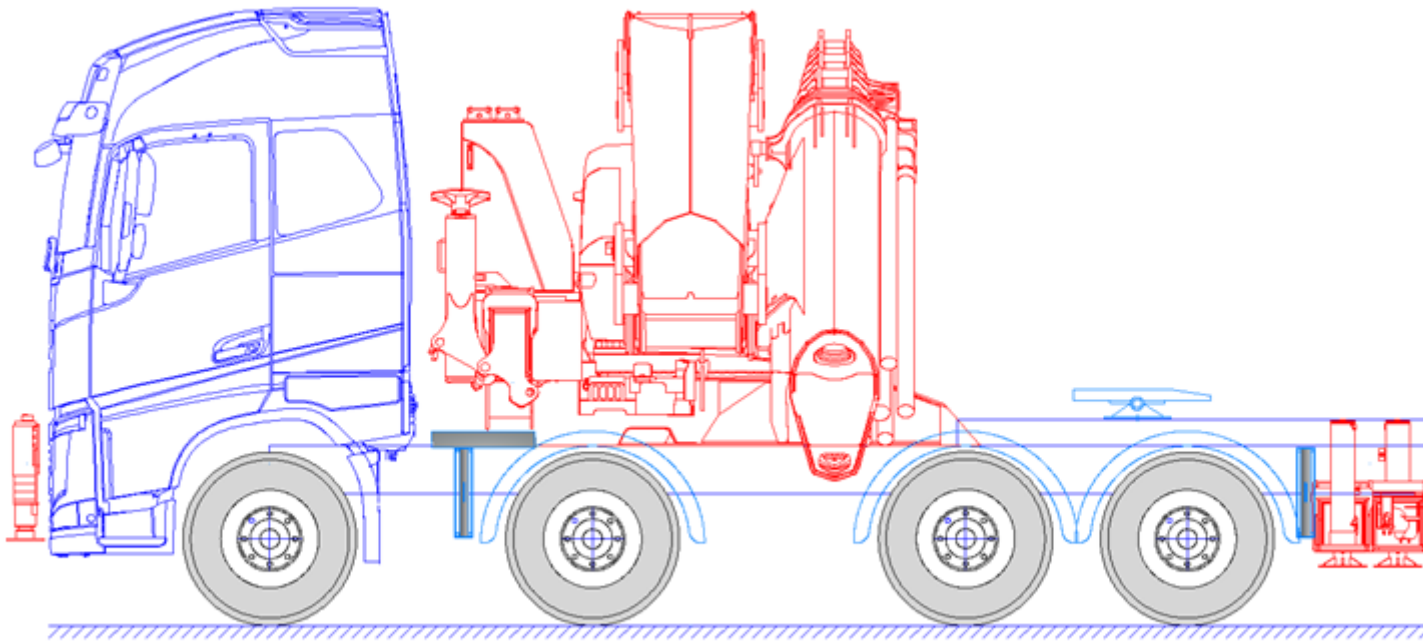


PALFINGER



PROJECT
MCC23494_PA
C_V02

CUSTOMER

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CRAIG SNEDDON

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DESIGN ENGINEER

PALFINGER

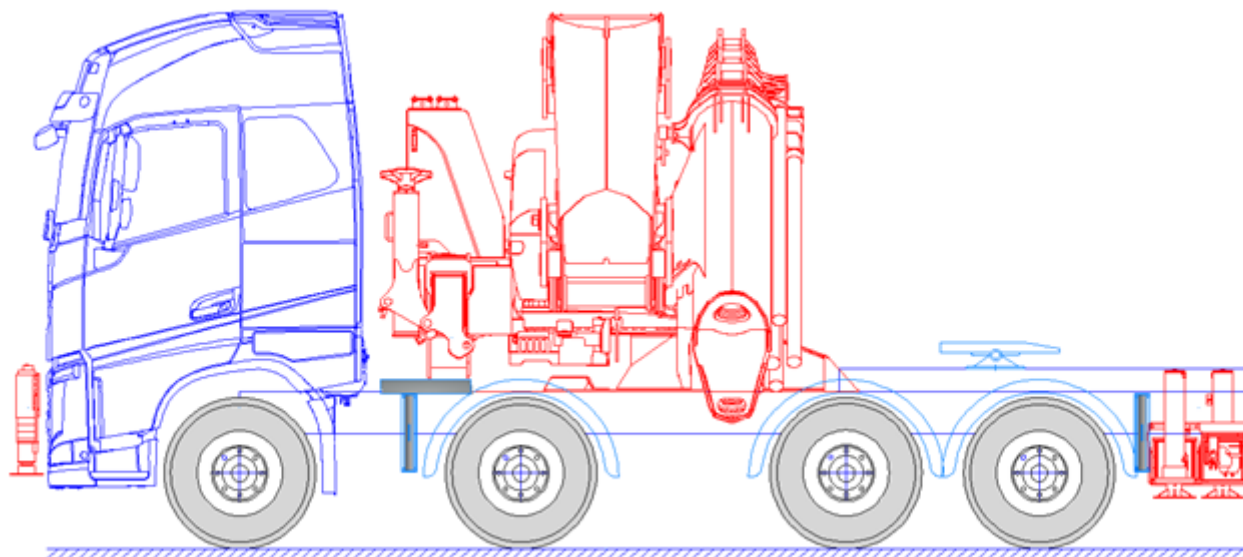
Palfinger EMEA GmbH

Salzburg AT

Ludwig Stangel



@ l.stangel@palfinger.com



PROJECT INFORMATION AND INDEX

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| 2. Project Information | 10. Lifting Capacity Analysis Crane |
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| 7. Stability Calculation Crane - Graphic | |
| 8. Stability Calculation Crane - Detail | |

PROJECT DATA

Project Number:	MCC23494_PAC_V02
Consignment:	
Installation Type:	Tractor
Carrier:	Volvo FH Version 4 82F R6HA
	8x2 Euro 6
Cab:	CAB-HSLP (FH)
Wheel Base [mm]:	1.995 + 2.305 + 1.370
Permissible axle load [kg]:	10.000 / 10.000 / 15.000 / 10.000
Load Max [kg]:	32.000
Payload [kg]:	3.212
Crane:	PK 165.002 TEC 7 H EGG R4X STZY OELKU2 TKKR500 HPSC
Additional Stabilizer:	BS1242 - B_STZS3_STU04 / KSZ284A - KSZ284A
Container Handling System:	

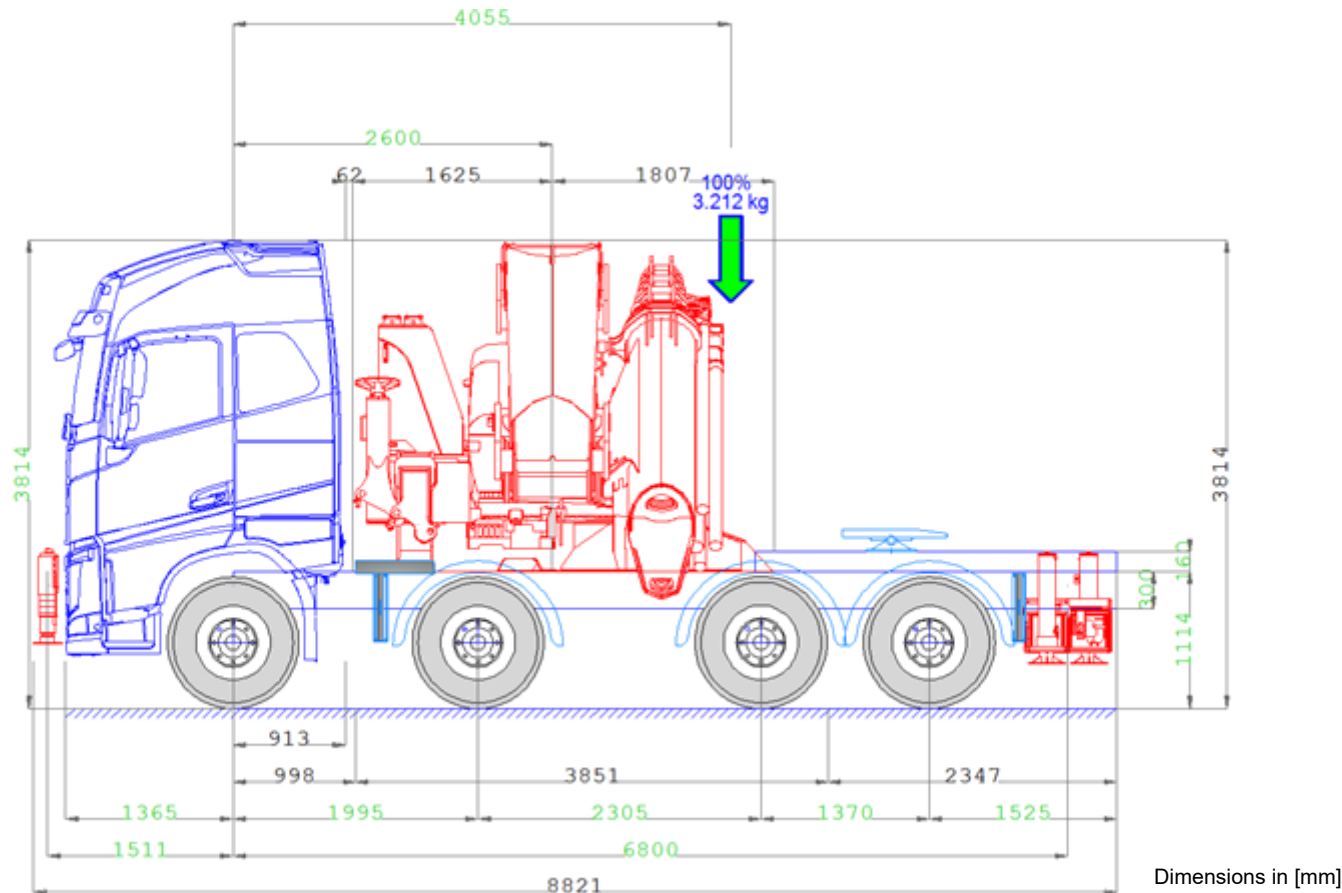
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The calculation results are created with the software tool PAC Online. Weights and dimensions are based on the standard chassis equipment or mentioned otherwise. Additional weights due to special equipment must be added to the calculated axle loads. Before starting with the bodybuilding the chassis has to be weighed, the frame height has to be checked and compared with the result of the calculation. In case of deviations the calculation and position of the equipment has to be corrected. It is not possible to consider all influences for the stability calculation. It is necessary to carry out required inspections and tests under the relevant laws in the place of registration! The calculation results are additional information only and can not replace such inspections and tests.

The calculation results are non-binding guide values. Changes and variations in production are possible and permissible. Palfinger does not accept any liability or warranty for the correctness and validity of the calculation results.

Version:
1.0.9.25693



INSTALLATION DRAWING

PROJECT DATA

Project Number:	MCC23494_PAC_V02
Consignment:	
Installation Type:	Tractor
Carrier:	Volvo FH Version 4 82F R6HA 8x2 Euro 6
Cab:	CAB-HSLP (FH)
Wheel Base [mm]:	1.995 + 2.305 + 1.370
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Load Max [kg]:	32.000
Payload [kg]:	3.212
Crane:	PK 165.002 TEC 7 H EGG R4X STZY OELKU2 TKKR500 HPSC
Additional Stabilizer:	BS1242 - B_STZS3_STU04 / KSZ284A - KSZ284A
Container Handling System:	

Project Information:

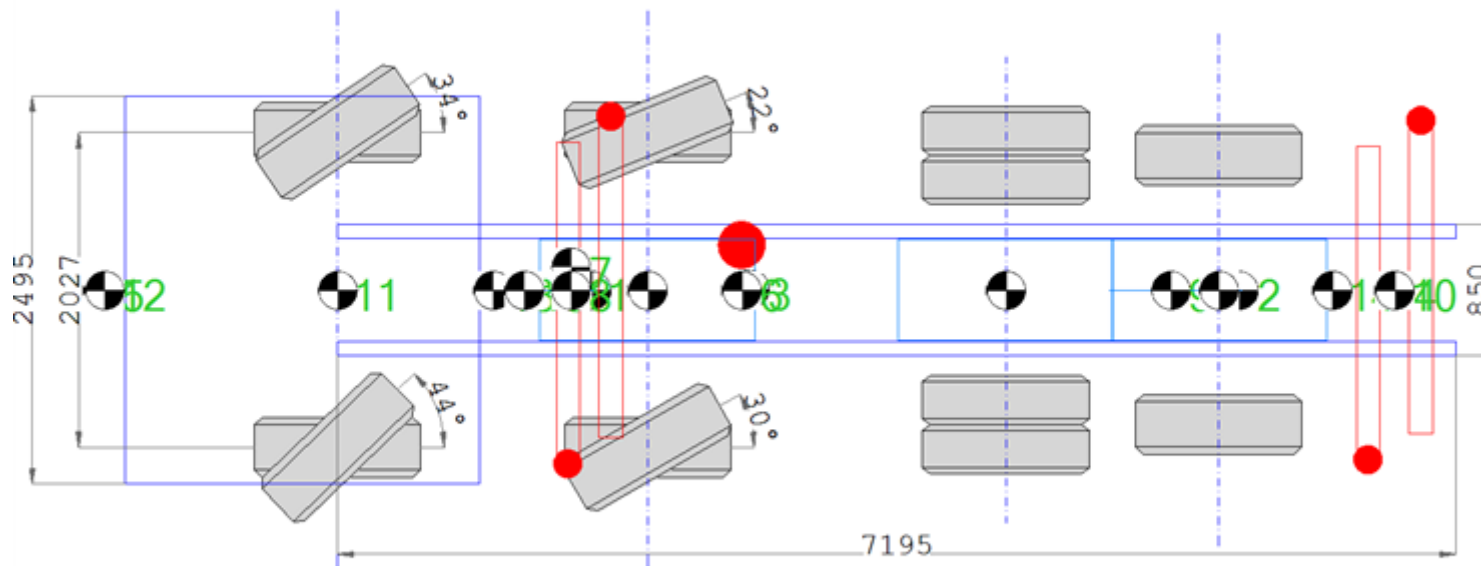
Remarks:

- Truck weights acc. to sendet Volvo specification FO1325-00-85929 (incl. driver, full adblue & diesel tank)

stability:

- truck not stable to all sides

-> crane performance has to be reduced accordingly



TOP VIEW

Dimensions in [mm]

Legend:

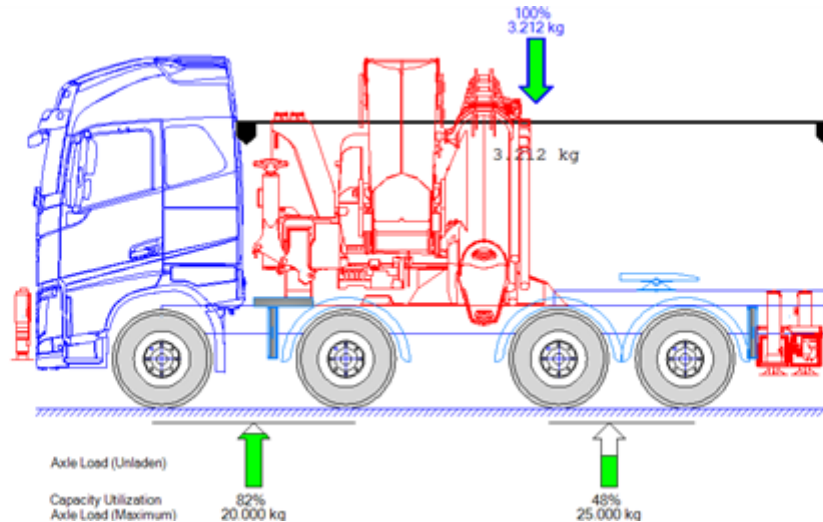
- | | |
|---|--------------------------------------|
| 1 Volvo FH Version 4 82F R6HA 10.862 kg | 9 Fifth-wheel + slider 250 kg |
| 2 Subframe 1.000 kg | 10 side plates add stab 160 kg |
| 3 PK 165.002 TEC 7 H 13.213 kg | 11 frame reinforcement 120 kg |
| 4 BS1242 1.860 kg | 12 Front cover and traverse 120 kg |
| 5 KSZ284A 80 kg | 13 Stabilizer plate front 45 kg |
| 6 side plates crane 250 kg | 14 Stabilizer plate add. stab. 80 kg |
| 7 PTO + pumps 60 kg | 15 Stabilizer plate add. stab. 80 kg |
| 8 hydr. Öl 500 kg | |

Support frame:

Distance mid of front axle to beginning of subframe: 4.250mm
Length: 2.945mm

PROJECT DATA

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Additional Stabilizer:	BS1242 - B_STZS3_STU04 / KSZ284A - KSZ284A
Container Handling System:	



Transport Position Crane

Default	Yes
Boom Direction	Right
Angle main boom [°]	-46,3
Angle knuckle boom [°]	173,8
Knuckle boom stroke [mm]	0
Angle FlyJib [°]	
FlyJib stroke [mm]	

Transport Position Hookloader

Transp. Stroke [mm]

Result	Weight [kg]	Location [mm]			Front axle [kg]	Rear Axle [kg]
		X	Y	Z		
Axle Load (Unladen)	28.788	2.629	5	1.505	58% 16.587	12.201
Payload	3.212	4.055	0	1.114	662	2.550
Evenly Distributed Payload Loss						
Axle Load (Laden)	32.000	2.772	4	1.466	54% 17.249	14.751
Axle Load (Maximum)	32.000				63% 20.000	25.000
Recommended COG Payload: 914 - 7.195						

AXLE- & PAYLOAD CALCULATION - GRAPHIC

PROJECT DATA

Project Number:	MCC23494_PAC_V02
Consignment:	
Installation Type:	Tractor
Carrier:	Volvo FH Version 4 82F R6HA 8x2 Euro 6
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Load Max [kg]:	32.000
Payload [kg]:	3.212
Crane:	PK 165.002 TEC 7 H EGG R4X STZY OELKU2 TKKR500 HPSC
Additional Stabilizer:	BS1242 - B_STZS3_STU04 / KSZ284A - KSZ284A
Container Handling System:	



Name	Weight [kg]	Location [mm]			Front axle [kg]	Rear Axle [kg]	Relevance
		X	Y	Z			
Volvo FH Version 4 82F R6HA	10.862	1.635	0	911	9.065	1.797	*
Subframe	1.000	5.798	0	1.194	-247	1.247	*
PK 165.002 TEC 7 H - Mounting Parts	0	2.600	0	1.114	0	0	*
PK 165.002 TEC 7 H - Static Parts	5.886	2.127	153	1.784	4.160	1.726	*
PK 165.002 TEC 7 H - Dynamic Parts	7.436	3.054	-105	2.473	3.464	3.972	*
BS1242/B_STZS3_STU04	1.860	6.800	0	814	-943	2.803	*
KSZ284A	80	-1.511	0	1.114	132	-52	*
mudguard 4th axle	0	5.670	0	1.200	0	0	*
mudguard 3rd axle	0	4.300	0	1.200	0	0	*
mudguard 2nd axle	0	1.995	0	1.200	0	0	*
side plates crane	250	2.600	0	0	146	104	*
PTO + pumps	60	1.500	150	800	52	8	*
hydr. Öl	500	1.500	0	1.500	435	65	A
Fifth-wheel + slider	250	5.360	0	1.275	-33	283	*
side plates add stab	160	6.800	0	1.000	-81	241	*
frame reinforcement	120	0	0	1.000	151	-31	*
Front cover and traverse	120	-1.500	0	1.000	198	-78	*
Stabilizer plate front	45	1.000	0	1.200	45	0	A
Stabilizer plate add. stab.	80	6.400	0	1.100	-32	112	A
Stabilizer plate add. stab.	80	1.200	0	1.100	76	4	A
Axle Load (Unladen)	28.788	2.629	5	1.505	58% 16.587	12.201	
Payload	3.212	4.055	0	1.114	662	2.550	
Evenly Distributed Payload Loss							
Axle Load (Laden)	32.000	2.772	4	1.466	54% 17.249	14.751	
Axle Load (Maximum)	32.000				63% 20.000	25.000	
Recommended COG Payload: 914 - 7.195							

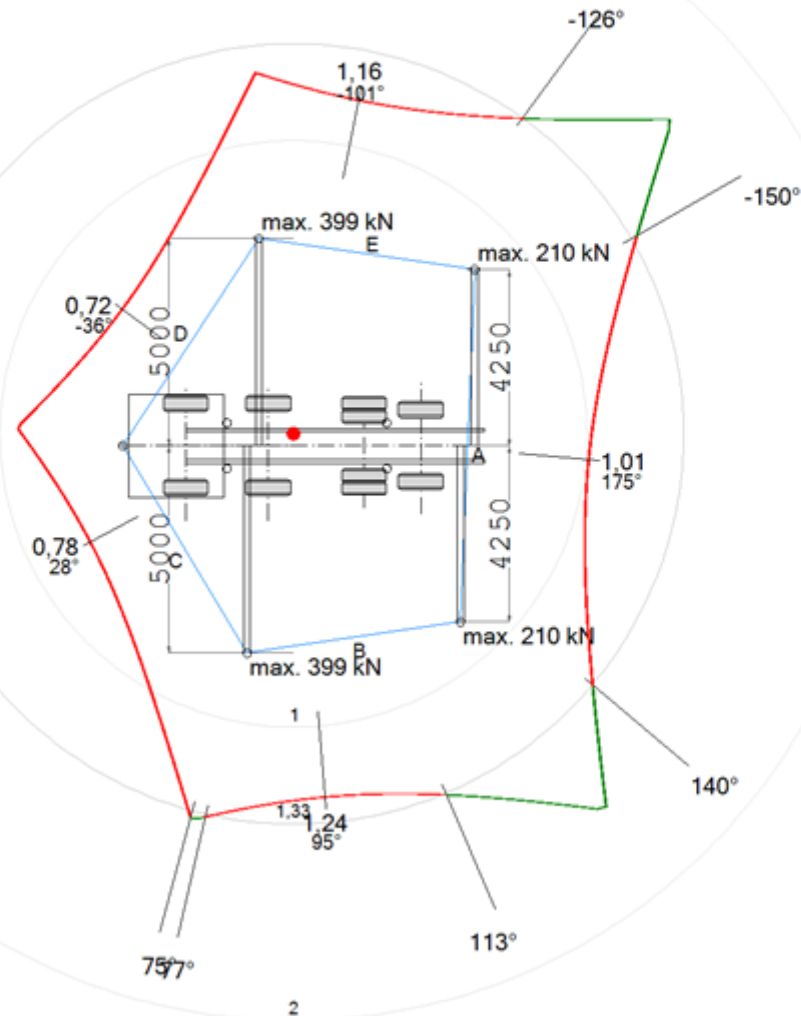
AXLE- & PAYLOAD CALCULATION - DETAIL

PROJECT DATA

Project Number:	MCC23494_PAC_V02
Consignment:	
Installation Type:	Tractor
Carrier:	Volvo FH Version 4 82F R6HA 8x2 Euro 6
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Load Max [kg]:	32.000
Payload [kg]:	3.212
Crane:	PK 165.002 TEC 7 H EGG R4X STZY OELKU2 TKKR500 HPSC
Additional Stabilizer:	BS1242 - B_STZS3_STU04 / KSZ284A - KSZ284A
Container Handling System:	

PK 165.002 TEC 7 H 20°/20°
EGG R4X STZY

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STABILITY CALCULATION CRANE - GRAPHIC

PROJECT DATA

Project Number:	MCC23494_PAC_V02
Consignment:	
Installation Type:	Tractor
Carrier:	Volvo FH Version 4 82F R6HA 8x2 Euro 6
Cab:	CAB-HSLP (FH)
Wheel Base [mm]:	1.995 + 2.305 + 1.370
Permissible axle load [kg]:	10.000 / 10.000 / 15.000 / 10.000
Load Max [kg]:	32.000
Payload [kg]:	3.212
Crane:	PK 165.002 TEC 7 H EGG R4X STZY OELKU2 TKKR500 HPSC
Additional Stabilizer:	BS1242 - B_STZS3_STU04 / KSZ284A - KSZ284A
Container Handling System:	

Result

A: 1,01 D: 0,72
B: 1,24 E: 1,16
C: 0,78



TL	MS [mt]	MT [mt]	D-TR [mm]	D-LC [mm]	W-CI [kg]	D-CWI [mm]	W-CO [kg]	D-CWO [mm]	F
A	101,73	100,78	4.150	16.633	10.492	3.856	2.808	7.044	1,01
B	116,87	94,14	4.781	15.765	10.492	4.413	2.808	6.182	1,24
C	82,29	105,00	3.567	17.164	10.059	2.946	3.241	6.604	0,78
D	78,18	108,19	3.479	17.558	10.059	2.667	3.241	6.997	0,72
E	113,96	98,22	4.822	16.299	10.492	4.077	2.808	6.711	1,16

Weight Carrier [kg] = 14.762

Legend

TL.....	Tipping Line
MS.....	Stability moment
MT.....	Tipping moment
D-TR.....	distance cog. carrier to tipping line
D-LC.....	Distance load to tipping line
W-CI.....	Crane mass inside tipping line
D-CWI.....	Distance cog. crane mass inside to tipping line
W-CO.....	Crane mass outside tipping line
D-CWO...	Distance cog. crane mass outside to tipping line
F.....	Stab. Factor

	Crane Position Lifting capacity
Angle main boom [°]	20
Angle knuckle boom [°]	20
Knuckle boom stroke [mm]	16.290
Angle FlyJib [°]	-
FlyJib stroke [mm]	-
Manual Extensions	0
Lifting capacity [kg]	4.870
Lifting capacity outreach [mm]	20.822

STABILITY CALCULATION CRANE - DETAIL

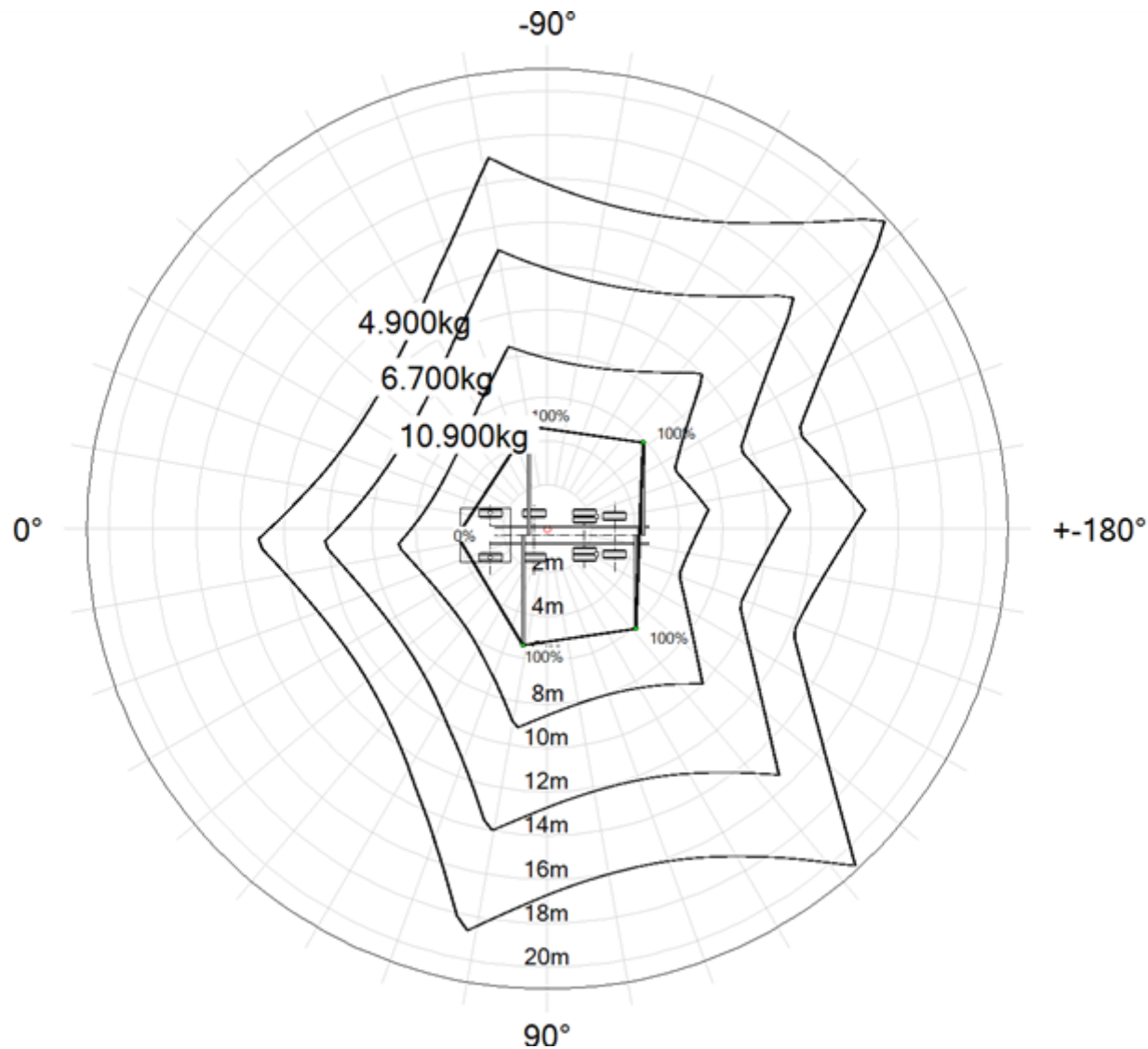
PROJECT DATA

Project Number:	MCC23494_PAC_V02
Consignment:	
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Payload [kg]:	3.212
Crane:	PK 165.002 TEC 7 H EGG R4X STZY OELKU2 TKKR500 HPSC
Additional Stabilizer:	BS1242 - B_STZS3_STU04 / KSZ284A - KSZ284A
Container Handling System:	

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Stabilizer	Stabilizer Spread [mm]		Mounting Point [mm]		
	Left	Right	X	Y	Z
EGG R4X STZY	5.000	5.000	1.620	0	1.114
BS1242 B_STZS3_STU04.0	4.250	4.250	6.800	0	814
KSZ284A KSZ284A.0	0	0	-1.511	0	1.114

Tipping Line		Distance from front axle
Front Axle	Width	
Front Axle	1.100	998
Rear Axle	1.100	4.848



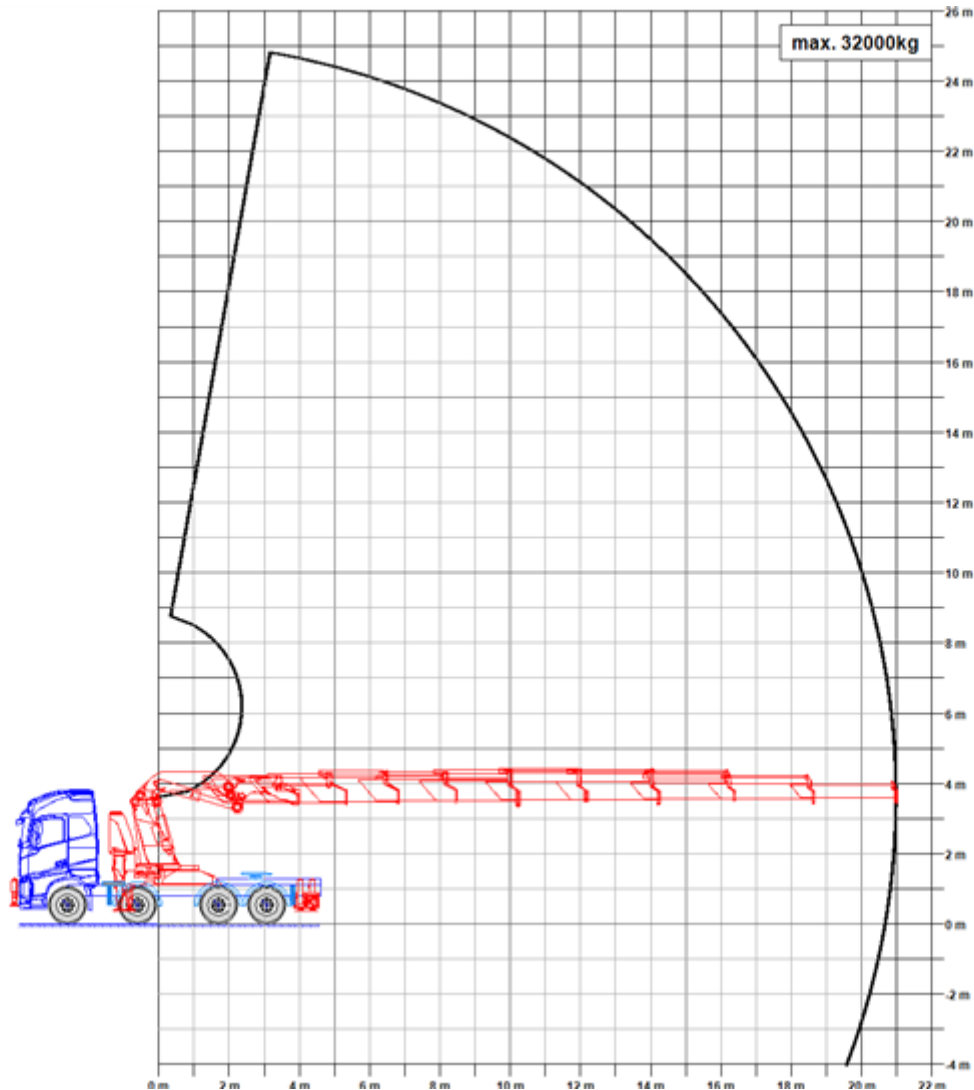
HPSC - HIGH PERFORMANCE STABILITY CONTROL

PROJECT DATA

Project Number:	MCC23494_PAC_V02
Consignment:	
Installation Type:	Tractor
Carrier:	Volvo FH Version 4 82F R6HA
	8x2 Euro 6
Cab:	CAB-HSLP (FH)
Wheel Base [mm]:	1.995 + 2.305 + 1.370
Permissible axle load [kg]:	10.000 / 10.000 / 15.000 / 10.000
Load Max [kg]:	32.000
Payload [kg]:	3.212
Crane:	PK 165.002 TEC 7 H EGG R4X STZY OELKU2 TKKR500 HPSC
Additional Stabilizer:	BS1242 - B_STZS3_STU04 / KSZ284A - KSZ284A
Container Handling System:	

It is not possible to consider all influences for the stability calculation. The calculated lifting values are approximate only and may differ significantly to the actual vehicle.

Caution: In the lifting performance calculation is a potential reduction of the crane performance, due to the max. permissible stabilizer force on the front stabilizer, not considered! The max. permissible stabilizer force on the front stabilizer and the crane performance in this area, has to be rechecked separately!



LIFTING CAPACITY ANALYSIS CRANE

PROJECT DATA

Project Number:	MCC23494_PAC_V02
Consignment:	
Installation Type:	Tractor
Carrier:	Volvo FH Version 4 82F R6HA 8x2 Euro 6
Cab:	CAB-HSLP (FH)
Wheel Base [mm]:	1.995 + 2.305 + 1.370
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Payload [kg]:	3.212
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Additional Stabilizer:	BS1242 - B_STZS3_STU04 / KSZ284A - KSZ284A
Container Handling System:	

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Crane Configuration

Angle main boom [°]	0
Angle knuckle boom [°]	0
Knuckle boom stroke [mm]	16.290
Angle FlyJib [°]	
FlyJib stroke [mm]	
Manual Extensions	0
Mounting Height [mm]	1.114

Crane performance

Outreach [mm]	20.979
Lifting Height [mm]	3.486
Lifting Capacity [kg]	4.577
Working Pressure [%]	100