



Pictured machine may include options and additional equipment.

## Features

The Himec RM 905 is a self propelled boom unit suitable for lifting and installing works and charging of explosives in tunnels. It consists of the new Normet Rigid Frame Carrier (=R) with M-series Cummins B4.5 Stage V 121 kW or Tier3 110 kW engine and NBB3 basket boom. 500 kg lifting load and maximum 9.1 m platform height helps to reach up to 11.4 m high roofs. Lateral working reach is 10 m.

Boom controls are in the basket and down on the carrier.

### Technical specification

#### NBB3 BASKET BOOM

|                                     |                             |
|-------------------------------------|-----------------------------|
| 2-men basket                        |                             |
| Lifting capacity of basket          | 500 kg = 340 kg + 2 persons |
| Basket size                         | 1.2 m x 1.8 m               |
| Boom lift                           | -20°...+60°                 |
| Boom extension                      | 4.0 m                       |
| Max. Lifting height (basket floor)  | 9.1 m                       |
| Max. Vertical reach                 | 11 m                        |
| Boom slew                           | +/- 30°                     |
| Max. Lateral coverage               | 10 m                        |
| Diesel start/stop (from the basket) |                             |
| Battery operated emergency pump     |                             |

#### ENGINE

Liquid cooled turbo charged CUMMINS B4.5  
121 kW/2500 rpm, Stage V approved  
Requires DEF (urea) and ultra-low sulphur diesel (ULSD) (max sulphur content < 15 ppm)

#### TRANSMISSION

|                                   |                     |
|-----------------------------------|---------------------|
| Hydrostatic 4-wheel transmission  |                     |
| Variable piston pump              | 115 cm <sup>3</sup> |
| Variable piston motor             | 160 cm <sup>3</sup> |
| Separate stainless steel oil tank | 110 L               |

#### AXLES

|                           |        |
|---------------------------|--------|
| Planetary type            |        |
| Dana 223                  |        |
| Rear end axle oscillation | +/- 8° |
| Boom end axle fixed       |        |

#### TYRES

12.00 - 20

#### PERFORMANCE

|   |         |
|---|---------|
| Max. Horizontal speed (horizontal tunnel) | 25 km/h |
| Max. speed in 1:7 inclined tunnel         | 9 km/h  |
| Max. Tractive force                       | 113 kN  |

#### BRAKES

Service brake; hydraulically powered two-circuit  
Oil-immersed multi-discs brakes in both axles

Safety/Parking brake; spring-activated, hydraulically  
Released, fail-safe-type brake. Brake test possibility in cabin

#### STEERING

Four-wheel steering as standard  
Orbitrol type  
Including crabwalk

#### FUEL TANK

|                 |       |
|-----------------|-------|
| Capacity        | 140 L |
| Stainless steel |       |

#### DEF TANK

|                      |      |
|----------------------|------|
| Diesel Exhaust Fluid |      |
| Capacity             | 19 L |

#### HYDRAULIC SYSTEM

|   |       |
|---|-------|
| Variable displacement pump system               |       |
| 190 bar, 95 L/min/2200 rpm                      |       |
| Hydraulic oil tank capacity                     | 130 L |
| Return oil filtration                           | 10 µm |
| Indication of level, filtration and temperature |       |

#### 24 VDC ELECTRICAL SYSTEM

Exposed components are min. IP65 standard Battery 2 x 80 Ah  
Alternator 80 A  
Wire harness (self extinguishing) with tinned wires and watertight conduits  
Led driving lights  

- Front end LED lights 2 x 1300 lm
- Rear end LED lights 2 x 1300 lm

LED directional lights on front and rear side  
LED working lights  

- 4pcs on cabin
- 2pcs on carrier

#### DRIVER'S COMPARTMENT

Open cabin FOPS/ROPS approved  
Air suspended driver's seat  
Seat with retractable lap seat belt  
Forward and side seating for the driver with two sets of pedals (brake and accelerator)  
Cabin door interlock switches with safety brake application  
MID 070 S Multifunctional Display with:  

- Meters; e.g. speed, RPM, operating hours
- Status indicators; e.g. fluid levels, temperatures, pressures, alarms, faults

#### MACHINE CONNECTIVITY

Machine connectivity hardware (WLAN/3G/4G/LTE)

#### GREASING SYSTEM

Centralized grease fittings for the carrier

#### OTHER

12 kg hand held fire extinguisher  
Standard symbol labels  
Hydraulic front support legs  
Hydraulic rear support legs

### Optional equipment

#### DRIVER'S CABIN

Enclosed cabin, FOPS/ROPS  
HVAC system

#### ENGINE

Liquid cooled turbo charged CUMMINS QSB4.5,  
110kW/2300 rpm, TIER 3 approved

- Exhaust system: Catalytic exhaust gas purifier and muffler

#### MACHINE CONNECTIVITY

- Data lifetime license (Include connectivity hardware)
- Analytics lifetime license  
(Include connectivity hardware and data lifetime license)

#### OTHER

- Warning lights, 1 unit:
- Rotating beacon; red
  - Rotating beacon; blue

### Additional equipment

#### HIGH VOLTAGE SYSTEM

400V/50Hz power pack  
690V/50Hz power pack  
1000V/50Hz power pack

#### COMPRESSOR

2.6 m<sup>3</sup>/min hydraulic driven compressor

#### FOR ENCLOSED CABIN

CD/Radio system

#### FOR NBB BASKET BOOM

##### Safety bar

**Safety bar with hydraulic lift:**  
Reduces lifting capacity 60 kg

**Safety roof with hydraulic lift:**  
Reduces lifting capacity 100 kg

**Safety roof with hydraulic lift and slide:**  
Reduces lifting capacity 200 kg

**LED working lights on safety roof (2 pcs) 73 W**

#### FIRE SUPPRESSION SYSTEM

**Fogmaker:** Manually actuated  
**Fogmaker:** Automatically actuated  
**Ansul:** Manually actuated  
**Ansul:** Automatically actuated

#### GREASING SYSTEM

Automatic lubrication system for carrier and lifter: Lincoln

#### OTHER

**Fast fuel filling system: Wiggins**  
**Oil evacuation kit with sample points**  
**Extra hand held fire extinguisher (12 kg)**

##### Warning lights, 1 unit:

- Rotating beacon; amber
- Rotating beacon; red
- Rotating beacon; blue
- Strobe light; white

**Text labels in:** Fin / En / Por / Swe / Rus / Nor / Ger /  
Fra / Spa / Ita

##### Toolbox and maintenance tools

**2 wheel chocks with brackets**  
**Reversing camera**  
**Spare wheel**

### LTC services

#### RECOMMENDED SPARE PARTS FOR EARLY LIFE

**Spare parts package: A complete package to make sure your machine runs with optimal uptime up to 1000 operation hours\*.**

Includes periodical maintenance parts and most critical spare parts related to e.g.:

- Engine (e.g. filters, belts)
- Chassis (e.g. wiper blades, throttle pedal connector)
- Hydraulics (e.g. filters)
- Electrics (e.g. sensors, work lights, solenoid coils, contactors)
- Boom (e.g. sliding parts, bearings, cylinders, seals, pins)
- Compressor, if applicable (e.g. filters)

\*) In challenging operating environment 1000h of usage may not be reached with this spare parts package.

#### EXTENDED WARRANTY

Extended warranty extends the standard warranty period (12 months or 2000 usage hours) up to total 24 months or 3000 usage hours, whichever is reached first.

#### ELECTRONIC MANUALS ON THE WEB

LinkOne electronic spare parts and instruction manuals

#### TRAINING AND EXPERTISE SERVICES

Available before and at the equipment delivery - and during the whole equipment life-time!

##### Product training:

Operation and Maintenance  
Automation - NorSmart  
Foundation of electrics, hydraulics and mechanics  
Trouble-shooting

##### Process & operator improvement audit for:

Concrete spraying  
Charging  
Scaling

##### Audit services to improve:

Performance, availability, maintenance & repair efficiency, safety, quality, environmental aspects

#### SERVICE CONTRACTS FOR

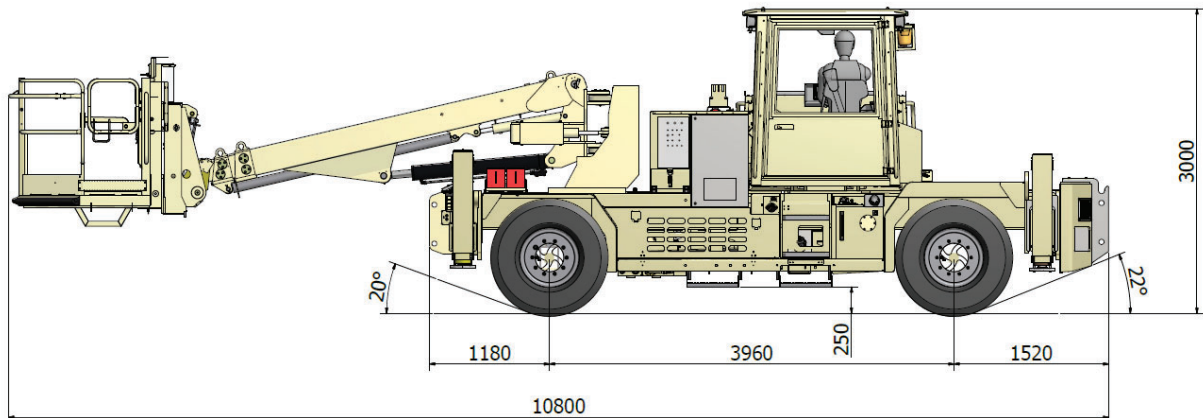
Spare parts supply  
Scheduled inspection  
Supervision  
Scheduled maintenance  
Preventive maintenance

#### EQUIPMENT HAND-OVER SERVICES

|   | Start-up training | Commissioning                                   |
|---|-------------------|---|
| <b>1. Operator training</b>                                 |                   |   |
| <b>1.1 Classroom training</b>                               |                   | No classroom training included in commissioning |
| General introduction and operation of machine               | Comprehensive     |   |
| Safety instructions   | Comprehensive     |   |
| Use of manuals  | Comprehensive     |   |
| Technical introduction of equipment                         | Comprehensive     |   |
| Hands-on service and pre-operation checks                   | Comprehensive     |   |
| Controls and driving (starting, driving, stopping, parking) | Comprehensive     |   |
| Work method   | Comprehensive     |   |
| <b>1.2 Practical training</b>                               |                   |   |
| Pre-operation checks  | Comprehensive     | Basic   |
| Driving, starting, stopping, parking                        | Comprehensive     | Basic   |
| Preparing the machine for specific operation conditions     | Comprehensive     | Not covered                                     |
| Operation   | Comprehensive     | Basic   |
| Washing the machine   | Comprehensive     | Basic   |
| Troubleshooting   | Comprehensive     | Basic   |
| <b>2. Maintenance and repair training</b>                   |                   |   |
| General operation of machines                               | Comprehensive     | Basic   |
| Symbols of drawings and codes                               | Comprehensive     | Not covered                                     |
| Understanding hydraulic and electric schematics             | Comprehensive     | Basic   |
| Control systems   | Comprehensive     | Basic   |
| Function of main components (depending on equipment)        | Comprehensive     | Basic   |
| Locations of components in the machine                      | Comprehensive     | Not covered                                     |
| Periodical maintenance                                      | Comprehensive     | Basic   |
| Troubleshooting   | Comprehensive     | Not covered                                     |
| Use of manuals  | Comprehensive     | Basic   |
| Connection of hydraulic and electrical equipment            | Comprehensive     | Not covered                                     |

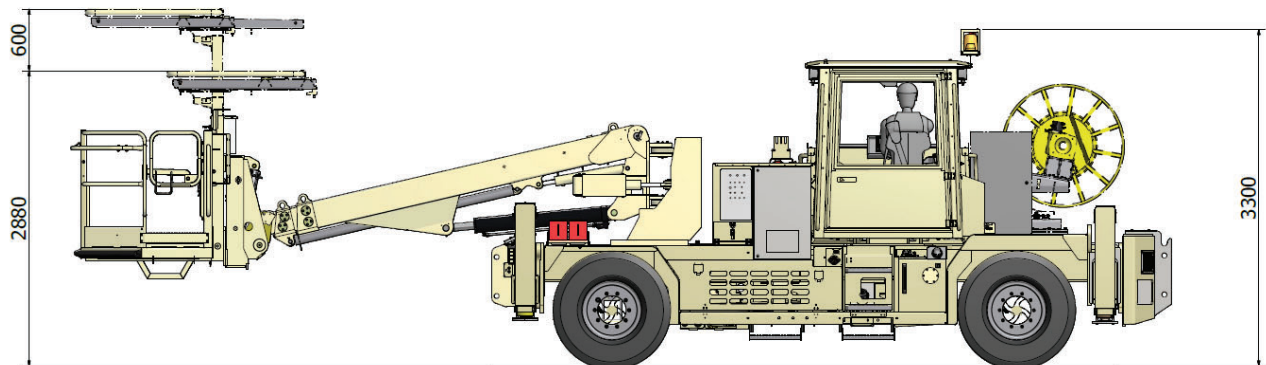
Normet reserves the right to change this specification without further notice.

### Dimensions



#### SIDE VIEW

Basic machine



#### SIDE VIEW

Machine with options

#### DIMENSIONS

|            |          |
|------------|----------|
| Length     | 10800 mm |
| Width      | 2300 mm  |
| Height     | 3000 mm  |
| Wheel base | 3960 mm  |
| Track      | 1650 mm  |

#### TURNING RADIUS

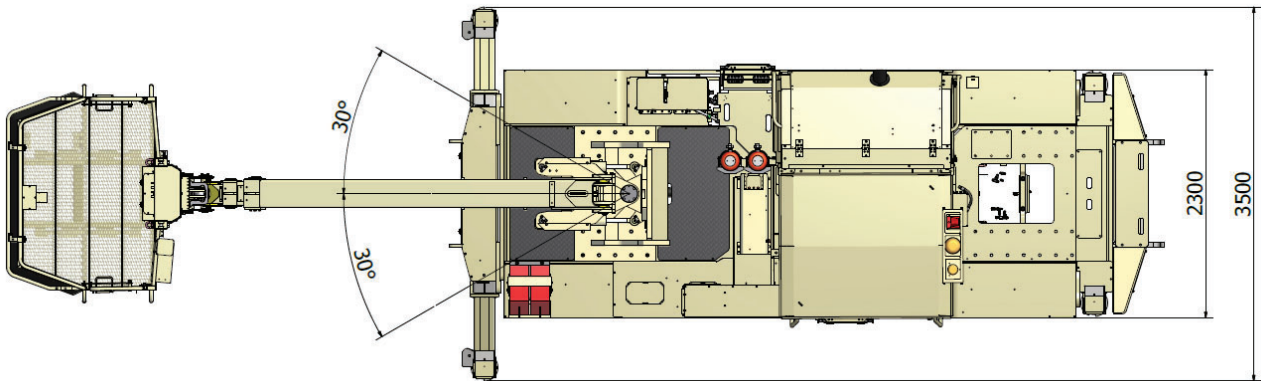
|       |      |
|-------|------|
| Outer | 7960 |
| Inner | 3980 |

#### WEIGHT

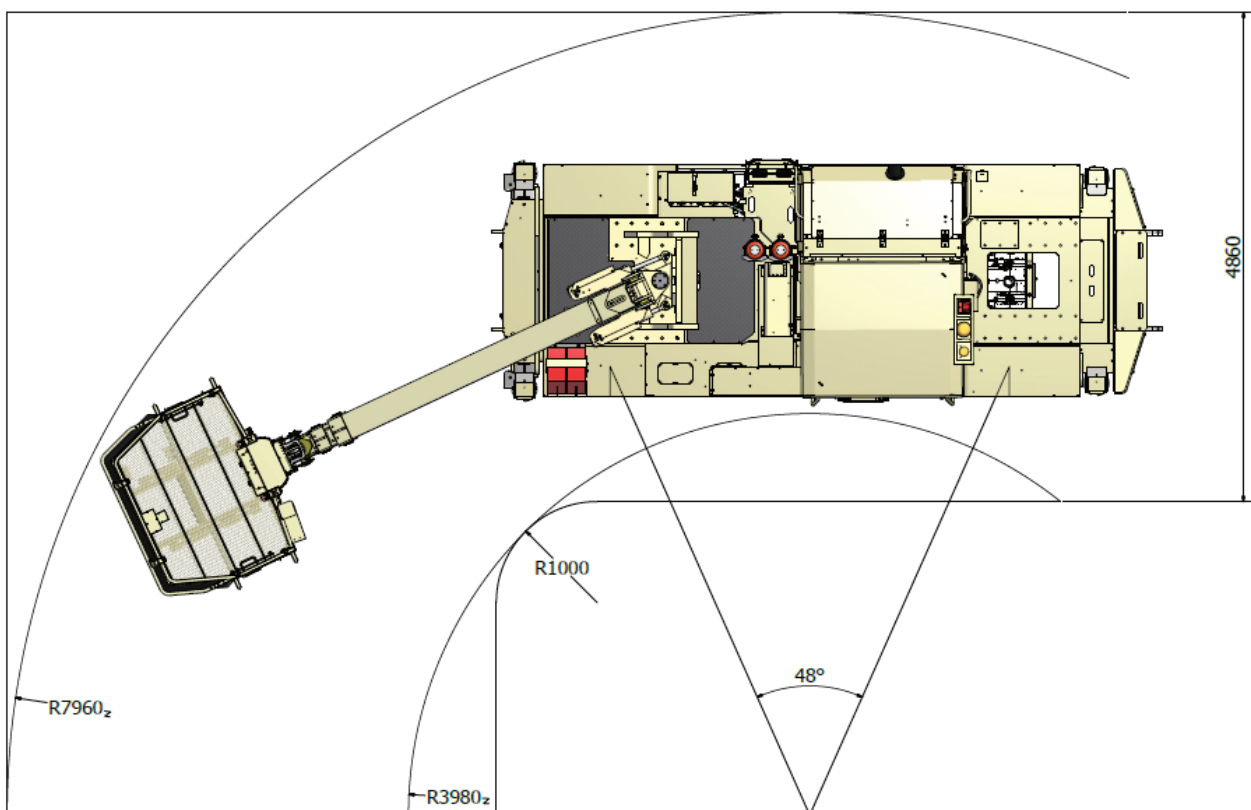
|           |           |
|-----------|-----------|
| Operating | 18 000 kg |
|-----------|-----------|

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### Dimensions



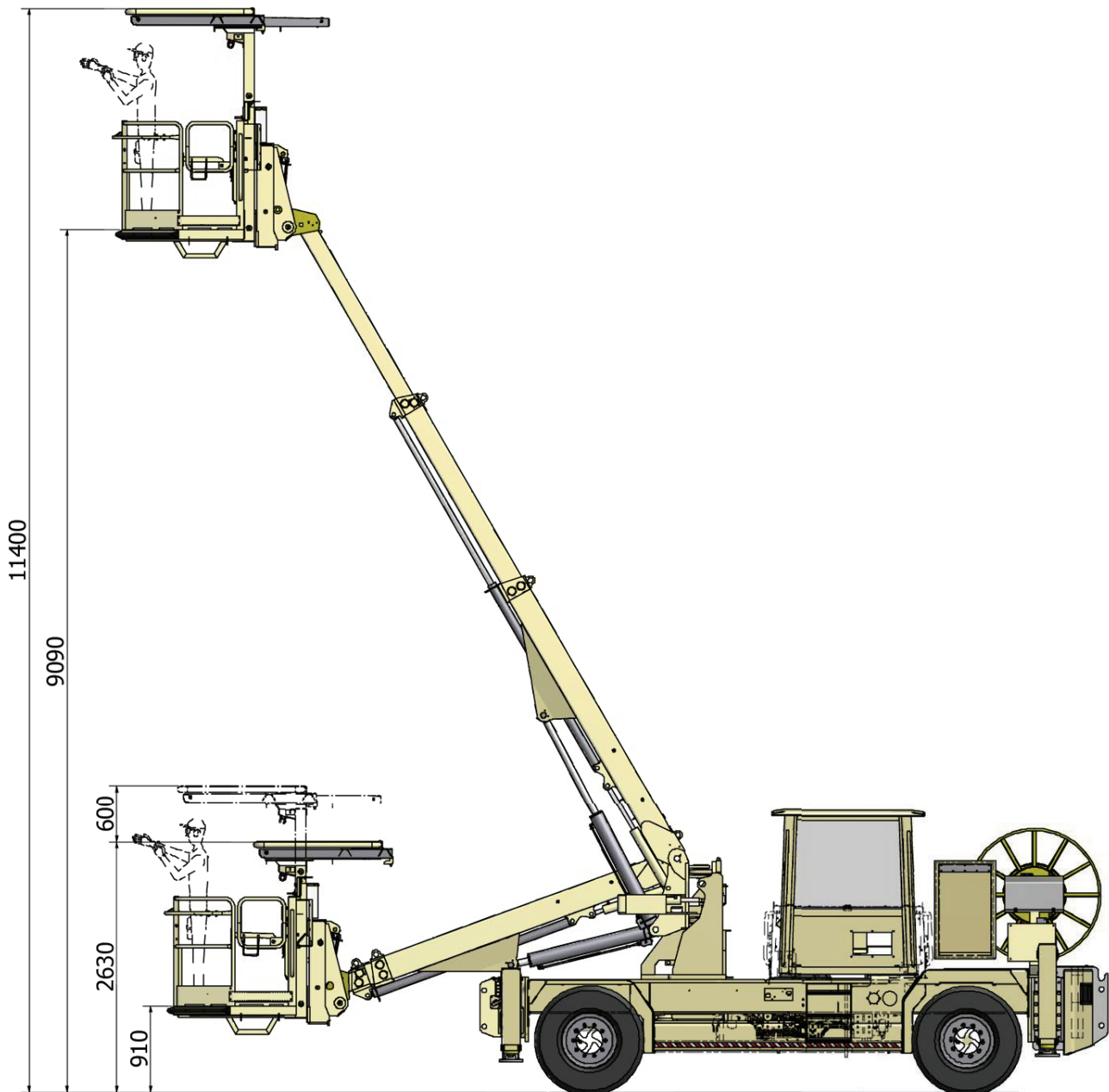
### TOP VIEW



### TURNING RADIUS

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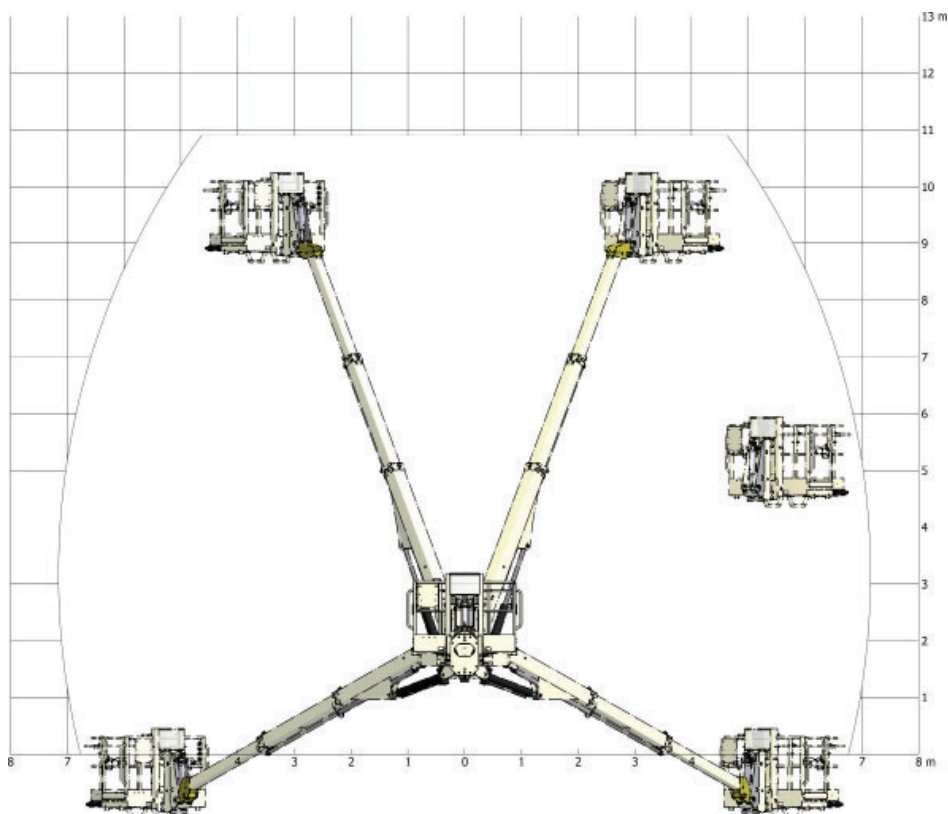
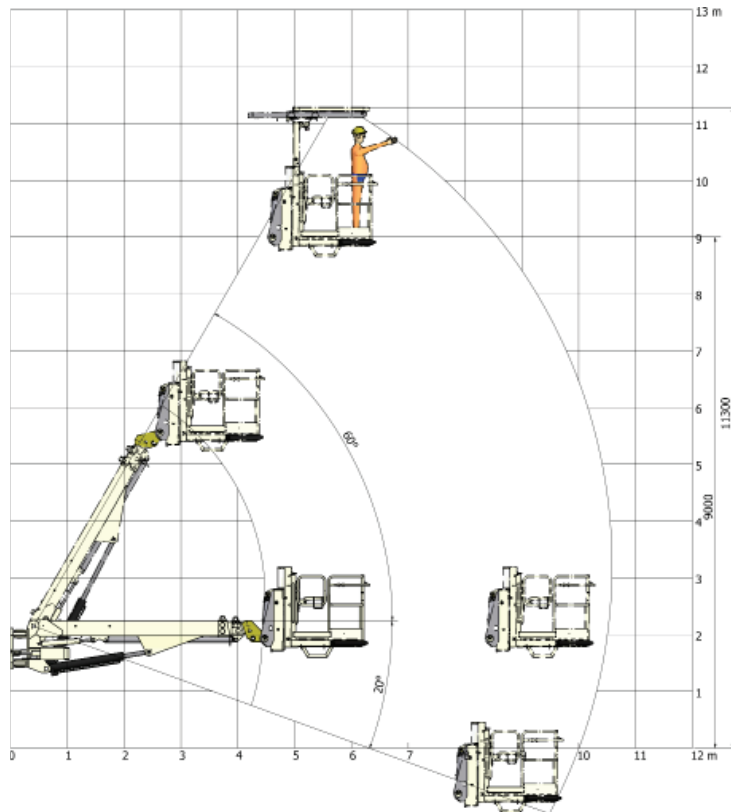
### Dimensions



### BOOM MOVEMENTS

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### Dimensions

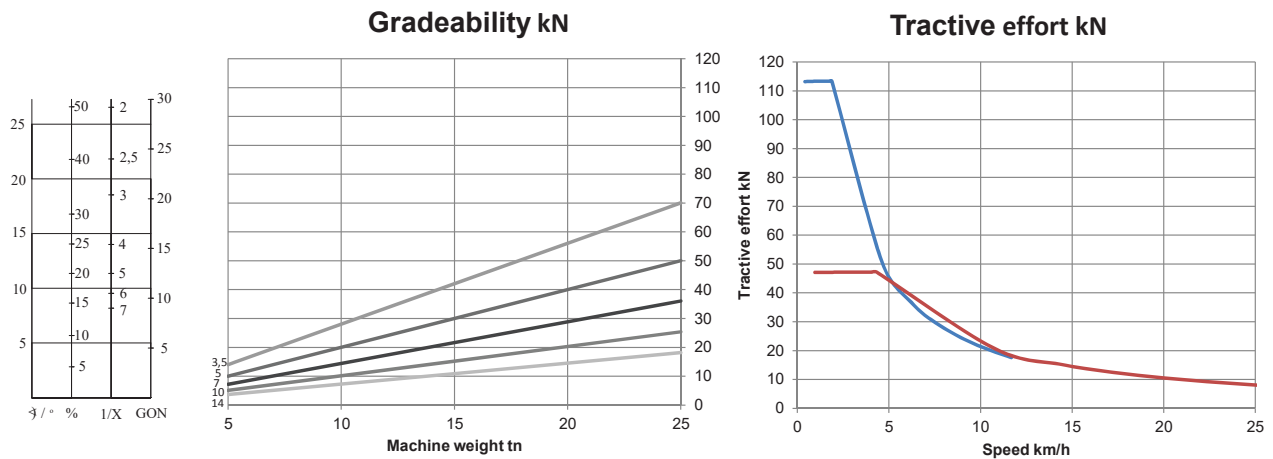


### COVERAGE AREA OF NBB3 BOOM

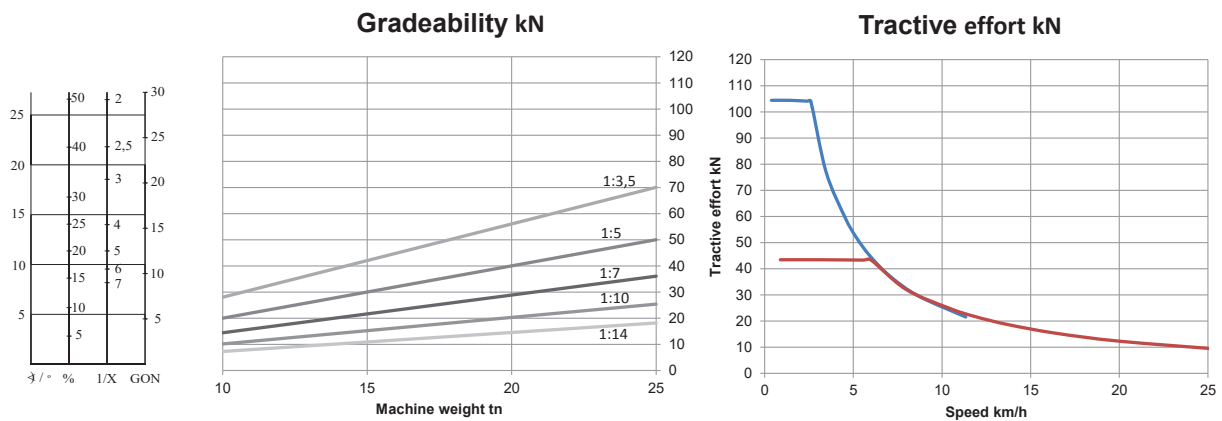
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### Performance



### CUMMINS B 4.5 121kW Stage V Performance curve



### CUMMINS QSF4.5 110kW Tier3 Performance curve