



This image includes options and extra equipment.

Features

Normet's Tornado S2 is a robust concrete mixer and transport machine, diesel hydraulically driven with 4 m³ concrete load capacity, complying with the technical specifications of the ASTM C94 norm. The main characteristics of this equipment is the high reliability and the ease of use and low maintenance cost.

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

The FOPS/ROPS cockpit provides superior visibility and comfortable compartment for the driver. Due to the versatility of the axles' assembly, it is possible to select between two configurations, one with front oscillation and another with rear oscillation.

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

Technical specifications

ENGINE

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

EXHAUST SYSTEM

- Catalytic exhaust gas purifier.

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 oscillation: 7° (Fixed rear end axle)*.
- Rear end axle oscillation: 7° (Fixed front end axle)*.

* One of the two axle configurations must be chosen.

TYRES

- 9.00 - R20.

WHEEL CHOCKS

- Steel wheel chocks.

PERFORMANCE

- Fully loaded maximum speed:
- Horizontal: 18 km/h
- Upward inclined 1:7 tunnel: 8 km/h.
- Fully loaded, 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: 220 L.

MIXING DRUM

- Maximum capacity 4 m³.
- Two-directional hydraulic rotation for charging/mixing, and discharge.
- Rexroth hydraulic engine and pump with variable flow electronic speed control.

WATER SYSTEM

Hydraulically-driven roller pump.

- Max. water pressure 7 bar
- Max. water flow: 75 L/min
- Washing hose length 15 m
- Stainless steel tank capacity 220 L

CHASSIS

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

DRIVER'S COMPARTMENT

- FOPS/ROPS certified compartment.
- Suspended driver's seat.
- Driver's seat with ISO 7096 certification.
- 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. IP65 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.

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

Additional Equipment

WHEEL CHOCKS*

Steel wheel chocks

- Steel wheel chocks kit (2 pieces).

Polyurethane wheel chocks

- Polyurethane wheel chocks kit (2 pieces).

* One type must be selected.

FIRE SUPPRESSION SYSTEM

- **Fogmaker:** Automatically and manually actuated.
- **Ansul:** Manual actuation.

ENCLOSED COCKPIT

Cockpit ventilation:

- Cockpit Heating.
- Air conditioning.

SPARE WHEEL

- 9.00 - R20.

SAFETY EQUIPMENT

Reversing camera

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

Obstacle detection system

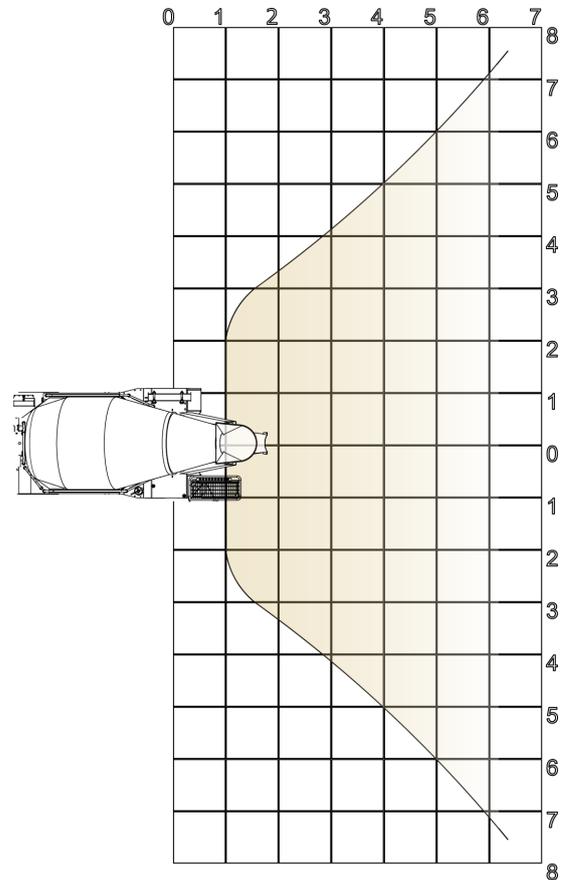
- One ultrasound sensor unit, adjustable detection distance up to nine meters.
- Cockpit display with audio and visual signals.

Seatbelt

- Driver presence detection.

SAFETY KIT

- Wheel nut locker.
- Laminated cabin glass.
- Fire extinguisher.
- Strobe lamp pole.



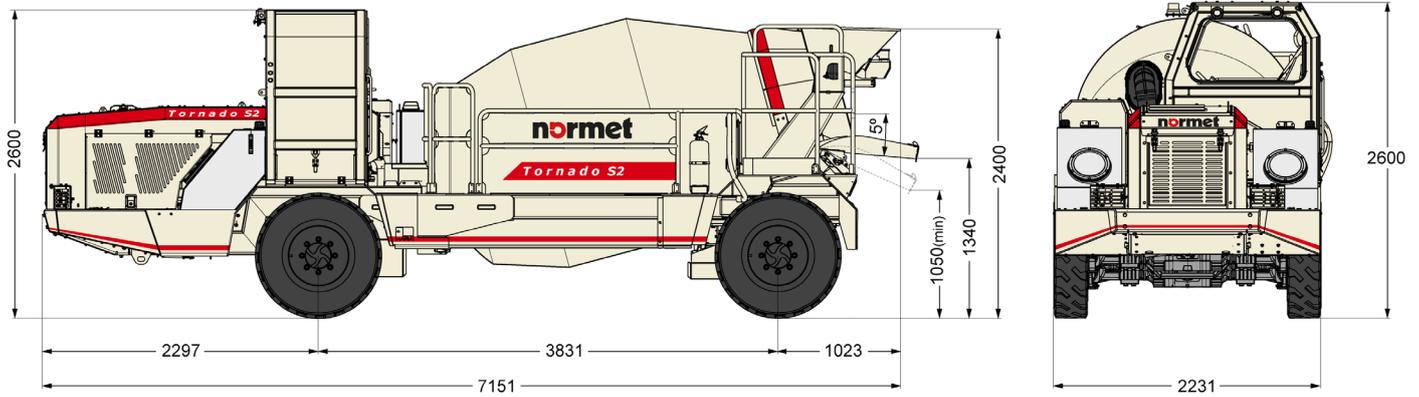
TOP VIEW
Reversing camera coverage diagram.



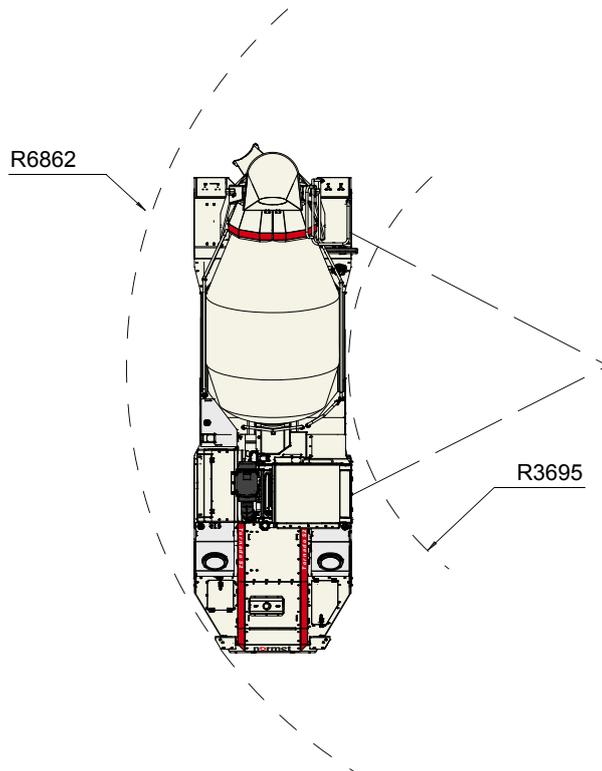
SIDE AND TOP VIEW
Obstacle detection system diagram.

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

Tornado S2 Dimensions (Rear Oscillation)



Side and Front view



Turning radius

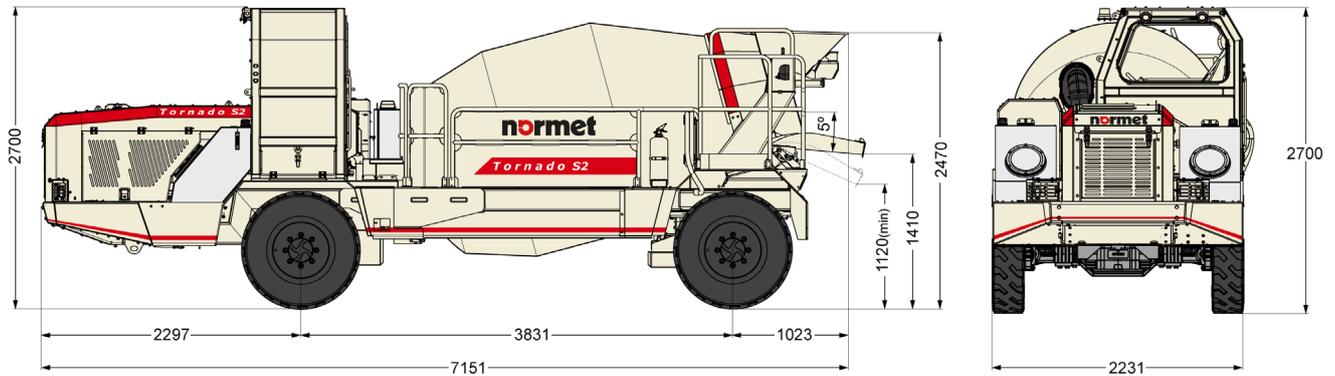
DIMENSIONS	
Width	2231 mm
Long	7151 mm
Height	2600 mm
Wheel base	3831 mm

TURNING RADIUS	
Outer	6862 mm
Inner	3695 mm

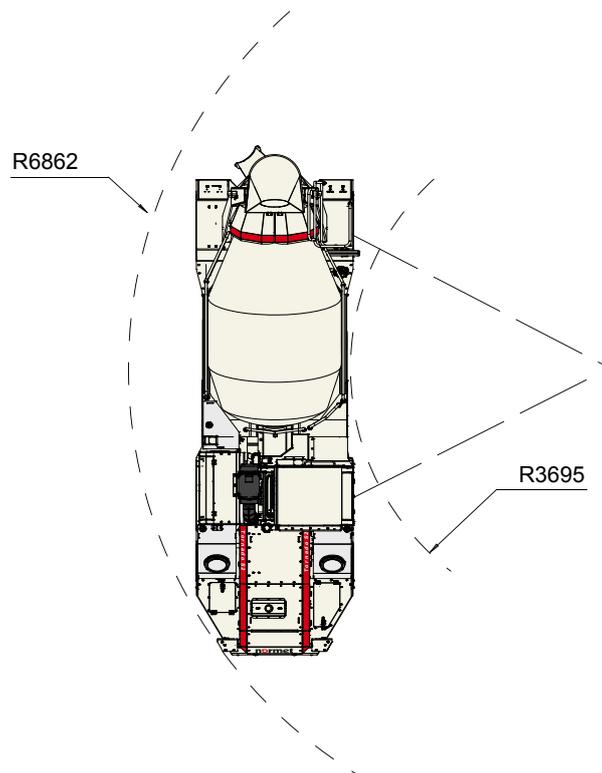
WEIGHT	
Unloaded	9200 kg

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

Tornado S2 Dimensions (Front Oscillation)



Side and Front view



Turning radius

DIMENSIONS

Width	2231 mm
Long	7151 mm
Height	2700 mm
Wheel base	3831 mm

TURNING RADIUS

Outer	6862 mm
Inner	3695 mm

WEIGHT

Unloaded	9200 kg
----------	---------

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