4 Utilisation per cross section in the Out service.

Section No.	Member No.	Location x [m]	S-Point No.	Load-ing	Stress Type	Stress [kN/cm²] Existing	Limit	Stress Ratio
1	SHAPE-THIN KEDER PROFIEL ZEILREGEL							
	243	1,334	79	CO104	Sigma Total	-13,91	20,00	0,70
	833	3,186	49	CO103	Tau Total	-4,04	11,55	0,35
	243	1,334	79	CO104	Sigma-eqv	13,91	20,00	0,70
2	QRO 50x4 (Hot Formed)							
	973	0,000	6	CO123	Sigma Total	-4,53	11,36	0,40
	42	0,169	16	CO123	Tau Total	1,67	6,56	0,25
	973	0,000	6	CO123	Sigma-eqv	4,54	11,36	0,40
3	Ring 48/3							
	144	0,000	12	CO124	Sigma Total	10,61	11,36	0,93
	67	0,000	1	CO123	Tau Total	2,30	6,56	0,35
	144	0,000	12	CO124	Sigma-eqv	10,61	11,36	0,93
4	Ring 48/6							
	129	0,060	30	CO124	Sigma Total	-6,09	23,64	0,26
	839	0,000	2	CO123	Tau Total	0,66	13,65	0,05
	129	0,060	30	CO124	Sigma-eqv	6,09	23,64	0,26
5	Ring 20/2							
	868	0,479	10	CO123	Sigma Total	8,35	11,36	0,73
	892	0,000	11	CO123	Tau Total	0,26	6,56	0,04
	868	0,479	10	CO123	Sigma-eqv	8,35	11,36	0,73
6	RO 38x4.5 | DIN EN 10220							
	654	0,210	1	CO113	Sigma Total	-5,67	35,50	0,16
	654	0,210	28	CO113	Tau Total	0,39	20,50	0,02
	654	0,210	1	CO113	Sigma-eqv	5,67	35,50	0,16
7	RO 48.3x3.2 (Hot Formed)							
	23	0,661	21	CO123	Sigma Total	-16,34	32,00	0,51
	31	0,100	25	CO103	Tau Total	7,68	18,48	0,42
	23	0,661	21	CO123	Sigma-eqv	16,36	32,00	0,51
8	RO 48.3x3.2 (Hot Formed)							
	239	0,500	10	CO123	Sigma Total	-24,88	32,00	0,78
	680	1,036	35	CO113	Tau Total	-1,82	18,48	0,10
	239	0,500	10	CO123	Sigma-eqv	24,88	32,00	0,78
9	RO 48.3x3.2 (Hot Formed)							
	699	1,302	10	CO100	Sigma Total	-1,20	32,00	0,04
	703	0,000	1	CO114	Tau Total	0,20	18,48	0,01
	699	1,302	10	CO100	Sigma-eqv	1,20	32,00	0,04
10	RO 48.3x2.6 (Hot Formed)							
	726	1,600	10	CO100	Sigma Total	-2,67	23,50	0,11
	746	0,000	17	CO100	Tau Total	-0,68	13,57	0,05
	726	1,600	10	CO100	Sigma-eqv	2,67	23,50	0,11
12	HK 50/30/4/4/4/4							
	467	0,000	14	CO113	Sigma Total	-0,87	20,45	0,04
	467	0,000	8	CO113	Tau Total	0,14	11,81	0,01
	467	0,000	14	CO113	Sigma-eqv	0,90	20,45	0,04
13	Rectangle 50/50							
	1022	0,000	2	CO103	Sigma Total	-3,09	21,27	0,15
	992	0,000	1	CO114	Tau Total	0,83	12,28	0,07
	1022	0,000	2	CO103	Sigma-eqv	3,09	21,27	0,15

4.0 Detail calculations for different parts.

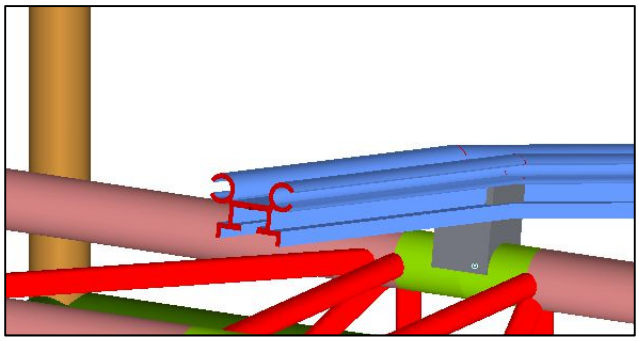
In this chapter, necessary detail calculations of different parts for the roof are made.

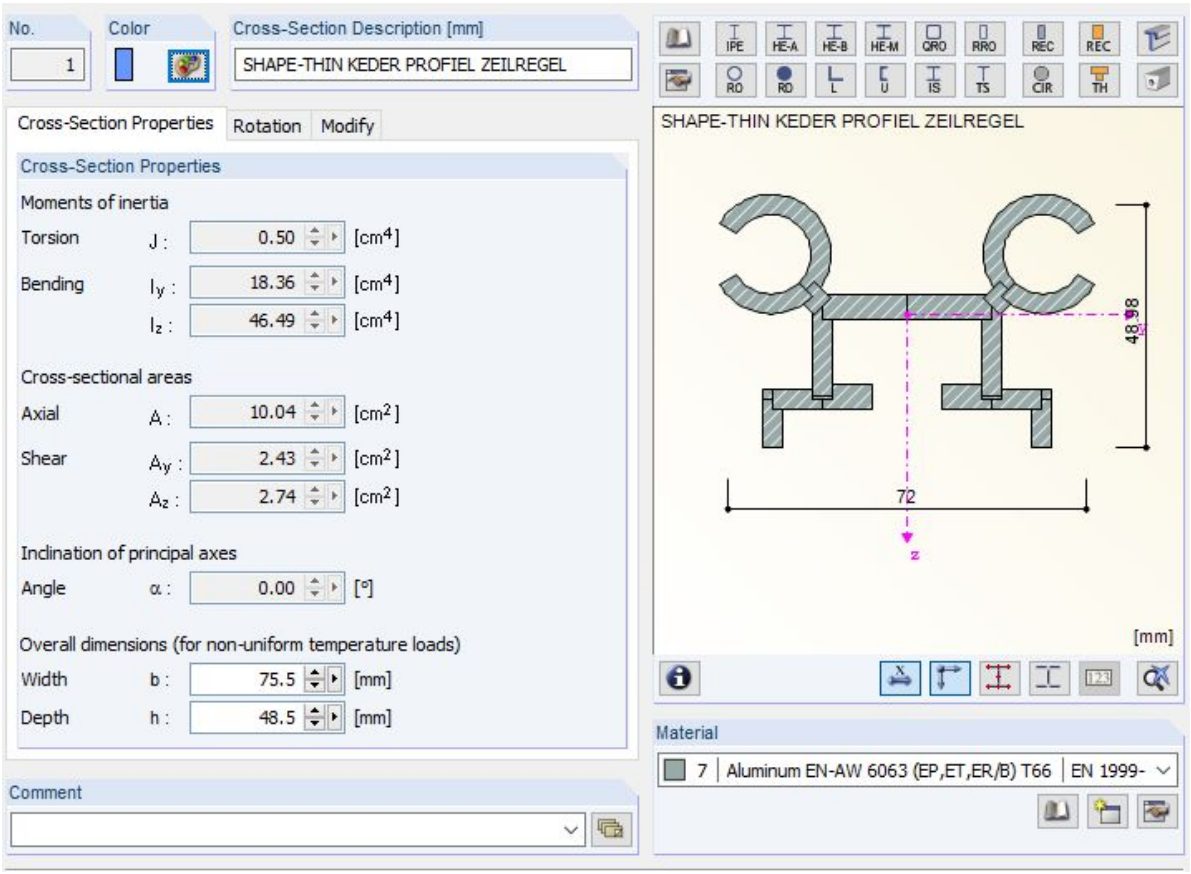
4.1 Check of the Keder profile for the roof canopy.

The GS24 and the GE32 Layher roofs have different keder profiles to mount the Roof canopy. The used keder profiles are designed and delivered by Layher. These profiles have been taken into account in the calculation of the different systems.

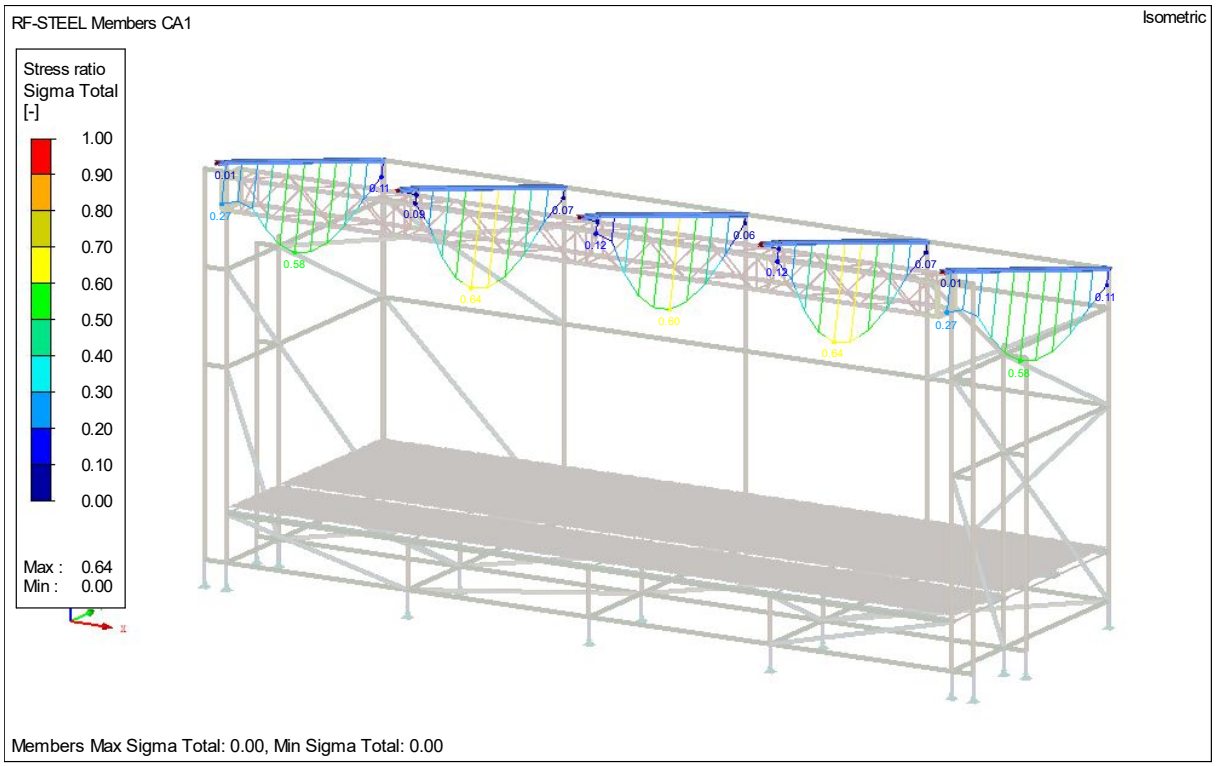
4.1.1 Check of the GE24 keder profile.

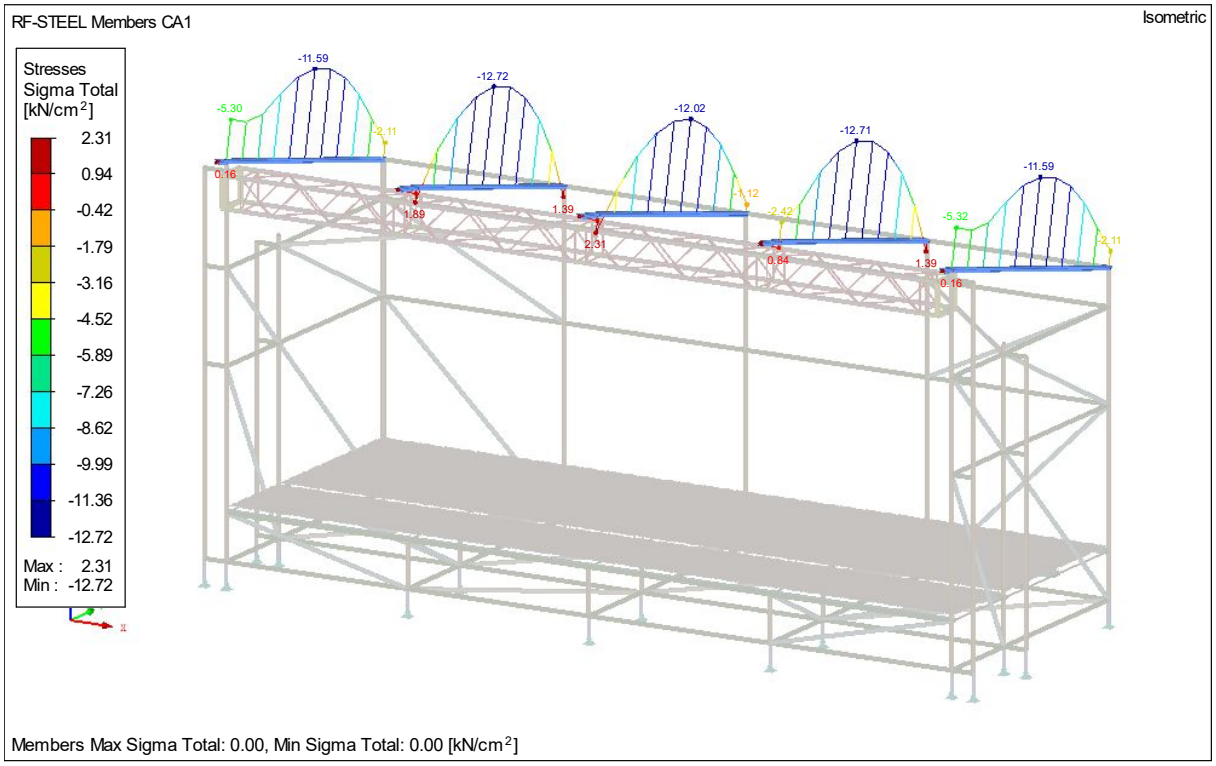
The keder profile of the GE24 Layher roof system is the profile 4200400 of Layher





The maximum utilisation in the stress analyse calculation of the GE24 in CA1



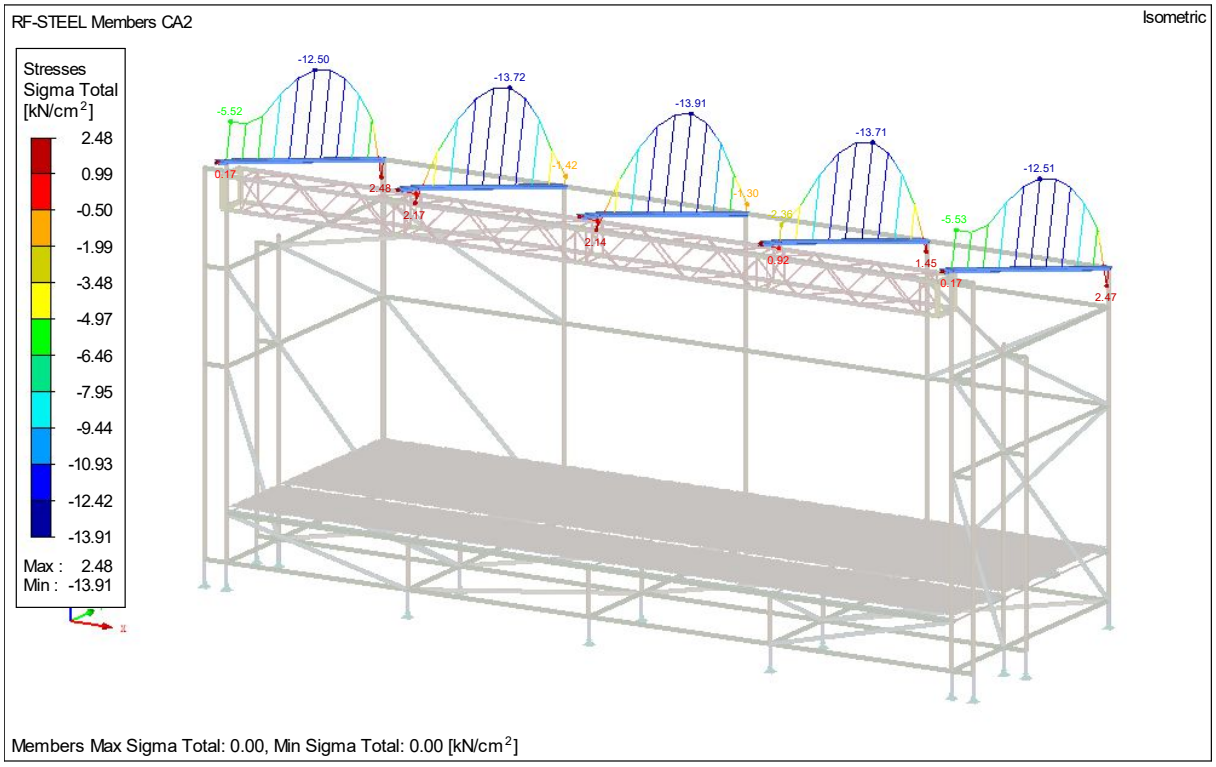


Utilisation of the different members of the GE24 in CA1

Member No.	Location x [m]	S-Point No.	Load-ing	Stress Type	Stress [kN/cm²] Existing	Limit	Stress Ratio
243	Cross-section No. 1 - SHAPE-THIN KEDER PROFIEL ZEILREGEL						
	1,334	79	CO14	Sigma Total	-12,02	20,00	0,60
	3,002	41	CO14	Tau Total	-0,52	11,55	0,04
	1,334	79	CO14	Sigma-eqv	12,02	20,00	0,60
244	Cross-section No. 1 - SHAPE-THIN KEDER PROFIEL ZEILREGEL						
	1,668	79	CO13	Sigma Total	-12,72	20,00	0,64
	3,002	109	CO14	Tau Total	-1,10	11,55	0,10
	1,668	79	CO13	Sigma-eqv	12,74	20,00	0,64
245	Cross-section No. 1 - SHAPE-THIN KEDER PROFIEL ZEILREGEL						
	1,668	20	CO14	Sigma Total	-12,71	20,00	0,64
	3,002	49	CO14	Tau Total	-1,07	11,55	0,09
	1,668	20	CO14	Sigma-eqv	12,72	20,00	0,64
833	Cross-section No. 1 - SHAPE-THIN KEDER PROFIEL ZEILREGEL						
	1,593	79	CO10	Sigma Total	-11,59	20,00	0,58
	3,186	49	CO13	Tau Total	-3,60	11,55	0,31
	1,593	79	CO10	Sigma-eqv	11,70	20,00	0,58
837	Cross-section No. 1 - SHAPE-THIN KEDER PROFIEL ZEILREGEL						
	1,593	20	CO10	Sigma Total	-11,59	20,00	0,58
	3,186	109	CO13	Tau Total	-3,59	11,55	0,31
	1,593	20	CO10	Sigma-eqv	11,70	20,00	0,59

The maximum utilisation in the stress analyse calculation of the GE24 in CA2



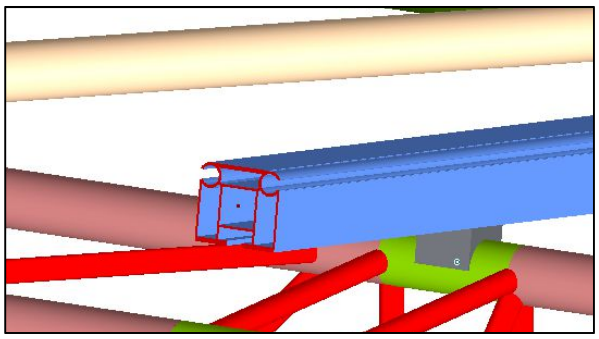


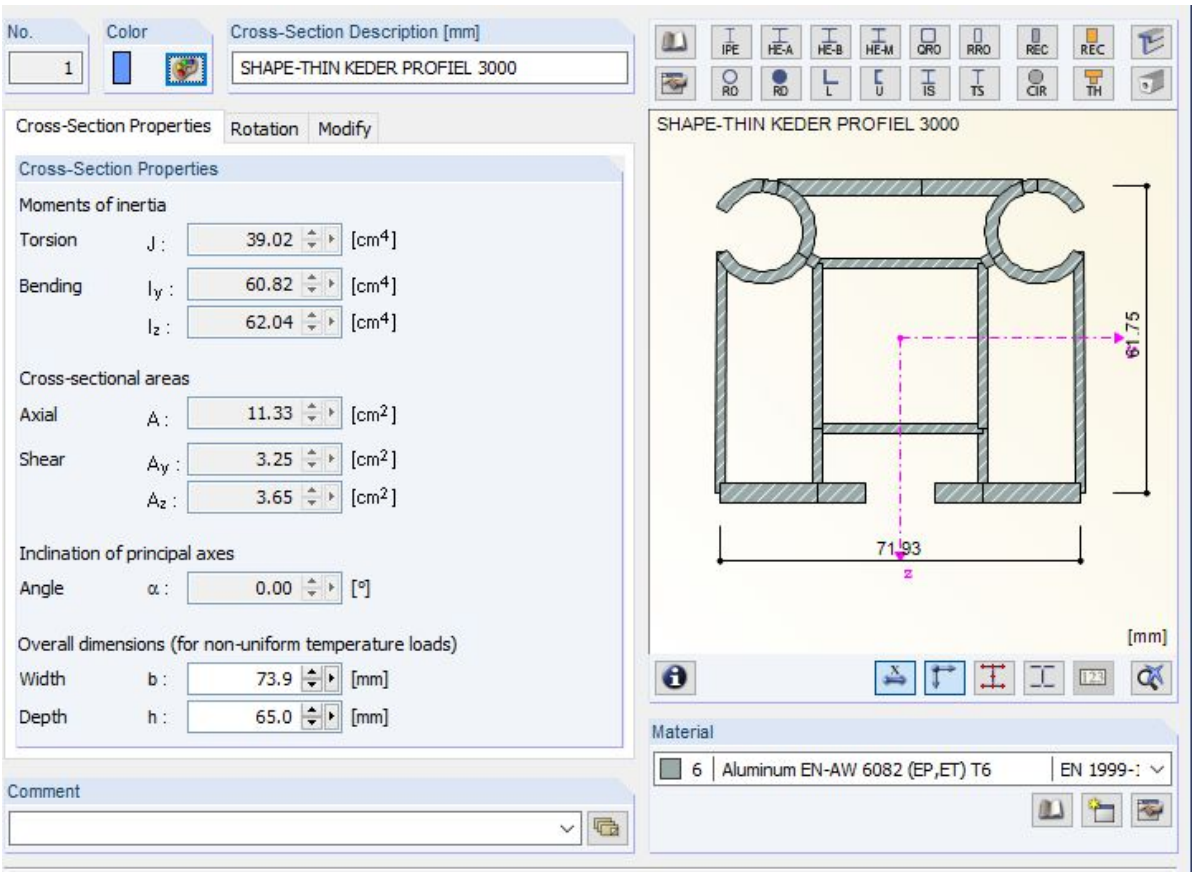
Utilisation of the different members of the GE24 in CA2

Member No.	Location x [m]	S-Point No.	Load-ing	Stress Type	Stress [kN/cm²] Existing	Limit	Stress Ratio
243	Cross-section No. 1 - SHAPE-THIN KEDER PROFIEL ZEILREGEL						
	1,334	79	CO104	Sigma Total	-13,91	20,00	0,70
	3,002	49	CO113	Tau Total	-1,33	11,55	0,12
	1,334	79	CO104	Sigma-eqv	13,91	20,00	0,70
244	Cross-section No. 1 - SHAPE-THIN KEDER PROFIEL ZEILREGEL						
	1,334	79	CO103	Sigma Total	-13,72	20,00	0,69
	3,002	41	CO104	Tau Total	-1,01	11,55	0,09
	1,668	79	CO103	Sigma-eqv	13,73	20,00	0,69
245	Cross-section No. 1 - SHAPE-THIN KEDER PROFIEL ZEILREGEL						
	1,334	20	CO103	Sigma Total	-13,71	20,00	0,69
	3,002	49	CO114	Tau Total	-1,63	11,55	0,14
	1,334	20	CO104	Sigma-eqv	13,71	20,00	0,69
833	Cross-section No. 1 - SHAPE-THIN KEDER PROFIEL ZEILREGEL						
	1,593	79	CO100	Sigma Total	-12,51	20,00	0,63
	3,186	49	CO103	Tau Total	-4,04	11,55	0,35
	1,593	79	CO100	Sigma-eqv	12,64	20,00	0,63
837	Cross-section No. 1 - SHAPE-THIN KEDER PROFIEL ZEILREGEL						
	1,593	20	CO100	Sigma Total	-12,50	20,00	0,63
	3,186	109	CO103	Tau Total	-4,03	11,55	0,35
	1,593	20	CO100	Sigma-eqv	12,64	20,00	0,63

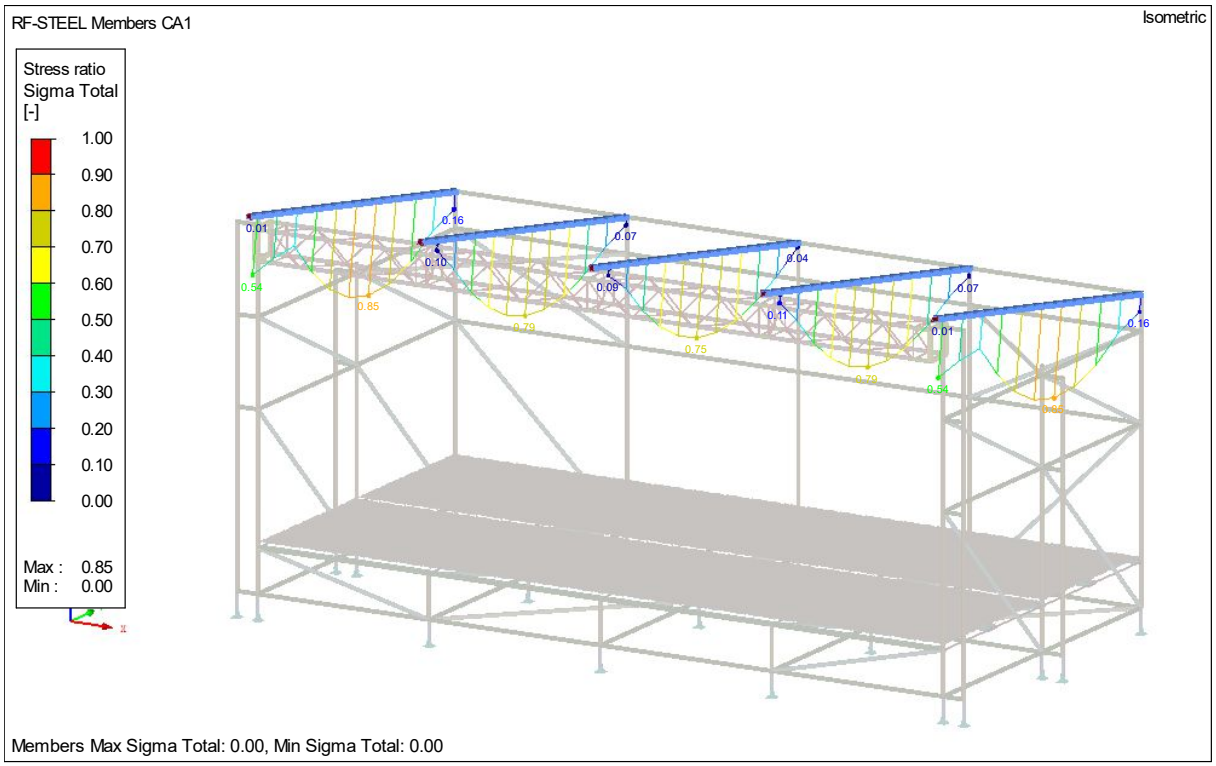
4.1.2 Check of the GE32 keder profile.

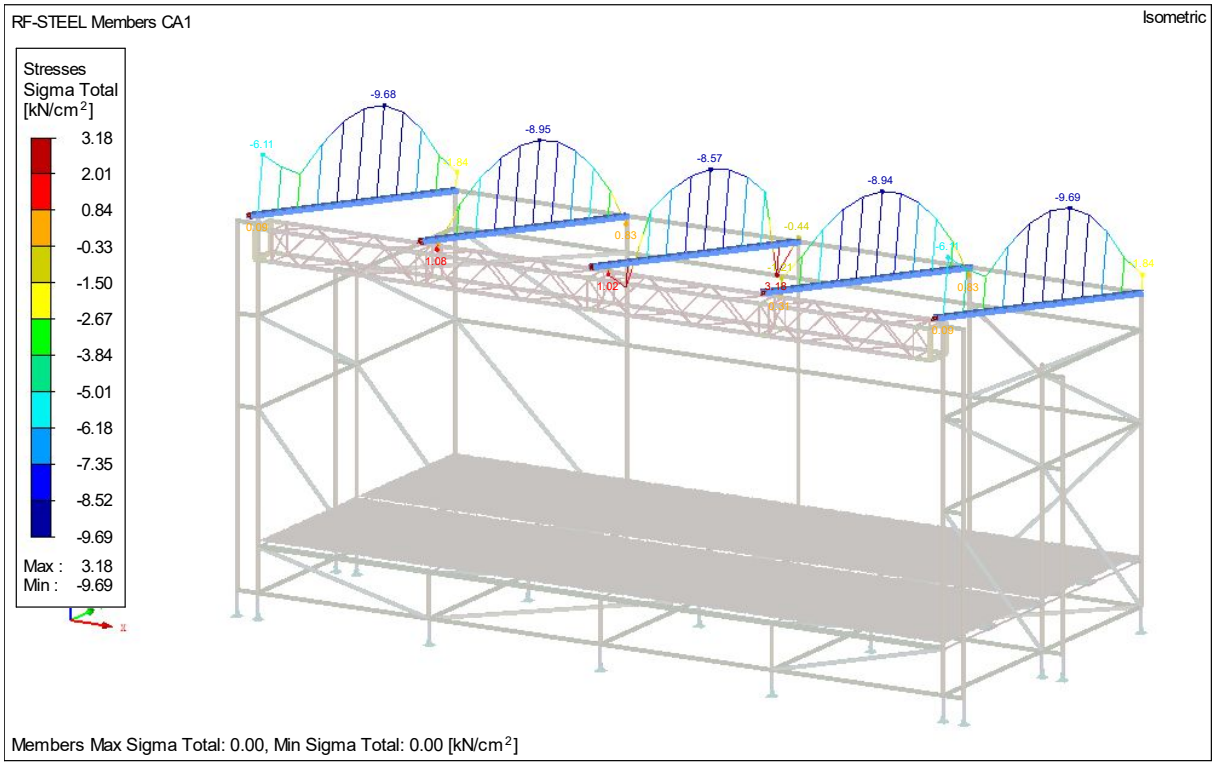
The keder profile of the GE32 Layher roof system is the profile 5574600 of Layher





The maximum utilisation in the stress analyse calculation of the GE32 in CA1

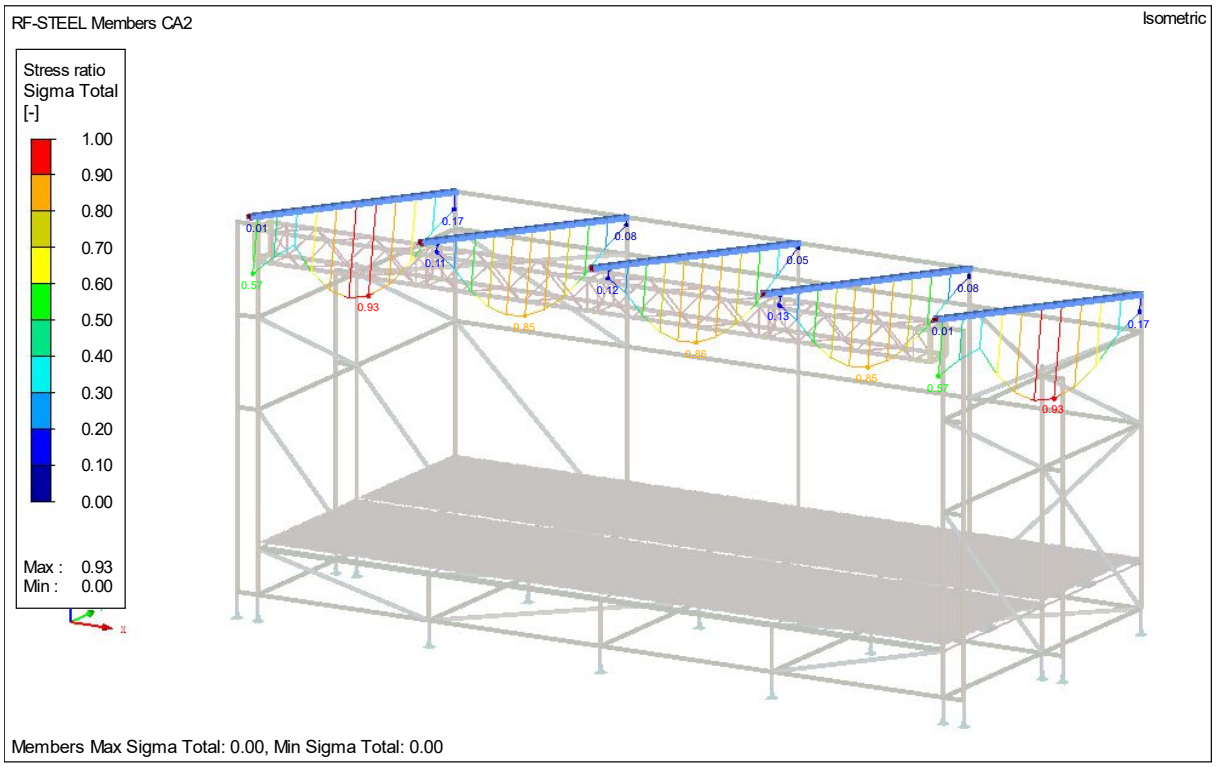


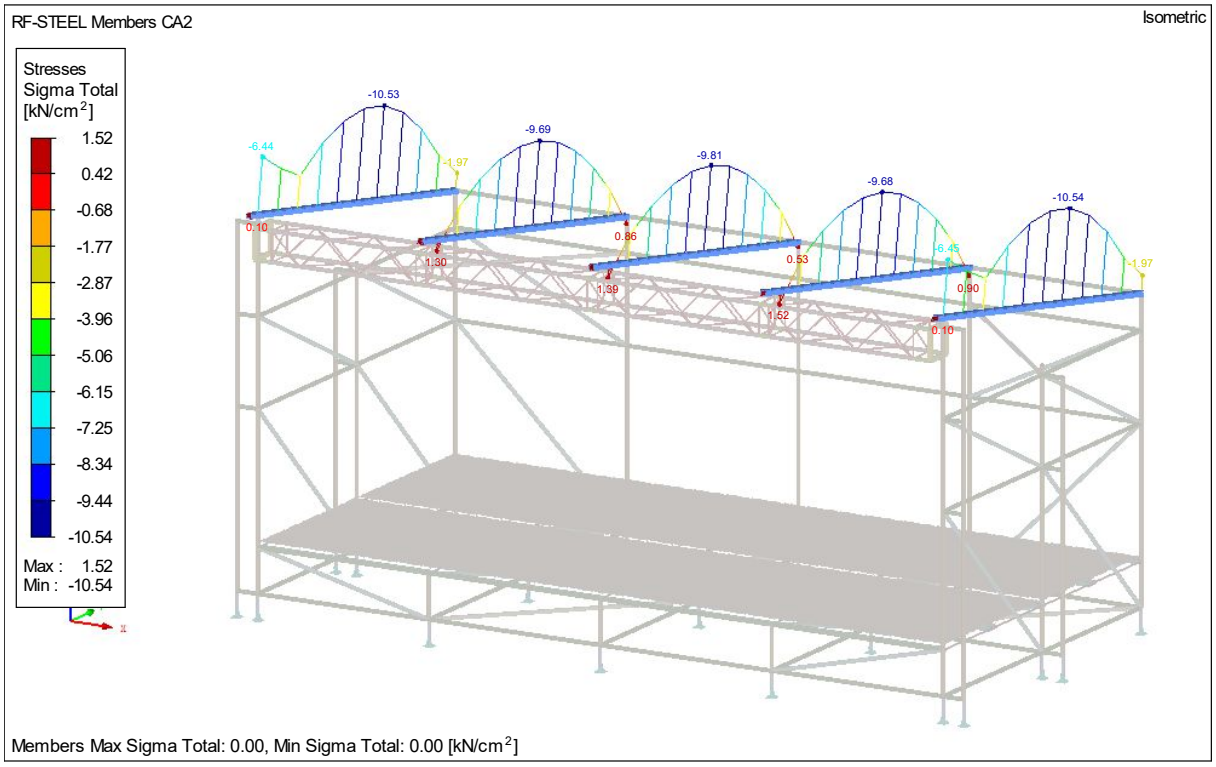


Utilisation of the different members of the GE32 in CA1

Member No.	Location x [m]	S-Point No.	Load-ing	Stress Type	Stress [kN/cm²] Existing	Limit	Stress Ratio
243	Cross-section No. 1 - SHAPE-THIN KEDER PROFIEL 3000						
	2,009	143	CO104	Sigma Total	-9,81	11,36	0,86
	4,019	131	CO104	Tau Total	0,53	6,56	0,08
	2,009	143	CO104	Sigma-eqv	9,81	11,36	0,86
244	Cross-section No. 1 - SHAPE-THIN KEDER PROFIEL 3000						
	2,009	143	CO103	Sigma Total	-9,69	11,36	0,85
	0,000	131	CO124	Tau Total	0,62	6,56	0,09
	2,009	143	CO103	Sigma-eqv	9,69	11,36	0,85
245	Cross-section No. 1 - SHAPE-THIN KEDER PROFIEL 3000						
	2,009	78	CO104	Sigma Total	-9,68	11,36	0,85
	0,000	65	CO124	Tau Total	0,62	6,56	0,09
	2,009	78	CO104	Sigma-eqv	9,68	11,36	0,85
833	Cross-section No. 1 - SHAPE-THIN KEDER PROFIEL 3000						
	1,681	143	CO100	Sigma Total	-10,54	11,36	0,93
	4,203	19	CO103	Tau Total	1,16	6,56	0,18
	1,681	143	CO100	Sigma-eqv	10,54	11,36	0,93
837	Cross-section No. 1 - SHAPE-THIN KEDER PROFIEL 3000						
	1,681	78	CO100	Sigma Total	-10,53	11,36	0,93
	4,203	23	CO103	Tau Total	-1,16	6,56	0,18
	1,681	78	CO100	Sigma-eqv	10,53	11,36	0,93

The maximum utilisation in the stress analyse calculation of the GE32 in CA2





Utilisation of the different members of the GE32 in CA2

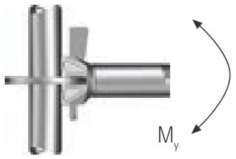
Member No.	Location x [m]	S-Point No.	Load-ing	Stress Type	Stress [kN/cm²] Existing	Limit	Stress Ratio
243	Cross-section No. 1 - SHAPE-THIN KEDER PROFIEL 3000						
	2,009	143	CO104	Sigma Total	-9,81	11,36	0,86
	4,019	131	CO104	Tau Total	0,53	6,56	0,08
	2,009	143	CO104	Sigma-eqv	9,81	11,36	0,86
244	Cross-section No. 1 - SHAPE-THIN KEDER PROFIEL 3000						
	2,009	143	CO103	Sigma Total	-9,69	11,36	0,85
	0,000	131	CO124	Tau Total	0,62	6,56	0,09
	2,009	143	CO103	Sigma-eqv	9,69	11,36	0,85
245	Cross-section No. 1 - SHAPE-THIN KEDER PROFIEL 3000						
	2,009	78	CO104	Sigma Total	-9,68	11,36	0,85
	0,000	65	CO124	Tau Total	0,62	6,56	0,09
	2,009	78	CO104	Sigma-eqv	9,68	11,36	0,85
833	Cross-section No. 1 - SHAPE-THIN KEDER PROFIEL 3000						
	1,681	143	CO100	Sigma Total	-10,54	11,36	0,93
	4,203	19	CO103	Tau Total	1,16	6,56	0,18
	1,681	143	CO100	Sigma-eqv	10,54	11,36	0,93
837	Cross-section No. 1 - SHAPE-THIN KEDER PROFIEL 3000						
	1,681	78	CO100	Sigma Total	-10,53	11,36	0,93
	4,203	23	CO103	Tau Total	-1,16	6,56	0,18
	1,681	78	CO100	Sigma-eqv	10,53	11,36	0,93

4.2 Layher information design values.

The used Layher system is the Layher K2000+ system.
When parts need to be replaced by Layher Variant II system, take care that these will be in places with less internal forces.
For the check of the Layher system the calculation results of the GE32 Layher roof + pa wings will be used.

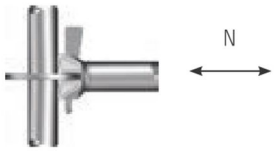
Z-8.22-64: K 2000+

Biegemoment



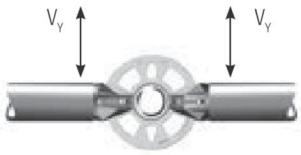
Biegemoment
$M_{y,Rd} = \pm 101{,}0$ kNcm

Normalkraft

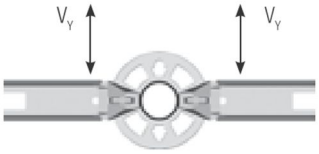


$N_{Rd} = \pm 31{,}0$ kN

Horizontale Querkraft

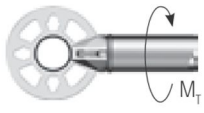


O-Riegel: $V_{y,Rd} = \pm 10{,}0$ kN



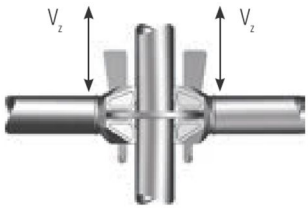
U-Riegel: $V_{y,Rd} = \pm 5{,}9$ kN

Torsionsmoment



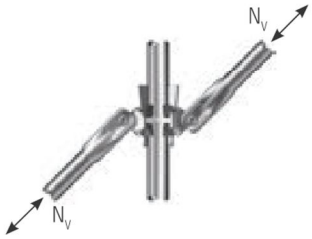
$M_{T,Rd} = \pm 52{,}5$ kNcm

Vertikale Querkraft



Vertikale Querkraft, Einzelanschluss
$V_{z,Rd} = \pm 26{,}4$ kN
Vertikale Querkraft je Lochscheibe
$\sum V_{z,Rd} = \pm 105{,}6$ kN

Normalkraft, Diagonale



Beanspruchbarkeiten der Vertikaldiagonalen für Feldhöhe 2,00 m für **K 2000+**:

Druck									Zug
Feldlänge [m]	0,73	1,09	1,40	1,57	2,07	2,57	3,07	4,14	alle Feldlängen
N_{VRd} [kN]	-16,1	-16,8	-15,5	-14,8	-12,4	-10,2	-8,3	-5,3	+17,9

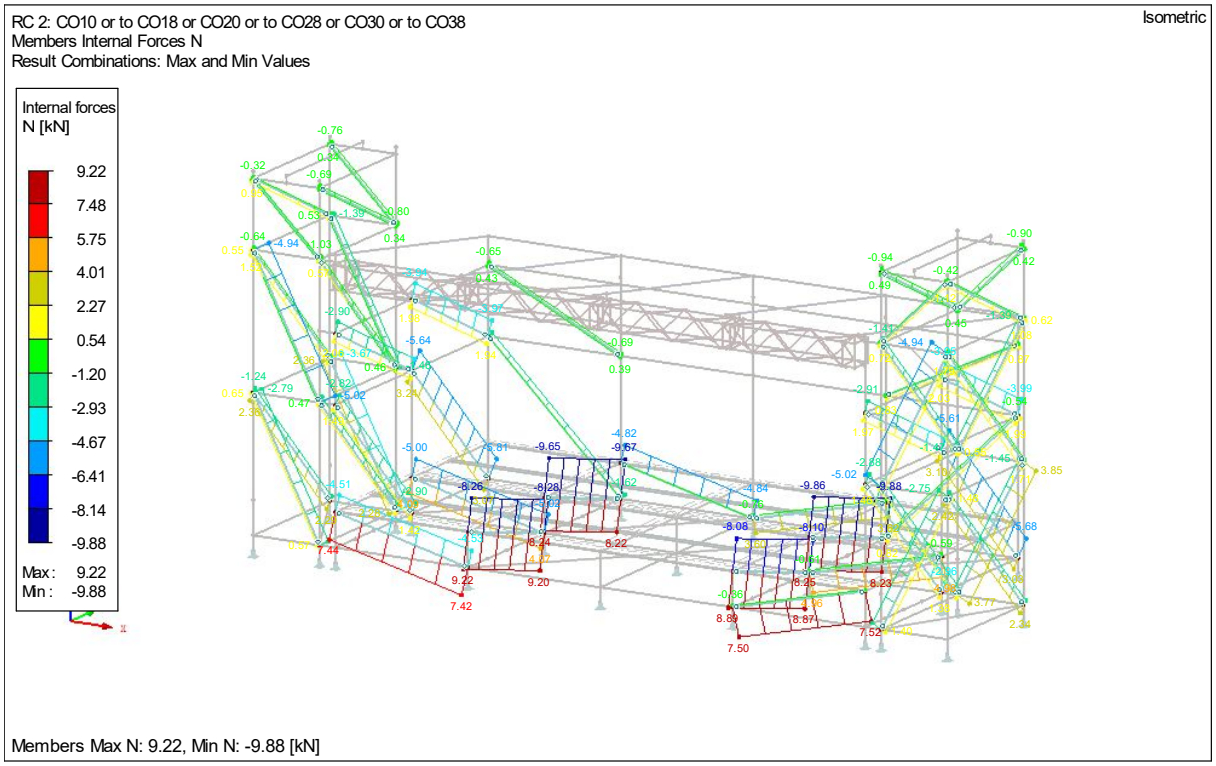
K 2000+ Bauteile können mit Bauteilen der Variante LW, Variante II und Variante I vermischt werden. Beanspruchbarkeiten siehe Zulassung Z-8.22-64 und Z-8.22-949.

Rd = Beanspruchbarkeit,
(enthält Teilsicherheitsbeiwert γ_M)

*„Zulässige Lasten" bzw. „Gebrauchslasten" erhält man durch Division der Beanspruchbarkeit durch 1,5 (= γ_F)

4.5 Check of the Layher diagonals.

The Maximum compression of the Layher K2000+ diagonals is according to the figure in chapter 4.2. In the next figure the minimum and maximum forces are displayed.



The maximum N_{ed} in a diagonal is 9.88 kN. According to the table on page 134 the maximum design force for this diagonal is 12.4 kN

Check of the diagonals

$N_{ed} / N_{rd} < 1$

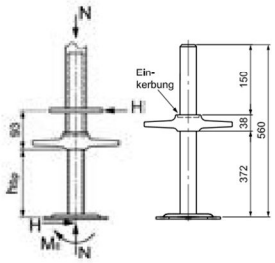
$9.88 / 12.4 = 0.79 < 1$

4.7 Check of the Layher Spindle's.

In the next table the spindle loading capacity in conjunction with height is given

Fußspindeln – Belastungstabellen

FUSSSPINDEL 60



Ersatzquerschnittswerte der Spindel

A	= 3,84 cm²
W_{el}	= 2,61 cm³
W_{pl}	= 3,26 cm³
I	= 3,74 cm⁴

Material: EN 10219-S235JRH

→ Rollgewinde: $f_{y,k}$ = 280,0 N/mm²

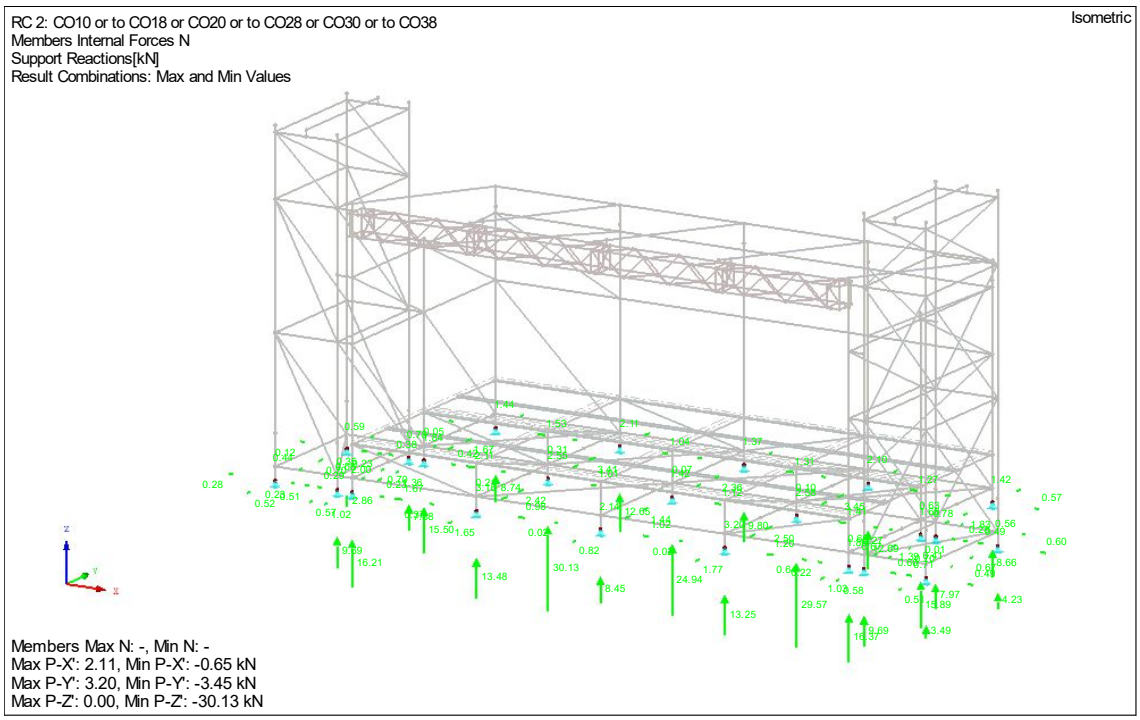
Tab. 12 Belastung Fußspindeln

Aus-spindel-länge h_{Sp} [cm]	Zulässige Vertikallast N [kN]* bei gleichzeitiger Wirkung einer Horizontallast H [kN]																								Zul. Hori-zontallast H [kN] wenn N = 0
	H = 0,0		H = 0,5		H = 1,0		H = 1,5		H = 2,0		H = 2,5		H = 3,0		H = 3,5		H = 4,0		H = 4,5		H = 5,0		H = 5,5		H = 6,0		
	N_1	N_2	N_1	N_2	N_1	N_2	N_1	N_2	N_1	N_2	N_1	N_2	N_1	N_2	N_1	N_2	N_1	N_2	N_1	N_2	N_1	N_2	N_1	N_2	N_1	N_2	
0	39	53	39	51	39	51	39	51	39	50	39	49	39	49	38	–	38	–	37	–	36	–	36	–	35	–	26,3
5	39	52	39	51	39	50	39	48	38	–	37	–	36	–	35	–	34	–	33	–	32	–	31	–	30	–	7,8
10	39	51	39	49	38	–	37	–	36	–	34	–	33	–	30	–	29	–	28	–	26	–	25	–	–	–	4,6
15	39	49	38	–	36	–	35	–	33	–	31	–	29	–	–	–	–	–	–	–	–	–	–	–	–	–	3,2
20	38	–	36	–	34	–	32	–	29	–	27	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2,5
25	37	–	34	–	31	–	28	–	23	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2,0
30	35	–	31	–	27	–	21	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,7
35	32	–	27	–	21	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,5
37	30	–	25	–	17	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,4

*Die zulässigen Vertikallasten wurden berechnet unter Anwendung des Berechnungsmodells nach DIN EN 12811-1, Abs. 10.2.3.2. Zur Erfassung der Biegesteifigkeit des Ständerrohres, der Schnittgrößenanteile aus Theorie II. Ordnung und der maximalen Beanspruchbarkeit der Ständer wurden folgende Raumgerüste mit Rastermaß 2,57 x 2,57 m berücksichtigt:
2,00 m Lagenhöhe für Stieldruckkräfte $N_1 \leq 39$ kN
1,50 m Lagenhöhe für Stieldruckkräfte 39 kN < $N_2 \leq 54$ kN

(–) Bei dieser Kombination von Ausspindellänge und Horizontallast ist die Biegebeanspruchbarkeit der Spindel überschritten.

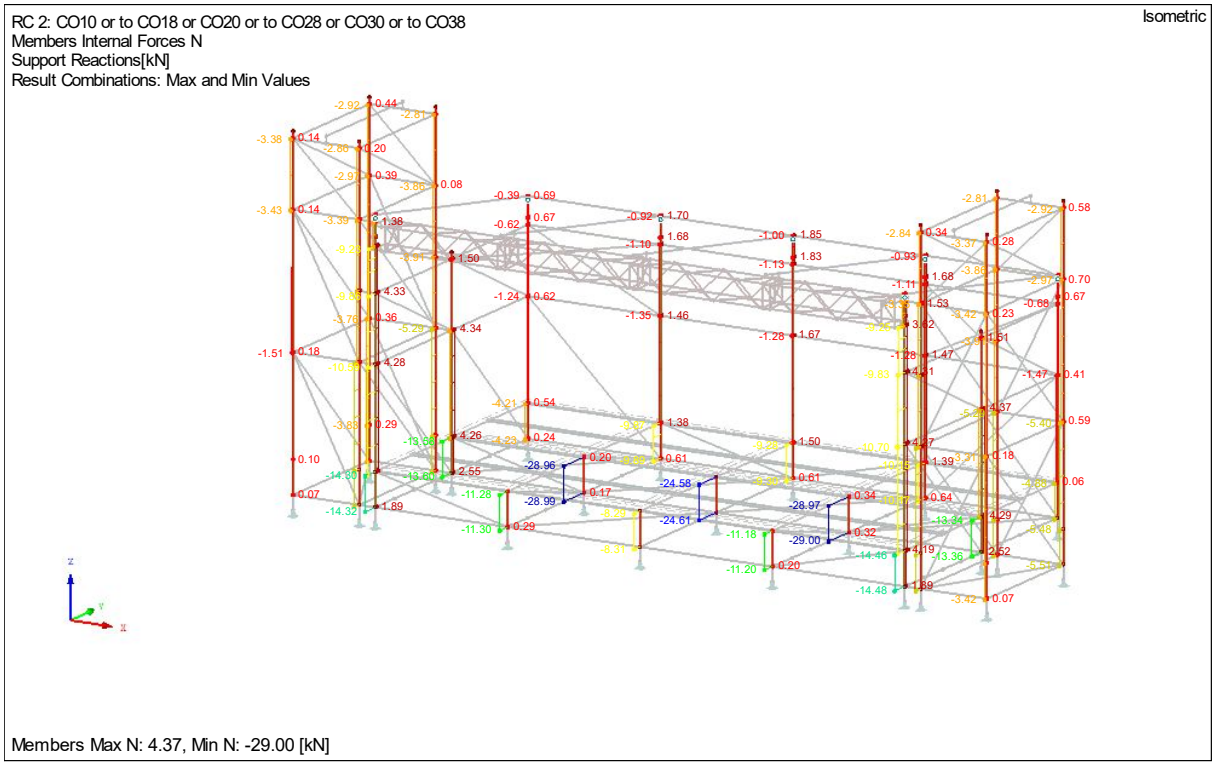
In the next figure the maximum support forces for Result combination are presented.



The maximum support force is 30.13 kN.

The maximum total horizontal force is 18.58 kN. This force will be divided over the 23 spindles. 18.58 / 23 = 0.80 kN of horizontal force per spindle. According to the table of the Layher spindle the combination between the vertical and the horizontal force allows for a maximum spindle length of 25 cm on the highest loaded spindles.

4.8 Check of the Layher columns.



Proof against buckling.
$\beta = 0.9$
$L_{cr} = 0.9 * 200 = 180$ cm Maximum free tube
$A = 4.53$ cm²
$I = 11.60$ cm^4
$W = 4.80$ cm³
$i = 1.60$cm

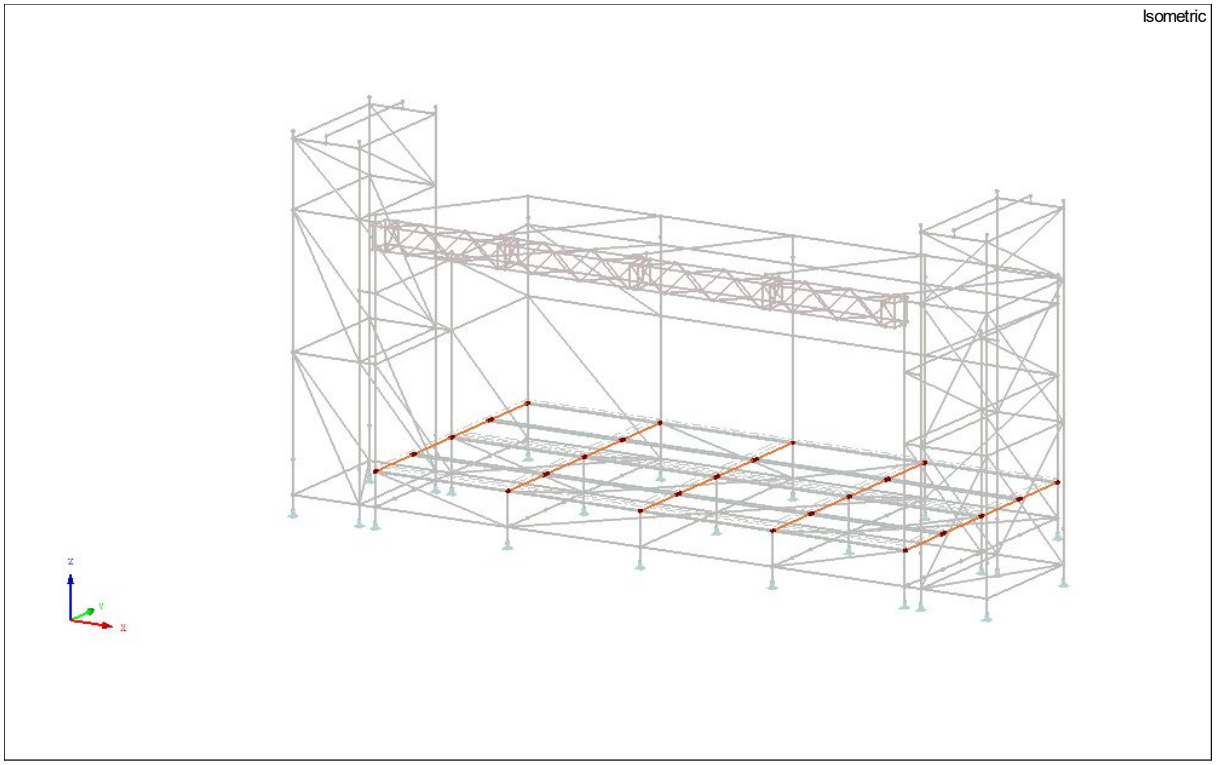
$\lambda_1 = \pi * \sqrt{(210000/320)} = 80{,}48$
$\bar{\lambda} = 180 / (1.6 * 80.48) = 1.39$
Buckling curve for hollow section line c (table 6.2 from en-1993-1-1)
$\alpha = 0{,}49$
$\Phi = 0.5 * (1 + \alpha * (\bar{\lambda} - 0.2) + \bar{\lambda}^2)$
$\Phi = 0.5 * (1 + 0.49 * (1.393 - 0.2) + 1.393^2) = 1.763$
$\chi_{min} = 1 / (\Phi + \sqrt{(\Phi^2 - \bar{\lambda}^2)})$
$\chi_{min} = 1 / (1.393 + \sqrt{(1.763^2 - 1.393^2)}) = 0.352$

$N_{b,rd} = \chi * A * f_0 / 1.1$
$N_{b,rd} = 0.352 * 4.53 * 32 / 1.1 = 43.68$ kN
$N_{ed,\,max} = 29.00$ kN

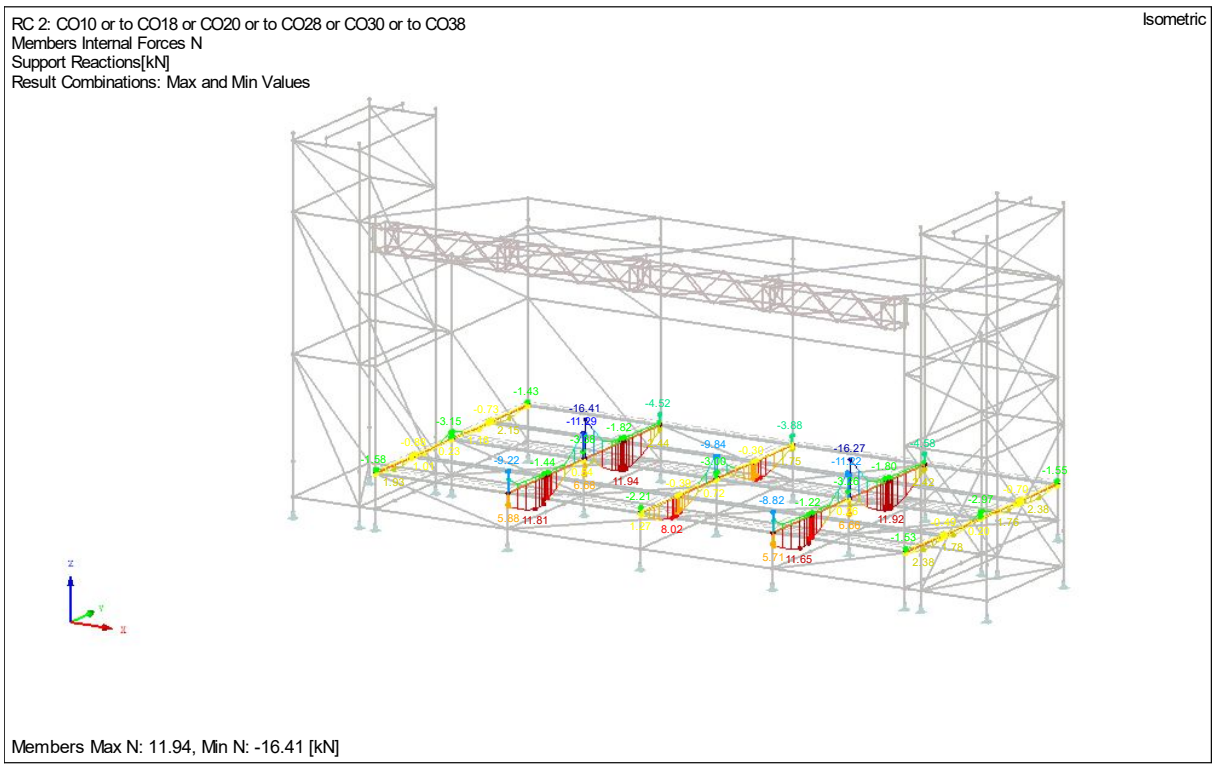
check = $N_{ed,\,max} / N_{b,rd} < 1$
$29.00 / 43.68 = 0.66 < 1$

4.9 Check of the Event Layher staging system.

The event Layher staging system exist of Layher transom beams with a decking system on top.

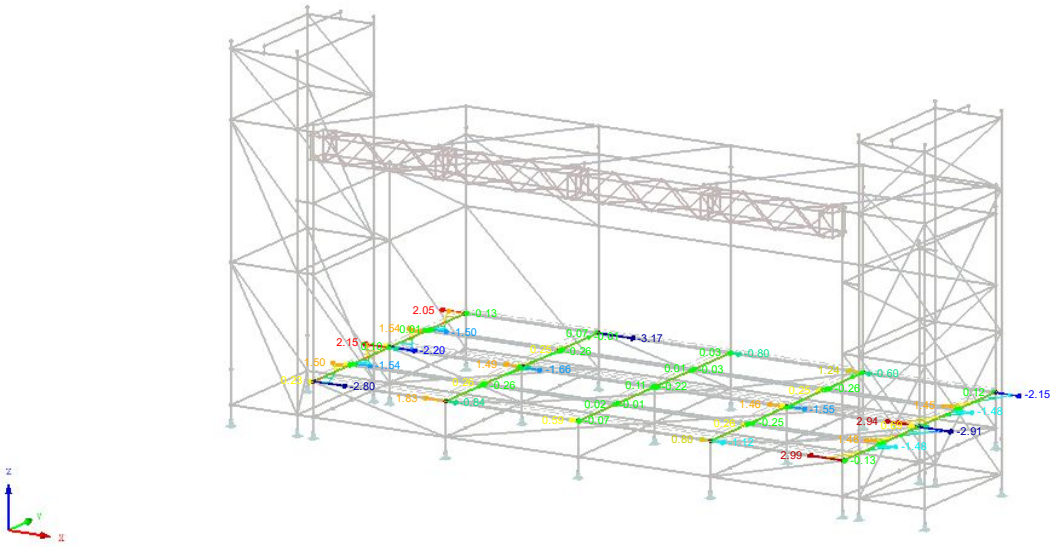


In the next figures the internal forces of the floor beam are shown.



RC 2: CO10 or to CO18 or CO20 or to CO28 or CO30 or to CO38
Members Internal Forces V-y
Support Reactions[kN]
Result Combinations: Max and Min Values

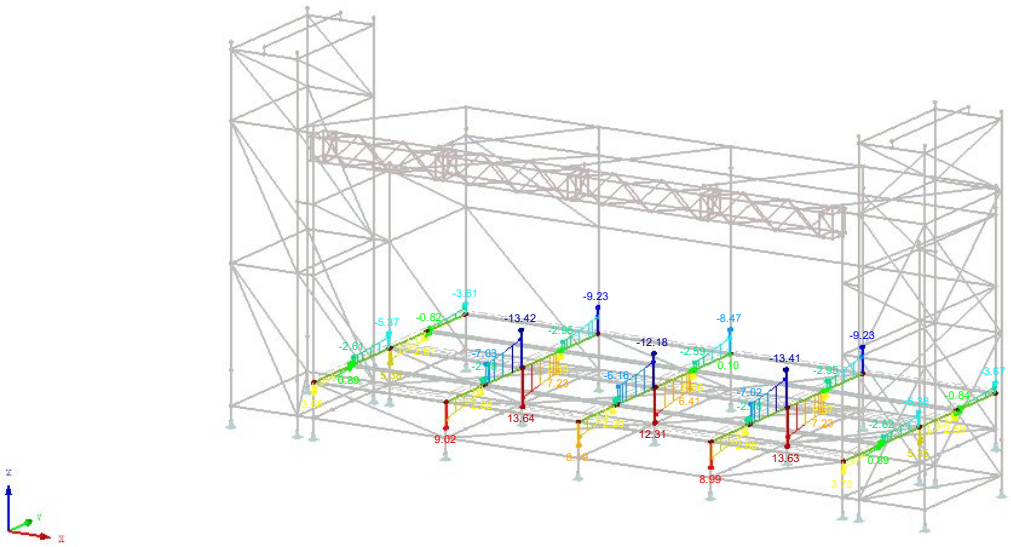
Isometric



Members Max V-y: 2.99, Min V-y: -3.17 [kN]

RC 2: CO10 or to CO18 or CO20 or to CO28 or CO30 or to CO38
Members Internal Forces V-z
Support Reactions[kN]
Result Combinations: Max and Min Values

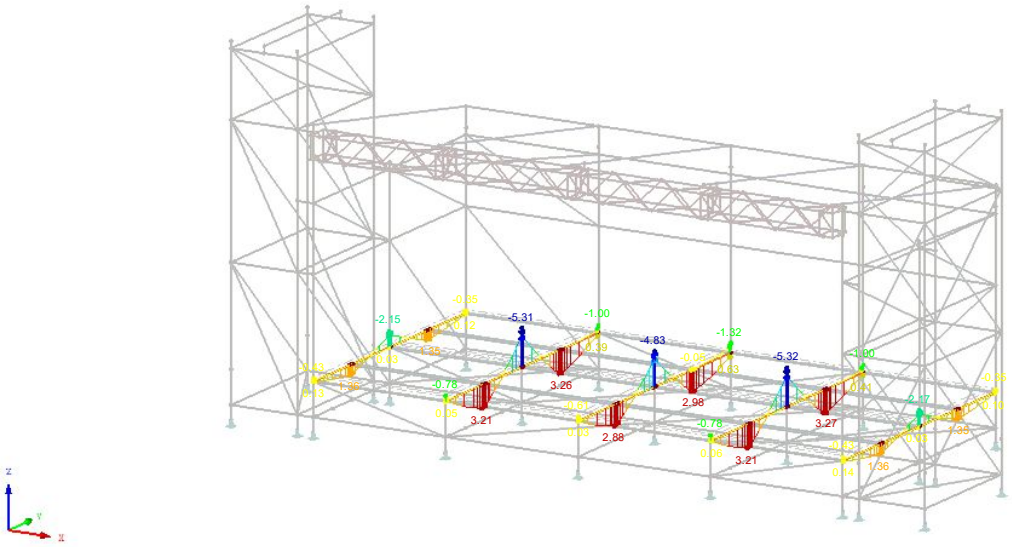
Isometric



Members Max V-z: 13.64, Min V-z: -13.42 [kN]

RC 2: CO10 or to CO18 or CO20 or to CO28 or CO30 or to CO38
Members Internal Forces M-y
Support Reactions[kN]
Result Combinations: Max and Min Values

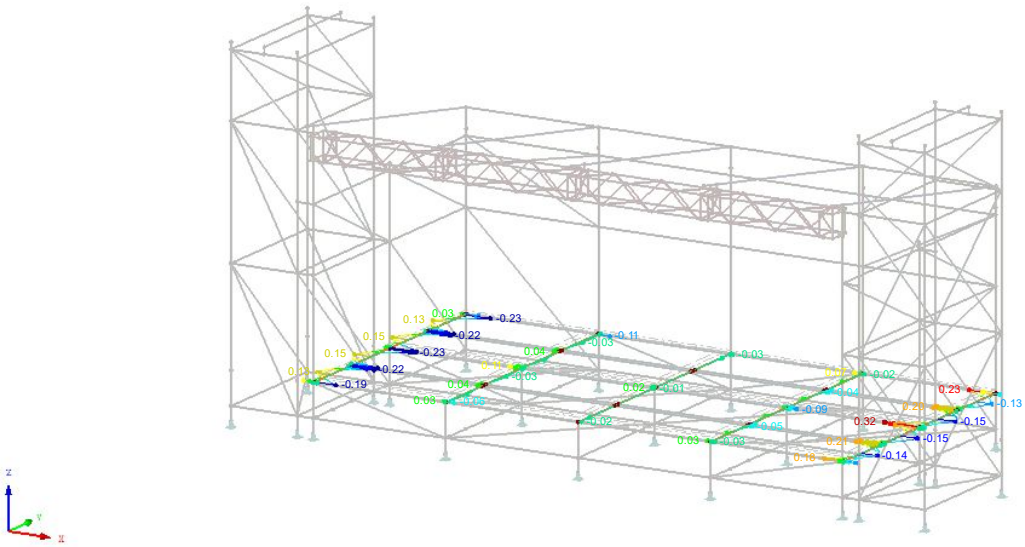
Isometric



Members Max M-y: 3.27, Min M-y: -5.32 [kNm]

RC 2: CO10 or to CO18 or CO20 or to CO28 or CO30 or to CO38
Members Internal Forces M-z
Support Reactions[kN]
Result Combinations: Max and Min Values

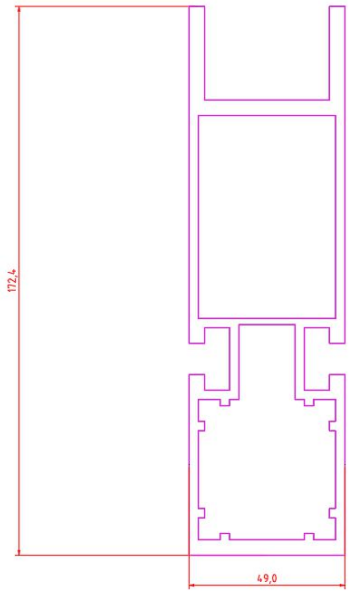
Isometric



Members Max M-z: 0.32, Min M-z: -0.23 [kNm]

Profiel berekening.

Layher Event Beam speciaal profiel Aluminium 6005A T6



I_1 [INCH^4]	5542580
I_2 [INCH^4]	701985
S_2 [INCH]	90.03
S_1 [INCH]	82.38
A [INCH^2]	1878.072

$Wy = I_1 / e_y = 554 / 8.25 = 67.15\ cm^3$
$Wz = I_2 / e_z = 70.2 / 2.5 = 28.08\ cm^3$

$N_{ed} = 16.41\ kN$
$\sigma N_{ed} = N_{ed} / A = 16.41 / 18.78 = 0.87\ kN/cm^2$
$V_{y,ed} = 3.17\ kN$
$\sigma v_{z,ed} = V_{y,ed} / A = 3.17 / 18.78 = 0.17\ kN/cm^2$
$V_{z,ed} = 13.46\ kN$
$\sigma v_{z,ed} = V_{z,ed} / A = 13.46 / 18.78 = 0.72\ kN/cm^2$
My,ed = 5.32 kNm
$\sigma M_{y,ed} = M_{y,ed} / Wy = 532 / 67.15 = 7.92\ kN/cm^2$
Mz,ed = 0.32 kNm
$\sigma M_{z,ed} = M_{z,ed} / Wy = 32 / 28.08 = 1.14\ kN/cm^2$

$\sigma tot = \sigma N_{ed} + 0{,}58 * \sigma v_{z,ed} + 0{,}58 * \sigma v_{z,ed} + \sigma M_{y,ed} + \sigma M_{y,ed}$
$0.87 + 0.58 * 0.17 + 0.58 * 0.72 + 7.92 + 1.14 = 10.45\ kN/cm^2$

Check
$\sigma tot / (fy / \gamma) < 1$
$10.45 / (22.5 / 1.1) = 0.51 < 1$

5.0 Necessary Ballast.

5.1 Ballast calculation

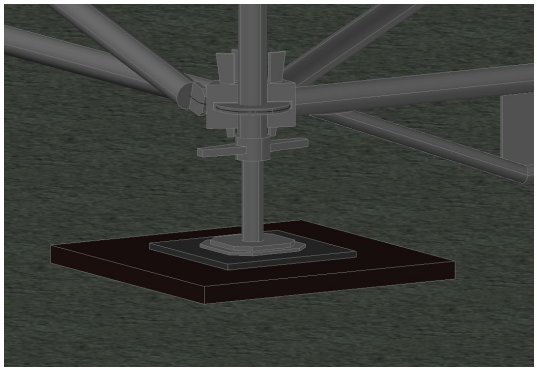
The ballast will be checked for overturning and sliding. The Layher stage which is designed as a ridged stage will be taken into account. The uplift of the system is not limited due to the high self-weight in comparison with the relative small area.

All permanent installed loading can be subtracted from the nearest Ballast position

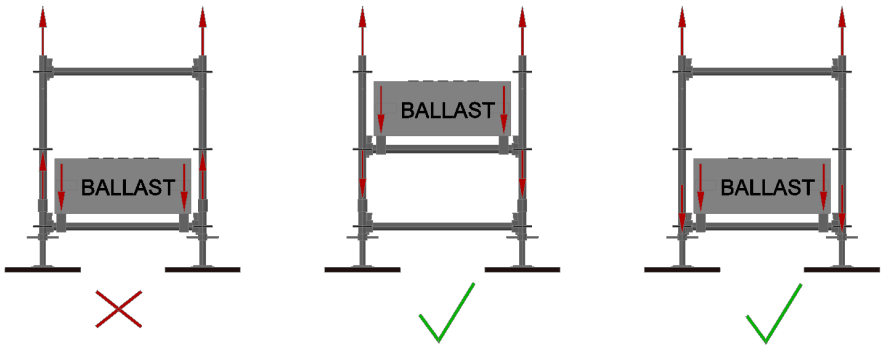
The safety factor for the ballast calculation against slipping is set to 1.2 according to the NEN-EN 13814. This is based on a horizontal load which is relying on friction.
For the friction coefficient the factor of 0.6 has been taken into account.
The Ballast calculation with factor 0.6 can be justified because rubber underlayment plate is used.

Table 3 — Coefficients of friction μ

	Wood	Steel	Concrete
Wood	0,4	0,4	0,6
Steel	0,4	0,1	0,2
Concrete	0,6	0,2	0,5
Clay[a]	0,25	0,2	0,25
Loam[a]	0,4	0,2	0,4
Sand and gravel	0,65	0,2	0,65
[a] At least of stiff consistency in accordance with ENV 1997-1.			

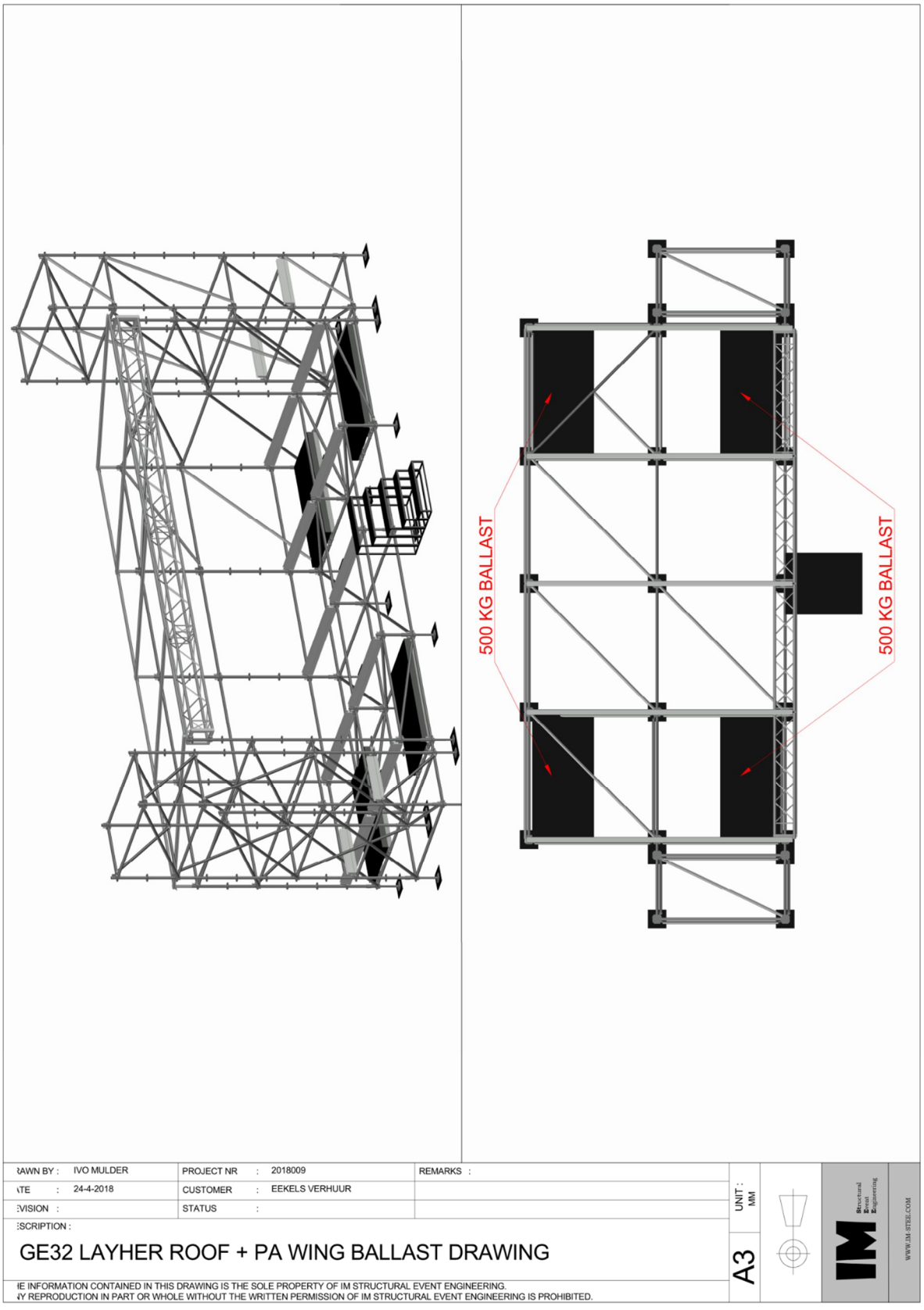


The ballast need to be placed in such a way that it will be activated when lifting forces are applied. If the ballast is placed on the bottom level the use of Layher uprights with connected base collar is necessary.

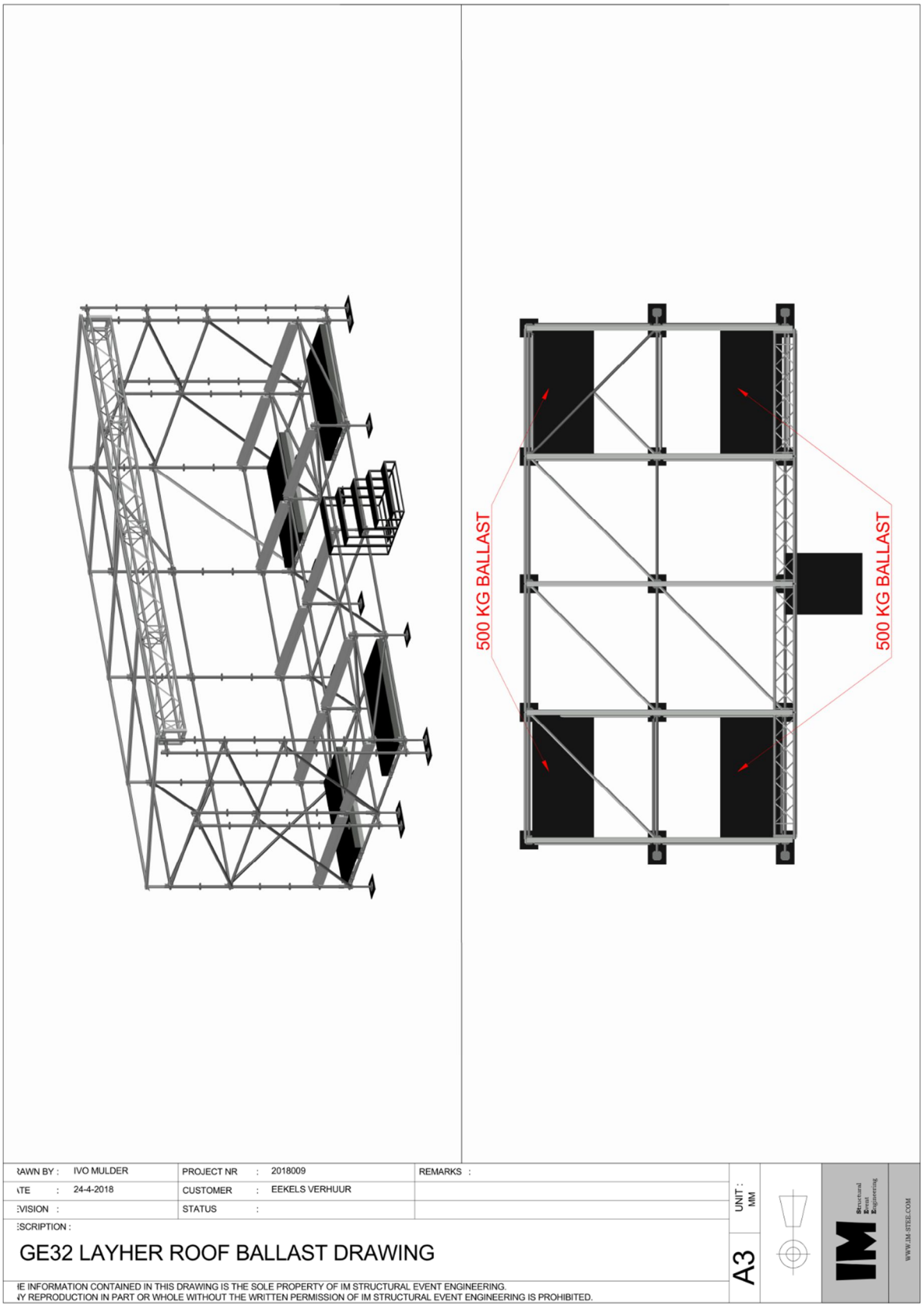


5.2 Ballast drawing

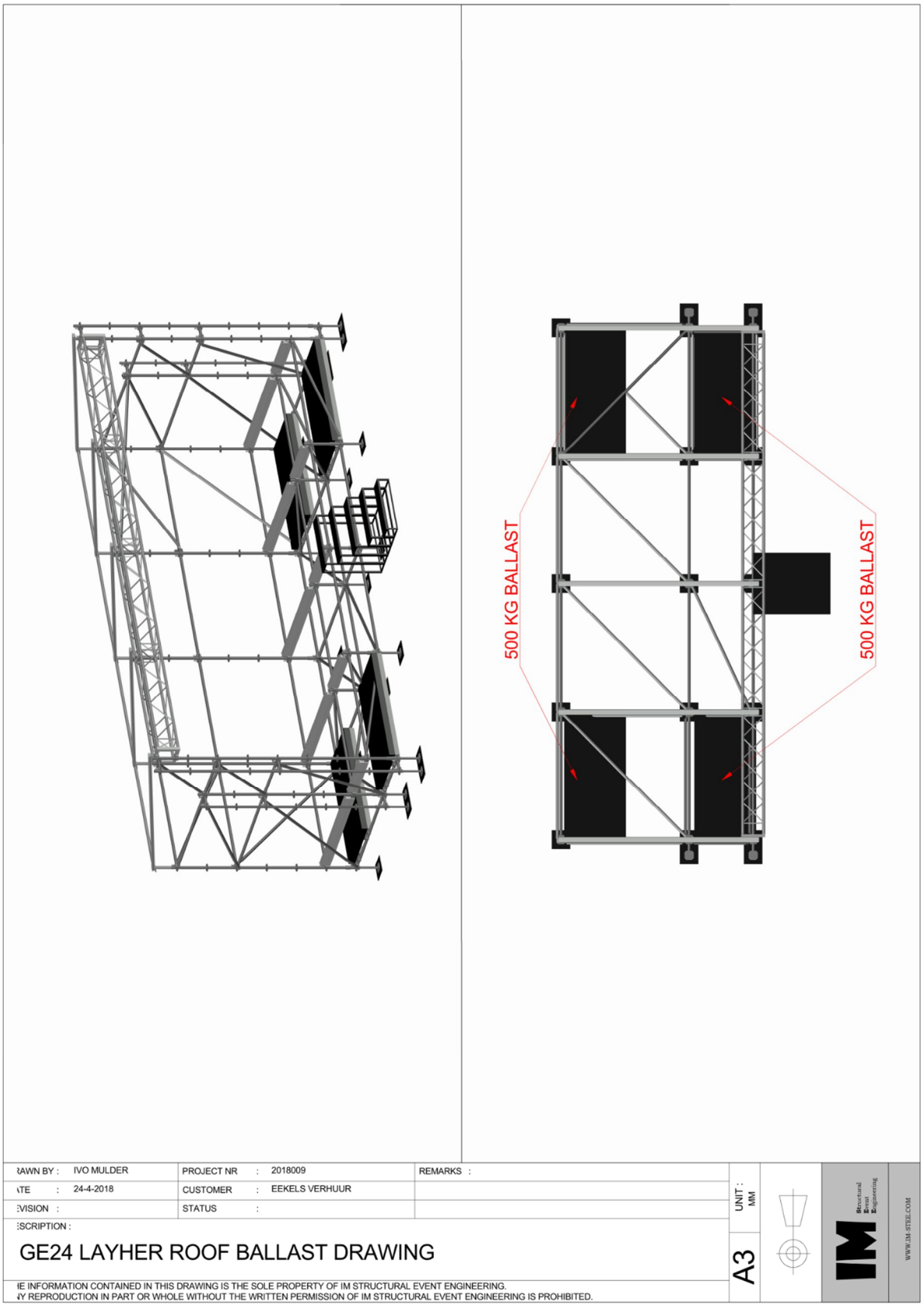
Ballast drawing GE32 Layher Roof + PA wings



Ballast drawing GE32 Layher Roof



Ballast drawing GE24 Layher Roof



5.3 Calculation of ballast against overturning and slipping.

For the calculation of the ballast against overturning and sliding of the system the results of the GE32 Layher roof + Pa wing calculation will be used.

,	Description	Value	Unit		Description	Value	Unit
	CO50 - LC1 + LC2 + LC10				**CO150 - LC1 + LC2 + LC13**		
	Sum of loads in X	0,00	kN		Sum of loads in X	0,00	kN
	Sum of loads in Y	13,76	kN		Sum of loads in Y	4,65	kN
	Sum of loads in Z	-31,57	kN		Sum of loads in Z	-30,49	kN
	CO51 - LC1 + LC2 + LC3 + LC10				**CO151 - LC1 + LC2 + LC3 + LC13**		
	Sum of loads in X	0,00	kN		Sum of loads in X	0,00	kN
	Sum of loads in Y	13,76	kN		Sum of loads in Y	4,65	kN
	Sum of loads in Z	-55,73	kN		Sum of loads in Z	-54,66	kN
	CO52 - LC1 + LC2 + LC4 + LC10				**CO152 - LC1 + LC2 + LC4 + LC13**		
	Sum of loads in X	0,00	kN		Sum of loads in X	0,00	kN
	Sum of loads in Y	13,76	kN		Sum of loads in Y	4,65	kN
	Sum of loads in Z	-52,57	kN		Sum of loads in Z	-51,49	kN
	CO53 - LC1 + LC2 + LC5 + LC10				**CO153 - LC1 + LC2 + LC5 + LC13**		
	Sum of loads in X	0,00	kN		Sum of loads in X	0,00	kN
	Sum of loads in Y	13,76	kN		Sum of loads in Y	4,65	kN
	Sum of loads in Z	-57,57	kN		Sum of loads in Z	-56,49	kN
	CO54 - LC1 + LC2 + LC6 + LC10				**CO154 - LC1 + LC2 + LC6 + LC13**		
	Sum of loads in X	0,00	kN		Sum of loads in X	0,00	kN
	Sum of loads in Y	13,76	kN		Sum of loads in Y	4,65	kN
	Sum of loads in Z	-56,57	kN		Sum of loads in Z	-55,49	kN
	CO60 - LC1 + LC2 + LC11				**CO160 - LC1 + LC2 + LC14**		
	Sum of loads in X	3,39	kN		Sum of loads in X	2,93	kN
	Sum of loads in Y	1,24	kN		Sum of loads in Y	1,59	kN
	Sum of loads in Z	-42,33	kN		Sum of loads in Z	-33,63	kN
	CO61 - LC1 + LC2 + LC3 + LC11				**CO161 - LC1 + LC2 + LC3 + LC14**		
	Sum of loads in X	3,39	kN		Sum of loads in X	2,93	kN
	Sum of loads in Y	1,24	kN		Sum of loads in Y	1,59	kN
	Sum of loads in Z	-66,49	kN		Sum of loads in Z	-57,79	kN
	CO62 - LC1 + LC2 + LC4 + LC11				**CO162 - LC1 + LC2 + LC4 + LC14**		
	Sum of loads in X	3,39	kN		Sum of loads in X	2,93	kN
	Sum of loads in Y	1,24	kN		Sum of loads in Y	1,59	kN
	Sum of loads in Z	-63,33	kN		Sum of loads in Z	-54,63	kN
	CO63 - LC1 + LC2 + LC5 + LC11				**CO163 - LC1 + LC2 + LC5 + LC14**		
	Sum of loads in X	3,39	kN		Sum of loads in X	2,93	kN
	Sum of loads in Y	1,24	kN		Sum of loads in Y	1,59	kN
	Sum of loads in Z	-68,33	kN		Sum of loads in Z	-59,63	kN
	CO64 - LC1 + LC2 + LC6 + LC11				**CO164 - LC1 + LC2 + LC6 + LC14**		
	Sum of loads in X	3,39	kN		Sum of loads in X	2,93	kN
	Sum of loads in Y	1,24	kN		Sum of loads in Y	1,59	kN
	Sum of loads in Z	-67,33	kN		Sum of loads in Z	-58,63	kN
	CO70 - LC1 + LC2 + LC12				**CO170 - LC1 + LC2 + LC15**		
	Sum of loads in X	0,96	kN		Sum of loads in X	0,00	kN
	Sum of loads in Y	-11,70	kN		Sum of loads in Y	-3,79	kN
	Sum of loads in Z	-48,06	kN		Sum of loads in Z	-50,88	kN
	CO71 - LC1 + LC2 + LC3 + LC12				**CO171 - LC1 + LC2 + LC3 + LC15**		
	Sum of loads in X	0,96	kN		Sum of loads in X	0,00	kN
	Sum of loads in Y	-11,70	kN		Sum of loads in Y	-3,79	kN
	Sum of loads in Z	-72,22	kN		Sum of loads in Z	-75,05	kN
	CO72 - LC1 + LC2 + LC4 + LC12				**CO172 - LC1 + LC2 + LC4 + LC15**		
	Sum of loads in X	0,96	kN		Sum of loads in X	0,00	kN
	Sum of loads in Y	-11,70	kN		Sum of loads in Y	-3,79	kN
	Sum of loads in Z	-69,06	kN		Sum of loads in Z	-71,88	kN
	CO73 - LC1 + LC2 + LC5 + LC12				**CO173 - LC1 + LC2 + LC5 + LC15**		
	Sum of loads in X	0,96	kN		Sum of loads in X	0,00	kN
	Sum of loads in Y	-11,70	kN		Sum of loads in Y	-3,79	kN
	Sum of loads in Z	-74,06	kN		Sum of loads in Z	-76,88	kN
	CO74 - LC1 + LC2 + LC6 + LC12				**CO174 - LC1 + LC2 + LC6 + LC15**		
	Sum of loads in X	0,96	kN		Sum of loads in X	0,00	kN
	Sum of loads in Y	-11,70	kN		Sum of loads in Y	-3,79	kN
	Sum of loads in Z	-73,06	kN		Sum of loads in Z	-75,88	kN

Decisive load combination CO50 Characteristic values wind 0° In service.

5.3.1 Calculation of ballast against overturning.

Check: $M_{stab}/ M_{ov} > 1.2$

Used info for the stability calculation.
Sum of vertical forces = 31.57 kN
Sum of horizontal load = 13.76 kN

The center of gravity of the complete system lays on a height of 2.60 meter.

Overturning moment
M_{ov} = 13.76 * (2.60) = 35.77 kNm

Stabilization moment
M_{stab} = (Ballast + Layher self-weight + down force) * depth / 2
M_{stab} = (31.57) * 4.144 / 2 = 65.41

M_{stab}/ M_{ov} = 65.41 / 35.77 = 1.82 > 1.2

5.3.2 Calculation of ballast against slipping.

Sum of vertical forces = 31.57 kN
Sum of horizontal load = 13.76 kN

Ballast calculation with the friction coefficient 0.6
(ballast + Self-weight + down force) * friction coefficient / sum of horizontal > 1.2
(31.57) * 0.6 / 13.76 = 1.37 > 1.2

Prolyte H40V Truss

Truss series	Prolyte H40V
Truss manufacturer	Prolyte Group
Truss series calculated by:	Krasenbrink + Bastians.
Structural report number:	12500-4

Design internal forces for the complete truss

Normal force main chord	+/- 50.22 kN
Normal force coupling system	+/- 52.58 kN
Normal force diagonals	+/- 13.39 kN
Bending moment $M_{yR,d}$	34.05 kNm
Bending moment $M_{zR,d}$	34.05 kNm
Normal Force $N_{R,d}$	200.86 kN
Transversal Force $V_{yr,d}$	18.94 kN
Transversal Force $V_{zr,d}$	18.94 kN

Truss geometry

Main chords	48x3 EN AW-6082T6	
Diagonals	20x2 EN AW-6082T6	
Coupling system	CCS7	
Height	339 mm	Centre to centre distance main chords
Width	339 mm	Centre to centre distance main chords
A	16.96 cm²	
I_y	4179.54 cm^4	
I_z	4179.54 cm^4	
i_y	15.70 cm	
i_z	15.70 cm	
I_T	900 cm^4	

Statische berekening

Eekels verhuur - GE72 Layher podium + dak

Rapportnummer SB-2023-65_B

VD RIET

projectnummer	2023-65_B
project	GE72 Layher podium + dak
onderwerp	Statische berekening
opdrachtgever	Eekels Verhuur B.V. Hallenstraat 20 5531AB Bladel Nederland
advies	Van de Riet 48.3 – Adviesbureau Wernhout Nederland
auteur	K. van de Riet
datum	03 / 05 / 2023
geldigheidsduur document	03 / 05 / 2028

*

1. Inhoudsopgave

1. Inhoudsopgave 3
2. Algemeen 5
2.1. Projectomschrijving 5
2.2. Aannames / opmerkingen 5
2.3. Conclusie 6
2.4. Documenten 7
3. Situatie 8
3.1. Rekenmodel 8
3.2. Rekenmethode 9
3.3. Materialen 11
3.3.1. Staven (profielen) en knopen (scharnieren) 11
3.3.2. Materiaallijst 11
3.3.3. Doorsnede 12
3.3.4. Scharnieren (conform EN74 en Z-8.22-64) 22
3.3.4.1. Scharnieren (conform EN74 en Z-8.22-64) - Kruiskoppeling BB 22
3.3.4.1.1. Nonlinear functions 22
3.3.4.2. Scharnieren (conform EN74 en Z-8.22-64) - Layher K2000+ 23
3.3.4.2.1. Nonlinear functions 23
3.3.4.3. Scharnieren (conform EN74 en Z-8.22-64) - dia layher - VDR 207x200 NLFunct 24
3.3.4.3.1. Nonlinear functions 25
3.3.4.4. Scharnieren (conform EN74 en Z-8.22-64) - dia layher - VDR 207x150 NLFunct 25
3.3.4.4.1. Nonlinear functions 25
3.3.4.5. Scharnieren (conform EN74 en Z-8.22-64) - dia layher - VDR 207x100 NLFunct 26
3.3.4.5.1. Nonlinear functions 26
3.4. Steunpunten 26
4. Belastingaanname 29
4.1. Belastinggevallen 29
4.1.1. Belastinggevallen 30
4.1.1.1. Belastinggevallen - EG 30
4.1.1.2. Belastinggevallen - EG VL 30
4.1.1.3. Belastinggevallen - B 31
4.1.1.4. Belastinggevallen - NL WV1 32
4.1.1.5. Belastinggevallen - NL WV1 50% 33
4.1.1.6. Belastinggevallen - NL H WV1 10% X 34
4.1.1.7. Belastinggevallen - NL H WV1 10% Y 35
4.1.1.8. Belastinggevallen - NL H WV1 10% -X 36
4.1.1.9. Belastinggevallen - NL H WV1 10% -Y 37
4.1.1.10. Belastinggevallen - MW X 38
4.1.1.11. Belastinggevallen - MW Y 39
4.1.1.12. Belastinggevallen - MW -X 40
4.1.1.13. Belastinggevallen - MW -Y 41
4.1.1.14. Belastinggevallen - WW X 42
4.1.1.15. Belastinggevallen - WW Y 43
4.1.1.16. Belastinggevallen - WW -X 44
4.1.1.17. Belastinggevallen - WW -Y 45
4.1.1.18. Belastinggevallen - H 1 46
4.1.1.19. Belastinggevallen - H 2 47
4.1.1.20. Belastinggevallen - H 3 48
4.1.1.21. Belastinggevallen - H 4 49
4.2. Toelichting Belastinggevallen 51
4.3. Belastingcombinaties 55
4.3.1. Niet-lineaire Combinaties 55
4.3.2. Stability combinations 64
5. Resultaten 74
5.1. Berekeningsverslag 74
5.2. Critical load coefficients 86
5.3. Resultclasses 90
5.4. Steunpunt reacties 92
5.4.1. Reactions 92
5.4.2. Reactions 126
5.5. Interne krachten 141
5.5.1. 1D internal forces 141
5.5.2. 1D internal forces 147
5.6. Staalcontrole 154
5.6.1. EC-EN 1993 ULS: steelcheck 154

5.6.2. EC-EN 1993 ULS: steelcheck 154
5.6.3. Scaffolding - Coupler check 162
5.6.4. Scaffolding - Coupler check 162
5.7. Aluminiumcontrole 163
5.7.1. EC-EN 1999 Aluminium check ULS 163
5.7.2. EC-EN 1999 Aluminium check ULS 164
5.8. Doorbuiging / vervorming 171
5.8.1. 1D deformations 171
6. Bijlagen 172
6.1. Toelatingscertificaten Z-8.22-64, Z-8.22-939 en de Z-8.22-949. 172
6.2. Tekenwerk 172

2. Algemeen

2.1. Projectomschrijving

Betreft een constructieve beschouwing van de standaard configuratie "GE72 Layher podium+dak".

De constructie is geheel opgebouwd uit Layher Allround materiaal.
Het Layher Allround systeem is een standaard gekeurd module systeem, en dient conform de montage- en gebruikshandleiding opgebouwd te worden. Het toelatingcertificaat is als bijlage toegevoegd.

In deze rekennota beschouwen we de globale stabiliteit getoetst met een evenwichtsberekening en doorsnede controles voor de maatgevende onderdelen in de constructie. Belastingcombinaties zijn genomen voor de ongunstigste situatie met ongunstige uitganspunten per berekening.

2.2. Aannames / opmerkingen

- de situatie /het rekenmodel zoals gegeven in hoofdstuk 3

- de belastingenaannames zoals gegeven in hoofdstuk 4

- alle verbindingen voldoende sterk en stijf uitvoeren/aanslaan en/of voldoende deugdelijk koppelen;
  maximale uitspindeling voetspindels <=150mm

- Instanthouding- en ontruimingsprotocol document te verzorgen door vergunninghouder
  Hierin dienen onder andere beheersmaatregelen te worden vastgelegd voor het bewaken van de windsnelheid en voor het waarborgen van de veiligheid van personen in en rond de constructie indien de operationele windsnelheden worden overschreden.
  Geadviseerd wordt om gebruik te maken van een windmeter ter plaatse en hierop te monitoren.

  De constructie is berekend met een 'in gebruik situatie' en een 'buiten gebruik situatie'.
  Een goede uitvoering van beheersmaatregelen door de organisatie is hierbij essentieel.

  *In gebruik situatie (met alle wanden en het dak dicht / voorzien van een zeil) :
  De constructie is berekend met een werkwindbelasting over de volledige hoogte van 0,185 kN/m2 (62km/u = 17,2 m/s).
  incl. alle vloerbelastingen.
  incl. gewichten aan de trussen.

  *Buiten gebruik situatie (met alle wanden open en enkel het dak dicht / voorzien van een zeil) :
  De constructie is berekend met een maximale windbelasting over de volledige hoogte van 0,4375 kN/m2 (95,25km/u = 26,46m/s).
  excl. vloerbelastingen
  incl. gewichten aan de trussen.

2.3. Conclusie

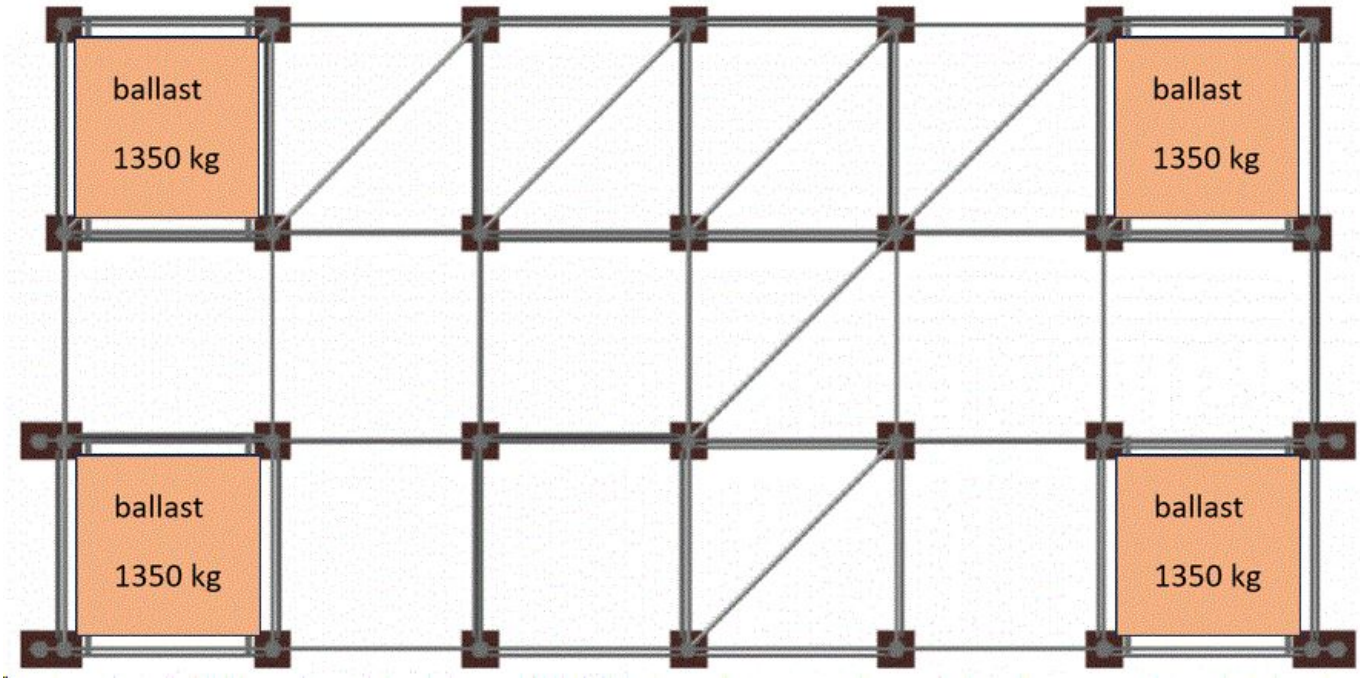
De constructie voldoet als draagconstructie conform de uitgangspunten en aannamen in deze berekening.

Controle belastingen door vergunninghouder te verzorgen.
- Hieronder de maximale reactiekrachten op de ondergrond :

Nonlinear calculation
Class: Alle NC BGT
System: Global
Extreme: Global
Selection: All
Nodal reactions

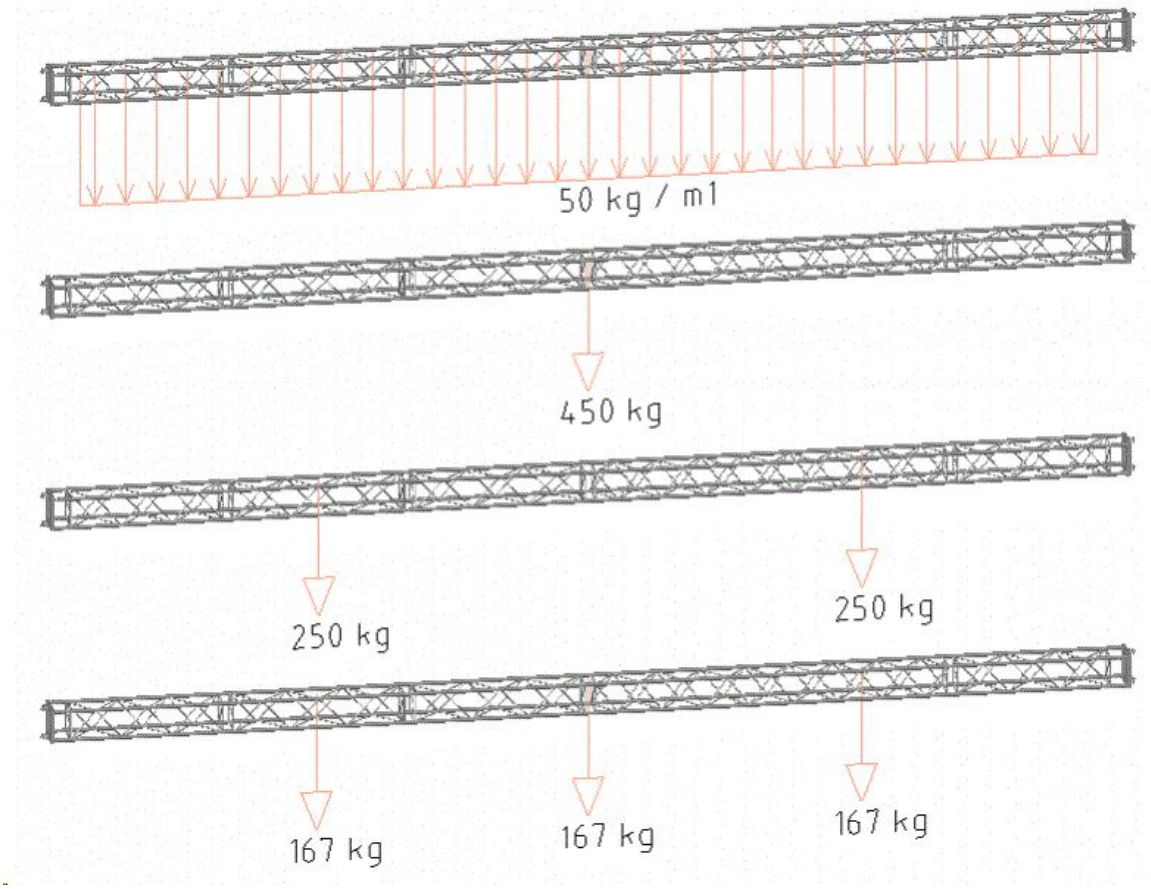
Name	Case	R_x [kN]	R_y [kN]	R_z [kN]
Sn17/N77	NC BGT A IG -X	**-1,627**	-0,227	22,318
Sn16/N72	NC BGT A BGE Y	**0,823**	-1,303	9,953
Sn16/N72	NC BGT A BG Y	0,818	**-1,328**	5,072
Sn22/N102	NC BGT A BG -Y	-0,226	**1,007**	5,522
Sn24/N112	NC BGT A BG Y	0,000	0,000	**0,000**
Sn9/N37	NC BGT H1 IG -Y	-0,984	0,993	**22,421**

- Hieronder in de plattegrond de noodzakelijk te plaatsen ballast :



- Hieronder in het vooraanzicht de maximale toelaatbare gewichten incl. de aan te slagen posities (van toepassing op beide trussen), er worden 4 verschillende mogelijkheden geboden deze mogen niet worden gecombineerd :

(indien getakeld/gehesen wordt dient men rekening te houden met een reductie van de toelaatbare belasting door de toepassing van de dynamische belastingfactor 20%.)



2.4. Documenten

De volgende documenten zijn van toepassing:

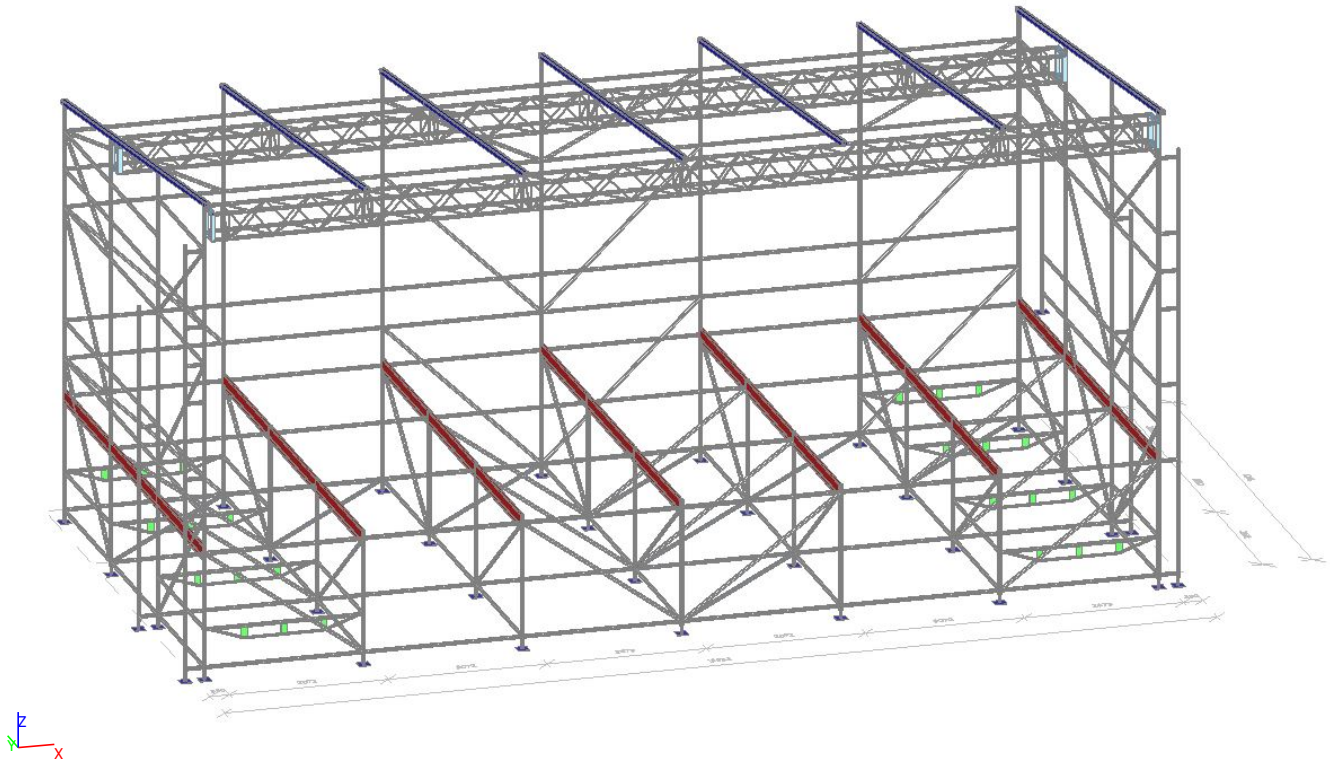
NEN-EN 1990 Eurocode 0 Grondslagen voor het constructief ontwerp
NEN-EN 1991 Eurocode 1 Belastingen op constructies
NEN-EN 1992 Eurocode 2 Betonconstructies
NEN-EN 1993 Eurocode 3 Staalconstructies
NEN-EN 1994 Eurocode 4 Staal-beton constructies
NEN-EN 1995 Eurocode 5 Houtconstructies
NEN-EN 1996 Eurocode 6 Constructies in metselwerk
NEN-EN 1997 Eurocode 7 Geotechnisch ontwerp

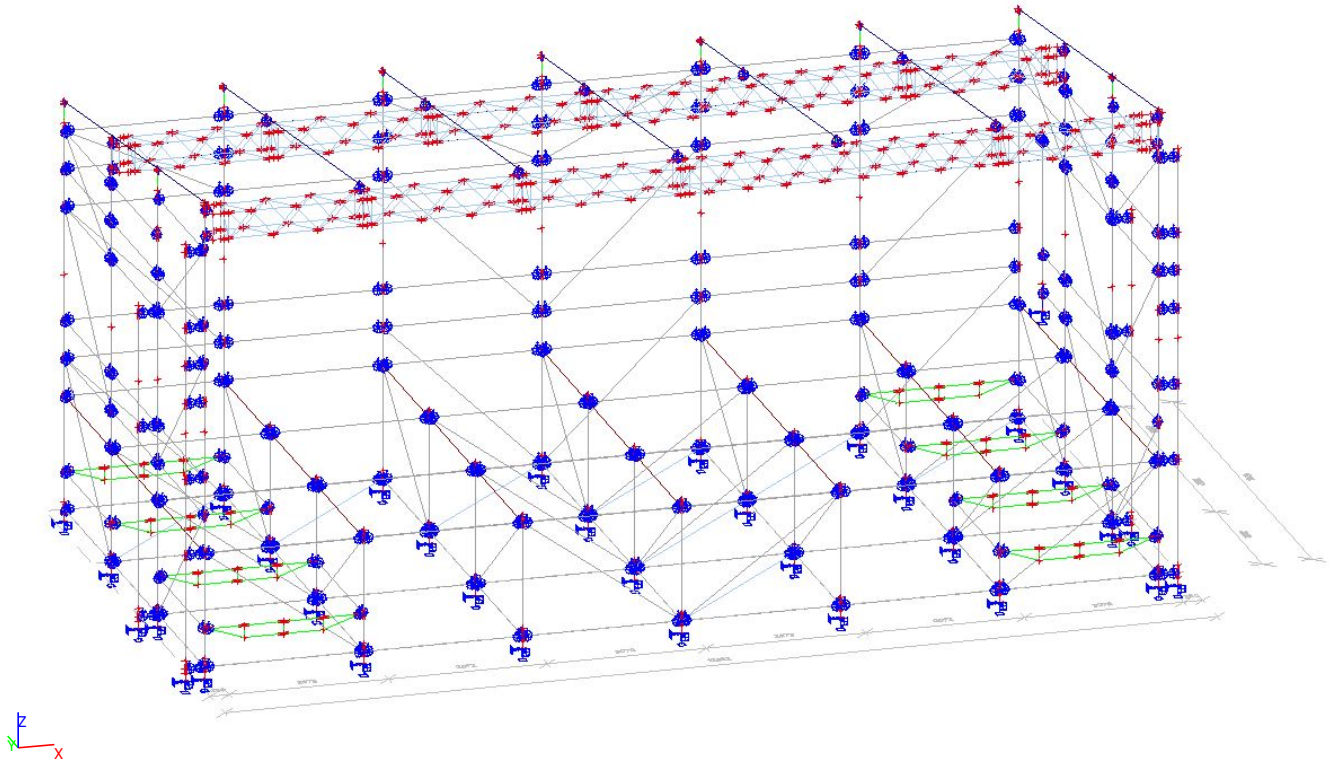
De constructie gebouwd en gemodelleerd uit standaard Layher steigeronderdelen.
Alle geometrie, mechanische eigenschappen, leveringstoestanden etc. zijn gekeurd en gedocumenteerd in de toelatingscertificaten en normering : Allgemein bauaufsichtliche Zulassungen Z-8.22-64, Z-8.22-939, Z-8.22-949 en de EN74.

3. Situatie

3.1. Rekenmodel

In het rekenmodel is de draagconstructie gemodelleerd en berekend.





3.2. Rekenmethode

De constructie wordt getoetst in de grenstoestanden (zoals geëist in de NEN-EN 1990). De uiterste grenstoestand gaat uit van de karakteristieke waarden van het belastingeffect + de weerstand en is gedefinieerd als de waarden waarvoor de kans dat grotere belastingen respectievelijk kleinere weerstanden voorkomen een bepaald percentage is (+/- 5%-fractiel; de waarde die slechts in 5% van alle gevallen wordt over- of onderschreden.
De rekenwaarde van het belasting effect wordt in deze berekening bepaald door de karakteristieke waarde van het belastingeffect te vermenigvuldigen met een partiële factor aan de belastingkant en voor de weerstand de karakteristieke waarde te delen door een partiële factor. Met behulp van een eenheidscontrole van deze twee waarden is telkens per berekening aangetoond dat de gewenste faalkans niet overschreden is.

De statische analyse van de totale draagconstructie wordt uitgevoerd door middel van een Eindige Elementen computerprogramma. De berekening omvat een 2e Orde rekenwijze conform NEN-EN 1993-1-1.

De krachtsverdeling en de vervormingen zijn bepaald met een geometrisch niet-lineaire analyse inclusief globale,
en lokale imperfecties. Het gedrag van de constructie inclusief imperfecties wordt voorspelt op basis van evenwicht in de vervormde toestand en lineair elastisch materiaalgedrag (wet van Hooke). Er wordt rekening gehouden met grote verplaatsingen zodat de invloed van geometrische verandering van de constructie op de krachtsverdeling in rekening wordt gebracht. Er wordt lineair elastisch materiaal toegepast.

Voor alle relevante belastingcombinaties wordt de eerste positieve globale knikcurve berekend. Deze knikcurve en de bijbehorende ηcr zal worden gebruikt als imperfectie voor de 2de orde berekening.
Deze manier van berekenen wordt ook wel omschreven als Pad 3.

Name	Solver
Neglect shear force deformation (Ay, Az >> A)	✖
Initial stress	✖
Apply property modifiers	✓
Number of thicknesses of rib plate	20
Maximum soil interaction iterations	10
Maximum iterations	200
Number of increments	1
Number of buckling modes	4

Number of sections on average member	10
Step for soil/water pressure [m]	0,500
C1x [kN/m^3]	1,000e+02
C1y [kN/m^3]	1,000e+02
C1z [kN/m^3]	1,000e+04
C2x [kN/m]	5,000e+03
C2y [kN/m]	5,000e+03
Coefficient for reinforcement	1
Warning when maximal translation is greater than [mm]	1000,000
Warning when maximal rotation is greater than [mrad]	100,000
Parallelism tolerance [deg]	10,000
Ratio to half - distance to adjacent beam beff,i/bi [-]	0,20
Ratio to effective span length beff,i/l0 [-]	0,10
Max ratio to effective span length beff,i/l0 [-]	0,20
Simply supported beam [-]	1,00
Inner span [-]	0,70
End span [-]	0,85
Cantilever, base ratio to current span [-]	1,00
Cantilever, base ratio to adjacent span [-]	0,15
Cantilever, max ratio to current span [-]	1,50
Max adjacent span length ratio [-]	1,50
Max cantilever length ratio to adjacent span [-]	0,50
Span length ratio Le/beff,i,max (1 side) [-]	8,00
Simply supported beam [-]	1,00
Inner span [-]	0,70
End span [-]	0,85
Cantilever [-]	2,00
Method used for non-concrete and non-steel / composite beams	EN 1994-1-1
Solver precision ratio	1
Soil combination	None
Plastic hinge code	No code
Bending theory of plate/shell analysis	Mindlin
Type of solver	Direct
Type of eigen value solver	Lanczos
Method of calculation	Picard

3.3. Materialen

3.3.1. Staven (profielen) en knopen (scharnieren)

De constructie gebouwd en gemodelleerd uit standaard Layher steigeronderdelen.
Alle geometrie, mechanische eigenschappen, leveringstoestanden etc. zijn gekeurd en gedocumenteerd in de toelatingscertificaten en normering : Allgemein bauaufsichtliche Zulassungen Z-8.22-64, Z-8.22-939, Z-8.22-949 en de EN74.

3.3.2. Materiaallijst

Selection: All
Type of sorting: Cross-section

Summary

Material	Mass [kg]	Surface [m²]	Volume [m³]
Steel	2024,578	90,571	2,579e-01
Aluminium	556,767	72,688	2,062e-01
Total	2581,344	163,259	4,641e-01

Note: Value 'Surface' represents for 1D members the total exposed surface area, while for 2D members it corresponds only to the surface area of the centroidal plane.

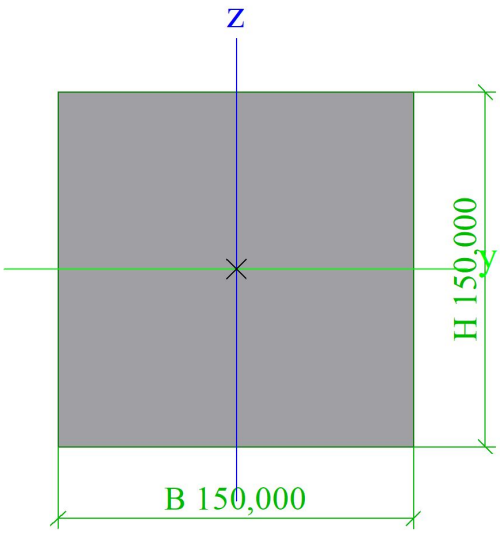
Steel (1D)

Cross-section	Material	Length [m]	Unit mass [kg/m]	Mass [kg]	Surface [m²]	Volume [m³]
Ledger - RO48.3X3.2	S 235 (Reh >320) Ledger	303,368	3,556	1078,792	46,112	1,374e-01
Vertical Diagonal - RO48.3X2.3	S 235	128,689	2,606	335,388	19,561	4,272e-02
Standard - RO48.3X3.2	S 235 (Reh >320) Standard	115,972	3,556	412,403	17,628	5,254e-02
Collar - RO48.3X3.2	S 235 (Reh >320) Standard	5,445	3,556	19,363	0,828	2,467e-03
Horizontal Diagonal - RO48.3X3.2	S 235 (Reh >320) Ledger	23,442	3,556	83,361	3,563	1,062e-02
Base plate - Rechthoek (150,000; 150,000)	S 235	0,165	176,625	29,143	0,099	3,713e-03
Spindle - RO38X4.5	S 235 (Reh >280) spindle	3,400	3,721	12,651	0,405	1,612e-03
Rail RL - RO33.7X3.2	S 235	16,186	2,410	39,007	1,716	4,969e-03
Intermediate plate RL - FL80X6	S 235	3,840	3,768	14,469	0,660	1,843e-03
Total		600,507		2024,578	90,571	2,579e-01

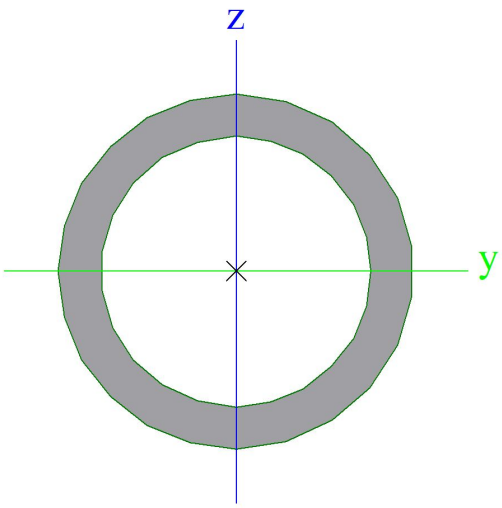
Aluminium (1D)

Cross-section	Material	Length [m]	Unit mass [kg/m]	Mass [kg]	Surface [m²]	Volume [m³]
Event transom - Grafische doorsnede	EN-AW 6063 (EP,ET,ER/B) T66 (0-10)	43,512	5,368	233,579	26,803	8,651e-02
truss diagonal - RO20X2	EN-AW 6082 (EP/O,EP/H,ET) T6 (0-5)	178,713	0,305	54,525	11,223	2,019e-02
truss chord - RO48.3X3.2	EN-AW 6082 (EP/O,EP/H,ET) T6 (0-5)	98,960	1,223	121,038	15,042	4,483e-02
Keder rail 3000 ALU - Grafische doorsnede	EN-AW 6082 (EP/O,EP/H,ET) T6 (0-5)	45,150	3,035	137,052	18,572	5,076e-02
truss koppelstuk QRO 50x4 - QRO50X4	EN-AW 6082 (EP/O,EP/H,ET) T6 (0-5)	5,424	1,949	10,574	1,047	3,916e-03
Total		371,759		556,767	72,688	2,062e-01

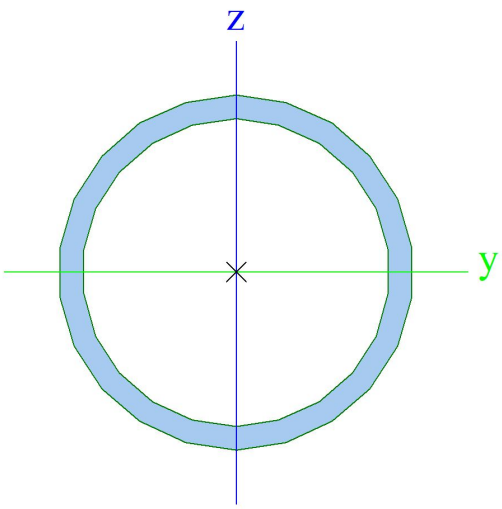
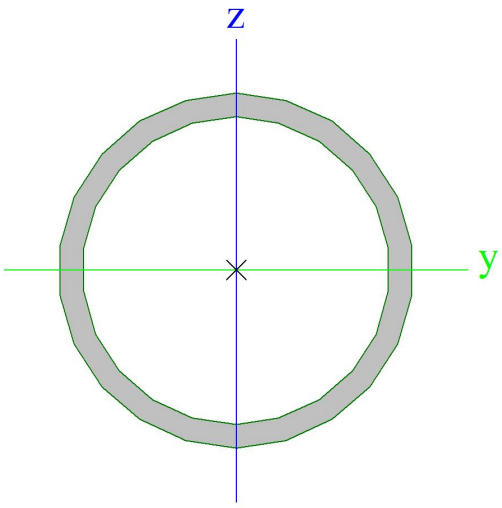
3.3.3. Doorsnede

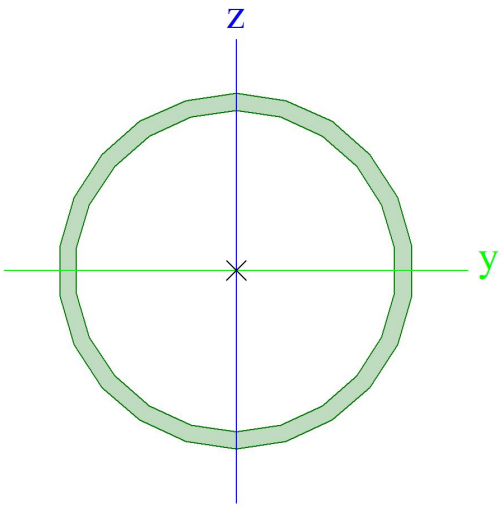
Base plate		
Type	Rechthoek	
Detailed	150,000; 150,000	
Shape type	Thick-walled	
Item material	S 235	
Fabrication	general	
Colour		
Flexural buckling y-y, Flexural buckling z-z	d	d
A [m^2]	2,250e-02	
A_y [m^2], A_z [m^2]	1,875e-02	1,875e-02
A_L [m^2/m], A_D [m^2/m]	6,0000e-01	6,0000e-01
$c_{Y.UCS}$ [mm], $c_{Z.UCS}$ [mm]	75,000	75,000
α [deg]	0,000	
I_y [m^4], I_z [m^4]	4,219e-05	4,219e-05
i_y [mm], i_z [mm]	43,301	43,301
$W_{el.y}$ [m^3], $W_{el.z}$ [m^3]	5,625e-04	5,625e-04
$W_{pl.y}$ [m^3], $W_{pl.z}$ [m^3]	8,437e-04	8,437e-04
$M_{pl.y.+}$ [kNm], $M_{pl.y.-}$ [kNm]	1,983e+02	1,983e+02
$M_{pl.z.+}$ [kNm], $M_{pl.z.-}$ [kNm]	1,983e+02	1,983e+02
d_y [mm], d_z [mm]	0,000	0,000
I_t [m^4], I_w [m^6]	7,125e-05	0,000e+00
β_y [mm], β_z [mm]	0,000	0,000
Picture		

Spindle		
Type	RO38X4.5	
Formcode	3 - Circular hollow section	
Shape type	Thin-walled	
Item material	S 235 (Reh >280) spindle	
Fabrication	rolled	
Colour		
Flexural buckling y-y, Flexural buckling z-z	a	a
A [m^2]	4,740e-04	
A_y [m^2], A_z [m^2]	3,015e-04	3,015e-04
A_L [m^2/m], A_D [m^2/m]	1,1900e-01	2,1048e-01
$c_{Y.UCS}$ [mm], $c_{Z.UCS}$ [mm]	19,000	19,000
α [deg]	0,000	
I_y [m^4], I_z [m^4]	6,760e-08	6,760e-08
i_y [mm], i_z [mm]	11,942	11,942
$W_{el.y}$ [m^3], $W_{el.z}$ [m^3]	3,560e-06	3,560e-06
$W_{pl.y}$ [m^3], $W_{pl.z}$ [m^3]	5,050e-06	5,050e-06
$M_{pl.y.+}$ [kNm], $M_{pl.y.-}$	1,422e+00	1,422e+00

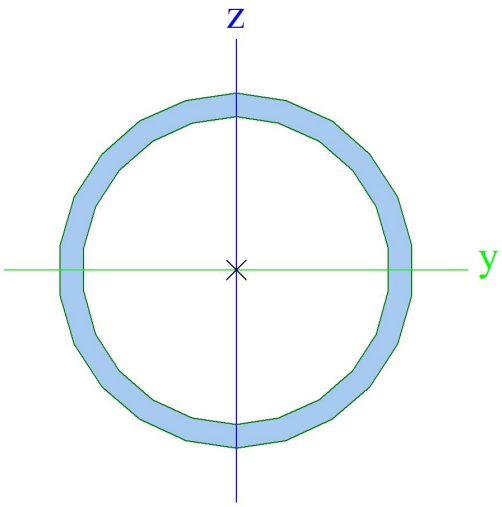
[kNm]		
$M_{pl.z.+}$ [kNm], $M_{pl.z.-}$ [kNm]	1,422e+00	1,422e+00
d_y [mm], d_z [mm]	0,000	0,000
I_t [m^4], I_w [m^6]	1,352e-07	4,154e-44
β_y [mm], β_z [mm]	0,000	0,000
Picture		

Collar		
Type	RO48.3X3.2	
Formcode	3 - Circular hollow section	
Shape type	Thin-walled	
Item material	S 235 (Reh >320) Standard	
Fabrication	rolled	
Colour		
Flexural buckling y-y, Flexural buckling z-z	a	a
A [m^2]	4,530e-04	
A_y [m^2], A_z [m^2]	2,886e-04	2,886e-04
A_L [m^2/m], A_D [m^2/m]	1,5200e-01	2,8336e-01
$c_{Y.UCS}$ [mm], $c_{Z.UCS}$ [mm]	24,150	24,150
α [deg]	0,000	
I_y [m^4], I_z [m^4]	1,160e-07	1,160e-07
i_y [mm], i_z [mm]	16,002	16,002
$W_{el.y}$ [m^3], $W_{el.z}$ [m^3]	4,800e-06	4,800e-06
$W_{pl.y}$ [m^3], $W_{pl.z}$ [m^3]	6,509e-06	6,509e-06
$M_{pl.y.+}$ [kNm], $M_{pl.y.-}$ [kNm]	2,086e+00	2,086e+00
$M_{pl.z.+}$ [kNm], $M_{pl.z.-}$ [kNm]	2,086e+00	2,086e+00
d_y [mm], d_z [mm]	0,000	0,000
I_t [m^4], I_w [m^6]	2,320e-07	1,746e-43
β_y [mm], β_z [mm]	0,000	0,000

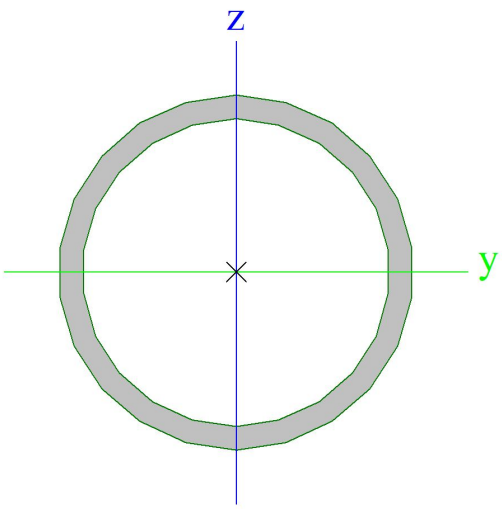
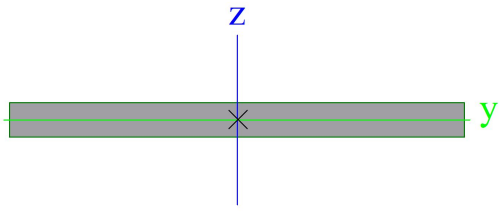
Picture		
Standard		
Type	RO48.3X3.2	
Formcode	3 - Circular hollow section	
Shape type	Thin-walled	
Item material	S 235 (Reh >320) Standard	
Fabrication	rolled	
Colour		
Flexural buckling y-y, Flexural buckling z-z	a	a
A [m^2]	4,530e-04	
A_y [m^2], A_z [m^2]	2,886e-04	2,886e-04
A_L [m^2/m], A_D [m^2/m]	1,5200e-01	2,8336e-01
$c_{Y.UCS}$ [mm], $c_{Z.UCS}$ [mm]	24,150	24,150
α [deg]	0,000	
I_y [m^4], I_z [m^4]	1,160e-07	1,160e-07
i_y [mm], i_z [mm]	16,002	16,002
$W_{el.y}$ [m^3], $W_{el.z}$ [m^3]	4,800e-06	4,800e-06
$W_{pl.y}$ [m^3], $W_{pl.z}$ [m^3]	6,509e-06	6,509e-06
$M_{pl.y.+}$ [kNm], $M_{pl.y.-}$ [kNm]	2,086e+00	2,086e+00
$M_{pl.z.+}$ [kNm], $M_{pl.z.-}$ [kNm]	2,086e+00	2,086e+00
d_y [mm], d_z [mm]	0,000	0,000
I_t [m^4], I_w [m^6]	2,320e-07	1,746e-43
β_y [mm], β_z [mm]	0,000	0,000
Picture		

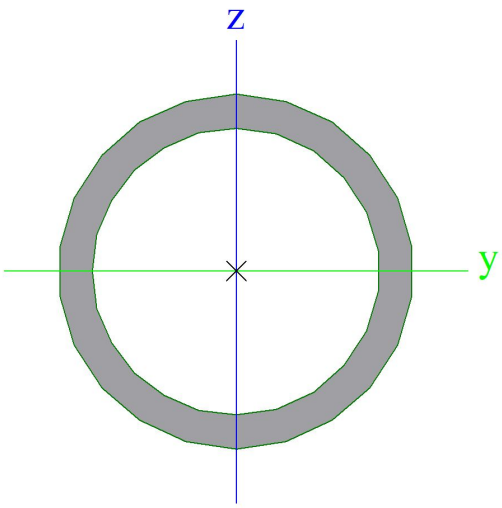
Vertical Diagonal		
Type	RO48.3X2.3	
Formcode	3 - Circular hollow section	
Shape type	Thin-walled	
Item material	S 235	
Fabrication	rolled	
Colour		
Flexural buckling y-y, Flexural buckling z-z	a	a
A [m^2]	3,320e-04	
A_y [m^2], A_z [m^2]	2,116e-04	2,116e-04
A_L [m^2/m], A_D [m^2/m]	1,5200e-01	2,8901e-01
$c_{Y.UCS}$ [mm], $c_{Z.UCS}$ [mm]	24,150	24,150
α [deg]	0,000	
I_y [m^4], I_z [m^4]	8,810e-08	8,810e-08
i_y [mm], i_z [mm]	16,290	16,290
$W_{el.y}$ [m^3], $W_{el.z}$ [m^3]	3,650e-06	3,650e-06
$W_{pl.y}$ [m^3], $W_{pl.z}$ [m^3]	4,867e-06	4,867e-06
$M_{pl.y.+}$ [kNm], $M_{pl.y.-}$ [kNm]	1,144e+00	1,144e+00
$M_{pl.z.+}$ [kNm], $M_{pl.z.-}$ [kNm]	1,144e+00	1,144e+00
d_y [mm], d_z [mm]	0,000	0,000
I_t [m^4], I_w [m^6]	1,762e-07	1,298e-43
β_y [mm], β_z [mm]	0,000	0,000
Picture		

Horizontal Diagonal		
Type	RO48.3X3.2	
Formcode	3 - Circular hollow section	
Shape type	Thin-walled	
Item material	S 235 (Reh >320) Ledger	
Fabrication	rolled	
Colour		
Flexural buckling y-y, Flexural buckling z-z	a	a
A [m^2]	4,530e-04	
A_y [m^2], A_z [m^2]	2,886e-04	2,886e-04
A_L [m^2/m], A_D [m^2/m]	1,5200e-01	2,8336e-01
$c_{Y.UCS}$ [mm], $c_{Z.UCS}$ [mm]	24,150	24,150
α [deg]	0,000	
I_y [m^4], I_z [m^4]	1,160e-07	1,160e-07
i_y [mm], i_z [mm]	16,002	16,002
$W_{el.y}$ [m^3], $W_{el.z}$ [m^3]	4,800e-06	4,800e-06
$W_{pl.y}$ [m^3], $W_{pl.z}$ [m^3]	6,509e-06	6,509e-06
$M_{pl.y.+}$ [kNm], $M_{pl.y.-}$ [kNm]	2,086e+00	2,086e+00
$M_{pl.z.+}$ [kNm], $M_{pl.z.-}$	2,086e+00	2,086e+00

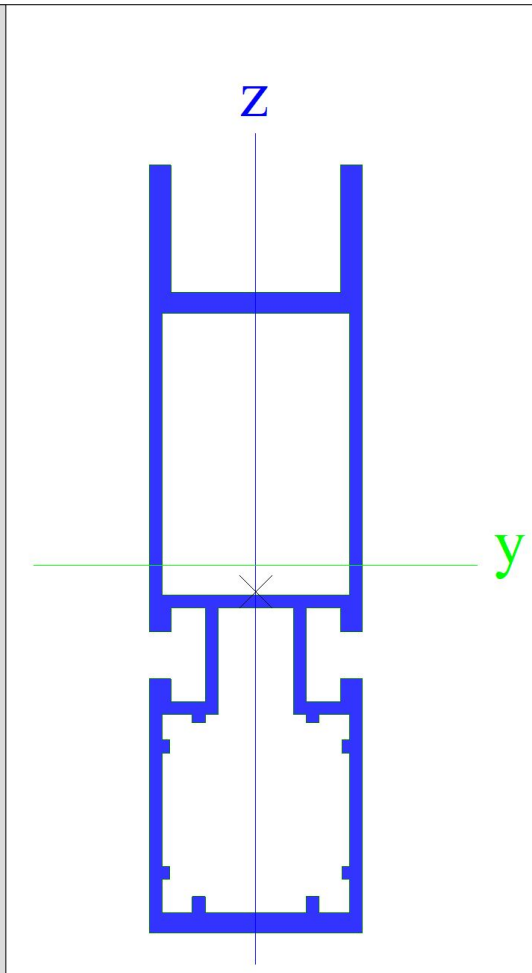
[kNm]		
d_y [mm], d_z [mm]	0,000	0,000
I_t [m^4], I_w [m^6]	2,320e-07	1,746e-43
β_y [mm], β_z [mm]	0,000	0,000
Picture		

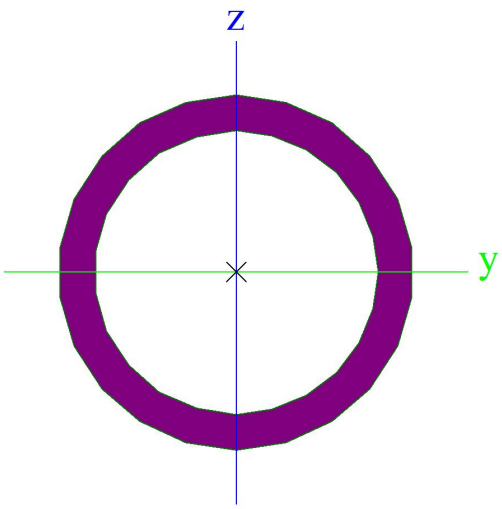
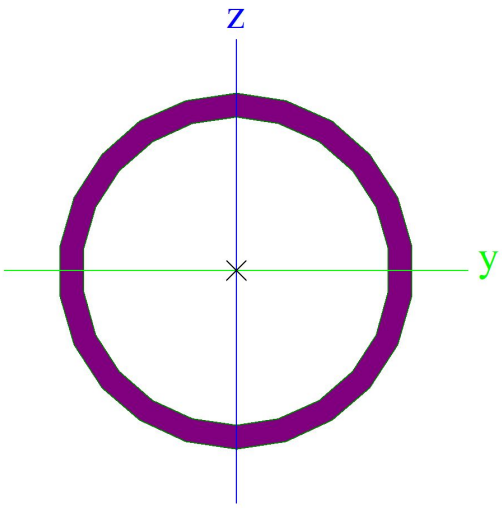
Ledger		
Type	RO48.3X3.2	
Formcode	3 - Circular hollow section	
Shape type	Thin-walled	
Item material	S 235 (Reh >320) Ledger	
Fabrication	rolled	
Colour		
Flexural buckling y-y, Flexural buckling z-z	a	a
A [m^2]	4,530e-04	
A_y [m^2], A_z [m^2]	2,886e-04	2,886e-04
A_L [m^2/m], A_D [m^2/m]	1,5200e-01	2,8336e-01
$c_{Y.UCS}$ [mm], $c_{Z.UCS}$ [mm]	24,150	24,150
α [deg]	0,000	
I_y [m^4], I_z [m^4]	1,160e-07	1,160e-07
i_y [mm], i_z [mm]	16,002	16,002
$W_{el.y}$ [m^3], $W_{el.z}$ [m^3]	4,800e-06	4,800e-06
$W_{pl.y}$ [m^3], $W_{pl.z}$ [m^3]	6,509e-06	6,509e-06
$M_{pl.y.+}$ [kNm], $M_{pl.y.-}$ [kNm]	2,086e+00	2,086e+00
$M_{pl.z.+}$ [kNm], $M_{pl.z.-}$ [kNm]	2,086e+00	2,086e+00
d_y [mm], d_z [mm]	0,000	0,000
I_t [m^4], I_w [m^6]	2,320e-07	1,746e-43
β_y [mm], β_z [mm]	0,000	0,000

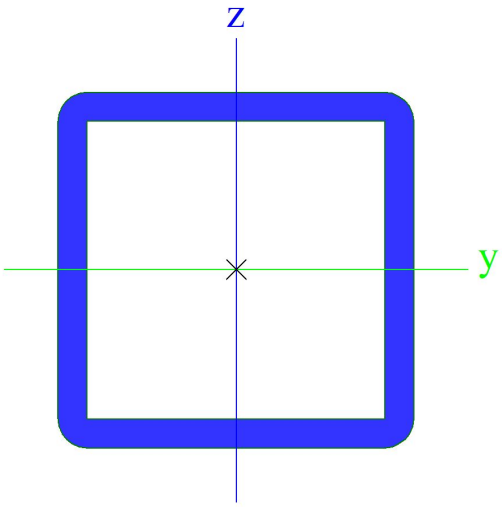
Picture		
Intermediate plate RL		
Type	FL80X6	
Formcode	7 - Full rectangular section	
Shape type	Thin-walled	
Item material	S 235	
Fabrication	rolled	
Colour		
Flexural buckling y-y, Flexural buckling z-z	c	c
A [m^2]	4,800e-04	
A_y [m^2], A_z [m^2]	4,000e-04	4,000e-04
A_L [m^2/m], A_D [m^2/m]	1,7200e-01	1,7200e-01
$c_{Y.UCS}$ [mm], $c_{Z.UCS}$ [mm]	40,000	3,000
α [deg]	0,000	
I_y [m^4], I_z [m^4]	1,440e-09	2,560e-07
i_y [mm], i_z [mm]	1,732	23,094
$W_{el.y}$ [m^3], $W_{el.z}$ [m^3]	4,800e-07	6,400e-06
$W_{pl.y}$ [m^3], $W_{pl.z}$ [m^3]	7,200e-07	9,600e-06
$M_{pl.y.+}$ [kNm], $M_{pl.y.-}$ [kNm]	1,692e-01	1,692e-01
$M_{pl.z.+}$ [kNm], $M_{pl.z.-}$ [kNm]	2,256e+00	2,256e+00
d_y [mm], d_z [mm]	0,000	0,000
I_t [m^4], I_w [m^6]	5,760e-09	0,000e+00
β_y [mm], β_z [mm]	0,000	0,000
Picture		
Rail RL		
Type	RO33.7X3.2	
Formcode	3 - Circular hollow section	
Shape type	Thin-walled	
Item material	S 235	
Fabrication	rolled	
Colour		
Flexural buckling y-y, Flexural buckling z-z	a	a
A [m^2]	3,070e-04	
A_y [m^2], A_z [m^2]	1,952e-04	1,952e-04
A_L [m^2/m], A_D [m^2/m]	1,0600e-01	1,9163e-01

$c_{Y.UCS}$ [mm], $c_{Z.UCS}$ [mm]	16,850	16,850
α [deg]	0,000	
I_y [m^4], I_z [m^4]	3,600e-08	3,600e-08
i_y [mm], i_z [mm]	10,829	10,829
$W_{el.y}$ [m^3], $W_{el.z}$ [m^3]	2,140e-06	2,140e-06
$W_{pl.y}$ [m^3], $W_{pl.z}$ [m^3]	2,977e-06	2,977e-06
$M_{pl.y.+}$ [kNm], $M_{pl.y.-}$ [kNm]	7,019e-01	7,019e-01
$M_{pl.z.+}$ [kNm], $M_{pl.z.-}$ [kNm]	7,019e-01	7,019e-01
d_y [mm], d_z [mm]	0,000	0,000
I_t [m^4], I_w [m^6]	7,200e-08	8,063e-45
β_y [mm], β_z [mm]	0,000	0,000
Picture		

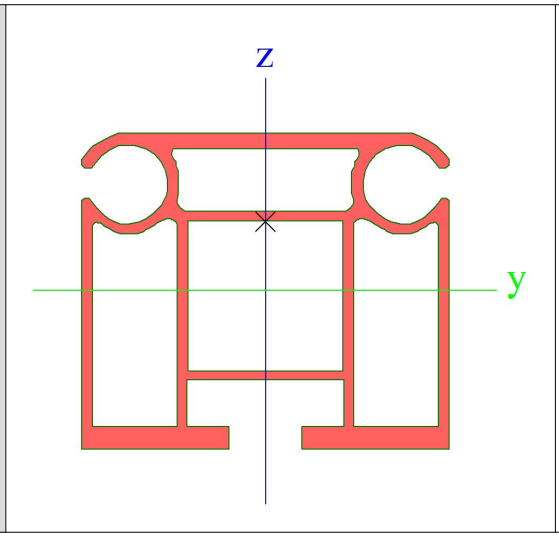
Event transom		
Type	Grafische doorsnede	
Shape type	Thin-walled	
Item material	EN-AW 6063 (EP,ET,ER/B) T66 (0-10)	
Fabrication	general	
Colour		
A [m^2]	1,988e-03	
A_y [m^2], A_z [m^2]	7,736e-04	1,108e-03
A_L [m^2/m], A_D [m^2/m]	6,1600e-01	1,1036e+00
$c_{Y.UCS}$ [mm], $c_{Z.UCS}$ [mm]	0,000	-4,073
α [deg]	0,000	
I_y [m^4], I_z [m^4]	6,304e-06	7,712e-07
i_y [mm], i_z [mm]	56,309	19,694
$W_{el.y}$ [m^3], $W_{el.z}$ [m^3]	6,701e-05	3,085e-05
$W_{pl.y}$ [m^3], $W_{pl.z}$ [m^3]	9,639e-05	3,677e-05
$M_{pl.y.+}$ [kNm], $M_{pl.y.-}$ [kNm]	1,928e+01	1,928e+01
$M_{pl.z.+}$ [kNm], $M_{pl.z.-}$ [kNm]	7,353e+00	7,353e+00
d_y [mm], d_z [mm]	0,000	-6,267
I_t [m^4], I_w [m^6]	1,086e-06	1,288e-09
β_y [mm], β_z [mm]	13,902	0,000

Picture		
truss diagonal		
Type	RO20X2	
Formcode	3 - Circular hollow section	
Shape type	Thin-walled	
Item material	EN-AW 6082 (EP/O,EP/H,ET) T6 (0-5)	
Fabrication	rolled	
Colour		
A [m^2]	1,130e-04	
A_y [m^2], A_z [m^2]	7,200e-05	7,200e-05
A_L [m^2/m], A_D [m^2/m]	6,2800e-02	1,1309e-01
$c_{Y.UCS}$ [mm], $c_{Z.UCS}$ [mm]	10,000	10,000
α [deg]	0,000	
I_y [m^4], I_z [m^4]	4,640e-09	4,640e-09
i_y [mm], i_z [mm]	6,408	6,408
$W_{el.y}$ [m^3], $W_{el.z}$ [m^3]	4,640e-07	4,640e-07
$W_{pl.y}$ [m^3], $W_{pl.z}$ [m^3]	6,480e-07	6,480e-07
$M_{pl.y.+}$ [kNm], $M_{pl.y.-}$ [kNm]	1,626e-01	1,626e-01
$M_{pl.z.+}$ [kNm], $M_{pl.z.-}$ [kNm]	1,626e-01	1,626e-01
d_y [mm], d_z [mm]	0,000	0,000
I_t [m^4], I_w [m^6]	9,280e-09	1,100e-45
β_y [mm], β_z [mm]	0,000	0,000

Picture		
truss chord		
Type	RO48.3X3.2	
Formcode	3 - Circular hollow section	
Shape type	Thin-walled	
Item material	EN-AW 6082 (EP/O,EP/H,ET) T6 (0-5)	
Fabrication	rolled	
Colour		
A [m^2]	4,530e-04	
A_y [m^2], A_z [m^2]	2,886e-04	2,886e-04
A_L [m^2/m], A_D [m^2/m]	1,5200e-01	2,8336e-01
$c_{Y.UCS}$ [mm], $c_{Z.UCS}$ [mm]	24,150	24,150
α [deg]	0,000	
I_y [m^4], I_z [m^4]	1,160e-07	1,160e-07
i_y [mm], i_z [mm]	16,002	16,002
$W_{el.y}$ [m^3], $W_{el.z}$ [m^3]	4,800e-06	4,800e-06
$W_{pl.y}$ [m^3], $W_{pl.z}$ [m^3]	6,509e-06	6,509e-06
$M_{pl.y.+}$ [kNm], $M_{pl.y.-}$ [kNm]	1,629e+00	1,629e+00
$M_{pl.z.+}$ [kNm], $M_{pl.z.-}$ [kNm]	1,629e+00	1,629e+00
d_y [mm], d_z [mm]	0,000	0,000
I_t [m^4], I_w [m^6]	2,320e-07	1,746e-43
β_y [mm], β_z [mm]	0,000	0,000
Picture		
truss koppelstuk QRO 50x4		
Type	QRO50X4	

Formcode	2 - Rectangular hollow section	
Shape type	Thin-walled	
Item material	EN-AW 6082 (EP/O,EP/H,ET) T6 (0-5)	
Fabrication	rolled	
Colour		
A [m^2]	7,220e-04	
A_y [m^2], A_z [m^2]	3,831e-04	3,828e-04
A_L [m^2/m], A_D [m^2/m]	1,9300e-01	3,6110e-01
$c_{Y.UCS}$ [mm], $c_{Z.UCS}$ [mm]	25,000	25,000
α [deg]	0,000	
I_y [m^4], I_z [m^4]	2,540e-07	2,540e-07
i_y [mm], i_z [mm]	18,756	18,756
$W_{el.y}$ [m^3], $W_{el.z}$ [m^3]	1,010e-05	1,010e-05
$W_{pl.y}$ [m^3], $W_{pl.z}$ [m^3]	1,240e-05	1,240e-05
$M_{pl.y.+}$ [kNm], $M_{pl.y.-}$ [kNm]	3,098e+00	3,098e+00
$M_{pl.z.+}$ [kNm], $M_{pl.z.-}$ [kNm]	3,098e+00	3,098e+00
d_y [mm], d_z [mm]	0,001	0,001
I_t [m^4], I_w [m^6]	3,939e-07	1,768e-13
β_y [mm], β_z [mm]	-0,001	-0,001
Picture		

Keder rail 3000 ALU		
Type	Grafische doorsnede	
Shape type	Thick-walled	
Item material	EN-AW 6082 (EP/O,EP/H,ET) T6 (0-5)	
Fabrication	extrusion	
Colour		
A [m^2]	1,124e-03	
A_y [m^2], A_z [m^2]	6,406e-04	5,259e-04
A_L [m^2/m], A_D [m^2/m]	4,1134e-01	8,6820e-01
$c_{Y.UCS}$ [mm], $c_{Z.UCS}$ [mm]	0,000	-0,060
α [deg]	0,000	
I_y [m^4], I_z [m^4]	5,899e-07	6,377e-07
i_y [mm], i_z [mm]	22,906	23,816
$W_{el.y}$ [m^3], $W_{el.z}$ [m^3]	1,847e-05	1,722e-05
$W_{pl.y}$ [m^3], $W_{pl.z}$ [m^3]	2,347e-05	2,410e-05
$M_{pl.y.+}$ [kNm], $M_{pl.y.-}$ [kNm]	5,866e+00	5,866e+00
$M_{pl.z.+}$ [kNm], $M_{pl.z.-}$ [kNm]	6,024e+00	6,024e+00
d_y [mm], d_z [mm]	0,000	14,028
I_t [m^4], I_w [m^6]	3,674e-07	1,193e-10
β_y [mm], β_z [mm]	-31,281	0,000

Picture	

Explanations of symbols	
A	Area
A_y	Shear Area in principal y-direction
A_z	Shear Area in principal z-direction
A_L	Circumference per unit length
A_D	Drying surface per unit length
$c_{Y.UCS}$	Centroid coordinate in Y-direction of Input axis system
$c_{Z.UCS}$	Centroid coordinate in Z-direction of Input axis system
$I_{Y.LCS}$	Second moment of area about the YLCS axis
$I_{Z.LCS}$	Second moment of area about the ZLCS axis
$I_{YZ.LCS}$	Product moment of area in the LCS system
α	Rotation angle of the principal axis system
I_y	Second moment of area about the principal y-axis
I_z	Second moment of area about the principal z-axis
i_y	Radius of gyration about the principal y-axis
i_z	Radius of gyration about the principal z-axis

Explanations of symbols	
$W_{el.y}$	Elastic section modulus about the principal y-axis
$W_{el.z}$	Elastic section modulus about the principal z-axis
$W_{pl.y}$	Plastic section modulus about the principal y-axis
$W_{pl.z}$	Plastic section modulus about the principal z-axis
$M_{pl.y.+}$	Plastic moment about the principal y-axis for a positive My moment
$M_{pl.y.-}$	Plastic moment about the principal y-axis for a negative My moment
$M_{pl.z.+}$	Plastic moment about the principal z-axis for a positive Mz moment
$M_{pl.z.-}$	Plastic moment about the principal z-axis for a negative Mz moment
d_y	Shear center coordinate in principal y-direction measured from the centroid - Not calculated or simplified
d_z	Shear center coordinate in principal z-direction measured from the centroid - Not calculated or simplified
I_t	Torsional constant - Not calculated or simplified
I_w	Warping constant - Not calculated or simplified
β_y	Mono-symmetry constant about the principal y-axis
β_z	Mono-symmetry constant about the principal z-axis

3.3.4. Scharnieren (conform EN74 en Z-8.22-64)

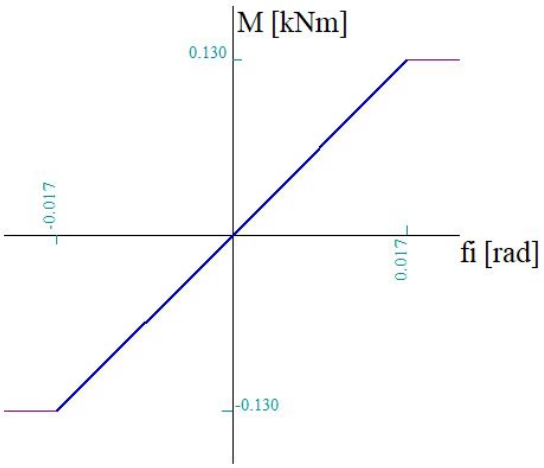
3.3.4.1. Scharnieren (conform EN74 en Z-8.22-64) - Kruiskoppeling BB

Name	ux	uy	uz	fix	fiy	fiz	Hinge type	Nxk [kN]	Vyk [kN]	Vzk [kN]
								Mxk [kNm]	Myk [kNm]	Mzk [kNm]
Kruiskoppeling BB	Rigid	Rigid	Rigid	Nonlinear	Nonlinear	Nonlinear	Right angle	15,000	30,000	15,000
								0,130	0,800	0,130

3.3.4.1.1. Nonlinear functions

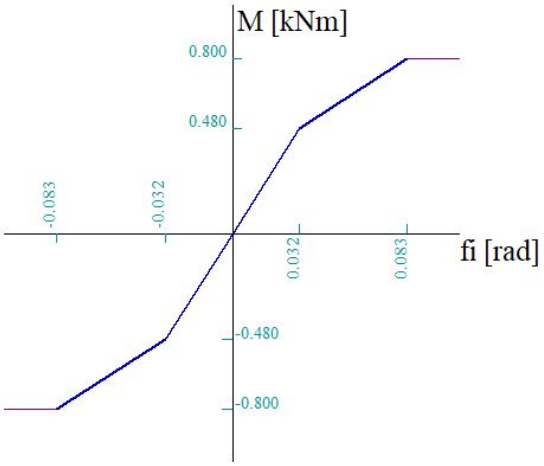
Name	Type	fi / M	Positive end	Negative end
RA-B-MT	Rotation	-0.017300 / -130.000000	Free	Free
		0.017300 / 130.000000		

Drawing



Name	Type	fi / M	Positive end	Negative end
RA-B-MB	Rotation	-0.083300 / -800.000000	Free	Free
		-0.032000 / -480.000000		
		0.032000 / 480.000000		
		0.083300 / 800.000000		

Drawing



3.3.4.2. Scharnieren (conform EN74 en Z-8.22-64) - Layher K2000+

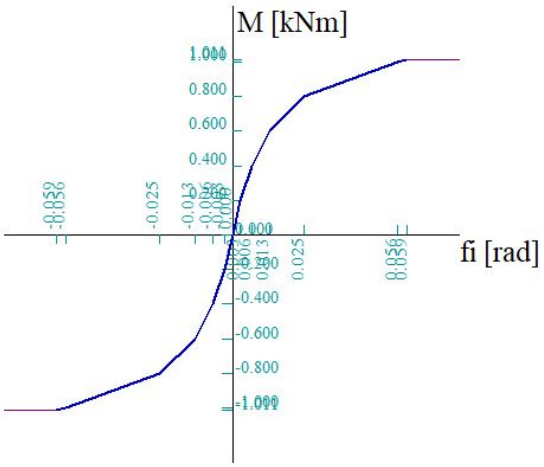
Name	ux	uy	uz	fix	fiy	fiz	Hinge type	Nxk [kN]	Vyk [kN]	Vzk [kN]
								Mxk [kNm]	Myk [kNm]	Mzk [kNm]
Layher K2000+	Rigid	Flexible	Rigid	Nonlinear	Nonlinear	Flexible	Layher (Variante K2000+)	34,100	11,000	29,040
								0,578	1,111	0,409

3.3.4.2.1. Nonlinear functions

Name	Type	fi / M	Positive end	Negative end
VDR - K2000 - My	Rotation	-0.059500 / -1011.000000	Free	Free
		-0.056200 / -1000.000000		
		-0.024600 / -800.000000		
		-0.012700 / -600.000000		
		-0.006500 / -400.000000		
		-0.002600 / -200.000000		
		0.000000 / 0.000000		
		0.002600 / 200.000000		

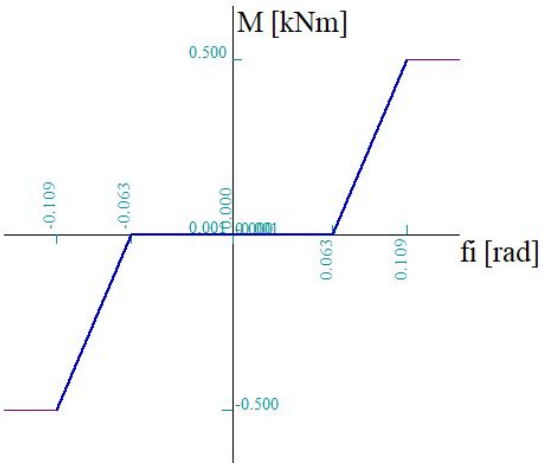
Name	Type	fi / M	Positive end	Negative end
		0.006500 / 400.000000		
		0.012700 / 600.000000		
		0.024600 / 800.000000		
		0.056200 / 1000.000000		
		0.059500 / 1011.000000		

Drawing



Name	Type	fi / M	Positive end	Negative end
VDR - K2000 - Mx	Rotation	-0.108700 / -500.000000	Free	Free
		-0.062900 / -1.000000		
		0.000000 / 0.000000		
		0.062900 / 1.000000		
		0.108700 / 500.000000		

Drawing



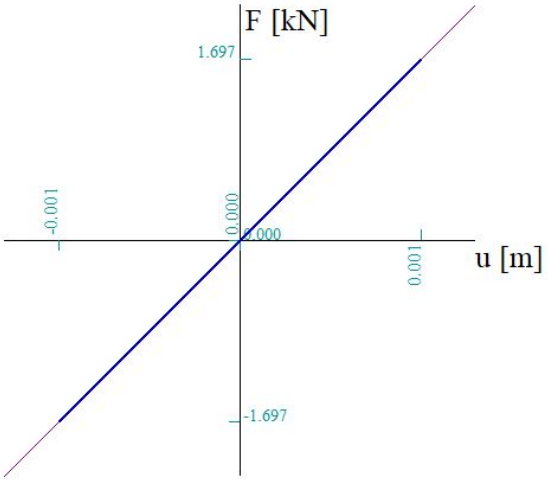
3.3.4.3. Scharnieren (conform EN74 en Z-8.22-64) - dia layher - VDR 207x200 NLFunct

Name	ux	uy	uz	fix	fiy	fiz	Hinge type	Nxk [kN]	Vyk [kN]	Vzk [kN]
								Mxk [kNm]	Myk [kNm]	Mzk [kNm]
dia layher - VDR 207x200 NLFunct	Nonlinear	Rigid	Rigid	Rigid	Free	Rigid	Swivel	12,800	0,000	12,800
								0,000	0,000	0,000

3.3.4.3.1. Nonlinear functions

Name	Type	u / F	Positive end	Negative end
VDR - Diagonaal 207x200	Translation	-0.001000 / -1697.000000	Flexible	Flexible
		0.000000 / 0.000000		
		0.001000 / 1697.000000		

Drawing



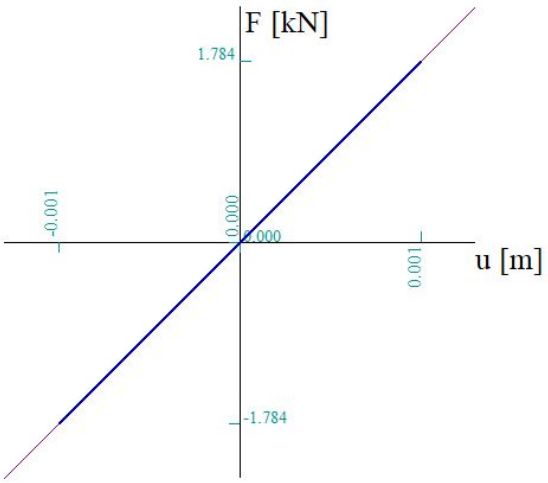
3.3.4.4. Scharnieren (conform EN74 en Z-8.22-64) - dia layher - VDR 207x150 NLFunct

Name	ux	uy	uz	fix	fiy	fiz	Hinge type	Nxk [kN]	Vyk [kN]	Vzk [kN]
								Mxk [kNm]	Myk [kNm]	Mzk [kNm]
dia layher - VDR 207x150 NLFunct	Nonlinear	Rigid	Rigid	Rigid	Free	Rigid	Swivel	15,500	0,000	15,500
								0,000	0,000	0,000

3.3.4.4.1. Nonlinear functions

Name	Type	u / F	Positive end	Negative end
VDR - Diagonaal 207x150	Translation	-0.001000 / -1784.000000	Flexible	Flexible
		0.000000 / 0.000000		
		0.001000 / 1784.000000		

Drawing



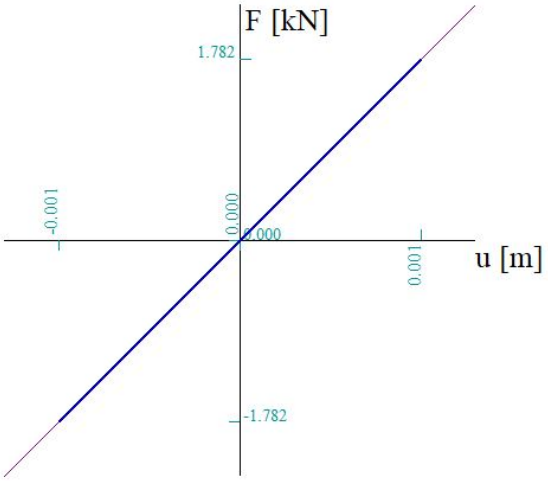
3.3.4.5. Scharnieren (conform EN74 en Z-8.22-64) - dia layher - VDR 207x100 NLFunct

Name	ux	uy	uz	fix	fiy	fiz	Hinge type	Nxk [kN]	Vyk [kN]	Vzk [kN]
								Mxk [kNm]	Myk [kNm]	Mzk [kNm]
dia layher - VDR 207x100 NLFunct	Nonlinear	Rigid	Rigid	Rigid	Free	Rigid	Swivel	17,100	0,000	17,100
								0,000	0,000	0,000

3.3.4.5.1. Nonlinear functions

Name	Type	u / F	Positive end	Negative end
VDR - Diagonaal 207x100	Translation	-0.001000 / -1782.000000	Flexible	Flexible
		0.000000 / 0.000000		
		0.001000 / 1782.000000		

Drawing



3.4. Steunpunten

De voetspindels zijn gedocumenteerd in de hierboven benoemde zulassungen.
Deze steunpunten zijn in het rekenmodel als volgt gedefinieerd :

Name	Node	System	X	mju X	Y	mju Y	Z	Rx	Stiffness Rx [kNm/rad]	Ry	Stiffness Ry [kNm/rad]	Rz
Sn1	K5	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn2	N2	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn3	N7	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn4	N12	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn5	N17	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn6	N22	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn7	N27	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn8	N32	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn9	N37	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn10	N42	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn11	N47	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn12	N52	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn13	N57	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn14	N62	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn15	N67	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn16	N72	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn17	N77	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn18	N82	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn19	N87	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn20	N92	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn21	N97	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn22	N102	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn23	N107	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid

Name	Node	System	X	mju X	Y	mju Y	Z	Rx	Stiffness Rx [kNm/rad]	Ry	Stiffness Ry [kNm/rad]	Rz
Sn24	N112	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn25	N117	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn26	N122	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn27	N127	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn28	N132	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn29	N137	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn30	N142	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn31	N147	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn32	N152	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid
Sn33	N158	GCS	Friction	0.5	Friction	0.5	Rigid press only	Flexible	2,000e+01	Flexible	2,000e+01	Rigid

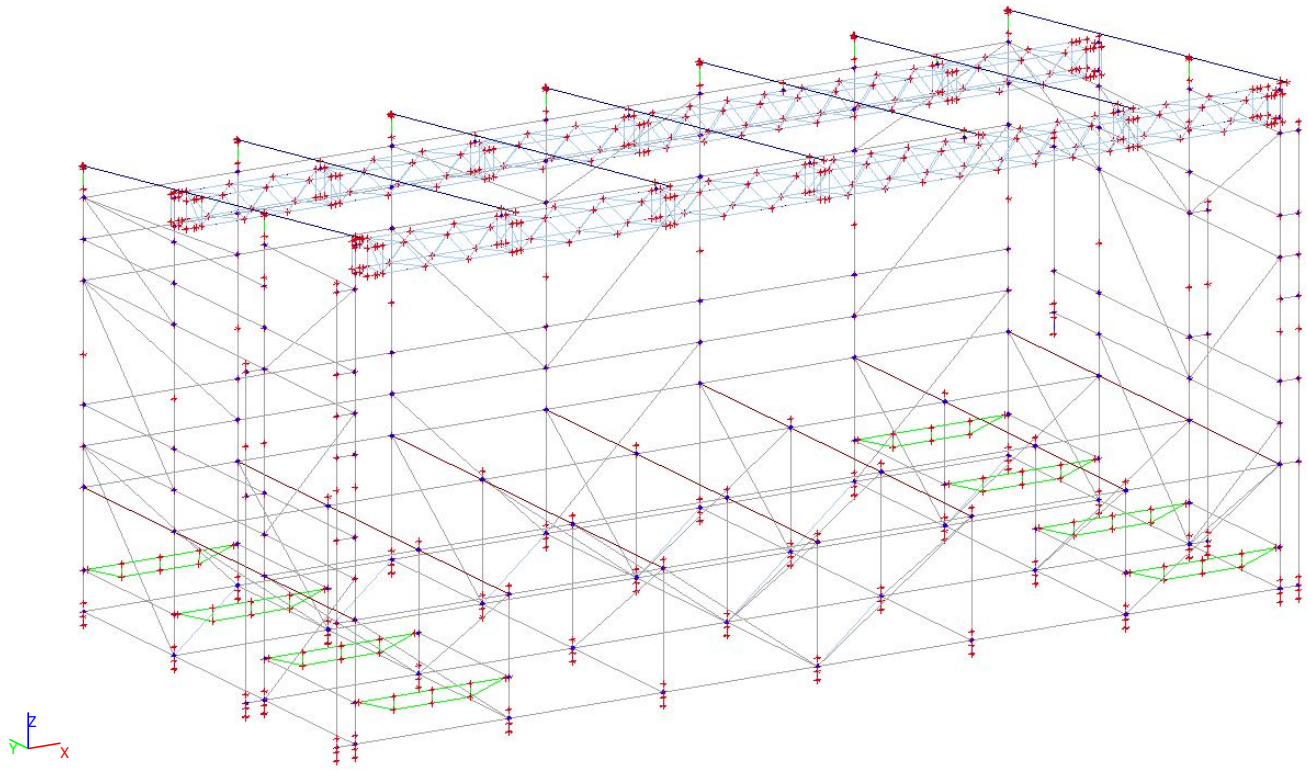
4. Belastingaanname

4.1. Belastinggevallen

4.1.1. Belastinggevallen

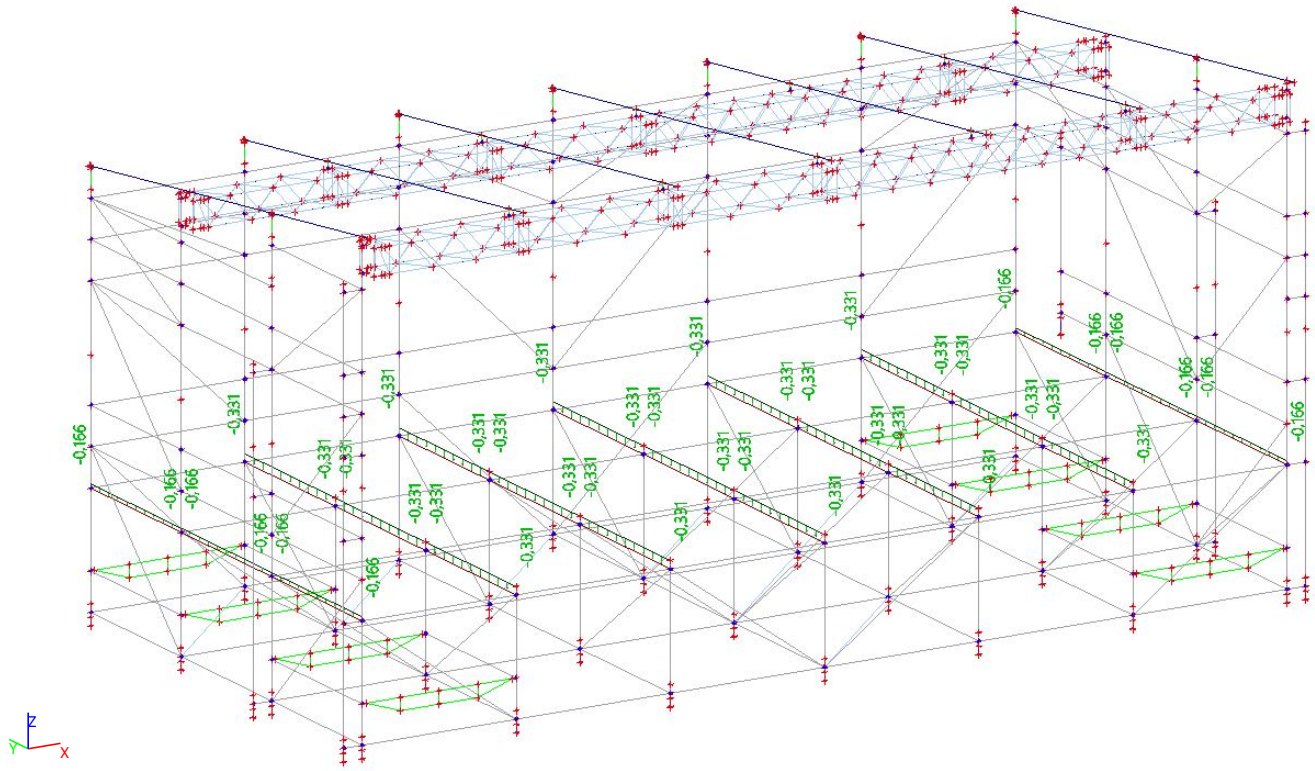
4.1.1.1. Belastinggevallen - EG

Name	Description	Action type	Load group	Load group	Load type
	Spec	Load type			
EG	Eigen gewicht	Permanent	Permanente belastingen	Permanente belastingen	Self weight
		Self weight			



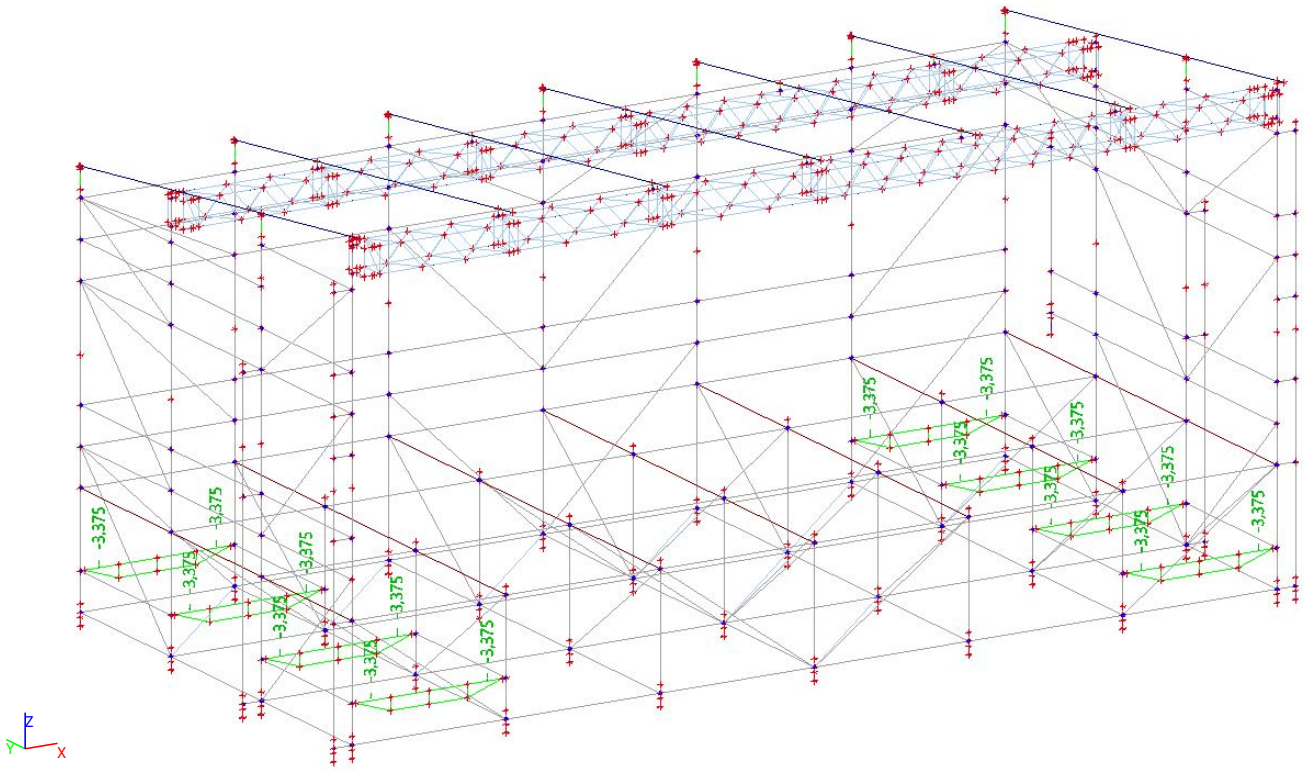
4.1.1.2. Belastinggevallen - EG VL

Name	Description	Action type	Load group	Load group	Load type
	Spec	Load type			
EG VL	Eigen gewicht vloeren	Permanent	Permanente belastingen	Permanente belastingen	Standard
		Standard			



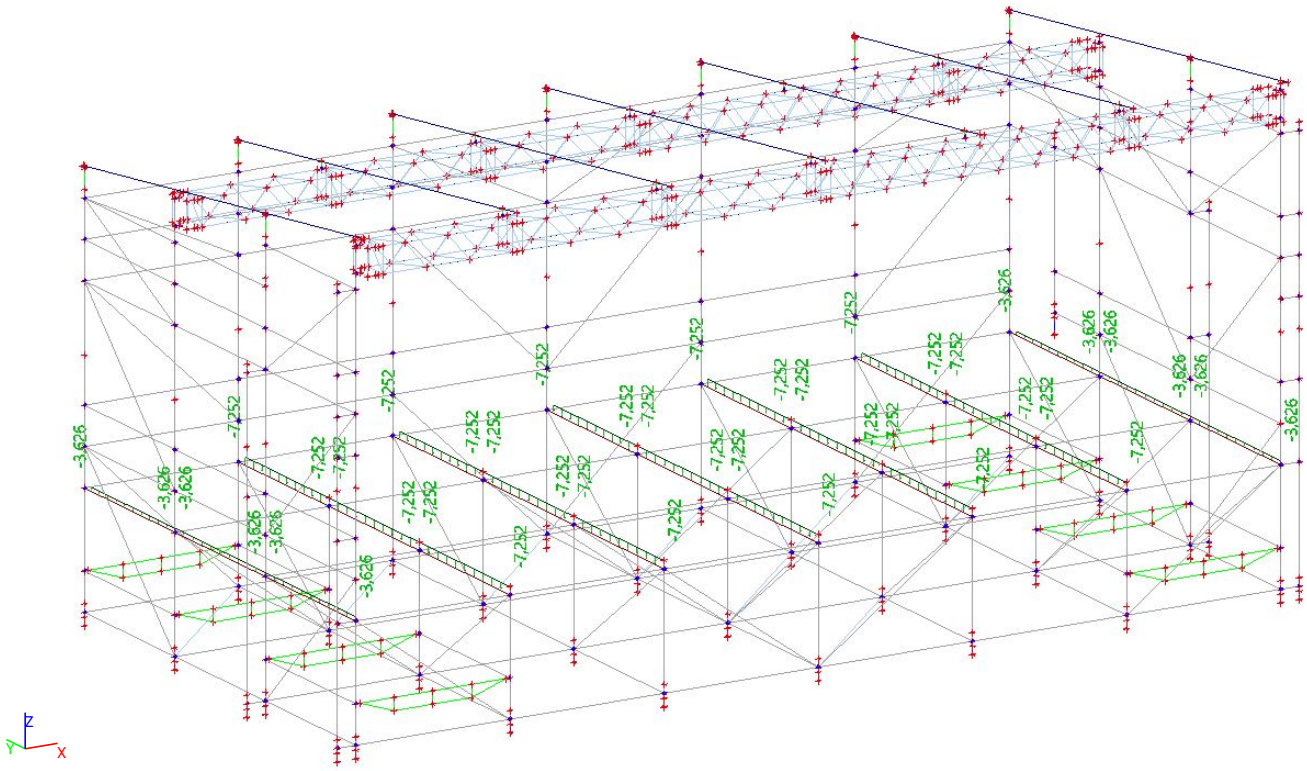
4.1.1.3. Belastinggevallen - B

Name	Description	Action type	Load group	Load group	Load type
	Spec	Load type			
B	Ballast	Permanent	Permanente belastingen	Permanente belastingen	Standard
		Standard			



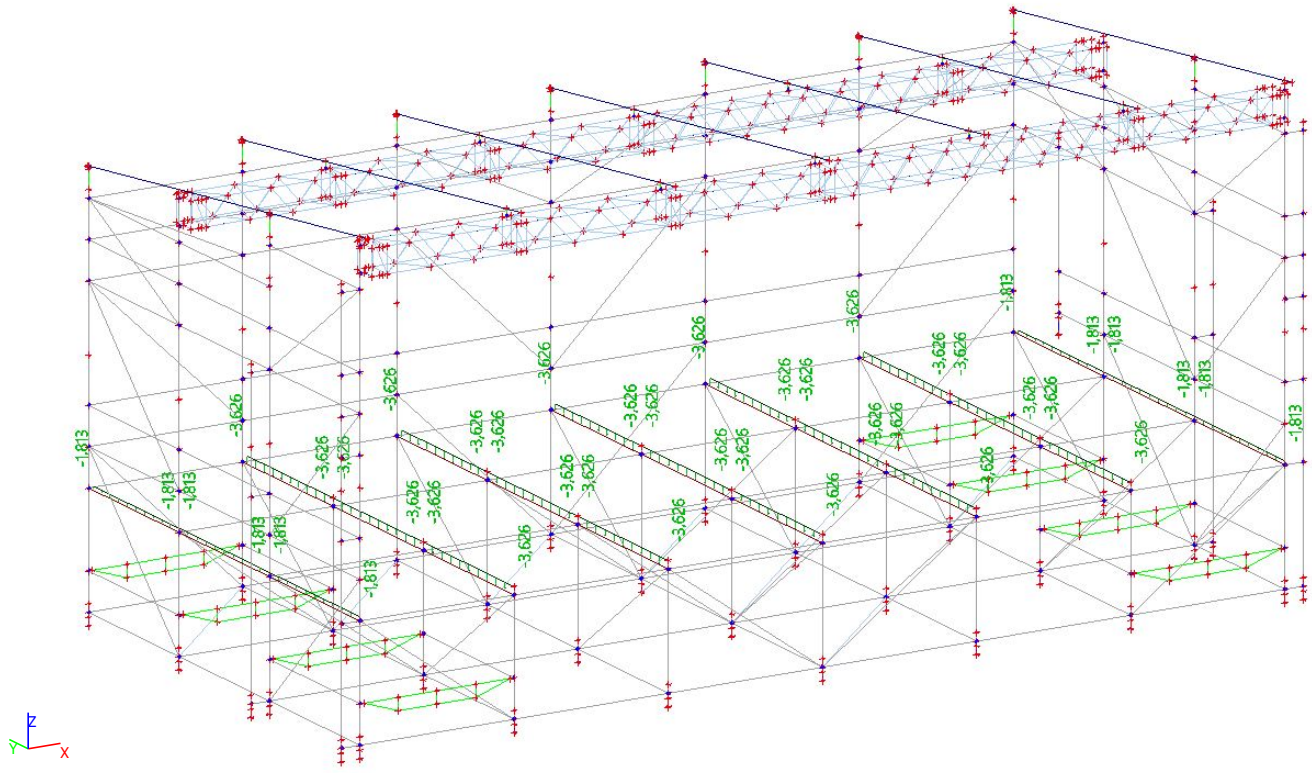
4.1.1.4. Belastinggevallen - NL WV1

Name	Description	Action type	Load group	Load group	Load type
	Spec	Load type			
NL WV1	Nuttige belasting op werkvloer 1	Variable	Variabele belastingen	Variabele belastingen	Static
	Standard	Static			



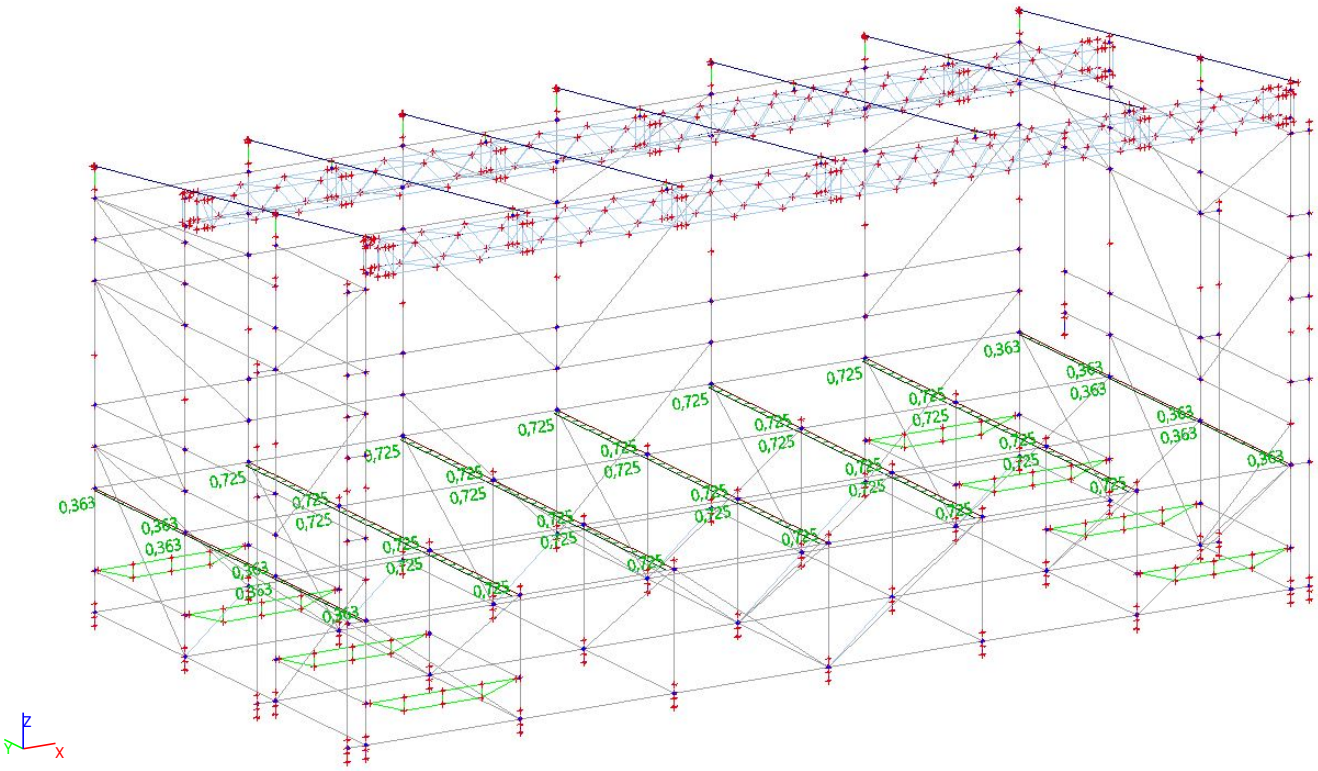
4.1.1.5. Belastinggevallen - NL WV1 50%

Name	Description	Action type	Load group	Load group	Load type
	Spec	Load type			
NL WV1 50%	50% nuttige belasting op werkvloer 1	Variable	Variabele belastingen	Variabele belastingen	Static
	Standard	Static			



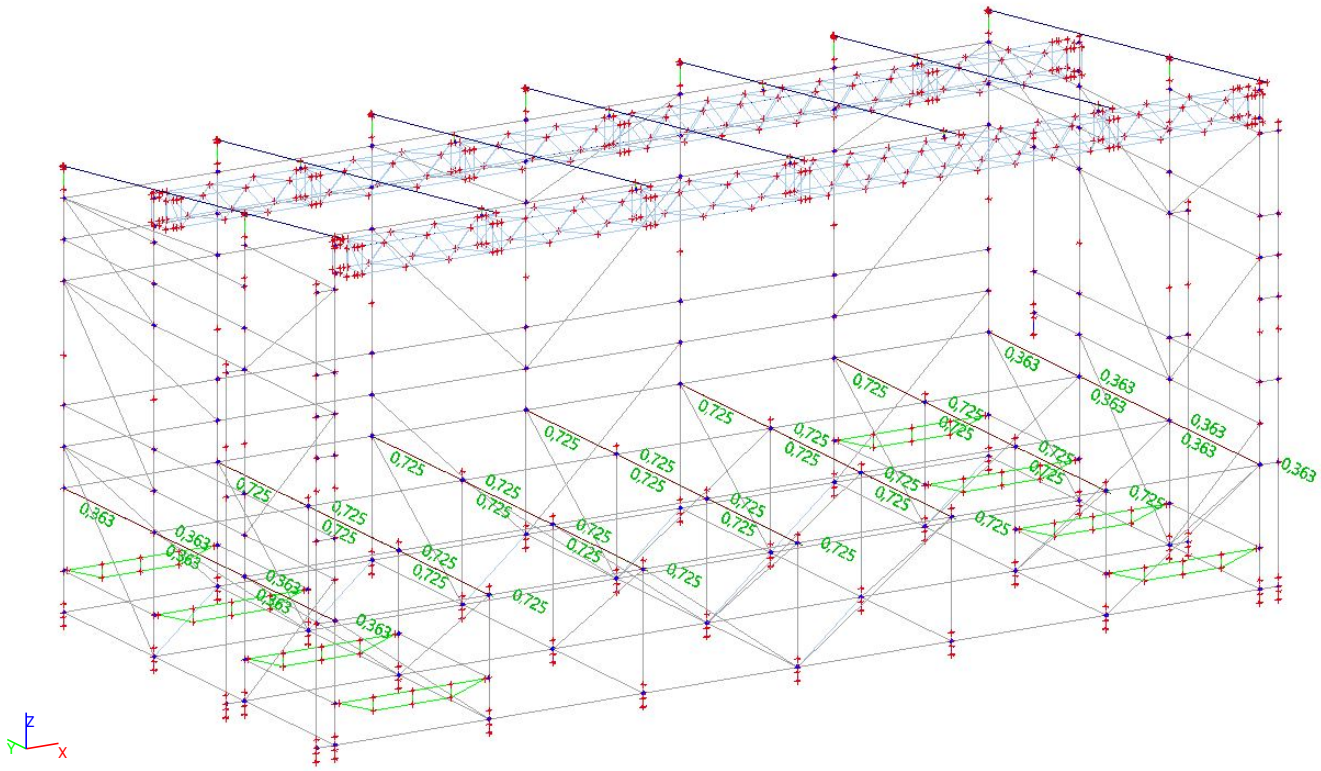
4.1.1.6. Belastinggevallen - NL H WV1 10% X

Name	Description	Action type	Load group	Load group	Load type
	Spec	Load type			
NL H WV1 10% X	Nuttige belasting horizontaal 10%V op werkvloer 1	Variable	Variabele belastingen	Variabele belastingen	Static
	Standard	Static			



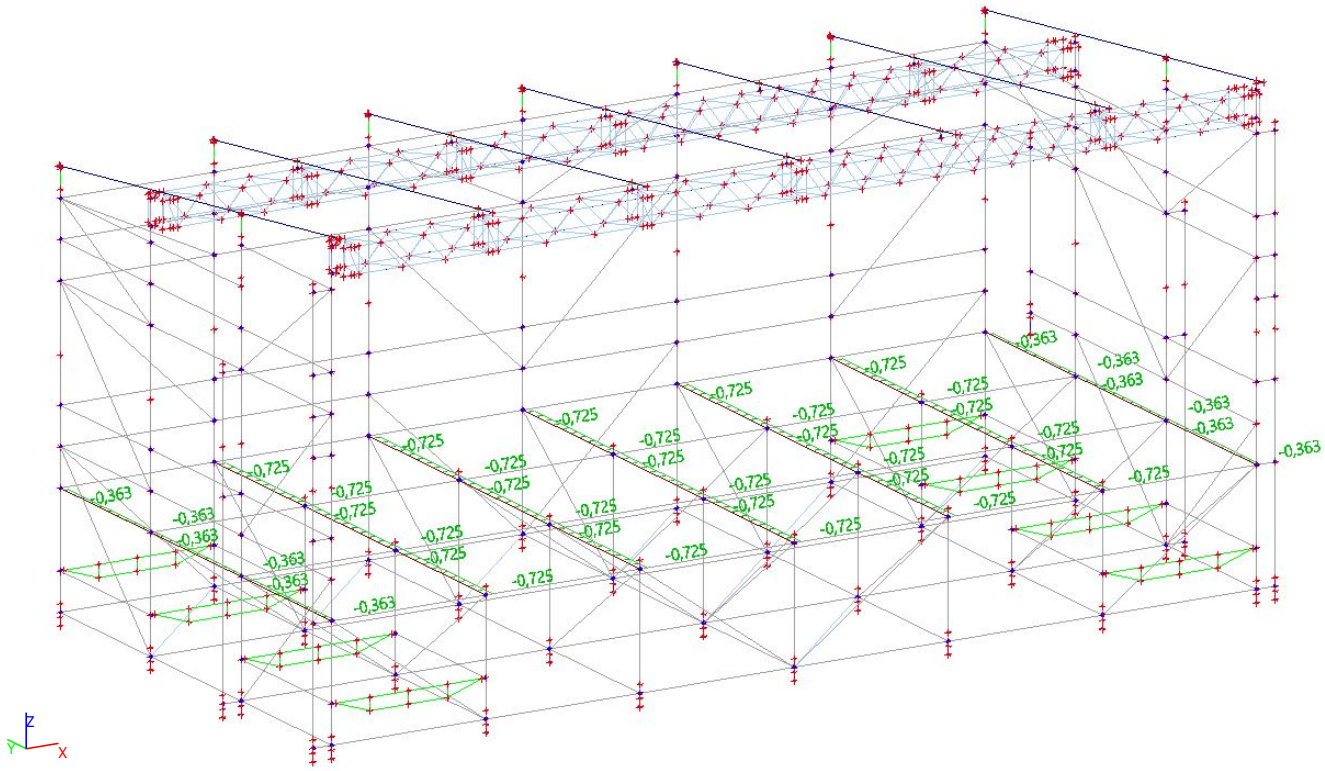
4.1.1.7. Belastinggevallen - NL H WV1 10% Y

Name	Description	Action type	Load group	Load group	Load type
	Spec	Load type			
NL H WV1 10% Y	Nuttige belasting horizontaal 10%V op werkvloer 1	Variable	Variabele belastingen	Variabele belastingen	Static
	Standard	Static			



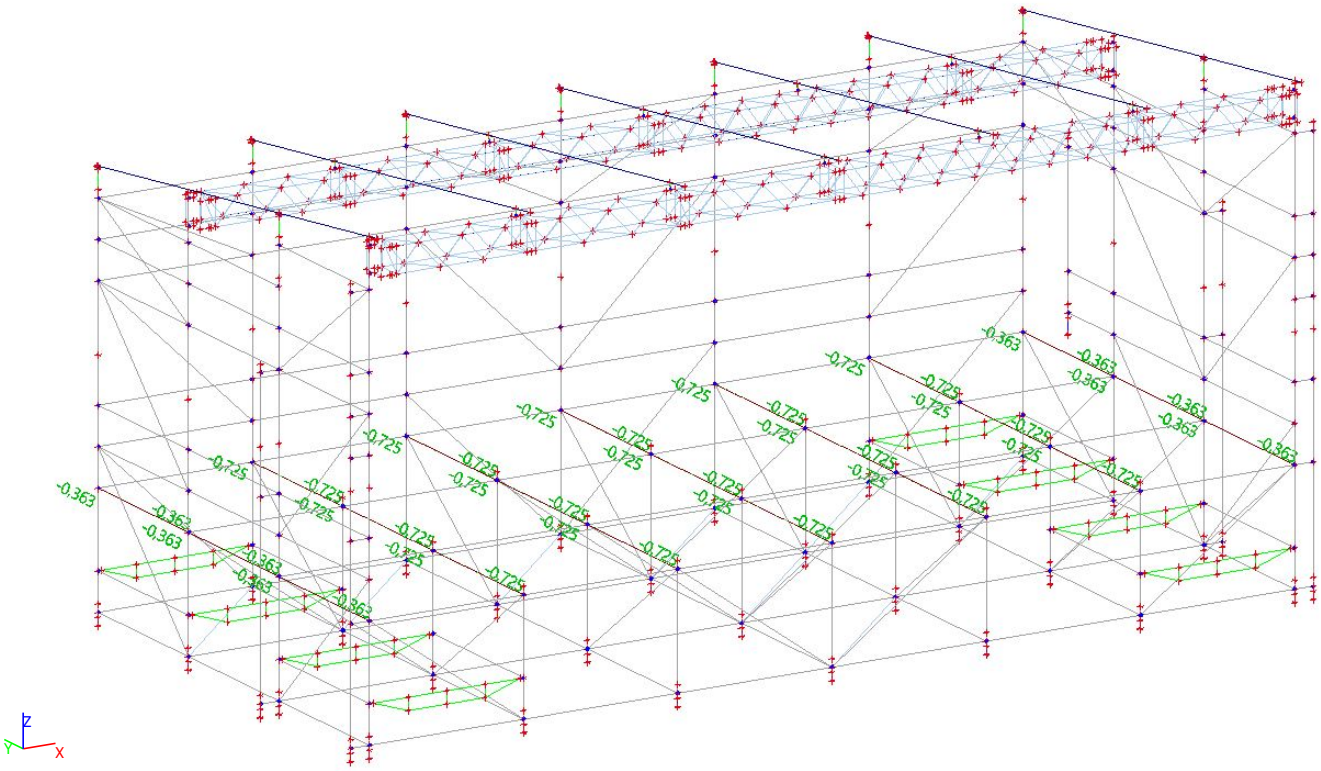
4.1.1.8. Belastinggevallen - NL H WV1 10% -X

Name	Description	Action type	Load group	Load group	Load type
	Spec	Load type			
NL H WV1 10% -X	Nuttige belasting horizontaal 10%V op werkvloer 1	Variable	Variabele belastingen	Variabele belastingen	Static
	Standard	Static			



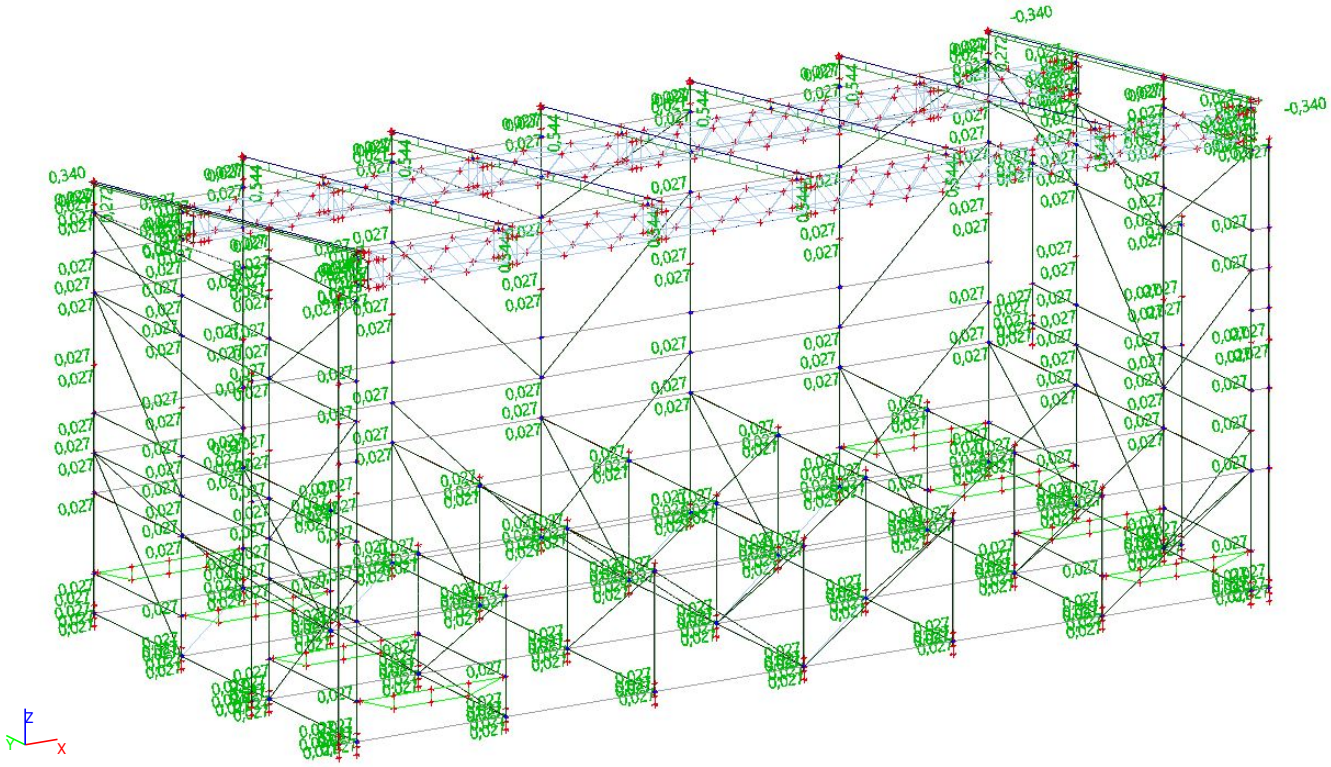
4.1.1.9. Belastinggevallen - NL H WV1 10% -Y

Name	Description	Action type	Load group	Load group	Load type
	Spec	Load type			
NL H WV1 10% -Y	Nuttige belasting horizontaal 10%V op werkvloer 1	Variable	Variabele belastingen	Variabele belastingen	Static
	Standard	Static			



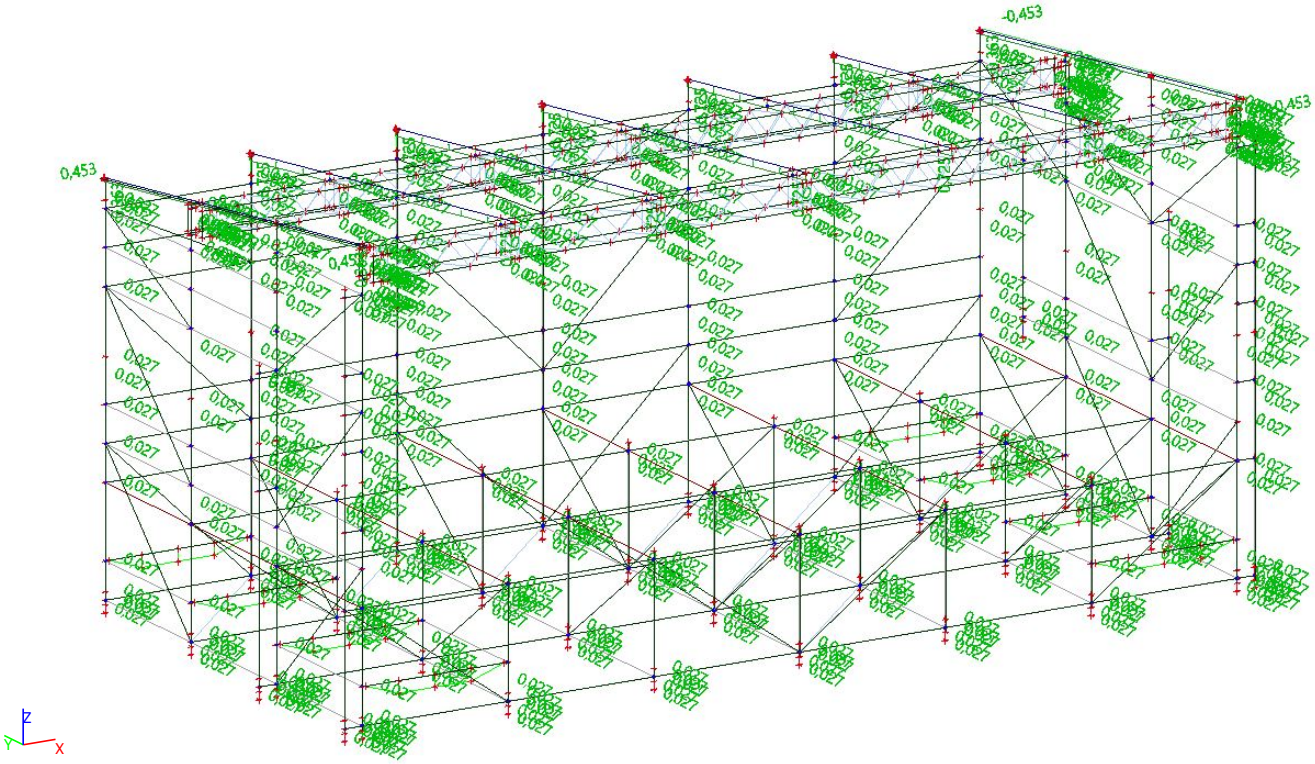
4.1.1.10. Belastinggevallen - MW X

Name	Description	Action type	Load group	Load group	Load type
	Spec	Load type			
MW X	Maximale wind / x-richting	Variable	Windbelasting	Windbelasting	Static
	Standard	Static			



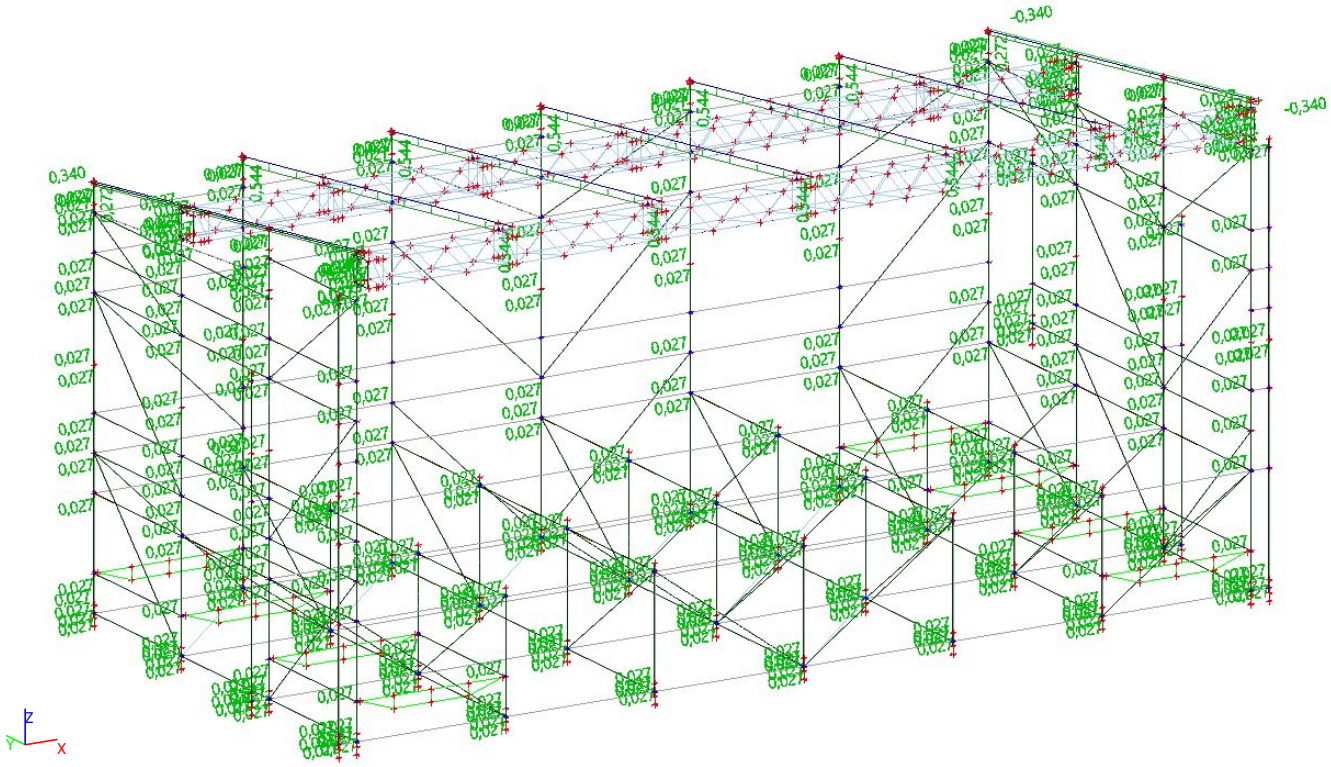
4.1.1.11. Belastinggevallen - MW Y

Name	Description	Action type	Load group	Load group	Load type
	Spec	Load type			
MW Y	Maximale wind / y-richting	Variable	Windbelasting	Windbelasting	Static
	Standard	Static			



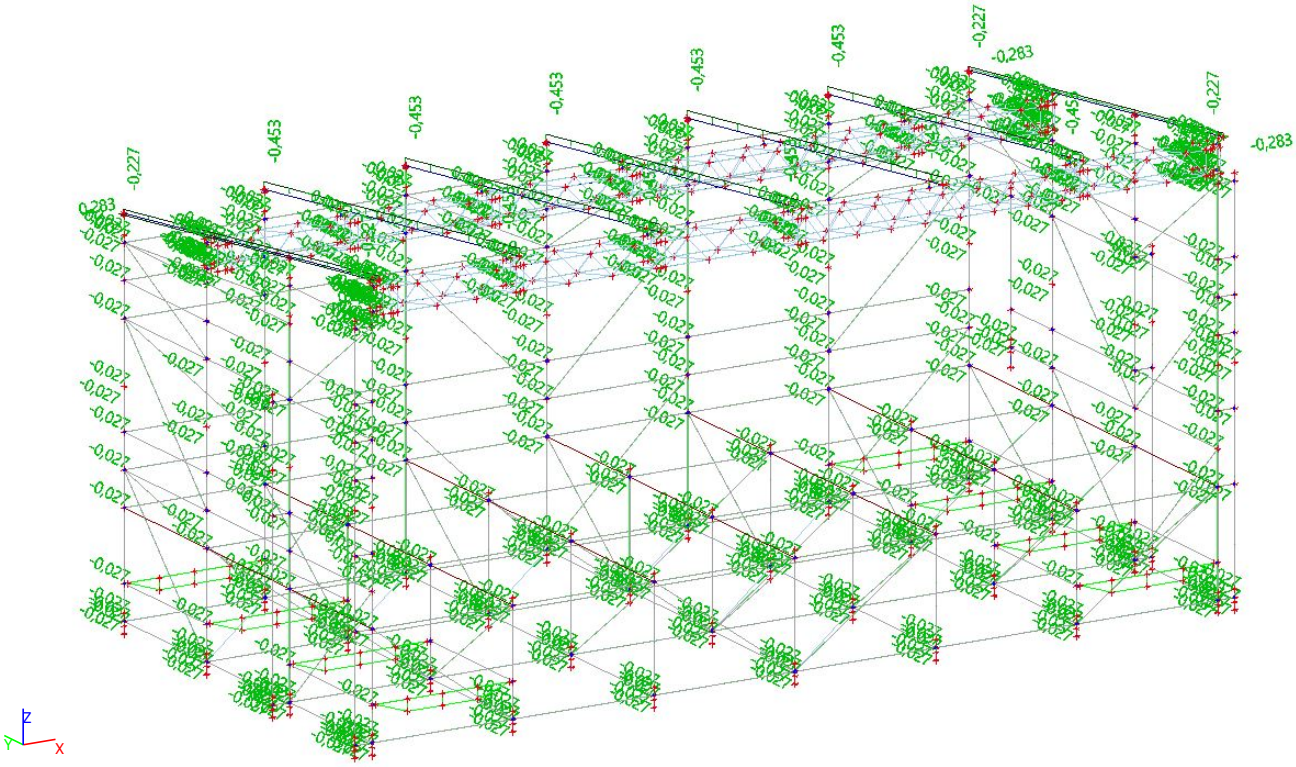
4.1.1.12. Belastinggevallen - MW -X

Name	Description	Action type	Load group	Load group	Load type
	Spec	Load type			
MW -X	Maximale wind / -x-richting	Variable	Windbelasting	Windbelasting	Static
	Standard	Static			



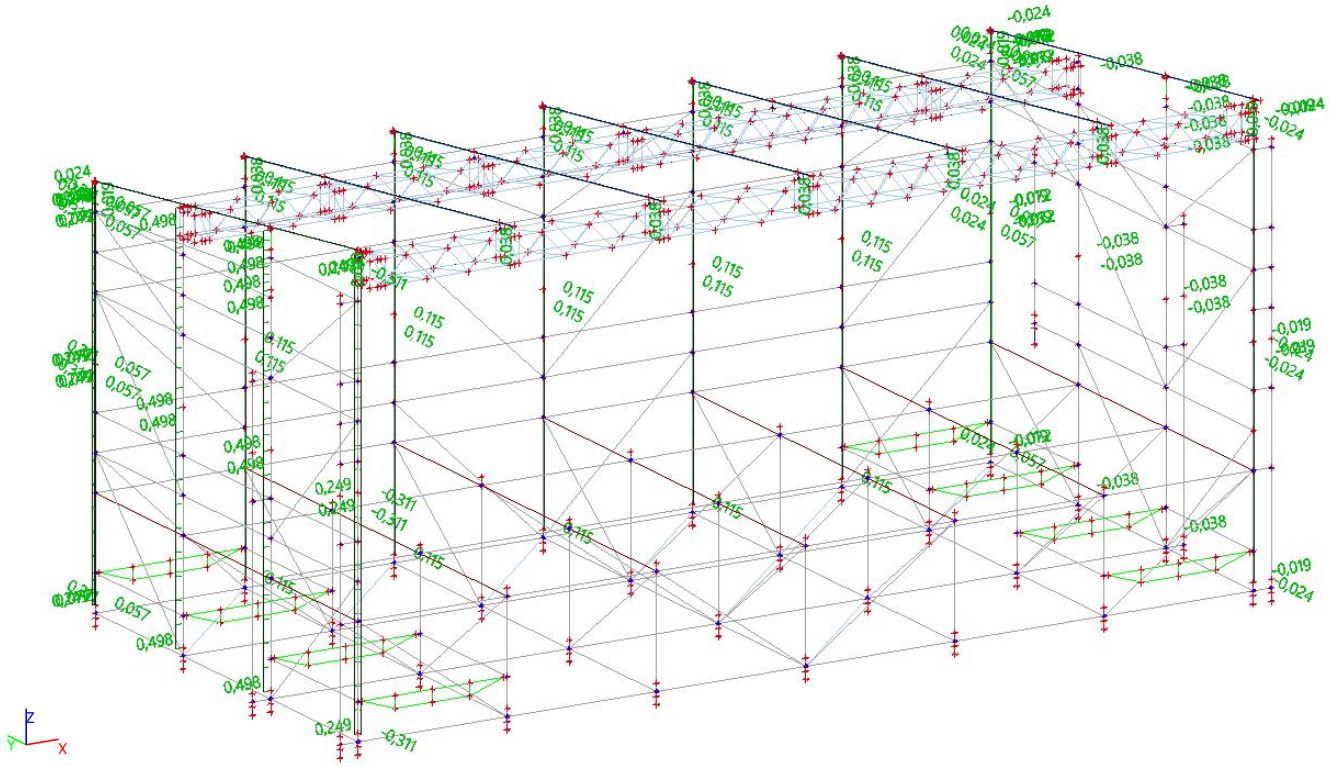
4.1.1.13. Belastinggevallen - MW -Y

Name	Description	Action type	Load group	Load group	Load type
	Spec	Load type			
MW -Y	Maximale wind / -y-richting Standard	Variable Static	Windbelasting	Windbelasting	Static



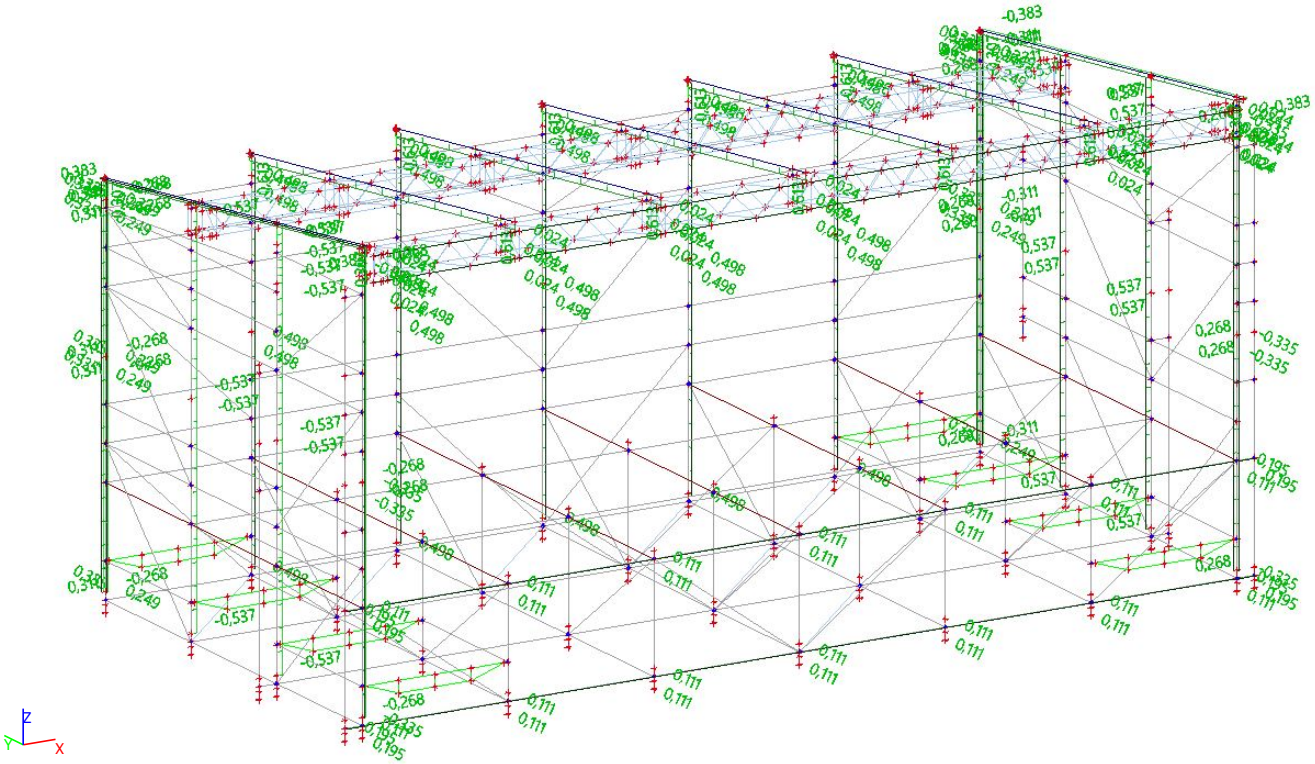
4.1.1.14. Belastinggevallen - WW X

Name	Description	Action type	Load group	Load group	Load type
	Spec	Load type			
WW X	Werkwind / x-richting	Variable	Windbelasting	Windbelasting	Static
	Standard	Static			



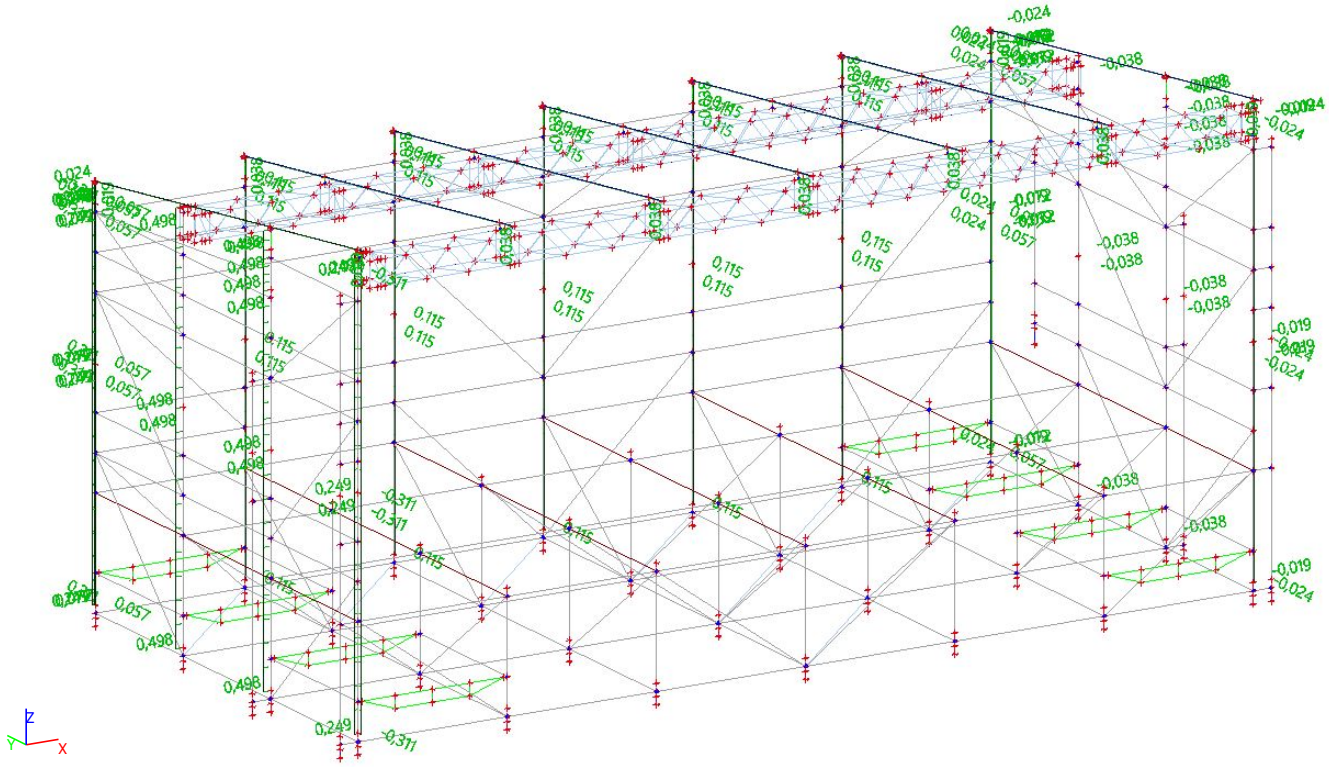
4.1.1.15. Belastinggevallen - WW Y

Name	Description	Action type	Load group	Load group	Load type
	Spec	Load type			
WW Y	Werkwind / y-richting	Variable	Windbelasting	Windbelasting	Static
	Standard	Static			



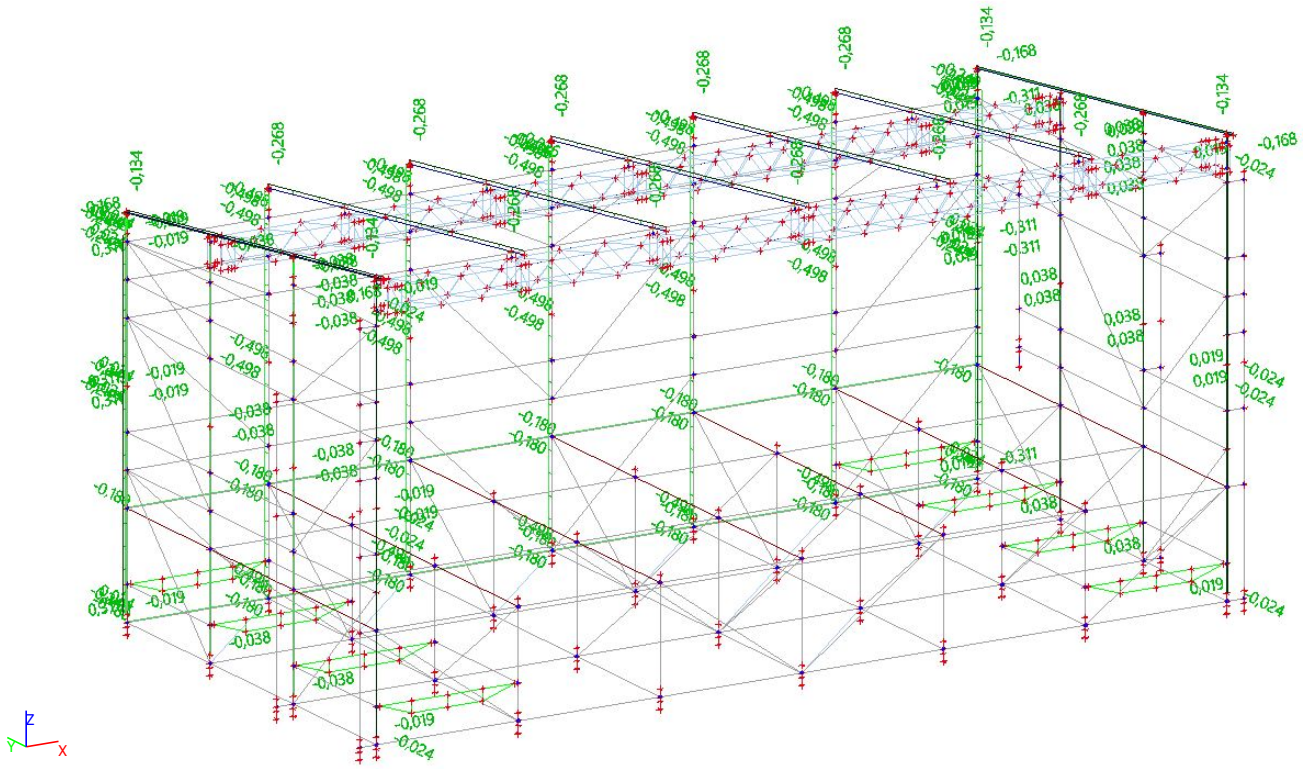
4.1.1.16. Belastinggevallen - WW -X

Name	Description	Action type	Load group	Load group	Load type
	Spec	Load type			
WW -X	Werkwind / -x-richting	Variable	Windbelasting	Windbelasting	Static
	Standard	Static			



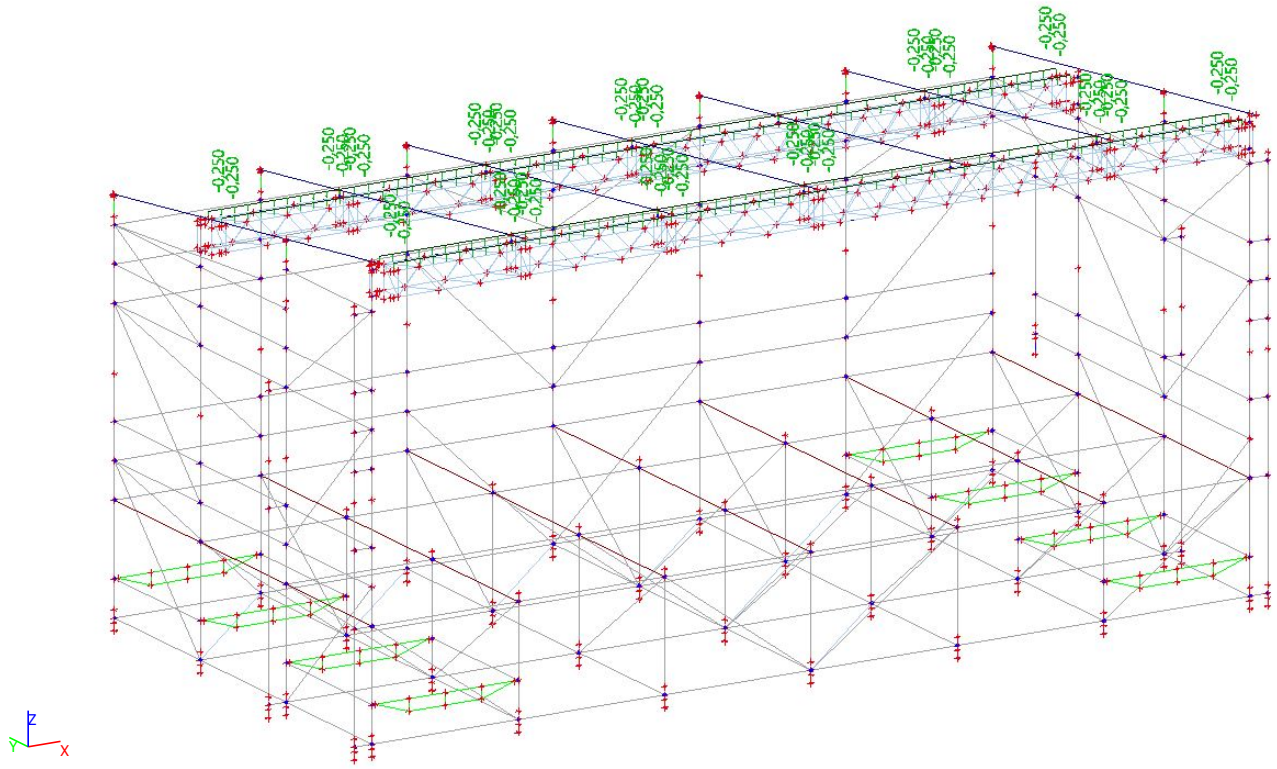
4.1.1.17. Belastinggevallen - WW -Y

Name	Description	Action type	Load group	Load group	Load type
	Spec	Load type			
WW -Y	Werkwind / -y-richting	Variable	Windbelasting	Windbelasting	Static
	Standard	Static			



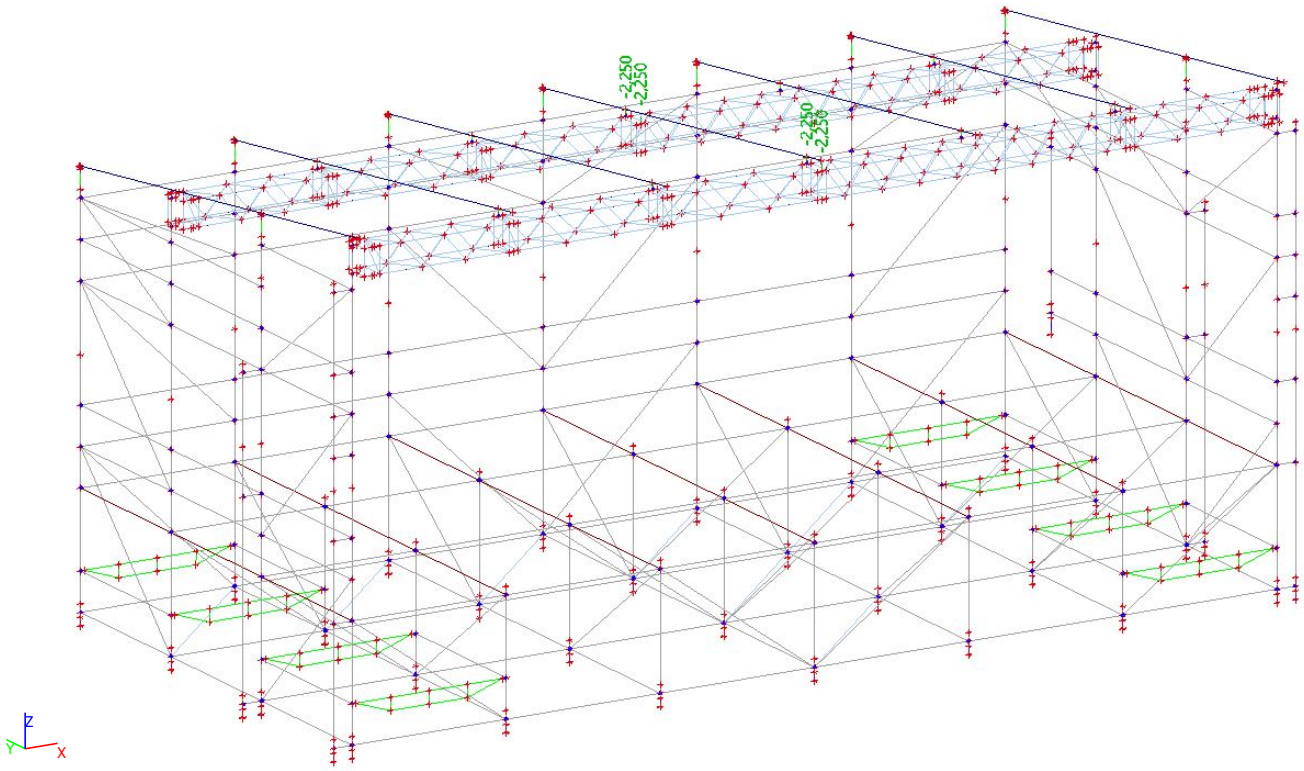
4.1.1.18. Belastinggevallen - H 1

Name	Description	Action type	Load group	Load group	Load type
	Spec	Load type			
H 1	Hijslast positie 1	Variable	Variabele belastingen	Variabele belastingen	Static
	Standard	Static			



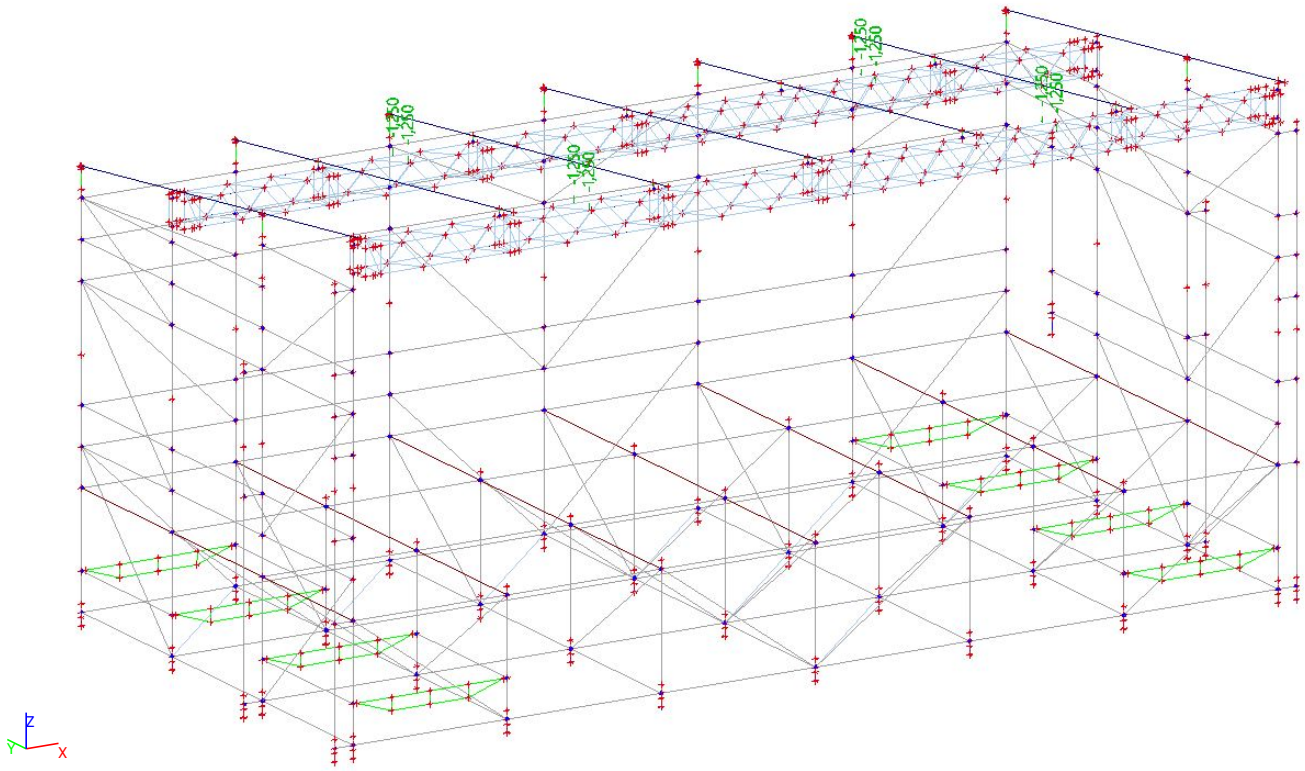
4.1.1.19. Belastinggevallen - H 2

Name	Description	Action type	Load group	Load group	Load type
	Spec	Load type			
H 2	Hijslast positie 2	Variable	Variabele belastingen	Variabele belastingen	Static
	Standard	Static			



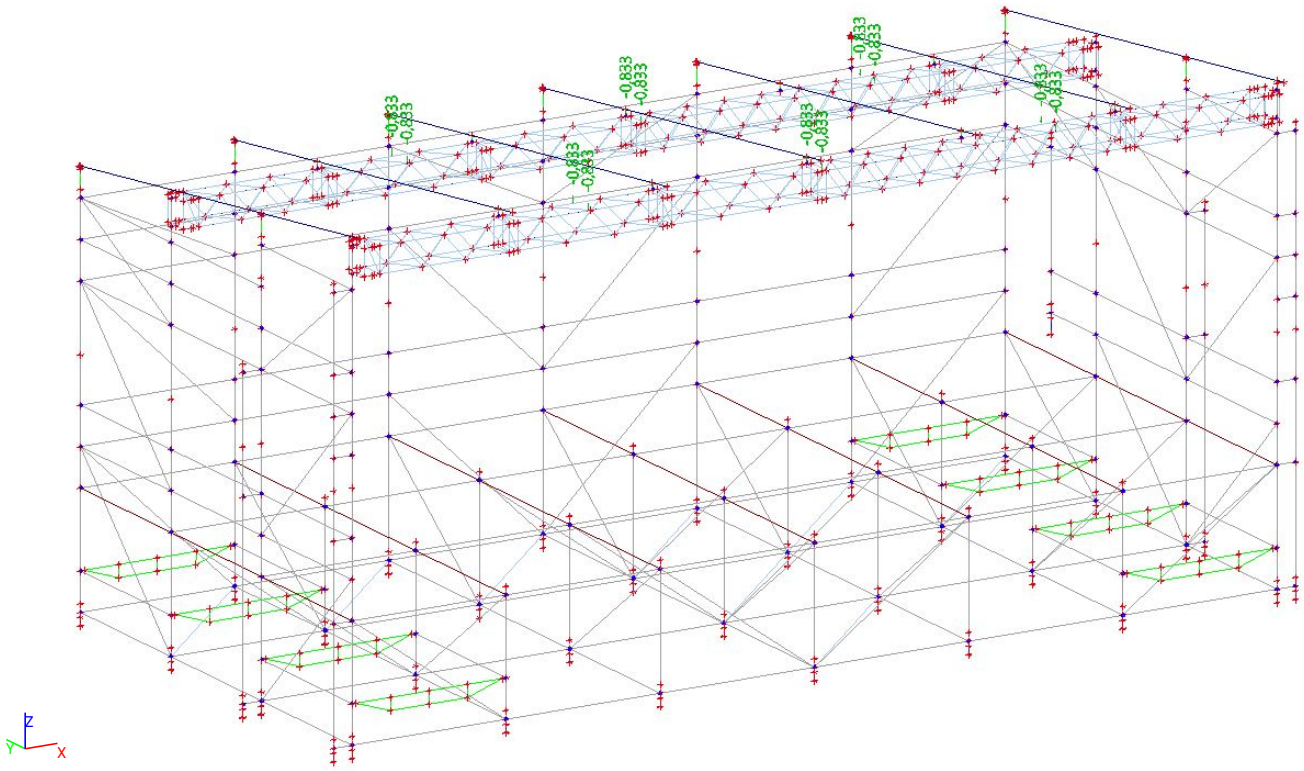
4.1.1.20. Belastinggevallen - H 3

Name	Description	Action type	Load group	Load group	Load type
	Spec	Load type			
H 3	Hijslast positie 3	Variable	Variabele belastingen	Variabele belastingen	Static
	Standard	Static			



4.1.1.21. Belastinggevallen - H 4

Name	Description	Action type	Load group	Load group	Load type
	Spec	Load type			
H 4	Hijslast positie 4	Variable	Variabele belastingen	Variabele belastingen	Static
	Standard	Static			


-0,833
Z
Y
X

4.2. Toelichting Belastinggevallen

EG
Eigen gewicht
automatisch gegenereerd

EG VL
Eigen gewicht vloeren
vereenvoudig tot lijnlast op de Eventliggers 2,07 m
68,6 kg per vloer / 2,072 m = 0,331 kN/m1
zijkanten = 0,166 kN/m1
B
Ballast
vereenvoudigd tot puntlasten op de Dubbele buisliggers 2,07 m
1350 kg in elke hoek / 4 = 3,5 kkN

NL WV1
Nuttige belasting op werkvloer 1
350kg/m2 / 2,072 m1 = 7,252 kN/m1
350kg/m2 / 1,036 m1 = 3,626 kN/m1

NL WV1 50%
50% nuttige belasting op werkvloer 1
350kg/m2 / 2,072 m1 = 7,252 kN/m1 x 50% = 3,626 kN/m1
350kg/m2 / 1,036 m1 = 3,626 kN/m1 x 50% = 1,813 kN/m1

NL H WV1 10% X
Nuttige belasting horizontaal 10%V op werkvloer 1
350kg/m2 / 2,072 m1 = 7,252 kN/m1 x 10% = 0,7252 kN/m1
350kg/m2 / 1,036 m1 = 3,626 kN/m1 x 10% = 0,3626 kN/m1

NL H WV1 10% Y
Nuttige belasting horizontaal 10%V op werkvloer 1
350kg/m2 / 2,072 m1 = 7,252 kN/m1 x 10% = 0,7252 kN/m1
350kg/m2 / 1,036 m1 = 3,626 kN/m1 x 10% = 0,3626 kN/m1

NL H WV1 10% -X
Nuttige belasting horizontaal 10%V op werkvloer 1
350kg/m2 / 2,072 m1 = 7,252 kN/m1 x 10% = 0,7252 kN/m1
350kg/m2 / 1,036 m1 = 3,626 kN/m1 x 10% = 0,3626 kN/m1

NL H WV1 10% -Y
Nuttige belasting horizontaal 10%V op werkvloer 1
350kg/m2 / 2,072 m1 = 7,252 kN/m1 x 10% = 0,7252 kN/m1
350kg/m2 / 1,036 m1 = 3,626 kN/m1 x 10% = 0,3626 kN/m1

H 1
Hijslast positie 1
600 kg totaal verdeeld over 12 m = 50 kg/m1
50 kg /m1 / 2 trussbuizen = 0,25 kN/m1

H 2
Hijslast positie 2
450 kg totaal als puntlast in het midden
450 kg / 2 trussbuizen = 2,25 kN

H 3
Hijslast positie 3
500 kg totaal als 2 puntlasten op de truss = 250 kg
250 kg / 2 trussbuizen = 1,25 kN

H 4
Hijslast positie 4
500 kg totaal als 3 puntlasten op de truss = 167 kg
167 kg / 2 trussbuizen = 0,833 kN

MW X
Maximale wind / x-richting
Buiten gebruik wind 90°

		Cpe	Cpi	→	Cp,net	[kN/m2]	h.o.h.		
wind calculations of the main roof canopy	qw,roof profile 1 and 4	0,6			0,6 x	0,4375 x	1,036 =	0,272	kN/m
	qw,roof profile 2 and 3	0,6			0,6 x	0,4375 x	2,072 =	0,544	kN/m
membrane tension of the main roof canopy	qmt,roof profile 1 and 4	*aan 2 zijkanten naar*				0,272 /	0,8 =	0,340	kN/m
	qmt,roof profile 2 and 3	*binnen gericht hor.lijnlast*					=	0,000	kN/m

In the Out-service situation all the wall canopy's need to be removed
A wind loading is set to all the profiles which lays perpendicular to the wind direction 0,027471 kN/m1

MW Y
Maximale wind / y-richting
Buiten gebruik wind 0°

		Cpe	Cpi	→	Cp,net	[kN/m2]	h.o.h.		
wind calculations of the main roof canopy	qw,roof profile 1 and 4	0,8			0,8 x	0,4375 x	1,036 =	0,363	kN/m
	qw,roof profile 2 and 3	0,8			0,8 x	0,4375 x	2,072 =	0,725	kN/m
membrane tension of the main roof canopy	qmt,roof profile 1 and 4	*aan 2 zijkanten naar*				0,363 /	0,8 =	0,453	kN/m
	qmt,roof profile 2 and 3	*binnen gericht hor.lijnlast*					=	0,000	kN/m

In the Out-service situation all the wall canopy's need to be removed
A wind loading is set to all the profiles which lays perpendicular to the wind direction 0,027471 kN/m1

MW -X
Maximale wind / -x-richting
Buiten gebruik wind 90°

		Cpe	Cpi	→	Cp,net	[kN/m2]	h.o.h.		
wind calculations of the main roof canopy	qw,roof profile 1 and 4	0,6			0,6 x	0,4375 x	1,036 =	0,272	kN/m
	qw,roof profile 2 and 3	0,6			0,6 x	0,4375 x	2,072 =	0,544	kN/m
membrane tension of the main roof canopy	qmt,roof profile 1 and 4	*aan 2 zijkanten naar*				0,272 /	0,8 =	0,340	kN/m
	qmt,roof profile 2 and 3	*binnen gericht hor.lijnlast*					=	0,000	kN/m

In the Out-service situation all the wall canopy's need to be removed
A wind loading is set to all the profiles which lays perpendicular to the wind direction 0,027471 kN/m1

MW -Y
Maximale wind / -y-richting
Buiten gebruik wind 180°

		Cpe	Cpi	→	Cp,net	[kN/m2]	h.o.h.		
wind calculations of the main roof canopy	qw,roof profile 1 and 4	0,5			0,5 x	0,4375 x	1,036 =	0,227	kN/m
	qw,roof profile 2 and 3	0,5			0,5 x	0,4375 x	2,072 =	0,453	kN/m
membrane tension of the main roof canopy	qmt,roof profile 1 and 4	*aan 2 zijkanten naar*				0,227 /	0,8 =	0,283	kN/m
	qmt,roof profile 2 and 3	*binnen gericht hor.lijnlast*					=	0,000	kN/m

In the Out-service situation all the wall canopy's need to be removed
A wind loading is set to all the profiles which lays perpendicular to the wind direction 0,027471 kN/m1

WW X
Werkwind / x-richting
In gebruik wind 90°

		Cpe	Cpi	→	Cp,net	[kN/m2]	h.o.h.		
wind calculations of the main roof canopy	qw,roof profile 1 and 4	0,6	-0,5		0,1 x	0,185 x	1,036 =	0,019	kN/m
	qw,roof profile 2 and 3	0,6	-0,5		0,1 x	0,185 x	2,072 =	0,038	kN/m
membrane tension of the main roof canopy	qmt,roof profile 1 and 4	*aan 2 zijkanten naar*				0,019 /	0,8 =	0,024	kN/m
	qmt,roof profile 2 and 3	*binnen gericht hor.lijnlast*					=	0,000	kN/m
wind on the back-wall canopy	qw, back wall mid	0,8	-0,5		0,3 x	0,185 x	2,072 =	0,115	kN/m
	qw, back wall side	0,8	-0,5		0,3 x	0,185 x	1,036 =	0,057	kN/m
membrane tension of the back-wall canopy	qmt, back wall mid	*aan 2 zijkanten naar*					=	0,000	kN/m
	qw, back wall side	*binnen gericht vert.lijnlast*				0,057 /	0,8 =	0,072	kN/m
wind on the side-wall canopy 1	qw, side wall mid	0,8	0,5		1,3 x	0,185 x	2,072 =	0,498	kN/m
	qw, side wall side	0,8	0,5		1,3 x	0,185 x	1,036 =	0,249	kN/m
membrane tension of the side-wall canopy 1	qmt, side wall mid	*aan 2 zijkanten naar*					=	0,000	kN/m
	qw, side wall side	*binnen gericht vert.lijnlast*				0,249 /	0,8 =	0,311	kN/m
wind on the side-wall canopy 2	qw, side wall mid	-0,4	0,5		0,1 x	0,185 x	2,072 =	0,038	kN/m
	qw, side wall side	-0,4	0,5		0,1 x	0,185 x	1,036 =	0,019	kN/m
membrane tension of the side-wall canopy 2	qmt, side wall mid	*aan 2 zijkanten naar*					=	0,000	kN/m
	qw, side wall side	*binnen gericht vert.lijnlast*				0,019 /	0,8 =	0,024	kN/m

WW Y
Werkwind / y-richting
In gebruik wind 0°

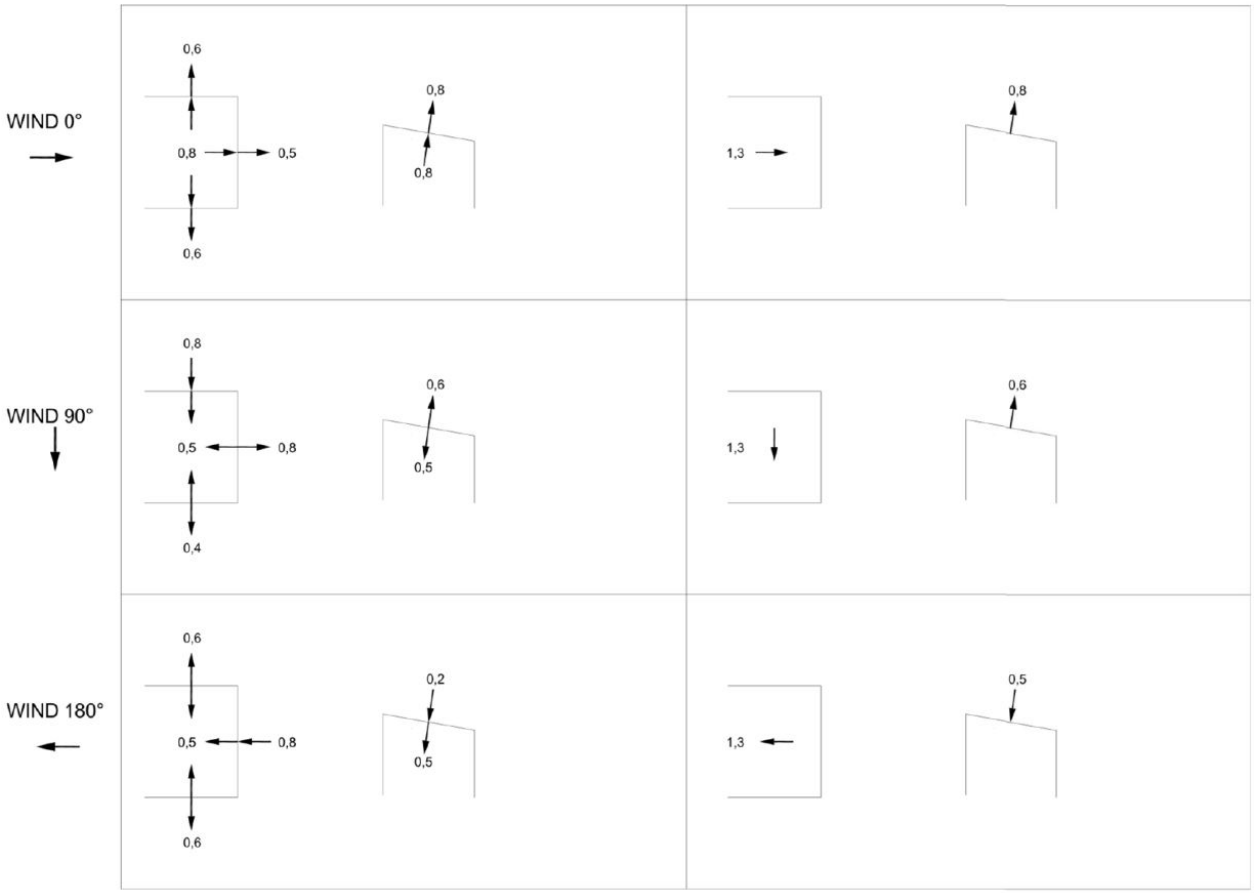
		Cpe	Cpi	→	Cp,net	[kN/m2]	h.o.h.		
wind calculations of the main roof canopy	qw,roof profile 1 and 4	0,8	0,8		1,6 x	0,185 x	1,036	=	0,307 kN/m
	qw,roof profile 2 and 3	0,8	0,8		1,6 x	0,185 x	2,072	=	0,613 kN/m
membrane tension of the main roof canopy	qmt,roof profile 1 and 4	*aan 2 zijkanten naar*				0,307 /	0,8	=	0,383 kN/m
	qmt,roof profile 2 and 3	*binnen gericht hor.lijnlast*						=	0,000 kN/m
wind on the back-wall canopy	qw, back wall mid	0,8	0,5		1,3 x	0,185 x	2,072	=	0,498 kN/m
	qw, back wall side	0,8	0,5		1,3 x	0,185 x	1,036	=	0,249 kN/m
membrane tension of the back-wall canopy	qmt, back wall mid	*aan 2 zijkanten naar*						=	0,000 kN/m
	qw, back wall side	*binnen gericht vert.lijnlast*				0,249 /	0,8	=	0,311 kN/m
wind on the side-wall canopy	qw, side wall mid	0,8	0,6		1,4 x	0,185 x	2,072	=	0,537 kN/m
	qw, side wall side	0,8	0,6		1,4 x	0,185 x	1,036	=	0,268 kN/m
membrane tension of the side-wall canopy	qmt, side wall mid	*aan 2 zijkanten naar*						=	0,000 kN/m
	qw, side wall side	*binnen gericht vert.lijnlast*				0,268 /	0,8	=	0,335 kN/m
wind on truss	qw, truss	1,3			1,3 x	0,185 x	0,1	=	0,024 kN/m
wind on stage	qw, stage	0,8			0,8 x	0,185 x	0,75	=	0,111 kN/m

WW -X
Werkwind / -x-richting
In gebruik wind 90°

		Cpe	Cpi	→	Cp,net	[kN/m2]	h.o.h.		
wind calculations of the main roof canopy	qw,roof profile 1 and 4	0,6	-0,5		0,1 x	0,185 x	1,036	=	0,019 kN/m
	qw,roof profile 2 and 3	0,6	-0,5		0,1 x	0,185 x	2,072	=	0,038 kN/m
membrane tension of the main roof canopy	qmt,roof profile 1 and 4	*aan 2 zijkanten naar*				0,019 /	0,8	=	0,024 kN/m
	qmt,roof profile 2 and 3	*binnen gericht hor.lijnlast*						=	0,000 kN/m
wind on the back-wall canopy	qw, back wall mid	0,8	-0,5		0,3 x	0,185 x	2,072	=	0,115 kN/m
	qw, back wall side	0,8	-0,5		0,3 x	0,185 x	1,036	=	0,057 kN/m
membrane tension of the back-wall canopy	qmt, back wall mid	*aan 2 zijkanten naar*						=	0,000 kN/m
	qw, back wall side	*binnen gericht vert.lijnlast*				0,057 /	0,8	=	0,072 kN/m
wind on the side-wall canopy 1	qw, side wall mid	0,8	0,5		1,3 x	0,185 x	2,072	=	0,498 kN/m
	qw, side wall side	0,8	0,5		1,3 x	0,185 x	1,036	=	0,249 kN/m
membrane tension of the side-wall canopy 1	qmt, side wall mid	*aan 2 zijkanten naar*						=	0,000 kN/m
	qw, side wall side	*binnen gericht vert.lijnlast*				0,249 /	0,8	=	0,311 kN/m
wind on the side-wall canopy 2	qw, side wall mid	-0,4	0,5		0,1 x	0,185 x	2,072	=	0,038 kN/m
	qw, side wall side	-0,4	0,5		0,1 x	0,185 x	1,036	=	0,019 kN/m
membrane tension of the side-wall canopy 2	qmt, side wall mid	*aan 2 zijkanten naar*						=	0,000 kN/m
	qw, side wall side	*binnen gericht vert.lijnlast*				0,019 /	0,8	=	0,024 kN/m

WW -Y
Werkwind / -y-richting
In gebruik wind 180°

		Cpe	Cpi	→	Cp,net	[kN/m2]	h.o.h.		
wind calculations of the main roof canopy	qw,roof profile 1 and 4	-0,2	-0,5		-0,7 x	0,185 x	1,036	=	-0,134 kN/m
	qw,roof profile 2 and 3	-0,2	-0,5		-0,7 x	0,185 x	2,072	=	-0,268 kN/m
membrane tension of the main roof canopy	qmt,roof profile 1 and 4	*aan 2 zijkanten naar*				-0,134 /	0,8	=	-0,168 kN/m
	qmt,roof profile 2 and 3	*binnen gericht hor.lijnlast*						=	0,000 kN/m
wind on the back-wall canopy	qw, back wall mid	-0,8	-0,5		-1,3 x	0,185 x	2,072	=	-0,498 kN/m
	qw, back wall side	-0,8	-0,5		-1,3 x	0,185 x	1,036	=	-0,249 kN/m
membrane tension of the back-wall canopy	qmt, back wall mid	*aan 2 zijkanten naar*						=	0,000 kN/m
	qw, back wall side	*binnen gericht vert.lijnlast*				-0,249 /	0,8	=	-0,311 kN/m
wind on the side-wall canopy	qw, side wall mid	0,6	-0,5		0,1 x	0,185 x	2,072	=	0,038 kN/m
	qw, side wall side	0,6	-0,5		0,1 x	0,185 x	1,036	=	0,019 kN/m
membrane tension of the side-wall canopy	qmt, side wall mid	*aan 2 zijkanten naar*						=	0,000 kN/m
	qw, side wall side	*binnen gericht vert.lijnlast*				0,019 /	0,8	=	0,024 kN/m
wind on stage	qw, stage	1,3			1,3 x	0,185 x	0,75	=	0,180 kN/m


WIND 0°
0,6
0,8
0,5
0,6
0,8
0,8
1,3
0,8
WIND 90°
0,8
0,5
0,8
0,4
0,6
0,5
1,3
0,6
WIND 180°
0,6
0,5
0,8
0,6
0,2
0,5
1,3
0,5

4.3. Belastingcombinaties

4.3.1. Niet-lineaire Combinaties

Name	Load cases	Coeff [-]	Type	Stability	obal imperfectio	deforma [mm]
NC BGT A BG X	EG - Eigen gewicht	1,00	Serviceability	SC UGT A BG X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	MW X - Maximale wind / x-richting	1,00				
NC BGT A BG Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT A BG Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	MW Y - Maximale wind / y-richting	1,00				
NC BGT A BG -X	EG - Eigen gewicht	1,00	Serviceability	SC UGT A BG -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	MW -X - Maximale wind / -x-richting	1,00				
NC BGT A BG -Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT A BG -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	MW -Y - Maximale wind / -y-richting	1,00				
NC BGT A BGE X	EG - Eigen gewicht	1,00	Serviceability	SC UGT A BGE X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 50% - 50% nuttige belasting op werkvloer 1	1,00				
	MW X - Maximale wind / x-richting	1,00				
NC BGT A BGE Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT A BGE Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 50% - 50% nuttige belasting op werkvloer 1	1,00				
	MW Y - Maximale wind / y-richting	1,00				
NC BGT A BGE -X	EG - Eigen gewicht	1,00	Serviceability	SC UGT A BGE -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 50% - 50% nuttige belasting op werkvloer 1	1,00				
	MW -X - Maximale wind / -x-richting	1,00				
NC BGT A BGE -Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT A BGE -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 50% - 50% nuttige belasting op werkvloer 1	1,00				
	MW -Y - Maximale wind / -y-richting	1,00				
NC BGT A IG X	EG - Eigen gewicht	1,00	Serviceability	SC UGT A IG X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
NC BGT A IG Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT A IG Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	WW Y - Werkwind / y-richting	1,00				
NC BGT A IG -X	EG - Eigen gewicht	1,00	Serviceability	SC UGT A IG -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	WW -X - Werkwind / -x-richting	1,00				
NC BGT A IG -Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT A IG -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	WW -Y - Werkwind / -y-richting	1,00				
NC BGT A VC	EG - Eigen gewicht	1,00	Serviceability	SC UGT A VC	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				

Name	Load cases	Coeff [-]	Type	Stability	obal imperfectio	deforma [mm]
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
NC UGT A BG X	EG - Eigen gewicht	1,20	Ultimate	SC UGT A BG X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	MW X - Maximale wind / x-richting	1,35				
NC UGT A BG Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT A BG Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	MW Y - Maximale wind / y-richting	1,35				
NC UGT A BG -X	EG - Eigen gewicht	1,20	Ultimate	SC UGT A BG -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	MW -X - Maximale wind / -x-richting	1,35				
NC UGT A BG -Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT A BG -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	MW -Y - Maximale wind / -y-richting	1,35				
NC UGT A BGE X	EG - Eigen gewicht	1,20	Ultimate	SC UGT A BGE X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 50% - 50% nuttige belasting op werkvloer 1	1,35				
	MW X - Maximale wind / x-richting	1,35				
NC UGT A BGE Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT A BGE Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 50% - 50% nuttige belasting op werkvloer 1	1,35				
	MW Y - Maximale wind / y-richting	1,35				
NC UGT A BGE -X	EG - Eigen gewicht	1,20	Ultimate	SC UGT A BGE -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 50% - 50% nuttige belasting op werkvloer 1	1,35				
	MW -X - Maximale wind / -x-richting	1,35				
NC UGT A BGE -Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT A BGE -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 50% - 50% nuttige belasting op werkvloer 1	1,35				
	MW -Y - Maximale wind / -y-richting	1,35				
NC UGT A IG X	EG - Eigen gewicht	1,20	Ultimate	SC UGT A IG X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	WW X - Werkwind / x-richting	1,35				
NC UGT A IG Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT A IG Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	WW Y - Werkwind / y-richting	1,35				
NC UGT A IG -X	EG - Eigen gewicht	1,20	Ultimate	SC UGT A IG -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	WW -X - Werkwind / -x-richting	1,35				
NC UGT A IG -Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT A IG -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	WW -Y - Werkwind / -y-richting	1,35				
NC UGT A O X	EG - Eigen gewicht	0,90	Ultimate	SC UGT A O X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	0,90				
	B - Ballast	0,90				
	MW X - Maximale wind / x-richting	1,35				
NC UGT A O Y	EG - Eigen gewicht	0,90	Ultimate	SC UGT A O Y	Buckling shape	20,000

Name	Load cases	Coeff [-]	Type	Stability	obal imperfectio	deforma [mm]
	EG VL - Eigen gewicht vloeren	0,90				
	B - Ballast	0,90				
	MW Y - Maximale wind / y-richting	1,35				
NC UGT A O -X	EG - Eigen gewicht	0,90	Ultimate	SC UGT A O -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	0,90				
	B - Ballast	0,90				
	MW -X - Maximale wind / -x-richting	1,35				
NC UGT A O -Y	EG - Eigen gewicht	0,90	Ultimate	SC UGT A O -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	0,90				
	B - Ballast	0,90				
	MW -Y - Maximale wind / -y-richting	1,35				
NC UGT A VC	EG - Eigen gewicht	1,20	Ultimate	SC UGT A VC	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
NC BGT H1 IG X	EG - Eigen gewicht	1,00	Serviceability	SC UGT H1 IG X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	WW X - Werkwind / x-richting	1,00				
	H 1 - Hijslast positie 1	1,00				
	HF H1 X - Horizontale factor hijslast 1 / x-richting	1,00				
NC BGT H1 IG Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT H1 IG Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	WW Y - Werkwind / y-richting	1,00				
	H 1 - Hijslast positie 1	1,00				
	HF H1 Y - Horizontale factor hijslast 1 / y-richting	1,00				
NC BGT H1 IG -X	EG - Eigen gewicht	1,00	Serviceability	SC UGT H1 IG -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	WW -X - Werkwind / -x-richting	1,00				
	H 1 - Hijslast positie 1	1,00				
	HF H1 -X - Horizontale factor hijslast 1 / -x-richting	1,00				
NC BGT H1 IG -Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT H1 IG -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	WW -Y - Werkwind / -y-richting	1,00				
	H 1 - Hijslast positie 1	1,00				
	HF H1 -Y - Horizontale factor hijslast 1 / -y-richting	1,00				
NC BGT H1 VC	EG - Eigen gewicht	1,00	Serviceability	SC UGT H1 VC	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	H 1 - Hijslast positie 1	1,00				
NC UGT H1 IG X	EG - Eigen gewicht	1,20	Ultimate	SC UGT H1 IG X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	WW X - Werkwind / x-richting	1,35				
	H 1 - Hijslast positie 1	1,35				
	HF H1 X - Horizontale factor hijslast 1 / x-richting	1,35				
NC UGT H1 IG Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT H1 IG Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				

Name	Load cases	Coeff [-]	Type	Stability	obal imperfectio	deforma [mm]
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	WW Y - Werkwind / y-richting	1,35				
	H 1 - Hijslast positie 1	1,35				
	HF H1 Y - Horizontale factor hijslast 1 / y-richting	1,35				
NC UGT H1 IG -X	EG - Eigen gewicht	1,20	Ultimate	SC UGT H1 IG -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	WW -X - Werkwind / -x-richting	1,35				
	H 1 - Hijslast positie 1	1,35				
	HF H1 -X - Horizontale factor hijslast 1 / -x-richting	1,35				
NC UGT H1 IG -Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT H1 IG -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	WW -Y - Werkwind / -y-richting	1,35				
	H 1 - Hijslast positie 1	1,35				
	HF H1 -Y - Horizontale factor hijslast 1 / -y-richting	1,35				
NC UGT H1 VC	EG - Eigen gewicht	1,20	Ultimate	SC UGT H1 VC	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	H 1 - Hijslast positie 1	1,35				
NC BGT H2 IG X	EG - Eigen gewicht	1,00	Serviceability	SC UGT H2 IG X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	WW X - Werkwind / x-richting	1,00				
	H 2 - Hijslast positie 2	1,00				
	HF H2 X - Horizontale factor hijslast 2 / x-richting	1,00				
NC BGT H2 IG Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT H2 IG Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	WW Y - Werkwind / y-richting	1,00				
	H 2 - Hijslast positie 2	1,00				
	HF H2 Y - Horizontale factor hijslast 2 / y-richting	1,00				
NC BGT H2 IG -X	EG - Eigen gewicht	1,00	Serviceability	SC UGT H2 IG -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	WW -X - Werkwind / -x-richting	1,00				
	H 2 - Hijslast positie 2	1,00				
	HF H2 -X - Horizontale factor hijslast 2 / -x-richting	1,00				
NC BGT H2 IG -Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT H2 IG -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	WW -Y - Werkwind / -y-richting	1,00				
	H 2 - Hijslast positie 2	1,00				
	HF H2 -Y - Horizontale factor hijslast 2 / -y-richting	1,00				
NC BGT H2 VC	EG - Eigen gewicht	1,00	Serviceability	SC UGT H2 VC	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	H 2 - Hijslast positie 2	1,00				
NC UGT H2 IG X	EG - Eigen gewicht	1,20	Ultimate	SC UGT H2 IG X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				

Name	Load cases	Coeff [-]	Type	Stability	obal imperfectio	deforma [mm]
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	WW X - Werkwind / x-richting	1,35				
	H 2 - Hijslast positie 2	1,35				
	HF H2 X - Horizontale factor hijslast 2 / x-richting	1,35				
NC UGT H2 IG Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT H2 IG Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	WW Y - Werkwind / y-richting	1,35				
	H 2 - Hijslast positie 2	1,35				
	HF H2 Y - Horizontale factor hijslast 2 / y-richting	1,35				
NC UGT H2 IG -X	EG - Eigen gewicht	1,20	Ultimate	SC UGT H2 IG -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	WW -X - Werkwind / -x-richting	1,35				
	H 2 - Hijslast positie 2	1,35				
	HF H2 -X - Horizontale factor hijslast 2 / -x-richting	1,35				
NC UGT H2 IG -Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT H2 IG -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	WW -Y - Werkwind / -y-richting	1,35				
	H 2 - Hijslast positie 2	1,35				
	HF H2 -Y - Horizontale factor hijslast 2 / -y-richting	1,35				
NC UGT H2 VC	EG - Eigen gewicht	1,20	Ultimate	SC UGT H2 VC	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	H 2 - Hijslast positie 2	1,35				
NC BGT H3 IG X	EG - Eigen gewicht	1,00	Serviceability	SC UGT H3 IG X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	WW X - Werkwind / x-richting	1,00				
	H 3 - Hijslast positie 3	1,00				
	HF H3 X - Horizontale factor hijslast 3 / x-richting	1,00				
NC BGT H3 IG Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT H3 IG Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	WW Y - Werkwind / y-richting	1,00				
	H 3 - Hijslast positie 3	1,00				
	HF H3 Y - Horizontale factor hijslast 3 / y-richting	1,00				
NC BGT H3 IG -X	EG - Eigen gewicht	1,00	Serviceability	SC UGT H3 IG -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	WW -X - Werkwind / -x-richting	1,00				
	H 3 - Hijslast positie 3	1,00				
	HF H3 -X - Horizontale factor hijslast 3 / -x-richting	1,00				
NC BGT H3 IG -Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT H3 IG -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	WW -Y - Werkwind / -y-richting	1,00				

Name	Load cases	Coeff [-]	Type	Stability	obal imperfectio	deforma [mm]
	H 3 - Hijslast positie 3	1,00				
	HF H3 -Y - Horizontale factor hijslast 3 / -y-richting	1,00				
NC BGT H3 VC	EG - Eigen gewicht	1,00	Serviceability	SC UGT H3 VC	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	H 3 - Hijslast positie 3	1,00				
NC UGT H3 IG X	EG - Eigen gewicht	1,20	Ultimate	SC UGT H3 IG X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	WW X - Werkwind / x-richting	1,35				
	H 3 - Hijslast positie 3	1,35				
	HF H3 X - Horizontale factor hijslast 3 / x-richting	1,35				
NC UGT H3 IG Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT H3 IG Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	WW Y - Werkwind / y-richting	1,35				
	H 3 - Hijslast positie 3	1,35				
	HF H3 Y - Horizontale factor hijslast 3 / y-richting	1,35				
NC UGT H3 IG -X	EG - Eigen gewicht	1,20	Ultimate	SC UGT H3 IG -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	WW -X - Werkwind / -x-richting	1,35				
	H 3 - Hijslast positie 3	1,35				
	HF H3 -X - Horizontale factor hijslast 3 / -x-richting	1,35				
NC UGT H3 IG -Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT H3 IG -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	WW -Y - Werkwind / -y-richting	1,35				
	H 3 - Hijslast positie 3	1,35				
	HF H3 -Y - Horizontale factor hijslast 3 / -y-richting	1,35				
NC UGT H3 VC	EG - Eigen gewicht	1,20	Ultimate	SC UGT H3 VC	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	H 3 - Hijslast positie 3	1,35				
NC BGT H4 IG X	EG - Eigen gewicht	1,00	Serviceability	SC UGT H4 IG X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	WW X - Werkwind / x-richting	1,00				
	H 4 - Hijslast positie 4	1,00				
	HF H4 X - Horizontale factor hijslast 4 / x-richting	1,00				
NC BGT H4 IG Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT H4 IG Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	WW Y - Werkwind / y-richting	1,00				
	H 4 - Hijslast positie 4	1,00				
	HF H4 Y - Horizontale factor hijslast 4 / y-richting	1,00				
NC BGT H4 IG -X	EG - Eigen gewicht	1,00	Serviceability	SC UGT H4 IG -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				

Name	Load cases	Coeff [-]	Type	Stability	obal imperfectio	deforma [mm]
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	WW -X - Werkwind / -x-richting	1,00				
	H 4 - Hijslast positie 4	1,00				
	HF H4 -X - Horizontale factor hijslast 4 / -x-richting	1,00				
NC BGT H4 IG -Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT H4 IG -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	WW -Y - Werkwind / -y-richting	1,00				
	H 4 - Hijslast positie 4	1,00				
	HF H4 -Y - Horizontale factor hijslast 4 / -y-richting	1,00				
NC BGT H4 VC	EG - Eigen gewicht	1,00	Serviceability	SC UGT H4 VC	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	NL WV1 - Nuttige belasting op werkvloer 1	1,00				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,00				
	H 4 - Hijslast positie 4	1,00				
NC UGT H4 IG X	EG - Eigen gewicht	1,20	Ultimate	SC UGT H4 IG X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	WW X - Werkwind / x-richting	1,35				
	H 4 - Hijslast positie 4	1,35				
	HF H4 X - Horizontale factor hijslast 4 / x-richting	1,35				
NC UGT H4 IG Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT H4 IG Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	WW Y - Werkwind / y-richting	1,35				
	H 4 - Hijslast positie 4	1,35				
	HF H4 Y - Horizontale factor hijslast 4 / y-richting	1,35				
NC UGT H4 IG -X	EG - Eigen gewicht	1,20	Ultimate	SC UGT H4 IG -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	WW -X - Werkwind / -x-richting	1,35				
	H 4 - Hijslast positie 4	1,35				
	HF H4 -X - Horizontale factor hijslast 4 / -x-richting	1,35				
NC UGT H4 IG -Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT H4 IG -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	WW -Y - Werkwind / -y-richting	1,35				
	H 4 - Hijslast positie 4	1,35				
	HF H4 -Y - Horizontale factor hijslast 4 / -y-richting	1,35				
NC UGT H4 VC	EG - Eigen gewicht	1,20	Ultimate	SC UGT H4 VC	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	NL WV1 - Nuttige belasting op werkvloer 1	1,35				
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V	1,35				
	H 4 - Hijslast positie 4	1,35				
NC BGT H1 BGE X	EG - Eigen gewicht	1,00	Serviceability	SC UGT H1 BGE X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	MW X - Maximale wind / x-richting	1,00				
	H 1 - Hijslast positie 1	1,00				
	HF H1 X - Horizontale factor hijslast 1 / x-richting	1,00				
NC BGT H1 BGE Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT H1 BGE Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	MW Y - Maximale wind / y-richting	1,00				

Name	Load cases	Coeff [-]	Type	Stability	obal imperfectio	deforma [mm]
	H 1 - Hijslast positie 1	1,00				
	HF H1 Y - Horizontale factor hijslast 1 / y-richting	1,00				
NC BGT H1 BGE -X	EG - Eigen gewicht	1,00	Serviceability	SC UGT H1 BGE -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	MW -X - Maximale wind / -x-richting	1,00				
	H 1 - Hijslast positie 1	1,00				
	HF H1 -X - Horizontale factor hijslast 1 / -x-richting	1,00				
NC BGT H1 BGE -Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT H1 BGE -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	MW -Y - Maximale wind / -y-richting	1,00				
	H 1 - Hijslast positie 1	1,00				
	HF H1 -Y - Horizontale factor hijslast 1 / -y-richting	1,00				
NC UGT H1 BGE X	EG - Eigen gewicht	1,20	Ultimate	SC UGT H1 BGE X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	MW X - Maximale wind / x-richting	1,35				
	H 1 - Hijslast positie 1	1,35				
	HF H1 X - Horizontale factor hijslast 1 / x-richting	1,35				
NC UGT H1 BGE Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT H1 BGE Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	MW Y - Maximale wind / y-richting	1,35				
	H 1 - Hijslast positie 1	1,35				
	HF H1 Y - Horizontale factor hijslast 1 / y-richting	1,35				
NC UGT H1 BGE -X	EG - Eigen gewicht	1,20	Ultimate	SC UGT H1 BGE -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	MW -X - Maximale wind / -x-richting	1,35				
	H 1 - Hijslast positie 1	1,35				
	HF H1 -X - Horizontale factor hijslast 1 / -x-richting	1,35				
NC UGT H1 BGE -Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT H1 BGE -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	MW -Y - Maximale wind / -y-richting	1,35				
	H 1 - Hijslast positie 1	1,35				
	HF H1 -Y - Horizontale factor hijslast 1 / -y-richting	1,35				
NC BGT H2 BGE X	EG - Eigen gewicht	1,00	Serviceability	SC UGT H2 BGE X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	MW X - Maximale wind / x-richting	1,00				
	H 2 - Hijslast positie 2	1,00				
	HF H2 X - Horizontale factor hijslast 2 / x-richting	1,00				
NC BGT H2 BGE Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT H2 BGE Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	MW Y - Maximale wind / y-richting	1,00				
	H 2 - Hijslast positie 2	1,00				
	HF H2 Y - Horizontale factor hijslast 2 / y-richting	1,00				
NC BGT H2 BGE -X	EG - Eigen gewicht	1,00	Serviceability	SC UGT H2 BGE -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	MW -X - Maximale wind / -x-richting	1,00				
	H 2 - Hijslast positie 2	1,00				
	HF H2 -X - Horizontale factor hijslast 2 / -x-richting	1,00				
NC BGT H2 BGE -Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT H2 BGE -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	MW -Y - Maximale wind / -y-richting	1,00				
	H 2 - Hijslast positie 2	1,00				
	HF H2 -Y - Horizontale factor hijslast 2 / -y-richting	1,00				
NC UGT H2 BGE X	EG - Eigen gewicht	1,20	Ultimate	SC UGT H2 BGE X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	MW X - Maximale wind / x-richting	1,35				

Name	Load cases	Coeff [-]	Type	Stability	obal imperfectio	deforma [mm]
	H 2 - Hijslast positie 2	1,35				
	HF H2 X - Horizontale factor hijslast 2 / x-richting	1,35				
NC UGT H2 BGE Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT H2 BGE Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	MW Y - Maximale wind / y-richting	1,35				
	H 2 - Hijslast positie 2	1,35				
	HF H2 Y - Horizontale factor hijslast 2 / y-richting	1,35				
NC UGT H2 BGE -X	EG - Eigen gewicht	1,20	Ultimate	SC UGT H2 BGE -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	MW -X - Maximale wind / -x-richting	1,35				
	H 2 - Hijslast positie 2	1,35				
	HF H2 -X - Horizontale factor hijslast 2 / -x-richting	1,35				
NC UGT H2 BGE -Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT H2 BGE -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	MW -Y - Maximale wind / -y-richting	1,35				
	H 2 - Hijslast positie 2	1,35				
	HF H2 -Y - Horizontale factor hijslast 2 / -y-richting	1,35				
NC BGT H3 BGE X	EG - Eigen gewicht	1,00	Serviceability	SC UGT H3 BGE X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	MW X - Maximale wind / x-richting	1,00				
	H 3 - Hijslast positie 3	1,00				
	HF H3 X - Horizontale factor hijslast 3 / x-richting	1,00				
NC BGT H3 BGE Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT H3 BGE Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	MW Y - Maximale wind / y-richting	1,00				
	H 3 - Hijslast positie 3	1,00				
	HF H3 Y - Horizontale factor hijslast 3 / y-richting	1,00				
NC BGT H3 BGE -X	EG - Eigen gewicht	1,00	Serviceability	SC UGT H3 BGE -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	MW -X - Maximale wind / -x-richting	1,00				
	H 3 - Hijslast positie 3	1,00				
	HF H3 -X - Horizontale factor hijslast 3 / -x-richting	1,00				
NC BGT H3 BGE -Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT H3 BGE -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	MW -Y - Maximale wind / -y-richting	1,00				
	H 3 - Hijslast positie 3	1,00				
	HF H3 -Y - Horizontale factor hijslast 3 / -y-richting	1,00				
NC UGT H3 BGE X	EG - Eigen gewicht	1,20	Ultimate	SC UGT H3 BGE X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	MW X - Maximale wind / x-richting	1,35				
	H 3 - Hijslast positie 3	1,35				
	HF H3 X - Horizontale factor hijslast 3 / x-richting	1,35				
NC UGT H3 BGE Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT H3 BGE Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	MW Y - Maximale wind / y-richting	1,35				
	H 3 - Hijslast positie 3	1,35				
	HF H3 Y - Horizontale factor hijslast 3 / y-richting	1,35				
NC UGT H3 BGE -X	EG - Eigen gewicht	1,20	Ultimate	SC UGT H3 BGE -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	MW -X - Maximale wind / -x-richting	1,35				
	H 3 - Hijslast positie 3	1,35				
	HF H3 -X - Horizontale factor hijslast 3 / -x-richting	1,35				
NC UGT H3 BGE -Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT H3 BGE -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	MW -Y - Maximale wind / -y-richting	1,35				

Name	Load cases	Coeff [-]	Type	Stability	obal imperfectio	deforma [mm]
	H 3 - Hijslast positie 3	1,35				
	HF H3 -Y - Horizontale factor hijslast 3 / -y-richting	1,35				
NC BGT H4 BGE X	EG - Eigen gewicht	1,00	Serviceability	SC UGT H4 BGE X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	MW X - Maximale wind / x-richting	1,00				
	H 4 - Hijslast positie 4	1,00				
	HF H4 X - Horizontale factor hijslast 4 / x-richting	1,00				
NC BGT H4 BGE Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT H4 BGE Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	MW Y - Maximale wind / y-richting	1,00				
	H 4 - Hijslast positie 4	1,00				
	HF H4 Y - Horizontale factor hijslast 4 / y-richting	1,00				
NC BGT H4 BGE -X	EG - Eigen gewicht	1,00	Serviceability	SC UGT H4 BGE -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	MW -X - Maximale wind / -x-richting	1,00				
	H 4 - Hijslast positie 4	1,00				
	HF H4 -X - Horizontale factor hijslast 4 / -x-richting	1,00				
NC BGT H4 BGE -Y	EG - Eigen gewicht	1,00	Serviceability	SC UGT H4 BGE -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,00				
	B - Ballast	1,00				
	MW -Y - Maximale wind / -y-richting	1,00				
	H 4 - Hijslast positie 4	1,00				
	HF H4 -Y - Horizontale factor hijslast 4 / -y-richting	1,00				
NC UGT H4 BGE X	EG - Eigen gewicht	1,20	Ultimate	SC UGT H4 BGE X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	MW X - Maximale wind / x-richting	1,35				
	H 4 - Hijslast positie 4	1,35				
	HF H4 X - Horizontale factor hijslast 4 / x-richting	1,35				
NC UGT H4 BGE Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT H4 BGE Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	MW Y - Maximale wind / y-richting	1,35				
	H 4 - Hijslast positie 4	1,35				
	HF H4 Y - Horizontale factor hijslast 4 / y-richting	1,35				
NC UGT H4 BGE -X	EG - Eigen gewicht	1,20	Ultimate	SC UGT H4 BGE -X	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	MW -X - Maximale wind / -x-richting	1,35				
	H 4 - Hijslast positie 4	1,35				
	HF H4 -X - Horizontale factor hijslast 4 / -x-richting	1,35				
NC UGT H4 BGE -Y	EG - Eigen gewicht	1,20	Ultimate	SC UGT H4 BGE -Y	Buckling shape	20,000
	EG VL - Eigen gewicht vloeren	1,20				
	B - Ballast	1,20				
	MW -Y - Maximale wind / -y-richting	1,35				
	H 4 - Hijslast positie 4	1,35				
	HF H4 -Y - Horizontale factor hijslast 4 / -y-richting	1,35				

4.3.2. Stability combinations

Name	Load cases	Coeff. [-]
SC UGT A BG X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	MW X - Maximale wind / x-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT A BG Y	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	MW Y - Maximale wind / y-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT A BG -X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	EG VL - Eigen gewicht vloeren	1,20

Name	Load cases	Coeff. [-]
SC UGT A BG -Y	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	MW -Y - Maximale wind / -y-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT A BGE X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 50% - 50% nuttige belasting op werkvloer 1	1,35
	MW X - Maximale wind / x-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT A BGE Y	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 50% - 50% nuttige belasting op werkvloer 1	1,35
	MW Y - Maximale wind / y-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT A BGE -X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 50% - 50% nuttige belasting op werkvloer 1	1,35
	MW -X - Maximale wind / -x-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT A BGE -Y	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 50% - 50% nuttige belasting op werkvloer 1	1,35
	MW -Y - Maximale wind / -y-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT A O X	EG - Eigen gewicht	0,90
	B - Ballast	0,90
	MW X - Maximale wind / x-richting	1,35
	EG VL - Eigen gewicht vloeren	0,90
SC UGT A O Y	EG - Eigen gewicht	0,90
	B - Ballast	0,90
	MW Y - Maximale wind / y-richting	1,35
	EG VL - Eigen gewicht vloeren	0,90
SC UGT A O -X	EG - Eigen gewicht	0,90
	B - Ballast	0,90
	MW -X - Maximale wind / -x-richting	1,35
	EG VL - Eigen gewicht vloeren	0,90
SC UGT A O -Y	EG - Eigen gewicht	0,90
	B - Ballast	0,90
	MW -Y - Maximale wind / -y-richting	1,35
	EG VL - Eigen gewicht vloeren	0,90
SC UGT A IG X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V op werkvloer 1	1,35
	WW X - Werkwind / x-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT A IG Y	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V op werkvloer 1	1,35
	WW Y - Werkwind / y-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT A IG -X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V op werkvloer 1	1,35
	WW -X - Werkwind / -x-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT A IG -Y	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V op werkvloer 1	1,35
	WW -Y - Werkwind / -y-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT A VC	EG - Eigen gewicht	1,20
	B - Ballast	1,20

Name	Load cases	Coeff. [-]
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V op werkvloer 1	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H1 IG X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V op werkvloer 1	1,35
	H 1 - Hijslast positie 1	1,35
	HF H1 X - Horizontale factor hijslast 1 / x-richting	1,20
	WW X - Werkwind / x-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H1 IG Y	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	WW Y - Werkwind / y-richting	1,35
	H 1 - Hijslast positie 1	1,35
	HF H1 Y - Horizontale factor hijslast 1 / y-richting	1,20
	NL H WV1 10% Y - Nuttige belasting horizontaal 10%V op werkvloer 1	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H1 IG -X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	H 1 - Hijslast positie 1	1,35
	HF H1 -X - Horizontale factor hijslast 1 / -x-richting	1,35
	NL H WV1 10% -X - Nuttige belasting horizontaal 10%V op werkvloer 1	1,20
	WW -X - Werkwind / -x-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H1 IG -Y	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	WW -Y - Werkwind / -y-richting	1,35
	H 1 - Hijslast positie 1	1,35
	HF H1 -Y - Horizontale factor hijslast 1 / -y-richting	1,20
	NL H WV1 10% -Y - Nuttige belasting horizontaal 10%V op werkvloer 1	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H1 VC	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V op werkvloer 1	1,35
	H 1 - Hijslast positie 1	1,20
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H2 IG X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V op werkvloer 1	1,35
	H 2 - Hijslast positie 2	1,35
	HF H2 X - Horizontale factor hijslast 2 / x-richting	1,20
	WW X - Werkwind / x-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H2 IG Y	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	WW Y - Werkwind / y-richting	1,35
	H 2 - Hijslast positie 2	1,35
	HF H2 Y - Horizontale factor hijslast 2 / y-richting	1,20
	NL H WV1 10% Y - Nuttige belasting horizontaal 10%V op werkvloer 1	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H2 IG -X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	H 2 - Hijslast positie 2	1,35
	HF H2 -X - Horizontale factor hijslast 2 / -x-richting	1,35
	NL H WV1 10% -X - Nuttige belasting horizontaal 10%V op werkvloer 1	1,20
	WW -X - Werkwind / -x-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H2 IG -Y	EG - Eigen gewicht	1,20

Name	Load cases	Coeff. [-]
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	WW -Y - Werkwind / -y-richting	1,35
	H 2 - Hijslast positie 2	1,35
	HF H2 -Y - Horizontale factor hijslast 2 / -y-richting	1,20
	NL H WV1 10% -Y - Nuttige belasting horizontaal 10%V op werkvloer 1	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H2 VC	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V op werkvloer 1	1,35
	H 2 - Hijslast positie 2	1,20
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H3 IG X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V op werkvloer 1	1,35
	H 3 - Hijslast positie 3	1,35
	HF H3 X - Horizontale factor hijslast 3 / x-richting	1,20
	WW X - Werkwind / x-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H3 IG Y	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	WW Y - Werkwind / y-richting	1,35
	H 3 - Hijslast positie 3	1,35
	HF H3 Y - Horizontale factor hijslast 3 / y-richting	1,20
	NL H WV1 10% Y - Nuttige belasting horizontaal 10%V op werkvloer 1	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H3 IG -X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	H 3 - Hijslast positie 3	1,35
	HF H3 -X - Horizontale factor hijslast 3 / -x-richting	1,35
	NL H WV1 10% -X - Nuttige belasting horizontaal 10%V op werkvloer 1	1,20
	WW -X - Werkwind / -x-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H3 IG -Y	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	WW -Y - Werkwind / -y-richting	1,35
	H 3 - Hijslast positie 3	1,35
	HF H3 -Y - Horizontale factor hijslast 3 / -y-richting	1,20
	NL H WV1 10% -Y - Nuttige belasting horizontaal 10%V op werkvloer 1	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H3 VC	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V op werkvloer 1	1,35
	H 3 - Hijslast positie 3	1,20
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H4 IG X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V op werkvloer 1	1,35
	H 4 - Hijslast positie 4	1,35
	HF H4 X - Horizontale factor hijslast 4 / x-richting	1,20
	WW X - Werkwind / x-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H4 IG Y	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	WW Y - Werkwind / y-richting	1,35
	H 4 - Hijslast positie 4	1,35
	HF H4 Y - Horizontale factor hijslast 4 / y-richting	1,20
	NL H WV1 10% Y - Nuttige belasting horizontaal 10%V op werkvloer 1	1,35

Name	Load cases	Coeff. [-]
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H4 IG -X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	H 4 - Hijslast positie 4	1,35
	HF H4 -X - Horizontale factor hijslast 4 / -x-richting	1,35
	NL H WV1 10% -X - Nuttige belasting horizontaal 10%V op werkvloer 1	1,20
	WW -X - Werkwind / -x-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H4 IG -Y	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	WW -Y - Werkwind / -y-richting	1,35
	H 4 - Hijslast positie 4	1,35
	HF H4 -Y - Horizontale factor hijslast 4 / -y-richting	1,20
	NL H WV1 10% -Y - Nuttige belasting horizontaal 10%V op werkvloer 1	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H4 VC	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	NL WV1 - Nuttige belasting op werkvloer 1	1,35
	NL H WV1 10% X - Nuttige belasting horizontaal 10%V op werkvloer 1	1,35
	H 4 - Hijslast positie 4	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H1 BGE X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	H 1 - Hijslast positie 1	1,35
	HF H1 X - Horizontale factor hijslast 1 / x-richting	1,35
	MW X - Maximale wind / x-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H1 BGE Y	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	MW Y - Maximale wind / y-richting	1,35
	H 1 - Hijslast positie 1	1,35
	HF H1 Y - Horizontale factor hijslast 1 / y-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H1 BGE -X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	H 1 - Hijslast positie 1	1,35
	HF H1 -X - Horizontale factor hijslast 1 / -x-richting	1,35
	MW -X - Maximale wind / -x-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H1 BGE -Y	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	MW -Y - Maximale wind / -y-richting	1,35
	H 1 - Hijslast positie 1	1,35
	HF H1 -Y - Horizontale factor hijslast 1 / -y-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H2 BGE X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	H 2 - Hijslast positie 2	1,35
	HF H2 X - Horizontale factor hijslast 2 / x-richting	1,35
	MW X - Maximale wind / x-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H2 BGE Y	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	MW Y - Maximale wind / y-richting	1,35
	H 2 - Hijslast positie 2	1,35
	HF H2 Y - Horizontale factor hijslast 2 / y-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H2 BGE -X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	H 2 - Hijslast positie 2	1,35
	HF H2 -X - Horizontale factor hijslast 2 / -x-richting	1,35
	MW -X - Maximale wind / -x-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H2 BGE -Y	EG - Eigen gewicht	1,20

Name	Load cases	Coeff. [-]
	B - Ballast	1,20
	MW -Y - Maximale wind / -y-richting	1,35
	H 2 - Hijslast positie 2	1,35
	HF H2 -Y - Horizontale factor hijslast 2 / -y-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H3 BGE X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	H 3 - Hijslast positie 3	1,35
	HF H3 X - Horizontale factor hijslast 3 / x-richting	1,35
	MW X - Maximale wind / x-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H3 BGE Y	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	MW Y - Maximale wind / y-richting	1,35
	H 3 - Hijslast positie 3	1,35
	HF H3 Y - Horizontale factor hijslast 3 / y-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H3 BGE -X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	H 3 - Hijslast positie 3	1,35
	HF H3 -X - Horizontale factor hijslast 3 / -x-richting	1,35
	MW -X - Maximale wind / -x-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H3 BGE -Y	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	MW -Y - Maximale wind / -y-richting	1,35
	H 3 - Hijslast positie 3	1,35
	HF H3 -Y - Horizontale factor hijslast 3 / -y-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H4 BGE X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	H 4 - Hijslast positie 4	1,35
	HF H4 X - Horizontale factor hijslast 4 / x-richting	1,35
	MW X - Maximale wind / x-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H4 BGE Y	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	MW Y - Maximale wind / y-richting	1,35
	H 4 - Hijslast positie 4	1,35
	HF H4 Y - Horizontale factor hijslast 4 / y-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H4 BGE -X	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	H 4 - Hijslast positie 4	1,35
	HF H4 -X - Horizontale factor hijslast 4 / -x-richting	1,35
	MW -X - Maximale wind / -x-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT H4 BGE -Y	EG - Eigen gewicht	1,20
	B - Ballast	1,20
	MW -Y - Maximale wind / -y-richting	1,35
	H 4 - Hijslast positie 4	1,35
	HF H4 -Y - Horizontale factor hijslast 4 / -y-richting	1,35
	EG VL - Eigen gewicht vloeren	1,20
SC UGT A BG X/1 - 1,000		
SC UGT A BG X/2 - 1,002		
SC UGT A BG X/3 - 1,004		
SC UGT A BG X/4 - 1,011		
SC UGT A BG Y/1 - 1,000		
SC UGT A BG Y/2 - 1,001		
SC UGT A BG Y/3 - 1,002		
SC UGT A BG Y/4 - 1,003		
SC UGT A BGE X/1 - 1,000		
SC UGT A BGE X/2 - 1,002		
SC UGT A BGE X/3 - 1,004		
SC UGT A BGE X/4 - 1,011		
SC UGT A BGE Y/1 - 1,000		

Name	Load cases	Coeff. [-]
SC UGT A BGE Y/2 - 1,000		
SC UGT A BGE Y/3 - 1,003		
SC UGT A BGE Y/4 - 1,003		
SC UGT A IG X/1 - 1,000		
SC UGT A IG X/2 - 1,003		
SC UGT A IG X/3 - 1,008		
SC UGT A IG X/4 - 1,013		
SC UGT A IG Y/1 - 1,000		
SC UGT A IG Y/2 - 1,000		
SC UGT A IG Y/3 - 1,005		
SC UGT A IG Y/4 - 1,005		
SC UGT A O X/1 - 2,000		
SC UGT A O X/2 - 2,004		
SC UGT A O X/3 - 2,008		
SC UGT A O X/4 - 2,034		
SC UGT A O Y/1 - 2,000		
SC UGT A O Y/2 - 2,020		
SC UGT A O Y/3 - 2,057		
SC UGT A O Y/4 - 2,063		
SC UGT A BG -X/1 - 1,000		
SC UGT A BG -X/2 - 1,000		
SC UGT A BG -X/3 - 1,000		
SC UGT A BG -X/4 - 1,000		
SC UGT A BG -Y/1 - 1,000		
SC UGT A BG -Y/2 - 1,001		
SC UGT A BG -Y/3 - 1,002		
SC UGT A BG -Y/4 - 1,002		
SC UGT A BGE -X/1 - 1,000		
SC UGT A BGE -X/2 - 1,002		
SC UGT A BGE -X/3 - 1,004		
SC UGT A BGE -X/4 - 1,011		
SC UGT A BGE -Y/1 - 1,000		
SC UGT A BGE -Y/2 - 1,001		
SC UGT A BGE -Y/3 - 1,002		
SC UGT A BGE -Y/4 - 1,002		
SC UGT A IG -X/1 - 1,000		
SC UGT A IG -X/2 - 1,003		
SC UGT A IG -X/3 - 1,008		
SC UGT A IG -X/4 - 1,013		
SC UGT A IG -Y/1 - 1,000		
SC UGT A IG -Y/2 - 1,002		
SC UGT A IG -Y/3 - 1,002		
SC UGT A IG -Y/4 - 1,004		
SC UGT A O -X/1 - 2,000		
SC UGT A O -X/2 - 2,004		
SC UGT A O -X/3 - 2,008		
SC UGT A O -X/4 - 2,034		
SC UGT A O -Y/1 - 2,000		
SC UGT A O -Y/2 - 2,008		
SC UGT A O -Y/3 - 2,013		
SC UGT A O -Y/4 - 2,019		
SC UGT A VC/1 - 1,000		
SC UGT A VC/2 - 1,001		
SC UGT A VC/3 - 1,002		
SC UGT A VC/4 - 1,002		
SC UGT H1 IG X/1 - 1,000		
SC UGT H1 IG X/2 - 1,001		
SC UGT H1 IG X/3 - 1,006		
SC UGT H1 IG X/4 - 1,012		
SC UGT H1 IG Y/1 - 1,000		
SC UGT H1 IG Y/2 - 1,002		
SC UGT H1 IG Y/3 - 1,004		
SC UGT H1 IG Y/4 - 1,005		
SC UGT H1 IG -X/1 - 1,000		
SC UGT H1 IG -X/2 - 1,001		
SC UGT H1 IG -X/3 - 1,001		

Name	Load cases	Coeff. [-]
SC UGT H1 IG -X/4 - 1,008		
SC UGT H1 IG -Y/1 - 1,000		
SC UGT H1 IG -Y/2 - 1,001		
SC UGT H1 IG -Y/3 - 1,003		
SC UGT H1 IG -Y/4 - 1,004		
SC UGT H1 VC/1 - 1,000		
SC UGT H1 VC/2 - 1,000		
SC UGT H1 VC/3 - 1,002		
SC UGT H1 VC/4 - 1,002		
SC UGT H2 IG X/1 - 1,000		
SC UGT H2 IG X/2 - 1,002		
SC UGT H2 IG X/3 - 1,007		
SC UGT H2 IG X/4 - 1,013		
SC UGT H2 IG Y/1 - 1,000		
SC UGT H2 IG Y/2 - 1,002		
SC UGT H2 IG Y/3 - 1,004		
SC UGT H2 IG Y/4 - 1,005		
SC UGT H2 IG -X/1 - 1,000		
SC UGT H2 IG -X/2 - 1,001		
SC UGT H2 IG -X/3 - 1,001		
SC UGT H2 IG -X/4 - 1,007		
SC UGT H2 IG -Y/1 - 1,000		
SC UGT H2 IG -Y/2 - 1,001		
SC UGT H2 IG -Y/3 - 1,003		
SC UGT H2 IG -Y/4 - 1,004		
SC UGT H2 VC/1 - 1,000		
SC UGT H2 VC/2 - 1,000		
SC UGT H2 VC/3 - 1,002		
SC UGT H2 VC/4 - 1,002		
SC UGT H3 IG X/1 - 1,000		
SC UGT H3 IG X/2 - 1,002		
SC UGT H3 IG X/3 - 1,007		
SC UGT H3 IG X/4 - 1,012		
SC UGT H3 IG Y/1 - 1,000		
SC UGT H3 IG Y/2 - 1,002		
SC UGT H3 IG Y/3 - 1,004		
SC UGT H3 IG Y/4 - 1,005		
SC UGT H3 IG -X/1 - 1,000		
SC UGT H3 IG -X/2 - 1,001		
SC UGT H3 IG -X/3 - 1,001		
SC UGT H3 IG -X/4 - 1,008		
SC UGT H3 IG -Y/1 - 1,000		
SC UGT H3 IG -Y/2 - 1,001		
SC UGT H3 IG -Y/3 - 1,003		
SC UGT H3 IG -Y/4 - 1,004		
SC UGT H3 VC/1 - 1,000		
SC UGT H3 VC/2 - 1,000		
SC UGT H3 VC/3 - 1,002		
SC UGT H3 VC/4 - 1,002		
SC UGT H4 IG X/1 - 1,000		
SC UGT H4 IG X/2 - 1,002		
SC UGT H4 IG X/3 - 1,007		
SC UGT H4 IG X/4 - 1,012		
SC UGT H4 IG Y/1 - 1,000		
SC UGT H4 IG Y/2 - 1,002		
SC UGT H4 IG Y/3 - 1,004		
SC UGT H4 IG Y/4 - 1,005		
SC UGT H4 IG -X/1 - 1,000		
SC UGT H4 IG -X/2 - 1,001		
SC UGT H4 IG -X/3 - 1,001		
SC UGT H4 IG -X/4 - 1,008		
SC UGT H4 IG -Y/1 - 1,000		
SC UGT H4 IG -Y/2 - 1,001		
SC UGT H4 IG -Y/3 - 1,003		
SC UGT H4 IG -Y/4 - 1,004		
SC UGT H4 VC/1 - 1,000		

Name	Load cases	Coeff. [-]
SC UGT H4 VC/2 - 1,000		
SC UGT H4 VC/3 - 1,002		
SC UGT H4 VC/4 - 1,002		
SC UGT H1 BGE X/1 - 1,000		
SC UGT H1 BGE X/2 - 1,002		
SC UGT H1 BGE X/3 - 1,004		
SC UGT H1 BGE X/4 - 1,011		
SC UGT H1 BGE Y/1 - 1,000		
SC UGT H1 BGE Y/2 - 1,001		
SC UGT H1 BGE Y/3 - 1,002		
SC UGT H1 BGE Y/4 - 1,003		
SC UGT H1 BGE -X/1 - 1,000		
SC UGT H1 BGE -X/2 - 1,002		
SC UGT H1 BGE -X/3 - 1,004		
SC UGT H1 BGE -X/4 - 1,011		
SC UGT H1 BGE -Y/1 - 1,000		
SC UGT H1 BGE -Y/2 - 1,001		
SC UGT H1 BGE -Y/3 - 1,003		
SC UGT H1 BGE -Y/4 - 1,003		
SC UGT H2 BGE X/1 - 1,000		
SC UGT H2 BGE X/2 - 1,002		
SC UGT H2 BGE X/3 - 1,004		
SC UGT H2 BGE X/4 - 1,011		
SC UGT H2 BGE Y/1 - 1,000		
SC UGT H2 BGE Y/2 - 1,000		
SC UGT H2 BGE Y/3 - 1,002		
SC UGT H2 BGE Y/4 - 1,003		
SC UGT H2 BGE -X/1 - 1,000		
SC UGT H2 BGE -X/2 - 1,002		
SC UGT H2 BGE -X/3 - 1,004		
SC UGT H2 BGE -X/4 - 1,011		
SC UGT H2 BGE -Y/1 - 1,000		
SC UGT H2 BGE -Y/2 - 1,001		
SC UGT H2 BGE -Y/3 - 1,003		
SC UGT H2 BGE -Y/4 - 1,003		
SC UGT H3 BGE X/1 - 1,000		
SC UGT H3 BGE X/2 - 1,002		
SC UGT H3 BGE X/3 - 1,004		
SC UGT H3 BGE X/4 - 1,011		
SC UGT H3 BGE Y/1 - 1,000		
SC UGT H3 BGE Y/2 - 1,001		
SC UGT H3 BGE Y/3 - 1,002		
SC UGT H3 BGE Y/4 - 1,003		
SC UGT H3 BGE -X/1 - 1,000		
SC UGT H3 BGE -X/2 - 1,002		
SC UGT H3 BGE -X/3 - 1,004		
SC UGT H3 BGE -X/4 - 1,011		
SC UGT H3 BGE -Y/1 - 1,000		
SC UGT H3 BGE -Y/2 - 1,001		
SC UGT H3 BGE -Y/3 - 1,003		
SC UGT H3 BGE -Y/4 - 1,003		
SC UGT H4 BGE X/1 - 1,000		
SC UGT H4 BGE X/2 - 1,002		
SC UGT H4 BGE X/3 - 1,004		
SC UGT H4 BGE X/4 - 1,011		
SC UGT H4 BGE Y/1 - 1,000		
SC UGT H4 BGE Y/2 - 1,001		
SC UGT H4 BGE Y/3 - 1,002		
SC UGT H4 BGE Y/4 - 1,003		
SC UGT H4 BGE -X/1 - 1,000		
SC UGT H4 BGE -X/2 - 1,002		
SC UGT H4 BGE -X/3 - 1,004		
SC UGT H4 BGE -X/4 - 1,011		
SC UGT H4 BGE -Y/1 - 1,000		
SC UGT H4 BGE -Y/2 - 1,001		
SC UGT H4 BGE -Y/3 - 1,003		

Name	Load cases	Coeff. [-]
SC UGT H4 BGE -Y/4 - 1,003		

5. Resultaten

5.1. Berekeningsverslag

Linear calculation

Number of 2D elements	0
Number of 1D elements	6711
Number of mesh nodes	6008
Number of equations	36048
Bending theory	Mindlin
Load cases	EG, B, NL WV1, NL WV1 50%, NL H WV1 10% X, MW Y, WW Y, MW -Y, WW -Y, H 1, H 2, H 3, H 4, NL H WV1 10% Y, NL H WV1 10% -X, NL H WV1 10% -Y, MW X, WW X, MW -X, WW -X, EG VL
Start of calculation	14.06.2023 22:03
End of calculation	14.06.2023 22:03

Sum of loads and reactions

Load case	Value	X [kN]	Y [kN]	Z [kN]
EG	loads	0,000	0,000	-25,323
	reaction in nodes	0,000	0,000	25,323
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
B	loads	0,000	0,000	-54,000
	reaction in nodes	0,000	0,000	54,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NL WV1	loads	0,000	0,000	-263,944
	reaction in nodes	0,000	0,000	263,944
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NL WV1 50%	loads	0,000	0,000	-133,060
	reaction in nodes	0,000	0,000	133,060
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NL H WV1 10% X	loads	26,612	0,000	0,000
	reaction in nodes	-26,612	0,000	0,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
MW Y	loads	0,000	14,663	28,064
	reaction in nodes	0,000	-14,663	-28,064
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
WW Y	loads	0,000	19,735	23,730
	reaction in nodes	0,000	-19,735	-23,730
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
MW -Y	loads	0,000	-14,663	-17,538
	reaction in nodes	0,000	14,663	17,538
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
WW -Y	loads	0,000	-20,127	-10,372
	reaction in nodes	0,000	20,127	10,372
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
H 1	loads	0,000	0,000	-12,016
	reaction in nodes	0,000	0,000	12,016

Load case	Value	X [kN]	Y [kN]	Z [kN]
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
HF H1 X	loads	0,000	0,000	0,000
	reaction in nodes	0,000	0,000	0,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
HF H1 Y	loads	0,000	0,000	0,000
	reaction in nodes	0,000	0,000	0,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
HF H1 -X	loads	0,000	0,000	0,000
	reaction in nodes	0,000	0,000	0,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
HF H1 -Y	loads	0,000	0,000	0,000
	reaction in nodes	0,000	0,000	0,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
H 2	loads	0,000	0,000	-9,000
	reaction in nodes	0,000	0,000	9,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
HF H2 X	loads	0,000	0,000	0,000
	reaction in nodes	0,000	0,000	0,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
HF H2 Y	loads	0,000	0,000	0,000
	reaction in nodes	0,000	0,000	0,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
HF H2 -X	loads	0,000	0,000	0,000
	reaction in nodes	0,000	0,000	0,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
HF H2 -Y	loads	0,000	0,000	0,000
	reaction in nodes	0,000	0,000	0,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
H 3	loads	0,000	0,000	-10,000
	reaction in nodes	0,000	0,000	10,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
HF H3 X	loads	0,000	0,000	0,000
	reaction in nodes	0,000	0,000	0,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
HF H3 Y	loads	0,000	0,000	0,000
	reaction in nodes	0,000	0,000	0,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
HF H3 -X	loads	0,000	0,000	0,000
	reaction in nodes	0,000	0,000	0,000
	reaction on lines	0,000	0,000	0,000

Load case	Value	X [kN]	Y [kN]	Z [kN]
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
HF H3 -Y	loads	0,000	0,000	0,000
	reaction in nodes	0,000	0,000	0,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
H 4	loads	0,000	0,000	-10,000
	reaction in nodes	0,000	0,000	10,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
HF H4 X	loads	0,000	0,000	0,000
	reaction in nodes	0,000	0,000	0,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
HF H4 Y	loads	0,000	0,000	0,000
	reaction in nodes	0,000	0,000	0,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
HF H4 -X	loads	0,000	0,000	0,000
	reaction in nodes	0,000	0,000	0,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
HF H4 -Y	loads	0,000	0,000	0,000
	reaction in nodes	0,000	0,000	0,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NL H WV1 10% Y	loads	0,000	26,612	0,000
	reaction in nodes	0,000	-26,612	0,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NL H WV1 10% -X	loads	-26,612	0,000	0,000
	reaction in nodes	26,612	0,000	0,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NL H WV1 10% -Y	loads	0,000	-26,612	0,000
	reaction in nodes	0,000	26,612	0,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
MW X	loads	11,483	0,000	21,053
	reaction in nodes	-11,483	0,000	-21,053
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
WW X	loads	7,763	3,869	1,471
	reaction in nodes	-7,763	-3,869	-1,471
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
MW -X	loads	11,483	0,000	21,053
	reaction in nodes	-11,483	0,000	-21,053
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
WW -X	loads	7,763	3,869	1,471
	reaction in nodes	-7,763	-3,869	-1,471
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000

Load case	Value	X [kN]	Y [kN]	Z [kN]
	contact 2D	0,000	0,000	0,000
EG VL	loads	0,000	0,000	-12,345
	reaction in nodes	0,000	0,000	12,345
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000

Nonlinear calculation

Number of 2D elements	0
Number of 1D elements	6711
Number of mesh nodes	6008
Number of equations	36048
Bending theory	Mindlin
Geometrical nonlinearity	2nd order (Timoshenko)
Method of calculation	Picard
Number of increments	1
Maximum iterations	200

Nonlinear combination	Start of calculation	End of calculation	No. of iterations
NC BGT A BG X	14.06.2023 22:11	14.06.2023 22:11	23
NC BGT A BG Y	14.06.2023 22:11	14.06.2023 22:11	28
NC BGT A BGE X	14.06.2023 22:11	14.06.2023 22:12	27
NC BGT A BGE Y	14.06.2023 22:12	14.06.2023 22:12	35
NC BGT A IG X	14.06.2023 22:12	14.06.2023 22:12	30
NC BGT A IG Y	14.06.2023 22:12	14.06.2023 22:12	24
NC BGT A BG -X	14.06.2023 22:12	14.06.2023 22:12	23
NC BGT A BG -Y	14.06.2023 22:12	14.06.2023 22:12	50
NC BGT A BGE -X	14.06.2023 22:12	14.06.2023 22:12	27
NC BGT A BGE -Y	14.06.2023 22:12	14.06.2023 22:12	27
NC BGT A IG -X	14.06.2023 22:12	14.06.2023 22:12	11
NC BGT A IG -Y	14.06.2023 22:12	14.06.2023 22:12	40
NC BGT A VC	14.06.2023 22:12	14.06.2023 22:12	30
NC UGT A BG X	14.06.2023 22:12	14.06.2023 22:13	32
NC UGT A BG Y	14.06.2023 22:13	14.06.2023 22:13	37
NC UGT A BGE X	14.06.2023 22:13	14.06.2023 22:13	18
NC UGT A BGE Y	14.06.2023 22:13	14.06.2023 22:13	46
NC UGT A IG X	14.06.2023 22:13	14.06.2023 22:13	11
NC UGT A IG Y	14.06.2023 22:13	14.06.2023 22:13	32
NC UGT A O X	14.06.2023 22:13	14.06.2023 22:13	35
NC UGT A O Y	14.06.2023 22:13	14.06.2023 22:13	51
NC UGT A BG -X	14.06.2023 22:13	14.06.2023 22:13	32
NC UGT A BG -Y	14.06.2023 22:13	14.06.2023 22:13	32
NC UGT A BGE -X	14.06.2023 22:13	14.06.2023 22:13	18
NC UGT A BGE -Y	14.06.2023 22:13	14.06.2023 22:14	34
NC UGT A IG -X	14.06.2023 22:14	14.06.2023 22:14	11
NC UGT A IG -Y	14.06.2023 22:14	14.06.2023 22:14	30
NC UGT A O -X	14.06.2023 22:14	14.06.2023 22:14	37
NC UGT A O -Y	14.06.2023 22:14	14.06.2023 22:14	20
NC UGT A VC	14.06.2023 22:14	14.06.2023 22:14	25
NC BGT H1 IG X	14.06.2023 22:14	14.06.2023 22:14	19
NC BGT H1 IG Y	14.06.2023 22:14	14.06.2023 22:14	27
NC BGT H1 IG -X	14.06.2023 22:14	14.06.2023 22:14	19
NC BGT H1 IG -Y	14.06.2023 22:14	14.06.2023 22:14	48
NC BGT H1 VC	14.06.2023 22:14	14.06.2023 22:14	5
NC UGT H1 IG X	14.06.2023 22:14	14.06.2023 22:14	14
NC UGT H1 IG Y	14.06.2023 22:14	14.06.2023 22:15	34
NC UGT H1 IG -X	14.06.2023 22:15	14.06.2023 22:15	14
NC UGT H1 IG -Y	14.06.2023 22:15	14.06.2023 22:15	30
NC UGT H1 VC	14.06.2023 22:15	14.06.2023 22:15	5
NC BGT H2 IG X	14.06.2023 22:15	14.06.2023 22:15	13
NC BGT H2 IG Y	14.06.2023 22:15	14.06.2023 22:15	28
NC BGT H2 IG -X	14.06.2023 22:15	14.06.2023 22:15	13
NC BGT H2 IG -Y	14.06.2023 22:15	14.06.2023 22:15	36
NC BGT H2 VC	14.06.2023 22:15	14.06.2023 22:15	5

Nonlinear combination	Start of calculation	End of calculation	No. of iterations
NC UGT H2 IG X	14.06.2023 22:15	14.06.2023 22:15	11
NC UGT H2 IG Y	14.06.2023 22:15	14.06.2023 22:15	34
NC UGT H2 IG -X	14.06.2023 22:15	14.06.2023 22:15	11
NC UGT H2 IG -Y	14.06.2023 22:15	14.06.2023 22:15	30
NC UGT H2 VC	14.06.2023 22:15	14.06.2023 22:15	5
NC BGT H3 IG X	14.06.2023 22:15	14.06.2023 22:15	15
NC BGT H3 IG Y	14.06.2023 22:15	14.06.2023 22:16	27
NC BGT H3 IG -X	14.06.2023 22:16	14.06.2023 22:16	15
NC BGT H3 IG -Y	14.06.2023 22:16	14.06.2023 22:16	44
NC BGT H3 VC	14.06.2023 22:16	14.06.2023 22:16	5
NC UGT H3 IG X	14.06.2023 22:16	14.06.2023 22:16	12
NC UGT H3 IG Y	14.06.2023 22:16	14.06.2023 22:16	34
NC UGT H3 IG -X	14.06.2023 22:16	14.06.2023 22:16	12
NC UGT H3 IG -Y	14.06.2023 22:16	14.06.2023 22:16	30
NC UGT H3 VC	14.06.2023 22:16	14.06.2023 22:16	5
NC BGT H4 IG X	14.06.2023 22:16	14.06.2023 22:16	15
NC BGT H4 IG Y	14.06.2023 22:16	14.06.2023 22:16	28
NC BGT H4 IG -X	14.06.2023 22:16	14.06.2023 22:16	15
NC BGT H4 IG -Y	14.06.2023 22:16	14.06.2023 22:16	41
NC BGT H4 VC	14.06.2023 22:16	14.06.2023 22:17	5
NC UGT H4 IG X	14.06.2023 22:17	14.06.2023 22:17	12
NC UGT H4 IG Y	14.06.2023 22:17	14.06.2023 22:17	34
NC UGT H4 IG -X	14.06.2023 22:17	14.06.2023 22:17	12
NC UGT H4 IG -Y	14.06.2023 22:17	14.06.2023 22:17	30
NC UGT H4 VC	14.06.2023 22:17	14.06.2023 22:17	5
NC BGT H1 BGE X	14.06.2023 22:17	14.06.2023 22:17	24
NC BGT H1 BGE Y	14.06.2023 22:17	14.06.2023 22:17	35
NC BGT H1 BGE -X	14.06.2023 22:17	14.06.2023 22:17	24
NC BGT H1 BGE -Y	14.06.2023 22:17	14.06.2023 22:17	51
NC UGT H1 BGE X	14.06.2023 22:17	14.06.2023 22:17	33
NC UGT H1 BGE Y	14.06.2023 22:17	14.06.2023 22:18	42
NC UGT H1 BGE -X	14.06.2023 22:18	14.06.2023 22:18	33
NC UGT H1 BGE -Y	14.06.2023 22:18	14.06.2023 22:18	32
NC BGT H2 BGE X	14.06.2023 22:18	14.06.2023 22:18	30
NC BGT H2 BGE Y	14.06.2023 22:18	14.06.2023 22:18	41
NC BGT H2 BGE -X	14.06.2023 22:18	14.06.2023 22:18	30
NC BGT H2 BGE -Y	14.06.2023 22:18	14.06.2023 22:18	24
NC UGT H2 BGE X	14.06.2023 22:18	14.06.2023 22:18	20
NC UGT H2 BGE Y	14.06.2023 22:18	14.06.2023 22:18	48
NC UGT H2 BGE -X	14.06.2023 22:18	14.06.2023 22:18	20
NC UGT H2 BGE -Y	14.06.2023 22:18	14.06.2023 22:18	32
NC BGT H3 BGE X	14.06.2023 22:18	14.06.2023 22:19	41
NC BGT H3 BGE Y	14.06.2023 22:19	14.06.2023 22:19	37
NC BGT H3 BGE -X	14.06.2023 22:19	14.06.2023 22:19	41
NC BGT H3 BGE -Y	14.06.2023 22:19	14.06.2023 22:19	51
NC UGT H3 BGE X	14.06.2023 22:19	14.06.2023 22:19	26
NC UGT H3 BGE Y	14.06.2023 22:19	14.06.2023 22:19	47
NC UGT H3 BGE -X	14.06.2023 22:19	14.06.2023 22:19	26
NC UGT H3 BGE -Y	14.06.2023 22:19	14.06.2023 22:19	32
NC BGT H4 BGE X	14.06.2023 22:19	14.06.2023 22:19	38
NC BGT H4 BGE Y	14.06.2023 22:19	14.06.2023 22:19	37
NC BGT H4 BGE -X	14.06.2023 22:19	14.06.2023 22:20	38
NC BGT H4 BGE -Y	14.06.2023 22:20	14.06.2023 22:20	37
NC UGT H4 BGE X	14.06.2023 22:20	14.06.2023 22:20	34
NC UGT H4 BGE Y	14.06.2023 22:20	14.06.2023 22:20	46
NC UGT H4 BGE -X	14.06.2023 22:20	14.06.2023 22:20	34
NC UGT H4 BGE -Y	14.06.2023 22:20	14.06.2023 22:20	32

Sum of loads and reactions

Nonlinear combination	Value	X [kN]	Y [kN]	Z [kN]
NC BGT A BG X	loads	11,483	0,000	-70,615
	reaction in nodes	-11,483	0,000	70,615
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000

Nonlinear combination	Value	X [kN]	Y [kN]	Z [kN]
NC BGT A BG Y	loads	0,000	14,663	-63,604
	reaction in nodes	0,000	-14,663	63,604
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT A BGE X	loads	11,483	0,000	-203,675
	reaction in nodes	-11,483	0,000	203,675
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT A BGE Y	loads	0,000	14,663	-196,664
	reaction in nodes	0,000	-14,663	196,664
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT A IG X	loads	26,612	0,000	-355,612
	reaction in nodes	-26,612	0,000	355,612
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT A IG Y	loads	26,612	19,735	-331,882
	reaction in nodes	-26,612	-19,735	331,882
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT A BG -X	loads	11,483	0,000	-70,615
	reaction in nodes	-11,483	0,000	70,615
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT A BG -Y	loads	0,000	-14,663	-109,206
	reaction in nodes	0,000	14,663	109,206
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT A BGE -X	loads	11,483	0,000	-203,675
	reaction in nodes	-11,483	0,000	203,675
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT A BGE -Y	loads	0,000	-14,663	-242,265
	reaction in nodes	0,000	14,663	242,265
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT A IG -X	loads	34,374	3,869	-354,141
	reaction in nodes	-34,374	-3,869	354,141
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT A IG -Y	loads	26,612	-20,127	-365,983
	reaction in nodes	-26,612	20,127	365,983
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT A VC	loads	26,612	0,000	-355,612
	reaction in nodes	-26,612	0,000	355,612
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT A BG X	loads	15,502	0,000	-81,580
	reaction in nodes	-15,502	0,000	81,580
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT A BG Y	loads	0,000	19,794	-72,115

Nonlinear combination	Value	X [kN]	Y [kN]	Z [kN]
	reaction in nodes	0,000	-19,794	72,115
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT A BGE X	loads	15,502	0,000	-261,211
	reaction in nodes	-15,502	0,000	261,211
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT A BGE Y	loads	0,000	19,794	-251,746
	reaction in nodes	0,000	-19,794	251,746
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT A IG X	loads	46,405	5,222	-464,341
	reaction in nodes	-46,405	-5,222	464,341
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT A IG Y	loads	35,926	26,643	-434,291
	reaction in nodes	-35,926	-26,643	434,291
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT A O X	loads	15,502	0,000	-54,080
	reaction in nodes	-15,502	0,000	54,080
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT A O Y	loads	0,000	19,794	-44,615
	reaction in nodes	0,000	-19,794	44,615
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT A BG -X	loads	15,502	0,000	-81,580
	reaction in nodes	-15,502	0,000	81,580
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT A BG -Y	loads	0,000	-19,794	-133,677
	reaction in nodes	0,000	19,794	133,677
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT A BGE -X	loads	15,502	0,000	-261,211
	reaction in nodes	-15,502	0,000	261,211
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT A BGE -Y	loads	0,000	-19,794	-313,308
	reaction in nodes	0,000	19,794	313,308
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT A IG -X	loads	46,405	5,222	-464,341
	reaction in nodes	-46,405	-5,222	464,341
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT A IG -Y	loads	35,926	-27,171	-480,327
	reaction in nodes	-35,926	27,171	480,328
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT A O -X	loads	15,502	0,000	-54,080
	reaction in nodes	-15,502	0,000	54,080

Nonlinear combination	Value	X [kN]	Y [kN]	Z [kN]
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT A O -Y	loads	0,000	-19,794	-106,177
	reaction in nodes	0,000	19,794	106,177
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT A VC	loads	35,926	0,000	-466,326
	reaction in nodes	-35,926	0,000	466,326
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H1 IG X	loads	34,374	3,869	-366,157
	reaction in nodes	-34,374	-3,869	366,157
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H1 IG Y	loads	26,612	19,735	-343,898
	reaction in nodes	-26,612	-19,735	343,898
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H1 IG -X	loads	34,374	3,869	-366,157
	reaction in nodes	-34,374	-3,869	366,157
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H1 IG -Y	loads	26,612	-20,127	-378,000
	reaction in nodes	-26,612	20,127	378,000
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H1 VC	loads	26,612	0,000	-367,628
	reaction in nodes	-26,612	0,000	367,628
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H1 IG X	loads	46,405	5,222	-480,562
	reaction in nodes	-46,405	-5,222	480,562
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H1 IG Y	loads	35,926	26,643	-450,512
	reaction in nodes	-35,926	-26,643	450,512
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H1 IG -X	loads	46,405	5,222	-480,562
	reaction in nodes	-46,405	-5,222	480,562
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H1 IG -Y	loads	35,926	-27,171	-496,549
	reaction in nodes	-35,926	27,171	496,549
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H1 VC	loads	35,926	0,000	-482,548
	reaction in nodes	-35,926	0,000	482,548
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H2 IG X	loads	34,374	3,869	-363,141
	reaction in nodes	-34,374	-3,869	363,141
	reaction on lines	0,000	0,000	0,000

Nonlinear combination	Value	X [kN]	Y [kN]	Z [kN]
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H2 IG Y	loads	26,612	19,735	-340,882
	reaction in nodes	-26,612	-19,735	340,882
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H2 IG -X	loads	34,374	3,869	-363,141
	reaction in nodes	-34,374	-3,869	363,141
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H2 IG -Y	loads	26,612	-20,127	-374,983
	reaction in nodes	-26,612	20,127	374,983
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H2 VC	loads	26,612	0,000	-364,612
	reaction in nodes	-26,612	0,000	364,612
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H2 IG X	loads	46,405	5,222	-476,491
	reaction in nodes	-46,405	-5,222	476,491
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H2 IG Y	loads	35,926	26,643	-446,441
	reaction in nodes	-35,926	-26,643	446,441
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H2 IG -X	loads	46,405	5,222	-476,491
	reaction in nodes	-46,405	-5,222	476,491
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H2 IG -Y	loads	35,926	-27,171	-492,478
	reaction in nodes	-35,926	27,171	492,478
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H2 VC	loads	35,926	0,000	-478,476
	reaction in nodes	-35,926	0,000	478,476
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H3 IG X	loads	34,374	3,869	-364,141
	reaction in nodes	-34,374	-3,869	364,141
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H3 IG Y	loads	26,612	19,735	-341,882
	reaction in nodes	-26,612	-19,735	341,882
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H3 IG -X	loads	34,374	3,869	-364,141
	reaction in nodes	-34,374	-3,869	364,141
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H3 IG -Y	loads	26,612	-20,127	-375,983
	reaction in nodes	-26,612	20,127	375,983
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000

Nonlinear combination	Value	X [kN]	Y [kN]	Z [kN]
	contact 2D	0,000	0,000	0,000
NC BGT H3 VC	loads	26,612	0,000	-365,612
	reaction in nodes	-26,612	0,000	365,612
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H3 IG X	loads	46,405	5,222	-477,841
	reaction in nodes	-46,405	-5,222	477,841
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H3 IG Y	loads	35,926	26,643	-447,791
	reaction in nodes	-35,926	-26,643	447,791
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H3 IG -X	loads	46,405	5,222	-477,841
	reaction in nodes	-46,405	-5,222	477,841
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H3 IG -Y	loads	35,926	-27,171	-493,828
	reaction in nodes	-35,926	27,171	493,828
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H3 VC	loads	35,926	0,000	-479,826
	reaction in nodes	-35,926	0,000	479,826
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H4 IG X	loads	34,374	3,869	-364,141
	reaction in nodes	-34,374	-3,869	364,141
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H4 IG Y	loads	26,612	19,735	-341,882
	reaction in nodes	-26,612	-19,735	341,882
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H4 IG -X	loads	34,374	3,869	-364,141
	reaction in nodes	-34,374	-3,869	364,141
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H4 IG -Y	loads	26,612	-20,127	-375,983
	reaction in nodes	-26,612	20,127	375,983
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H4 VC	loads	26,612	0,000	-365,611
	reaction in nodes	-26,612	0,000	365,611
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H4 IG X	loads	46,405	5,222	-477,840
	reaction in nodes	-46,405	-5,222	477,840
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H4 IG Y	loads	35,926	26,643	-447,790
	reaction in nodes	-35,926	-26,643	447,790
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000

Nonlinear combination	Value	X [kN]	Y [kN]	Z [kN]
NC UGT H4 IG -X	loads	46,405	5,222	-477,840
	reaction in nodes	-46,405	-5,222	477,840
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H4 IG -Y	loads	35,926	-27,171	-493,827
	reaction in nodes	-35,926	27,171	493,827
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H4 VC	loads	35,926	0,000	-479,825
	reaction in nodes	-35,926	0,000	479,825
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H1 BGE X	loads	11,483	0,000	-82,631
	reaction in nodes	-11,483	0,000	82,631
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H1 BGE Y	loads	0,000	14,663	-75,620
	reaction in nodes	0,000	-14,663	75,620
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H1 BGE -X	loads	11,483	0,000	-82,631
	reaction in nodes	-11,483	0,000	82,631
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H1 BGE -Y	loads	0,000	-14,663	-121,222
	reaction in nodes	0,000	14,663	121,222
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H1 BGE X	loads	15,502	0,000	-97,802
	reaction in nodes	-15,502	0,000	97,802
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H1 BGE Y	loads	0,000	19,794	-88,337
	reaction in nodes	0,000	-19,794	88,337
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H1 BGE -X	loads	15,502	0,000	-97,802
	reaction in nodes	-15,502	0,000	97,802
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H1 BGE -Y	loads	0,000	-19,794	-149,899
	reaction in nodes	0,000	19,794	149,899
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H2 BGE X	loads	11,483	0,000	-79,615
	reaction in nodes	-11,483	0,000	79,615
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H2 BGE Y	loads	0,000	14,663	-72,604
	reaction in nodes	0,000	-14,663	72,604
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H2 BGE -X	loads	11,483	0,000	-79,615

Nonlinear combination	Value	X [kN]	Y [kN]	Z [kN]
	reaction in nodes	-11,483	0,000	79,615
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H2 BGE -Y	loads	0,000	-14,663	-118,206
	reaction in nodes	0,000	14,663	118,206
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H2 BGE X	loads	15,502	0,000	-93,730
	reaction in nodes	-15,502	0,000	93,730
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H2 BGE Y	loads	0,000	19,794	-84,265
	reaction in nodes	0,000	-19,794	84,265
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H2 BGE -X	loads	15,502	0,000	-93,730
	reaction in nodes	-15,502	0,000	93,730
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H2 BGE -Y	loads	0,000	-19,794	-145,827
	reaction in nodes	0,000	19,794	145,827
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H3 BGE X	loads	11,483	0,000	-80,615
	reaction in nodes	-11,483	0,000	80,615
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H3 BGE Y	loads	0,000	14,663	-73,604
	reaction in nodes	0,000	-14,663	73,604
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H3 BGE -X	loads	11,483	0,000	-80,615
	reaction in nodes	-11,483	0,000	80,615
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H3 BGE -Y	loads	0,000	-14,663	-119,206
	reaction in nodes	0,000	14,663	119,206
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H3 BGE X	loads	15,502	0,000	-95,080
	reaction in nodes	-15,502	0,000	95,080
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H3 BGE Y	loads	0,000	19,794	-85,615
	reaction in nodes	0,000	-19,794	85,615
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H3 BGE -X	loads	15,502	0,000	-95,080
	reaction in nodes	-15,502	0,000	95,080
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H3 BGE -Y	loads	0,000	-19,794	-147,177
	reaction in nodes	0,000	19,794	147,177

Nonlinear combination	Value	X [kN]	Y [kN]	Z [kN]
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H4 BGE X	loads	11,483	0,000	-80,615
	reaction in nodes	-11,483	0,000	80,615
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H4 BGE Y	loads	0,000	14,663	-73,604
	reaction in nodes	0,000	-14,663	73,604
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H4 BGE -X	loads	11,483	0,000	-80,615
	reaction in nodes	-11,483	0,000	80,615
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC BGT H4 BGE -Y	loads	0,000	-14,663	-119,205
	reaction in nodes	0,000	14,663	119,205
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H4 BGE X	loads	15,502	0,000	-95,080
	reaction in nodes	-15,502	0,000	95,080
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H4 BGE Y	loads	0,000	19,794	-85,615
	reaction in nodes	0,000	-19,794	85,615
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H4 BGE -X	loads	15,502	0,000	-95,080
	reaction in nodes	-15,502	0,000	95,080
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000
NC UGT H4 BGE -Y	loads	0,000	-19,794	-147,177
	reaction in nodes	0,000	19,794	147,177
	reaction on lines	0,000	0,000	0,000
	contact 1D	0,000	0,000	0,000
	contact 2D	0,000	0,000	0,000

5.2. Critical load coefficients

N -	f []
Stability combination : SC UGT A BG X	
1	1,000
2	1,002
3	1,004
4	1,011
Stability combination : SC UGT A BG Y	
1	1,000
2	1,001
3	1,002
4	1,003
Stability combination : SC UGT A BGE X	
1	1,000
2	1,002
3	1,004
4	1,011
Stability combination : SC UGT A BGE Y	
1	1,000
2	1,000

N -	f []
3	1,003
4	1,003
Stability combination : SC UGT A IG X	
1	1,000
2	1,003
3	1,008
4	1,013
Stability combination : SC UGT A IG Y	
1	1,000
2	1,000
3	1,005
4	1,005
Stability combination : SC UGT A O X	
1	2,000
2	2,004
3	2,008
4	2,034
Stability combination : SC UGT A O Y	
1	2,000
2	2,020
3	2,057
4	2,063
Stability combination : SC UGT A BG -X	
1	1,000
2	1,000
3	1,000
4	1,000
Stability combination : SC UGT A BG -Y	
1	1,000
2	1,001
3	1,002
4	1,002
Stability combination : SC UGT A BGE -X	
1	1,000
2	1,002
3	1,004
4	1,011
Stability combination : SC UGT A BGE -Y	
1	1,000
2	1,001
3	1,002
4	1,002
Stability combination : SC UGT A IG -X	
1	1,000
2	1,003
3	1,008
4	1,013
Stability combination : SC UGT A IG -Y	
1	1,000
2	1,002
3	1,002
4	1,004
Stability combination : SC UGT A O -X	
1	2,000
2	2,004
3	2,008
4	2,034
Stability combination : SC UGT A O -Y	
1	2,000
2	2,008
3	2,013
4	2,019
Stability combination : SC UGT A VC	
1	1,000
2	1,001
3	1,002

N -	f []
4	1,002
Stability combination : SC UGT H1 IG X	
1	1,000
2	1,001
3	1,006
4	1,012
Stability combination : SC UGT H1 IG Y	
1	1,000
2	1,002
3	1,004
4	1,005
Stability combination : SC UGT H1 IG -X	
1	1,000
2	1,001
3	1,001
4	1,008
Stability combination : SC UGT H1 IG -Y	
1	1,000
2	1,001
3	1,003
4	1,004
Stability combination : SC UGT H1 VC	
1	1,000
2	1,000
3	1,002
4	1,002
Stability combination : SC UGT H2 IG X	
1	1,000
2	1,002
3	1,007
4	1,013
Stability combination : SC UGT H2 IG Y	
1	1,000
2	1,002
3	1,004
4	1,005
Stability combination : SC UGT H2 IG -X	
1	1,000
2	1,001
3	1,001
4	1,007
Stability combination : SC UGT H2 IG -Y	
1	1,000
2	1,001
3	1,003
4	1,004
Stability combination : SC UGT H2 VC	
1	1,000
2	1,000
3	1,002
4	1,002
Stability combination : SC UGT H3 IG X	
1	1,000
2	1,002
3	1,007
4	1,012
Stability combination : SC UGT H3 IG Y	
1	1,000
2	1,002
3	1,004
4	1,005
Stability combination : SC UGT H3 IG -X	
1	1,000
2	1,001
3	1,001
4	1,008

N -	f []
Stability combination : SC UGT H3 IG -Y	
1	1,000
2	1,001
3	1,003
4	1,004
Stability combination : SC UGT H3 VC	
1	1,000
2	1,000
3	1,002
4	1,002
Stability combination : SC UGT H4 IG X	
1	1,000
2	1,002
3	1,007
4	1,012
Stability combination : SC UGT H4 IG Y	
1	1,000
2	1,002
3	1,004
4	1,005
Stability combination : SC UGT H4 IG -X	
1	1,000
2	1,001
3	1,001
4	1,008
Stability combination : SC UGT H4 IG -Y	
1	1,000
2	1,001
3	1,003
4	1,004
Stability combination : SC UGT H4 VC	
1	1,000
2	1,000
3	1,002
4	1,002
Stability combination : SC UGT H1 BGE X	
1	1,000
2	1,002
3	1,004
4	1,011
Stability combination : SC UGT H1 BGE Y	
1	1,000
2	1,001
3	1,002
4	1,003
Stability combination : SC UGT H1 BGE -X	
1	1,000
2	1,002
3	1,004
4	1,011
Stability combination : SC UGT H1 BGE -Y	
1	1,000
2	1,001
3	1,003
4	1,003
Stability combination : SC UGT H2 BGE X	
1	1,000
2	1,002
3	1,004
4	1,011
Stability combination : SC UGT H2 BGE Y	
1	1,000
2	1,000
3	1,002
4	1,003
Stability combination : SC UGT H2 BGE -X	

N -	f []
1	1,000
2	1,002
3	1,004
4	1,011
Stability combination : SC UGT H2 BGE -Y	
1	1,000
2	1,001
3	1,003
4	1,003
Stability combination : SC UGT H3 BGE X	
1	1,000
2	1,002
3	1,004
4	1,011
Stability combination : SC UGT H3 BGE Y	
1	1,000
2	1,001
3	1,002
4	1,003
Stability combination : SC UGT H3 BGE -X	
1	1,000
2	1,002
3	1,004
4	1,011
Stability combination : SC UGT H3 BGE -Y	
1	1,000
2	1,001
3	1,003
4	1,003
Stability combination : SC UGT H4 BGE X	
1	1,000
2	1,002
3	1,004
4	1,011
Stability combination : SC UGT H4 BGE Y	
1	1,000
2	1,001
3	1,002
4	1,003
Stability combination : SC UGT H4 BGE -X	
1	1,000
2	1,002
3	1,004
4	1,011
Stability combination : SC UGT H4 BGE -Y	
1	1,000
2	1,001
3	1,003
4	1,003

5.3. Resultclasses

Name	Description	List
Alle NC BGT	Alle niet-lineaire combinaties in BGT	NC BGT A BG X
		NC BGT A BG Y
		NC BGT A BGE X
		NC BGT A BGE Y
		NC BGT A IG X
		NC BGT A IG Y
		NC BGT A BG -X
		NC BGT A BG -Y
		NC BGT A BGE -X
		NC BGT A BGE -Y
		NC BGT A IG -X
		NC BGT A IG -Y
		NC BGT A VC

Name	Description	List
		NC BGT H1 IG X
		NC BGT H1 IG Y
		NC BGT H1 IG -X
		NC BGT H1 IG -Y
		NC BGT H1 VC
		NC BGT H2 IG X
		NC BGT H2 IG Y
		NC BGT H2 IG -X
		NC BGT H2 IG -Y
		NC BGT H2 VC
		NC BGT H3 IG X
		NC BGT H3 IG Y
		NC BGT H3 IG -X
		NC BGT H3 IG -Y
		NC BGT H3 VC
Alle NC UGT	Alle niet-lineaire combinaties in UGT	NC UGT A BG X
		NC UGT A BG Y
		NC UGT A BG -X
		NC UGT A BG -Y
		NC UGT A BGE X
		NC UGT A BGE Y
		NC UGT A BGE -X
		NC UGT A BGE -Y
		NC UGT A IG X
		NC UGT A IG Y
		NC UGT A IG -X
		NC UGT A IG -Y
		NC UGT A O X
		NC UGT A O Y
		NC UGT A O -X
		NC UGT A O -Y
		NC UGT A VC
		NC UGT H1 IG X
		NC UGT H1 IG Y
		NC UGT H1 IG -X
		NC UGT H1 IG -Y
		NC UGT H1 VC
		NC UGT H2 IG X
		NC UGT H2 IG Y
		NC UGT H2 IG -X
		NC UGT H2 IG -Y
		NC UGT H2 VC
		NC UGT H3 IG X
		NC UGT H3 IG Y
		NC UGT H3 IG -X
		NC UGT H3 IG -Y
		NC UGT H3 VC
		NC UGT H4 IG X
		NC UGT H4 IG Y
		NC UGT H4 IG -X
		NC UGT H4 IG -Y
		NC UGT H4 VC
		NC UGT H1 BGE X
		NC UGT H1 BGE Y
		NC UGT H1 BGE -X
		NC UGT H1 BGE -Y
		NC UGT H2 BGE X
		NC UGT H2 BGE Y
		NC UGT H2 BGE -X
		NC UGT H2 BGE -Y
		NC UGT H3 BGE X
		NC UGT H3 BGE Y
		NC UGT H3 BGE -X
		NC UGT H3 BGE -Y
		NC UGT H4 BGE X
		NC UGT H4 BGE Y
		NC UGT H4 BGE -X

Name	Description	List
		NC UGT H4 BGE -Y
IG NC UGT	Alle niet-lineaire combinaties in UGT	NC UGT A IG X
		NC UGT A IG Y
		NC UGT A IG -X
		NC UGT A IG -Y
		NC UGT A VC

5.4. Steunpunt reacties

Deze waarden bepalen de globale stabiliteit van de constructie. De ondergrond, respectievelijk de constructie, waarop deze reactiekrachten tot uiting komen dient gecontroleerd te worden door de opdrachtgever

5.4.1. Reactions

Nonlinear calculation
Class: Alle NC UGT
System: Global
Extreme: No
Selection: All
Nodal reactions

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn1/K5	NC UGT A BG X	-0,626	-0,035	2,980	0,000	-0,028	-0,011
Sn1/K5	NC UGT A BG Y	-0,396	-1,061	8,691	0,099	0,001	-0,002
Sn1/K5	NC UGT A BG -X	-0,626	-0,035	2,980	0,000	-0,028	-0,011
Sn1/K5	NC UGT A BG -Y	-0,085	0,851	2,056	-0,052	0,010	0,001
Sn1/K5	NC UGT A BGE X	-0,464	-0,010	5,380	-0,001	-0,023	-0,011
Sn1/K5	NC UGT A BGE Y	-0,398	-1,336	12,278	0,071	0,002	-0,007
Sn1/K5	NC UGT A BGE -X	-0,464	-0,010	5,380	-0,001	-0,023	-0,011
Sn1/K5	NC UGT A BGE -Y	-0,079	0,871	4,338	-0,053	0,010	0,001
Sn1/K5	NC UGT A IG X	-1,148	-0,224	8,713	0,006	-0,068	-0,011
Sn1/K5	NC UGT A IG Y	-1,080	-1,062	13,372	0,056	-0,050	-0,006
Sn1/K5	NC UGT A IG -X	-1,148	-0,224	8,713	0,006	-0,068	-0,011
Sn1/K5	NC UGT A IG -Y	-0,940	0,974	5,203	-0,057	-0,047	0,015
Sn1/K5	NC UGT A O X	-0,448	0,048	0,896	0,002	-0,028	-0,010
Sn1/K5	NC UGT A O Y	-0,301	-2,056	6,985	0,162	0,000	-0,001
Sn1/K5	NC UGT A O -X	-0,448	0,048	0,896	0,002	-0,028	-0,010
Sn1/K5	NC UGT A O -Y	0,019	0,267	0,533	-0,035	0,010	0,001
Sn1/K5	NC UGT A VC	-0,990	0,111	9,120	-0,004	-0,047	-0,004
Sn1/K5	NC UGT H1 IG X	-1,154	-0,223	8,614	0,006	-0,068	-0,010
Sn1/K5	NC UGT H1 IG Y	-1,060	-0,922	13,151	0,051	-0,050	-0,005
Sn1/K5	NC UGT H1 IG -X	-1,154	-0,223	8,614	0,006	-0,068	-0,010
Sn1/K5	NC UGT H1 IG -Y	-0,945	0,980	5,160	-0,058	-0,047	0,016
Sn1/K5	NC UGT H1 VC	-0,995	0,116	9,074	-0,004	-0,047	-0,003
Sn1/K5	NC UGT H2 IG X	-1,155	-0,222	8,629	0,006	-0,068	-0,010
Sn1/K5	NC UGT H2 IG Y	-1,059	-0,921	13,154	0,051	-0,050	-0,005
Sn1/K5	NC UGT H2 IG -X	-1,155	-0,222	8,629	0,006	-0,068	-0,010
Sn1/K5	NC UGT H2 IG -Y	-0,944	0,980	5,168	-0,058	-0,047	0,016
Sn1/K5	NC UGT H2 VC	-0,995	0,116	9,079	-0,004	-0,047	-0,003
Sn1/K5	NC UGT H3 IG X	-1,154	-0,223	8,631	0,006	-0,068	-0,010
Sn1/K5	NC UGT H3 IG Y	-1,059	-0,922	13,161	0,051	-0,050	-0,005
Sn1/K5	NC UGT H3 IG -X	-1,154	-0,223	8,631	0,006	-0,068	-0,010
Sn1/K5	NC UGT H3 IG -Y	-0,944	0,979	5,168	-0,058	-0,047	0,016
Sn1/K5	NC UGT H3 VC	-0,994	0,115	9,082	-0,004	-0,047	-0,003
Sn1/K5	NC UGT H4 IG X	-1,154	-0,223	8,627	0,006	-0,068	-0,010
Sn1/K5	NC UGT H4 IG Y	-1,059	-0,922	13,156	0,051	-0,050	-0,005
Sn1/K5	NC UGT H4 IG -X	-1,154	-0,223	8,627	0,006	-0,068	-0,010
Sn1/K5	NC UGT H4 IG -Y	-0,944	0,980	5,167	-0,058	-0,047	0,016
Sn1/K5	NC UGT H4 VC	-0,995	0,116	9,079	-0,004	-0,047	-0,003
Sn1/K5	NC UGT H1 BGE X	-0,577	-0,044	2,939	0,000	-0,026	-0,011
Sn1/K5	NC UGT H1 BGE Y	-0,401	-1,335	8,670	0,071	0,002	-0,006
Sn1/K5	NC UGT H1 BGE -X	-0,577	-0,044	2,939	0,000	-0,026	-0,011

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn1/K5	NC UGT H1 BGE -Y	-0,092	0,857	2,006	-0,052	0,010	0,002
Sn1/K5	NC UGT H2 BGE X	-0,573	-0,043	2,957	0,000	-0,026	-0,011
Sn1/K5	NC UGT H2 BGE Y	-0,407	-1,242	8,532	0,078	0,001	-0,005
Sn1/K5	NC UGT H2 BGE -X	-0,573	-0,043	2,957	0,000	-0,026	-0,011
Sn1/K5	NC UGT H2 BGE -Y	-0,093	0,857	2,013	-0,052	0,010	0,002
Sn1/K5	NC UGT H3 BGE X	-0,579	-0,044	2,948	0,000	-0,026	-0,011
Sn1/K5	NC UGT H3 BGE Y	-0,405	-1,277	8,655	0,075	0,001	-0,006
Sn1/K5	NC UGT H3 BGE -X	-0,579	-0,044	2,948	0,000	-0,026	-0,011
Sn1/K5	NC UGT H3 BGE -Y	-0,092	0,857	2,014	-0,052	0,010	0,002
Sn1/K5	NC UGT H4 BGE X	-0,576	-0,044	2,950	0,000	-0,026	-0,011
Sn1/K5	NC UGT H4 BGE Y	-0,405	-1,273	8,609	0,076	0,001	-0,006
Sn1/K5	NC UGT H4 BGE -X	-0,576	-0,044	2,950	0,000	-0,026	-0,011
Sn1/K5	NC UGT H4 BGE -Y	-0,092	0,857	2,012	-0,052	0,010	0,002
Sn2/N2	NC UGT A BG X	-0,805	-0,051	6,781	0,000	-0,029	-0,001
Sn2/N2	NC UGT A BG Y	-0,403	-1,330	5,464	0,053	-0,001	0,027
Sn2/N2	NC UGT A BG -X	-0,805	-0,051	6,782	0,000	-0,029	-0,001
Sn2/N2	NC UGT A BG -Y	0,005	0,725	5,201	-0,030	0,008	-0,015
Sn2/N2	NC UGT A BGE X	-0,611	0,005	11,187	0,000	-0,023	0,001
Sn2/N2	NC UGT A BGE Y	-0,462	-0,986	9,887	0,040	0,000	0,019
Sn2/N2	NC UGT A BGE -X	-0,611	0,005	11,187	0,000	-0,023	0,001
Sn2/N2	NC UGT A BGE -Y	0,012	0,760	9,684	-0,030	0,008	-0,014
Sn2/N2	NC UGT A IG X	-1,612	-0,156	16,861	0,005	-0,068	-0,001
Sn2/N2	NC UGT A IG Y	-1,507	-0,961	16,019	0,039	-0,051	-0,011
Sn2/N2	NC UGT A IG -X	-1,612	-0,156	16,861	0,005	-0,068	-0,001
Sn2/N2	NC UGT A IG -Y	-1,207	0,969	13,958	-0,045	-0,048	0,016
Sn2/N2	NC UGT A O X	-1,094	-0,059	5,586	0,001	-0,039	0,001
Sn2/N2	NC UGT A O Y	-0,303	-2,210	4,420	0,101	-0,001	0,027
Sn2/N2	NC UGT A O -X	-1,094	-0,059	5,586	0,001	-0,039	0,001
Sn2/N2	NC UGT A O -Y	0,122	0,891	3,880	-0,034	0,009	-0,015
Sn2/N2	NC UGT A VC	-1,331	0,020	15,183	-0,002	-0,048	0,002
Sn2/N2	NC UGT H1 IG X	-1,620	-0,157	16,987	0,005	-0,068	-0,001
Sn2/N2	NC UGT H1 IG Y	-1,479	-0,893	16,136	0,037	-0,050	-0,012
Sn2/N2	NC UGT H1 IG -X	-1,620	-0,157	16,987	0,005	-0,068	-0,001
Sn2/N2	NC UGT H1 IG -Y	-1,211	0,969	14,047	-0,045	-0,048	0,015
Sn2/N2	NC UGT H1 VC	-1,336	0,019	15,291	-0,002	-0,048	0,001
Sn2/N2	NC UGT H2 IG X	-1,620	-0,158	16,987	0,005	-0,068	-0,001
Sn2/N2	NC UGT H2 IG Y	-1,478	-0,893	16,143	0,037	-0,050	-0,012
Sn2/N2	NC UGT H2 IG -X	-1,620	-0,158	16,987	0,005	-0,068	-0,001
Sn2/N2	NC UGT H2 IG -Y	-1,211	0,968	14,053	-0,045	-0,048	0,015
Sn2/N2	NC UGT H2 VC	-1,336	0,018	15,297	-0,002	-0,048	0,001
Sn2/N2	NC UGT H3 IG X	-1,619	-0,157	16,976	0,005	-0,068	-0,001
Sn2/N2	NC UGT H3 IG Y	-1,478	-0,893	16,126	0,037	-0,050	-0,012
Sn2/N2	NC UGT H3 IG -X	-1,619	-0,157	16,976	0,005	-0,068	-0,001
Sn2/N2	NC UGT H3 IG -Y	-1,210	0,969	14,041	-0,045	-0,048	0,015
Sn2/N2	NC UGT H3 VC	-1,336	0,019	15,283	-0,002	-0,048	0,001
Sn2/N2	NC UGT H4 IG X	-1,620	-0,157	16,984	0,005	-0,068	-0,001
Sn2/N2	NC UGT H4 IG Y	-1,478	-0,893	16,137	0,037	-0,050	-0,012
Sn2/N2	NC UGT H4 IG -X	-1,620	-0,157	16,984	0,005	-0,068	-0,001
Sn2/N2	NC UGT H4 IG -Y	-1,210	0,969	14,048	-0,045	-0,048	0,015
Sn2/N2	NC UGT H4 VC	-1,336	0,019	15,292	-0,002	-0,048	0,001
Sn2/N2	NC UGT H1 BGE X	-0,741	-0,044	6,870	0,000	-0,027	-0,001
Sn2/N2	NC UGT H1 BGE	-0,457	-1,047	5,469	0,040	0,000	0,017

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
	Y						
Sn2/N2	NC UGT H1 BGE -X	-0,741	-0,044	6,870	0,000	-0,027	-0,001
Sn2/N2	NC UGT H1 BGE -Y	-0,003	0,726	5,300	-0,030	0,008	-0,016
Sn2/N2	NC UGT H2 BGE X	-0,735	-0,043	6,868	0,000	-0,026	-0,001
Sn2/N2	NC UGT H2 BGE Y	-0,451	-1,085	5,504	0,042	0,000	0,020
Sn2/N2	NC UGT H2 BGE -X	-0,735	-0,043	6,868	0,000	-0,026	-0,001
Sn2/N2	NC UGT H2 BGE -Y	-0,003	0,725	5,307	-0,030	0,008	-0,016
Sn2/N2	NC UGT H3 BGE X	-0,744	-0,044	6,864	0,000	-0,027	-0,001
Sn2/N2	NC UGT H3 BGE Y	-0,454	-1,074	5,481	0,042	0,000	0,019
Sn2/N2	NC UGT H3 BGE -X	-0,744	-0,044	6,864	0,000	-0,027	-0,001
Sn2/N2	NC UGT H3 BGE -Y	-0,002	0,726	5,293	-0,030	0,008	-0,016
Sn2/N2	NC UGT H4 BGE X	-0,740	-0,044	6,868	0,000	-0,027	-0,001
Sn2/N2	NC UGT H4 BGE Y	-0,454	-1,073	5,489	0,042	0,000	0,019
Sn2/N2	NC UGT H4 BGE -X	-0,740	-0,044	6,868	0,000	-0,027	-0,001
Sn2/N2	NC UGT H4 BGE -Y	-0,003	0,726	5,302	-0,030	0,008	-0,016
Sn3/N7	NC UGT A BG X	0,000	0,000	0,000	-0,005	-0,004	-0,002
Sn3/N7	NC UGT A BG Y	-0,134	-0,598	1,197	0,012	-0,001	-0,004
Sn3/N7	NC UGT A BG -X	0,000	0,000	0,000	-0,005	-0,004	-0,002
Sn3/N7	NC UGT A BG -Y	0,112	0,550	1,740	-0,017	0,004	0,004
Sn3/N7	NC UGT A BGE X	-0,654	0,097	3,955	0,001	-0,023	-0,002
Sn3/N7	NC UGT A BGE Y	-0,140	-0,643	5,691	0,020	-0,001	-0,003
Sn3/N7	NC UGT A BGE -X	-0,654	0,097	3,955	0,001	-0,023	-0,002
Sn3/N7	NC UGT A BGE -Y	0,110	0,740	6,212	-0,015	0,004	0,004
Sn3/N7	NC UGT A IG X	-1,786	-0,053	8,257	0,005	-0,067	-0,004
Sn3/N7	NC UGT A IG Y	-1,407	-0,996	9,599	0,028	-0,051	-0,010
Sn3/N7	NC UGT A IG -X	-1,786	-0,053	8,257	0,005	-0,067	-0,004
Sn3/N7	NC UGT A IG -Y	-1,247	1,316	8,195	-0,032	-0,051	0,007
Sn3/N7	NC UGT A O X	0,000	0,000	0,000	-0,006	-0,004	-0,002
Sn3/N7	NC UGT A O Y	-0,067	-0,302	0,604	0,009	-0,001	-0,001
Sn3/N7	NC UGT A O -X	0,000	0,000	0,000	-0,006	-0,004	-0,002
Sn3/N7	NC UGT A O -Y	0,148	0,632	1,320	-0,019	0,004	0,004
Sn3/N7	NC UGT A VC	-1,301	0,167	9,254	0,002	-0,050	-0,003
Sn3/N7	NC UGT H1 IG X	-1,791	-0,070	8,482	0,005	-0,067	-0,005
Sn3/N7	NC UGT H1 IG Y	-1,390	-1,011	9,847	0,027	-0,051	-0,011
Sn3/N7	NC UGT H1 IG -X	-1,791	-0,070	8,482	0,005	-0,067	-0,005
Sn3/N7	NC UGT H1 IG -Y	-1,246	1,306	8,413	-0,032	-0,051	0,006
Sn3/N7	NC UGT H1 VC	-1,301	0,152	9,488	0,002	-0,050	-0,003
Sn3/N7	NC UGT H2 IG X	-1,790	-0,071	8,516	0,005	-0,067	-0,005
Sn3/N7	NC UGT H2 IG Y	-1,389	-1,013	9,878	0,027	-0,051	-0,011
Sn3/N7	NC UGT H2 IG -X	-1,790	-0,071	8,516	0,005	-0,067	-0,005
Sn3/N7	NC UGT H2 IG -Y	-1,246	1,304	8,438	-0,032	-0,051	0,006
Sn3/N7	NC UGT H2 VC	-1,301	0,150	9,516	0,002	-0,050	-0,003
Sn3/N7	NC UGT H3 IG X	-1,790	-0,068	8,458	0,005	-0,067	-0,005
Sn3/N7	NC UGT H3 IG Y	-1,389	-1,008	9,819	0,027	-0,051	-0,011
Sn3/N7	NC UGT H3 IG -X	-1,790	-0,068	8,458	0,005	-0,067	-0,005
Sn3/N7	NC UGT H3 IG -Y	-1,246	1,307	8,389	-0,032	-0,051	0,006
Sn3/N7	NC UGT H3 VC	-1,301	0,153	9,462	0,002	-0,050	-0,003
Sn3/N7	NC UGT H4 IG X	-1,790	-0,069	8,487	0,005	-0,067	-0,005
Sn3/N7	NC UGT H4 IG Y	-1,389	-1,011	9,849	0,027	-0,051	-0,011
Sn3/N7	NC UGT H4 IG -X	-1,790	-0,069	8,487	0,005	-0,067	-0,005
Sn3/N7	NC UGT H4 IG -Y	-1,246	1,305	8,414	-0,032	-0,051	0,006
Sn3/N7	NC UGT H4 VC	-1,301	0,152	9,490	0,002	-0,050	-0,003

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn3/N7	NC UGT H1 BGE X	0,000	0,000	0,000	-0,004	-0,004	-0,003
Sn3/N7	NC UGT H1 BGE Y	-0,131	-0,706	1,412	0,015	-0,001	-0,003
Sn3/N7	NC UGT H1 BGE -X	0,000	0,000	0,000	-0,004	-0,004	-0,003
Sn3/N7	NC UGT H1 BGE -Y	0,108	0,538	1,970	-0,017	0,004	0,004
Sn3/N7	NC UGT H2 BGE X	0,000	0,000	0,000	-0,004	-0,004	-0,003
Sn3/N7	NC UGT H2 BGE Y	-0,140	-0,713	1,427	0,015	-0,001	-0,004
Sn3/N7	NC UGT H2 BGE -X	0,000	0,000	0,000	-0,004	-0,004	-0,003
Sn3/N7	NC UGT H2 BGE -Y	0,108	0,536	1,997	-0,017	0,004	0,003
Sn3/N7	NC UGT H3 BGE X	0,000	0,000	0,000	-0,004	-0,004	-0,003
Sn3/N7	NC UGT H3 BGE Y	-0,136	-0,688	1,377	0,014	-0,001	-0,003
Sn3/N7	NC UGT H3 BGE -X	0,000	0,000	0,000	-0,004	-0,004	-0,003
Sn3/N7	NC UGT H3 BGE -Y	0,109	0,539	1,945	-0,017	0,004	0,004
Sn3/N7	NC UGT H4 BGE X	0,000	0,000	0,000	-0,004	-0,004	-0,003
Sn3/N7	NC UGT H4 BGE Y	-0,137	-0,702	1,405	0,014	-0,001	-0,003
Sn3/N7	NC UGT H4 BGE -X	0,000	0,000	0,000	-0,004	-0,004	-0,003
Sn3/N7	NC UGT H4 BGE -Y	0,108	0,538	1,972	-0,017	0,004	0,003
Sn4/N12	NC UGT A BG X	-0,201	-0,039	0,403	-0,002	-0,011	-0,002
Sn4/N12	NC UGT A BG Y	-0,085	-0,607	1,213	0,015	0,000	0,000
Sn4/N12	NC UGT A BG -X	-0,201	-0,038	0,402	-0,002	-0,011	-0,002
Sn4/N12	NC UGT A BG -Y	-0,015	0,395	2,000	-0,016	0,000	0,000
Sn4/N12	NC UGT A BGE X	-0,715	0,081	5,531	0,000	-0,025	-0,001
Sn4/N12	NC UGT A BGE Y	-0,066	-0,461	5,818	0,017	0,001	0,000
Sn4/N12	NC UGT A BGE -X	-0,715	0,081	5,531	0,000	-0,025	-0,001
Sn4/N12	NC UGT A BGE -Y	-0,013	0,544	6,620	-0,014	0,001	0,000
Sn4/N12	NC UGT A IG X	-1,859	-0,054	10,852	0,003	-0,070	0,000
Sn4/N12	NC UGT A IG Y	-1,429	-0,947	10,989	0,023	-0,053	-0,003
Sn4/N12	NC UGT A IG -X	-1,859	-0,054	10,852	0,003	-0,070	0,000
Sn4/N12	NC UGT A IG -Y	-1,379	1,250	9,573	-0,031	-0,054	0,002
Sn4/N12	NC UGT A O X	0,000	0,000	0,000	-0,003	-0,007	-0,003
Sn4/N12	NC UGT A O Y	-0,060	-0,393	0,787	0,010	0,000	0,003
Sn4/N12	NC UGT A O -X	0,000	0,000	0,000	-0,003	-0,007	-0,003
Sn4/N12	NC UGT A O -Y	0,017	0,451	1,552	-0,017	0,001	0,000
Sn4/N12	NC UGT A VC	-1,395	0,127	10,613	0,000	-0,053	-0,001
Sn4/N12	NC UGT H1 IG X	-1,864	-0,076	11,137	0,003	-0,070	0,000
Sn4/N12	NC UGT H1 IG Y	-1,422	-0,987	11,287	0,023	-0,053	-0,003
Sn4/N12	NC UGT H1 IG -X	-1,864	-0,076	11,137	0,003	-0,070	0,000
Sn4/N12	NC UGT H1 IG -Y	-1,375	1,238	9,833	-0,031	-0,054	0,002
Sn4/N12	NC UGT H1 VC	-1,393	0,109	10,894	0,000	-0,053	-0,001
Sn4/N12	NC UGT H2 IG X	-1,863	-0,076	11,191	0,003	-0,070	0,000
Sn4/N12	NC UGT H2 IG Y	-1,421	-0,990	11,343	0,023	-0,053	-0,003
Sn4/N12	NC UGT H2 IG -X	-1,863	-0,076	11,191	0,003	-0,070	0,000
Sn4/N12	NC UGT H2 IG -Y	-1,374	1,236	9,881	-0,031	-0,054	0,002
Sn4/N12	NC UGT H2 VC	-1,392	0,107	10,947	0,000	-0,053	-0,001
Sn4/N12	NC UGT H3 IG X	-1,863	-0,072	11,099	0,003	-0,070	0,000
Sn4/N12	NC UGT H3 IG Y	-1,421	-0,984	11,247	0,023	-0,053	-0,003
Sn4/N12	NC UGT H3 IG -X	-1,863	-0,072	11,099	0,003	-0,070	0,000
Sn4/N12	NC UGT H3 IG -Y	-1,375	1,239	9,798	-0,031	-0,054	0,002
Sn4/N12	NC UGT H3 VC	-1,392	0,111	10,857	0,000	-0,053	-0,001
Sn4/N12	NC UGT H4 IG X	-1,863	-0,075	11,142	0,003	-0,070	0,000
Sn4/N12	NC UGT H4 IG Y	-1,421	-0,987	11,292	0,023	-0,053	-0,003

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn4/N12	NC UGT H4 IG -X	-1,863	-0,075	11,142	0,003	-0,070	0,000
Sn4/N12	NC UGT H4 IG -Y	-1,375	1,238	9,837	-0,031	-0,054	0,002
Sn4/N12	NC UGT H4 VC	-1,392	0,109	10,899	0,000	-0,053	-0,001
Sn4/N12	NC UGT H1 BGE X	-0,445	-0,057	0,890	-0,002	-0,018	-0,002
Sn4/N12	NC UGT H1 BGE Y	-0,084	-0,651	1,478	0,017	0,001	0,000
Sn4/N12	NC UGT H1 BGE -X	-0,445	-0,057	0,890	-0,002	-0,018	-0,002
Sn4/N12	NC UGT H1 BGE -Y	-0,017	0,383	2,277	-0,016	0,000	0,000
Sn4/N12	NC UGT H2 BGE X	-0,487	-0,060	0,974	-0,002	-0,019	-0,001
Sn4/N12	NC UGT H2 BGE Y	-0,095	-0,650	1,534	0,017	0,000	0,000
Sn4/N12	NC UGT H2 BGE -X	-0,487	-0,060	0,974	-0,002	-0,019	-0,001
Sn4/N12	NC UGT H2 BGE -Y	-0,017	0,382	2,329	-0,016	0,000	0,000
Sn4/N12	NC UGT H3 BGE X	-0,415	-0,054	0,830	-0,002	-0,017	-0,002
Sn4/N12	NC UGT H3 BGE Y	-0,092	-0,652	1,442	0,017	0,000	0,000
Sn4/N12	NC UGT H3 BGE -X	-0,415	-0,054	0,830	-0,002	-0,017	-0,002
Sn4/N12	NC UGT H3 BGE -Y	-0,016	0,385	2,240	-0,016	0,000	0,000
Sn4/N12	NC UGT H4 BGE X	-0,450	-0,057	0,899	-0,002	-0,018	-0,002
Sn4/N12	NC UGT H4 BGE Y	-0,092	-0,651	1,485	0,017	0,000	0,000
Sn4/N12	NC UGT H4 BGE -X	-0,450	-0,057	0,899	-0,002	-0,018	-0,002
Sn4/N12	NC UGT H4 BGE -Y	-0,017	0,383	2,282	-0,016	0,000	0,000
Sn5/N17	NC UGT A BG X	-0,888	-0,097	2,345	-0,002	-0,030	-0,005
Sn5/N17	NC UGT A BG Y	-0,039	-0,568	1,135	0,010	0,001	0,003
Sn5/N17	NC UGT A BG -X	-0,888	-0,097	2,345	-0,002	-0,030	-0,005
Sn5/N17	NC UGT A BG -Y	-0,130	0,513	1,715	-0,016	-0,002	-0,005
Sn5/N17	NC UGT A BGE X	-0,743	0,102	6,737	0,000	-0,025	-0,005
Sn5/N17	NC UGT A BGE Y	-0,025	-0,538	5,539	0,017	0,003	0,003
Sn5/N17	NC UGT A BGE -X	-0,743	0,102	6,737	0,000	-0,025	-0,005
Sn5/N17	NC UGT A BGE -Y	-0,129	0,712	6,181	-0,015	-0,002	-0,005
Sn5/N17	NC UGT A IG X	-1,852	-0,058	12,488	0,005	-0,069	-0,001
Sn5/N17	NC UGT A IG Y	-1,405	-0,928	11,427	0,025	-0,052	0,007
Sn5/N17	NC UGT A IG -X	-1,852	-0,058	12,488	0,005	-0,069	-0,001
Sn5/N17	NC UGT A IG -Y	-1,444	1,316	10,135	-0,032	-0,055	-0,014
Sn5/N17	NC UGT A O X	-0,858	-0,061	1,717	-0,002	-0,031	-0,005
Sn5/N17	NC UGT A O Y	-0,028	-0,380	0,760	0,003	0,001	0,004
Sn5/N17	NC UGT A O -X	-0,858	-0,061	1,717	-0,002	-0,031	-0,005
Sn5/N17	NC UGT A O -Y	-0,096	0,558	1,297	-0,017	-0,002	-0,005
Sn5/N17	NC UGT A VC	-1,430	0,204	11,130	0,000	-0,053	-0,003
Sn5/N17	NC UGT H1 IG X	-1,858	-0,066	12,708	0,004	-0,069	0,000
Sn5/N17	NC UGT H1 IG Y	-1,404	-0,945	11,647	0,025	-0,052	0,007
Sn5/N17	NC UGT H1 IG -X	-1,858	-0,065	12,708	0,004	-0,069	0,000
Sn5/N17	NC UGT H1 IG -Y	-1,438	1,305	10,313	-0,032	-0,055	-0,013
Sn5/N17	NC UGT H1 VC	-1,426	0,191	11,333	0,000	-0,053	-0,002
Sn5/N17	NC UGT H2 IG X	-1,857	-0,069	12,731	0,004	-0,069	0,000
Sn5/N17	NC UGT H2 IG Y	-1,404	-0,949	11,677	0,025	-0,052	0,007
Sn5/N17	NC UGT H2 IG -X	-1,857	-0,069	12,731	0,004	-0,069	0,000
Sn5/N17	NC UGT H2 IG -Y	-1,437	1,304	10,337	-0,032	-0,055	-0,013
Sn5/N17	NC UGT H2 VC	-1,425	0,190	11,360	0,000	-0,053	-0,002
Sn5/N17	NC UGT H3 IG X	-1,857	-0,065	12,682	0,004	-0,069	0,000
Sn5/N17	NC UGT H3 IG Y	-1,404	-0,944	11,623	0,025	-0,052	0,007
Sn5/N17	NC UGT H3 IG -X	-1,857	-0,065	12,682	0,004	-0,069	0,000
Sn5/N17	NC UGT H3 IG -Y	-1,439	1,306	10,294	-0,032	-0,055	-0,014

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn5/N17	NC UGT H3 VC	-1,426	0,193	11,311	0,000	-0,053	-0,003
Sn5/N17	NC UGT H4 IG X	-1,857	-0,067	12,708	0,004	-0,069	0,000
Sn5/N17	NC UGT H4 IG Y	-1,404	-0,946	11,650	0,025	-0,052	0,007
Sn5/N17	NC UGT H4 IG -X	-1,857	-0,067	12,708	0,004	-0,069	0,000
Sn5/N17	NC UGT H4 IG -Y	-1,438	1,305	10,316	-0,032	-0,055	-0,013
Sn5/N17	NC UGT H4 VC	-1,425	0,191	11,336	0,000	-0,053	-0,002
Sn5/N17	NC UGT H1 BGE X	-0,834	-0,104	2,522	-0,002	-0,029	-0,005
Sn5/N17	NC UGT H1 BGE Y	-0,048	-0,648	1,296	0,013	0,001	0,004
Sn5/N17	NC UGT H1 BGE -X	-0,834	-0,104	2,522	-0,002	-0,029	-0,005
Sn5/N17	NC UGT H1 BGE -Y	-0,129	0,499	1,914	-0,016	-0,002	-0,004
Sn5/N17	NC UGT H2 BGE X	-0,829	-0,107	2,542	-0,002	-0,028	-0,005
Sn5/N17	NC UGT H2 BGE Y	-0,060	-0,672	1,344	0,014	0,001	0,004
Sn5/N17	NC UGT H2 BGE -X	-0,829	-0,107	2,542	-0,002	-0,028	-0,005
Sn5/N17	NC UGT H2 BGE -Y	-0,130	0,498	1,940	-0,016	-0,002	-0,004
Sn5/N17	NC UGT H3 BGE X	-0,837	-0,104	2,501	-0,002	-0,029	-0,005
Sn5/N17	NC UGT H3 BGE Y	-0,055	-0,642	1,283	0,013	0,001	0,004
Sn5/N17	NC UGT H3 BGE -X	-0,837	-0,104	2,501	-0,002	-0,029	-0,005
Sn5/N17	NC UGT H3 BGE -Y	-0,130	0,501	1,892	-0,016	-0,002	-0,004
Sn5/N17	NC UGT H4 BGE X	-0,833	-0,105	2,522	-0,002	-0,028	-0,005
Sn5/N17	NC UGT H4 BGE Y	-0,056	-0,655	1,311	0,013	0,001	0,004
Sn5/N17	NC UGT H4 BGE -X	-0,833	-0,105	2,522	-0,002	-0,028	-0,005
Sn5/N17	NC UGT H4 BGE -Y	-0,129	0,499	1,917	-0,016	-0,002	-0,004
Sn6/N22	NC UGT A BG X	-0,420	-0,032	2,938	-0,002	-0,035	-0,007
Sn6/N22	NC UGT A BG Y	0,280	-0,866	5,221	0,034	0,002	-0,015
Sn6/N22	NC UGT A BG -X	-0,420	-0,035	2,938	-0,002	-0,035	-0,007
Sn6/N22	NC UGT A BG -Y	0,011	0,550	5,470	-0,026	-0,007	0,009
Sn6/N22	NC UGT A BGE X	-0,278	0,008	7,540	-0,002	-0,031	-0,008
Sn6/N22	NC UGT A BGE Y	0,281	-0,611	9,754	0,028	0,002	-0,014
Sn6/N22	NC UGT A BGE -X	-0,278	0,008	7,540	-0,002	-0,031	-0,008
Sn6/N22	NC UGT A BGE -Y	0,018	0,589	9,953	-0,026	-0,007	0,007
Sn6/N22	NC UGT A IG X	-1,340	-0,186	11,274	0,005	-0,074	-0,003
Sn6/N22	NC UGT A IG Y	-1,041	-0,750	13,239	0,032	-0,054	0,011
Sn6/N22	NC UGT A IG -X	-1,340	-0,186	11,274	0,005	-0,074	-0,003
Sn6/N22	NC UGT A IG -Y	-1,158	0,794	11,551	-0,040	-0,060	-0,031
Sn6/N22	NC UGT A O X	-0,714	-0,035	1,428	-0,002	-0,042	-0,007
Sn6/N22	NC UGT A O Y	0,191	-1,742	3,949	0,058	0,002	-0,010
Sn6/N22	NC UGT A O -X	-0,714	-0,035	1,428	-0,002	-0,042	-0,007
Sn6/N22	NC UGT A O -Y	-0,013	0,565	4,148	-0,026	-0,006	0,009
Sn6/N22	NC UGT A VC	-1,082	-0,012	12,601	-0,002	-0,057	-0,007
Sn6/N22	NC UGT H1 IG X	-1,346	-0,167	11,401	0,004	-0,074	-0,002
Sn6/N22	NC UGT H1 IG Y	-1,039	-0,741	13,400	0,032	-0,054	0,012
Sn6/N22	NC UGT H1 IG -X	-1,346	-0,167	11,401	0,004	-0,074	-0,002
Sn6/N22	NC UGT H1 IG -Y	-1,152	0,793	11,691	-0,040	-0,059	-0,030
Sn6/N22	NC UGT H1 VC	-1,076	-0,010	12,746	-0,002	-0,057	-0,007
Sn6/N22	NC UGT H2 IG X	-1,346	-0,169	11,416	0,004	-0,074	-0,002
Sn6/N22	NC UGT H2 IG Y	-1,039	-0,741	13,408	0,032	-0,054	0,012
Sn6/N22	NC UGT H2 IG -X	-1,346	-0,169	11,415	0,004	-0,074	-0,002
Sn6/N22	NC UGT H2 IG -Y	-1,151	0,793	11,697	-0,040	-0,059	-0,030
Sn6/N22	NC UGT H2 VC	-1,076	-0,010	12,753	-0,002	-0,057	-0,007
Sn6/N22	NC UGT H3 IG X	-1,346	-0,169	11,392	0,004	-0,074	-0,002

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn6/N22	NC UGT H3 IG Y	-1,039	-0,742	13,386	0,032	-0,054	0,012
Sn6/N22	NC UGT H3 IG -X	-1,346	-0,169	11,392	0,004	-0,074	-0,002
Sn6/N22	NC UGT H3 IG -Y	-1,152	0,793	11,678	-0,040	-0,059	-0,030
Sn6/N22	NC UGT H3 VC	-1,077	-0,010	12,733	-0,002	-0,057	-0,007
Sn6/N22	NC UGT H4 IG X	-1,346	-0,169	11,405	0,004	-0,074	-0,002
Sn6/N22	NC UGT H4 IG Y	-1,039	-0,741	13,400	0,032	-0,054	0,012
Sn6/N22	NC UGT H4 IG -X	-1,346	-0,169	11,405	0,004	-0,074	-0,002
Sn6/N22	NC UGT H4 IG -Y	-1,152	0,793	11,690	-0,040	-0,059	-0,030
Sn6/N22	NC UGT H4 VC	-1,076	-0,010	12,746	-0,002	-0,057	-0,007
Sn6/N22	NC UGT H1 BGE X	-0,365	-0,025	3,119	-0,002	-0,034	-0,006
Sn6/N22	NC UGT H1 BGE Y	0,242	-0,652	5,384	0,027	0,001	-0,010
Sn6/N22	NC UGT H1 BGE -X	-0,365	-0,025	3,119	-0,002	-0,034	-0,006
Sn6/N22	NC UGT H1 BGE -Y	0,012	0,547	5,612	-0,026	-0,007	0,009
Sn6/N22	NC UGT H2 BGE X	-0,360	-0,029	3,141	-0,002	-0,033	-0,006
Sn6/N22	NC UGT H2 BGE Y	0,233	-0,660	5,383	0,027	0,000	-0,011
Sn6/N22	NC UGT H2 BGE -X	-0,360	-0,029	3,141	-0,002	-0,033	-0,006
Sn6/N22	NC UGT H2 BGE -Y	0,012	0,547	5,618	-0,026	-0,007	0,009
Sn6/N22	NC UGT H3 BGE X	-0,368	-0,027	3,104	-0,002	-0,034	-0,006
Sn6/N22	NC UGT H3 BGE Y	0,236	-0,661	5,366	0,027	0,001	-0,011
Sn6/N22	NC UGT H3 BGE -X	-0,368	-0,027	3,104	-0,002	-0,034	-0,006
Sn6/N22	NC UGT H3 BGE -Y	0,012	0,548	5,599	-0,026	-0,007	0,009
Sn6/N22	NC UGT H4 BGE X	-0,364	-0,027	3,124	-0,002	-0,033	-0,006
Sn6/N22	NC UGT H4 BGE Y	0,236	-0,660	5,377	0,027	0,001	-0,011
Sn6/N22	NC UGT H4 BGE -X	-0,364	-0,027	3,124	-0,002	-0,033	-0,006
Sn6/N22	NC UGT H4 BGE -Y	0,012	0,547	5,611	-0,026	-0,007	0,009
Sn7/N27	NC UGT A BG X	-0,213	0,059	7,501	-0,003	-0,037	-0,002
Sn7/N27	NC UGT A BG Y	0,413	-1,631	7,323	0,067	0,003	0,007
Sn7/N27	NC UGT A BG -X	-0,213	0,055	7,500	-0,003	-0,037	-0,002
Sn7/N27	NC UGT A BG -Y	0,006	0,943	4,823	-0,045	-0,011	-0,003
Sn7/N27	NC UGT A BGE X	-0,106	0,046	9,473	-0,004	-0,033	-0,002
Sn7/N27	NC UGT A BGE Y	0,372	-1,065	8,971	0,047	0,003	0,009
Sn7/N27	NC UGT A BGE -X	-0,106	0,046	9,473	-0,004	-0,033	-0,002
Sn7/N27	NC UGT A BGE -Y	0,010	0,954	7,077	-0,045	-0,010	-0,003
Sn7/N27	NC UGT A IG X	-0,950	-0,353	13,779	0,008	-0,076	0,000
Sn7/N27	NC UGT A IG Y	-0,729	-1,218	12,340	0,041	-0,055	0,008
Sn7/N27	NC UGT A IG -X	-0,950	-0,353	13,779	0,008	-0,076	0,000
Sn7/N27	NC UGT A IG -Y	-0,876	0,792	10,522	-0,043	-0,062	-0,022
Sn7/N27	NC UGT A O X	-0,507	0,022	6,293	-0,001	-0,044	-0,002
Sn7/N27	NC UGT A O Y	0,368	-2,623	6,549	0,098	0,005	0,006
Sn7/N27	NC UGT A O -X	-0,507	0,022	6,293	-0,001	-0,044	-0,002
Sn7/N27	NC UGT A O -Y	-0,034	0,940	3,297	-0,044	-0,009	-0,003
Sn7/N27	NC UGT A VC	-0,794	-0,145	11,623	-0,001	-0,059	-0,001
Sn7/N27	NC UGT H1 IG X	-0,956	-0,318	13,664	0,006	-0,076	0,000
Sn7/N27	NC UGT H1 IG Y	-0,727	-1,207	12,295	0,041	-0,055	0,008
Sn7/N27	NC UGT H1 IG -X	-0,956	-0,318	13,664	0,006	-0,076	0,000
Sn7/N27	NC UGT H1 IG -Y	-0,867	0,799	10,484	-0,043	-0,062	-0,022
Sn7/N27	NC UGT H1 VC	-0,787	-0,137	11,592	-0,002	-0,059	-0,001
Sn7/N27	NC UGT H2 IG X	-0,957	-0,318	13,643	0,006	-0,076	0,000
Sn7/N27	NC UGT H2 IG Y	-0,726	-1,207	12,283	0,041	-0,055	0,008
Sn7/N27	NC UGT H2 IG -X	-0,957	-0,319	13,644	0,006	-0,076	0,000

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn7/N27	NC UGT H2 IG -Y	-0,867	0,800	10,472	-0,043	-0,062	-0,022
Sn7/N27	NC UGT H2 VC	-0,786	-0,136	11,579	-0,002	-0,059	-0,001
Sn7/N27	NC UGT H3 IG X	-0,957	-0,319	13,664	0,006	-0,076	0,000
Sn7/N27	NC UGT H3 IG Y	-0,727	-1,208	12,298	0,041	-0,055	0,008
Sn7/N27	NC UGT H3 IG -X	-0,957	-0,319	13,664	0,006	-0,076	0,000
Sn7/N27	NC UGT H3 IG -Y	-0,868	0,799	10,487	-0,043	-0,062	-0,022
Sn7/N27	NC UGT H3 VC	-0,787	-0,138	11,594	-0,002	-0,059	-0,001
Sn7/N27	NC UGT H4 IG X	-0,957	-0,318	13,655	0,006	-0,076	0,000
Sn7/N27	NC UGT H4 IG Y	-0,727	-1,207	12,291	0,041	-0,055	0,008
Sn7/N27	NC UGT H4 IG -X	-0,957	-0,319	13,655	0,006	-0,076	0,000
Sn7/N27	NC UGT H4 IG -Y	-0,867	0,799	10,480	-0,043	-0,062	-0,022
Sn7/N27	NC UGT H4 VC	-0,787	-0,137	11,588	-0,002	-0,059	-0,001
Sn7/N27	NC UGT H1 BGE X	-0,169	0,053	7,250	-0,004	-0,036	-0,002
Sn7/N27	NC UGT H1 BGE Y	0,338	-1,077	6,384	0,045	0,001	0,010
Sn7/N27	NC UGT H1 BGE -X	-0,169	0,053	7,250	-0,004	-0,036	-0,002
Sn7/N27	NC UGT H1 BGE -Y	0,009	0,948	4,793	-0,045	-0,011	-0,003
Sn7/N27	NC UGT H2 BGE X	-0,165	0,055	7,269	-0,004	-0,035	-0,002
Sn7/N27	NC UGT H2 BGE Y	0,330	-1,104	6,514	0,046	0,001	0,009
Sn7/N27	NC UGT H2 BGE -X	-0,165	0,055	7,269	-0,004	-0,035	-0,002
Sn7/N27	NC UGT H2 BGE -Y	0,009	0,949	4,781	-0,045	-0,011	-0,003
Sn7/N27	NC UGT H3 BGE X	-0,171	0,054	7,286	-0,004	-0,036	-0,002
Sn7/N27	NC UGT H3 BGE Y	0,333	-1,105	6,469	0,046	0,001	0,009
Sn7/N27	NC UGT H3 BGE -X	-0,171	0,054	7,286	-0,004	-0,036	-0,002
Sn7/N27	NC UGT H3 BGE -Y	0,009	0,948	4,796	-0,045	-0,011	-0,003
Sn7/N27	NC UGT H4 BGE X	-0,168	0,055	7,272	-0,004	-0,036	-0,002
Sn7/N27	NC UGT H4 BGE Y	0,334	-1,105	6,454	0,046	0,001	0,009
Sn7/N27	NC UGT H4 BGE -X	-0,168	0,055	7,272	-0,004	-0,036	-0,002
Sn7/N27	NC UGT H4 BGE -Y	0,009	0,949	4,789	-0,045	-0,011	-0,003
Sn8/N32	NC UGT A BG X	-0,345	-0,007	0,689	0,000	-0,017	0,008
Sn8/N32	NC UGT A BG Y	0,000	0,000	0,000	0,051	-0,018	-0,007
Sn8/N32	NC UGT A BG -X	-0,345	-0,007	0,689	0,000	-0,017	0,008
Sn8/N32	NC UGT A BG -Y	-0,117	1,253	15,683	-0,051	-0,008	0,008
Sn8/N32	NC UGT A BGE X	-0,568	0,033	5,732	0,000	-0,022	0,007
Sn8/N32	NC UGT A BGE Y	0,000	0,000	0,000	0,028	0,000	-0,004
Sn8/N32	NC UGT A BGE -X	-0,568	0,033	5,732	0,000	-0,022	0,007
Sn8/N32	NC UGT A BGE -Y	-0,125	1,288	20,742	-0,052	-0,009	0,008
Sn8/N32	NC UGT A IG X	-1,443	-0,316	12,307	0,007	-0,069	-0,016
Sn8/N32	NC UGT A IG Y	-1,013	-1,487	3,156	0,056	-0,043	0,014
Sn8/N32	NC UGT A IG -X	-1,443	-0,316	12,307	0,007	-0,069	-0,016
Sn8/N32	NC UGT A IG -Y	-1,205	1,320	21,196	-0,057	-0,061	0,002
Sn8/N32	NC UGT A O X	0,000	0,000	0,000	0,003	-0,011	0,010
Sn8/N32	NC UGT A O Y	0,000	0,000	0,000	0,077	-0,028	-0,008
Sn8/N32	NC UGT A O -X	0,000	0,000	0,000	0,003	-0,011	0,010
Sn8/N32	NC UGT A O -Y	-0,177	1,666	14,043	-0,061	-0,011	-0,001
Sn8/N32	NC UGT A VC	-1,108	0,143	14,253	-0,004	-0,055	-0,002
Sn8/N32	NC UGT H1 IG X	-1,421	-0,314	15,749	0,006	-0,070	-0,014
Sn8/N32	NC UGT H1 IG Y	-1,021	-1,303	6,696	0,051	-0,045	0,015
Sn8/N32	NC UGT H1 IG -X	-1,421	-0,314	15,749	0,006	-0,070	-0,014
Sn8/N32	NC UGT H1 IG -Y	-1,171	1,321	24,645	-0,057	-0,062	0,004
Sn8/N32	NC UGT H1 VC	-1,079	0,148	17,664	-0,004	-0,055	-0,001

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn8/N32	NC UGT H2 IG X	-1,419	-0,314	14,656	0,006	-0,070	-0,014
Sn8/N32	NC UGT H2 IG Y	-1,021	-1,305	5,607	0,051	-0,045	0,015
Sn8/N32	NC UGT H2 IG -X	-1,419	-0,314	14,656	0,006	-0,070	-0,014
Sn8/N32	NC UGT H2 IG -Y	-1,171	1,322	23,561	-0,057	-0,062	0,004
Sn8/N32	NC UGT H2 VC	-1,078	0,147	16,579	-0,004	-0,055	0,000
Sn8/N32	NC UGT H3 IG X	-1,423	-0,314	15,136	0,006	-0,070	-0,014
Sn8/N32	NC UGT H3 IG Y	-1,024	-1,304	6,089	0,051	-0,045	0,015
Sn8/N32	NC UGT H3 IG -X	-1,423	-0,314	15,136	0,006	-0,070	-0,014
Sn8/N32	NC UGT H3 IG -Y	-1,175	1,321	24,032	-0,057	-0,062	0,004
Sn8/N32	NC UGT H3 VC	-1,082	0,147	17,057	-0,004	-0,055	-0,001
Sn8/N32	NC UGT H4 IG X	-1,421	-0,314	15,063	0,006	-0,070	-0,014
Sn8/N32	NC UGT H4 IG Y	-1,022	-1,304	6,014	0,051	-0,045	0,015
Sn8/N32	NC UGT H4 IG -X	-1,421	-0,314	15,063	0,006	-0,070	-0,014
Sn8/N32	NC UGT H4 IG -Y	-1,172	1,322	23,963	-0,057	-0,062	0,004
Sn8/N32	NC UGT H4 VC	-1,080	0,147	16,983	-0,004	-0,055	-0,001
Sn8/N32	NC UGT H1 BGE X	-0,632	-0,025	4,133	0,000	-0,025	0,008
Sn8/N32	NC UGT H1 BGE Y	0,000	0,000	0,000	0,027	-0,003	-0,003
Sn8/N32	NC UGT H1 BGE -X	-0,632	-0,025	4,133	0,000	-0,025	0,008
Sn8/N32	NC UGT H1 BGE -Y	-0,096	1,255	19,111	-0,052	-0,009	0,010
Sn8/N32	NC UGT H2 BGE X	-0,626	-0,023	3,042	0,000	-0,025	0,008
Sn8/N32	NC UGT H2 BGE Y	0,000	0,000	0,000	0,033	-0,007	-0,003
Sn8/N32	NC UGT H2 BGE -X	-0,626	-0,023	3,042	0,000	-0,025	0,008
Sn8/N32	NC UGT H2 BGE -Y	-0,094	1,256	18,024	-0,052	-0,009	0,010
Sn8/N32	NC UGT H3 BGE X	-0,637	-0,025	3,519	0,000	-0,025	0,008
Sn8/N32	NC UGT H3 BGE Y	0,000	0,000	0,000	0,031	-0,006	-0,003
Sn8/N32	NC UGT H3 BGE -X	-0,637	-0,025	3,519	0,000	-0,025	0,008
Sn8/N32	NC UGT H3 BGE -Y	-0,098	1,255	18,500	-0,052	-0,009	0,010
Sn8/N32	NC UGT H4 BGE X	-0,632	-0,024	3,447	0,000	-0,025	0,008
Sn8/N32	NC UGT H4 BGE Y	0,000	0,000	0,000	0,031	-0,006	-0,003
Sn8/N32	NC UGT H4 BGE -X	-0,632	-0,024	3,447	0,000	-0,025	0,008
Sn8/N32	NC UGT H4 BGE -Y	-0,096	1,256	18,428	-0,052	-0,009	0,010
Sn9/N37	NC UGT A BG X	-0,992	0,045	5,957	0,001	-0,027	0,013
Sn9/N37	NC UGT A BG Y	0,983	-0,983	1,967	0,041	0,011	0,046
Sn9/N37	NC UGT A BG -X	-0,992	0,045	5,957	0,001	-0,027	0,013
Sn9/N37	NC UGT A BG -Y	0,052	0,858	6,112	-0,028	-0,008	-0,038
Sn9/N37	NC UGT A BGE X	-0,789	0,129	16,220	0,001	-0,022	0,013
Sn9/N37	NC UGT A BGE Y	0,382	-0,865	14,838	0,037	0,012	0,027
Sn9/N37	NC UGT A BGE -X	-0,789	0,129	16,220	0,001	-0,022	0,013
Sn9/N37	NC UGT A BGE -Y	0,044	0,915	16,370	-0,028	-0,008	-0,039
Sn9/N37	NC UGT A IG X	-1,981	0,037	28,530	0,005	-0,070	0,014
Sn9/N37	NC UGT A IG Y	-1,211	-0,981	26,876	0,037	-0,048	0,010
Sn9/N37	NC UGT A IG -X	-1,981	0,037	28,530	0,005	-0,070	0,014
Sn9/N37	NC UGT A IG -Y	-1,403	1,332	29,550	-0,043	-0,063	-0,020
Sn9/N37	NC UGT A O X	-1,311	-0,003	4,154	0,001	-0,035	0,015
Sn9/N37	NC UGT A O Y	0,000	0,000	0,000	0,036	-0,023	0,053
Sn9/N37	NC UGT A O -X	-1,311	-0,003	4,154	0,001	-0,035	0,015
Sn9/N37	NC UGT A O -Y	-0,035	0,969	4,712	-0,032	-0,009	-0,029
Sn9/N37	NC UGT A VC	-1,364	0,211	28,264	-0,002	-0,057	-0,001
Sn9/N37	NC UGT H1 IG X	-1,943	0,031	28,544	0,005	-0,071	0,013
Sn9/N37	NC UGT H1 IG Y	-1,179	-0,932	26,893	0,035	-0,050	0,008

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn9/N37	NC UGT H1 IG -X	-1,943	0,031	28,544	0,005	-0,071	0,013
Sn9/N37	NC UGT H1 IG -Y	-1,339	1,328	29,571	-0,043	-0,064	-0,022
Sn9/N37	NC UGT H1 VC	-1,310	0,206	28,283	-0,002	-0,058	-0,002
Sn9/N37	NC UGT H2 IG X	-1,934	0,030	28,533	0,005	-0,071	0,013
Sn9/N37	NC UGT H2 IG Y	-1,177	-0,932	26,882	0,035	-0,050	0,008
Sn9/N37	NC UGT H2 IG -X	-1,934	0,030	28,533	0,005	-0,071	0,013
Sn9/N37	NC UGT H2 IG -Y	-1,335	1,327	29,560	-0,043	-0,064	-0,022
Sn9/N37	NC UGT H2 VC	-1,305	0,206	28,271	-0,002	-0,058	-0,002
Sn9/N37	NC UGT H3 IG X	-1,945	0,031	28,540	0,005	-0,070	0,013
Sn9/N37	NC UGT H3 IG Y	-1,185	-0,931	26,889	0,035	-0,050	0,008
Sn9/N37	NC UGT H3 IG -X	-1,945	0,031	28,540	0,005	-0,070	0,013
Sn9/N37	NC UGT H3 IG -Y	-1,345	1,328	29,567	-0,043	-0,064	-0,022
Sn9/N37	NC UGT H3 VC	-1,315	0,207	28,278	-0,002	-0,058	-0,002
Sn9/N37	NC UGT H4 IG X	-1,940	0,031	28,538	0,005	-0,071	0,013
Sn9/N37	NC UGT H4 IG Y	-1,180	-0,931	26,887	0,035	-0,050	0,008
Sn9/N37	NC UGT H4 IG -X	-1,940	0,031	28,538	0,005	-0,071	0,013
Sn9/N37	NC UGT H4 IG -Y	-1,339	1,327	29,565	-0,043	-0,064	-0,022
Sn9/N37	NC UGT H4 VC	-1,309	0,206	28,276	-0,002	-0,058	-0,002
Sn9/N37	NC UGT H1 BGE X	-0,829	0,048	5,979	0,001	-0,025	0,012
Sn9/N37	NC UGT H1 BGE Y	0,491	-0,980	4,321	0,038	0,010	0,026
Sn9/N37	NC UGT H1 BGE -X	-0,829	0,048	5,979	0,001	-0,025	0,012
Sn9/N37	NC UGT H1 BGE -Y	0,108	0,855	6,133	-0,028	-0,009	-0,039
Sn9/N37	NC UGT H2 BGE X	-0,818	0,049	5,968	0,001	-0,025	0,012
Sn9/N37	NC UGT H2 BGE Y	0,682	-1,044	3,665	0,040	0,011	0,031
Sn9/N37	NC UGT H2 BGE -X	-0,818	0,049	5,968	0,001	-0,025	0,012
Sn9/N37	NC UGT H2 BGE -Y	0,111	0,854	6,122	-0,028	-0,009	-0,039
Sn9/N37	NC UGT H3 BGE X	-0,837	0,048	5,975	0,001	-0,025	0,012
Sn9/N37	NC UGT H3 BGE Y	0,599	-1,022	3,921	0,039	0,011	0,029
Sn9/N37	NC UGT H3 BGE -X	-0,837	0,048	5,975	0,001	-0,025	0,012
Sn9/N37	NC UGT H3 BGE -Y	0,102	0,855	6,128	-0,028	-0,009	-0,039
Sn9/N37	NC UGT H4 BGE X	-0,827	0,049	5,973	0,001	-0,025	0,012
Sn9/N37	NC UGT H4 BGE Y	0,611	-1,023	3,897	0,039	0,011	0,029
Sn9/N37	NC UGT H4 BGE -X	-0,827	0,049	5,973	0,001	-0,025	0,012
Sn9/N37	NC UGT H4 BGE -Y	0,107	0,854	6,127	-0,028	-0,009	-0,039
Sn10/N42	NC UGT A BG X	-0,487	-0,007	0,975	0,000	-0,020	0,013
Sn10/N42	NC UGT A BG Y	0,000	0,000	0,000	0,006	-0,009	-0,003
Sn10/N42	NC UGT A BG -X	-0,487	-0,006	0,975	0,000	-0,020	0,013
Sn10/N42	NC UGT A BG -Y	-0,082	0,561	1,970	-0,018	-0,004	-0,002
Sn10/N42	NC UGT A BGE X	-0,612	0,001	11,172	0,000	-0,024	0,012
Sn10/N42	NC UGT A BGE Y	0,288	-0,518	10,861	0,021	0,005	0,000
Sn10/N42	NC UGT A BGE -X	-0,612	0,001	11,172	0,000	-0,024	0,012
Sn10/N42	NC UGT A BGE -Y	-0,087	0,543	12,089	-0,018	-0,004	-0,002
Sn10/N42	NC UGT A IG X	-1,842	-0,169	18,763	0,003	-0,072	0,009
Sn10/N42	NC UGT A IG Y	-1,267	-0,811	18,228	0,029	-0,052	0,013
Sn10/N42	NC UGT A IG -X	-1,842	-0,169	18,763	0,003	-0,072	0,009
Sn10/N42	NC UGT A IG -Y	-1,540	0,931	20,840	-0,038	-0,061	0,001
Sn10/N42	NC UGT A O X	-0,185	-0,033	0,370	-0,001	-0,011	0,015
Sn10/N42	NC UGT A O Y	0,000	0,000	0,000	0,009	-0,015	-0,001
Sn10/N42	NC UGT A O -X	-0,185	-0,033	0,370	-0,001	-0,011	0,015
Sn10/N42	NC UGT A O -Y	-0,119	0,611	1,609	-0,020	-0,005	-0,002

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn10/N42	NC UGT A VC	-1,433	-0,020	19,453	-0,002	-0,057	0,007
Sn10/N42	NC UGT H1 IG X	-1,848	-0,170	18,768	0,003	-0,072	0,009
Sn10/N42	NC UGT H1 IG Y	-1,289	-0,801	18,227	0,029	-0,052	0,013
Sn10/N42	NC UGT H1 IG -X	-1,848	-0,170	18,768	0,003	-0,072	0,009
Sn10/N42	NC UGT H1 IG -Y	-1,544	0,932	20,840	-0,038	-0,061	0,001
Sn10/N42	NC UGT H1 VC	-1,437	-0,019	19,452	-0,002	-0,057	0,007
Sn10/N42	NC UGT H2 IG X	-1,848	-0,168	18,766	0,003	-0,072	0,009
Sn10/N42	NC UGT H2 IG Y	-1,287	-0,800	18,227	0,029	-0,052	0,013
Sn10/N42	NC UGT H2 IG -X	-1,848	-0,168	18,766	0,003	-0,072	0,009
Sn10/N42	NC UGT H2 IG -Y	-1,542	0,932	20,839	-0,038	-0,061	0,001
Sn10/N42	NC UGT H2 VC	-1,436	-0,018	19,452	-0,002	-0,057	0,007
Sn10/N42	NC UGT H3 IG X	-1,847	-0,169	18,767	0,003	-0,072	0,009
Sn10/N42	NC UGT H3 IG Y	-1,288	-0,801	18,227	0,029	-0,052	0,013
Sn10/N42	NC UGT H3 IG -X	-1,847	-0,169	18,767	0,003	-0,072	0,009
Sn10/N42	NC UGT H3 IG -Y	-1,543	0,932	20,840	-0,038	-0,061	0,001
Sn10/N42	NC UGT H3 VC	-1,436	-0,019	19,452	-0,002	-0,057	0,007
Sn10/N42	NC UGT H4 IG X	-1,848	-0,169	18,767	0,003	-0,072	0,009
Sn10/N42	NC UGT H4 IG Y	-1,288	-0,801	18,227	0,029	-0,052	0,013
Sn10/N42	NC UGT H4 IG -X	-1,848	-0,169	18,767	0,003	-0,072	0,009
Sn10/N42	NC UGT H4 IG -Y	-1,543	0,932	20,839	-0,038	-0,061	0,001
Sn10/N42	NC UGT H4 VC	-1,436	-0,019	19,452	-0,002	-0,057	0,007
Sn10/N42	NC UGT H1 BGE X	-0,509	0,006	1,017	0,000	-0,020	0,013
Sn10/N42	NC UGT H1 BGE Y	0,305	-0,340	0,681	0,016	0,005	0,001
Sn10/N42	NC UGT H1 BGE -X	-0,509	0,006	1,017	0,000	-0,020	0,013
Sn10/N42	NC UGT H1 BGE -Y	-0,090	0,564	1,969	-0,018	-0,004	-0,002
Sn10/N42	NC UGT H2 BGE X	-0,510	0,008	1,020	0,000	-0,020	0,013
Sn10/N42	NC UGT H2 BGE Y	0,245	-0,245	0,490	0,013	0,002	0,000
Sn10/N42	NC UGT H2 BGE -X	-0,510	0,008	1,020	0,000	-0,020	0,013
Sn10/N42	NC UGT H2 BGE -Y	-0,089	0,564	1,967	-0,018	-0,004	-0,002
Sn10/N42	NC UGT H3 BGE X	-0,506	0,005	1,012	0,000	-0,020	0,013
Sn10/N42	NC UGT H3 BGE Y	0,282	-0,282	0,565	0,014	0,004	0,000
Sn10/N42	NC UGT H3 BGE -X	-0,506	0,005	1,012	0,000	-0,020	0,013
Sn10/N42	NC UGT H3 BGE -Y	-0,089	0,563	1,968	-0,018	-0,004	-0,002
Sn10/N42	NC UGT H4 BGE X	-0,508	0,006	1,016	0,000	-0,020	0,013
Sn10/N42	NC UGT H4 BGE Y	0,279	-0,279	0,558	0,014	0,003	0,000
Sn10/N42	NC UGT H4 BGE -X	-0,508	0,006	1,016	0,000	-0,020	0,013
Sn10/N42	NC UGT H4 BGE -Y	-0,090	0,564	1,968	-0,018	-0,004	-0,002
Sn11/N47	NC UGT A BG X	-0,749	0,032	1,498	-0,001	-0,028	0,009
Sn11/N47	NC UGT A BG Y	0,141	-0,466	0,932	0,021	-0,002	0,000
Sn11/N47	NC UGT A BG -X	-0,749	0,032	1,498	-0,001	-0,028	0,009
Sn11/N47	NC UGT A BG -Y	0,006	0,438	2,014	-0,017	-0,003	-0,001
Sn11/N47	NC UGT A BGE X	-0,655	0,026	11,882	-0,001	-0,025	0,010
Sn11/N47	NC UGT A BGE Y	0,106	-0,362	11,342	0,019	0,001	0,000
Sn11/N47	NC UGT A BGE -X	-0,655	0,026	11,882	-0,001	-0,025	0,010
Sn11/N47	NC UGT A BGE -Y	0,005	0,426	12,396	-0,017	-0,003	-0,001
Sn11/N47	NC UGT A IG X	-2,009	-0,082	21,889	0,001	-0,077	0,005
Sn11/N47	NC UGT A IG Y	-1,494	-0,686	20,752	0,026	-0,058	0,006
Sn11/N47	NC UGT A IG -X	-2,009	-0,082	21,889	0,001	-0,077	0,005
Sn11/N47	NC UGT A IG -Y	-1,591	0,917	23,649	-0,037	-0,064	0,004
Sn11/N47	NC UGT A O X	-0,534	0,013	1,068	-0,001	-0,022	0,010

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn11/N47	NC UGT A O Y	0,000	0,000	0,000	0,008	-0,010	0,002
Sn11/N47	NC UGT A O -X	-0,534	0,013	1,068	-0,001	-0,022	0,010
Sn11/N47	NC UGT A O -Y	-0,017	0,465	1,649	-0,018	-0,003	-0,001
Sn11/N47	NC UGT A VC	-1,551	0,012	22,147	-0,002	-0,061	0,005
Sn11/N47	NC UGT H1 IG X	-2,006	-0,087	21,875	0,002	-0,077	0,005
Sn11/N47	NC UGT H1 IG Y	-1,497	-0,703	20,734	0,027	-0,058	0,006
Sn11/N47	NC UGT H1 IG -X	-2,006	-0,087	21,875	0,002	-0,077	0,005
Sn11/N47	NC UGT H1 IG -Y	-1,584	0,916	23,637	-0,037	-0,064	0,004
Sn11/N47	NC UGT H1 VC	-1,545	0,009	22,132	-0,002	-0,061	0,005
Sn11/N47	NC UGT H2 IG X	-2,006	-0,083	21,874	0,001	-0,077	0,005
Sn11/N47	NC UGT H2 IG Y	-1,497	-0,701	20,733	0,027	-0,058	0,006
Sn11/N47	NC UGT H2 IG -X	-2,006	-0,083	21,874	0,001	-0,077	0,005
Sn11/N47	NC UGT H2 IG -Y	-1,583	0,917	23,636	-0,037	-0,064	0,004
Sn11/N47	NC UGT H2 VC	-1,545	0,010	22,131	-0,002	-0,061	0,005
Sn11/N47	NC UGT H3 IG X	-2,006	-0,085	21,877	0,001	-0,077	0,005
Sn11/N47	NC UGT H3 IG Y	-1,497	-0,702	20,736	0,027	-0,058	0,006
Sn11/N47	NC UGT H3 IG -X	-2,006	-0,085	21,877	0,001	-0,077	0,005
Sn11/N47	NC UGT H3 IG -Y	-1,584	0,916	23,639	-0,037	-0,064	0,004
Sn11/N47	NC UGT H3 VC	-1,545	0,009	22,134	-0,002	-0,061	0,005
Sn11/N47	NC UGT H4 IG X	-2,006	-0,084	21,875	0,001	-0,077	0,005
Sn11/N47	NC UGT H4 IG Y	-1,497	-0,702	20,734	0,027	-0,058	0,006
Sn11/N47	NC UGT H4 IG -X	-2,006	-0,084	21,875	0,001	-0,077	0,005
Sn11/N47	NC UGT H4 IG -Y	-1,583	0,916	23,637	-0,037	-0,064	0,004
Sn11/N47	NC UGT H4 VC	-1,545	0,009	22,132	-0,002	-0,061	0,005
Sn11/N47	NC UGT H1 BGE X	-0,740	0,036	1,485	-0,001	-0,027	0,009
Sn11/N47	NC UGT H1 BGE Y	0,109	-0,427	0,949	0,020	0,001	0,000
Sn11/N47	NC UGT H1 BGE -X	-0,740	0,036	1,485	-0,001	-0,027	0,009
Sn11/N47	NC UGT H1 BGE -Y	0,006	0,439	2,000	-0,017	-0,003	-0,001
Sn11/N47	NC UGT H2 BGE X	-0,736	0,037	1,484	-0,001	-0,027	0,009
Sn11/N47	NC UGT H2 BGE Y	0,116	-0,411	0,963	0,020	0,000	0,000
Sn11/N47	NC UGT H2 BGE -X	-0,736	0,037	1,484	-0,001	-0,027	0,009
Sn11/N47	NC UGT H2 BGE -Y	0,006	0,440	1,998	-0,017	-0,003	-0,001
Sn11/N47	NC UGT H3 BGE X	-0,743	0,036	1,487	-0,001	-0,027	0,009
Sn11/N47	NC UGT H3 BGE Y	0,112	-0,421	0,960	0,020	0,000	0,000
Sn11/N47	NC UGT H3 BGE -X	-0,743	0,036	1,487	-0,001	-0,027	0,009
Sn11/N47	NC UGT H3 BGE -Y	0,006	0,439	2,001	-0,017	-0,003	-0,001
Sn11/N47	NC UGT H4 BGE X	-0,739	0,036	1,485	-0,001	-0,027	0,009
Sn11/N47	NC UGT H4 BGE Y	0,112	-0,418	0,959	0,020	0,000	0,000
Sn11/N47	NC UGT H4 BGE -X	-0,739	0,036	1,485	-0,001	-0,027	0,009
Sn11/N47	NC UGT H4 BGE -Y	0,006	0,440	1,999	-0,017	-0,003	-0,001
Sn12/N52	NC UGT A BG X	-0,891	-0,091	1,910	-0,001	-0,028	0,014
Sn12/N52	NC UGT A BG Y	-0,215	-0,648	1,864	0,021	-0,007	-0,002
Sn12/N52	NC UGT A BG -X	-0,891	-0,092	1,911	-0,001	-0,028	0,014
Sn12/N52	NC UGT A BG -Y	0,073	0,500	2,020	-0,017	-0,001	0,000
Sn12/N52	NC UGT A BGE X	-0,745	-0,086	12,024	-0,001	-0,024	0,014
Sn12/N52	NC UGT A BGE Y	-0,144	-0,542	11,258	0,018	-0,001	0,000
Sn12/N52	NC UGT A BGE -X	-0,745	-0,086	12,024	-0,001	-0,024	0,014
Sn12/N52	NC UGT A BGE -Y	0,079	0,497	12,136	-0,018	0,000	0,000
Sn12/N52	NC UGT A IG X	-2,105	-0,320	23,953	0,001	-0,072	0,008
Sn12/N52	NC UGT A IG Y	-1,711	-0,925	22,648	0,025	-0,056	0,003

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn12/N52	NC UGT A IG -X	-2,105	-0,320	23,953	0,001	-0,072	0,008
Sn12/N52	NC UGT A IG -Y	-1,530	0,881	25,228	-0,040	-0,061	0,012
Sn12/N52	NC UGT A O X	-0,811	-0,053	1,622	-0,002	-0,026	0,014
Sn12/N52	NC UGT A O Y	-0,122	-0,907	1,815	0,028	-0,005	-0,002
Sn12/N52	NC UGT A O -X	-0,811	-0,053	1,622	-0,002	-0,026	0,014
Sn12/N52	NC UGT A O -Y	0,072	0,530	1,648	-0,018	-0,001	0,000
Sn12/N52	NC UGT A VC	-1,614	-0,095	23,847	-0,005	-0,058	0,008
Sn12/N52	NC UGT H1 IG X	-2,096	-0,308	23,944	0,000	-0,072	0,007
Sn12/N52	NC UGT H1 IG Y	-1,706	-0,905	22,646	0,025	-0,055	0,003
Sn12/N52	NC UGT H1 IG -X	-2,096	-0,308	23,944	0,000	-0,072	0,007
Sn12/N52	NC UGT H1 IG -Y	-1,511	0,879	25,224	-0,040	-0,060	0,012
Sn12/N52	NC UGT H1 VC	-1,600	-0,092	23,843	-0,005	-0,057	0,007
Sn12/N52	NC UGT H2 IG X	-2,095	-0,311	23,943	0,001	-0,072	0,007
Sn12/N52	NC UGT H2 IG Y	-1,707	-0,904	22,644	0,025	-0,055	0,003
Sn12/N52	NC UGT H2 IG -X	-2,096	-0,310	23,943	0,001	-0,072	0,007
Sn12/N52	NC UGT H2 IG -Y	-1,511	0,879	25,224	-0,040	-0,060	0,012
Sn12/N52	NC UGT H2 VC	-1,600	-0,091	23,841	-0,005	-0,057	0,007
Sn12/N52	NC UGT H3 IG X	-2,096	-0,310	23,945	0,001	-0,072	0,007
Sn12/N52	NC UGT H3 IG Y	-1,707	-0,906	22,646	0,025	-0,055	0,003
Sn12/N52	NC UGT H3 IG -X	-2,096	-0,310	23,945	0,001	-0,072	0,007
Sn12/N52	NC UGT H3 IG -Y	-1,513	0,879	25,225	-0,040	-0,060	0,012
Sn12/N52	NC UGT H3 VC	-1,601	-0,091	23,843	-0,005	-0,057	0,007
Sn12/N52	NC UGT H4 IG X	-2,096	-0,310	23,944	0,001	-0,072	0,007
Sn12/N52	NC UGT H4 IG Y	-1,707	-0,905	22,645	0,025	-0,055	0,003
Sn12/N52	NC UGT H4 IG -X	-2,096	-0,310	23,944	0,001	-0,072	0,007
Sn12/N52	NC UGT H4 IG -Y	-1,512	0,879	25,224	-0,040	-0,060	0,012
Sn12/N52	NC UGT H4 VC	-1,600	-0,091	23,842	-0,005	-0,057	0,007
Sn12/N52	NC UGT H1 BGE X	-0,824	-0,086	1,898	-0,001	-0,026	0,014
Sn12/N52	NC UGT H1 BGE Y	-0,142	-0,589	1,211	0,020	-0,002	0,000
Sn12/N52	NC UGT H1 BGE -X	-0,824	-0,086	1,898	-0,001	-0,026	0,014
Sn12/N52	NC UGT H1 BGE -Y	0,081	0,499	2,015	-0,017	0,000	0,000
Sn12/N52	NC UGT H2 BGE X	-0,821	-0,088	1,898	-0,001	-0,026	0,014
Sn12/N52	NC UGT H2 BGE Y	-0,149	-0,578	1,377	0,019	-0,003	-0,001
Sn12/N52	NC UGT H2 BGE -X	-0,821	-0,088	1,898	-0,001	-0,026	0,014
Sn12/N52	NC UGT H2 BGE -Y	0,080	0,499	2,015	-0,017	0,000	0,000
Sn12/N52	NC UGT H3 BGE X	-0,829	-0,087	1,900	-0,001	-0,026	0,014
Sn12/N52	NC UGT H3 BGE Y	-0,149	-0,587	1,315	0,019	-0,002	0,000
Sn12/N52	NC UGT H3 BGE -X	-0,829	-0,087	1,900	-0,001	-0,026	0,014
Sn12/N52	NC UGT H3 BGE -Y	0,080	0,499	2,015	-0,017	0,000	0,000
Sn12/N52	NC UGT H4 BGE X	-0,825	-0,087	1,899	-0,001	-0,026	0,014
Sn12/N52	NC UGT H4 BGE Y	-0,148	-0,584	1,319	0,019	-0,002	0,000
Sn12/N52	NC UGT H4 BGE -X	-0,825	-0,087	1,899	-0,001	-0,026	0,014
Sn12/N52	NC UGT H4 BGE -Y	0,080	0,499	2,015	-0,017	0,000	0,000
Sn13/N57	NC UGT A BG X	-0,823	0,044	5,083	-0,001	-0,028	0,018
Sn13/N57	NC UGT A BG Y	-0,228	-1,039	4,217	0,035	-0,014	-0,016
Sn13/N57	NC UGT A BG -X	-0,843	0,047	5,083	-0,001	-0,028	0,026
Sn13/N57	NC UGT A BG -Y	0,046	0,849	6,042	-0,025	0,002	0,017
Sn13/N57	NC UGT A BGE X	-0,687	0,120	15,356	0,000	-0,025	0,019
Sn13/N57	NC UGT A BGE Y	-0,062	-0,718	15,183	0,029	-0,006	-0,012
Sn13/N57	NC UGT A BGE -X	-0,687	0,120	15,356	0,000	-0,025	0,019

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn13/N57	NC UGT A BGE -Y	0,053	0,915	16,308	-0,025	0,002	0,018
Sn13/N57	NC UGT A IG X	-2,017	-0,076	23,211	0,005	-0,073	0,011
Sn13/N57	NC UGT A IG Y	-1,600	-0,910	22,470	0,032	-0,059	0,012
Sn13/N57	NC UGT A IG -X	-2,017	-0,076	23,211	0,005	-0,073	0,011
Sn13/N57	NC UGT A IG -Y	-1,502	1,228	25,063	-0,038	-0,060	0,008
Sn13/N57	NC UGT A O X	-1,225	0,020	3,580	-0,001	-0,037	0,015
Sn13/N57	NC UGT A O Y	-0,228	-1,201	2,402	0,040	-0,015	-0,018
Sn13/N57	NC UGT A O -X	-1,225	0,020	3,580	-0,001	-0,037	0,015
Sn13/N57	NC UGT A O -Y	0,048	0,839	4,637	-0,026	0,002	0,015
Sn13/N57	NC UGT A VC	-1,513	0,169	23,835	-0,001	-0,058	0,009
Sn13/N57	NC UGT H1 IG X	-2,045	-0,057	23,238	0,005	-0,072	0,012
Sn13/N57	NC UGT H1 IG Y	-1,643	-0,905	22,485	0,032	-0,058	0,012
Sn13/N57	NC UGT H1 IG -X	-2,045	-0,057	23,238	0,005	-0,072	0,012
Sn13/N57	NC UGT H1 IG -Y	-1,535	1,224	25,081	-0,038	-0,059	0,009
Sn13/N57	NC UGT H1 VC	-1,545	0,167	23,854	-0,001	-0,058	0,010
Sn13/N57	NC UGT H2 IG X	-2,049	-0,058	23,227	0,005	-0,072	0,012
Sn13/N57	NC UGT H2 IG Y	-1,644	-0,906	22,476	0,032	-0,058	0,012
Sn13/N57	NC UGT H2 IG -X	-2,049	-0,058	23,227	0,005	-0,072	0,013
Sn13/N57	NC UGT H2 IG -Y	-1,538	1,225	25,070	-0,038	-0,059	0,009
Sn13/N57	NC UGT H2 VC	-1,548	0,167	23,844	-0,002	-0,058	0,010
Sn13/N57	NC UGT H3 IG X	-2,041	-0,057	23,233	0,005	-0,072	0,012
Sn13/N57	NC UGT H3 IG Y	-1,639	-0,906	22,482	0,032	-0,058	0,012
Sn13/N57	NC UGT H3 IG -X	-2,041	-0,057	23,233	0,005	-0,072	0,012
Sn13/N57	NC UGT H3 IG -Y	-1,532	1,225	25,076	-0,038	-0,059	0,009
Sn13/N57	NC UGT H3 VC	-1,541	0,167	23,850	-0,001	-0,058	0,010
Sn13/N57	NC UGT H4 IG X	-2,045	-0,058	23,231	0,005	-0,072	0,012
Sn13/N57	NC UGT H4 IG Y	-1,642	-0,906	22,480	0,032	-0,058	0,012
Sn13/N57	NC UGT H4 IG -X	-2,046	-0,058	23,232	0,005	-0,072	0,012
Sn13/N57	NC UGT H4 IG -Y	-1,535	1,225	25,075	-0,038	-0,059	0,009
Sn13/N57	NC UGT H4 VC	-1,545	0,167	23,848	-0,002	-0,058	0,010
Sn13/N57	NC UGT H1 BGE X	-0,795	0,052	5,117	-0,001	-0,026	0,019
Sn13/N57	NC UGT H1 BGE Y	-0,099	-0,777	4,870	0,028	-0,005	-0,011
Sn13/N57	NC UGT H1 BGE -X	-0,795	0,052	5,117	-0,001	-0,026	0,019
Sn13/N57	NC UGT H1 BGE -Y	0,007	0,844	6,061	-0,025	0,003	0,018
Sn13/N57	NC UGT H2 BGE X	-0,796	0,048	5,105	-0,001	-0,026	0,019
Sn13/N57	NC UGT H2 BGE Y	-0,124	-0,789	4,694	0,028	-0,007	-0,011
Sn13/N57	NC UGT H2 BGE -X	-0,796	0,048	5,105	-0,001	-0,026	0,019
Sn13/N57	NC UGT H2 BGE -Y	0,003	0,844	6,050	-0,025	0,003	0,018
Sn13/N57	NC UGT H3 BGE X	-0,797	0,051	5,111	-0,001	-0,026	0,019
Sn13/N57	NC UGT H3 BGE Y	-0,112	-0,789	4,764	0,028	-0,007	-0,011
Sn13/N57	NC UGT H3 BGE -X	-0,797	0,051	5,111	-0,001	-0,026	0,019
Sn13/N57	NC UGT H3 BGE -Y	0,011	0,845	6,057	-0,025	0,003	0,018
Sn13/N57	NC UGT H4 BGE X	-0,796	0,050	5,110	-0,001	-0,026	0,019
Sn13/N57	NC UGT H4 BGE Y	-0,116	-0,788	4,757	0,028	-0,007	-0,011
Sn13/N57	NC UGT H4 BGE -X	-0,796	0,050	5,110	-0,001	-0,026	0,019
Sn13/N57	NC UGT H4 BGE -Y	0,007	0,844	6,055	-0,025	0,003	0,018
Sn14/N62	NC UGT A BG X	-0,616	0,208	1,911	-0,002	-0,029	0,013
Sn14/N62	NC UGT A BG Y	-0,160	-1,233	2,466	0,056	-0,015	0,004
Sn14/N62	NC UGT A BG -X	-0,596	0,210	1,911	-0,002	-0,029	0,005
Sn14/N62	NC UGT A BG -Y	0,046	1,287	9,049	-0,047	0,001	-0,002

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn14/N62	NC UGT A BGE X	-0,506	0,207	6,835	-0,002	-0,026	0,014
Sn14/N62	NC UGT A BGE Y	-0,055	-1,262	6,534	0,051	-0,006	0,007
Sn14/N62	NC UGT A BGE -X	-0,506	0,207	6,835	-0,002	-0,026	0,014
Sn14/N62	NC UGT A BGE -Y	0,054	1,315	14,070	-0,048	0,002	-0,002
Sn14/N62	NC UGT A IG X	-1,462	-0,136	19,357	0,010	-0,074	0,001
Sn14/N62	NC UGT A IG Y	-1,055	-1,180	15,044	0,045	-0,061	-0,006
Sn14/N62	NC UGT A IG -X	-1,462	-0,136	19,357	0,010	-0,074	0,001
Sn14/N62	NC UGT A IG -Y	-1,110	1,197	19,719	-0,043	-0,061	0,003
Sn14/N62	NC UGT A O X	-0,233	0,167	0,466	0,000	-0,020	0,016
Sn14/N62	NC UGT A O Y	0,000	0,000	0,000	0,033	-0,012	0,005
Sn14/N62	NC UGT A O -X	-0,233	0,167	0,466	0,000	-0,020	0,016
Sn14/N62	NC UGT A O -Y	0,043	1,263	7,412	-0,047	0,001	-0,002
Sn14/N62	NC UGT A VC	-1,097	0,094	18,700	0,000	-0,059	0,003
Sn14/N62	NC UGT H1 IG X	-1,464	-0,093	22,402	0,008	-0,073	0,000
Sn14/N62	NC UGT H1 IG Y	-1,068	-1,163	18,131	0,045	-0,060	-0,007
Sn14/N62	NC UGT H1 IG -X	-1,464	-0,093	22,402	0,008	-0,073	0,000
Sn14/N62	NC UGT H1 IG -Y	-1,115	1,199	22,862	-0,044	-0,060	0,001
Sn14/N62	NC UGT H1 VC	-1,103	0,101	21,812	0,000	-0,058	0,001
Sn14/N62	NC UGT H2 IG X	-1,469	-0,094	21,402	0,008	-0,073	0,000
Sn14/N62	NC UGT H2 IG Y	-1,071	-1,164	17,124	0,045	-0,060	-0,007
Sn14/N62	NC UGT H2 IG -X	-1,469	-0,094	21,402	0,008	-0,073	0,000
Sn14/N62	NC UGT H2 IG -Y	-1,119	1,201	21,869	-0,044	-0,060	0,001
Sn14/N62	NC UGT H2 VC	-1,107	0,101	20,812	0,000	-0,058	0,001
Sn14/N62	NC UGT H3 IG X	-1,464	-0,094	21,850	0,008	-0,073	0,000
Sn14/N62	NC UGT H3 IG Y	-1,068	-1,164	17,579	0,045	-0,060	-0,007
Sn14/N62	NC UGT H3 IG -X	-1,464	-0,094	21,849	0,008	-0,073	0,000
Sn14/N62	NC UGT H3 IG -Y	-1,115	1,199	22,305	-0,044	-0,060	0,002
Sn14/N62	NC UGT H3 VC	-1,103	0,100	21,257	0,000	-0,058	0,002
Sn14/N62	NC UGT H4 IG X	-1,466	-0,093	21,778	0,008	-0,073	0,000
Sn14/N62	NC UGT H4 IG Y	-1,069	-1,164	17,504	0,045	-0,060	-0,007
Sn14/N62	NC UGT H4 IG -X	-1,466	-0,094	21,778	0,008	-0,073	0,000
Sn14/N62	NC UGT H4 IG -Y	-1,117	1,200	22,239	-0,044	-0,060	0,002
Sn14/N62	NC UGT H4 VC	-1,105	0,101	21,187	0,000	-0,058	0,001
Sn14/N62	NC UGT H1 BGE X	-0,580	0,195	4,913	-0,003	-0,027	0,012
Sn14/N62	NC UGT H1 BGE Y	-0,074	-1,292	4,522	0,048	-0,006	0,006
Sn14/N62	NC UGT H1 BGE -X	-0,580	0,195	4,913	-0,003	-0,027	0,012
Sn14/N62	NC UGT H1 BGE -Y	0,029	1,287	12,177	-0,048	0,002	-0,003
Sn14/N62	NC UGT H2 BGE X	-0,581	0,198	3,936	-0,003	-0,026	0,012
Sn14/N62	NC UGT H2 BGE Y	-0,087	-1,323	3,752	0,050	-0,008	0,005
Sn14/N62	NC UGT H2 BGE -X	-0,581	0,198	3,936	-0,003	-0,026	0,012
Sn14/N62	NC UGT H2 BGE -Y	0,027	1,289	11,184	-0,048	0,002	-0,003
Sn14/N62	NC UGT H3 BGE X	-0,583	0,198	4,376	-0,003	-0,027	0,012
Sn14/N62	NC UGT H3 BGE Y	-0,081	-1,325	4,109	0,050	-0,007	0,006
Sn14/N62	NC UGT H3 BGE -X	-0,583	0,198	4,376	-0,003	-0,027	0,012
Sn14/N62	NC UGT H3 BGE -Y	0,030	1,287	11,621	-0,048	0,002	-0,003
Sn14/N62	NC UGT H4 BGE X	-0,582	0,197	4,304	-0,003	-0,027	0,012
Sn14/N62	NC UGT H4 BGE Y	-0,083	-1,326	4,038	0,050	-0,007	0,006
Sn14/N62	NC UGT H4 BGE -X	-0,582	0,197	4,304	-0,003	-0,027	0,012
Sn14/N62	NC UGT H4 BGE -Y	0,028	1,288	11,554	-0,048	0,002	-0,003
Sn15/N67	NC UGT A BG X	0,000	0,000	0,000	0,001	-0,139	0,012

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn15/N67	NC UGT A BG Y	0,000	0,000	0,000	0,058	-0,100	0,035
Sn15/N67	NC UGT A BG -X	0,000	0,000	0,000	0,001	-0,139	0,012
Sn15/N67	NC UGT A BG -Y	0,000	0,000	0,000	-0,023	-0,034	-0,005
Sn15/N67	NC UGT A BGE X	0,000	0,000	0,000	0,001	-0,136	0,013
Sn15/N67	NC UGT A BGE Y	0,000	0,000	0,000	0,033	-0,097	0,035
Sn15/N67	NC UGT A BGE -X	0,000	0,000	0,000	0,001	-0,136	0,013
Sn15/N67	NC UGT A BGE -Y	0,000	0,000	0,000	-0,023	-0,032	-0,005
Sn15/N67	NC UGT A IG X	0,000	0,000	0,000	0,006	-0,176	0,019
Sn15/N67	NC UGT A IG Y	-0,645	-0,067	1,289	0,021	-0,002	-0,013
Sn15/N67	NC UGT A IG -X	0,000	0,000	0,000	0,006	-0,176	0,019
Sn15/N67	NC UGT A IG -Y	0,000	0,000	0,000	-0,013	-0,022	0,005
Sn15/N67	NC UGT A O X	0,000	0,000	0,000	0,004	-0,142	0,012
Sn15/N67	NC UGT A O Y	0,000	0,000	0,000	0,081	-0,100	0,037
Sn15/N67	NC UGT A O -X	0,000	0,000	0,000	0,004	-0,142	0,012
Sn15/N67	NC UGT A O -Y	0,000	0,000	0,000	-0,023	-0,035	-0,005
Sn15/N67	NC UGT A VC	-0,002	0,002	0,004	0,000	-0,007	0,002
Sn15/N67	NC UGT H1 IG X	0,000	0,000	0,000	0,006	-0,169	0,020
Sn15/N67	NC UGT H1 IG Y	-0,825	-0,058	1,651	0,020	-0,006	-0,010
Sn15/N67	NC UGT H1 IG -X	0,000	0,000	0,000	0,006	-0,169	0,020
Sn15/N67	NC UGT H1 IG -Y	0,000	0,000	0,000	-0,013	-0,014	0,006
Sn15/N67	NC UGT H1 VC	-0,189	0,005	0,377	0,000	-0,011	0,003
Sn15/N67	NC UGT H2 IG X	0,000	0,000	0,000	0,006	-0,168	0,020
Sn15/N67	NC UGT H2 IG Y	-0,830	-0,058	1,660	0,020	-0,007	-0,010
Sn15/N67	NC UGT H2 IG -X	0,000	0,000	0,000	0,006	-0,168	0,020
Sn15/N67	NC UGT H2 IG -Y	0,000	0,000	0,000	-0,013	-0,014	0,006
Sn15/N67	NC UGT H2 VC	-0,201	0,005	0,402	0,000	-0,012	0,003
Sn15/N67	NC UGT H3 IG X	0,000	0,000	0,000	0,006	-0,169	0,020
Sn15/N67	NC UGT H3 IG Y	-0,806	-0,058	1,612	0,020	-0,006	-0,010
Sn15/N67	NC UGT H3 IG -X	0,000	0,000	0,000	0,006	-0,169	0,020
Sn15/N67	NC UGT H3 IG -Y	0,000	0,000	0,000	-0,013	-0,015	0,006
Sn15/N67	NC UGT H3 VC	-0,169	0,005	0,338	0,000	-0,011	0,003
Sn15/N67	NC UGT H4 IG X	0,000	0,000	0,000	0,006	-0,168	0,020
Sn15/N67	NC UGT H4 IG Y	-0,821	-0,058	1,642	0,020	-0,006	-0,010
Sn15/N67	NC UGT H4 IG -X	0,000	0,000	0,000	0,006	-0,168	0,020
Sn15/N67	NC UGT H4 IG -Y	0,000	0,000	0,000	-0,013	-0,014	0,006
Sn15/N67	NC UGT H4 VC	-0,187	0,005	0,375	0,000	-0,011	0,003
Sn15/N67	NC UGT H1 BGE X	0,000	0,000	0,000	0,001	-0,130	0,014
Sn15/N67	NC UGT H1 BGE Y	0,000	0,000	0,000	0,033	-0,090	0,036
Sn15/N67	NC UGT H1 BGE -X	0,000	0,000	0,000	0,001	-0,130	0,014
Sn15/N67	NC UGT H1 BGE -Y	0,000	0,000	0,000	-0,023	-0,025	-0,004
Sn15/N67	NC UGT H2 BGE X	0,000	0,000	0,000	0,001	-0,130	0,014
Sn15/N67	NC UGT H2 BGE Y	0,000	0,000	0,000	0,039	-0,090	0,036
Sn15/N67	NC UGT H2 BGE -X	0,000	0,000	0,000	0,001	-0,130	0,014
Sn15/N67	NC UGT H2 BGE -Y	0,000	0,000	0,000	-0,023	-0,024	-0,004
Sn15/N67	NC UGT H3 BGE X	0,000	0,000	0,000	0,001	-0,131	0,013
Sn15/N67	NC UGT H3 BGE Y	0,000	0,000	0,000	0,037	-0,091	0,036
Sn15/N67	NC UGT H3 BGE -X	0,000	0,000	0,000	0,001	-0,131	0,013
Sn15/N67	NC UGT H3 BGE -Y	0,000	0,000	0,000	-0,023	-0,026	-0,004
Sn15/N67	NC UGT H4 BGE X	0,000	0,000	0,000	0,001	-0,130	0,014
Sn15/N67	NC UGT H4 BGE Y	0,000	0,000	0,000	0,037	-0,090	0,036
Sn15/N67	NC UGT H4 BGE -X	0,000	0,000	0,000	0,001	-0,130	0,014

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn15/N67	NC UGT H4 BGE -Y	0,000	0,000	0,000	-0,023	-0,025	-0,004
Sn16/N72	NC UGT A BG X	0,651	0,011	3,397	0,000	-0,039	0,023
Sn16/N72	NC UGT A BG Y	1,050	-1,847	5,602	0,098	-0,015	0,022
Sn16/N72	NC UGT A BG -X	0,650	0,011	3,397	0,000	-0,040	0,023
Sn16/N72	NC UGT A BG -Y	0,480	1,203	2,490	-0,053	-0,006	-0,005
Sn16/N72	NC UGT A BGE X	0,715	-0,006	8,397	-0,001	-0,037	0,022
Sn16/N72	NC UGT A BGE Y	1,083	-1,761	12,156	0,073	-0,012	0,020
Sn16/N72	NC UGT A BGE -X	0,715	-0,006	8,397	-0,001	-0,037	0,022
Sn16/N72	NC UGT A BGE -Y	0,453	1,177	7,463	-0,054	-0,006	-0,005
Sn16/N72	NC UGT A IG X	-0,297	-0,088	14,015	0,010	-0,088	0,059
Sn16/N72	NC UGT A IG Y	-1,345	-1,441	16,130	0,060	-0,048	0,002
Sn16/N72	NC UGT A IG -X	-0,297	-0,088	14,015	0,010	-0,088	0,059
Sn16/N72	NC UGT A IG -Y	-1,256	1,335	9,992	-0,056	-0,057	0,005
Sn16/N72	NC UGT A O X	0,465	0,016	1,800	0,002	-0,046	0,026
Sn16/N72	NC UGT A O Y	1,177	-1,179	2,359	0,102	-0,011	0,025
Sn16/N72	NC UGT A O -X	0,465	0,016	1,800	0,002	-0,046	0,026
Sn16/N72	NC UGT A O -Y	0,491	0,491	0,982	-0,034	-0,007	-0,004
Sn16/N72	NC UGT A VC	-1,458	0,076	13,769	-0,004	-0,053	0,008
Sn16/N72	NC UGT H1 IG X	-0,325	-0,088	14,070	0,010	-0,088	0,053
Sn16/N72	NC UGT H1 IG Y	-1,273	-1,135	16,056	0,054	-0,047	-0,002
Sn16/N72	NC UGT H1 IG -X	-0,325	-0,088	14,070	0,010	-0,088	0,053
Sn16/N72	NC UGT H1 IG -Y	-1,317	1,342	9,985	-0,056	-0,056	-0,001
Sn16/N72	NC UGT H1 VC	-1,403	0,079	13,406	-0,004	-0,052	0,003
Sn16/N72	NC UGT H2 IG X	-0,335	-0,087	14,037	0,010	-0,088	0,053
Sn16/N72	NC UGT H2 IG Y	-1,273	-1,134	16,007	0,054	-0,047	-0,002
Sn16/N72	NC UGT H2 IG -X	-0,335	-0,087	14,037	0,010	-0,088	0,053
Sn16/N72	NC UGT H2 IG -Y	-1,321	1,342	9,956	-0,056	-0,056	-0,001
Sn16/N72	NC UGT H2 VC	-1,400	0,080	13,350	-0,004	-0,052	0,003
Sn16/N72	NC UGT H3 IG X	-0,326	-0,088	14,058	0,010	-0,088	0,054
Sn16/N72	NC UGT H3 IG Y	-1,280	-1,134	16,077	0,054	-0,047	-0,001
Sn16/N72	NC UGT H3 IG -X	-0,326	-0,088	14,058	0,010	-0,088	0,054
Sn16/N72	NC UGT H3 IG -Y	-1,310	1,341	9,979	-0,056	-0,056	0,000
Sn16/N72	NC UGT H3 VC	-1,407	0,079	13,438	-0,004	-0,052	0,004
Sn16/N72	NC UGT H4 IG X	-0,330	-0,087	14,051	0,010	-0,088	0,053
Sn16/N72	NC UGT H4 IG Y	-1,276	-1,134	16,042	0,054	-0,047	-0,002
Sn16/N72	NC UGT H4 IG -X	-0,330	-0,087	14,051	0,010	-0,088	0,053
Sn16/N72	NC UGT H4 IG -Y	-1,316	1,342	9,970	-0,056	-0,056	-0,001
Sn16/N72	NC UGT H4 VC	-1,403	0,079	13,393	-0,004	-0,052	0,003
Sn16/N72	NC UGT H1 BGE X	0,638	0,001	3,467	0,000	-0,038	0,017
Sn16/N72	NC UGT H1 BGE Y	1,048	-1,847	8,418	0,073	-0,012	0,014
Sn16/N72	NC UGT H1 BGE -X	0,638	0,001	3,467	0,000	-0,038	0,017
Sn16/N72	NC UGT H1 BGE -Y	0,391	1,210	2,475	-0,053	-0,005	-0,011
Sn16/N72	NC UGT H2 BGE X	0,637	0,003	3,432	0,000	-0,038	0,017
Sn16/N72	NC UGT H2 BGE Y	1,035	-1,844	7,742	0,079	-0,013	0,014
Sn16/N72	NC UGT H2 BGE -X	0,637	0,003	3,432	0,000	-0,038	0,017
Sn16/N72	NC UGT H2 BGE -Y	0,385	1,209	2,445	-0,053	-0,005	-0,011
Sn16/N72	NC UGT H3 BGE X	0,640	0,001	3,452	0,000	-0,038	0,018
Sn16/N72	NC UGT H3 BGE Y	1,046	-1,841	7,930	0,077	-0,013	0,015
Sn16/N72	NC UGT H3 BGE -X	0,640	0,001	3,452	0,000	-0,038	0,018
Sn16/N72	NC UGT H3 BGE -Y	0,400	1,209	2,471	-0,053	-0,005	-0,010
Sn16/N72	NC UGT H4 BGE X	0,638	0,002	3,447	0,000	-0,038	0,017
Sn16/N72	NC UGT H4 BGE	1,041	-1,843	7,947	0,077	-0,013	0,015

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
	Y						
Sn16/N72	NC UGT H4 BGE -X	0,638	0,002	3,447	0,000	-0,038	0,017
Sn16/N72	NC UGT H4 BGE -Y	0,392	1,209	2,460	-0,053	-0,005	-0,011
Sn17/N77	NC UGT A BG X	-0,983	-0,058	6,343	0,000	-0,028	-0,010
Sn17/N77	NC UGT A BG Y	-0,232	-1,342	6,245	0,048	-0,006	0,038
Sn17/N77	NC UGT A BG -X	-0,984	-0,058	6,343	0,000	-0,028	-0,010
Sn17/N77	NC UGT A BG -Y	-0,027	0,632	5,213	-0,029	-0,003	-0,020
Sn17/N77	NC UGT A BGE X	-0,885	-0,116	16,636	-0,001	-0,026	-0,010
Sn17/N77	NC UGT A BGE Y	-0,176	-1,006	16,488	0,034	-0,003	0,025
Sn17/N77	NC UGT A BGE -X	-0,885	-0,116	16,636	-0,001	-0,026	-0,010
Sn17/N77	NC UGT A BGE -Y	-0,032	0,548	15,515	-0,030	-0,003	-0,020
Sn17/N77	NC UGT A IG X	-2,216	-0,297	29,433	0,002	-0,077	0,004
Sn17/N77	NC UGT A IG Y	-1,180	-1,014	29,049	0,036	-0,055	0,013
Sn17/N77	NC UGT A IG -X	-2,216	-0,297	29,433	0,002	-0,077	0,004
Sn17/N77	NC UGT A IG -Y	-1,453	0,843	27,314	-0,046	-0,060	0,004
Sn17/N77	NC UGT A O X	-1,220	-0,059	4,985	0,001	-0,035	-0,007
Sn17/N77	NC UGT A O Y	-0,102	-1,974	3,948	0,079	-0,001	0,046
Sn17/N77	NC UGT A O -X	-1,220	-0,059	4,985	0,001	-0,035	-0,007
Sn17/N77	NC UGT A O -Y	-0,041	0,758	3,820	-0,032	-0,003	-0,020
Sn17/N77	NC UGT A VC	-1,386	-0,103	28,280	-0,005	-0,057	0,009
Sn17/N77	NC UGT H1 IG X	-2,173	-0,297	29,422	0,002	-0,077	0,004
Sn17/N77	NC UGT H1 IG Y	-1,102	-0,963	29,027	0,035	-0,054	0,013
Sn17/N77	NC UGT H1 IG -X	-2,173	-0,297	29,422	0,002	-0,077	0,004
Sn17/N77	NC UGT H1 IG -Y	-1,408	0,847	27,293	-0,046	-0,059	0,004
Sn17/N77	NC UGT H1 VC	-1,324	-0,101	28,268	-0,005	-0,057	0,009
Sn17/N77	NC UGT H2 IG X	-2,175	-0,296	29,419	0,002	-0,078	0,004
Sn17/N77	NC UGT H2 IG Y	-1,102	-0,963	29,027	0,035	-0,054	0,013
Sn17/N77	NC UGT H2 IG -X	-2,175	-0,296	29,419	0,002	-0,078	0,004
Sn17/N77	NC UGT H2 IG -Y	-1,405	0,847	27,292	-0,046	-0,059	0,004
Sn17/N77	NC UGT H2 VC	-1,321	-0,101	28,267	-0,005	-0,057	0,009
Sn17/N77	NC UGT H3 IG X	-2,179	-0,296	29,422	0,002	-0,077	0,004
Sn17/N77	NC UGT H3 IG Y	-1,109	-0,963	29,029	0,035	-0,054	0,013
Sn17/N77	NC UGT H3 IG -X	-2,179	-0,296	29,422	0,002	-0,077	0,004
Sn17/N77	NC UGT H3 IG -Y	-1,413	0,847	27,296	-0,046	-0,059	0,004
Sn17/N77	NC UGT H3 VC	-1,329	-0,101	28,269	-0,005	-0,057	0,009
Sn17/N77	NC UGT H4 IG X	-2,176	-0,296	29,421	0,002	-0,077	0,004
Sn17/N77	NC UGT H4 IG Y	-1,104	-0,963	29,028	0,035	-0,054	0,013
Sn17/N77	NC UGT H4 IG -X	-2,176	-0,296	29,421	0,002	-0,077	0,004
Sn17/N77	NC UGT H4 IG -Y	-1,408	0,847	27,294	-0,046	-0,059	0,004
Sn17/N77	NC UGT H4 VC	-1,324	-0,101	28,268	-0,005	-0,057	0,009
Sn17/N77	NC UGT H1 BGE X	-0,908	-0,052	6,319	0,000	-0,027	-0,011
Sn17/N77	NC UGT H1 BGE Y	-0,145	-0,982	6,179	0,036	-0,003	0,024
Sn17/N77	NC UGT H1 BGE -X	-0,908	-0,052	6,319	0,000	-0,027	-0,011
Sn17/N77	NC UGT H1 BGE -Y	-0,002	0,637	5,196	-0,030	-0,003	-0,021
Sn17/N77	NC UGT H2 BGE X	-0,907	-0,051	6,319	0,000	-0,027	-0,011
Sn17/N77	NC UGT H2 BGE Y	-0,159	-1,031	6,197	0,038	-0,004	0,028
Sn17/N77	NC UGT H2 BGE -X	-0,907	-0,051	6,319	0,000	-0,027	-0,011
Sn17/N77	NC UGT H2 BGE -Y	0,000	0,636	5,195	-0,030	-0,003	-0,021
Sn17/N77	NC UGT H3 BGE X	-0,916	-0,052	6,322	0,000	-0,027	-0,011
Sn17/N77	NC UGT H3 BGE Y	-0,158	-1,016	6,192	0,037	-0,004	0,027
Sn17/N77	NC UGT H3 BGE -X	-0,916	-0,052	6,322	0,000	-0,027	-0,011
Sn17/N77	NC UGT H3 BGE -Y	-0,005	0,636	5,198	-0,030	-0,003	-0,021

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn17/N77	NC UGT H4 BGE X	-0,910	-0,052	6,320	0,000	-0,027	-0,011
Sn17/N77	NC UGT H4 BGE Y	-0,157	-1,015	6,192	0,037	-0,004	0,027
Sn17/N77	NC UGT H4 BGE -X	-0,910	-0,052	6,320	0,000	-0,027	-0,011
Sn17/N77	NC UGT H4 BGE -Y	-0,002	0,636	5,196	-0,030	-0,003	-0,021
Sn18/N82	NC UGT A BG X	-0,366	-0,016	0,731	0,000	-0,016	-0,012
Sn18/N82	NC UGT A BG Y	-0,164	-0,789	1,659	0,031	-0,005	-0,005
Sn18/N82	NC UGT A BG -X	-0,365	-0,016	0,731	0,000	-0,016	-0,012
Sn18/N82	NC UGT A BG -Y	-0,045	0,458	0,916	-0,018	-0,002	0,002
Sn18/N82	NC UGT A BGE X	-0,670	0,023	10,947	0,000	-0,026	-0,009
Sn18/N82	NC UGT A BGE Y	-0,089	-0,520	11,945	0,021	-0,002	0,000
Sn18/N82	NC UGT A BGE -X	-0,670	0,023	10,947	0,000	-0,026	-0,009
Sn18/N82	NC UGT A BGE -Y	-0,054	0,501	11,060	-0,019	-0,002	0,003
Sn18/N82	NC UGT A IG X	-1,905	-0,035	19,078	0,003	-0,077	0,009
Sn18/N82	NC UGT A IG Y	-1,340	-0,706	20,640	0,030	-0,055	0,007
Sn18/N82	NC UGT A IG -X	-1,905	-0,035	19,078	0,003	-0,077	0,009
Sn18/N82	NC UGT A IG -Y	-1,465	1,000	18,387	-0,038	-0,059	0,009
Sn18/N82	NC UGT A O X	-0,141	-0,011	0,282	-0,001	-0,009	-0,014
Sn18/N82	NC UGT A O Y	-0,029	-0,740	1,480	0,032	-0,001	-0,001
Sn18/N82	NC UGT A O -X	-0,141	-0,011	0,282	-0,001	-0,009	-0,014
Sn18/N82	NC UGT A O -Y	-0,048	0,285	0,570	-0,012	-0,002	0,002
Sn18/N82	NC UGT A VC	-1,388	0,088	19,522	-0,002	-0,056	0,008
Sn18/N82	NC UGT H1 IG X	-1,892	-0,037	19,077	0,004	-0,076	0,009
Sn18/N82	NC UGT H1 IG Y	-1,296	-0,699	20,645	0,030	-0,053	0,007
Sn18/N82	NC UGT H1 IG -X	-1,892	-0,036	19,077	0,004	-0,076	0,009
Sn18/N82	NC UGT H1 IG -Y	-1,443	1,000	18,388	-0,038	-0,058	0,009
Sn18/N82	NC UGT H1 VC	-1,359	0,087	19,522	-0,002	-0,056	0,008
Sn18/N82	NC UGT H2 IG X	-1,898	-0,035	19,079	0,004	-0,076	0,009
Sn18/N82	NC UGT H2 IG Y	-1,297	-0,698	20,646	0,030	-0,053	0,007
Sn18/N82	NC UGT H2 IG -X	-1,898	-0,035	19,079	0,004	-0,076	0,009
Sn18/N82	NC UGT H2 IG -Y	-1,442	1,000	18,389	-0,038	-0,058	0,009
Sn18/N82	NC UGT H2 VC	-1,359	0,088	19,523	-0,002	-0,056	0,008
Sn18/N82	NC UGT H3 IG X	-1,896	-0,036	19,078	0,004	-0,076	0,009
Sn18/N82	NC UGT H3 IG Y	-1,299	-0,698	20,645	0,030	-0,054	0,007
Sn18/N82	NC UGT H3 IG -X	-1,896	-0,036	19,078	0,004	-0,076	0,009
Sn18/N82	NC UGT H3 IG -Y	-1,445	1,000	18,388	-0,038	-0,058	0,009
Sn18/N82	NC UGT H3 VC	-1,360	0,087	19,522	-0,002	-0,056	0,008
Sn18/N82	NC UGT H4 IG X	-1,896	-0,036	19,078	0,004	-0,076	0,009
Sn18/N82	NC UGT H4 IG Y	-1,297	-0,698	20,645	0,030	-0,054	0,007
Sn18/N82	NC UGT H4 IG -X	-1,896	-0,036	19,078	0,004	-0,076	0,009
Sn18/N82	NC UGT H4 IG -Y	-1,443	1,000	18,389	-0,038	-0,058	0,009
Sn18/N82	NC UGT H4 VC	-1,359	0,087	19,522	-0,002	-0,056	0,008
Sn18/N82	NC UGT H1 BGE X	-0,382	-0,009	0,764	0,000	-0,017	-0,012
Sn18/N82	NC UGT H1 BGE Y	-0,083	-0,649	1,774	0,024	-0,002	-0,001
Sn18/N82	NC UGT H1 BGE -X	-0,382	-0,009	0,764	0,000	-0,017	-0,012
Sn18/N82	NC UGT H1 BGE -Y	-0,046	0,458	0,916	-0,018	-0,002	0,002
Sn18/N82	NC UGT H2 BGE X	-0,384	-0,008	0,768	0,000	-0,017	-0,012
Sn18/N82	NC UGT H2 BGE Y	-0,103	-0,675	1,768	0,025	-0,003	-0,002
Sn18/N82	NC UGT H2 BGE -X	-0,384	-0,008	0,768	0,000	-0,017	-0,012
Sn18/N82	NC UGT H2 BGE -Y	-0,046	0,458	0,917	-0,018	-0,002	0,002
Sn18/N82	NC UGT H3 BGE X	-0,380	-0,009	0,760	0,000	-0,017	-0,012
Sn18/N82	NC UGT H3 BGE Y	-0,096	-0,670	1,769	0,025	-0,003	-0,002
Sn18/N82	NC UGT H3 BGE	-0,380	-0,009	0,760	0,000	-0,017	-0,012

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
	-X						
Sn18/N82	NC UGT H3 BGE -Y	-0,046	0,458	0,916	-0,018	-0,002	0,002
Sn18/N82	NC UGT H4 BGE X	-0,382	-0,009	0,764	0,000	-0,017	-0,012
Sn18/N82	NC UGT H4 BGE Y	-0,097	-0,668	1,769	0,025	-0,003	-0,002
Sn18/N82	NC UGT H4 BGE -X	-0,382	-0,009	0,764	0,000	-0,017	-0,012
Sn18/N82	NC UGT H4 BGE -Y	-0,046	0,458	0,916	-0,018	-0,002	0,002
Sn19/N87	NC UGT A BG X	-0,728	0,033	1,455	-0,001	-0,028	-0,008
Sn19/N87	NC UGT A BG Y	-0,145	-0,541	1,923	0,023	-0,005	0,000
Sn19/N87	NC UGT A BG -X	-0,728	0,034	1,455	-0,001	-0,028	-0,008
Sn19/N87	NC UGT A BG -Y	0,057	0,474	1,069	-0,018	-0,002	0,001
Sn19/N87	NC UGT A BGE X	-0,660	0,056	11,884	-0,001	-0,027	-0,008
Sn19/N87	NC UGT A BGE Y	-0,032	-0,382	12,347	0,019	-0,002	0,000
Sn19/N87	NC UGT A BGE -X	-0,660	0,056	11,884	-0,001	-0,027	-0,008
Sn19/N87	NC UGT A BGE -Y	0,059	0,494	11,484	-0,018	-0,002	0,001
Sn19/N87	NC UGT A IG X	-2,009	-0,074	22,524	0,002	-0,078	0,004
Sn19/N87	NC UGT A IG Y	-1,508	-0,735	23,290	0,027	-0,058	0,003
Sn19/N87	NC UGT A IG -X	-2,009	-0,074	22,524	0,002	-0,078	0,004
Sn19/N87	NC UGT A IG -Y	-1,483	0,955	21,086	-0,036	-0,061	0,005
Sn19/N87	NC UGT A O X	-0,515	0,014	1,031	-0,001	-0,022	-0,010
Sn19/N87	NC UGT A O Y	-0,029	-0,765	1,531	0,030	0,000	0,003
Sn19/N87	NC UGT A O -X	-0,515	0,014	1,031	-0,001	-0,022	-0,010
Sn19/N87	NC UGT A O -Y	0,036	0,350	0,699	-0,014	-0,002	0,000
Sn19/N87	NC UGT A VC	-1,463	0,020	22,252	-0,002	-0,058	0,004
Sn19/N87	NC UGT H1 IG X	-1,987	-0,084	22,528	0,002	-0,077	0,004
Sn19/N87	NC UGT H1 IG Y	-1,457	-0,767	23,296	0,028	-0,056	0,004
Sn19/N87	NC UGT H1 IG -X	-1,987	-0,084	22,528	0,002	-0,077	0,004
Sn19/N87	NC UGT H1 IG -Y	-1,454	0,954	21,087	-0,036	-0,060	0,005
Sn19/N87	NC UGT H1 VC	-1,432	0,014	22,255	-0,001	-0,058	0,004
Sn19/N87	NC UGT H2 IG X	-1,994	-0,079	22,528	0,002	-0,078	0,004
Sn19/N87	NC UGT H2 IG Y	-1,459	-0,765	23,298	0,028	-0,056	0,004
Sn19/N87	NC UGT H2 IG -X	-1,994	-0,079	22,528	0,002	-0,078	0,004
Sn19/N87	NC UGT H2 IG -Y	-1,453	0,955	21,087	-0,036	-0,060	0,005
Sn19/N87	NC UGT H2 VC	-1,432	0,014	22,255	-0,001	-0,058	0,004
Sn19/N87	NC UGT H3 IG X	-1,993	-0,081	22,527	0,002	-0,078	0,004
Sn19/N87	NC UGT H3 IG Y	-1,461	-0,765	23,296	0,028	-0,057	0,004
Sn19/N87	NC UGT H3 IG -X	-1,993	-0,081	22,527	0,002	-0,078	0,004
Sn19/N87	NC UGT H3 IG -Y	-1,457	0,955	21,087	-0,036	-0,060	0,005
Sn19/N87	NC UGT H3 VC	-1,433	0,014	22,254	-0,001	-0,058	0,004
Sn19/N87	NC UGT H4 IG X	-1,992	-0,081	22,528	0,002	-0,078	0,004
Sn19/N87	NC UGT H4 IG Y	-1,459	-0,765	23,297	0,028	-0,056	0,004
Sn19/N87	NC UGT H4 IG -X	-1,992	-0,081	22,528	0,002	-0,078	0,004
Sn19/N87	NC UGT H4 IG -Y	-1,455	0,955	21,087	-0,036	-0,060	0,005
Sn19/N87	NC UGT H4 VC	-1,432	0,014	22,255	-0,001	-0,058	0,004
Sn19/N87	NC UGT H1 BGE X	-0,714	0,035	1,460	-0,001	-0,028	-0,008
Sn19/N87	NC UGT H1 BGE Y	-0,033	-0,472	1,921	0,021	-0,002	0,000
Sn19/N87	NC UGT H1 BGE -X	-0,714	0,035	1,460	-0,001	-0,028	-0,008
Sn19/N87	NC UGT H1 BGE -Y	0,058	0,474	1,069	-0,018	-0,002	0,001
Sn19/N87	NC UGT H2 BGE X	-0,713	0,036	1,461	-0,001	-0,028	-0,008
Sn19/N87	NC UGT H2 BGE Y	-0,058	-0,456	1,923	0,020	-0,003	0,000
Sn19/N87	NC UGT H2 BGE -X	-0,713	0,036	1,461	-0,001	-0,028	-0,008
Sn19/N87	NC UGT H2 BGE -Y	0,058	0,475	1,070	-0,018	-0,002	0,001
Sn19/N87	NC UGT H3 BGE X	-0,719	0,035	1,459	-0,001	-0,028	-0,008

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn19/N87	NC UGT H3 BGE Y	-0,051	-0,466	1,922	0,020	-0,002	0,000
Sn19/N87	NC UGT H3 BGE -X	-0,719	0,035	1,459	-0,001	-0,028	-0,008
Sn19/N87	NC UGT H3 BGE -Y	0,058	0,474	1,069	-0,018	-0,002	0,001
Sn19/N87	NC UGT H4 BGE X	-0,716	0,036	1,460	-0,001	-0,028	-0,008
Sn19/N87	NC UGT H4 BGE Y	-0,051	-0,463	1,922	0,020	-0,002	0,000
Sn19/N87	NC UGT H4 BGE -X	-0,716	0,036	1,460	-0,001	-0,028	-0,008
Sn19/N87	NC UGT H4 BGE -Y	0,058	0,475	1,069	-0,018	-0,002	0,001
Sn20/N92	NC UGT A BG X	-0,835	-0,092	1,994	-0,001	-0,027	-0,011
Sn20/N92	NC UGT A BG Y	-0,227	-0,657	1,912	0,020	-0,004	-0,002
Sn20/N92	NC UGT A BG -X	-0,836	-0,093	1,995	-0,001	-0,027	-0,011
Sn20/N92	NC UGT A BG -Y	-0,037	0,431	1,064	-0,018	0,000	-0,001
Sn20/N92	NC UGT A BGE X	-0,709	-0,049	12,143	-0,002	-0,024	-0,012
Sn20/N92	NC UGT A BGE Y	-0,095	-0,536	12,042	0,018	0,000	-0,001
Sn20/N92	NC UGT A BGE -X	-0,709	-0,049	12,143	-0,002	-0,024	-0,012
Sn20/N92	NC UGT A BGE -Y	-0,023	0,463	11,207	-0,019	0,000	-0,002
Sn20/N92	NC UGT A IG X	-1,814	-0,110	24,686	-0,001	-0,070	0,001
Sn20/N92	NC UGT A IG Y	-1,441	-0,758	24,945	0,024	-0,053	0,000
Sn20/N92	NC UGT A IG -X	-1,814	-0,110	24,686	-0,001	-0,070	0,001
Sn20/N92	NC UGT A IG -Y	-1,363	1,043	22,783	-0,042	-0,055	0,004
Sn20/N92	NC UGT A O X	-0,812	-0,037	1,623	-0,002	-0,027	-0,010
Sn20/N92	NC UGT A O Y	-0,139	-0,683	1,366	0,022	-0,001	0,000
Sn20/N92	NC UGT A O -X	-0,812	-0,037	1,623	-0,002	-0,027	-0,010
Sn20/N92	NC UGT A O -Y	-0,029	0,351	0,703	-0,015	0,000	-0,001
Sn20/N92	NC UGT A VC	-1,343	0,095	23,867	-0,007	-0,052	0,002
Sn20/N92	NC UGT H1 IG X	-1,783	-0,091	24,702	-0,002	-0,069	0,001
Sn20/N92	NC UGT H1 IG Y	-1,377	-0,721	24,958	0,023	-0,051	0,000
Sn20/N92	NC UGT H1 IG -X	-1,783	-0,091	24,703	-0,002	-0,069	0,001
Sn20/N92	NC UGT H1 IG -Y	-1,318	1,037	22,796	-0,042	-0,054	0,003
Sn20/N92	NC UGT H1 VC	-1,303	0,097	23,883	-0,007	-0,051	0,002
Sn20/N92	NC UGT H2 IG X	-1,791	-0,097	24,703	-0,001	-0,069	0,001
Sn20/N92	NC UGT H2 IG Y	-1,379	-0,722	24,960	0,023	-0,051	0,000
Sn20/N92	NC UGT H2 IG -X	-1,791	-0,097	24,703	-0,001	-0,069	0,001
Sn20/N92	NC UGT H2 IG -Y	-1,316	1,037	22,797	-0,042	-0,054	0,003
Sn20/N92	NC UGT H2 VC	-1,302	0,098	23,884	-0,007	-0,051	0,002
Sn20/N92	NC UGT H3 IG X	-1,790	-0,096	24,700	-0,001	-0,069	0,001
Sn20/N92	NC UGT H3 IG Y	-1,381	-0,723	24,957	0,023	-0,051	0,000
Sn20/N92	NC UGT H3 IG -X	-1,790	-0,096	24,700	-0,001	-0,069	0,001
Sn20/N92	NC UGT H3 IG -Y	-1,323	1,037	22,795	-0,042	-0,054	0,003
Sn20/N92	NC UGT H3 VC	-1,304	0,098	23,881	-0,007	-0,051	0,002
Sn20/N92	NC UGT H4 IG X	-1,789	-0,095	24,702	-0,001	-0,069	0,001
Sn20/N92	NC UGT H4 IG Y	-1,379	-0,722	24,958	0,023	-0,051	0,000
Sn20/N92	NC UGT H4 IG -X	-1,789	-0,095	24,702	-0,001	-0,069	0,001
Sn20/N92	NC UGT H4 IG -Y	-1,319	1,037	22,796	-0,042	-0,054	0,003
Sn20/N92	NC UGT H4 VC	-1,303	0,098	23,883	-0,007	-0,051	0,002
Sn20/N92	NC UGT H1 BGE X	-0,765	-0,089	2,005	-0,001	-0,025	-0,011
Sn20/N92	NC UGT H1 BGE Y	-0,103	-0,618	1,898	0,019	0,000	0,000
Sn20/N92	NC UGT H1 BGE -X	-0,765	-0,089	2,005	-0,001	-0,025	-0,011
Sn20/N92	NC UGT H1 BGE -Y	-0,033	0,428	1,081	-0,018	0,000	-0,001
Sn20/N92	NC UGT H2 BGE X	-0,764	-0,092	2,007	-0,001	-0,025	-0,011
Sn20/N92	NC UGT H2 BGE Y	-0,130	-0,609	1,910	0,019	-0,001	-0,001
Sn20/N92	NC UGT H2 BGE -X	-0,764	-0,092	2,007	-0,001	-0,025	-0,011
Sn20/N92	NC UGT H2 BGE	-0,033	0,429	1,082	-0,018	0,000	-0,001

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
	-Y						
Sn20/N92	NC UGT H3 BGE X	-0,772	-0,090	2,004	-0,001	-0,025	-0,011
Sn20/N92	NC UGT H3 BGE Y	-0,122	-0,617	1,903	0,019	-0,001	0,000
Sn20/N92	NC UGT H3 BGE -X	-0,772	-0,090	2,004	-0,001	-0,025	-0,011
Sn20/N92	NC UGT H3 BGE -Y	-0,034	0,429	1,079	-0,018	0,000	-0,001
Sn20/N92	NC UGT H4 BGE X	-0,767	-0,091	2,005	-0,001	-0,025	-0,011
Sn20/N92	NC UGT H4 BGE Y	-0,123	-0,614	1,905	0,019	-0,001	0,000
Sn20/N92	NC UGT H4 BGE -X	-0,767	-0,091	2,005	-0,001	-0,025	-0,011
Sn20/N92	NC UGT H4 BGE -Y	-0,033	0,429	1,080	-0,018	0,000	-0,001
Sn21/N97	NC UGT A BG X	-0,829	-0,027	4,923	-0,001	-0,026	-0,012
Sn21/N97	NC UGT A BG Y	-0,150	-0,942	6,062	0,034	-0,004	-0,017
Sn21/N97	NC UGT A BG -X	-0,833	-0,025	4,922	-0,001	-0,026	-0,011
Sn21/N97	NC UGT A BG -Y	-0,079	0,614	5,144	-0,027	0,001	0,007
Sn21/N97	NC UGT A BGE X	-0,720	-0,099	15,236	-0,002	-0,024	-0,012
Sn21/N97	NC UGT A BGE Y	0,049	-0,803	16,357	0,027	0,000	-0,012
Sn21/N97	NC UGT A BGE -X	-0,720	-0,099	15,236	-0,002	-0,024	-0,012
Sn21/N97	NC UGT A BGE -Y	-0,073	0,537	15,443	-0,028	0,001	0,007
Sn21/N97	NC UGT A IG X	-1,860	-0,288	23,385	0,003	-0,066	0,004
Sn21/N97	NC UGT A IG Y	-1,418	-0,926	24,661	0,032	-0,053	0,003
Sn21/N97	NC UGT A IG -X	-1,860	-0,288	23,385	0,003	-0,066	0,004
Sn21/N97	NC UGT A IG -Y	-1,439	0,778	22,877	-0,041	-0,054	-0,003
Sn21/N97	NC UGT A O X	-1,125	-0,011	3,532	-0,001	-0,034	-0,010
Sn21/N97	NC UGT A O Y	-0,268	-1,873	4,131	0,057	-0,003	-0,010
Sn21/N97	NC UGT A O -X	-1,125	-0,011	3,532	-0,001	-0,034	-0,010
Sn21/N97	NC UGT A O -Y	-0,087	0,632	3,757	-0,027	0,001	0,013
Sn21/N97	NC UGT A VC	-1,338	-0,106	23,874	-0,004	-0,051	0,009
Sn21/N97	NC UGT H1 IG X	-1,883	-0,267	23,355	0,003	-0,065	0,003
Sn21/N97	NC UGT H1 IG Y	-1,408	-0,915	24,640	0,032	-0,052	0,003
Sn21/N97	NC UGT H1 IG -X	-1,883	-0,267	23,355	0,003	-0,065	0,003
Sn21/N97	NC UGT H1 IG -Y	-1,437	0,780	22,840	-0,041	-0,052	-0,004
Sn21/N97	NC UGT H1 VC	-1,344	-0,102	23,841	-0,004	-0,050	0,008
Sn21/N97	NC UGT H2 IG X	-1,891	-0,268	23,354	0,003	-0,066	0,004
Sn21/N97	NC UGT H2 IG Y	-1,413	-0,915	24,637	0,032	-0,052	0,003
Sn21/N97	NC UGT H2 IG -X	-1,893	-0,268	23,354	0,003	-0,066	0,002
Sn21/N97	NC UGT H2 IG -Y	-1,437	0,780	22,838	-0,041	-0,052	-0,004
Sn21/N97	NC UGT H2 VC	-1,347	-0,101	23,838	-0,004	-0,050	0,008
Sn21/N97	NC UGT H3 IG X	-1,882	-0,268	23,359	0,003	-0,066	0,004
Sn21/N97	NC UGT H3 IG Y	-1,407	-0,916	24,642	0,032	-0,052	0,003
Sn21/N97	NC UGT H3 IG -X	-1,883	-0,268	23,359	0,003	-0,066	0,003
Sn21/N97	NC UGT H3 IG -Y	-1,437	0,780	22,844	-0,041	-0,052	-0,004
Sn21/N97	NC UGT H3 VC	-1,340	-0,102	23,844	-0,004	-0,050	0,008
Sn21/N97	NC UGT H4 IG X	-1,886	-0,268	23,356	0,003	-0,066	0,004
Sn21/N97	NC UGT H4 IG Y	-1,410	-0,915	24,639	0,032	-0,052	0,003
Sn21/N97	NC UGT H4 IG -X	-1,887	-0,268	23,356	0,003	-0,066	0,003
Sn21/N97	NC UGT H4 IG -Y	-1,437	0,780	22,840	-0,041	-0,052	-0,004
Sn21/N97	NC UGT H4 VC	-1,344	-0,102	23,841	-0,004	-0,050	0,008
Sn21/N97	NC UGT H1 BGE X	-0,791	-0,018	4,903	-0,001	-0,024	-0,012
Sn21/N97	NC UGT H1 BGE Y	0,015	-0,733	6,030	0,027	0,000	-0,011
Sn21/N97	NC UGT H1 BGE -X	-0,791	-0,018	4,903	-0,001	-0,024	-0,012
Sn21/N97	NC UGT H1 BGE -Y	-0,112	0,616	5,112	-0,027	0,001	0,007
Sn21/N97	NC UGT H2 BGE X	-0,793	-0,021	4,898	-0,001	-0,024	-0,012
Sn21/N97	NC UGT H2 BGE Y	-0,011	-0,739	6,020	0,028	-0,001	-0,012

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn21/N97	NC UGT H2 BGE -X	-0,793	-0,021	4,898	-0,001	-0,024	-0,012
Sn21/N97	NC UGT H2 BGE -Y	-0,114	0,617	5,109	-0,027	0,001	0,007
Sn21/N97	NC UGT H3 BGE X	-0,795	-0,020	4,905	-0,001	-0,024	-0,012
Sn21/N97	NC UGT H3 BGE Y	0,001	-0,741	6,029	0,028	-0,001	-0,011
Sn21/N97	NC UGT H3 BGE -X	-0,795	-0,020	4,905	-0,001	-0,024	-0,012
Sn21/N97	NC UGT H3 BGE -Y	-0,109	0,616	5,115	-0,027	0,001	0,007
Sn21/N97	NC UGT H4 BGE X	-0,793	-0,020	4,901	-0,001	-0,024	-0,012
Sn21/N97	NC UGT H4 BGE Y	-0,002	-0,740	6,025	0,028	-0,001	-0,011
Sn21/N97	NC UGT H4 BGE -X	-0,793	-0,020	4,901	-0,001	-0,024	-0,012
Sn21/N97	NC UGT H4 BGE -Y	-0,112	0,616	5,112	-0,027	0,001	0,007
Sn22/N102	NC UGT A BG X	-0,724	0,115	2,885	-0,003	-0,026	0,010
Sn22/N102	NC UGT A BG Y	-0,462	-0,462	0,925	0,023	0,017	-0,001
Sn22/N102	NC UGT A BG -X	-0,722	0,117	2,888	-0,003	-0,026	0,009
Sn22/N102	NC UGT A BG -Y	-0,304	1,361	6,670	-0,051	0,002	0,004
Sn22/N102	NC UGT A BGE X	-0,626	0,071	8,586	-0,004	-0,024	0,008
Sn22/N102	NC UGT A BGE Y	-0,916	-1,684	8,226	0,053	0,007	-0,003
Sn22/N102	NC UGT A BGE -X	-0,626	0,071	8,586	-0,004	-0,024	0,008
Sn22/N102	NC UGT A BGE -Y	-0,274	1,335	11,755	-0,052	0,002	0,004
Sn22/N102	NC UGT A IG X	-1,686	-0,376	14,112	0,009	-0,061	0,031
Sn22/N102	NC UGT A IG Y	-1,253	-1,373	15,411	0,048	-0,051	0,008
Sn22/N102	NC UGT A IG -X	-1,686	-0,376	14,112	0,009	-0,061	0,031
Sn22/N102	NC UGT A IG -Y	-1,402	1,190	17,851	-0,046	-0,051	0,010
Sn22/N102	NC UGT A O X	-0,502	0,084	1,004	-0,002	-0,022	0,010
Sn22/N102	NC UGT A O Y	0,000	0,000	0,000	0,017	0,032	-0,002
Sn22/N102	NC UGT A O -X	-0,502	0,084	1,004	-0,002	-0,022	0,010
Sn22/N102	NC UGT A O -Y	-0,314	1,356	5,104	-0,051	0,002	-0,001
Sn22/N102	NC UGT A VC	-1,240	-0,059	17,006	-0,002	-0,048	0,005
Sn22/N102	NC UGT H1 IG X	-1,681	-0,293	14,481	0,007	-0,060	0,034
Sn22/N102	NC UGT H1 IG Y	-1,221	-1,357	15,525	0,047	-0,050	0,011
Sn22/N102	NC UGT H1 IG -X	-1,681	-0,293	14,481	0,007	-0,060	0,034
Sn22/N102	NC UGT H1 IG -Y	-1,332	1,198	17,578	-0,046	-0,049	0,012
Sn22/N102	NC UGT H1 VC	-1,199	-0,051	16,830	-0,002	-0,046	0,008
Sn22/N102	NC UGT H2 IG X	-1,689	-0,295	14,341	0,007	-0,061	0,033
Sn22/N102	NC UGT H2 IG Y	-1,224	-1,358	15,362	0,047	-0,050	0,011
Sn22/N102	NC UGT H2 IG -X	-1,688	-0,295	14,341	0,007	-0,061	0,035
Sn22/N102	NC UGT H2 IG -Y	-1,329	1,198	17,403	-0,046	-0,049	0,012
Sn22/N102	NC UGT H2 VC	-1,201	-0,052	16,663	-0,002	-0,046	0,008
Sn22/N102	NC UGT H3 IG X	-1,685	-0,295	14,462	0,007	-0,061	0,033
Sn22/N102	NC UGT H3 IG Y	-1,223	-1,359	15,476	0,047	-0,050	0,010
Sn22/N102	NC UGT H3 IG -X	-1,684	-0,295	14,462	0,007	-0,061	0,034
Sn22/N102	NC UGT H3 IG -Y	-1,339	1,197	17,574	-0,046	-0,049	0,012
Sn22/N102	NC UGT H3 VC	-1,198	-0,052	16,811	-0,002	-0,046	0,008
Sn22/N102	NC UGT H4 IG X	-1,686	-0,295	14,413	0,007	-0,061	0,033
Sn22/N102	NC UGT H4 IG Y	-1,223	-1,358	15,437	0,047	-0,050	0,011
Sn22/N102	NC UGT H4 IG -X	-1,685	-0,295	14,413	0,007	-0,061	0,034
Sn22/N102	NC UGT H4 IG -Y	-1,333	1,198	17,501	-0,046	-0,049	0,012
Sn22/N102	NC UGT H4 VC	-1,200	-0,052	16,751	-0,002	-0,046	0,008
Sn22/N102	NC UGT H1 BGE X	-0,640	0,118	3,579	-0,004	-0,024	0,011
Sn22/N102	NC UGT H1 BGE Y	-0,863	-1,610	5,004	0,052	0,006	0,001
Sn22/N102	NC UGT H1 BGE -X	-0,640	0,118	3,579	-0,004	-0,024	0,011
Sn22/N102	NC UGT H1 BGE -Y	-0,204	1,367	7,045	-0,051	0,001	0,007
Sn22/N102	NC UGT H2 BGE	-0,637	0,117	3,197	-0,004	-0,024	0,011

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
	X						
Sn22/N102	NC UGT H2 BGE Y	-0,875	-1,674	4,338	0,053	0,006	0,002
Sn22/N102	NC UGT H2 BGE -X	-0,637	0,117	3,197	-0,004	-0,024	0,011
Sn22/N102	NC UGT H2 BGE -Y	-0,200	1,367	6,903	-0,051	0,001	0,008
Sn22/N102	NC UGT H3 BGE X	-0,648	0,118	3,417	-0,004	-0,024	0,011
Sn22/N102	NC UGT H3 BGE Y	-0,882	-1,672	4,622	0,053	0,006	0,001
Sn22/N102	NC UGT H3 BGE -X	-0,648	0,118	3,417	-0,004	-0,024	0,011
Sn22/N102	NC UGT H3 BGE -Y	-0,215	1,366	6,972	-0,051	0,001	0,007
Sn22/N102	NC UGT H4 BGE X	-0,641	0,117	3,355	-0,004	-0,024	0,011
Sn22/N102	NC UGT H4 BGE Y	-0,875	-1,672	4,657	0,053	0,006	0,001
Sn22/N102	NC UGT H4 BGE -X	-0,641	0,117	3,355	-0,004	-0,024	0,011
Sn22/N102	NC UGT H4 BGE -Y	-0,206	1,367	6,958	-0,051	0,001	0,007
Sn23/N107	NC UGT A BG X	-0,030	0,008	0,060	0,003	-0,014	-0,009
Sn23/N107	NC UGT A BG Y	0,000	0,000	0,000	0,025	0,080	-0,022
Sn23/N107	NC UGT A BG -X	-0,031	0,008	0,062	0,003	-0,014	-0,009
Sn23/N107	NC UGT A BG -Y	0,000	0,000	0,000	-0,021	0,014	0,017
Sn23/N107	NC UGT A BGE X	-0,043	0,008	0,086	0,002	-0,014	-0,009
Sn23/N107	NC UGT A BGE Y	0,000	0,000	0,000	0,022	0,078	-0,021
Sn23/N107	NC UGT A BGE -X	-0,043	0,008	0,086	0,002	-0,014	-0,009
Sn23/N107	NC UGT A BGE -Y	0,000	0,000	0,000	-0,021	0,012	0,017
Sn23/N107	NC UGT A IG X	-1,355	-0,002	4,496	0,005	-0,063	-0,004
Sn23/N107	NC UGT A IG Y	-0,689	-0,053	2,632	0,016	-0,055	0,005
Sn23/N107	NC UGT A IG -X	-1,355	-0,002	4,496	0,005	-0,063	-0,004
Sn23/N107	NC UGT A IG -Y	-0,393	0,057	0,786	-0,014	-0,026	-0,004
Sn23/N107	NC UGT A O X	0,000	0,000	0,000	0,004	-0,013	-0,009
Sn23/N107	NC UGT A O Y	0,000	0,000	0,000	0,029	0,084	-0,022
Sn23/N107	NC UGT A O -X	0,000	0,000	0,000	0,004	-0,013	-0,009
Sn23/N107	NC UGT A O -Y	0,000	0,000	0,000	-0,021	0,015	0,016
Sn23/N107	NC UGT A VC	-0,879	0,003	1,758	0,000	-0,039	0,000
Sn23/N107	NC UGT H1 IG X	-1,263	0,001	4,967	0,004	-0,063	-0,004
Sn23/N107	NC UGT H1 IG Y	-0,578	-0,051	2,942	0,016	-0,054	0,006
Sn23/N107	NC UGT H1 IG -X	-1,263	0,001	4,967	0,004	-0,063	-0,004
Sn23/N107	NC UGT H1 IG -Y	-0,736	0,057	1,471	-0,014	-0,042	-0,004
Sn23/N107	NC UGT H1 VC	-1,010	0,004	2,342	-0,001	-0,047	0,001
Sn23/N107	NC UGT H2 IG X	-1,264	0,001	4,974	0,004	-0,063	-0,004
Sn23/N107	NC UGT H2 IG Y	-0,575	-0,051	2,968	0,016	-0,054	0,006
Sn23/N107	NC UGT H2 IG -X	-1,264	0,001	4,975	0,004	-0,063	-0,004
Sn23/N107	NC UGT H2 IG -Y	-0,753	0,057	1,507	-0,014	-0,042	-0,004
Sn23/N107	NC UGT H2 VC	-1,005	0,004	2,371	-0,001	-0,047	0,001
Sn23/N107	NC UGT H3 IG X	-1,275	0,001	4,907	0,004	-0,063	-0,004
Sn23/N107	NC UGT H3 IG Y	-0,588	-0,052	2,914	0,016	-0,054	0,006
Sn23/N107	NC UGT H3 IG -X	-1,275	0,001	4,907	0,004	-0,063	-0,004
Sn23/N107	NC UGT H3 IG -Y	-0,699	0,057	1,398	-0,014	-0,040	-0,004
Sn23/N107	NC UGT H3 VC	-1,019	0,003	2,286	0,000	-0,047	0,001
Sn23/N107	NC UGT H4 IG X	-1,268	0,001	4,949	0,004	-0,063	-0,004
Sn23/N107	NC UGT H4 IG Y	-0,580	-0,051	2,944	0,016	-0,054	0,006
Sn23/N107	NC UGT H4 IG -X	-1,268	0,001	4,950	0,004	-0,063	-0,004
Sn23/N107	NC UGT H4 IG -Y	-0,731	0,057	1,461	-0,014	-0,041	-0,004
Sn23/N107	NC UGT H4 VC	-1,011	0,004	2,335	-0,001	-0,047	0,001
Sn23/N107	NC UGT H1 BGE X	-0,262	0,009	0,524	0,002	-0,025	-0,008
Sn23/N107	NC UGT H1 BGE Y	0,000	0,000	0,000	0,021	0,070	-0,020
Sn23/N107	NC UGT H1 BGE -X	-0,262	0,009	0,524	0,002	-0,025	-0,008

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn23/N107	NC UGT H1 BGE -Y	0,000	0,000	0,000	-0,021	0,003	0,017
Sn23/N107	NC UGT H2 BGE X	-0,287	0,009	0,579	0,002	-0,026	-0,008
Sn23/N107	NC UGT H2 BGE Y	0,000	0,000	0,000	0,021	0,070	-0,021
Sn23/N107	NC UGT H2 BGE -X	-0,287	0,009	0,579	0,002	-0,026	-0,008
Sn23/N107	NC UGT H2 BGE -Y	0,000	0,000	0,000	-0,021	0,002	0,017
Sn23/N107	NC UGT H3 BGE X	-0,240	0,009	0,481	0,002	-0,024	-0,008
Sn23/N107	NC UGT H3 BGE Y	0,000	0,000	0,000	0,021	0,071	-0,021
Sn23/N107	NC UGT H3 BGE -X	-0,240	0,009	0,481	0,002	-0,024	-0,008
Sn23/N107	NC UGT H3 BGE -Y	0,000	0,000	0,000	-0,021	0,004	0,017
Sn23/N107	NC UGT H4 BGE X	-0,267	0,009	0,534	0,002	-0,025	-0,008
Sn23/N107	NC UGT H4 BGE Y	0,000	0,000	0,000	0,021	0,070	-0,021
Sn23/N107	NC UGT H4 BGE -X	-0,267	0,009	0,534	0,002	-0,025	-0,008
Sn23/N107	NC UGT H4 BGE -Y	0,000	0,000	0,000	-0,021	0,003	0,017
Sn24/N112	NC UGT A BG X	0,000	0,000	0,000	0,004	-0,032	0,037
Sn24/N112	NC UGT A BG Y	0,000	0,000	0,000	0,064	-0,016	0,062
Sn24/N112	NC UGT A BG -X	0,000	0,000	0,000	0,004	-0,032	0,037
Sn24/N112	NC UGT A BG -Y	0,064	0,084	3,696	-0,031	-0,002	0,023
Sn24/N112	NC UGT A BGE X	0,000	0,000	0,000	0,004	-0,030	0,038
Sn24/N112	NC UGT A BGE Y	0,000	0,000	0,000	0,036	-0,008	0,063
Sn24/N112	NC UGT A BGE -X	0,000	0,000	0,000	0,004	-0,030	0,038
Sn24/N112	NC UGT A BGE -Y	0,059	0,084	3,980	-0,032	-0,002	0,023
Sn24/N112	NC UGT A IG X	0,000	0,000	0,000	0,009	-0,039	0,037
Sn24/N112	NC UGT A IG Y	0,000	0,000	0,000	0,020	-0,022	0,003
Sn24/N112	NC UGT A IG -X	0,000	0,000	0,000	0,009	-0,039	0,037
Sn24/N112	NC UGT A IG -Y	-0,659	0,063	2,234	-0,025	-0,031	0,023
Sn24/N112	NC UGT A O X	0,000	0,000	0,000	0,008	-0,035	0,037
Sn24/N112	NC UGT A O Y	0,000	0,000	0,000	0,091	-0,015	0,063
Sn24/N112	NC UGT A O -X	0,000	0,000	0,000	0,008	-0,035	0,037
Sn24/N112	NC UGT A O -Y	0,057	0,097	3,434	-0,033	-0,002	0,025
Sn24/N112	NC UGT A VC	-0,302	0,004	0,603	0,000	-0,018	0,003
Sn24/N112	NC UGT H1 IG X	0,000	0,000	0,000	0,009	-0,036	0,039
Sn24/N112	NC UGT H1 IG Y	0,000	0,000	0,000	0,020	-0,016	0,007
Sn24/N112	NC UGT H1 IG -X	0,000	0,000	0,000	0,009	-0,036	0,039
Sn24/N112	NC UGT H1 IG -Y	-0,597	0,060	4,285	-0,025	-0,032	0,026
Sn24/N112	NC UGT H1 VC	-0,627	0,004	2,506	0,000	-0,031	0,006
Sn24/N112	NC UGT H2 IG X	0,000	0,000	0,000	0,009	-0,036	0,040
Sn24/N112	NC UGT H2 IG Y	0,000	0,000	0,000	0,020	-0,017	0,007
Sn24/N112	NC UGT H2 IG -X	0,000	0,000	0,000	0,009	-0,036	0,040
Sn24/N112	NC UGT H2 IG -Y	-0,593	0,060	4,179	-0,025	-0,032	0,026
Sn24/N112	NC UGT H2 VC	-0,623	0,004	2,381	0,000	-0,031	0,007
Sn24/N112	NC UGT H3 IG X	0,000	0,000	0,000	0,009	-0,036	0,039
Sn24/N112	NC UGT H3 IG Y	0,000	0,000	0,000	0,020	-0,017	0,006
Sn24/N112	NC UGT H3 IG -X	0,000	0,000	0,000	0,009	-0,036	0,039
Sn24/N112	NC UGT H3 IG -Y	-0,604	0,061	4,036	-0,025	-0,032	0,025
Sn24/N112	NC UGT H3 VC	-0,633	0,004	2,231	0,000	-0,031	0,006
Sn24/N112	NC UGT H4 IG X	0,000	0,000	0,000	0,009	-0,036	0,039
Sn24/N112	NC UGT H4 IG Y	0,000	0,000	0,000	0,020	-0,017	0,007
Sn24/N112	NC UGT H4 IG -X	0,000	0,000	0,000	0,009	-0,036	0,039
Sn24/N112	NC UGT H4 IG -Y	-0,598	0,060	4,146	-0,025	-0,032	0,026
Sn24/N112	NC UGT H4 VC	-0,628	0,004	2,354	0,000	-0,031	0,006
Sn24/N112	NC UGT H1 BGE X	0,000	0,000	0,000	0,004	-0,028	0,041
Sn24/N112	NC UGT H1 BGE	0,000	0,000	0,000	0,035	-0,004	0,065

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
	Y						
Sn24/N112	NC UGT H1 BGE -X	0,000	0,000	0,000	0,004	-0,028	0,041
Sn24/N112	NC UGT H1 BGE -Y	0,117	0,081	5,697	-0,032	-0,003	0,026
Sn24/N112	NC UGT H2 BGE X	0,000	0,000	0,000	0,004	-0,029	0,041
Sn24/N112	NC UGT H2 BGE Y	0,000	0,000	0,000	0,043	-0,007	0,065
Sn24/N112	NC UGT H2 BGE -X	0,000	0,000	0,000	0,004	-0,029	0,041
Sn24/N112	NC UGT H2 BGE -Y	0,120	0,081	5,585	-0,031	-0,003	0,026
Sn24/N112	NC UGT H3 BGE X	0,000	0,000	0,000	0,004	-0,029	0,040
Sn24/N112	NC UGT H3 BGE Y	0,000	0,000	0,000	0,040	-0,006	0,065
Sn24/N112	NC UGT H3 BGE -X	0,000	0,000	0,000	0,004	-0,029	0,040
Sn24/N112	NC UGT H3 BGE -Y	0,111	0,081	5,439	-0,031	-0,003	0,025
Sn24/N112	NC UGT H4 BGE X	0,000	0,000	0,000	0,004	-0,028	0,041
Sn24/N112	NC UGT H4 BGE Y	0,000	0,000	0,000	0,040	-0,006	0,065
Sn24/N112	NC UGT H4 BGE -X	0,000	0,000	0,000	0,004	-0,028	0,041
Sn24/N112	NC UGT H4 BGE -Y	0,116	0,081	5,557	-0,031	-0,003	0,026
Sn25/N117	NC UGT A BG X	0,090	0,023	1,486	0,000	-0,031	0,020
Sn25/N117	NC UGT A BG Y	0,000	0,000	0,000	0,074	-0,021	0,027
Sn25/N117	NC UGT A BG -X	0,087	0,023	1,485	0,000	-0,031	0,020
Sn25/N117	NC UGT A BG -Y	-0,027	0,901	11,482	-0,053	-0,001	0,010
Sn25/N117	NC UGT A BGE X	0,150	0,018	4,051	-0,001	-0,027	0,019
Sn25/N117	NC UGT A BGE Y	0,000	0,000	0,000	0,039	-0,008	0,031
Sn25/N117	NC UGT A BGE -X	0,150	0,018	4,051	-0,001	-0,027	0,019
Sn25/N117	NC UGT A BGE -Y	-0,031	0,889	13,784	-0,054	-0,001	0,010
Sn25/N117	NC UGT A IG X	-0,545	-0,018	7,800	0,010	-0,059	0,023
Sn25/N117	NC UGT A IG Y	0,000	0,000	0,000	0,031	-0,015	0,000
Sn25/N117	NC UGT A IG -X	-0,545	-0,018	7,800	0,010	-0,059	0,023
Sn25/N117	NC UGT A IG -Y	-0,839	1,030	14,996	-0,055	-0,030	0,010
Sn25/N117	NC UGT A O X	0,000	0,000	0,000	0,005	-0,037	0,021
Sn25/N117	NC UGT A O Y	0,000	0,000	0,000	0,104	-0,025	0,031
Sn25/N117	NC UGT A O -X	0,000	0,000	0,000	0,005	-0,037	0,021
Sn25/N117	NC UGT A O -Y	-0,024	1,296	10,131	-0,062	-0,001	0,011
Sn25/N117	NC UGT A VC	-0,908	0,094	9,739	-0,004	-0,031	0,005
Sn25/N117	NC UGT H1 IG X	-0,608	-0,017	12,026	0,010	-0,057	0,023
Sn25/N117	NC UGT H1 IG Y	-0,950	-0,851	3,934	0,055	-0,032	0,000
Sn25/N117	NC UGT H1 IG -X	-0,608	-0,017	12,026	0,010	-0,057	0,023
Sn25/N117	NC UGT H1 IG -Y	-0,836	1,031	17,248	-0,056	-0,031	0,010
Sn25/N117	NC UGT H1 VC	-0,820	0,096	12,104	-0,004	-0,030	0,005
Sn25/N117	NC UGT H2 IG X	-0,627	-0,017	11,067	0,010	-0,058	0,023
Sn25/N117	NC UGT H2 IG Y	-0,943	-0,852	2,977	0,055	-0,033	0,000
Sn25/N117	NC UGT H2 IG -X	-0,627	-0,017	11,067	0,010	-0,058	0,023
Sn25/N117	NC UGT H2 IG -Y	-0,837	1,033	16,392	-0,056	-0,031	0,010
Sn25/N117	NC UGT H2 VC	-0,821	0,096	11,267	-0,004	-0,030	0,005
Sn25/N117	NC UGT H3 IG X	-0,612	-0,017	11,333	0,010	-0,058	0,023
Sn25/N117	NC UGT H3 IG Y	-0,936	-0,852	3,243	0,055	-0,033	0,000
Sn25/N117	NC UGT H3 IG -X	-0,612	-0,017	11,333	0,010	-0,058	0,023
Sn25/N117	NC UGT H3 IG -Y	-0,837	1,031	16,796	-0,056	-0,031	0,010
Sn25/N117	NC UGT H3 VC	-0,820	0,096	11,680	-0,004	-0,030	0,005
Sn25/N117	NC UGT H4 IG X	-0,618	-0,017	11,366	0,010	-0,057	0,023
Sn25/N117	NC UGT H4 IG Y	-0,942	-0,852	3,275	0,055	-0,033	0,000
Sn25/N117	NC UGT H4 IG -X	-0,618	-0,017	11,366	0,010	-0,057	0,023
Sn25/N117	NC UGT H4 IG -Y	-0,836	1,032	16,722	-0,056	-0,031	0,010
Sn25/N117	NC UGT H4 VC	-0,820	0,096	11,592	-0,004	-0,030	0,005

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn25/N117	NC UGT H1 BGE X	-0,019	0,015	5,711	0,000	-0,029	0,020
Sn25/N117	NC UGT H1 BGE Y	0,000	0,000	0,000	0,038	-0,003	0,032
Sn25/N117	NC UGT H1 BGE -X	-0,019	0,015	5,711	0,000	-0,029	0,020
Sn25/N117	NC UGT H1 BGE -Y	-0,036	0,901	13,779	-0,053	-0,002	0,010
Sn25/N117	NC UGT H2 BGE X	-0,008	0,016	4,756	0,000	-0,029	0,020
Sn25/N117	NC UGT H2 BGE Y	0,000	0,000	0,000	0,047	-0,007	0,033
Sn25/N117	NC UGT H2 BGE -X	-0,008	0,016	4,756	0,000	-0,029	0,020
Sn25/N117	NC UGT H2 BGE -Y	-0,036	0,903	12,929	-0,053	-0,002	0,010
Sn25/N117	NC UGT H3 BGE X	-0,004	0,014	5,020	0,000	-0,029	0,020
Sn25/N117	NC UGT H3 BGE Y	0,000	0,000	0,000	0,044	-0,006	0,033
Sn25/N117	NC UGT H3 BGE -X	-0,004	0,014	5,020	0,000	-0,029	0,020
Sn25/N117	NC UGT H3 BGE -Y	-0,035	0,901	13,335	-0,053	-0,002	0,010
Sn25/N117	NC UGT H4 BGE X	-0,009	0,015	5,053	0,000	-0,029	0,020
Sn25/N117	NC UGT H4 BGE Y	0,000	0,000	0,000	0,044	-0,006	0,033
Sn25/N117	NC UGT H4 BGE -X	-0,009	0,015	5,053	0,000	-0,029	0,020
Sn25/N117	NC UGT H4 BGE -Y	-0,036	0,902	13,254	-0,053	-0,002	0,010
Sn26/N122	NC UGT A BG X	-0,818	-0,060	5,727	0,000	-0,027	-0,004
Sn26/N122	NC UGT A BG Y	0,632	-0,632	1,264	0,037	-0,003	0,040
Sn26/N122	NC UGT A BG -X	-0,821	-0,060	5,727	0,000	-0,027	-0,004
Sn26/N122	NC UGT A BG -Y	0,061	0,519	5,507	-0,029	-0,002	-0,027
Sn26/N122	NC UGT A BGE X	-0,693	-0,080	10,687	-0,001	-0,023	-0,006
Sn26/N122	NC UGT A BGE Y	0,286	-0,766	8,576	0,034	0,001	0,010
Sn26/N122	NC UGT A BGE -X	-0,693	-0,080	10,687	-0,001	-0,023	-0,006
Sn26/N122	NC UGT A BGE -Y	0,054	0,478	10,467	-0,030	-0,002	-0,029
Sn26/N122	NC UGT A IG X	-1,536	-0,195	16,633	0,002	-0,056	-0,005
Sn26/N122	NC UGT A IG Y	-1,274	-0,812	14,929	0,037	-0,041	0,015
Sn26/N122	NC UGT A IG -X	-1,536	-0,195	16,633	0,002	-0,056	-0,005
Sn26/N122	NC UGT A IG -Y	-0,822	0,751	17,230	-0,044	-0,034	-0,004
Sn26/N122	NC UGT A O X	-0,904	-0,065	4,211	0,000	-0,030	-0,002
Sn26/N122	NC UGT A O Y	0,000	0,000	0,000	0,045	-0,026	0,052
Sn26/N122	NC UGT A O -X	-0,904	-0,065	4,211	0,000	-0,030	-0,002
Sn26/N122	NC UGT A O -Y	0,048	0,615	4,256	-0,032	-0,002	-0,026
Sn26/N122	NC UGT A VC	-0,872	-0,021	16,142	-0,004	-0,035	0,002
Sn26/N122	NC UGT H1 IG X	-1,442	-0,192	16,633	0,002	-0,054	-0,004
Sn26/N122	NC UGT H1 IG Y	-0,945	-0,769	15,022	0,035	-0,035	0,015
Sn26/N122	NC UGT H1 IG -X	-1,442	-0,192	16,633	0,002	-0,054	-0,004
Sn26/N122	NC UGT H1 IG -Y	-0,788	0,757	17,224	-0,045	-0,035	-0,004
Sn26/N122	NC UGT H1 VC	-0,786	-0,018	16,145	-0,004	-0,034	0,002
Sn26/N122	NC UGT H2 IG X	-1,460	-0,192	16,625	0,002	-0,055	-0,004
Sn26/N122	NC UGT H2 IG Y	-0,948	-0,769	15,014	0,035	-0,035	0,015
Sn26/N122	NC UGT H2 IG -X	-1,460	-0,192	16,625	0,002	-0,055	-0,004
Sn26/N122	NC UGT H2 IG -Y	-0,785	0,756	17,214	-0,045	-0,035	-0,004
Sn26/N122	NC UGT H2 VC	-0,783	-0,018	16,135	-0,004	-0,034	0,002
Sn26/N122	NC UGT H3 IG X	-1,461	-0,192	16,633	0,002	-0,055	-0,004
Sn26/N122	NC UGT H3 IG Y	-0,957	-0,770	15,023	0,035	-0,035	0,015
Sn26/N122	NC UGT H3 IG -X	-1,461	-0,192	16,633	0,002	-0,055	-0,004
Sn26/N122	NC UGT H3 IG -Y	-0,792	0,756	17,223	-0,045	-0,035	-0,004
Sn26/N122	NC UGT H3 VC	-0,788	-0,018	16,143	-0,004	-0,033	0,002
Sn26/N122	NC UGT H4 IG X	-1,457	-0,192	16,630	0,002	-0,055	-0,004
Sn26/N122	NC UGT H4 IG Y	-0,950	-0,769	15,019	0,035	-0,035	0,015

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn26/N122	NC UGT H4 IG -X	-1,457	-0,192	16,630	0,002	-0,055	-0,004
Sn26/N122	NC UGT H4 IG -Y	-0,788	0,756	17,219	-0,045	-0,035	-0,004
Sn26/N122	NC UGT H4 VC	-0,785	-0,018	16,140	-0,004	-0,034	0,002
Sn26/N122	NC UGT H1 BGE X	-0,729	-0,053	5,728	-0,001	-0,025	-0,004
Sn26/N122	NC UGT H1 BGE Y	0,203	-0,770	4,017	0,035	0,000	0,011
Sn26/N122	NC UGT H1 BGE -X	-0,729	-0,053	5,728	-0,001	-0,025	-0,004
Sn26/N122	NC UGT H1 BGE -Y	0,084	0,525	5,504	-0,030	-0,003	-0,026
Sn26/N122	NC UGT H2 BGE X	-0,733	-0,052	5,715	-0,001	-0,026	-0,004
Sn26/N122	NC UGT H2 BGE Y	0,371	-0,806	3,325	0,038	0,000	0,016
Sn26/N122	NC UGT H2 BGE -X	-0,733	-0,052	5,715	-0,001	-0,026	-0,004
Sn26/N122	NC UGT H2 BGE -Y	0,086	0,525	5,494	-0,030	-0,003	-0,026
Sn26/N122	NC UGT H3 BGE X	-0,740	-0,053	5,725	-0,001	-0,026	-0,004
Sn26/N122	NC UGT H3 BGE Y	0,309	-0,795	3,566	0,037	0,000	0,014
Sn26/N122	NC UGT H3 BGE -X	-0,740	-0,053	5,725	-0,001	-0,026	-0,004
Sn26/N122	NC UGT H3 BGE -Y	0,082	0,525	5,502	-0,030	-0,002	-0,026
Sn26/N122	NC UGT H4 BGE X	-0,735	-0,053	5,721	-0,001	-0,026	-0,004
Sn26/N122	NC UGT H4 BGE Y	0,311	-0,794	3,561	0,037	0,000	0,014
Sn26/N122	NC UGT H4 BGE -X	-0,735	-0,053	5,721	-0,001	-0,026	-0,004
Sn26/N122	NC UGT H4 BGE -Y	0,084	0,525	5,499	-0,030	-0,003	-0,026
Sn27/N127	NC UGT A BG X	-0,197	0,010	0,394	0,000	-0,010	0,004
Sn27/N127	NC UGT A BG Y	0,000	0,000	0,000	0,007	-0,006	-0,003
Sn27/N127	NC UGT A BG -X	-0,197	0,010	0,394	0,000	-0,010	0,004
Sn27/N127	NC UGT A BG -Y	-0,033	0,387	1,322	-0,019	-0,001	0,002
Sn27/N127	NC UGT A BGE X	-0,596	-0,178	5,234	-0,003	-0,024	0,002
Sn27/N127	NC UGT A BGE Y	0,055	-0,593	5,163	0,019	0,000	-0,005
Sn27/N127	NC UGT A BGE -X	-0,596	-0,178	5,234	-0,003	-0,024	0,002
Sn27/N127	NC UGT A BGE -Y	-0,036	0,180	6,261	-0,021	-0,001	-0,001
Sn27/N127	NC UGT A IG X	-1,480	-0,421	8,938	-0,001	-0,056	0,002
Sn27/N127	NC UGT A IG Y	-1,135	-0,946	8,576	0,026	-0,043	0,001
Sn27/N127	NC UGT A IG -X	-1,480	-0,421	8,938	-0,001	-0,056	0,002
Sn27/N127	NC UGT A IG -Y	-0,902	0,356	10,871	-0,041	-0,035	0,001
Sn27/N127	NC UGT A O X	-0,115	0,004	0,230	-0,001	-0,008	0,004
Sn27/N127	NC UGT A O Y	0,000	0,000	0,000	0,013	-0,011	0,000
Sn27/N127	NC UGT A O -X	-0,115	0,004	0,230	-0,001	-0,008	0,004
Sn27/N127	NC UGT A O -Y	-0,033	0,436	1,103	-0,021	-0,001	0,002
Sn27/N127	NC UGT A VC	-0,921	-0,330	9,713	-0,006	-0,036	0,001
Sn27/N127	NC UGT H1 IG X	-1,412	-0,422	8,943	-0,001	-0,054	0,002
Sn27/N127	NC UGT H1 IG Y	-0,946	-0,939	8,618	0,026	-0,036	0,001
Sn27/N127	NC UGT H1 IG -X	-1,412	-0,422	8,943	-0,001	-0,054	0,002
Sn27/N127	NC UGT H1 IG -Y	-0,903	0,356	10,877	-0,041	-0,035	0,001
Sn27/N127	NC UGT H1 VC	-0,879	-0,331	9,717	-0,006	-0,034	0,001
Sn27/N127	NC UGT H2 IG X	-1,436	-0,421	8,942	-0,001	-0,055	0,002
Sn27/N127	NC UGT H2 IG Y	-0,952	-0,939	8,616	0,026	-0,037	0,001
Sn27/N127	NC UGT H2 IG -X	-1,436	-0,421	8,942	-0,001	-0,055	0,002
Sn27/N127	NC UGT H2 IG -Y	-0,903	0,356	10,877	-0,041	-0,035	0,001
Sn27/N127	NC UGT H2 VC	-0,879	-0,330	9,716	-0,006	-0,034	0,001
Sn27/N127	NC UGT H3 IG X	-1,430	-0,421	8,941	-0,001	-0,055	0,002
Sn27/N127	NC UGT H3 IG Y	-0,955	-0,939	8,616	0,026	-0,037	0,001
Sn27/N127	NC UGT H3 IG -X	-1,430	-0,421	8,941	-0,001	-0,055	0,002
Sn27/N127	NC UGT H3 IG -Y	-0,903	0,356	10,876	-0,041	-0,035	0,001

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn27/N127	NC UGT H3 VC	-0,877	-0,331	9,716	-0,006	-0,034	0,001
Sn27/N127	NC UGT H4 IG X	-1,429	-0,421	8,942	-0,001	-0,055	0,002
Sn27/N127	NC UGT H4 IG Y	-0,952	-0,939	8,617	0,026	-0,037	0,001
Sn27/N127	NC UGT H4 IG -X	-1,429	-0,421	8,942	-0,001	-0,055	0,002
Sn27/N127	NC UGT H4 IG -Y	-0,903	0,356	10,876	-0,041	-0,035	0,001
Sn27/N127	NC UGT H4 VC	-0,878	-0,331	9,716	-0,006	-0,034	0,001
Sn27/N127	NC UGT H1 BGE X	-0,182	0,016	0,363	0,000	-0,010	0,004
Sn27/N127	NC UGT H1 BGE Y	0,034	-0,139	0,279	0,011	0,000	-0,003
Sn27/N127	NC UGT H1 BGE -X	-0,182	0,016	0,363	0,000	-0,010	0,004
Sn27/N127	NC UGT H1 BGE -Y	-0,047	0,388	1,326	-0,019	-0,001	0,002
Sn27/N127	NC UGT H2 BGE X	-0,182	0,018	0,363	0,000	-0,010	0,004
Sn27/N127	NC UGT H2 BGE Y	0,060	-0,061	0,121	0,008	0,000	-0,003
Sn27/N127	NC UGT H2 BGE -X	-0,182	0,018	0,363	0,000	-0,010	0,004
Sn27/N127	NC UGT H2 BGE -Y	-0,047	0,389	1,325	-0,019	-0,001	0,002
Sn27/N127	NC UGT H3 BGE X	-0,184	0,016	0,368	0,000	-0,010	0,004
Sn27/N127	NC UGT H3 BGE Y	0,050	-0,086	0,171	0,009	0,000	-0,003
Sn27/N127	NC UGT H3 BGE -X	-0,184	0,016	0,368	0,000	-0,010	0,004
Sn27/N127	NC UGT H3 BGE -Y	-0,045	0,388	1,325	-0,019	-0,001	0,002
Sn27/N127	NC UGT H4 BGE X	-0,183	0,017	0,365	0,000	-0,010	0,004
Sn27/N127	NC UGT H4 BGE Y	0,049	-0,084	0,168	0,009	0,000	-0,003
Sn27/N127	NC UGT H4 BGE -X	-0,183	0,017	0,365	0,000	-0,010	0,004
Sn27/N127	NC UGT H4 BGE -Y	-0,046	0,388	1,325	-0,019	-0,001	0,002
Sn28/N132	NC UGT A BG X	-0,481	0,061	0,961	-0,001	-0,020	0,002
Sn28/N132	NC UGT A BG Y	0,053	-0,172	0,343	0,016	-0,004	0,001
Sn28/N132	NC UGT A BG -X	-0,481	0,062	0,961	-0,001	-0,020	0,002
Sn28/N132	NC UGT A BG -Y	0,083	0,403	1,385	-0,018	-0,001	0,000
Sn28/N132	NC UGT A BGE X	-0,621	-0,139	6,021	-0,003	-0,025	0,002
Sn28/N132	NC UGT A BGE Y	0,001	-0,468	5,564	0,017	-0,002	0,000
Sn28/N132	NC UGT A BGE -X	-0,621	-0,139	6,021	-0,003	-0,025	0,002
Sn28/N132	NC UGT A BGE -Y	0,089	0,219	6,449	-0,020	-0,001	0,000
Sn28/N132	NC UGT A IG X	-1,639	-0,495	10,848	0,000	-0,059	0,002
Sn28/N132	NC UGT A IG Y	-1,301	-1,025	9,839	0,025	-0,044	0,002
Sn28/N132	NC UGT A IG -X	-1,639	-0,495	10,848	0,000	-0,059	0,002
Sn28/N132	NC UGT A IG -Y	-0,930	0,318	12,336	-0,037	-0,038	0,002
Sn28/N132	NC UGT A O X	-0,398	0,023	0,797	-0,001	-0,018	0,001
Sn28/N132	NC UGT A O Y	0,000	0,000	0,000	0,010	-0,006	0,004
Sn28/N132	NC UGT A O -X	-0,398	0,023	0,797	-0,001	-0,018	0,001
Sn28/N132	NC UGT A O -Y	0,068	0,418	1,150	-0,019	-0,001	0,000
Sn28/N132	NC UGT A VC	-1,014	-0,419	11,074	-0,003	-0,038	0,002
Sn28/N132	NC UGT H1 IG X	-1,548	-0,510	10,827	0,000	-0,057	0,002
Sn28/N132	NC UGT H1 IG Y	-1,112	-1,064	9,814	0,027	-0,039	0,002
Sn28/N132	NC UGT H1 IG -X	-1,548	-0,510	10,827	0,000	-0,057	0,002
Sn28/N132	NC UGT H1 IG -Y	-0,917	0,322	12,319	-0,037	-0,038	0,002
Sn28/N132	NC UGT H1 VC	-0,970	-0,424	11,055	-0,003	-0,037	0,002
Sn28/N132	NC UGT H2 IG X	-1,578	-0,504	10,825	0,000	-0,058	0,002
Sn28/N132	NC UGT H2 IG Y	-1,119	-1,062	9,812	0,027	-0,039	0,002
Sn28/N132	NC UGT H2 IG -X	-1,578	-0,504	10,825	0,000	-0,058	0,002
Sn28/N132	NC UGT H2 IG -Y	-0,916	0,323	12,318	-0,037	-0,038	0,002
Sn28/N132	NC UGT H2 VC	-0,970	-0,423	11,054	-0,003	-0,037	0,002
Sn28/N132	NC UGT H3 IG X	-1,571	-0,506	10,829	0,000	-0,057	0,002

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn28/N132	NC UGT H3 IG Y	-1,124	-1,062	9,817	0,027	-0,039	0,002
Sn28/N132	NC UGT H3 IG -X	-1,571	-0,505	10,829	0,000	-0,057	0,002
Sn28/N132	NC UGT H3 IG -Y	-0,918	0,322	12,321	-0,037	-0,038	0,002
Sn28/N132	NC UGT H3 VC	-0,970	-0,424	11,057	-0,003	-0,037	0,002
Sn28/N132	NC UGT H4 IG X	-1,569	-0,506	10,827	0,000	-0,057	0,002
Sn28/N132	NC UGT H4 IG Y	-1,119	-1,062	9,814	0,027	-0,039	0,002
Sn28/N132	NC UGT H4 IG -X	-1,569	-0,506	10,827	0,000	-0,057	0,002
Sn28/N132	NC UGT H4 IG -Y	-0,917	0,322	12,319	-0,037	-0,038	0,002
Sn28/N132	NC UGT H4 VC	-0,970	-0,423	11,055	-0,003	-0,037	0,002
Sn28/N132	NC UGT H1 BGE X	-0,469	0,061	0,937	-0,001	-0,020	0,002
Sn28/N132	NC UGT H1 BGE Y	0,014	-0,239	0,477	0,018	-0,001	0,000
Sn28/N132	NC UGT H1 BGE -X	-0,469	0,061	0,937	-0,001	-0,020	0,002
Sn28/N132	NC UGT H1 BGE -Y	0,082	0,404	1,367	-0,018	-0,001	0,000
Sn28/N132	NC UGT H2 BGE X	-0,468	0,064	0,937	-0,001	-0,020	0,002
Sn28/N132	NC UGT H2 BGE Y	-0,009	-0,247	0,493	0,018	-0,003	0,000
Sn28/N132	NC UGT H2 BGE -X	-0,468	0,064	0,937	-0,001	-0,020	0,002
Sn28/N132	NC UGT H2 BGE -Y	0,082	0,404	1,366	-0,018	-0,001	0,000
Sn28/N132	NC UGT H3 BGE X	-0,470	0,062	0,940	-0,001	-0,020	0,002
Sn28/N132	NC UGT H3 BGE Y	-0,004	-0,245	0,491	0,018	-0,002	0,000
Sn28/N132	NC UGT H3 BGE -X	-0,470	0,062	0,940	-0,001	-0,020	0,002
Sn28/N132	NC UGT H3 BGE -Y	0,082	0,404	1,369	-0,018	-0,001	0,000
Sn28/N132	NC UGT H4 BGE X	-0,469	0,062	0,938	-0,001	-0,020	0,002
Sn28/N132	NC UGT H4 BGE Y	-0,005	-0,244	0,489	0,018	-0,002	0,000
Sn28/N132	NC UGT H4 BGE -X	-0,469	0,062	0,938	-0,001	-0,020	0,002
Sn28/N132	NC UGT H4 BGE -Y	0,082	0,404	1,367	-0,018	-0,001	0,000
Sn29/N137	NC UGT A BG X	-0,715	0,028	1,429	0,000	-0,027	0,005
Sn29/N137	NC UGT A BG Y	-0,110	-0,394	1,061	0,021	-0,008	0,001
Sn29/N137	NC UGT A BG -X	-0,714	0,027	1,428	0,000	-0,027	0,005
Sn29/N137	NC UGT A BG -Y	0,008	0,362	1,317	-0,018	0,000	-0,002
Sn29/N137	NC UGT A BGE X	-0,596	-0,163	6,389	-0,003	-0,023	0,007
Sn29/N137	NC UGT A BGE Y	-0,074	-0,530	5,469	0,016	-0,003	0,005
Sn29/N137	NC UGT A BGE -X	-0,596	-0,163	6,389	-0,003	-0,023	0,007
Sn29/N137	NC UGT A BGE -Y	0,001	0,164	6,256	-0,021	0,000	0,001
Sn29/N137	NC UGT A IG X	-1,425	-0,343	12,145	-0,004	-0,055	0,012
Sn29/N137	NC UGT A IG Y	-1,135	-0,834	10,800	0,022	-0,042	0,012
Sn29/N137	NC UGT A IG -X	-1,425	-0,343	12,145	-0,004	-0,055	0,012
Sn29/N137	NC UGT A IG -Y	-0,879	0,439	12,995	-0,046	-0,034	0,013
Sn29/N137	NC UGT A O X	-0,634	0,053	1,268	-0,001	-0,025	0,005
Sn29/N137	NC UGT A O Y	0,145	-0,323	0,646	0,018	0,001	0,002
Sn29/N137	NC UGT A O -X	-0,634	0,053	1,268	-0,001	-0,025	0,005
Sn29/N137	NC UGT A O -Y	0,006	0,382	1,098	-0,019	0,000	-0,002
Sn29/N137	NC UGT A VC	-0,895	-0,224	11,835	-0,010	-0,035	0,012
Sn29/N137	NC UGT H1 IG X	-1,304	-0,329	12,145	-0,004	-0,052	0,012
Sn29/N137	NC UGT H1 IG Y	-0,938	-0,807	10,759	0,021	-0,036	0,012
Sn29/N137	NC UGT H1 IG -X	-1,304	-0,329	12,145	-0,004	-0,052	0,012
Sn29/N137	NC UGT H1 IG -Y	-0,858	0,432	12,994	-0,045	-0,034	0,013
Sn29/N137	NC UGT H1 VC	-0,851	-0,223	11,835	-0,010	-0,033	0,012
Sn29/N137	NC UGT H2 IG X	-1,341	-0,333	12,144	-0,004	-0,053	0,012
Sn29/N137	NC UGT H2 IG Y	-0,948	-0,808	10,759	0,021	-0,036	0,012
Sn29/N137	NC UGT H2 IG -X	-1,341	-0,333	12,144	-0,004	-0,053	0,012

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn29/N137	NC UGT H2 IG -Y	-0,857	0,432	12,993	-0,045	-0,034	0,013
Sn29/N137	NC UGT H2 VC	-0,850	-0,223	11,834	-0,010	-0,033	0,012
Sn29/N137	NC UGT H3 IG X	-1,334	-0,332	12,146	-0,004	-0,053	0,012
Sn29/N137	NC UGT H3 IG Y	-0,954	-0,809	10,762	0,021	-0,037	0,012
Sn29/N137	NC UGT H3 IG -X	-1,334	-0,332	12,146	-0,004	-0,053	0,012
Sn29/N137	NC UGT H3 IG -Y	-0,860	0,433	12,994	-0,045	-0,034	0,013
Sn29/N137	NC UGT H3 VC	-0,852	-0,223	11,835	-0,010	-0,033	0,012
Sn29/N137	NC UGT H4 IG X	-1,331	-0,332	12,145	-0,004	-0,052	0,012
Sn29/N137	NC UGT H4 IG Y	-0,948	-0,808	10,760	0,021	-0,036	0,012
Sn29/N137	NC UGT H4 IG -X	-1,331	-0,332	12,145	-0,004	-0,052	0,012
Sn29/N137	NC UGT H4 IG -Y	-0,858	0,433	12,994	-0,045	-0,034	0,013
Sn29/N137	NC UGT H4 VC	-0,851	-0,223	11,835	-0,010	-0,033	0,012
Sn29/N137	NC UGT H1 BGE X	-0,635	0,029	1,438	0,000	-0,025	0,005
Sn29/N137	NC UGT H1 BGE Y	-0,016	-0,269	0,538	0,016	-0,001	0,002
Sn29/N137	NC UGT H1 BGE -X	-0,635	0,029	1,438	0,000	-0,025	0,005
Sn29/N137	NC UGT H1 BGE -Y	0,019	0,360	1,316	-0,018	0,000	-0,002
Sn29/N137	NC UGT H2 BGE X	-0,647	0,026	1,431	0,000	-0,025	0,005
Sn29/N137	NC UGT H2 BGE Y	-0,059	-0,338	0,676	0,019	-0,003	0,002
Sn29/N137	NC UGT H2 BGE -X	-0,647	0,026	1,431	0,000	-0,025	0,005
Sn29/N137	NC UGT H2 BGE -Y	0,019	0,360	1,316	-0,018	0,000	-0,002
Sn29/N137	NC UGT H3 BGE X	-0,648	0,028	1,435	0,000	-0,025	0,005
Sn29/N137	NC UGT H3 BGE Y	-0,048	-0,316	0,633	0,018	-0,003	0,002
Sn29/N137	NC UGT H3 BGE -X	-0,648	0,028	1,435	0,000	-0,025	0,005
Sn29/N137	NC UGT H3 BGE -Y	0,017	0,360	1,316	-0,018	0,000	-0,002
Sn29/N137	NC UGT H4 BGE X	-0,645	0,027	1,434	0,000	-0,025	0,005
Sn29/N137	NC UGT H4 BGE Y	-0,048	-0,318	0,636	0,018	-0,003	0,002
Sn29/N137	NC UGT H4 BGE -X	-0,645	0,027	1,434	0,000	-0,025	0,005
Sn29/N137	NC UGT H4 BGE -Y	0,018	0,360	1,316	-0,018	0,000	-0,002
Sn30/N142	NC UGT A BG X	-0,987	0,035	3,916	-0,001	-0,025	0,010
Sn30/N142	NC UGT A BG Y	-0,412	-0,754	2,964	0,033	-0,010	0,002
Sn30/N142	NC UGT A BG -X	-0,974	0,031	3,918	-0,001	-0,026	0,002
Sn30/N142	NC UGT A BG -Y	-0,069	0,503	5,487	-0,027	0,001	0,013
Sn30/N142	NC UGT A BGE X	-0,828	0,000	9,044	-0,001	-0,022	0,013
Sn30/N142	NC UGT A BGE Y	-0,190	-0,620	9,021	0,027	-0,004	-0,004
Sn30/N142	NC UGT A BGE -X	-0,828	0,000	9,044	-0,001	-0,022	0,013
Sn30/N142	NC UGT A BGE -Y	-0,070	0,467	10,448	-0,028	0,001	0,015
Sn30/N142	NC UGT A IG X	-1,800	-0,141	12,885	0,004	-0,051	0,017
Sn30/N142	NC UGT A IG Y	-1,121	-0,718	12,735	0,032	-0,042	0,012
Sn30/N142	NC UGT A IG -X	-1,800	-0,141	12,885	0,004	-0,051	0,017
Sn30/N142	NC UGT A IG -Y	-0,918	0,713	14,934	-0,040	-0,032	0,003
Sn30/N142	NC UGT A O X	-1,163	0,040	2,477	-0,001	-0,031	0,008
Sn30/N142	NC UGT A O Y	-0,208	-0,208	0,415	0,021	0,000	-0,004
Sn30/N142	NC UGT A O -X	-1,163	0,040	2,477	-0,001	-0,031	0,008
Sn30/N142	NC UGT A O -Y	-0,057	0,508	4,224	-0,027	0,001	0,012
Sn30/N142	NC UGT A VC	-0,923	-0,016	13,891	-0,003	-0,032	0,007
Sn30/N142	NC UGT H1 IG X	-1,608	-0,125	12,988	0,003	-0,046	0,017
Sn30/N142	NC UGT H1 IG Y	-0,932	-0,710	12,774	0,032	-0,035	0,012
Sn30/N142	NC UGT H1 IG -X	-1,608	-0,125	12,988	0,003	-0,046	0,017
Sn30/N142	NC UGT H1 IG -Y	-0,929	0,714	14,935	-0,040	-0,031	0,002
Sn30/N142	NC UGT H1 VC	-0,912	-0,014	13,893	-0,003	-0,031	0,007

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn30/N142	NC UGT H2 IG X	-1,691	-0,126	12,990	0,003	-0,047	0,017
Sn30/N142	NC UGT H2 IG Y	-0,946	-0,710	12,765	0,032	-0,035	0,011
Sn30/N142	NC UGT H2 IG -X	-1,691	-0,126	12,990	0,003	-0,047	0,017
Sn30/N142	NC UGT H2 IG -Y	-0,931	0,714	14,926	-0,040	-0,031	0,002
Sn30/N142	NC UGT H2 VC	-0,914	-0,013	13,884	-0,003	-0,031	0,007
Sn30/N142	NC UGT H3 IG X	-1,666	-0,126	12,991	0,003	-0,047	0,017
Sn30/N142	NC UGT H3 IG Y	-0,948	-0,710	12,770	0,032	-0,035	0,012
Sn30/N142	NC UGT H3 IG -X	-1,666	-0,126	12,991	0,003	-0,047	0,017
Sn30/N142	NC UGT H3 IG -Y	-0,928	0,714	14,933	-0,040	-0,031	0,002
Sn30/N142	NC UGT H3 VC	-0,910	-0,014	13,892	-0,003	-0,031	0,007
Sn30/N142	NC UGT H4 IG X	-1,665	-0,126	12,990	0,003	-0,047	0,017
Sn30/N142	NC UGT H4 IG Y	-0,944	-0,710	12,769	0,032	-0,035	0,012
Sn30/N142	NC UGT H4 IG -X	-1,665	-0,126	12,990	0,003	-0,047	0,017
Sn30/N142	NC UGT H4 IG -Y	-0,930	0,714	14,931	-0,040	-0,031	0,002
Sn30/N142	NC UGT H4 VC	-0,912	-0,014	13,889	-0,003	-0,031	0,007
Sn30/N142	NC UGT H1 BGE X	-0,899	0,039	4,124	-0,001	-0,022	0,011
Sn30/N142	NC UGT H1 BGE Y	-0,065	-0,587	4,439	0,027	-0,001	-0,006
Sn30/N142	NC UGT H1 BGE -X	-0,899	0,039	4,124	-0,001	-0,022	0,011
Sn30/N142	NC UGT H1 BGE -Y	-0,090	0,504	5,485	-0,027	0,002	0,012
Sn30/N142	NC UGT H2 BGE X	-0,918	0,037	4,066	-0,001	-0,022	0,011
Sn30/N142	NC UGT H2 BGE Y	-0,164	-0,593	4,158	0,027	-0,004	-0,006
Sn30/N142	NC UGT H2 BGE -X	-0,918	0,037	4,066	-0,001	-0,022	0,011
Sn30/N142	NC UGT H2 BGE -Y	-0,092	0,505	5,476	-0,027	0,002	0,012
Sn30/N142	NC UGT H3 BGE X	-0,913	0,038	4,087	-0,001	-0,023	0,011
Sn30/N142	NC UGT H3 BGE Y	-0,134	-0,595	4,267	0,027	-0,003	-0,006
Sn30/N142	NC UGT H3 BGE -X	-0,913	0,038	4,087	-0,001	-0,023	0,011
Sn30/N142	NC UGT H3 BGE -Y	-0,088	0,504	5,484	-0,027	0,002	0,012
Sn30/N142	NC UGT H4 BGE X	-0,912	0,038	4,086	-0,001	-0,022	0,011
Sn30/N142	NC UGT H4 BGE Y	-0,133	-0,593	4,272	0,027	-0,003	-0,006
Sn30/N142	NC UGT H4 BGE -X	-0,912	0,038	4,086	-0,001	-0,022	0,011
Sn30/N142	NC UGT H4 BGE -Y	-0,090	0,505	5,481	-0,027	0,002	0,012
Sn31/N147	NC UGT A BG X	0,000	0,000	0,000	0,001	-0,020	-0,004
Sn31/N147	NC UGT A BG Y	0,000	0,000	0,000	0,017	0,000	-0,025
Sn31/N147	NC UGT A BG -X	0,000	0,000	0,000	0,001	-0,019	0,005
Sn31/N147	NC UGT A BG -Y	0,015	1,108	11,510	-0,051	0,000	-0,011
Sn31/N147	NC UGT A BGE X	0,000	0,000	0,000	0,000	-0,014	-0,004
Sn31/N147	NC UGT A BGE Y	0,000	0,000	0,000	0,017	0,004	-0,012
Sn31/N147	NC UGT A BGE -X	0,000	0,000	0,000	0,000	-0,014	-0,004
Sn31/N147	NC UGT A BGE -Y	0,013	1,096	13,738	-0,051	0,000	-0,010
Sn31/N147	NC UGT A IG X	0,000	0,000	0,000	0,002	-0,017	-0,002
Sn31/N147	NC UGT A IG Y	-1,066	-1,107	2,635	0,047	-0,040	0,016
Sn31/N147	NC UGT A IG -X	0,000	0,000	0,000	0,002	-0,017	-0,002
Sn31/N147	NC UGT A IG -Y	-0,790	0,998	14,778	-0,045	-0,029	-0,001
Sn31/N147	NC UGT A O X	0,000	0,000	0,000	0,002	-0,024	-0,002
Sn31/N147	NC UGT A O Y	0,000	0,000	0,000	0,020	0,007	-0,023
Sn31/N147	NC UGT A O -X	0,000	0,000	0,000	0,002	-0,024	-0,002
Sn31/N147	NC UGT A O -Y	0,011	1,096	10,149	-0,050	0,000	-0,010
Sn31/N147	NC UGT A VC	-0,812	-0,023	10,087	-0,002	-0,030	0,006
Sn31/N147	NC UGT H1 IG X	-0,622	-0,202	1,245	0,007	-0,028	-0,002
Sn31/N147	NC UGT H1 IG Y	-0,803	-1,089	5,276	0,047	-0,033	0,021

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn31/N147	NC UGT H1 IG -X	-0,622	-0,202	1,245	0,007	-0,028	-0,002
Sn31/N147	NC UGT H1 IG -Y	-0,771	0,998	17,122	-0,045	-0,029	-0,001
Sn31/N147	NC UGT H1 VC	-0,776	-0,018	12,379	-0,002	-0,029	0,007
Sn31/N147	NC UGT H2 IG X	-0,301	-0,203	0,602	0,007	-0,020	-0,002
Sn31/N147	NC UGT H2 IG Y	-0,821	-1,091	4,488	0,047	-0,033	0,021
Sn31/N147	NC UGT H2 IG -X	-0,301	-0,203	0,601	0,007	-0,020	-0,002
Sn31/N147	NC UGT H2 IG -Y	-0,771	1,000	16,324	-0,045	-0,028	-0,001
Sn31/N147	NC UGT H2 VC	-0,776	-0,018	11,593	-0,002	-0,029	0,007
Sn31/N147	NC UGT H3 IG X	-0,395	-0,203	0,790	0,007	-0,022	-0,002
Sn31/N147	NC UGT H3 IG Y	-0,828	-1,090	4,797	0,047	-0,033	0,021
Sn31/N147	NC UGT H3 IG -X	-0,395	-0,203	0,790	0,007	-0,022	-0,002
Sn31/N147	NC UGT H3 IG -Y	-0,773	0,998	16,671	-0,045	-0,029	-0,001
Sn31/N147	NC UGT H3 VC	-0,777	-0,019	11,964	-0,002	-0,029	0,007
Sn31/N147	NC UGT H4 IG X	-0,402	-0,203	0,805	0,007	-0,022	-0,002
Sn31/N147	NC UGT H4 IG Y	-0,820	-1,090	4,765	0,047	-0,033	0,021
Sn31/N147	NC UGT H4 IG -X	-0,402	-0,203	0,805	0,007	-0,022	-0,002
Sn31/N147	NC UGT H4 IG -Y	-0,772	0,999	16,621	-0,045	-0,029	-0,001
Sn31/N147	NC UGT H4 VC	-0,776	-0,018	11,892	-0,002	-0,029	0,007
Sn31/N147	NC UGT H1 BGE X	0,000	0,000	0,000	0,000	-0,013	-0,004
Sn31/N147	NC UGT H1 BGE Y	-0,066	-0,151	0,302	0,020	-0,002	-0,011
Sn31/N147	NC UGT H1 BGE -X	0,000	0,000	0,000	0,000	-0,013	-0,004
Sn31/N147	NC UGT H1 BGE -Y	0,023	1,107	13,786	-0,051	0,001	-0,009
Sn31/N147	NC UGT H2 BGE X	0,000	0,000	0,000	0,000	-0,014	-0,004
Sn31/N147	NC UGT H2 BGE Y	0,000	0,000	0,000	0,016	-0,001	-0,011
Sn31/N147	NC UGT H2 BGE -X	0,000	0,000	0,000	0,000	-0,014	-0,004
Sn31/N147	NC UGT H2 BGE -Y	0,024	1,109	12,984	-0,051	0,001	-0,009
Sn31/N147	NC UGT H3 BGE X	0,000	0,000	0,000	0,000	-0,014	-0,004
Sn31/N147	NC UGT H3 BGE Y	0,000	0,000	0,000	0,016	0,000	-0,011
Sn31/N147	NC UGT H3 BGE -X	0,000	0,000	0,000	0,000	-0,014	-0,004
Sn31/N147	NC UGT H3 BGE -Y	0,022	1,107	13,352	-0,051	0,001	-0,010
Sn31/N147	NC UGT H4 BGE X	0,000	0,000	0,000	0,000	-0,014	-0,004
Sn31/N147	NC UGT H4 BGE Y	0,000	0,000	0,000	0,016	0,000	-0,011
Sn31/N147	NC UGT H4 BGE -X	0,000	0,000	0,000	0,000	-0,014	-0,004
Sn31/N147	NC UGT H4 BGE -Y	0,023	1,108	13,285	-0,051	0,001	-0,009
Sn32/N152	NC UGT A BG X	-0,415	0,007	4,692	0,002	-0,028	-0,022
Sn32/N152	NC UGT A BG Y	0,000	0,000	0,000	0,020	-0,001	-0,056
Sn32/N152	NC UGT A BG -X	-0,417	0,009	4,687	0,002	-0,028	-0,022
Sn32/N152	NC UGT A BG -Y	-0,071	0,078	3,506	-0,020	0,001	-0,018
Sn32/N152	NC UGT A BGE X	-0,505	0,007	6,620	0,001	-0,023	-0,022
Sn32/N152	NC UGT A BGE Y	0,000	0,000	0,000	0,017	0,004	-0,054
Sn32/N152	NC UGT A BGE -X	-0,505	0,007	6,620	0,001	-0,023	-0,022
Sn32/N152	NC UGT A BGE -Y	-0,071	0,078	3,792	-0,020	0,001	-0,018
Sn32/N152	NC UGT A IG X	-1,378	-0,004	12,757	0,003	-0,050	-0,010
Sn32/N152	NC UGT A IG Y	-0,041	-0,041	0,083	0,011	-0,006	0,002
Sn32/N152	NC UGT A IG -X	-1,378	-0,004	12,757	0,003	-0,050	-0,010
Sn32/N152	NC UGT A IG -Y	-0,762	0,048	4,420	-0,013	-0,029	-0,015
Sn32/N152	NC UGT A O X	-0,436	0,006	3,492	0,003	-0,035	-0,023
Sn32/N152	NC UGT A O Y	0,000	0,000	0,000	0,024	0,002	-0,056
Sn32/N152	NC UGT A O -X	-0,436	0,006	3,492	0,003	-0,035	-0,023
Sn32/N152	NC UGT A O -Y	-0,065	0,077	3,262	-0,019	0,001	-0,018

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn32/N152	NC UGT A VC	-0,734	0,004	2,602	-0,001	-0,030	0,001
Sn32/N152	NC UGT H1 IG X	-1,395	-0,001	15,250	0,002	-0,043	-0,012
Sn32/N152	NC UGT H1 IG Y	-0,744	-0,074	1,488	0,015	-0,026	0,005
Sn32/N152	NC UGT H1 IG -X	-1,395	-0,001	15,250	0,002	-0,043	-0,012
Sn32/N152	NC UGT H1 IG -Y	-0,800	0,047	6,206	-0,013	-0,028	-0,017
Sn32/N152	NC UGT H1 VC	-0,752	0,005	4,429	-0,001	-0,028	-0,001
Sn32/N152	NC UGT H2 IG X	-1,460	-0,001	14,964	0,002	-0,045	-0,012
Sn32/N152	NC UGT H2 IG Y	-0,681	-0,074	1,362	0,015	-0,024	0,005
Sn32/N152	NC UGT H2 IG -X	-1,460	-0,001	14,964	0,002	-0,045	-0,012
Sn32/N152	NC UGT H2 IG -Y	-0,803	0,047	6,089	-0,013	-0,028	-0,017
Sn32/N152	NC UGT H2 VC	-0,755	0,005	4,299	-0,001	-0,028	-0,001
Sn32/N152	NC UGT H3 IG X	-1,435	-0,001	15,031	0,002	-0,044	-0,012
Sn32/N152	NC UGT H3 IG Y	-0,650	-0,074	1,301	0,015	-0,023	0,005
Sn32/N152	NC UGT H3 IG -X	-1,435	-0,001	15,031	0,002	-0,044	-0,012
Sn32/N152	NC UGT H3 IG -Y	-0,796	0,047	5,984	-0,013	-0,028	-0,017
Sn32/N152	NC UGT H3 VC	-0,747	0,005	4,170	-0,001	-0,029	-0,001
Sn32/N152	NC UGT H4 IG X	-1,437	-0,001	15,049	0,002	-0,044	-0,012
Sn32/N152	NC UGT H4 IG Y	-0,684	-0,074	1,367	0,015	-0,024	0,005
Sn32/N152	NC UGT H4 IG -X	-1,437	-0,001	15,049	0,002	-0,044	-0,012
Sn32/N152	NC UGT H4 IG -Y	-0,800	0,047	6,072	-0,013	-0,028	-0,017
Sn32/N152	NC UGT H4 VC	-0,752	0,005	4,281	-0,001	-0,028	-0,001
Sn32/N152	NC UGT H1 BGE X	-0,617	0,007	8,121	0,001	-0,023	-0,024
Sn32/N152	NC UGT H1 BGE Y	0,000	0,000	0,000	0,015	0,001	-0,055
Sn32/N152	NC UGT H1 BGE -X	-0,617	0,007	8,121	0,001	-0,023	-0,024
Sn32/N152	NC UGT H1 BGE -Y	-0,121	0,076	5,378	-0,020	0,002	-0,020
Sn32/N152	NC UGT H2 BGE X	-0,568	0,007	7,377	0,001	-0,024	-0,024
Sn32/N152	NC UGT H2 BGE Y	0,000	0,000	0,000	0,016	0,000	-0,056
Sn32/N152	NC UGT H2 BGE -X	-0,568	0,007	7,377	0,001	-0,024	-0,024
Sn32/N152	NC UGT H2 BGE -Y	-0,124	0,076	5,267	-0,020	0,002	-0,020
Sn32/N152	NC UGT H3 BGE X	-0,582	0,007	7,568	0,001	-0,024	-0,024
Sn32/N152	NC UGT H3 BGE Y	0,000	0,000	0,000	0,016	0,000	-0,055
Sn32/N152	NC UGT H3 BGE -X	-0,582	0,007	7,568	0,001	-0,024	-0,024
Sn32/N152	NC UGT H3 BGE -Y	-0,115	0,076	5,137	-0,020	0,002	-0,019
Sn32/N152	NC UGT H4 BGE X	-0,583	0,007	7,603	0,001	-0,023	-0,024
Sn32/N152	NC UGT H4 BGE Y	0,000	0,000	0,000	0,016	0,000	-0,056
Sn32/N152	NC UGT H4 BGE -X	-0,583	0,007	7,603	0,001	-0,023	-0,024
Sn32/N152	NC UGT H4 BGE -Y	-0,120	0,076	5,244	-0,020	0,002	-0,020
Sn33/N158	NC UGT A BG X	-0,079	-0,108	0,217	0,008	-0,040	-0,002
Sn33/N158	NC UGT A BG Y	0,010	-0,232	0,464	0,030	0,041	0,033
Sn33/N158	NC UGT A BG -X	-0,079	-0,108	0,217	0,008	-0,040	-0,003
Sn33/N158	NC UGT A BG -Y	-0,004	0,004	0,008	-0,015	-0,013	-0,016
Sn33/N158	NC UGT A BGE X	-0,079	-0,113	0,227	0,007	-0,039	-0,002
Sn33/N158	NC UGT A BGE Y	0,022	-0,220	0,440	0,026	0,044	0,039
Sn33/N158	NC UGT A BGE -X	-0,079	-0,113	0,227	0,007	-0,039	-0,002
Sn33/N158	NC UGT A BGE -Y	-0,015	0,015	0,030	-0,016	-0,019	-0,020
Sn33/N158	NC UGT A IG X	-0,057	-0,187	0,374	0,013	-0,045	-0,046
Sn33/N158	NC UGT A IG Y	-0,084	-0,244	0,488	0,029	-0,016	-0,054
Sn33/N158	NC UGT A IG -X	-0,057	-0,187	0,374	0,013	-0,045	-0,046
Sn33/N158	NC UGT A IG -Y	-0,038	0,038	0,077	-0,013	-0,031	-0,029
Sn33/N158	NC UGT A O X	-0,082	-0,084	0,169	0,007	-0,041	-0,003

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn33/N158	NC UGT A O Y	0,005	-0,234	0,469	0,036	0,041	0,033
Sn33/N158	NC UGT A O -X	-0,082	-0,084	0,169	0,007	-0,041	-0,003
Sn33/N158	NC UGT A O -Y	0,000	0,000	0,000	-0,016	-0,010	-0,013
Sn33/N158	NC UGT A VC	-0,047	-0,072	0,281	0,003	-0,021	-0,025
Sn33/N158	NC UGT H1 IG X	-0,066	-0,195	0,390	0,013	-0,058	-0,060
Sn33/N158	NC UGT H1 IG Y	-0,096	-0,256	0,512	0,029	-0,029	-0,069
Sn33/N158	NC UGT H1 IG -X	-0,066	-0,195	0,390	0,013	-0,058	-0,060
Sn33/N158	NC UGT H1 IG -Y	-0,050	0,050	0,100	-0,014	-0,045	-0,045
Sn33/N158	NC UGT H1 VC	-0,057	-0,071	0,304	0,002	-0,035	-0,039
Sn33/N158	NC UGT H2 IG X	-0,067	-0,191	0,381	0,013	-0,058	-0,061
Sn33/N158	NC UGT H2 IG Y	-0,096	-0,252	0,503	0,029	-0,029	-0,069
Sn33/N158	NC UGT H2 IG -X	-0,067	-0,191	0,381	0,013	-0,058	-0,061
Sn33/N158	NC UGT H2 IG -Y	-0,046	0,046	0,091	-0,013	-0,044	-0,043
Sn33/N158	NC UGT H2 VC	-0,058	-0,071	0,295	0,002	-0,035	-0,040
Sn33/N158	NC UGT H3 IG X	-0,065	-0,193	0,386	0,013	-0,056	-0,058
Sn33/N158	NC UGT H3 IG Y	-0,094	-0,254	0,508	0,029	-0,027	-0,067
Sn33/N158	NC UGT H3 IG -X	-0,065	-0,193	0,386	0,013	-0,056	-0,058
Sn33/N158	NC UGT H3 IG -Y	-0,048	0,048	0,096	-0,013	-0,043	-0,043
Sn33/N158	NC UGT H3 VC	-0,056	-0,071	0,300	0,002	-0,033	-0,038
Sn33/N158	NC UGT H4 IG X	-0,066	-0,192	0,385	0,013	-0,058	-0,060
Sn33/N158	NC UGT H4 IG Y	-0,095	-0,253	0,507	0,029	-0,028	-0,068
Sn33/N158	NC UGT H4 IG -X	-0,066	-0,192	0,385	0,013	-0,058	-0,060
Sn33/N158	NC UGT H4 IG -Y	-0,047	0,047	0,095	-0,013	-0,044	-0,043
Sn33/N158	NC UGT H4 VC	-0,057	-0,071	0,299	0,002	-0,034	-0,039
Sn33/N158	NC UGT H1 BGE X	-0,088	-0,113	0,226	0,007	-0,052	-0,015
Sn33/N158	NC UGT H1 BGE Y	0,012	-0,207	0,414	0,024	0,032	0,026
Sn33/N158	NC UGT H1 BGE -X	-0,088	-0,113	0,226	0,007	-0,052	-0,015
Sn33/N158	NC UGT H1 BGE -Y	-0,015	0,015	0,031	-0,016	-0,027	-0,031
Sn33/N158	NC UGT H2 BGE X	-0,089	-0,110	0,221	0,007	-0,053	-0,016
Sn33/N158	NC UGT H2 BGE Y	0,008	-0,208	0,416	0,025	0,030	0,023
Sn33/N158	NC UGT H2 BGE -X	-0,089	-0,110	0,221	0,007	-0,053	-0,016
Sn33/N158	NC UGT H2 BGE -Y	-0,011	0,011	0,022	-0,016	-0,026	-0,030
Sn33/N158	NC UGT H3 BGE X	-0,087	-0,112	0,224	0,007	-0,050	-0,014
Sn33/N158	NC UGT H3 BGE Y	0,011	-0,208	0,416	0,024	0,033	0,026
Sn33/N158	NC UGT H3 BGE -X	-0,087	-0,112	0,224	0,007	-0,050	-0,014
Sn33/N158	NC UGT H3 BGE -Y	-0,013	0,013	0,027	-0,016	-0,025	-0,029
Sn33/N158	NC UGT H4 BGE X	-0,088	-0,112	0,223	0,007	-0,052	-0,015
Sn33/N158	NC UGT H4 BGE Y	0,010	-0,207	0,414	0,024	0,032	0,025
Sn33/N158	NC UGT H4 BGE -X	-0,088	-0,112	0,223	0,007	-0,052	-0,015
Sn33/N158	NC UGT H4 BGE -Y	-0,013	0,013	0,026	-0,016	-0,026	-0,030

5.4.2. Reactions

Nonlinear calculation
Class: Alle NC BGT
System: Global
Extreme: No
Selection: All
Nodal reactions

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn1/K5	NC BGT A BG X	-0,441	-0,035	2,806	0,000	-0,019	-0,008
Sn1/K5	NC BGT A BG Y	-0,323	-0,796	7,057	0,067	0,001	-0,003
Sn1/K5	NC BGT A BGE X	-0,362	-0,007	4,551	-0,001	-0,016	-0,008
Sn1/K5	NC BGT A BGE Y	-0,303	-1,038	9,708	0,048	0,002	-0,006
Sn1/K5	NC BGT A IG X	-0,750	0,082	7,316	-0,003	-0,034	-0,003
Sn1/K5	NC BGT A IG Y	-0,810	-0,752	10,349	0,040	-0,036	-0,004
Sn1/K5	NC BGT A BG -X	-0,441	-0,035	2,806	0,000	-0,019	-0,008
Sn1/K5	NC BGT A BG -Y	-0,081	0,629	2,095	-0,038	0,008	0,001
Sn1/K5	NC BGT A BGE -X	-0,362	-0,007	4,551	-0,001	-0,016	-0,008
Sn1/K5	NC BGT A BGE -Y	-0,077	0,643	3,787	-0,039	0,008	0,001
Sn1/K5	NC BGT A IG -X	-0,870	-0,165	7,017	0,005	-0,049	-0,008
Sn1/K5	NC BGT A IG -Y	-0,711	0,718	4,429	-0,042	-0,034	0,011
Sn1/K5	NC BGT A VC	-0,750	0,082	7,316	-0,003	-0,034	-0,003
Sn1/K5	NC BGT H1 IG X	-0,874	-0,164	6,948	0,005	-0,049	-0,007
Sn1/K5	NC BGT H1 IG Y	-0,802	-0,682	10,289	0,038	-0,036	-0,004
Sn1/K5	NC BGT H1 IG -X	-0,874	-0,164	6,948	0,005	-0,049	-0,007
Sn1/K5	NC BGT H1 IG -Y	-0,714	0,722	4,399	-0,043	-0,034	0,012
Sn1/K5	NC BGT H1 VC	-0,753	0,086	7,280	-0,003	-0,034	-0,002
Sn1/K5	NC BGT H2 IG X	-0,875	-0,163	6,958	0,005	-0,049	-0,007
Sn1/K5	NC BGT H2 IG Y	-0,801	-0,681	10,292	0,038	-0,036	-0,004
Sn1/K5	NC BGT H2 IG -X	-0,875	-0,163	6,958	0,005	-0,049	-0,007
Sn1/K5	NC BGT H2 IG -Y	-0,714	0,722	4,404	-0,042	-0,034	0,012
Sn1/K5	NC BGT H2 VC	-0,753	0,086	7,284	-0,003	-0,034	-0,002
Sn1/K5	NC BGT H3 IG X	-0,874	-0,164	6,959	0,005	-0,049	-0,008
Sn1/K5	NC BGT H3 IG Y	-0,801	-0,682	10,297	0,038	-0,036	-0,004
Sn1/K5	NC BGT H3 IG -X	-0,874	-0,164	6,959	0,005	-0,049	-0,008
Sn1/K5	NC BGT H3 IG -Y	-0,714	0,722	4,404	-0,042	-0,034	0,012
Sn1/K5	NC BGT H3 VC	-0,753	0,085	7,286	-0,003	-0,034	-0,002
Sn2/N2	NC BGT A BG X	-0,561	-0,035	5,495	0,000	-0,019	0,000
Sn2/N2	NC BGT A BG Y	-0,338	-0,858	4,533	0,035	-0,001	0,019
Sn2/N2	NC BGT A BGE X	-0,470	0,001	8,773	0,000	-0,017	0,001
Sn2/N2	NC BGT A BGE Y	-0,356	-0,716	7,799	0,028	0,001	0,013
Sn2/N2	NC BGT A IG X	-0,999	0,011	11,726	-0,002	-0,035	0,001
Sn2/N2	NC BGT A IG Y	-1,119	-0,694	12,348	0,029	-0,037	-0,008
Sn2/N2	NC BGT A BG -X	-0,561	-0,035	5,495	0,000	-0,019	0,000
Sn2/N2	NC BGT A BG -Y	-0,013	0,533	4,346	-0,022	0,007	-0,011
Sn2/N2	NC BGT A BGE -X	-0,470	0,001	8,773	0,000	-0,017	0,001
Sn2/N2	NC BGT A BGE -Y	-0,008	0,559	7,661	-0,022	0,007	-0,010
Sn2/N2	NC BGT A IG -X	-1,206	-0,118	12,970	0,004	-0,049	-0,001
Sn2/N2	NC BGT A IG -Y	-0,906	0,713	10,824	-0,033	-0,035	0,012
Sn2/N2	NC BGT A VC	-0,998	0,011	11,726	-0,002	-0,035	0,001
Sn2/N2	NC BGT H1 IG X	-1,211	-0,119	13,060	0,004	-0,050	-0,001
Sn2/N2	NC BGT H1 IG Y	-1,107	-0,664	12,437	0,028	-0,036	-0,009
Sn2/N2	NC BGT H1 IG -X	-1,211	-0,119	13,060	0,004	-0,050	-0,001
Sn2/N2	NC BGT H1 IG -Y	-0,909	0,713	10,893	-0,033	-0,035	0,011
Sn2/N2	NC BGT H1 VC	-1,002	0,011	11,806	-0,002	-0,035	0,001
Sn2/N2	NC BGT H2 IG X	-1,212	-0,119	13,061	0,004	-0,049	-0,001
Sn2/N2	NC BGT H2 IG Y	-1,107	-0,663	12,442	0,028	-0,036	-0,009
Sn2/N2	NC BGT H2 IG -X	-1,212	-0,119	13,061	0,004	-0,049	-0,001
Sn2/N2	NC BGT H2 IG -Y	-0,909	0,712	10,897	-0,033	-0,035	0,011
Sn2/N2	NC BGT H2 VC	-1,002	0,010	11,811	-0,002	-0,035	0,001
Sn2/N2	NC BGT H3 IG X	-1,211	-0,119	13,052	0,004	-0,049	-0,001
Sn2/N2	NC BGT H3 IG Y	-1,106	-0,663	12,430	0,028	-0,036	-0,009
Sn2/N2	NC BGT H3 IG -X	-1,211	-0,119	13,052	0,004	-0,049	-0,001
Sn2/N2	NC BGT H3 IG -Y	-0,908	0,713	10,888	-0,033	-0,035	0,011
Sn2/N2	NC BGT H3 VC	-1,002	0,011	11,800	-0,002	-0,035	0,001
Sn3/N7	NC BGT A BG X	0,000	0,000	0,000	-0,003	-0,003	-0,002
Sn3/N7	NC BGT A BG Y	-0,110	-0,508	1,017	0,010	-0,001	-0,002
Sn3/N7	NC BGT A BGE X	-0,483	0,061	3,078	0,001	-0,017	-0,002
Sn3/N7	NC BGT A BGE Y	-0,093	-0,468	4,373	0,015	0,000	-0,002
Sn3/N7	NC BGT A IG X	-0,959	0,122	7,009	0,001	-0,036	-0,002
Sn3/N7	NC BGT A IG Y	-1,033	-0,710	7,274	0,021	-0,037	-0,008
Sn3/N7	NC BGT A BG -X	0,000	0,000	0,000	-0,003	-0,003	-0,002
Sn3/N7	NC BGT A BG -Y	0,084	0,394	1,448	-0,013	0,003	0,003
Sn3/N7	NC BGT A BGE -X	-0,483	0,061	3,078	0,001	-0,017	-0,002
Sn3/N7	NC BGT A BGE -Y	0,083	0,534	4,753	-0,011	0,003	0,003

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn3/N7	NC BGT A IG -X	-1,319	-0,040	6,276	0,004	-0,049	-0,003
Sn3/N7	NC BGT A IG -Y	-0,918	0,960	6,232	-0,023	-0,037	0,005
Sn3/N7	NC BGT A VC	-0,959	0,122	7,009	0,001	-0,036	-0,002
Sn3/N7	NC BGT H1 IG X	-1,323	-0,053	6,445	0,004	-0,049	-0,003
Sn3/N7	NC BGT H1 IG Y	-1,025	-0,721	7,456	0,021	-0,037	-0,008
Sn3/N7	NC BGT H1 IG -X	-1,323	-0,053	6,445	0,004	-0,049	-0,003
Sn3/N7	NC BGT H1 IG -Y	-0,917	0,952	6,397	-0,023	-0,037	0,005
Sn3/N7	NC BGT H1 VC	-0,960	0,111	7,182	0,001	-0,036	-0,002
Sn3/N7	NC BGT H2 IG X	-1,322	-0,054	6,469	0,004	-0,049	-0,004
Sn3/N7	NC BGT H2 IG Y	-1,025	-0,723	7,479	0,021	-0,037	-0,008
Sn3/N7	NC BGT H2 IG -X	-1,322	-0,054	6,469	0,004	-0,049	-0,004
Sn3/N7	NC BGT H2 IG -Y	-0,917	0,951	6,416	-0,023	-0,037	0,004
Sn3/N7	NC BGT H2 VC	-0,959	0,110	7,203	0,001	-0,036	-0,002
Sn3/N7	NC BGT H3 IG X	-1,322	-0,052	6,427	0,004	-0,049	-0,003
Sn3/N7	NC BGT H3 IG Y	-1,025	-0,720	7,436	0,021	-0,037	-0,008
Sn3/N7	NC BGT H3 IG -X	-1,322	-0,052	6,427	0,004	-0,049	-0,003
Sn3/N7	NC BGT H3 IG -Y	-0,917	0,953	6,378	-0,023	-0,037	0,005
Sn3/N7	NC BGT H3 VC	-0,959	0,112	7,163	0,001	-0,036	-0,002
Sn4/N12	NC BGT A BG X	-0,304	-0,039	0,607	-0,002	-0,012	-0,001
Sn4/N12	NC BGT A BG Y	-0,080	-0,479	1,061	0,012	0,000	-0,001
Sn4/N12	NC BGT A BGE X	-0,533	0,050	4,254	0,000	-0,019	-0,001
Sn4/N12	NC BGT A BGE Y	-0,045	-0,347	4,468	0,013	0,001	0,000
Sn4/N12	NC BGT A IG X	-1,033	0,090	8,018	0,000	-0,039	-0,001
Sn4/N12	NC BGT A IG Y	-1,058	-0,677	8,311	0,018	-0,039	-0,002
Sn4/N12	NC BGT A BG -X	-0,304	-0,039	0,607	-0,002	-0,012	-0,001
Sn4/N12	NC BGT A BG -Y	-0,014	0,282	1,649	-0,012	0,000	0,000
Sn4/N12	NC BGT A BGE -X	-0,533	0,050	4,254	0,000	-0,019	-0,001
Sn4/N12	NC BGT A BGE -Y	-0,012	0,390	5,064	-0,011	0,001	0,000
Sn4/N12	NC BGT A IG -X	-1,379	-0,043	8,193	0,002	-0,051	0,000
Sn4/N12	NC BGT A IG -Y	-1,020	0,902	7,251	-0,023	-0,040	0,001
Sn4/N12	NC BGT A VC	-1,033	0,090	8,018	0,000	-0,039	-0,001
Sn4/N12	NC BGT H1 IG X	-1,382	-0,059	8,405	0,002	-0,051	0,000
Sn4/N12	NC BGT H1 IG Y	-1,055	-0,702	8,529	0,018	-0,038	-0,002
Sn4/N12	NC BGT H1 IG -X	-1,382	-0,059	8,405	0,002	-0,051	0,000
Sn4/N12	NC BGT H1 IG -Y	-1,017	0,893	7,449	-0,023	-0,040	0,001
Sn4/N12	NC BGT H1 VC	-1,032	0,077	8,226	0,000	-0,039	-0,001
Sn4/N12	NC BGT H2 IG X	-1,382	-0,059	8,445	0,002	-0,051	0,000
Sn4/N12	NC BGT H2 IG Y	-1,054	-0,703	8,571	0,018	-0,038	-0,002
Sn4/N12	NC BGT H2 IG -X	-1,382	-0,059	8,445	0,002	-0,051	0,000
Sn4/N12	NC BGT H2 IG -Y	-1,016	0,893	7,486	-0,023	-0,040	0,001
Sn4/N12	NC BGT H2 VC	-1,031	0,076	8,266	0,000	-0,039	-0,001
Sn4/N12	NC BGT H3 IG X	-1,382	-0,056	8,377	0,002	-0,051	0,000
Sn4/N12	NC BGT H3 IG Y	-1,054	-0,699	8,500	0,018	-0,038	-0,002
Sn4/N12	NC BGT H3 IG -X	-1,382	-0,056	8,377	0,002	-0,051	0,000
Sn4/N12	NC BGT H3 IG -Y	-1,017	0,894	7,422	-0,023	-0,040	0,001
Sn4/N12	NC BGT H3 VC	-1,032	0,078	8,199	0,000	-0,039	-0,001
Sn5/N17	NC BGT A BG X	-0,623	-0,078	1,865	-0,001	-0,021	-0,004
Sn5/N17	NC BGT A BG Y	-0,057	-0,497	0,993	0,010	0,001	0,002
Sn5/N17	NC BGT A BGE X	-0,559	0,066	5,134	0,000	-0,019	-0,004
Sn5/N17	NC BGT A BGE Y	-0,018	-0,396	4,243	0,013	0,002	0,002
Sn5/N17	NC BGT A IG X	-1,064	0,150	8,382	0,000	-0,039	-0,002
Sn5/N17	NC BGT A IG Y	-1,049	-0,659	8,614	0,019	-0,038	0,005
Sn5/N17	NC BGT A BG -X	-0,623	-0,078	1,865	-0,001	-0,021	-0,004
Sn5/N17	NC BGT A BG -Y	-0,103	0,370	1,424	-0,012	-0,002	-0,003
Sn5/N17	NC BGT A BGE -X	-0,559	0,066	5,134	0,000	-0,019	-0,004
Sn5/N17	NC BGT A BGE -Y	-0,102	0,515	4,727	-0,011	-0,001	-0,004
Sn5/N17	NC BGT A IG -X	-1,380	-0,043	9,381	0,004	-0,051	-0,001
Sn5/N17	NC BGT A IG -Y	-1,072	0,960	7,653	-0,024	-0,041	-0,010
Sn5/N17	NC BGT A VC	-1,064	0,150	8,383	0,000	-0,039	-0,002
Sn5/N17	NC BGT H1 IG X	-1,384	-0,048	9,540	0,003	-0,051	0,000
Sn5/N17	NC BGT H1 IG Y	-1,048	-0,670	8,774	0,019	-0,038	0,005
Sn5/N17	NC BGT H1 IG -X	-1,384	-0,048	9,540	0,003	-0,051	0,000
Sn5/N17	NC BGT H1 IG -Y	-1,068	0,951	7,791	-0,023	-0,040	-0,010
Sn5/N17	NC BGT H1 VC	-1,061	0,140	8,534	0,000	-0,039	-0,002
Sn5/N17	NC BGT H2 IG X	-1,383	-0,051	9,558	0,003	-0,051	0,000
Sn5/N17	NC BGT H2 IG Y	-1,047	-0,672	8,795	0,019	-0,038	0,005

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn5/N17	NC BGT H2 IG -X	-1,383	-0,051	9,558	0,003	-0,051	0,000
Sn5/N17	NC BGT H2 IG -Y	-1,067	0,950	7,809	-0,024	-0,040	-0,010
Sn5/N17	NC BGT H2 VC	-1,061	0,139	8,554	0,000	-0,039	-0,002
Sn5/N17	NC BGT H3 IG X	-1,384	-0,048	9,522	0,003	-0,051	0,000
Sn5/N17	NC BGT H3 IG Y	-1,048	-0,669	8,756	0,019	-0,038	0,005
Sn5/N17	NC BGT H3 IG -X	-1,384	-0,048	9,522	0,003	-0,051	0,000
Sn5/N17	NC BGT H3 IG -Y	-1,068	0,952	7,776	-0,024	-0,041	-0,010
Sn5/N17	NC BGT H3 VC	-1,061	0,142	8,517	0,000	-0,039	-0,002
Sn6/N22	NC BGT A BG X	-0,258	-0,025	2,702	-0,001	-0,025	-0,005
Sn6/N22	NC BGT A BG Y	0,187	-0,531	4,368	0,021	0,000	-0,010
Sn6/N22	NC BGT A BGE X	-0,195	0,004	6,068	-0,001	-0,023	-0,006
Sn6/N22	NC BGT A BGE Y	0,229	-0,450	7,714	0,020	0,002	-0,010
Sn6/N22	NC BGT A IG X	-0,789	-0,012	9,815	-0,001	-0,042	-0,005
Sn6/N22	NC BGT A IG Y	-0,762	-0,553	10,298	0,024	-0,040	0,008
Sn6/N22	NC BGT A BG -X	-0,258	-0,028	2,701	-0,001	-0,025	-0,005
Sn6/N22	NC BGT A BG -Y	0,022	0,404	4,546	-0,019	-0,006	0,006
Sn6/N22	NC BGT A BGE -X	-0,195	0,004	6,068	-0,001	-0,023	-0,006
Sn6/N22	NC BGT A BGE -Y	0,027	0,433	7,860	-0,019	-0,005	0,005
Sn6/N22	NC BGT A IG -X	-0,984	-0,139	8,838	0,003	-0,055	-0,002
Sn6/N22	NC BGT A IG -Y	-0,842	0,582	9,043	-0,029	-0,044	-0,023
Sn6/N22	NC BGT A VC	-0,789	-0,012	9,816	-0,001	-0,042	-0,005
Sn6/N22	NC BGT H1 IG X	-0,987	-0,125	8,938	0,003	-0,055	-0,002
Sn6/N22	NC BGT H1 IG Y	-0,760	-0,548	10,415	0,024	-0,040	0,009
Sn6/N22	NC BGT H1 IG -X	-0,987	-0,125	8,938	0,003	-0,055	-0,002
Sn6/N22	NC BGT H1 IG -Y	-0,837	0,582	9,148	-0,029	-0,044	-0,022
Sn6/N22	NC BGT H1 VC	-0,785	-0,011	9,923	-0,002	-0,042	-0,005
Sn6/N22	NC BGT H2 IG X	-0,987	-0,127	8,947	0,003	-0,055	-0,002
Sn6/N22	NC BGT H2 IG Y	-0,759	-0,549	10,421	0,024	-0,040	0,009
Sn6/N22	NC BGT H2 IG -X	-0,987	-0,127	8,947	0,003	-0,055	-0,002
Sn6/N22	NC BGT H2 IG -Y	-0,837	0,582	9,153	-0,029	-0,044	-0,022
Sn6/N22	NC BGT H2 VC	-0,785	-0,011	9,929	-0,002	-0,042	-0,005
Sn6/N22	NC BGT H3 IG X	-0,988	-0,126	8,930	0,003	-0,055	-0,002
Sn6/N22	NC BGT H3 IG Y	-0,760	-0,549	10,405	0,024	-0,040	0,009
Sn6/N22	NC BGT H3 IG -X	-0,988	-0,126	8,930	0,003	-0,055	-0,002
Sn6/N22	NC BGT H3 IG -Y	-0,838	0,582	9,139	-0,029	-0,044	-0,022
Sn6/N22	NC BGT H3 VC	-0,785	-0,011	9,914	-0,002	-0,042	-0,005
Sn7/N27	NC BGT A BG X	-0,111	0,041	6,042	-0,003	-0,027	-0,001
Sn7/N27	NC BGT A BG Y	0,268	-0,897	5,838	0,040	0,000	0,006
Sn7/N27	NC BGT A BGE X	-0,064	0,034	7,544	-0,003	-0,025	-0,001
Sn7/N27	NC BGT A BGE Y	0,299	-0,792	7,057	0,034	0,002	0,007
Sn7/N27	NC BGT A IG X	-0,568	-0,107	9,159	-0,001	-0,044	-0,001
Sn7/N27	NC BGT A IG Y	-0,524	-0,898	9,688	0,030	-0,041	0,006
Sn7/N27	NC BGT A BG -X	-0,111	0,038	6,041	-0,003	-0,027	-0,001
Sn7/N27	NC BGT A BG -Y	0,022	0,696	4,133	-0,033	-0,008	-0,002
Sn7/N27	NC BGT A BGE -X	-0,064	0,034	7,544	-0,003	-0,025	-0,001
Sn7/N27	NC BGT A BGE -Y	0,025	0,704	5,804	-0,034	-0,008	-0,002
Sn7/N27	NC BGT A IG -X	-0,689	-0,261	10,718	0,005	-0,056	0,000
Sn7/N27	NC BGT A IG -Y	-0,627	0,586	8,347	-0,032	-0,046	-0,016
Sn7/N27	NC BGT A VC	-0,568	-0,107	9,160	-0,001	-0,044	-0,001
Sn7/N27	NC BGT H1 IG X	-0,693	-0,233	10,657	0,004	-0,057	0,000
Sn7/N27	NC BGT H1 IG Y	-0,521	-0,893	9,656	0,030	-0,041	0,006
Sn7/N27	NC BGT H1 IG -X	-0,693	-0,233	10,657	0,004	-0,057	0,000
Sn7/N27	NC BGT H1 IG -Y	-0,620	0,591	8,322	-0,032	-0,046	-0,016
Sn7/N27	NC BGT H1 VC	-0,563	-0,101	9,137	-0,001	-0,044	-0,001
Sn7/N27	NC BGT H2 IG X	-0,693	-0,234	10,644	0,004	-0,057	0,000
Sn7/N27	NC BGT H2 IG Y	-0,521	-0,893	9,647	0,030	-0,041	0,006
Sn7/N27	NC BGT H2 IG -X	-0,693	-0,234	10,644	0,004	-0,057	0,000
Sn7/N27	NC BGT H2 IG -Y	-0,620	0,591	8,312	-0,032	-0,046	-0,016
Sn7/N27	NC BGT H2 VC	-0,562	-0,101	9,128	-0,001	-0,044	-0,001
Sn7/N27	NC BGT H3 IG X	-0,693	-0,234	10,658	0,004	-0,057	0,000
Sn7/N27	NC BGT H3 IG Y	-0,521	-0,893	9,658	0,030	-0,041	0,006
Sn7/N27	NC BGT H3 IG -X	-0,693	-0,234	10,658	0,004	-0,057	0,000
Sn7/N27	NC BGT H3 IG -Y	-0,621	0,590	8,324	-0,032	-0,046	-0,016
Sn7/N27	NC BGT H3 VC	-0,563	-0,102	9,139	-0,001	-0,044	-0,001
Sn8/N32	NC BGT A BG X	-0,472	-0,015	1,110	0,000	-0,018	0,005
Sn8/N32	NC BGT A BG Y	0,000	0,000	0,000	0,033	-0,010	-0,004

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn8/N32	NC BGT A BGE X	-0,413	0,031	4,852	0,000	-0,017	0,005
Sn8/N32	NC BGT A BGE Y	0,013	-0,013	0,027	0,018	0,003	-0,002
Sn8/N32	NC BGT A IG X	-0,816	0,114	11,178	-0,003	-0,040	-0,002
Sn8/N32	NC BGT A IG Y	-0,750	-1,044	3,054	0,040	-0,032	0,010
Sn8/N32	NC BGT A BG -X	-0,472	-0,015	1,110	0,000	-0,018	0,005
Sn8/N32	NC BGT A BG -Y	-0,084	0,936	12,213	-0,038	-0,006	0,007
Sn8/N32	NC BGT A BGE -X	-0,413	0,031	4,852	0,000	-0,017	0,005
Sn8/N32	NC BGT A BGE -Y	-0,091	0,963	15,957	-0,038	-0,006	0,006
Sn8/N32	NC BGT A IG -X	-1,063	-0,225	9,735	0,005	-0,051	-0,011
Sn8/N32	NC BGT A IG -Y	-0,897	0,987	16,298	-0,042	-0,045	0,002
Sn8/N32	NC BGT A VC	-0,816	0,114	11,178	-0,003	-0,040	-0,002
Sn8/N32	NC BGT H1 IG X	-1,049	-0,224	12,285	0,005	-0,051	-0,010
Sn8/N32	NC BGT H1 IG Y	-0,749	-0,953	5,585	0,037	-0,033	0,011
Sn8/N32	NC BGT H1 IG -X	-1,049	-0,224	12,285	0,005	-0,051	-0,010
Sn8/N32	NC BGT H1 IG -Y	-0,874	0,988	18,844	-0,042	-0,045	0,003
Sn8/N32	NC BGT H1 VC	-0,797	0,117	13,706	-0,003	-0,041	0,000
Sn8/N32	NC BGT H2 IG X	-1,047	-0,223	11,476	0,005	-0,051	-0,010
Sn8/N32	NC BGT H2 IG Y	-0,749	-0,954	4,778	0,037	-0,033	0,011
Sn8/N32	NC BGT H2 IG -X	-1,047	-0,223	11,476	0,005	-0,051	-0,010
Sn8/N32	NC BGT H2 IG -Y	-0,874	0,989	18,040	-0,042	-0,045	0,003
Sn8/N32	NC BGT H2 VC	-0,796	0,117	12,902	-0,003	-0,041	0,000
Sn8/N32	NC BGT H3 IG X	-1,050	-0,224	11,831	0,005	-0,051	-0,010
Sn8/N32	NC BGT H3 IG Y	-0,751	-0,954	5,134	0,037	-0,033	0,011
Sn8/N32	NC BGT H3 IG -X	-1,050	-0,224	11,831	0,005	-0,051	-0,010
Sn8/N32	NC BGT H3 IG -Y	-0,877	0,988	18,391	-0,042	-0,045	0,003
Sn8/N32	NC BGT H3 VC	-0,799	0,117	13,256	-0,003	-0,041	-0,001
Sn9/N37	NC BGT A BG X	-0,633	0,045	4,937	0,001	-0,018	0,009
Sn9/N37	NC BGT A BG Y	0,729	-0,843	2,377	0,033	0,010	0,030
Sn9/N37	NC BGT A BGE X	-0,574	0,102	12,537	0,001	-0,016	0,009
Sn9/N37	NC BGT A BGE Y	0,189	-0,604	11,871	0,026	0,008	0,017
Sn9/N37	NC BGT A IG X	-1,002	0,165	21,457	-0,001	-0,042	-0,001
Sn9/N37	NC BGT A IG Y	-0,894	-0,702	20,429	0,027	-0,036	0,007
Sn9/N37	NC BGT A BG -X	-0,633	0,045	4,937	0,001	-0,018	0,009
Sn9/N37	NC BGT A BG -Y	0,052	0,641	5,044	-0,021	-0,006	-0,029
Sn9/N37	NC BGT A BGE -X	-0,574	0,102	12,537	0,001	-0,016	0,009
Sn9/N37	NC BGT A BGE -Y	0,045	0,684	12,650	-0,021	-0,006	-0,030
Sn9/N37	NC BGT A IG -X	-1,457	0,035	21,653	0,004	-0,051	0,010
Sn9/N37	NC BGT A IG -Y	-1,028	0,996	22,406	-0,031	-0,046	-0,016
Sn9/N37	NC BGT A VC	-1,002	0,165	21,457	-0,001	-0,042	-0,001
Sn9/N37	NC BGT H1 IG X	-1,427	0,030	21,664	0,004	-0,052	0,009
Sn9/N37	NC BGT H1 IG Y	-0,865	-0,680	20,441	0,026	-0,037	0,005
Sn9/N37	NC BGT H1 IG -X	-1,427	0,030	21,664	0,004	-0,052	0,009
Sn9/N37	NC BGT H1 IG -Y	-0,984	0,993	22,421	-0,032	-0,047	-0,017
Sn9/N37	NC BGT H1 VC	-0,963	0,162	21,472	-0,002	-0,043	-0,002
Sn9/N37	NC BGT H2 IG X	-1,421	0,030	21,655	0,004	-0,052	0,009
Sn9/N37	NC BGT H2 IG Y	-0,863	-0,680	20,432	0,026	-0,037	0,005
Sn9/N37	NC BGT H2 IG -X	-1,421	0,030	21,655	0,004	-0,052	0,009
Sn9/N37	NC BGT H2 IG -Y	-0,981	0,992	22,412	-0,032	-0,047	-0,017
Sn9/N37	NC BGT H2 VC	-0,960	0,161	21,463	-0,002	-0,043	-0,002
Sn9/N37	NC BGT H3 IG X	-1,429	0,031	21,661	0,004	-0,052	0,009
Sn9/N37	NC BGT H3 IG Y	-0,869	-0,680	20,438	0,026	-0,037	0,006
Sn9/N37	NC BGT H3 IG -X	-1,429	0,031	21,661	0,004	-0,052	0,009
Sn9/N37	NC BGT H3 IG -Y	-0,988	0,993	22,417	-0,032	-0,047	-0,017
Sn9/N37	NC BGT H3 VC	-0,967	0,162	21,468	-0,002	-0,042	-0,002
Sn10/N42	NC BGT A BG X	-0,441	0,004	0,882	0,000	-0,017	0,009
Sn10/N42	NC BGT A BG Y	0,115	-0,115	0,231	0,007	-0,003	-0,001
Sn10/N42	NC BGT A BGE X	-0,449	0,003	8,420	0,000	-0,018	0,009
Sn10/N42	NC BGT A BGE Y	0,192	-0,383	8,294	0,016	0,004	0,000
Sn10/N42	NC BGT A IG X	-1,057	-0,012	14,562	-0,001	-0,042	0,005
Sn10/N42	NC BGT A IG Y	-0,940	-0,603	13,651	0,022	-0,038	0,009
Sn10/N42	NC BGT A BG -X	-0,441	0,004	0,882	0,000	-0,017	0,009
Sn10/N42	NC BGT A BG -Y	-0,054	0,417	1,595	-0,013	-0,003	-0,002
Sn10/N42	NC BGT A BGE -X	-0,449	0,003	8,420	0,000	-0,018	0,009
Sn10/N42	NC BGT A BGE -Y	-0,059	0,406	9,096	-0,013	-0,003	-0,002
Sn10/N42	NC BGT A IG -X	-1,361	-0,121	14,056	0,003	-0,053	0,007
Sn10/N42	NC BGT A IG -Y	-1,135	0,694	15,588	-0,028	-0,045	0,000

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn10/N42	NC BGT A VC	-1,057	-0,012	14,562	-0,001	-0,042	0,005
Sn10/N42	NC BGT H1 IG X	-1,366	-0,123	14,058	0,003	-0,053	0,007
Sn10/N42	NC BGT H1 IG Y	-0,952	-0,599	13,650	0,022	-0,038	0,010
Sn10/N42	NC BGT H1 IG -X	-1,366	-0,123	14,058	0,003	-0,053	0,007
Sn10/N42	NC BGT H1 IG -Y	-1,137	0,695	15,588	-0,028	-0,045	0,001
Sn10/N42	NC BGT H1 VC	-1,060	-0,011	14,562	-0,001	-0,042	0,005
Sn10/N42	NC BGT H2 IG X	-1,366	-0,122	14,057	0,003	-0,053	0,007
Sn10/N42	NC BGT H2 IG Y	-0,951	-0,598	13,650	0,022	-0,038	0,010
Sn10/N42	NC BGT H2 IG -X	-1,366	-0,121	14,057	0,003	-0,053	0,007
Sn10/N42	NC BGT H2 IG -Y	-1,136	0,696	15,587	-0,028	-0,045	0,001
Sn10/N42	NC BGT H2 VC	-1,059	-0,010	14,562	-0,001	-0,042	0,005
Sn10/N42	NC BGT H3 IG X	-1,365	-0,122	14,058	0,003	-0,053	0,007
Sn10/N42	NC BGT H3 IG Y	-0,951	-0,599	13,650	0,022	-0,038	0,009
Sn10/N42	NC BGT H3 IG -X	-1,365	-0,122	14,058	0,003	-0,053	0,007
Sn10/N42	NC BGT H3 IG -Y	-1,136	0,695	15,588	-0,028	-0,045	0,000
Sn10/N42	NC BGT H3 VC	-1,059	-0,011	14,562	-0,001	-0,042	0,005
Sn11/N47	NC BGT A BG X	-0,546	0,032	1,249	-0,001	-0,020	0,007
Sn11/N47	NC BGT A BG Y	0,097	-0,292	0,878	0,014	-0,001	0,000
Sn11/N47	NC BGT A BGE X	-0,483	0,022	8,946	0,000	-0,019	0,007
Sn11/N47	NC BGT A BGE Y	0,080	-0,278	8,536	0,014	0,001	0,000
Sn11/N47	NC BGT A IG X	-1,147	0,010	16,549	-0,002	-0,045	0,003
Sn11/N47	NC BGT A IG Y	-1,107	-0,521	15,508	0,020	-0,043	0,004
Sn11/N47	NC BGT A BG -X	-0,546	0,033	1,249	-0,001	-0,020	0,007
Sn11/N47	NC BGT A BG -Y	0,010	0,326	1,627	-0,012	-0,002	-0,001
Sn11/N47	NC BGT A BGE -X	-0,483	0,022	8,946	0,000	-0,019	0,007
Sn11/N47	NC BGT A BGE -Y	0,008	0,318	9,325	-0,013	-0,002	-0,001
Sn11/N47	NC BGT A IG -X	-1,488	-0,059	16,360	0,001	-0,056	0,004
Sn11/N47	NC BGT A IG -Y	-1,176	0,686	17,660	-0,027	-0,047	0,003
Sn11/N47	NC BGT A VC	-1,147	0,010	16,549	-0,002	-0,045	0,003
Sn11/N47	NC BGT H1 IG X	-1,486	-0,065	16,348	0,001	-0,056	0,004
Sn11/N47	NC BGT H1 IG Y	-1,107	-0,531	15,495	0,020	-0,043	0,004
Sn11/N47	NC BGT H1 IG -X	-1,486	-0,065	16,348	0,001	-0,056	0,004
Sn11/N47	NC BGT H1 IG -Y	-1,171	0,685	17,651	-0,027	-0,047	0,003
Sn11/N47	NC BGT H1 VC	-1,143	0,008	16,538	-0,001	-0,045	0,003
Sn11/N47	NC BGT H2 IG X	-1,486	-0,062	16,347	0,001	-0,056	0,004
Sn11/N47	NC BGT H2 IG Y	-1,107	-0,530	15,494	0,020	-0,043	0,004
Sn11/N47	NC BGT H2 IG -X	-1,486	-0,062	16,347	0,001	-0,056	0,004
Sn11/N47	NC BGT H2 IG -Y	-1,170	0,685	17,650	-0,027	-0,047	0,003
Sn11/N47	NC BGT H2 VC	-1,142	0,009	16,537	-0,001	-0,045	0,003
Sn11/N47	NC BGT H3 IG X	-1,486	-0,063	16,349	0,001	-0,056	0,004
Sn11/N47	NC BGT H3 IG Y	-1,108	-0,530	15,496	0,020	-0,043	0,004
Sn11/N47	NC BGT H3 IG -X	-1,486	-0,063	16,349	0,001	-0,056	0,004
Sn11/N47	NC BGT H3 IG -Y	-1,172	0,685	17,652	-0,027	-0,047	0,003
Sn11/N47	NC BGT H3 VC	-1,143	0,008	16,539	-0,001	-0,045	0,003
Sn12/N52	NC BGT A BG X	-0,620	-0,068	1,555	-0,001	-0,019	0,010
Sn12/N52	NC BGT A BG Y	-0,133	-0,426	1,391	0,014	-0,004	-0,001
Sn12/N52	NC BGT A BGE X	-0,555	-0,065	9,052	-0,001	-0,018	0,011
Sn12/N52	NC BGT A BGE Y	-0,103	-0,409	8,389	0,014	0,000	0,000
Sn12/N52	NC BGT A IG X	-1,199	-0,070	17,804	-0,004	-0,042	0,006
Sn12/N52	NC BGT A IG Y	-1,270	-0,689	16,916	0,019	-0,041	0,002
Sn12/N52	NC BGT A BG -X	-0,620	-0,068	1,556	-0,001	-0,019	0,010
Sn12/N52	NC BGT A BG -Y	0,051	0,369	1,633	-0,013	0,000	0,000
Sn12/N52	NC BGT A BGE -X	-0,555	-0,065	9,052	-0,001	-0,018	0,011
Sn12/N52	NC BGT A BGE -Y	0,056	0,366	9,134	-0,013	0,000	0,000
Sn12/N52	NC BGT A IG -X	-1,565	-0,236	17,882	0,001	-0,053	0,005
Sn12/N52	NC BGT A IG -Y	-1,138	0,655	18,819	-0,029	-0,045	0,009
Sn12/N52	NC BGT A VC	-1,198	-0,070	17,804	-0,004	-0,042	0,006
Sn12/N52	NC BGT H1 IG X	-1,558	-0,225	17,876	0,000	-0,053	0,005
Sn12/N52	NC BGT H1 IG Y	-1,265	-0,677	16,913	0,019	-0,041	0,002
Sn12/N52	NC BGT H1 IG -X	-1,558	-0,225	17,876	0,000	-0,053	0,005
Sn12/N52	NC BGT H1 IG -Y	-1,125	0,653	18,816	-0,029	-0,044	0,009
Sn12/N52	NC BGT H1 VC	-1,189	-0,068	17,800	-0,004	-0,042	0,005
Sn12/N52	NC BGT H2 IG X	-1,558	-0,227	17,875	0,001	-0,053	0,005
Sn12/N52	NC BGT H2 IG Y	-1,265	-0,677	16,912	0,019	-0,041	0,002
Sn12/N52	NC BGT H2 IG -X	-1,558	-0,227	17,875	0,001	-0,053	0,005
Sn12/N52	NC BGT H2 IG -Y	-1,125	0,654	18,815	-0,029	-0,044	0,009

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn12/N52	NC BGT H2 VC	-1,188	-0,067	17,799	-0,004	-0,042	0,005
Sn12/N52	NC BGT H3 IG X	-1,558	-0,227	17,876	0,000	-0,053	0,005
Sn12/N52	NC BGT H3 IG Y	-1,266	-0,678	16,914	0,019	-0,041	0,002
Sn12/N52	NC BGT H3 IG -X	-1,558	-0,227	17,876	0,000	-0,053	0,005
Sn12/N52	NC BGT H3 IG -Y	-1,126	0,653	18,816	-0,029	-0,044	0,009
Sn12/N52	NC BGT H3 VC	-1,189	-0,068	17,801	-0,004	-0,042	0,005
Sn13/N57	NC BGT A BG X	-0,574	0,042	4,290	0,000	-0,020	0,014
Sn13/N57	NC BGT A BG Y	-0,111	-0,627	3,767	0,022	-0,008	-0,010
Sn13/N57	NC BGT A BGE X	-0,512	0,098	11,904	0,000	-0,018	0,015
Sn13/N57	NC BGT A BGE Y	-0,037	-0,518	11,866	0,021	-0,003	-0,008
Sn13/N57	NC BGT A IG X	-1,127	0,134	18,192	-0,001	-0,043	0,007
Sn13/N57	NC BGT A IG Y	-1,191	-0,659	17,177	0,024	-0,043	0,009
Sn13/N57	NC BGT A BG -X	-0,593	0,044	4,289	0,000	-0,019	0,020
Sn13/N57	NC BGT A BG -Y	0,034	0,634	4,997	-0,019	0,001	0,013
Sn13/N57	NC BGT A BGE -X	-0,512	0,098	11,904	0,000	-0,018	0,015
Sn13/N57	NC BGT A BGE -Y	0,038	0,683	12,606	-0,019	0,002	0,013
Sn13/N57	NC BGT A IG -X	-1,502	-0,046	17,732	0,004	-0,053	0,009
Sn13/N57	NC BGT A IG -Y	-1,117	0,915	19,102	-0,028	-0,044	0,007
Sn13/N57	NC BGT A VC	-1,127	0,134	18,192	-0,001	-0,043	0,007
Sn13/N57	NC BGT H1 IG X	-1,522	-0,032	17,752	0,003	-0,053	0,010
Sn13/N57	NC BGT H1 IG Y	-1,219	-0,657	17,190	0,024	-0,042	0,009
Sn13/N57	NC BGT H1 IG -X	-1,522	-0,032	17,752	0,003	-0,053	0,010
Sn13/N57	NC BGT H1 IG -Y	-1,139	0,912	19,117	-0,028	-0,043	0,007
Sn13/N57	NC BGT H1 VC	-1,150	0,132	18,207	-0,001	-0,042	0,008
Sn13/N57	NC BGT H2 IG X	-1,524	-0,033	17,743	0,003	-0,053	0,010
Sn13/N57	NC BGT H2 IG Y	-1,221	-0,658	17,183	0,024	-0,042	0,009
Sn13/N57	NC BGT H2 IG -X	-1,524	-0,033	17,744	0,003	-0,053	0,010
Sn13/N57	NC BGT H2 IG -Y	-1,142	0,913	19,109	-0,028	-0,043	0,007
Sn13/N57	NC BGT H2 VC	-1,152	0,132	18,199	-0,001	-0,042	0,008
Sn13/N57	NC BGT H3 IG X	-1,519	-0,033	17,748	0,003	-0,053	0,009
Sn13/N57	NC BGT H3 IG Y	-1,217	-0,657	17,187	0,024	-0,043	0,009
Sn13/N57	NC BGT H3 IG -X	-1,519	-0,033	17,748	0,003	-0,053	0,010
Sn13/N57	NC BGT H3 IG -Y	-1,137	0,913	19,114	-0,028	-0,044	0,007
Sn13/N57	NC BGT H3 VC	-1,147	0,132	18,203	-0,001	-0,042	0,008
Sn14/N62	NC BGT A BG X	-0,426	0,157	1,981	-0,002	-0,020	0,010
Sn14/N62	NC BGT A BG Y	-0,079	-1,059	2,246	0,043	-0,009	0,004
Sn14/N62	NC BGT A BGE X	-0,376	0,160	5,634	-0,002	-0,019	0,010
Sn14/N62	NC BGT A BGE Y	-0,035	-0,934	5,260	0,037	-0,004	0,005
Sn14/N62	NC BGT A IG X	-0,815	0,076	14,444	0,000	-0,043	0,002
Sn14/N62	NC BGT A IG Y	-0,784	-0,863	11,716	0,033	-0,045	-0,004
Sn14/N62	NC BGT A BG -X	-0,407	0,158	1,981	-0,002	-0,021	0,003
Sn14/N62	NC BGT A BG -Y	0,034	0,959	7,292	-0,035	0,001	-0,001
Sn14/N62	NC BGT A BGE -X	-0,376	0,160	5,634	-0,002	-0,019	0,010
Sn14/N62	NC BGT A BGE -Y	0,040	0,979	11,013	-0,035	0,001	-0,001
Sn14/N62	NC BGT A IG -X	-1,087	-0,095	14,911	0,007	-0,054	0,001
Sn14/N62	NC BGT A IG -Y	-0,825	0,895	15,193	-0,032	-0,045	0,002
Sn14/N62	NC BGT A VC	-0,815	0,077	14,444	0,000	-0,043	0,002
Sn14/N62	NC BGT H1 IG X	-1,090	-0,060	17,181	0,006	-0,054	0,000
Sn14/N62	NC BGT H1 IG Y	-0,793	-0,855	14,001	0,033	-0,044	-0,005
Sn14/N62	NC BGT H1 IG -X	-1,090	-0,060	17,181	0,006	-0,054	0,000
Sn14/N62	NC BGT H1 IG -Y	-0,829	0,896	17,514	-0,032	-0,044	0,001
Sn14/N62	NC BGT H1 VC	-0,820	0,082	16,748	0,000	-0,043	0,001
Sn14/N62	NC BGT H2 IG X	-1,093	-0,061	16,440	0,006	-0,054	0,000
Sn14/N62	NC BGT H2 IG Y	-0,795	-0,856	13,257	0,033	-0,044	-0,005
Sn14/N62	NC BGT H2 IG -X	-1,093	-0,061	16,440	0,006	-0,054	0,000
Sn14/N62	NC BGT H2 IG -Y	-0,831	0,898	16,777	-0,032	-0,044	0,001
Sn14/N62	NC BGT H2 VC	-0,823	0,082	16,007	0,000	-0,043	0,001
Sn14/N62	NC BGT H3 IG X	-1,090	-0,061	16,772	0,006	-0,054	0,000
Sn14/N62	NC BGT H3 IG Y	-0,793	-0,856	13,593	0,033	-0,044	-0,005
Sn14/N62	NC BGT H3 IG -X	-1,090	-0,061	16,772	0,006	-0,054	0,000
Sn14/N62	NC BGT H3 IG -Y	-0,829	0,896	17,102	-0,032	-0,044	0,001
Sn14/N62	NC BGT H3 VC	-0,820	0,081	16,337	0,000	-0,043	0,001
Sn15/N67	NC BGT A BG X	0,000	0,000	0,000	0,001	-0,102	0,009
Sn15/N67	NC BGT A BG Y	0,000	0,000	0,000	0,038	-0,073	0,026
Sn15/N67	NC BGT A BGE X	0,000	0,000	0,000	0,001	-0,099	0,009
Sn15/N67	NC BGT A BGE Y	0,000	0,000	0,000	0,021	-0,070	0,026

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn15/N67	NC BGT A IG X	-0,021	0,003	0,042	0,000	-0,005	0,001
Sn15/N67	NC BGT A IG Y	-0,512	-0,048	1,024	0,015	-0,003	-0,009
Sn15/N67	NC BGT A BG -X	0,000	0,000	0,000	0,001	-0,102	0,009
Sn15/N67	NC BGT A BG -Y	0,000	0,000	0,000	-0,017	-0,025	-0,004
Sn15/N67	NC BGT A BGE -X	0,000	0,000	0,000	0,001	-0,099	0,009
Sn15/N67	NC BGT A BGE -Y	0,000	0,000	0,000	-0,017	-0,024	-0,004
Sn15/N67	NC BGT A IG -X	0,000	0,000	0,000	0,004	-0,130	0,014
Sn15/N67	NC BGT A IG -Y	0,000	0,000	0,000	-0,009	-0,016	0,004
Sn15/N67	NC BGT A VC	-0,021	0,003	0,042	0,000	-0,005	0,001
Sn15/N67	NC BGT H1 IG X	0,000	0,000	0,000	0,004	-0,124	0,015
Sn15/N67	NC BGT H1 IG Y	-0,658	-0,043	1,317	0,015	-0,007	-0,007
Sn15/N67	NC BGT H1 IG -X	0,000	0,000	0,000	0,004	-0,124	0,015
Sn15/N67	NC BGT H1 IG -Y	0,000	0,000	0,000	-0,009	-0,010	0,004
Sn15/N67	NC BGT H1 VC	-0,157	0,004	0,314	0,000	-0,009	0,002
Sn15/N67	NC BGT H2 IG X	0,000	0,000	0,000	0,005	-0,123	0,015
Sn15/N67	NC BGT H2 IG Y	-0,663	-0,043	1,326	0,015	-0,007	-0,007
Sn15/N67	NC BGT H2 IG -X	0,000	0,000	0,000	0,005	-0,123	0,015
Sn15/N67	NC BGT H2 IG -Y	0,000	0,000	0,000	-0,009	-0,010	0,005
Sn15/N67	NC BGT H2 VC	-0,166	0,004	0,333	0,000	-0,009	0,002
Sn15/N67	NC BGT H3 IG X	0,000	0,000	0,000	0,004	-0,125	0,015
Sn15/N67	NC BGT H3 IG Y	-0,642	-0,043	1,284	0,015	-0,006	-0,008
Sn15/N67	NC BGT H3 IG -X	0,000	0,000	0,000	0,004	-0,125	0,015
Sn15/N67	NC BGT H3 IG -Y	0,000	0,000	0,000	-0,009	-0,011	0,004
Sn15/N67	NC BGT H3 VC	-0,143	0,003	0,286	0,000	-0,009	0,002
Sn16/N72	NC BGT A BG X	0,566	0,001	3,088	0,000	-0,029	0,018
Sn16/N72	NC BGT A BG Y	0,818	-1,328	5,072	0,067	-0,011	0,017
Sn16/N72	NC BGT A BGE X	0,586	-0,002	6,791	-0,001	-0,028	0,016
Sn16/N72	NC BGT A BGE Y	0,823	-1,303	9,953	0,050	-0,009	0,015
Sn16/N72	NC BGT A IG X	-1,074	0,058	10,738	-0,003	-0,039	0,006
Sn16/N72	NC BGT A IG Y	-0,989	-0,996	12,577	0,043	-0,035	0,003
Sn16/N72	NC BGT A BG -X	0,566	0,001	3,088	0,000	-0,029	0,017
Sn16/N72	NC BGT A BG -Y	0,355	0,892	2,417	-0,039	-0,004	-0,004
Sn16/N72	NC BGT A BGE -X	0,586	-0,002	6,791	-0,001	-0,028	0,016
Sn16/N72	NC BGT A BGE -Y	0,335	0,873	6,103	-0,040	-0,004	-0,004
Sn16/N72	NC BGT A IG -X	-0,170	-0,066	10,955	0,007	-0,066	0,043
Sn16/N72	NC BGT A IG -Y	-0,935	0,986	7,989	-0,041	-0,042	0,003
Sn16/N72	NC BGT A VC	-1,074	0,058	10,738	-0,003	-0,039	0,006
Sn16/N72	NC BGT H1 IG X	-0,202	-0,065	10,998	0,007	-0,065	0,039
Sn16/N72	NC BGT H1 IG Y	-0,938	-0,839	12,359	0,040	-0,034	-0,001
Sn16/N72	NC BGT H1 IG -X	-0,202	-0,065	10,998	0,007	-0,065	0,039
Sn16/N72	NC BGT H1 IG -Y	-0,979	0,991	7,985	-0,041	-0,041	-0,001
Sn16/N72	NC BGT H1 VC	-1,036	0,060	10,474	-0,003	-0,038	0,002
Sn16/N72	NC BGT H2 IG X	-0,210	-0,065	10,972	0,007	-0,065	0,039
Sn16/N72	NC BGT H2 IG Y	-0,938	-0,839	12,321	0,040	-0,034	-0,001
Sn16/N72	NC BGT H2 IG -X	-0,210	-0,065	10,972	0,007	-0,065	0,039
Sn16/N72	NC BGT H2 IG -Y	-0,982	0,991	7,963	-0,041	-0,041	-0,001
Sn16/N72	NC BGT H2 VC	-1,033	0,061	10,432	-0,003	-0,038	0,002
Sn16/N72	NC BGT H3 IG X	-0,200	-0,065	10,988	0,007	-0,065	0,039
Sn16/N72	NC BGT H3 IG Y	-0,943	-0,839	12,379	0,040	-0,034	0,000
Sn16/N72	NC BGT H3 IG -X	-0,200	-0,065	10,988	0,007	-0,065	0,039
Sn16/N72	NC BGT H3 IG -Y	-0,974	0,990	7,981	-0,041	-0,041	-0,001
Sn16/N72	NC BGT H3 VC	-1,038	0,060	10,497	-0,003	-0,038	0,002
Sn17/N77	NC BGT A BG X	-0,693	-0,044	5,208	0,000	-0,021	-0,007
Sn17/N77	NC BGT A BG Y	-0,138	-0,833	5,131	0,031	-0,004	0,027
Sn17/N77	NC BGT A BGE X	-0,643	-0,089	12,840	-0,001	-0,019	-0,007
Sn17/N77	NC BGT A BGE Y	-0,112	-0,730	12,720	0,024	-0,002	0,016
Sn17/N77	NC BGT A IG X	-1,021	-0,083	21,465	-0,003	-0,042	0,007
Sn17/N77	NC BGT A IG Y	-0,861	-0,756	22,028	0,026	-0,040	0,009
Sn17/N77	NC BGT A BG -X	-0,694	-0,044	5,208	0,000	-0,021	-0,007
Sn17/N77	NC BGT A BG -Y	-0,018	0,463	4,376	-0,022	-0,002	-0,015
Sn17/N77	NC BGT A BGE -X	-0,643	-0,089	12,840	-0,001	-0,019	-0,007
Sn17/N77	NC BGT A BGE -Y	-0,022	0,403	12,014	-0,022	-0,002	-0,014
Sn17/N77	NC BGT A IG -X	-1,627	-0,227	22,318	0,002	-0,057	0,004
Sn17/N77	NC BGT A IG -Y	-1,074	0,625	20,754	-0,034	-0,044	0,003
Sn17/N77	NC BGT A VC	-1,021	-0,083	21,465	-0,003	-0,042	0,007
Sn17/N77	NC BGT H1 IG X	-1,593	-0,227	22,308	0,002	-0,057	0,004

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn17/N77	NC BGT H1 IG Y	-0,807	-0,732	22,014	0,026	-0,039	0,009
Sn17/N77	NC BGT H1 IG -X	-1,593	-0,227	22,308	0,002	-0,057	0,004
Sn17/N77	NC BGT H1 IG -Y	-1,042	0,628	20,740	-0,034	-0,044	0,003
Sn17/N77	NC BGT H1 VC	-0,978	-0,081	21,456	-0,004	-0,041	0,007
Sn17/N77	NC BGT H2 IG X	-1,595	-0,227	22,307	0,002	-0,057	0,004
Sn17/N77	NC BGT H2 IG Y	-0,806	-0,731	22,014	0,026	-0,039	0,009
Sn17/N77	NC BGT H2 IG -X	-1,595	-0,227	22,307	0,002	-0,057	0,004
Sn17/N77	NC BGT H2 IG -Y	-1,040	0,628	20,740	-0,034	-0,043	0,003
Sn17/N77	NC BGT H2 VC	-0,975	-0,081	21,456	-0,004	-0,041	0,007
Sn17/N77	NC BGT H3 IG X	-1,597	-0,227	22,309	0,002	-0,057	0,004
Sn17/N77	NC BGT H3 IG Y	-0,812	-0,732	22,015	0,026	-0,039	0,009
Sn17/N77	NC BGT H3 IG -X	-1,597	-0,227	22,309	0,002	-0,057	0,004
Sn17/N77	NC BGT H3 IG -Y	-1,045	0,628	20,742	-0,034	-0,044	0,003
Sn17/N77	NC BGT H3 VC	-0,981	-0,081	21,457	-0,004	-0,041	0,007
Sn18/N82	NC BGT A BG X	-0,344	-0,009	0,688	0,000	-0,014	-0,008
Sn18/N82	NC BGT A BG Y	-0,101	-0,523	1,419	0,020	-0,003	-0,003
Sn18/N82	NC BGT A BGE X	-0,506	0,015	8,246	0,000	-0,019	-0,007
Sn18/N82	NC BGT A BGE Y	-0,061	-0,389	8,982	0,015	-0,001	0,000
Sn18/N82	NC BGT A IG X	-1,027	0,064	14,610	-0,001	-0,041	0,006
Sn18/N82	NC BGT A IG Y	-0,987	-0,528	15,426	0,022	-0,040	0,005
Sn18/N82	NC BGT A BG -X	-0,344	-0,008	0,688	0,000	-0,014	-0,008
Sn18/N82	NC BGT A BG -Y	-0,034	0,354	0,807	-0,014	-0,001	0,001
Sn18/N82	NC BGT A BGE -X	-0,506	0,015	8,246	0,000	-0,019	-0,007
Sn18/N82	NC BGT A BGE -Y	-0,041	0,370	8,330	-0,014	-0,001	0,002
Sn18/N82	NC BGT A IG -X	-1,426	-0,027	14,282	0,003	-0,057	0,007
Sn18/N82	NC BGT A IG -Y	-1,086	0,741	13,778	-0,028	-0,043	0,007
Sn18/N82	NC BGT A VC	-1,027	0,064	14,610	-0,001	-0,041	0,006
Sn18/N82	NC BGT H1 IG X	-1,410	-0,029	14,284	0,003	-0,056	0,007
Sn18/N82	NC BGT H1 IG Y	-0,957	-0,525	15,430	0,022	-0,039	0,006
Sn18/N82	NC BGT H1 IG -X	-1,410	-0,029	14,284	0,003	-0,056	0,007
Sn18/N82	NC BGT H1 IG -Y	-1,071	0,741	13,780	-0,028	-0,042	0,007
Sn18/N82	NC BGT H1 VC	-1,008	0,064	14,610	-0,001	-0,041	0,006
Sn18/N82	NC BGT H2 IG X	-1,415	-0,028	14,284	0,003	-0,056	0,007
Sn18/N82	NC BGT H2 IG Y	-0,958	-0,524	15,430	0,022	-0,039	0,006
Sn18/N82	NC BGT H2 IG -X	-1,415	-0,028	14,284	0,003	-0,056	0,007
Sn18/N82	NC BGT H2 IG -Y	-1,070	0,741	13,780	-0,028	-0,042	0,007
Sn18/N82	NC BGT H2 VC	-1,008	0,064	14,610	-0,001	-0,041	0,006
Sn18/N82	NC BGT H3 IG X	-1,413	-0,028	14,284	0,003	-0,056	0,007
Sn18/N82	NC BGT H3 IG Y	-0,959	-0,525	15,429	0,022	-0,039	0,006
Sn18/N82	NC BGT H3 IG -X	-1,413	-0,028	14,284	0,003	-0,056	0,007
Sn18/N82	NC BGT H3 IG -Y	-1,072	0,741	13,780	-0,028	-0,043	0,007
Sn18/N82	NC BGT H3 VC	-1,009	0,064	14,610	-0,001	-0,041	0,006
Sn19/N87	NC BGT A BG X	-0,546	0,033	1,217	-0,001	-0,021	-0,006
Sn19/N87	NC BGT A BG Y	-0,067	-0,331	1,562	0,015	-0,003	-0,001
Sn19/N87	NC BGT A BGE X	-0,488	0,044	8,947	-0,001	-0,020	-0,006
Sn19/N87	NC BGT A BGE Y	-0,009	-0,289	9,286	0,014	-0,001	0,000
Sn19/N87	NC BGT A IG X	-1,079	0,017	16,630	-0,001	-0,043	0,003
Sn19/N87	NC BGT A IG Y	-1,107	-0,556	17,386	0,021	-0,042	0,002
Sn19/N87	NC BGT A BG -X	-0,547	0,034	1,217	-0,001	-0,021	-0,006
Sn19/N87	NC BGT A BG -Y	0,046	0,352	0,929	-0,013	-0,001	0,000
Sn19/N87	NC BGT A BGE -X	-0,488	0,044	8,947	-0,001	-0,020	-0,006
Sn19/N87	NC BGT A BGE -Y	0,048	0,369	8,652	-0,013	-0,001	0,000
Sn19/N87	NC BGT A IG -X	-1,494	-0,051	16,830	0,001	-0,057	0,003
Sn19/N87	NC BGT A IG -Y	-1,095	0,714	15,778	-0,026	-0,045	0,003
Sn19/N87	NC BGT A VC	-1,078	0,017	16,630	-0,001	-0,043	0,003
Sn19/N87	NC BGT H1 IG X	-1,472	-0,063	16,832	0,002	-0,057	0,003
Sn19/N87	NC BGT H1 IG Y	-1,074	-0,575	17,390	0,021	-0,041	0,003
Sn19/N87	NC BGT H1 IG -X	-1,472	-0,063	16,832	0,002	-0,057	0,003
Sn19/N87	NC BGT H1 IG -Y	-1,075	0,714	15,778	-0,026	-0,044	0,003
Sn19/N87	NC BGT H1 VC	-1,059	0,014	16,632	-0,001	-0,042	0,003
Sn19/N87	NC BGT H2 IG X	-1,477	-0,059	16,832	0,002	-0,057	0,003
Sn19/N87	NC BGT H2 IG Y	-1,075	-0,574	17,390	0,021	-0,041	0,003
Sn19/N87	NC BGT H2 IG -X	-1,477	-0,059	16,832	0,002	-0,057	0,003
Sn19/N87	NC BGT H2 IG -Y	-1,073	0,714	15,779	-0,026	-0,044	0,003
Sn19/N87	NC BGT H2 VC	-1,058	0,014	16,633	-0,001	-0,042	0,003
Sn19/N87	NC BGT H3 IG X	-1,476	-0,060	16,831	0,002	-0,057	0,003

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn19/N87	NC BGT H3 IG Y	-1,077	-0,574	17,389	0,021	-0,041	0,003
Sn19/N87	NC BGT H3 IG -X	-1,476	-0,060	16,831	0,002	-0,057	0,003
Sn19/N87	NC BGT H3 IG -Y	-1,077	0,714	15,778	-0,026	-0,044	0,003
Sn19/N87	NC BGT H3 VC	-1,059	0,014	16,632	-0,001	-0,042	0,003
Sn20/N92	NC BGT A BG X	-0,601	-0,075	1,614	-0,001	-0,019	-0,008
Sn20/N92	NC BGT A BG Y	-0,129	-0,450	1,546	0,014	-0,002	-0,002
Sn20/N92	NC BGT A BGE X	-0,531	-0,042	9,136	-0,001	-0,018	-0,009
Sn20/N92	NC BGT A BGE Y	-0,064	-0,409	9,056	0,013	0,000	-0,001
Sn20/N92	NC BGT A IG X	-0,998	0,068	17,812	-0,005	-0,038	0,001
Sn20/N92	NC BGT A IG Y	-1,065	-0,565	18,602	0,018	-0,038	0,000
Sn20/N92	NC BGT A BG -X	-0,601	-0,076	1,614	-0,001	-0,019	-0,008
Sn20/N92	NC BGT A BG -Y	-0,033	0,312	0,923	-0,013	0,000	-0,001
Sn20/N92	NC BGT A BGE -X	-0,531	-0,042	9,136	-0,001	-0,018	-0,009
Sn20/N92	NC BGT A BGE -Y	-0,023	0,337	8,444	-0,014	0,000	-0,002
Sn20/N92	NC BGT A IG -X	-1,357	-0,083	18,416	-0,001	-0,051	0,000
Sn20/N92	NC BGT A IG -Y	-1,016	0,771	17,020	-0,031	-0,040	0,003
Sn20/N92	NC BGT A VC	-0,998	0,067	17,814	-0,005	-0,038	0,001
Sn20/N92	NC BGT H1 IG X	-1,328	-0,065	18,427	-0,001	-0,050	0,001
Sn20/N92	NC BGT H1 IG Y	-1,025	-0,544	18,611	0,017	-0,037	0,000
Sn20/N92	NC BGT H1 IG -X	-1,328	-0,065	18,427	-0,001	-0,050	0,001
Sn20/N92	NC BGT H1 IG -Y	-0,984	0,766	17,030	-0,031	-0,040	0,002
Sn20/N92	NC BGT H1 VC	-0,972	0,069	17,826	-0,005	-0,037	0,001
Sn20/N92	NC BGT H2 IG X	-1,334	-0,070	18,427	-0,001	-0,051	0,001
Sn20/N92	NC BGT H2 IG Y	-1,026	-0,544	18,613	0,017	-0,037	0,000
Sn20/N92	NC BGT H2 IG -X	-1,334	-0,070	18,427	-0,001	-0,051	0,001
Sn20/N92	NC BGT H2 IG -Y	-0,982	0,766	17,030	-0,031	-0,039	0,002
Sn20/N92	NC BGT H2 VC	-0,971	0,069	17,827	-0,005	-0,037	0,001
Sn20/N92	NC BGT H3 IG X	-1,333	-0,069	18,425	-0,001	-0,050	0,001
Sn20/N92	NC BGT H3 IG Y	-1,028	-0,545	18,610	0,017	-0,038	0,000
Sn20/N92	NC BGT H3 IG -X	-1,333	-0,069	18,425	-0,001	-0,050	0,001
Sn20/N92	NC BGT H3 IG -Y	-0,987	0,767	17,029	-0,031	-0,040	0,002
Sn20/N92	NC BGT H3 VC	-0,973	0,069	17,825	-0,005	-0,037	0,001
Sn21/N97	NC BGT A BG X	-0,597	-0,023	4,158	-0,001	-0,019	-0,009
Sn21/N97	NC BGT A BG Y	-0,018	-0,592	4,982	0,022	-0,001	-0,012
Sn21/N97	NC BGT A BGE X	-0,537	-0,074	11,803	-0,002	-0,017	-0,009
Sn21/N97	NC BGT A BGE Y	0,038	-0,599	12,637	0,020	0,000	-0,008
Sn21/N97	NC BGT A IG X	-0,984	-0,089	18,214	-0,003	-0,037	0,000
Sn21/N97	NC BGT A IG Y	-1,050	-0,699	18,793	0,024	-0,039	0,002
Sn21/N97	NC BGT A BG -X	-0,599	-0,022	4,157	-0,001	-0,019	-0,009
Sn21/N97	NC BGT A BG -Y	-0,061	0,451	4,324	-0,020	0,000	0,005
Sn21/N97	NC BGT A BGE -X	-0,537	-0,074	11,803	-0,002	-0,017	-0,009
Sn21/N97	NC BGT A BGE -Y	-0,057	0,395	11,961	-0,021	0,000	0,005
Sn21/N97	NC BGT A IG -X	-1,387	-0,219	17,856	0,002	-0,049	0,003
Sn21/N97	NC BGT A IG -Y	-1,071	0,575	17,483	-0,030	-0,040	-0,003
Sn21/N97	NC BGT A VC	-0,999	-0,085	18,214	-0,003	-0,037	0,007
Sn21/N97	NC BGT H1 IG X	-1,396	-0,204	17,836	0,002	-0,048	0,002
Sn21/N97	NC BGT H1 IG Y	-1,046	-0,693	18,778	0,023	-0,038	0,002
Sn21/N97	NC BGT H1 IG -X	-1,396	-0,204	17,836	0,002	-0,048	0,002
Sn21/N97	NC BGT H1 IG -Y	-1,068	0,576	17,457	-0,030	-0,038	-0,003
Sn21/N97	NC BGT H1 VC	-1,007	-0,082	18,190	-0,003	-0,036	0,007
Sn21/N97	NC BGT H2 IG X	-1,403	-0,204	17,834	0,002	-0,048	0,002
Sn21/N97	NC BGT H2 IG Y	-1,050	-0,693	18,775	0,023	-0,038	0,002
Sn21/N97	NC BGT H2 IG -X	-1,404	-0,205	17,834	0,002	-0,048	0,001
Sn21/N97	NC BGT H2 IG -Y	-1,068	0,577	17,455	-0,030	-0,038	-0,003
Sn21/N97	NC BGT H2 VC	-1,009	-0,082	18,188	-0,003	-0,036	0,007
Sn21/N97	NC BGT H3 IG X	-1,397	-0,205	17,838	0,002	-0,048	0,002
Sn21/N97	NC BGT H3 IG Y	-1,046	-0,693	18,779	0,023	-0,038	0,002
Sn21/N97	NC BGT H3 IG -X	-1,397	-0,205	17,838	0,002	-0,048	0,002
Sn21/N97	NC BGT H3 IG -Y	-1,069	0,576	17,460	-0,030	-0,038	-0,003
Sn21/N97	NC BGT H3 VC	-1,004	-0,082	18,193	-0,003	-0,036	0,007
Sn22/N102	NC BGT A BG X	-0,509	0,085	2,770	-0,003	-0,019	0,007
Sn22/N102	NC BGT A BG Y	-0,727	-0,903	1,805	0,031	0,004	0,000
Sn22/N102	NC BGT A BGE X	-0,456	0,057	6,976	-0,003	-0,018	0,006
Sn22/N102	NC BGT A BGE Y	-0,676	-1,240	7,270	0,039	0,005	-0,002
Sn22/N102	NC BGT A IG X	-0,920	-0,046	13,140	-0,001	-0,035	0,009
Sn22/N102	NC BGT A IG Y	-0,920	-1,009	11,950	0,035	-0,037	0,006

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn22/N102	NC BGT A BG -X	-0,507	0,086	2,773	-0,003	-0,019	0,007
Sn22/N102	NC BGT A BG -Y	-0,226	1,007	5,522	-0,038	0,001	0,004
Sn22/N102	NC BGT A BGE -X	-0,456	0,057	6,976	-0,003	-0,018	0,006
Sn22/N102	NC BGT A BGE -Y	-0,205	0,989	9,289	-0,038	0,001	0,004
Sn22/N102	NC BGT A IG -X	-1,247	-0,273	11,173	0,006	-0,045	0,023
Sn22/N102	NC BGT A IG -Y	-1,032	0,880	13,765	-0,034	-0,037	0,008
Sn22/N102	NC BGT A VC	-0,907	-0,042	13,130	-0,001	-0,035	0,004
Sn22/N102	NC BGT H1 IG X	-1,238	-0,213	11,314	0,005	-0,044	0,025
Sn22/N102	NC BGT H1 IG Y	-0,901	-1,002	12,003	0,035	-0,037	0,008
Sn22/N102	NC BGT H1 IG -X	-1,238	-0,213	11,314	0,005	-0,044	0,025
Sn22/N102	NC BGT H1 IG -Y	-0,981	0,886	13,578	-0,034	-0,036	0,009
Sn22/N102	NC BGT H1 VC	-0,884	-0,036	13,014	-0,002	-0,034	0,005
Sn22/N102	NC BGT H2 IG X	-1,244	-0,214	11,201	0,005	-0,045	0,024
Sn22/N102	NC BGT H2 IG Y	-0,903	-1,003	11,877	0,035	-0,037	0,008
Sn22/N102	NC BGT H2 IG -X	-1,243	-0,214	11,201	0,005	-0,045	0,025
Sn22/N102	NC BGT H2 IG -Y	-0,979	0,886	13,450	-0,034	-0,036	0,009
Sn22/N102	NC BGT H2 VC	-0,885	-0,037	12,890	-0,002	-0,034	0,006
Sn22/N102	NC BGT H3 IG X	-1,241	-0,214	11,297	0,005	-0,045	0,024
Sn22/N102	NC BGT H3 IG Y	-0,902	-1,003	11,971	0,035	-0,037	0,008
Sn22/N102	NC BGT H3 IG -X	-1,240	-0,214	11,297	0,005	-0,045	0,025
Sn22/N102	NC BGT H3 IG -Y	-0,986	0,885	13,574	-0,034	-0,036	0,009
Sn22/N102	NC BGT H3 VC	-0,883	-0,037	13,000	-0,002	-0,034	0,005
Sn23/N107	NC BGT A BG X	-0,069	0,006	0,139	0,002	-0,012	-0,007
Sn23/N107	NC BGT A BG Y	0,000	0,000	0,000	0,018	0,058	-0,016
Sn23/N107	NC BGT A BGE X	-0,082	0,006	0,164	0,001	-0,012	-0,007
Sn23/N107	NC BGT A BGE Y	0,000	0,000	0,000	0,016	0,057	-0,016
Sn23/N107	NC BGT A IG X	-0,671	0,003	1,343	0,000	-0,030	0,000
Sn23/N107	NC BGT A IG Y	-0,499	-0,039	1,988	0,012	-0,040	0,004
Sn23/N107	NC BGT A BG -X	-0,070	0,006	0,140	0,002	-0,012	-0,007
Sn23/N107	NC BGT A BG -Y	0,000	0,000	0,000	-0,015	0,011	0,012
Sn23/N107	NC BGT A BGE -X	-0,082	0,006	0,164	0,001	-0,012	-0,007
Sn23/N107	NC BGT A BGE -Y	0,000	0,000	0,000	-0,015	0,009	0,012
Sn23/N107	NC BGT A IG -X	-1,003	-0,002	3,306	0,003	-0,046	-0,003
Sn23/N107	NC BGT A IG -Y	-0,309	0,042	0,617	-0,010	-0,020	-0,003
Sn23/N107	NC BGT A VC	-0,675	0,002	1,350	0,000	-0,030	0,000
Sn23/N107	NC BGT H1 IG X	-0,933	0,001	3,660	0,003	-0,046	-0,002
Sn23/N107	NC BGT H1 IG Y	-0,423	-0,038	2,251	0,012	-0,040	0,004
Sn23/N107	NC BGT H1 IG -X	-0,933	0,001	3,660	0,003	-0,046	-0,002
Sn23/N107	NC BGT H1 IG -Y	-0,553	0,042	1,106	-0,010	-0,031	-0,003
Sn23/N107	NC BGT H1 VC	-0,744	0,003	1,770	0,000	-0,035	0,001
Sn23/N107	NC BGT H2 IG X	-0,934	0,000	3,674	0,003	-0,046	-0,002
Sn23/N107	NC BGT H2 IG Y	-0,421	-0,038	2,275	0,012	-0,040	0,004
Sn23/N107	NC BGT H2 IG -X	-0,934	0,001	3,674	0,003	-0,046	-0,002
Sn23/N107	NC BGT H2 IG -Y	-0,566	0,042	1,133	-0,010	-0,032	-0,003
Sn23/N107	NC BGT H2 VC	-0,740	0,003	1,792	0,000	-0,035	0,001
Sn23/N107	NC BGT H3 IG X	-0,942	0,000	3,619	0,003	-0,046	-0,002
Sn23/N107	NC BGT H3 IG Y	-0,430	-0,038	2,226	0,012	-0,040	0,004
Sn23/N107	NC BGT H3 IG -X	-0,942	0,000	3,619	0,003	-0,046	-0,002
Sn23/N107	NC BGT H3 IG -Y	-0,527	0,042	1,055	-0,010	-0,030	-0,003
Sn23/N107	NC BGT H3 VC	-0,750	0,003	1,729	0,000	-0,035	0,001
Sn24/N112	NC BGT A BG X	0,000	0,000	0,000	0,003	-0,025	0,026
Sn24/N112	NC BGT A BG Y	0,000	0,000	0,000	0,042	-0,010	0,044
Sn24/N112	NC BGT A BGE X	0,000	0,000	0,000	0,003	-0,023	0,027
Sn24/N112	NC BGT A BGE Y	0,000	0,000	0,000	0,022	-0,004	0,044
Sn24/N112	NC BGT A IG X	-0,265	0,003	0,530	0,000	-0,015	0,003
Sn24/N112	NC BGT A IG Y	0,000	0,000	0,000	0,014	-0,016	0,003
Sn24/N112	NC BGT A BG -X	0,000	0,000	0,000	0,003	-0,025	0,026
Sn24/N112	NC BGT A BG -Y	0,048	0,063	2,783	-0,023	-0,001	0,017
Sn24/N112	NC BGT A BGE -X	0,000	0,000	0,000	0,003	-0,023	0,027
Sn24/N112	NC BGT A BGE -Y	0,044	0,064	2,993	-0,023	-0,001	0,017
Sn24/N112	NC BGT A IG -X	0,000	0,000	0,000	0,006	-0,029	0,027
Sn24/N112	NC BGT A IG -Y	-0,483	0,047	1,755	-0,018	-0,023	0,017
Sn24/N112	NC BGT A VC	-0,265	0,003	0,531	0,000	-0,015	0,003
Sn24/N112	NC BGT H1 IG X	0,000	0,000	0,000	0,006	-0,025	0,029
Sn24/N112	NC BGT H1 IG Y	0,000	0,000	0,000	0,015	-0,012	0,005
Sn24/N112	NC BGT H1 IG -X	0,000	0,000	0,000	0,006	-0,025	0,029

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn24/N112	NC BGT H1 IG -Y	-0,439	0,046	3,315	-0,018	-0,024	0,019
Sn24/N112	NC BGT H1 VC	-0,461	0,003	1,916	0,000	-0,023	0,005
Sn24/N112	NC BGT H2 IG X	0,000	0,000	0,000	0,006	-0,026	0,029
Sn24/N112	NC BGT H2 IG Y	0,000	0,000	0,000	0,015	-0,012	0,005
Sn24/N112	NC BGT H2 IG -X	0,000	0,000	0,000	0,006	-0,026	0,029
Sn24/N112	NC BGT H2 IG -Y	-0,436	0,046	3,225	-0,018	-0,024	0,019
Sn24/N112	NC BGT H2 VC	-0,458	0,003	1,824	0,000	-0,023	0,005
Sn24/N112	NC BGT H3 IG X	0,000	0,000	0,000	0,006	-0,026	0,029
Sn24/N112	NC BGT H3 IG Y	0,000	0,000	0,000	0,015	-0,012	0,005
Sn24/N112	NC BGT H3 IG -X	0,000	0,000	0,000	0,006	-0,026	0,029
Sn24/N112	NC BGT H3 IG -Y	-0,444	0,046	3,107	-0,018	-0,023	0,019
Sn24/N112	NC BGT H3 VC	-0,465	0,003	1,712	0,000	-0,023	0,004
Sn25/N117	NC BGT A BG X	0,097	0,013	1,682	0,000	-0,023	0,014
Sn25/N117	NC BGT A BG Y	0,000	0,000	0,000	0,049	-0,013	0,019
Sn25/N117	NC BGT A BGE X	0,118	0,017	3,584	-0,001	-0,020	0,014
Sn25/N117	NC BGT A BGE Y	0,000	0,000	0,000	0,023	-0,004	0,023
Sn25/N117	NC BGT A IG X	-0,660	0,073	7,719	-0,003	-0,023	0,003
Sn25/N117	NC BGT A IG Y	-0,207	-0,207	0,414	0,028	-0,015	0,000
Sn25/N117	NC BGT A BG -X	0,094	0,013	1,681	0,000	-0,023	0,014
Sn25/N117	NC BGT A BG -Y	-0,021	0,673	9,040	-0,039	-0,001	0,007
Sn25/N117	NC BGT A BGE -X	0,118	0,017	3,584	-0,001	-0,020	0,014
Sn25/N117	NC BGT A BGE -Y	-0,024	0,665	10,743	-0,040	-0,001	0,007
Sn25/N117	NC BGT A IG -X	-0,420	-0,012	6,373	0,008	-0,044	0,016
Sn25/N117	NC BGT A IG -Y	-0,622	0,766	11,589	-0,041	-0,022	0,008
Sn25/N117	NC BGT A VC	-0,661	0,073	7,719	-0,003	-0,023	0,003
Sn25/N117	NC BGT H1 IG X	-0,471	-0,011	9,512	0,008	-0,041	0,016
Sn25/N117	NC BGT H1 IG Y	-0,706	-0,623	3,517	0,041	-0,024	0,000
Sn25/N117	NC BGT H1 IG -X	-0,471	-0,011	9,512	0,008	-0,041	0,016
Sn25/N117	NC BGT H1 IG -Y	-0,621	0,767	13,213	-0,041	-0,023	0,007
Sn25/N117	NC BGT H1 VC	-0,608	0,074	9,493	-0,003	-0,022	0,003
Sn25/N117	NC BGT H2 IG X	-0,483	-0,011	8,801	0,008	-0,042	0,016
Sn25/N117	NC BGT H2 IG Y	-0,700	-0,624	2,808	0,041	-0,024	0,000
Sn25/N117	NC BGT H2 IG -X	-0,483	-0,011	8,801	0,008	-0,042	0,016
Sn25/N117	NC BGT H2 IG -Y	-0,621	0,768	12,591	-0,041	-0,022	0,007
Sn25/N117	NC BGT H2 VC	-0,608	0,075	8,874	-0,003	-0,022	0,003
Sn25/N117	NC BGT H3 IG X	-0,471	-0,011	8,998	0,008	-0,041	0,016
Sn25/N117	NC BGT H3 IG Y	-0,695	-0,624	3,005	0,041	-0,024	0,000
Sn25/N117	NC BGT H3 IG -X	-0,470	-0,011	8,998	0,008	-0,041	0,016
Sn25/N117	NC BGT H3 IG -Y	-0,621	0,767	12,902	-0,041	-0,022	0,007
Sn25/N117	NC BGT H3 VC	-0,607	0,074	9,179	-0,003	-0,022	0,003
Sn26/N122	NC BGT A BG X	-0,581	-0,042	4,713	0,000	-0,019	-0,003
Sn26/N122	NC BGT A BG Y	0,572	-0,645	1,825	0,031	0,003	0,026
Sn26/N122	NC BGT A BGE X	-0,504	-0,059	8,380	-0,001	-0,017	-0,004
Sn26/N122	NC BGT A BGE Y	0,117	-0,553	7,221	0,024	0,000	0,004
Sn26/N122	NC BGT A IG X	-0,634	-0,016	12,411	-0,003	-0,025	0,002
Sn26/N122	NC BGT A IG Y	-0,887	-0,598	11,581	0,027	-0,029	0,011
Sn26/N122	NC BGT A BG -X	-0,583	-0,042	4,713	0,000	-0,019	-0,003
Sn26/N122	NC BGT A BG -Y	0,048	0,383	4,548	-0,022	-0,001	-0,020
Sn26/N122	NC BGT A BGE -X	-0,504	-0,059	8,380	-0,001	-0,017	-0,004
Sn26/N122	NC BGT A BGE -Y	0,043	0,354	8,215	-0,022	-0,001	-0,021
Sn26/N122	NC BGT A IG -X	-1,124	-0,144	12,772	0,002	-0,041	-0,003
Sn26/N122	NC BGT A IG -Y	-0,605	0,561	13,210	-0,033	-0,025	-0,004
Sn26/N122	NC BGT A VC	-0,634	-0,016	12,411	-0,003	-0,025	0,002
Sn26/N122	NC BGT H1 IG X	-1,042	-0,142	12,765	0,002	-0,039	-0,003
Sn26/N122	NC BGT H1 IG Y	-0,691	-0,577	11,587	0,026	-0,026	0,011
Sn26/N122	NC BGT H1 IG -X	-1,042	-0,142	12,764	0,002	-0,039	-0,003
Sn26/N122	NC BGT H1 IG -Y	-0,581	0,565	13,205	-0,033	-0,025	-0,003
Sn26/N122	NC BGT H1 VC	-0,579	-0,013	12,413	-0,003	-0,025	0,002
Sn26/N122	NC BGT H2 IG X	-1,056	-0,142	12,759	0,002	-0,040	-0,003
Sn26/N122	NC BGT H2 IG Y	-0,693	-0,577	11,581	0,026	-0,026	0,011
Sn26/N122	NC BGT H2 IG -X	-1,056	-0,142	12,759	0,002	-0,040	-0,003
Sn26/N122	NC BGT H2 IG -Y	-0,579	0,565	13,198	-0,033	-0,025	-0,003
Sn26/N122	NC BGT H2 VC	-0,577	-0,013	12,406	-0,003	-0,025	0,002
Sn26/N122	NC BGT H3 IG X	-1,056	-0,142	12,765	0,002	-0,040	-0,003
Sn26/N122	NC BGT H3 IG Y	-0,699	-0,577	11,587	0,026	-0,026	0,011
Sn26/N122	NC BGT H3 IG -X	-1,056	-0,142	12,765	0,002	-0,040	-0,003

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn26/N122	NC BGT H3 IG -Y	-0,584	0,564	13,204	-0,033	-0,025	-0,003
Sn26/N122	NC BGT H3 VC	-0,580	-0,013	12,412	-0,003	-0,025	0,002
Sn27/N127	NC BGT A BG X	-0,173	0,013	0,346	0,000	-0,008	0,003
Sn27/N127	NC BGT A BG Y	0,000	0,000	0,000	0,004	-0,004	-0,003
Sn27/N127	NC BGT A BGE X	-0,441	-0,130	3,947	-0,002	-0,017	0,001
Sn27/N127	NC BGT A BGE Y	0,019	-0,438	3,979	0,014	0,000	-0,004
Sn27/N127	NC BGT A IG X	-0,675	-0,254	7,268	-0,004	-0,026	0,001
Sn27/N127	NC BGT A IG Y	-0,808	-0,717	6,452	0,020	-0,030	0,001
Sn27/N127	NC BGT A BG -X	-0,173	0,013	0,346	0,000	-0,008	0,003
Sn27/N127	NC BGT A BG -Y	-0,025	0,285	1,059	-0,014	0,000	0,001
Sn27/N127	NC BGT A BGE -X	-0,441	-0,130	3,947	-0,002	-0,017	0,001
Sn27/N127	NC BGT A BGE -Y	-0,027	0,135	4,709	-0,016	-0,001	-0,001
Sn27/N127	NC BGT A IG -X	-1,092	-0,322	6,696	-0,001	-0,041	0,001
Sn27/N127	NC BGT A IG -Y	-0,667	0,260	8,117	-0,031	-0,026	0,001
Sn27/N127	NC BGT A VC	-0,675	-0,254	7,267	-0,004	-0,026	0,001
Sn27/N127	NC BGT H1 IG X	-1,024	-0,323	6,706	0,000	-0,039	0,001
Sn27/N127	NC BGT H1 IG Y	-0,695	-0,715	6,467	0,019	-0,027	0,001
Sn27/N127	NC BGT H1 IG -X	-1,024	-0,323	6,706	0,000	-0,039	0,001
Sn27/N127	NC BGT H1 IG -Y	-0,669	0,261	8,121	-0,031	-0,026	0,001
Sn27/N127	NC BGT H1 VC	-0,650	-0,254	7,270	-0,004	-0,025	0,001
Sn27/N127	NC BGT H2 IG X	-1,043	-0,323	6,705	0,000	-0,040	0,001
Sn27/N127	NC BGT H2 IG Y	-0,699	-0,714	6,466	0,019	-0,027	0,001
Sn27/N127	NC BGT H2 IG -X	-1,043	-0,323	6,705	0,000	-0,040	0,001
Sn27/N127	NC BGT H2 IG -Y	-0,668	0,261	8,121	-0,031	-0,026	0,001
Sn27/N127	NC BGT H2 VC	-0,650	-0,254	7,269	-0,004	-0,025	0,001
Sn27/N127	NC BGT H3 IG X	-1,038	-0,323	6,704	0,000	-0,040	0,001
Sn27/N127	NC BGT H3 IG Y	-0,702	-0,715	6,465	0,019	-0,027	0,001
Sn27/N127	NC BGT H3 IG -X	-1,038	-0,323	6,704	0,000	-0,040	0,001
Sn27/N127	NC BGT H3 IG -Y	-0,668	0,261	8,121	-0,031	-0,026	0,001
Sn27/N127	NC BGT H3 VC	-0,649	-0,254	7,269	-0,004	-0,025	0,001
Sn28/N132	NC BGT A BG X	-0,399	0,053	0,797	-0,001	-0,016	0,001
Sn28/N132	NC BGT A BG Y	-0,002	-0,228	0,475	0,015	-0,003	0,000
Sn28/N132	NC BGT A BGE X	-0,452	-0,097	4,538	-0,002	-0,018	0,001
Sn28/N132	NC BGT A BGE Y	0,012	-0,347	4,191	0,013	-0,001	0,000
Sn28/N132	NC BGT A IG X	-0,739	-0,315	8,279	-0,002	-0,028	0,002
Sn28/N132	NC BGT A IG Y	-0,927	-0,776	7,374	0,019	-0,032	0,002
Sn28/N132	NC BGT A BG -X	-0,399	0,053	0,797	-0,001	-0,016	0,001
Sn28/N132	NC BGT A BG -Y	0,066	0,303	1,112	-0,013	-0,001	0,000
Sn28/N132	NC BGT A BGE -X	-0,452	-0,097	4,538	-0,002	-0,018	0,001
Sn28/N132	NC BGT A BGE -Y	0,070	0,168	4,855	-0,015	-0,001	0,000
Sn28/N132	NC BGT A IG -X	-1,203	-0,370	8,111	0,000	-0,044	0,001
Sn28/N132	NC BGT A IG -Y	-0,683	0,240	9,203	-0,027	-0,028	0,002
Sn28/N132	NC BGT A VC	-0,740	-0,314	8,279	-0,002	-0,028	0,002
Sn28/N132	NC BGT H1 IG X	-1,117	-0,386	8,096	0,001	-0,041	0,002
Sn28/N132	NC BGT H1 IG Y	-0,811	-0,799	7,358	0,020	-0,028	0,002
Sn28/N132	NC BGT H1 IG -X	-1,117	-0,386	8,096	0,001	-0,041	0,002
Sn28/N132	NC BGT H1 IG -Y	-0,674	0,243	9,190	-0,027	-0,028	0,002
Sn28/N132	NC BGT H1 VC	-0,713	-0,317	8,264	-0,002	-0,027	0,002
Sn28/N132	NC BGT H2 IG X	-1,140	-0,381	8,095	0,000	-0,042	0,002
Sn28/N132	NC BGT H2 IG Y	-0,817	-0,797	7,356	0,020	-0,029	0,002
Sn28/N132	NC BGT H2 IG -X	-1,140	-0,381	8,095	0,000	-0,042	0,002
Sn28/N132	NC BGT H2 IG -Y	-0,673	0,243	9,189	-0,027	-0,028	0,002
Sn28/N132	NC BGT H2 VC	-0,712	-0,316	8,263	-0,002	-0,027	0,002
Sn28/N132	NC BGT H3 IG X	-1,134	-0,382	8,098	0,000	-0,042	0,002
Sn28/N132	NC BGT H3 IG Y	-0,820	-0,797	7,360	0,020	-0,029	0,002
Sn28/N132	NC BGT H3 IG -X	-1,134	-0,382	8,098	0,000	-0,042	0,002
Sn28/N132	NC BGT H3 IG -Y	-0,675	0,242	9,191	-0,027	-0,028	0,002
Sn28/N132	NC BGT H3 VC	-0,713	-0,317	8,266	-0,002	-0,027	0,002
Sn29/N137	NC BGT A BG X	-0,517	0,021	1,146	0,000	-0,020	0,003
Sn29/N137	NC BGT A BG Y	-0,091	-0,258	0,756	0,014	-0,005	0,001
Sn29/N137	NC BGT A BGE X	-0,436	-0,118	4,809	-0,002	-0,017	0,005
Sn29/N137	NC BGT A BGE Y	-0,033	-0,395	4,063	0,012	-0,001	0,004
Sn29/N137	NC BGT A IG X	-0,658	-0,174	8,836	-0,008	-0,025	0,009
Sn29/N137	NC BGT A IG Y	-0,814	-0,630	8,062	0,016	-0,030	0,009
Sn29/N137	NC BGT A BG -X	-0,521	0,021	1,144	0,000	-0,020	0,003
Sn29/N137	NC BGT A BG -Y	0,006	0,269	1,056	-0,013	0,000	-0,001

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn29/N137	NC BGT A BGE -X	-0,436	-0,118	4,809	-0,002	-0,017	0,005
Sn29/N137	NC BGT A BGE -Y	0,001	0,124	4,706	-0,015	0,000	0,001
Sn29/N137	NC BGT A IG -X	-1,049	-0,263	9,065	-0,003	-0,040	0,009
Sn29/N137	NC BGT A IG -Y	-0,651	0,323	9,686	-0,034	-0,025	0,010
Sn29/N137	NC BGT A VC	-0,659	-0,175	8,835	-0,008	-0,025	0,009
Sn29/N137	NC BGT H1 IG X	-0,939	-0,250	9,058	-0,003	-0,037	0,009
Sn29/N137	NC BGT H1 IG Y	-0,689	-0,614	8,047	0,016	-0,026	0,009
Sn29/N137	NC BGT H1 IG -X	-0,939	-0,250	9,058	-0,003	-0,037	0,009
Sn29/N137	NC BGT H1 IG -Y	-0,636	0,319	9,685	-0,033	-0,025	0,010
Sn29/N137	NC BGT H1 VC	-0,630	-0,174	8,835	-0,008	-0,025	0,009
Sn29/N137	NC BGT H2 IG X	-0,968	-0,253	9,058	-0,003	-0,038	0,009
Sn29/N137	NC BGT H2 IG Y	-0,695	-0,615	8,048	0,016	-0,027	0,009
Sn29/N137	NC BGT H2 IG -X	-0,968	-0,253	9,058	-0,003	-0,038	0,009
Sn29/N137	NC BGT H2 IG -Y	-0,635	0,319	9,684	-0,033	-0,025	0,010
Sn29/N137	NC BGT H2 VC	-0,630	-0,174	8,834	-0,008	-0,025	0,009
Sn29/N137	NC BGT H3 IG X	-0,961	-0,252	9,060	-0,003	-0,038	0,009
Sn29/N137	NC BGT H3 IG Y	-0,700	-0,615	8,049	0,016	-0,027	0,009
Sn29/N137	NC BGT H3 IG -X	-0,961	-0,252	9,060	-0,003	-0,038	0,009
Sn29/N137	NC BGT H3 IG -Y	-0,638	0,319	9,685	-0,033	-0,025	0,010
Sn29/N137	NC BGT H3 VC	-0,631	-0,174	8,835	-0,008	-0,025	0,009
Sn30/N142	NC BGT A BG X	-0,713	0,025	3,405	-0,001	-0,018	0,009
Sn30/N142	NC BGT A BG Y	-0,289	-0,468	2,922	0,022	-0,007	0,002
Sn30/N142	NC BGT A BGE X	-0,612	0,001	7,195	-0,001	-0,016	0,011
Sn30/N142	NC BGT A BGE Y	-0,086	-0,458	7,363	0,020	-0,001	-0,002
Sn30/N142	NC BGT A IG X	-0,702	-0,007	10,748	-0,002	-0,023	0,014
Sn30/N142	NC BGT A IG Y	-0,807	-0,535	9,914	0,024	-0,030	0,009
Sn30/N142	NC BGT A BG -X	-0,699	0,023	3,407	-0,001	-0,018	0,002
Sn30/N142	NC BGT A BG -Y	-0,055	0,371	4,533	-0,020	0,001	0,009
Sn30/N142	NC BGT A BGE -X	-0,612	0,001	7,195	-0,001	-0,016	0,011
Sn30/N142	NC BGT A BGE -Y	-0,055	0,346	8,199	-0,020	0,001	0,011
Sn30/N142	NC BGT A IG -X	-1,329	-0,104	10,038	0,003	-0,037	0,013
Sn30/N142	NC BGT A IG -Y	-0,684	0,531	11,516	-0,029	-0,023	0,002
Sn30/N142	NC BGT A VC	-0,684	-0,012	10,749	-0,002	-0,024	0,005
Sn30/N142	NC BGT H1 IG X	-1,136	-0,092	10,079	0,002	-0,033	0,013
Sn30/N142	NC BGT H1 IG Y	-0,687	-0,531	9,927	0,024	-0,025	0,008
Sn30/N142	NC BGT H1 IG -X	-1,136	-0,093	10,079	0,002	-0,033	0,013
Sn30/N142	NC BGT H1 IG -Y	-0,691	0,532	11,516	-0,029	-0,022	0,002
Sn30/N142	NC BGT H1 VC	-0,679	-0,010	10,751	-0,002	-0,023	0,005
Sn30/N142	NC BGT H2 IG X	-1,201	-0,093	10,080	0,002	-0,034	0,013
Sn30/N142	NC BGT H2 IG Y	-0,697	-0,531	9,920	0,024	-0,025	0,008
Sn30/N142	NC BGT H2 IG -X	-1,201	-0,093	10,080	0,002	-0,034	0,013
Sn30/N142	NC BGT H2 IG -Y	-0,693	0,532	11,510	-0,029	-0,022	0,002
Sn30/N142	NC BGT H2 VC	-0,681	-0,010	10,744	-0,002	-0,023	0,005
Sn30/N142	NC BGT H3 IG X	-1,179	-0,093	10,081	0,002	-0,034	0,013
Sn30/N142	NC BGT H3 IG Y	-0,699	-0,531	9,925	0,024	-0,026	0,008
Sn30/N142	NC BGT H3 IG -X	-1,179	-0,093	10,080	0,002	-0,034	0,013
Sn30/N142	NC BGT H3 IG -Y	-0,691	0,532	11,515	-0,029	-0,023	0,002
Sn30/N142	NC BGT H3 VC	-0,678	-0,010	10,750	-0,002	-0,023	0,005
Sn31/N147	NC BGT A BG X	0,000	0,000	0,000	0,000	-0,014	-0,004
Sn31/N147	NC BGT A BG Y	0,000	0,000	0,000	0,013	0,000	-0,018
Sn31/N147	NC BGT A BGE X	0,000	0,000	0,000	-0,001	-0,009	-0,003
Sn31/N147	NC BGT A BGE Y	0,000	0,000	0,000	0,012	0,003	-0,008
Sn31/N147	NC BGT A IG X	-0,580	-0,008	7,962	-0,001	-0,022	-0,004
Sn31/N147	NC BGT A IG Y	-0,756	-0,805	2,470	0,035	-0,029	0,015
Sn31/N147	NC BGT A BG -X	0,000	0,000	0,000	0,000	-0,013	0,004
Sn31/N147	NC BGT A BG -Y	0,012	0,824	9,052	-0,037	0,000	-0,008
Sn31/N147	NC BGT A BGE -X	0,000	0,000	0,000	-0,001	-0,009	-0,003
Sn31/N147	NC BGT A BGE -Y	0,010	0,815	10,701	-0,038	0,000	-0,007
Sn31/N147	NC BGT A IG -X	0,000	0,000	0,000	0,001	-0,011	-0,002
Sn31/N147	NC BGT A IG -Y	-0,583	0,741	11,450	-0,033	-0,022	-0,001
Sn31/N147	NC BGT A VC	-0,596	-0,013	7,975	-0,001	-0,022	0,005
Sn31/N147	NC BGT H1 IG X	-0,690	-0,143	1,381	0,005	-0,026	-0,002
Sn31/N147	NC BGT H1 IG Y	-0,582	-0,798	4,444	0,034	-0,024	0,015
Sn31/N147	NC BGT H1 IG -X	-0,690	-0,143	1,381	0,005	-0,026	-0,002
Sn31/N147	NC BGT H1 IG -Y	-0,570	0,741	13,132	-0,033	-0,021	-0,001
Sn31/N147	NC BGT H1 VC	-0,573	-0,010	9,703	-0,002	-0,021	0,005

Name	Case	R_x [kN]	R_y [kN]	R_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
Sn31/N147	NC BGT H2 IG X	-0,440	-0,144	0,881	0,005	-0,020	-0,002
Sn31/N147	NC BGT H2 IG Y	-0,595	-0,799	3,860	0,034	-0,024	0,015
Sn31/N147	NC BGT H2 IG -X	-0,440	-0,144	0,880	0,005	-0,020	-0,002
Sn31/N147	NC BGT H2 IG -Y	-0,570	0,742	12,554	-0,033	-0,021	-0,001
Sn31/N147	NC BGT H2 VC	-0,573	-0,010	9,121	-0,002	-0,021	0,005
Sn31/N147	NC BGT H3 IG X	-0,524	-0,144	1,048	0,005	-0,022	-0,002
Sn31/N147	NC BGT H3 IG Y	-0,601	-0,799	4,089	0,034	-0,024	0,015
Sn31/N147	NC BGT H3 IG -X	-0,524	-0,144	1,048	0,005	-0,022	-0,002
Sn31/N147	NC BGT H3 IG -Y	-0,572	0,741	12,821	-0,033	-0,021	-0,001
Sn31/N147	NC BGT H3 VC	-0,574	-0,011	9,396	-0,002	-0,021	0,005
Sn32/N152	NC BGT A BG X	-0,336	0,005	3,947	0,001	-0,020	-0,016
Sn32/N152	NC BGT A BG Y	0,000	0,000	0,000	0,014	0,000	-0,040
Sn32/N152	NC BGT A BGE X	-0,412	0,005	5,386	0,001	-0,016	-0,015
Sn32/N152	NC BGT A BGE Y	0,000	0,000	0,000	0,012	0,003	-0,038
Sn32/N152	NC BGT A IG X	-0,544	0,002	2,023	-0,001	-0,022	0,001
Sn32/N152	NC BGT A IG Y	-0,064	-0,056	0,128	0,011	-0,005	0,005
Sn32/N152	NC BGT A BG -X	-0,337	0,006	3,943	0,001	-0,020	-0,015
Sn32/N152	NC BGT A BG -Y	-0,054	0,058	2,659	-0,014	0,001	-0,013
Sn32/N152	NC BGT A BGE -X	-0,412	0,005	5,386	0,001	-0,016	-0,015
Sn32/N152	NC BGT A BGE -Y	-0,054	0,059	2,871	-0,015	0,001	-0,013
Sn32/N152	NC BGT A IG -X	-1,054	-0,003	9,933	0,002	-0,037	-0,007
Sn32/N152	NC BGT A IG -Y	-0,564	0,036	3,349	-0,009	-0,022	-0,011
Sn32/N152	NC BGT A VC	-0,540	0,003	2,011	-0,001	-0,022	0,001
Sn32/N152	NC BGT H1 IG X	-0,981	-0,001	11,438	0,001	-0,030	-0,009
Sn32/N152	NC BGT H1 IG Y	-0,585	-0,054	1,169	0,011	-0,020	0,004
Sn32/N152	NC BGT H1 IG -X	-0,981	-0,001	11,438	0,001	-0,030	-0,009
Sn32/N152	NC BGT H1 IG -Y	-0,591	0,036	4,725	-0,010	-0,021	-0,013
Sn32/N152	NC BGT H1 VC	-0,556	0,004	3,332	-0,001	-0,021	-0,001
Sn32/N152	NC BGT H2 IG X	-1,032	-0,001	11,251	0,001	-0,032	-0,009
Sn32/N152	NC BGT H2 IG Y	-0,538	-0,055	1,076	0,011	-0,019	0,003
Sn32/N152	NC BGT H2 IG -X	-1,032	-0,001	11,251	0,001	-0,032	-0,009
Sn32/N152	NC BGT H2 IG -Y	-0,593	0,036	4,626	-0,010	-0,021	-0,013
Sn32/N152	NC BGT H2 VC	-0,559	0,004	3,236	-0,001	-0,021	-0,001
Sn32/N152	NC BGT H3 IG X	-1,012	-0,001	11,272	0,001	-0,031	-0,009
Sn32/N152	NC BGT H3 IG Y	-0,515	-0,055	1,031	0,011	-0,018	0,004
Sn32/N152	NC BGT H3 IG -X	-1,012	-0,001	11,272	0,001	-0,031	-0,009
Sn32/N152	NC BGT H3 IG -Y	-0,588	0,036	4,537	-0,010	-0,021	-0,013
Sn32/N152	NC BGT H3 VC	-0,553	0,004	3,141	-0,001	-0,021	-0,001
Sn33/N158	NC BGT A BG X	-0,059	-0,089	0,179	0,006	-0,030	-0,002
Sn33/N158	NC BGT A BG Y	0,010	-0,177	0,353	0,022	0,031	0,026
Sn33/N158	NC BGT A BGE X	-0,058	-0,093	0,186	0,005	-0,029	-0,001
Sn33/N158	NC BGT A BGE Y	0,018	-0,168	0,335	0,019	0,033	0,030
Sn33/N158	NC BGT A IG X	-0,035	-0,053	0,228	0,002	-0,016	-0,019
Sn33/N158	NC BGT A IG Y	-0,063	-0,191	0,382	0,022	-0,012	-0,041
Sn33/N158	NC BGT A BG -X	-0,059	-0,089	0,178	0,006	-0,030	-0,002
Sn33/N158	NC BGT A BG -Y	-0,013	0,013	0,026	-0,012	-0,015	-0,016
Sn33/N158	NC BGT A BGE -X	-0,058	-0,093	0,186	0,005	-0,029	-0,001
Sn33/N158	NC BGT A BGE -Y	-0,014	0,021	0,042	-0,012	-0,016	-0,016
Sn33/N158	NC BGT A IG -X	-0,042	-0,148	0,295	0,010	-0,033	-0,034
Sn33/N158	NC BGT A IG -Y	-0,039	0,038	0,077	-0,010	-0,028	-0,026
Sn33/N158	NC BGT A VC	-0,035	-0,053	0,228	0,002	-0,016	-0,019
Sn33/N158	NC BGT H1 IG X	-0,049	-0,155	0,309	0,010	-0,043	-0,044
Sn33/N158	NC BGT H1 IG Y	-0,071	-0,200	0,399	0,022	-0,022	-0,051
Sn33/N158	NC BGT H1 IG -X	-0,049	-0,155	0,309	0,010	-0,043	-0,044
Sn33/N158	NC BGT H1 IG -Y	-0,047	0,047	0,094	-0,011	-0,039	-0,037
Sn33/N158	NC BGT H1 VC	-0,043	-0,051	0,245	0,002	-0,026	-0,029
Sn33/N158	NC BGT H2 IG X	-0,050	-0,151	0,303	0,010	-0,043	-0,045
Sn33/N158	NC BGT H2 IG Y	-0,072	-0,196	0,393	0,022	-0,022	-0,051
Sn33/N158	NC BGT H2 IG -X	-0,050	-0,151	0,303	0,010	-0,043	-0,045
Sn33/N158	NC BGT H2 IG -Y	-0,044	0,044	0,088	-0,010	-0,037	-0,036
Sn33/N158	NC BGT H2 VC	-0,043	-0,051	0,239	0,002	-0,026	-0,030
Sn33/N158	NC BGT H3 IG X	-0,049	-0,153	0,306	0,010	-0,042	-0,043
Sn33/N158	NC BGT H3 IG Y	-0,071	-0,198	0,396	0,022	-0,021	-0,050
Sn33/N158	NC BGT H3 IG -X	-0,049	-0,153	0,306	0,010	-0,042	-0,043
Sn33/N158	NC BGT H3 IG -Y	-0,046	0,045	0,091	-0,010	-0,037	-0,036
Sn33/N158	NC BGT H3 VC	-0,042	-0,052	0,242	0,002	-0,025	-0,028

5.5. Interne krachten

5.5.1. 1D internal forces

Nonlinear calculation
Class: Alle NC UGT
Coordinate system: Principal
Extreme 1D: Cross-section
Selection: All

Name	dx [m]	Case	Cross-section	N [kN]	V_y [kN]	V_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
S36	0,000	NC UGT H1 IG -Y	Collar - RO48.3X3.2	**-29,550**	1,385	1,430	-0,022	0,087	0,103
S60	0,165	NC UGT A O -X	Collar - RO48.3X3.2	**3,315**	-0,001	-0,175	0,011	0,166	0,004
S28	0,000	NC UGT A O Y	Collar - RO48.3X3.2	-6,526	**-2,652**	-0,369	0,006	-0,033	-0,181
S32	0,000	NC UGT A O -Y	Collar - RO48.3X3.2	-14,027	**1,705**	0,184	-0,001	0,009	0,119
S64	0,000	NC UGT A O Y	Collar - RO48.3X3.2	-2,343	-1,192	**-1,175**	0,024	-0,134	-0,024
S68	0,000	NC UGT A IG X	Collar - RO48.3X3.2	-29,410	-0,297	**2,319**	0,004	0,167	-0,029
S132	0,060-	NC UGT H2 IG Y	Collar - RO48.3X3.2	-0,481	-0,252	0,097	**-0,069**	-0,003	-0,038
S96	0,060-	NC UGT H2 BGE Y	Collar - RO48.3X3.2	0,017	0,002	0,000	**0,065**	-0,007	0,043
S88	0,060+	NC UGT A O Y	Collar - RO48.3X3.2	-3,460	-0,087	0,551	0,000	**-0,243**	0,032
S64	0,060+	NC UGT A O -X	Collar - RO48.3X3.2	-5,088	-0,053	-0,488	0,002	**0,310**	0,022
S28	0,060-	NC UGT A O Y	Collar - RO48.3X3.2	-6,526	-2,646	-0,368	0,006	-0,055	**-0,340**
S32	0,060+	NC UGT A O Y	Collar - RO48.3X3.2	-1,048	-0,908	-0,323	0,003	0,069	**0,403**
S34	0,000	NC UGT H1 IG -Y	Spindle - RO38X4.5	**-29,554**	1,392	1,433	-0,022	-0,057	-0,036
S94	0,100	NC UGT A BG Y	Spindle - RO38X4.5	**0,015**	0,000	0,000	0,062	-0,016	0,064
S26	0,050-	NC UGT A O Y	Spindle - RO38X4.5	-6,526	**-2,655**	-0,369	0,006	-0,015	-0,048
S30	0,050-	NC UGT A O -Y	Spindle - RO38X4.5	-14,028	**1,709**	0,184	-0,001	-0,001	0,033
S62	0,000	NC UGT A O Y	Spindle - RO38X4.5	-2,346	-1,191	**-1,176**	0,025	-0,017	0,096
S66	0,050-	NC UGT A IG X	Spindle - RO38X4.5	-29,411	-0,299	**2,330**	0,004	0,051	-0,014
S129	0,200	NC UGT H2 IG Y	Spindle - RO38X4.5	-0,483	-0,252	0,097	**-0,069**	-0,009	-0,023
S94	0,000	NC UGT H2 BGE Y	Spindle - RO38X4.5	0,010	0,000	0,000	**0,065**	-0,007	0,043
S58	0,100	NC UGT A IG X	Spindle - RO38X4.5	0,015	0,000	0,000	0,019	**-0,176**	0,006
S66	0,100	NC UGT A IG X	Spindle - RO38X4.5	-29,410	-0,297	2,319	0,004	**0,167**	-0,029
S26	0,100	NC UGT A O Y	Spindle - RO38X4.5	-6,526	-2,652	-0,369	0,006	-0,033	**-0,181**
S3	0,000	NC UGT A O Y	Spindle - RO38X4.5	-6,961	-2,112	0,301	-0,001	0,002	**0,151**
S33	0,000	NC UGT H1 IG -Y	Base plate - Rechthoek (150,000; 150,000)	**-29,564**	1,392	1,433	-0,022	-0,064	-0,043
S93	0,005	NC UGT A BG Y	Base plate - Rechthoek (150,000; 150,000)	**0,010**	0,000	0,000	0,062	-0,016	0,064
S25	0,000	NC UGT A O Y	Base plate -	-6,536	**-2,655**	-0,369	0,006	0,005	0,098

Name	dx [m]	Case	Cross-section	N [kN]	V_y [kN]	V_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
			Rechthoek (150,000; 150,000)						
S29	0,000	NC UGT A O -Y	Base plate - Rechthoek (150,000; 150,000)	-14,038	**1,708**	0,184	-0,001	-0,011	-0,061
S61	0,005	NC UGT A O Y	Base plate - Rechthoek (150,000; 150,000)	-2,346	-1,191	**-1,176**	0,025	-0,017	0,096
S65	0,000	NC UGT A IG X	Base plate - Rechthoek (150,000; 150,000)	-29,424	-0,300	**2,329**	0,004	-0,077	0,002
S130	0,005	NC UGT H2 IG Y	Base plate - Rechthoek (150,000; 150,000)	-0,492	-0,252	0,096	**-0,069**	-0,029	0,028
S93	0,000	NC UGT H2 BGE Y	Base plate - Rechthoek (150,000; 150,000)	0,000	0,000	0,000	**0,065**	-0,007	0,043
S57	0,005	NC UGT A IG X	Base plate - Rechthoek (150,000; 150,000)	0,010	0,000	0,000	0,019	**-0,176**	0,006
S89	0,005	NC UGT A O Y	Base plate - Rechthoek (150,000; 150,000)	0,008	0,000	0,000	-0,022	**0,084**	0,029
S97	0,000	NC UGT A O -Y	Base plate - Rechthoek (150,000; 150,000)	-10,126	1,327	0,025	0,011	-0,001	**-0,062**
S4	0,000	NC UGT A O Y	Base plate - Rechthoek (150,000; 150,000)	-6,968	-2,113	0,301	-0,001	0,000	**0,162**
S166	0,000	NC UGT A IG -Y	Standard - RO48.3X3.2	**-26,062**	-0,032	0,470	-0,015	0,013	0,064
S142	1,895-	NC UGT A IG X	Standard - RO48.3X3.2	**10,500**	0,240	0,555	-0,006	-0,084	0,011
S150	2,586-	NC UGT A BGE Y	Standard - RO48.3X3.2	4,869	**-2,989**	-0,298	-0,405	-0,967	-0,552
S151	2,925-	NC UGT A O Y	Standard - RO48.3X3.2	2,050	**3,055**	-3,381	0,524	-0,258	0,445
S150	2,895-	NC UGT H2 BGE -Y	Standard - RO48.3X3.2	-3,012	-1,744	**-3,911**	-0,249	0,186	-0,140
S151	2,895-	NC UGT H2 BGE -Y	Standard - RO48.3X3.2	-3,030	-1,688	**3,926**	0,251	-0,178	-0,132
S1003	0,000	NC UGT A O Y	Standard - RO48.3X3.2	0,767	0,066	-1,717	**-1,043**	0,105	-0,006
S1005	0,000	NC UGT H2 BGE Y	Standard - RO48.3X3.2	0,771	-0,500	1,681	**0,966**	-0,097	0,000
S151	2,586-	NC UGT H2 BGE -Y	Standard - RO48.3X3.2	-7,619	2,495	-0,640	0,162	**-1,537**	0,409
S150	2,586-	NC UGT H2 BGE -Y	Standard - RO48.3X3.2	-7,611	2,513	0,637	-0,179	**1,541**	0,418
S149	1,395+	NC UGT A IG -Y	Standard - RO48.3X3.2	-1,316	1,792	-0,681	0,006	0,195	**-1,095**
S149	1,395+	NC UGT H2 IG Y	Standard - RO48.3X3.2	-0,093	-1,779	-0,692	0,006	0,198	**1,184**
S1106	0,518-	NC UGT A O X	Rail RL - RO33.7X3.2	**2,385**	0,000	0,040	0,000	0,014	0,000
S1097	0,494	NC UGT H1	Rail RL -	**7,850**	0,000	0,285	0,000	0,109	0,000

Name	dx [m]	Case	Cross-section	N [kN]	V_y [kN]	V_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
		IG Y	RO33.7X3.2						
S1101	0,000	NC UGT H2 BGE -Y	Rail RL - RO33.7X3.2	6,753	**-0,078**	0,161	-0,005	-0,010	0,043
S1092	0,518-	NC UGT H1 IG -Y	Rail RL - RO33.7X3.2	4,892	0,002	**-0,107**	0,000	-0,019	0,002
S196	0,494	NC UGT H2 BGE Y	Rail RL - RO33.7X3.2	7,047	-0,051	0,198	**-0,008**	0,085	0,008
S1097	0,494	NC UGT H1 IG -Y	Rail RL - RO33.7X3.2	7,446	0,058	0,252	**0,009**	0,102	-0,010
S1109	0,000	NC UGT H1 IG X	Rail RL - RO33.7X3.2	4,015	0,003	**0,296**	0,000	**-0,039**	-0,002
S1090	0,494	NC UGT A IG X	Rail RL - RO33.7X3.2	7,669	0,000	0,291	0,000	**0,111**	0,000
S1097	0,000	NC UGT H2 BGE -Y	Rail RL - RO33.7X3.2	6,935	**0,080**	0,183	0,006	-0,013	**-0,044**
S1099	0,518-	NC UGT H2 BGE -Y	Rail RL - RO33.7X3.2	5,258	0,033	-0,033	-0,002	0,003	**0,050**
S1098	0,000	NC UGT H1 IG Y	Intermediate plate RL - FL80X6	**-2,325**	1,738	0,000	0,000	0,000	-0,047
S1093	0,160	NC UGT H1 IG -X	Intermediate plate RL - FL80X6	**0,077**	0,503	0,001	0,000	0,000	0,057
S1102	0,000	NC UGT A BG Y	Intermediate plate RL - FL80X6	-2,302	**-1,748**	0,007	0,001	-0,001	0,048
S1091	0,000	NC UGT H1 IG -Y	Intermediate plate RL - FL80X6	-2,154	**1,940**	0,000	0,000	0,000	-0,057
S1098	0,080-	NC UGT H2 BGE -Y	Intermediate plate RL - FL80X6	-2,096	1,362	**-0,069**	-0,005	0,000	0,080
S1094	0,080+	NC UGT A O Y	Intermediate plate RL - FL80X6	-1,141	-0,774	**0,025**	0,000	0,000	-0,046
S1098	0,160	NC UGT H2 IG -Y	Intermediate plate RL - FL80X6	-2,229	1,655	-0,063	**-0,014**	-0,005	0,223
S195	0,160	NC UGT A BGE Y	Intermediate plate RL - FL80X6	-2,112	-1,404	-0,056	**0,012**	-0,004	-0,194
S1100	0,160	NC UGT H2 BGE -Y	Intermediate plate RL - FL80X6	0,072	0,054	-0,060	0,000	**-0,005**	0,006
S1098	0,000	NC UGT H2 BGE -Y	Intermediate plate RL - FL80X6	-2,100	1,362	-0,066	0,002	**0,006**	-0,030
S1102	0,160	NC UGT A BG Y	Intermediate plate RL - FL80X6	-2,295	-1,748	0,007	-0,005	0,000	**-0,232**
S1091	0,160	NC UGT H1 IG -Y	Intermediate plate RL - FL80X6	-2,147	1,940	0,000	0,000	0,000	**0,253**
S197	0,250+	NC UGT H2 IG X	Ledger - RO48.3X3.2	**-7,934**	-0,013	-2,291	0,001	0,405	-0,013
S348	0,000	NC UGT A O Y	Ledger - RO48.3X3.2	**6,467**	-0,035	0,023	0,000	0,002	0,002
S1096	2,021-	NC UGT H2 BGE -Y	Ledger - RO48.3X3.2	-6,847	**-0,566**	-2,112	0,009	-0,060	-0,029
S1096	0,051+	NC UGT H2 BGE -Y	Ledger - RO48.3X3.2	-7,026	**0,568**	2,040	-0,005	-0,034	-0,025
S197	2,072	NC UGT A IG X	Ledger - RO48.3X3.2	-0,391	0,041	**-4,228**	0,000	-0,239	0,003
S1096	0,000	NC UGT A BG Y	Ledger - RO48.3X3.2	-0,065	-0,122	**4,232**	0,000	-0,257	0,003
S190	0,051-	NC UGT H2	Ledger -	-0,183	0,222	4,161	**-0,012**	-0,007	-0,018

Name	dx [m]	Case	Cross-section	N [kN]	V_y [kN]	V_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
		BGE Y	RO48.3X3.2						
S1096	1,822+	NC UGT A BGE -Y	Ledger - RO48.3X3.2	-6,775	-0,556	-2,084	**0,011**	0,360	0,083
S328	0,000	NC UGT H2 BGE -Y	Ledger - RO48.3X3.2	0,293	0,041	2,369	-0,006	**-0,499**	-0,032
S338	0,250	NC UGT A O -X	Ledger - RO48.3X3.2	0,185	0,001	3,290	0,000	**0,498**	0,000
S443	1,381+	NC UGT A IG Y	Ledger - RO48.3X3.2	-0,638	0,231	-0,353	0,001	0,138	**-0,183**
S448	1,381+	NC UGT A IG Y	Ledger - RO48.3X3.2	-0,679	-0,262	-0,305	0,000	0,125	**0,204**
S310	0,921-	NC UGT A O Y	Event transom - Grafische doorsnede	**-2,368**	-0,008	-0,050	0,000	0,119	0,002
S301	0,000	NC UGT H2 IG Y	Event transom - Grafische doorsnede	**1,227**	1,004	10,448	0,002	-0,413	-0,029
S294	2,072	NC UGT H2 IG -Y	Event transom - Grafische doorsnede	-1,289	**-1,067**	-10,622	-0,002	-0,422	-0,031
S294	0,000	NC UGT H2 IG -Y	Event transom - Grafische doorsnede	-1,289	**1,069**	10,629	0,002	-0,429	-0,033
S299	2,072	NC UGT A IG Y	Event transom - Grafische doorsnede	1,198	-1,012	**-10,715**	-0,002	-0,450	-0,029
S301	0,000	NC UGT A IG -Y	Event transom - Grafische doorsnede	-1,640	1,021	**10,925**	0,002	-0,455	-0,030
S299	0,460-	NC UGT H2 IG -Y	Event transom - Grafische doorsnede	-1,699	0,576	5,837	**-0,017**	3,501	0,339
S301	1,612+	NC UGT A IG -Y	Event transom - Grafische doorsnede	-1,694	-0,574	-5,619	**0,017**	3,825	0,333
S301	2,072	NC UGT H2 IG Y	Event transom - Grafische doorsnede	1,218	-0,912	-9,306	-0,004	**-0,640**	-0,031
S301	1,151-	NC UGT A IG -Y	Event transom - Grafische doorsnede	-1,731	-0,118	-0,891	0,007	**5,324**	0,492
S293	2,072	NC UGT A IG -Y	Event transom - Grafische doorsnede	-1,336	-0,907	-8,981	0,001	0,037	**-0,043**
S294	1,151-	NC UGT H2 IG -Y	Event transom - Grafische doorsnede	-1,374	-0,118	-1,178	0,005	5,013	**0,516**
S505	2,558	NC UGT H1 IG -X	Vertical Diagonal - RO48.3X2.3	**-5,038**	0,000	-0,037	0,000	0,000	0,001
S509	0,000	NC UGT A O Y	Vertical Diagonal - RO48.3X2.3	**5,886**	-0,031	0,020	-0,009	0,000	0,018
S517	1,990-	NC UGT A IG Y	Vertical Diagonal - RO48.3X2.3	-1,807	**-0,464**	0,018	0,031	-0,005	-0,022
S516	1,990-	NC UGT A IG Y	Vertical Diagonal - RO48.3X2.3	-1,512	**0,507**	0,011	-0,015	0,000	0,040
S477	2,880	NC UGT H1 IG -X	Vertical Diagonal - RO48.3X2.3	1,809	-0,031	**-0,237**	0,003	0,000	-0,011
S523	2,301	NC UGT A O Y	Vertical Diagonal - RO48.3X2.3	1,105	0,217	-0,044	**-0,147**	-0,004	0,440
S474	2,880	NC UGT H2	Vertical	-0,104	0,070	-0,031	**0,109**	0,001	-0,027

Name	dx [m]	Case	Cross-section	N [kN]	V_y [kN]	V_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
		IG -Y	Diagonal - RO48.3X2.3						
S479	2,160+	NC UGT A IG X	Vertical Diagonal - RO48.3X2.3	-2,371	0,008	**0,100**	-0,007	**-0,068**	0,007
S477	2,160+	NC UGT H1 IG -X	Vertical Diagonal - RO48.3X2.3	1,824	-0,031	-0,227	0,003	**0,166**	0,011
S519	0,000	NC UGT A O -X	Vertical Diagonal - RO48.3X2.3	-0,576	0,250	0,007	-0,065	-0,002	**-0,445**
S523	2,301	NC UGT H2 BGE Y	Vertical Diagonal - RO48.3X2.3	0,936	0,252	-0,052	-0,106	-0,004	**0,457**
S551	0,000	NC UGT H4 BGE -Y	truss diagonal - RO20X2	**-7,823**	0,053	-0,030	0,002	0,009	-0,007
S556	0,000	NC UGT H1 BGE -Y	truss diagonal - RO20X2	**8,414**	0,013	-0,082	-0,001	0,014	-0,002
S933	0,113-	NC UGT H2 BGE -Y	truss diagonal - RO20X2	-1,642	**-0,211**	0,017	0,000	-0,001	-0,006
S933	0,339	NC UGT A O Y	truss diagonal - RO20X2	0,821	**0,230**	-0,005	0,000	-0,001	0,055
S709	0,113-	NC UGT H2 BGE -Y	truss diagonal - RO20X2	-0,129	0,030	**0,227**	0,000	0,004	-0,001
S604	0,117-	NC UGT H2 BGE -Y	truss diagonal - RO20X2	-2,395	-0,075	0,009	**-0,007**	0,001	0,019
S604	0,470	NC UGT A O Y	truss diagonal - RO20X2	1,071	0,088	-0,008	**0,007**	-0,003	0,011
S709	0,339	NC UGT A O Y	truss diagonal - RO20X2	0,287	-0,024	**-0,241**	0,000	**-0,057**	-0,004
S709	0,339	NC UGT H2 BGE -Y	truss diagonal - RO20X2	-0,134	0,030	0,224	0,000	**0,055**	0,005
S943	0,339	NC UGT H2 BGE -Y	truss diagonal - RO20X2	-0,661	-0,196	-0,008	0,000	-0,002	**-0,052**
S943	0,339	NC UGT A O Y	truss diagonal - RO20X2	0,210	0,223	0,009	0,000	0,002	**0,055**
S975	2,072	NC UGT H2 BGE -Y	truss chord - RO48.3X3.2	**-57,442**	-0,134	2,727	0,120	0,229	0,024
S976	2,012+	NC UGT H2 BGE -Y	truss chord - RO48.3X3.2	**57,514**	0,018	0,140	0,000	0,103	0,040
S1069	0,062	NC UGT A O Y	truss chord - RO48.3X3.2	3,949	**-5,642**	2,949	-0,029	0,093	-0,129
S1075	0,062	NC UGT A BGE Y	truss chord - RO48.3X3.2	3,912	**5,351**	2,803	0,027	0,089	0,130
S1073	0,062	NC UGT H1 BGE -Y	truss chord - RO48.3X3.2	-3,662	-0,170	**-5,094**	0,006	-0,132	-0,056
S1073	0,000	NC UGT A O Y	truss chord - RO48.3X3.2	1,883	1,098	**3,816**	0,004	-0,144	-0,090
S959	0,060-	NC UGT A O Y	truss chord - RO48.3X3.2	40,602	0,258	1,230	**-0,246**	-0,074	-0,020
S959	0,000	NC UGT H2 BGE -Y	truss chord - RO48.3X3.2	-53,890	-0,194	-1,949	**0,236**	0,221	0,037
S1060	0,000	NC UGT H1 BGE -Y	truss chord - RO48.3X3.2	-1,206	0,555	2,844	-0,041	**-0,412**	-0,091
S1045	0,000	NC UGT A O Y	truss chord - RO48.3X3.2	-2,086	1,376	-2,314	-0,050	**0,337**	-0,225
S1068	0,000	NC UGT A O Y	truss chord - RO48.3X3.2	-5,134	3,894	2,283	-0,028	-0,107	**-0,371**
S1074	0,000	NC UGT H1 BGE Y	truss chord - RO48.3X3.2	-3,018	-3,532	0,318	0,018	-0,002	**0,349**
S993	1,935+	NC UGT H2 IG -Y	Keder rail 3000 ALU - Grafische doorsnede	**-1,525**	-0,006	0,817	0,019	-0,108	-0,049
S988	4,199+	NC UGT H2 BGE -X	Keder rail 3000 ALU - Grafische doorsnede	**1,529**	-0,071	-0,699	0,119	0,551	0,597

Name	dx [m]	Case	Cross-section	N [kN]	V_y [kN]	V_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
S994	0,025+	NC UGT A O Y	Keder rail 3000 ALU - Grafische doorsnede	-0,060	**-1,701**	-0,758	0,041	0,005	1,043
S988	0,025+	NC UGT A O Y	Keder rail 3000 ALU - Grafische doorsnede	0,181	**1,652**	-0,781	-0,044	0,007	-0,956
S989	1,935+	NC UGT H2 BGE Y	Keder rail 3000 ALU - Grafische doorsnede	0,970	0,019	**-2,089**	-0,004	1,031	-0,031
S991	6,109-	NC UGT A O Y	Keder rail 3000 ALU - Grafische doorsnede	-0,223	-0,012	**2,026**	-0,001	0,386	-0,019
S994	4,199+	NC UGT A O Y	Keder rail 3000 ALU - Grafische doorsnede	1,148	0,250	-1,089	**-0,245**	0,895	-1,129
S988	4,199+	NC UGT A O Y	Keder rail 3000 ALU - Grafische doorsnede	1,100	-0,218	-0,982	**0,256**	0,778	1,066
S991	4,022	NC UGT A O Y	Keder rail 3000 ALU - Grafische doorsnede	-0,104	-0,010	0,038	-0,001	**-1,772**	0,004
S991	3,790-	NC UGT H2 BGE -Y	Keder rail 3000 ALU - Grafische doorsnede	-0,069	-0,006	-0,005	0,000	**1,469**	0,014
S994	2,808-	NC UGT A O Y	Keder rail 3000 ALU - Grafische doorsnede	-0,293	-0,018	0,542	0,043	-0,320	**-1,345**
S988	2,808-	NC UGT A O Y	Keder rail 3000 ALU - Grafische doorsnede	-0,052	-0,024	0,512	-0,047	-0,389	**1,294**
S1022	0,254-	NC UGT A O Y	truss koppelstuk QRO 50x4 - QRO50X4	**3,491**	3,882	-2,343	-0,034	-0,026	-0,021
S1022	0,339	NC UGT H2 BGE -Y	truss koppelstuk QRO 50x4 - QRO50X4	-3,018	**-4,314**	2,920	0,062	0,227	-0,272
S1034	0,000	NC UGT H2 BGE -Y	truss koppelstuk QRO 50x4 - QRO50X4	-3,094	**4,288**	-2,938	-0,062	0,229	-0,278
S1034	0,170-	NC UGT H1 BGE -Y	truss koppelstuk QRO 50x4 - QRO50X4	**-3,151**	4,141	**-3,182**	-0,081	-0,296	0,433
S1022	0,170+	NC UGT H1 BGE -Y	truss koppelstuk QRO 50x4 - QRO50X4	-3,071	-4,166	**3,161**	0,081	-0,295	0,443
S1021	0,339	NC UGT H1 BGE -Y	truss koppelstuk QRO 50x4 - QRO50X4	-0,063	-1,253	1,277	**-0,117**	0,030	-0,053
S1032	0,000	NC UGT H1 BGE -Y	truss koppelstuk QRO 50x4 - QRO50X4	-0,135	1,229	-1,259	**0,117**	0,029	-0,050
S1033	0,000	NC UGT H1 BGE -Y	truss koppelstuk QRO 50x4 - QRO50X4	-0,567	-1,441	2,792	-0,017	**-0,495**	0,234
S1033	0,339	NC UGT H1 BGE -Y	truss koppelstuk QRO 50x4 - QRO50X4	-0,574	-1,453	2,792	-0,004	**0,453**	-0,256
S1021	0,170-	NC UGT A O Y	truss koppelstuk QRO 50x4 - QRO50X4	-2,907	-4,186	2,030	-0,034	0,139	**-0,484**
S1022	0,170+	NC UGT H2 BGE -Y	truss koppelstuk QRO 50x4 - QRO50X4	-3,023	-4,309	2,928	0,067	-0,269	**0,459**
S1081	2,930	NC UGT A BG Y	Horizontal Diagonal - RO48.3X3.2	**-3,010**	0,000	-0,060	0,000	-0,010	-0,001

Name	dx [m]	Case	Cross-section	N [kN]	V_y [kN]	V_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
S1086	1,628-	NC UGT A O Y	Horizontal Diagonal - RO48.3X3.2	**3,891**	0,000	-0,048	0,000	0,000	-0,001
S1081	2,930	NC UGT H2 IG -Y	Horizontal Diagonal - RO48.3X3.2	0,192	**-0,001**	-0,064	0,000	-0,027	-0,001
S1081	0,000	NC UGT A BG -Y	Horizontal Diagonal - RO48.3X3.2	1,493	0,000	**0,087**	0,000	-0,061	0,001
S1086	1,954-	NC UGT H2 BGE -Y	Horizontal Diagonal - RO48.3X3.2	-1,463	0,000	-0,003	**0,000**	0,026	0,001
S1086	0,000	NC UGT A O Y	Horizontal Diagonal - RO48.3X3.2	3,891	0,000	-0,003	**0,000**	0,040	0,000
S1086	2,930	NC UGT A IG Y	Horizontal Diagonal - RO48.3X3.2	0,419	-0,001	**-0,119**	0,000	**-0,112**	-0,001
S1081	0,326-	NC UGT A IG Y	Horizontal Diagonal - RO48.3X3.2	-1,980	0,000	-0,005	0,000	**0,059**	0,000
S1082	0,000	NC UGT H2 BGE -Y	Horizontal Diagonal - RO48.3X3.2	0,178	**0,001**	0,070	0,000	-0,036	**-0,002**
S1082	0,000	NC UGT A O Y	Horizontal Diagonal - RO48.3X3.2	0,443	-0,001	0,039	0,000	0,007	**0,002**

5.5.2. 1D internal forces

Nonlinear calculation
Class: Alle NC BGT
Coordinate system: Principal
Extreme 1D: Cross-section
Selection: All

Name	dx [m]	Case	Cross-section	N [kN]	V_y [kN]	V_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
S36	0,000	NC BGT H1 IG -Y	Collar - RO48.3X3.2	**-22,405**	1,025	1,035	-0,017	0,062	0,076
S60	0,165	NC BGT A BG X	Collar - RO48.3X3.2	**2,536**	0,001	-0,123	0,008	0,120	0,001
S64	0,000	NC BGT A BG Y	Collar - RO48.3X3.2	-5,056	**-1,345**	-0,813	0,016	-0,096	-0,074
S36	0,000	NC BGT A IG -Y	Collar - RO48.3X3.2	-22,390	**1,027**	1,078	-0,016	0,067	0,077
S64	0,000	NC BGT A BGE Y	Collar - RO48.3X3.2	-9,939	-1,327	**-0,815**	0,014	-0,095	-0,089
S68	0,000	NC BGT A IG -X	Collar - RO48.3X3.2	-22,302	-0,227	**1,685**	0,004	0,120	-0,022
S132	0,060-	NC BGT H2 IG Y	Collar - RO48.3X3.2	-0,374	-0,197	0,072	**-0,052**	-0,003	-0,030
S96	0,030-	NC BGT A BGE Y	Collar - RO48.3X3.2	0,013	0,001	0,000	**0,044**	-0,004	0,022
S64	0,060-	NC BGT A BG Y	Collar - RO48.3X3.2	-5,054	-1,342	-0,812	0,016	**-0,145**	-0,155
S64	0,060+	NC BGT A BG X	Collar - RO48.3X3.2	-5,563	-0,017	-0,428	0,001	**0,230**	0,001
S64	0,060-	NC BGT A BGE Y	Collar - RO48.3X3.2	-9,937	-1,322	-0,812	0,014	-0,144	**-0,169**
S32	0,060+	NC BGT A BG Y	Collar - RO48.3X3.2	-0,894	-0,428	-0,338	-0,003	0,066	**0,188**
S34	0,000	NC BGT H1 IG -Y	Spindle - RO38X4.5	**-22,408**	1,028	1,036	-0,017	-0,042	-0,026
S94	0,100	NC BGT A BG Y	Spindle - RO38X4.5	**0,012**	0,000	0,000	0,044	-0,010	0,042

Name	dx [m]	Case	Cross-section	N [kN]	V_y [kN]	V_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
S62	0,050-	NC BGT A BG Y	Spindle - RO38X4.5	-5,057	**-1,346**	-0,814	0,016	-0,056	-0,007
S34	0,050-	NC BGT A IG -Y	Spindle - RO38X4.5	-22,391	**1,031**	1,081	-0,016	0,013	0,025
S62	0,000	NC BGT A BGE Y	Spindle - RO38X4.5	-9,942	-1,328	**-0,819**	0,015	-0,013	0,044
S66	0,050-	NC BGT A IG -X	Spindle - RO38X4.5	-22,303	-0,229	**1,692**	0,004	0,036	-0,011
S129	0,200	NC BGT H2 IG Y	Spindle - RO38X4.5	-0,376	-0,197	0,072	**-0,052**	-0,007	-0,018
S94	0,000	NC BGT A BGE Y	Spindle - RO38X4.5	0,009	0,000	0,000	**0,044**	-0,004	0,022
S58	0,100	NC BGT A IG -X	Spindle - RO38X4.5	0,012	0,000	0,000	0,014	**-0,130**	0,004
S66	0,100	NC BGT A IG -X	Spindle - RO38X4.5	-22,302	-0,227	1,685	0,004	**0,120**	-0,022
S86	0,100	NC BGT A BGE Y	Spindle - RO38X4.5	-7,256	-1,252	0,672	-0,002	0,076	**-0,093**
S18	0,100	NC BGT A IG -Y	Spindle - RO38X4.5	-7,638	0,967	1,087	-0,010	0,074	**0,078**
S33	0,000	NC BGT H1 IG -Y	Base plate - Rechthoek (150,000; 150,000)	**-22,417**	1,028	1,036	-0,017	-0,047	-0,032
S93	0,005	NC BGT A BG Y	Base plate - Rechthoek (150,000; 150,000)	**0,009**	0,000	0,000	0,044	-0,010	0,042
S61	0,000	NC BGT A BG Y	Base plate - Rechthoek (150,000; 150,000)	-5,068	**-1,345**	-0,815	0,017	-0,011	0,067
S33	0,000	NC BGT A IG -Y	Base plate - Rechthoek (150,000; 150,000)	-22,402	**1,031**	1,080	-0,016	-0,046	-0,031
S61	0,005	NC BGT A BGE Y	Base plate - Rechthoek (150,000; 150,000)	-9,942	-1,328	**-0,819**	0,015	-0,013	0,044
S65	0,000	NC BGT A IG -X	Base plate - Rechthoek (150,000; 150,000)	-22,314	-0,229	**1,691**	0,004	-0,057	0,002
S130	0,005	NC BGT H2 IG Y	Base plate - Rechthoek (150,000; 150,000)	-0,384	-0,197	0,072	**-0,051**	-0,022	0,021
S93	0,000	NC BGT A BGE Y	Base plate - Rechthoek (150,000; 150,000)	0,000	0,000	0,000	**0,044**	-0,004	0,022
S57	0,005	NC BGT A IG -X	Base plate - Rechthoek (150,000; 150,000)	0,009	0,000	0,000	0,014	**-0,130**	0,004
S89	0,005	NC BGT A BG Y	Base plate - Rechthoek (150,000; 150,000)	0,009	0,000	0,000	-0,016	**0,058**	0,018
S4	0,000	NC BGT H1 IG -Y	Base plate - Rechthoek (150,000; 150,000)	-4,396	0,732	0,722	0,012	-0,034	**-0,043**
S4	0,000	NC BGT A BG Y	Base plate - Rechthoek	-7,054	-0,820	0,323	-0,003	0,001	**0,067**

Name	dx [m]	Case	Cross-section	N [kN]	V_y [kN]	V_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
			(150,000; 150,000)						
S166	0,000	NC BGT A IG -Y	Standard - RO48.3X3.2	**-19,808**	-0,029	0,379	-0,012	0,011	0,046
S142	1,895-	NC BGT A IG -X	Standard - RO48.3X3.2	**7,973**	0,182	0,416	-0,004	-0,058	0,009
S150	2,586-	NC BGT A BGE Y	Standard - RO48.3X3.2	3,534	**-2,226**	-0,207	-0,269	-0,708	-0,402
S151	2,925-	NC BGT A BG Y	Standard - RO48.3X3.2	1,464	**1,975**	-2,465	0,393	-0,192	0,269
S150	2,792-	NC BGT H2 IG -X	Standard - RO48.3X3.2	-1,050	-0,045	**-2,848**	-0,008	0,328	0,000
S164	2,086+	NC BGT A IG Y	Standard - RO48.3X3.2	1,648	0,120	**2,625**	0,031	-0,867	-0,041
S1003	0,000	NC BGT A BG Y	Standard - RO48.3X3.2	0,560	-0,177	-1,263	**-0,756**	0,082	0,000
S1005	0,000	NC BGT A BGE Y	Standard - RO48.3X3.2	0,564	-0,269	1,240	**0,702**	-0,065	0,000
S164	2,086-	NC BGT A IG Y	Standard - RO48.3X3.2	4,085	-0,607	-1,160	0,068	**-0,954**	-0,044
S150	2,586-	NC BGT H2 IG -X	Standard - RO48.3X3.2	-2,900	0,077	1,071	0,039	**0,996**	0,011
S149	1,395+	NC BGT A IG -Y	Standard - RO48.3X3.2	-1,057	1,326	-0,502	0,004	0,144	**-0,811**
S149	1,395+	NC BGT H2 IG Y	Standard - RO48.3X3.2	-0,149	-1,324	-0,510	0,005	0,146	**0,897**
S1106	0,518-	NC BGT A IG -X	Rail RL - RO33.7X3.2	**2,719**	-0,001	0,036	0,000	0,014	0,001
S1097	0,494	NC BGT H2 IG Y	Rail RL - RO33.7X3.2	**6,479**	0,000	0,228	0,000	0,088	0,000
S1101	0,000	NC BGT A BGE -Y	Rail RL - RO33.7X3.2	5,628	**-0,064**	0,137	-0,005	-0,008	0,035
S1097	0,000	NC BGT A BG -Y	Rail RL - RO33.7X3.2	5,699	**0,065**	0,145	0,005	-0,010	-0,035
S1092	0,518-	NC BGT H2 IG -Y	Rail RL - RO33.7X3.2	4,064	0,001	**-0,086**	0,000	-0,015	0,002
S1109	0,000	NC BGT H1 IG X	Rail RL - RO33.7X3.2	3,462	0,002	**0,239**	0,000	-0,031	-0,002
S196	0,494	NC BGT A BGE Y	Rail RL - RO33.7X3.2	5,732	-0,043	0,147	**-0,006**	0,065	0,006
S1097	0,494	NC BGT H1 IG -Y	Rail RL - RO33.7X3.2	6,107	0,049	0,199	**0,007**	0,082	-0,008
S1109	0,000	NC BGT A IG -X	Rail RL - RO33.7X3.2	3,458	0,002	0,239	0,000	**-0,031**	-0,002
S1090	0,494	NC BGT A IG -X	Rail RL - RO33.7X3.2	6,288	0,000	0,231	0,000	**0,089**	0,000
S1097	0,000	NC BGT A BGE -Y	Rail RL - RO33.7X3.2	5,697	0,064	0,145	0,005	-0,010	**-0,035**
S1099	0,518-	NC BGT A BGE -Y	Rail RL - RO33.7X3.2	4,339	0,025	-0,025	-0,002	0,003	**0,040**
S1098	0,000	NC BGT H2 IG Y	Intermediate plate RL - FL80X6	**-1,920**	1,418	0,000	0,000	0,000	-0,038
S1093	0,160	NC BGT H1 IG -X	Intermediate plate RL - FL80X6	**0,062**	0,416	0,001	0,000	0,000	0,047
S1102	0,000	NC BGT A BG Y	Intermediate plate RL - FL80X6	-1,885	**-1,389**	0,004	0,000	0,000	0,037
S1091	0,000	NC BGT H2 IG -Y	Intermediate plate RL - FL80X6	-1,781	**1,582**	0,000	0,000	0,000	-0,046
S1098	0,080-	NC BGT A BG -Y	Intermediate plate RL - FL80X6	-1,725	1,099	**-0,055**	-0,004	0,000	0,065
S202	0,080-	NC BGT A BG	Intermediate	-1,741	-1,056	**0,015**	-0,002	0,000	-0,064

Name	dx [m]	Case	Cross-section	N [kN]	V_y [kN]	V_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
		Y	plate RL - FL80X6						
S1098	0,160	NC BGT H1 IG -Y	Intermediate plate RL - FL80X6	-1,831	1,340	-0,051	**-0,011**	-0,004	0,181
S195	0,160	NC BGT A BGE Y	Intermediate plate RL - FL80X6	-1,732	-1,114	-0,046	**0,010**	-0,004	-0,156
S1098	0,160	NC BGT A BGE -Y	Intermediate plate RL - FL80X6	-1,722	1,097	-0,051	-0,010	**-0,004**	0,154
S1098	0,000	NC BGT A BG -Y	Intermediate plate RL - FL80X6	-1,728	1,099	-0,053	0,002	**0,005**	-0,023
S1102	0,160	NC BGT A BG Y	Intermediate plate RL - FL80X6	-1,879	-1,388	0,004	-0,002	0,000	**-0,186**
S1091	0,160	NC BGT H2 IG -Y	Intermediate plate RL - FL80X6	-1,776	1,581	0,000	0,000	0,000	**0,207**
S197	0,250+	NC BGT H2 IG X	Ledger - RO48.3X3.2	**-6,514**	-0,012	-1,890	0,001	0,334	-0,008
S347	1,842-	NC BGT A BG Y	Ledger - RO48.3X3.2	**3,339**	0,021	-0,031	0,000	-0,007	-0,004
S1096	2,021-	NC BGT A BGE -Y	Ledger - RO48.3X3.2	-5,615	**-0,464**	-1,752	0,007	-0,048	-0,024
S1096	0,051+	NC BGT A BGE -Y	Ledger - RO48.3X3.2	-5,684	**0,464**	1,724	-0,005	-0,038	-0,021
S197	2,072	NC BGT A IG -X	Ledger - RO48.3X3.2	-0,302	0,025	**-3,518**	0,000	-0,198	0,002
S1096	0,000	NC BGT A BG Y	Ledger - RO48.3X3.2	-0,053	-0,067	**3,512**	0,000	-0,202	0,001
S189	0,250-	NC BGT H2 IG Y	Ledger - RO48.3X3.2	-6,149	0,451	1,543	**-0,008**	0,332	0,069
S1096	1,822+	NC BGT A BG -Y	Ledger - RO48.3X3.2	-5,609	-0,457	-1,741	**0,009**	0,299	0,068
S321	0,250	NC BGT A IG -X	Ledger - RO48.3X3.2	-0,430	0,000	-1,899	0,001	**-0,378**	-0,004
S338	0,250	NC BGT A BG X	Ledger - RO48.3X3.2	0,126	-0,001	2,509	0,000	**0,394**	0,000
S443	1,381+	NC BGT A IG Y	Ledger - RO48.3X3.2	-0,466	0,172	-0,266	0,000	0,104	**-0,136**
S448	1,381+	NC BGT A IG Y	Ledger - RO48.3X3.2	-0,498	-0,196	-0,225	0,000	0,092	**0,152**
S301	1,151-	NC BGT A IG -Y	Event transom - Grafische doorsnede	**-1,292**	-0,087	-0,644	0,004	**3,952**	0,363
S301	0,000	NC BGT H2 IG Y	Event transom - Grafische doorsnede	**0,883**	0,745	7,772	0,001	-0,332	-0,022
S294	2,072	NC BGT H2 IG -Y	Event transom - Grafische doorsnede	-0,977	**-0,780**	-7,911	-0,001	-0,342	-0,023
S294	0,000	NC BGT H2 IG -Y	Event transom - Grafische doorsnede	-0,977	**0,782**	7,916	0,001	-0,347	-0,024
S299	2,072	NC BGT A IG Y	Event transom - Grafische doorsnede	0,847	-0,750	**-7,996**	-0,001	-0,367	-0,021
S301	0,000	NC BGT A IG -Y	Event transom - Grafische doorsnede	-1,242	0,755	**8,154**	0,001	-0,373	-0,022
S299	0,460-	NC BGT H2 IG -Y	Event transom - Grafische doorsnede	-1,260	0,424	4,337	**-0,010**	2,594	0,250
S301	1,612-	NC BGT A IG	Event transom -	-1,272	-0,424	-4,164	**0,010**	2,845	0,246

Name	dx [m]	Case	Cross-section	N [kN]	V_y [kN]	V_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
		-Y	Grafische doorsnede						
S301	2,072	NC BGT H2 IG Y	Event transom - Grafische doorsnede	0,878	-0,677	-6,952	-0,002	**-0,528**	-0,023
S293	2,072	NC BGT A IG -Y	Event transom - Grafische doorsnede	-1,022	-0,676	-6,678	0,000	0,025	**-0,032**
S294	1,151-	NC BGT H2 IG -Y	Event transom - Grafische doorsnede	-1,024	-0,086	-0,877	0,003	3,706	**0,377**
S505	2,558	NC BGT H1 IG X	Vertical Diagonal - RO48.3X2.3	**-3,710**	0,000	-0,030	0,000	0,000	0,000
S513	0,000	NC BGT H2 IG X	Vertical Diagonal - RO48.3X2.3	**3,409**	0,002	0,024	0,001	0,000	-0,004
S517	1,990-	NC BGT A IG Y	Vertical Diagonal - RO48.3X2.3	-1,377	**-0,343**	0,014	0,024	-0,004	-0,016
S516	1,990-	NC BGT A IG Y	Vertical Diagonal - RO48.3X2.3	-1,124	**0,377**	0,008	-0,012	0,000	0,030
S477	2,880	NC BGT H1 IG -X	Vertical Diagonal - RO48.3X2.3	1,303	-0,024	**-0,181**	0,002	0,000	-0,009
S523	2,301	NC BGT A BGE Y	Vertical Diagonal - RO48.3X2.3	0,801	0,152	-0,041	**-0,106**	-0,002	0,311
S474	2,880	NC BGT H2 IG -Y	Vertical Diagonal - RO48.3X2.3	-0,078	0,052	-0,026	**0,080**	0,001	-0,019
S479	2,160+	NC BGT A IG -X	Vertical Diagonal - RO48.3X2.3	-1,755	0,007	**0,069**	-0,005	**-0,045**	0,005
S477	2,160+	NC BGT H1 IG -X	Vertical Diagonal - RO48.3X2.3	1,315	-0,024	-0,171	0,002	**0,126**	0,009
S519	0,000	NC BGT A BGE X	Vertical Diagonal - RO48.3X2.3	-0,338	0,185	0,014	-0,047	-0,001	**-0,326**
S523	2,301	NC BGT A BG Y	Vertical Diagonal - RO48.3X2.3	0,961	0,152	-0,040	-0,105	-0,002	**0,311**
S556	0,447	NC BGT A BG Y	truss diagonal - RO20X2	**-5,085**	-0,010	0,021	0,001	0,005	-0,001
S551	0,335-	NC BGT A BG Y	truss diagonal - RO20X2	**5,023**	-0,058	0,029	-0,002	0,004	-0,010
S933	0,339	NC BGT A BGE Y	truss diagonal - RO20X2	0,664	**0,167**	-0,007	0,000	-0,001	0,040
S709	0,000	NC BGT A BG -Y	truss diagonal - RO20X2	-0,161	0,013	**0,129**	0,000	-0,012	-0,002
S599	0,470	NC BGT A BGE Y	truss diagonal - RO20X2	-0,609	-0,051	-0,001	**-0,004**	-0,001	-0,019
S604	0,470	NC BGT A BGE Y	truss diagonal - RO20X2	0,671	0,065	-0,005	**0,005**	-0,002	0,008
S709	0,339	NC BGT A BGE Y	truss diagonal - RO20X2	0,166	-0,016	**-0,176**	0,000	**-0,042**	-0,003
S764	0,339	NC BGT A BG -Y	truss diagonal - RO20X2	-0,150	0,015	0,126	0,000	**0,031**	0,002
S916	0,339	NC BGT A BG Y	truss diagonal - RO20X2	0,774	**-0,129**	-0,011	0,000	-0,002	**-0,030**
S943	0,339	NC BGT A BGE Y	truss diagonal - RO20X2	0,231	0,164	0,004	0,000	0,001	**0,040**
S975	2,072	NC BGT H2 IG -Y	truss chord - RO48.3X3.2	**-36,926**	0,053	1,745	0,065	0,149	0,026

Name	dx [m]	Case	Cross-section	N [kN]	V_y [kN]	V_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
S976	2,012+	NC BGT H2 IG -Y	truss chord - RO48.3X3.2	**37,042**	0,010	0,130	0,000	0,063	0,027
S1069	0,062	NC BGT A BG Y	truss chord - RO48.3X3.2	2,806	**-4,015**	2,057	-0,020	0,066	-0,130
S1075	0,062	NC BGT A BGE Y	truss chord - RO48.3X3.2	2,806	**3,965**	2,043	0,020	0,065	0,130
S1075	0,062	NC BGT H1 IG -Y	truss chord - RO48.3X3.2	-2,722	-1,766	**-3,082**	-0,008	-0,092	0,021
S1073	0,000	NC BGT A BGE Y	truss chord - RO48.3X3.2	1,171	0,942	**2,722**	0,005	-0,105	-0,079
S959	0,060-	NC BGT A BGE Y	truss chord - RO48.3X3.2	29,477	0,133	0,945	**-0,180**	-0,050	-0,013
S953	2,072	NC BGT A BGE Y	truss chord - RO48.3X3.2	29,485	-0,080	-1,006	**0,170**	-0,108	-0,018
S1060	0,000	NC BGT H1 IG -Y	truss chord - RO48.3X3.2	-0,733	0,074	1,564	-0,014	**-0,226**	-0,019
S1060	0,000	NC BGT A BGE Y	truss chord - RO48.3X3.2	-1,545	-0,866	-1,607	0,033	**0,235**	0,143
S1068	0,000	NC BGT A BG Y	truss chord - RO48.3X3.2	-3,730	2,631	1,573	-0,017	-0,073	**-0,293**
S1074	0,000	NC BGT A BGE Y	truss chord - RO48.3X3.2	-3,700	-2,530	1,561	0,016	-0,072	**0,287**
S993	1,935+	NC BGT H2 IG -Y	Keder rail 3000 ALU - Grafische doorsnede	**-1,134**	-0,001	0,605	0,014	-0,077	-0,037
S993	1,935+	NC BGT A IG Y	Keder rail 3000 ALU - Grafische doorsnede	**1,107**	-0,019	-1,248	-0,006	0,521	0,040
S994	0,025+	NC BGT A BG Y	Keder rail 3000 ALU - Grafische doorsnede	0,181	**-1,251**	-0,552	0,035	0,006	0,756
S988	0,025+	NC BGT A BG Y	Keder rail 3000 ALU - Grafische doorsnede	0,188	**1,218**	-0,560	-0,038	0,006	-0,700
S989	1,935+	NC BGT A BGE Y	Keder rail 3000 ALU - Grafische doorsnede	0,939	0,027	**-1,492**	0,007	0,604	-0,048
S991	6,109-	NC BGT A BG Y	Keder rail 3000 ALU - Grafische doorsnede	-0,186	-0,007	**1,472**	0,000	0,276	-0,009
S994	4,199+	NC BGT A BG Y	Keder rail 3000 ALU - Grafische doorsnede	0,838	0,183	-0,732	**-0,174**	0,596	-0,815
S988	4,199+	NC BGT A BG Y	Keder rail 3000 ALU - Grafische doorsnede	0,824	-0,159	-0,701	**0,181**	0,561	0,763
S991	4,022	NC BGT A BG Y	Keder rail 3000 ALU - Grafische doorsnede	-0,074	-0,006	0,022	0,000	**-1,284**	0,004
S991	4,022	NC BGT A BGE -Y	Keder rail 3000 ALU - Grafische doorsnede	0,052	-0,004	-0,027	0,000	**0,916**	0,008
S994	2,808-	NC BGT A BGE Y	Keder rail 3000 ALU - Grafische doorsnede	0,175	-0,007	0,363	0,035	-0,278	**-0,987**
S988	2,808-	NC BGT A BG Y	Keder rail 3000 ALU - Grafische doorsnede	0,035	-0,027	0,366	-0,039	-0,277	**0,948**
S1034	0,085-	NC BGT A BGE Y	truss koppelstuk QRO 50x4 - QRO50X4	**2,484**	-2,649	1,626	0,024	-0,017	-0,001
S1021	0,085-	NC BGT A BG Y	truss koppelstuk QRO 50x4 - QRO50X4	-1,991	**-3,069**	1,397	-0,023	-0,023	-0,103
S1032	0,339	NC BGT A BG Y	truss koppelstuk QRO 50x4 -	-1,894	**3,001**	-1,373	0,024	-0,139	0,147

Name	dx [m]	Case	Cross-section	N [kN]	V_y [kN]	V_z [kN]	M_x [kNm]	M_y [kNm]	M_z [kNm]
			QRO50X4						
S1034	0,170-	NC BGT H1 IG -Y	truss koppelstuk QRO 50x4 - QRO50X4	-1,551	2,246	**-1,757**	-0,051	-0,175	0,231
S1022	0,170+	NC BGT H1 IG -Y	truss koppelstuk QRO 50x4 - QRO50X4	-1,522	-2,260	**1,747**	0,051	-0,175	0,236
S1021	0,339	NC BGT H1 IG -Y	truss koppelstuk QRO 50x4 - QRO50X4	0,428	-1,172	0,939	**-0,069**	0,042	-0,070
S1032	0,000	NC BGT H1 IG -Y	truss koppelstuk QRO 50x4 - QRO50X4	0,411	1,149	-0,932	**0,069**	0,042	-0,071
S1033	0,000	NC BGT H1 IG -Y	truss koppelstuk QRO 50x4 - QRO50X4	-0,295	-0,695	1,583	-0,017	**-0,280**	0,111
S1028	0,000	NC BGT A BGE Y	truss koppelstuk QRO 50x4 - QRO50X4	0,184	0,569	-1,481	0,005	**0,260**	-0,090
S1021	0,170-	NC BGT A BG Y	truss koppelstuk QRO 50x4 - QRO50X4	**-1,995**	-3,067	1,396	-0,023	0,095	**-0,364**
S1034	0,170-	NC BGT H2 IG -X	truss koppelstuk QRO 50x4 - QRO50X4	-0,652	2,132	-0,944	-0,018	-0,104	**0,259**
S1081	2,930	NC BGT A BG Y	Horizontal Diagonal - RO48.3X3.2	**-2,314**	0,000	-0,051	0,000	-0,013	0,000
S1086	0,000	NC BGT A BG Y	Horizontal Diagonal - RO48.3X3.2	**1,616**	0,000	0,027	0,000	0,011	0,000
S1081	2,930	NC BGT H2 IG -Y	Horizontal Diagonal - RO48.3X3.2	0,131	**-0,001**	-0,053	0,000	-0,022	-0,001
S1082	0,000	NC BGT A BG -Y	Horizontal Diagonal - RO48.3X3.2	0,138	**0,000**	0,058	0,000	-0,030	-0,001
S1081	0,000	NC BGT A BG -Y	Horizontal Diagonal - RO48.3X3.2	1,083	0,000	**0,070**	0,000	-0,048	0,001
S1086	1,954-	NC BGT A BGE -Y	Horizontal Diagonal - RO48.3X3.2	-1,092	0,000	-0,005	**0,000**	0,020	0,000
S1081	1,954+	NC BGT A BGE -Y	Horizontal Diagonal - RO48.3X3.2	1,090	0,000	0,002	**0,000**	0,022	0,000
S1086	2,930	NC BGT A IG Y	Horizontal Diagonal - RO48.3X3.2	0,302	0,000	**-0,094**	0,000	**-0,086**	-0,001
S1081	0,326-	NC BGT A IG Y	Horizontal Diagonal - RO48.3X3.2	-1,398	0,000	0,001	0,000	**0,042**	0,000
S1082	0,000	NC BGT A BGE -Y	Horizontal Diagonal - RO48.3X3.2	0,160	0,000	0,056	0,000	-0,028	**-0,001**
S1082	0,000	NC BGT A BG Y	Horizontal Diagonal - RO48.3X3.2	0,015	0,000	0,040	0,000	0,000	**0,001**

5.6. Staalcontrole

5.6.1. EC-EN 1993 ULS: steelcheck

Nonlinear calculation
Class: Alle NC UGT
Coordinate system: Principal
Extreme 1D: Cross-section
Selection: All
Overall Unity Check

Name	dx [m]	Case	Cross-section	Material	$UC_{Overall}$ [-]	UC_{Sec} [-]	UC_{Stab} [-]
S32	0,060+	NC UGT A O Y	Collar - RO48.3X3.2	S 235 (Reh >320) Standard	**0,21**	0,21	0,00
S34	0,000	NC UGT H1 IG -Y	Spindle - RO38X4.5	S 235 (Reh >280) spindle	**0,22**	0,22	0,00
S33	0,000	NC UGT H1 IG -Y	Base plate - Rechthoek (150,000; 150,000)	S 235	**0,01**	0,01	0,00
S150	2,586-	NC UGT H2 BGE -Y	Standard - RO48.3X3.2	S 235 (Reh >320) Standard	**0,83**	0,83	0,00
S1090	0,494	NC UGT A IG X	Rail RL - RO33.7X3.2	S 235	**0,18**	0,18	0,00
S1098	0,160	NC UGT H2 IG -Y	Intermediate plate RL - FL80X6	S 235	**0,24**	0,24	0,00
S328	0,000	NC UGT H2 BGE -Y	Ledger - RO48.3X3.2	S 235 (Reh >320) Ledger	**0,26**	0,26	0,00
S523	2,301	NC UGT H2 BGE Y	Vertical Diagonal - RO48.3X2.3	S 235	**0,43**	0,43	0,00
S1086	2,930	NC UGT A IG Y	Horizontal Diagonal - RO48.3X3.2	S 235 (Reh >320) Ledger	**0,06**	0,06	0,00

5.6.2. EC-EN 1993 ULS: steelcheck

Nonlinear calculation
Class: Alle NC UGT
Coordinate system: Principal
Extreme 1D: Cross-section
Selection: All

EN 1993-1-1 Code Check
EN 12811-1 Scaffolding Check
National annex: Standard EN

Member S32	**0,060 / 0,165 m**	**RO48.3X3.2**	**S 235 (Reh >320) Standard**	**Alle NC UGT**	**0,21 -**

Combination key
Alle NC UGT / NC UGT A O Y

Partial safety factors	
γ_{M0} for resistance of cross-sections	1,000
γ_{M1} for resistance to instability	1,000
γ_{M2} for resistance of net sections	1,250

Material			
Yield strength	f_y	320,000	N/mm^2
Ultimate strength	f_u	360,000	N/mm^2
Fabrication		Rolled	

...::SECTION CHECK::...

The critical check is on position 0,060 m

Internal forces		Calculated	Unit
Normal force	N_{Ed}	-1,048	kN
Shear force	$V_{y,Ed}$	-0,908	kN
Shear force	$V_{z,Ed}$	-0,323	kN
Torsion	T_{Ed}	0,003	kNm
Bending moment	$M_{y,Ed}$	0,069	kNm
Bending moment	$M_{z,Ed}$	0,403	kNm

Scaffolding check for tubular members
According to EN 12811-1 & DIN 4420 Teil 1 article 5.4.7.4 and table 7

Normal force resistance	$N_{pl,d}$	144,960	kN
Shear resistance	$V_{pl,d}$	53,280	kN
Bending resistance	$M_{pl,d}$	1,920	kNm
Unity check N		0,01	-
Unity check V		0,02	-
Unity check M		0,21	-
Unity check Interaction		0,21	-
Unity check Max		0,21	-

The member satisfies the section check.

EN 1993-1-1 Code Check
National annex: Standard EN

Member S33	**0,000 / 0,005 m**	**Rechthoek (150,000; 150,000)**	**S 235**	**Alle NC UGT**	**0,01 -**

Combination key
Alle NC UGT / NC UGT H1 IG -Y

Partial safety factors	
γ_{M0} for resistance of cross-sections	1,000
γ_{M1} for resistance to instability	1,000
γ_{M2} for resistance of net sections	1,250

Material			
Yield strength	f_y	215,000	N/mm^2
Ultimate strength	f_u	360,000	N/mm^2
Fabrication		General	

Warning: The thickness is not defined within the specified thickness range for strength reduction. The reduced strengths of the largest defined thickness range are used.

...::SECTION CHECK::...

The critical check is on position 0,000 m

Internal forces		Calculated	Unit
Normal force	N_{Ed}	-29,564	kN
Shear force	$V_{y,Ed}$	1,392	kN
Shear force	$V_{z,Ed}$	1,433	kN
Torsion	T_{Ed}	-0,022	kNm
Bending moment	$M_{y,Ed}$	-0,064	kNm
Bending moment	$M_{z,Ed}$	-0,043	kNm

Classification for cross-section design
Classification according to EN 1993-1-1 article 5.5.2
Classification of Internal and Outstand parts according to EN 1993-1-1 Table 5.2 Sheet 1 & 2

Id	Type	c [mm]	t [mm]	σ_1 [kN/m^2]	σ_2 [kN/m^2]	Ψ [-]	k_σ [-]	α [-]	c/t [-]	Class 1 Limit [-]	Class 2 Limit [-]	Class 3 Limit [-]	Class
1	UO	150,000	150,000	1,4279e+03	1,2000e+03	0,840	0,490	1,000	1,000	9,409	10,455	15,363	1

Note: The Classification limits have been set according to Semi-Comp+.
The cross-section is classified as Class 1

Compression check
According to EN 1993-1-1 article 6.2.4 and formula (6.9)

Cross-section area	A	2,250e-02	m^2
Compression resistance	$N_{c,Rd}$	4837,500	kN
Unity check		0,01	-

Bending moment check for M_y
According to EN 1993-1-1 article 6.2.5 and formula (6.12),(6.13)

Plastic section modulus	$W_{pl,y}$	8,437e-04	m^3
Plastic bending moment	$M_{pl,y,Rd}$	181,406	kNm
Unity check		0,00	-

Bending moment check for M_z
According to EN 1993-1-1 article 6.2.5 and formula (6.12),(6.13)

Plastic section modulus	$W_{pl,z}$	8,437e-04	m^3
Plastic bending moment	$M_{pl,z,Rd}$	181,406	kNm
Unity check		0,00	-

Shear check for V_y
According to EN 1993-1-1 article 6.2.6 and formula (6.17)

Shear correction factor	η	1,200	
Shear area	A_v	2,250e-02	m^2
Plastic shear resistance for V_y	$V_{pl,y,Rd}$	2792,932	kN
Unity check		0,00	-

Shear check for V_z
According to EN 1993-1-1 article 6.2.6 and formula (6.17)

Shear correction factor	η	1,200	
Shear area	A_v	2,250e-02	m^2
Plastic shear resistance for V_z	$V_{pl,z,Rd}$	2792,932	kN
Unity check		0,00	-

Combined bending, axial force and shear force check
According to EN 1993-1-1 article 6.2.1(5) and formula (6.1)

Elastic verification			
Fibre		7	
Normal stress due to the normal force N	$\sigma_{N,Ed}$	1,314	N/mm^2
Normal stress due to the bending moment M_y	$\sigma_{My,Ed}$	0,114	N/mm^2
Normal stress due to the bending moment M_z	$\sigma_{Mz,Ed}$	0,077	N/mm^2
Total longitudinal stress	$\sigma_{tot,Ed}$	1,504	N/mm^2
Shear stress due to the transverse shear force V_y	$\tau_{Vy,Ed}$	0,000	N/mm^2
Shear stress due to the transverse shear force V_z	$\tau_{Vz,Ed}$	0,000	N/mm^2
Shear stress due to uniform (St. Venant) torsion	$\tau_{t,Ed}$	0,000	N/mm^2
Total shear stress	$\tau_{tot,Ed}$	0,000	N/mm^2
Summation of von Mises stress	$\sigma_{von\ Mises,Ed}$	1,504	N/mm^2
Unity check		0,01	-

Note: For this section no formula is given in article 6.2.7(9) for the plastic shear resistance reduced by torsion. Therefore the elastic yield criterion according to EN 1993-1-1 article 6.2.1(5) is verified.

The member satisfies the section check.
Note: Only the section check is executed for this member.

EN 1993-1-1 Code Check
EN 12811-1 Scaffolding Check
National annex: Standard EN

Member S34	**0,000 / 0,100 m**	**RO38X4.5**	**S 235 (Reh >280) spindle**	**Alle NC UGT**	**0,22 -**

Combination key
Alle NC UGT / NC UGT H1 IG -Y

Partial safety factors	
γ_{M0} for resistance of cross-sections	1,000
γ_{M1} for resistance to instability	1,000
γ_{M2} for resistance of net sections	1,250

Material			
Yield strength	f_y	280,000	N/mm 2
Ultimate strength	f_u	360,000	N/mm 2
Fabrication		Rolled	

...::SECTION CHECK::...

The critical check is on position 0,000 m

Internal forces		Calculated	Unit
Normal force	N_{Ed}	-29,554	kN
Shear force	$V_{y,Ed}$	1,392	kN
Shear force	$V_{z,Ed}$	1,433	kN
Torsion	T_{Ed}	-0,022	kNm
Bending moment	$M_{y,Ed}$	-0,057	kNm
Bending moment	$M_{z,Ed}$	-0,036	kNm

Scaffolding check for tubular members
According to EN 12811-1:2003 article 10.3.3.2 and equation 9

Normal force resistance	$N_{pl,d}$	132,720	kN
Shear resistance	$V_{pl,d}$	48,782	kN
Bending resistance	$M_{pl,d}$	1,246	kNm
Unity check N		0,22	-
Unity check V		0,05	-
Unity check M		0,05	-
Unity check Interaction		0,06	-
Unity check Max		0,22	-

The member satisfies the section check.

EN 1993-1-1 Code Check
EN 12811-1 Scaffolding Check
National annex: Standard EN

Member S150	**2,586 / 3,000 m**	**RO48.3X3.2**	**S 235 (Reh >320) Standard**	**Alle NC UGT**	**0,83 -**

Combination key
Alle NC UGT / NC UGT H2 BGE -Y

Partial safety factors	
γ_{M0} for resistance of cross-sections	1,000
γ_{M1} for resistance to instability	1,000
γ_{M2} for resistance of net sections	1,250

Material			
Yield strength	f_y	320,000	N/mm 2
Ultimate strength	f_u	360,000	N/mm 2
Fabrication		Rolled	

...::SECTION CHECK::...

The critical check is on position 2,586 m

Internal forces		Calculated	Unit
Normal force	N_{Ed}	-7,611	kN
Shear force	$V_{y,Ed}$	2,513	kN
Shear force	$V_{z,Ed}$	0,637	kN
Torsion	T_{Ed}	-0,179	kNm
Bending moment	$M_{y,Ed}$	1,541	kNm
Bending moment	$M_{z,Ed}$	0,418	kNm

Scaffolding check for tubular members
According to EN 12811-1 & DIN 4420 Teil 1 article 5.4.7.4 and table 7

Normal force resistance	$N_{pl,d}$	144,960	kN
Shear resistance	$V_{pl,d}$	53,280	kN
Bending resistance	$M_{pl,d}$	1,920	kNm
Unity check N		0,05	-
Unity check V		0,05	-
Unity check M		0,83	-
Unity check Interaction		0,83	-
Unity check Max		0,83	-

The member satisfies the section check.

EN 1993-1-1 Code Check
EN 12811-1 Scaffolding Check
National annex: Standard EN

Member S328	**0,000 / 0,250 m**	**RO48.3X3.2**	**S 235 (Reh >320) Ledger**	**Alle NC UGT**	**0,26 -**

Combination key
Alle NC UGT / NC UGT H2 BGE -Y

Partial safety factors	
γ_{M0} for resistance of cross-sections	1,000
γ_{M1} for resistance to instability	1,000
γ_{M2} for resistance of net sections	1,250

Material			
Yield strength	f_y	320,000	N/mm^2
Ultimate strength	f_u	360,000	N/mm^2
Fabrication		Rolled	

...::SECTION CHECK::...

The critical check is on position 0,000 m

Internal forces		**Calculated**	**Unit**
Normal force	N_{Ed}	0,293	kN
Shear force	$V_{y,Ed}$	0,041	kN
Shear force	$V_{z,Ed}$	2,369	kN
Torsion	T_{Ed}	-0,006	kNm
Bending moment	$M_{y,Ed}$	-0,499	kNm
Bending moment	$M_{z,Ed}$	-0,032	kNm

Scaffolding check for tubular members
According to EN 12811-1 & DIN 4420 Teil 1 article 5.4.7.4 and table 7

Normal force resistance	$N_{pl,d}$	144,960	kN
Shear resistance	$V_{pl,d}$	53,280	kN
Bending resistance	$M_{pl,d}$	1,920	kNm
Unity check N		0,00	-
Unity check V		0,05	-
Unity check M		0,26	-
Unity check Interaction		0,26	-
Unity check Max		0,26	-

The member satisfies the section check.

EN 1993-1-1 Code Check
EN 12811-1 Scaffolding Check
National annex: Standard EN

Member S523	**2,301 / 2,301 m**	**RO48.3X2.3**	**S 235**	**Alle NC UGT**	**0,43 -**

Combination key
Alle NC UGT / NC UGT H2 BGE Y

Partial safety factors	
γ_{M0} for resistance of cross-sections	1,000
γ_{M1} for resistance to instability	1,000
γ_{M2} for resistance of net sections	1,250

Material			
Yield strength	f_y	235,000	N/mm^2
Ultimate strength	f_u	360,000	N/mm^2
Fabrication		Rolled	

...::SECTION CHECK::...

The critical check is on position 2,301 m

Internal forces		Calculated	Unit
Normal force	N_{Ed}	0,936	kN
Shear force	$V_{y,Ed}$	0,252	kN
Shear force	$V_{z,Ed}$	-0,052	kN
Torsion	T_{Ed}	-0,106	kNm
Bending moment	$M_{y,Ed}$	-0,004	kNm
Bending moment	$M_{z,Ed}$	0,457	kNm

Scaffolding check for tubular members
According to EN 12811-1 & DIN 4420 Teil 1 article 5.4.7.4 and table 7

Normal force resistance	$N_{pl,d}$	78,020	kN
Shear resistance	$V_{pl,d}$	28,676	kN
Bending resistance	$M_{pl,d}$	1,072	kNm
Unity check N		0,01	-
Unity check V		0,01	-
Unity check M		0,43	-
Unity check Interaction		0,43	-
Unity check Max		0,43	-

The member satisfies the section check.

EN 1993-1-1 Code Check
EN 12811-1 Scaffolding Check
National annex: Standard EN

Member S1086	**2,930 / 2,930 m**	**RO48.3X3.2**	**S 235 (Reh >320) Ledger**	**Alle NC UGT**	**0,06 -**

Combination key
Alle NC UGT / NC UGT A IG Y

Partial safety factors	
γ_{M0} for resistance of cross-sections	1,000
γ_{M1} for resistance to instability	1,000
γ_{M2} for resistance of net sections	1,250

Material			
Yield strength	f_y	320,000	N/mm^2
Ultimate strength	f_u	360,000	N/mm^2
Fabrication		Rolled	

...::SECTION CHECK::...

The critical check is on position 2,930 m

Internal forces		Calculated	Unit
Normal force	N_{Ed}	0,419	kN
Shear force	$V_{y,Ed}$	-0,001	kN
Shear force	$V_{z,Ed}$	-0,119	kN
Torsion	T_{Ed}	0,000	kNm
Bending moment	$M_{y,Ed}$	-0,112	kNm
Bending moment	$M_{z,Ed}$	-0,001	kNm

Scaffolding check for tubular members
According to EN 12811-1 & DIN 4420 Teil 1 article 5.4.7.4 and table 7

Normal force resistance	$N_{pl,d}$	144,960	kN
Shear resistance	$V_{pl,d}$	53,280	kN
Bending resistance	$M_{pl,d}$	1,920	kNm
Unity check N		0,00	-
Unity check V		0,00	-
Unity check M		0,06	-
Unity check Interaction		0,06	-
Unity check Max		0,06	-

The member satisfies the section check.

EN 1993-1-1 Code Check
EN 12811-1 Scaffolding Check
National annex: Standard EN

Member S1090	**0,494 / 0,494 m**	**RO33.7X3.2**	**S 235**	**Alle NC UGT**	**0,18 -**

Combination key
Alle NC UGT / NC UGT A IG X

Partial safety factors	
γ_{M0} for resistance of cross-sections	1,000
γ_{M1} for resistance to instability	1,000
γ_{M2} for resistance of net sections	1,250

Material			
Yield strength	f_y	235,000	N/mm^2
Ultimate strength	f_u	360,000	N/mm^2
Fabrication		Rolled	

...::SECTION CHECK::...

The critical check is on position 0,494 m

Internal forces		Calculated	Unit
Normal force	N_{Ed}	7,669	kN
Shear force	$V_{y,Ed}$	0,000	kN
Shear force	$V_{z,Ed}$	0,291	kN
Torsion	T_{Ed}	0,000	kNm
Bending moment	$M_{y,Ed}$	0,111	kNm
Bending moment	$M_{z,Ed}$	0,000	kNm

Scaffolding check for tubular members
According to EN 12811-1:2003 article 10.3.3.2 and equation 9

Normal force resistance	$N_{pl,d}$	72,145	kN
Shear resistance	$V_{pl,d}$	26,517	kN
Bending resistance	$M_{pl,d}$	0,629	kNm
Unity check N		0,11	-
Unity check V		0,01	-
Unity check M		0,18	-
Unity check Interaction		0,18	-
Unity check Max		0,18	-

The member satisfies the section check.

EN 1993-1-1 Code Check
National annex: Standard EN

Member S1098	0,160 / 0,160 m	FL80X6	S 235	Alle NC UGT	0,24 -

Combination key
Alle NC UGT / NC UGT H2 IG -Y

Partial safety factors	
γ_{M0} for resistance of cross-sections	1,000
γ_{M1} for resistance to instability	1,000
γ_{M2} for resistance of net sections	1,250

Material			
Yield strength	f_y	235,000	N/mm^2
Ultimate strength	f_u	360,000	N/mm^2
Fabrication		Rolled	

...::SECTION CHECK::...

The critical check is on position 0,160 m

Axis definition :
- principal y- axis in this code check is referring to the principal z axis in SCIA Engineer
- principal z- axis in this code check is referring to the principal y axis in SCIA Engineer

Internal forces		Calculated	Unit
Normal force	N_{Ed}	-2,229	kN
Shear force	$V_{y,Ed}$	-0,063	kN
Shear force	$V_{z,Ed}$	1,655	kN
Torsion	T_{Ed}	-0,014	kNm
Bending moment	$M_{y,Ed}$	0,223	kNm
Bending moment	$M_{z,Ed}$	-0,005	kNm

Classification for cross-section design
Classification according to EN 1993-1-1 article 5.5.2

Classification of Internal and Outstand parts according to EN 1993-1-1 Table 5.2 Sheet 1 & 2

Id	Type	c [mm]	t [mm]	σ_1 [kN/m^2]	σ_2 [kN/m^2]	Ψ [-]	k_σ [-]	α [-]	c/t [-]	Class 1 Limit [-]	Class 2 Limit [-]	Class 3 Limit [-]	Class
1	I	80,000	6,000	-3,0126e+04	3,9412e+04	-0,764		0,567	13,333	59,511	69,603	97,998	1

Note: The Classification limits have been set according to Semi-Comp+.
The cross-section is classified as Class 1

Compression check
According to EN 1993-1-1 article 6.2.4 and formula (6.9)

Cross-section area	A	4,800e-04	m^2
Compression resistance	$N_{c,Rd}$	112,800	kN
Unity check		0,02	-

Bending moment check for M_y
According to EN 1993-1-1 article 6.2.5 and formula (6.12),(6.13)

Plastic section modulus	$W_{pl,y}$	9,600e-06	m^3
Plastic bending moment	$M_{pl,y,Rd}$	2,256	kNm
Unity check		0,10	-

Bending moment check for M_z
According to EN 1993-1-1 article 6.2.5 and formula (6.12),(6.13)

Plastic section modulus	$W_{pl,z}$	7,200e-07	m^3
Plastic bending moment	$M_{pl,z,Rd}$	0,169	kNm
Unity check		0,03	-

Shear check for V_y
According to EN 1993-1-1 article 6.2.6 and formula (6.17)

Shear correction factor	η	1,200	
Shear area	A_v	4,800e-04	m^2
Plastic shear resistance for V_y	$V_{pl,y,Rd}$	65,125	kN
Unity check		0,00	-

Shear check for V_z
According to EN 1993-1-1 article 6.2.6 and formula (6.17)

Shear correction factor	η	1,200	
Shear area	A_v	4,800e-04	m^2
Plastic shear resistance for V_z	$V_{pl,z,Rd}$	65,125	kN
Unity check		0,03	-

Torsion check
According to EN 1993-1-1 article 6.2.7 and formula (6.23)

Index of fibre	Fibre	1	
Total torsional moment	τ_{Ed}	14,701	N/mm^2
Elastic shear resistance	τ_{Rd}	135,677	N/mm^2
Unity check		0,11	-

Combined bending, axial force and shear force check
According to EN 1993-1-1 article 6.2.1(5) and formula (6.1)

Elastic verification			
Fibre		3	
Normal stress due to the normal force N	$\sigma_{N,Ed}$	4,643	N/mm^2
Normal stress due to the bending moment M_y	$\sigma_{My,Ed}$	34,769	N/mm^2
Normal stress due to the bending moment M_z	$\sigma_{Mz,Ed}$	10,281	N/mm^2
Total longitudinal stress	$\sigma_{tot,Ed}$	49,693	N/mm^2
Shear stress due to the transverse shear force V_y	$\tau_{Vy,Ed}$	0,000	N/mm^2
Shear stress due to the transverse shear force V_z	$\tau_{Vz,Ed}$	0,000	N/mm^2
Shear stress due to uniform (St. Venant) torsion	$\tau_{t,Ed}$	14,701	N/mm^2
Total shear stress	$\tau_{tot,Ed}$	14,701	N/mm^2

Elastic verification			
Summation of von Mises stress	$\sigma_{von\ Mises,Ed}$	55,837	N/mm^2
Unity check		0,24	-

Note: For this section no formula is given in article 6.2.7(9) for the plastic shear resistance reduced by torsion. Therefore the elastic yield criterion according to EN 1993-1-1 article 6.2.1(5) is verified.

The member satisfies the section check.
Note: Only the section check is executed for this member.

5.6.3. Scaffolding - Coupler check

Nonlinear calculation
Class: Alle NC UGT
Coordinate system: Principal
Extreme 1D: Cross-section
Selection: All
Scaffolding - Coupler Check

Name	dx [m]	Case	Cross-section	UC_{Max} [-]	UC_{Fx} [-]	UC_{Fy} [-]	UC_{Fz} [-]	UC_{Mx} [-]	UC_{My} [-]	UC_{Mz} [-]	$UC_{Interaction1}$ [-]	$UC_{Interaction2}$ [-]	$UC_{Interaction3}$ [-]
S1080	0,000	NC UGT H2 BGE -Y	Standard - RO48.3X3.2	**0,61**	0,13	0,00	0,07	0,17	0,33	0,61	0,25	-	-
S453	0,000	NC UGT A O Y	Ledger - RO48.3X3.2	**0,82**	0,02	0,01	0,01	0,01	0,32	0,48	0,82	0,03	0,19
S301	2,072	NC UGT H2 IG Y	Event transom - Grafische doorsnede	**0,98**	0,04	0,08	0,32	0,01	0,58	0,08	0,98	0,23	0,49
S509	2,558	NC UGT A O Y	Vertical Diagonal - RO48.3X2.3	**0,38**	0,38	-	0,00	-	-	-	-	-	-
S1074	0,062	NC UGT H2 BGE X	truss chord - RO48.3X3.2	**1,00**	0,03	0,11	0,02	0,12	0,02	1,00	0,15	-	-
S1082	0,000	NC UGT H1 IG -Y	Horizontal Diagonal - RO48.3X3.2	**0,27**	0,02	0,00	0,00	0,00	0,00	0,00	0,00	0,02	0,27

5.6.4. Scaffolding - Coupler check

Nonlinear calculation
Class: Alle NC UGT
Coordinate system: Principal
Extreme 1D: Global
Selection: All

EN 12811-1 Code Check
National annex: Standard EN

Scaffolding Coupler	Member	Location / Length [m]	Material	Coupler type	Case	UC_{Max} [-]
H414	S1074	0,062/0,062	Steel	Right angle	Alle NC UGT	**1,00**

Partial safety factors	
γ_{M0}	1,000

Design internal forces

		Member	Scaffolding Coupler	Unit
Normal force	N_{Ed}	-0,522	-0,522	kN
Shear force	$V_{y,Ed}$	-3,320	-3,320	kN
Shear force	$V_{z,Ed}$	0,289	0,289	kN
Torsion moment	$M_{x,Ed}$	0,015	0,015	kNm
Bending moment	$M_{y,Ed}$	0,020	0,020	kNm
Torsion moment	$M_{z,Ed}$	0,130	0,130	kNm

Scaffolding coupler resistances
According to EN 12811-1 Table C1

Scaffolding Coupler H414		
N_{xk}	15,000	kN
V_{yk}	30,000	kN
V_{zk}	15,000	kN
M_{xk}	0,130	kNm
M_{yk}	0,800	kNm
M_{zk}	0,130	kNm

Scaffolding coupler check
According to EN 12811-1

Normal force check N

$$UC_{Fx} = \frac{|N_{Ed}|}{\frac{N_{xk}}{\gamma_{M0}}} = \frac{|-0,522[kN]|}{\frac{15,000[kN]}{1,000}} = \mathbf{0,03 \leq 1,00} \quad (§10.3.3.1)$$

Shear force check Vy

$$UC_{Fy} = \frac{|V_{y,Ed}|}{\frac{V_{yk}}{\gamma_{M0}}} = \frac{|-3,320[kN]|}{\frac{30,000[kN]}{1,000}} = \mathbf{0,11 \leq 1,00} \quad (§10.3.3.1)$$

Shear force check Vz

$$UC_{Fz} = \frac{|V_{z,Ed}|}{\frac{V_{zk}}{\gamma_{M0}}} = \frac{|0,289[kN]|}{\frac{15,000[kN]}{1,000}} = \mathbf{0,02 \leq 1,00} \quad (§10.3.3.1)$$

Torsional moment check Mx

$$UC_{Mx} = \frac{|M_{x,Ed}|}{\frac{M_{xk}}{\gamma_{M0}}} = \frac{|0,015[kNm]|}{\frac{0,130[kNm]}{1,000}} = \mathbf{0,12 \leq 1,00} \quad (§10.3.3.1)$$

Bending moment check My

$$UC_{My} = \frac{|M_{y,Ed}|}{\frac{M_{yk}}{\gamma_{M0}}} = \frac{|0,020[kNm]|}{\frac{0,800[kNm]}{1,000}} = \mathbf{0,02 \leq 1,00} \quad (§10.3.3.1)$$

Torsional moment check Mz

$$UC_{Mz} = \frac{|M_{z,Ed}|}{\frac{M_{zk}}{\gamma_{M0}}} = \frac{|0,130[kNm]|}{\frac{0,130[kNm]}{1,000}} = \mathbf{1,00 > 1,00} \quad (§10.3.3.1)$$

Interaction check 1

$$UC_{Interaction1} = \frac{|N_{Ed}| + |V_{z,Ed}|}{\frac{N_{xk} + V_{zk}}{\gamma_{M0}}} + \frac{|V_{y,Ed}|}{\frac{V_{yk}}{\gamma_{M0}}} + \frac{|M_{y,Ed}|}{2,4 \times \frac{M_{yk}}{\gamma_{M0}}} = \frac{|-0,522[kN]| + |0,289[kN]|}{\frac{15,000[kN] + 15,000[kN]}{1,000}} + \frac{|-3,320[kN]|}{\frac{30,000[kN]}{1,000}} + \frac{|0,020[kNm]|}{2,4 \times \frac{0,800[kNm]}{1,000}} = \mathbf{0,15 \leq 1,00} \quad (10)$$

5.7. Aluminiumcontrole

5.7.1. EC-EN 1999 Aluminium check ULS

Nonlinear calculation
Class: Alle NC UGT
Coordinate system: Principal
Extreme 1D: Cross-section
Selection: All
There are 2 warnings on selected members. 2 of them are shown.
Overall unity check

Name	dx [m]	Case	Cross-section	Material	$UC_{Overall}$ [-]	UC_{Sec} [-]	UC_{Stab} [-]	E/W/N
S301	1,151-	NC UGT A IG -Y	Event transom - Grafische doorsnede	EN-AW 6063 (EP,ET,ER/B) T66 (0-10)	**0,60**	0,60	0,00	
S709	0,339	NC UGT A O Y	truss diagonal - RO20X2	EN-AW 6082 (EP/O,EP/H,ET) T6 (0-5)	**0,43**	0,43	0,00	
S976	2,012+	NC UGT H2 BGE -Y	truss chord - RO48.3X3.2	EN-AW 6082 (EP/O,EP/H,ET) T6 (0-5)	**0,56**	0,56	0,00	
S994	4,199+	NC UGT A O Y	Keder rail 3000 ALU - Grafische doorsnede	EN-AW 6082 (EP/O,EP/H,ET) T6 (0-5)	**0,51**	0,51	0,00	W1, W2
S1022	0,170+	NC UGT H1 BGE -Y	truss koppelstuk QRO 50x4 - QRO50X4	EN-AW 6082 (EP/O,EP/H,ET) T6 (0-5)	**0,32**	0,32	0,00	

E/W/N	Present on members
W1	S988, S994
W2	S988, S994

5.7.2. EC-EN 1999 Aluminium check ULS

Nonlinear calculation
Class: Alle NC UGT
Coordinate system: Principal
Extreme 1D: Cross-section
Selection: All

EN 1999-1-1 code check
National annex: Standard EN

Member S301	**1,151 / 2,072 m**	**Grafische doorsnede**	**EN-AW 6063 (EP,ET,ER/B) T66 (0-10)**	**Alle NC UGT**	**0,60 -**

Combination key
Alle NC UGT / NC UGT A IG -Y

Partial safety factors	
γ_{M1} for resistance of cross-sections and to instability	1,100
γ_{M2} for resistance in tension	1,250

Material			
0.2% proof strength	f_o	200,000	N/mm^2
0.2% proof strength in HAZ	$f_{o,haz}$	75,000	N/mm^2
Ultimate tensile strength	f_u	245,000	N/mm^2
Ultimate tensile strength in HAZ	$f_{u,haz}$	130,000	N/mm^2
Buckling class		A	
Fabrication		General	

...::SECTION CHECK::...

The critical check is on position 1,151 m
Note: This section is not located in a heat affected zone (HAZ).

Internal forces		Calculated	Unit
Normal force	N_{Ed}	-1,731	kN
Shear force	$V_{y,Ed}$	-0,118	kN
Shear force	$V_{z,Ed}$	-0,891	kN
Torsional moment	T_{Ed}	0,007	kNm
Bending moment	$M_{y,Ed}$	5,324	kNm
Bending moment	$M_{z,Ed}$	0,492	kNm

Classification for cross-section design
Classification according to EN 1999-1-1 article 6.1.4

Cross-section classification		
Normal force	N-	Class 4
Bending moment	M_y+	Class 4
Bending moment	M_z+	Class 4

Compression check
According to EN 1999-1-1 article 6.2.4 and formula (6.20)

Effective section area	A_{eff}	1,618e-03	m^2
Compression resistance (yielding)	$N_{o,Rd}$	294,187	kN
Compression resistance	$N_{c,Rd}$	294,187	kN
Unity check		0,01	-

Bending moment check for M_y
According to EN 1999-1-1 article 6.2.5 and formula (6.23)
Section is classified as Class 4

Elastic section modulus	$W_{el,y}$	6,701e-05	m^3
Effective section modulus	$W_{eff,y}$	6,145e-05	m^3
Shape factor	α_y	0,917	
Bending moment resistance (yielding)	$M_{o,y,Rd}$	11,173	kNm
Bending moment resistance	$M_{y,Rd}$	11,173	kNm
Unity check		0,48	-

Bending moment check for M_z
According to EN 1999-1-1 article 6.2.5 and formula (6.23)
Section is classified as Class 4

Elastic section modulus	$W_{el,z}$	3,085e-05	m^3
Effective section modulus	$W_{eff,z}$	2,378e-05	m^3
Shape factor	α_z	0,771	
Bending moment resistance (yielding)	$M_{o,z,Rd}$	4,323	kNm
Bending moment resistance	$M_{z,Rd}$	4,323	kNm
Unity check		0,11	-

Shear check for V_y
According to EN 1999-1-1 article 6.2.6 and formula (6.28)

Slenderness classification		Non-slender	
Shear area	$A_{v,y}$	6,844e-04	m^2
Shear resistance	$V_{y,Rd}$	71,843	kN
Unity check		0,00	-

Shear check for V_z
According to EN 1999-1-1 article 6.2.6 and formula (6.28)

Slenderness classification		Non-slender	
Shear area	$A_{v,z}$	1,392e-03	m^2
Shear resistance	$V_{z,Rd}$	146,122	kN
Unity check		0,01	-

Torsion check
According to EN 1999-1-1 article 6.2.7 and formula (6.32)

Fibre		20	
Total torsional shear stress	τ_{Ed}	0,161	N/mm^2
Torsional shear stress resistance	τ_{Rd}	104,973	N/mm^2
Unity check		0,00	-

Combined bending, axial force and shear force check
According to EN 1999-1-1 article 6.2.1(5) and formula (6.15)

Effective area properties			
Effective section area	A_{eff}	1,618e-03	m^2
Effective section modulus	$W_{eff,y}$	6,145e-05	m^3
Effective section modulus	$W_{eff,z}$	2,378e-05	m^3

Elastic verification			
Index of fibre	Fibre	13	
Normal stress due to N_{Ed}	$\sigma_{N,Ed}$	1,070	N/mm^2
Normal stress due to $M_{y,Ed}$	$\sigma_{My,Ed}$	86,627	N/mm^2
Normal stress due to $M_{z,Ed}$	$\sigma_{Mz,Ed}$	20,644	N/mm^2
Total longitudinal stress	$\sigma_{tot,Ed}$	108,341	N/mm^2
Shear stress due to $V_{y,Ed}$	$\tau_{Vy,Ed}$	0,000	N/mm^2
Shear stress due to $V_{z,Ed}$	$\tau_{Vz,Ed}$	0,000	N/mm^2
Shear stress due to torsion	$\tau_{t,Ed}$	0,000	N/mm^2
Total shear stress	$\tau_{tot,Ed}$	0,000	N/mm^2

Elastic verification			
Constant	C	1,200	
Summation of von Mises stress	$\sigma_{von\ Mises,Ed}$	108,341	N/mm^2
Unity check (normal stress)		0,60	-
Unity check (shear stress)		0,00	-
Unity check (von Mises stress)		0,54	-

The member satisfies the section check.
Note: Only the section check is executed for this member.

EN 1999-1-1 code check
EN 12811-1 Scaffolding Check
National annex: Standard EN

Member S709	**0,339 / 0,339 m**	**RO20X2**	**EN-AW 6082 (EP/O,EP/H,ET) T6 (0-5)**	**Alle NC UGT**	**0,43 -**

Combination key
Alle NC UGT / NC UGT A O Y

Partial safety factors	
γ_{M1} for resistance of cross-sections and to instability	1,100
γ_{M2} for resistance in tension	1,250

Material			
0.2% proof strength	f_o	250,000	N/mm^2
0.2% proof strength in HAZ	$f_{o,haz}$	125,000	N/mm^2
Ultimate tensile strength	f_u	290,000	N/mm^2
Ultimate tensile strength in HAZ	$f_{u,haz}$	185,000	N/mm^2
Buckling class		A	
Fabrication		Rolled	

...::SECTION CHECK::...

The critical check is on position 0,339 m
Note: This section is not located in a heat affected zone (HAZ).

Internal forces		**Calculated**	**Unit**
Normal force	N_{Ed}	0,287	kN
Shear force	$V_{y,Ed}$	-0,024	kN
Shear force	$V_{z,Ed}$	-0,241	kN
Torsional moment	T_{Ed}	0,000	kNm
Bending moment	$M_{y,Ed}$	-0,057	kNm
Bending moment	$M_{z,Ed}$	-0,004	kNm

Scaffolding check for tubular members
According to EN 12811-1 & DIN 4420 Teil 1 article 5.4.7.4 and formula table 7

Resultant shear force	$V_{resultant}$	0,242	kN
Resultant bending moment	$M_{resultant}$	0,057	kNm
Shape factor	α_y	1,250	
Normal force resistance	$N_{pl,d}$	25,682	kN
Shear resistance	$V_{pl,d}$	9,439	kN
Bending resistance	$M_{pl,d}$	0,132	kNm
Unity check N		0,01	-
Unity check V		0,03	-
Unity check M		0,43	-
Unity check Interaction		0,43	-
Unity check Max		0,43	-

The member satisfies the section check.

EN 1999-1-1 code check
EN 12811-1 Scaffolding Check
National annex: Standard EN

Member S976	**2,012 / 2,072 m**	**RO48.3X3.2**	**EN-AW 6082 (EP/O,EP/H,ET) T6 (0-5)**	**Alle NC UGT**	**0,56 -**

Combination key
Alle NC UGT / NC UGT H2 BGE -Y

Partial safety factors	
γ_{M1} for resistance of cross-sections and to instability	1,100
γ_{M2} for resistance in tension	1,250

Material			
0.2% proof strength	f_o	250,000	N/mm^2
0.2% proof strength in HAZ	$f_{o,haz}$	125,000	N/mm^2
Ultimate tensile strength	f_u	290,000	N/mm^2
Ultimate tensile strength in HAZ	$f_{u,haz}$	185,000	N/mm^2
Buckling class		A	
Fabrication		Rolled	

...::SECTION CHECK::...

The critical check is on position 2,012 m
Note: This section is not located in a heat affected zone (HAZ).

Internal forces		**Calculated**	**Unit**
Normal force	N_{Ed}	57,514	kN
Shear force	$V_{y,Ed}$	0,018	kN
Shear force	$V_{z,Ed}$	0,140	kN
Torsional moment	T_{Ed}	0,000	kNm
Bending moment	$M_{y,Ed}$	0,103	kNm
Bending moment	$M_{z,Ed}$	0,040	kNm

Scaffolding check for tubular members
According to EN 12811-1:2003 article 10.3.3.2 and formula equation 9

Resultant shear force	$V_{resultant}$	0,141	kN
Resultant bending moment	$M_{resultant}$	0,110	kNm
Shape factor	α_y	1,250	
Normal force resistance	$N_{pl,d}$	102,955	kN
Shear resistance	$V_{pl,d}$	37,841	kN
Bending resistance	$M_{pl,d}$	1,364	kNm
Unity check N		0,56	-
Unity check V		0,00	-
Unity check M		0,08	-
Unity check Interaction		0,13	-
Unity check Max		0,56	-

The member satisfies the section check.

EN 1999-1-1 code check
National annex: Standard EN

Member S994	**4,199 / 6,450 m**	**Grafische doorsnede**	**EN-AW 6082 (EP/O,EP/H,ET) T6 (0-5)**	**Alle NC UGT**	**0,51 -**

Combination key
Alle NC UGT / NC UGT A O Y

Partial safety factors	
γ_{M1} for resistance of cross-sections and to instability	1,100
γ_{M2} for resistance in tension	1,250

Material			
0.2% proof strength	f_o	250,000	N/mm^2
0.2% proof strength in HAZ	$f_{o,haz}$	125,000	N/mm^2
Ultimate tensile strength	f_u	290,000	N/mm^2
Ultimate tensile strength in HAZ	$f_{u,haz}$	185,000	N/mm^2
Buckling class		A	
Fabrication		Extrusion	

...::SECTION CHECK::...

The critical check is on position 4,199 m
Note: This section is not located in a heat affected zone (HAZ).

Axis definition :
- principal y- axis in this code check is referring to the principal z axis in SCIA Engineer
- principal z- axis in this code check is referring to the principal y axis in SCIA Engineer

Internal forces		Calculated	Unit
Normal force	N_{Ed}	1,148	kN
Shear force	$V_{y,Ed}$	-1,089	kN
Shear force	$V_{z,Ed}$	0,250	kN
Torsional moment	T_{Ed}	-0,245	kNm
Bending moment	$M_{y,Ed}$	-1,129	kNm
Bending moment	$M_{z,Ed}$	0,895	kNm

Classification for cross-section design
Warning: No initial shape was defined for this cross-section! Without initial shape no effective cross-section properties can be obtained. Gross cross-section properties are used instead, and the cross-section is checked as elastic Class 3.

Tension check
According to EN 1999-1-1 article 6.2.3 and formula (6.17)

Gross or reduced section area	A_g	1,124e-03	m^2
Tension resistance (yielding)	$N_{o,Rd}$	255,511	kN
Tension resistance	$N_{t,Rd}$	255,511	kN
Unity check		0,00	-

Bending moment check for M_y
According to EN 1999-1-1 article 6.2.5 and formula (6.23)
Section is classified as Class 3

Shape factor	$\alpha_{y,3,u}$	1,000	
Bending moment resistance (yielding)	$M_{o,y,Rd}$	3,915	kNm
Bending moment resistance	$M_{y,Rd}$	3,915	kNm
Unity check		0,29	-

Bending moment check for M_z
According to EN 1999-1-1 article 6.2.5 and formula (6.23)
Section is classified as Class 3

Shape factor	$\alpha_{z,3,u}$	1,000	
Bending moment resistance (yielding)	$M_{o,z,Rd}$	4,197	kNm
Bending moment resistance	$M_{z,Rd}$	4,197	kNm
Unity check		0,21	-

Shear check for V_y
According to EN 1999-1-1 article 6.2.6 and formula (6.28)

Slenderness classification		Non-slender	
Shear area	$A_{v,y}$	5,259e-04	m^2
Shear resistance	$V_{y,Rd}$	69,008	kN
Unity check		0,02	-

Warning: The shear area according EN 1999-1-1 art. 6.2.6 could not be determined due to not defined initial shape. Consequently, the shear areas A_y and A_z of the gross cross-section properties (FEM analysis) are used instead.
Shear check for V_z
According to EN 1999-1-1 article 6.2.6 and formula (6.28)

Slenderness classification		Non-slender	
Shear area	$A_{v,z}$	6,406e-04	m^2
Shear resistance	$V_{z,Rd}$	84,056	kN
Unity check		0,00	-

Warning: The shear area according EN 1999-1-1 art. 6.2.6 could not be determined due to not defined initial shape. Consequently, the shear areas A_y and A_z of the gross cross-section properties (FEM analysis) are used instead.

Torsion check
According to EN 1999-1-1 article 6.2.7 and formula (6.32)

Fibre		34	
Total torsional shear stress	τ_{Ed}	-22,131	N/mm^2
Torsional shear stress resistance	τ_{Rd}	131,216	N/mm^2
Unity check		0,17	-

Combined bending, axial force and shear force check
According to EN 1999-1-1 article 6.2.1(5) and formula (6.15)

Effective area properties			
Effective section area	A_{eff}	1,124e-03	m^2
Effective section modulus	$W_{eff,y}$	1,722e-05	m^3
Effective section modulus	$W_{eff,z}$	1,847e-05	m^3

Elastic verification			
Index of fibre	Fibre	52	
Normal stress due to N_{Ed}	$\sigma_{N,Ed}$	-1,021	N/mm^2
Normal stress due to $M_{y,Ed}$	$\sigma_{My,Ed}$	-65,487	N/mm^2
Normal stress due to $M_{z,Ed}$	$\sigma_{Mz,Ed}$	-48,285	N/mm^2
Total longitudinal stress	$\sigma_{tot,Ed}$	-114,793	N/mm^2
Shear stress due to $V_{y,Ed}$	$\tau_{Vy,Ed}$	0,000	N/mm^2
Shear stress due to $V_{z,Ed}$	$\tau_{Vz,Ed}$	0,000	N/mm^2
Shear stress due to torsion	$\tau_{t,Ed}$	0,000	N/mm^2
Total shear stress	$\tau_{tot,Ed}$	0,000	N/mm^2
Constant	C	1,200	
Summation of von Mises stress	$\sigma_{von\ Mises,Ed}$	114,793	N/mm^2
Unity check (normal stress)		0,51	-
Unity check (shear stress)		0,00	-
Unity check (von Mises stress)		0,46	-

The member satisfies the section check.
Note: Only the section check is executed for this member.

EN 1999-1-1 code check
National annex: Standard EN

Member S1022	**0,170 / 0,339 m**	**QRO50X4**	**EN-AW 6082 (EP/O,EP/H,ET) T6 (0-5)**	**Alle NC UGT**	**0,32 -**

Combination key
Alle NC UGT / NC UGT H1 BGE -Y

Partial safety factors	
γ_{M1} for resistance of cross-sections and to instability	1,100
γ_{M2} for resistance in tension	1,250

Material			
0.2% proof strength	f_o	250,000	N/mm^2
0.2% proof strength in HAZ	$f_{o,haz}$	125,000	N/mm^2
Ultimate tensile strength	f_u	290,000	N/mm^2
Ultimate tensile strength in HAZ	$f_{u,haz}$	185,000	N/mm^2
Buckling class		A	
Fabrication		Rolled	

...::SECTION CHECK::...

The critical check is on position 0,170 m
Note: This section is not located in a heat affected zone (HAZ).

Internal forces		**Calculated**	**Unit**
Normal force	N_{Ed}	-3,071	kN
Shear force	$V_{y,Ed}$	-4,166	kN
Shear force	$V_{z,Ed}$	3,161	kN
Torsional moment	T_{Ed}	0,081	kNm
Bending moment	$M_{y,Ed}$	-0,295	kNm
Bending moment	$M_{z,Ed}$	0,443	kNm

Classification for cross-section design
Classification according to EN 1999-1-1 article 6.1.4

Cross-section classification		
Normal force	N-	Class 1
Bending moment	M_y-	Class 1
Bending moment	M_z+	Class 1

Compression check
According to EN 1999-1-1 article 6.2.4 and formula (6.20)

Effective section area	A_{eff}	7,222e-04	m^2
Compression resistance (yielding)	$N_{o,Rd}$	164,137	kN
Compression resistance	$N_{c,Rd}$	164,137	kN
Unity check		0,02	-

Bending moment check for M_y
According to EN 1999-1-1 article 6.2.5 and formula (6.23)
Section is classified as Class 1

Elastic section modulus	$W_{el,y}$	1,010e-05	m^3
Plastic section modulus	$W_{pl,y}$	1,240e-05	m^3
Shape factor	α_y	1,227	
Bending moment resistance (yielding)	$M_{o,y,Rd}$	2,817	kNm
Bending moment resistance	$M_{y,Rd}$	2,817	kNm
Unity check		0,10	-

Bending moment check for M_z
According to EN 1999-1-1 article 6.2.5 and formula (6.23)
Section is classified as Class 1

Elastic section modulus	$W_{el,z}$	1,010e-05	m^3
Plastic section modulus	$W_{pl,z}$	1,240e-05	m^3
Shape factor	α_z	1,227	
Bending moment resistance (yielding)	$M_{o,z,Rd}$	2,817	kNm
Bending moment resistance	$M_{z,Rd}$	2,817	kNm
Unity check		0,16	-

Shear check for V_y
According to EN 1999-1-1 article 6.2.6 and formula (6.28)

Slenderness classification		Non-slender	
Shear area	$A_{v,y}$	3,586e-04	m^2
Shear resistance	$V_{y,Rd}$	47,057	kN
Unity check		0,09	-

Shear check for V_z
According to EN 1999-1-1 article 6.2.6 and formula (6.28)

Slenderness classification		Non-slender	
Shear area	$A_{v,z}$	3,586e-04	m^2
Shear resistance	$V_{z,Rd}$	47,057	kN
Unity check		0,07	-

Torsion check
According to EN 1999-1-1 article 6.2.7 and formula (6.32)

Fibre		2	
Total torsional shear stress	τ_{Ed}	5,595	N/mm^2
Torsional shear stress resistance	τ_{Rd}	131,216	N/mm^2
Unity check		0,04	-

Combined shear and torsion check for V_y and $\tau_{t,Ed}$
According to EN 1999-1-1 article 6.2.7.3 and formula (6.34), (6.37)

Index of fibre		2	
Shear stress due to torsion	$\tau_{t,Ed}$	5,595	N/mm^2
Reduced shear resistance	$V_{T,y,Rd}$	45,051	kN
Unity check		0,09	-

Combined shear and torsion check for V_z and $\tau_{t,Ed}$
According to EN 1999-1-1 article 6.2.7.3 and formula (6.34), (6.37)

Index of fibre		2	
Shear stress due to torsion	$\tau_{t,Ed}$	5,595	N/mm^2
Reduced shear resistance	$V_{T,z,Rd}$	45,051	kN
Unity check		0,07	-

Combined bending, axial force and shear force check
According to EN 1999-1-1 article 6.2.1(5) and formula (6.15)

Effective area properties			
Effective section area	A_{eff}	7,222e-04	m^2
Effective section modulus	$W_{eff,y}$	1,014e-05	m^3
Effective section modulus	$W_{eff,z}$	1,014e-05	m^3

Elastic verification			
Index of fibre	Fibre	4	
Normal stress due to N_{Ed}	$\sigma_{N,Ed}$	4,252	N/mm^2
Normal stress due to $M_{y,Ed}$	$\sigma_{My,Ed}$	27,683	N/mm^2
Normal stress due to $M_{z,Ed}$	$\sigma_{Mz,Ed}$	41,683	N/mm^2
Total longitudinal stress	$\sigma_{tot,Ed}$	73,618	N/mm^2
Shear stress due to $V_{y,Ed}$	$\tau_{Vy,Ed}$	0,761	N/mm^2
Shear stress due to $V_{z,Ed}$	$\tau_{Vz,Ed}$	0,578	N/mm^2
Shear stress due to torsion	$\tau_{t,Ed}$	4,087	N/mm^2
Total shear stress	$\tau_{tot,Ed}$	5,427	N/mm^2
Constant	C	1,200	
Summation of von Mises stress	$\sigma_{von\ Mises,Ed}$	74,216	N/mm^2
Unity check (normal stress)		0,32	-
Unity check (shear stress)		0,04	-
Unity check (von Mises stress)		0,30	-

The member satisfies the section check.
Note: Only the section check is executed for this member.

5.8. Doorbuiging / vervorming

5.8.1. 1D deformations

Nonlinear calculation
Class: Alle NC BGT
Coordinate system: Principal
Extreme 1D: Global
Selection: All
Deformations

Name	dx [m]	Case	u_x [mm]	u_y [mm]	u_z [mm]	φ_x [mrad]	φ_y [mrad]	φ_z [mrad]	U_{total} [mm]
S1017	0,086	NC BGT H2 IG -Y	**-88,296**	-1,631	10,732	0,360	20,415	0,123	88,961
S1078	0,087	NC BGT A BG Y	**84,062**	0,176	-13,583	0,052	35,620	-0,296	85,153
S988	3,040	NC BGT A BG Y	-5,217	**-75,057**	11,086	20,817	9,589	0,771	76,051
S994	3,040	NC BGT A BG Y	-15,585	**79,784**	11,435	-20,099	9,259	0,437	82,092
S991	4,022	NC BGT H2 IG -Y	10,535	1,001	**-118,126**	0,054	-0,508	0,214	118,599
S1097	0,494	NC BGT A BG -Y	-0,253	1,389	-0,159	**-61,896**	0,152	17,594	1,421
S1099	0,518-	NC BGT A BGE -Y	0,177	7,106	0,211	**64,366**	0,020	0,369	7,112
S1098	0,080+	NC BGT A BG -Y	-0,606	-0,182	-2,306	-2,184	**-65,852**	-0,390	2,392
S991	0,025-	NC BGT H2 IG -Y	10,558	1,353	-1,386	0,039	**48,019**	-0,267	10,734
S1008	0,016	NC BGT A BG Y	1,600	-13,581	0,000	-0,235	-0,069	**-49,338**	13,675
S1008	0,016	NC BGT H2 IG -Y	-1,427	10,552	1,353	-0,267	0,038	**48,019**	10,734
S991	3,790-	NC BGT A BG Y	-13,583	0,393	**129,174**	-0,322	-2,096	0,483	**129,887**

6. Bijlagen

6.1. Toelatingscertificaten Z-8.22-64, Z-8.22-939 en de Z-8.22-949.

Op aanvraag beschikbaar.
Deze zijn weggelaten om het aantal paginas van dit rapport te reduceren.

6.2. Tekenwerk