



**WIGGERS**

Ingenieurs in bouwconstructies

**Project:**

**Vlakke afdekking RVS**

**Werkordernr. Wopereis N. 1525**

Datum:

13-03-2025 / 11-11-2024

Projectnr.:

30260-IK

Berekening deel:

A – Vlakke afdekking

## Projectgegevens

Project: Vlakke afdekking RVS  
Werkorenr. Wopereis N. 1525  
Son, Noord-Brabant



Berekening deel: A

Onderdeel: Vlakke afdekking

Constructeur: ing. 

email:  [@wiggers-ing.com](mailto: @wiggers-ing.com)

paraaf HC:

Opdrachtgever: Wopereis RVS B.V.  
T.a.v.    
Postbus 463  
7000 AL Doetinchem



## Aangehouden voorschriften, kwaliteitseisen:

De statische berekening is uitgevoerd volgens de constructie voorschriften uit de NEN-EN 1990 - serie.

Indien niet anders is aangegeven is uitgegaan van :

voor gewapende betonconstructies	: betonkwaliteit C20/25, staalkwaliteit B500A/B
	: schilvloeren C30/37
	: prefab beton C35/45
voor staalconstructies	: staalkwaliteit S235
voor houtconstructies	: houtkwaliteit C18
voor steenconstructies	: kalkzandsteenlijmelementen, CS12.

## Toelaatbare gronddrukspanningen:

Indien niet anders is aangegeven, wordt bij een fundering op staal, bij een gronddekking van 200 mm en een hoogste grondwaterstand van 600 mm onder aanlegniveau van de fundering, uitgegaan van de volgende toelaatbare rekenwaarden. Deze waarden in het werk te (laten) controleren:

<i>strookbreedte in mm<sup>1</sup></i>	<i>Q<sub>Rd</sub> in kN/m<sup>1</sup></i>	<i>strookbreedte in mm<sup>1</sup></i>	<i>Q<sub>Rd</sub> in kN/m<sup>1</sup></i>
400	33	500	45
600	60	700	75
800	90	900	110
1000	130	1100	150
1200	175	1400	225
1600	285	1800	350

## Gevolgklasse, Betrouwbaarheidsklasse en ontwerplevensduur:

Het project is ingedeeld in

Gevolgklasse:

**CC1**

Betrouwbaarheidsklasse:

**RC1**

Ontwerplevensduur:

**50 jaar**

Geadviseerde Uitvoeringsklasse conform EN 1090-2:

**EXC2**

## Gebruikte eenheden:

Indien niet anders wordt aangegeven zijn de volgende eenheden aangehouden:

overspanningen	in m <sup>1</sup>
belastingen	in kN/m <sup>2</sup> of in kN/m <sup>1</sup> of in kN
afmetingen	in mm <sup>1</sup>
spanningen	in N/mm <sup>2</sup>
wapening	in mm <sup>2</sup> of mm <sup>2</sup> /m <sup>1</sup> plaatbreedte

## Bouwkundige tekening(en):

Bij de uitwerking van de statische berekening is gewerkt van de volgende tekening(en):

Tekening: Wopereis Artikelnr. N1525-0001

d.d.: 30-09-2024

---

**Algemene gegevens:** Tenzij anders aangegeven**Staalconstructie:**

- bevestiging dak- vloer- en wandplaten volgens berekening leverancier
- de dakplaten dienen als kipsteun voor de dakliggers dit is d.m.v. een berekening door de dakplaatleverancier aan te tonen
- bij alle randen en hoeken van dak-, en wandplaten rekening houden met verhoogde windbelasting
- voorzieningen t.b.v. valbeveiliging volgens opgaaf leverancier
- deze staalconstructieberekening omvat alleen de hoofddraagconstructie
- detailberekening staalconstructie volgens leverancier staalconstructie
- staalconstructie in een vochtige omgeving conserveren
- in overleg met de brandadviseur de staalconstructie evt. brandwerend beschermen



## Technische omschrijving

Het project dat in navolgende berekening wordt behandeld, betreft de bouw van een vlakke cirkelvormige afdekking. De constructie wordt aan een bestaande betonconstructie bevestigd. De betonwand is 250mm dik. Betonsterkte betonconstructie is onbekend, aanname betonsterkte C20/25. De betonconstructie i.h.w. te laten controleren. De controle van de bestaande betonconstructie is buiten beschouwing gelaten.

## Gewichten en belastingen:

### Vlakke afdichting

$$G_k = \text{Traanplaat } t=5\text{mm}/6,5\text{mm} = 0,17 \text{ kN/m}^2$$

$$q_k = \text{Cat. E2} = 1,00 \text{ kN/m}^2$$

$$Q_k = \text{Cat. E2 (0,1x0,1m)} = 2,00 \text{ kN}$$

$$q_{k;\text{sneeuw}} = 0,70 \times 0,80 = 0,56 \text{ kN/m}^2$$

Sneeuwbelasting niet maatgevend. Dak wordt niet betreden wanneer er sneeuw op het dak aanwezig is.

### Wind

$$H = 5,5 \text{ m}^1$$

$$B = 12,5 \text{ m}^1$$

$$L = 12,5 \text{ m}^1$$

$$q_{k;\text{wind}} = 0,56 \text{ kN/m}^2 ; \text{Gebied III, onbebouwd gebied, terreincategorie II}$$

uitwendige drukcoëfficiënten van toepassing:

$$C_{pe,10} = \text{voor ontwerp- en hoofdberekening van hoofddraagconstructie}$$

NB: "waar zuiging is, kan geen wrijving zijn"

$$C_{pe,10} \text{ Zone G: } -1,2 \quad \text{Zone H: } -0,7 \quad \text{Zone I: } -0,2 \quad (\text{windzuiging dakvlak})$$

Er is van uitgegaan dat het bouwwerk een "gesloten gebouw" gebouw is.

De aanwezige installatie vult met zijn eigen afdichting (los van de aluminium afdichting) de aanwezige sparing in het aluminium frame. Op basis hiervan is de windbelasting gecontroleerd op basis van een gesloten constructie.

$$Q_{\text{wind zone G}}: -1,2 \times 0,56 = -0,696 \text{ kN/m}^2$$

$$Q_{\text{wind zone H}}: -0,7 \times 0,56 = -0,392 \text{ kN/m}^2$$

$$Q_{\text{wind zone I}}: -0,2 \times 0,56 = -0,112 \text{ kN/m}^2$$

Nr. 30260-IK

Bl. ..

Datum: 13-03-2025

Schaal: ..

## Windbelasting

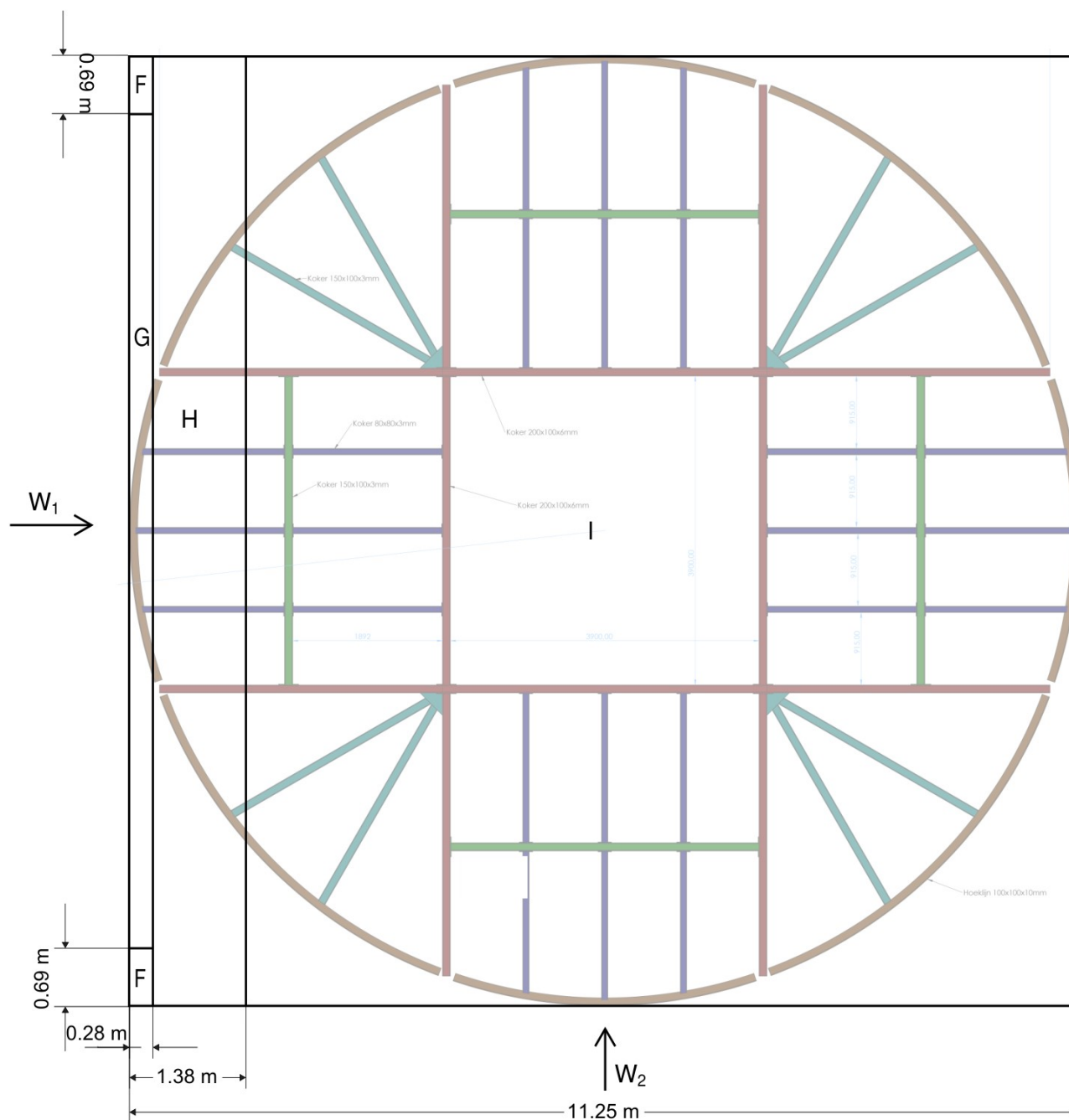
Windbelasting op de ronde afsluiting.

Uitgaande van een dichte dakconstructie. De aanwezige sparing wordt gedicht door de aanwezige installatie in de put.

Windzones op basis van een rechthoekig gebouw, zie indeling op onderstaande afbeelding.

Wind in twee richtingen beschouwd.

$e=0,5h=0,5 \times 5,5\text{m}=2,75\text{m}$



Oplegging hoofdligger koker 250x100x5mm (rood) wordt belast op maximaal 0,65kN trek.

Oplegging overige liggers (groen & blauw) worden belast op maximaal 0,54kN trek.

De Liggers dienen minimaal deze belasting over de kunnen brengen naar de opleggingen.

Nr. 30260-IK

Bl. ..

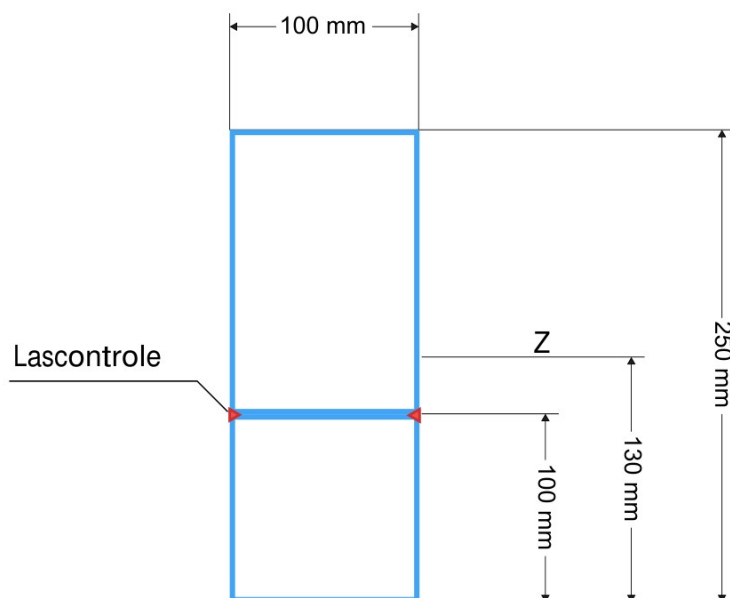
Datum: ..

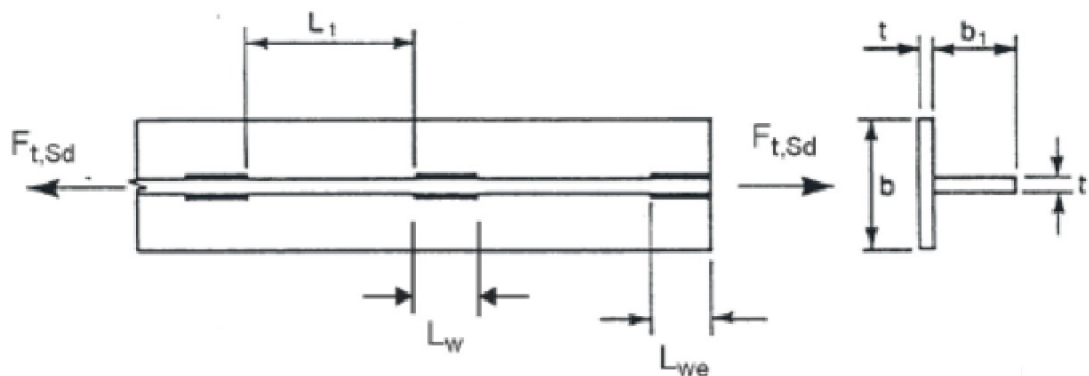
Schaal: ..

**Koker 250x100x5**

Koker opgebouwd uit 2 profielen

150x100x5mm + 100x100x5mm


 $D \cdot S / (B \cdot I)$  = spanning in de las

 $D = 21400 \text{ N}$      $S = 1836 \cdot 80 \text{ mm} = 146880 \text{ mm}^3$ 
 $B = 2 \cdot 3 \text{ mm} = 6 \text{ mm}$      $I = 26980000 \text{ mm}^4$ 
 $21400 \cdot 146880 / (6 \cdot 26980000) = 19,5 \text{ N/mm}^2$ 
Kies 2x kettinglas lasdoorsnede: 3,0mm
 $L_1 = 80 \text{ mm}$      $L_w = 75 \text{ mm}$ 


Constructieadviesbureau		ing. ██████████		Varsseveld	
Samengesteld profiel 250x100x5mm					
Projectnaam				Projectnummer	
Omschrijving				Constructeur	
Opdrachtgever				Eenheden m, kN, kNm	
Bestand		N:\30200\30260-IK\Constructie\Berekeningen\Losse bestanden\Samengesteld profiel.mxft			

## 1. Doorsnede eigenschappen

### DOORSNEDEN

ID	Label	Materiaal	Mat. code	Elasticiteit	Poisson	Dichtheid
1	KK150/100/5	S235H(EN10219-1)	Hol koudg. stall	2.1000e+08	0.30	78.50
2	KK150/100/5	Gat				
3	KK100/5	S235H(EN10219-1)	Hol koudg. stall	2.1000e+08	0.30	78.50
4	KK100/5	Gat				
				kPa		kPa

### REFERENTIEPUNTEN

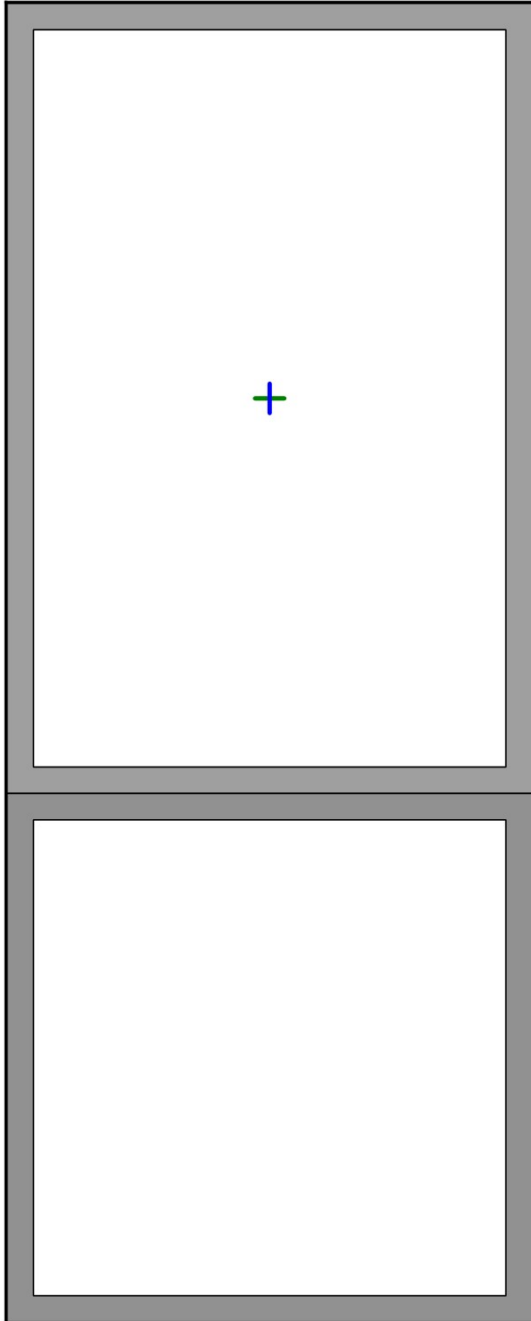
Doorsneden	ID	Y	-Z	Label	ID	Y	-Z	Label
KK150/100/5	1	-50.00	-75.00		3	50.00	75.00	
	2	50.00	-75.00		4	-50.00	75.00	
KK150/100/5	5	-45.00	-70.00		7	45.00	70.00	
	6	45.00	-70.00		8	-45.00	70.00	
KK100/5	9	-50.00	-175.00		11	50.00	-75.00	
	10	50.00	-175.00		12	-50.00	-75.00	
KK100/5	13	-45.00	-170.00		15	45.00	-80.00	
	14	45.00	-170.00		16	-45.00	-80.00	
		mm	mm				mm	mm

### EIGENSCHAPPEN

Resultaten tov globale assen						
Totaal oppervlak	A	4300	mm2	Axiale stijfheid	EA	9030e+05 N
Gewogen oppervlak	Ai	4300	mm2	Buigstijfheid	Ely	5666e+09 Nmm2
Gew./lengte	g	0.34	N/mm		Elz	1441e+09 Nmm2
Zwaartepunt	cy	0.00	mm	Torsiestijfheid	Glp	2733e+09 Nmm2
	cz	55.23	mm	Grootste afstand	ey	50.00 mm
Traagheidsmoment	ly	2698e+04	mm4		ez	130.23 mm
	lz	686e+04	mm4	Weerstandsmoment	Wy	207e+03 mm3
Polair traagh.mom.	lp	3384e+04	mm4		Wz	137e+03 mm3
Traagheidsproduct	lyz	0e+02	mm4			

Constructieadviesbureau		ing. [REDACTED]	Varsseveld
Samengesteld profiel 250x100x5mm			
Projectnaam		Projectnummer	
Omschrijving		Constructeur	
Opdrachtgever		Eenheden	m, kN, kNm
Bestand	N:\30200\30260-IK\Constructie\Berekeningen\Losse bestanden\Samengesteld profiel.mxf		

#### 1. DOORSNEDE EIGENSCHAPPEN PROFIELVORM



Nr. 30260-IK

Bl. ..

Datum: ..

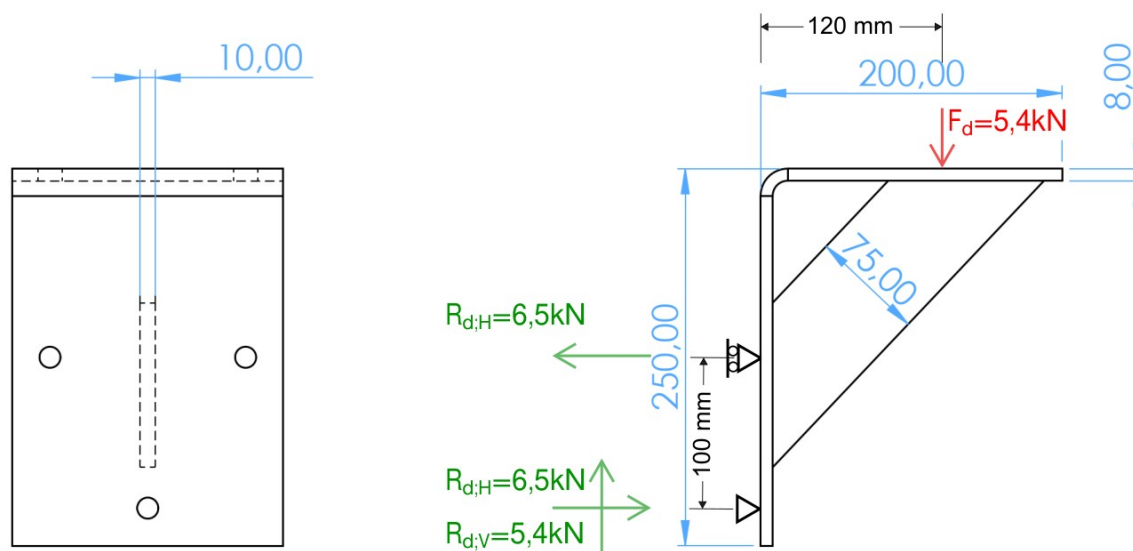
Schaal: ..

### Oplegging 1

Oplegging van toepassing bij koker 150x100x3 &amp; koker 80x80x3mm

Betonwand d=250mm

C20/25 (i.h.w. te controleren)



Kies hoeklijn 250x200x8mm + schot t=10mm      3M12 Fischer Superbond ankers  
zie berekening conform Fischer rekentool op de volgende pagina's.



C-FIX 1.125.0.0  
Versie  
2024.9.10.5.24  
Datum  
18-11-2024

**fischer Benelux B.V**

Gooimeer 14  
1411 AX Naarden  
Telefoon: +31 35 6 95 66 66  
Fax: +31 35 6 95 66 99  
techniek@fischer.nl  
www.fischer.nl

**Opmerking**

Oplegging 1 Ankers

**Ontwerp specificaties**

**Anker**

Systeem	fischer Superbond systeem
Injectie mortel	FIS SB 390 S
In te klemmen deel	Ankerstang FIS A M 12 x 180 R, Roestvast staal, Sterkte klasse A4-70
Verankeringsdiepte	140 mm

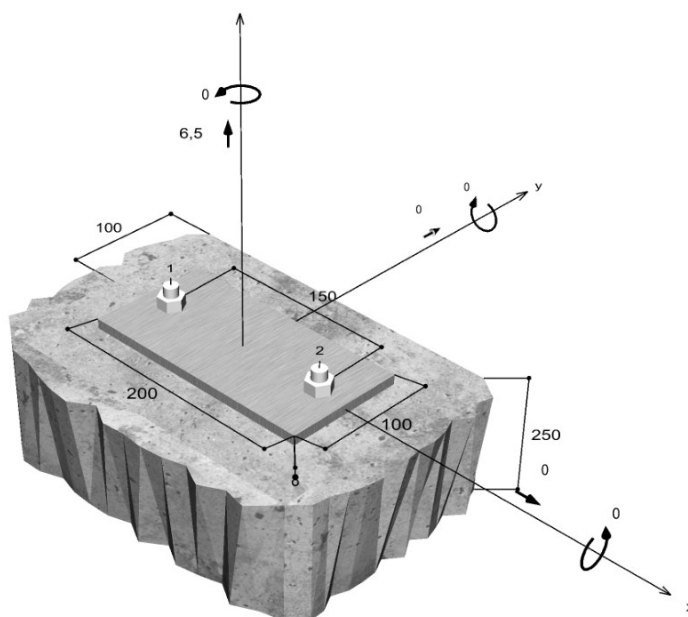
Berekeningsgegevens	Ankerdimensionering in Beton volgens European Technical Assessment ETA-12/0258, Optie 1, Afgegeven op 24-10-2023
---------------------	--



**Geometrie / Belastingen**

mm, kN, kNm

Rekenwaarden (inclusief veiligheidsfactoren aan de belastingzijde)



Niet op schaal



C-FIX 1.125.0.0  
Versie  
2024.9.10.5.24  
Datum  
18-11-2024

fischer



12

## Gegevens

Ontwerpmethode      Ontwerp methode EN 1992-4:2017 Verlijmdde ankers  
Ondergrond          C20/25, EN 206  
Betonsituatie        Gescheurd, Droog boorgat  
Temperatuur bereik   24 °C Lange duur temperatuur, 40 °C Korte duur  
temperatuur  
Wapening            Geen of normale wapening. Zonder randwapening. Met  
Splijtwapening  
Boormethode        Hamerboren  
Installatie           Voorsteek montage  
Ruimte in doorvoergat   Doorvoergat niet gevult  
Belasting type       Statisch  
Afstand montage    Geen Buiging  
Ankerplaat afmetingen   200 mm x 100 mm x 8 mm  
Profiel type          Geen

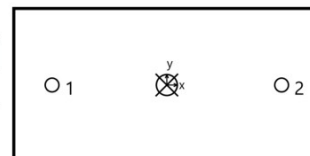
## Rekenwaarde van de belastingen \*)

#	N <sub>Ed</sub> kN	V <sub>Ed,x</sub> kN	V <sub>Ed,y</sub> kN	M <sub>Ed,x</sub> kNm	M <sub>Ed,y</sub> kNm	M <sub>T,Ed</sub> kNm	Belasting type
1	6,50	0,00	0,00	0,00	0,00	0,00	Statisch

\*) Inclusief benodigde veiligheidsfactoren voor de belasting

## Resulterende ankerkracht

Anker nr.	Trekkracht kN	Dwarskracht kN	Dwarskracht x kN	Dwarskracht y kN
1	3,25	0,00	0,00	0,00
2	3,25	0,00	0,00	0,00



Max. betondrukspanning :      0,00 ‰  
Max. betondrukspanning :      0,0 N/mm<sup>2</sup>  
Resultante trekkracht :        6,50 kN , X/Y positie ( 0 / 0 )  
Resultante drukkracht :        0,00 kN , X/Y positie ( 0 / 0 )

## Opneembare rekenwaarde trekkracht

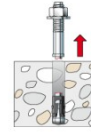
Berekening	Belasting kN	Capaciteit kN	Uitnutting β <sub>N</sub> %
Staalbreuk *	3,25	31,55	10,3
Gecombineerd uittrekken en betonkegelbreuk	6,50	29,81	21,8
Betonkegel breuk	6,50	32,11	20,2

\* Maatgevende anker



### Staalbreuk

$$N_{Ed} \leq \frac{N_{Rk,s}}{\gamma_{Ms}} \quad (N_{Rd,s})$$



$N_{Rk,s}$ kN	$\gamma_{Ms}$	$N_{Rd,s}$ kN	$N_{Ed}$ kN	$\beta_{N,s}$ %
59,00	1,87	31,55	3,25	10,3

Anker nr.	$\beta_{N,s}$ %	Groep N°	Maatgevende Beta
1	10,3	1	$\beta_{N,s;1}$
2	10,3	2	$\beta_{N,s;2}$

### Gecombineerd uittrekken en betonkegelbreuk

$$N_{Ed} \leq \frac{N_{Rk,p}}{\gamma_{Mp}} \quad (N_{Rd,p})$$



$$N_{Rk,p} = N_{Rk,p}^0 \cdot \frac{A_{p,N}}{A_{p,N}^0} \cdot \Psi_{s,Np} \cdot \Psi_{g,Np} \cdot \Psi_{ec,Np} \cdot \Psi_{re,Np}$$

 Vergelijking  
(7.13)

$$N_{Rk,p} = 39,58kN \cdot \frac{120.228mm^2}{99.856mm^2} \cdot 0,890 \cdot 1,054 \cdot 1,000 \cdot 1,000 = 44,72kN$$

$$N_{Rk,p}^0 = \Psi_{sus} \cdot \pi \cdot d \cdot h_{ef} \cdot \tau_{Rk} = 1,00 \cdot \pi \cdot 12mm \cdot 140mm \cdot 7,5N/mm^2 = 39,58kN$$

 Vergelijking  
(7.14)

$$\Psi_{sus} = 1,00$$

 Vergelijking  
(7.14a)

$$\alpha_{sus} = 0,00 \leq \Psi_{sus}^0 = 0,84$$

$$s_{cr,Np} = \min\left(7,3 \cdot d \cdot \left(\Psi_{sus} \cdot \tau_{Rk,ucr}\right)^{0,5}; 3 \cdot h_{ef}\right)$$

 Vergelijking  
(7.15)

$$s_{cr,Np} = \min\left(7,3 \cdot 12mm \cdot \left(1,00 \cdot 13,0N/mm^2\right)^{0,5}; 3 \cdot 140mm\right) = 316mm$$

$$c_{cr,Np} = \frac{s_{cr,Np}}{2} = \frac{316mm}{2} = 158mm$$

 Vergelijking  
(7.16)

$$\Psi_{s,Np} = 0,7 + 0,3 \cdot \frac{c}{c_{cr,Np}} = 0,7 + 0,3 \cdot \frac{100mm}{158mm} = 0,890 \leq 1$$

 Vergelijking  
(7.20)

$$\Psi_{g,Np} = \Psi_{g,Np}^0 - \sqrt{\frac{s}{s_{cr,Np}}} \cdot \left(\Psi_{g,Np}^0 - 1\right) = 1,175 - \sqrt{\frac{150mm}{316mm}} \cdot (1,175 - 1) = 1,054 \geq 1$$

 Vergelijking  
(7.17)

$$\Psi_{g,Np}^0 = \sqrt{n} - \left(\sqrt{n} - 1\right) \cdot \left(\frac{\tau_{Rk}}{\tau_{Rk,c}}\right)^{1,5}$$

 Vergelijking  
(7.18)

$$\Psi_{g,Np}^0 = \sqrt{2} - \left(\sqrt{2} - 1\right) \cdot \left(\frac{7,5N/mm^2}{10,8N/mm^2}\right)^{1,5} = 1,175 \geq 1$$

$$\tau_{Rk,c} = \frac{k_3}{\pi \cdot d} \sqrt{h_{ef} \cdot f_{ck}} = \frac{7,7}{3,14 \cdot 12mm} \sqrt{140mm \cdot 20,0N/mm^2} = 10,8N/mm^2$$

 Vergelijking  
(7.19)

$$\Psi_{ec,Np} = \frac{1}{1 + \frac{2e_n}{s_{cr,Np}}} = \Psi_{ec,Npx} \cdot \Psi_{ec,Npy} = 1,000 \cdot 1,000 = 1,000 \leq 1$$

 Vergelijking  
 (7.21)

$$\Psi_{ec,Npx} = \frac{1}{1 + \frac{2 \cdot 0mm}{316mm}} = 1,000 \leq 1 \quad \Psi_{ec,Npy} = \frac{1}{1 + \frac{2 \cdot 0mm}{316mm}} = 1,000 \leq 1$$

$$\Psi_{re,Np} = 1,000$$

 Vergelijking  
 (7.5)

<b>N<sub>Rk,p</sub></b> kN	<b>Y<sub>Mp</sub></b>	<b>N<sub>Rd,p</sub></b> kN	<b>N<sub>Ed</sub></b> kN	<b>β<sub>N,p</sub></b> %
44,72	1,50	29,81	6,50	21,8

<b>Anker nr.</b>	<b>β<sub>N,p</sub></b> %	<b>Groep N°</b>	<b>Maatgevende Beta</b>
1, 2	21,8	1	β <sub>N,p;1</sub>

### Betonkegel breuk

$$N_{Ed} \leq \frac{N_{Rk,c}}{\gamma_{Mc}} \quad (N_{Rd,c})$$



$$N_{Rk,c} = N_{Rk,c}^0 \cdot \frac{A_{c,N}}{A_{c,N}^0} \cdot \Psi_{s,N} \cdot \Psi_{re,N} \cdot \Psi_{ec,N} \cdot \Psi_{M,N}$$

 Vergelijking  
 (7.1)

$$N_{Rk,c} = 57,04kN \cdot \frac{176.700mm^2}{176.400mm^2} \cdot 0,843 \cdot 1,000 \cdot 1,000 \cdot 1,000 = 48,16kN$$

$$N_{Rk,c}^0 = k_1 \cdot \sqrt{f_{ck}} \cdot h_{ef}^{1,5} = 7,7 \cdot \sqrt{20,0N/mm^2} \cdot (140mm)^{1,5} = 57,04kN$$

 Vergelijking  
 (7.2)

$$\Psi_{s,N} = 0,7 + 0,3 \cdot \frac{c}{c_{cr,N}} = 0,7 + 0,3 \cdot \frac{100mm}{210mm} = 0,843 \leq 1$$

 Vergelijking  
 (7.4)

$$\Psi_{re,N} = 1,000$$

 Vergelijking  
 (7.5)

$$\Psi_{ec,N} = \frac{1}{1 + \frac{2e_n}{s_{cr,N}}} \Rightarrow \Psi_{ec,Nx} \cdot \Psi_{ec,Ny} = 1,000 \cdot 1,000 = 1,000 \leq 1$$

 Vergelijking  
 (7.6)

$$\Psi_{ec,Nx} = \frac{1}{1 + \frac{2 \cdot 0mm}{420mm}} = 1,000 \leq 1 \quad \Psi_{ec,Ny} = \frac{1}{1 + \frac{2 \cdot 0mm}{420mm}} = 1,000 \leq 1$$

$$\Psi_{M,N} = 1,00 \geq 1$$

 Vergelijking  
 (7.7)

<b>N<sub>Rk,c</sub></b> kN	<b>Y<sub>Mc</sub></b>	<b>N<sub>Rd,c</sub></b> kN	<b>N<sub>Ed</sub></b> kN	<b>β<sub>N,c</sub></b> %
48,16	1,50	32,11	6,50	20,2

<b>Anker nr.</b>	<b>β<sub>N,c</sub></b> %	<b>Groep N°</b>	<b>Maatgevende Beta</b>
1, 2	20,2	1	β <sub>N,c;1</sub>



C-FIX 1.125.0.0  
Versie  
2024.9.10.5.24  
Datum  
18-11-2024



15

## Gecombineerde trek- en drukkracht

$$\beta_N = \beta_{N,p;1} = 0,22 \leq 1$$



Berekening succesvol

## Informatie betreffende de ankerplaat

### Ankerplaat details

Ankerplaat dikte zonder berekening gekozen

t = 8 mm

Profiel type

Geen

## Technische opmerkingen

Het overbrengen van de belasting op het beton wordt gecontroleerd voor de uiterste grenstoestand. Hierdoor zullen de controles voor het betonnen bouwdeel uitgevoerd moeten worden. Ter verificatie moeten de gegevens uit de huidige rekenmethode worden gehanteerd.



### Ankerplaat details

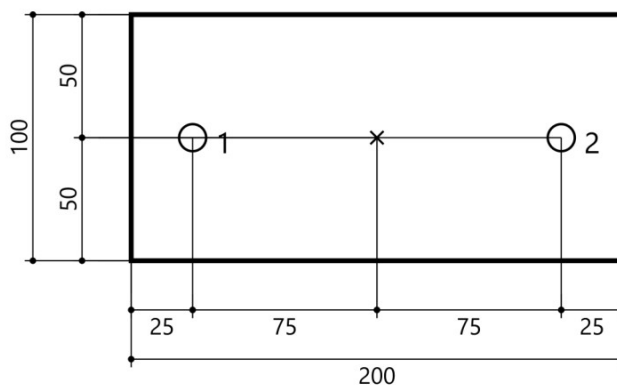
Voetplaat materiaal S 235 (st 37)  
 Ankerplaat dikte  $t = 8 \text{ mm}$   
 Doorvoergat in ankerplaat  $d_f = 14 \text{ mm}$

### Bijlage

Profiel type Geen

### Anker coördinaten

Anker nr.	x mm	y mm
1	-75	0
2	75	0



Nr. 30260-IK

Bl. ..

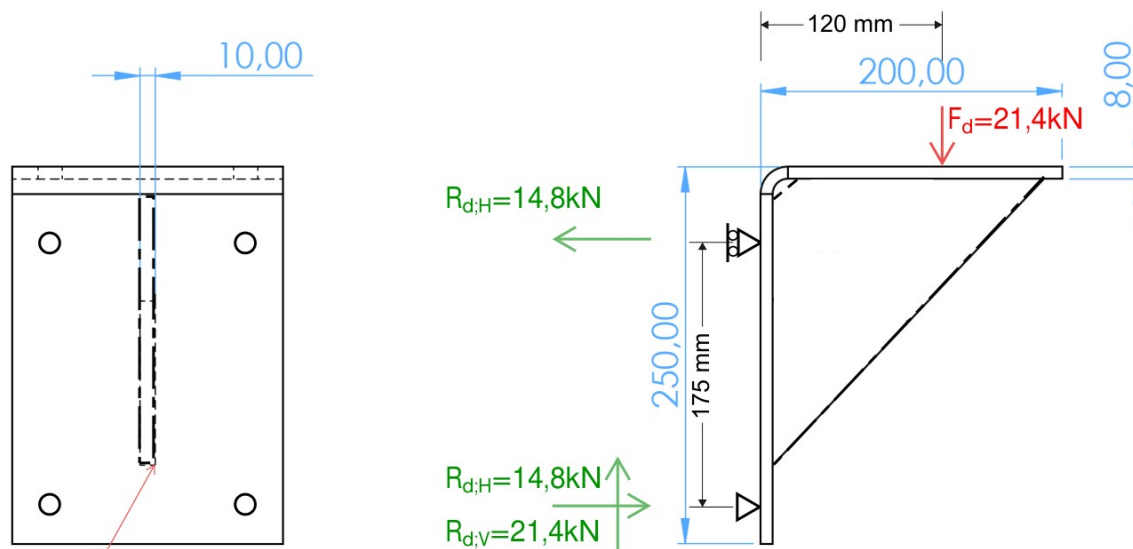
Datum: ..

Schaal: ..

## Oplegging 2

Oplegging van toepassing bij koker 250x100x5

Betonwand d=250mm C20/25 (i.h.w. te controleren)



Schot  $t=10\text{mm}$  tot bovenaan  
doorzetten.

Kies hoeklijn 250x200x10mm + schot  $t=10\text{mm}$  2x2M12 Fischer Superbond ankers  
zie berekening conform Fischer rekentool op de volgende pagina's.



## fischer Benelux B.V

Gooimeer 14  
1411 AX Naarden  
Telefoon: +31 35 6 95 66 66  
Fax: +31 35 6 95 66 99  
techniek@fischer.nl  
www.fischer.nl

### Opmerking

Oplegging 2 Ankers

## Ontwerp specificaties

### Anker

Systeem	fischer Superbond systeem
Injectie mortel	FIS SB 390 S
In te klemmen deel	Ankerstang FIS A M 12 x 180 R, Roestvast staal, Sterkte klasse A4-70
Verankeringsdiepte	140 mm

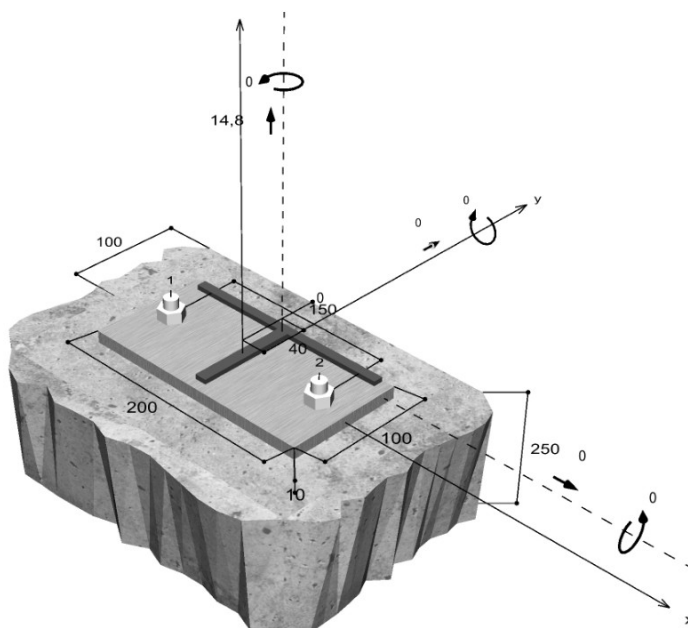
Berekeningsgegevens	Ankerdimensionering in Beton volgens European Technical Assessment ETA-12/0258, Optie 1, Afgegeven op 24-10-2023
---------------------	--



### Geometrie / Belastingen

mm, kN, kNm

Rekenwaarden (inclusief veiligheidsfactoren aan de belastingzijde)



Niet op schaal



C-FIX 1.125.0.0  
Versie  
2024.9.10.5.24  
Datum  
18-11-2024



## Gegevens

Ontwerpmethode	Ontwerp methode EN 1992-4:2017 Verlijmdde ankers
Ondergrond	C20/25, EN 206
Betonsituatie	Gescheurd, Droog boorgat
Temperatuur bereik	24 °C Lange duur temperatuur, 40 °C Korte duur temperatuur
Wapening	Geen of normale wapening. Zonder randwapening. Met Splijtwapening
Boormethode	Hamerboren
Installatie	Voorsteek montage
Ruimte in doorvoergat	Doorvoergat niet gevult
Belasting type	Statisch
Afstand montage	Geen Buiging
Ankerplaat afmetingen	200 mm x 100 mm x 10 mm
Profiel type	Aangepast profiel

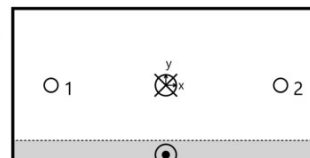
## Rekenwaarde van de belastingen \*)

#	N <sub>Ed</sub> kN	V <sub>Ed,x</sub> kN	V <sub>Ed,y</sub> kN	M <sub>Ed,x</sub> kNm	M <sub>Ed,y</sub> kNm	M <sub>T,Ed</sub> kNm	Belasting type
1	14,80	0,00	0,00	0,00	0,00	0,00	Statisch

\*) Inclusief benodigde veiligheidsfactoren voor de belasting

## Resulterende ankerkracht

Anker nr.	Trekkracht kN	Dwarskracht kN	Dwarskracht x kN	Dwarskracht y kN
1	13,93	0,00	0,00	0,00
2	13,93	0,00	0,00	0,00



Max. betondrukspanning :	0,31 ‰
Max. betondrukspanning :	9,3 N/mm <sup>2</sup>
Resultante trekkracht :	27,87 kN , X/Y positie ( 0 / 0 )
Resultante drukkracht :	13,07 kN , X/Y positie ( 0 / -45 )

## Opneembare rekenwaarde trekkracht

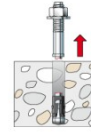
Berekening	Belasting kN	Capaciteit kN	Uitnutting $\beta_N$ %
Staalbreuk *	13,93	31,55	44,2
Gecombineerd uittrekken en betonkegelbreuk	27,87	29,81	93,5
Betonkegel breuk	27,87	32,11	86,8

\* Maatgevende anker



### Staalbreuk

$$N_{Ed} \leq \frac{N_{Rk,s}}{\gamma_{Ms}} \quad (N_{Rd,s})$$



$N_{Rk,s}$ kN	$\gamma_{Ms}$	$N_{Rd,s}$ kN	$N_{Ed}$ kN	$\beta_{N,s}$ %
59,00	1,87	31,55	13,93	44,2

Anker nr.	$\beta_{N,s}$ %	Groep N°	Maatgevende Beta
1	44,2	1	$\beta_{N,s;1}$
2	44,2	2	$\beta_{N,s;2}$

### Gecombineerd uittrekken en betonkegelbreuk

$$N_{Ed} \leq \frac{N_{Rk,p}}{\gamma_{Mp}} \quad (N_{Rd,p})$$



$$N_{Rk,p} = N_{Rk,p}^0 \cdot \frac{A_{p,N}}{A_{p,N}^0} \cdot \Psi_{s,Np} \cdot \Psi_{g,Np} \cdot \Psi_{ec,Np} \cdot \Psi_{re,Np}$$

 Vergelijking  
(7.13)

$$N_{Rk,p} = 39,58kN \cdot \frac{120.228mm^2}{99.856mm^2} \cdot 0,890 \cdot 1,054 \cdot 1,000 \cdot 1,000 = 44,72kN$$

$$N_{Rk,p}^0 = \Psi_{sus} \cdot \pi \cdot d \cdot h_{ef} \cdot \tau_{Rk} = 1,00 \cdot \pi \cdot 12mm \cdot 140mm \cdot 7,5N/mm^2 = 39,58kN$$

 Vergelijking  
(7.14)

$$\Psi_{sus} = 1,00$$

 Vergelijking  
(7.14a)

$$\alpha_{sus} = 0,00 \leq \Psi_{sus}^0 = 0,84$$

$$s_{cr,Np} = \min \left( 7,3 \cdot d \cdot \left( \Psi_{sus} \cdot \tau_{Rk,ucr} \right)^{0,5} ; 3 \cdot h_{ef} \right)$$

 Vergelijking  
(7.15)

$$s_{cr,Np} = \min \left( 7,3 \cdot 12mm \cdot \left( 1,00 \cdot 13,0N/mm^2 \right)^{0,5} ; 3 \cdot 140mm \right) = 316mm$$

$$c_{cr,Np} = \frac{s_{cr,Np}}{2} = \frac{316mm}{2} = 158mm$$

 Vergelijking  
(7.16)

$$\Psi_{s,Np} = 0,7 + 0,3 \cdot \frac{c}{c_{cr,Np}} = 0,7 + 0,3 \cdot \frac{100mm}{158mm} = 0,890 \leq 1$$

 Vergelijking  
(7.20)

$$\Psi_{g,Np} = \Psi_{g,Np}^0 - \sqrt{\frac{s}{s_{cr,Np}}} \cdot \left( \Psi_{g,Np}^0 - 1 \right) = 1,175 - \sqrt{\frac{150mm}{316mm}} \cdot \left( 1,175 - 1 \right) = 1,054 \geq 1$$

 Vergelijking  
(7.17)

$$\Psi_{g,Np}^0 = \sqrt{n} - \left( \sqrt{n} - 1 \right) \cdot \left( \frac{\tau_{Rk}}{\tau_{Rk,c}} \right)^{1,5}$$

 Vergelijking  
(7.18)

$$\Psi_{g,Np}^0 = \sqrt{2} - \left( \sqrt{2} - 1 \right) \cdot \left( \frac{7,5N/mm^2}{10,8N/mm^2} \right)^{1,5} = 1,175 \geq 1$$

$$\tau_{Rk,c} = \frac{k_3}{\pi \cdot d} \sqrt{h_{ef} \cdot f_{ck}} = \frac{7,7}{3,14 \cdot 12mm} \sqrt{140mm \cdot 20,0N/mm^2} = 10,8N/mm^2$$

 Vergelijking  
(7.19)

$$\Psi_{ec,Np} = \frac{1}{1 + \frac{2e_n}{s_{cr,Np}}} = \Psi_{ec,Npx} \cdot \Psi_{ec,Npy} = 1,000 \cdot 1,000 = 1,000 \leq 1$$

 Vergelijking  
 (7.21)

$$\Psi_{ec,Npx} = \frac{1}{1 + \frac{2 \cdot 0mm}{316mm}} = 1,000 \leq 1 \quad \Psi_{ec,Npy} = \frac{1}{1 + \frac{2 \cdot 0mm}{316mm}} = 1,000 \leq 1$$

$$\Psi_{re,Np} = 1,000$$

 Vergelijking  
 (7.5)

<b>N<sub>Rk,p</sub></b> kN	<b>Y<sub>Mp</sub></b>	<b>N<sub>Rd,p</sub></b> kN	<b>N<sub>Ed</sub></b> kN	<b>β<sub>N,p</sub></b> %
44,72	1,50	29,81	27,87	93,5

<b>Anker nr.</b>	<b>β<sub>N,p</sub></b> %	<b>Groep N°</b>	<b>Maatgevende Beta</b>
1, 2	93,5	1	β <sub>N,p;1</sub>

### Betonkegel breuk

$$N_{Ed} \leq \frac{N_{Rk,c}}{\gamma_{Mc}} \quad (N_{Rd,c})$$



$$N_{Rk,c} = N_{Rk,c}^0 \cdot \frac{A_{c,N}}{A_{c,N}^0} \cdot \Psi_{s,N} \cdot \Psi_{re,N} \cdot \Psi_{ec,N} \cdot \Psi_{M,N}$$

 Vergelijking  
 (7.1)

$$N_{Rk,c} = 57,04kN \cdot \frac{176.700mm^2}{176.400mm^2} \cdot 0,843 \cdot 1,000 \cdot 1,000 \cdot 1,000 = 48,16kN$$

$$N_{Rk,c}^0 = k_1 \cdot \sqrt{f_{ck}} \cdot h_{ef}^{1,5} = 7,7 \cdot \sqrt{20,0N/mm^2} \cdot (140mm)^{1,5} = 57,04kN$$

 Vergelijking  
 (7.2)

$$\Psi_{s,N} = 0,7 + 0,3 \cdot \frac{c}{c_{cr,N}} = 0,7 + 0,3 \cdot \frac{100mm}{210mm} = 0,843 \leq 1$$

 Vergelijking  
 (7.4)

$$\Psi_{re,N} = 1,000$$

 Vergelijking  
 (7.5)

$$\Psi_{ec,N} = \frac{1}{1 + \frac{2e_n}{s_{cr,N}}} \Rightarrow \Psi_{ec,Nx} \cdot \Psi_{ec,Ny} = 1,000 \cdot 1,000 = 1,000 \leq 1$$

 Vergelijking  
 (7.6)

$$\Psi_{ec,Nx} = \frac{1}{1 + \frac{2 \cdot 0mm}{420mm}} = 1,000 \leq 1 \quad \Psi_{ec,Ny} = \frac{1}{1 + \frac{2 \cdot 0mm}{420mm}} = 1,000 \leq 1$$

$$\Psi_{M,N} = 1,00 \geq 1$$

 Vergelijking  
 (7.7)

<b>N<sub>Rk,c</sub></b> kN	<b>Y<sub>Mc</sub></b>	<b>N<sub>Rd,c</sub></b> kN	<b>N<sub>Ed</sub></b> kN	<b>β<sub>N,c</sub></b> %
48,16	1,50	32,11	27,87	86,8

<b>Anker nr.</b>	<b>β<sub>N,c</sub></b> %	<b>Groep N°</b>	<b>Maatgevende Beta</b>
1, 2	86,8	1	β <sub>N,c;1</sub>



C-FIX 1.125.0.0  
Versie  
2024.9.10.5.24  
Datum  
18-11-2024



23

## Gecombineerde trek- en drukkracht

$$\beta_N = \beta_{N,p;1} = 0,93 \leq 1$$



Berekening succesvol

## Informatie betreffende de ankerplaat

### Ankerplaat details

Ankerplaat dikte zonder berekening gekozen

t = 10 mm

Profiel type

Aangepast profiel

## Technische opmerkingen

Het overbrengen van de belasting op het beton wordt gecontroleerd voor de uiterste grenstoestand. Hierdoor zullen de controles voor het betonnen bouwdeel uitgevoerd moeten worden. Ter verificatie moeten de gegevens uit de huidige rekenmethode worden gehanteerd.

## Montage gegevens

### Anker

#### Systeem

Injectie mortel

#### fischer Superbond systeem

FIS SB 390 S (overige koker afmetingen beschikbaar)

Artikel 519451

In te klemmen deel

Ankerstang FIS A M 12 x 180 R, Roestvast staal, Sterkte klasse A4-70

Artikel 90452



Accessoires

FIS MR Plus

Artikel 545853

FIS DM S Pro

Artikel 563337

Perslucht reinigingspistool

Artikel 93286

Olievrije perslucht ( $p \geq 6$  bar)

Door de klant.

BSD 14

Artikel 1491

SDS koppeling met M8 aansluiting

Artikel 530332

SDS Plus-V II 14/160/210

Artikel 531816

of alternatief

FHD 14/250/380

Artikel 546598

Hamer boren met of zonder

stofafzuiging

Alternatieve kokers

FIS SB 585 S

Artikel 519452

De getoonde kokers zijn een alternatief op de gekozen koker met dezelfde goedkeuring.

### Installatie details

Draad diameter

M 12

Boor diameter

$d_0 = 14$  mm

Boorgat diepte

$h_1 = 140$  mm

Verankeringsdiepte

$h_{ef} = 140$  mm

Boormethode

Hamerboren

Boorgat reiniging

Twee keer uitblazen met compressor, twee keer borstelen, twee keer uitblazen met compressor. No borehole cleaning required in case of using a hollow drill bit, e.g. fischer FHD.

Installatie

Voorsteek montage

Ruimte in doorvoergat

Doorvoergat niet gevult

Maximaal aandraaimoment

$T_{inst,max} = 40,0$  Nm

Sleutelwijdte

19 mm

Ankerplaat dikte

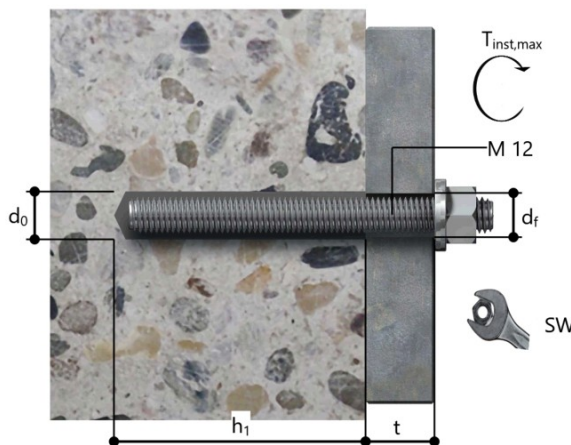
$t = 10$  mm

$t_{fix}$

$t_{fix} = 10$  mm

$T_{fix,max}$

Mortelvolumen per boorgat 12 ml/6 Schaal eenheden



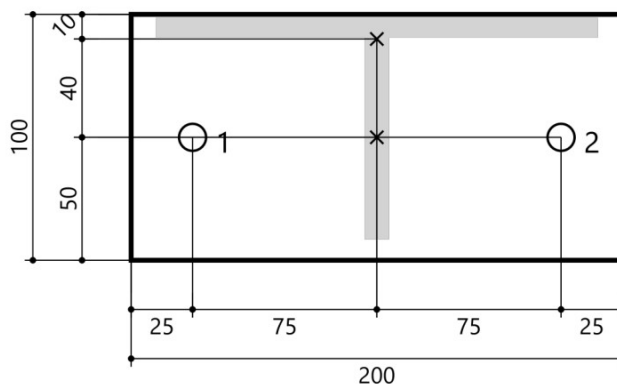
### Ankerplaat details

Voetplaat materiaal Niet beschikbaar  
 Ankerplaat dikte  $t = 10 \text{ mm}$   
 Doorvoergat in ankerplaat  $d_f = 14 \text{ mm}$

### Bijlage

Profiel type Aangepast profiel

Profiel afmeting	mm
Hoogte	90
Lijfdikte	10
Flens dikte	8
Aangrijppunt belasting op Y-as	9



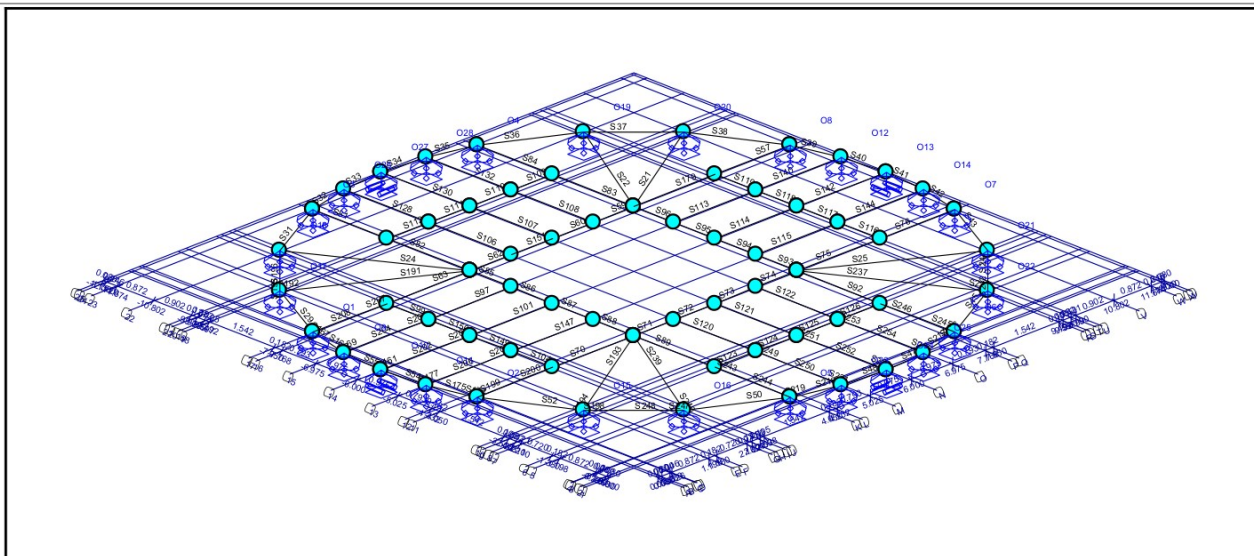
### Anker coördinaten

Anker nr.	x mm	y mm
1	-75	0
2	75	0

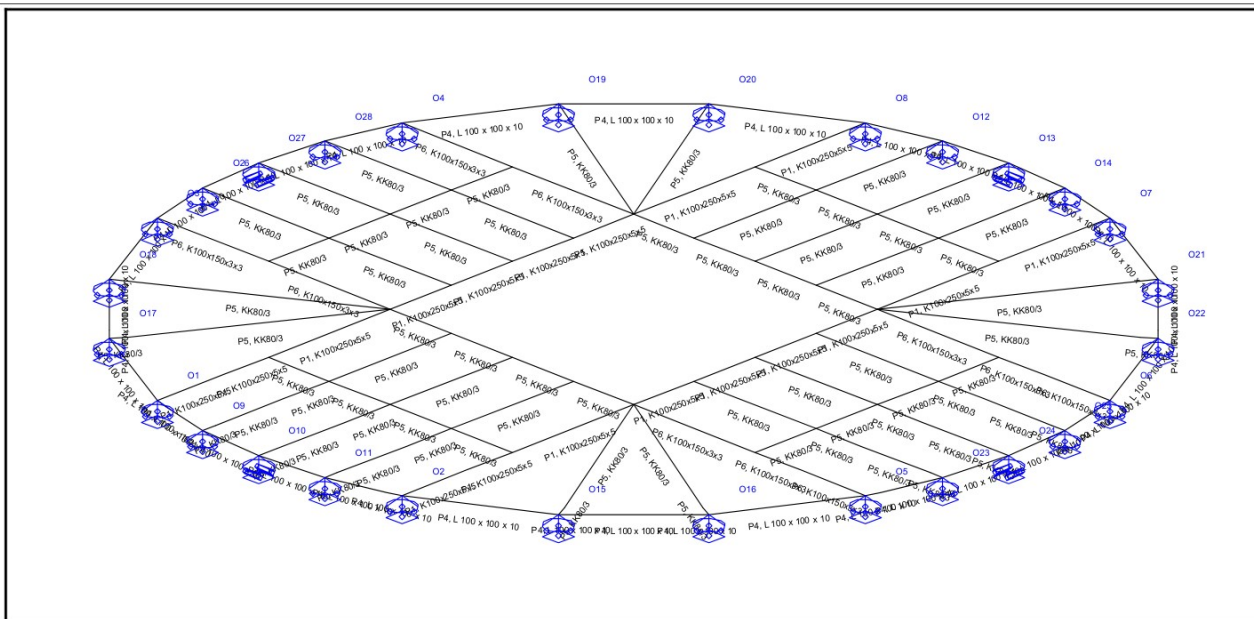


Constructieadviesbureau		ing. [REDACTED]		Varsseveld	
Vlakke afdekking Wopereis					
Project name			Project number		
Part description			Structural engineer		
Client			Units	m, kN, kNm	
File	N:\30200\30260-IK\Constructie\Berekeningen\Losse bestanden\250313 3D.mxf				

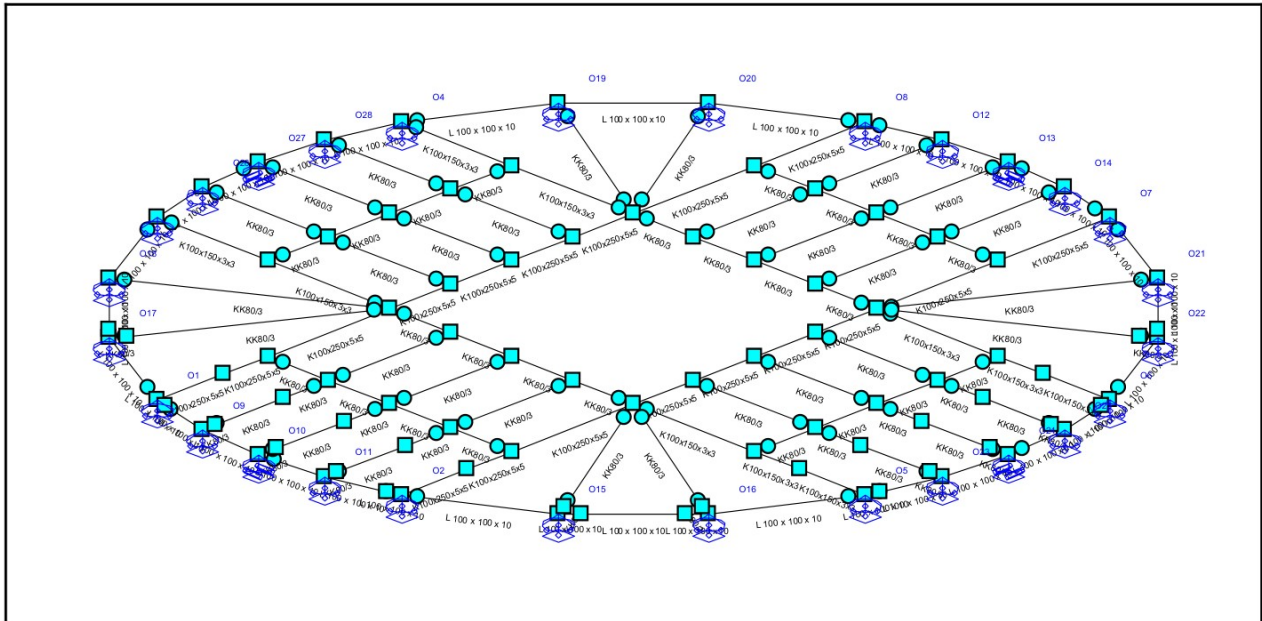
PIC. GEOMETRIE 1 MAATVOERING



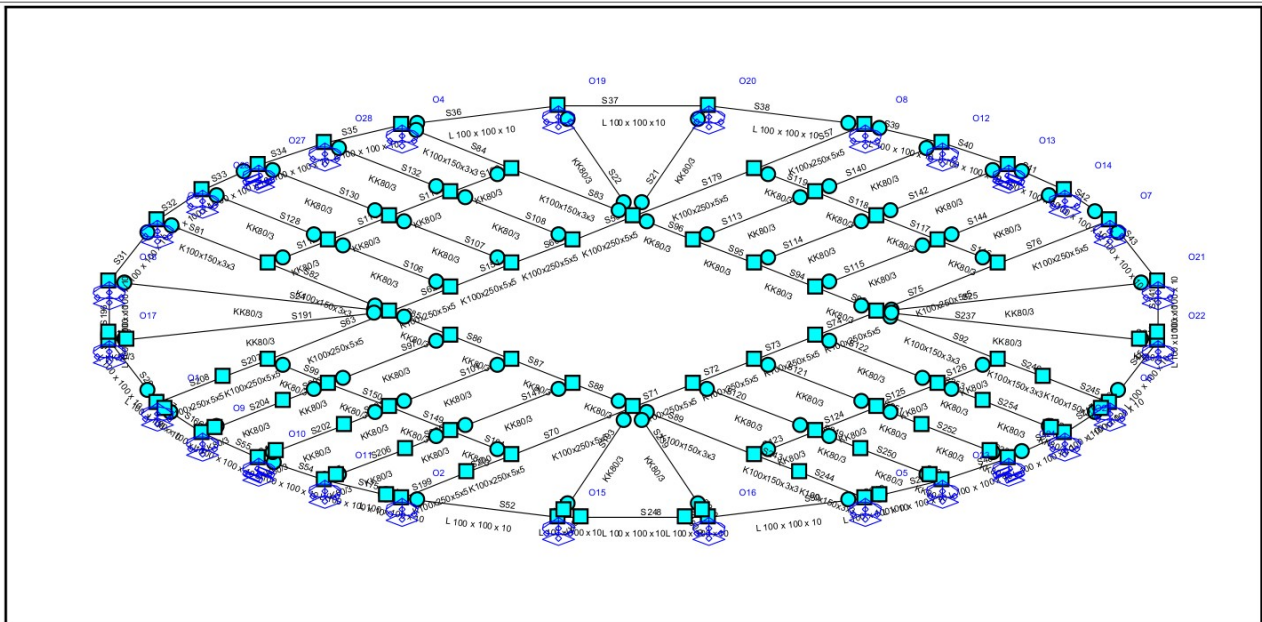
PIC. GEOMETRIE 2 PROFIELEN



PIC. AS 1



PIC. AS 5



## MEMBERS

Member	Node B	Node E	X-B	Y-B	Z-B	X-E	Y-E	Z-E	Length	Section	Position
S21	K41	K42	7,950	-7,950	0,000	10,802	-9,597	0,000	3,293	P5	0,000 - L(3,293)
S22	K41	K43	7,950	-7,950	0,000	9,597	-10,802	0,000	3,293	P5	0,000 - L(3,293)
S24	K44	K46	4,050	-7,950	0,000	2,403	-10,802	0,000	3,293	P5	0,000 - L(3,293)
S25	K47	K48	7,950	-4,050	0,000	10,802	-2,403	0,000	3,293	P5	0,000 - L(3,293)
S29	K2	K45	0,326	-7,950	0,000	1,198	-9,597	0,000	1,864	P4	0,000 - L(1,864)
S31	K46	K3	2,403	-10,802	0,000	4,050	-11,674	0,000	1,864	P4	0,000 - L(1,864)
S32	K3	K16	4,050	-11,674	0,000	5,025	-11,920	0,000	1,006	P4	0,000 - L(1,006)
S33	K16	K18	5,025	-11,920	0,000	6,000	-12,000	0,000	0,978	P4	0,000 - L(0,978)
S34	K18	K20	6,000	-12,000	0,000	6,975	-11,920	0,000	0,978	P4	0,000 - L(0,978)
S35	K20	K8	6,975	-11,920	0,000	7,950	-11,674	0,000	1,006	P4	0,000 - L(1,006)
S36	K8	K43	7,950	-11,674	0,000	9,597	-10,802	0,000	1,864	P4	0,000 - L(1,864)
S37	K43	K42	9,597	-10,802	0,000	10,802	-9,597	0,000	1,704	P4	0,000 - L(1,704)
S38	K42	K1	10,802	-9,597	0,000	11,674	-7,950	0,000	1,864	P4	0,000 - L(1,864)
S39	K1	K28	11,674	-7,950	0,000	11,920	-6,975	0,000	1,006	P4	0,000 - L(1,006)
S40	K28	K30	11,920	-6,975	0,000	12,000	-6,000	0,000	0,978	P4	0,000 - L(0,978)
S41	K30	K32	12,000	-6,000	0,000	11,920	-5,025	0,000	0,978	P4	0,000 - L(0,978)

Constructieadviesbureau			ing.			Varsseveld				
Member	Node B	Node E	X-B	Y-B	Z-B	X-E	Y-E	Z-E	Length Section	Position
S42	K32	K6	11,920	-5,025	0,000	11,674	-4,050	0,000	1,006 P4	0,000 - L(1,006)
S43	K6	K48	11,674	-4,050	0,000	10,802	-2,403	0,000	1,864 P4	0,000 - L(1,864)
S45	K49	K7	9,597	-1,198	0,000	7,950	-0,326	0,000	1,864 P4	0,000 - L(1,864)
S47	K26	K24	6,975	-0,080	0,000	6,000	0,000	0,000	0,978 P4	0,000 - L(0,978)
S48	K24	K22	6,000	0,000	0,000	5,025	-0,080	0,000	0,978 P4	0,000 - L(0,978)
S50	K4	K52	4,050	-0,326	0,000	2,403	-1,198	0,000	1,864 P4	0,000 - L(1,864)
S52	K51	K5	1,198	-2,403	0,000	0,326	-4,050	0,000	1,864 P4	0,000 - L(1,864)
S54	K40	K38	0,080	-5,025	0,000	0,000	-6,000	0,000	0,978 P4	0,000 - L(0,978)
S55	K38	K36	0,000	-6,000	0,000	0,080	-6,975	0,000	0,978 P4	0,000 - L(0,978)
S57	K1	K10	11,674	-7,950	0,000	9,900	-7,950	0,000	1,774 P1	0,000 - L(1,774)
S59	K41	K19	7,950	-7,950	0,000	6,975	-7,950	0,000	0,975 P1	0,000 - L(0,975)
S60	K19	K17	6,975	-7,950	0,000	6,000	-7,950	0,000	0,975 P1	0,000 - L(0,975)
S62	K15	K44	5,025	-7,950	0,000	4,050	-7,950	0,000	0,975 P1	0,000 - L(0,975)
S63	K44	K34	4,050	-7,950	0,000	2,100	-7,950	0,000	1,950 P1	0,000 - L(1,950)
S70	K33	K50	2,100	-4,050	0,000	4,050	-4,050	0,000	1,950 P1	0,000 - L(1,950)
S71	K50	K21	4,050	-4,050	0,000	5,025	-4,050	0,000	0,975 P1	0,000 - L(0,975)
S72	K21	K23	5,025	-4,050	0,000	6,000	-4,050	0,000	0,975 P1	0,000 - L(0,975)
S73	K23	K25	6,000	-4,050	0,000	6,975	-4,050	0,000	0,975 P1	0,000 - L(0,975)
S74	K25	K47	6,975	-4,050	0,000	7,950	-4,050	0,000	0,975 P1	0,000 - L(0,975)
S75	K47	K9	7,950	-4,050	0,000	9,900	-4,050	0,000	1,950 P1	0,000 - L(1,950)
S76	K9	K6	9,900	-4,050	0,000	11,674	-4,050	0,000	1,774 P1	0,000 - L(1,774)
S81	K3	K14	4,050	-11,674	0,000	4,050	-9,900	0,000	1,774 P6	0,000 - L(1,774)
S82	K14	K44	4,050	-9,900	0,000	4,050	-7,950	0,000	1,950 P6	0,000 - L(1,950)
S83	K41	K13	7,950	-7,950	0,000	7,950	-9,900	0,000	1,950 P6	0,000 - L(1,950)
S84	K13	K8	7,950	-9,900	0,000	7,950	-11,674	0,000	1,774 P6	0,000 - L(1,774)
S85	K44	K35	4,050	-7,950	0,000	4,050	-6,975	0,000	0,975 P5	0,000 - L(0,975)
S86	K35	K37	4,050	-6,975	0,000	4,050	-6,000	0,000	0,975 P5	0,000 - L(0,975)
S87	K37	K39	4,050	-6,000	0,000	4,050	-5,025	0,000	0,975 P5	0,000 - L(0,975)
S88	K39	K50	4,050	-5,025	0,000	4,050	-4,050	0,000	0,975 P5	0,000 - L(0,975)
S89	K50	K11	4,050	-4,050	0,000	4,050	-2,100	0,000	1,950 P6	0,000 - L(1,950)
S92	K12	K47	7,950	-2,100	0,000	7,950	-4,050	0,000	1,950 P6	0,000 - L(1,950)
S93	K47	K31	7,950	-4,050	0,000	7,950	-5,025	0,000	0,975 P5	0,000 - L(0,975)
S94	K31	K29	7,950	-5,025	0,000	7,950	-6,000	0,000	0,975 P5	0,000 - L(0,975)
S95	K29	K27	7,950	-6,000	0,000	7,950	-6,975	0,000	0,975 P5	0,000 - L(0,975)
S96	K27	K41	7,950	-6,975	0,000	7,950	-7,950	0,000	0,975 P5	0,000 - L(0,975)
S97	K35	K53	4,050	-6,975	0,000	2,100	-6,975	0,000	1,950 P5	0,000 - L(1,950)
S99	K53	K34	2,100	-6,975	0,000	2,100	-7,950	0,000	0,975 P5	0,000 - L(0,975)
S101	K37	K54	4,050	-6,000	0,000	2,100	-6,000	0,000	1,950 P5	0,000 - L(1,950)
S104	K33	K55	2,100	-4,050	0,000	2,100	-5,025	0,000	0,975 P5	0,000 - L(0,975)
S106	K15	K56	5,025	-7,950	0,000	5,025	-9,900	0,000	1,950 P5	0,000 - L(1,950)
S107	K17	K57	6,000	-7,950	0,000	6,000	-9,900	0,000	1,950 P5	0,000 - L(1,950)
S108	K19	K58	6,975	-7,950	0,000	6,975	-9,900	0,000	1,950 P5	0,000 - L(1,950)
S109	K13	K58	7,950	-9,900	0,000	6,975	-9,900	0,000	0,975 P5	0,000 - L(0,975)
S110	K58	K57	6,975	-9,900	0,000	6,000	-9,900	0,000	0,975 P5	0,000 - L(0,975)
S111	K57	K56	6,000	-9,900	0,000	5,025	-9,900	0,000	0,975 P5	0,000 - L(0,975)
S112	K56	K14	5,025	-9,900	0,000	4,050	-9,900	0,000	0,975 P5	0,000 - L(0,975)
S113	K27	K59	7,950	-6,975	0,000	9,900	-6,975	0,000	1,950 P5	0,000 - L(1,950)
S114	K29	K60	7,950	-6,000	0,000	9,900	-6,000	0,000	1,950 P5	0,000 - L(1,950)
S115	K31	K61	7,950	-5,025	0,000	9,900	-5,025	0,000	1,950 P5	0,000 - L(1,950)
S116	K9	K61	9,900	-4,050	0,000	9,900	-5,025	0,000	0,975 P5	0,000 - L(0,975)
S117	K61	K60	9,900	-5,025	0,000	9,900	-6,000	0,000	0,975 P5	0,000 - L(0,975)
S118	K60	K59	9,900	-6,000	0,000	9,900	-6,975	0,000	0,975 P5	0,000 - L(0,975)
S119	K59	K10	9,900	-6,975	0,000	9,900	-7,950	0,000	0,975 P5	0,000 - L(0,975)
S120	K21	K62	5,025	-4,050	0,000	5,025	-2,100	0,000	1,950 P5	0,000 - L(1,950)
S121	K23	K63	6,000	-4,050	0,000	6,000	-2,100	0,000	1,950 P5	0,000 - L(1,950)
S122	K25	K64	6,975	-4,050	0,000	6,975	-2,100	0,000	1,950 P5	0,000 - L(1,950)
S123	K11	K62	4,050	-2,100	0,000	5,025	-2,100	0,000	0,975 P5	0,000 - L(0,975)
S124	K62	K63	5,025	-2,100	0,000	6,000	-2,100	0,000	0,975 P5	0,000 - L(0,975)
S125	K63	K64	6,000	-2,100	0,000	6,975	-2,100	0,000	0,975 P5	0,000 - L(0,975)
S126	K64	K12	6,975	-2,100	0,000	7,950	-2,100	0,000	0,975 P5	0,000 - L(0,975)
S128	K56	K16	5,025	-9,900	0,000	5,025	-11,920	0,000	2,020 P5	0,000 - L(2,020)
S130	K57	K18	6,000	-9,900	0,000	6,000	-12,000	0,000	2,100 P5	0,000 - L(2,100)
S132	K58	K20	6,975	-9,900	0,000	6,975	-11,920	0,000	2,020 P5	0,000 - L(2,020)
S140	K59	K28	9,900	-6,975	0,000	11,920	-6,975	0,000	2,020 P5	0,000 - L(2,020)
S142	K60	K30	9,900	-6,000	0,000	12,000	-6,000	0,000	2,100 P5	0,000 - L(2,100)
S144	K61	K32	9,900	-5,025	0,000	11,920	-5,025	0,000	2,020 P5	0,000 - L(2,020)
S147	K39	K55	4,050	-5,025	0,000	2,100	-5,025	0,000	1,950 P5	0,000 - L(1,950)
S149	K55	K54	2,100	-5,025	0,000	2,100	-6,000	0,000	0,975 P5	0,000 - L(0,975)



Member	Node B	Node E	X-B	Y-B	Z-B	X-E	Y-E	Z-E	Length	Section	Position
S150	K54	K53	2,100	-6,000	0,000	2,100	-6,975	0,000	0,975	P5	0,000 - L(0,975)
S151	K17	K15	6,000	-7,950	0,000	5,025	-7,950	0,000	0,975	P1	0,000 - L(0,975)
S161	K74	K38	0,280	-6,000	0,000	0,000	-6,000	0,000	0,280	P5	0,000 - L(0,280)
S166	K36	K78	0,080	-6,975	0,000	0,280	-7,768	0,000	0,818	P4	0,000 - L(0,818)
S167	K78	K2	0,280	-7,768	0,000	0,326	-7,950	0,000	0,188	P4	0,000 - L(0,188)
S169	K77	K36	0,280	-6,975	0,000	0,080	-6,975	0,000	0,200	P5	0,000 - L(0,200)
S174	K5	K81	0,326	-4,050	0,000	0,280	-4,232	0,000	0,188	P4	0,000 - L(0,188)
S175	K81	K40	0,280	-4,232	0,000	0,080	-5,025	0,000	0,818	P4	0,000 - L(0,818)
S177	K82	K40	0,280	-5,025	0,000	0,080	-5,025	0,000	0,200	P5	0,000 - L(0,200)
S179	K10	K41	9,900	-7,950	0,000	7,950	-7,950	0,000	1,950	P1	0,000 - L(1,950)
S191	K44	K93	4,050	-7,950	0,000	1,380	-9,492	0,000	3,083	P5	0,000 - L(3,083)
S192	K93	K45	1,380	-9,492	0,000	1,198	-9,597	0,000	0,210	P5	0,000 - L(0,210)
S193	K50	K87	4,050	-4,050	0,000	1,380	-2,508	0,000	3,083	P5	0,000 - L(3,083)
S194	K87	K51	1,380	-2,508	0,000	1,198	-2,403	0,000	0,210	P5	0,000 - L(0,210)
S195	K45	K94	1,198	-9,597	0,000	1,380	-9,779	0,000	0,257	P4	0,000 - L(0,257)
S196	K94	K46	1,380	-9,779	0,000	2,403	-10,802	0,000	1,447	P4	0,000 - L(1,447)
S198	K86	K51	1,380	-2,221	0,000	1,198	-2,403	0,000	0,257	P4	0,000 - L(0,257)
S199	K5	K88	0,326	-4,050	0,000	1,380	-4,050	0,000	1,054	P1	0,000 - L(1,054)
S200	K88	K33	1,380	-4,050	0,000	2,100	-4,050	0,000	0,720	P1	0,000 - L(0,720)
S201	K54	K90	2,100	-6,000	0,000	1,380	-6,000	0,000	0,720	P5	0,000 - L(0,720)
S202	K90	K74	1,380	-6,000	0,000	0,280	-6,000	0,000	1,100	P5	0,000 - L(1,100)
S203	K53	K91	2,100	-6,975	0,000	1,380	-6,975	0,000	0,720	P5	0,000 - L(0,720)
S204	K91	K77	1,380	-6,975	0,000	0,280	-6,975	0,000	1,100	P5	0,000 - L(1,100)
S205	K55	K89	2,100	-5,025	0,000	1,380	-5,025	0,000	0,720	P5	0,000 - L(0,720)
S206	K89	K82	1,380	-5,025	0,000	0,280	-5,025	0,000	1,100	P5	0,000 - L(1,100)
S207	K34	K92	2,100	-7,950	0,000	1,380	-7,950	0,000	0,720	P1	0,000 - L(0,720)
S208	K92	K2	1,380	-7,950	0,000	0,326	-7,950	0,000	1,054	P1	0,000 - L(1,054)
S216	K7	K102	7,950	-0,326	0,000	7,768	-0,280	0,000	0,188	P4	0,000 - L(0,188)
S217	K102	K26	7,768	-0,280	0,000	6,975	-0,080	0,000	0,818	P4	0,000 - L(0,818)
S218	K22	K98	5,025	-0,080	0,000	4,232	-0,280	0,000	0,818	P4	0,000 - L(0,818)
S219	K98	K4	4,232	-0,280	0,000	4,050	-0,326	0,000	0,188	P4	0,000 - L(0,188)
S221	K99	K22	5,025	-0,280	0,000	5,025	-0,080	0,000	0,200	P5	0,000 - L(0,200)
S223	K100	K24	6,000	-0,280	0,000	6,000	0,000	0,000	0,280	P5	0,000 - L(0,280)
S225	K101	K26	6,975	-0,280	0,000	6,975	-0,080	0,000	0,200	P5	0,000 - L(0,200)
S237	K47	K113	7,950	-4,050	0,000	9,492	-1,380	0,000	3,083	P5	0,000 - L(3,083)
S238	K113	K49	9,492	-1,380	0,000	9,597	-1,198	0,000	0,210	P5	0,000 - L(0,210)
S239	K50	K107	4,050	-4,050	0,000	2,508	-1,380	0,000	3,083	P5	0,000 - L(3,083)
S240	K107	K52	2,508	-1,380	0,000	2,403	-1,198	0,000	0,210	P5	0,000 - L(0,210)
S241	K48	K114	10,802	-2,403	0,000	9,779	-1,380	0,000	1,447	P4	0,000 - L(1,447)
S242	K114	K49	9,779	-1,380	0,000	9,597	-1,198	0,000	0,257	P4	0,000 - L(0,257)
S243	K11	K108	4,050	-2,100	0,000	4,050	-1,380	0,000	0,720	P6	0,000 - L(0,720)
S244	K108	K4	4,050	-1,380	0,000	4,050	-0,326	0,000	1,054	P6	0,000 - L(1,054)
S245	K7	K112	7,950	-0,326	0,000	7,950	-1,380	0,000	1,054	P6	0,000 - L(1,054)
S246	K112	K12	7,950	-1,380	0,000	7,950	-2,100	0,000	0,720	P6	0,000 - L(0,720)
S247	K52	K106	2,403	-1,198	0,000	2,221	-1,380	0,000	0,257	P4	0,000 - L(0,257)
S248	K106	K86	2,221	-1,380	0,000	1,380	-2,221	0,000	1,189	P4	0,000 - L(1,189)
S249	K62	K109	5,025	-2,100	0,000	5,025	-1,380	0,000	0,720	P5	0,000 - L(0,720)
S250	K109	K99	5,025	-1,380	0,000	5,025	-0,280	0,000	1,100	P5	0,000 - L(1,100)
S251	K63	K110	6,000	-2,100	0,000	6,000	-1,380	0,000	0,720	P5	0,000 - L(0,720)
S252	K110	K100	6,000	-1,380	0,000	6,000	-0,280	0,000	1,100	P5	0,000 - L(1,100)
S253	K64	K111	6,975	-2,100	0,000	6,975	-1,380	0,000	0,720	P5	0,000 - L(0,720)
S254	K111	K101	6,975	-1,380	0,000	6,975	-0,280	0,000	1,100	P5	0,000 - L(1,100)
-	-	-	m	m	m	m	m	m	m	-	-

## SECTIONS

Section	Section Name	Area	It	ly	Iz	Material	Angle
P1	K100x250x5x5	3.4000e-03	1.5933e-05	2.6528e-05	6.2533e-06	S235	0,0
P4	L 100 x 100 x 10	1.9155e-03	5.9133e-08	1.7668e-06	1.7668e-06	S235	0,0
P5	KK80/3	9.0855e-04	1.3696e-06	8.9060e-07	8.9060e-07	S235H(EN1021 9-1)	0,0
P6	K100x150x3x3	1.4640e-03	4.9997e-06	4.7348e-06	2.5330e-06	S235	0,0
-	-	m2	m4	m4	m4	-	°

## SECTION SHAPES

Section	Tapered	hB	hE	tf	tw	tf2	B	b1	b2	Castellate	Height
P1	No	0,250	0,250	0,0050	0,0050	0,0000	0,100	0,000	0,000	No	0,000
P6	No	0,150	0,150	0,0030	0,0030	0,0000	0,100	0,000	0,000	No	0,000

$$\cdot \quad \cdot \quad m \quad m \quad m \quad m \quad m \quad m \quad m \quad m \quad m$$

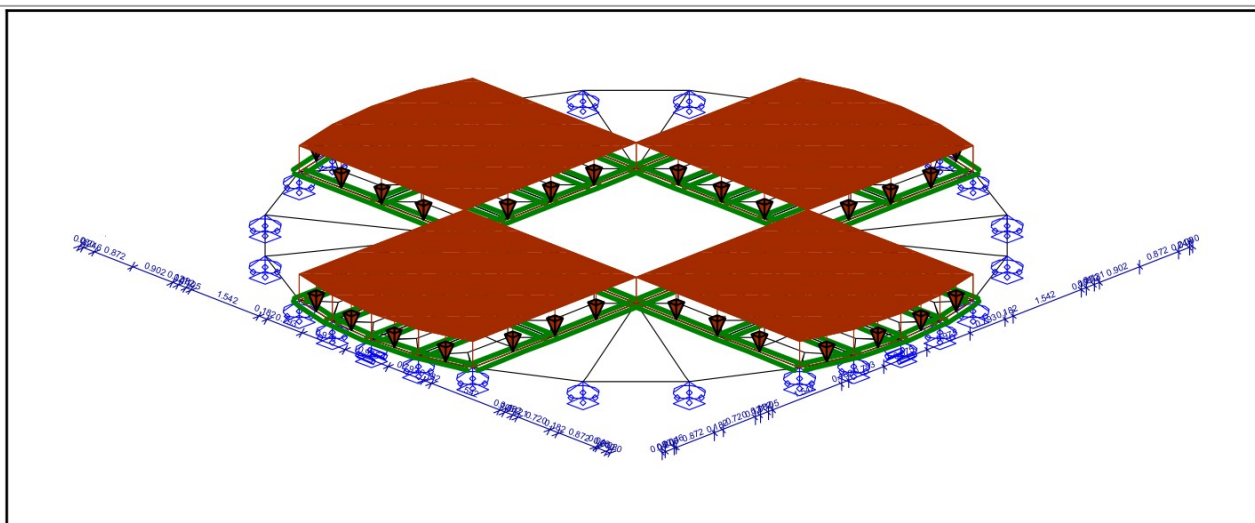
## MATERIALS

Material Name	Poison	Density	Youngs mod.	Lin. Exp.
S235H(EN10219-1)	0.30	78.50	2.1000e+08	12.0000e-06
S235	0.30	78.50	2.1000e+08	12.0000e-06
-	-	kN/m3	kN/m2	C°m

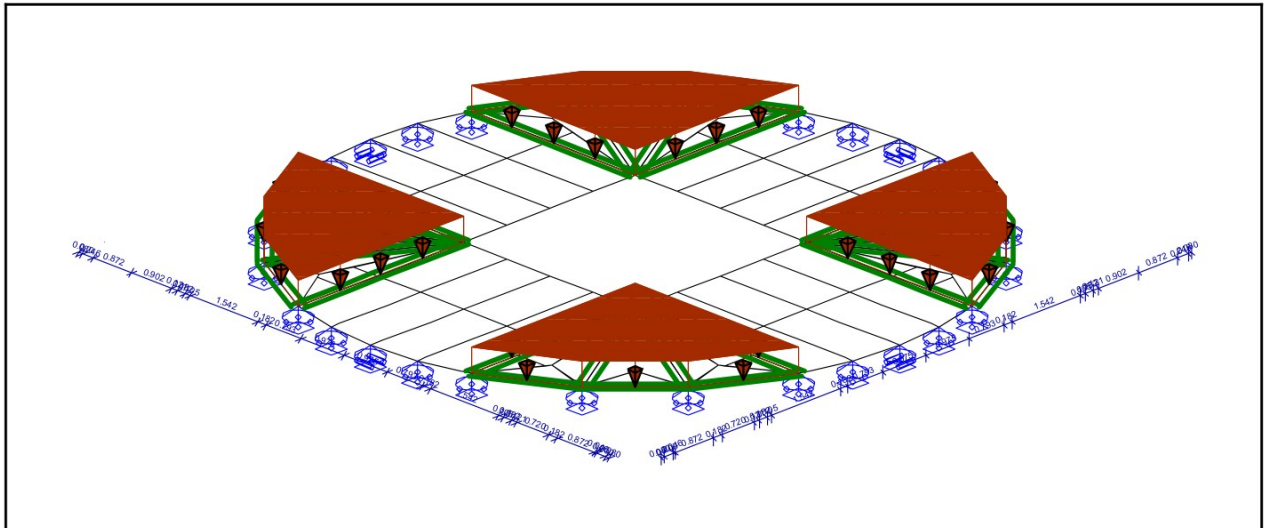
## SUPPORTS

Support	Object	Position	X	Y	Z	Xr	Yr	Zr	AngleXr	AngleYr	AngleZr
O1	K2	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O2	K5	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O3	K3	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O4	K8	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O5	K4	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O6	K7	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O7	K6	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O8	K1	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O9	K36	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O10	K38	0,000	Free	Fixed	Fixed	Free	Free	Free	0	0	0
O11	K40	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O12	K28	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O13	K30	0,000	Free	Fixed	Fixed	Free	Free	Free	0	0	0
O14	K32	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O15	K51	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O16	K52	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O17	K45	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O18	K46	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O19	K43	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O20	K42	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O21	K48	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O22	K49	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O23	K22	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O24	K24	0,000	Fixed	Free	Fixed	Free	Free	Free	0	0	0
O25	K26	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O26	K16	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
O27	K18	0,000	Fixed	Free	Fixed	Free	Free	Free	0	0	0
O28	K20	0,000	Free	Free	Fixed	Free	Free	Free	0	0	0
-	-	m	kNm/m	kNm/m	kNm/m	kNm/rad	kNm/rad	kNm/rad	°	°	°

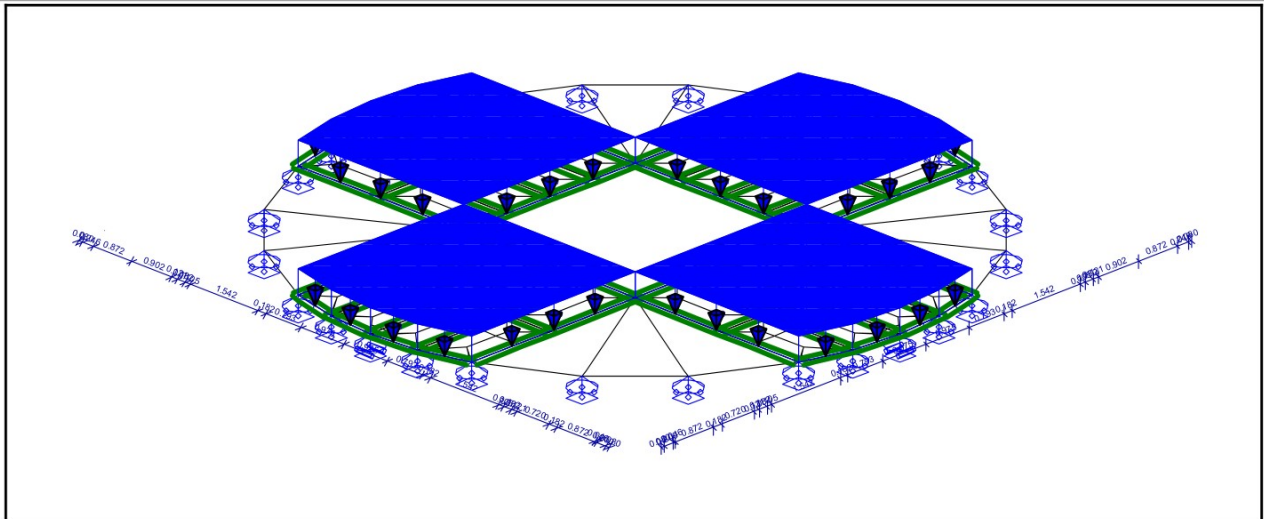
PIC. LASTEN B.G.1 PERMANENT



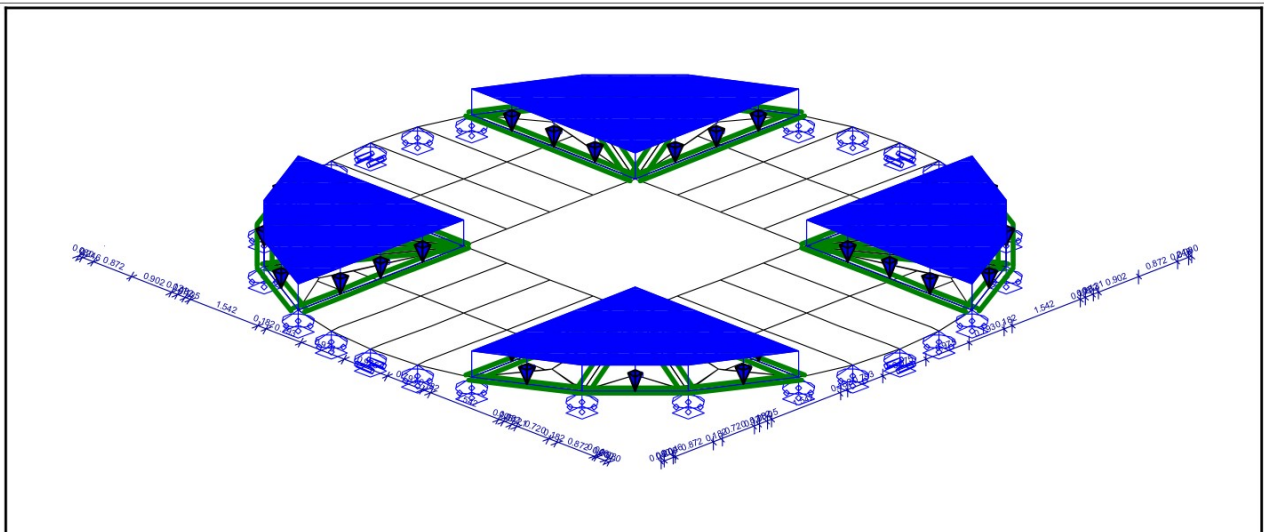
PIC. LASTEN B.G.2 PERMANENT



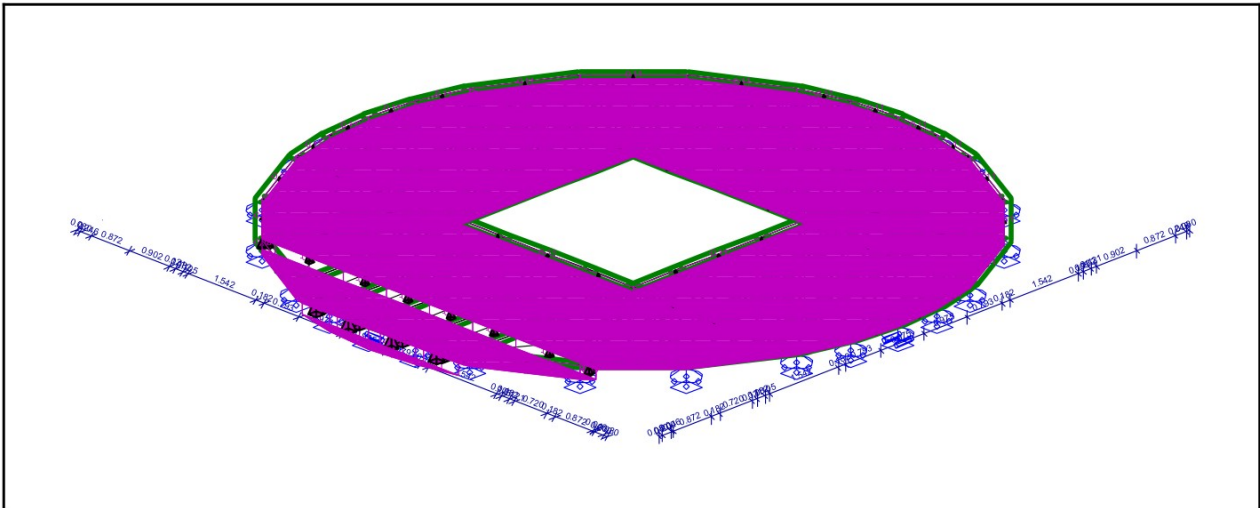
### PIC. LASTEN B.G.3 VERDEELDE VERANDERLIJKE BELASTING



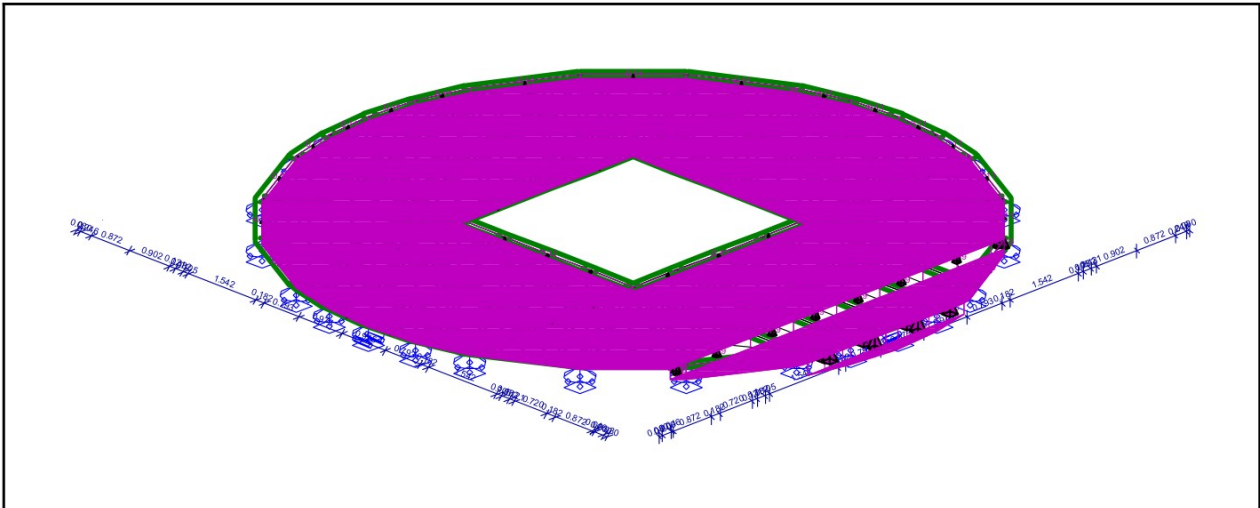
### PIC. LASTEN B.G.4 VERDEELDE VERANDERLIJKE BELASTING



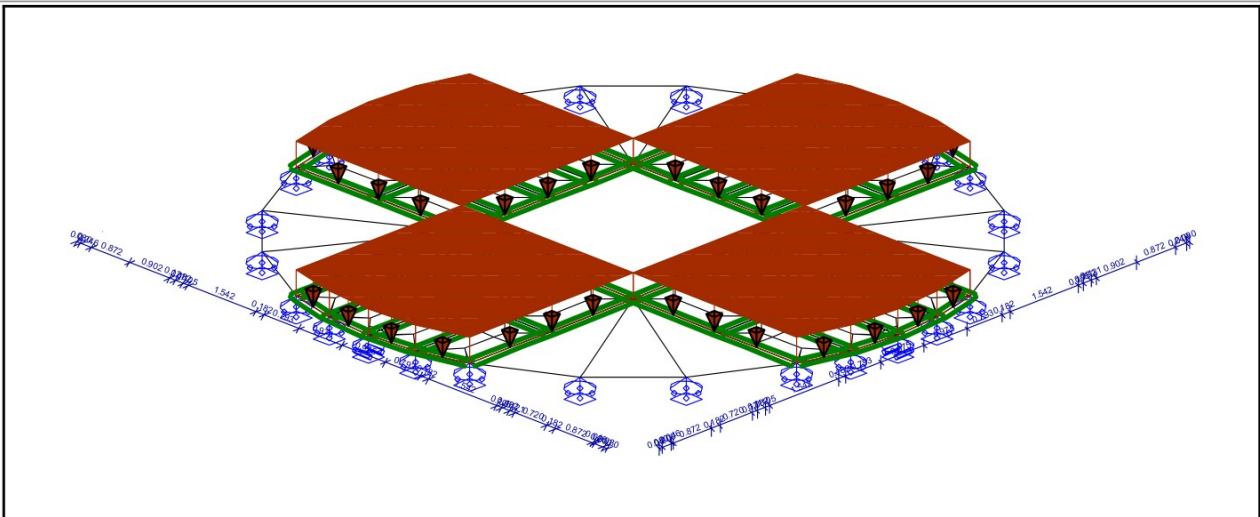
PIC. LASTEN B.G.5 WINDBELASTING LINKS RECHTS



PIC. LASTEN B.G.6 WINDBELASTING ONDER BOVEN



B.G.1: PERMANENT



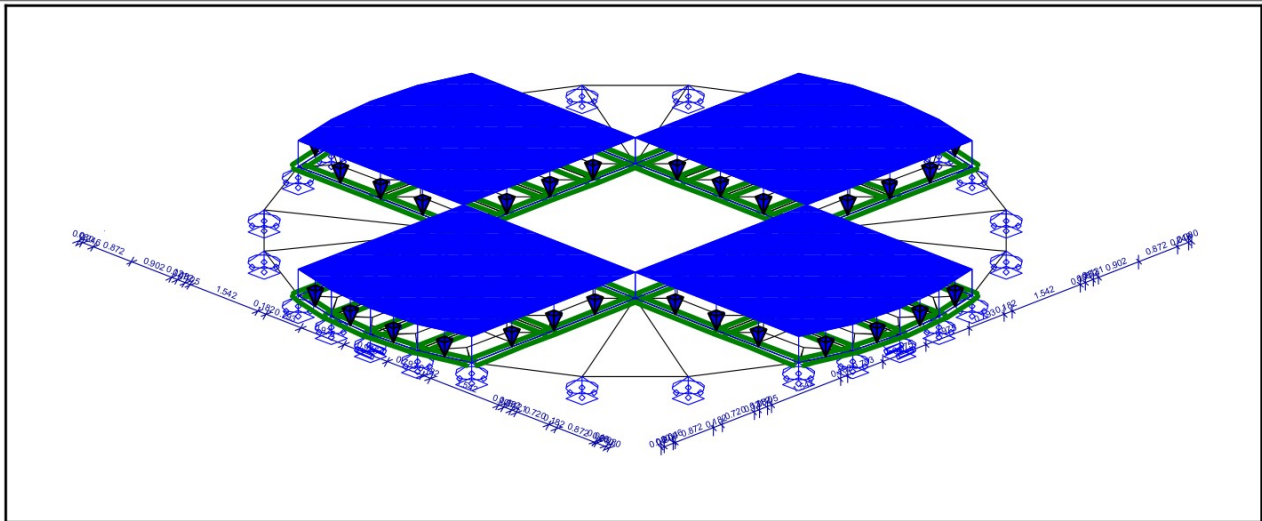
### B.G.1: PERMANENT

Type	Value Begin	Value End	Dist. Begin	Dist. End	Direction Member/Node
B.G.1: Permanent					



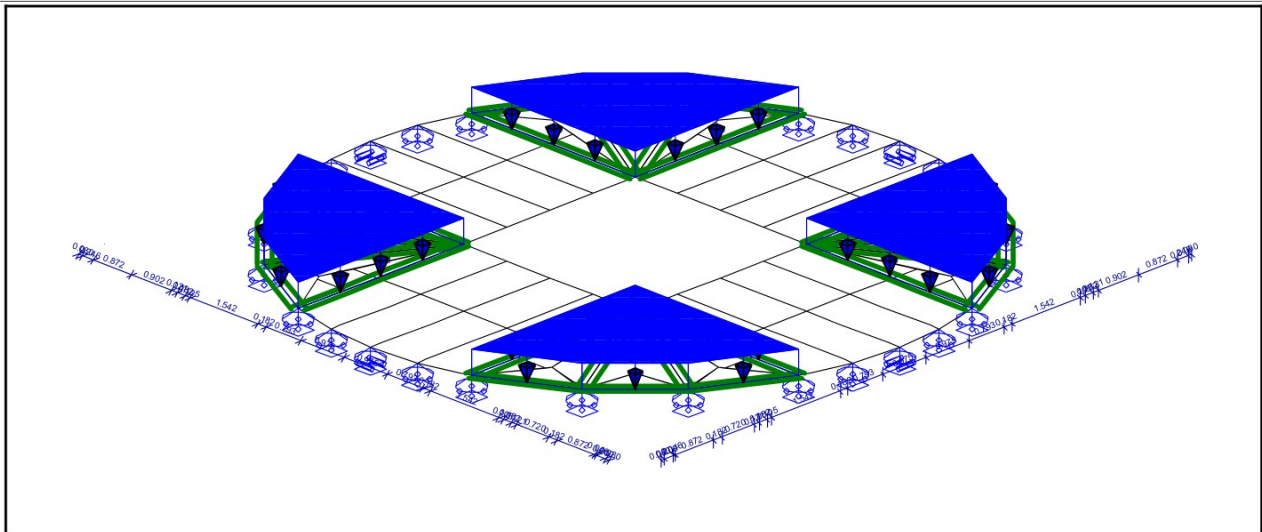


Type	Value Begin	Value End	Dist. Begin	Dist. End	Direction Member/Node
<b>B.G.2: Permanent</b>					
p	0,17				Z (0.326,-7.950,-0.000) (4.050,-7.950,-0.000) (4.050,-11.674,-0.000) (2.403,-10.802,-0.000) (1.198,-9.597,-0.000)
p	0,17				Z (7.950,-11.674,-0.000) (9.597,-10.802,-0.000) (10.802,-9.597,-0.000) (11.674,-7.950,-0.000) (7.950,-7.950,-0.000)
<b>Sum of loads</b>	<b>X:0,00</b>	<b>kN Y 0,00</b>	<b>kN Z:6,01</b>	<b>kN</b>	
-	-	-	m	m	- -

**B.G.3: VERDEELDE VERANDERLIJKE BELASTING****B.G.3: VERDEELDE VERANDERLIJKE BELASTING**

Type	Value Begin	Value End	Dist. Begin	Dist. End	Direction Member/Node
<b>B.G.3: Verdeelde veranderlijke belasting</b>					
p	1,00				Z (0.326,-7.950,-0.000) (4.050,-7.950,-0.000) (4.050,-4.050,-0.000) (0.326,-4.050,-0.000) (0.080,-5.025,-0.000) (0.000,-6.000,-0.000) (0.080,-6.975,-0.000)
p	1,00				Z (4.050,-7.950,-0.000) (4.050,-11.674,-0.000) (5.025,-11.920,-0.000) (6.000,-12.000,-0.000) (6.975,-11.920,-0.000) (7.950,-11.674,-0.000) (7.950,-7.950,-0.000)
p	1,00				Z (7.950,-7.950,-0.000) (11.674,-7.950,-0.000) (11.920,-6.975,-0.000) (12.000,-6.000,-0.000) (11.920,-5.025,-0.000) (11.674,-4.050,-0.000) (7.950,-4.050,-0.000)
p	1,00				Z (4.050,-4.050,-0.000) (7.950,-4.050,-0.000) (7.950,-0.326,-0.000) (6.975,-0.080,-0.000) (6.000,-0.000,-0.000) (5.025,-0.080,-0.000) (4.050,-0.326,-0.000)
<b>Sum of loads</b>	<b>X:0,00</b>	<b>kN Y 0,00</b>	<b>kN Z:61,28</b>	<b>kN</b>	
-	-	-	m	m	- -

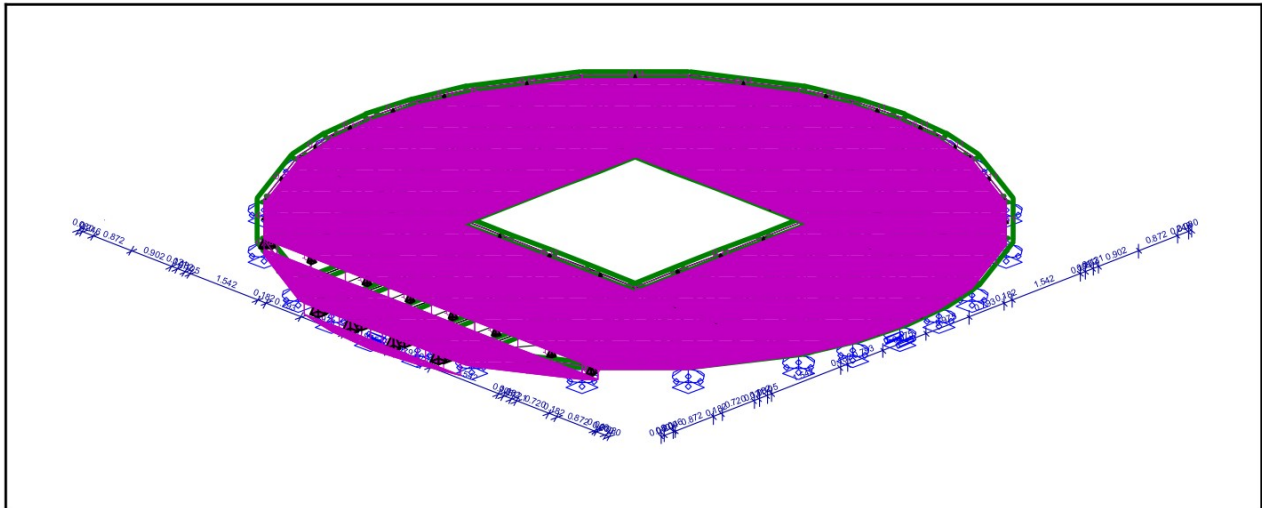
## B.G.4: VERDEELDE VERANDERLIJKE BELASTING



## B.G.4: VERDEELDE VERANDERLIJKE BELASTING

Type	Value Begin	Value End	Dist. Begin	Dist. End	Direction Member/Node
B.G.4: Verdeelde veranderlijke belasting					
p	1,00				Z (0.326,-7.950,-0.000) (1.198,-9.597,-0.000) (2.403,-10.802,-0.000) (4.050,-11.674,-0.000) (4.050,-7.950,-0.000)
p	1,00				Z (7.950,-11.674,-0.000) (9.597,-10.802,-0.000) (10.802,-9.597,-0.000) (11.674,-7.950,-0.000) (7.950,-7.950,-0.000)
p	1,00				Z (7.950,-4.050,-0.000) (11.674,-4.050,-0.000) (10.802,-2.403,-0.000) (9.597,-1.198,-0.000) (7.950,-0.326,-0.000)
p	1,00				Z (0.326,-4.050,-0.000) (4.050,-4.050,-0.000) (4.050,-0.326,-0.000) (2.403,-1.198,-0.000) (1.198,-2.403,-0.000)
Sum of loads	X:0,00	kN Y 0,00	kN Z: 35,38	kN	
-	-	-	m	m	- -

## B.G.5: WINDBELASTING LINKS RECHTS

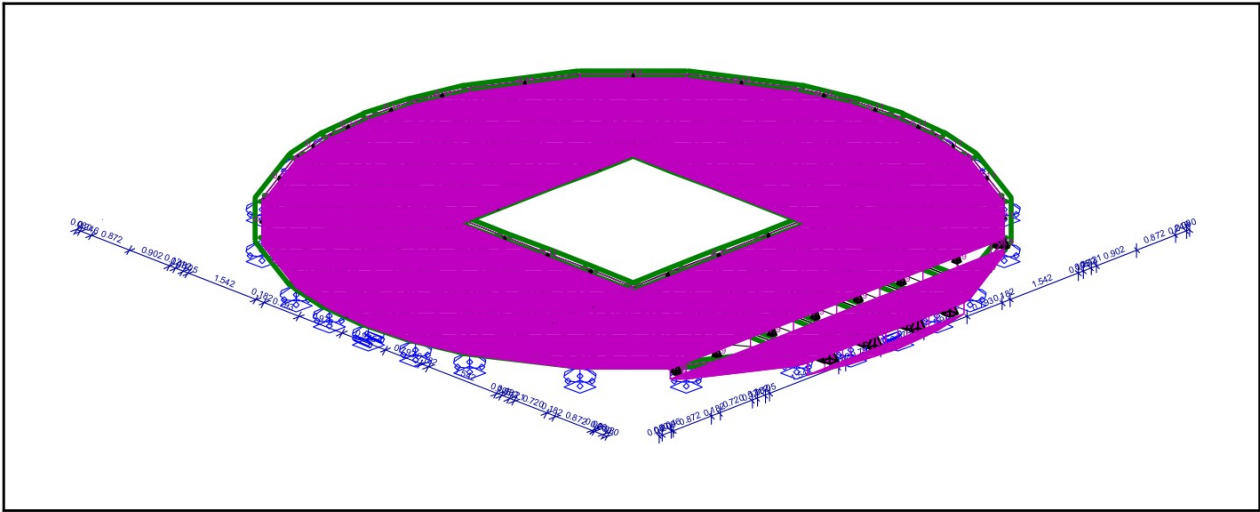


## B.G.5: WINDBELASTING LINKS RECHTS

Type	Value Begin	Value End	Dist. Begin	Dist. End	Direction Member/Node
<b>B.G.5: Windbelasting Links Rechts</b>					
p	-0,70				Z (0.280,-4.232,-0.000)
					(0.280,-5.025,-0.000)
					(0.280,-6.000,-0.000)
					(0.280,-6.975,-0.000)
					(0.280,-7.768,-0.000)
					(0.080,-6.975,-0.000)
					(0.000,-6.000,-0.000)
					(0.080,-5.025,-0.000)
p	-0,39				Z (1.380,-2.221,-0.000)
					(1.380,-2.508,-0.000)
					(1.380,-4.050,-0.000)
					(1.380,-5.025,-0.000)
					(1.380,-6.000,-0.000)
					(1.380,-6.975,-0.000)
					(1.380,-7.950,-0.000)
					(1.380,-9.492,-0.000)
					(1.380,-9.779,-0.000)
					(1.198,-9.597,-0.000)
					(0.326,-7.950,-0.000)
					(0.280,-7.768,-0.000)
					(0.280,-4.232,-0.000)
					(0.326,-4.050,-0.000)
p	-0,11				Z (1.380,-2.221,-0.000)
					(2.403,-1.198,-0.000)
					(4.050,-0.326,-0.000)
					(4.050,-11.674,-0.000)
					(2.403,-10.802,-0.000)
					(1.380,-9.779,-0.000)
p	-0,11				Z (4.050,-7.950,-0.000)
					(7.950,-7.950,-0.000)
					(7.950,-11.674,-0.000)
					(6.975,-11.920,-0.000)
					(6.000,-12.000,-0.000)
					(5.025,-11.920,-0.000)
					(4.050,-11.674,-0.000)
p	-0,11				Z (4.050,-4.050,-0.000)
					(4.050,-0.326,-0.000)
					(5.025,-0.080,-0.000)
					(6.000,-0.000,-0.000)
					(6.975,-0.080,-0.000)
					(7.950,-0.326,-0.000)
					(7.950,-4.050,-0.000)



Type	Value Begin	Value End	Dist. Begin	Dist. End	Direction Member/Node
<b>B.G.5: Windbelasting Links Rechts</b>					
p	-0,11				Z (7.950,-0.326,-0.000) (7.950,-11.674,-0.000) (9.597,-10.802,-0.000) (10.802,-9.597,-0.000) (11.674,-7.950,-0.000) (11.920,-6.975,-0.000) (12.000,-6.000,-0.000) (11.920,-5.025,-0.000) (11.674,-4.050,-0.000) (10.802,-2.403,-0.000) (9.597,-1.198,-0.000)
<b>Sum of loads</b>	<b>X:0,00</b>	<b>kN Y 0,00</b>	<b>kN Z: -13,05</b>	<b>kN</b>	
-	-	-	m	m	--

**B.G.6: WINDBELASTING ONDER BOVEN****B.G.6: WINDBELASTING ONDER BOVEN**

Type	Value Begin	Value End	Dist. Begin	Dist. End	Direction Member/Node
<b>B.G.6: Windbelasting Onder Boven</b>					
p	-0,70				Z (4.232,-0.280,-0.000) (5.025,-0.280,-0.000) (6.000,-0.280,-0.000) (6.975,-0.280,-0.000) (7.768,-0.280,-0.000) (6.975,-0.080,-0.000) (6.000,-0.000,-0.000) (5.025,-0.080,-0.000)
p	-0,39				Z (4.232,-0.280,-0.000) (4.050,-0.326,-0.000) (2.403,-1.198,-0.000) (2.221,-1.380,-0.000) (2.508,-1.380,-0.000) (4.050,-1.380,-0.000) (5.025,-1.380,-0.000) (6.000,-1.380,-0.000) (6.975,-1.380,-0.000) (7.950,-1.380,-0.000) (9.492,-1.380,-0.000) (9.779,-1.380,-0.000) (9.597,-1.198,-0.000) (7.950,-0.326,-0.000) (7.768,-0.280,-0.000)
p	-0,11				Z (2.221,-1.380,-0.000) (9.779,-1.380,-0.000) (10.802,-2.403,-0.000) (11.674,-4.050,-0.000) (0.326,-4.050,-0.000) (1.198,-2.403,-0.000)

Type	Value Begin	Value End	Dist. Begin	Dist. End	Direction Member/Node
<b>B.G.6: Windbelasting Onder Boven</b>					
p	-0,11				Z (0.326,-4.050,-0.000)
					(4.050,-4.050,-0.000)
					(4.050,-7.950,-0.000)
					(0.326,-7.950,-0.000)
					(0.080,-6.975,-0.000)
					(0.000,-6.000,-0.000)
					(0.080,-5.025,-0.000)
p	-0,11				Z (7.950,-4.050,-0.000)
					(11.674,-4.050,-0.000)
					(11.920,-5.025,-0.000)
					(12.000,-6.000,-0.000)
					(11.920,-6.975,-0.000)
					(11.674,-7.950,-0.000)
					(7.950,-7.950,-0.000)
p	-0,11				Z (0.326,-7.950,-0.000)
					(11.674,-7.950,-0.000)
					(10.802,-9.597,-0.000)
					(9.597,-10.802,-0.000)
					(7.950,-11.674,-0.000)
					(6.975,-11.920,-0.000)
					(6.000,-12.000,-0.000)
					(5.025,-11.920,-0.000)
					(4.050,-11.674,-0.000)
					(2.403,-10.802,-0.000)
					(1.198,-9.597,-0.000)
<b>Sum of loads</b>	<b>X:0,00</b>	<b>kN Y 0,00</b>	<b>kN Z:-13,05</b>	<b>kN</b>	
-	-	-	m	m	- -

### MASSA LOADS COMBINATIONS (TABLE)

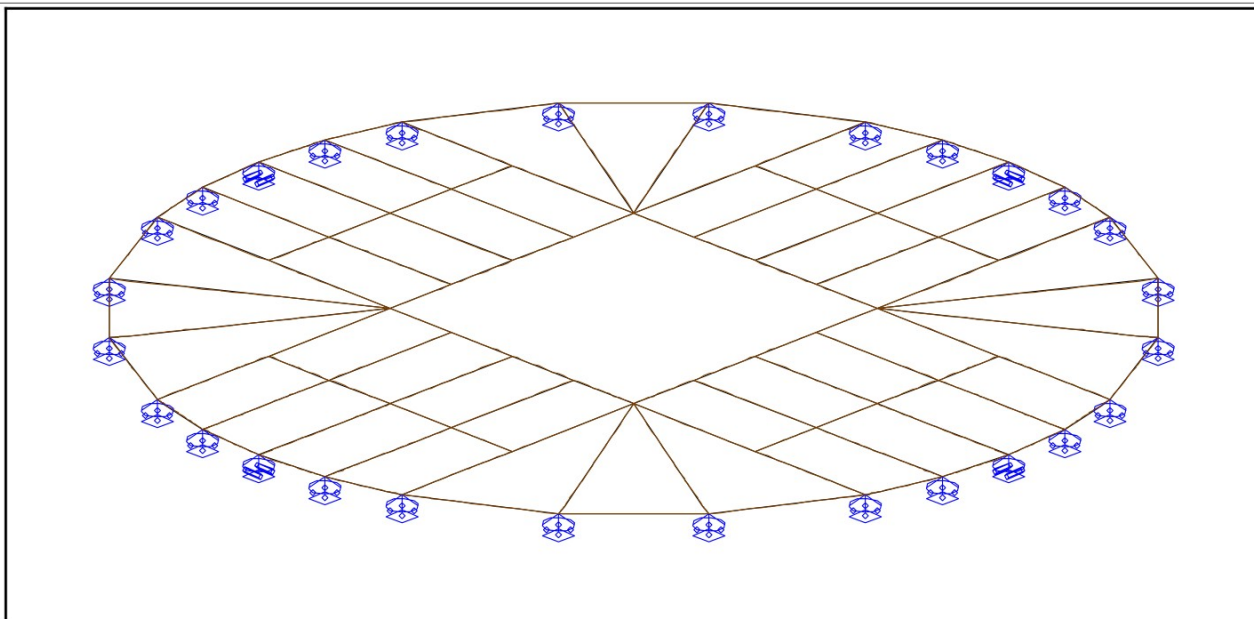
L.C.	Description	Ma.C.1
B.G.1	Permanent	1.00
B.G.2	Permanent	1.00
B.G.3	Verdeelde veranderlijke belasting	-
B.G.4	Verdeelde veranderlijke belasting	-
B.G.5	Windbelasting Links Rechts	-
B.G.6	Windbelasting Onder Boven	-

### FUNDAMENTEEL LOADS COMBINATIONS (TABLE)

L.C.	Description	Fu.C.1	Fu.C.2	Fu.C.3	Fu.C.4	Fu.C.5
B.G.1	Permanent	1.08	1.08	1.22	0.90	0.90
B.G.2	Permanent	1.08	1.08	1.22	0.90	0.90
B.G.3	Verdeelde veranderlijke belasting	-	1.35	-	-	-
B.G.4	Verdeelde veranderlijke belasting	-	1.35	-	-	-
B.G.5	Windbelasting Links Rechts	-	-	-	1.35	-
B.G.6	Windbelasting Onder Boven	-	-	-	-	1.35

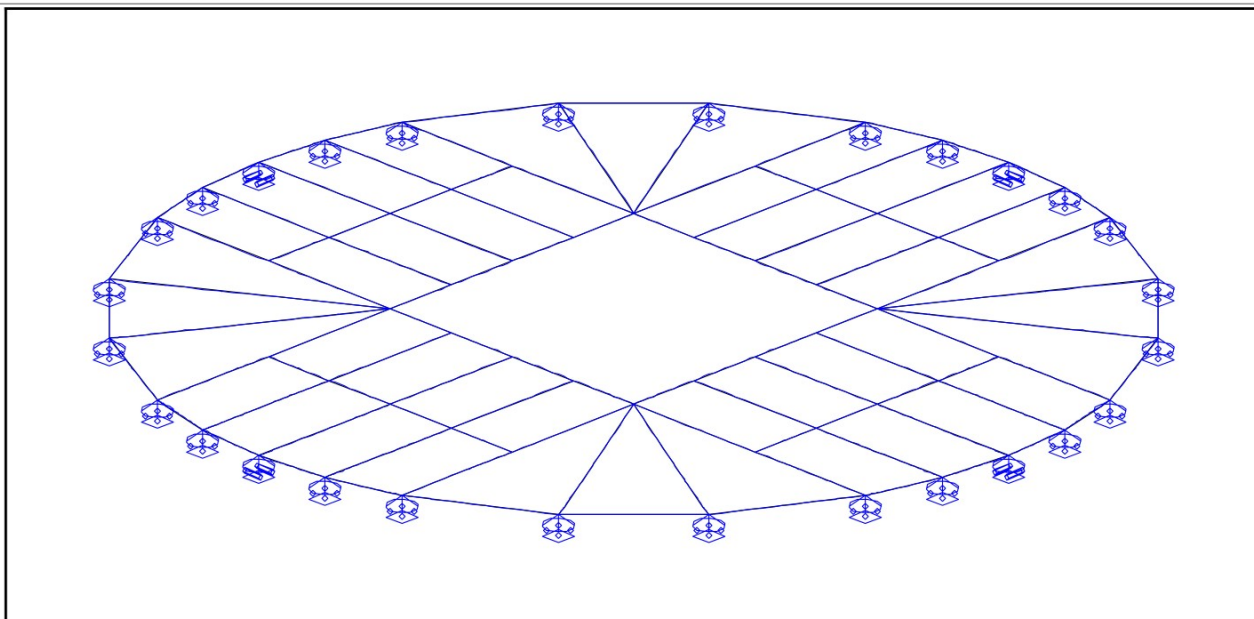
PIC. FU.C. NORMAALKRACHT (NX) ENVELOPE

Fundamenteel Loads Combinations



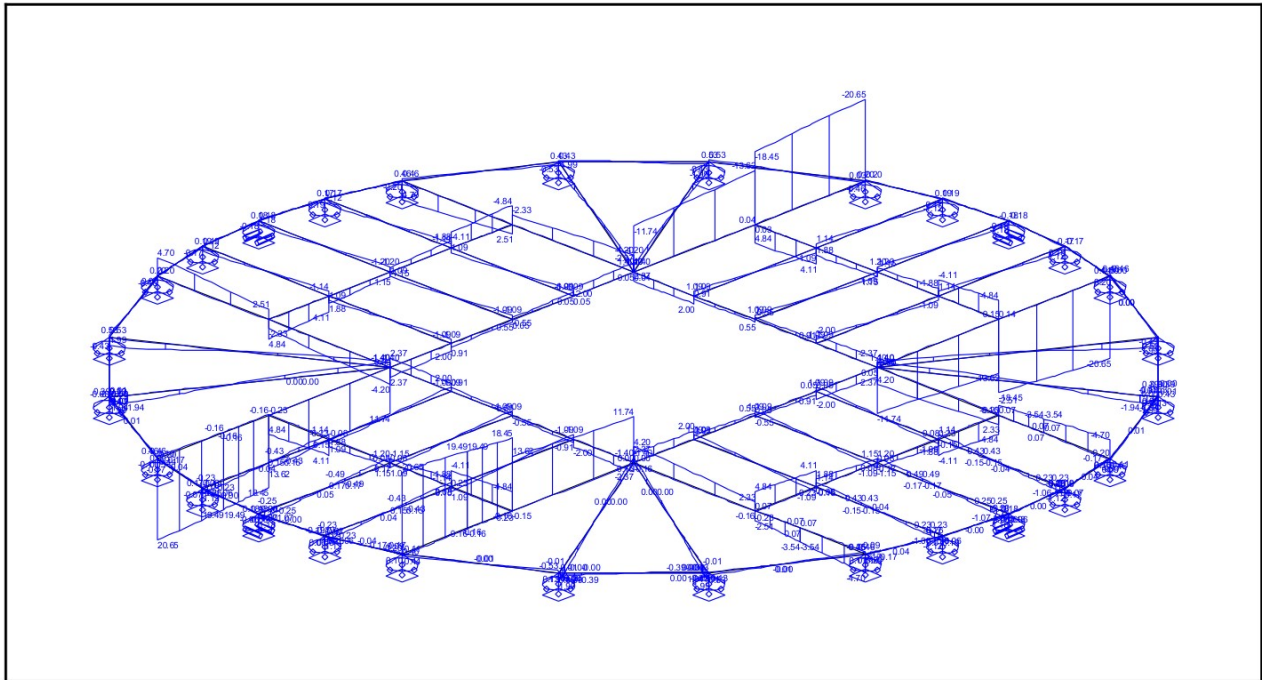
PIC. FU.C. DWARSKRACHT (VY) ENVELOPE

Fundamenteel Loads Combinations



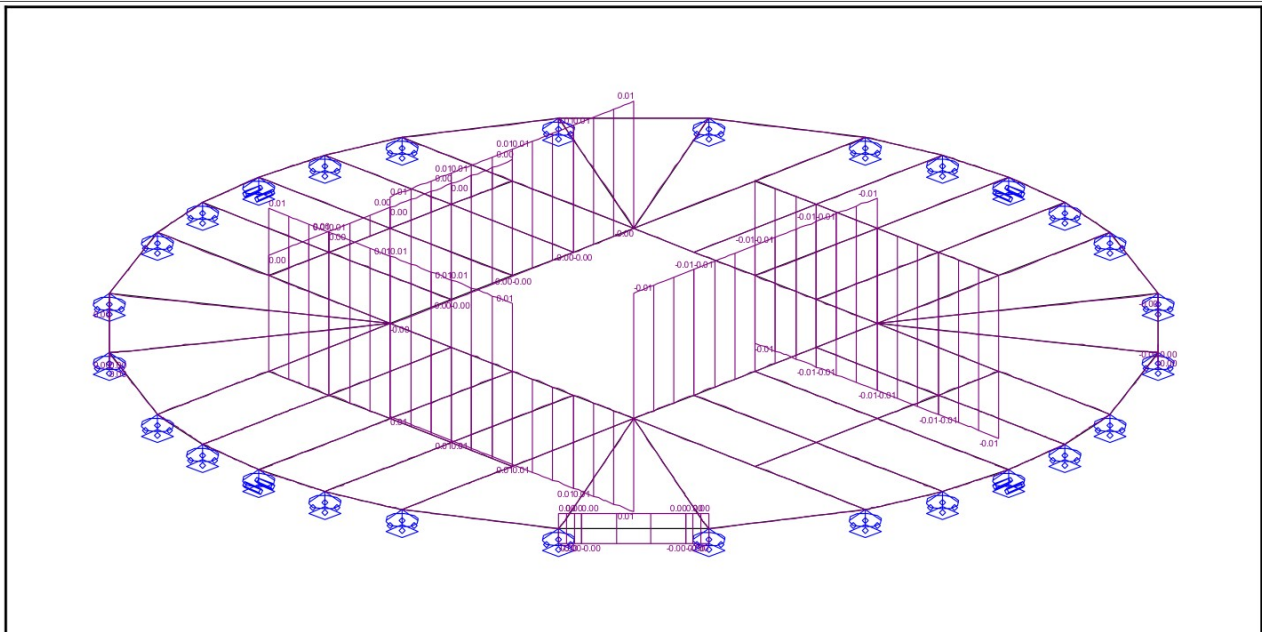
PIC. FU.C. DWARSKRACHT (VZ) ENVELOPE

Fundamenteel Loads Combinations



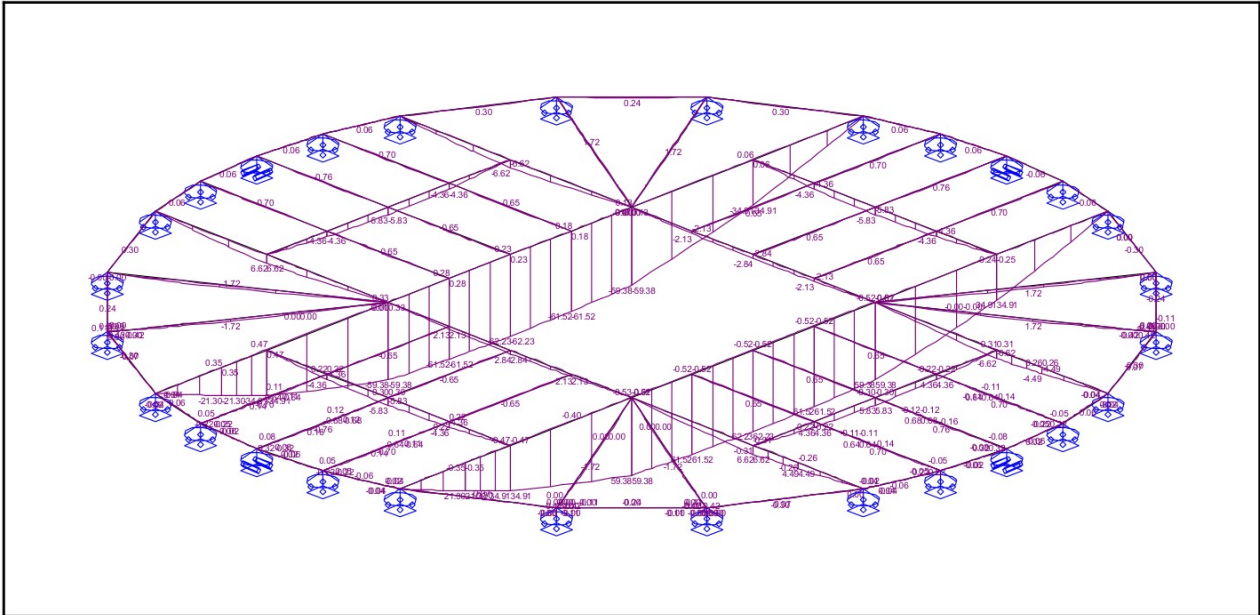
PIC. FU.C. TORSIEMOMENTEN (MX) ENVELOPE

Fundamenteel Loads Combinations



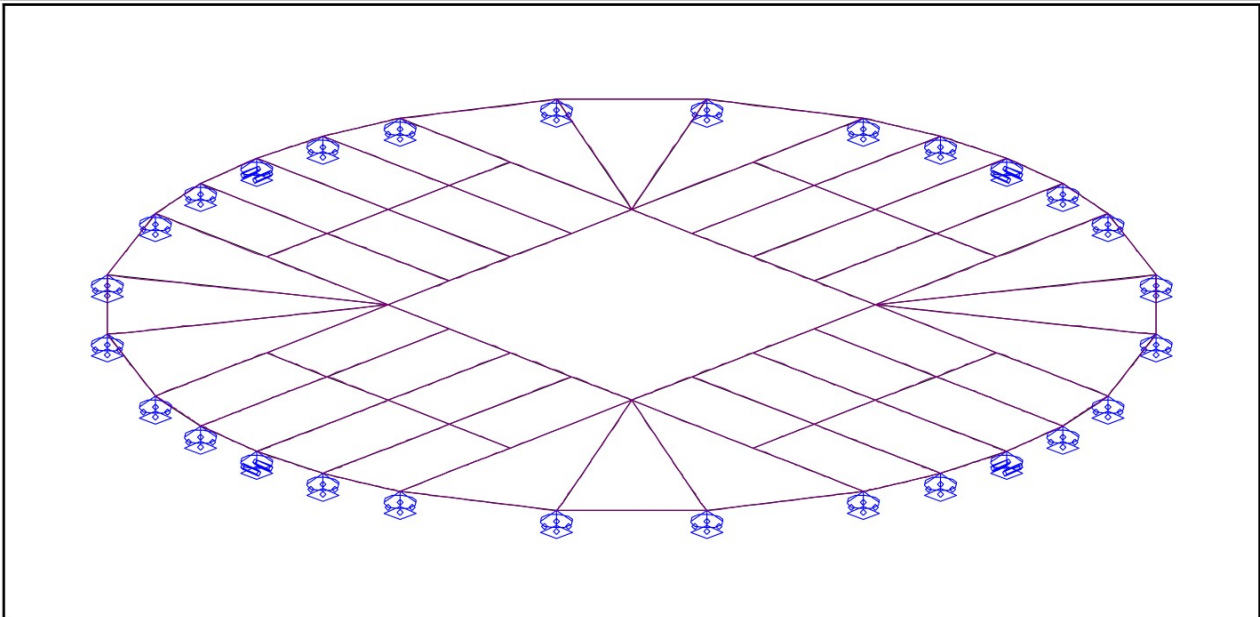
PIC. FU.C. MOMENTEN (MY) ENVELOPE

Fundamenteel Loads Combinations



PIC. FU.C. MOMENTEN (Mz) ENVELOPE

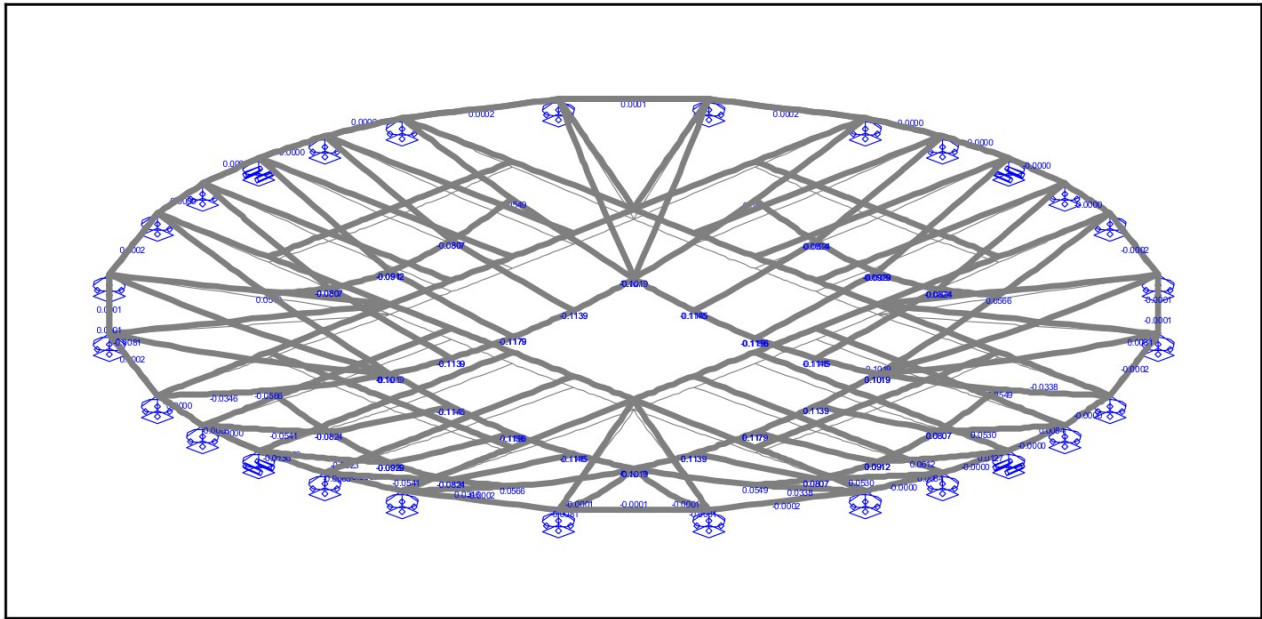
Fundamenteel Loads Combinations





PIC. KA.C. VERPLAATSINGEN ENVELOPE

Karakteristiek Loads Combinations



## FU.C. ENVELOPE

Member	Nx Minus	Nx Plus	Nx NegMa	Nx PosMin	Vy Minus	Vy Plus	Vz Minus	Vz Plus	Mx Minus	Mx Plus	My Minus	My Plus	Mz Minus	Mz Plus
S21	0.00	0.00	0.00	0.00	0.00	0.00	-1.99	1.40	0.00	0.00	0.00	1.72	0.00	0.00
S22	0.00	0.00	0.00	0.00	0.00	0.00	-1.99	1.40	0.00	0.00	0.00	1.72	0.00	0.00
S24	0.00	0.00	0.00	0.00	0.00	0.00	-1.40	1.99	0.00	0.00	-1.72	0.00	0.00	0.00
S25	0.00	0.00	0.00	0.00	0.00	0.00	-1.99	1.40	0.00	0.00	0.00	1.72	0.00	0.00
S29	0.00	0.00	0.00	0.00	0.00	0.00	-0.53	0.46	0.00	0.00	-0.07	0.30	0.00	0.00
S31	0.00	0.00	0.00	0.00	0.00	0.00	-0.46	0.53	0.00	0.00	0.00	0.30	0.00	0.00
S32	0.00	0.00	0.00	0.00	0.00	0.00	-0.17	0.20	0.00	0.00	0.00	0.06	0.00	0.00
S33	0.00	0.00	0.00	0.00	0.00	0.00	-0.18	0.19	0.00	0.00	0.00	0.06	0.00	0.00
S34	0.00	0.00	0.00	0.00	0.00	0.00	-0.19	0.18	0.00	0.00	0.00	0.06	0.00	0.00
S35	0.00	0.00	0.00	0.00	0.00	0.00	-0.20	0.17	0.00	0.00	0.00	0.06	0.00	0.00
S36	0.00	0.00	0.00	0.00	0.00	0.00	-0.53	0.46	0.00	0.00	0.00	0.30	0.00	0.00
S37	0.00	0.00	0.00	0.00	0.00	0.00	-0.43	0.43	0.00	0.00	0.00	0.24	0.00	0.00
S38	0.00	0.00	0.00	0.00	0.00	0.00	-0.46	0.53	0.00	0.00	0.00	0.30	0.00	0.00
S39	0.00	0.00	0.00	0.00	0.00	0.00	-0.17	0.20	0.00	0.00	0.00	0.06	0.00	0.00
S40	0.00	0.00	0.00	0.00	0.00	0.00	-0.18	0.19	0.00	0.00	0.00	0.06	0.00	0.00
S41	0.00	0.00	0.00	0.00	0.00	0.00	-0.18	0.19	0.00	0.00	-0.06	0.00	0.00	0.00
S42	0.00	0.00	0.00	0.00	0.00	0.00	-0.17	0.20	0.00	0.00	-0.06	0.00	0.00	0.00
S43	0.00	0.00	0.00	0.00	0.00	0.00	-0.46	0.53	0.00	0.00	-0.30	0.00	0.00	0.00
S45	0.00	0.00	0.00	0.00	0.00	0.00	-0.53	0.46	0.00	0.00	-0.30	0.07	0.00	0.00
S47	0.00	0.00	0.00	0.00	0.00	0.00	-0.19	0.18	0.00	0.00	-0.06	0.02	0.00	0.00
S48	0.00	0.00	0.00	0.00	0.00	0.00	-0.18	0.19	0.00	0.00	-0.06	0.02	0.00	0.00
S50	0.00	0.00	0.00	0.00	0.00	0.00	-0.46	0.53	0.00	0.00	-0.30	0.07	0.00	0.00
S52	0.00	0.00	0.00	0.00	0.00	0.00	-0.53	0.46	0.00	0.00	-0.30	0.07	0.00	0.00
S54	0.00	0.00	0.00	0.00	0.00	0.00	-0.19	0.18	0.00	0.00	-0.06	0.02	0.00	0.00
S55	0.00	0.00	0.00	0.00	0.00	0.00	-0.19	0.18	0.00	0.00	-0.02	0.06	0.00	0.00
S57	0.00	0.00	0.00	0.00	0.00	0.00	-20.65	0.03	0.00	0.00	-34.91	0.06	0.00	0.00
S59	0.00	0.00	0.00	0.00	0.00	0.00	-2.37	0.05	0.00	0.01	-61.52	0.18	0.00	0.00
S60	0.00	0.00	0.00	0.00	0.00	0.00	-0.91	0.05	0.00	0.01	-62.23	0.23	0.00	0.00
S62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.37	0.00	0.01	-61.52	0.33	0.00	0.00
S63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.62	0.00	0.00	-59.38	0.47	0.00	0.00
S70	0.00	0.00	0.00	0.00	0.00	0.00	-0.15	13.62	0.00	0.00	-0.53	59.38	0.00	0.00
S71	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.37	-0.01	0.00	-0.52	61.52	0.00	0.00
S72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91	-0.01	0.00	-0.52	62.23	0.00	0.00
S73	0.00	0.00	0.00	0.00	0.00	0.00	-0.91	0.05	-0.01	0.00	-0.52	62.23	0.00	0.00
S74	0.00	0.00	0.00	0.00	0.00	0.00	-2.37	0.05	-0.01	0.00	-0.52	61.52	0.00	0.00
S75	0.00	0.00	0.00	0.00	0.00	0.00	-13.62	0.15	0.00	0.00	-0.52	59.38	0.00	0.00
S76	0.00	0.00	0.00	0.00	0.00	0.00	-20.65	0.14	0.00	0.00	-0.25	34.91	0.00	0.00
S81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.70	0.00	0.00	0.00	6.62	0.00	0.00

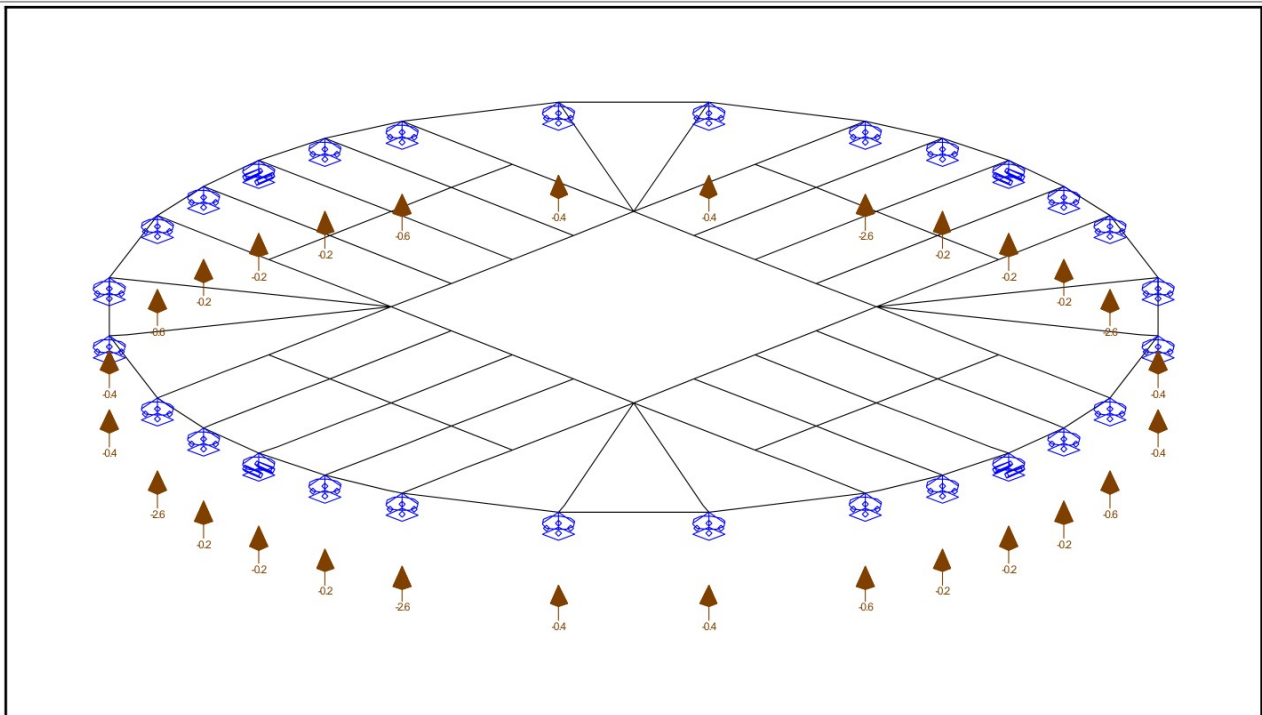


Member	Nx Minus	Nx Plus	Nx NegMa	Nx PosMin	Vy Minus	Vy Plus	Vz Minus	Vz Plus	Mx Minus	Mx Plus	My Minus	My Plus	Mz Minus	Mz Plus
			x											
S82	0.00	0.00	0,00	0,00	0.00	0.00	-4.20	0.00	0.00	0.00	-0.01	6.62	0.00	0.00
S83	0.00	0.00	0,00	0,00	0.00	0.00	-4.20	0.00	0.00	0.00	-6.62	0.00	0.00	0.00
S84	0.00	0.00	0,00	0,00	0.00	0.00	0.00	4.70	0.00	0.00	-6.62	0.00	0.00	0.00
S85	0.00	0.00	0,00	0,00	0.00	0.00	0.00	2.37	0.00	0.01	0.00	2.13	0.00	0.00
S86	0.00	0.00	0,00	0,00	0.00	0.00	0.00	0.91	0.00	0.01	0.00	2.84	0.00	0.00
S87	0.00	0.00	0,00	0,00	0.00	0.00	-0.91	0.00	0.00	0.01	0.00	2.84	0.00	0.00
S88	0.00	0.00	0,00	0,00	0.00	0.00	-2.37	0.00	0.00	0.01	0.00	2.13	0.00	0.00
S89	0.00	0.00	0,00	0,00	0.00	0.00	-0.16	4.20	0.00	0.00	-0.31	6.62	0.00	0.00
S92	0.00	0.00	0,00	0,00	0.00	0.00	-0.16	4.20	0.00	0.00	-6.62	0.31	0.00	0.00
S93	0.00	0.00	0,00	0,00	0.00	0.00	-2.37	0.00	0.00	0.00	-2.13	0.00	0.00	0.00
S94	0.00	0.00	0,00	0,00	0.00	0.00	-0.91	0.00	0.00	0.00	-2.84	0.00	0.00	0.00
S95	0.00	0.00	0,00	0,00	0.00	0.00	0.00	0.91	0.00	0.00	-2.84	0.00	0.00	0.00
S96	0.00	0.00	0,00	0,00	0.00	0.00	0.00	2.37	0.00	0.00	-2.13	0.00	0.00	0.00
S97	0.00	0.00	0,00	0,00	0.00	0.00	-1.09	1.09	0.00	0.00	-0.65	0.00	0.00	0.00
S99	0.00	0.00	0,00	0,00	0.00	0.00	-0.23	4.84	0.00	0.01	-4.36	0.22	0.00	0.00
S101	0.00	0.00	0,00	0,00	0.00	0.00	-1.09	1.09	0.00	0.00	-0.65	0.00	0.00	0.00
S104	0.00	0.00	0,00	0,00	0.00	0.00	-4.84	0.23	0.00	0.01	-4.36	0.22	0.00	0.00
S106	0.00	0.00	0,00	0,00	0.00	0.00	-1.09	1.09	0.00	0.00	-0.65	0.00	0.00	0.00
S107	0.00	0.00	0,00	0,00	0.00	0.00	-1.09	1.09	0.00	0.00	-0.65	0.00	0.00	0.00
S108	0.00	0.00	0,00	0,00	0.00	0.00	-1.09	1.09	0.00	0.00	-0.65	0.00	0.00	0.00
S109	0.00	0.00	0,00	0,00	0.00	0.00	-4.84	0.00	0.00	0.00	-4.36	0.00	0.00	0.00
S110	0.00	0.00	0,00	0,00	0.00	0.00	-1.88	0.00	0.00	0.00	-5.83	0.00	0.00	0.00
S111	0.00	0.00	0,00	0,00	0.00	0.00	0.00	1.88	0.00	0.00	-5.83	0.00	0.00	0.00
S112	0.00	0.00	0,00	0,00	0.00	0.00	0.00	4.84	0.00	0.00	-4.36	0.00	0.00	0.00
S113	0.00	0.00	0,00	0,00	0.00	0.00	-1.09	1.09	0.00	0.00	0.00	0.65	0.00	0.00
S114	0.00	0.00	0,00	0,00	0.00	0.00	-1.09	1.09	0.00	0.00	0.00	0.65	0.00	0.00
S115	0.00	0.00	0,00	0,00	0.00	0.00	-1.09	1.09	0.00	0.00	0.00	0.65	0.00	0.00
S116	0.00	0.00	0,00	0,00	0.00	0.00	-4.84	0.00	-0.01	0.00	-4.36	0.00	0.00	0.00
S117	0.00	0.00	0,00	0,00	0.00	0.00	-1.88	0.00	-0.01	0.00	-5.83	0.00	0.00	0.00
S118	0.00	0.00	0,00	0,00	0.00	0.00	0.00	1.88	-0.01	0.00	-5.83	0.00	0.00	0.00
S119	0.00	0.00	0,00	0,00	0.00	0.00	0.00	4.84	-0.01	0.00	-4.36	0.00	0.00	0.00
S120	0.00	0.00	0,00	0,00	0.00	0.00	-1.09	1.09	0.00	0.00	0.00	0.65	0.00	0.00
S121	0.00	0.00	0,00	0,00	0.00	0.00	-1.09	1.09	0.00	0.00	0.00	0.65	0.00	0.00
S122	0.00	0.00	0,00	0,00	0.00	0.00	-1.09	1.09	0.00	0.00	0.00	0.65	0.00	0.00
S123	0.00	0.00	0,00	0,00	0.00	0.00	-0.23	4.84	0.00	0.00	-0.22	4.36	0.00	0.00
S124	0.00	0.00	0,00	0,00	0.00	0.00	-0.08	1.88	0.00	0.00	-0.30	5.83	0.00	0.00
S125	0.00	0.00	0,00	0,00	0.00	0.00	-1.88	0.08	0.00	0.00	-0.30	5.83	0.00	0.00
S126	0.00	0.00	0,00	0,00	0.00	0.00	-4.84	0.23	0.00	0.00	-0.22	4.36	0.00	0.00
S128	0.00	0.00	0,00	0,00	0.00	0.00	-1.14	1.12	0.00	0.00	-0.70	0.00	0.00	0.00
S130	0.00	0.00	0,00	0,00	0.00	0.00	-1.20	1.18	0.00	0.00	-0.76	0.00	0.00	0.00
S132	0.00	0.00	0,00	0,00	0.00	0.00	-1.14	1.12	0.00	0.00	-0.70	0.00	0.00	0.00
S140	0.00	0.00	0,00	0,00	0.00	0.00	-1.12	1.14	0.00	0.00	0.00	0.70	0.00	0.00
S142	0.00	0.00	0,00	0,00	0.00	0.00	-1.18	1.20	0.00	0.00	0.00	0.76	0.00	0.00
S144	0.00	0.00	0,00	0,00	0.00	0.00	-1.12	1.14	0.00	0.00	0.00	0.70	0.00	0.00
S147	0.00	0.00	0,00	0,00	0.00	0.00	-1.09	1.09	0.00	0.00	-0.65	0.00	0.00	0.00
S149	0.00	0.00	0,00	0,00	0.00	0.00	-1.88	0.08	0.00	0.01	-5.83	0.30	0.00	0.00
S150	0.00	0.00	0,00	0,00	0.00	0.00	-0.08	1.88	0.00	0.01	-5.83	0.30	0.00	0.00
S151	0.00	0.00	0,00	0,00	0.00	0.00	0.00	0.91	0.00	0.01	-62.23	0.28	0.00	0.00
S161	0.00	0.00	0,00	0,00	0.00	0.00	-0.30	1.18	0.00	0.00	-0.32	0.08	0.00	0.00
S166	0.00	0.00	0,00	0,00	0.00	0.00	-0.17	0.17	0.00	0.00	-0.04	0.06	0.00	0.00
S167	0.00	0.00	0,00	0,00	0.00	0.00	-0.20	0.10	0.00	0.00	-0.02	0.04	0.00	0.00
S169	0.00	0.00	0,00	0,00	0.00	0.00	-0.26	1.12	0.00	0.00	-0.22	0.05	0.00	0.00
S174	0.00	0.00	0,00	0,00	0.00	0.00	-0.20	0.10	0.00	0.00	-0.04	0.02	0.00	0.00
S175	0.00	0.00	0,00	0,00	0.00	0.00	-0.17	0.17	0.00	0.00	-0.06	0.04	0.00	0.00
S177	0.00	0.00	0,00	0,00	0.00	0.00	-0.26	1.12	0.00	0.00	-0.22	0.05	0.00	0.00
S179	0.00	0.00	0,00	0,00	0.00	0.00	-13.62	0.04	0.00	0.00	-59.38	0.13	0.00	0.00
S191	0.00	0.00	0,00	0,00	0.00	0.00	-1.40	1.94	0.00	0.00	-1.72	0.00	0.00	0.00
S192	0.00	0.00	0,00	0,00	0.00	0.00	-0.02	1.99	0.00	0.00	-0.42	0.00	0.00	0.00
S193	0.00	0.00	0,00	0,00	0.00	0.00	-1.40	1.94	0.00	0.00	-1.72	0.00	0.00	0.00
S194	0.00	0.00	0,00	0,00	0.00	0.00	-0.02	1.99	0.00	0.00	-0.42	0.00	0.00	0.00
S195	0.00	0.00	0,00	0,00	0.00	0.00	-0.01	0.43	0.00	0.00	0.00	0.11	0.00	0.00
S196	0.00	0.00	0,00	0,00	0.00	0.00	-0.43	0.39	0.00	0.00	0.00	0.24	0.00	0.00
S198	0.00	0.00	0,00	0,00	0.00	0.00	-0.01	0.43	0.00	0.00	-0.11	0.00	0.00	0.00
S199	0.00	0.00	0,00	0,00	0.00	0.00	-0.44	20.65	0.00	0.00	-0.35	21.30	0.00	0.00

Member	Nx Minus	Nx Plus	Nx NegMa x	Nx PosMin	Vy Minus	Vy Plus	Vz Minus	Vz Plus	Mx Minus	Mx Plus	My Minus	My Plus	Mz Minus	Mz Plus
S200	0.00	0.00	0,00	0,00	0.00	0.00	-0.16	19.49	0.00	0.00	-0.47	34.91	0.00	0.00
S201	0.00	0.00	0,00	0,00	0.00	0.00	-1.20	0.17	0.00	0.00	-0.68	0.12	0.00	0.00
S202	0.00	0.00	0,00	0,00	0.00	0.00	-0.49	1.07	0.00	0.00	-0.76	0.16	0.00	0.00
S203	0.00	0.00	0,00	0,00	0.00	0.00	-1.14	0.15	0.00	0.00	-0.64	0.11	0.00	0.00
S204	0.00	0.00	0,00	0,00	0.00	0.00	-0.43	1.06	0.00	0.00	-0.70	0.14	0.00	0.00
S205	0.00	0.00	0,00	0,00	0.00	0.00	-1.14	0.15	0.00	0.00	-0.64	0.11	0.00	0.00
S206	0.00	0.00	0,00	0,00	0.00	0.00	-0.43	1.06	0.00	0.00	-0.70	0.14	0.00	0.00
S207	0.00	0.00	0,00	0,00	0.00	0.00	-0.16	19.49	0.00	0.00	-34.91	0.47	0.00	0.00
S208	0.00	0.00	0,00	0,00	0.00	0.00	-0.44	20.65	0.00	0.00	-21.30	0.35	0.00	0.00
S216	0.00	0.00	0,00	0,00	0.00	0.00	-0.20	0.10	0.00	0.00	-0.04	0.02	0.00	0.00
S217	0.00	0.00	0,00	0,00	0.00	0.00	-0.17	0.17	0.00	0.00	-0.06	0.04	0.00	0.00
S218	0.00	0.00	0,00	0,00	0.00	0.00	-0.17	0.17	0.00	0.00	-0.06	0.04	0.00	0.00
S219	0.00	0.00	0,00	0,00	0.00	0.00	-0.10	0.20	0.00	0.00	-0.04	0.02	0.00	0.00
S221	0.00	0.00	0,00	0,00	0.00	0.00	-1.12	0.26	0.00	0.00	-0.05	0.22	0.00	0.00
S223	0.00	0.00	0,00	0,00	0.00	0.00	-1.18	0.30	0.00	0.00	-0.08	0.32	0.00	0.00
S225	0.00	0.00	0,00	0,00	0.00	0.00	-1.12	0.26	0.00	0.00	-0.05	0.22	0.00	0.00
S237	0.00	0.00	0,00	0,00	0.00	0.00	-1.94	1.40	0.00	0.00	0.00	1.72	0.00	0.00
S238	0.00	0.00	0,00	0,00	0.00	0.00	-1.99	0.02	0.00	0.00	0.00	0.42	0.00	0.00
S239	0.00	0.00	0,00	0,00	0.00	0.00	-1.40	1.94	0.00	0.00	-1.72	0.00	0.00	0.00
S240	0.00	0.00	0,00	0,00	0.00	0.00	-0.02	1.99	0.00	0.00	-0.42	0.00	0.00	0.00
S241	0.00	0.00	0,00	0,00	0.00	0.00	-0.43	0.39	0.00	0.00	-0.24	0.00	0.00	0.00
S242	0.00	0.00	0,00	0,00	0.00	0.00	-0.01	0.43	0.00	0.00	-0.11	0.00	0.00	0.00
S243	0.00	0.00	0,00	0,00	0.00	0.00	-3.54	0.07	0.00	0.00	-0.31	6.62	0.00	0.00
S244	0.00	0.00	0,00	0,00	0.00	0.00	-4.70	0.35	0.00	0.00	-0.26	4.49	0.00	0.00
S245	0.00	0.00	0,00	0,00	0.00	0.00	-4.70	0.35	0.00	0.00	-4.49	0.26	0.00	0.00
S246	0.00	0.00	0,00	0,00	0.00	0.00	-3.54	0.07	0.00	0.00	-6.62	0.31	0.00	0.00
S247	0.00	0.00	0,00	0,00	0.00	0.00	-0.43	0.01	0.00	0.00	-0.11	0.00	0.00	0.00
S248	0.00	0.00	0,00	0,00	0.00	0.00	-0.39	0.39	0.00	0.00	-0.24	0.00	0.00	0.00
S249	0.00	0.00	0,00	0,00	0.00	0.00	-0.15	1.14	0.00	0.00	-0.11	0.64	0.00	0.00
S250	0.00	0.00	0,00	0,00	0.00	0.00	-1.06	0.43	0.00	0.00	-0.14	0.70	0.00	0.00
S251	0.00	0.00	0,00	0,00	0.00	0.00	-0.17	1.20	0.00	0.00	-0.12	0.68	0.00	0.00
S252	0.00	0.00	0,00	0,00	0.00	0.00	-1.07	0.49	0.00	0.00	-0.16	0.76	0.00	0.00
S253	0.00	0.00	0,00	0,00	0.00	0.00	-0.15	1.14	0.00	0.00	-0.11	0.64	0.00	0.00
S254	0.00	0.00	0,00	0,00	0.00	0.00	-1.06	0.43	0.00	0.00	-0.14	0.70	0.00	0.00
-	kN	kN	kN	kN	kN	kN	kN	kN	kNm	kNm	kNm	kNm	kNm	kNm

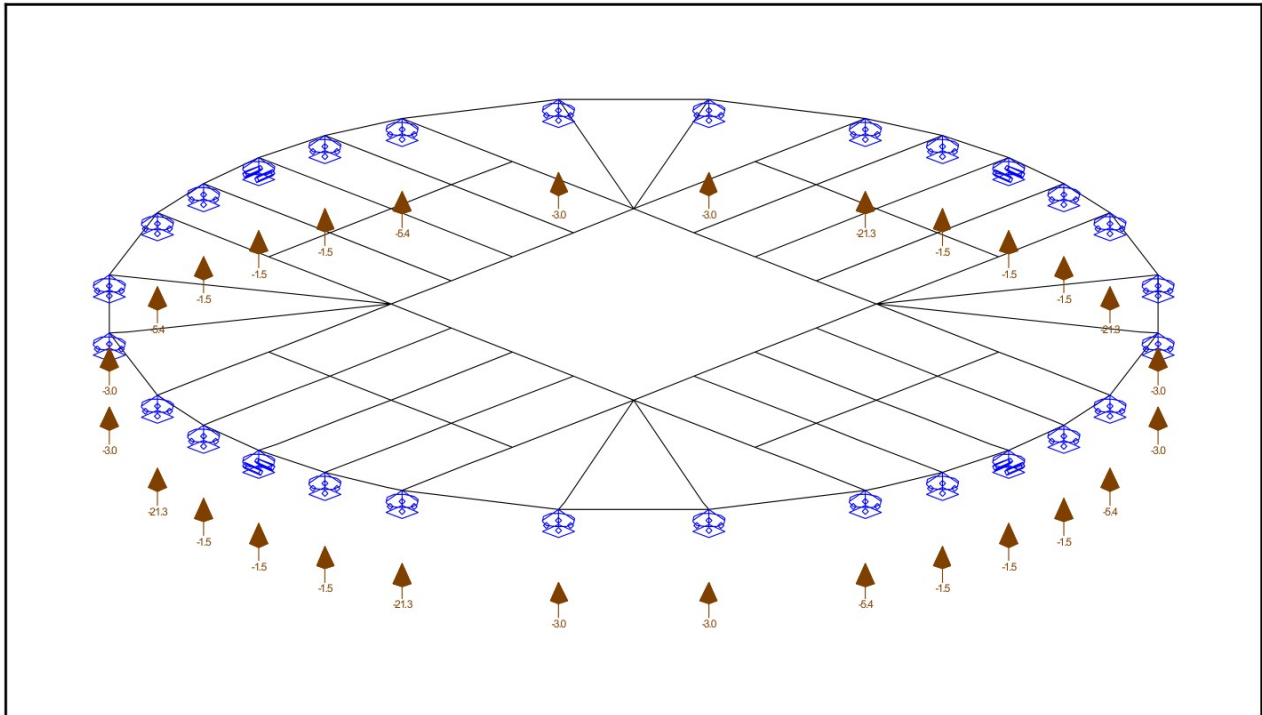
PIC. FU.C.1 OPLEGREACTIES

Fundamenteel Loads Combinations



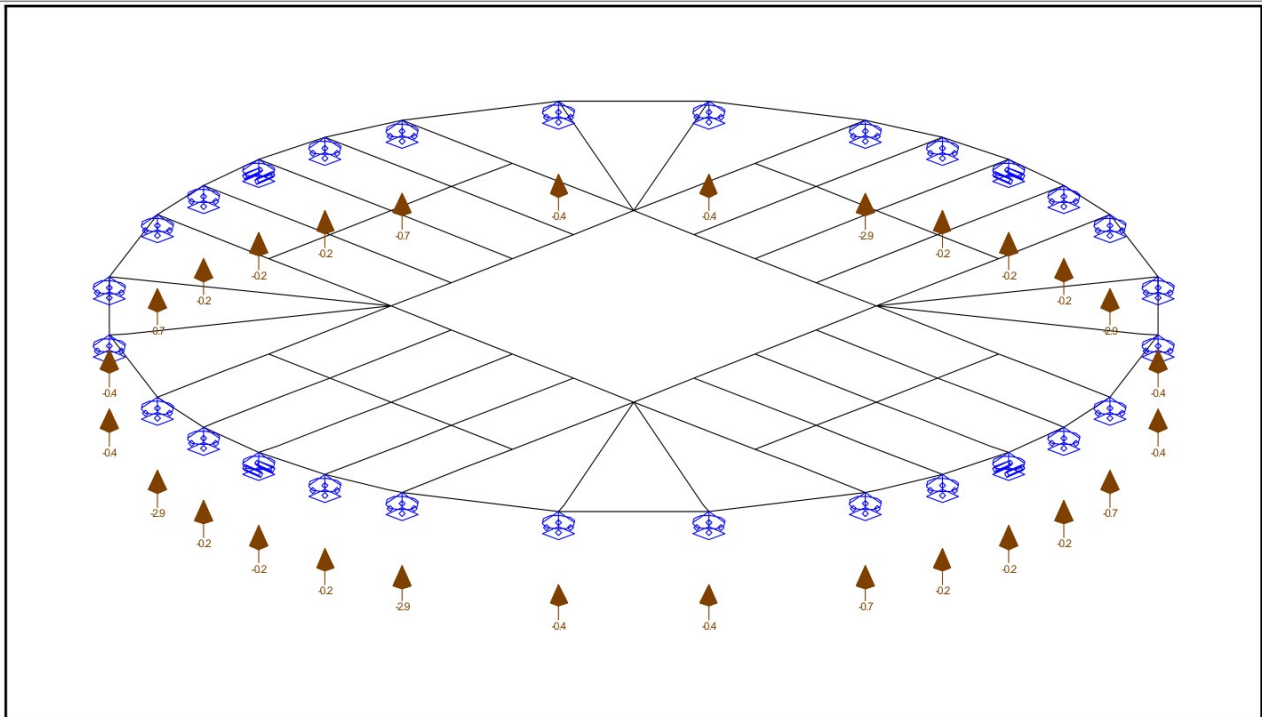
PIC. FU.C.2 OPLEGREACTIES

Fundamenteel Loads Combinations



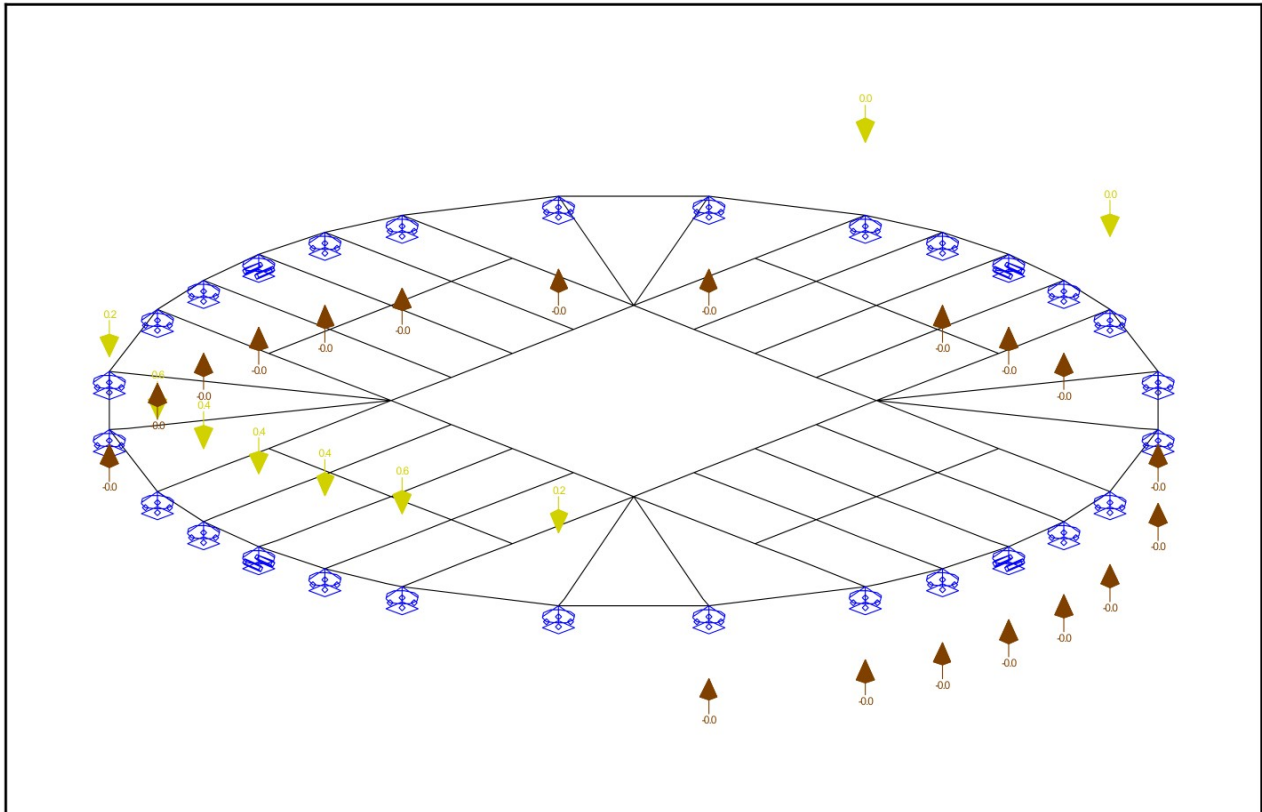
PIC. FU.C.3 OPLEGREACTIES

Fundamenteel Loads Combinations



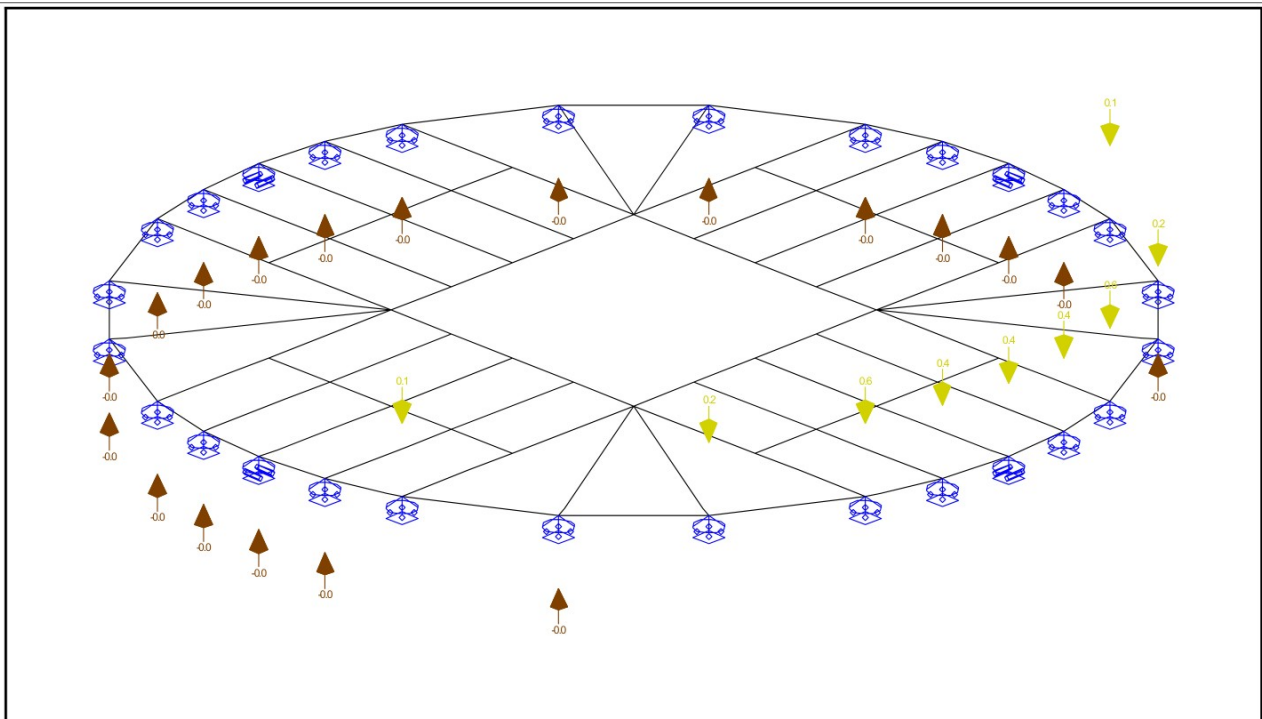
PIC. FU.C.4 OPLEGREACTIES

Fundamenteel Loads Combinations



PIC. FU.C.5 OPLEGREACTIES

Fundamenteel Loads Combinations



### FU.C. SUPPORT REACTIONS WITH L.CASES

LComb	Support	Node	Reaction
Fu.C.1	O1	K2	Z $-2.55 = -1.69[B.G.1] * 1.08 - 0.67[B.G.2] * 1.08$
	O2	K5	Z $-2.55 = -1.69[B.G.1] * 1.08 - 0.67[B.G.2] * 1.08$
	O3	K3	Z $-0.64 = -0.42[B.G.1] * 1.08 - 0.17[B.G.2] * 1.08$
	O4	K8	Z $-0.64 = -0.42[B.G.1] * 1.08 - 0.17[B.G.2] * 1.08$
	O5	K4	Z $-0.64 = -0.42[B.G.1] * 1.08 - 0.17[B.G.2] * 1.08$



LComb	Support	Node	Reaction
Fu.C.1	O6	K7	Z $-0.64 = -0.42[B.G.1] * 1.08 - 0.17[B.G.2] * 1.08$
	O7	K6	Z $-2.55 = -1.69[B.G.1] * 1.08 - 0.67[B.G.2] * 1.08$
	O8	K1	Z $-2.55 = -1.69[B.G.1] * 1.08 - 0.67[B.G.2] * 1.08$
	O9	K36	Z $-0.18 = -0.16[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08$
	O10	K38	Z $-0.18 = -0.17[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08$
	O11	K40	Z $-0.18 = -0.16[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08$
	O12	K28	Z $-0.18 = -0.16[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08$
	O13	K30	Z $-0.18 = -0.17[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08$
	O14	K32	Z $-0.18 = -0.16[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08$
	O15	K51	Z $-0.35 = -0.00[B.G.1] * 1.08 - 0.33[B.G.2] * 1.08$
	O16	K52	Z $-0.35 = 0.00[B.G.1] * 1.08 - 0.33[B.G.2] * 1.08$
	O17	K45	Z $-0.35 = -0.00[B.G.1] * 1.08 - 0.33[B.G.2] * 1.08$
	O18	K46	Z $-0.35 = 0.00[B.G.1] * 1.08 - 0.33[B.G.2] * 1.08$
	O19	K43	Z $-0.35 = 0.00[B.G.1] * 1.08 - 0.33[B.G.2] * 1.08$
	O20	K42	Z $-0.35 = -0.00[B.G.1] * 1.08 - 0.33[B.G.2] * 1.08$
	O21	K48	Z $-0.35 = 0.00[B.G.1] * 1.08 - 0.33[B.G.2] * 1.08$
	O22	K49	Z $-0.35 = 0.00[B.G.1] * 1.08 - 0.33[B.G.2] * 1.08$
	O23	K22	Z $-0.18 = -0.16[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08$
	O24	K24	Z $-0.18 = -0.17[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08$
	O25	K26	Z $-0.18 = -0.16[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08$
	O26	K16	Z $-0.18 = -0.16[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08$
	O27	K18	Z $-0.18 = -0.17[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08$
	O28	K20	Z $-0.18 = -0.16[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08$
Fu.C.2	O1	K2	Z $-21.31 = -1.69[B.G.1] * 1.08 - 0.67[B.G.2] * 1.08 - 9.92[B.G.3] * 1.35 - 3.97[B.G.4] * 1.35$
	O2	K5	Z $-21.31 = -1.69[B.G.1] * 1.08 - 0.67[B.G.2] * 1.08 - 9.92[B.G.3] * 1.35 - 3.97[B.G.4] * 1.35$
	O3	K3	Z $-5.36 = -0.42[B.G.1] * 1.08 - 0.17[B.G.2] * 1.08 - 2.47[B.G.3] * 1.35 - 1.02[B.G.4] * 1.35$
	O4	K8	Z $-5.36 = -0.42[B.G.1] * 1.08 - 0.17[B.G.2] * 1.08 - 2.47[B.G.3] * 1.35 - 1.02[B.G.4] * 1.35$
	O5	K4	Z $-5.36 = -0.42[B.G.1] * 1.08 - 0.17[B.G.2] * 1.08 - 2.47[B.G.3] * 1.35 - 1.02[B.G.4] * 1.35$
	O6	K7	Z $-5.36 = -0.42[B.G.1] * 1.08 - 0.17[B.G.2] * 1.08 - 2.47[B.G.3] * 1.35 - 1.02[B.G.4] * 1.35$
	O7	K6	Z $-21.31 = -1.69[B.G.1] * 1.08 - 0.67[B.G.2] * 1.08 - 9.92[B.G.3] * 1.35 - 3.97[B.G.4] * 1.35$
	O8	K1	Z $-21.31 = -1.69[B.G.1] * 1.08 - 0.67[B.G.2] * 1.08 - 9.92[B.G.3] * 1.35 - 3.97[B.G.4] * 1.35$
	O9	K36	Z $-1.48 = -0.16[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08 - 0.96[B.G.3] * 1.35 + 0.00[B.G.4] * 1.35$
	O10	K38	Z $-1.54 = -0.17[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08 - 1.00[B.G.3] * 1.35 + 0.00[B.G.4] * 1.35$
	O11	K40	Z $-1.48 = -0.16[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08 - 0.96[B.G.3] * 1.35 + 0.00[B.G.4] * 1.35$
	O12	K28	Z $-1.48 = -0.16[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08 - 0.96[B.G.3] * 1.35 + 0.00[B.G.4] * 1.35$
	O13	K30	Z $-1.54 = -0.17[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08 - 1.00[B.G.3] * 1.35 + 0.00[B.G.4] * 1.35$
	O14	K32	Z $-1.48 = -0.16[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08 - 0.96[B.G.3] * 1.35 + 0.00[B.G.4] * 1.35$
	O15	K51	Z $-2.95 = -0.00[B.G.1] * 1.08 - 0.33[B.G.2] * 1.08 - 0.00[B.G.3] * 1.35 - 1.93[B.G.4] * 1.35$
	O16	K52	Z $-2.95 = 0.00[B.G.1] * 1.08 - 0.33[B.G.2] * 1.08 + 0.00[B.G.3] * 1.35 - 1.93[B.G.4] * 1.35$
	O17	K45	Z $-2.95 = -0.00[B.G.1] * 1.08 - 0.33[B.G.2] * 1.08 - 0.00[B.G.3] * 1.35 - 1.93[B.G.4] * 1.35$
	O18	K46	Z $-2.95 = 0.00[B.G.1] * 1.08 - 0.33[B.G.2] * 1.08 + 0.00[B.G.3] * 1.35 - 1.93[B.G.4] * 1.35$
	O19	K43	Z $-2.95 = 0.00[B.G.1] * 1.08 - 0.33[B.G.2] * 1.08 + 0.00[B.G.3] * 1.35 - 1.93[B.G.4] * 1.35$
	O20	K42	Z $-2.95 = -0.00[B.G.1] * 1.08 - 0.33[B.G.2] * 1.08 - 0.00[B.G.3] * 1.35 - 1.93[B.G.4] * 1.35$
	O21	K48	Z $-2.95 = 0.00[B.G.1] * 1.08 - 0.33[B.G.2] * 1.08 + 0.00[B.G.3] * 1.35 - 1.93[B.G.4] * 1.35$
	O22	K49	Z $-2.95 = 0.00[B.G.1] * 1.08 - 0.33[B.G.2] * 1.08 + 0.00[B.G.3] * 1.35 - 1.93[B.G.4] * 1.35$
	O23	K22	Z $-1.48 = -0.16[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08 - 0.96[B.G.3] * 1.35 + 0.00[B.G.4] * 1.35$
	O24	K24	Z $-1.54 = -0.17[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08 - 1.00[B.G.3] * 1.35 + 0.00[B.G.4] * 1.35$



LComb	Support	Node	Reaction
Fu.C.2	O25	K26	Z $-1.48 = -0.16[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08 - 0.96[B.G.3] * 1.35 + 0.00[B.G.4] * 1.35$
	O26	K16	Z $-1.48 = -0.16[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08 - 0.96[B.G.3] * 1.35 + 0.00[B.G.4] * 1.35$
	O27	K18	Z $-1.54 = -0.17[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08 - 1.00[B.G.3] * 1.35 + 0.00[B.G.4] * 1.35$
	O28	K20	Z $-1.48 = -0.16[B.G.1] * 1.08 + 0.00[B.G.2] * 1.08 - 0.96[B.G.3] * 1.35 + 0.00[B.G.4] * 1.35$
Fu.C.3	O1	K2	Z $-2.88 = -1.69[B.G.1] * 1.22 - 0.67[B.G.2] * 1.22$
	O2	K5	Z $-2.88 = -1.69[B.G.1] * 1.22 - 0.67[B.G.2] * 1.22$
	O3	K3	Z $-0.72 = -0.42[B.G.1] * 1.22 - 0.17[B.G.2] * 1.22$
	O4	K8	Z $-0.72 = -0.42[B.G.1] * 1.22 - 0.17[B.G.2] * 1.22$
	O5	K4	Z $-0.72 = -0.42[B.G.1] * 1.22 - 0.17[B.G.2] * 1.22$
	O6	K7	Z $-0.72 = -0.42[B.G.1] * 1.22 - 0.17[B.G.2] * 1.22$
	O7	K6	Z $-2.88 = -1.69[B.G.1] * 1.22 - 0.67[B.G.2] * 1.22$
	O8	K1	Z $-2.88 = -1.69[B.G.1] * 1.22 - 0.67[B.G.2] * 1.22$
	O9	K36	Z $-0.20 = -0.16[B.G.1] * 1.22 + 0.00[B.G.2] * 1.22$
	O10	K38	Z $-0.21 = -0.17[B.G.1] * 1.22 + 0.00[B.G.2] * 1.22$
	O11	K40	Z $-0.20 = -0.16[B.G.1] * 1.22 + 0.00[B.G.2] * 1.22$
	O12	K28	Z $-0.20 = -0.16[B.G.1] * 1.22 + 0.00[B.G.2] * 1.22$
	O13	K30	Z $-0.21 = -0.17[B.G.1] * 1.22 + 0.00[B.G.2] * 1.22$
	O14	K32	Z $-0.20 = -0.16[B.G.1] * 1.22 + 0.00[B.G.2] * 1.22$
	O15	K51	Z $-0.40 = -0.00[B.G.1] * 1.22 - 0.33[B.G.2] * 1.22$
	O16	K52	Z $-0.40 = 0.00[B.G.1] * 1.22 - 0.33[B.G.2] * 1.22$
	O17	K45	Z $-0.40 = -0.00[B.G.1] * 1.22 - 0.33[B.G.2] * 1.22$
	O18	K46	Z $-0.40 = 0.00[B.G.1] * 1.22 - 0.33[B.G.2] * 1.22$
	O19	K43	Z $-0.40 = 0.00[B.G.1] * 1.22 - 0.33[B.G.2] * 1.22$
	O20	K42	Z $-0.40 = -0.00[B.G.1] * 1.22 - 0.33[B.G.2] * 1.22$
	O21	K48	Z $-0.40 = 0.00[B.G.1] * 1.22 - 0.33[B.G.2] * 1.22$
	O22	K49	Z $-0.40 = 0.00[B.G.1] * 1.22 - 0.33[B.G.2] * 1.22$
	O23	K22	Z $-0.20 = -0.16[B.G.1] * 1.22 + 0.00[B.G.2] * 1.22$
	O24	K24	Z $-0.21 = -0.17[B.G.1] * 1.22 + 0.00[B.G.2] * 1.22$
	O25	K26	Z $-0.20 = -0.16[B.G.1] * 1.22 + 0.00[B.G.2] * 1.22$
	O26	K16	Z $-0.20 = -0.16[B.G.1] * 1.22 + 0.00[B.G.2] * 1.22$
	O27	K18	Z $-0.21 = -0.17[B.G.1] * 1.22 + 0.00[B.G.2] * 1.22$
	O28	K20	Z $-0.20 = -0.16[B.G.1] * 1.22 + 0.00[B.G.2] * 1.22$
Fu.C.4	O1	K2	Z $0.65 = -1.69[B.G.1] * 0.90 - 0.67[B.G.2] * 0.90 + 2.05[B.G.5] * 1.35$
	O2	K5	Z $0.65 = -1.69[B.G.1] * 0.90 - 0.67[B.G.2] * 0.90 + 2.05[B.G.5] * 1.35$
	O3	K3	Z $-0.00 = -0.42[B.G.1] * 0.90 - 0.17[B.G.2] * 0.90 + 0.39[B.G.5] * 1.35$
	O4	K8	Z $-0.01 = -0.42[B.G.1] * 0.90 - 0.17[B.G.2] * 0.90 + 0.39[B.G.5] * 1.35$
	O5	K4	Z $-0.00 = -0.42[B.G.1] * 0.90 - 0.17[B.G.2] * 0.90 + 0.39[B.G.5] * 1.35$
	O6	K7	Z $-0.01 = -0.42[B.G.1] * 0.90 - 0.17[B.G.2] * 0.90 + 0.39[B.G.5] * 1.35$
	O7	K6	Z $0.03 = -1.69[B.G.1] * 0.90 - 0.67[B.G.2] * 0.90 + 1.60[B.G.5] * 1.35$
	O8	K1	Z $0.03 = -1.69[B.G.1] * 0.90 - 0.67[B.G.2] * 0.90 + 1.60[B.G.5] * 1.35$
	O9	K36	Z $0.40 = -0.16[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.41[B.G.5] * 1.35$
	O10	K38	Z $0.43 = -0.17[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.43[B.G.5] * 1.35$
	O11	K40	Z $0.40 = -0.16[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.41[B.G.5] * 1.35$
	O12	K28	Z $-0.00 = -0.16[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.11[B.G.5] * 1.35$
	O13	K30	Z $-0.00 = -0.17[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.11[B.G.5] * 1.35$
	O14	K32	Z $-0.00 = -0.16[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.11[B.G.5] * 1.35$
	O15	K51	Z $0.15 = -0.00[B.G.1] * 0.90 - 0.33[B.G.2] * 0.90 + 0.33[B.G.5] * 1.35$
	O16	K52	Z $-0.01 = 0.00[B.G.1] * 0.90 - 0.33[B.G.2] * 0.90 + 0.21[B.G.5] * 1.35$
	O17	K45	Z $0.15 = -0.00[B.G.1] * 0.90 - 0.33[B.G.2] * 0.90 + 0.33[B.G.5] * 1.35$
	O18	K46	Z $-0.01 = 0.00[B.G.1] * 0.90 - 0.33[B.G.2] * 0.90 + 0.21[B.G.5] * 1.35$
	O19	K43	Z $-0.00 = 0.00[B.G.1] * 0.90 - 0.33[B.G.2] * 0.90 + 0.22[B.G.5] * 1.35$
	O20	K42	Z $-0.00 = -0.00[B.G.1] * 0.90 - 0.33[B.G.2] * 0.90 + 0.22[B.G.5] * 1.35$
	O21	K48	Z $-0.00 = 0.00[B.G.1] * 0.90 - 0.33[B.G.2] * 0.90 + 0.22[B.G.5] * 1.35$
	O22	K49	Z $-0.00 = 0.00[B.G.1] * 0.90 - 0.33[B.G.2] * 0.90 + 0.22[B.G.5] * 1.35$
	O23	K22	Z $-0.00 = -0.16[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.11[B.G.5] * 1.35$
	O24	K24	Z $-0.00 = -0.17[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.11[B.G.5] * 1.35$
	O25	K26	Z $-0.00 = -0.16[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.11[B.G.5] * 1.35$
	O26	K16	Z $-0.00 = -0.16[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.11[B.G.5] * 1.35$
	O27	K18	Z $-0.00 = -0.17[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.11[B.G.5] * 1.35$
	O28	K20	Z $-0.00 = -0.16[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.11[B.G.5] * 1.35$
Fu.C.5	O1	K2	Z $-0.03 = -1.69[B.G.1] * 0.90 - 0.67[B.G.2] * 0.90 + 1.56[B.G.6] * 1.35$

LComb	Support	Node	Reaction
Fu.C.5	O2	K5	Z $0.14 = -1.69[B.G.1] * 0.90 - 0.67[B.G.2] * 0.90 + 1.68[B.G.6] * 1.35$
	O3	K3	Z $-0.01 = -0.42[B.G.1] * 0.90 - 0.17[B.G.2] * 0.90 + 0.39[B.G.6] * 1.35$
	O4	K8	Z $-0.01 = -0.42[B.G.1] * 0.90 - 0.17[B.G.2] * 0.90 + 0.39[B.G.6] * 1.35$
	O5	K4	Z $0.56 = -0.42[B.G.1] * 0.90 - 0.17[B.G.2] * 0.90 + 0.81[B.G.6] * 1.35$
	O6	K7	Z $0.56 = -0.42[B.G.1] * 0.90 - 0.17[B.G.2] * 0.90 + 0.81[B.G.6] * 1.35$
	O7	K6	Z $0.14 = -1.69[B.G.1] * 0.90 - 0.67[B.G.2] * 0.90 + 1.68[B.G.6] * 1.35$
	O8	K1	Z $-0.02 = -1.69[B.G.1] * 0.90 - 0.67[B.G.2] * 0.90 + 1.56[B.G.6] * 1.35$
	O9	K36	Z $-0.00 = -0.16[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.11[B.G.6] * 1.35$
	O10	K38	Z $-0.00 = -0.17[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.11[B.G.6] * 1.35$
	O11	K40	Z $-0.00 = -0.16[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.11[B.G.6] * 1.35$
	O12	K28	Z $-0.00 = -0.16[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.11[B.G.6] * 1.35$
	O13	K30	Z $-0.00 = -0.17[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.11[B.G.6] * 1.35$
	O14	K32	Z $-0.00 = -0.16[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.11[B.G.6] * 1.35$
	O15	K51	Z $-0.01 = -0.00[B.G.1] * 0.90 - 0.33[B.G.2] * 0.90 + 0.21[B.G.6] * 1.35$
	O16	K52	Z $0.15 = 0.00[B.G.1] * 0.90 - 0.33[B.G.2] * 0.90 + 0.33[B.G.6] * 1.35$
	O17	K45	Z $-0.00 = -0.00[B.G.1] * 0.90 - 0.33[B.G.2] * 0.90 + 0.22[B.G.6] * 1.35$
	O18	K46	Z $-0.00 = 0.00[B.G.1] * 0.90 - 0.33[B.G.2] * 0.90 + 0.22[B.G.6] * 1.35$
	O19	K43	Z $-0.00 = 0.00[B.G.1] * 0.90 - 0.33[B.G.2] * 0.90 + 0.22[B.G.6] * 1.35$
	O20	K42	Z $-0.00 = -0.00[B.G.1] * 0.90 - 0.33[B.G.2] * 0.90 + 0.22[B.G.6] * 1.35$
	O21	K48	Z $-0.01 = 0.00[B.G.1] * 0.90 - 0.33[B.G.2] * 0.90 + 0.21[B.G.6] * 1.35$
	O22	K49	Z $0.15 = 0.00[B.G.1] * 0.90 - 0.33[B.G.2] * 0.90 + 0.33[B.G.6] * 1.35$
	O23	K22	Z $0.40 = -0.16[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.41[B.G.6] * 1.35$
	O24	K24	Z $0.43 = -0.17[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.43[B.G.6] * 1.35$
	O25	K26	Z $0.40 = -0.16[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.41[B.G.6] * 1.35$
	O26	K16	Z $-0.00 = -0.16[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.11[B.G.6] * 1.35$
	O27	K18	Z $-0.00 = -0.17[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.11[B.G.6] * 1.35$
	O28	K20	Z $-0.00 = -0.16[B.G.1] * 0.90 + 0.00[B.G.2] * 0.90 + 0.11[B.G.6] * 1.35$
-	-	-	kN kNm

**EXTREME UNITY CHECK DIN-EN1993-1-1:2014/NA:2014**

Field	Check Type	Combination	Formula	UC max
C21-V1 (0.000-3.293)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,28
C22-V1 (0.000-3.293)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,28
C24-V1 (0.000-3.293)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,28
C25-V1 (0.000-3.293)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,28
C29-V1 (0.000-1.864)	Lat.Buck.	Fu.C.2	DIN-EN1993-1-1(6.54)	0,06
C31-V1 (0.000-1.864)	Lat.Buck.	Fu.C.2	DIN-EN1993-1-1(6.54)	0,06
C32-V1 (0.000-1.006)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,01
C33-V1 (0.000-0.978)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,01
C34-V1 (0.000-0.978)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,01
C35-V1 (0.000-1.006)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,01
C36-V1 (0.000-1.864)	Lat.Buck.	Fu.C.2	DIN-EN1993-1-1(6.54)	0,06
C37-V1 (0.000-1.704)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,04
C38-V1 (0.000-1.864)	Lat.Buck.	Fu.C.2	DIN-EN1993-1-1(6.54)	0,06
C39-V1 (0.000-1.006)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,01
C40-V1 (0.000-0.978)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,01
C41-V1 (0.000-0.978)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,01
C42-V1 (0.000-1.006)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,01
C43-V1 (0.000-1.864)	Lat.Buck.	Fu.C.2	DIN-EN1993-1-1(6.54)	0,06
C45-V1 (0.000-1.864)	Lat.Buck.	Fu.C.2	DIN-EN1993-1-1(6.54)	0,06
C47-V1 (0.000-0.978)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,01
C48-V1 (0.000-0.978)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,01
C50-V1 (0.000-1.864)	Lat.Buck.	Fu.C.2	DIN-EN1993-1-1(6.54)	0,06
C52-V1 (0.000-1.864)	Lat.Buck.	Fu.C.2	DIN-EN1993-1-1(6.54)	0,06
C54-V1 (0.000-0.978)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,01
C55-V1 (0.000-0.978)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,01
C57-V1 (0.000-1.774)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,56
C59-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,98
C60-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,99
C62-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,98
C63-V1 (0.000-1.950)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,95
C70-V1 (0.000-1.950)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,95

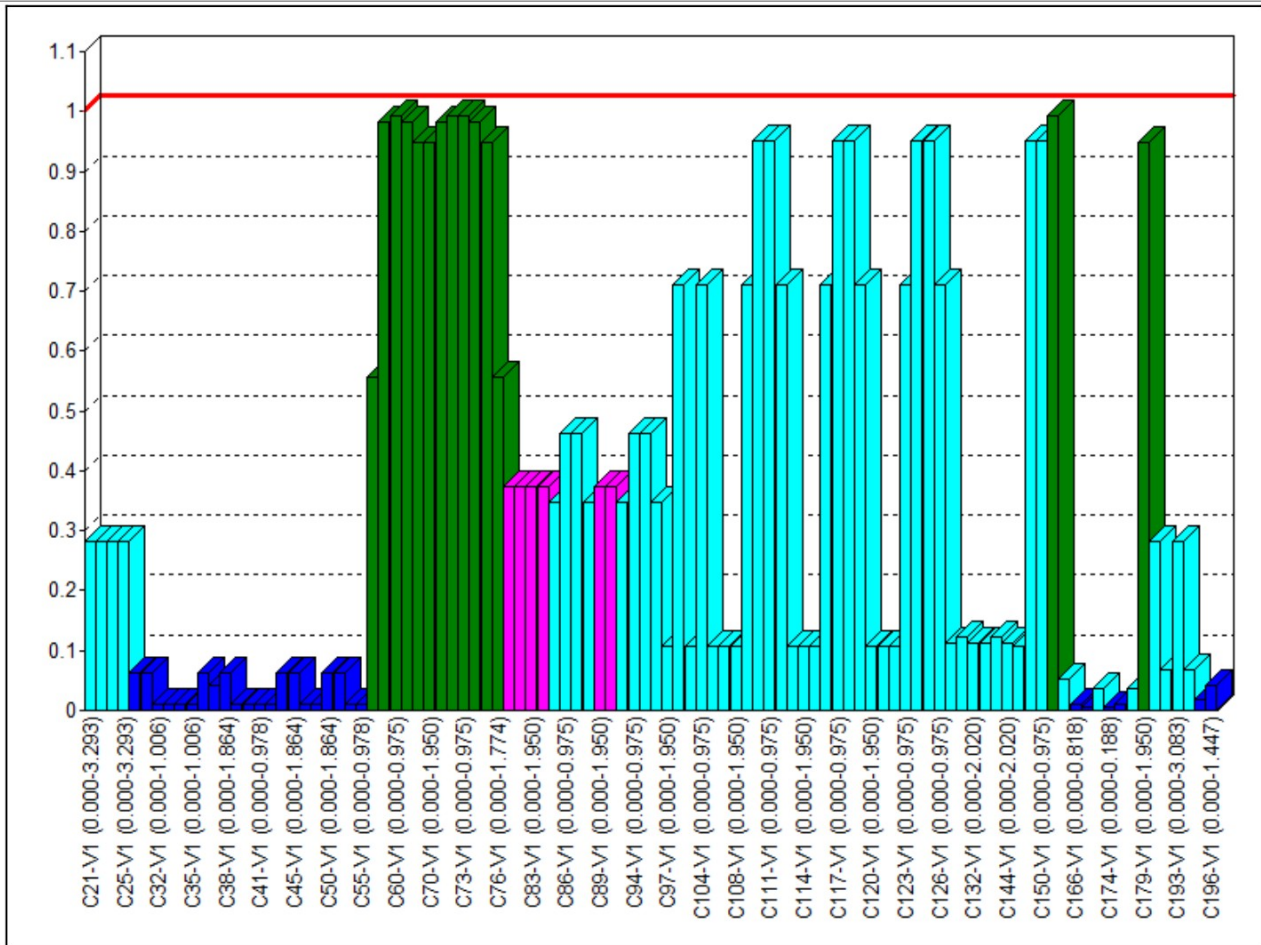
Field	Check Type	Combination	Formula	UC max
C71-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,98
C72-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,99
C73-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,99
C74-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,98
C75-V1 (0.000-1.950)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,95
C76-V1 (0.000-1.774)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,56
C81-V1 (0.000-1.774)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,37
C82-V1 (0.000-1.950)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,37
C83-V1 (0.000-1.950)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,37
C84-V1 (0.000-1.774)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,37
C85-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,35
C86-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,46
C87-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,46
C88-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,35
C89-V1 (0.000-1.950)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,37
C92-V1 (0.000-1.950)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,37
C93-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,35
C94-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,46
C95-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,46
C96-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,35
C97-V1 (0.000-1.950)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11
C99-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,71
C101-V1 (0.000-1.950)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11
C104-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,71
C106-V1 (0.000-1.950)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11
C107-V1 (0.000-1.950)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11
C108-V1 (0.000-1.950)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11
C109-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,71
C110-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,95
C111-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,95
C112-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,71
C113-V1 (0.000-1.950)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11
C114-V1 (0.000-1.950)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11
C115-V1 (0.000-1.950)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11
C116-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,71
C117-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,95
C118-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,95
C119-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,71
C120-V1 (0.000-1.950)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11
C121-V1 (0.000-1.950)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11
C122-V1 (0.000-1.950)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11
C123-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,71
C124-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,95

Field	Check Type	Combination	Formula	UC max
C125-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,95
C126-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,71
C128-V1 (0.000-2.020)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11
C130-V1 (0.000-2.100)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,12
C132-V1 (0.000-2.020)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11
C140-V1 (0.000-2.020)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11
C142-V1 (0.000-2.100)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,12
C144-V1 (0.000-2.020)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11
C147-V1 (0.000-1.950)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11
C149-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,95
C150-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,95
C151-V1 (0.000-0.975)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,99
C161-V1 (0.000-0.280)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,05
C166-V1 (0.000-0.818)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,01
C167-V1 (0.000-0.188)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,01
C169-V1 (0.000-0.200)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,04
C174-V1 (0.000-0.188)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,01
C175-V1 (0.000-0.818)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,01
C177-V1 (0.000-0.200)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,04
C179-V1 (0.000-1.950)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,95
C191-V1 (0.000-3.083)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,28
C192-V1 (0.000-0.210)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,07
C193-V1 (0.000-3.083)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,28
C194-V1 (0.000-0.210)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,07
C195-V1 (0.000-0.257)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,02
C196-V1 (0.000-1.447)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,04
C198-V1 (0.000-0.257)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,02
C199-V1 (0.000-1.054)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,34
C200-V1 (0.000-0.720)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,56
C201-V1 (0.000-0.720)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11
C202-V1 (0.000-1.100)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,12
C203-V1 (0.000-0.720)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,10
C204-V1 (0.000-1.100)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11
C205-V1 (0.000-0.720)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,10

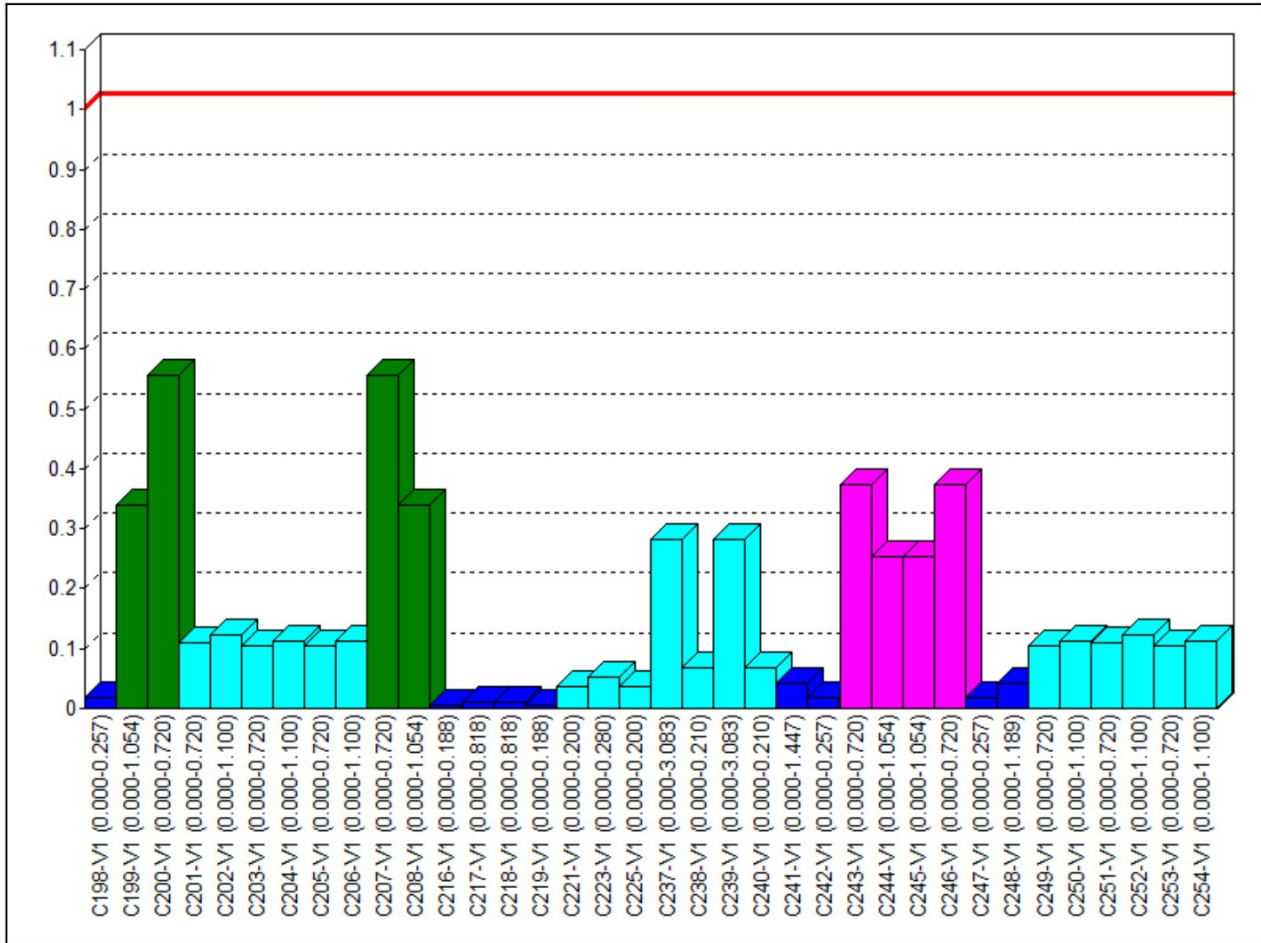
Field	Check Type	Combination	Formula	UC max
C206-V1 (0.000-1.100)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11
C207-V1 (0.000-0.720)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,56
C208-V1 (0.000-1.054)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,34
C216-V1 (0.000-0.188)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,01
C217-V1 (0.000-0.818)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,01
C218-V1 (0.000-0.818)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,01
C219-V1 (0.000-0.188)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,01
C221-V1 (0.000-0.200)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,04
C223-V1 (0.000-0.280)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,05
C225-V1 (0.000-0.200)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,04
C237-V1 (0.000-3.083)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,28
C238-V1 (0.000-0.210)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,07
C239-V1 (0.000-3.083)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,28
C240-V1 (0.000-0.210)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,07
C241-V1 (0.000-1.447)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,04
C242-V1 (0.000-0.257)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,02
C243-V1 (0.000-0.720)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,37
C244-V1 (0.000-1.054)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,25
C245-V1 (0.000-1.054)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,25
C246-V1 (0.000-0.720)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,37
C247-V1 (0.000-0.257)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,02
C248-V1 (0.000-1.189)	Cross	Fu.C.2	DIN-EN1993-1-1(6.42)	0,04
C249-V1 (0.000-0.720)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,10
C250-V1 (0.000-1.100)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11
C251-V1 (0.000-0.720)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11
C252-V1 (0.000-1.100)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,12
C253-V1 (0.000-0.720)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,10
C254-V1 (0.000-1.100)	Cross	Fu.C.2	DIN-EN1993-1-1(6.12)	0,11



PIC. STEEL UC CHART [1/2]



PIC. STEEL UC CHART [2/2]



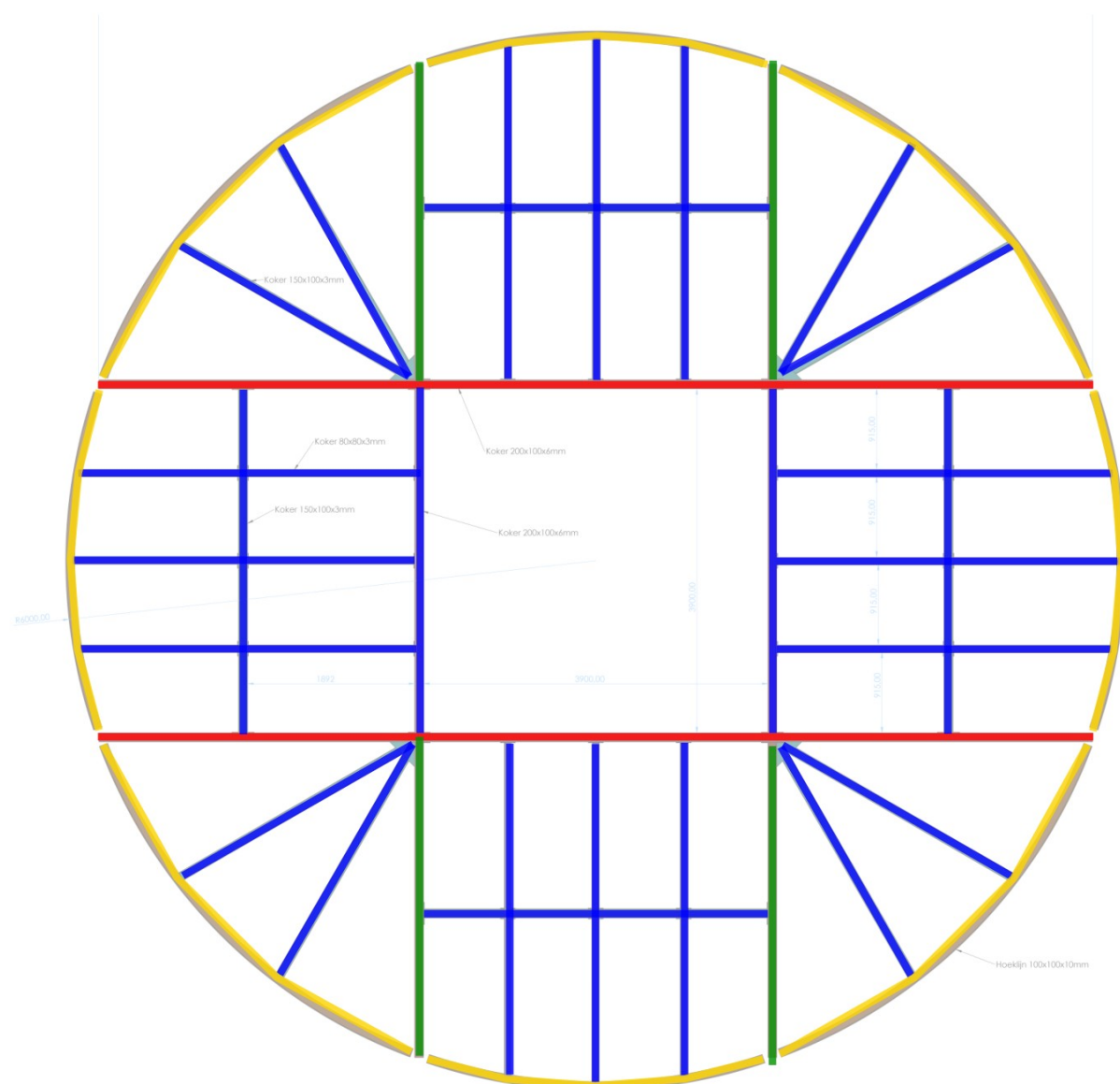
## Overzicht staal

Nr. 30260-IK





Bl. ..

Datum: 13-11-2024

Schaal: 1:80



## Profielen RVS316:

-  Koker 250x100x5mm (één lengte)
-  Koker 150x100x3mm
-  Koker 80x80x3
-  Hoeklijn 100x100x10mm

## Oplegreacties:

Koker 250x100x5	21,4kN
Koker 150x100x3	5,4kN
Koker 80x80x3	3,0kN

Alle verbindingen zijn dwarskrachtverbindingen.