

PRELIMINARY



**119** kW (Tier 3a)

**129** kW (Tier 4)



**50** t



**30.4** m



**MAXCAB**

# 653E

Telescopic crawler crane

Tier 4 emission  
standards

# 653E Technical data, equipment

## MACHINE TYPE

Model (type) **653**

## ENGINE

|                          |                                                                                                                                                                                                                                                                                        |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                    | Cummins QSB 4.5 diesel motor,<br><b>119 kW/162 hp at 2,200 rpm</b><br>Tier 3a emission standards<br><br>Cummins QSB 4.5 diesel motor,<br><b>129 kW/175 hp at 2,500 rpm</b><br>Tier 4f emission standards<br><br>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>                                                                                                                                                                                                                                                                           |
| AdBlue tank              | <b>38 l</b>                                                                                                                                                                                                                                                                            |
| Electrical system Anlage | <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 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>■ Anti-corrosive maritime climate varnish</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
- Upper-carriage railing

## 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 – environmentally friendly</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, variable</b>                                                      |

# 653E Technical data, equipment

## CAB MAXCAB

|               |                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cab type      | maXcab full-size cab, 15° tiltable                                                                                                                                                                                                                                                                                                                                                                                             |
| Cab equipment | Sliding door, excellent ergonomics, automatic climate control, heated seat, air-suspension comfort seat, fresh air filter/circulating air filter, 12/24 V connections, SENCON, roller shade for sunroof                                                                                                                                                                                                                        |
| Options       | <ul style="list-style-type: none"> <li>Hydraulically elevating cab E270, can be elevated 2.70 m and tilted 30°</li> <li>Auxiliary heating system with timer</li> <li>Activated-carbon filter for cab</li> <li>Sliding window in operator door</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 CD player</li> </ul> |

## ATTACHMENTS

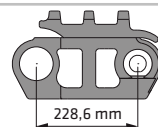
|                 |                                                                                                                                                                                                                                             |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Design          | Decades of experience, state-of-the-art computer simulation, maximum stability, longest service life, oversized, low-maintenance bearing points, sealed special bearing bushes, precision-crafted                                           |
| Telescopic boom | 4-piece with pulley head, continuous hydraulic telescoping from 9.4 – 30.4 m                                                                                                                                                                |
| Hoisting winch  | Slant-axis hydraulic motor drive with compact planetary gear, 50 kN pulling power (4th layer), 0 – 115 m/min. cable speed, 16 mm cable diameter, 170 m cable length. Winch motion display via vibration transducers in the joysticks        |
| 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"> <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> <li>Fly boom extension to 13 m, tiltable (0°, 40°)</li> </ul> |

## Options

- Auxiliary jib, 5-t load capacity, 1-strand
- 2nd crane winch with 50 kN pulling power (4th layer), 0 – 115 m/min. cable speed, 16 mm cable diameter and 170 m cable length
- Additional load charts accepted for 2°/4° incline position
- Suitable for use as elevating work platform with up to 4 m width and 500 kg payload
- 3-kW electrohydraulic emergency unit
- Remote radio control

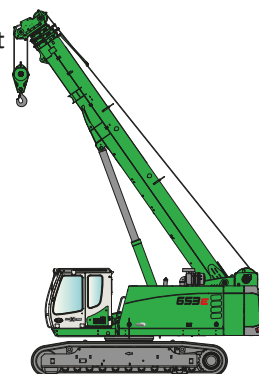
## UNDERCARRIAGE

|                |                                                                                                                                                   |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Design         | <b>T41/380</b> crawler undercarriage with hydraulically extendable track width. Stable welded construction.                                       |
| Drive          | Hydraulic travel drive for each running gear side, 2-stage hydraulic traction motors                                                              |
| Parking brake  | Spring-loaded, hydraulically ventilated disk brake                                                                                                |
| Traveling gear | 700-mm 3-grouser crawler shoes, maintenance-free tractor chassis                                                                                  |
| Speed          | <b>0 – 2.9 kph</b>                                                                                                                                |
| Options        | Available crawler shoe types: <ul style="list-style-type: none"> <li>800-mm 3-grouser crawler shoes</li> <li>700-mm flat crawler shoes</li> </ul> |



## OPERATING WEIGHT

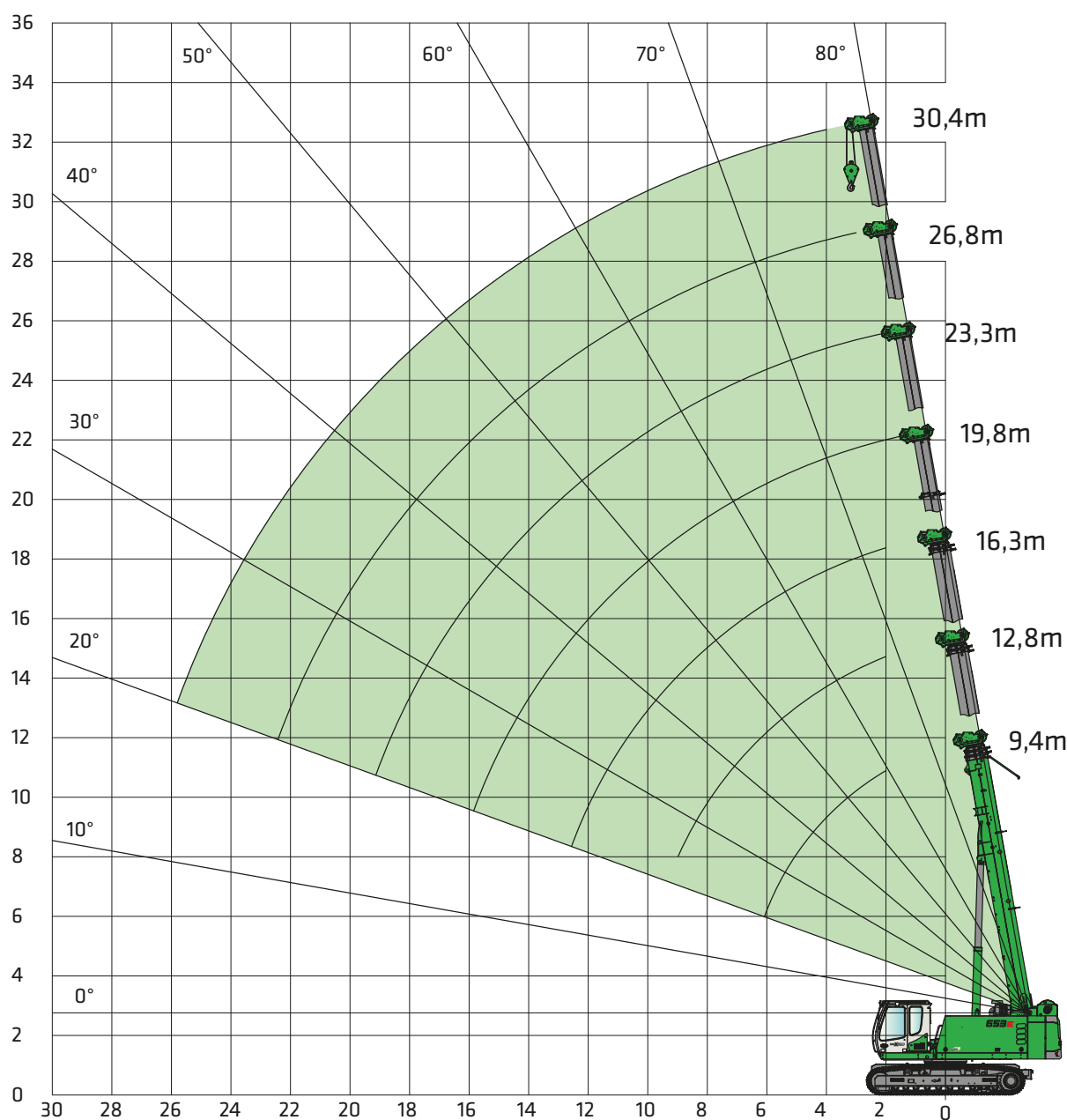
|      |                                                                                                                                                                                                                            |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mass | <b>Approx. 50,200 kg</b><br>With 30.4-m telescopic boom, 13-m fly boom, 35-t hook, 700-mm 3-grouser crawler shoes, 2 hoisting winches, hydraulically telescoping undercarriage, 8.9-t ballast, 5.5-t undercarriage ballast |
| Note | The operating weight varies according to model type.                                                                                                                                                                       |



# 653E Crane equipment



30.4-m main boom (HA)



| Capacity         | Weight | Cable reeving and max. load capacity |           |           |           |           |           |           |           |           |          |
|------------------|--------|--------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|
|                  |        | 10                                   | 9         | 8         | 7         | 6         | 5         | 4         | 3         | 2         | 1        |
| 5 t              | 80 kg  |                                      |           |           |           |           |           |           |           |           | 5,000 kg |
| 15 t<br>1-pulley | 190 kg |                                      |           |           |           |           |           |           | 15,000 kg | 10,000 kg | 5,000 kg |
| 35 t<br>3-pulley | 260 kg |                                      |           |           | 35,000 kg | 30,000 kg | 25,000 kg | 20,000 kg | 15,000 kg | 10,000 kg | 5,000 kg |
| 60 t<br>6-pulley | 540 kg | 50,000 kg                            | 45,000 kg | 40,000 kg | 35,000 kg | 30,000 kg | 25,000 kg | 20,000 kg | 15,000 kg | 10,000 kg | 5,000 kg |

# 653E Load ratings



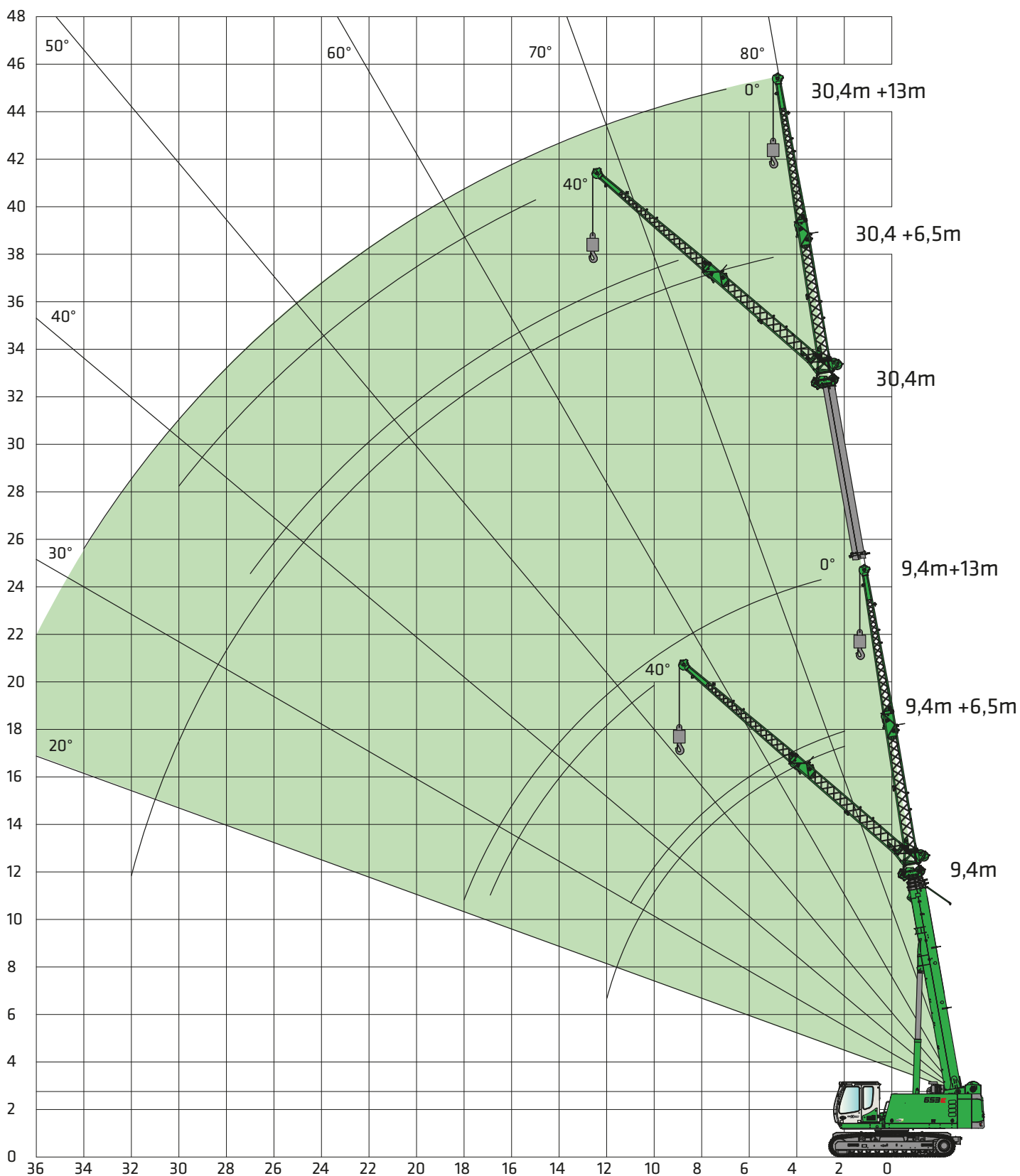
30.4-m main boom (HA)

|                               | Boom length [m]                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |     |     |
|-------------------------------|-----------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|
|                               | 9.4                                           |      |      | 12.8 |      |      | 16.3 |      |      | 19.8 |      |      | 23.3 |      |      | 26.8 |      |      | 30.4 |     |     |
| Counterweight [t]             | 8.9                                           | 8.9  | 8.9  | 8.9  | 8.9  | 8.9  | 8.9  | 8.9  | 8.9  | 8.9  | 8.9  | 8.9  | 8.9  | 8.9  | 8.9  | 8.9  | 8.9  | 8.9  | 8.9  | 8.9 | 8.9 |
| Undercarriage ballast [t]     | 5.5                                           | 5.5  | 5.5  | 5.5  | 5.5  | 5.5  | 5.5  | 5.5  | 5.5  | 5.5  | 5.5  | 5.5  | 5.5  | 5.5  | 5.5  | 5.5  | 5.5  | 5.5  | 5.5  | 5.5 | 5.5 |
| 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                           | 50.0                                          | 40.0 | 35.0 | 31.0 | 31.0 | 30.0 | 26.0 | 26.0 | 20.0 | 15.6 | 15.6 | 15.6 | 14.5 | 14.5 | 14.5 |      |      |      |      |     |     |
| 3.0                           | 45.0                                          | 40.0 | 35.0 | 31.0 | 31.0 | 30.0 | 24.4 | 24.4 | 20.0 | 15.6 | 15.6 | 15.6 | 14.5 | 14.5 | 14.5 | 12.7 | 12.7 | 12.7 |      |     |     |
| 4.0                           | 38.0                                          | 30.0 | 24.0 | 31.0 | 30.0 | 22.7 | 21.7 | 21.7 | 20.0 | 15.6 | 15.6 | 15.6 | 14.5 | 14.5 | 14.5 | 12.6 | 12.6 | 12.6 | 9.2  | 9.2 | 9.2 |
| 5.0                           | 30.0                                          | 22.5 | 17.0 | 28.0 | 22.6 | 17.3 | 19.3 | 19.3 | 16.0 | 15.6 | 15.6 | 15.5 | 14.2 | 14.2 | 14.2 | 12.4 | 12.4 | 12.4 | 9.2  | 9.2 | 9.2 |
| 6.0                           | 22.0                                          | 17.0 | 13.0 | 22.3 | 17.0 | 13.2 | 16.9 | 16.6 | 12.8 | 14.9 | 14.9 | 12.6 | 13.6 | 13.6 | 12.3 | 11.9 | 11.9 | 11.9 | 9.2  | 9.2 | 9.2 |
| 7.0                           |                                               |      |      | 17.3 | 13.4 | 10.4 | 15.0 | 13.3 | 10.3 | 13.6 | 13.4 | 10.4 | 12.5 | 12.5 | 10.2 | 11.1 | 11.1 | 10.0 | 9.1  | 9.1 | 9.1 |
| 8.0                           |                                               |      |      | 14.2 | 10.9 | 8.4  | 13.3 | 10.8 | 8.3  | 12.2 | 11.2 | 8.7  | 11.2 | 11.2 | 8.7  | 10.3 | 10.3 | 8.6  | 8.7  | 8.7 | 8.4 |
| 9.0                           |                                               |      |      | 11.5 | 9.0  | 7.0  | 11.5 | 8.9  | 6.9  | 11.1 | 9.3  | 7.3  | 10.2 | 9.6  | 7.5  | 9.4  | 9.4  | 7.4  | 8.2  | 8.2 | 7.3 |
| 10.0                          |                                               |      |      |      |      |      | 9.7  | 7.5  | 5.8  | 9.9  | 7.9  | 6.1  | 9.3  | 8.2  | 6.4  | 8.6  | 8.3  | 6.4  | 7.8  | 7.8 | 6.4 |
| 11.0                          |                                               |      |      |      |      |      | 8.3  | 6.4  | 4.9  | 8.7  | 6.8  | 5.2  | 8.5  | 7.0  | 5.5  | 8.0  | 7.2  | 5.6  | 7.3  | 7.3 | 5.6 |
| 12.0                          |                                               |      |      |      |      |      | 7.2  | 5.5  | 4.1  | 7.5  | 5.9  | 4.5  | 7.7  | 6.1  | 4.7  | 7.3  | 6.3  | 4.9  | 6.8  | 6.4 | 5.0 |
| 13.0                          |                                               |      |      |      |      |      | 6.2  | 4.7  | 3.5  | 6.6  | 5.1  | 3.9  | 6.9  | 5.4  | 4.1  | 6.8  | 5.5  | 4.3  | 6.4  | 5.7 | 4.4 |
| 14.0                          |                                               |      |      |      |      |      |      |      |      | 5.8  | 4.5  | 3.4  | 6.0  | 4.7  | 3.6  | 6.1  | 4.9  | 3.8  | 5.9  | 5.0 | 3.9 |
| 15.0                          |                                               |      |      |      |      |      |      |      |      | 5.2  | 3.9  | 2.9  | 5.4  | 4.2  | 3.2  | 5.6  | 4.4  | 3.3  | 5.6  | 4.5 | 3.5 |
| 16.0                          |                                               |      |      |      |      |      |      |      |      | 4.6  | 3.5  | 2.5  | 4.8  | 3.7  | 2.8  | 5.0  | 3.9  | 2.9  | 5.0  | 4.0 | 3.1 |
| 17.0                          |                                               |      |      |      |      |      |      |      |      |      |      |      | 4.3  | 3.3  | 2.4  | 4.5  | 3.5  | 2.6  | 4.7  | 3.6 | 2.7 |
| 18.0                          |                                               |      |      |      |      |      |      |      |      |      |      |      | 3.9  | 2.9  | 2.1  | 4.1  | 3.1  | 2.3  | 4.2  | 3.2 | 2.4 |
| 19.0                          |                                               |      |      |      |      |      |      |      |      |      |      |      | 3.5  | 2.6  | 1.8  | 3.7  | 2.8  | 2.0  | 3.9  | 2.9 | 2.1 |
| 20.0                          |                                               |      |      |      |      |      |      |      |      |      |      |      | 3.1  | 2.3  | 1.5  | 3.4  | 2.5  | 1.7  | 3.5  | 2.6 | 1.9 |
| 21.0                          |                                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 3.1  | 2.2  | 1.5  | 3.2  | 2.4 | 1.6 |
| 22.0                          |                                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 2.8  | 2.0  | 1.3  | 2.9  | 2.1 | 1.4 |
| 23.0                          |                                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 2.5  | 1.8  | 1.1  | 2.7  | 1.9 | 1.2 |
| 24.0                          |                                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 2.4  | 1.7 | 1.1 |
| 25.0                          | Table no.: 653R-75/1977/8.9+5.5/10.14 HA 0,3° |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 2.2  | 1.5 | 0.9 |
| 26.0                          | Table no.: 653R-75/1577/8.9+5.5/10.14 HA 0,3° |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 2.0  | 1.3 | 0.7 |
| Number of strands             | 4                                             | 10   | 10   | 3    | 8    | 8    | 3    | 6    | 6    | 2    | 4    | 4    | 2    | 4    | 4    | 2    | 4    | 4    | 1    | 4   | 4   |
| I                             | 0%                                            |      |      | 50%  |      |      | 100% |      |      | 100% |      |      | 100% |      |      | 100% |      |      | 100% |     |     |
| II                            | 0%                                            |      |      | 0%   |      |      | 0%   |      |      | 25%  |      |      | 50%  |      |      | 75%  |      |      | 100% |     |     |
| III                           | 0%                                            |      |      | 0%   |      |      | 0%   |      |      | 25%  |      |      | 50%  |      |      | 75%  |      |      | 0%   |     |     |
| Load capacity reduction [kg]  | 580                                           |      |      | 420  |      |      | 330  |      |      | 270  |      |      | 230  |      |      | 200  |      |      | 180  |     |     |

# 653E Crane equipment



6.5-m or 13-m fly boom (SA)



# 653E Load ratings



6.5-m fly boom (SA)

| 8.9 t<br>5.5 t    | Telescopic boom length [m]                       |     |      |     |      |     |      |     |
|-------------------|--------------------------------------------------|-----|------|-----|------|-----|------|-----|
|                   | 9.4                                              |     | 16.3 |     | 23.8 |     | 30.3 |     |
| 3.8 m             | 0°                                               | 40° | 0°   | 40° | 0°   | 40° | 0°   | 40° |
| Outreach [m]      |                                                  |     |      |     |      |     |      |     |
| 2.0               | 10.0                                             |     |      |     |      |     |      |     |
| 3.0               | 9.9                                              |     | 10.0 |     | 9.9  |     |      |     |
| 4.0               | 8.6                                              |     | 9.9  |     | 9.4  |     |      |     |
| 5.0               | 7.7                                              | 4.6 | 9.4  |     | 9.0  |     | 4.9  |     |
| 6.0               | 6.9                                              | 4.4 | 8.7  | 4.6 | 8.5  |     | 4.8  |     |
| 7.0               | 6.3                                              | 4.2 | 8.0  | 4.5 | 8.0  | 4.4 | 4.8  |     |
| 8.0               | 5.7                                              | 4.0 | 7.4  | 4.3 | 7.6  | 4.3 | 4.7  |     |
| 9.0               | 5.2                                              | 3.9 | 6.9  | 4.2 | 7.2  | 4.2 | 4.7  | 4.0 |
| 10.0              | 4.8                                              | 3.8 | 6.4  | 4.1 | 6.8  | 4.1 | 4.7  | 4.0 |
| 11.0              | 4.5                                              | 3.7 | 6.0  | 4.0 | 6.5  | 4.0 | 4.7  | 3.9 |
| 12.0              | 4.1                                              |     | 5.7  | 3.9 | 6.2  | 3.9 | 4.7  | 3.8 |
| 13.0              |                                                  |     | 5.3  | 3.8 | 5.9  | 3.9 | 4.6  | 3.8 |
| 14.0              |                                                  |     | 5.0  | 3.8 | 5.7  | 3.8 | 4.4  | 3.7 |
| 15.0              |                                                  |     | 4.8  | 3.7 | 5.4  | 3.7 | 4.2  | 3.7 |
| 16.0              |                                                  |     | 4.6  | 3.7 | 5.0  | 3.7 | 4.0  | 3.6 |
| 17.0              |                                                  |     | 4.2  |     | 4.6  | 3.6 | 3.8  | 3.5 |
| 18.0              |                                                  |     | 4.0  |     | 4.2  | 3.6 | 3.7  | 3.4 |
| 19.0              |                                                  |     |      |     | 3.7  | 3.6 | 3.5  | 3.3 |
| 20.0              |                                                  |     |      |     | 3.5  | 3.5 | 3.4  | 3.2 |
| 21.0              |                                                  |     |      |     | 3.2  | 3.3 | 3.2  | 3.1 |
| 22.0              |                                                  |     |      |     | 2.9  |     | 3.0  | 3.0 |
| 23.0              |                                                  |     |      |     | 2.6  |     | 2.7  | 2.8 |
| 24.0              |                                                  |     |      |     | 2.4  |     | 2.4  | 2.6 |
| 25.0              |                                                  |     |      |     |      |     | 2.2  | 2.4 |
| 26.0              |                                                  |     |      |     |      |     | 2.0  | 2.2 |
| 27.0              |                                                  |     |      |     |      |     | 1.8  | 2.0 |
| 28.0              |                                                  |     |      |     |      |     | 1.7  |     |
| 29.0              |                                                  |     |      |     |      |     | 1.5  |     |
| 30.0              |                                                  |     |      |     |      |     | 1.4  |     |
| 31.0              |                                                  |     |      |     |      |     | 1.2  |     |
| 32.0              |                                                  |     |      |     |      |     | 1.1  |     |
| 33.0              | Table no.: 653R-75/2327/8.9+0.0/10.14 SA6.5 0.3° |     |      |     |      |     |      |     |
| 34.0              |                                                  |     |      |     |      |     |      |     |
| Number of strands | 2                                                | 1   | 2    | 1   | 2    | 1   | 2    | 1   |
| I                 | 0%                                               |     | 100% |     | 100% |     | 100% |     |
| II                | 0%                                               |     | 0%   |     | 50%  |     | 100% |     |
| III               | 0%                                               |     | 0%   |     | 50%  |     | 100% |     |

# 653E Load ratings



13-m fly boom (SA)

| 8.9 t             | 5.5 t                                           | Telescopic boom length [m] |     |      |     |      |     |      |     |
|-------------------|-------------------------------------------------|----------------------------|-----|------|-----|------|-----|------|-----|
|                   |                                                 | 9.4                        |     | 16.3 |     | 23.8 |     | 30.3 |     |
| 3.8 m             |                                                 | 0°                         | 40° | 0°   | 40° | 0°   | 40° | 0°   | 40° |
| Outreach [m]      |                                                 |                            |     |      |     |      |     |      |     |
| 2.0               |                                                 |                            |     |      |     |      |     |      |     |
| 3.0               | 4.6                                             |                            |     |      |     |      |     |      |     |
| 4.0               | 4.4                                             |                            |     | 4.6  |     |      |     |      |     |
| 5.0               | 4.0                                             |                            |     | 4.4  |     | 3.8  |     |      |     |
| 6.0               | 3.7                                             |                            |     | 4.1  |     | 3.7  |     |      |     |
| 7.0               | 3.4                                             |                            |     | 3.8  |     | 3.6  |     | 2.1  |     |
| 8.0               | 3.1                                             |                            |     | 3.6  |     | 3.4  |     | 2.1  |     |
| 9.0               | 2.9                                             |                            |     | 3.4  |     | 3.3  |     | 2.1  |     |
| 10.0              | 2.7                                             |                            | 1.8 | 3.2  |     | 3.1  |     | 2.1  |     |
| 11.0              | 2.5                                             |                            | 1.7 | 3.0  |     | 3.0  |     | 2.1  |     |
| 12.0              | 2.3                                             |                            | 1.7 | 2.8  | 1.7 | 2.9  |     | 2.1  |     |
| 13.0              | 2.2                                             |                            | 1.7 | 2.6  | 1.7 | 2.7  | 1.7 | 2.1  |     |
| 14.0              | 2.0                                             |                            | 1.6 | 2.5  | 1.7 | 2.6  | 1.6 | 2.1  |     |
| 15.0              | 1.9                                             |                            | 1.6 | 2.4  | 1.6 | 2.5  | 1.6 | 2.1  | 1.5 |
| 16.0              | 1.8                                             |                            | 1.5 | 2.3  | 1.6 | 2.4  | 1.6 | 2.1  | 1.5 |
| 17.0              | 1.7                                             |                            | 1.5 | 2.1  | 1.5 | 2.3  | 1.5 | 2.1  | 1.5 |
| 18.0              | 1.6                                             |                            |     | 2.0  | 1.5 | 2.2  | 1.5 | 2.1  | 1.5 |
| 19.0              |                                                 |                            |     | 2.0  | 1.5 | 2.1  | 1.5 | 2.0  | 1.4 |
| 20.0              |                                                 |                            |     | 1.9  | 1.5 | 2.1  | 1.5 | 2.0  | 1.4 |
| 21.0              |                                                 |                            |     | 1.8  |     | 2.0  | 1.4 | 1.9  | 1.4 |
| 22.0              |                                                 |                            |     | 1.7  |     | 1.9  | 1.4 | 1.9  | 1.4 |
| 23.0              |                                                 |                            |     | 1.6  |     | 1.8  | 1.4 | 1.8  | 1.4 |
| 24.0              |                                                 |                            |     | 1.5  |     | 1.8  | 1.4 | 1.8  | 1.3 |
| 25.0              |                                                 |                            |     |      |     | 1.7  | 1.4 | 1.7  | 1.3 |
| 26.0              |                                                 |                            |     |      |     | 1.7  | 1.4 | 1.7  | 1.3 |
| 27.0              |                                                 |                            |     |      |     | 1.6  |     | 1.6  | 1.3 |
| 28.0              |                                                 |                            |     |      |     | 1.4  |     | 1.6  | 1.3 |
| 29.0              |                                                 |                            |     |      |     | 1.4  |     | 1.6  | 1.3 |
| 30.0              |                                                 |                            |     |      |     |      |     | 1.3  | 1.1 |
| 31.0              |                                                 |                            |     |      |     |      |     | 1.1  |     |
| 32.0              |                                                 |                            |     |      |     |      |     | 0.9  |     |
| 33.0              | Table no.: 653R-75/1977/8.9+5.5/10.14 SA13 0.3° |                            |     |      |     |      |     | 0.7  |     |
| 34.0              |                                                 |                            |     |      |     |      |     | 0.6  |     |
| Number of strands |                                                 | 2                          | 1   | 2    | 1   | 2    | 1   | 2    | 1   |
| I                 |                                                 | 0%                         |     | 100% |     | 100% |     | 100% |     |
| II                |                                                 | 0%                         |     | 0%   |     | 50%  |     | 100% |     |
| III               |                                                 | 0%                         |     | 0%   |     | 50%  |     | 100% |     |



# 653E Load ratings



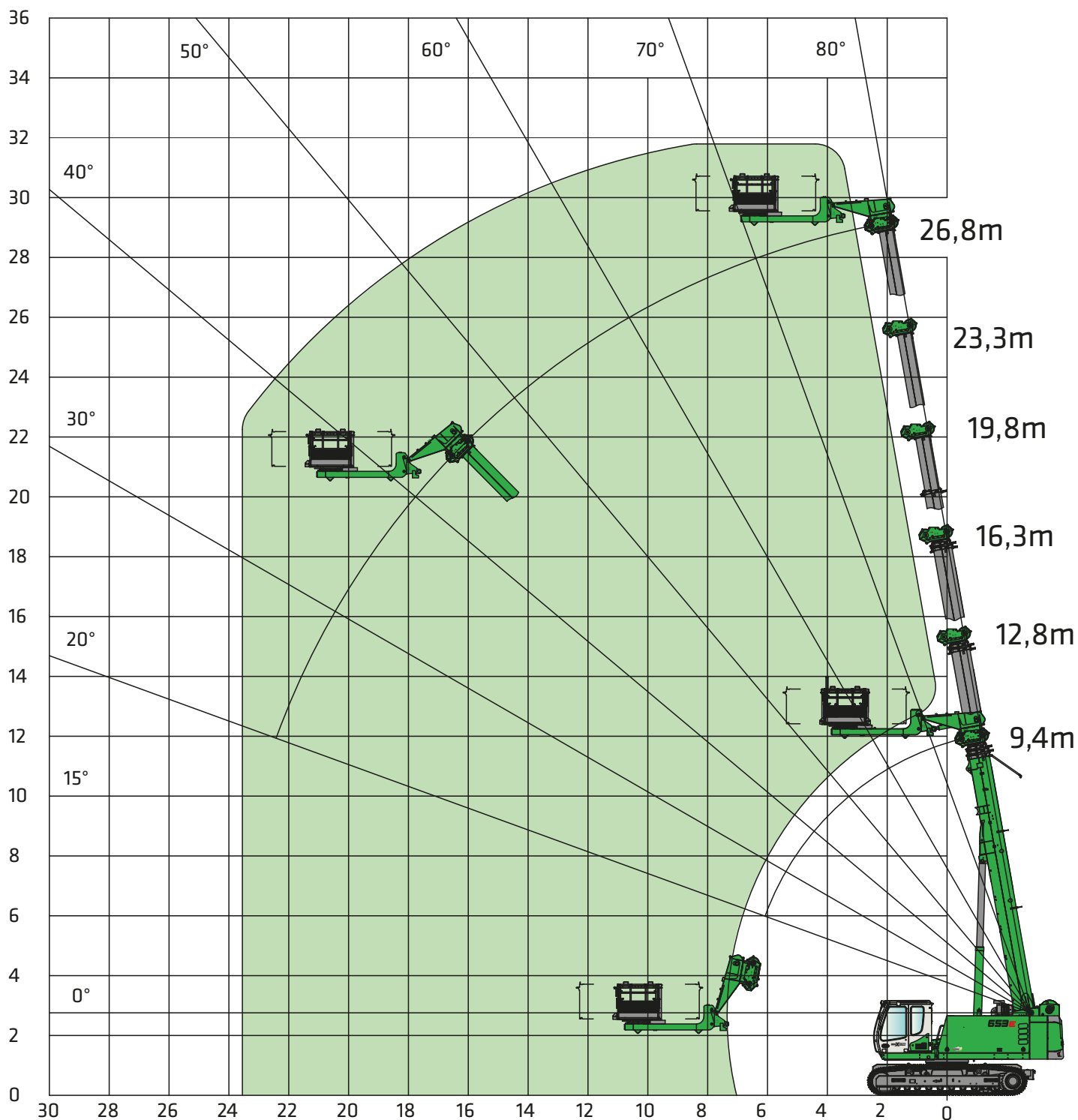
Auxiliary jib (HA-S)

|                               | Boom length [m]                                 |     |     |      |     |     |      |     |     |      |     |     |      |     |     |      |     |     |      |     |     |
|-------------------------------|-------------------------------------------------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|------|-----|-----|
|                               | 9.4                                             |     |     | 12.8 |     |     | 16.3 |     |     | 19.8 |     |     | 23.3 |     |     | 26.8 |     |     | 30.4 |     |     |
| Counterweight [t]             | 8.9                                             | 8.9 | 8.9 | 8.9  | 8.9 | 8.9 | 8.9  | 8.9 | 8.9 | 8.9  | 8.9 | 8.9 | 8.9  | 8.9 | 8.9 | 8.9  | 8.9 | 8.9 | 8.9  | 8.9 | 8.9 |
| Undercarriage ballast [t]     | 5.5                                             | 5.5 | 5.5 | 5.5  | 5.5 | 5.5 | 5.5  | 5.5 | 5.5 | 5.5  | 5.5 | 5.5 | 5.5  | 5.5 | 5.5 | 5.5  | 5.5 | 5.5 | 5.5  | 5.5 | 5.5 |
| 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                           | 5.0                                             | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 |
| 3.0                           | 5.0                                             | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 |
| 4.0                           | 5.0                                             | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 |
| 5.0                           | 5.0                                             | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 |
| 6.0                           | 5.0                                             | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 |
| 7.0                           |                                                 | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 |
| 8.0                           |                                                 | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 |
| 9.0                           |                                                 |     |     | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 |
| 10.0                          |                                                 |     |     | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 |
| 11.0                          |                                                 |     |     | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 |
| 12.0                          |                                                 |     |     |      |     |     | 5.0  | 5.0 | 4.3 | 5.0  | 5.0 | 4.6 | 5.0  | 5.0 | 4.8 | 5.0  | 5.0 | 5.0 | 5.0  | 5.0 | 5.0 |
| 13.0                          |                                                 |     |     |      |     |     | 5.0  | 4.9 | 3.7 | 5.0  | 5.0 | 4.0 | 5.0  | 5.0 | 4.2 | 5.0  | 5.0 | 4.4 | 5.0  | 5.0 | 4.4 |
| 14.0                          |                                                 |     |     |      |     |     |      |     |     | 5.0  | 4.6 | 3.5 | 5.0  | 4.8 | 3.7 | 5.0  | 5.0 | 3.8 | 5.0  | 5.0 | 4.0 |
| 15.0                          |                                                 |     |     |      |     |     |      |     |     | 5.0  | 4.0 | 3.0 | 5.0  | 4.3 | 3.2 | 5.0  | 4.4 | 3.4 | 5.0  | 4.5 | 3.5 |
| 16.0                          |                                                 |     |     |      |     |     |      |     |     | 4.5  | 3.6 | 2.6 | 4.7  | 3.8 | 2.8 | 4.9  | 4.0 | 3.0 | 4.9  | 4.1 | 3.1 |
| 17.0                          |                                                 |     |     |      |     |     |      |     |     | 4.0  | 3.1 | 2.2 | 4.2  | 3.4 | 2.5 | 4.4  | 3.5 | 2.6 | 4.6  | 3.7 | 2.8 |
| 18.0                          |                                                 |     |     |      |     |     |      |     |     |      |     |     | 3.8  | 3.0 | 2.1 | 4.0  | 3.2 | 2.3 | 4.1  | 3.3 | 2.5 |
| 19.0                          |                                                 |     |     |      |     |     |      |     |     |      |     |     | 3.4  | 2.7 | 1.8 | 3.6  | 2.9 | 2.0 | 3.8  | 3.0 | 2.2 |
| 20.0                          |                                                 |     |     |      |     |     |      |     |     |      |     |     | 3.0  | 2.4 | 1.6 | 3.3  | 2.6 | 1.8 | 3.4  | 2.7 | 1.9 |
| 21.0                          |                                                 |     |     |      |     |     |      |     |     |      |     |     |      |     |     | 3.0  | 2.3 | 1.5 | 3.1  | 2.4 | 1.7 |
| 22.0                          |                                                 |     |     |      |     |     |      |     |     |      |     |     |      |     |     | 2.7  | 2.0 | 1.3 | 2.8  | 2.2 | 1.5 |
| 23.0                          |                                                 |     |     |      |     |     |      |     |     |      |     |     |      |     |     | 2.4  | 1.8 | 1.1 | 2.6  | 1.9 | 1.3 |
| 24.0                          |                                                 |     |     |      |     |     |      |     |     |      |     |     |      |     |     |      | 1.6 | 0.9 | 2.3  | 1.7 | 1.1 |
| 25.0                          | Table no.: 653R-75/1977/8.9+5.5/10.14 HA-S 0.3° |     |     |      |     |     |      |     |     |      |     |     |      |     |     |      |     |     | 2.1  | 1.5 | 0.9 |
| 26.0                          | Table no.: 653R-75/1577/8.9+5.5/10.14 HA-S 0.3° |     |     |      |     |     |      |     |     |      |     |     |      |     |     |      |     |     | 1.9  | 1.4 | 0.8 |
| Number of strands             | 1                                               | 1   | 1   | 1    | 1   | 1   | 1    | 1   | 1   | 1    | 1   | 1   | 1    | 1   | 1   | 1    | 1   | 1   | 1    | 1   | 1   |
| I                             | 0%                                              |     |     | 50%  |     |     | 100% |     |     | 100% |     |     | 100% |     |     | 100% |     |     | 100% |     |     |
| II                            | 0%                                              |     |     | 0%   |     |     | 0%   |     |     | 25%  |     |     | 50%  |     |     | 75%  |     |     | 100% |     |     |
| III                           | 0%                                              |     |     | 0%   |     |     | 0%   |     |     | 25%  |     |     | 50%  |     |     | 75%  |     |     | 0%   |     |     |
| Load capacity reduction [kg]  | 580                                             |     |     | 420  |     |     | 330  |     |     | 270  |     |     | 230  |     |     | 200  |     |     | 180  |     |     |

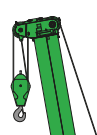
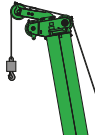
# 653E Crane equipment



Elevating work platform type 4000/500



# 653E Load capacity programs

|                                                                                         |                                                                                         | Main boom (HA)                                                                          |                                                                                         |                                                                                         | Auxiliary jib (HA-S)                                                                    |                                                                                         |                                                                                         | 6.5-m fly boom (SA)                                                                      |                                                                                           |                                                                                           | 15-m fly boom (SA)                                                                        |                                                                                           |                                                                                           |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| Counterweight [t]                                                                       | Undercarriage ballast [t]                                                               |        |                                                                                         |                                                                                         |        |                                                                                         |                                                                                         |       |                                                                                           |                                                                                           |        |                                                                                           |                                                                                           |
|                                                                                         |                                                                                         |  3.8 m |  3.0 m |  2.3 m |  3.8 m |  3.0 m |  2.3 m |  3.8 m |  3.0 m |  2.3 m |  4.1 m |  3.0 m |  3.2 m |
|  8.9 t |  5.5 t |  360°  |  360°  |  360°  |  360°  |  360°  |  360°  |  360°  | —                                                                                         | —                                                                                         |  360°  | —                                                                                         | —                                                                                         |
| Undercarriage track width                                                               |                                                                                         |  4.1 m |  3.3 m |  2.6 m |  4.1 m |  3.3 m |  2.6 m |  4.1 m |  3.3 m |  2.6 m |  4.1 m |  3.3 m |  2.6 m |
|  8.9 t |  0 t   |  360°  |  360°  |  360°  |  360°  |  360°  |  360°  | —                                                                                        | —                                                                                         | —                                                                                         |  360°  | —                                                                                         | —                                                                                         |

## Note:

### Optional load capacities available for 2° and 4° incline positions.

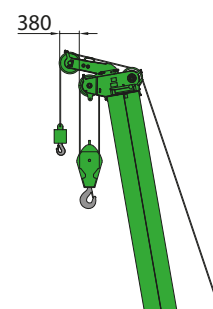
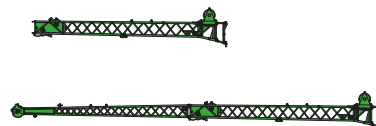
- Specified load ratings only apply when machine is level ( $\pm 0.3^\circ$ ) and stable.
- Load ratings are in tons (t) and apply for 360 degrees.
- Load ratings are in accordance with EN 13000.
- The weight of the load handling devices (e.g., hook, cable) must be subtracted from the load ratings.
- 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.
- Permissible cable pull per strand in crane mode for cable diameter 16 mm – 5,000 kg.
- Specified load ratings are for reference only. See the tables in the operating manual for the applicable load rating.

## 653E 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, 5-t load capacity, 1-strand



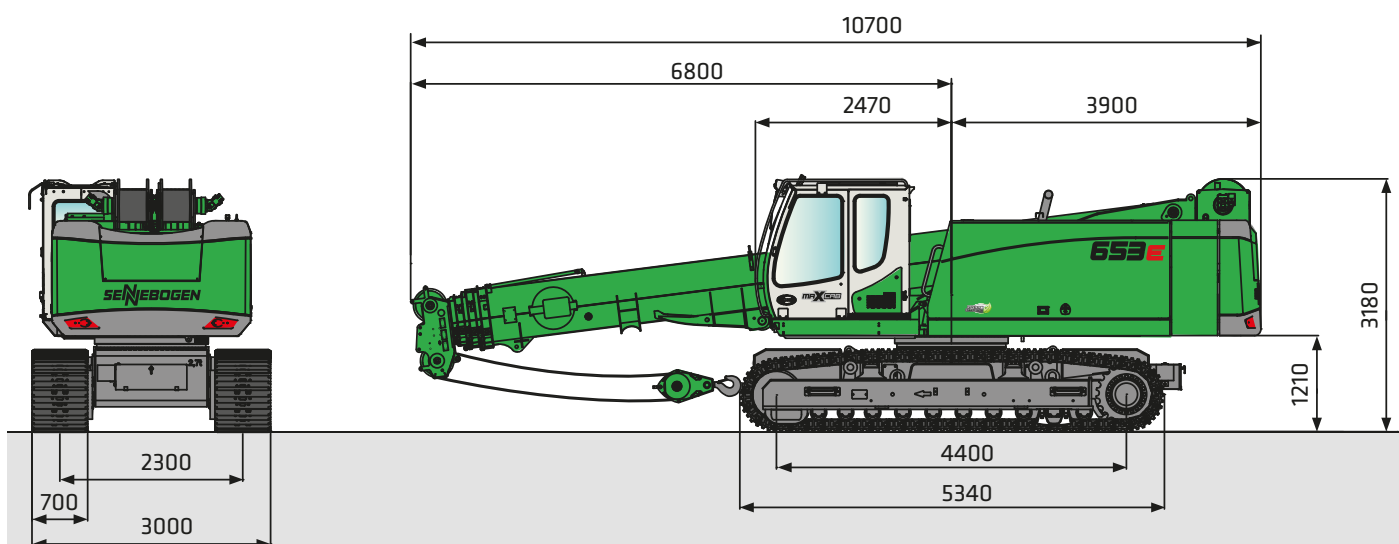
# 653E Transport dimensions and weights



653 R with T41/380 undercarriage and 700-mm 3-grouser crawler shoes

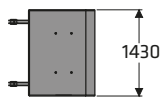
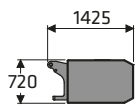
Operating weight: approx. 50,200 kg

(with 13-m fly boom, 2 hoisting winches, 8.9-t counterweight, 5.5-t undercarriage ballast and 35-t hook)



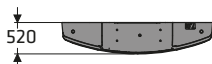
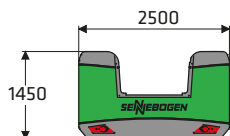
Transport weight: approx. 44,700 kg (13-m fly boom, 2 hoisting winches, without undercarriage ballast)

# 653E Transport dimensions and weights



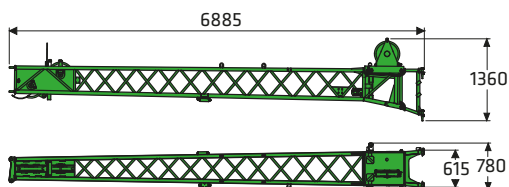
Undercarriage ballast

2x 2,750 kg



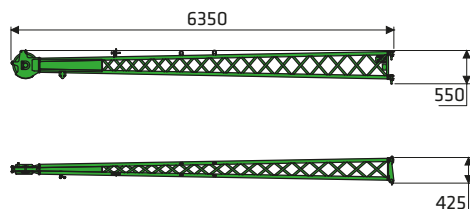
Counterweight

7,000 kg



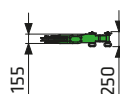
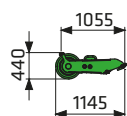
6.5-m fly boom

600 kg



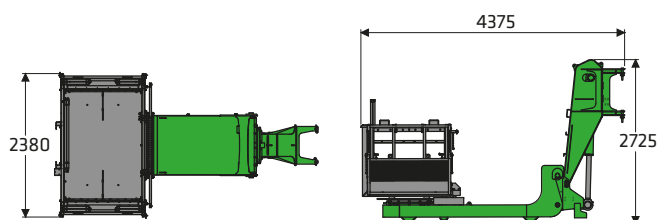
6.5-m fly boom extension

250 kg



5-t auxiliary jib

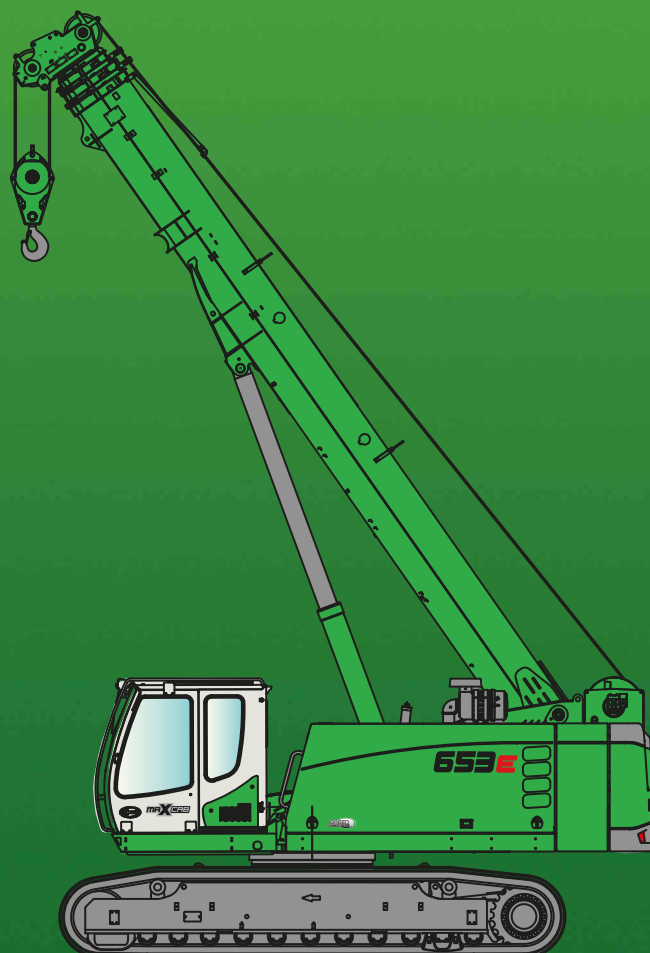
50 kg



Work platform incl. adapter, width: 2.4 m

2,300 kg

# 653E



This catalog describes machine models, scope 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 depending on the country to which the machines are delivered, especially in regard to standard and optional equipment.

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