



*Pictured machine may include options and additional equipment.*

## Features

Scamec 2000 M is a diesel driven unit designed for mechanised scaling in underground mines and tunnels where tramming height is 2.4 m or more. Scamec consist of NC200 carrier, NSB1000 boom, scaling tool and other scaler accessories.

The powerful liquid cooled turbo charged 155 kW Deutz or MB 170 kW TIER 3 approved engine provides clean and efficient operation. MB gives a maximum speed of 7 km/h in an upward inclined 1:7 tunnel. In a horizontal tunnel, the maximum speed is 17 km/h.

The FOPS and ROPS approved safety cabin provides superior visibility and comfortable compartment for the driver. The enclosed cabin provides noise level < 75 dB. All daily checks can be done from the ground level.

Technical performances indicated in this document are valid at sea level.

### Technical specification

#### NORMET SCALING BOOM NSB1000

Heavy duty telescopic scaling boom	
Max. vertical reach of hammer	9.8 m
Max. horizontal reach of hammer	14 m
Boom slew	+/- 40°
Hammer turn	+/- 45°
Hammer tilt	120°

#### BOOM CONTROL

Hydraulic pilot control with Deutz engine or  
Electrical control with MB engine  
Two joysticks

#### SCALING TOOLS

Epiroc (Atlas-Copco) SB302 Tunnel, hydraulic impact hammer	
• Impact energy	450 J
• Impact rate	max. 1300 bpm
• Weight	304 kg
Push plate	

#### FOR SCALING PROCESS

Hydraulically powered 0,4 m<sup>3</sup>/min compressor for air flushing of hammer's tool

Dust suppression system with manual water reel  
Hose length 30 m

#### ENGINE

Liquid cooled turbo charged Deutz TCD 2012 L6, 155 kW/2300 rpm, TIER 3 approved or Liquid cooled turbo charged MB OM906LA, 170 kW/2200 rpm, TIER 3 approved

#### EXHAUST SYSTEM

Catalytic exhaust gas purifier and muffler

#### TRANSMISSION

Dana 32 000 series power shift with pump drive group 3 speeds forward and reverse  
4-wheel drive

#### AXLES

Planetary type  
Dana 113  
Load end axle fixed  
Engine end axle oscillation +/- 7°

#### TYRES

14.00 - 24 PR 28

#### PERFORMANCE

1st gear max.	6 km/h
2nd gear	12 km/h
3rd gear	25 km/h
Max. tractive effort	133 kN
Max speed in 1:7 inclined tunnel	7 km/h
Performance curve	100018584

#### STEERING

Hydraulic frame steering  
Orbitrol type  
Frame articulation +/- 40°

#### FUEL TANK

Capacity 140 L

#### BRAKES

Service brake: hydraulically powered dual-circuit oil immersed multidisc brakes in both axles

Safety/Parking brake: spring applied hydraulically released fail-safe -type brake. Brake testing possible from cabin

#### HYDRAULIC SYSTEM

Variable displacement pump system, 190 bar, 155 L/min/2200 rpm  
Hydraulic oil tank capacity 240 L  
Return oil filtration 10 µm  
Indication of level, filtration and temperature

#### 24 VDC ELECTRICAL SYSTEM

Exposed components are min IP 65 standard  
Battery 2 x 115 Ah  
Alternator 100 A  
LED Driving lights 2x26 W Forward + 2x26W Rear  
LED Working lights 10x56W Forward + 2x26W Rear  
LED parking, brake and indicator lights  
LED side lights; amber  
Rotating beacon; amber  
Wire harness (self extinguishing) with tinned wires and water tight conduits

### Technical specification

#### DRIVER'S COMPARTMENT

Open one-man cabin FOPS/ROPS approved

Cabin lift: + 600 mm

Cabin tilt: 15°

Air suspended seat for driver

Seat with retractable lap seat belt

Driving controls and a set of pedals

CAN Cockpit, Master Gauge:

- Tacho, rpm
- Operating hours
- Fuel level
- Transmission temperature
- Cooling water temperature

#### GREASING SYSTEM

Centralized grease fittings for the carrier

Ramlube lubrication system for hammer

#### OTHER

12 kg hand held fire extinguisher

Standard symbol labels

Support legs: 4 pcs for scaling with hammer

### Optional equipment

#### BOOM CONTROL

Electric control with two joysticks  
available only with Mercedes-Benz engine and enclosed cabin

#### SCALING TOOLS

Normet pick unit  
Rotating Normet pick unit  
Turnable push plate

#### DRIVER'S CABIN

Enclosed cabin, FOPS/ROPS approved

#### ENGINE

Liquid cooled turbo charged Deutz TCD 2012 L6,  
155 kW/2300 rpm, TIER 3 approved with Dana 32  
000 series power shift

1st gear max.	5 km/h
2nd gear	10 km/h
3rd gear	18 km/h
Max. tractive effort	164 kN

Max speed in 1:7 inclined tunnel

- Fully loaded 8 km/h
- Empty 10 km/h

Performance curve DOC000805

Liquid cooled turbo charged Mercedes-Benz OM 906  
LA, 170 kW/2200 rpm, TIER 3 approved with Dana  
32 000 series power shift

1st gear max.	5 km/h
2nd gear	10 km/h
3rd gear	19 km/h
Max. tractive effort	172 kN

Max speed in 1:7 inclined tunnel: 7 km/h

Performance curve  
100003433

#### EXHAUST SYSTEM

Diesel Particle Filter (DPF)

#### OTHER

Warning lights, 1 unit:

- Rotating beacon; red
- Rotating beacon; blue

### Additional equipment

#### HIGH VOLTAGE ELECTRICAL SYSTEM

Electro-hydraulic 55 kW power pack for powering the  
scaling boom including:  
Hydraulically driven cable reel with 100 m cable

#### SCALING TOOLS

Normet pick unit  
Rotating Normet pick unit  
Hammer maintenance tools for:

- Epirock (Atlas-Copco) SB302 Tunnel

#### FOR SCALING PROCESS

Water tank 200 L

Emergency escape system:

Manually triggered, automated conversion from work  
mode to tramping mode with revved engine and  
selected reverse gear

Available only with MB

#### FOR ENCLOSED CABIN

USB/Radio system

Cabin ventilation:

- Cabin heating
- Air conditioning

#### FIRE SUPPRESSION SYSTEM

Fogmaker: Manually actuated

Fogmaker: Automatically actuated

Ansul: Manually actuated

Ansul: Automatically actuated

Tempus: Manually actuated (Non CE)

Buran: (Non CE)

#### GREASING SYSTEM

Automatic lubrication system for carrier and Normet  
boom: Lincoln

#### OTHER

Fast fuel filling system: Wiggins

Extra hand held fire extinguisher (12 kg)

Warning lights, 2nd unit:

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

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

2 wheel chocks with brackets

Reversing camera

Scamec 2000 spare wheel

Scamec 2000 spare wheel with rack

Arctic climate kit

## Service

### OPERATIONAL SPARE PARTS

A complete parts package to ensure your machine runs with optimal uptime.

After commissioning of your new Normet equipment, the following maintenance & critical spares are typically recommended to support and service your machine:

- Filters, belts
- Sensors, work lights, solenoid coils and fuses
- Sliding parts, bearings, cylinders, seals & pins
- Hoses including concrete, charging & hydraulic
- Nozzles & tips

TamCrete EasyClean - nontoxic protective agent

- Pistons and seal kits
- Guide rollers and bushes

Note: The usage and consumption of parts may vary depending on the operating environment.

### EXTENDED WARRANTY

Standard Normet equipment warranty is 2000 operation hours or 12 months (whichever is reached first). Extended warranty for your Normet equipment can be provided with service agreement- conditions apply.

### TRAINING AND EXPERTISE SERVICES

Need training before your machine goes into service or any stage during its working life? The Normet Academy and our highly skilled technicians can provide all your expert training needs including...

#### Product training:

Operation and Maintenance  
Automation -NorSmart/Nordoser  
Electric, hydraulic and mechanical fundamentals  
Trouble-shooting and fault finding

#### Process & operator improvement audit for:

Concrete spraying - practical or simulated  
Charging  
Scaling - practical or simulated

#### Audit services to improve:

Equipment performance, machine availability, safety & quality.

### SERVICE AGREEMENTS

Parts supply

Periodic fleet inspection

Preventative maintenance

Maintenance Supervision

Fleet availability

### ELECTRONIC MANUALS

LinkOne electronic spare parts and instruction manuals

### EQUIPMENT - COMMISSIONING & START UP SERVICES

#### Operator Training

- Class room training
- Practical training

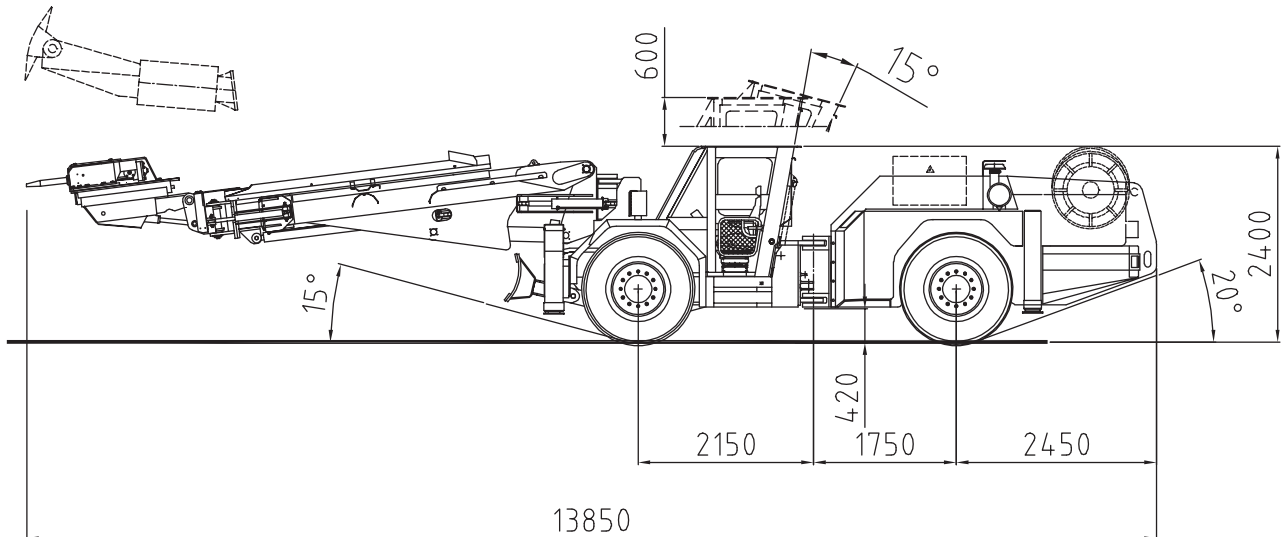
#### Maintenance & Repair Training

- Class room training
- Practical training

#### Commissioning

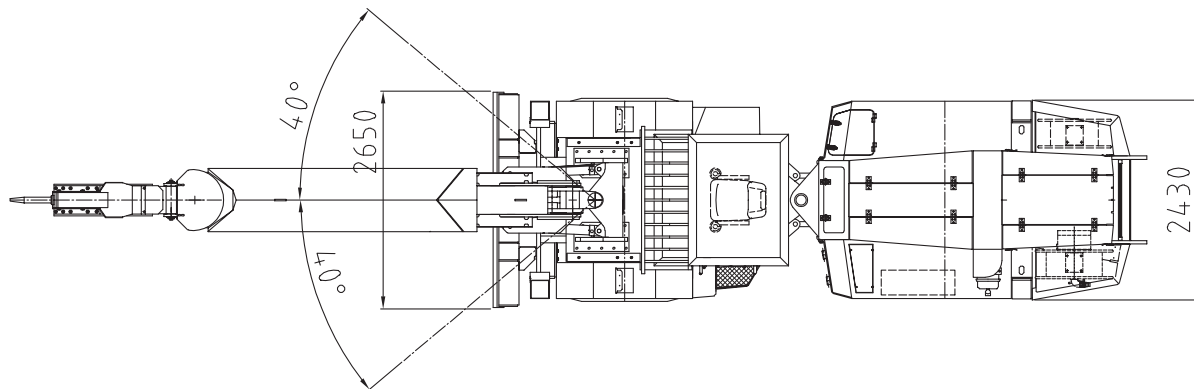
- Receiving inspection

### Dimensions



#### SIDE VIEW

Basic machine



#### TOP VIEW

Machine with options and extra equipment

#### DIMENSIONS

Length	13850 mm
Width	2650 mm
Height (standard)	2400 mm
Wheel base	3900 mm
Ground clearance as shown	420 mm

#### TURNING RADIUS

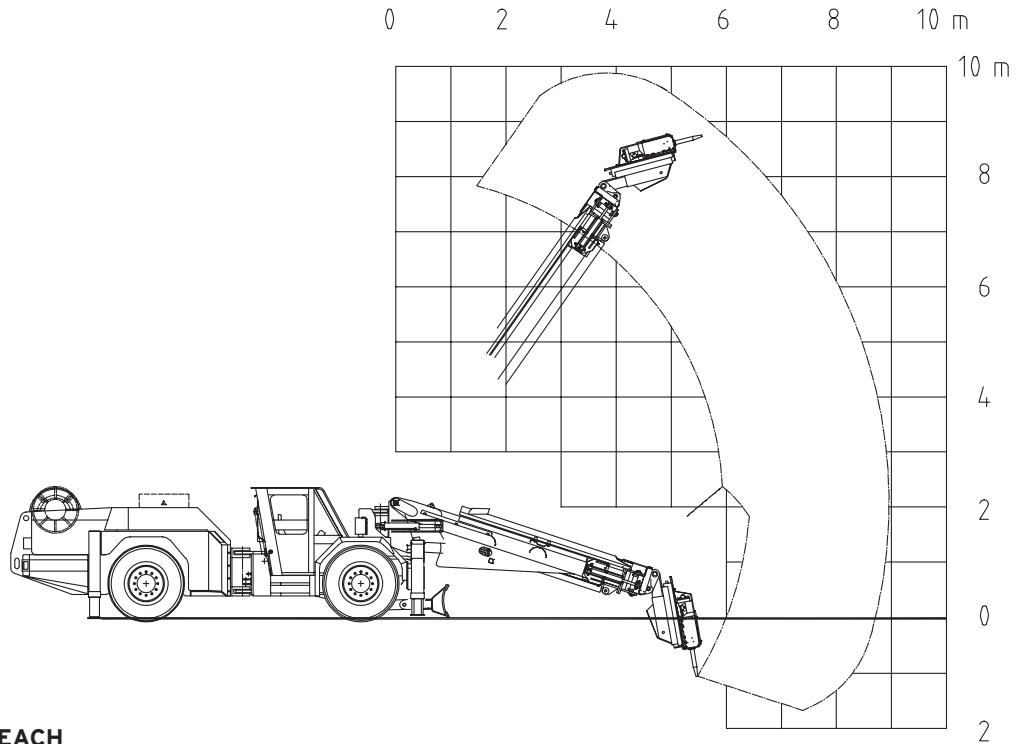
Outer	6790 mm
Inner	4050 mm

#### WEIGHT

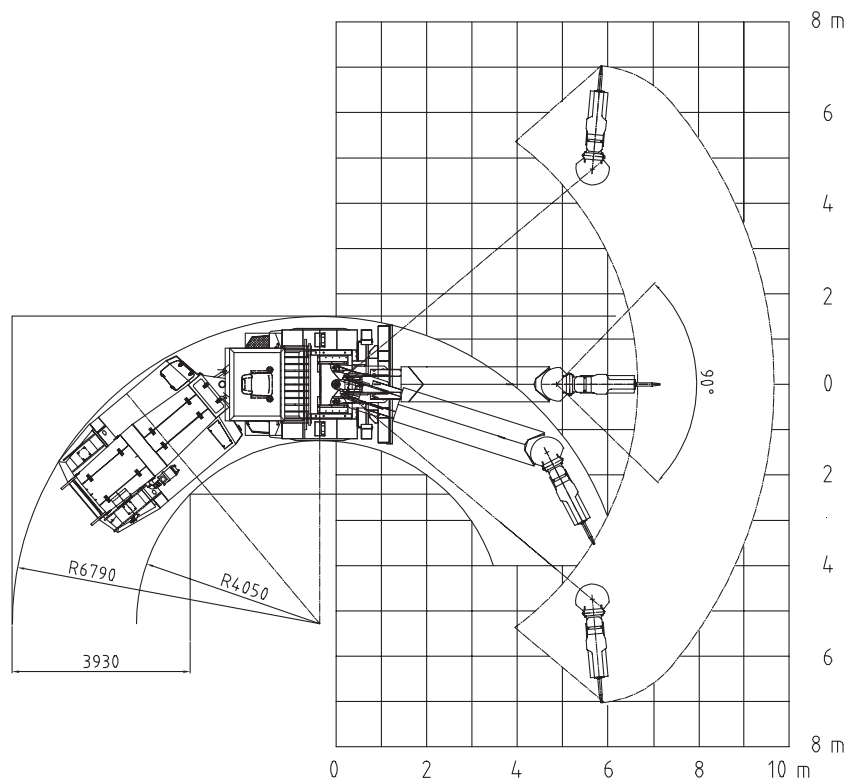
Operating weight:	26 200 kg
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Normet reserves the right to change this specification without further notice.

### Dimensions

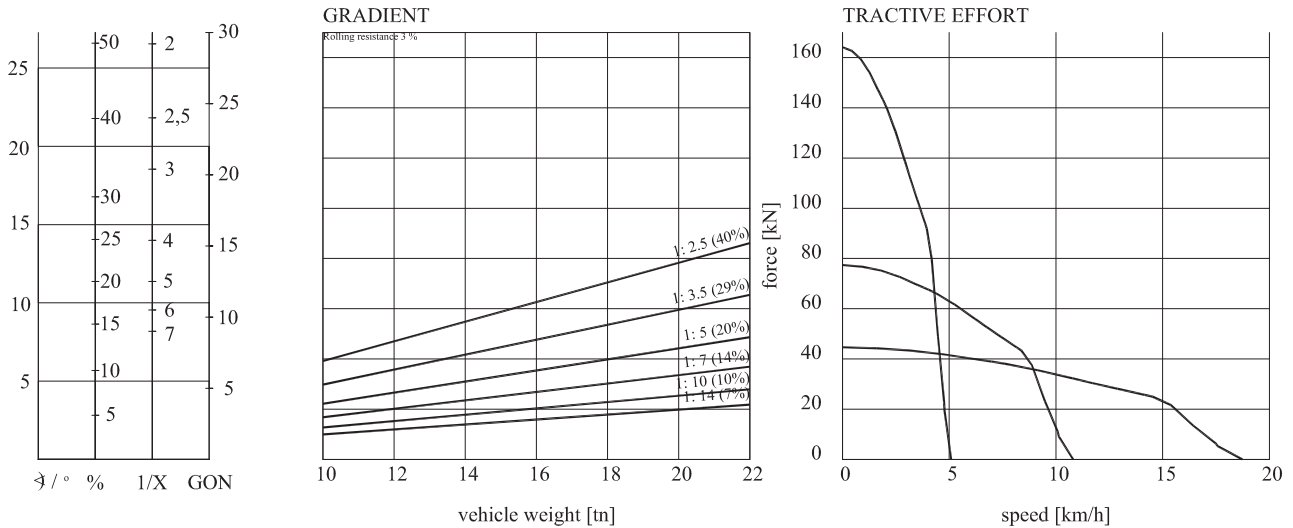


### BOOM REACH

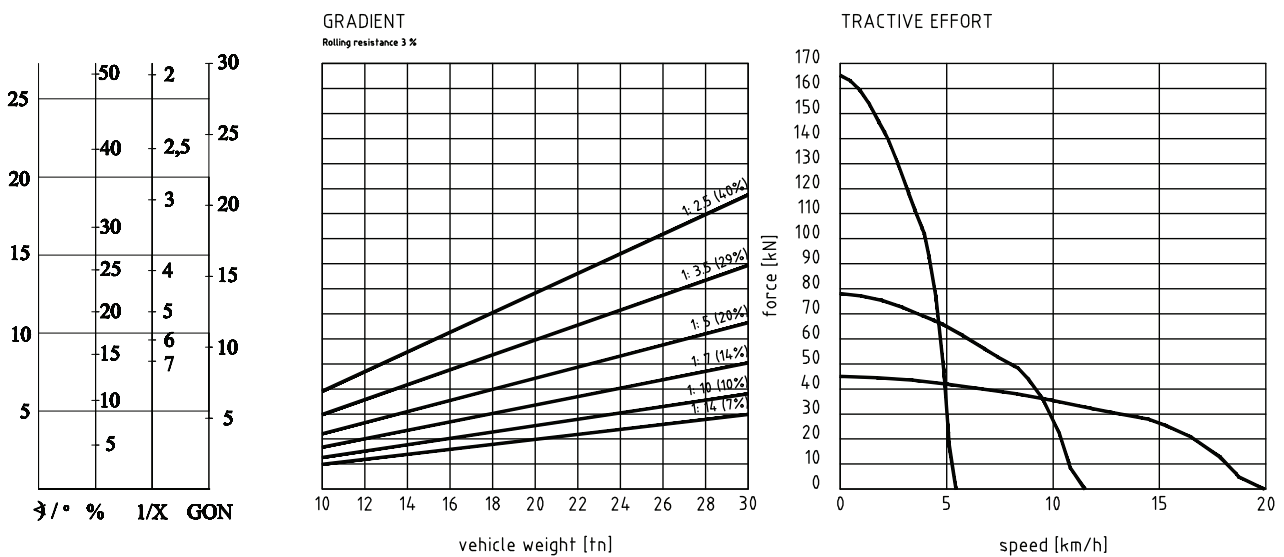


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### Tractive efforts



### DEUTZ TCD 2012 L6, 155 kW Performance curve DOC000805



### MERCEDES-BENZ OM 906 LA, 170 kW Performance curve 100003433

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