

PRELIMINARY



613E

Telescopic Crane

 92 kW

 16 t

 24 m

TIER IVf emission standards

613E Technical data, equipment

MACHINE TYPE

Model (Type) **613**

ENGINE

Model	FPT N45, 92 kW / 125 PS bei 2200 min⁻¹ TIER IVf emission standard Direct injection, turbo-charged, charge air cooling, reduced emissions
Cooling	Water-cooled
Diesel filter	With water separator and heating system
Air filter	Dry filter with integrated pre-separator, automatic dust discharge, main element and safety element, contamination indicator
Fuel Tank	200 l
AdBlue Tank	43 l
Electrical system	24 V
Batterien	2 x 155 AH
Optionen	<ul style="list-style-type: none"> ■ Low-temperature package with engine pre-heating and heated diesel filter ■ Electric fuel pump

UPPERCARRIAGE

Design	Torsion-resistant box design, precision crafted, steel bushings for boom bearings. Extremely service-friendly design, longitudinal engine
Electrical system	Central electrical distributor, battery disconnect switch
Cooling system	3-circuit cooling system with high cooling capacity, electronically regulated fan drive for water, charge air and oil cooler
Safety	Rearview and right sideview cameras, LED lighting package
Options	<ul style="list-style-type: none"> ■ Additional LED headlights ■ Up to 2 additional cameras ■ Anti-corrosive maritime climate varnish ■ Low-temperature package ■ Automatic central lubrication for boom pivot point, luffing cylinder, slewing ring track and winch drum bearing ■ Pinion tooth lubrication for slewing ring

HYDRAULIC SYSTEM

Pump aggregate directly mounted on the diesel motor. Load sensing/LUDV hydraulic system, electrohydraulic pilot-controlled work functions, load limit sensing control	
Pump type	Variable axial piston pump. Through the independent allocation of the amount pumped, multiple working functions can be steered independently and precisely.
Pump control	Zero-stroke control, Speed related regulation of the drive pump and the variable axial piston motor. Secondary functions through gear pump.
Operating pressure	max. 330 bar
Filtration	High-performance filtration with long change interval
Hydraulic tank	180 l
Control system	Very precise, automotive drive motion. Pre-selector of driving direction, Inch-braking pedal Servo-Joystick control for working functions
Safety	Hydraulic circuits secured with safety valves Pipe fracture safety valve for luffing and telescoping cylinders
Optionen	<ul style="list-style-type: none"> ■ Bio-Oil environmentally friendly ■ 3 µm hydraulic microfilter SENNEBOGEN HydroClean ■ Electric heater for hydraulic tank

SLEWING DRIVE

Gearbox	Compact planetary gear with hydraulic rotor, integrated brake valves
Slewing gear brake	Spring-loaded disk brake, pedal for individual braking
Slewing ring	Large dimensioned slewing ring, sealed. Very precise, strong turning function.
Slewing speed	0-2 rpm , stepless

613E Technical data, equipment

CAB MAX CRB

Cab type	MultiCab, 1,75 m elevating
Cab equipment	Hydraulically elevating. Comfort cab with air-suspension and sound suppression. All weather design with safety glass and large sized skylights. Opening front pane. Comfort seat, resiliently mounted, adjustable in suspension and weight. Clearly laid out instrumental panel, adjustable steering column. Variable cab heating system, outside air and circulating air stage with particle filter. Climate control system.
Options	<ul style="list-style-type: none"> ■ Auxiliary heating system with timer ■ Protective roof grating ■ FOPS protective roof grating ■ Radio with CD Player

ATTACHEMENTS

Construction	Decades of experience and state-of-the-art computer simulation guarantee maximum stability and longest service life.
Telescopic boom	3-piece with pulley head, continuous hydraulic telescoping
Hoisting winch	Slant-axis hydraulic motor drive with compact planetary gear, pulling power 35 kN, cable speed 0-95 m/min. cable diameter 14 mm.
Safety brake	Spring-loaded disk brake
Crane safety	Next-generation load moment monitoring, straightforward panel displaying all important data through SENCON display, lifting limit switch, cable exit protection, pressure relief valves and pipe fracture safety device with event recorder
Cylinders	Hydraulic cylinders with high-quality sealing and guide elements
Options	<ul style="list-style-type: none"> ■ Folding jib 5 m tiltable, extremely fast and easy setup without auxiliary devices, locked on basic boom when not in use

UNTERWAGEN

Design	<p>613 M - Stable welded construction in rigid design, precision machined. Integrated 4-point outriggers with individual control.</p> <p>613 R - Very strong, hydraulically extendable crawler undercarriage with integrated, protected drives</p>
Drive	<p>613 M - 4-wheel drive and all wheel steering. Drive system through 2 stage power shift gear. Oscillation axle cylinders automatic and individually controllable. Strong drawbar pull and drive dynamic.</p> <p>613 R - High traction force through 2 speed variable displacement piston motor with directly mounted automatic brake valve and planetary gear at each track side.</p>
Parking brake	<p>613 M - 2-circuit servo brake system and safety parking brake</p> <p>613 R - Spring loaded multi disc brake</p>
Travelling gear	<p>613 M - Wheels 8 x 10.00-20</p> <p>613 R - Maintenance free track type with hydraulic track tensioning system, triple bar shoes.</p>
Speed	<p>613 M - 0 - 8 km/h off road 0-20 km/h according to german road regulations</p> <p>613 R - 0-1,2 / 0-2,2 km/h</p>
Options	<p>Available crawler shoe types:</p> <ul style="list-style-type: none"> ■ 700 mm Triple bar shoes ■ 800 mm Triple bar shoes ■ 900 mm Triple bar shoes

OPERATING WEIGHT

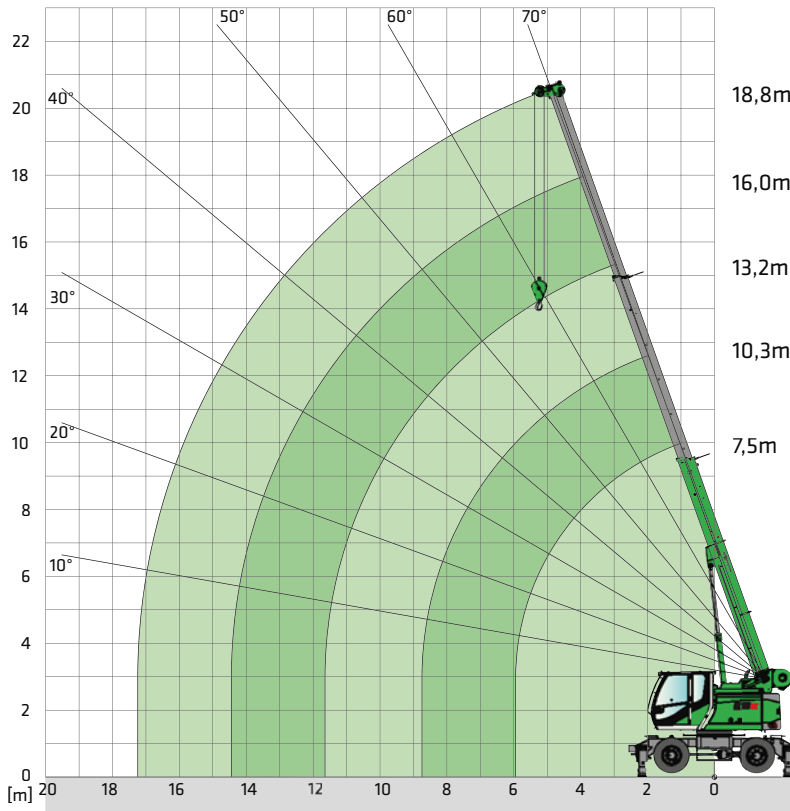
Mass	<p>613 M approx. 18.700 kg with telescoping boom 18,8 m, folding jib 5 m and 10,5 t hook.</p> <p>613 R with telescoping boom 18,8 m, folding jib 5 m and 10,5 t hook.</p> <p>Triple bar shoes 700 mm approx. 21.600 kg 800 mm approx. 21.900 kg 900 mm approx. 22.200 kg</p>
Note	The operating weight varies according to model type.

613E Load ratings

M/R



Main boom HA 18,8 m



Notes:

- The rated loads shown are based on the machine on firm level ground and without travelling.
- The rated loads shown are in metric tons valid for 360 degrees swing.
The rated loads shown are valid for 613 M on outriggers, the rated loads in brackets () are valid for free on wheels.
- Liftcrane capacities are calculated to comply with DIN 15019.2 and ISO 4305.
- The rated loads shown include the weight of all lifting attachments, such as hook and buckets, etc.
- The user must derate or limit the lifted loads to allow for adverse conditions such as soft or uneven ground, out of the level conditions, wind side loads, pendulum action, jerking or sudden stopping of loads, inexperience of personnel and travelling with a load.
- Max. single line pull for crane operation with rope diameter 14 mm - 3.500 kg
- Loads marked with* are only valid with special equipment.
- The lifting capacities are for reference only. For actual lifting capacities please refer to load chart in operator's manual.
- The rated loads shown are valid for 613 R with crawler undercarriage extended (gauge 3300 mm), the rated loads in brackets () are valid for crawler undercarriage retracted (gauge mm).



Main boom HA 18,8 m

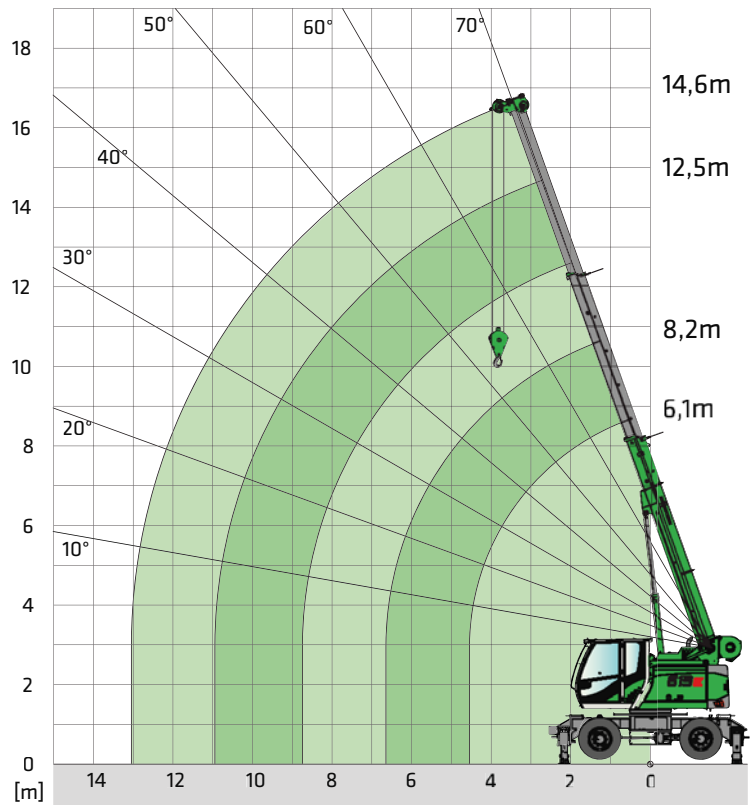
Radius [m]	Boom length [m]				
	7,5	10,3	13,2	16	18,8
2,0	15,0 (12,0)				
3,0	13,3 (8,3)	10,0 (8,4)			
4,0	10,6 (5,3)	10,0 (5,3)	8,0 (5,4)		
5,0	8,5 (3,7)	8,6 (3,8)	8,0 (3,8)	6,0 (3,9)	
5,5	7,5 (3,2)	7,6 (3,4)	7,4 (3,4)	6,0 (3,4)	4,5 (3,4)
6,0	5,7 (2,9) / 6,0 m	6,7 (2,9)	6,7 (2,9)	5,9 (2,9)	4,5 (2,9)
7,0		5,2 (2,3)	5,3 (2,3)	5,2 (2,3)	4,5 (2,3)
8,0		4,2 (1,8)	4,3 (1,8)	4,3 (1,8)	4,1 (1,9)
9,0		3,6 (1,5) / 8,8 m	3,5 (1,5)	3,6 (1,5)	3,6 (1,5)
10,0			3,0 (1,2)	3,0 (1,2)	3,0 (1,2)
11,0			2,6 (1,0)	2,6 (1,0)	2,6 (1,0)
12,0			2,4 (0,9) / 11,6 m	2,2 (0,8)	2,3 (0,8)
13,0				2,0 (0,7)	2,0 (0,7)
14,0				1,7 (0,6)	1,7 (0,6)
15,0				1,6 (-) / 14,4 m	1,5
16,0	Tab.-Nr.: 613M18.8/75/2000/4.1/08.06 Ausleger (abgestützt) Tab.-Nr.: 613M18.8/75/2000/4.1/08.06 Ausleger (freistehend)				1,3
17,0					1,1 / 17,3 m

613E Load ratings

M/R



Main boom HA 14,6 m



Main boom
HA 14,6 m

Radius [m]	Boom length [m]				
	6,1	8,2	10,3	12,5	14,6
1,0	16,0 (12,0)				
2,0	16,0 (12,0)	13,0 (12,0)			
3,0	13,5 (8,3)	13,0 (8,3)	11,0 (8,4)		
4,0	10,8 (5,3)	10,9 (5,4)	10,5 (5,4)	8,3 (5,4)	6,5 (5,4)
4,5	9,6 (4,4)	9,8 (4,6)	9,6 (4,6)	7,8 (4,6)	6,3 (4,6)
5,0		8,7 (3,9)	8,7 (3,9)	7,2 (3,9)	6,1 (3,9)
6,0		6,8 (2,9)	6,8 (3,0)	6,3 (3,0)	5,3 (3,0)
7,0		5,1 (2,5) / 6,7 m	5,3 (2,4)	5,4 (2,4)	4,6 (2,4)
8,0			4,3 (1,9)	4,4 (1,9)	4,1 (2,0)
9,0			2,7 (1,6) / 8,8 m	3,7 (1,6)	3,7 (1,6)
10,0				3,1 (1,3)	3,1 (1,4)
11,0				2,7 (1,1) / 10,9 m	2,7 (1,1)
12,0	Tab.-Nr.: 613M-14.6/75/2000/4.1/08.06 Ausleger (abgestützt)				2,3 (1,0)
13,0	Tab.-Nr.: 613M-14.6/75/960/4.1/08.06 Ausleger (freistehend)				2,1 (0,8)



Hooks

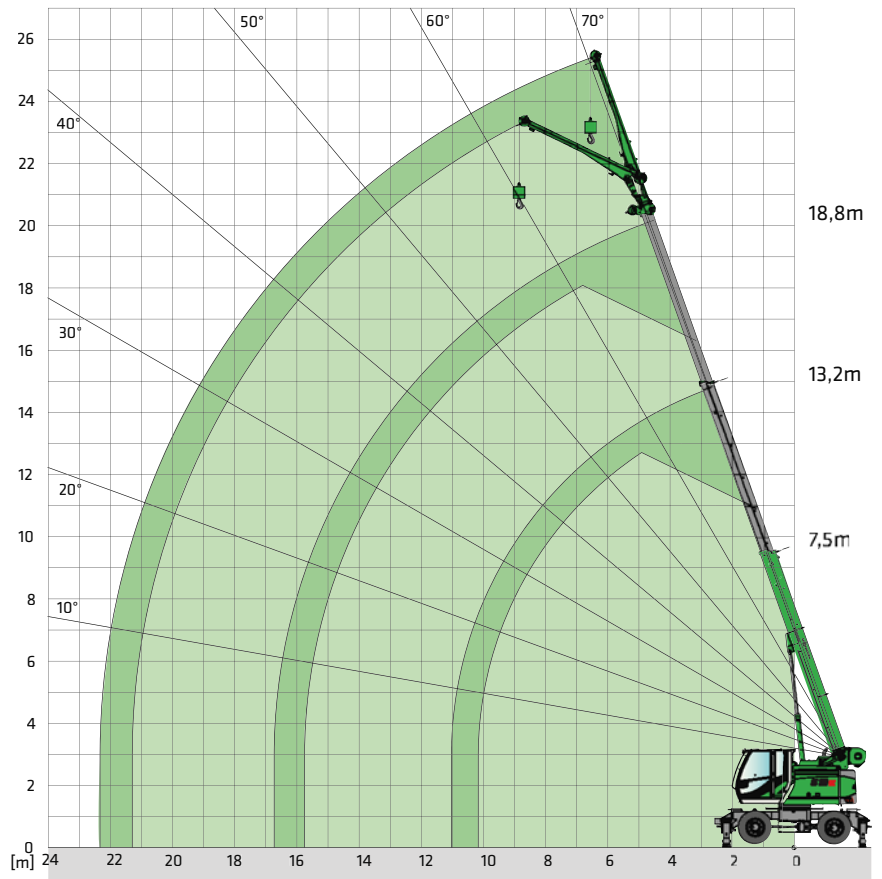
Capacity	Weight	No. of hoist reeving and max. rated load					
		5	4	3	2	1	
17,5 t (2-pulley)	180 kg	17.500 kg	14.000 kg	10.500 kg	7.000 kg	3.500 kg	for main boom
10,5 t (1-pulley)	100 kg			10.500 kg	7.000 kg	3.500 kg	for main boom
4 t	40 kg					5.000 kg	for main boom

613E Load ratings

M/R



Folding jib SA 5,0 m



HA 18,8 m



SA 5,0 m

Radius [m]	Telescopic boom length [m]									
	7,5		10,3		13,2		16,0		18,8	
	0°	45°	0°	45°	0°	45°	0°	45°	0°	45°
4,0	3,8 (3,8)		4,4 (4,4)							
5,0	3,3 (3,3)		3,8 (3,8)		4,2 (4,0)					
6,0	2,9 (2,9)	2,0 (2,0)	3,4 (3,1)		3,8 (3,0)		3,8 (3,0)			
7,0	2,5 (2,5)	1,9 (1,9)	3,1 (2,4)	2,0 (2,0)	3,4 (2,4)		3,5 (2,3)		2,7 (2,3)	
8,0	2,2 (2,1)	1,9 (1,9)	2,8 (2,0)	2,0 (2,0)	3,1 (1,9)	2,0 (1,9)	3,2 (1,9)		2,7 (1,8)	
9,0	2,0 (1,7)	1,8 (1,7)	2,5 (1,6)	1,9 (1,6)	2,8 (1,5)	2,0 (1,5)	2,9 (1,5)	1,9 (1,5)	2,6 (1,5)	
10,0	1,9 (1,4)		2,2 (1,3)	1,9 (1,3)	2,5 (1,3)	1,9 (1,3)	2,6 (1,2)	1,9 (1,2)	2,4 (1,2)	1,9 (1,2)
11,0			2,0 (1,1)	1,8 (1,1)	2,3 (1,0)	1,9 (1,0)	2,4 (1,0)	1,9 (1,0)	2,2 (0,9)	1,9 (0,9)
12,0			1,8 (0,9)		2,2 (0,8)	1,8 (0,8)	2,2 (0,8)	1,9 (0,8)	2,0 (0,8)	1,9 (0,8)
13,0			1,8 (0,7)		2,0 (0,7)	1,8 (0,7)	2,0 (0,6)	1,8 (0,6)	1,9 (0,6)	1,8 (0,6)
14,0					1,7 (0,6)		1,7 (0,5)	1,7 (0,5)	1,7	1,7
15,0					1,5		1,5	1,5	1,4	1,4
16,0					1,4		1,3		1,3	1,3
17,0							1,1		1,1	
18,0							1,0		1,0	
19,0	Tab.-Nr.: 613M-18,8/75/2000/4.1/08.06SA5								0,9	
20,0	Tab.-Nr.: 613M-18,8/75/960/4.1/08.06SA5								0,7	

613E Load ratings

M/R



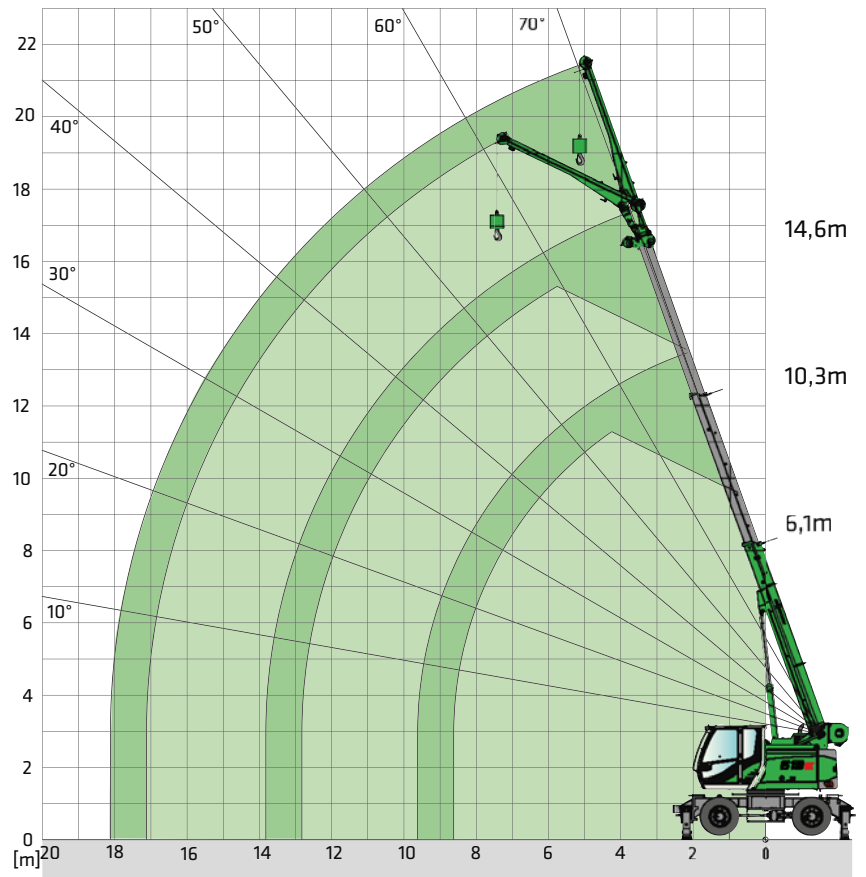
Folding jib SA 5,0 m



HA 14,6 m



SA 5,0 m



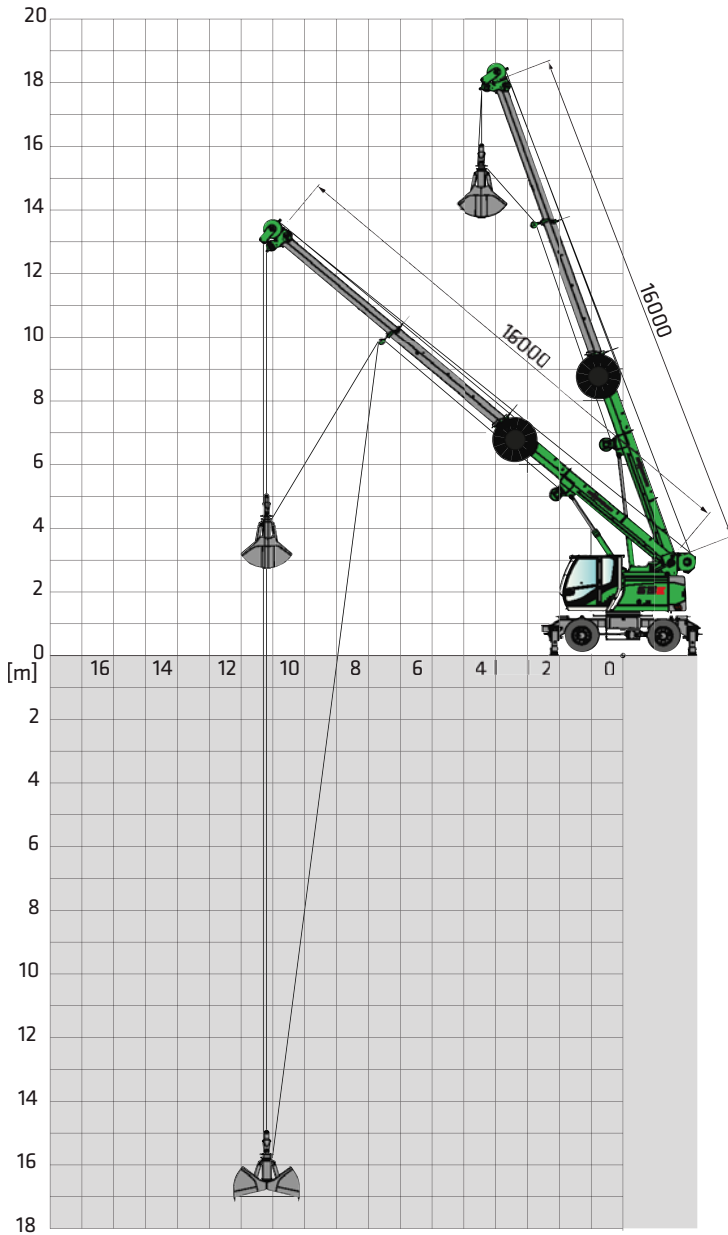
Radius [m]	Telescopic boom length [m]										
	6,1		8,2		10,3		12,5		14,6		
	0°	45°	0°	45°	0°	45°	0°	45°	0°	45°	
3,0	4,2 (4,2)										
4,0	3,5 (3,5)		4,0 (4,0)								
5,0	3,0 (3,0)		3,5 (3,5)		3,7 (3,7)		4,0 (4,4)				
6,0	2,5 (2,6)	1,9 (1,9)	3,0 (3,0)	2,0 (2,0)	3,4 (3,1)		3,6 (3,0)		3,5 (3,0)		
7,0	2,2 (2,2)	1,9 (1,9)	2,7 (2,5)	2,0 (2,0)	3,0 (2,4)	2,0 (2,0)	3,3 (2,4)		3,4 (2,4)		
8,0	1,9 (1,9)	1,8 (1,8)	2,4 (2,0)	1,9 (1,9)	2,7 (2,0)	2,0 (2,0)	3,0 (1,9)	2,0 (1,9)	3,0 (1,9)		
9,0	1,8 (1,7)		2,1 (1,7)	1,8 (1,7)	2,5 (1,6)	1,9 (1,6)	2,8 (1,6)	1,9 (1,6)	2,7 (1,6)	2,0 (1,6)	
10,0			1,9 (1,4)		2,2 (1,3)	1,9 (1,3)	2,5 (1,3)	1,9 (1,3)	2,5 (1,3)	1,9 (1,3)	
11,0			1,8 (1,2)		2,0 (1,1)	1,8 (1,1)	2,3 (1,1)	1,9 (1,1)	2,2 (1,1)	1,9 (1,1)	
12,0					1,8 (0,9)		2,0 (0,9)	1,8 (0,9)	2,0 (0,9)	1,9 (0,9)	
13,0					1,8 (0,8)		1,9 (0,8)		1,9 (0,7)	1,8 (0,7)	
14,0							1,7 (0,6)		1,8 (0,6)	1,8 (0,6)	
15,0	Tab.-Nr.: 613M-14,6/75/2000/4.1/08.06SA5						1,6 (0,5)		1,6 (0,5)		
16,0	Tab.-Nr.: 613M-14,6/75/960/4.1/08.06SA5								1,4		

613E Clamshell equipment

M/R



Main boom HA 18,8 m



Notes:

1. The rated loads shown are based on the machine on firm level ground and without travelling.
2. The rated loads shown are in metric tons valid for 360 degrees swing. The rated loads shown are valid for 614 M on outriggers, the rated loads in brackets () are valid for free on wheels.
3. The rated loads shown is conform with DIN 15019.2 and ISO 4305



Ausladung [m]	Auslegerlänge [m]			
	7,5	10,3	13,2	16,0
2,0	12,7			
3,0	11,3	8,5		
4,0	9,0	8,5	6,8	
5,0	7,2	7,3	6,8	5,1
5,5	6,3	6,4	6,3	5,1
6,0		5,7	5,7	5,0
7,0		4,4	4,5	4,4
8,0		3,5	3,6	3,6
9,0			3,0	3,0
10,0			2,5	2,5
11,0			2,2	2,2
12,0				1,8
13,0				1,7
14,0				1,4
15,0				
16,0				

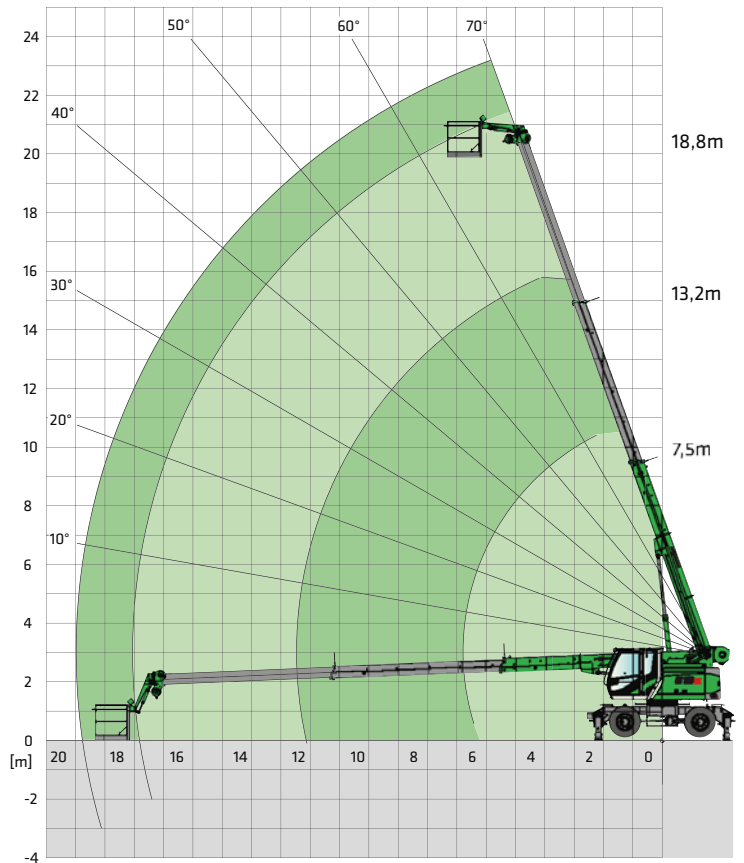
613E Crane equipment

M/R



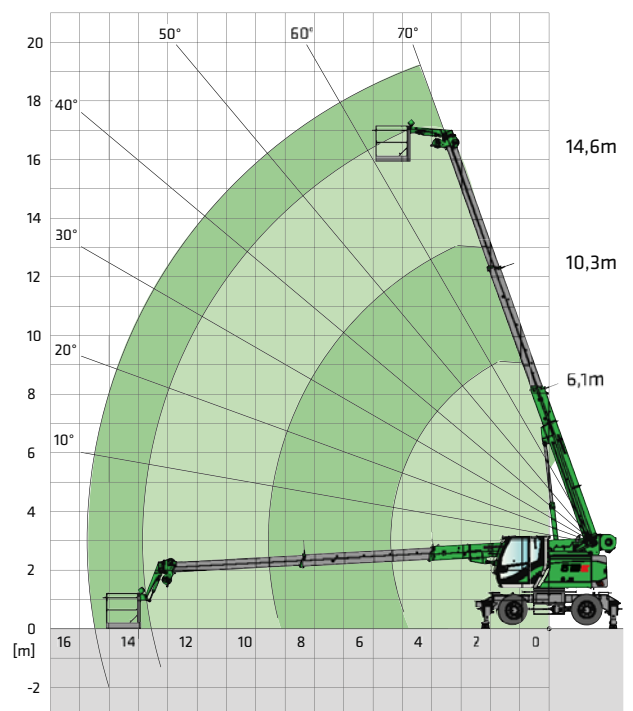
Working platform
HA 18,8 m

The permitted lifting capacity of the working platform is 350 kg:
2 Persons each 80 kg + 190 kg additional load.



Working platform
HA 14,6 m

The permitted lifting capacity of the working platform is 350 kg:
2 Persons each 80 kg + 190 kg additional load.

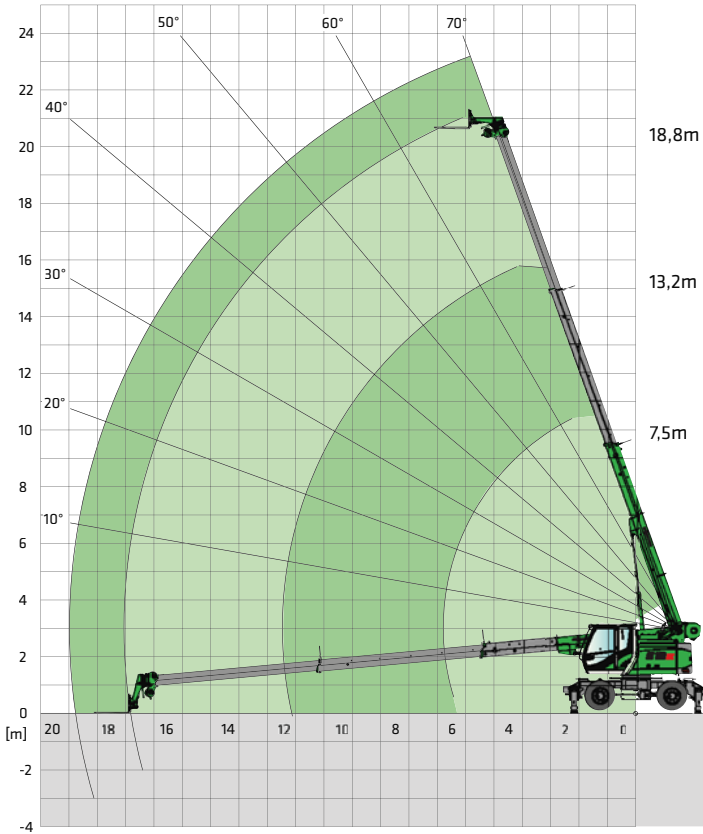


613E Crane equipment

M/R



Lifting fork 7,5-18,8 m



Notes:

1. The rated loads shown are based on the machine on firm level ground and without travelling.
2. The rated loads shown are in metric tons valid for 360 degrees swing.
3. The rated loads are calculated to comply with DIN 15019.2 and ISO 4305.
4. The rated loads are shown for centred positioned load on the lifting fork with a centre of gravity distance of 500 mm from the fork carrier.
5. The user must derate or limit the lifted loads to allow for adverse conditions such as soft or uneven ground, out of the level conditions, wind side loads, pendulum action, jerking or sudden stopping of loads, inexperience of personnel and travelling with a load.
6. The rated loads shown are valid for the machine on outriggers.
7. The rated loads shown in brackets () are valid for machines free on wheels.
8. The lifting capacities above are for reference only. For actual lifting capacities please refer to load chart in operator's manual.



Lifting fork 7,5-18,8 m

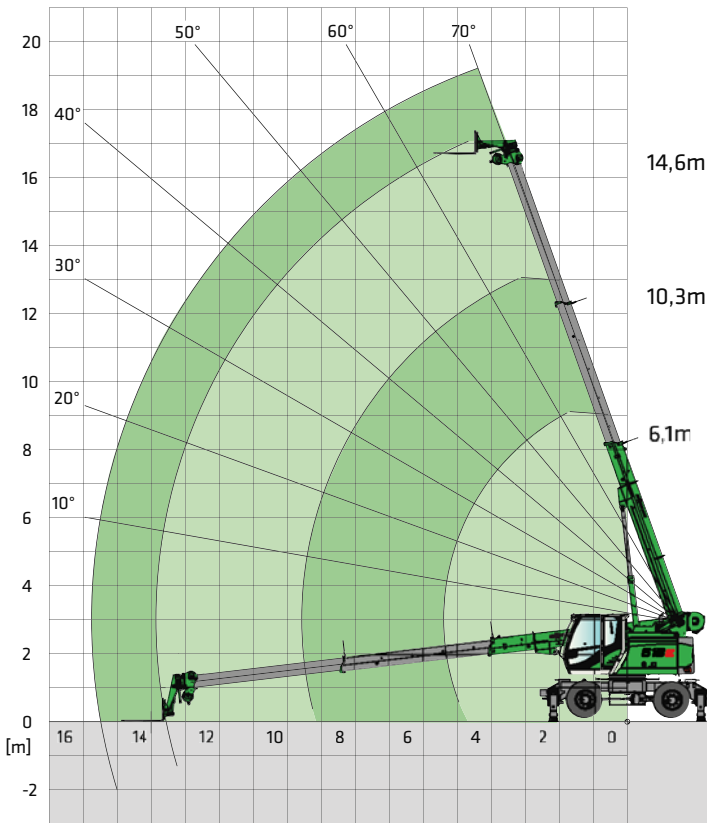
Radius [m]	boom length [m]				
	7,5	10,3	13,2	16	18,8
2,0	2,5 (1,53)				
3,0	2,5 (1,53)	1,3 (0,63)			
4,0	2,5 (1,53)	1,3 (0,63)	0,9		
4,5	2,5 (1,53)	1,3 (0,63)	0,9	0,6	
5,0	2,5 (1,53)	1,3 (0,63)	0,9	0,6	0,5
6,0	2,5 (1,53)	1,3 (0,63)	0,9	0,6	0,5
7,0	2,5 (1,53)	1,3 (0,63)	0,9	0,6	0,5
8,0	2,5/7,5 (1,53)/7,5	1,3 (0,63)	0,9	0,6	0,5
9,0		1,3 (0,63)	0,9	0,6	0,5
10,0		1,3 (0,63)	0,9	0,6	0,5
11,0		1,3/10,3 (0,63)/10,3	0,9	0,6	0,5
12,0			0,9	0,6	0,5
13,0			0,9/13,2	0,6	0,5
14,0				0,6	0,5
15,0				0,6	0,5
16,0				0,6	0,5
17,0					0,5
18,0	Tab.-Nr.: 613M-18,8/75/2000(960)/4.1/08.06				0,5/18,8
I	0%	25%	50%	75%	100%
II	0%	25%	50%	75%	100%

613E Traglastprogramme

M/R



Lifting fork 6,1-14,6

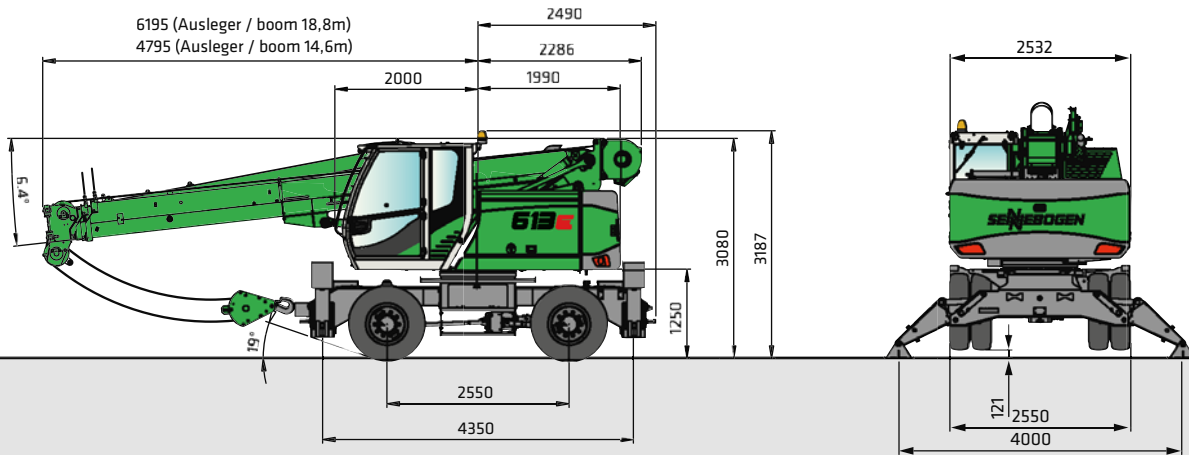


Lifting fork 6,1-14,6

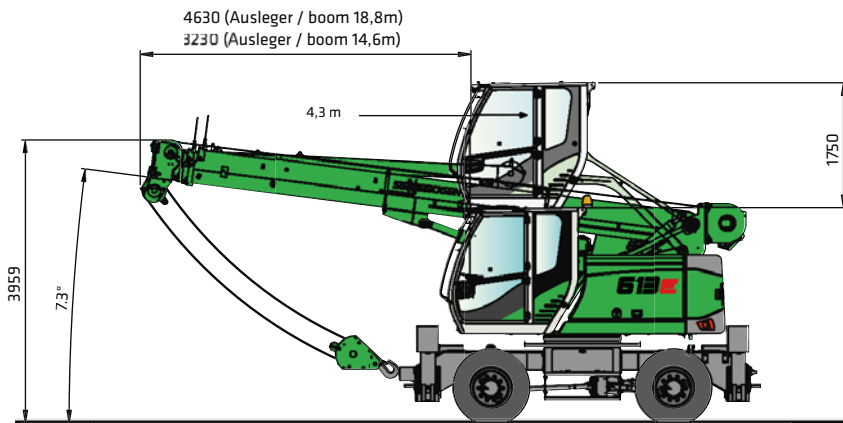
Radius [m]	boom length [m]				
	6,1	8,2	10,3	12,5	14,6
2,0	3,0 (2,0)				
3,0	3,0 (2,0)	1,8 (1,28)			
4,0	3,0 (2,0)	1,8 (1,28)	1,4 (0,7)		
4,5	3,0 (2,0)	1,8 (1,28)	1,4 (0,7)	1,0 (0,37)	
5,0	3,0 (2,0)	1,8 (1,28)	1,4 (0,7)	1,0 (0,37)	0,6
6,0	3,0 (2,0)	1,8 (1,28)	1,4 (0,7)	1,0 (0,37)	0,6
7,0		1,8 (1,28)	1,4 (0,7)	1,0 (0,37)	0,6
8,0		1,8 (1,28)	1,4 (0,7)	1,0 (0,37)	0,6
9,0		1,8/8,2 (1,28) / 8,2	1,4 (0,7)	1,0 (0,37)	0,6
10,0			1,4 (0,7)	1,0 (0,37)	0,6
11,0			1,4/10,3 (0,7)/10,3	1,0 (0,37)	0,6
12,0				1,0 (0,37)	0,6
13,0				1,0/12,5 (0,37)/12,5	0,6
14,0					0,6
15,0					0,6/14,6
16,0					
17,0					
18,0	Tab.-Nr.: 613M-14,6/75/2000(960)/4.1/08.06				
I	0%	25%	50%	75%	100%
II	0%	25%	50%	75%	100%

613E Dimensions

M/R

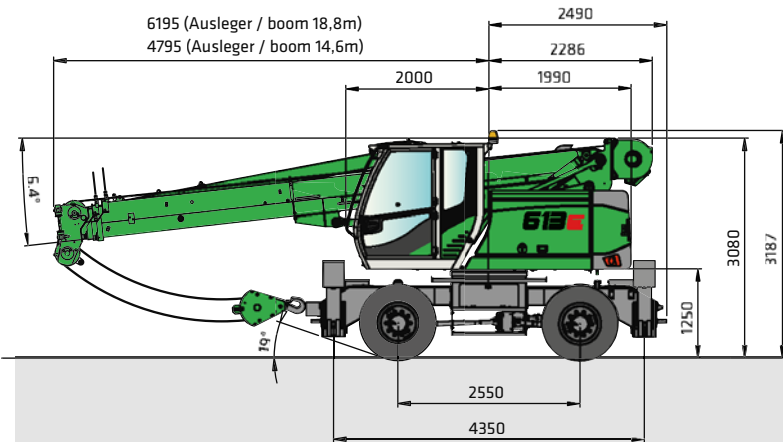
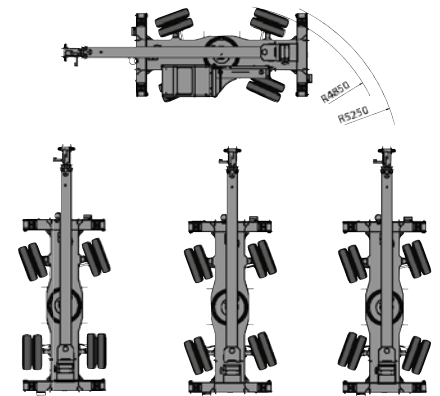


613 with mobile undercarriage



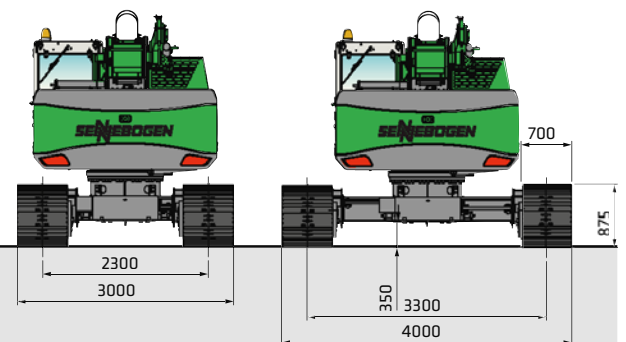
613 with mobile undercarriage

Turning radius



613 with crawler undercarriage

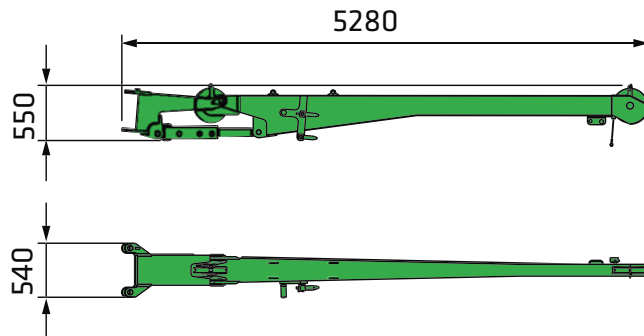
Shoe width	Min. transport width
700 mm	3000 mm
800 mm	3100 mm
900 mm	3200 mm



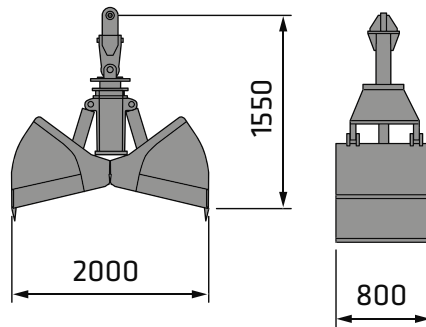
613E Attachements

M/R

Folding Jib 5 m

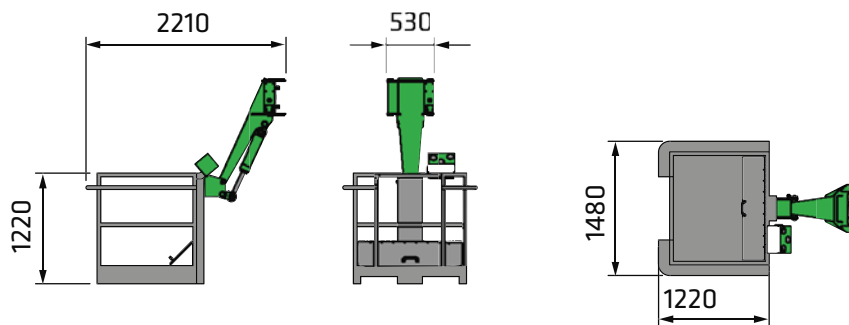


Hydraulic grab with teeth and drainage holes

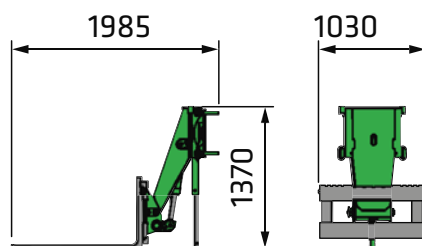


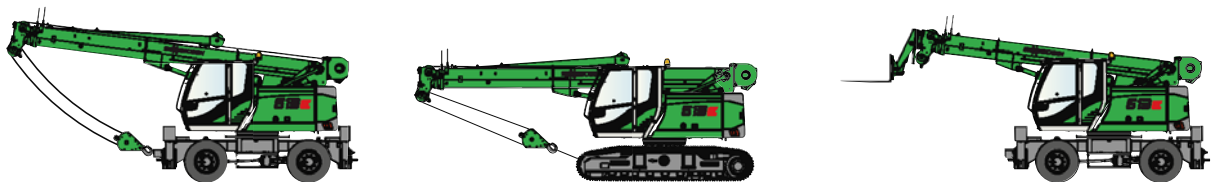
Weight	Content
kg	Liter
750	600

Working platform



Lifting fork



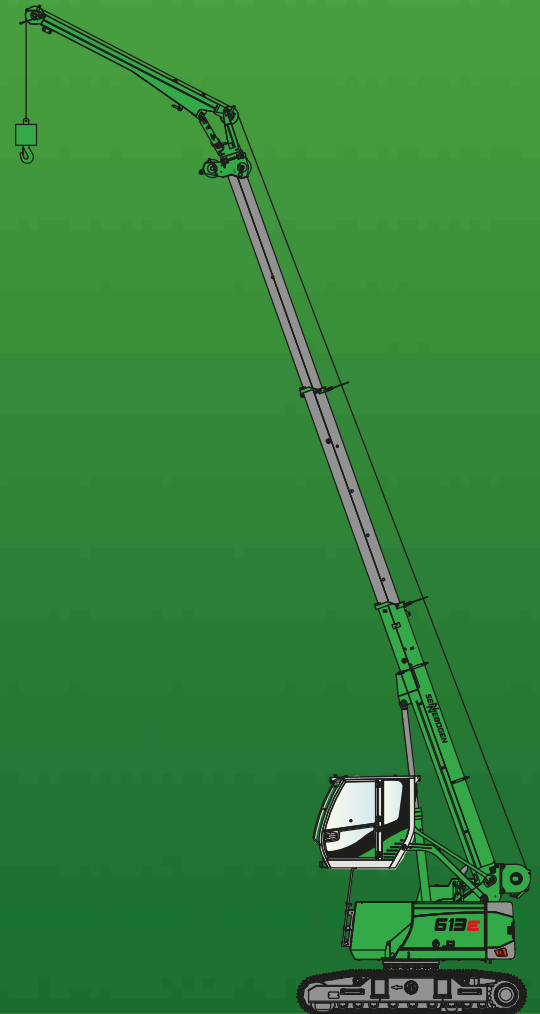


613E

M/R



613E



This catalog describes machine models, scopes of equipment of individual models, and configuration options (standard equipment and optional equipment) of the machines supplied by SENNEBOGEN Maschinenfabrik. Machine illustrations can contain optional equipment and supplemental equipment. Actual equipment may vary depending on the country to which the machines are delivered, especially in regard to standard and optional equipment.

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