



This image includes options and extra equipment.

Features

Tornado Tier III is a robust concrete mixer and transport machine, diesel hydraulically driven with 4 m³ concrete capacity. The main characteristics of this equipment is the high reliability and the easily and low cost maintenance.

The powerful liquid cooled turbo charged Deutz TCD 2013 L4 TIER 3 approved engine provides clean and efficient operation and gives maximum speed of 8 km/h fully loaded in upward inclined 1:7 tunnel. In horizontal tunnel the maximum speed is 18 km/h.

The cabin provides superior visibility and comfortable compartment for the driver.

All daily checks can be done from the ground level.

Technical specifications

ENGINE

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

EXHAUST SYSTEM

Catalytic exhaust gas purifier and muffler

TRANSMISSION

Hydrostatic 4-wheel transmission
Variable piston pump 125 cm³
Variable piston motor 140 cm³
Stainless steel hydraulic oil tank

AXLES

Planetary type
Dana 212
Front end axle fixed
Rear end axle oscillation +/- 7°

TYRES

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PERFORMANCE

Fully loaded maximum speed:
Horizontal: 18km/h
Upward inclined 1:7 tunnel: 8 km/h.
Full charged 30% max gradient (according to SAE)

STEERING

Four-wheel steering as standard
Orbitrol type
Including crabwalk

BRAKES

Service brake: hydraulically powered two-circuit oil-immersed multi-disc brakes in both axles
Safety/Parking brake: spring-activated, hydraulically released, fail-safe-type brake.

HYDRAULIC CIRCUITS

Three separate circuits with one common oil tank

- **TRAMING:** Hydrostatic transmission DA control, speed controlled by system pressure.
- **MIXING DRUM:** Hydrostatic transmission, electronic speed control.
- **SERVICE:** Gear pump for steering, brakes and water pump.

Hydraulic oil tank: 270L

MIXING DRUM

Maximum capacity 4m³
Two-directional hydraulic rotation for charging/mixing, and discharge.
Rexroth hydraulic engine driven by Rexroth variable caudal pump with electric speed regulation.

WATER SYSTEM

Water pump driven by hydraulic gear motor.

- Water flow analog control.
- Water cleaning hose length: 15m
- Water tank: 270L

CHASSIS

HS. tubular steel beams, specially designed for heavy duty applications.

DRIVER'S COMPARTMENT

Suspended driver's seat
Seat with retractable (75 mm wide) lap seat belt
The driver's compartment with driving controls and pedals.
VDO gauges (IP65):

- Master Gauge: Engine RPM
Hourmeter
Voltmeter
Fuel Consumption
Turbocharger pressure
 - Fuel level
 - Engine temperature
- Window kit is included

FUEL TANK

Capacity 200 L. Stainless steel.

24 VDC ELECTRICAL SYSTEM

Exposed components are min. IP 65 standard
Battery 2 x 80 Ah
Alternator 55 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

Service brake lights
LED directional lights on front and back side

WORKING LIGHTS

24 VDC LED lights

Additional Equipment

FIRE SUPPRESSION SYSTEM

Fogmaker: Automatically and manually actuated.

HIGH PRESSURE WASHER

Hydraulically operated pressure washer with hose reel:

- Max. water pressure 100 bar
- Max. water flow 15 L/min

Manually operated hose reel

- Hose size 3/4" (19 mm)

ENCLOSED CABIN

Cabin ventilation:

- Cabin Heating
- Air conditioning.

SPARE WHEEL

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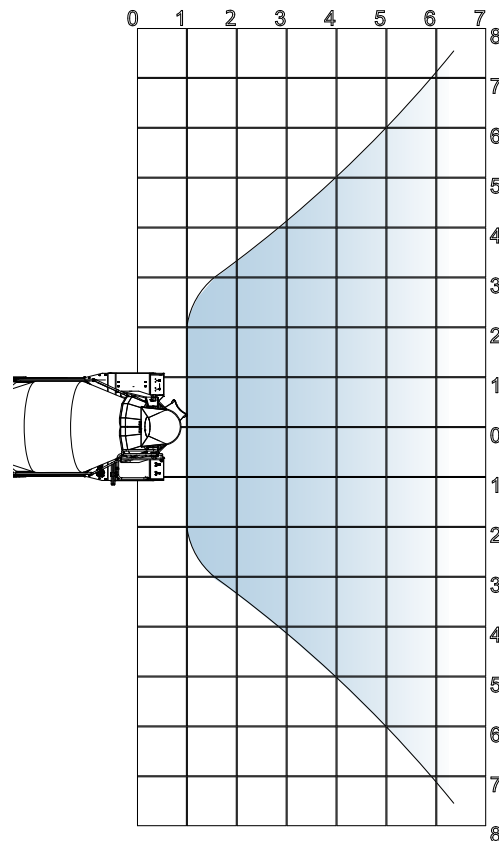
SAFETY EQUIPMENT

Reversing camera

- Infrared LEDs for ultra-low light performance
- Illumination distance 5m
- Heater
- Day/Night sensor

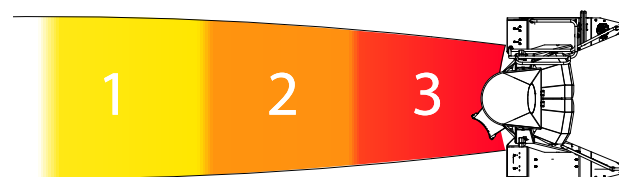
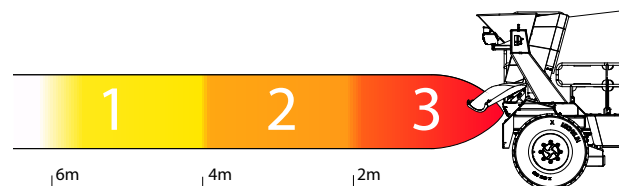
Obstacle detection system

- Two units ultrasound sensor , adjustable detection distance up to nine meters.
- Two units ultrasound sensor, fix detection distance for blind spots.
- Cabin display with audio and visual signals.



TOP VIEW

Reversing camera coverage diagram.

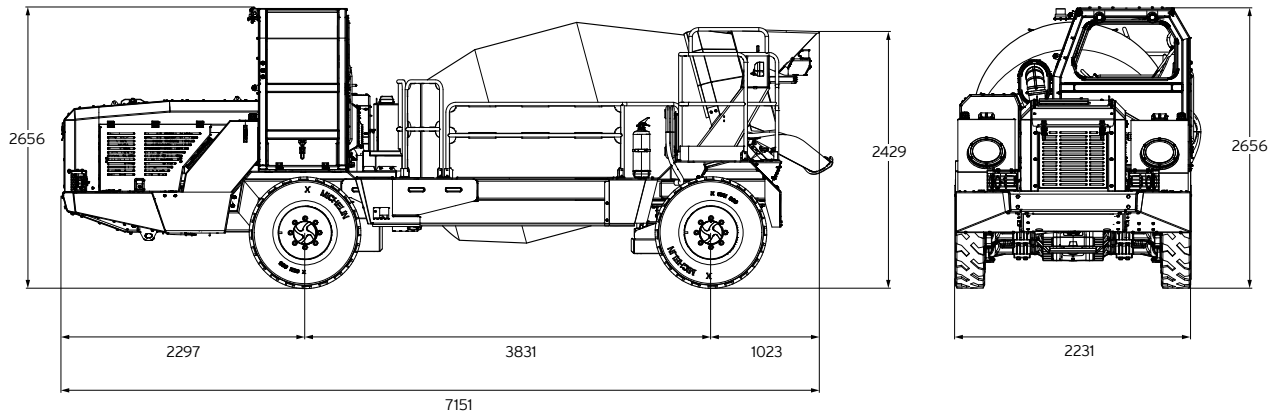


TOP AND SIDE VIEW

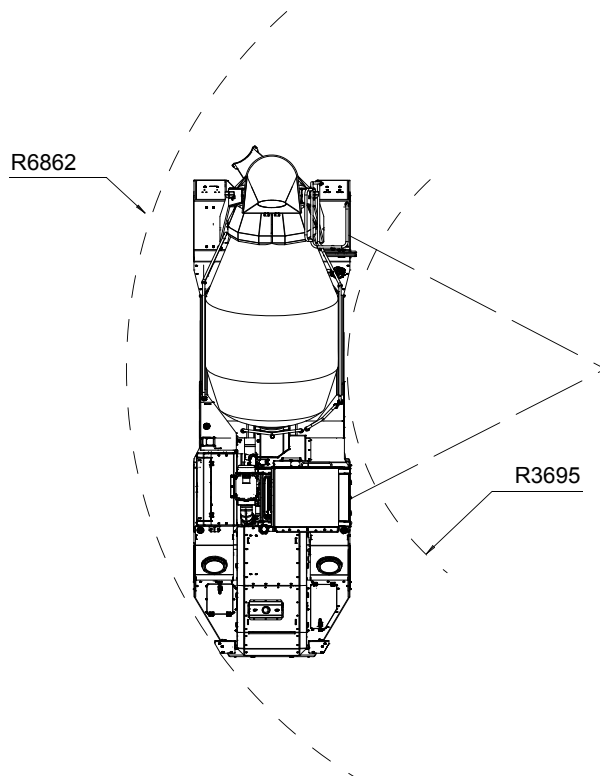
Obstacle detection system diagram.

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

Dimensions



Side and Front view



Turning radius

DIMENSIONS

Width	2231 mm
Long	7151 mm
Height	2656 mm
Wheel base	3831 mm

TURNING RADIUS

Outer	6862 mm
Inner	3695 mm

WEIGHT

Unloaded	8000 kg
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