

SENEBOGEN

PRELIMINARY



129 kW



50 t



MAX CAB

1100E

Crawler crane

Tier IVf emission standards

1100E Advanced. The E-Series.



1972: Rope-driven SK 15 with plastic operator cab

What makes up the E-Series

- 60 years of experience in the design and construction of duty cycle cranes
- Uncompromisingly high performance in all areas
- Technology that can be mastered: High-quality components without over-engineering
- Long product service life and high value retention

Your top benefits:

- 1 Green Efficiency**
Save fuel – reduce operating costs
Work quietly – protect operator and environment



- 2 Peak performance**
Durable mechanical systems – stressed parts optimized
High speeds – high load capacities

- 3 Maximum operating comfort**
Comfortable Maxcab operator cab – relaxed work
SENCON – SENNEBOGEN Control System



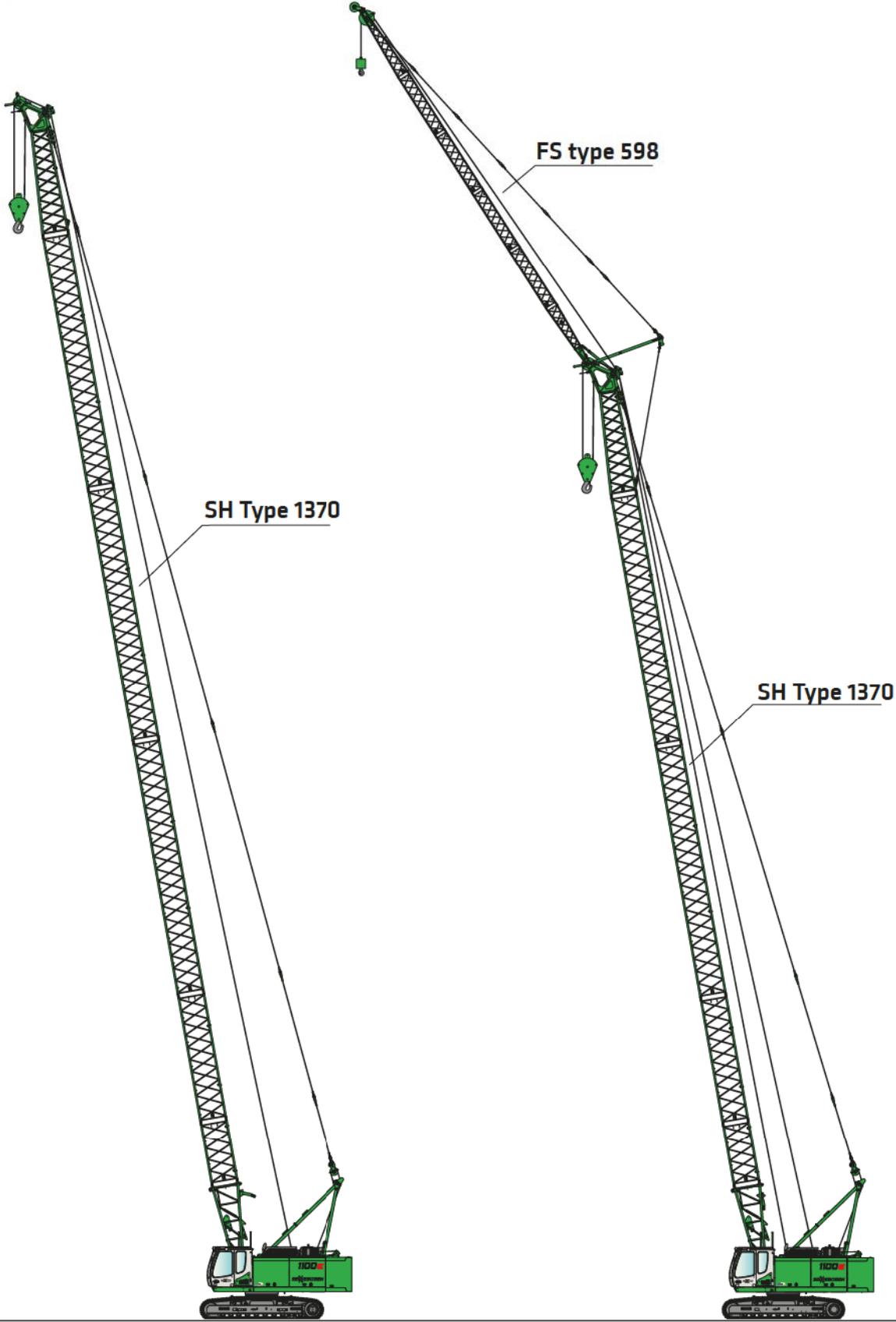
- 4 Flexibility in use**
Driving under load – low space requirement
Strong undercarriage traction – good all-terrain mobility

- 5 Easy transport**
Telescopic undercarriage – quickly ready for use
Ballast support system – short set-up time

- 6 Maintenance and service made easy**
Easy fault diagnosis – central measuring points
Easy maintenance – clear labeling

- 7 Consultation and support**
3 production sites – 2 subsidiaries
120 sales partners – over 300 service stations

1100E



SH

SH-FS

1100E Technical data, equipment

MACHINE TYPE

Model (type) **1100**

ENGINE

Model Cummins QSB 6.7-C173, Stage IIIa
129 kW / 176 hp at 1850 min⁻¹
 Cummins QSB 6.7-C173, Stage IV
129 kW / 176 hp at 1850 min⁻¹
 Direct-injection, turbo-charged, charged air cooler, reduced emissions

Cooling Water-cooled

Diesel filter With water separator

Air filter Dry filter with pre-separator, automatic dust discharge, main element and safety element, contamination indicator

Fuel tank **max. 450 l**

DEF tank **30 l (Level IV)**

Electr. system **24 V**

Electric installation Easy and very clear

Batteries **2 x 150 Ah**, main switch

Options

- Low-temperature package with engine pre-heating and heated diesel filter for temperatures below -40 °C
- Electric fuel pump
- Idle/Stop Automatic

UPPERCARRIAGE

Design Torsion-resistant box design, precision crafted, bronze bushings for boom bearing arrangement, clear and very service-friendly concept, engine installed in the longitudinal direction

Electrical system central electrical distributor, battery disconnect switch

Lighting LED headlights for optimal illumination of the work area

Safety

- Camera monitoring of the rear area and on the right side

Options

- Low temperature package
- Ballast support fixture
- Pinion tooth lubrication for slewing ring, outer
- Automatic central lubrication system for equipment and slewing ring
- Further cameras on customer request
- Uppercarriage railing right + left
- shared ballast
- maritime climate varnishing

HYDRAULIC SYSTEM

Multi-circuit hydraulic system for optimal function and capacity, all movements can be run simultaneously.

Pump type The hydraulic pumps are variable displacement piston pumps with individual control and energy-saving flow-on-demand control.

Pump control The pumps only supply as much oil as is actually consumed. Pressure cut-off, load limit sensing control

Operating pressure **max. 330 bar**

Filtration High-performance filtration with long-term change interval, contamination level indicator

Hydraulic tank **max: 550 l / 450 l (center of the sight glass)**

Control system Proportional, precision hydraulic servo control of the movements, 2 servo joysticks for work functions, supplemental functions via switches and foot pedals – arranged clearly and ergonomically.
 High energy efficiency due to large-dimensioned hydraulic valves and lines. Measurement connections in the hydraulic circuits

Safety Hydraulic circuits secured with safety valves

Options

- Bio-oil – environmentally friendly
- SENNEBOGEN HydroClean micro-filter system with water separator

SLEWING DRIVE

Gearbox Compact planetary gear with slant-axis hydraulic motor, integrated brake valves

Slewing gear brake Spring-loaded multi-disk brake

Slewing ring Ball bearing rotary connection with exterior gearing

Slewing speed **0-4 min⁻¹**, 3 adjustable rotation speeds

Options

- Precision slewing gear brake
- Second slewing gear

1100E Technical data, equipment

CAB MAXCAB

Cab type	Maxcab
Cab equipment	Sliding door, excellent ergonomics, climate automation, seat heater, air-suspension comfort seat, fresh air filter / circulating air filter, joystick steering, 12 V / 24 V connections, SENCON, roof window
Options	<ul style="list-style-type: none"> ■ Cab type E270, can be elevated 270 cm ■ Cab can be tilted 15° ■ Auxiliary heating system with timer ■ Cab active-charcoal filter - inside air/outside air ■ Sliding window in operator door ■ Armored-glass windshield ■ Armored-glass sunroof ■ Safety side window and rear window ■ Sunblind for windshield ■ Protective roof grating ■ FOPS protective roof grating ■ Protective front grating ■ Radio with speakers

ATTACHMENTS

Design	Decades of experience and the latest computer simulations guarantee the greatest degree of stability and life-span
Boom adjustment winch	Drive via slant axis hydraulic motor with compact planetary gear, pulling force 52 kN, rope diameter 14 mm, adjustment speed 30° to 80° in approx. 40 seconds.
Safety brake	Spring-loaded disk brake
Crane safety	Latest generation of load moment monitoring, display shows all important data, lifting limit switch, pressure relief valves, cable exit protection
Boom	SH boom length up to 52.3 m
Options	<ul style="list-style-type: none"> ■ Auxiliary jib, for load ratings to 8.5 t ■ Fixed fly to 18 m ■ Steel rope sheaves ■ Boom damping, hydraulic

UNDERCARRIAGE

Design	Telescopic crawler undercarriage, type T41/380 with hydraulically adjustable track width. Stable welded construction.
Travel drive	Strong travel drive with axial piston hydraulic motor and directly attached automatically functioning brake valve and compact planetary gear on each running gear side; protected drive transmission
Parking brake	Spring-loaded multi-disk brake
Traveling gear	Maintenance-free tractor running gear B6 with hydraulic chain tension, 700 mm 3-grouser base plates
Travel speed	0 - 1.5 km/h
Options	<ul style="list-style-type: none"> ■ 700 mm flat base plates (transport width 3000 mm) ■ 800 mm flat base plates (transport width 3200 mm) ■ 800 mm 3-grouser base plates (transport width 3200 mm)

WINCH

The winches are driven via high-pressure-regulated adjustable hydraulic motors, thus there is always optimal pulling force speed control. Hydraulic lowering brake valves for sensitive, wear-free braking. Strong oil-bath planetary gear, low-maintenance.

Holding brakes are spring-loaded, maintenance-free, low-wear disc brakes running in the oil bath, oil-cooled.

	Series
Main winches	
Rope winch (rated load) 1st layer	120 kN
Rope diameter	22 mm
Rope speed 1st layer	0-125 m/min

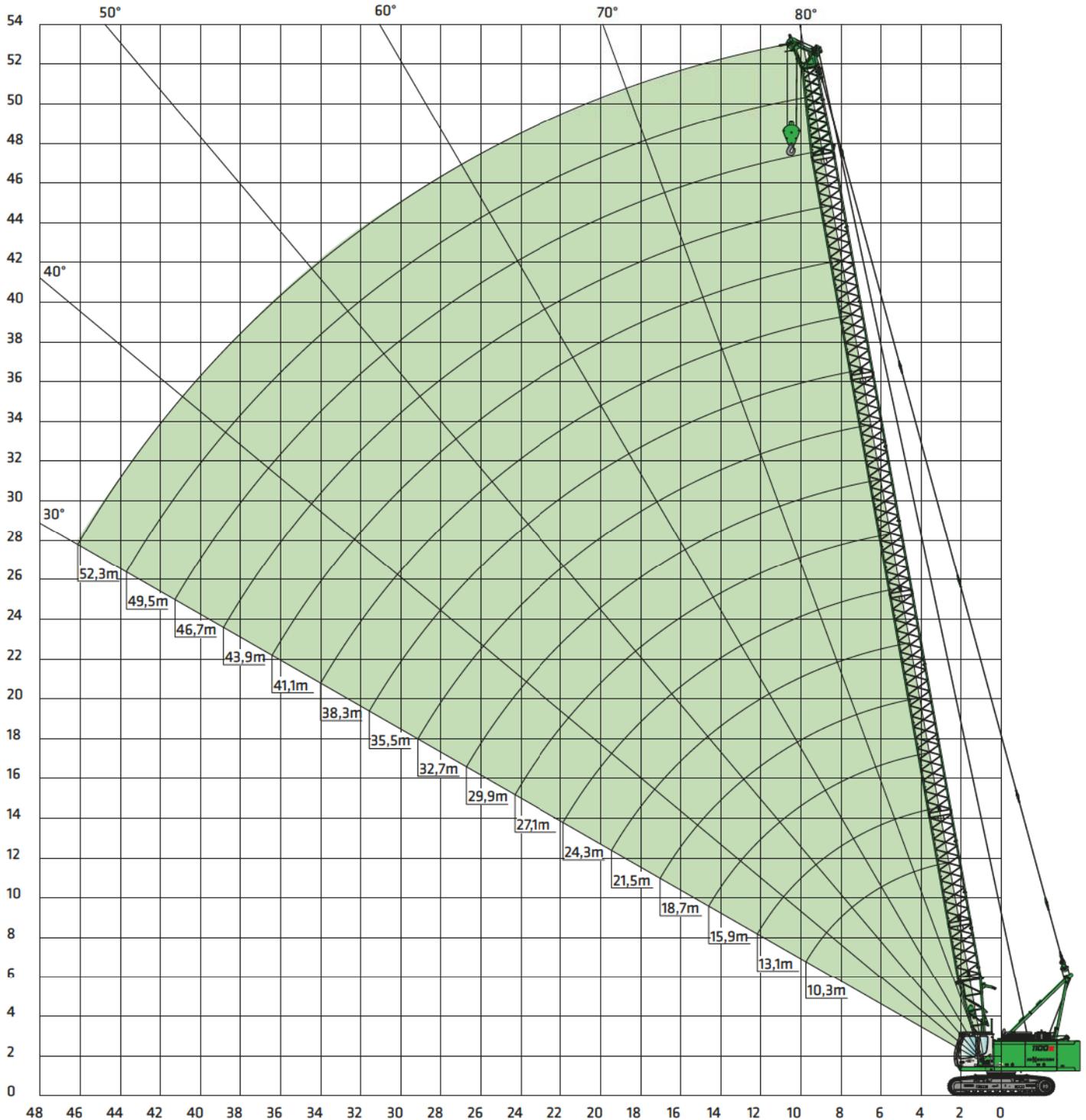
OPERATING WEIGHT

Mass	approx. 50 t 1100 telescopic undercarriage, basic boom 10.3 m, counterweight 18 t, 60 t bottom hook block, 700 mm 3-grouser base plates, 150 m hoisting rope
Notice	The operating weight varies depending on the version and equipment.

1100E Crane equipment



Main boom SH



See page 11 for boom assembly

6 Subject to change. See page 7 for notes on load lift charts.

1100E Load ratings



Main boom SH

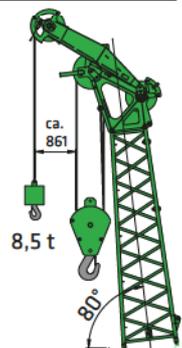
18 t	Boom length [m]																
	10.3	13.1	15.9	18.7	21.5	24.3	27.1	29.9	32.7	35.5	38.3	41.1	43.9	46.7	49.5	52.3	
2.6																	
3.0	50.0	49.0/3.6															
4.0	45.0	44.9	44.7	37.2/4.6													
5.0	36.0	35.8	35.6	34.0	32.5	28.2/5.5											
6.0	29.8	29.7	29.5	27.8	26.6	25.5	24.5	21.9/6.5									
7.0	24.1	24.0	23.9	23.3	22.5	21.6	20.8	20.2	19.5	18.0/7.5							
8.0	19.9	19.8	19.7	19.6	19.6	18.8	18.1	17.6	17.0	16.5	16.0	14.2/8.5					
9.0	16.5	16.8	16.7	16.7	16.6	16.5	16.0	15.6	15.1	14.6	14.1	13.7	13.0	11.1/9.5			
10.0	13.5	14.6	14.5	14.4	14.3	14.3	14.2	14.2	13.5	13.1	12.7	12.3	11.9	10.9	9.8	8.4/10.5	
11.0		12.9	12.7	12.7	12.6	12.5	12.4	12.4	12.3	11.8	11.5	11.2	10.8	10.5	9.4	8.3	
12.0		11.5	11.4	11.3	11.2	11.1	11.0	11.0	10.9	10.8	10.4	10.2	9.8	9.6	9.1	8.0	
13.0		10.9/12.4	10.2	10.2	10.1	10.0	9.9	9.9	9.7	9.7	9.6	9.3	9.0	8.8	8.5	7.7	
14.0			9.3	9.2	9.1	9.0	8.9	8.9	8.8	8.7	8.7	8.6	8.3	8.1	7.8	7.3	
15.0			8.6/14.9	8.4	8.3	8.2	8.1	8.1	8.0	7.9	7.8	7.8	7.7	7.5	7.2	7.0	
16.0				7.7	7.6	7.5	7.4	7.4	7.3	7.2	7.1	7.1	7.0	6.9	6.7	6.5	
17.0				7.1	7.0	6.9	6.8	6.8	6.7	6.6	6.5	6.5	6.4	6.3	6.2	6.0	
18.0				7.0/17.3	6.5	6.4	6.3	6.3	6.2	6.1	6.0	6.0	5.8	5.8	5.6	5.7	
19.0					6.0	5.9	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.3	5.2	5.2	
20.0					5.7/19.7	5.5	5.4	5.4	5.3	5.2	5.1	5.1	5.0	4.9	4.8	4.8	
22.0						4.9	4.8	4.7	4.6	4.5	4.4	4.4	4.3	4.2	4.1	4.1	
24.0						4.8/22.1	4.2	4.1	4.0	3.9	3.9	3.8	3.7	3.6	3.5	3.5	
26.0							4.0/24.6	3.7	3.5	3.4	3.4	3.3	3.2	3.1	3.0	3.0	
28.0								3.4/27.0	3.2	3.0	3.0	2.9	2.8	2.7	2.6	2.6	
30.0									2.9/29.4	2.7	2.6	2.6	2.5	2.4	2.2	2.3	
32.0										2.4/31.8	2.3	2.3	2.2	2.1	1.9	2.0	
34.0											2.1	2.0	1.9	1.8	1.7	1.7	
36.0											2.0/34.3	1.8	1.7	1.6	1.5	1.5	
38.0												1.7/36.7	1.5	1.4	1.3	1.3	
40.0													1.4/39.1	1.2	1.1	1.1	
42.0														1.1/41.5	0.9	0.9	
44.0															0.8	0.8	
46.0																0.6	
48.0			Table no. 1100R-80/1978/18.0/11.16 SH													0.6/46.4	
Number of strands	6	6	6	5	4	4	3	3	3	3	2	2	2	2	2	1	

Comments:

1. The specified safe working load values apply for a level and stable stance of the machine.
2. The safe working load values are specified in tons (t) and apply for 360 degrees.
3. The safe working loads take the standards ISO 4305 Tab. 1+2 and the tilt angle method (tilt angle 4°) into account
4. Deduct the weight of the load handling devices (hook, suspension gear) from the load ratings.
5. The safe working load values apply for the maximum undercarriage track width of 3800 mm.
6. 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.
7. Permissible rope pull per strand in crane mode for winch diameter 22 mm – 8,500 kg
8. Safe working load values apply for the SH boom (boom assembly in accordance with the operating manual)
9. Safe working load values apply for optimum boom assembly and a pulley head with plastic pulleys.

Auxiliary jib S12.5

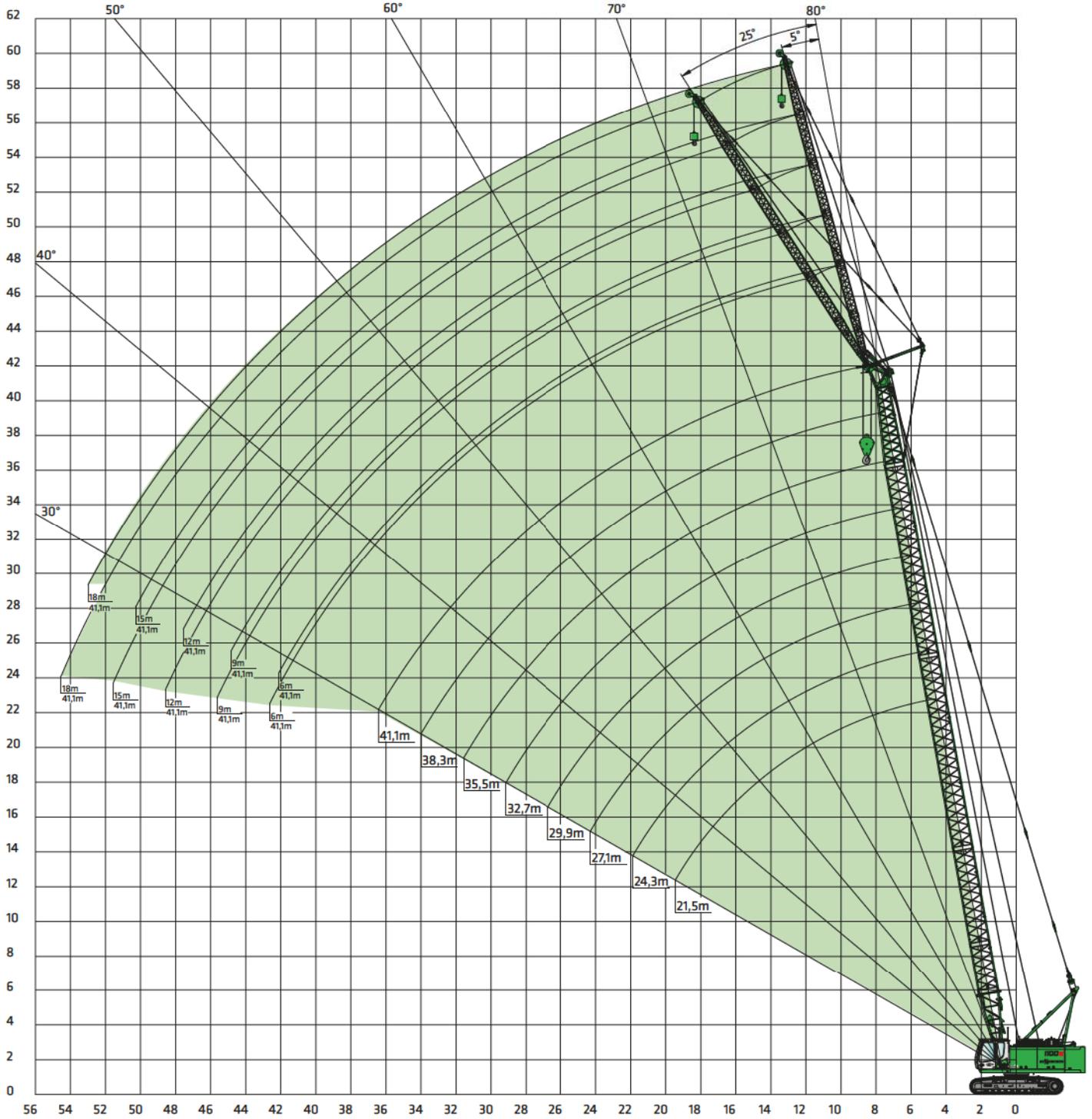
max. load capacity 8.5 t
(rope diameter 22 mm)



1100E Crane equipment



Main boom SH with fly jib FS



See page 11 for boom assembly

8 Subject to change. See page 7 for notes on load lift charts.

1100E Boom configuration

Main boom SH

Boom length [m]		10.3	13.1	15.9	18.7	21.5	24.3	27.1	29.9	32.7	35.5	38.3	41.1	43.9	46.7	49.5	52.3
Lower boom section type 1370	4.4 m	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Boom section type 1370	2.8 m	0	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1
Boom section type 1370	5.6 m	0	0	0	1	1	2	2	1	1	2	2	1	1	2	2	1
Boom section type 1370	11.2 m	0	0	0	0	0	0	0	1	1	1	1	2	2	2	2	3
Head piece type 1370	5.9 m	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Auxiliary jib S12.5 (option)	8.5 t	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

Main boom SHFS

Boom length [m]		21.5	24.3	27.1	29.9	32.7	35.5	38.3	41.1	6.0	9.0	12.0	15.0	18.0
Lower boom section type 1370	4.4 m	1	1	1	1	1	1	1	1					
Boom section type 1370	2.8 m	2	1	2	1	2	1	2	1					
Boom section type 1370	5.6 m	1	2	2	1	1	2	2	1					
Boom section type 1370	11.2 m	0	0	0	1	1	1	1	2					
Head piece type 1370	5.9 m	1	1	1	1	1	1	1	1					
Fly boom - lower boom section type 598	3.0 m									1	1	1	1	1
Fly boom - boom section type 598	3.0 m									0	1	2	3	4
Fly boom head piece type 598	3.0 m									1	1	1	1	1

Combination possibilities										
Fly jib length	6.0 m	x	x	x	x	x	x	x	x	x
	9.0 m	x	x	x	x	x	x	x	x	x
	12.0 m	x	x	x	x	x	x	x	x	x
	15.0 m	x	x	x	x	x	x	x	x	x
	18.0 m	x	x	x	x	x	x	x	x	x

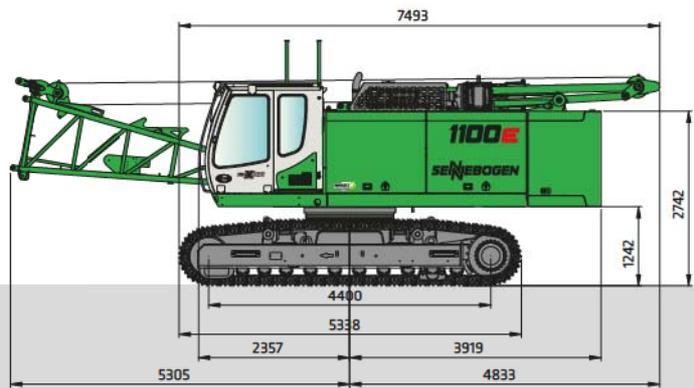
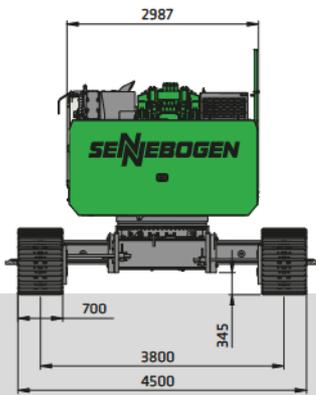
X = possible configuration



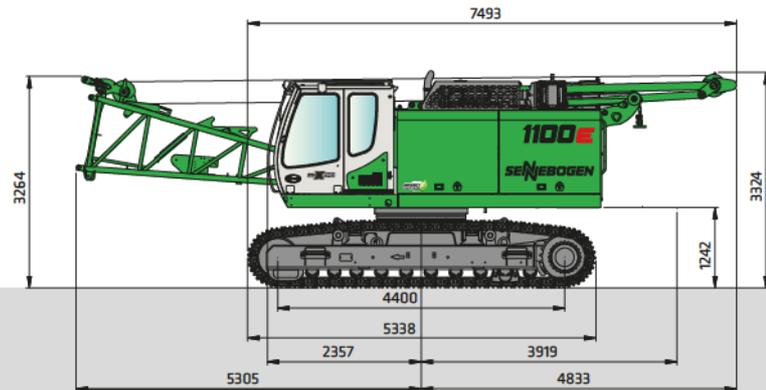
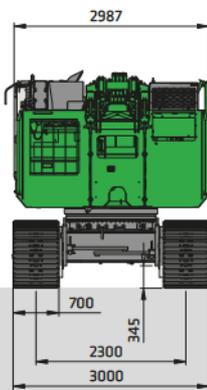
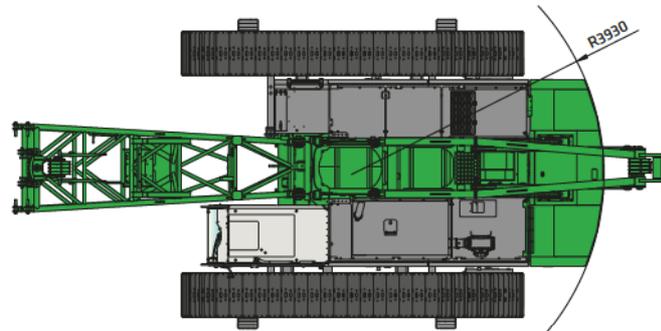
For 120 kN winches with 22 mm rope diameter

Capacity	Weight	Cable strand and maximum safe working load [kg]					
		6	5	4	3	2	1
10 t	200 kg						8,500
25 t 1-pulley	300 kg				25,000	17,000	8,500
40 t 2-pulley	350 kg		40,000	34,000	25,500	17,000	8,500
60 t 3-pulley	650 kg	50,000	42,500	34,000	25,500	17,000	8,500

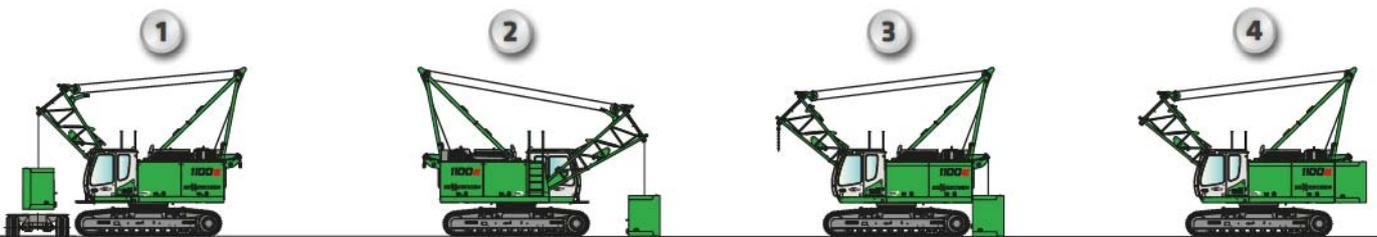
1100E Dimensions



1100 HD with counterweight 18 t, telescopic undercarriage T41/380, lower boom section, 2 x 12 t winch, approx 48,400 kg



1100 HD without counterweight, lower boom section, 2 x 12 t winch, approx. 30,400 kg



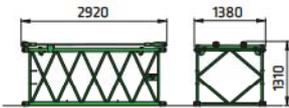
Ballast installation system

1100E Transport dimensions



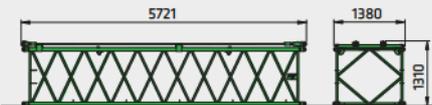
Lower boom section 4.4 m, type 1370

Weight: 830 kg



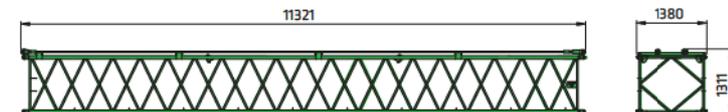
Intermediate boom section 2.8 m, type 1370

Weight: 300 kg (incl. holding rope)



Intermediate boom section 5.6 m, type 1370

Weight: 490 kg (incl. holding rope)



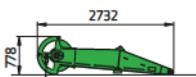
Intermediate boom section 11.2 m, type 1370

Weight: 870 kg (incl. holding rope)



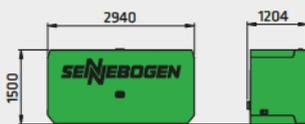
Boom headpiece 5.9 m, type 1370

steel pulleys: 1145 kg (incl. holding ropes)
plastic pulleys: 960 kg (incl. holding ropes)



Auxiliary jib S12.5

Weight: 280 kg



counterweight

weight: 18000 kg



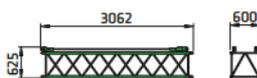
Counterweight shared (option)

Top section: 8600 kg
Bottom section: 9400 kg



Lower boom section 3 m, type 598

Weight: 330 kg



Intermediate boom section 3 m, type 598

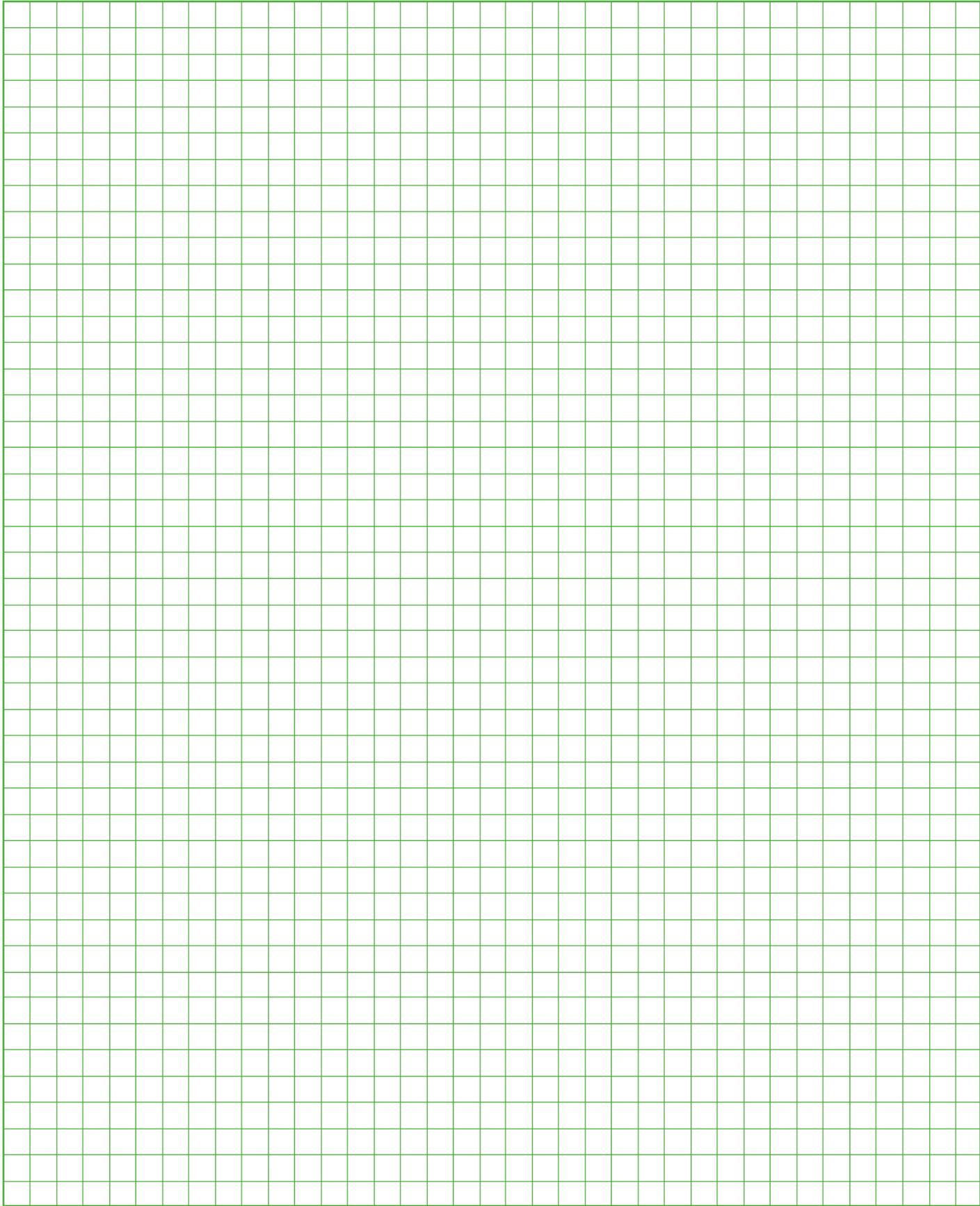
Weight: 120 kg (incl. holding rope)



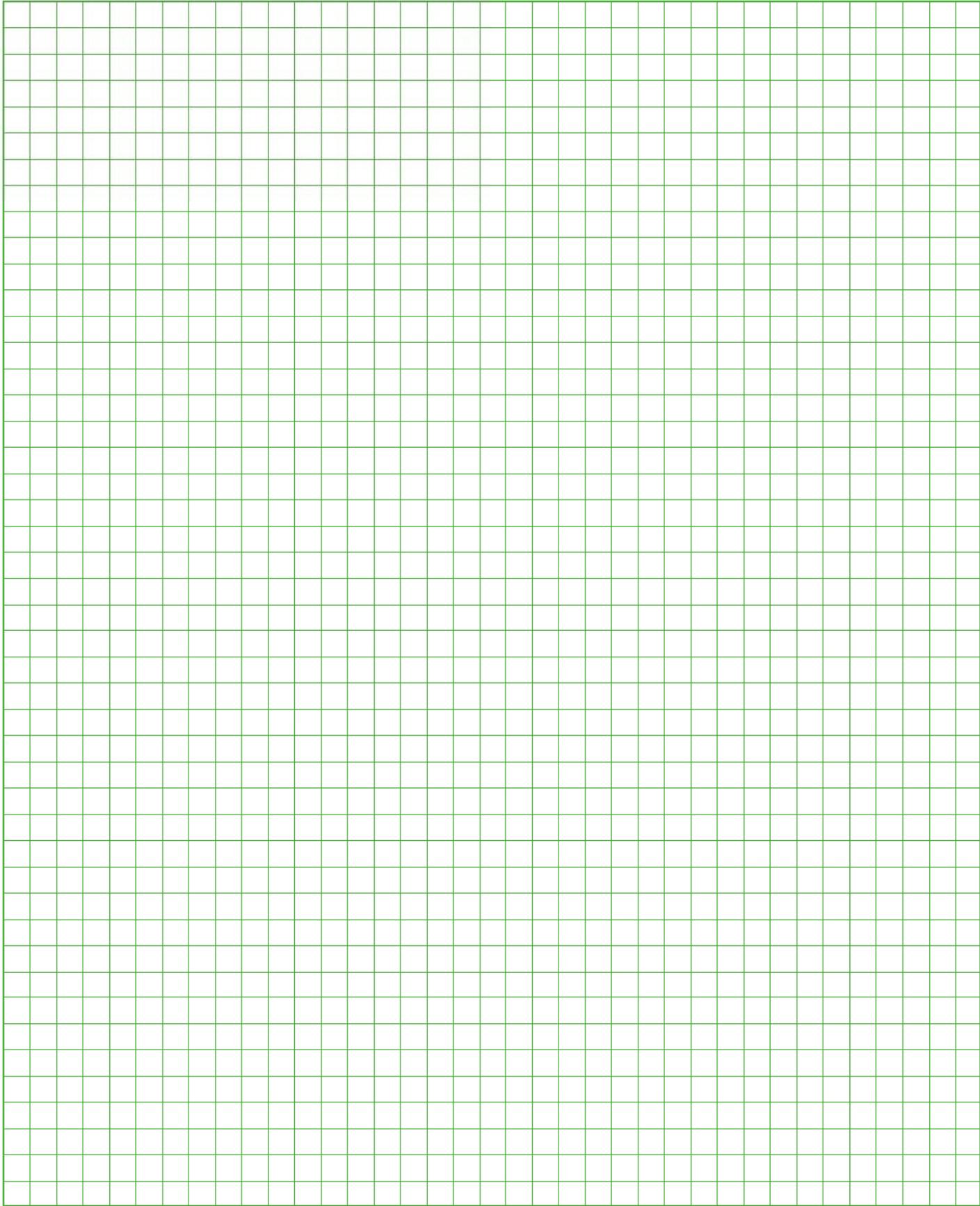
Boom headpiece 3 m, type 598

Weight: 210 kg (incl. holding rope)

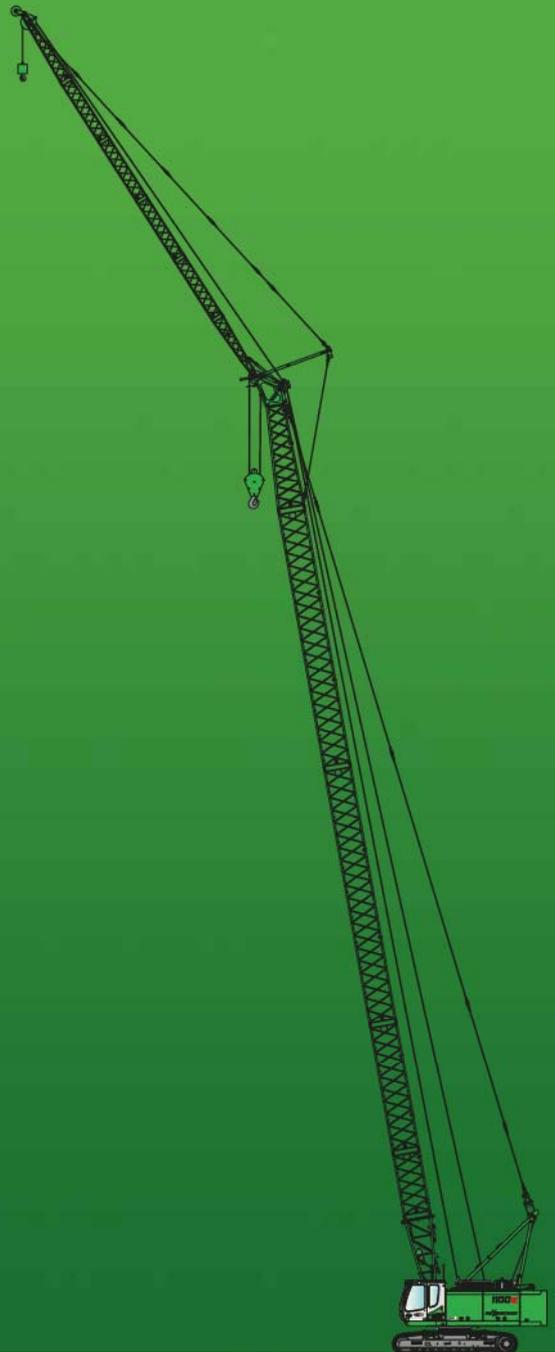
1100E Notes



1100E Notes



1100E



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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