

 **613R**

# SENEBOGEN

**PRELIMINARY**



# 613E

Telescopic crawler crane

 **92 kW**

 **16 t**

 **24 m**

 **MULTICAB**

Tier IV emission standards

# 613E Advanced. The E-Series




1978: TX10 telescopic crane

## What makes up the E-Series

- Over 25 years of experience in construction and building of highly specialized telescopic cranes
- Uncompromisingly high performance in all areas
- Technology that can be mastered: High-quality components without over-engineering
- Long service life and high value stability

## Your top benefits:

- 1 Green Efficiency**  
Save fuel – reduce operating costs  
Work quietly – protect operator and environment 
- 2 Peak performance**  
Robust boom system – work on an incline of up to 4°  
High cable speed
- 3 Maximum usability** **MULTICAB**  
multicab – work in comfort  
SENCON – work program selection made easy
- 4 Flexibility in service**  
Operate under full load – less space required  
Strong undercarriage traction – good off-road capability
- 5 Easy transport**  
Telescopic undercarriage – ready to go in no time – short-set-up time
- 6 Maintenance and service made easy**  
SENNEBOGEN control system – easy error diagnostics  
Simple maintenance – clear labeling
- 7 Consultation and support in your area**  
3 production sites – 2 subsidiaries  
130 sales partners – over 350 service stations





# 613E Technical data, equipment

## MACHINE TYPE

Model (type) **613**

## ENGINE

Model **FPT N45, 92 kW / 125 hp at 2,200 rpm**  
Compliant with Tier 4f emission standards

**FPT N45, 92 kW / 125 hp at 2,200 min**  
Compliant with Tier 3a emission standards

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**

DEF tank **43 l**

Electr. system **24 V**

Batteries **2 x 155 AH**

Options

- 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

- Additional LED headlights
- Up to 2 additional cameras
- Maritime climate varnishing as corrosion protection
- 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 unit mounted directly on diesel engine. Load sensing/  
LUDV hydraulic system, electrohydraulic pilot-controlled work  
functions, load limit sensing control

Pump type Axial piston variable displacement pump. The  
independent, proportional allocation of the  
pump quantity allows several work functions  
to be controlled with precision simultaneously  
and independently from one another

Pump control Zero-stroke control, speed-dependent adjust-  
ment of drive pump and axial piston regula-  
tor. Auxiliary functions via gear wheel pump.

Operating pressure **max. 330 bar**

Filtration High-performance filtration with long change  
interval

Hydraulic tank **180 l**

Control system Servo joystick operation for work movements.

Safety Hydraulic circuits secured with safety valves.  
Pipe fracture safety valve for luffing and tele-  
scoping cylinders

Options

- Bio-oil – environmentally friendly
- SENNEBOGEN HydroClean 3 µm hydraulic microfilter
- Hydraulic tank preheater

## SLEWING DRIVE

Gearbox Compact planetary gear with hydraulic and  
electric rotor, integrated brake valves

Slewing gear brake Spring-loaded disk brake, pedal for individual  
braking

Slewing ring Oversized slewing ring, sealed. Highly precise,  
powerful slewing function.

Slewing speed **0-2 rpm, variable**

# 613E Technical data, equipment

CAB <i>MULTICAB</i>	
Cab type	MultiCab, can be elevated 1.75 m
Cab equipment	Hydraulically elevating cab as standard. Flexibly mounted comfortable cab with super sound insulation. All-weather design, all-round glazing in safety glass and large roof window, adjustable windshield. Flexibly mounted comfortable seat, adjustable according to weight and shock-absorbent. Dashboard overview with swiveling steering column. Variable, controllable cab heating with air circulation stage and particle filter, automatic climate control
Options	<ul style="list-style-type: none"> <li>■ Auxiliary heating system with timer</li> <li>■ Protective roof grating</li> <li>■ FOPS protective roof grating</li> <li>■ Radio with USB and SD connection, MP3 and Bluetooth function</li> </ul>

UNDERCARRIAGE	
Design	Very strong, hydraulically telescoping crawler undercarriage, with integrated, protected drive transmission
Drive	Strong travel drive featuring 2-stage variable-displacement hydraulic motor with direct-mounted, automatically actuated brake valve and compact planetary gear on each running gear side
Parking brake	Spring-loaded disk brake
Traveling gear	Maintenance-free tractor running gear with hydraulic chain tension, 600 mm 3-grouser base plates
Speed	0-1.2 / 0-2.2 km/h
Options	Available base plate types: <ul style="list-style-type: none"> <li>■ 700 mm 3-grouser base plates</li> <li>■ 800 mm 3-grouser base plates</li> </ul>

ATTACHMENTS	
Design	Decades of experience and the latest computer simulations guarantee maximum stability and service life.
Telescopic boom	3-part with pulley head, hydraulic telescoping.
Hoisting winch	Slant-axis hydraulic motor drive with compact planetary gear, 35 kN traction, 0-95 m/min. cable speed, 14 mm cable diameter.
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 Eventrecorder
Cylinders	Hydraulic cylinders with high-quality sealing and guide elements
Options	<ul style="list-style-type: none"> <li>■ 5 m fly boom with swing-away jib, extremely fast and easy setup without auxiliary devices, locked on basic boom when not in use</li> </ul>

OPERATING WEIGHT	
Mass	<p><b>613 R</b></p> <p>With 18.8 m telescopic boom, 5 m fly boom, 10.5 t hook.</p> <p>3-grouser base plates            600 mm approx. <b>24,300 kg</b>            700 mm approx. <b>24,650 kg</b>            800 mm approx. <b>25,000 kg</b></p> <p>Operating weight varies by model.</p>



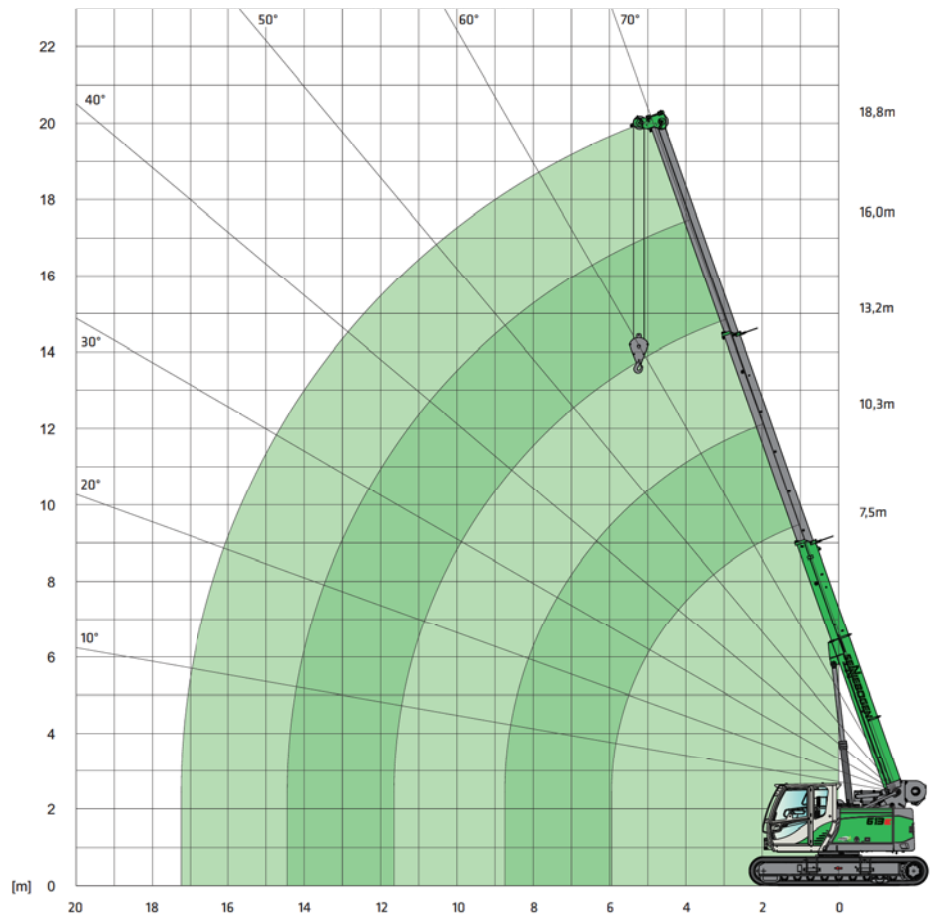
# 613E Crane equipment



## 18.8 m main boom (HA)

**Comments:**

1. The specified load ratings apply when the machine is standing level and firm.
2. The load ratings apply to the 613 R with extended crawler undercarriage (3,000 mm track); the load ratings in brackets ( ) apply when the crawler undercarriage is retracted (1,880 mm track).
3. The load ratings take into account the standards DIN 15019.2 and ISO 4305
4. The weight of the load handling devices (e.g. hook, suspension gear) must be subtracted from the load ratings.
5. Load ratings must be limited or reduced when conditions are unfavorable, such as soft or uneven ground, slopes, wind, lateral loads, swinging loads, jerking or sudden stopping of load, operator inexperience, driving with load.
6. Permissible rope winch per strand in crane mode for cable diameter 14 mm – 3,500 kg
7. Load ratings indicated with \* apply only in the case of special equipment.
8. The specified load ratings are guidelines only. The currently valid load ratings can be found in the tables in the operating manual.



## 18.8 m main boom (HA)

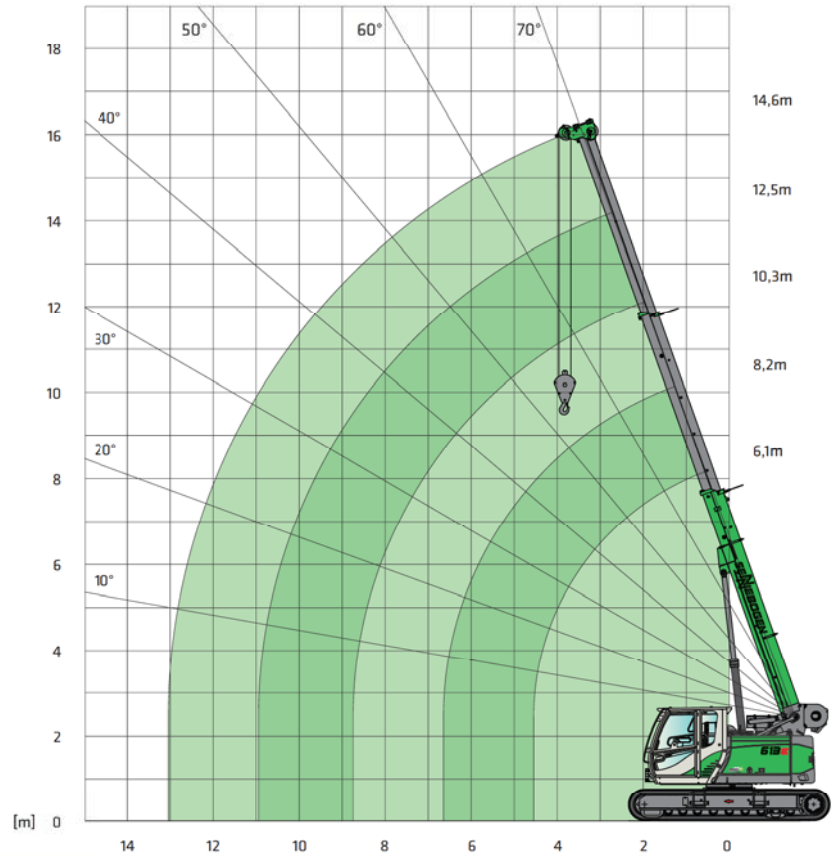
Outreach [m]	Boom length [m]				
	7.5	10.3	13.2	16	18.8
2.0	15.0 (12.0)				
3.0	13.3 (8.3)	10.0 (8.4)			
4.0	10.6 (5.3)	10.0 (5.3)	8.0 (5.4)		
5.0	8.5 (3.7)	8.6 (3.8)	8.0 (3.8)	6.0 (3.9)	
5.5	7.5 (3.2)	7.6 (3.4)	7.4 (3.4)	6.0 (3.4)	4.5 (3.4)
6.0	5.7 (2.9) / 6.0 m	6.7 (2.9)	6.7 (2.9)	5.9 (2.9)	4.5 (2.9)
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					1.3
17.0					1.1 / 17.3 m

Table no.: 613R-HD/18.8/75/1703(1453)/4.1/08.06

# 613E Crane equipment



14.6 m main boom (HA)



14.6 m main boom (HA)

Outreach [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	Table no.: 613R-HD/14.6/75/1703(1453)/4.1/08.06				2.3 (1.0)
13.0					2.1 (0.8)



Hook

Capacity	Weight	Cable reeving and maximum load rating					
		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 fly boom

# 613E Crane equipment



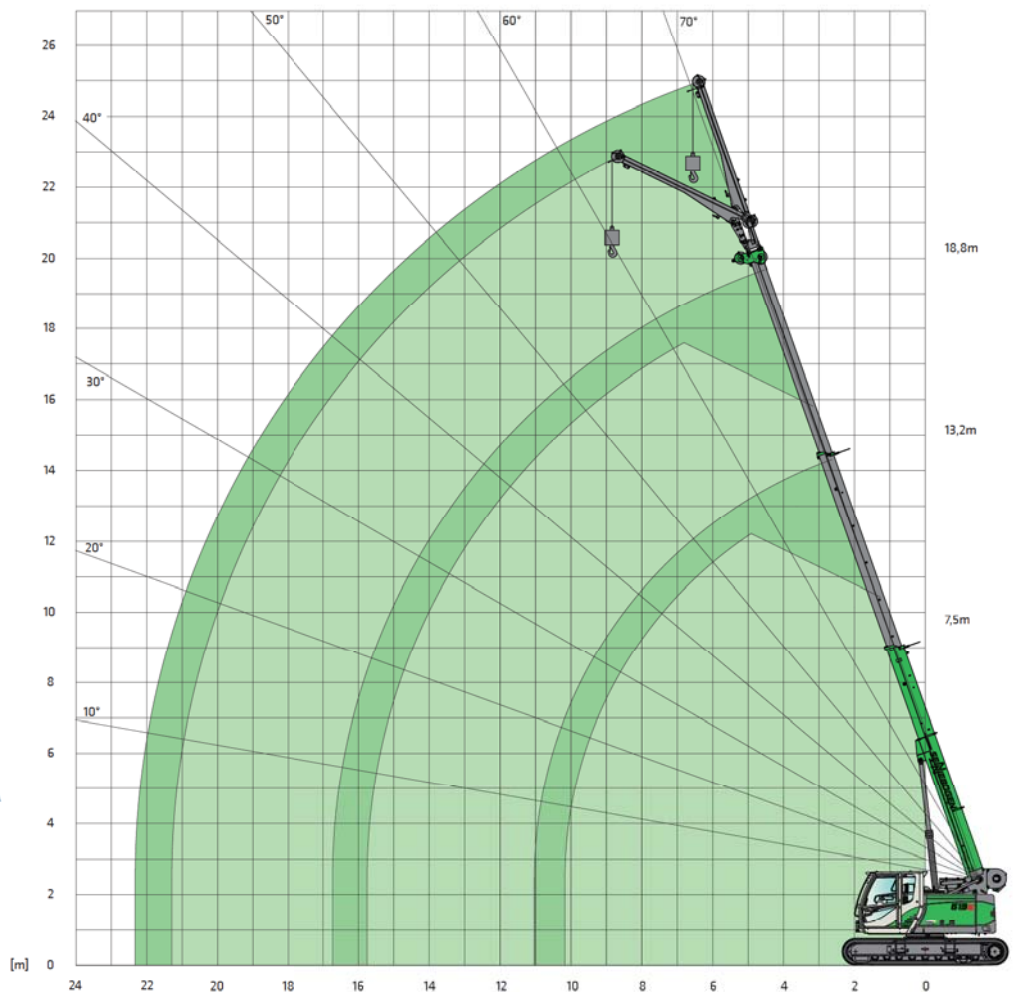
5.0 m fly boom (SA)



18.8 m HA



5.0 m SA



Outreach [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	Table no.: 613R-HD/18.8/75/1703/4.1/08.06 SA5								0.9	
20.0	Table no.: 613R-HD/18.8/75/1453/4.1/08.06 SA5								0.7	



# 613E Crane equipment



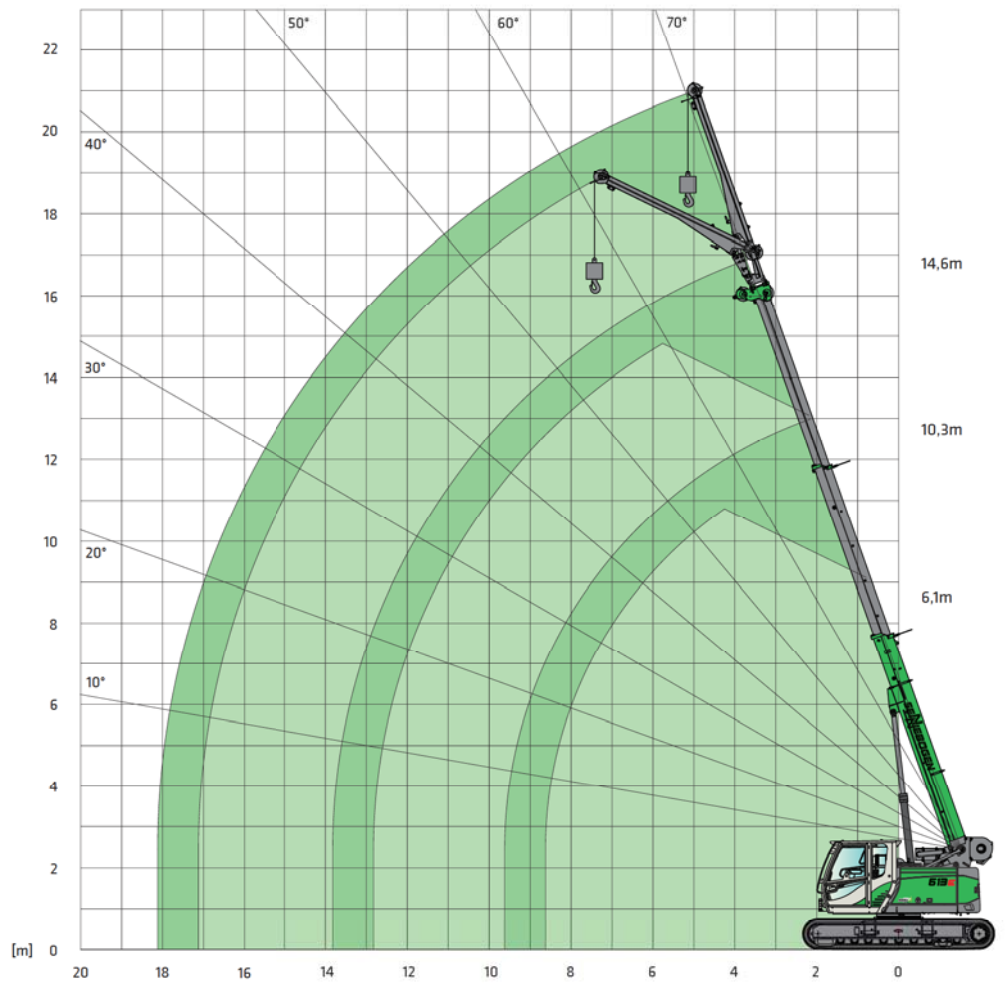
5.0 m fly boom (SA)



14.6 m HA



5.0 m SA

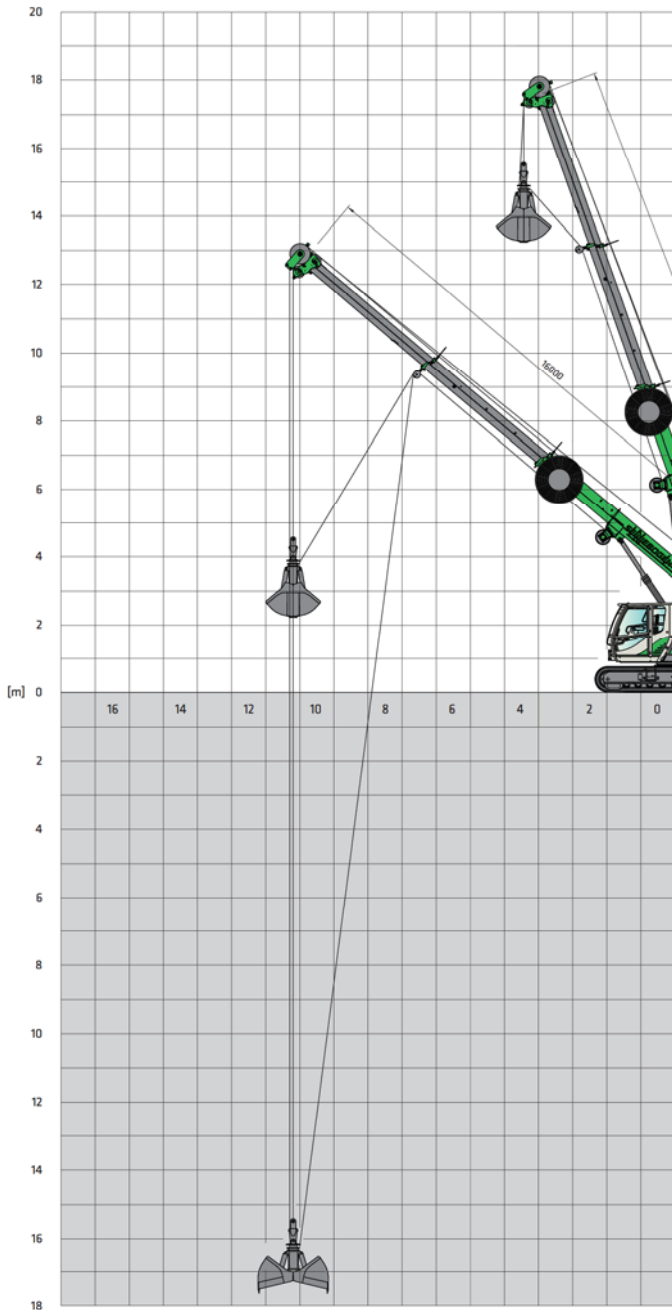


Outreach [m]	Telescopic boom length [m]									
	6.1		8.2		10.3		12.5		14.6	
	0°	45°	0°	45°	0°	45°	0°	45°	0°	45°
3.0	4.2 (4.2)									
4.0	3.5 (3.5)		4.0 (4.0)							
5.0	3.0 (3.0)		3.5 (3.5)		3.7 (3.7)		4.0 (4.4)			
6.0	2.5 (2.6)	1.9 (1.9)	3.0 (3.0)	2.0 (2.0)	3.4 (3.1)		3.6 (3.0)		3.5 (3.0)	
7.0	2.2 (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	Table no.: 613R-HD/14.6/75/1703/4.1/08.06 SA5						1.6 (0.5)		1.6 (0.5)	
16.0	Table no.: 613R-HD/14.6/75/1453/4.1/08.06 SA5								1.4	

# 613E Grab equipment



## 18.8 m main boom (HA)



**Comments:**

1. The specified load ratings apply when the machine is standing level and firm.
2. Load ratings are specified in tons and apply to a 360° slewing angle. The load ratings apply to the 613 R with maximum track width.
3. The load ratings take into account the standards DIN 15019.2 and ISO 4305



Outreach [m]	Boom length [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				

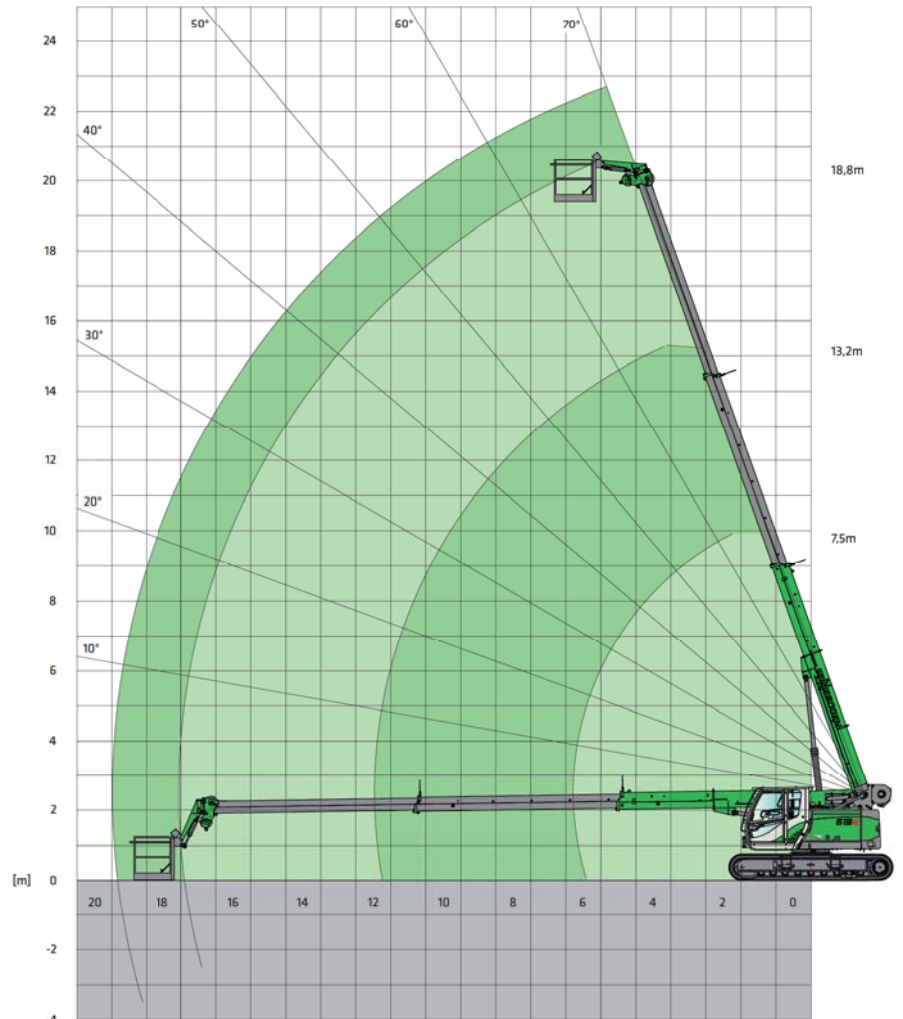
# 613E

## Work platform



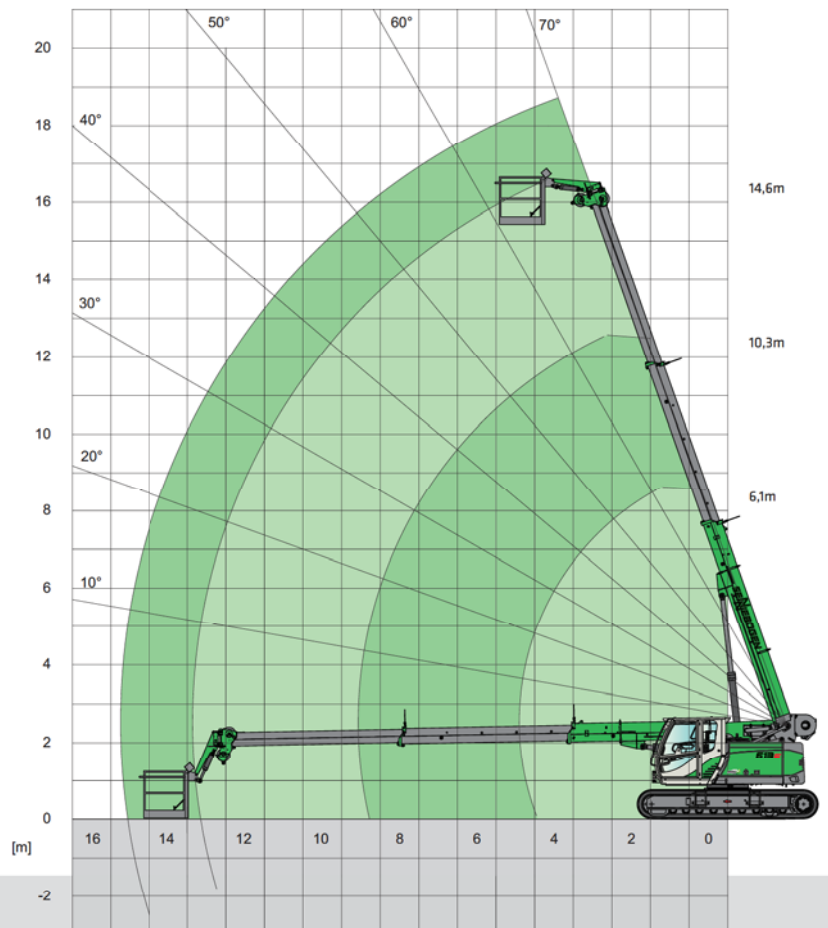
**Work platform**  
18.8 m HA

The permitted load capacity for the work platform is 350 kg:  
2 persons of 80 kg each + 190 kg additional load.

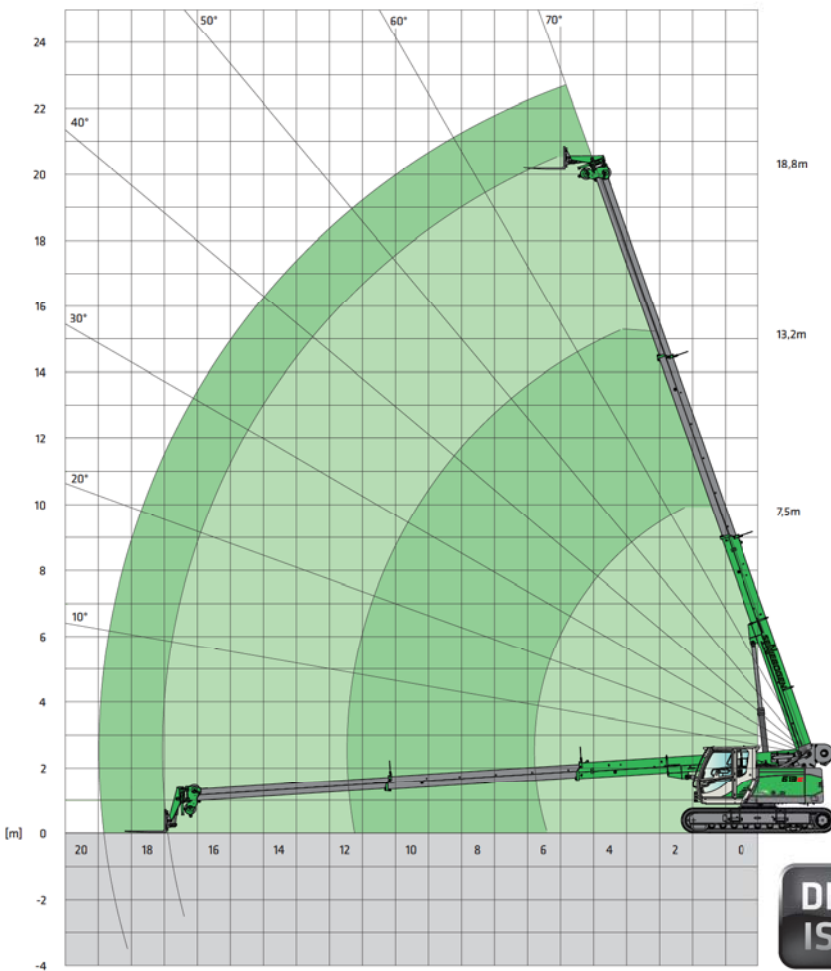


**Work platform**  
14.6 m HA

The permitted load capacity for the work platform is 350 kg:  
2 persons of 80 kg each + 190 kg additional load.



# 613E Lift fork equipment



7.5-18.8 m lift fork

**Comments:**

1. The specified load ratings apply when the machine is standing level and firm
2. Load ratings are specified in tons and apply to a 360° slewing angle.
3. The load ratings take into account the standards DIN 15019.2 and ISO 4305.
4. The load ratings apply to loads placed in the center of the lift fork with a center of gravity that is 500 mm from the fork carriage.
5. Load ratings must be limited or reduced when conditions are unfavorable, such as soft or uneven ground, slopes, wind, lateral loads, swinging loads, jerking or sudden stopping of load, operator inexperience, driving with load
6. The load ratings apply to the maximum track width.
7. The load ratings in brackets ( ) apply to the minimum track width.
8. The specified load ratings are guidelines only. The currently valid load ratings can be found in the tables in the operating manual.



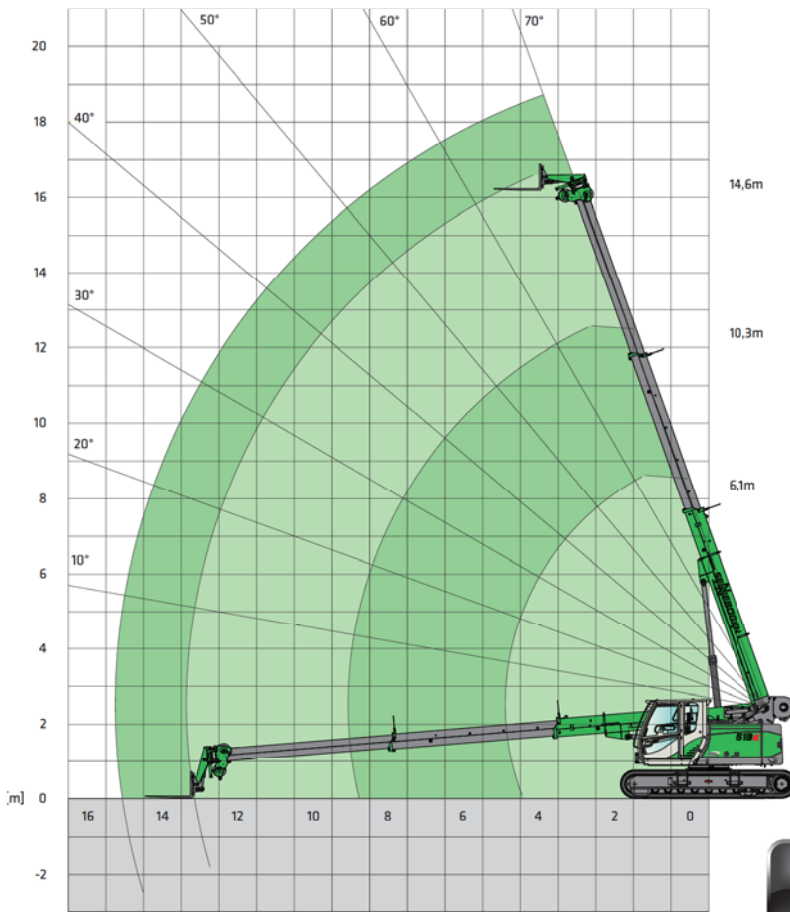
7.5-18.8 m lift fork

Outreach [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	Table no.: 613R-HD/18.8/75/1703(1453)/4.1/08.06, lift fork				0.5/18.8
I	0%	25%	50%	75%	100%
II	0%	25%	50%	75%	100%

# 613E Lift fork equipment



6.1-14.6 m lift fork

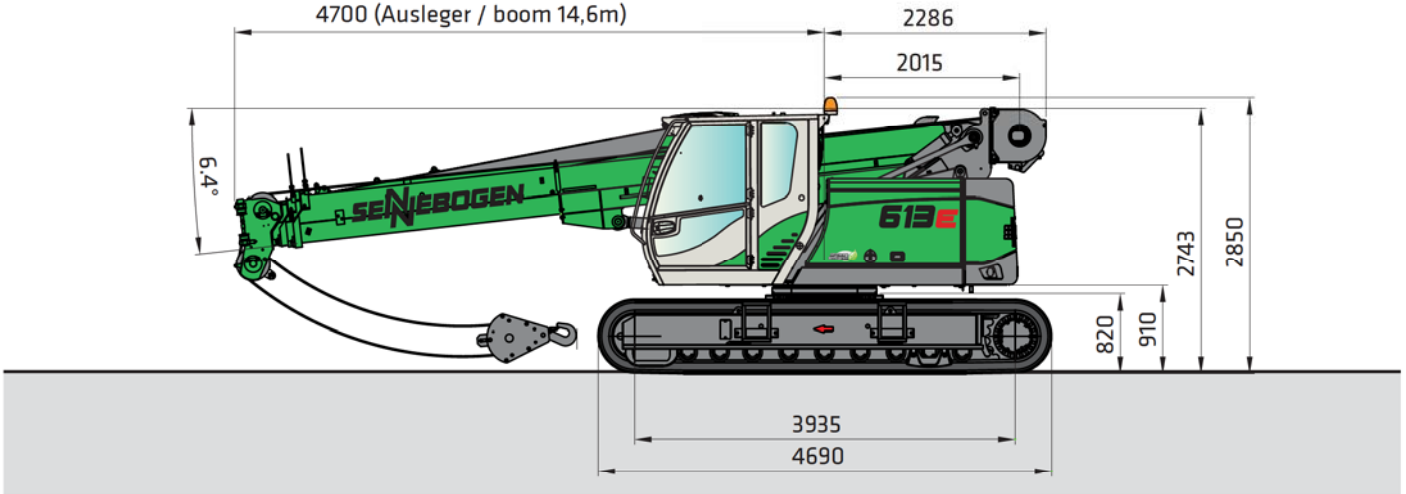


6.1-14.6 m lift fork

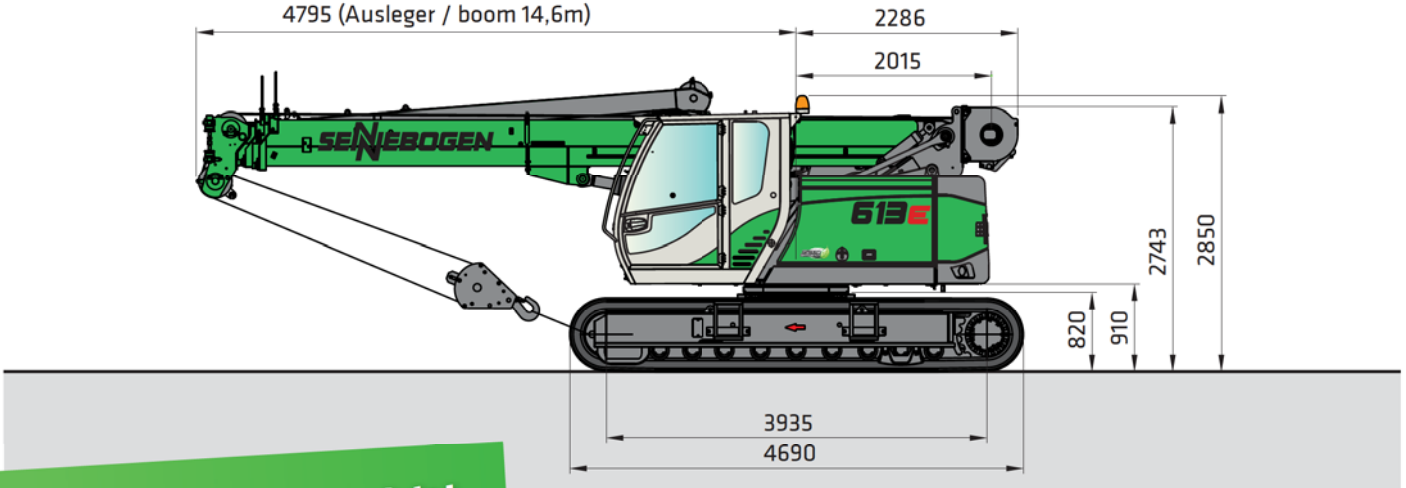
Outreach [m]	Boom length [m]				
	6.1	8.2	10.3	12.5	14.6
2.0	3.0 (2.0)				
3.0	3.0 (2.0)	1.8 (1.28)			
4.0	3.0 (2.0)	1.8 (1.28)	1.4 (0.7)		
4.5	3.0 (2.0)	1.8 (1.28)	1.4 (0.7)	1.0 (0.37)	
5.0	3.0 (2.0)	1.8 (1.28)	1.4 (0.7)	1.0 (0.37)	0.6
6.0	3.0 (2.0)	1.8 (1.28)	1.4 (0.7)	1.0 (0.37)	0.6
7.0		1.8 (1.28)	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	Table no.: 613R-HD/14.6/75/1703(1453)/4.1/08.06, lift fork				
I	0%	25%	50%	75%	100%
II	0%	25%	50%	75%	100%

# 613E Transport dimensions

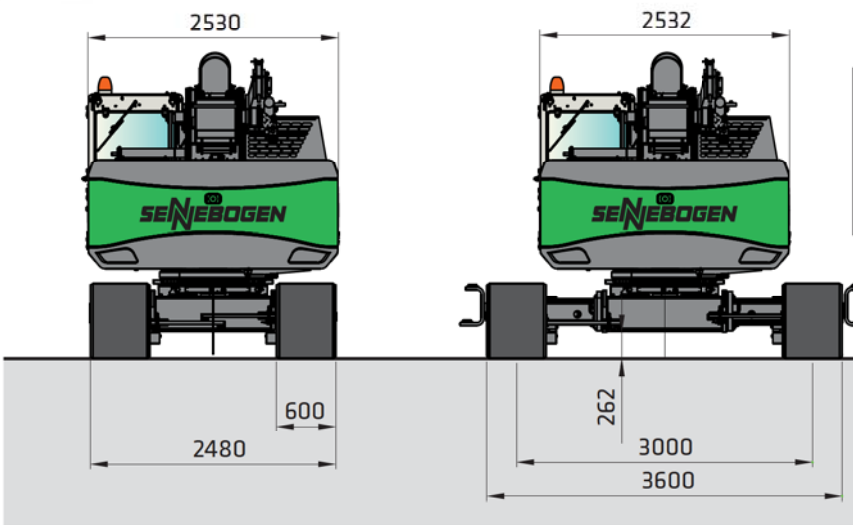
6100 (Ausleger / boom 18,8m)  
4700 (Ausleger / boom 14,6m)



6195 (Ausleger / boom 18,8m)  
4795 (Ausleger / boom 14,6m)



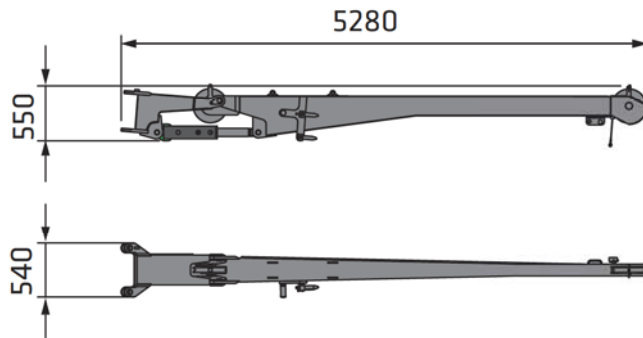
2,530 m transport width



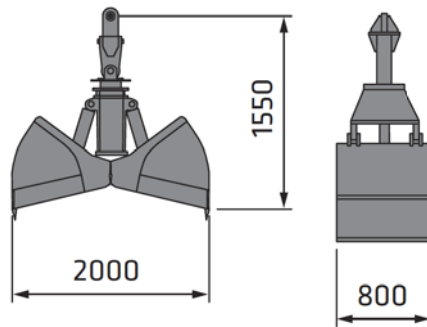
Base plates	Min. transport width
600 mm	2,550 mm
700 mm	2,600 mm
800 mm	2,700 mm

# 613E Attachments

## 5 m fly boom

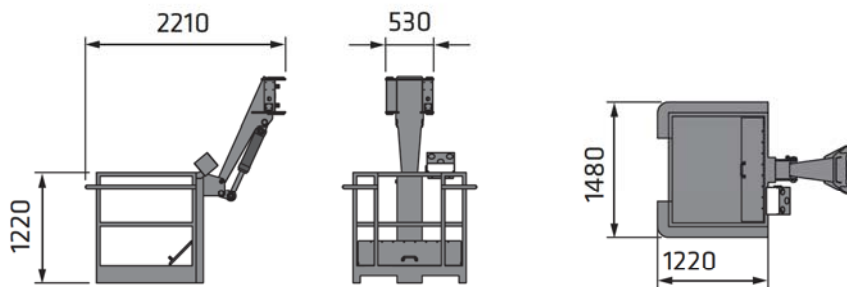


## Hydraulic grapple with teeth and drainage holes

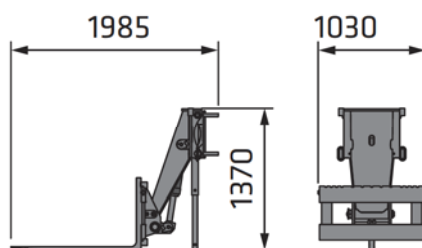


Weight	Capacity
kg	liters
750	600

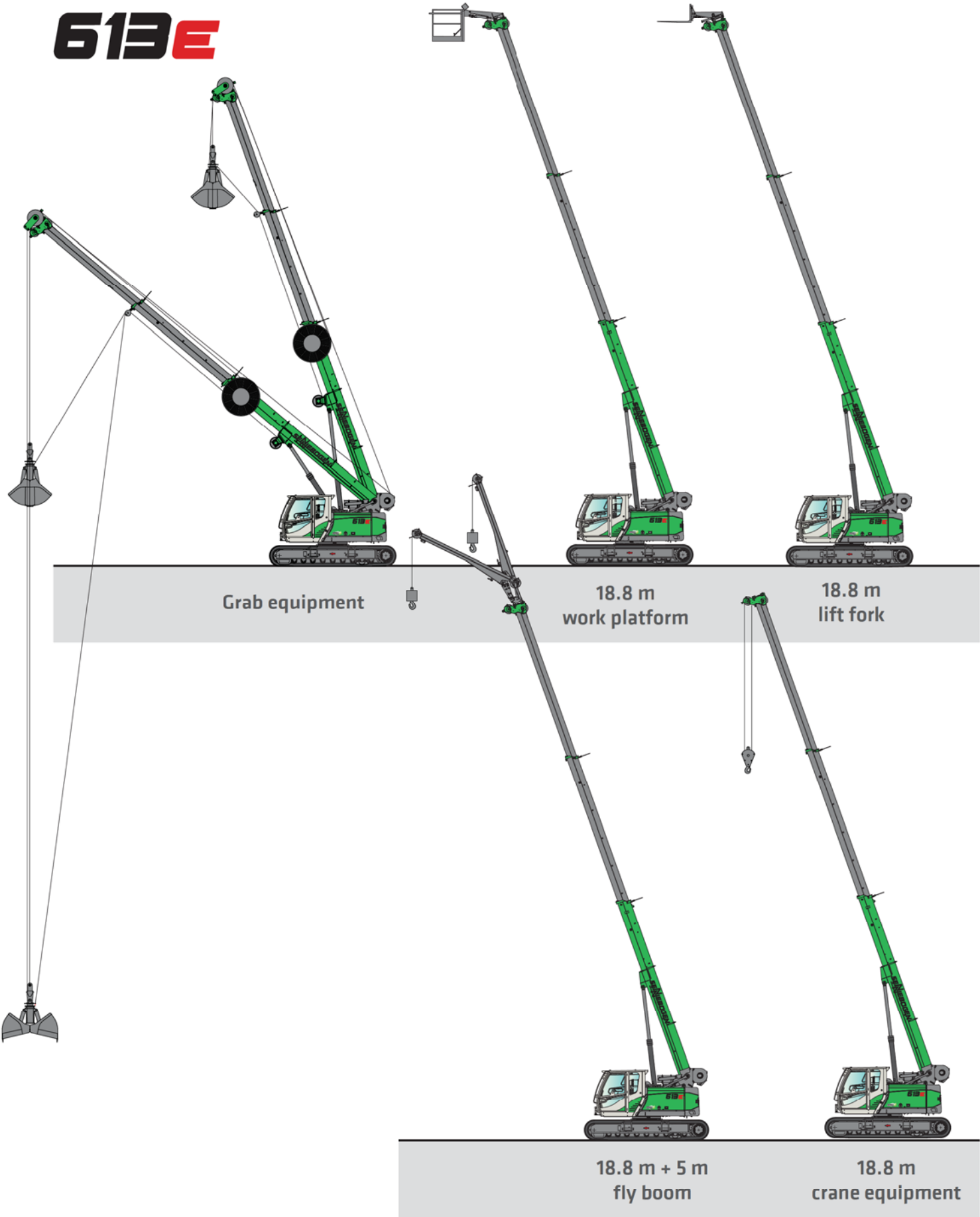
## Work platform



## Lift fork at-



# 613E







The SENNEBOGEN 613 E crawler crane moves and lifts loads on the construction site of a temporary sewage treatment plant in Germany.

# 613E

# R



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 GmbH. 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. All product designations used may be trademarks of SENNEBOGEN Maschinenfabrik GmbH or other supplying companies, and any use by third parties for their own purposes may violate the rights of the owners.

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## SENNEBOGEN

**SENNEBOGEN**  
**Maschinenfabrik GmbH**  
Sennebogenstraße 10  
94315 Straubing, Germany

Tel. +49 9421 540-144/146  
Fax +49 9421 43 882  
[marketing@sennebogen.de](mailto:marketing@sennebogen.de)

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