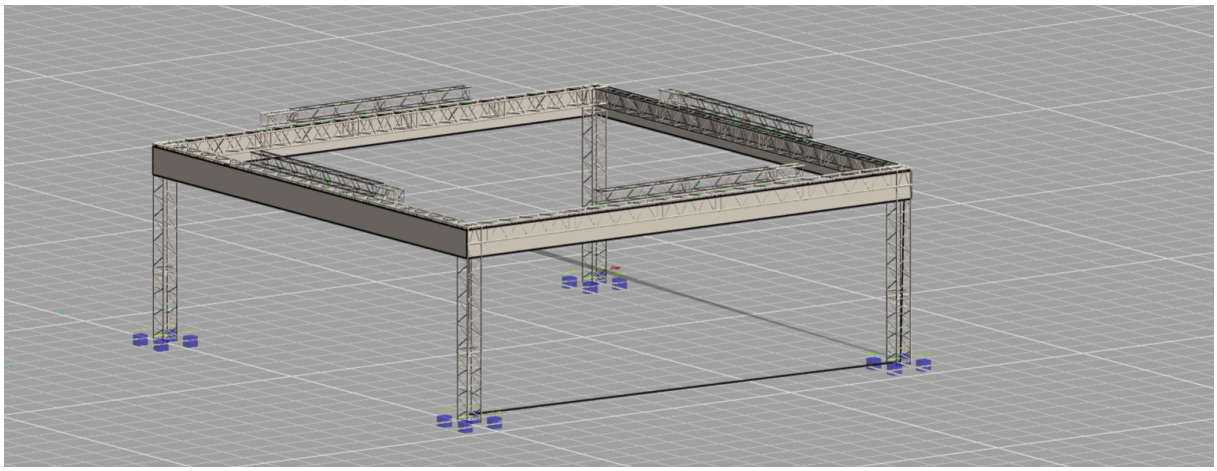
Static Calculation

Project Name	Dubai Air Show - TECS-03652
Location	Dubai
Client	TECS-ME
Author	Moritz Staffel



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Summary

The structure is adequately dimensioned.

The structure is designed for outdoor use.

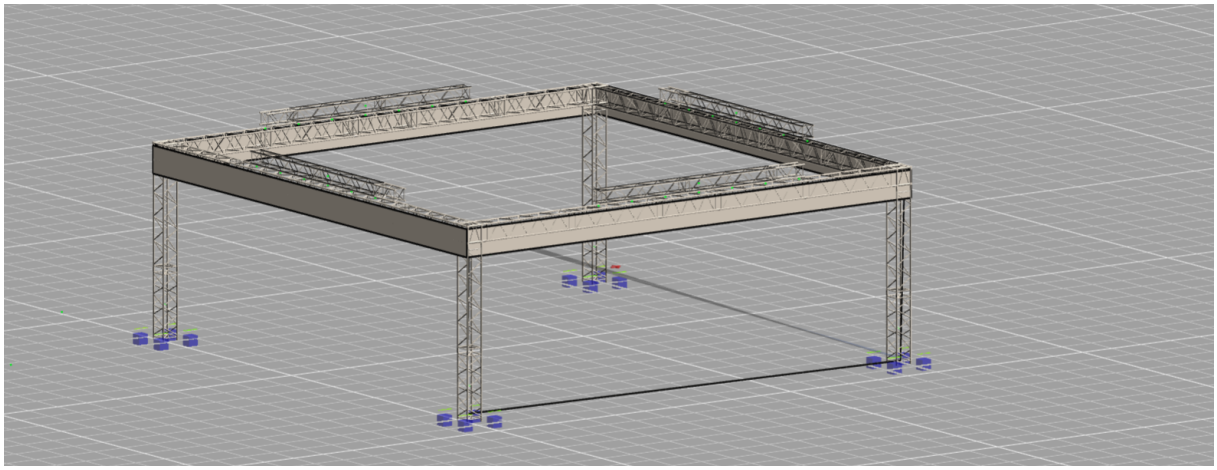
Project Description

A ground support is being proven.

The width is: 15,5m
The Depth is: 15,5m
The height is: 5m

The structure is shown here:

Isometric view:

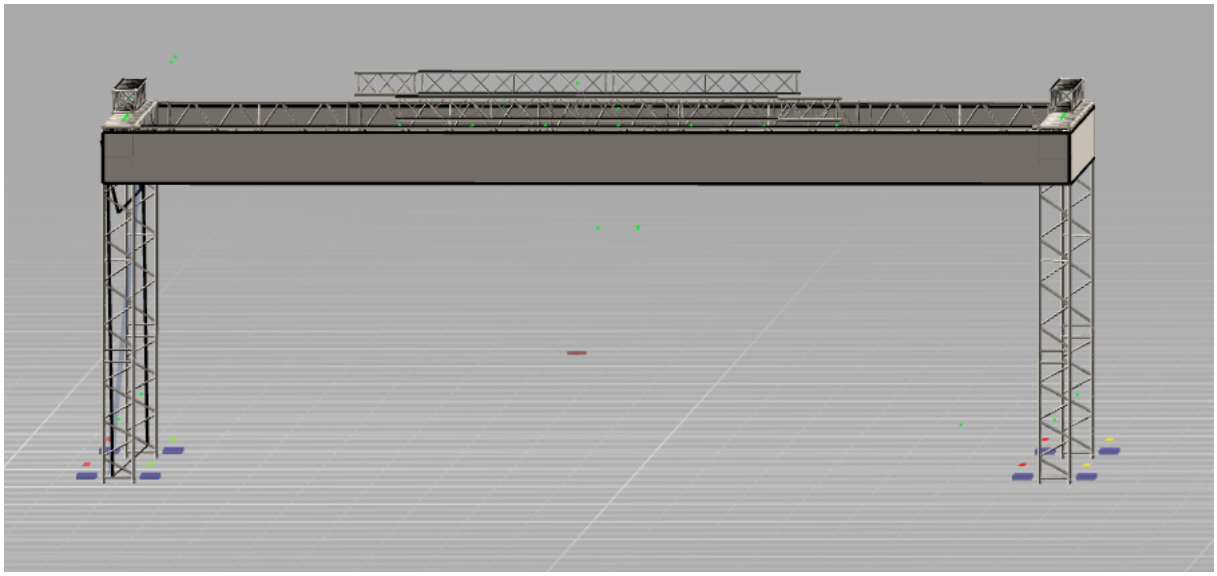


The structure holds a curtain system. This curtain system can be moved up and down.

The structure is designed to be in operation till 15m/s windspeed. This applies to wind force 6.
After this the curtain needs to be lifted.

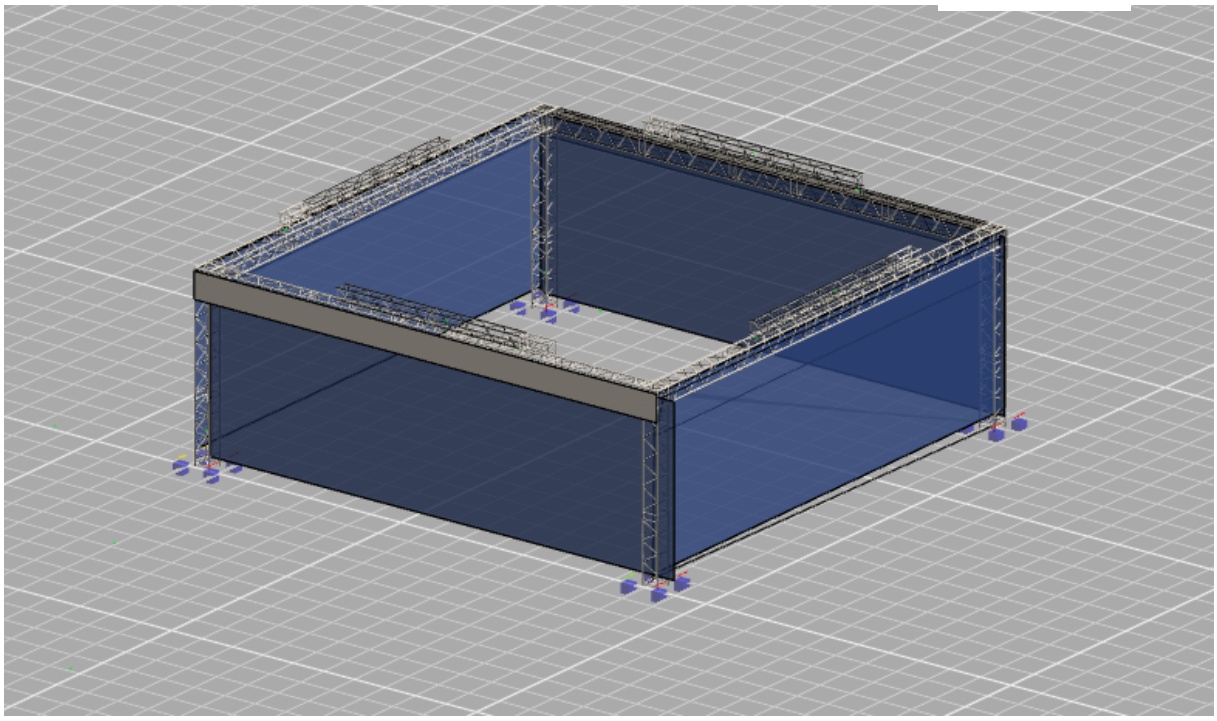
Out of Use

Lift all four curtains:



In Use

All curtains can be down:



Standards Used

Materials, Regulations, Literature, and Software

Materials / Building Materials
The materials used are listed in the individual proofs.

Currently valid general technical building regulations, in particular:
EN 1990 – Basis of structural design
EN 1991-1 – Actions on structures
EN 1999-1 – Structural design of aluminium constructions
EN 13814

Software Used
Production Assist 13.8

Load Assumptions

Wind Loads

The load assumptions are based on EN 1991-1-4.
The structure will be build near to Dubai. Dubai Wind code is used.

Height: < 7 m
qb = 0,56 kN/m^2
Vb = 30m/s

0,7 - Temporary standing factor below 24 month

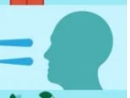
qp_1 = 1,5 *0,7 * 0,56 kN/m^2 = 0,59 kN/m^2

According to EN 13814 for following wind speed for in service will be used:

Tabelle 1 — Winddrücke für Fliegende Bauten

Bauhöhe	Druck $q_{eq} = q_{ref} \times ce(ze) \times c_d$ (kN/m²) für Referenzwindgeschwindigkeit	
	$v_{ref} \leq 15$ m/s (in Betrieb)	$v_{ref,0} \leq 28$ m/s (außer Betrieb)
0 ≤ 8 m	0,20	0,35
8 ≤ 20 m	0,30	0,50
20 ≤ 35 m	0,35	0,90
35 ≤ 50 m	0,40	1,00

This applies to wind force 6.

Beaufort Number	Description	Wind speed	Wave height	Sea conditions	Land conditions	
0	Calm	< 1 knot < 1 mph < 2 km/h	0 ft 0 m	Sea like a mirror	Smoke rises vertically	
1	Light air	1–3 knots 1–3 mph 2–5 km/h	0–1 ft 0–0.3 m	Ripples	Direction shown by smoke drift	
2	Light breeze	4–6 knots 4–7 mph 6–11 km/h	1–2 ft 0.3–0.6 m	Small wavelets	Wind felt on face	
3	Gentle breeze	7–10 knots 8–12 mph 12–19 km/h	2–4 ft 0.6–1.2 m	Large wavelets	Leaves and small twigs in constant motion	
4	Moderate breeze	11–16 knots 13–18 mph 20–28 km/h	3.5–6 ft 1–2 m	Small waves	Raises dust and loose paper	
5	Fresh breeze	17–21 knots 19–24 mph 29–38 km/h	6–10 ft 2–3 m	Moderate waves	Small trees and leafs begin to sway	
6	Strong breeze	22–27 knots 25–31 mph 39–49 km/h	9–13 ft 3–4 m	Large waves	Large branches in motion	
7	High wind, moderate gale, near gale	28–33 knots 32–38 mph 50–61 km/h	13–19 ft 4–5.5 m	Sea heaps up	Whole trees in motion	
8	Gale, fresh gale	34–40 knots 39–46 mph 62–74 km/h	18–25 ft 5.5–7.5 m	Moderately high waves	Twigs break off trees	
9	Strong/severe gale	41–47 knots 47–54 mph 75–88 km/h	23–32 ft 7–10 m	High waves	Slight structural damage	
10	Storm, whole gale	48–55 knots 55–63 mph 89–102 km/h	29–41 ft 9–12.5 m	Very high waves	Trees uprooted, considerable structural damage	
11	Violent storm	56–63 knots 64–72 mph 103–117 km/h	37–52 ft 11.5–16 m	Exceptionally high waves	Widespread damage	
12	Hurricane force	≥ 64 knots ≥ 73 mph ≥ 118 km/h	≥ 46 ft ≥ 14 m	Exceptionally high waves, sea is completely white	Devastation	

Calculation of Wind Load

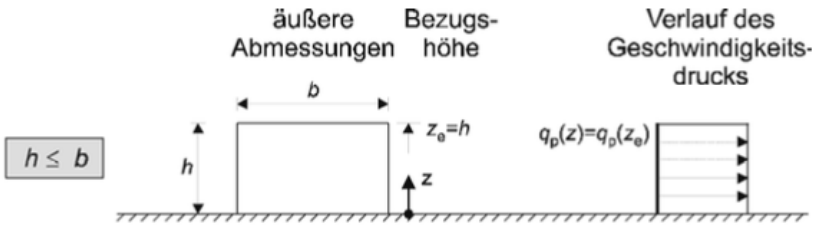
Wind Pressure	Wind Speed	Height	Temporary Use	Factor	Wind Max
0.14 kN/m2	15.00 m/s	25 m	0.70	1.64	0.23 kN/m2

Height	Factor	Wind Pressure
0 m	1.10	0.15 kN/m2
0 m	1.10	0.15 kN/m2
1 m	1.10	0.15 kN/m2
2 m	1.10	0.15 kN/m2
2 m	1.10	0.15 kN/m2
2 m	1.10	0.15 kN/m2
3 m	1.10	0.15 kN/m2
4 m	1.10	0.15 kN/m2
4 m	1.10	0.15 kN/m2
4 m	1.10	0.15 kN/m2
5 m	1.10	0.15 kN/m2
6 m	1.10	0.15 kN/m2
6 m	1.10	0.15 kN/m2
6 m	1.10	0.15 kN/m2
7 m	1.10	0.15 kN/m2
8 m	1.10	0.15 kN/m2
8 m	1.10	0.15 kN/m2
8 m	1.12	0.16 kN/m2
9 m	1.15	0.16 kN/m2
10 m	1.17	0.16 kN/m2
10 m	1.20	0.17 kN/m2
10 m	1.22	0.17 kN/m2
11 m	1.24	0.17 kN/m2
12 m	1.26	0.18 kN/m2
12 m	1.28	0.18 kN/m2
12 m	1.30	0.18 kN/m2
13 m	1.32	0.19 kN/m2
14 m	1.34	0.19 kN/m2
14 m	1.35	0.19 kN/m2
14 m	1.37	0.19 kN/m2
15 m	1.39	0.19 kN/m2
16 m	1.40	0.20 kN/m2
16 m	1.42	0.20 kN/m2
16 m	1.43	0.20 kN/m2
17 m	1.45	0.20 kN/m2
18 m	1.46	0.21 kN/m2
18 m	1.48	0.21 kN/m2
18 m	1.49	0.21 kN/m2
19 m	1.50	0.21 kN/m2
20 m	1.51	0.21 kN/m2
20 m	1.53	0.21 kN/m2
20 m	1.54	0.22 kN/m2
21 m	1.55	0.22 kN/m2

Height	Factor	Wind Pressure
22 m	1.56	0.22 kN/m2
22 m	1.58	0.22 kN/m2
22 m	1.59	0.22 kN/m2
23 m	1.60	0.22 kN/m2
24 m	1.61	0.23 kN/m2
24 m	1.62	0.23 kN/m2
24 m	1.63	0.23 kN/m2
25 m	1.64	0.23 kN/m2

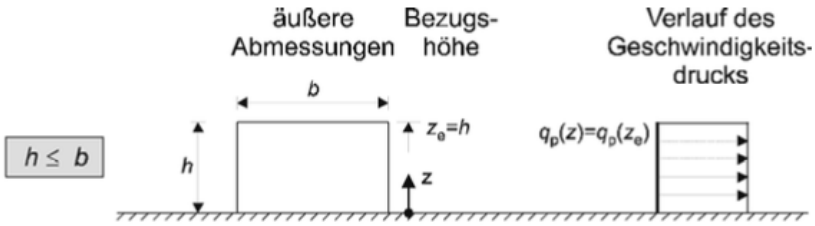
Wind Load Direction - 90 °

Windload - Fabric rolled



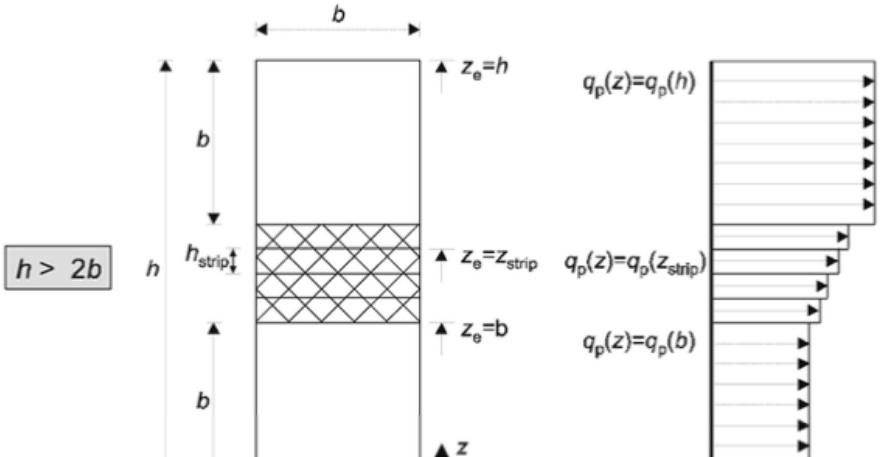
Width	Height	Ratio	Area	Filling	Cf	Force
2 m	15 m	0.11	24.266 m^2	1	1.60	3.00 kN

Windload - Polygon



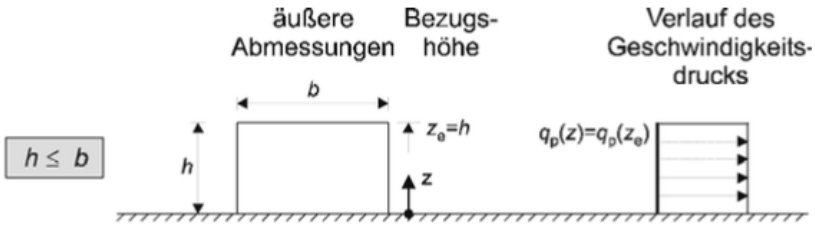
Width	Height	Ratio	Area	Filling	Cf	Force
1 m	15 m	0.08	16.575 m^2	1	1.30	3.51 kN

Windload - Box-52V-ATT Side



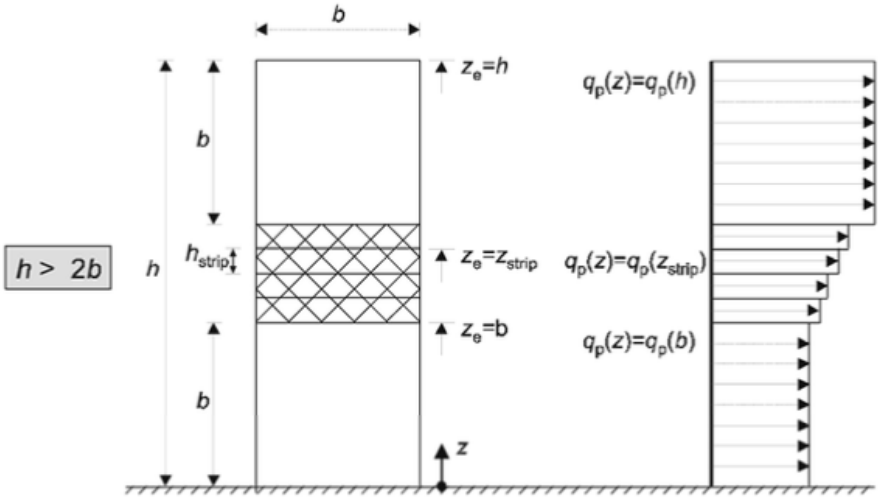
Width	Height	Ratio	Area	Filling	Cf	Force
0 m	0 m	4.00	0.002 m^2	1	1.60	0 kN

Windload - Box-52V-ATT Side



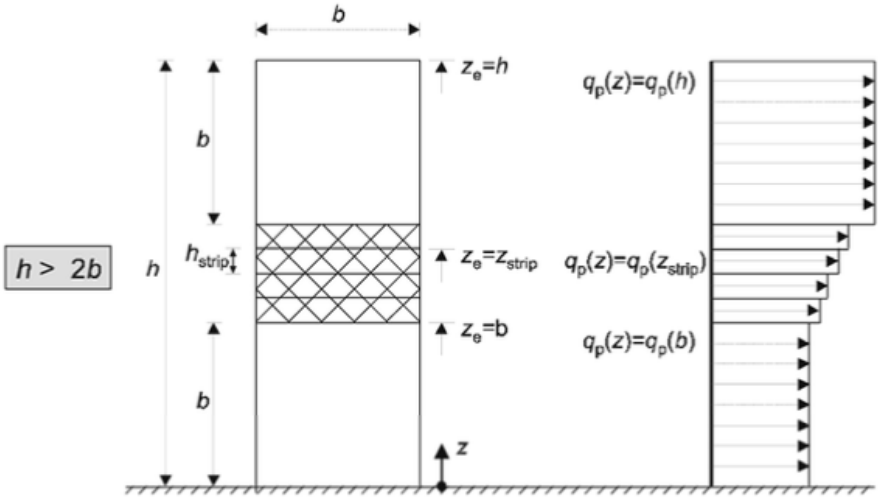
Width	Height	Ratio	Area	Filling	Cf	Force
0 m	1 m	0.60	0.170 m^2	1	1.60	0 kN

Windload - Box-52V-ATT Side



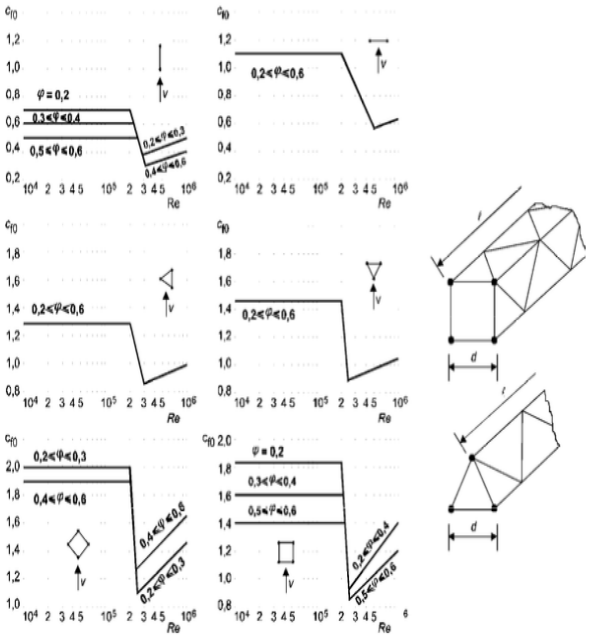
Width	Height	Ratio	Area	Filling	Cf	Force
0 m	0 m	5.33	0.019 m^2	1	1.60	0 kN

Windload - Box-52V-0



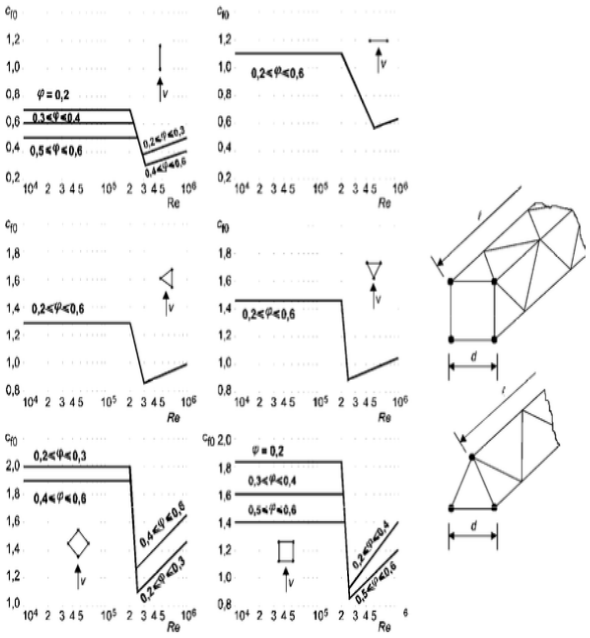
Width	Height	Ratio	Area	Filling	Cf	Force
1 m	0 m	36	0.023 m^2	1	1.60	nan kN

Windload - S52SV



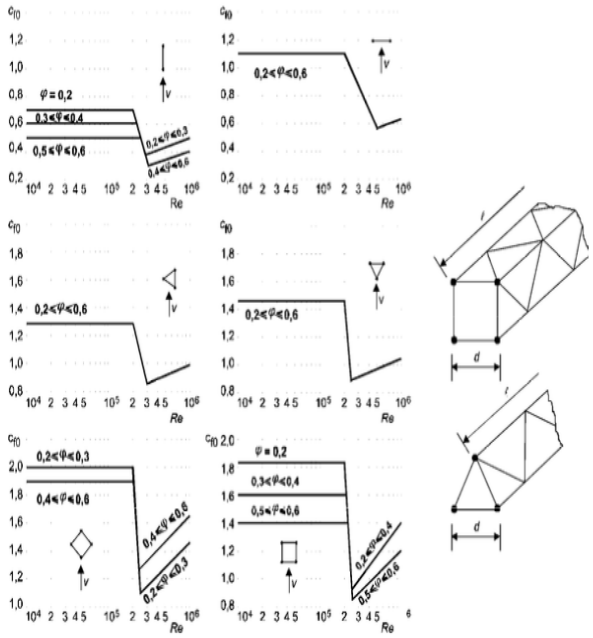
Width	Height	Area	Filling	Cf	Force
0 m	1 m	0.060 m^2	0.50	1.60	0.01 kN

Windload - S52SV



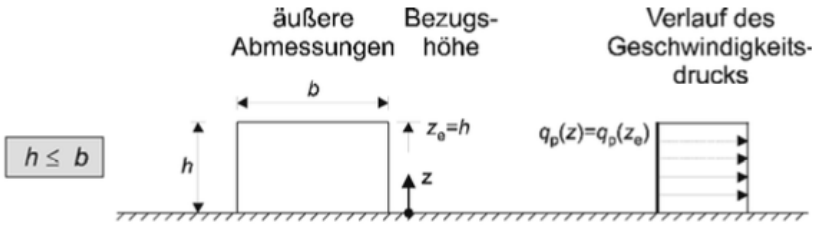
Width	Height	Area	Filling	Cf	Force
12 m	1 m	8.994 m^2	0.50	1.60	1.11 kN

Windload - S52SV



Width	Height	Area	Filling	Cf	Force
8 m	1 m	5.996 m^2	0.50	1.60	0.74 kN

Windload - Wind Covered



Width	Height	Ratio	Area	Filling	Cf	Force
5 m	15 m	0.37	77.838 m^2	1	1.30	15.34 kN

Load Cases

Eurocode Ultimate Failure

The following load combination is used for cross sections.

Name	Type	Factor load group	Factor load combination
Deadload	Deadload	1	1.35

Name	Type	Factor load group	Factor load combination
Payload	Payload	1	1.50
Cable	Deadload	1	1.35
Light	Payload	1	1.50
Audio	Payload	1	1.50
Video	Payload	1	1.50
Deco	Payload	1	1.50
Rigging	Deadload	1	1.35
Wind	Payload	1	1.50

Usability

The following load combination is used for supports.

Name	Type	Factor load group	Factor load combination
Deadload	Deadload	1	1
Payload	Payload	1	1
Cable	Deadload	1	1
Light	Payload	1	1
Audio	Payload	1	1
Video	Payload	1	1
Deco	Payload	1	1
Rigging	Deadload	1	1
Wind	Payload	1	1

Tipping

The following load combination is used for tipping and sliding calculations.

Name	Type	Factor load group	Factor load combination
Deadload	Deadload	1	1
Payload	Payload	1	1
Cable	Deadload	1	1
Light	Payload	1	1
Audio	Payload	1	1
Video	Payload	1	1
Deco	Payload	1	1
Rigging	Deadload	1	1
Wind	Payload	1	1.20

Load Overview

Symbol	Count	Weight	Total weight	Loadgrou	Force Support / Force cross section	Total force support / Total force cross section
	27	2 kg	54 kg	Payload	0.02 kN 0.03 kN	0.53 kN 0.79 kN

Symbol	Count	Weight	Total weight	Loadgrou	Force Support / Force cross section	Total force support / Total force cross section
Box-52V-0	4	26 kg	104 kg	Deadload	0.26 kN 0.34 kN	1.02 kN 1.38 kN
Box-52V-ATT Side	12	1.040 kg	12.480 kg	Deadload	0.01 kN 0.01 kN	0.12 kN 0.17 kN
Fabric rolled	3	20 kg	60 kg	Payload	0.20 kN 0.29 kN	0.59 kN 0.88 kN
Ground Support 1mx1m	4	500 kg	2000 kg	Deadload	4.91 kN 6.62 kN	19.62 kN 26.49 kN
High Speed RollUp	4	100 kg	400 kg	Deadload	0.98 kN 1.32 kN	3.92 kN 5.30 kN
High Speed RollUp	8	128 kg	1024 kg	Deadload	1.26 kN 1.70 kN	10.05 kN 13.56 kN
Polygon	1	0 kg	0 kg		0 kN 0 kN	0 kN 0 kN
S52SV-200	8	26.560 kg	212.480 kg	Deadload	0.26 kN 0.35 kN	2.08 kN 2.81 kN
S52SV-300	20	36.560 kg	731.200 kg	Deadload	0.36 kN 0.48 kN	7.17 kN 9.68 kN
Wind Covered	1	0 kg	0 kg		0 kN 0 kN	0 kN 0 kN
Cable Load Truss	137 m	0 kg/m	0 kg	Cable	0 kN/m 0 kN/m	0 kN 0 kN
Summary	**92**		**4598.160 kg**			**45.11 kN 61.06 kN**

Verification of Load-Bearing Capacity

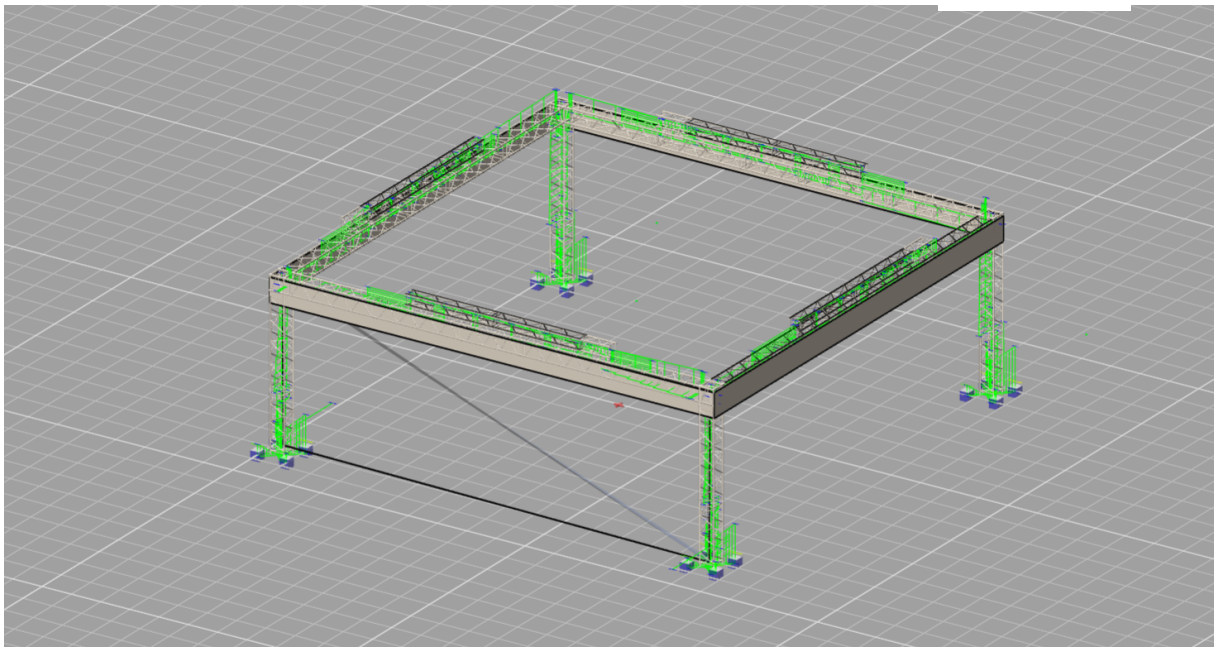
The calculation was made with Production Assist 13.8.

Verification of the Truss

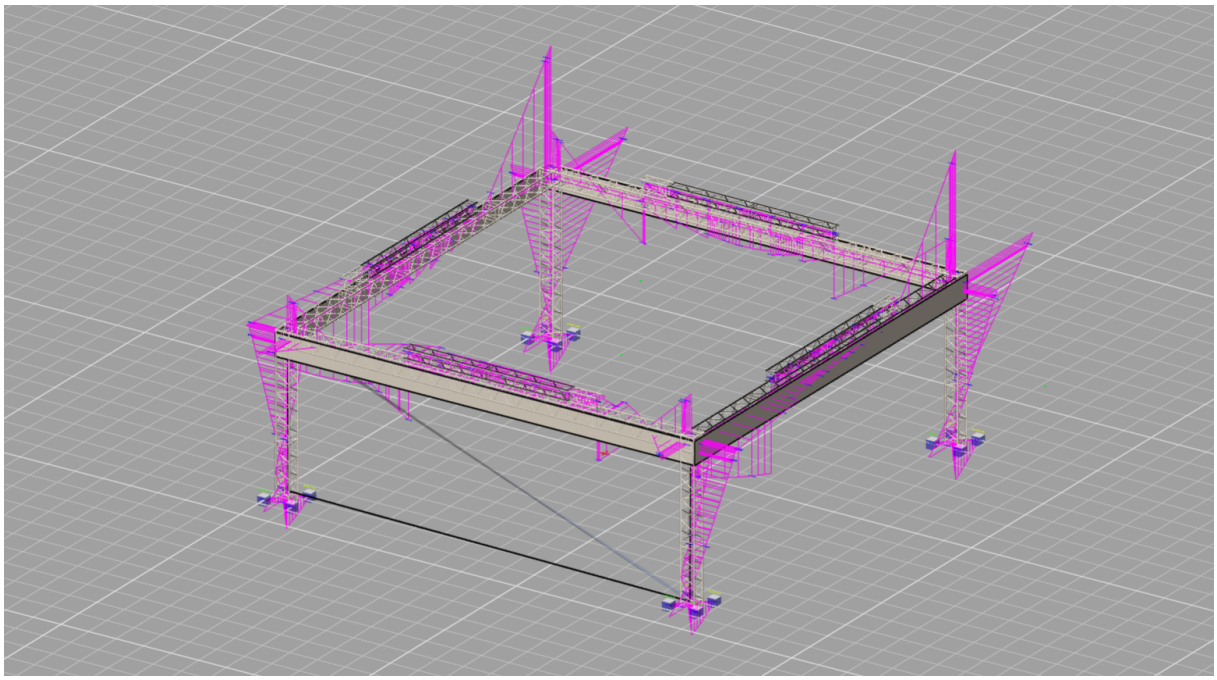
Design values were taken from the approval documents. These are included in the appendix of this calculation.

Action In Use

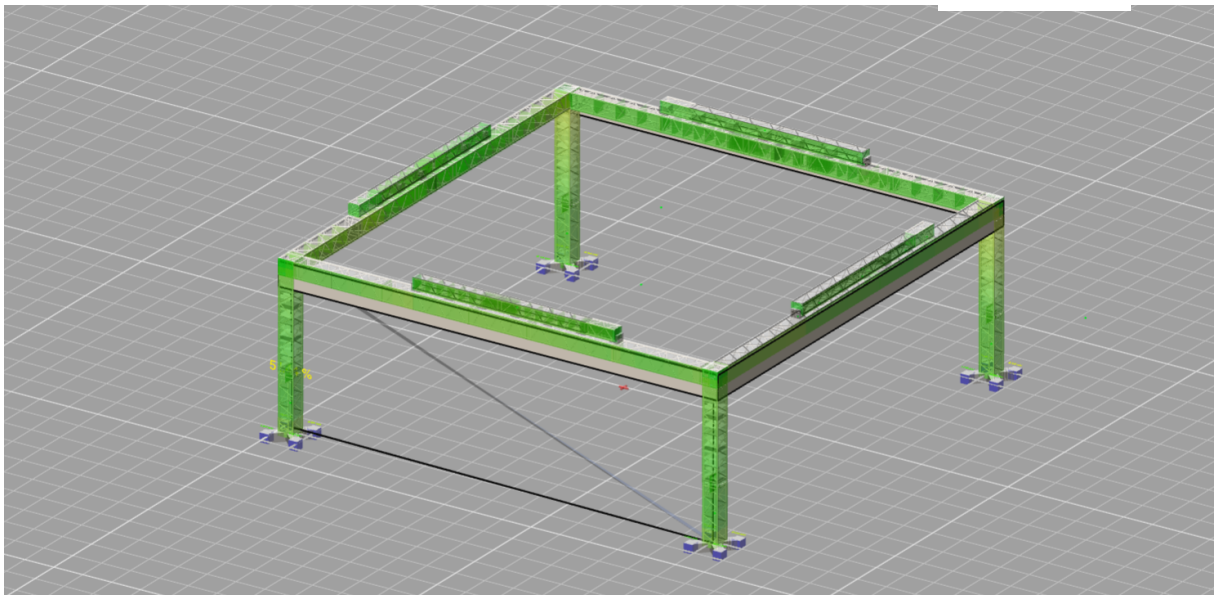
Shear Force



Moment

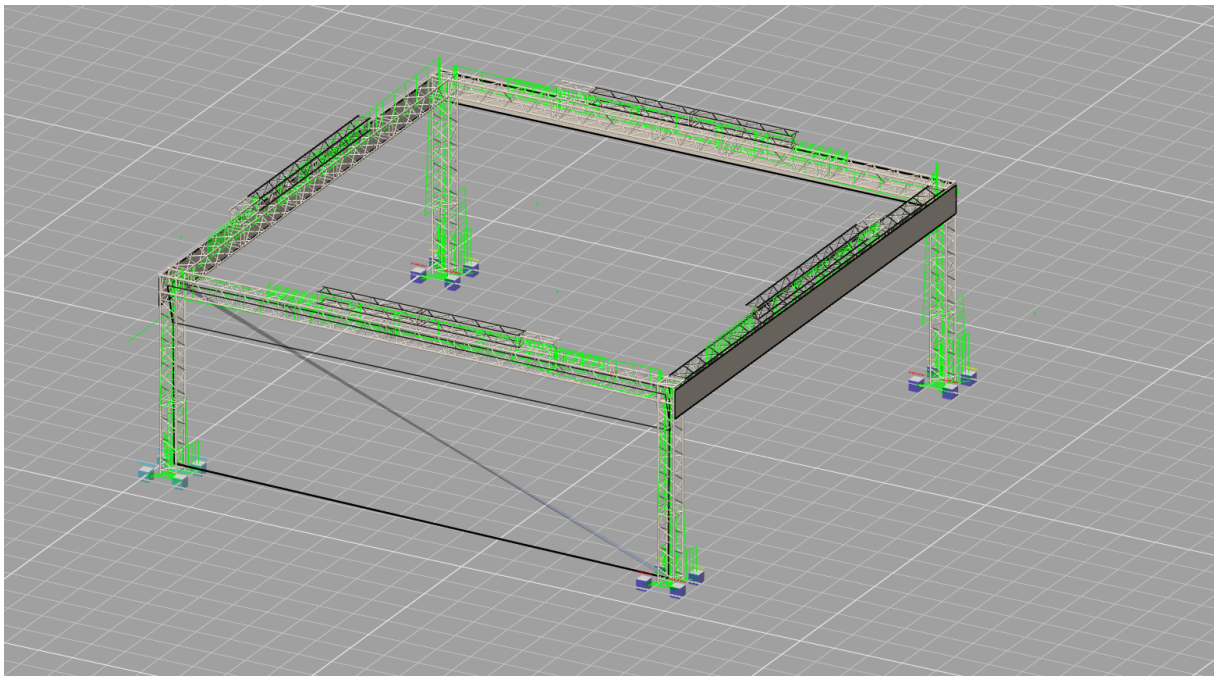


Utilization

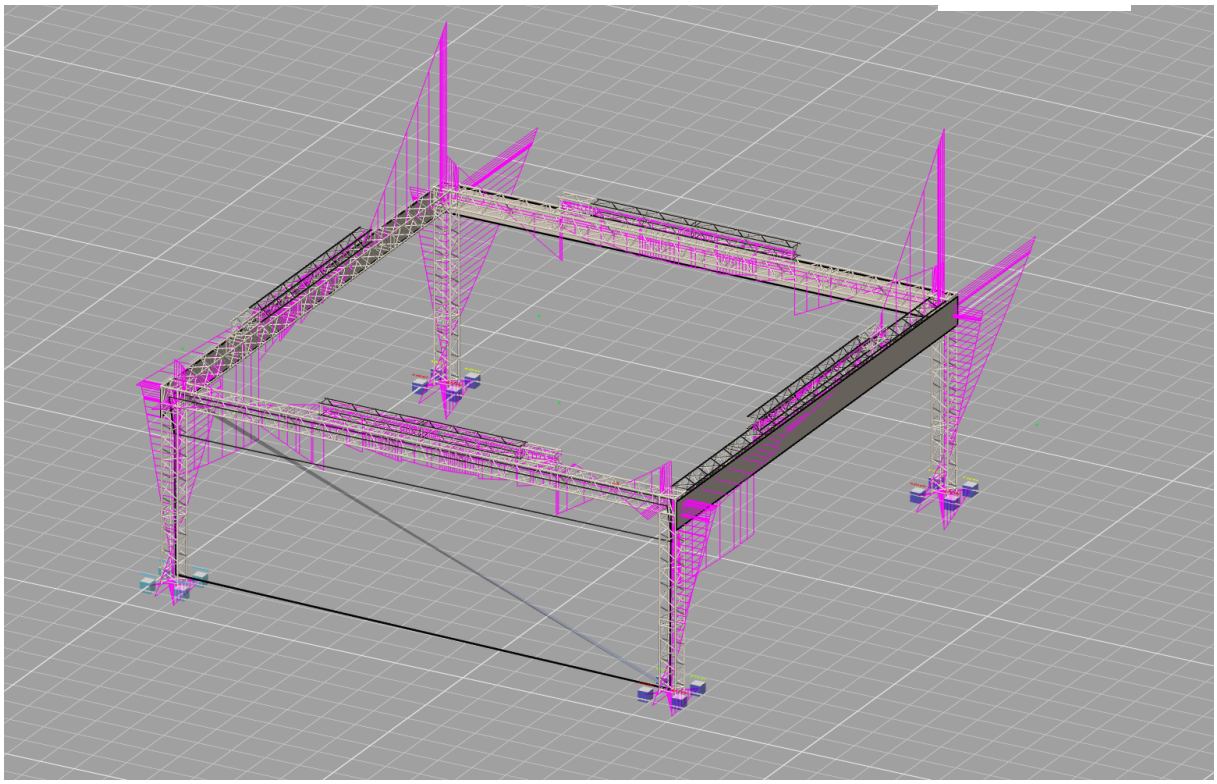


Action Out of Use

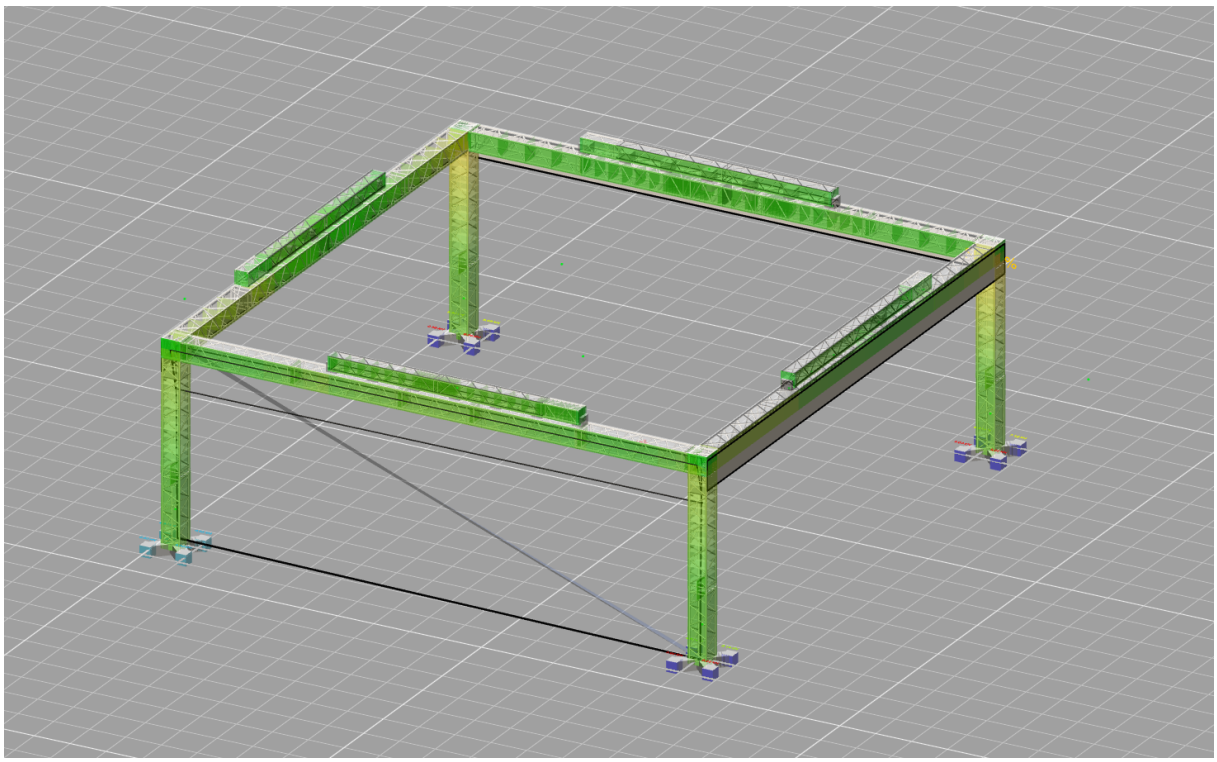
Shear Force



Moment



Utilization



S52SV

The cross section will be proved using Eurocode. The impact values are calculated with the load combination for cross sections.

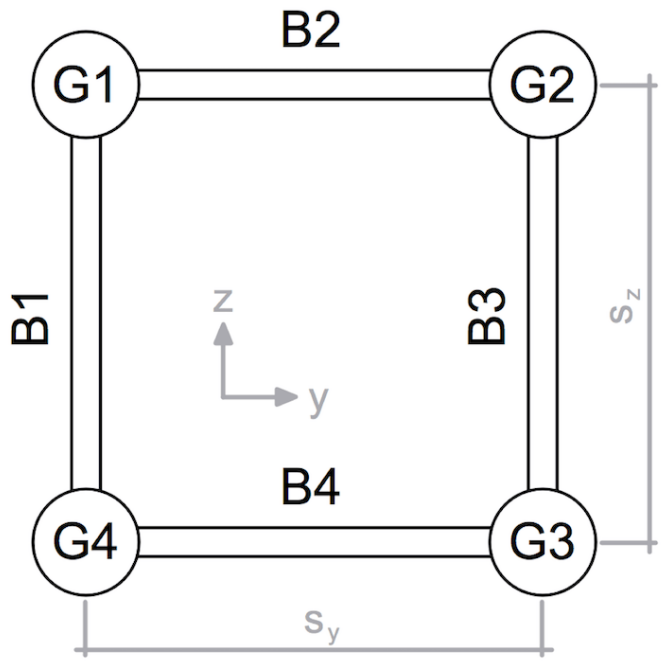
The following table shows the maximum cutting reactions for the cross section. In addition, the other section reactions for each position are listed in the same row. All reactions of a point lead to its cross section load.

Frame / Distance from start	Type	Nx	Vy	Vz	Mt	Mby	Mbz	Du
146/2 m/90 °	**Nx**	-11.92 kN	-7.08 kN	-1.08 kN	0.026 kNm	-0.209 kNm	-9.010 kNm	0.31 cm
122/2 m/90 °	**Vy**	-6.33 kN	13.41 kN	0.27 kN	-0.161 kNm	-0.179 kNm	-10.103 kNm	0.39 cm
43/0 m/90 °	**Vz**	-4.82 kN	-0.58 kN	-7.20 kN	-0.090 kNm	-27.185 kNm	-2.233 kNm	3.99 cm
145/0 m/90 °	**Mt**	-0.51 kN	5.77 kN	3.40 kN	-2.441 kNm	-0.035 kNm	0.914 kNm	1.83 cm
46/0 m/90 °	**Mby**	-10.95 kN	-1.02 kN	-6.34 kN	0.035 kNm	-27.224 kNm	-5.297 kNm	3.99 cm
51/0 m/90 °	**Mbz**	-11.00 kN	6.42 kN	0.33 kN	-1.595 kNm	-5.022 kNm	-25.463 kNm	3.89 cm
85/0 m/90 °	**Du**	8.27 kN	0.22 kN	0.07 kN	0.003 kNm	0.746 kNm	1.530 kNm	4.58 cm

The following design values are used as a basis.

Nx	Vy	Vz	Mt	Mby	Mbz	Qx	Qy	QZ	Force Tube	Force Bracing H/V
0 kN	42.61 kN	42.61 kN	0 kNm	64.330 kNm	64.330 kNm	0 kN/m	0 kN/m	0 kN/m	68.44 kN / 0 kN	30.13 kN / 30.13 kN

Truss geometry



Angle braceing horz	Angle braceing vert.	Lever Z	Lever Y
45 °	45 °	48 cm	48 cm

Proof	Frame / Distance from start	Formula	Value	Workload
Overall Workload	**46** 0 m		53.4 %	53.4 %
Vy	**122** 2 m		13.41 kN	31.5 %
Vz	**43** 0 m		-7.20 kN	16.9 %
Mby	**46** 0 m		-27.224 kNm	42.3 %
Mbz	**51** 0 m		-25.463 kNm	39.6 %
Tube 1	**46** 0 m	$F_{G1} = \frac{N_x}{4} - \frac{M_{by}}{2 * s_z} - \frac{M_{bz}}{2 * s_y} + \frac{\lvert M_t \rvert}{2 * s_y} * \tan(90° - \alpha_v)$	31.18 kN	45.6 %
Tube 2	**89** 0 m	$F_{G2} = \frac{N_x}{4} - \frac{M_{by}}{2 * s_z} + \frac{M_{bz}}{2 * s_y} + \frac{\lvert M_t \rvert}{2 * s_z} * \tan(90° - \alpha_h)$	-30.41 kN	44.4 %
Tube 3	**46** 0 m	$F_{G3} = \frac{N_x}{4} + \frac{M_{by}}{2 * s_z} + \frac{M_{bz}}{2 * s_y} + \frac{\lvert M_t \rvert}{2 * s_y} * \tan(90° - \alpha_v)$	-36.58 kN	53.4 %
Tube 4	**25** 0 m	$F_{G4} = \frac{N_x}{4} + \frac{M_{by}}{2 * s_z} - \frac{M_{bz}}{2 * s_y} + \frac{\lvert M_t \rvert}{2 * s_z} * \tan(90° - \alpha_h)$	-33.72 kN	49.3 %
Bracing 1	**49** 0 m	$F_{B1} = \frac{\lvert V_z \rvert}{2 * \sin(\alpha_v)} + \frac{\lvert M_t \rvert}{2 * s_y * \sin(\alpha_v)}$	6.00 kN	19.9 %
Bracing 2	**122** 2 m	$F_{B2} = \frac{\lvert V_y \rvert}{2 * \sin(\alpha_h)} + \frac{\lvert M_t \rvert}{2 * s_z * \sin(\alpha_h)}$	9.72 kN	32.3 %
Bracing 3	**49** 0 m	$F_{B3} = \frac{\lvert V_z \rvert}{2 * \sin(\alpha_v)} + \frac{\lvert M_t \rvert}{2 * s_y * \sin(\alpha_v)}$	6.00 kN	19.9 %
Bracing 4	**122** 2 m	$F_{B4} = \frac{\lvert V_y \rvert}{2 * \sin(\alpha_h)} + \frac{\lvert M_t \rvert}{2 * s_z * \sin(\alpha_v)}$	9.72 kN	32.3 %

The cross section is sufficiently dimensioned. The allowable forces are not exceeded.

**Profile for curtain

The for for the in action load case is 15,03kN for the full surface.

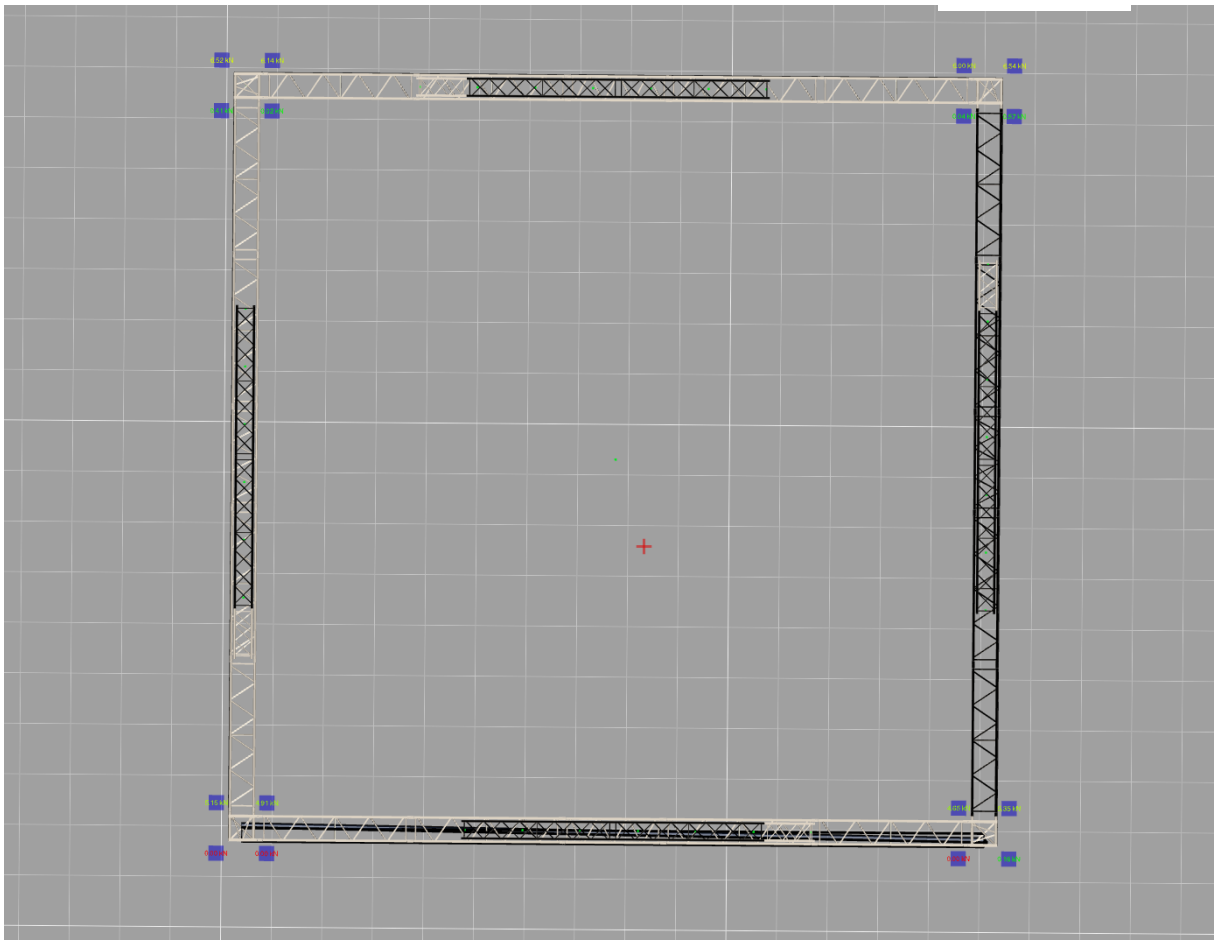
There the deadload is 15 / 25m for the profile.

0,6 kN / m is the distributed load for the profile.

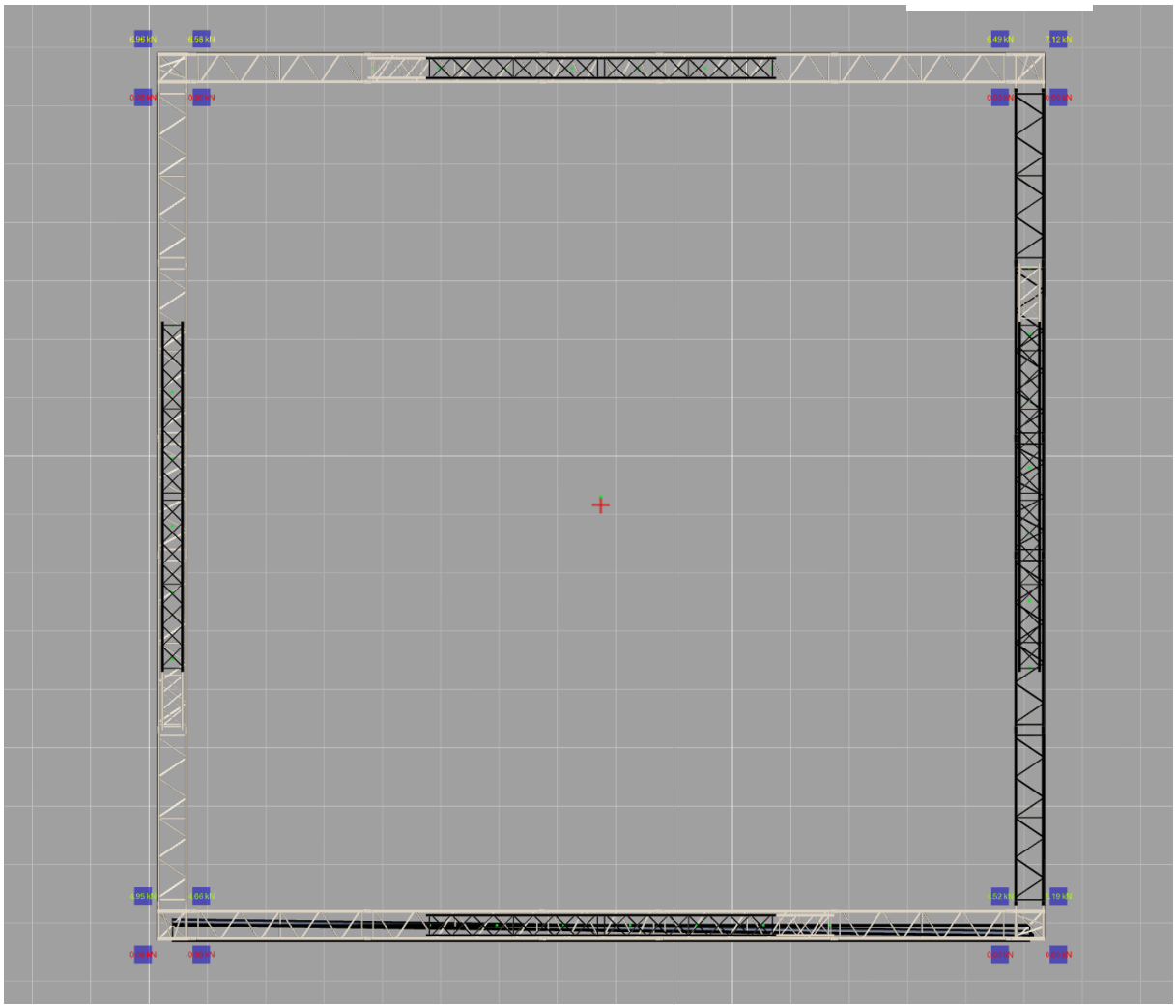
The profile needs to be hold by four clamps.

Verification of Supports

Action in Use



Action Out Use



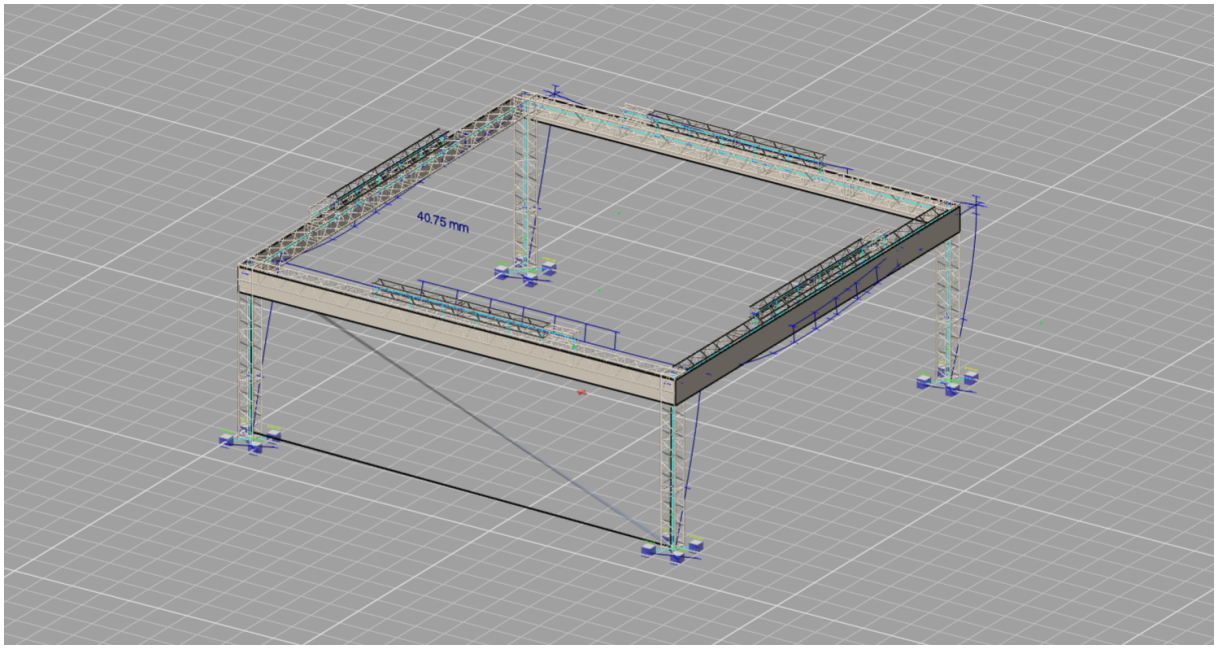
Number	Name	Force X Moment X	Max Force X Max Moment X	Force Y Moment Y	Max Force Y Max Moment Y	Force Z Moment Z	Max Force Z Max Moment Z
M1 Bottom Left	Ground Support 1mx1m	0.08 kN 0 kNm	0 kN 0 kNm	-2.07 kN 0 kNm	0 kN 0 kNm	0 kN 0 kNm	15 kN 0 kNm
M1 Bottom Right	Ground Support 1mx1m	0.08 kN 0 kNm	0 kN 0 kNm	-1.42 kN 0 kNm	0 kN 0 kNm	0 kN 0 kNm	15 kN 0 kNm
M1 Left Top	Ground Support 1mx1m	-0.57 kN 0 kNm	0 kN 0 kNm	-2.07 kN 0 kNm	0 kN 0 kNm	4.43 kN 0 kNm	15 kN 0 kNm
M1 Top Right	Ground Support 1mx1m	-0.57 kN 0 kNm	0 kN 0 kNm	-1.42 kN 0 kNm	0 kN 0 kNm	5.29 kN 0 kNm	15 kN 0 kNm
M2 Bottom Left	Ground Support 1mx1m	0.18 kN 0 kNm	0 kN 0 kNm	-1.15 kN 0 kNm	0 kN 0 kNm	0 kN 0 kNm	15 kN 0 kNm
M2 Bottom Right	Ground Support 1mx1m	0.19 kN 0 kNm	0 kN 0 kNm	-1.19 kN 0 kNm	0 kN 0 kNm	0 kN 0 kNm	15 kN 0 kNm
M2 Left Top	Ground Support 1mx1m	0.23 kN 0 kNm	0 kN 0 kNm	-1.15 kN 0 kNm	0 kN 0 kNm	6.94 kN 0 kNm	15 kN 0 kNm
M2 Top Right	Ground Support 1mx1m	0.23 kN 0 kNm	0 kN 0 kNm	-1.19 kN 0 kNm	0 kN 0 kNm	6.45 kN 0 kNm	15 kN 0 kNm
M3 Bottom Left	Ground Support 1mx1m	-1.24 kN 0 kNm	0 kN 0 kNm	-0.36 kN 0 kNm	0 kN 0 kNm	0 kN 0 kNm	15 kN 0 kNm

Number	Name	Force X Moment X	Max Force X Max Moment X	Force Y Moment Y	Max Force Y Max Moment Y	Force Z Moment Z	Max Force Z Max Moment Z
M3 Bottom Right	Ground Support 1mx1m	-1.25 kN 0 kNm	0 kN 0 kNm	-3.13 kN 0 kNm	0 kN 0 kNm	0 kN 0 kNm	15 kN 0 kNm
M3 Left Top	Ground Support 1mx1m	1.53 kN 0 kNm	0 kN 0 kNm	-0.36 kN 0 kNm	0 kN 0 kNm	4.82 kN 0 kNm	15 kN 0 kNm
M3 Top Right	Ground Support 1mx1m	1.52 kN 0 kNm	0 kN 0 kNm	-3.13 kN 0 kNm	0 kN 0 kNm	4.91 kN 0 kNm	15 kN 0 kNm
M4 Bottom Left	Ground Support 1mx1m	-0.19 kN 0 kNm	0 kN 0 kNm	-1.26 kN 0 kNm	0 kN 0 kNm	0 kN 0 kNm	15 kN 0 kNm
M4 Bottom Right	Ground Support 1mx1m	-0.19 kN 0 kNm	0 kN 0 kNm	-1.27 kN 0 kNm	0 kN 0 kNm	0 kN 0 kNm	15 kN 0 kNm
M4 Left Top	Ground Support 1mx1m	-0.18 kN 0 kNm	0 kN 0 kNm	-1.26 kN 0 kNm	0 kN 0 kNm	6.65 kN 0 kNm	15 kN 0 kNm
M4 Top Right	Ground Support 1mx1m	-0.19 kN 0 kNm	0 kN 0 kNm	-1.27 kN 0 kNm	0 kN 0 kNm	6.98 kN 0 kNm	15 kN 0 kNm

The ground supports are sufficiently dimensioned. The allowed forces are not exceeded.

Verification of Serviceability

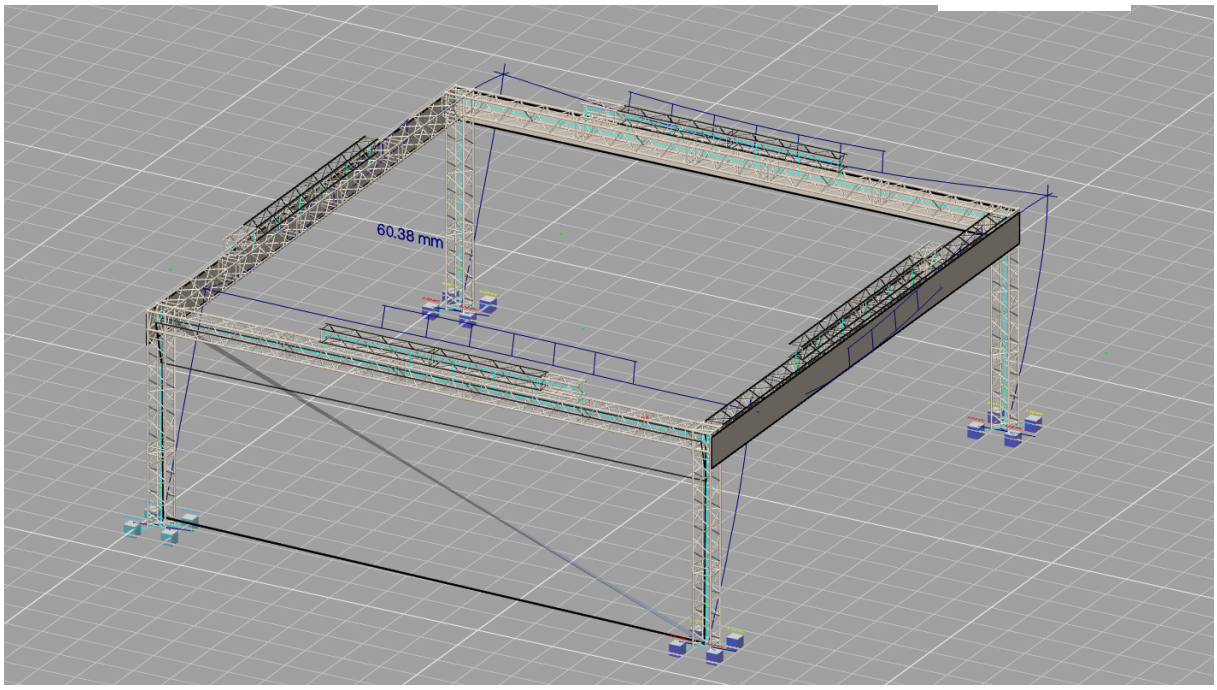
Action in Use



The maximum deflection of the structure is 4 cm over a span of 500 cm with no horizontal loads.

Thus, deflection is L/125. The deflection is within a reasonable range under wind load.

Action Out Use



The maximum deflection of the structure is 6 cm over a span of 500 cm with no horizontal loads.

Thus, deflection is L/83. The deflection is within a reasonable range under wind load.

Verification of Stability

Tipping

The calculation have bee done with pressure active support. The structure is stable, therefor does not tip.

Sliding

Action in Use

1,2 * (15,03) / 0,6 = 33,76 kN

Action Out

1,2 * (12 + 4,44 + 2,96) / 0,6 = 38,08 kN

500kg ballast are chosen per column.

The deadload of the structure is 45kN

The structure does not slide!

Contact and Imprint

Berlin, 10.11.2025

B. Eng. Moritz Staffel

Appendix Data

S52SV

ZERTIFIKAT
CERTIFICATE

Hiermit wird bescheinigt, dass die Firma / *This certifies that the company*

Prolyte BV
Industriepark 9
9351 PA Leek
Niederlande

berechtigt ist, das unten genannte Produkt mit dem abgebildeten Zeichen zu kennzeichnen
is authorized to provide the product mentioned below with the mark as illustrated

Fertigungsstätte *Manufacturing plant*	**siehe Anlage 2** *see annex 2*
Beschreibung des Produktes (Details s. Anlage 1) *Description of product* *(Details see Annex 1)*	**Aluminium Traversen System Typ** **S52SV** *Aluminum truss system type* *S52SV*
Geprüft nach *Tested in accordance with*	**DIN EN 1990:2010-12 (EUROCODE 0)** **DIN EN 1991-1-1:2010-12 (EUROCODE 1)** **DIN EN 1993-1-1:2010-12 (EUROCODE 3)** **DIN EN 1999-1-1:2014-03 (EUROCODE 9)**

Registrier-Nr. / *Registered No.* 44 780 13002203
Prüfbericht Nr. / *Test Report No.* 35275799
Aktenzeichen / *File reference* 8003022004

Gültigkeit / *Validity*
von / *from* 2020-10-01
bis / *until* 2025-09-30

Zertifizierungsstelle der
TÜV NORD CERT GmbH

Essen, 2020-10-01

TÜV NORD CERT GmbH Langemarckstraße 20 45141 Essen www.tuev-nord-cert.de technology@tuev-nord.de

Bitte beachten Sie auch die umseitigen Hinweise
Please also pay attention to the information stated overleaf

TÜV NORD

ANLAGE
ANNEX

zum Zertifikat Registrier-Nr. / *to Certificate Registration No.* 44 780 13002203

Produktbeschreibung: *Product description:*	**Aluminium Traversen System** *Aluminium truss system*
Typbezeichnung: *Type designation:*	**S52SV**
Anschlussquerschnitt: *Connecting cross section:*	**Vier – Punkt Traverse mit Seitenlängen von 470 x 470 mm in Bezug auf die Mittellinien** *Four chord trust with the flange length of 470 x 470 mm related to the centerlines*
Bauteillängen: *Element length:*	**0,6 m – 4 m in beliebigen Längen**
Gurtrohre [mm]: *Main tubes [mm]:*	**Ø 50 x 4** **EN AW 6082 T6**
Streben [mm]: *Braces [mm]:*	**Ø 30 x 3** **EN AW 6082 T6**
Rahmenstreben [mm]: *Frame braces [mm]:*	**Ø 30 x 3** **EN AW 6082 T6**

Zertifizierungsstelle der
TÜV NORD CERT GmbH

Essen, 2020-10-01

TÜV NORD CERT GmbH Langemarckstraße 20 45141 Essen www.tuev-nord-cert.de technology@tuev-nord.de

IT Appendix

FEA calculation appendix

FEA nodes

Node Number	Position X	Position Y	Position Z
1	55 m	31 m	-0 m
2	56 m	31 m	-0 m
3	40 m	31 m	-0 m
4	41 m	31 m	-0 m
5	40 m	32 m	5 m
6	55 m	32 m	5 m
7	40 m	32 m	2 m
8	55 m	32 m	2 m
9	55 m	32 m	5 m
10	40 m	32 m	-0 m
11	40 m	32 m	2 m
12	55 m	32 m	-0 m
13	55 m	32 m	2 m
14	45 m	32 m	6 m
15	45 m	32 m	6 m
16	46 m	32 m	6 m
17	47 m	32 m	6 m
18	48 m	32 m	6 m
19	48 m	32 m	6 m
20	49 m	32 m	6 m
21	51 m	32 m	6 m
22	52 m	32 m	6 m
23	51 m	32 m	6 m
24	52 m	32 m	6 m
25	40 m	32 m	5 m
26	40 m	32 m	5 m
27	40 m	32 m	6 m
28	41 m	32 m	5 m
29	41 m	32 m	5 m
30	44 m	32 m	5 m
31	45 m	32 m	5 m
32	46 m	32 m	5 m
33	47 m	32 m	5 m
34	47 m	32 m	5 m
35	48 m	32 m	5 m
36	49 m	32 m	5 m
37	49 m	32 m	5 m
38	51 m	32 m	5 m
39	52 m	32 m	5 m
40	52 m	32 m	5 m
41	55 m	32 m	5 m

Node Number	Position X	Position Y	Position Z
42	55 m	32 m	5 m
43	55 m	32 m	5 m
44	55 m	32 m	5 m
45	55 m	32 m	6 m
46	55 m	32 m	5 m
47	40 m	32 m	5 m
48	40 m	32 m	5 m
49	40 m	32 m	5 m
50	55 m	32 m	5 m
51	40 m	32 m	5 m
52	55 m	32 m	5 m
53	55 m	32 m	-0 m
54	56 m	32 m	-0 m
55	40 m	32 m	-0 m
56	41 m	32 m	-0 m
57	40 m	35 m	5 m
58	55 m	35 m	5 m
59	40 m	35 m	6 m
60	55 m	36 m	6 m
61	40 m	36 m	6 m
62	55 m	36 m	5 m
63	55 m	36 m	6 m
64	40 m	37 m	6 m
65	40 m	37 m	5 m
66	55 m	38 m	5 m
67	55 m	38 m	6 m
68	40 m	38 m	6 m
69	40 m	38 m	5 m
70	55 m	38 m	5 m
71	40 m	38 m	5 m
72	55 m	39 m	5 m
73	55 m	39 m	6 m
74	40 m	39 m	6 m
75	40 m	39 m	5 m
76	55 m	39 m	6 m
77	40 m	39 m	6 m
78	55 m	40 m	5 m
79	55 m	40 m	6 m
80	40 m	40 m	6 m
81	40 m	40 m	5 m
82	55 m	40 m	5 m
83	40 m	40 m	5 m
84	55 m	41 m	5 m
85	55 m	41 m	6 m
86	40 m	41 m	6 m
87	40 m	41 m	5 m

Node Number	Position X	Position Y	Position Z
88	55 m	42 m	5 m
89	55 m	42 m	6 m
90	40 m	42 m	6 m
91	40 m	42 m	5 m
92	55 m	42 m	6 m
93	40 m	42 m	6 m
94	55 m	43 m	5 m
95	55 m	43 m	6 m
96	55 m	43 m	6 m
97	55 m	43 m	5 m
98	40 m	43 m	5 m
99	40 m	46 m	-0 m
100	41 m	46 m	-0 m
101	55 m	46 m	-0 m
102	56 m	46 m	-0 m
103	55 m	46 m	5 m
104	40 m	46 m	5 m
105	55 m	46 m	5 m
106	40 m	46 m	5 m
107	40 m	47 m	2 m
108	40 m	47 m	-0 m
109	40 m	47 m	2 m
110	40 m	47 m	5 m
111	55 m	47 m	-0 m
112	55 m	47 m	2 m
113	55 m	47 m	2 m
114	55 m	47 m	5 m
115	55 m	47 m	5 m
116	55 m	47 m	5 m
117	55 m	47 m	5 m
118	55 m	47 m	6 m
119	55 m	47 m	5 m
120	55 m	47 m	5 m
121	40 m	47 m	5 m
122	40 m	47 m	5 m
123	40 m	47 m	5 m
124	40 m	47 m	6 m
125	41 m	47 m	5 m
126	41 m	47 m	5 m
127	44 m	47 m	5 m
128	47 m	47 m	5 m
129	49 m	47 m	5 m
130	52 m	47 m	5 m
131	44 m	47 m	5 m
132	45 m	47 m	5 m
133	46 m	47 m	5 m

Node Number	Position X	Position Y	Position Z
134	47 m	47 m	5 m
135	48 m	47 m	5 m
136	50 m	47 m	5 m
137	51 m	47 m	5 m
138	44 m	47 m	6 m
139	45 m	47 m	6 m
140	48 m	47 m	6 m
141	51 m	47 m	6 m
142	44 m	47 m	6 m
143	45 m	47 m	6 m
144	46 m	47 m	6 m
145	47 m	47 m	6 m
146	48 m	47 m	6 m
147	50 m	47 m	6 m
148	51 m	47 m	6 m
149	55 m	47 m	5 m
150	40 m	47 m	5 m
151	40 m	47 m	-0 m
152	41 m	47 m	-0 m
153	55 m	47 m	-0 m
154	56 m	47 m	-0 m

FEA materials

Material name	E modul	G modul	V	dT
EN-AW-6082-T6	70000 MPa	27000 MPa	0.30	0.00

FEA cross section

Material name	A	Ix	Iy	Iz
Stiff	100 m^2	100000 cm4	100000 cm4	100000 cm4
S52SV	0.002 m^2	3300 cm4	10906.20 cm4	10906.20 cm4
Stiff	100 m^2	100000 cm4	100000 cm4	100000 cm4

FEA frames

Frame number	Frame Start Node	Frame End Node	Frame material	Cross section name	Hinge number
1	5	26	S52SV	EN-AW-6082-T6	
2	48	47	S52SV	EN-AW-6082-T6	
3	7	11	S52SV	EN-AW-6082-T6	
4	11	47	S52SV	EN-AW-6082-T6	
5	48	26	S52SV	EN-AW-6082-T6	
6	27	26	S52SV	EN-AW-6082-T6	
7	49	51	S52SV	EN-AW-6082-T6	
8	49	26	S52SV	EN-AW-6082-T6	
9	28	26	S52SV	EN-AW-6082-T6	

Frame number	Frame Start Node	Frame End Node	Frame material	Cross section name	Hinge number
10	25	26	S52SV	EN-AW-6082-T6	
11	57	51	S52SV	EN-AW-6082-T6	
12	98	91	S52SV	EN-AW-6082-T6	
13	91	87	S52SV	EN-AW-6082-T6	
14	87	83	S52SV	EN-AW-6082-T6	
15	104	98	S52SV	EN-AW-6082-T6	
16	83	81	S52SV	EN-AW-6082-T6	
17	81	75	S52SV	EN-AW-6082-T6	
18	75	71	S52SV	EN-AW-6082-T6	
19	71	69	S52SV	EN-AW-6082-T6	
20	69	65	S52SV	EN-AW-6082-T6	
21	65	57	S52SV	EN-AW-6082-T6	
22	106	104	S52SV	EN-AW-6082-T6	
23	106	123	S52SV	EN-AW-6082-T6	
24	150	123	S52SV	EN-AW-6082-T6	
25	122	123	S52SV	EN-AW-6082-T6	
26	124	123	S52SV	EN-AW-6082-T6	
27	125	126	S52SV	EN-AW-6082-T6	
28	125	123	S52SV	EN-AW-6082-T6	
29	128	134	S52SV	EN-AW-6082-T6	
30	134	135	S52SV	EN-AW-6082-T6	
31	135	129	S52SV	EN-AW-6082-T6	
32	127	131	S52SV	EN-AW-6082-T6	
33	131	132	S52SV	EN-AW-6082-T6	
34	132	133	S52SV	EN-AW-6082-T6	
35	133	128	S52SV	EN-AW-6082-T6	
36	129	136	S52SV	EN-AW-6082-T6	
37	136	137	S52SV	EN-AW-6082-T6	
38	137	130	S52SV	EN-AW-6082-T6	
39	126	127	S52SV	EN-AW-6082-T6	
40	130	120	S52SV	EN-AW-6082-T6	
41	115	120	S52SV	EN-AW-6082-T6	
42	149	117	S52SV	EN-AW-6082-T6	
43	105	117	S52SV	EN-AW-6082-T6	
44	115	117	S52SV	EN-AW-6082-T6	
45	119	117	S52SV	EN-AW-6082-T6	
46	116	117	S52SV	EN-AW-6082-T6	
47	118	117	S52SV	EN-AW-6082-T6	
48	105	103	S52SV	EN-AW-6082-T6	
49	113	112	S52SV	EN-AW-6082-T6	
50	112	114	S52SV	EN-AW-6082-T6	
51	116	114	S52SV	EN-AW-6082-T6	
52	70	72	S52SV	EN-AW-6082-T6	
53	72	78	S52SV	EN-AW-6082-T6	
54	78	82	S52SV	EN-AW-6082-T6	
55	82	84	S52SV	EN-AW-6082-T6	

Frame number	Frame Start Node	Frame End Node	Frame material	Cross section name	Hinge number
56	84	88	S52SV	EN-AW-6082-T6	
57	88	94	S52SV	EN-AW-6082-T6	
58	94	97	S52SV	EN-AW-6082-T6	
59	97	103	S52SV	EN-AW-6082-T6	
60	52	58	S52SV	EN-AW-6082-T6	
61	58	62	S52SV	EN-AW-6082-T6	
62	62	66	S52SV	EN-AW-6082-T6	
63	66	70	S52SV	EN-AW-6082-T6	
64	50	52	S52SV	EN-AW-6082-T6	
65	46	44	S52SV	EN-AW-6082-T6	
66	42	44	S52SV	EN-AW-6082-T6	
67	50	44	S52SV	EN-AW-6082-T6	
68	6	44	S52SV	EN-AW-6082-T6	
69	43	44	S52SV	EN-AW-6082-T6	
70	45	44	S52SV	EN-AW-6082-T6	
71	42	41	S52SV	EN-AW-6082-T6	
72	41	40	S52SV	EN-AW-6082-T6	
73	8	13	S52SV	EN-AW-6082-T6	
74	13	9	S52SV	EN-AW-6082-T6	
75	43	9	S52SV	EN-AW-6082-T6	
76	40	39	S52SV	EN-AW-6082-T6	
77	39	38	S52SV	EN-AW-6082-T6	
78	38	37	S52SV	EN-AW-6082-T6	
79	37	36	S52SV	EN-AW-6082-T6	
80	33	32	S52SV	EN-AW-6082-T6	
81	32	31	S52SV	EN-AW-6082-T6	
82	31	30	S52SV	EN-AW-6082-T6	
83	30	29	S52SV	EN-AW-6082-T6	
84	36	35	S52SV	EN-AW-6082-T6	
85	35	34	S52SV	EN-AW-6082-T6	
86	34	33	S52SV	EN-AW-6082-T6	
87	109	107	S52SV	EN-AW-6082-T6	
88	107	110	S52SV	EN-AW-6082-T6	
89	122	110	S52SV	EN-AW-6082-T6	
90	121	123	S52SV	EN-AW-6082-T6	
91	28	29	S52SV	EN-AW-6082-T6	
92	86	87	Stiff	EN-AW-6082-T6	
93	74	75	Stiff	EN-AW-6082-T6	
94	13	8	S52SV	EN-AW-6082-T6	
95	8	12	S52SV	EN-AW-6082-T6	
96	2	12	Stiff	EN-AW-6082-T6	
97	1	12	Stiff	EN-AW-6082-T6	
98	53	12	Stiff	EN-AW-6082-T6	
99	54	12	Stiff	EN-AW-6082-T6	
100	23	22	Stiff	EN-AW-6082-T6	
101	22	24	Stiff	EN-AW-6082-T6	

Frame number	Frame Start Node	Frame End Node	Frame material	Cross section name	Hinge number
102	14	15	Stiff	EN-AW-6082-T6	
103	15	16	Stiff	EN-AW-6082-T6	
104	16	17	Stiff	EN-AW-6082-T6	
105	17	18	Stiff	EN-AW-6082-T6	
106	18	19	Stiff	EN-AW-6082-T6	
107	19	20	Stiff	EN-AW-6082-T6	
108	20	21	Stiff	EN-AW-6082-T6	
109	21	23	Stiff	EN-AW-6082-T6	
110	60	63	Stiff	EN-AW-6082-T6	
111	63	67	Stiff	EN-AW-6082-T6	
112	67	73	Stiff	EN-AW-6082-T6	
113	73	76	Stiff	EN-AW-6082-T6	
114	92	95	Stiff	EN-AW-6082-T6	
115	95	96	Stiff	EN-AW-6082-T6	
116	76	79	Stiff	EN-AW-6082-T6	
117	79	85	Stiff	EN-AW-6082-T6	
118	85	89	Stiff	EN-AW-6082-T6	
119	89	92	Stiff	EN-AW-6082-T6	
120	89	88	Stiff	EN-AW-6082-T6	
121	11	7	S52SV	EN-AW-6082-T6	
122	7	10	S52SV	EN-AW-6082-T6	
123	4	10	Stiff	EN-AW-6082-T6	
124	3	10	Stiff	EN-AW-6082-T6	
125	55	10	Stiff	EN-AW-6082-T6	
126	56	10	Stiff	EN-AW-6082-T6	
127	100	108	Stiff	EN-AW-6082-T6	
128	99	108	Stiff	EN-AW-6082-T6	
129	151	108	Stiff	EN-AW-6082-T6	
130	152	108	Stiff	EN-AW-6082-T6	
131	107	109	S52SV	EN-AW-6082-T6	
132	109	108	S52SV	EN-AW-6082-T6	
133	144	133	Stiff	EN-AW-6082-T6	
134	61	59	Stiff	EN-AW-6082-T6	
135	93	90	Stiff	EN-AW-6082-T6	
136	90	86	Stiff	EN-AW-6082-T6	
137	86	80	Stiff	EN-AW-6082-T6	
138	80	77	Stiff	EN-AW-6082-T6	
139	77	74	Stiff	EN-AW-6082-T6	
140	74	68	Stiff	EN-AW-6082-T6	
141	68	64	Stiff	EN-AW-6082-T6	
142	64	61	Stiff	EN-AW-6082-T6	
143	148	137	Stiff	EN-AW-6082-T6	
144	67	66	Stiff	EN-AW-6082-T6	
145	112	113	S52SV	EN-AW-6082-T6	
146	113	111	S52SV	EN-AW-6082-T6	
147	102	111	Stiff	EN-AW-6082-T6	

Frame number	Frame Start Node	Frame End Node	Frame material	Cross section name	Hinge number
148	101	111	Stiff	EN-AW-6082-T6	
149	153	111	Stiff	EN-AW-6082-T6	
150	154	111	Stiff	EN-AW-6082-T6	
151	20	37	Stiff	EN-AW-6082-T6	
152	147	136	Stiff	EN-AW-6082-T6	
153	21	38	Stiff	EN-AW-6082-T6	
154	16	32	Stiff	EN-AW-6082-T6	
155	142	131	Stiff	EN-AW-6082-T6	
156	95	94	Stiff	EN-AW-6082-T6	
157	22	39	Stiff	EN-AW-6082-T6	
158	64	65	Stiff	EN-AW-6082-T6	
159	143	132	Stiff	EN-AW-6082-T6	
160	68	69	Stiff	EN-AW-6082-T6	
161	85	84	Stiff	EN-AW-6082-T6	
162	145	134	Stiff	EN-AW-6082-T6	
163	79	78	Stiff	EN-AW-6082-T6	
164	19	35	Stiff	EN-AW-6082-T6	
165	80	81	Stiff	EN-AW-6082-T6	
166	146	135	Stiff	EN-AW-6082-T6	
167	73	72	Stiff	EN-AW-6082-T6	
168	17	34	Stiff	EN-AW-6082-T6	
169	90	91	Stiff	EN-AW-6082-T6	
170	63	62	Stiff	EN-AW-6082-T6	
171	15	31	Stiff	EN-AW-6082-T6	
172	139	142	Stiff	EN-AW-6082-T6	
173	142	138	Stiff	EN-AW-6082-T6	
174	140	145	Stiff	EN-AW-6082-T6	
175	145	144	Stiff	EN-AW-6082-T6	
176	144	143	Stiff	EN-AW-6082-T6	
177	143	139	Stiff	EN-AW-6082-T6	
178	141	148	Stiff	EN-AW-6082-T6	
179	148	147	Stiff	EN-AW-6082-T6	
180	147	146	Stiff	EN-AW-6082-T6	
181	146	140	Stiff	EN-AW-6082-T6	

FEM Bearings & Springs

Support node number	Support stiffness X	Support stiffness Y	Support stiffness Z
1	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°
2	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°
3	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°
4	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°
53	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°

Support node number	Support stiffness X	Support stiffness Y	Support stiffness Z
54	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°
55	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°
56	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°
99	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°
100	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°
101	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°
102	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°
151	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°
152	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°
153	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°
154	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°	1000000 kN/m 0 kNm/°

FEA point load

Frame number	Distance to start node	Force X	Force Y	Force Z
17	1 m	0 kN	0 kN	-0.20 kN
53	1 m	0 kN	0 kN	-0.20 kN
30	0 m	0 kN	0 kN	-0.20 kN
122	2 m	0.07 kN	-3.57 kN	0 kN
122	2 m	0.07 kN	-3.57 kN	0 kN
123	0 m	-0.06 kN	3.55 kN	0 kN
123	0 m	-0.22 kN	12.20 kN	0 kN
95	2 m	-0.18 kN	10.16 kN	0 kN
98	0 m	-0.07 kN	4.09 kN	0 kN
95	2 m	0.00 kN	0.21 kN	0 kN
95	2 m	0.05 kN	-2.60 kN	0 kN
95	2 m	0.05 kN	-2.60 kN	0 kN
122	2 m	0.06 kN	-2.79 kN	0 kN
95	2 m	0.05 kN	-2.29 kN	0 kN
122	1 m	0.04 kN	-1.97 kN	0 kN
95	1 m	0.04 kN	-1.86 kN	0 kN
122	1 m	0.03 kN	-1.20 kN	0 kN
95	1 m	0.03 kN	-1.35 kN	0 kN
122	1 m	0.02 kN	-0.60 kN	0 kN
95	1 m	0.02 kN	-0.86 kN	0 kN
122	1 m	0.01 kN	-0.19 kN	0 kN
95	1 m	0.01 kN	-0.46 kN	0 kN
122	1 m	0.00 kN	0.05 kN	0 kN
95	1 m	0.01 kN	-0.18 kN	0 kN

Frame number	Distance to start node	Force X	Force Y	Force Z
122	0 m	0.00 kN	0.18 kN	0 kN
95	0 m	0.01 kN	0.00 kN	0 kN
122	0 m	0.00 kN	0.22 kN	0 kN
95	0 m	0.00 kN	0.10 kN	0 kN
4	0 m	0.00 kN	0.23 kN	0 kN
74	0 m	0.00 kN	0.15 kN	0 kN
4	0 m	0.00 kN	0.22 kN	0 kN
74	0 m	0.00 kN	0.17 kN	0 kN
4	0 m	0.00 kN	0.20 kN	0 kN
74	0 m	0.00 kN	0.18 kN	0 kN
4	1 m	0.00 kN	0.19 kN	0 kN
74	1 m	0.00 kN	0.18 kN	0 kN
4	1 m	0.00 kN	0.17 kN	0 kN
74	1 m	0.00 kN	0.17 kN	0 kN
4	1 m	0.00 kN	0.16 kN	0 kN
74	1 m	0.00 kN	0.17 kN	0 kN
4	1 m	0.00 kN	0.15 kN	0 kN
74	1 m	0.00 kN	0.16 kN	0 kN
4	1 m	0.00 kN	0.13 kN	0 kN
74	1 m	0.00 kN	0.16 kN	0 kN
4	2 m	0.00 kN	0.12 kN	0 kN
74	2 m	0.00 kN	0.15 kN	0 kN
4	2 m	0.00 kN	0.11 kN	0 kN
74	2 m	0.00 kN	0.14 kN	0 kN
4	2 m	0.00 kN	0.10 kN	0 kN
74	2 m	0.00 kN	0.13 kN	0 kN
4	2 m	0.00 kN	0.09 kN	0 kN
74	2 m	0.00 kN	0.12 kN	0 kN
4	2 m	0.00 kN	0.07 kN	0 kN
74	2 m	0.00 kN	0.10 kN	0 kN
4	3 m	0.00 kN	0.06 kN	0 kN
74	3 m	0.00 kN	0.09 kN	0 kN
4	3 m	0.00 kN	0.04 kN	0 kN
74	3 m	0.00 kN	0.07 kN	0 kN
5	0 m	0.00 kN	0.02 kN	0 kN
69	0 m	0.00 kN	0.05 kN	0 kN
9	0 m	0.00 kN	-0.01 kN	0 kN
9	0 m	0.00 kN	-0.01 kN	0 kN
83	3 m	0.00 kN	0.02 kN	0 kN
83	3 m	0.00 kN	0.04 kN	0 kN
83	3 m	0.00 kN	0.05 kN	0 kN
83	2 m	0.00 kN	0.06 kN	0 kN
83	2 m	0.00 kN	0.08 kN	0 kN
83	2 m	0.00 kN	0.09 kN	0 kN
83	2 m	0.00 kN	0.09 kN	0 kN
83	2 m	0.00 kN	0.10 kN	0 kN

Frame number	Distance to start node	Force X	Force Y	Force Z
83	1 m	0.00 kN	0.11 kN	0 kN
83	1 m	0.00 kN	0.12 kN	0 kN
83	1 m	0.00 kN	0.12 kN	0 kN
83	1 m	0.00 kN	0.13 kN	0 kN
83	1 m	0.00 kN	0.13 kN	0 kN
83	0 m	0.00 kN	0.13 kN	0 kN
83	0 m	0.00 kN	0.13 kN	0 kN
82	1 m	0.00 kN	0.13 kN	0 kN
82	1 m	0.00 kN	0.12 kN	0 kN
82	1 m	0.00 kN	0.12 kN	0 kN
82	0 m	0.00 kN	0.11 kN	0 kN
82	0 m	0.00 kN	0.11 kN	0 kN
82	0 m	0.00 kN	0.10 kN	0 kN
81	1 m	0.00 kN	0.09 kN	0 kN
81	1 m	0.00 kN	0.09 kN	0 kN
81	1 m	0.00 kN	0.08 kN	0 kN
81	0 m	0.00 kN	0.07 kN	0 kN
81	0 m	0.00 kN	0.07 kN	0 kN
80	1 m	0.00 kN	0.06 kN	0 kN
80	1 m	0.00 kN	0.06 kN	0 kN
80	0 m	0.00 kN	0.05 kN	0 kN
80	0 m	0.00 kN	0.05 kN	0 kN
86	0 m	0.00 kN	0.05 kN	0 kN
86	0 m	0.00 kN	0.05 kN	0 kN
85	1 m	0.00 kN	0.04 kN	0 kN
85	1 m	0.00 kN	0.04 kN	0 kN
85	1 m	0.00 kN	0.04 kN	0 kN
85	0 m	0.00 kN	0.04 kN	0 kN
85	0 m	0.00 kN	0.04 kN	0 kN
85	0 m	0.00 kN	0.04 kN	0 kN
84	0 m	0.00 kN	0.04 kN	0 kN
84	0 m	0.00 kN	0.05 kN	0 kN
79	1 m	0.00 kN	0.05 kN	0 kN
79	0 m	0.00 kN	0.05 kN	0 kN
79	0 m	0.00 kN	0.05 kN	0 kN
78	1 m	0.00 kN	0.05 kN	0 kN
78	1 m	0.00 kN	0.05 kN	0 kN
78	1 m	0.00 kN	0.04 kN	0 kN
78	1 m	0.00 kN	0.03 kN	0 kN
78	0 m	0.00 kN	-0.00 kN	0 kN
78	0 m	0.00 kN	-0.04 kN	0 kN
77	1 m	0.00 kN	-0.07 kN	0 kN
77	1 m	0.00 kN	-0.07 kN	0 kN
77	1 m	0.00 kN	0.02 kN	0 kN
77	0 m	-0.00 kN	0.30 kN	0 kN
77	0 m	-0.01 kN	0.89 kN	0 kN

Frame number	Distance to start node	Force X	Force Y	Force Z
77	0 m	-0.03 kN	1.93 kN	0 kN
72	3 m	-0.06 kN	3.45 kN	0 kN
66	0 m	0.00 kN	0.02 kN	0 kN
72	3 m	0.04 kN	-1.77 kN	0 kN
72	3 m	0.04 kN	-1.77 kN	0 kN
72	3 m	0.02 kN	-0.98 kN	0 kN
72	2 m	0.01 kN	-0.37 kN	0 kN
72	2 m	0.00 kN	-0.00 kN	0 kN
72	2 m	0.00 kN	0.18 kN	0 kN
72	2 m	-0.00 kN	0.23 kN	0 kN
72	2 m	-0.00 kN	0.23 kN	0 kN
72	1 m	-0.00 kN	0.20 kN	0 kN
72	1 m	0.00 kN	0.16 kN	0 kN
72	1 m	0.00 kN	0.13 kN	0 kN
72	1 m	0.00 kN	0.10 kN	0 kN
72	1 m	0.00 kN	0.08 kN	0 kN
72	0 m	0.00 kN	0.06 kN	0 kN
72	0 m	0.00 kN	0.04 kN	0 kN
71	0 m	0.00 kN	0.02 kN	0 kN
70	0 m	0.00 kN	-0.01 kN	0 kN
70	0 m	0.00 kN	-0.01 kN	0 kN
4	3 m	0 kN	0 kN	0 kN
4	3 m	0 kN	0 kN	0 kN
4	3 m	0 kN	0 kN	0 kN
4	3 m	0 kN	0 kN	0 kN
4	3 m	0 kN	0 kN	0 kN
11	3 m	0 kN	0 kN	0 kN
11	3 m	0 kN	0 kN	0 kN
11	2 m	0 kN	0 kN	0 kN
11	2 m	0 kN	0 kN	0 kN
11	2 m	0 kN	0 kN	0 kN
11	2 m	0 kN	0 kN	0 kN
11	2 m	0 kN	0 kN	0 kN
11	1 m	0 kN	0 kN	0 kN
11	1 m	0 kN	0 kN	0 kN
11	1 m	0 kN	0 kN	0 kN
11	1 m	0 kN	0 kN	0 kN
11	1 m	0 kN	0 kN	0 kN
11	1 m	0 kN	0 kN	0 kN
11	0 m	0 kN	0 kN	0 kN
11	0 m	0 kN	0 kN	0 kN
21	1 m	0 kN	0 kN	0 kN
21	1 m	0 kN	0 kN	0 kN
21	1 m	0 kN	0 kN	0 kN
21	1 m	0 kN	0 kN	0 kN
21	0 m	0 kN	0 kN	0 kN
21	0 m	0 kN	0 kN	0 kN

Frame number	Distance to start node	Force X	Force Y	Force Z
20	1 m	0 kN	0 kN	0 kN
20	1 m	0 kN	0 kN	0 kN
20	1 m	0 kN	0 kN	0 kN
20	0 m	0 kN	0 kN	0 kN
20	0 m	0 kN	0 kN	0 kN
20	0 m	0 kN	0 kN	0 kN
19	1 m	0 kN	0 kN	0 kN
19	0 m	0 kN	0 kN	0 kN
19	0 m	0 kN	0 kN	0 kN
18	0 m	0 kN	0 kN	0 kN
18	0 m	0 kN	0 kN	0 kN
18	0 m	0 kN	0 kN	0 kN
17	1 m	0 kN	0 kN	0 kN
17	1 m	0 kN	0 kN	0 kN
17	1 m	0 kN	0 kN	0 kN
17	0 m	0 kN	0 kN	0 kN
17	0 m	0 kN	0 kN	0 kN
16	0 m	0 kN	0 kN	0 kN
16	0 m	0 kN	0 kN	0 kN
14	1 m	0 kN	0 kN	0 kN
14	1 m	0 kN	0 kN	0 kN
14	0 m	0 kN	0 kN	0 kN
14	0 m	0 kN	0 kN	0 kN
13	1 m	0 kN	0 kN	0 kN
13	1 m	0 kN	0 kN	0 kN
13	1 m	0 kN	0 kN	0 kN
13	0 m	0 kN	0 kN	0 kN
13	0 m	0 kN	0 kN	0 kN
13	0 m	0 kN	0 kN	0 kN
12	1 m	0 kN	0 kN	0 kN
12	1 m	0 kN	0 kN	0 kN
12	1 m	0 kN	0 kN	0 kN
12	0 m	0 kN	0 kN	0 kN
12	0 m	0 kN	0 kN	0 kN
15	3 m	0 kN	0 kN	0 kN
15	3 m	0 kN	0 kN	0 kN
15	3 m	0 kN	0 kN	0 kN
15	2 m	0 kN	0 kN	0 kN
15	2 m	0 kN	0 kN	0 kN
15	2 m	0 kN	0 kN	0 kN
15	2 m	0 kN	0 kN	0 kN
15	2 m	0 kN	0 kN	0 kN
15	1 m	0 kN	0 kN	0 kN
15	1 m	0 kN	0 kN	0 kN
15	1 m	0 kN	0 kN	0 kN
15	1 m	0 kN	0 kN	0 kN

Frame number	Distance to start node	Force X	Force Y	Force Z
15	1 m	0 kN	0 kN	0 kN
15	0 m	0 kN	0 kN	0 kN
88	3 m	0 kN	0 kN	0 kN
88	3 m	0 kN	0 kN	0 kN
88	3 m	0 kN	0 kN	0 kN
88	3 m	0 kN	0 kN	0 kN
88	3 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
25	0 m	0 kN	0 kN	0 kN
10	0 m	0 kN	0 kN	0 kN
90	0 m	0 kN	0 kN	0 kN
10	0 m	0 kN	0 kN	0 kN
10	0 m	0 kN	0 kN	0 kN
10	0 m	0 kN	0 kN	0 kN
10	0 m	0 kN	0 kN	0 kN
11	3 m	0 kN	0 kN	0 kN
11	3 m	0 kN	0 kN	0 kN
11	3 m	0 kN	0 kN	0 kN
11	2 m	0 kN	0 kN	0 kN
11	2 m	0 kN	0 kN	0 kN
11	2 m	0 kN	0 kN	0 kN
11	2 m	0 kN	0 kN	0 kN
11	2 m	0 kN	0 kN	0 kN
11	1 m	0 kN	0 kN	0 kN
11	1 m	0 kN	0 kN	0 kN
11	1 m	0 kN	0 kN	0 kN
11	1 m	0 kN	0 kN	0 kN
11	1 m	0 kN	0 kN	0 kN
11	0 m	0 kN	0 kN	0 kN
11	0 m	0 kN	0 kN	0 kN
21	1 m	0 kN	0 kN	0 kN
21	1 m	0 kN	0 kN	0 kN
21	1 m	0 kN	0 kN	0 kN
21	1 m	0 kN	0 kN	0 kN
21	0 m	0 kN	0 kN	0 kN
21	0 m	0 kN	0 kN	0 kN
158	0 m	0 kN	0 kN	0 kN
20	1 m	0 kN	0 kN	0 kN
20	1 m	0 kN	0 kN	0 kN
20	0 m	0 kN	0 kN	0 kN
20	0 m	0 kN	0 kN	0 kN
160	0 m	0 kN	0 kN	0 kN
160	0 m	0 kN	0 kN	0 kN
19	0 m	0 kN	0 kN	0 kN
19	0 m	0 kN	0 kN	0 kN
18	0 m	0 kN	0 kN	0 kN

Frame number	Distance to start node	Force X	Force Y	Force Z
18	0 m	0 kN	0 kN	0 kN
93	0 m	0 kN	0 kN	0 kN
17	1 m	0 kN	0 kN	0 kN
17	1 m	0 kN	0 kN	0 kN
17	1 m	0 kN	0 kN	0 kN
17	0 m	0 kN	0 kN	0 kN
17	0 m	0 kN	0 kN	0 kN
165	0 m	0 kN	0 kN	0 kN
16	0 m	0 kN	0 kN	0 kN
14	1 m	0 kN	0 kN	0 kN
14	1 m	0 kN	0 kN	0 kN
14	0 m	0 kN	0 kN	0 kN
92	0 m	0 kN	0 kN	0 kN
92	0 m	0 kN	0 kN	0 kN
13	1 m	0 kN	0 kN	0 kN
13	1 m	0 kN	0 kN	0 kN
13	0 m	0 kN	0 kN	0 kN
13	0 m	0 kN	0 kN	0 kN
169	0 m	0 kN	0 kN	0 kN
12	1 m	0 kN	0 kN	0 kN
12	1 m	0 kN	0 kN	0 kN
12	1 m	0 kN	0 kN	0 kN
12	0 m	0 kN	0 kN	0 kN
12	0 m	0 kN	0 kN	0 kN
15	3 m	0 kN	0 kN	0 kN
15	3 m	0 kN	0 kN	0 kN
15	3 m	0 kN	0 kN	0 kN
15	2 m	0 kN	0 kN	0 kN
15	2 m	0 kN	0 kN	0 kN
15	2 m	0 kN	0 kN	0 kN
15	2 m	0 kN	0 kN	0 kN
15	2 m	0 kN	0 kN	0 kN
15	1 m	0 kN	0 kN	0 kN
15	1 m	0 kN	0 kN	0 kN
15	1 m	0 kN	0 kN	0 kN
15	1 m	0 kN	0 kN	0 kN
15	1 m	0 kN	0 kN	0 kN
15	0 m	0 kN	0 kN	0 kN
15	0 m	0 kN	0 kN	0 kN
22	0 m	0 kN	0 kN	0 kN
90	0 m	0 kN	0 kN	0 kN
90	0 m	0 kN	0 kN	0 kN
90	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN

Frame number	Distance to start node	Force X	Force Y	Force Z
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
2	0 m	0 kN	0 kN	0 kN
88	3 m	0 kN	0.01 kN	0 kN
88	3 m	0 kN	0.01 kN	0 kN
88	3 m	0 kN	0.01 kN	0 kN
88	3 m	0 kN	0.02 kN	0 kN
88	3 m	0 kN	0.02 kN	0 kN
39	0 m	0 kN	0.02 kN	0 kN
39	0 m	0 kN	0.02 kN	0 kN
39	1 m	0 kN	0.02 kN	0 kN
39	1 m	0 kN	0.02 kN	0 kN

DeerSoft GmbH Pufendorfstrasse 11, 10249 Berlin, Amtsgericht Charlottenburg HRB 170851 B, USt-IdNr. 301875260
Kontakt mail@production-assist.com / Telefon: +49 30 40 36 4160
Geschäftsführer Moritz Staffel

Frame number	Distance to start node	Force X	Force Y	Force Z
39	1 m	0 kN	0.02 kN	0 kN
39	1 m	0 kN	0.02 kN	0 kN
39	1 m	0 kN	0.02 kN	0 kN
39	2 m	0 kN	0.02 kN	0 kN
39	2 m	0 kN	0.02 kN	0 kN
39	2 m	0 kN	0.02 kN	0 kN
39	2 m	0 kN	0.02 kN	0 kN
39	2 m	0 kN	0.02 kN	0 kN
39	3 m	0 kN	0.02 kN	0 kN
39	3 m	0 kN	0.02 kN	0 kN
32	0 m	0 kN	0.02 kN	0 kN
33	0 m	0 kN	0.02 kN	0 kN
33	0 m	0 kN	0.02 kN	0 kN
33	1 m	0 kN	0.02 kN	0 kN
33	1 m	0 kN	0.02 kN	0 kN
33	1 m	0 kN	0.02 kN	0 kN
34	0 m	0 kN	0.02 kN	0 kN
34	0 m	0 kN	0.02 kN	0 kN
34	0 m	0 kN	0.02 kN	0 kN
34	1 m	0 kN	0.02 kN	0 kN
34	1 m	0 kN	0.02 kN	0 kN
34	1 m	0 kN	0.02 kN	0 kN
35	0 m	0 kN	0.02 kN	0 kN
35	0 m	0 kN	0.02 kN	0 kN
35	0 m	0 kN	0.02 kN	0 kN
29	0 m	0 kN	0.02 kN	0 kN
29	0 m	0 kN	0.02 kN	0 kN
29	0 m	0 kN	0.02 kN	0 kN
30	0 m	0 kN	0.02 kN	0 kN
30	0 m	0 kN	0.02 kN	0 kN
30	1 m	0 kN	0.02 kN	0 kN
30	1 m	0 kN	0.02 kN	0 kN
30	1 m	0 kN	0.02 kN	0 kN
31	0 m	0 kN	0.02 kN	0 kN
31	0 m	0 kN	0.02 kN	0 kN
36	0 m	0 kN	0.02 kN	0 kN
36	0 m	0 kN	0.02 kN	0 kN
36	0 m	0 kN	0.02 kN	0 kN
36	1 m	0 kN	0.02 kN	0 kN
37	0 m	0 kN	0.02 kN	0 kN
37	0 m	0 kN	0.02 kN	0 kN
37	0 m	0 kN	0.02 kN	0 kN
37	1 m	0 kN	0.02 kN	0 kN
37	1 m	0 kN	0.02 kN	0 kN
37	1 m	0 kN	0.02 kN	0 kN
38	0 m	0 kN	0.02 kN	0 kN

Frame number	Distance to start node	Force X	Force Y	Force Z
38	0 m	0 kN	0.02 kN	0 kN
38	1 m	0 kN	0.02 kN	0 kN
38	1 m	0 kN	0.02 kN	0 kN
38	1 m	0 kN	0.02 kN	0 kN
40	0 m	0 kN	0.02 kN	0 kN
40	0 m	0 kN	0.02 kN	0 kN
40	0 m	0 kN	0.02 kN	0 kN
40	1 m	0 kN	0.02 kN	0 kN
40	1 m	0 kN	0.02 kN	0 kN
40	1 m	0 kN	0.02 kN	0 kN
40	1 m	0 kN	0.02 kN	0 kN
40	1 m	0 kN	0.02 kN	0 kN
40	2 m	0 kN	0.02 kN	0 kN
40	2 m	0 kN	0.02 kN	0 kN
40	2 m	0 kN	0.02 kN	0 kN
40	2 m	0 kN	0.02 kN	0 kN
40	2 m	0 kN	0.02 kN	0 kN
40	3 m	0 kN	0.02 kN	0 kN
40	3 m	0 kN	0.02 kN	0 kN
50	3 m	0 kN	0.02 kN	0 kN
50	3 m	0 kN	0.01 kN	0 kN
50	3 m	0 kN	0.01 kN	0 kN
50	3 m	0 kN	0.01 kN	0 kN
89	0 m	0 kN	0.01 kN	0 kN
51	0 m	0 kN	0.01 kN	0 kN
24	0 m	0 kN	0.01 kN	0 kN
42	0 m	0 kN	0.01 kN	0 kN
24	0 m	0 kN	0.01 kN	0 kN
24	0 m	0 kN	0.01 kN	0 kN
24	0 m	0 kN	0.01 kN	0 kN
24	0 m	0 kN	0.02 kN	0 kN
39	0 m	0 kN	0.02 kN	0 kN
39	0 m	0 kN	0.02 kN	0 kN
39	0 m	0 kN	0.02 kN	0 kN
39	1 m	0 kN	0.02 kN	0 kN
39	1 m	0 kN	0.02 kN	0 kN
39	1 m	0 kN	0.02 kN	0 kN
39	1 m	0 kN	0.02 kN	0 kN
39	1 m	0 kN	0.02 kN	0 kN
39	2 m	0 kN	0.02 kN	0 kN
39	2 m	0 kN	0.02 kN	0 kN
39	2 m	0 kN	0.02 kN	0 kN
39	2 m	0 kN	0.02 kN	0 kN
39	2 m	0 kN	0.02 kN	0 kN
39	3 m	0 kN	0.02 kN	0 kN
39	3 m	0 kN	0.02 kN	0 kN

Frame number	Distance to start node	Force X	Force Y	Force Z
155	0 m	0 kN	0.02 kN	0 kN
33	0 m	0 kN	0.02 kN	0 kN
33	0 m	0 kN	0.02 kN	0 kN
33	1 m	0 kN	0.02 kN	0 kN
33	1 m	0 kN	0.02 kN	0 kN
33	1 m	0 kN	0.02 kN	0 kN
159	0 m	0 kN	0.02 kN	0 kN
34	0 m	0 kN	0.02 kN	0 kN
34	0 m	0 kN	0.02 kN	0 kN
34	1 m	0 kN	0.02 kN	0 kN
34	1 m	0 kN	0.02 kN	0 kN
133	0 m	0 kN	0.02 kN	0 kN
133	0 m	0 kN	0.02 kN	0 kN
35	0 m	0 kN	0.02 kN	0 kN
35	0 m	0 kN	0.02 kN	0 kN
29	0 m	0 kN	0.02 kN	0 kN
29	0 m	0 kN	0.02 kN	0 kN
162	0 m	0 kN	0.02 kN	0 kN
30	0 m	0 kN	0.02 kN	0 kN
30	0 m	0 kN	0.02 kN	0 kN
30	1 m	0 kN	0.02 kN	0 kN
30	1 m	0 kN	0.02 kN	0 kN
30	1 m	0 kN	0.02 kN	0 kN
166	0 m	0 kN	0.02 kN	0 kN
31	0 m	0 kN	0.02 kN	0 kN
36	0 m	0 kN	0.02 kN	0 kN
36	0 m	0 kN	0.02 kN	0 kN
36	0 m	0 kN	0.02 kN	0 kN
36	1 m	0 kN	0.02 kN	0 kN
152	0 m	0 kN	0.02 kN	0 kN
37	0 m	0 kN	0.02 kN	0 kN
37	0 m	0 kN	0.02 kN	0 kN
37	1 m	0 kN	0.02 kN	0 kN
37	1 m	0 kN	0.02 kN	0 kN
143	0 m	0 kN	0.02 kN	0 kN
143	0 m	0 kN	0.02 kN	0 kN
38	0 m	0 kN	0.02 kN	0 kN
38	1 m	0 kN	0.02 kN	0 kN
38	1 m	0 kN	0.02 kN	0 kN
38	1 m	0 kN	0.02 kN	0 kN
40	0 m	0 kN	0.02 kN	0 kN
40	0 m	0 kN	0.02 kN	0 kN
40	0 m	0 kN	0.02 kN	0 kN
40	1 m	0 kN	0.02 kN	0 kN
40	1 m	0 kN	0.02 kN	0 kN
40	1 m	0 kN	0.02 kN	0 kN

Frame number	Distance to start node	Force X	Force Y	Force Z
40	1 m	0 kN	0.02 kN	0 kN
40	1 m	0 kN	0.02 kN	0 kN
40	2 m	0 kN	0.02 kN	0 kN
40	2 m	0 kN	0.02 kN	0 kN
40	2 m	0 kN	0.02 kN	0 kN
40	2 m	0 kN	0.02 kN	0 kN
40	2 m	0 kN	0.02 kN	0 kN
40	3 m	0 kN	0.02 kN	0 kN
40	3 m	0 kN	0.02 kN	0 kN
41	0 m	0 kN	0.02 kN	0 kN
42	0 m	0 kN	0.01 kN	0 kN
42	0 m	0 kN	0.01 kN	0 kN
42	0 m	0 kN	0.01 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
51	0 m	0 kN	0 kN	0 kN
4	2 m	0.02 kN	-1.24 kN	0 kN
4	2 m	0.02 kN	-1.24 kN	0 kN
4	2 m	-0.02 kN	1.00 kN	0 kN
4	2 m	-0.07 kN	3.76 kN	0 kN
74	2 m	-0.05 kN	2.81 kN	0 kN
74	2 m	-0.02 kN	1.01 kN	0 kN
74	2 m	0.00 kN	-0.09 kN	0 kN
74	2 m	0.02 kN	-0.84 kN	0 kN
74	2 m	0.02 kN	-0.84 kN	0 kN

Frame number	Distance to start node	Force X	Force Y	Force Z
4	2 m	0.02 kN	-0.99 kN	0 kN
74	2 m	0.01 kN	-0.74 kN	0 kN
4	3 m	0.01 kN	-0.72 kN	0 kN
74	3 m	0.01 kN	-0.60 kN	0 kN
4	3 m	0.01 kN	-0.43 kN	0 kN
74	3 m	0.01 kN	-0.41 kN	0 kN
5	0 m	0.00 kN	-0.17 kN	0 kN
69	0 m	0.00 kN	-0.19 kN	0 kN
1	0 m	-0.00 kN	0.08 kN	0 kN
1	0 m	-0.00 kN	0.08 kN	0 kN
83	3 m	-0.00 kN	0.16 kN	0 kN
83	3 m	-0.00 kN	0.21 kN	0 kN
83	3 m	-0.00 kN	0.22 kN	0 kN
83	2 m	-0.00 kN	0.20 kN	0 kN
83	2 m	-0.00 kN	0.16 kN	0 kN
83	2 m	-0.00 kN	0.10 kN	0 kN
83	2 m	0.00 kN	0.06 kN	0 kN
83	2 m	0.00 kN	0.02 kN	0 kN
83	1 m	0.00 kN	0.01 kN	0 kN
83	1 m	0.00 kN	-0.00 kN	0 kN
83	1 m	0.00 kN	-0.00 kN	0 kN
83	1 m	0.00 kN	0.00 kN	0 kN
83	1 m	0.00 kN	0.01 kN	0 kN
83	0 m	0.00 kN	0.01 kN	0 kN
83	0 m	0.00 kN	0.01 kN	0 kN
82	1 m	0.00 kN	0.02 kN	0 kN
82	1 m	0.00 kN	0.02 kN	0 kN
82	1 m	0.00 kN	0.02 kN	0 kN
82	0 m	0.00 kN	0.02 kN	0 kN
82	0 m	0.00 kN	0.02 kN	0 kN
82	0 m	0.00 kN	0.02 kN	0 kN
81	1 m	0.00 kN	0.02 kN	0 kN
81	1 m	0.00 kN	0.02 kN	0 kN
81	1 m	0.00 kN	0.02 kN	0 kN
81	0 m	0.00 kN	0.02 kN	0 kN
81	0 m	0.00 kN	0.02 kN	0 kN
80	1 m	0.00 kN	0.02 kN	0 kN
80	1 m	0.00 kN	0.02 kN	0 kN
80	0 m	0.00 kN	0.02 kN	0 kN
80	0 m	0.00 kN	0.02 kN	0 kN
86	0 m	0.00 kN	0.02 kN	0 kN
86	0 m	0.00 kN	0.02 kN	0 kN
85	1 m	0.00 kN	0.02 kN	0 kN
85	1 m	0.00 kN	0.02 kN	0 kN
85	1 m	0.00 kN	0.02 kN	0 kN
85	0 m	0.00 kN	0.02 kN	0 kN

Frame number	Distance to start node	Force X	Force Y	Force Z
85	0 m	0.00 kN	0.02 kN	0 kN
85	0 m	0.00 kN	0.02 kN	0 kN
84	0 m	0.00 kN	0.02 kN	0 kN
84	0 m	0.00 kN	0.02 kN	0 kN
79	1 m	0.00 kN	0.02 kN	0 kN
79	0 m	0.00 kN	0.02 kN	0 kN
79	0 m	0.00 kN	0.02 kN	0 kN
78	1 m	0.00 kN	0.02 kN	0 kN
78	1 m	0.00 kN	0.02 kN	0 kN
78	1 m	0.00 kN	0.02 kN	0 kN
78	1 m	0.00 kN	0.02 kN	0 kN
78	0 m	0.00 kN	0.02 kN	0 kN
78	0 m	0.00 kN	0.02 kN	0 kN
77	1 m	0.00 kN	0.02 kN	0 kN
77	1 m	0.00 kN	0.02 kN	0 kN
77	1 m	0.00 kN	0.02 kN	0 kN
77	0 m	0.00 kN	0.02 kN	0 kN
77	0 m	0.00 kN	0.02 kN	0 kN
77	0 m	0.00 kN	0.02 kN	0 kN
72	3 m	0.00 kN	0.01 kN	0 kN
72	3 m	0.00 kN	0.01 kN	0 kN
72	3 m	0.00 kN	0.01 kN	0 kN
72	2 m	0.00 kN	0.00 kN	0 kN
72	2 m	0.00 kN	-0.00 kN	0 kN
72	2 m	0.00 kN	-0.00 kN	0 kN
72	2 m	0.00 kN	0.00 kN	0 kN
72	2 m	0.00 kN	0.02 kN	0 kN
72	1 m	0.00 kN	0.04 kN	0 kN
72	1 m	-0.00 kN	0.08 kN	0 kN
72	1 m	-0.00 kN	0.13 kN	0 kN
72	1 m	-0.00 kN	0.18 kN	0 kN
72	1 m	-0.00 kN	0.21 kN	0 kN
72	0 m	-0.00 kN	0.21 kN	0 kN
72	0 m	-0.00 kN	0.18 kN	0 kN
71	0 m	-0.00 kN	0.11 kN	0 kN
66	0 m	0.00 kN	0.03 kN	0 kN
66	0 m	0.00 kN	0.03 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
25	0 m	0 kN	0 kN	0 kN
25	0 m	0 kN	0 kN	0 kN
25	0 m	0 kN	0 kN	0 kN
25	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN

Frame number	Distance to start node	Force X	Force Y	Force Z
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
89	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN

Frame number	Distance to start node	Force X	Force Y	Force Z
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN
75	0 m	0 kN	0 kN	0 kN

FEA line load

Frame number	Length load	Distance to start node	Force X	Force Y	Force Z
1	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
1	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
2	0 m	0 m	0 kN/m	0 kN/m	-0.128 kN/m
2	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
3	0 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
3	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
4	3 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
4	3 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
5	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
5	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
6	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
6	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
7	0 m	0 m	0 kN/m	0 kN/m	-0.128 kN/m
7	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
8	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
8	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
9	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
9	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
10	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
10	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
11	3 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
11	3 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
12	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
12	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
13	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
13	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
14	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
14	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
15	3 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
15	3 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
16	0 m	0 m	0 kN/m	0 kN/m	-0.130 kN/m
16	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m

Frame number	Length load	Distance to start node	Force X	Force Y	Force Z
17	1 m	0 m	0 kN/m	0 kN/m	-0.130 kN/m
17	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
18	1 m	0 m	0 kN/m	0 kN/m	-0.130 kN/m
18	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
19	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
19	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
20	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
20	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
21	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
21	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
22	0 m	0 m	0 kN/m	0 kN/m	-0.128 kN/m
22	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
23	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
23	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
24	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
24	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
25	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
25	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
26	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
26	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
27	0 m	0 m	0 kN/m	0 kN/m	-0.128 kN/m
27	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
28	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
28	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
29	0 m	0 m	0 kN/m	0 kN/m	-0.130 kN/m
29	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
30	1 m	0 m	0 kN/m	0 kN/m	-0.130 kN/m
30	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
31	0 m	0 m	0 kN/m	0 kN/m	-0.130 kN/m
31	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
32	0 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
32	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
33	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
33	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
34	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
34	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
35	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
35	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
36	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
36	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
37	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
37	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
38	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
38	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
39	3 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
39	3 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m

Frame number	Length load	Distance to start node	Force X	Force Y	Force Z
40	3 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
40	3 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
41	0 m	0 m	0 kN/m	0 kN/m	-0.128 kN/m
41	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
42	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
42	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
43	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
43	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
44	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
44	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
45	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
45	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
46	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
46	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
47	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
47	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
48	0 m	0 m	0 kN/m	0 kN/m	-0.128 kN/m
48	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
49	0 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
49	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
50	3 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
50	3 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
51	0 m	0 m	0 kN/m	0 kN/m	-0.128 kN/m
51	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
52	0 m	0 m	0 kN/m	0 kN/m	-0.130 kN/m
52	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
53	1 m	0 m	0 kN/m	0 kN/m	-0.130 kN/m
53	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
54	1 m	0 m	0 kN/m	0 kN/m	-0.130 kN/m
54	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
55	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
55	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
56	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
56	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
57	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
57	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
58	0 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
58	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
59	3 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
59	3 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
60	3 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
60	3 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
61	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
61	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
62	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
62	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m

Frame number	Length load	Distance to start node	Force X	Force Y	Force Z
63	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
63	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
64	0 m	0 m	0 kN/m	0 kN/m	-0.128 kN/m
64	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
65	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
65	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
66	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
66	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
67	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
67	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
68	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
68	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
69	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
69	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
70	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
70	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
71	0 m	0 m	0 kN/m	0 kN/m	-0.128 kN/m
71	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
72	3 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
72	3 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
73	0 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
73	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
74	3 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
74	3 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
75	0 m	0 m	0 kN/m	0 kN/m	-0.128 kN/m
75	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
76	0 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
76	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
77	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
77	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
78	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
78	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
79	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
79	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
80	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
80	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
81	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
81	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
82	1 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
82	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
83	3 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
83	3 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
84	0 m	0 m	0 kN/m	0 kN/m	-0.130 kN/m
84	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
85	1 m	0 m	0 kN/m	0 kN/m	-0.130 kN/m
85	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m

Frame number	Length load	Distance to start node	Force X	Force Y	Force Z
86	0 m	0 m	0 kN/m	0 kN/m	-0.130 kN/m
86	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
87	0 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
87	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
88	3 m	0 m	0 kN/m	0 kN/m	-0.120 kN/m
88	3 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
89	0 m	0 m	0 kN/m	0 kN/m	-0.128 kN/m
89	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
90	0 m	0 m	0 kN/m	0 kN/m	-0.160 kN/m
90	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
91	0 m	0 m	0 kN/m	0 kN/m	-0.128 kN/m
91	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
92	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
92	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
93	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
93	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
94	0 m	0 m	0 kN/m	0 kN/m	-0.130 kN/m
94	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
95	2 m	0 m	0 kN/m	0 kN/m	-0.130 kN/m
95	2 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
96	1 m	0 m	0 kN/m	0 kN/m	-1.734 kN/m
96	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
97	1 m	0 m	0 kN/m	0 kN/m	-1.734 kN/m
97	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
98	1 m	0 m	0 kN/m	0 kN/m	-1.734 kN/m
98	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
99	1 m	0 m	0 kN/m	0 kN/m	-1.734 kN/m
99	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
100	1 m	0 m	0 kN/m	0 kN/m	-0.981 kN/m
100	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
101	0 m	0 m	0 kN/m	0 kN/m	-0.981 kN/m
101	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
102	0 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
102	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
103	1 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
103	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
104	1 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
104	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
105	1 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
105	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
106	0 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
106	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
107	1 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
107	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
108	1 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
108	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m

Frame number	Length load	Distance to start node	Force X	Force Y	Force Z
109	0 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
109	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
110	0 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
110	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
111	1 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
111	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
112	1 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
112	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
113	1 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
113	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
114	1 m	0 m	0 kN/m	0 kN/m	-0.981 kN/m
114	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
115	0 m	0 m	0 kN/m	0 kN/m	-0.981 kN/m
115	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
116	0 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
116	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
117	1 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
117	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
118	1 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
118	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
119	0 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
119	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
120	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
120	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
121	0 m	0 m	0 kN/m	0 kN/m	-0.130 kN/m
121	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
122	2 m	0 m	0 kN/m	0 kN/m	-0.130 kN/m
122	2 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
123	1 m	0 m	0 kN/m	0 kN/m	-1.734 kN/m
123	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
124	1 m	0 m	0 kN/m	0 kN/m	-1.734 kN/m
124	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
125	1 m	0 m	0 kN/m	0 kN/m	-1.734 kN/m
125	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
126	1 m	0 m	0 kN/m	0 kN/m	-1.734 kN/m
126	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
127	1 m	0 m	0 kN/m	0 kN/m	-1.734 kN/m
127	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
128	1 m	0 m	0 kN/m	0 kN/m	-1.734 kN/m
128	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
129	1 m	0 m	0 kN/m	0 kN/m	-1.734 kN/m
129	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
130	1 m	0 m	0 kN/m	0 kN/m	-1.734 kN/m
130	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
131	0 m	0 m	0 kN/m	0 kN/m	-0.130 kN/m
131	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m

DeerSoft GmbH Pufendorfstrasse 11, 10249 Berlin, Amtsgericht Charlottenburg HRB 170851 B, USt-IdNr. 301875260
Kontakt mail@production-assist.com / Telefon: +49 30 40 36 4160
Geschäftsführer Moritz Staffel

Frame number	Length load	Distance to start node	Force X	Force Y	Force Z
132	2 m	0 m	0 kN/m	0 kN/m	-0.130 kN/m
132	2 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
133	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
133	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
134	1 m	0 m	0 kN/m	0 kN/m	-0.981 kN/m
134	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
135	0 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
135	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
136	1 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
136	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
137	1 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
137	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
138	1 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
138	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
139	0 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
139	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
140	1 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
140	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
141	1 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
141	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
142	0 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
142	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
143	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
143	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
144	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
144	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
145	0 m	0 m	0 kN/m	0 kN/m	-0.130 kN/m
145	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
146	2 m	0 m	0 kN/m	0 kN/m	-0.130 kN/m
146	2 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
147	1 m	0 m	0 kN/m	0 kN/m	-1.734 kN/m
147	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
148	1 m	0 m	0 kN/m	0 kN/m	-1.734 kN/m
148	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
149	1 m	0 m	0 kN/m	0 kN/m	-1.734 kN/m
149	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
150	1 m	0 m	0 kN/m	0 kN/m	-1.734 kN/m
150	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
151	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
151	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
152	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
152	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
153	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
153	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
154	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
154	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m

Frame number	Length load	Distance to start node	Force X	Force Y	Force Z
155	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
155	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
156	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
156	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
157	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
157	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
158	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
158	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
159	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
159	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
160	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
160	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
161	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
161	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
162	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
162	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
163	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
163	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
164	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
164	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
165	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
165	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
166	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
166	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
167	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
167	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
168	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
168	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
169	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
169	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
170	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
170	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
171	1 m	0 m	0 kN/m	0 kN/m	-0.037 kN/m
171	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
172	1 m	0 m	0 kN/m	0 kN/m	-0.981 kN/m
172	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
173	0 m	0 m	0 kN/m	0 kN/m	-0.981 kN/m
173	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
174	0 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
174	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
175	1 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
175	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
176	1 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
176	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
177	0 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
177	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m

Frame number	Length load	Distance to start node	Force X	Force Y	Force Z
178	0 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
178	0 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
179	1 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
179	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
180	1 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
180	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
181	1 m	0 m	0 kN/m	0 kN/m	-0.419 kN/m
181	1 m	0 m	0 kN/m	0 kN/m	-0.010 kN/m
3	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
4	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
4	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
4	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
4	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
4	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
4	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
4	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
4	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
4	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
4	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
4	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
4	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
4	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
4	0 m	3 m	0.000 kN/m	0.092 kN/m	0 kN/m
4	0 m	3 m	0.000 kN/m	0.092 kN/m	0 kN/m
4	0 m	3 m	0.000 kN/m	0.092 kN/m	0 kN/m
49	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
50	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
50	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
50	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
50	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
50	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
50	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
50	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
50	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
50	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
50	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
50	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
50	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
50	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
50	0 m	3 m	0.000 kN/m	0.092 kN/m	0 kN/m
50	0 m	3 m	0.000 kN/m	0.092 kN/m	0 kN/m
50	0 m	3 m	0.000 kN/m	0.092 kN/m	0 kN/m
73	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
74	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
74	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
74	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m

Frame number	Length load	Distance to start node	Force X	Force Y	Force Z
74	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
74	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
74	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
74	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
74	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
74	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
74	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
74	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
74	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
74	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
74	0 m	3 m	0.000 kN/m	0.092 kN/m	0 kN/m
74	0 m	3 m	0.000 kN/m	0.092 kN/m	0 kN/m
74	0 m	3 m	0.000 kN/m	0.092 kN/m	0 kN/m
87	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
88	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
88	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
88	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
88	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
88	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
88	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
88	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
88	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
88	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
88	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
88	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
88	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
88	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
88	0 m	3 m	0.000 kN/m	0.092 kN/m	0 kN/m
88	0 m	3 m	0.000 kN/m	0.092 kN/m	0 kN/m
88	0 m	3 m	0.000 kN/m	0.092 kN/m	0 kN/m
94	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
95	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
95	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
95	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
95	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
95	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
95	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
95	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
95	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
95	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
95	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
121	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
122	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
122	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
122	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m

Frame number	Length load	Distance to start node	Force X	Force Y	Force Z
122	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
122	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
122	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
122	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
122	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
122	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
122	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
122	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
131	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
132	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
132	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
132	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
132	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
132	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
132	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
132	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
132	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
132	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
132	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
132	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
145	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
146	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
146	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
146	0 m	0 m	0.000 kN/m	0.092 kN/m	0 kN/m
146	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
146	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
146	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
146	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
146	0 m	1 m	0.000 kN/m	0.092 kN/m	0 kN/m
146	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
146	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m
146	0 m	2 m	0.000 kN/m	0.092 kN/m	0 kN/m

DeerSoft GmbH Pufendorfstrasse 11, 10249 Berlin, Amtsgericht Charlottenburg HRB 170851 B, USt-IdNr. 301875260
Kontakt mail@production-assist.com / Telefon: +49 30 40 36 4160
Geschäftsführer Moritz Staffel