

Construction Machine

HS 8100 HD

Litronic®

EN

HS 8004.02

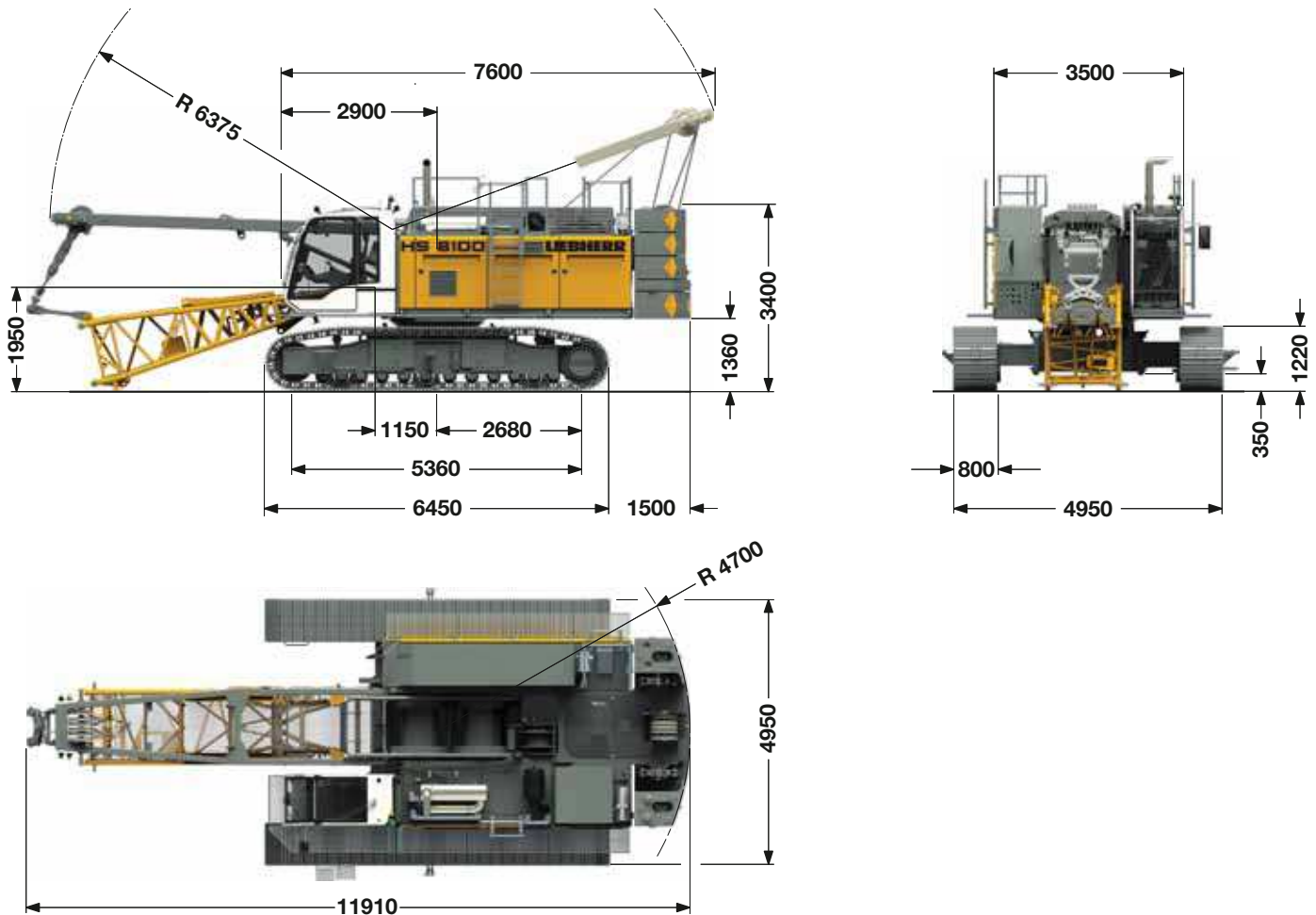


LIEBHERR

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Dimensions

Basic machine with undercarriage



Operating weight

The operating weight includes the basic machine with HD undercarriage, 2 main winches 275 kN including wire ropes (90 m), and 11 m main boom, consisting of A-frame, boom foot (5.5 m) and boom head (5.5 m), 26.3 t basic counterweight, 800 mm 3-web grousers and 50 t hook block.
Total weight _____ approx. 89 t

Ground pressure

Ground bearing pressure _____ 1.04 kg/cm²

Equipment

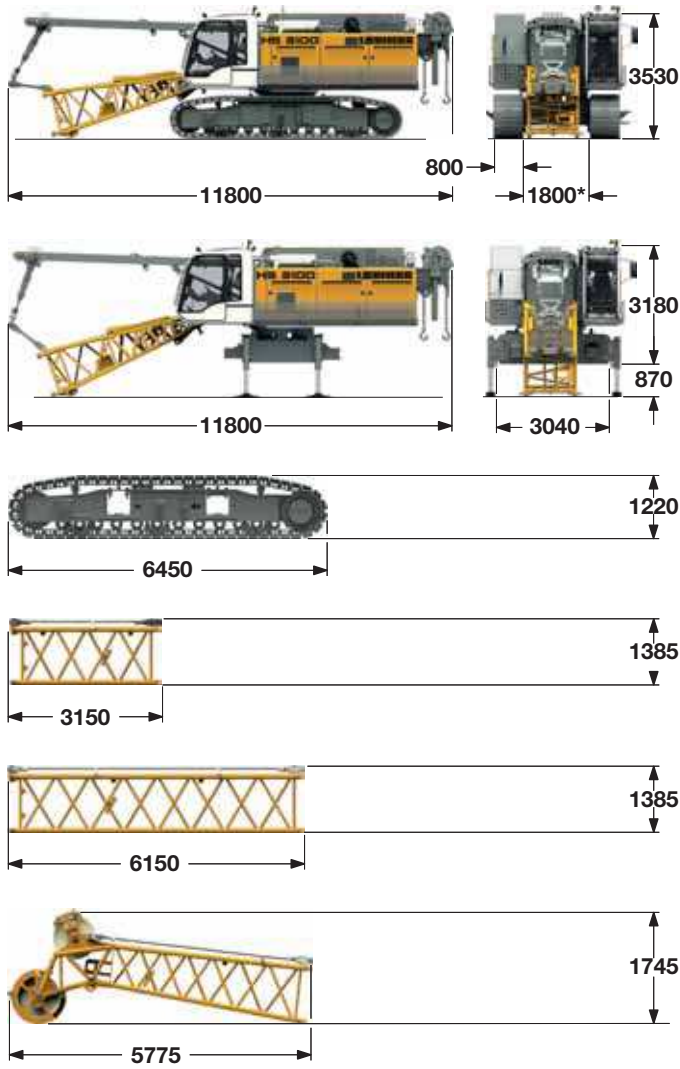
Main boom (No. 1311.24) max. length _____ 59 m
Modular designed equipment for lifting operation, with dragline or clamshell.
For dragline operation, a rotating fairlead is fitted into the boom foot. This minimizes the rope angle to drum, which results in lower rope wear.

Remarks

1. Liebherr cable excavator HS 8004.02
2. Designed according to EN 474-1 and EN 474-12.
3. Machine standing on firm, horizontal ground.
4. The weight of the lifting device (hoist ropes, hook block, shackle etc.) must be deducted from the gross lifting capacity to obtain a net lifting value.
5. Additional equipment on boom (e.g. boom catwalks, auxiliary jib) must be deducted to get the net lifting capacity.
6. For max. wind speed please refer to lift chart in operator's cab or manual.
7. Working radii are measured from centre of swing and under load.
8. The lifting capacities are valid for 360 degrees of swing.

Transport dimensions and weights

Basic machine and boom (No. 1311.24)



*) Steel sheaves (2+3)

Basic machine

with HD undercarriage, boom foot (No. 1311.24), A-frame, 2x 275 kN winches including wire ropes (90 m), without basic counterweight.

Width	3500 mm
Weight with 800 mm 3-web grousers	59550 kg
Weight with 900 mm 3-web grousers (optional)	59930 kg
Weight of hoist rope (2x 90 m)	5.68 kg/m

Basic machine

with boom foot (No. 1311.24), A-frame, 2x 275 kN winches including wire ropes (90 m), without basic counterweight and crawlers.

Width	3500 mm
Weight	40230 kg
Weight of hoist rope (2x 90 m)	5.68 kg/m

Crawler

2x

3-web grousers	800 mm
Width	915 mm
Weight with 800 mm 3-web grousers	9650 kg
Weight with 900 mm 3-web grousers (optional)	9840 kg

Boom section (No. 1311.24)

3 m

Width	1430 mm
Weight incl. pendant ropes	525 kg

Boom section (No. 1311.24)

6 m

Width	1430 mm
Weight incl. pendant ropes	880 kg

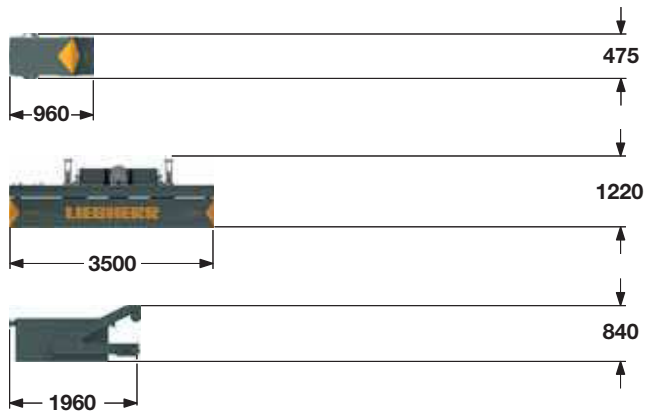
Boom head* (No. 1311.24)

Width	1430 mm
Weight incl. pendant ropes	2120 kg

Weights can vary with the final configuration of the machine. The figures in this brochure may include options which are not within the standard scope of supply of the machine.

Transport dimensions and weights

Counterweights



Counterweight (option 10x) 6x

Width	850 mm
Weight	1500 kg

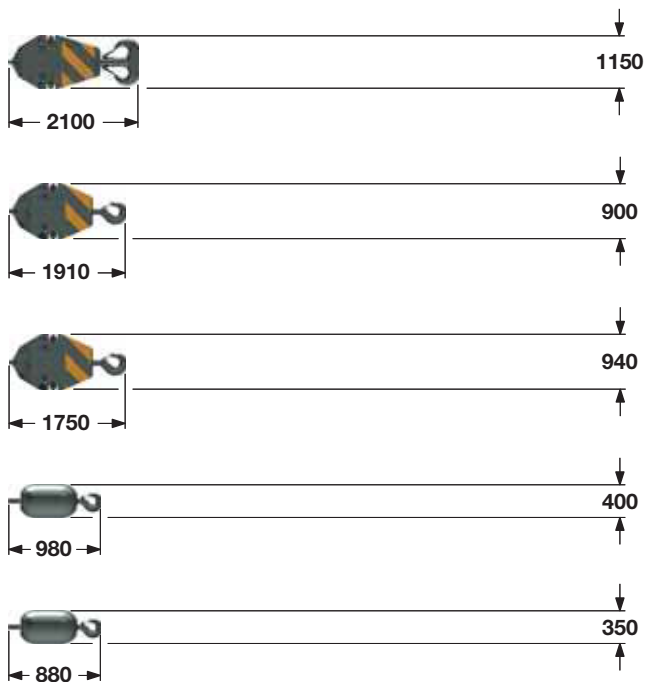
Counterweight 1x

Width	1050 mm
Weight	17330 kg

Carbody counterweight (option 2x)

Width	1640 mm
Weight	7500 kg

Hooks



100 t hook block – 2 sheaves

Width	320 mm
Weight	1200 kg

50 t hook block – 1 sheave

Width	400 mm
Weight	900 kg

40 t hook block – 1 sheave

Width	250 mm
Weight	515 kg

25 t single hook

Width	400 mm
Weight	400 kg

20 t single hook

Width	350 mm
Weight	350 kg

Technical description



Engine

Power rating according to ISO 9249, 390 kW (523 hp) at 1700 rpm
Engine type ———— Liebherr D 946 A7-04
Fuel tank ———— 790 l capacity with continuous level
————— indicator and reserve warning
AdBlue tank ———— 96 l capacity with continuous level
————— indicator and reserve warning
Engine complies with NRMM exhaust certification EPA CARB Tier 4f and 97/68 EC Stage IV.

ECO-Silent-Mode:

For work not requiring high engine power, the diesel engine can be operated in the ECO-Silent-Mode (e.g. for inserting reinforcement cages, for dragline or lifting operation).

Due to the ECO-Silent-Mode which can be preselected by the operator the engine runs with optimum fuel efficiency. This lowers consumption and reduces noise emission.



Hydraulic system

The pumps are operated by a distributor gearbox. Axial piston displacement pumps work in closed and open circuits supplying oil only when needed (flow control on demand). To minimize peak pressure an automatically working pressure cut-off is integrated. This spares pumps and saves energy. The hydraulic oil is cleaned through electronically controlled pressure and return filters. Possible contamination is signaled in the cabin.

Ready made hydraulic retrofit kits are available to customize requirements e.g. powering casing oscillators, VM vibrators, hydraulic grabs, fixed leaders etc.

Working pressure ———— max. 400 bar
Oil tank capacity ———— 910 l



Swing

Consists of rollerbearing with external teeth for lower tooth flank pressure, fixed axial piston hydraulic motor, spring loaded and hydraulically released multi-disc holding brake, planetary gearbox and pinion.

Swing speed from 0–4.6 rpm continuously variable, selector for 3 speed ranges to increase swing precision.

Option:

- Second swing drive



Noise emission

Noise emissions correspond with 2000/14/EC directive.
Guaranteed sound pressure level L_{PA} in the cabin ———— 74.4 dB(A)

Guaranteed sound power level L_{WA} ———— 107 dB(A)
Vibration transmitted to the hand-arm system of the machine operator ———— < 2.5 m/s²
Vibration transmitted to the whole body of the machine operator ———— < 0.5 m/s²



Main winches

Winch options:

Line pull (nom. load) ———— 200 kN ———— 275 kN
Rope diameter ———— 30 mm ———— 34 mm
Drum diameter ———— 630 mm ———— 750 mm
Rope speed ———— 0-101 m/min · 0-107 m/min
Rope capacity 1st layer ———— 40.6 m ———— 38.8 m

The winches are outstanding in their compact design and easy assembly. Clutch and braking functions on the free-fall system are provided by a compact designed, low wear and maintenance-free multi-disc brake. The drag and hoist winches use pressure controlled, variable flow hydraulic motors. This system features sensors that automatically adjust oil flow to provide max. winch speed depending on load.

Option:

Auxiliary winch ———— 70 kN in boom foot
Tagline winch ———— 30 kN with free fall



Control

The core of the Liebherr machines is the Litronic control system.

Developed and manufactured by Liebherr, this comprehensive system encompasses all control and monitoring functions and is designed to withstand extreme temperature changes and the rough heavy duty tasks common in the construction industry. Complete machine operating data, warnings and failure indications are clearly displayed in the required language on the high resolution monitor in the operator's cab.

Documentation of operating data (PDE) enables optimum diagnosis as well as early detection and prevention of more serious defects.

An electro-hydraulic proportional control allows several movements to be performed simultaneously. This ensures that all categories of loads can be positioned with utmost precision.

Options:

- PDE: Process data recording
- LiTU: Liebherr Telematics Unit
- Piling control / chisel control



Crawlers

The track width of the undercarriage is changed hydraulically. Propulsion through axial piston motor, hydraulically released spring loaded multi-disc brake, maintenance-free crawler tracks, hydraulic chain tensioning device.

3-web grousers ———— 800 mm
Transport width ———— 3400 mm
Drive speed ———— 0 – 1.28 km/h

Option:

3-web grousers ———— 900 mm
Transport width ———— 3500 mm

- 2-speed hydraulic motor for higher travel speed
- Self-assembly system, jack-up system



Boom winch

Line pull ———— max. 105 kN
Rope diameter ———— 20 mm
Boom up ———— 44 sec. from 15° to 86°

Equipment

Casing oscillator and clamshell



Casing oscillator

Max. drilling diameter ————— 2000 mm

Load chart for grab operation

counterweight 26.3 t 23.3 t 20.3 t (main boom No. 1311.24)

Capacities in metric tonnes for boom lengths (11 m - 32 m)

Radius (m)	Boom length in (m)																					Radius (m)					
	11			14			17			20			23			26			29				32				
	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t			
4.2																			38.1	38.1	38.1						4.2
5		42.4	42.4		42.4	42.4		42.4	42.4	42.4	42.4	42.4	42.4	42.4	42.4	42.4	42.4	42.4	38.1	38.1	38.1	33.6	33.6	33.6			5
6		42.4	42.4	42.4	42.4	42.4	42.4	42.4	42.3	42.3	42.3	42.4	42.4	42.4	42.4	42.4	42.4	42.4	38.1	38.1	38.1	33.6	33.6	33.6			6
7	39.4	36.8	34.3	39.5	36.9	34.4	39.5	37.0	34.4	39.5	37.0	34.4	39.5	36.9	34.4	39.5	36.9	34.4	38.1	36.9	34.3	33.6	33.6	33.6			7
8	32.3	30.2	28.1	32.4	30.3	28.2	32.4	30.3	28.2	32.4	30.3	28.2	32.4	30.3	28.1	32.3	30.2	28.1	32.3	30.2	28.1	32.2	30.1	28.0			8
9	27.3	25.5	23.7	27.4	25.6	23.8	27.4	25.6	23.8	27.4	25.6	23.8	27.3	25.5	23.7	27.3	25.5	23.7	27.2	25.4	23.6	27.1	25.3	23.5			9
10	23.5	21.9	20.4	23.6	22.0	20.5	23.6	22.1	20.5	23.6	22.0	20.5	23.6	22.0	20.4	23.5	21.9	20.3	23.4	21.8	20.3	23.3	21.8	20.2			10
12				18.4	17.1	15.9	18.4	17.1	15.9	18.4	17.1	15.9	18.3	17.1	15.8	18.2	17.0	15.7	18.2	16.9	15.7	18.1	16.8	15.6			12
14				14.8	13.8	12.8	14.9	13.9	12.8	14.9	13.8	12.8	14.8	13.8	12.7	14.7	13.7	12.7	14.7	13.6	12.6	14.6	13.5	12.5			14
16							12.4	11.5	10.6	12.4	11.5	10.6	12.3	11.5	10.6	12.3	11.4	10.5	12.2	11.3	10.4	12.1	11.2	10.3			16
18										10.5	9.7	9.0	10.5	9.7	8.9	10.4	9.6	8.8	10.3	9.5	8.8	10.2	9.4	8.7			18
20										9.0	8.3	7.7	9.0	8.3	7.6	8.9	8.3	7.6	8.9	8.2	7.5	8.8	8.1	7.4			20
22													7.8	7.2	6.6	7.8	7.2	6.5	7.7	7.1	6.5	7.6	7.0	6.4			22
24																6.8	6.3	5.7	6.8	6.2	5.6	6.7	6.1	5.5			24
26																			5.6	5.1	4.7	5.4	5.0	4.5			26
28																			4.4	4.0	3.6	4.3	3.9	3.5			28
30																						3.3	2.9	2.6			30

TLT 11914695 M00000 V1

Max. capacities in metric tonnes do not exceed 66.7% of tipping load. Capacities are for reference only and are not programmed in the LMI system.

Max. lifting capacity with mechanical grab is 27.5 t. For higher lifting capacities a hydraulic grab is required.

Dynamic soil compaction



Load chart for dynamic soil compaction

26.3 t counterweight (main boom No. 1311.24)

Capacities in metric tonnes for boom lengths (20 m – 32 m)

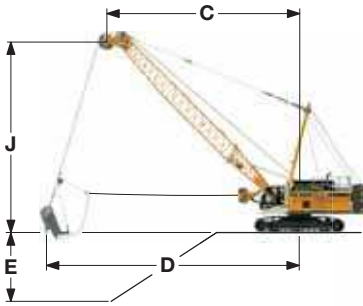
Radius (m)	Boom length in (m)				
	20	23	26	29	32
8	24.5	24.5	24.0	23.7	22.4
9	20.7	20.7	20.7	20.5	19.7
10.0		17.9	17.8	17.7	17.2

Max. capacities in metric tonnes do not exceed 75% of tipping load.

All loads given are max. values and must not be exceeded. They are only permitted in two-rope automatic operation and are valid for work on a surface with max. inclination of 1%. Lifting heights must not exceed 25 m.

Equipment

Dragline equipment



Digging diagram

- C = Radius / dumping radius
- D = Max. digging radius = approx. $C + 1/3 \text{ to } 1/2 J$
- E = Digging depth = approx. 40 - 50% of C
- J = Height to centre rope pulley boom head



Load chart for dragline operation

26.3 t counterweight (main boom No. 1311.24)

Capacities in metric tonnes for boom lengths (14 m - 29 m)

	Boom length in (m)																		alpha
	14			17			20			23			26			29			
alpha	C (m)	J (m)	t	C (m)	J (m)	t	C (m)	J (m)	t	C (m)	J (m)	t	C (m)	J (m)	t	C (m)	J (m)	t	alpha
55	10.1	13.0	26.4	11.8	15.5	21.3	13.6	18.0	17.7	15.3	20.4	14.9	17.0	22.9	12.3	18.7	25.3	10.6	55
50	11.1	12.3	23.4	13.0	14.6	18.8	14.9	16.9	15.5	16.8	19.1	13.0	18.8	21.4	10.9	20.7	23.7	9.4	50
45	11.9	11.4	21.1	14.0	13.5	16.9	16.2	15.6	13.9	18.3	17.8	11.5	20.4	19.9	9.8	22.5	22.0	8.0	45
40	12.7	10.4	19.3	15.0	12.4	15.4	17.3	14.3	12.6	19.6	16.2	10.6	21.9	18.2	8.6	24.2	20.1	6.7	40
35	13.4	9.4	17.9	15.9	11.2	14.3	18.3	12.9	11.7	20.8	14.6	9.7	23.2	16.3	7.6	25.7	18.0	5.8	35
30	14.0	8.4	16.9	16.6	9.9	13.4	19.2	11.4	10.9	21.8	12.9	8.8	24.4	14.4	6.7	27.0	15.9	5.0	30
25	14.5	7.3	16.0	17.2	8.5	12.7	20.0	9.8	10.3	22.7	11.1	8.1	25.4	12.3	6.0	28.1	13.6	4.4	25

TLT 11916665 M00000 V1

Max. capacities in metric tonnes do not exceed 75% of tipping load. Capacities are for reference only and are not programmed in the LMI system. The size of the bucket has to be determined according to local conditions.

Slurry wall grab

Maximum capacity in duty cycle operation with standard ropes

Line pull (1 st layer)	kN	200	275
Rope diameter	mm	30	34
Minimum breaking load	kN	846	1046
Line pull - 1-rope duty cycle operation	kN	200	275
Line pull - 2-rope duty cycle operation ¹⁾	kN	303	417

- 1) Lifting a load exceeding the line pull of one winch is only allowed if it can be ensured that each individual winch is not overloaded. When working with a mechanical 2-rope grab the total load to be lifted is limited by the line pull of one winch. Rigging and ropes are part of the load. Max. capacities in metric tonnes do not exceed 75% of tipping load.

Capacities in slurry wall operation are for reference only and are not programmed in the LMI system. All loads and counterweight configurations are max. values and must not be exceeded. Weight of additional equipment on boom (e.g. catwalks, hose drums etc.) must be deducted to get the net capacity.



Load chart for slurry wall operation

counterweight 26.3 t 23.3 t 20.3 t (main boom No. 1311.24)

Capacities in metric tonnes for boom lengths (11 m - 32 m)

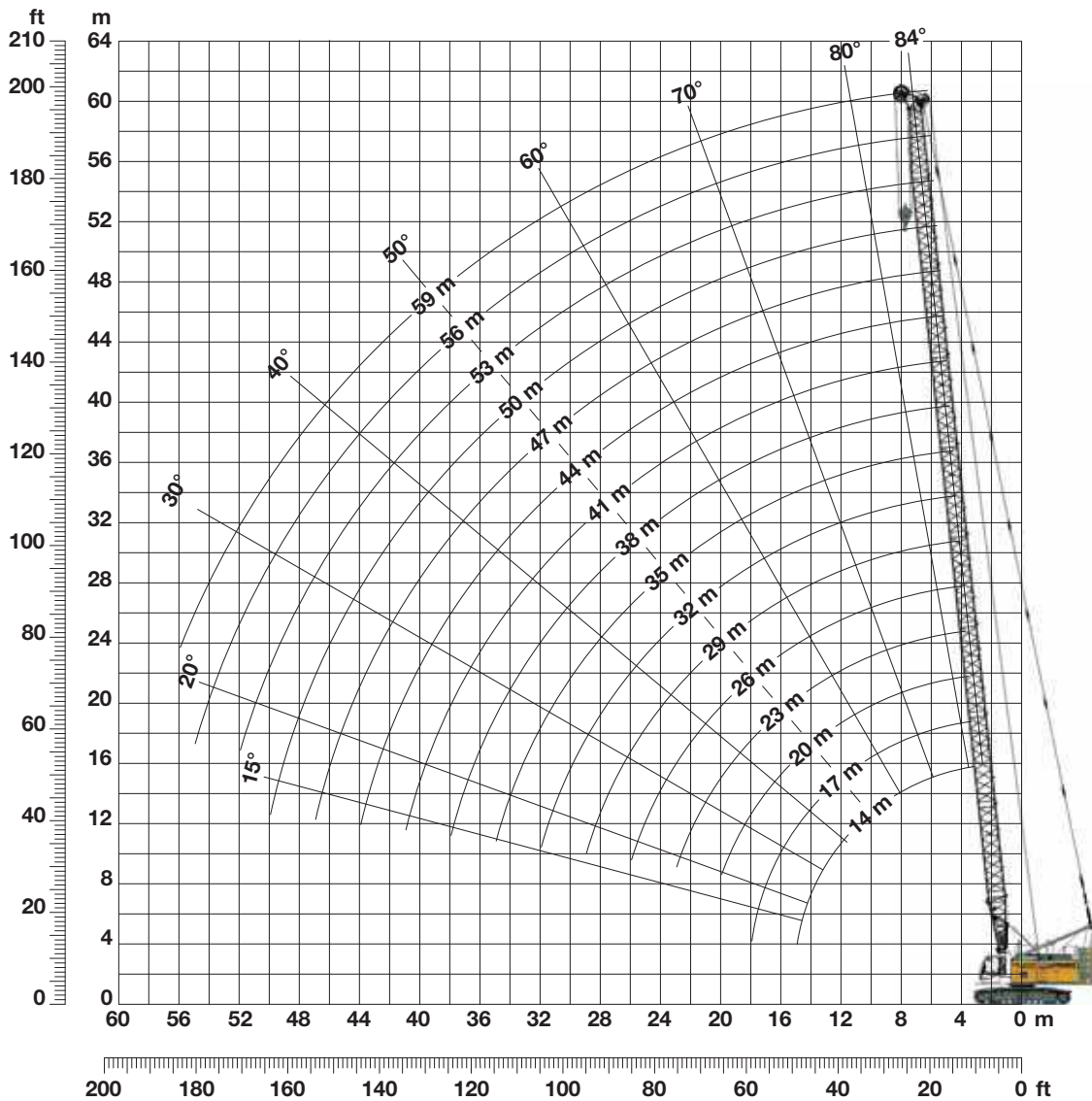
Radius (m)	Boom length in (m)																								Radius (m)			
	11			14			17			20			23			26			29			32						
	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t				
4.2																			38.1	38.1	38.1				4.2			
5		42.4	42.4		42.4	42.4		42.4	42.4	42.4	42.4	42.4	42.4	42.4	42.4	42.4	42.4	42.4	42.4	42.4	42.4	38.1	38.1	38.1	33.6	33.6	33.6	5
6		42.4	39.7	42.4	39.8	42.4	42.4	39.9	42.3	42.3	39.9	42.4	42.4	39.9	42.4	42.4	39.9	42.4	39.9	38.1	38.1	38.1	33.6	33.6	33.6	33.6	33.6	6
7	35.8	33.5	31.2	35.9	33.6	31.3	35.9	33.6	31.3	35.9	33.6	31.3	35.9	33.6	31.3	35.9	33.6	31.3	35.8	33.5	31.2	33.6	33.5	31.2	33.6	33.5	31.2	7
8	29.4	27.4	25.5	29.4	27.5	25.6	29.5	27.6	25.6	29.4	27.5	25.6	29.4	27.5	25.6	29.4	27.5	25.5	29.3	27.4	25.5	29.3	27.4	25.4	29.3	27.4	25.4	8
9	24.8	23.2	21.5	24.9	23.2	21.6	24.9	23.3	21.6	24.9	23.2	21.6	24.8	23.2	21.6	24.8	23.1	21.5	24.7	23.1	21.5	24.7	23.0	21.4	24.7	23.0	21.4	9
10	21.4	19.9	18.5	21.5	20.0	18.6	21.5	20.1	18.6	21.4	20.0	18.6	21.4	20.0	18.6	21.3	19.9	18.5	21.3	19.9	18.4	21.3	19.8	18.4	21.2	19.8	18.4	10
12				16.7	15.6	14.4	16.7	15.6	14.5	16.7	15.6	14.4	16.6	15.5	14.4	16.6	15.4	14.3	16.5	15.4	14.2	16.4	15.3	14.1	16.4	15.3	14.1	12
14				13.5	12.6	11.6	13.6	12.6	11.7	13.5	12.6	11.6	13.5	12.5	11.6	13.4	12.5	11.5	13.3	12.4	11.4	13.2	12.3	11.4	13.2	12.3	11.4	14
16							11.3	10.5	9.7	11.3	10.5	9.6	11.2	10.4	9.6	11.1	10.3	9.5	11.1	10.3	9.5	11.0	10.2	9.4	11.0	10.2	9.4	16
18										9.6	8.9	8.1	9.5	8.8	8.1	9.5	8.7	8.0	9.4	8.7	8.0	9.3	8.6	7.9	9.3	8.6	7.9	18
20										8.2	7.6	7.0	8.2	7.6	7.0	8.1	7.5	6.9	8.1	7.4	6.8	8.0	7.3	6.7	8.0	7.3	6.7	20
22													7.1	6.6	6.0	7.1	6.5	5.9	7.0	6.4	5.9	6.9	6.3	5.8	6.9	6.3	5.8	22
24																6.2	5.7	5.2	6.1	5.6	5.1	6.0	5.5	5.0	6.0	5.5	5.0	24
26																			5.4	4.9	4.5	5.3	4.9	4.4	5.3	4.9	4.4	26
28																			4.4	4.0	3.6	4.3	3.9	3.5	4.3	3.9	3.5	28
30																						3.3	2.9	2.6	3.3	2.9	2.6	30

TLT 11913217 M00000 V2

Max. lifting capacity with mechanical grab is 27.5 t. For higher lifting capacities a hydraulic grab is required. Stability calculated according to EN 996:1995. Machine standing on firm, horizontal ground.

Working range - main boom 84° - 15°

with 32.3 t counterweight and 15 t carbody counterweight (main boom No. 1311.24)



Auxiliary jib 25 t



The maximum capacity of the auxiliary jib is 25 t. The corresponding load chart is programmed in the LMI system.

Main boom configuration

from 11 m to 59 m (Table 1 - No. 1311.24)

	Length	Configuration for boom lengths																
		11	14	17	20	23	26	29	32	35	38	41	44	47	50	53	56	59
Boom foot	5.5 m	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Boom section	3.0 m		1		1		1		1		1		1		1		1	
Boom section	6.0 m			1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
Boom head	5.5 m	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Boom length (m)		11	14	17	20	23	26	29	32	35	38	41	44	47	50	53	56	59
Auxiliary jib applicable		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Load chart for lifting operation

counterweight 26.3 t 23.3 t 20.3 t

Capacities in metric tonnes for boom lengths (11 m - 29 m) - with 275 kN winches

Radius (m)	Boom length in (m)																		Radius (m)					
	11.0			14.0			17.0			20.0			23.0			26.0				29.0				
	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t			
3.0			100.0		98.2	100.0		100.0	100.0														3.0	
4.0		84.5	100.0		86.8	84.6		84.5	78.8				79.0	73.7		74.2	69.1	74.6	69.8	65.1	70.4	65.9	61.4	4.0
5.0		71.3	91.3		67.3	62.7		63.7	59.3	64.5	60.4	56.3	61.3	57.4	53.4	58.4	54.6	50.9	55.7	52.1	48.5		5.0	
6.0	59.8	55.9	66.4	57.0	53.3	49.6	54.4	50.9	47.4	52.1	48.7	45.3	49.9	46.6	43.4	47.8	44.7	41.5	45.9	42.9	39.8		6.0	
7.0	47.4	44.3	52.1	47.1	44.0	40.9	45.2	42.3	39.3	43.5	40.6	37.8	41.9	39.1	36.4	40.3	37.6	35.0	38.9	36.3	33.7		7.0	
8.0	38.8	36.3	41.2	38.9	36.4	33.8	38.6	36.1	33.5	37.2	34.8	32.3	36.0	33.6	31.2	34.7	32.4	30.1	33.6	31.3	29.1		8.0	
9.0	32.7	30.6	33.7	32.8	30.7	28.5	32.9	30.7	28.5	32.5	30.3	28.1	31.4	29.3	27.2	30.4	28.4	26.3	29.5	27.5	25.4		9.0	
10.0	28.2	26.3	28.4	28.3	26.4	24.5	28.3	26.4	24.5	28.3	26.4	24.5	27.9	26.0	24.1	27.0	25.2	23.3	26.2	24.4	22.6		10.0	
12.0	20.6	20.4	24.4	22.0	20.6	19.1	22.0	20.6	19.1	21.9	20.5	19.0	21.9	20.5	19.0	21.8	20.4	18.8	21.3	19.9	18.3		12.0	
14.0			18.9	17.8	16.6	15.3	17.9	16.6	15.4	17.8	16.6	15.3	17.8	16.5	15.2	17.7	16.4	15.1	17.5	16.3	15.0		14.0	
16.0							14.9	13.8	12.7	14.8	13.7	12.7	14.8	13.7	12.6	14.6	13.6	12.5	14.5	13.4	12.4		16.0	
18.0							12.5	11.6	10.6	12.5	11.6	10.7	12.5	11.6	10.6	12.4	11.4	10.5	12.3	11.3	10.4		18.0	
20.0										10.8	9.9	9.1	10.7	9.9	9.1	10.6	9.8	8.9	10.5	9.7	8.8		20.0	
22.0													9.3	8.5	7.8	9.2	8.4	7.7	9.1	8.3	7.6		22.0	
24.0																8.0	7.4	6.7	7.9	7.3	6.6		24.0	
26.0																7.0	6.4	5.8	7.0	6.3	5.7		26.0	
28.0																			6.1	5.6	5.0		28.0	

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counterweight 26.3 t 23.3 t 20.3 t

Capacities in metric tonnes for boom lengths (32 m - 53 m) - with 275 kN winches

Radius (m)	Boom length in (m)																		Radius (m)						
	32.0			35.0			38.0			41.0			44.0			47.0				50.0			53.0		
	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	
4.0	66.0	61.7	57.5																						4.0
5.0	53.2	49.7	46.3	50.9	47.5	44.2	48.7	45.5	42.3	46.7	43.6	40.5	44.2	41.8	38.8										5.0
6.0	44.1	41.2	38.2	42.4	39.6	36.7	40.7	38.0	35.3	39.2	36.6	33.9	37.8	35.2	32.7	36.4	33.9	31.4	34.1	32.7	29.8			6.0	
7.0	37.5	35.0	32.4	36.1	33.7	31.3	34.9	32.5	30.1	33.7	31.4	29.1	32.5	30.3	28.0	31.4	29.2	27.0	30.4	28.2	29.3			7.0	
8.0	32.5	30.3	28.0	31.4	29.3	27.1	30.4	28.3	26.2	29.4	27.3	25.3	28.4	26.4	24.4	27.5	25.6	23.6	26.6	24.7	25.8			8.0	
9.0	28.5	26.6	24.6	27.7	25.7	23.8	26.8	24.9	23.0	26.0	24.1	22.3	25.1	23.4	21.5	24.4	22.6	20.8	23.6	21.9	22.9			9.0	
10.0	25.4	23.6	21.8	24.6	22.9	21.2	23.9	22.2	20.6	23.2	21.5	20.0	22.5	20.8	19.3	21.8	20.3	18.7	21.1	19.7	20.5			10.0	
12.0	20.6	19.3	17.8	20.2	18.7	17.2	19.6	18.1	16.7	19.0	17.6	16.2	18.5	17.1	15.7	17.9	16.5	15.2	17.4	16.0	16.9			12.0	
14.0	17.3	16.0	14.8	16.8	15.6	14.3	16.3	15.1	13.9	15.9	14.6	13.4	15.4	14.2	13.0	14.9	13.7	12.6	14.5	13.3	14.0			14.0	
16.0	14.4	13.3	12.2	14.3	13.2	12.1	13.9	12.8	11.7	13.5	12.4	11.3	13.0	12.0	10.9	12.6	11.6	10.5	12.2	11.2	11.8			16.0	
18.0	12.1	11.2	10.2	12.0	11.1	10.1	11.8	10.9	10.0	11.6	10.6	9.6	11.2	10.2	9.3	10.8	9.9	8.9	10.5	9.5	10.1			18.0	
20.0	10.4	9.5	8.7	10.2	9.4	8.6	10.1	9.2	8.4	9.9	9.1	8.3	9.7	8.8	8.0	9.4	8.5	7.6	9.0	8.2	8.7			20.0	
22.0	9.0	8.2	7.5	8.8	8.1	7.3	8.7	7.9	7.2	8.5	7.8	7.0	8.4	7.6	6.9	8.1	7.3	6.6	7.8	7.0	7.5			22.0	
24.0	7.8	7.1	6.4	7.7	7.0	6.3	7.5	6.8	6.2	7.4	6.7	6.0	7.2	6.5	5.8	7.1	6.4	5.7	6.8	6.1	6.5			24.0	
26.0	6.8	6.2	5.6	6.7	6.1	5.5	6.6	5.9	5.3	6.4	5.8	5.2	6.2	5.6	5.0	6.1	5.5	4.8	5.9	5.3	5.6			26.0	
28.0	6.0	5.4	4.9	5.9	5.3	4.7	5.7	5.2	4.6	5.6	5.0	4.4	5.4	4.8	4.3	5.3	4.7	4.1	5.1	4.5	4.9			28.0	
30.0	5.3	4.8	4.2	5.2	4.6	4.1	5.0	4.5	4.0	4.9	4.4	3.8	4.7	4.2	3.7	4.6	4.0	3.5	4.4	3.9	4.2			30.0	
32.0	4.7	4.2	3.7	4.6	4.1	3.6	4.4	3.9	3.4	4.3	3.8	3.3	4.1	3.6	3.1	4.0	3.5	3.0	3.8	3.3	3.6			32.0	
34.0				4.0	3.5	3.1	3.9	3.4	2.9	3.7	3.3	2.8	3.6	3.1	2.6	3.4	3.0	2.5	3.3	2.8	3.1			34.0	
36.0							3.4	3.0	2.5	3.3	2.8	2.4	3.1	2.7	2.2	3.0	2.5	2.1	2.8	2.3	2.6			36.0	
38.0							3.0	2.5	2.1	2.8	2.4	2.0	2.7	2.3	1.8	2.5	2.1	1.7	2.4	1.9	2.2			38.0	
40.0										2.4	2.0	1.7	2.3	1.9	1.5	2.2	1.8	1.4	2.0	1.6	1.8			40.0	
42.0													1.9	1.6	1.2	1.8	1.4	1.1	1.6	1.3	1.5			42.0	
44.0													1.6	1.3		1.5	1.1		1.3		1.2			44.0	
46.0																1.2			1.0					46.0	

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Load chart for lifting operation

counterweight 26.3 t 29.3 t 32.3 t and 15 t carbody counterweight

Capacities in metric tonnes for boom lengths (11 m - 32 m) - with 275 kN winches

Radius (m)	Boom length in (m)																					Radius (m)						
	11			14			17			20			23			26			29				32					
	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t				
3		100.0			100.0	100.0			100.0	100.0															3			
4		100.0	100.0		100.0	100.0			97.9	97.9			99.1	100.0			93.1	96.9	74.6	87.7	92.3	70.4	82.8	87.3	66.0	77.6	77.6	4
5		89.6	94.4		84.5	88.1			80.0	84.3	64.5	75.9	80.0	61.3	72.2	76.1	58.4	68.8	72.5	55.7	65.6	69.2	53.2	62.7	66.1	66.1	5	
6	59.8	70.4	74.2	57.0	67.1	70.7	54.4	64.1	67.6	52.1	61.4	64.7	49.9	58.8	62.0	47.8	56.4	59.5	45.9	54.2	57.1	44.1	52.1	54.9	54.9	54.9	6	
7	47.4	55.8	58.8	47.1	55.5	58.6	45.2	53.4	56.3	43.5	51.3	54.2	41.9	49.5	52.2	40.3	47.7	50.3	38.9	46.0	48.5	37.5	44.4	46.8	46.8	46.8	7	
8	38.8	45.8	48.3	38.9	45.9	48.4	38.6	45.6	48.1	37.2	44.0	46.5	36.0	42.6	44.9	34.7	41.2	43.5	33.6	39.8	42.1	32.5	38.5	40.7	40.7	40.7	8	
9	32.7	38.7	40.9	32.8	38.8	41.0	32.9	38.8	41.0	32.5	38.5	40.6	31.4	37.3	39.4	30.4	36.1	38.2	29.5	35.0	37.0	28.5	34.0	35.9	35.9	35.9	9	
10	28.2	33.4	35.3	28.3	33.5	35.4	28.3	33.5	35.4	28.3	33.5	35.4	27.9	33.1	35.0	27.0	32.1	34.0	26.2	31.2	33.0	25.4	30.3	32.1	32.1	32.1	10	
12	20.6	20.6	20.6	22.0	26.1	27.6	22.0	26.1	27.7	21.9	26.1	27.6	21.9	26.0	27.5	21.8	25.9	27.4	21.3	25.5	27.0	20.6	24.8	26.2	26.2	26.2	12	
14				17.8	21.1	22.4	17.9	21.2	22.5	17.8	21.2	22.4	17.8	21.1	22.4	17.7	21.0	22.2	17.5	20.9	22.1	17.3	20.7	22.0	22.0	22.0	14	
16							14.9	17.8	18.9	14.8	17.8	18.8	14.8	17.7	18.8	14.6	17.6	18.7	14.5	17.5	18.5	14.4	17.3	18.4	18.4	18.4	16	
18							12.5	15.1	16.0	12.5	15.1	16.1	12.5	15.1	16.0	12.4	14.9	15.9	12.3	14.8	15.8	12.1	14.7	15.6	15.6	15.6	18	
20										10.8	13.0	13.9	10.7	13.0	13.8	10.6	12.9	13.7	10.5	12.8	13.6	10.4	12.6	13.5	13.5	13.5	20	
22													9.3	11.3	12.1	9.2	11.3	12.0	9.1	11.2	11.9	9.0	11.0	11.8	11.8	11.8	22	
24																8	9.9	10.6	7.9	9.8	10.5	7.8	9.7	10.4	10.4	10.4	24	
26																7	8.8	9.4	7.0	8.7	9.3	6.8	8.5	9.2	9.2	9.2	26	
28																			6.1	7.7	8.3	6.0	7.6	8.2	8.2	8.2	28	
30																						5.3	6.8	7.3	7.3	7.3	30	
32																						4.7	6.0	6.5	6.5	6.5	32	

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counterweight 26.3 t 29.3 t 32.3 t and 15 t carbody counterweight

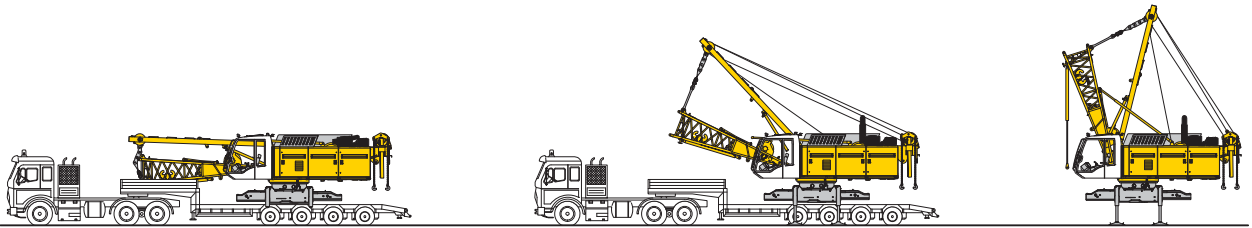
Capacities in metric tonnes for boom lengths (35 m - 59 m) - with 275 kN winches

Radius (m)	Boom length in (m)																								Radius (m)			
	35			38			41			44			47			50			53			56				59		
	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	
5	50.9	60.0	63.3	48.7	57.5	57.7	46.7	50.4	50.4	44.2	44.2	44.2																5
6	42.4	50.1	52.9	40.7	48.2	50.9	39.2	46.5	47.1	37.8	43.2	43.2	36.4	38.9	38.9	34.1	34.1	34.1	29.8	29.8	29.8	26.1	26.1	22.8	22.8	22.8	22.8	6
7	36.1	42.9	45.3	34.9	41.4	43.7	33.7	40.0	42.3	32.5	38.7	40.0	31.4	36.1	36.1	30.4	32.8	32.8	29.3	29.3	29.3	26.1	26.1	22.8	22.8	22.8	22.8	7
8	31.4	37.3	39.4	30.4	36.1	38.2	29.4	35.0	37.0	28.4	33.9	35.9	27.5	32.9	34.2	26.6	31.2	31.2	25.8	28.0	28.0	24.7	24.7	21.8	21.8	21.8	21.8	8
9	27.7	33.0	34.9	26.8	32.0	33.8	26.0	31.0	32.8	25.1	30.1	31.9	24.4	29.2	30.2	23.6	28.4	28.5	22.9	26.7	26.7	23.7	23.7	20.8	20.8	20.8	20.8	9
10	24.6	29.4	31.2	23.9	28.6	30.3	23.2	27.8	29.4	22.5	27.0	28.6	21.8	26.2	27.2	21.1	25.5	25.7	20.5	24.2	24.2	22.0	22.0	19.5	19.5	19.5	19.5	10
12	20.2	24.1	25.5	19.6	23.4	24.8	19.0	22.8	24.2	18.5	22.1	23.5	17.9	21.5	22.8	17.4	20.9	21.6	16.9	20.3	20.5	19.0	19.0	16.4	16.4	16.4	16.4	12
14	16.8	20.3	21.5	16.3	19.8	20.9	15.9	19.2	20.5	15.4	18.7	19.9	14.9	18.2	19.1	14.5	17.7	18.3	14.0	17.1	17.5	16.6	16.6	14.3	14.3	14.3	14.3	14
16	14.3	17.2	18.3	13.9	16.9	18.0	13.5	16.4	17.5	13.0	16.0	17.0	12.6	15.5	16.6	12.2	15.1	16.1	11.8	14.7	15.1	14.1	14.1	12.5	12.5	12.5	12.5	16
18	12.0	14.6	15.5	11.8	14.4	15.4	11.6	14.2	15.2	11.2	13.8	14.8	10.8	13.4	14.4	10.5	13.0	14.0	10.1	12.6	13.3	12.1	12.5	11.1	11.1	11.1	11.1	18
20	10.2	12.5	13.4	10.1	12.4	13.2	9.9	12.2	13.1	9.7	12.1	12.9	9.4	11.7	12.6	9.0	11.3	12.2	8.7	11.0	11.8	10.5	11.2	10.0	10.0	10.0	10.0	20
22	8.8	10.9	11.6	8.7	10.7	11.5	8.5	10.6	11.3	8.4	10.4	11.2	8.1	10.3	11.0	7.8	10.0	10.7	7.5	9.6	10.4	9.2	9.9	8.9	9.2	9.2	9.2	22
24	7.7	9.5	10.2	7.5	9.4	10.1	7.4	9.2	9.9	7.2	9.1	9.8	7.1	8.9	9.6	6.8	8.8	9.4	6.5	8.5	9.2	8.1	8.7	7.7	8.4	8.4	8.4	24
26	6.7	8.4	9.0	6.6	8.3	8.9	6.4	8.1	8.7	6.2	8.0	8.6	6.1	7.8	8.4	5.9	7.6	8.3	5.6	7.5	8.1	7.2	7.8	6.9	7.4	7.4	7.4	26
28	5.9	7.5	8.0	5.7	7.3	7.9	5.6	7.2	7.7	5.4	7.0	7.6	5.3	6.9	7.4	5.1	6.7	7.3	4.9	6.5	7.1	6.3	6.9	6.0	6.6	6.6	6.6	28
30	5.2	6.6	7.2	5.0	6.5	7.0	4.9	6.4	6.9	4.7	6.2	6.7	4.6	6.0	6.6	4.4	5.9	6.4	4.2	5.7	6.2	5.5	6.1	5.3	5.8	5.8	5.8	30
32	4.6	5.9	6.4	4.4	5.8	6.3	4.3	5.6	6.1	4.1	5.5	6.0	4.0	5.3	5.8	3.8	5.2	5.7	3.6	5.0	5.5	4.8	5.3	4.6	5.2	5.2	5.2	32
34	4.0	5.3	5.8	3.9	5.2	5.6	3.7	5.0	5.5	3.6	4.9	5.3	3.4	4.7	5.2	3.3	4.5	5.0	3.1	4.4	4.8	4.2	4.7	4.0	4.5	4.5	4.5	34
36				3.4	4.6	5.0	3.3	4.5	4.9	3.1	4.3	4.8	3.0	4.2	4.6	2.8	4.0	4.4	2.6	3.8	4.3	3.7	4.1	3.5	3.9	3.9	3.9	36
38				3.0	4.1	4.5	2.8	4.0	4.4	2.7	3.8	4.2	2.5	3.7	4.1	2.4	3.5	3.9	2.2	3.3	3.8	3.2	3.6	3.0	3.4	3.4	3.4	38
40							2.4	3.5	3.9	2.3	3.4	3.8	2.2	3.2	3.6	2.0	3.1	3.5	1.8	2.9	3.3	2.7	3.1	2.6	3.0	3.0	3.0	40
42										1.9	3.0	3.3	1.8	2.8	3.2	1.6	2.7	3.0	1.5	2.5	2.9	2.3	2.7	2.2	2.5	2.5	2.5	42
44										1.6	2.6	2.9	1.5	2.5	2.8	1.3	2.3	2.7	1.2	2.1	2.5	2.0	2.3	1.8	2.2	2.2	2.2	44
46												1.2	2.1	2.5	1.0	2.0	2.3		1.8	2.2	1.6	2.0	1.5	1.8	1.8	1.8	46	
48																1.7	2.0		1.5	1.8	1.3	1.7	1.2	1.5	1.5	1.5	48	
50																1.4	1.7		1.2	1.5	1.1	1.4	1.1	1.4	1.4	1.4	50	

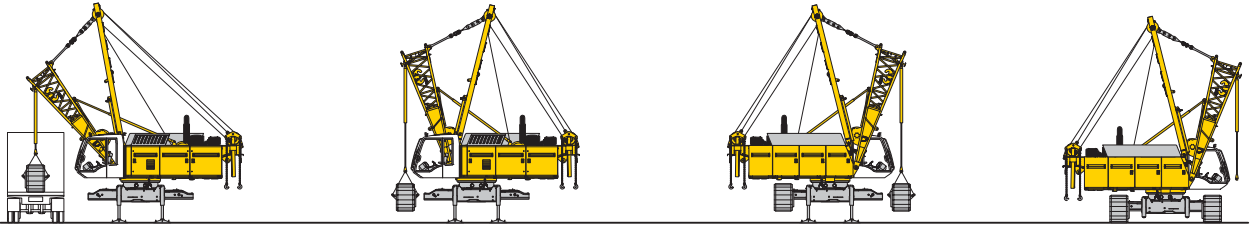
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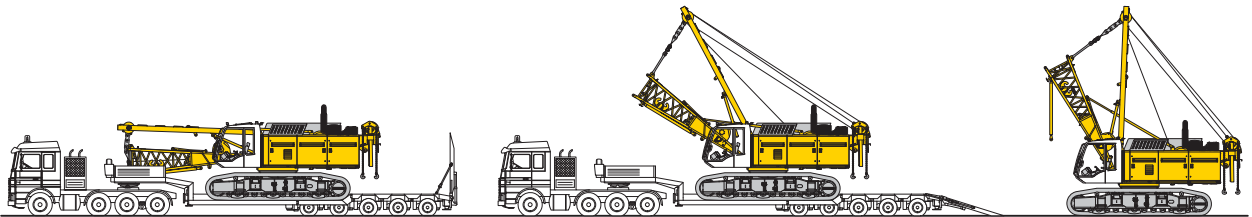
Self-assembly system



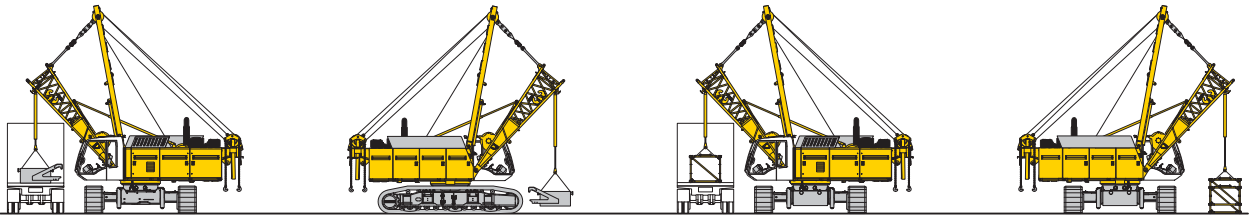
Unloading of basic machine (option)



Unloading and assembly of crawlers

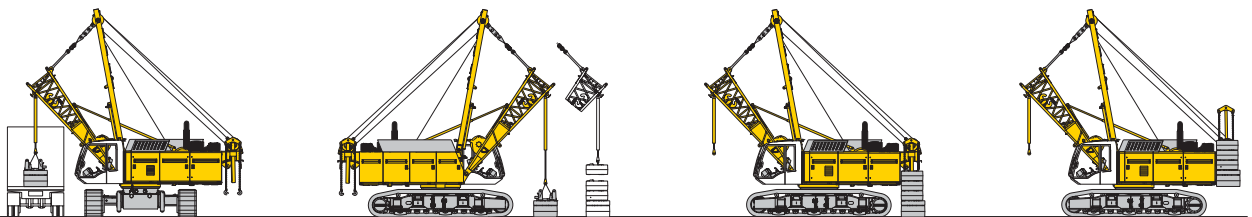


Unloading of basic machine (standard)

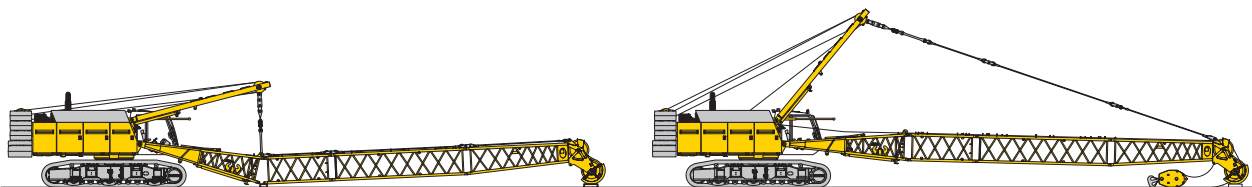


Unloading and assembly of carbody counterweight

Unloading and assembly of boom



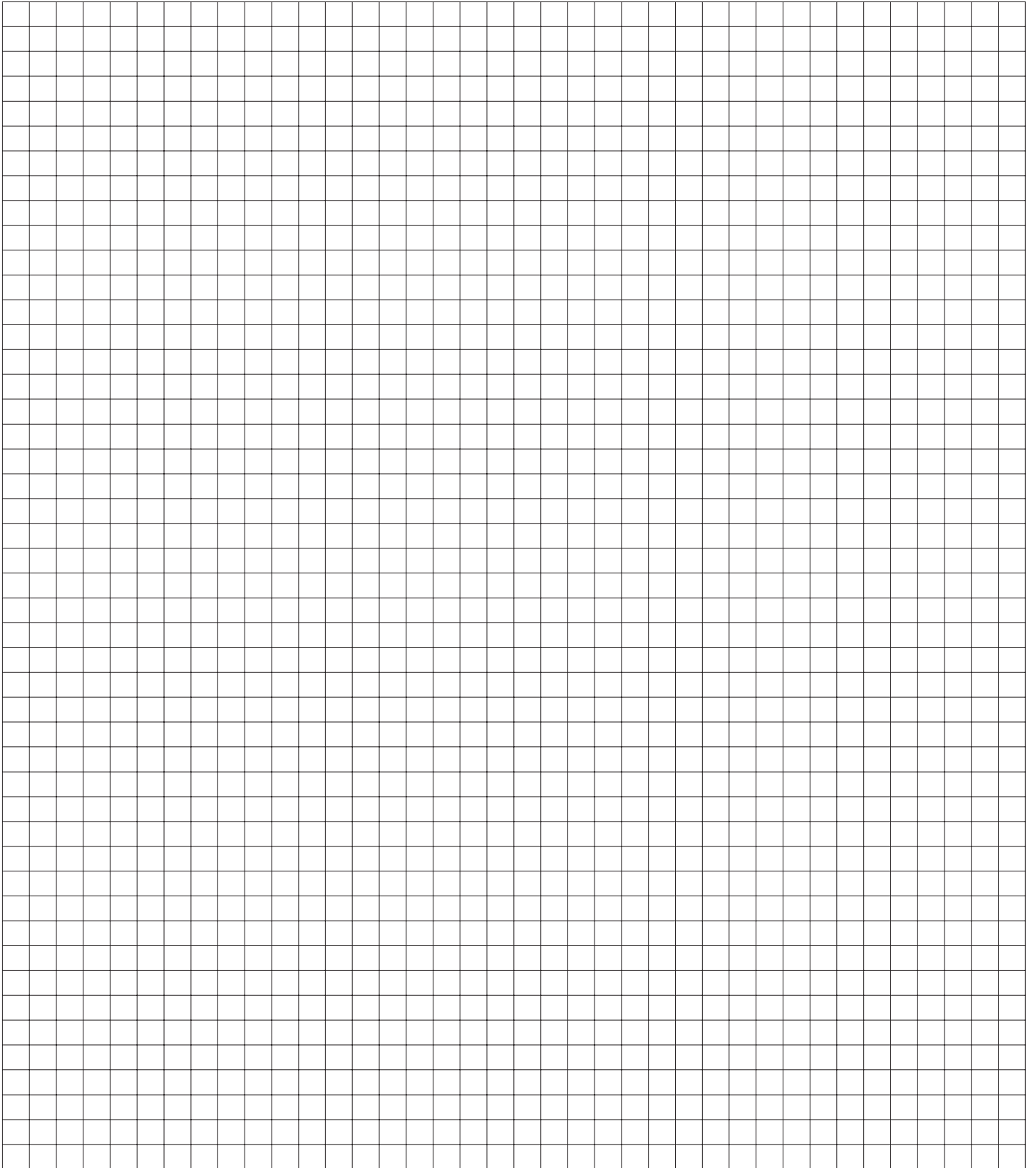
Unloading and assembly of counterweight



Assembly of boom and reeving of hoist ropes



Notice



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