

 **643 R**

# SENEBOGEN



**119** kW (Stage IIIa)

**129** kW (Stage IV)



**40** t



**30** m



**MULTICAB**

# 643E

Telescopic crawler crane

Stage IV

# 643E Advanced. The E-Series.



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°

3

### Maximum usability

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

Mobile undercarriage with outrigger – ready to go in no 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



**Stage IV**  
- Most modern,  
powerful engine  
- Fuel-efficient  
- Clean emissions

# 643E Technical data, equipment

## MACHINE TYPE

Model (type) **643**

## ENGINE

|                |   |
|----------------|---|
| Model          | Cummins diesel engine QSB 4.5<br><b>119 kW / 162 hp at 2,200 rpm</b><br>Compliant with Stage IIIa emission standards  |
|                | Cummins diesel engine QSB 4.5<br><b>129 kW / 175 hp at 2,500 rpm</b><br>Compliant with Stage IV 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      | <b>360 l</b>  |
| DEF tank       | <b>38 l</b>   |
| Electr. system | <b>24 V</b>   |
| Batteries      | <b>2 x 155 AH</b> battery disconnect switch   |
| Options        | <ul style="list-style-type: none"> <li>■ Low temperature package with engine pre-heating and heated diesel filter for temperatures below -20 °C</li> <li>■ Electric diesel fuel pump</li> </ul> |

## 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"> <li>■ Additional LED headlights</li> <li>■ Up to 2 additional cameras</li> <li>■ Maritime climate varnishing as corrosion protection</li> <li>■ Low temperature package for use at temperatures below -20 °C</li> </ul> |

## Options

- Automatic central lubrication for boom pivot point, luffing cylinder, slewing ring track and winch drum bearing
- Pinion tooth lubrication for slewing ring

## HYDRAULIC SYSTEM



|                    |  |
|--------------------|--|
|                    | Load sensing/LUDV hydraulic system, electrohydraulic pilot-controlled work functions, load limit sensing control   |
| Pump type          | Swashplate-type variable-displacement piston pump, load pressure-independent flow distribution for simultaneous, independent control of work functions   |
| Pump control       | Zero-stroke control, on-demand flow control – the pumps only pump as much oil as will actually be used, pressure purging, load limit sensing control   |
| Operating pressure | <b>max. 330 bar</b>  |
| Filtration         | High-performance filtration with long change interval  |
| Hydraulic tank     | <b>500 l</b>   |
| Control system     | Proportional, precision electrohydraulic actuation of work movements, 2 electric servo joysticks for work functions, including winch motion display via vibration transducer, additional functions via switches and pedals |
| Safety             | Hydraulic circuits secured with safety valves<br>Pipe fracture safety valve for luffing and telescoping cylinders  |
| Options            | <ul style="list-style-type: none"> <li>■ Bio-oil</li> <li>■ SENNEBOGEN HydroClean 3 µm hydraulic microfilter</li> <li>■ Electric heater for hydraulic tank for temperatures below -20 °C</li> </ul>                        |


## SLEWING DRIVE

|                    |   |
|--------------------|---|
| Gearbox            | Compact planetary gear with slant-axis hydraulic motor, integrated brake valves |
| Slewing gear brake | Spring-loaded disk brake, pedal for individual braking                          |
| Slewing ring       | Externally geared slewing ring, sealed  |
| Slewing speed      | <b>0-2 rpm</b> , variable   |





# 643E Technical data, equipment

|  <b>CAB</b>  |   |
|--|---|
| Cab type   | multiCab, can be inclined by 15°  |
| Cab equipment  | 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>■ Cab type E240, can be elevated 240 cm</li> <li>■ Cab can be tilted 20°</li> <li>■ Auxiliary heating system with timer</li> <li>■ Activated carbon filter for cabs</li> <li>■ Armored-glass windshield</li> <li>■ Armored-glass sunroof</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> |

|  <b>ATTACHMENTS</b> |  |
|--|--|
| Design   | Decades of experience, state-of-the-art computer simulation, maximum stability and service life, oversized and low-maintenance bearing points, sealed special bearing bushes, precision-crafted  |
| Telescopic boom  | 4-part with pulley head, continuous hydraulic telescoping to 9–30 m  |
| Hoisting winch   | Drive using inclined axis hydraulic motor with compact planetary gear, traction 35 kN (40 kN in the 1st position), cable speed 0–95 m/min., cable diameter 14 mm, 160 m cable length.  |
| 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>■ 6.5 m fly boom, tiltable (0°, 40°), extremely fast and easy setup without auxiliary devices, locked on basic boom when not in use</li> </ul>  |

|         |   |
|---------|---|
| Options | <ul style="list-style-type: none"> <li>■ Fly boom extension to 13 m, tiltable (0°, 40°)</li> <li>■ Wind movement display using vibrating joystick</li> <li>■ Auxiliary jib, 3.5 t load capacity, 1-strand</li> <li>■ 2nd crane winch: traction 35 kN (4th position), cable speed 0–95 m/min, cable diameter 14 mm, 130 m cable length</li> <li>■ Additional load charts accepted for 2°/4° incline position</li> <li>■ 7.5 kW electrohydraulic emergency unit</li> <li>■ Remote radio control</li> <li>■ Working range restriction</li> </ul> |
|---------|---|

|  <b>UNDERCARRIAGE</b> |   |
|--|---|
| Design   | <b>T41/380</b> crawler undercarriage with hydraulically extendable track width. Stable welded construction.   |
| Drive  | Hydraulic travel drive per chassis side, adjustable hydraulic drive motors  |
| Parking brake  | Spring-loaded, hydraulically ventilated disk brake  |
| Traveling gear   | 700 mm, 3-grouser base plates, maintenance-free tractor drive   |
| Speed  | <b>0–2.7 km/h</b>   |
| Options  | Available base plate types: <ul style="list-style-type: none"> <li>■ 800 mm 3-grouser base plates</li> <li>■ 900 mm 3-grouser base plates</li> <li>■ 700 mm flat base plates</li> </ul> |

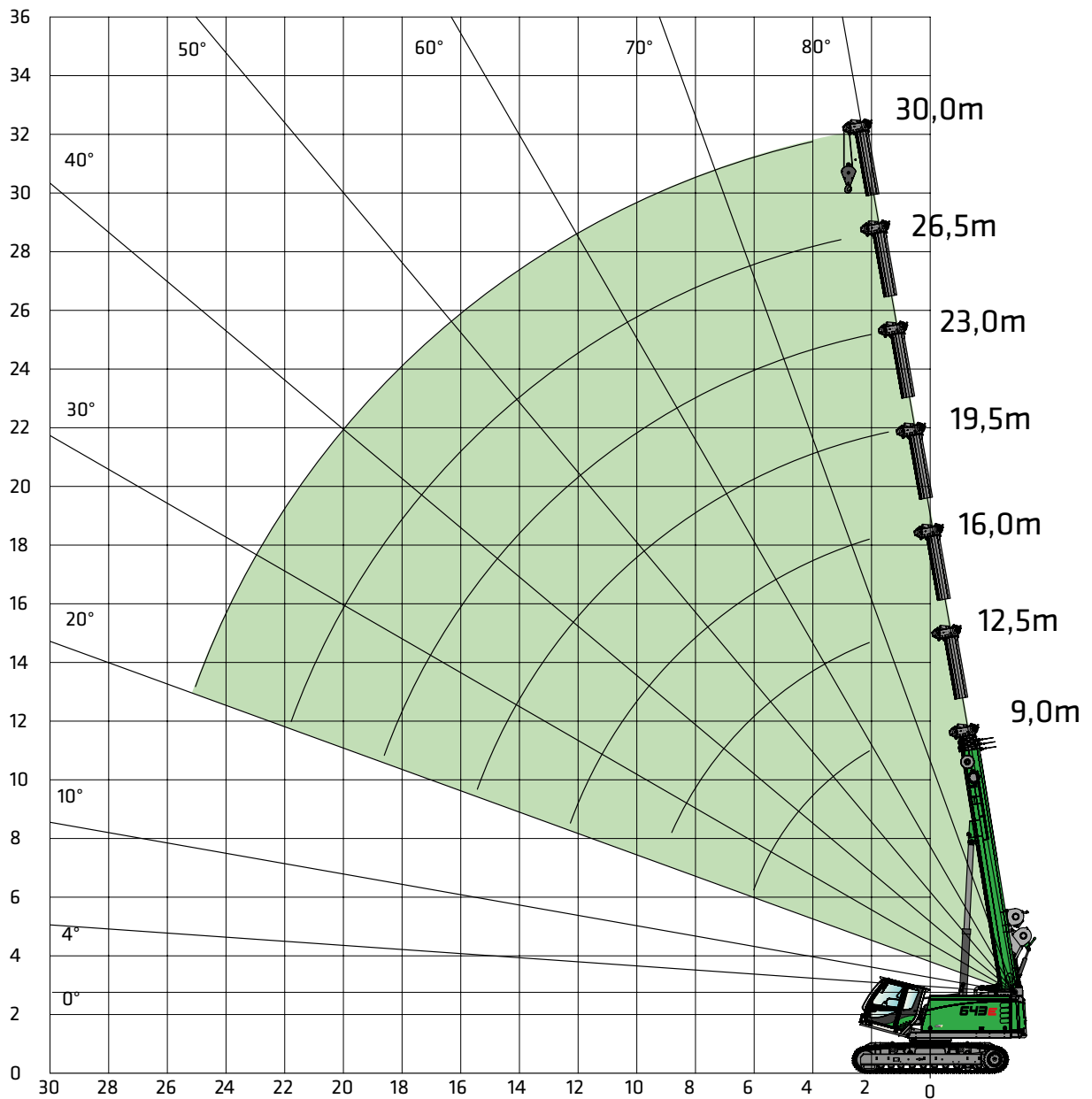
|  <b>OPERATING WEIGHT</b> |   |
|---|---|
| Mass  | <b>Approx. 42 t</b><br>With 30 m telescopic boom, 13 m fly boom, 35 t hook, 700 mm 3-grouser base plates, 2 hoisting winches, hydraulically telescoping undercarriage, 7 t ballast, 4 t undercarriage ballast |
| Notice  | The operating weight varies according to model type.  |



# 643E Crane equipment



30 m main boom (HA)



Hook

| Capacity         | Weight | Number of strands |           |           |           |           |           |           |          |          |
|------------------|--------|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|
|                  |        | 9                 | 8         | 7         | 6         | 5         | 4         | 3         | 2        | 1        |
| 32 t<br>4-pulley | 300 kg | 31,500 kg         | 28,000 kg | 24,500 kg | 21,000 kg | 17,500 kg | 14,000 kg | 10,500 kg | 7,000 kg | 3,500 kg |
| 25 t<br>3-pulley | 220 kg |                   |           | 24,500 kg | 21,000 kg | 17,500 kg | 14,000 kg | 10,500 kg | 7,000 kg | 3,500 kg |
| 4 t              | 40 kg  |                   |           |           |           |           |           |           |          | 3,500 kg |

# 643E Load ratings



30 m main boom (HA)

|                               | Boom length [m]                        |          |          |         |         |         |      |      |      |          |          |          |          |          |          |          |          |          |          |          |          |
|-------------------------------|--|----------|----------|---------|---------|---------|------|------|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
|                               | 9.0                                    |          |          | 12.5    |         |         | 16.0 |      |      | 19.5     |          |          | 23.0     |          |          | 26.5     |          |          | 30.0     |          |          |
| Counterweight [t]             | 7.0                                    | 7.0      | 7.0      | 7.0     | 7.0     | 7.0     | 7.0  | 7.0  | 7.0  | 7.0      | 7.0      | 7.0      | 7.0      | 7.0      | 7.0      | 7.0      | 7.0      | 7.0      | 7.0      | 7.0      | 7.0      |
| Undercarriage ballast [t]     | 4.0                                    | 4.0      | 4.0      | 4.0     | 4.0     | 4.0     | 4.0  | 4.0  | 4.0  | 4.0      | 4.0      | 4.0      | 4.0      | 4.0      | 4.0      | 4.0      | 4.0      | 4.0      | 4.0      | 4.0      | 4.0      |
| Undercarriage track width [m] | 3.8                                    | 3.0      | 2.3      | 3.8     | 3.0     | 2.3     | 3.8  | 3.0  | 2.3  | 3.8      | 3.0      | 2.3      | 3.8      | 3.0      | 2.3      | 3.8      | 3.0      | 2.3      | 3.8      | 3.0      | 2.3      |
| Outreach [m]                  |  |          |          |         |         |         |      |      |      |          |          |          |          |          |          |          |          |          |          |          |          |
| 2.0                           | 40.0*                                  | 40.0*    | 40.0*    |         |         |         |      |      |      |          |          |          |          |          |          |          |          |          |          |          |          |
| 3.0                           | 35.0                                   | 35.0     | 33.0     | 20.0    | 20.0    | 20.0    | 15.0 | 15.0 | 15.0 | 14.0     | 14.0     | 14.0     | 11.0     | 11.0     | 11.0     | 8.9      | 8.9      | 8.9      | 5.0      | 5.0      | 5.0      |
| 4.0                           | 30.2                                   | 27.7     | 20.2     | 20.0    | 20.0    | 19.9    | 15.0 | 15.0 | 15.0 | 14.0     | 14.0     | 14.0     | 11.0     | 11.0     | 11.0     | 8.9      | 8.9      | 8.9      | 5.0      | 5.0      | 5.0      |
| 5.0                           | 25.5                                   | 18.9     | 14.2     | 20.0    | 18.7    | 14.0    | 15.0 | 15.0 | 13.9 | 13.3     | 13.3     | 13.3     | 11.0     | 11.0     | 11.0     | 8.6      | 8.6      | 8.6      | 5.0      | 5.0      | 5.0      |
| 6.0                           | 18.0                                   | 14.1     | 10.7     | 18.5    | 13.9    | 10.5    | 14.9 | 13.8 | 10.5 | 12.0     | 12.0     | 10.9     | 10.3     | 10.3     | 10.3     | 8.3      | 8.3      | 8.3      | 5.0      | 5.0      | 5.0      |
| 7.0                           | 11.8/6.2                               | 13.4/6.2 | 10.2/6.2 | 14.3    | 10.9    | 8.3     | 13.2 | 10.8 | 8.2  | 10.9     | 10.9     | 8.6      | 9.5      | 9.5      | 8.9      | 7.8      | 7.8      | 7.8      | 5.0      | 5.0      | 5.0      |
| 8.0                           |  |          |          | 11.5    | 8.8     | 6.7     | 11.4 | 8.7  | 6.6  | 9.8      | 9.1      | 7.0      | 8.7      | 8.7      | 7.3      | 7.4      | 7.4      | 7.4      | 5.0      | 5.0      | 5.0      |
| 9.0                           |  |          |          | 9.5     | 7.3     | 5.5     | 9.4  | 7.2  | 5.4  | 9.0      | 7.6      | 5.8      | 7.9      | 7.8      | 6.1      | 6.9      | 6.9      | 6.2      | 5.0      | 5.0      | 5.0      |
| 10.0                          |  |          |          | 7.5/9.6 | 6.5/9.6 | 4.9/9.6 | 8.0  | 6.1  | 4.5  | 8.3      | 6.4      | 4.9      | 7.1      | 6.7      | 5.1      | 6.4      | 6.4      | 5.3      | 5.0      | 5.0      | 5.0      |
| 11.0                          |  |          |          |         |         |         | 6.8  | 5.1  | 3.7  | 7.2      | 5.5      | 4.1      | 6.5      | 5.7      | 4.4      | 5.9      | 5.9      | 4.5      | 5.0      | 5.0      | 4.7      |
| 12.0                          |  |          |          |         |         |         | 5.9  | 4.4  | 3.1  | 6.2      | 4.7      | 3.5      | 5.9      | 5.0      | 3.7      | 5.5      | 5.2      | 3.9      | 5.0      | 5.0      | 4.1      |
| 13.0                          |  |          |          |         |         |         | 5.0  | 3.7  | 2.6  | 5.4      | 4.1      | 3.0      | 5.5      | 4.3      | 3.2      | 5.1      | 4.5      | 3.4      | 4.7      | 4.7      | 3.5      |
| 14.0                          |  |          |          |         |         |         |      |      |      | 4.8      | 3.6      | 2.6      | 5.0      | 3.8      | 2.8      | 4.8      | 4.0      | 3.0      | 4.4      | 4.1      | 3.1      |
| 15.0                          |  |          |          |         |         |         |      |      |      | 4.2      | 3.1      | 2.2      | 4.5      | 3.3      | 2.4      | 4.5      | 3.5      | 2.6      | 4.1      | 3.7      | 2.7      |
| 16.0                          |  |          |          |         |         |         |      |      |      | 3.7      | 2.7      | 1.9      | 4.0      | 2.9      | 2.1      | 4.2      | 3.1      | 2.3      | 3.8      | 3.3      | 2.4      |
| 17.0                          |  |          |          |         |         |         |      |      |      | 3.5/16.6 | 2.5/16.6 | 1.7/16.6 | 3.6      | 2.6      | 1.8      | 3.7      | 2.8      | 2.0      | 3.6      | 2.9      | 2.1      |
| 18.0                          |  |          |          |         |         |         |      |      |      |          |          |          | 3.2      | 2.3      | 1.6      | 3.4      | 2.5      | 1.7      | 3.3      | 2.6      | 1.9      |
| 19.0                          |  |          |          |         |         |         |      |      |      |          |          |          | 2.9      | 2.0      | 1.3      | 3.0      | 2.2      | 1.5      | 3.1      | 2.3      | 1.6      |
| 20.0                          |  |          |          |         |         |         |      |      |      |          |          |          | 2.6      | 1.8      | 1.1      | 2.7      | 2.0      | 1.3      | 2.9      | 2.1      | 1.4      |
| 21.0                          |  |          |          |         |         |         |      |      |      |          |          |          | 2.5/20.1 | 1.8/20.1 | 1.1/20.1 | 2.5      | 1.8      | 1.1      | 2.6      | 1.9      | 1.3      |
| 22.0                          |  |          |          |         |         |         |      |      |      |          |          |          |          |          |          | 2.2      | 1.6      | 1.0      | 2.4      | 1.7      | 1.1      |
| 23.0                          |  |          |          |         |         |         |      |      |      |          |          |          |          |          |          | 1.9/23.6 | 1.3/23.6 | 0.7/23.6 | 2.2      | 1.5      | 0.9      |
| 24.0                          |  |          |          |         |         |         |      |      |      |          |          |          |          |          |          |          |          |          | 2.0      | 1.3      | 0.8      |
| 25.0                          |  |          |          |         |         |         |      |      |      |          |          |          |          |          |          |          |          |          | 1.8      | 1.2      | 0.7      |
| 26.0                          |  |          |          |         |         |         |      |      |      |          |          |          |          |          |          |          |          |          | 1.6      | 1.1      | 0.6      |
| 27.0                          | Table no.: 643R-30.0/75/1977/7.0/08.06 |          |          |         |         |         |      |      |      |          |          |          |          |          |          |          |          |          | 1.5      | 1.0      | 0.5      |
| 28.0                          | Table no.: 643R-30.0/75/1677/7.0/02.08 |          |          |         |         |         |      |      |      |          |          |          |          |          |          |          |          |          | 1.5/27.1 | 0.9/27.1 | 0.5/27.1 |
| Number of strands             | 10                                     | 10       | 10       | 6       | 6       | 6       | 5    | 5    | 5    | 4        | 4        | 4        | 4        | 4        | 4        | 3        | 3        | 3        | 2        | 2        | 2        |
| I                             | 0%                                     |          |          | 50%     |         |         | 100% |      |      | 100%     |          |          | 100%     |          |          | 100%     |          |          |          |          |          |
| II                            | 0%                                     |          |          | 0%      |         |         | 0%   |      |      | 25%      |          |          | 50%      |          |          | 75%      |          |          |          |          |          |
| III                           | 0%                                     |          |          | 0%      |         |         | 0%   |      |      | 25%      |          |          | 50%      |          |          | 75%      |          |          |          |          |          |
| at collapsible jib            |  |          |          |         |         |         |      |      |      |          |          |          |          |          |          |          |          |          |          |          |          |
| Load capacity reduction [kg]  | 570                                    |          |          | 420     |         |         | 330  |      |      | 280      |          |          | 240      |          |          | 210      |          |          | 180      |          |          |

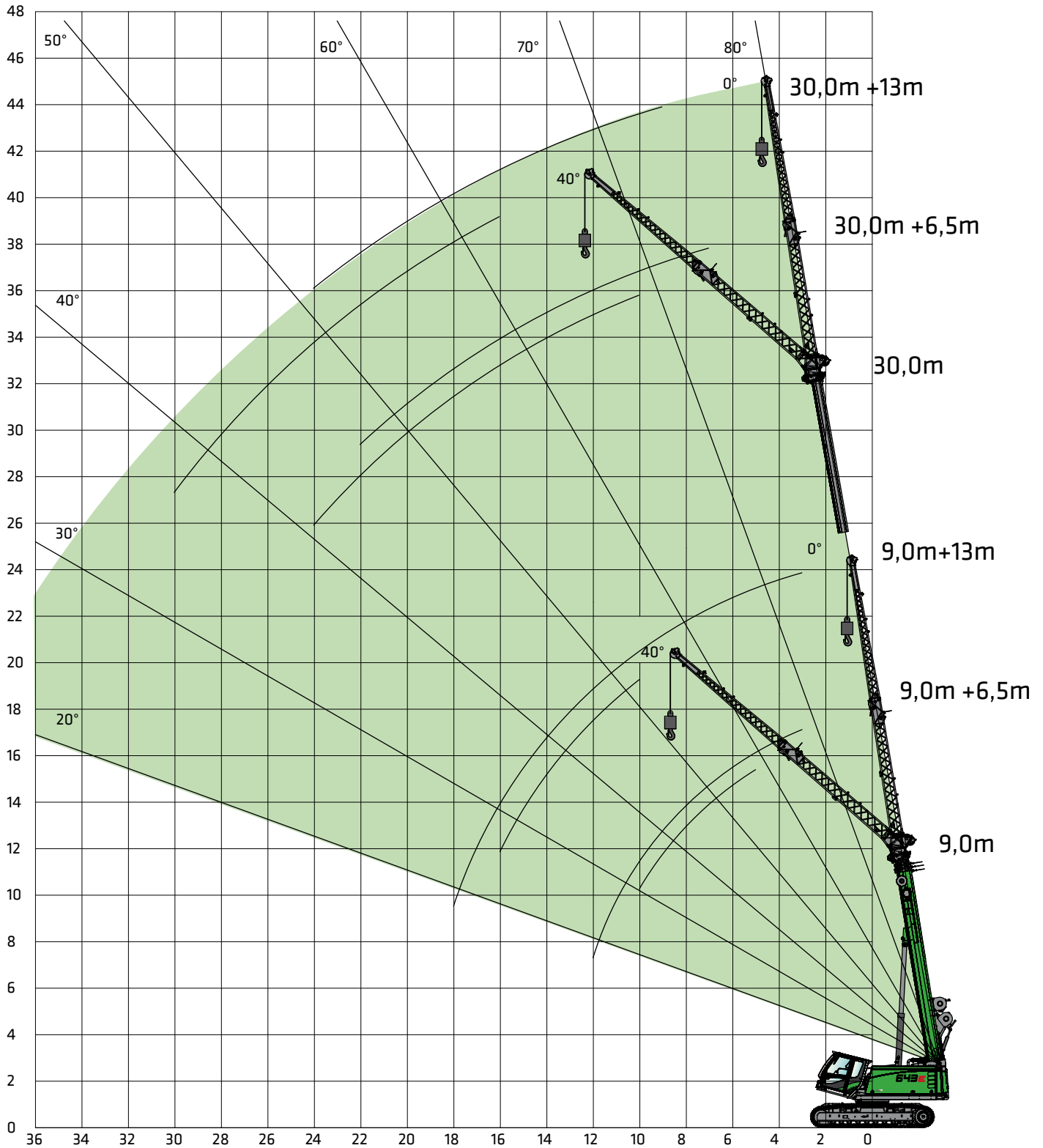
\* only possible with special equipment

Subject to change. See page 12 for notes on load lift charts.

# 643E Crane equipment



6.5 m or 13 m fly boom (SA)





# 643E Load ratings



6.5 m fly boom (SA)

| 7.0 t             | 4.0 t  | Telescopic boom length [m] |      |      |      |      |      |      |   |
|-------------------|--|----------------------------|------|------|------|------|------|------|---|
|                   |  | 9.0                        |      | 16.0 |      | 23.0 |      | 30.0 |   |
| 3.8 m             | 0°   | 40°                        | 0°   | 40°  | 0°   | 40°  | 0°   | 40°  |   |
| Outreach [m]      |  |                            |      |      |      |      |      |      |   |
| 2.0               |  |                            |      |      |      |      |      |      |   |
| 3.0               | 6.0  |                            | 6.0  |      |      |      |      |      |   |
| 4.0               | 6.0  |                            | 6.0  |      |      |      |      |      |   |
| 5.0               | 5.5  | 3.5                        | 6.0  |      | 6.0  |      |      |      |   |
| 6.0               | 4.9  | 3.3                        | 6.0  | 3.6  | 6.0  |      |      |      |   |
| 7.0               | 4.4  | 3.1                        | 5.9  | 3.4  | 6.0  |      | 3.5  |      |   |
| 8.0               | 4.0  | 2.9                        | 5.4  | 3.3  | 5.9  | 3.4  | 3.5  |      |   |
| 9.0               | 3.7  | 2.8                        | 5.0  | 3.2  | 5.6  | 3.3  | 3.5  |      |   |
| 10.0              | 3.4  | 2.7                        | 4.6  | 3.1  | 5.3  | 3.2  | 3.5  | 3.2  |   |
| 11.0              | 3.1  |                            | 4.3  | 3.0  | 5.0  | 3.2  | 3.5  | 3.0  |   |
| 12.0              | 2.8  |                            | 4.1  | 2.8  | 4.7  | 3.1  | 3.5  | 2.9  |   |
| 13.0              |  |                            | 3.9  | 2.8  | 4.4  | 3.0  | 3.5  | 2.8  |   |
| 14.0              |  |                            | 3.7  | 2.8  | 4.2  | 2.9  | 3.3  | 2.7  |   |
| 15.0              |  |                            | 3.5  |      | 3.9  | 2.9  | 3.0  | 2.5  |   |
| 16.0              |  |                            | 3.3  |      | 3.7  | 2.8  | 2.8  | 2.4  |   |
| 18.0              |  |                            | 2.9  |      | 3.3  | 2.7  | 2.4  | 2.3  |   |
| 20.0              |  |                            |      |      | 2.7  | 2.6  | 2.1  | 2.1  |   |
| 22.0              |  |                            |      |      | 2.2  |      | 1.9  | 1.9  |   |
| 24.0              |  |                            |      |      | 1.7  |      | 1.8  | 1.7  |   |
| 26.0              |  |                            |      |      | 1.4  |      | 1.5  | 1.6  |   |
| 28.0              |  |                            |      |      |      |      | 1.2  |      |   |
| 30.0              |  |                            |      |      |      |      | 0.9  |      |   |
| 32.0              |  |                            |      |      |      |      | 0.7  |      |   |
| 34.0              |  |                            |      |      |      |      |      |      |   |
| 36.0              |  |                            |      |      |      |      |      |      |   |
| 38.0              | Table no.: 643R-30.0/75/1977/7.0/08.06 SA6.5 |                            |      |      |      |      |      |      |   |
| Number of strands | 1  | 1                          | 1    | 1    | 1    | 1    | 1    | 1    | 1 |
| I                 | 0%   |                            | 100% |      | 100% |      | 100% |      |   |
| II                | 0%   |                            | 0%   |      | 50%  |      | 100% |      |   |
| III               | 0%   |                            | 0%   |      | 50%  |      | 100% |      |   |

# 643E Load ratings



13 m fly boom (SA)

|   | 7.0 t | 4.0 t | Telescopic boom length [m] |  |      |  |      |  |      |  |      |  |      |  |
|---|-------|-------|----------------------------|--|------|--|------|--|------|--|------|--|------|--|
|   |       |       | 9.0                        |  | 16.0 |  | 23.0 |  | 30.0 |  |      |  |      |  |
|   |       |       | 0°                         |  | 40°  |  | 0°   |  | 40°  |  | 0°   |  | 40°  |  |
| Outreach [m]                                  | 3.8 m |       |                            |  |      |  |      |  |      |  |      |  |      |  |
| 2.0   |       |       |                            |  |      |  |      |  |      |  |      |  |      |  |
| 3.0   | 3.0   |       |                            |  |      |  |      |  |      |  |      |  |      |  |
| 4.0   | 3.0   |       |                            |  |      |  |      |  |      |  |      |  |      |  |
| 5.0   | 3.0   |       | 3.0                        |  |      |  |      |  |      |  |      |  |      |  |
| 6.0   | 3.0   |       | 3.0                        |  |      |  |      |  |      |  |      |  |      |  |
| 7.0   | 2.9   |       | 3.0                        |  | 3.0  |  |      |  |      |  |      |  |      |  |
| 8.0   | 2.6   |       | 3.0                        |  | 3.0  |  |      |  |      |  |      |  |      |  |
| 9.0   | 2.3   |       | 2.9                        |  | 3.0  |  |      |  | 2.0  |  |      |  |      |  |
| 10.0  | 2.1   |       | 1.6                        |  | 2.7  |  | 2.9  |  | 2.0  |  |      |  |      |  |
| 11.0  | 2.0   |       | 1.5                        |  | 2.5  |  | 2.7  |  | 2.0  |  |      |  |      |  |
| 12.0  | 1.8   |       | 1.4                        |  | 2.4  |  | 2.6  |  | 2.0  |  |      |  |      |  |
| 13.0  | 1.7   |       | 1.4                        |  | 2.2  |  | 2.5  |  | 2.0  |  |      |  |      |  |
| 14.0  | 1.6   |       | 1.3                        |  | 2.1  |  | 2.4  |  | 1.5  |  | 2.0  |  |      |  |
| 15.0  | 1.6   |       | 1.3                        |  | 2.0  |  | 2.3  |  | 1.5  |  | 2.0  |  |      |  |
| 16.0  | 1.5   |       | 1.3                        |  | 1.9  |  | 2.2  |  | 1.4  |  | 2.0  |  | 1.5  |  |
| 18.0  | 1.1   |       |                            |  | 1.7  |  | 2.0  |  | 1.4  |  | 2.0  |  | 1.4  |  |
| 20.0  |       |       |                            |  | 1.6  |  | 1.8  |  | 1.3  |  | 1.9  |  | 1.4  |  |
| 22.0  |       |       |                            |  | 1.4  |  | 1.7  |  | 1.3  |  | 1.7  |  | 1.3  |  |
| 24.0  |       |       |                            |  | 1.3  |  | 1.6  |  | 1.3  |  | 1.6  |  | 1.3  |  |
| 26.0  |       |       |                            |  |      |  | 1.4  |  | 1.3  |  | 1.4  |  | 1.2  |  |
| 28.0  |       |       |                            |  |      |  | 1.3  |  |      |  | 1.3  |  | 1.2  |  |
| 30.0  |       |       |                            |  |      |  | 1.3  |  |      |  | 1.2  |  | 1.1  |  |
| 32.0  |       |       |                            |  |      |  | 1.1  |  |      |  | 1.1  |  | 1.1  |  |
| 34.0  |       |       |                            |  |      |  |      |  |      |  | 0.9  |  |      |  |
| 36.0  |       |       |                            |  |      |  |      |  |      |  | 0.7  |  |      |  |
| 38.0  |       |       |                            |  |      |  |      |  |      |  | 0.6  |  |      |  |
| Table no.: 643R-30.0/75/1977/7.0/08.06 SA13.0 |       |       |                            |  |      |  |      |  |      |  |      |  |      |  |
| Number of strands                             | 1     |       | 1                          |  | 1    |  | 1    |  | 1    |  | 1    |  | 1    |  |
| I   | 0%    |       | 100%                       |  | 100% |  | 100% |  | 100% |  | 100% |  | 100% |  |
| II  | 0%    |       | 0%                         |  | 50%  |  | 100% |  | 100% |  | 100% |  | 100% |  |
| III   | 0%    |       | 0%                         |  | 0%   |  | 50%  |  | 100% |  | 100% |  | 100% |  |

# 643E Load ratings



Auxiliary jib (HA-S)

|                               | Boom length [m]                             |           |            |            |            |            |            |            |            |            |            |            |            |           |
|-------------------------------|---|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|
|                               | 9.0   |           | 12.5       |            | 16.0       |            | 19.5       |            | 23.0       |            | 26.5       |            | 30.0       |           |
| Counterweight [t]             | 7.0   | 7.0       | 7.0        | 7.0        | 7.0        | 7.0        | 7.0        | 7.0        | 7.0        | 7.0        | 7.0        | 7.0        | 7.0        | 7.0       |
| Undercarriage ballast [t]     | 4.0   | 4.0       | 4.0        | 4.0        | 4.0        | 4.0        | 4.0        | 4.0        | 4.0        | 4.0        | 4.0        | 4.0        | 4.0        | 4.0       |
| Undercarriage track width [m] | 3.8   | 2.3       | 3.8        | 2.3        | 3.8        | 2.3        | 3.8        | 2.3        | 3.8        | 2.3        | 3.8        | 2.3        | 3.8        | 2.3       |
| <b>Outreach [m]</b>           |   |           |            |            |            |            |            |            |            |            |            |            |            |           |
| 2.0                           |   |           |            |            |            |            |            |            |            |            |            |            |            |           |
| 3.0                           | 3.5   | 3.5       | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5 / 3.5 |
| 4.0                           | 3.5   | 3.5       | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5       |
| 5.0                           | 3.5   | 3.5       | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5       |
| 6.0                           | 3.5   | 3.5       | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5       |
| 7.0                           | 3.5 / 6.7                                   | 3.5 / 6.7 | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5       |
| 8.0                           |   |           | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5       |
| 9.0                           |   |           | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5       |
| 10.0                          |   |           | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5       |
| 11.0                          |   |           | 3.5 / 10.2 | 3.5 / 10.2 | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5       |
| 12.0                          |   |           |            |            | 3.5        | 3.0        | 3.5        | 3.4        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5        | 3.5       |
| 13.0                          |   |           |            |            | 3.5        | 2.5        | 3.5        | 2.9        | 3.5        | 3.1        | 3.5        | 3.3        | 3.5        | 3.4       |
| 14.0                          |   |           |            |            | 3.5 / 13.7 | 2.1 / 13.7 | 3.5        | 2.5        | 3.5        | 2.7        | 3.5        | 2.9        | 3.5        | 3.0       |
| 15.0                          |   |           |            |            |            |            | 3.5        | 2.1        | 3.5        | 2.3        | 3.5        | 2.5        | 3.5        | 2.6       |
| 16.0                          |   |           |            |            |            |            | 3.5        | 1.8        | 3.5        | 2.0        | 3.5        | 2.2        | 3.5        | 2.3       |
| 17.0                          |   |           |            |            |            |            | 3.1        | 1.5        | 3.5        | 1.7        | 3.5        | 1.9        | 3.5        | 2.0       |
| 18.0                          |   |           |            |            |            |            | 3.0 / 17.2 | 1.4 / 17.2 | 3.1        | 1.5        | 3.3        | 1.6        | 3.2        | 1.8       |
| 19.0                          |   |           |            |            |            |            |            |            | 2.8        | 1.2        | 2.9        | 1.4        | 3.0        | 1.5       |
| 20.0                          |   |           |            |            |            |            |            |            | 2.5        | 1.0        | 2.6        | 1.2        | 2.8        | 1.3       |
| 21.0                          |   |           |            |            |            |            |            |            | 2.2 / 20.7 | 0.8 / 20.7 | 2.4        | 1.0        | 2.5        | 1.2       |
| 22.0                          |   |           |            |            |            |            |            |            |            |            | 2.1        | 0.9        | 2.3        | 1.0       |
| 23.0                          |   |           |            |            |            |            |            |            |            |            | 1.8        | 0.7        | 2.1        | 0.8       |
| 24.0                          |   |           |            |            |            |            |            |            |            |            | 1.7 / 24.2 | 0.6 / 24.2 | 1.9        | 0.7       |
| 25.0                          |   |           |            |            |            |            |            |            |            |            |            |            | 1.7        | 0.6       |
| 26.0                          |   |           |            |            |            |            |            |            |            |            |            |            | 1.5        | 0.5       |
| 27.0                          | Table no.: 643R-30.0/75/1977/7.0/12.16 HA-S |           |            |            |            |            |            |            |            |            |            |            | 1.4        |           |
| 28.0                          | Table no.: 643R-30.0/75/1227/7.0/12.16 HA-S |           |            |            |            |            |            |            |            |            |            |            | 1.4 / 27.1 |           |
| <b>Number of strands</b>      | <b>1</b>                                    | <b>1</b>  | <b>1</b>   | <b>1</b>   | <b>1</b>   | <b>1</b>   | <b>1</b>   | <b>1</b>   | <b>1</b>   | <b>1</b>   | <b>1</b>   | <b>1</b>   | <b>1</b>   | <b>1</b>  |
| I                             | 0%  |           | 50%        |            | 100%       |            | 100%       |            | 100%       |            | 100%       |            | 100%       |           |
| II                            | 0%  |           | 0%         |            | 0%         |            | 25%        |            | 50%        |            | 75%        |            | 100%       |           |
| III                           | 0%  |           | 0%         |            | 0%         |            | 25%        |            | 50%        |            | 75%        |            | 0%         |           |
| at collapsible jib            |   |           |            |            |            |            |            |            |            |            |            |            |            |           |
| Load capacity reduction [kg]  | 570   |           | 420        |            | 330        |            | 280        |            | 240        |            | 210        |            | 180        |           |

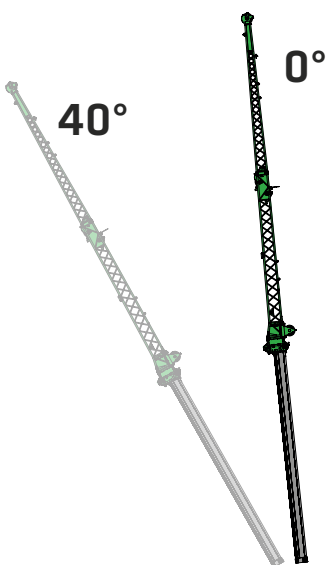
# 643E Load capacity programs

|                   |                           | Main boom HA              |          |          | Auxiliary jib HA-S |          | 6.5 m fly boom (SA) |   |   | Fly boom SA 13 m |   |   |
|-------------------|---------------------------|---------------------------|----------|----------|--------------------|----------|---------------------|---|---|------------------|---|---|
| Counterweight [t] | Undercarriage ballast [t] |                           |          |          |                    |          |                     |   |   |                  |   |   |
|                   |                           | Undercarriage track width |          |          |                    |          |                     |   |   |                  |   |   |
|                   |                           |                           |          |          |                    |          |                     |   |   |                  |   |   |
|                   |                           | 360°<br>                  | 360°<br> | 360°<br> | 360°<br>           | 360°<br> | 360°<br>            | - | - | 360°<br>         | - | - |

## Note:

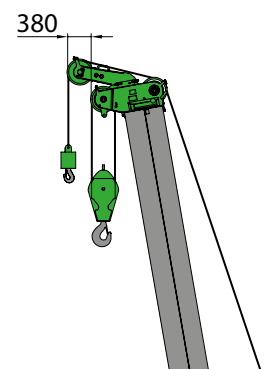
1. Specified load ratings only apply when machine is level ( $\pm 0.3^\circ$ ) and stable.
2. Load ratings are specified in tons and apply to 360 degrees.
3. Load ratings are in accordance with DIN 15019.2 and ISO 4305.
4. The weight of the load handling devices (e.g., hook, suspension gear) must be 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. Specified load ratings are for reference only. The currently valid load ratings can be found in the tables in the operating manual.
8. Optional load capacities are also available for a  $2^\circ/4^\circ$  incline position.

## 643E Fly boom

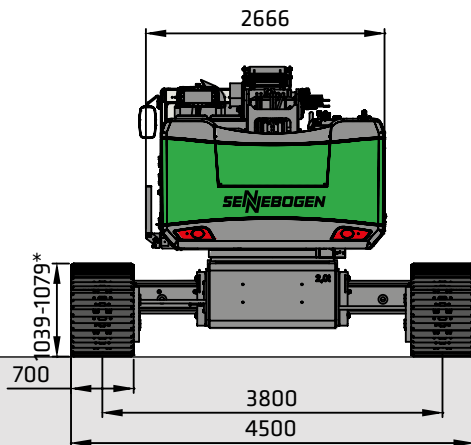


### Fly boom variants

- 6.5 m fly boom\*  
Max. 2-strand, possible offset angle  $0^\circ/40^\circ$
- 13 m fly boom\*  
with 6.5 m extension,  
1-strand, offset angle  $0^\circ/40^\circ$
- Auxiliary jib  
3.5 t load capacity, 1-strand



# 643E Transport dimensions and weights

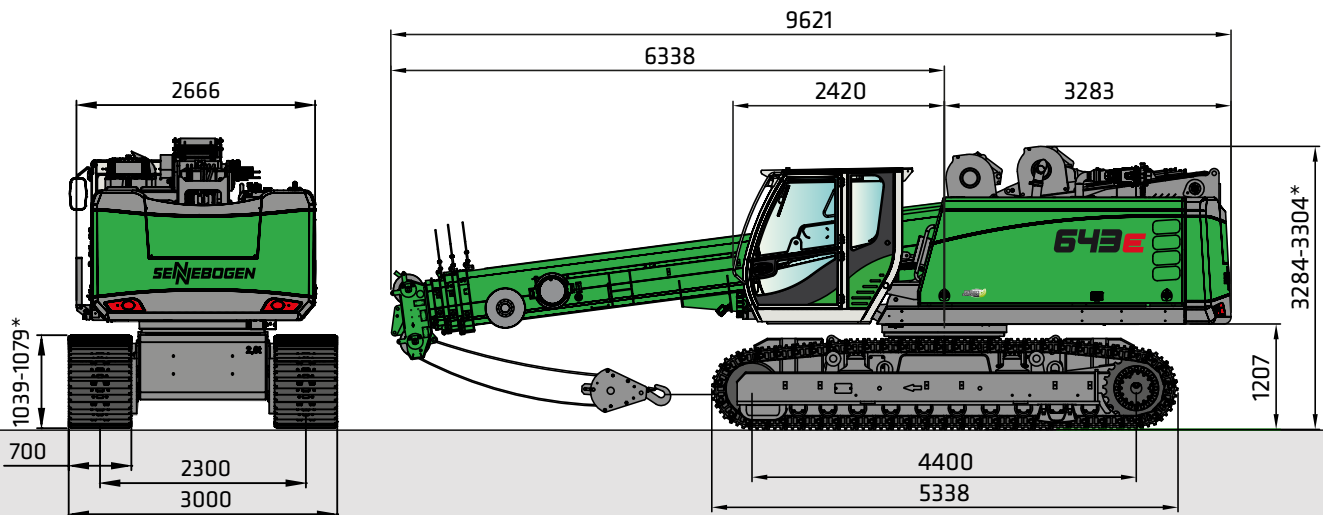


| Base plates | Min. transport width |
|-------------|----------------------|
| 700 mm      | 3000 mm              |
| 800 mm      | 3300 mm              |
| 900 mm      | 3400 mm              |

643 with T41/380 undercarriage and 700 mm 3-grouser base plates

Operating weight: approx. 42 t

(with 13 m fly boom, 2 hoisting winches, 7.0 t counterweight, 4.0 t undercarriage ballast and 35 t hook)

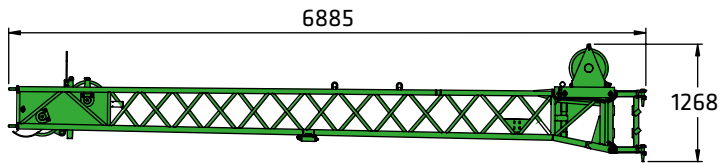


Transport weight: approx. 38,000 kg (13 m fly boom, 2 hoisting winches, without undercarriage ballast)

approx. 42,000 kg (13 m fly boom, 2 hoisting winches, with undercarriage ballast)

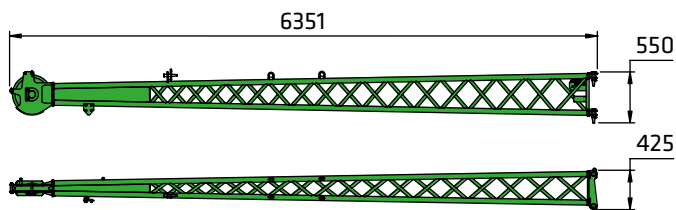
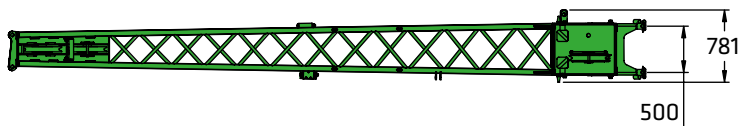


# 643E Transport dimensions and weights



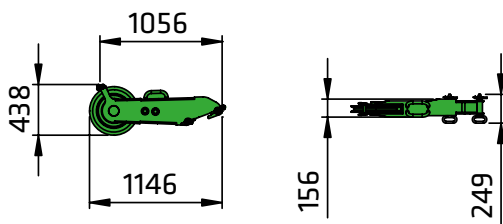
6.5 m fly boom

600 kg



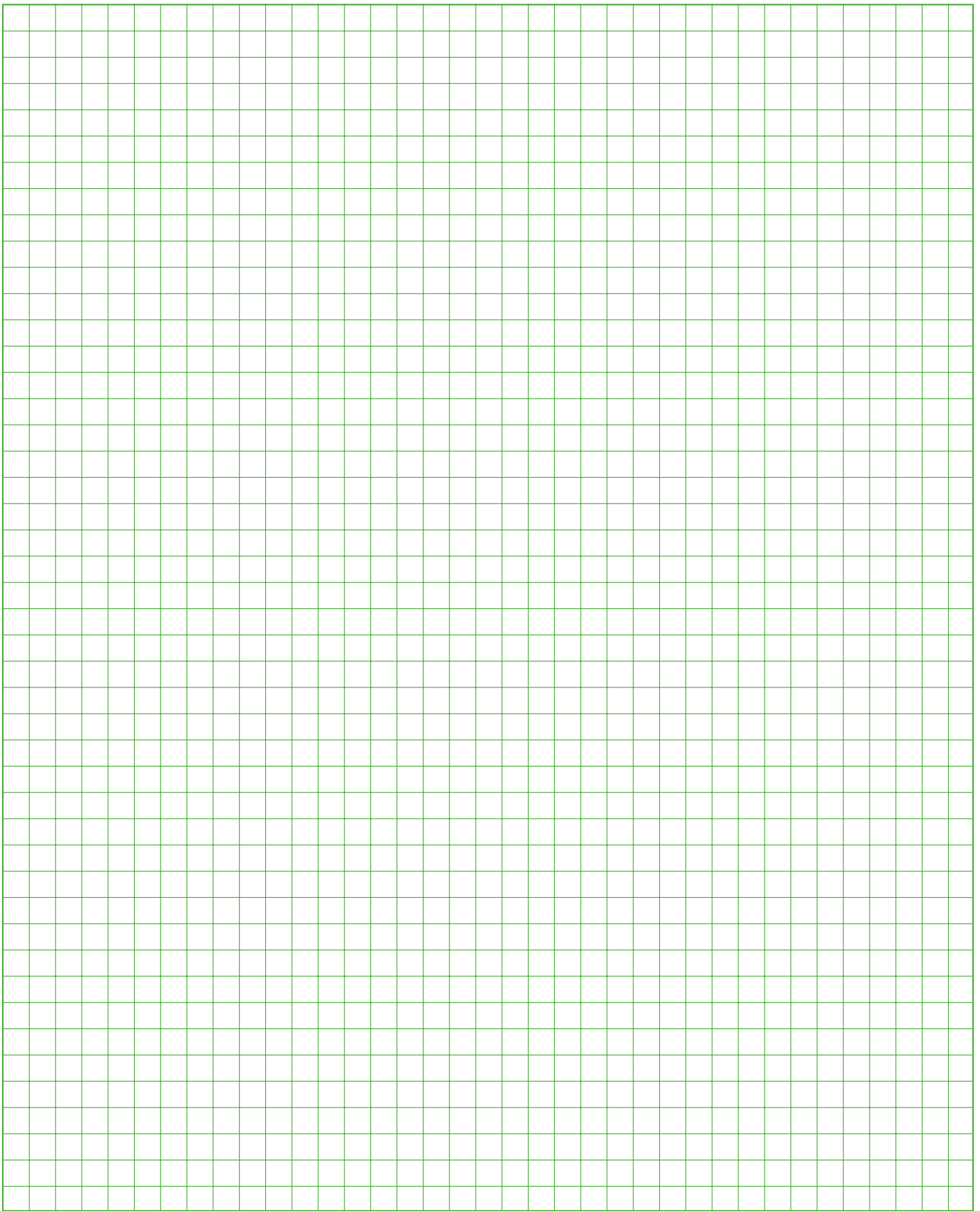
6.5 m fly boom extension

250 kg



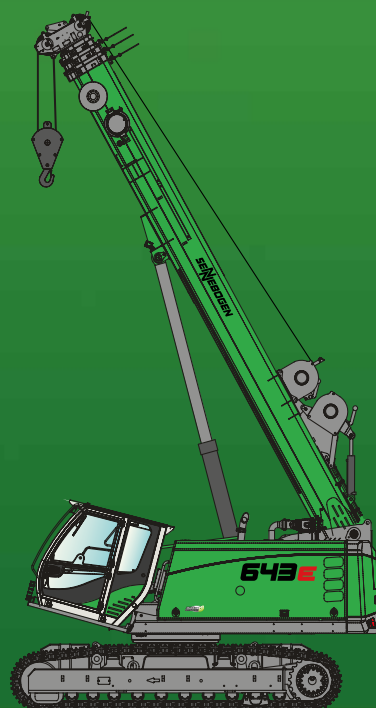
Auxiliary jib

50 kg



# 643E

# R



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

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## SENNEBOGEN

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

Tel. +49 9421 540-144/146  
marketing@sennebogen.de

Order no. 299155  
643R-E-081710-011910-0919d

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