

Pictured machine may include options and additional equipment.

Features

Charmec MC 605 ANFO charger (long end model) with diesel hydraulic or electro-hydraulic drive is designed for face and production charging in underground mines and tunnels up to 65 m² cross sections where max face height is 8.8m.

ANFO vessels options of 2 x 360 / 500 / 720 litres provides enough explosive storage volume for several faces without need for refuelling. Ready designed place for packed explosives, primers and detonators makes it possible to bring all the needed materials to the workplace at once and eliminates the need for an additional explosive service vehicle.

Compressor option eliminates the need for external pressure air line. Optional ANFO filling system allows filling of ANFO tanks from ground level during operation and eliminates the need for climbing up to the machine during the work. In production charging optional mechanical hose feeding system allows 33.5 mm, 38 mm or 44 mm charging hoses to be used for up- and down holes. Water adding system allows 1-2 % of water to be added into ANFO during the charging of up-holes for helping ANFO to stay in vertical holes.

Optional genuine electro-hydraulic process allows to charge without diesel fumes and more ergonomically with lower noise level. If electricity is not available charging work can be still done with diesel.

The liquid cooled turbo charged 120 kW Deutz or 110 kW MB TIER 3 approved engine provides clean and efficient operation and gives maximum speed of 10 km/h in upward 1:7 inclined tunnel.

The FOPS /ROPS approved safety canopy / cabin with pivotal instrument consol provides comfortable compartment for the driver and his assistant and superior visibility forwards and backwards. The enclosed cabin provides noise level < 75 dB. The Norsmart CAN bus carrier control system comes with fault diagnostics. Self extinguishing marine type wire harness with tinned wires and water tight conduits are specially designed for safe and reliable operation in hard underground conditions. All daily checks can be done from the ground level.

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

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

Technical specification

CHARGING SYSTEM

2 ANFO vessels and work stand, 1 charging operator
500 liter stainless steel ANFO kettle
Charging hose 19 x 25 mm, 30 m
Pressure max. 7 bar
Extra air for charging
Pneumatic hand and foot control for charging and blowing
Pneumatic control in basket to switch between vessels
Earth straps front and rear
Storage area for packaged explosives
Storage boxes for primers and detonators

NBB3S BASKET BOOM

2-men basket
Lifting capacity 500 kg
Boom lift -18°...+ 60°
Max. Lifting height (basket floor) 6.5 m
Max. Vertical reach 8.8 m
Boom slew +/- 30°
Automatic levelling of basket
Diesel start/stop from basket
Battery operated emergency pump for lowering the boom

CONTROL SYSTEM

Integrated, seamless control and diagnostic system
NorSmart for all machine functions. NorSmart controls:

- Carrier functions
- Boom functions
- Charging process
- Safety requirements
- Fault diagnostics
- Data logging

DRIVER'S COMPARTMENT

Open 2-man cabin FOPS/ROPS approved
Air suspended driver's and passenger's seat
Seat with retractable (75 mm wide) lap seat belt
The driver's compartment with pivoting instrument console with driving controls and pedals
Instrument console contain multi-informational color display
Assembled in upper mounting height (2700 mm)
Cabin door interlock switches with safety brake application

MACHINE CONNECTIVITY

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

ENGINE

Liquid cooled turbo charged Deutz TCD 2013 L4,
120 kW/2300 rpm, TIER 3 approved

EXHAUST SYSTEM

Catalytic exhaust gas purifier and muffler

TRANSMISSION

Dana 24 000 series power shift with pump drive group
3 speeds forwards and reverse
4-wheel drive

TYRES

12.00 - 20 PR 20

AXLES

Planetary type
Dana 123
Load end axle fixed
Engine end axle oscillation +/- 10°

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	10 km/h
Performance curve	100018584

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

STEERING

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

FUEL TANK

Capacity 112 L

HYDRAULIC SYSTEM

Variable displacement pump system
Pressure setting 190 bar, 95 L/min/2200 rpm
Hydraulic oil tank capacity 115 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 (4 + 2 pcs)
LED work lights on cabin (4 pcs)
LED work lights in basket (2 pcs)
LED parking, brake and turning indicator lights
Side reversing LED lights (2 pcs)
Rotating beacon, amber
Wire harness (self extinguishing) with tinned wires and water tight conduits

GREASING SYSTEM

Centralized grease fittings for the carrier and boom

OTHER

12 kg hand held fire extinguisher 2 pcs
Standard symbol labels
2 pairs of support legs; extendable legs at the load end and standard at the engine end

Optional equipment**CHARGING SYSTEM****ANFO system:**

- 2 charging operators
(N/A with one ANFO vessel systems)

ANFO module:

- 2 ANFO vessels with 6 m³/min onboard compressor and work stand
- 2 ANFO vessels with 6 m³/min onboard compressor and ANFO filling system
- 2 ANFO vessels and ANFO filling system
- 1 ANFO vessels with 6 m³/min onboard compressor, work stand and scissor lifter for transportation and lifting of ANFO bags. Total capacity 1500 kg. Available with 500I and 720I ANFO vessels. NA with high Voltage system.

ANFO vessel size:

- 360 L
- 720 L (N/A with anfo filling system)

Radio controlled charging and blowing in basket**ANFO hose diameter:**

- For manual hose feeding
22 x 28 / 26,5 x 33,5 / 41,5 x 51 mm
- For Mechanical hose feeding
26,5 x 33,5 / 30 x 38 mm / 34 x 44 mm

ANFO hose length:

- 30/60 m

DRIVER'S CABIN**Canopy:**

- Lower assembly height: 2400 mm

Enclosed cabin: Noise level in cabin LA = 75 dB

- Upper assembly heights: 2700 mm
- Lower assembly height: 2400 mm

MACHINE CONNECTIVITY

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

ENGINE**Liquid cooled turbo charged Mercedes- Benz 904 LA, 110 kW/2200 rpm, TIER 3 approved:**

1st gear max.	5 km/h
2nd gear	10 km/h
3rd gear	25 km/h
Max. tractive effort	120 kN
Max speed in upward 1:7 inclined tunnel	10 km/h
Performance curve	100006272

OTHER**Warning lights: 1 unit**

- Rotating beacon; red
- Rotating beacon; blue

Additional equipment**CHARGING SYSTEM**

Additional pneumatic charging controls: For toe holes and ground level charging work

Mechanical ANFO hose feeding for production charging

Hose guide for upward production charging

Directing pulley for downward production charging

Water for ANFO system: Capacity 70 L

Pressurized air after-cooler for a very high humidity

HIGH VOLTAGE ELECTRICAL SYSTEM**Electro hydraulic drive:**

- 400 V / 50 Hz with 100 m cable
- 440 V / 60 Hz with 100 m cable
- 690 V / 50 Hz with 100 or 150 m cable
- 1000 V / 50 Hz with 100 or 150 m cable

FOR ENCLOSED CABIN**CD/Radio system****Cabin ventilation:**

- Cabin heating
- Air conditioning

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 / safety bar (2 pcs) 43 W Boom suspension

FIRE SUPPRESSION SYSTEM

Fogmaker: Manually or automatically actuated

Ansul: Manually or automatically actuated

GREASING SYSTEM

Automatic lubrication system (Lincoln) for:

Carrier or carrier and lifter

OTHER

Winter kit for diesel engine

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

Toolbox and maintenance tools

2 wheel chocks with brackets

Spare wheel

Reversing camera

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

Hose reel for pressurized air:

(N/A with compressor models)

- 1" 30 m in manually operated
- 1" 50 m in hydraulically operated

Towing kit

Charmec MC 605 DA(V) long end

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

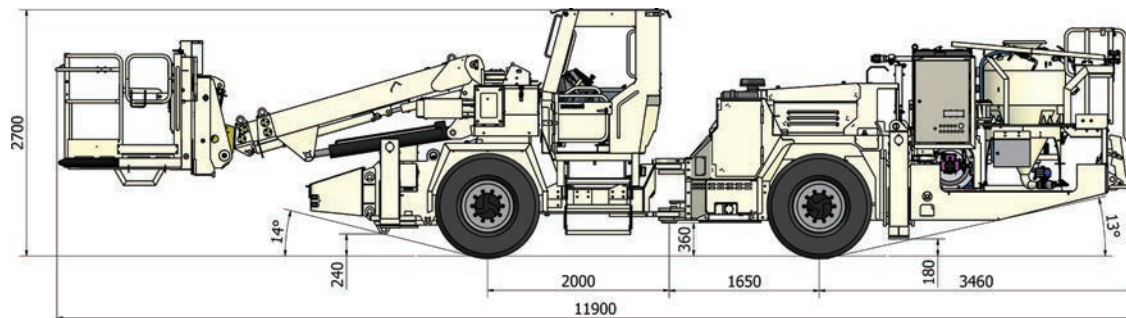
Maintenance & Repair Training

- Class room training
- Practical training

Commissioning

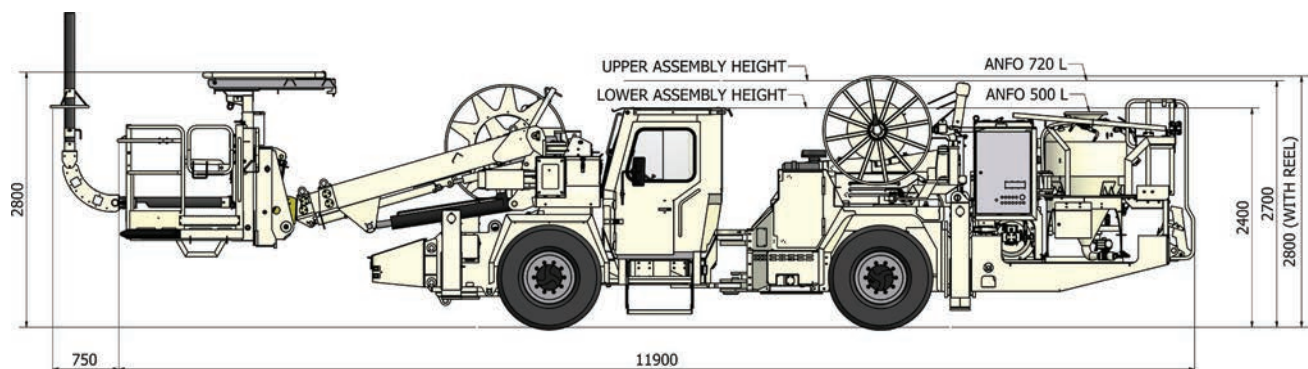
- Receiving inspection

Dimensions



SIDE VIEW

Basic machine



SIDE VIEW

Machine with enclosed cabin and additional equipment

DIMENSIONS

Length	11900 mm
Width	2000 mm
Height	2400/2700 mm
Wheel base	3650 mm
Ground clearance as shown	360 mm

TURNING RADIUS

Outer	(6930 mm) 7560 mm
Inner	3900 mm

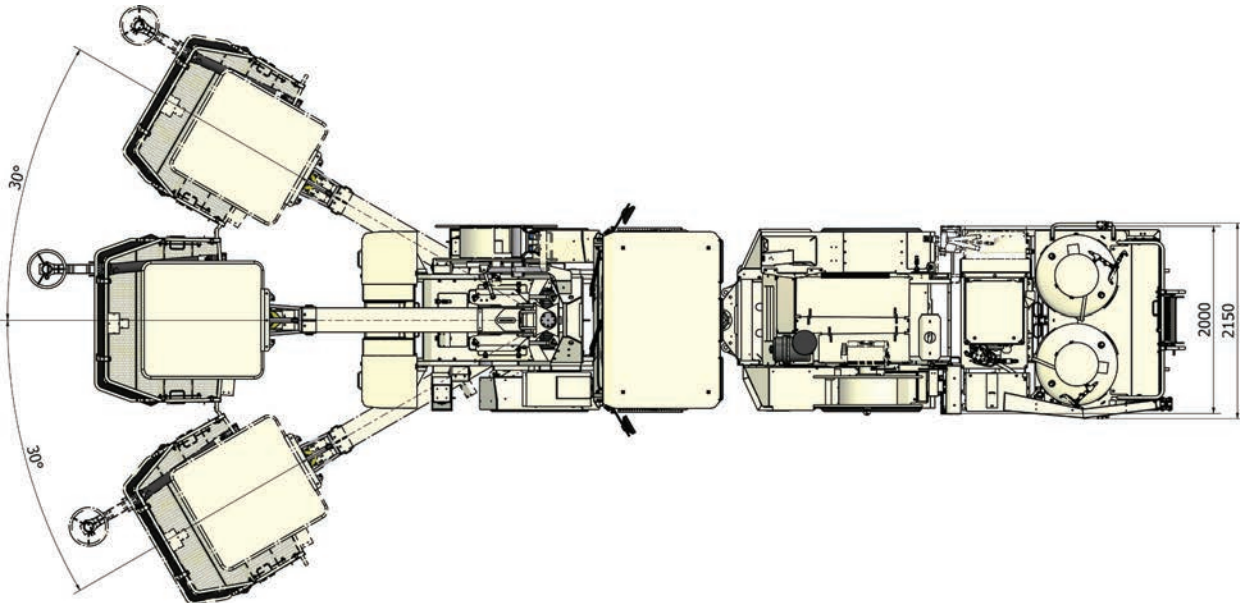
WEIGHT

Operating	15 000 kg
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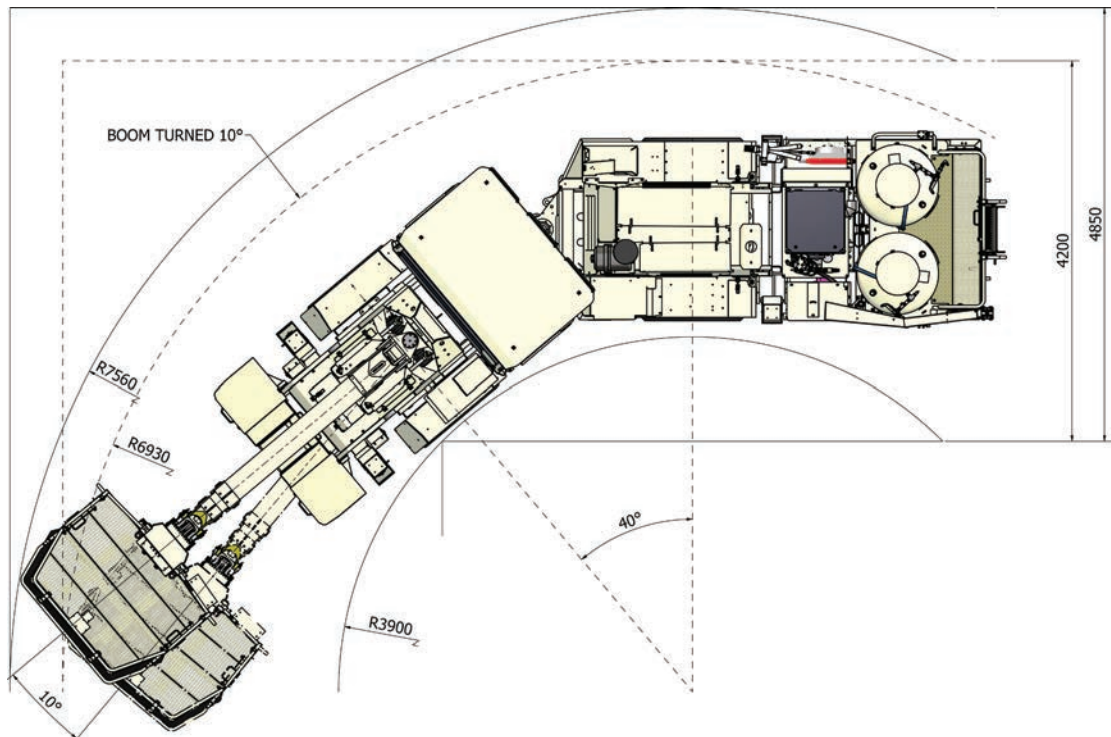
Normet reserves the right to change this specification without further notice.

Charmec MC 605 DA(V) long end

Dimensions



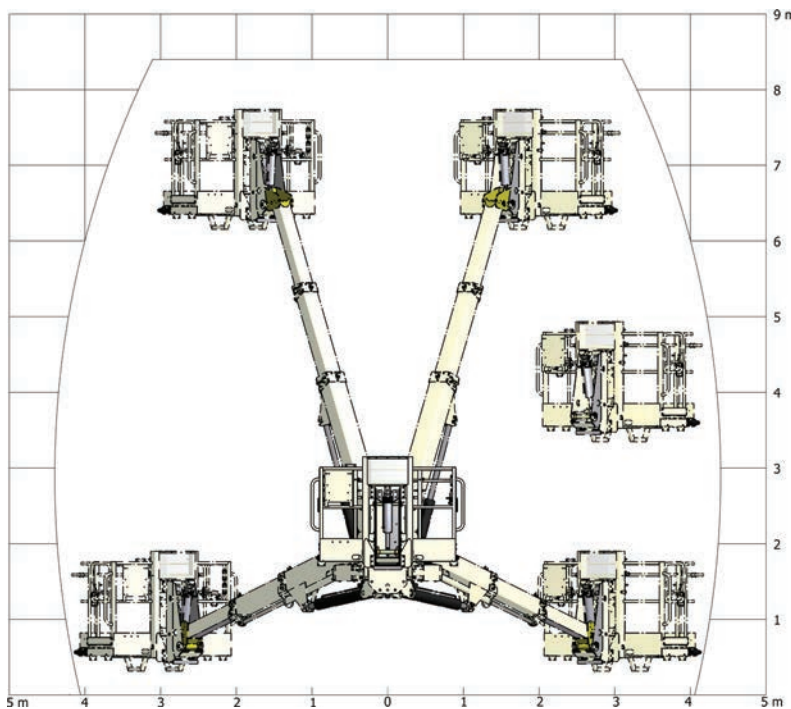
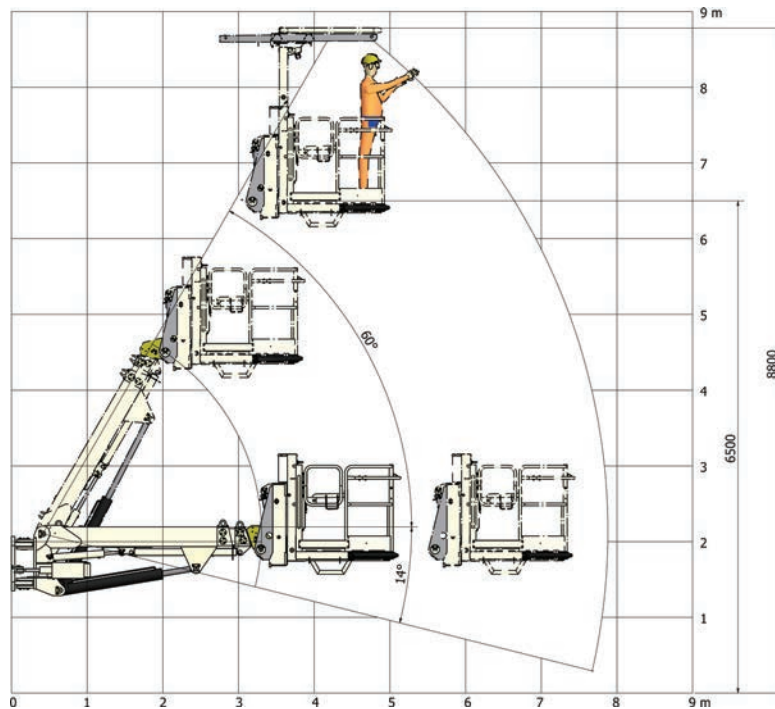
TOP VIEW



BOOM REACH

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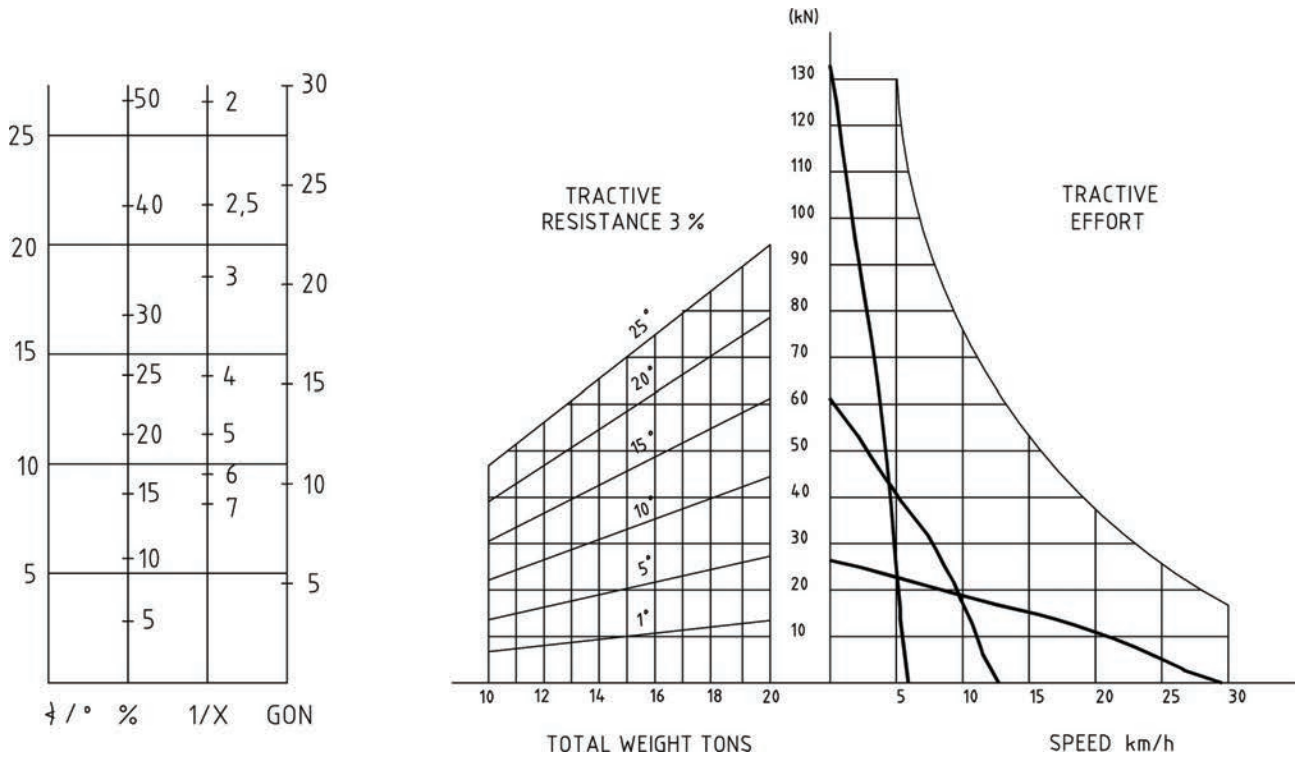
Dimensions



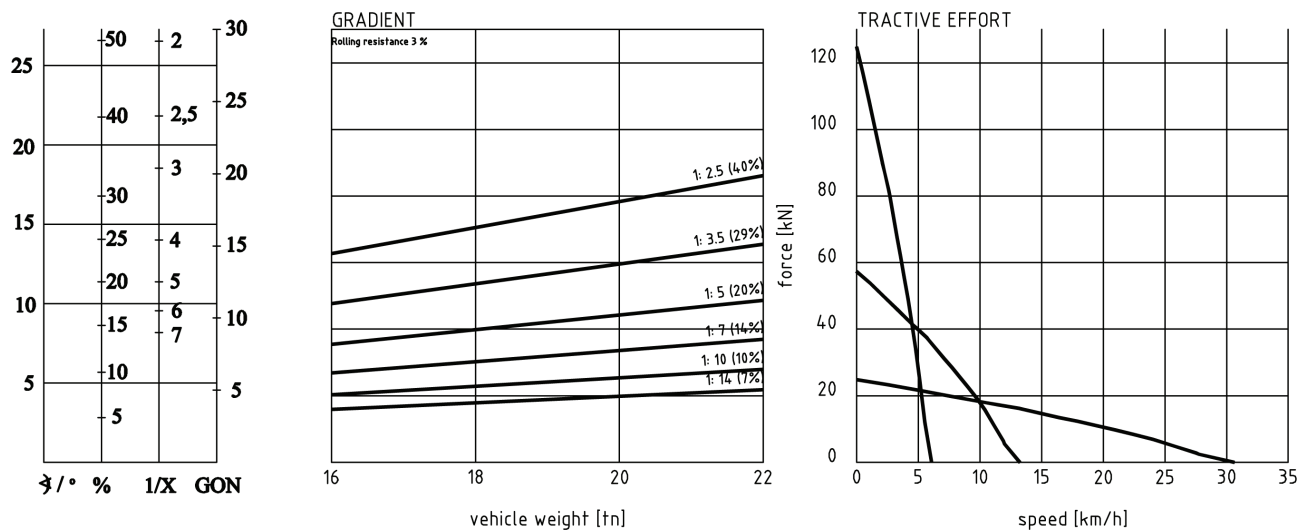
COVERAGE AREA OF NBB3S BASKET BOOM

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

Tractive efforts



DEUTZ TCD 2013 L4 120 kW
Performance curve 100018584



MERCEDES-BENZ OM 904 LA 110 kW
Performance curve 100006272