



This image includes options and extra equipment.

Features

Alpha 20 Tier 3 is a robust diesel-hydraulically driven shotcrete sprayer, with a large concrete pumping capacity. The main characteristics of this equipment are the high reliability and the ease and low cost of maintenance. The boom is designed for an optimum application of wet shotcrete, with a maximum reach of 7 meters. The concrete pump BS7622 has been specially engineered to work with shotcrete and has a theoretical capacity of 20 m³/h.

The analog additive dosing system is based on a hydraulically driven peristaltic pump. The 350 L capacity additive tank is manufactured in stainless steel. This combination ensures a long lifetime of the dosing system even with the most corrosive admixtures. The spraying process can be done from the radio remote control unit, which lets the operator control all the functions involved in the spraying process at a safe distance.

It has a 120 kW Liquid cooled turbo charged diesel engine meeting Tier 3 regulations.

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

Technical specification

SPRAYBOOM

Automatic functions:

- Nozzle rotation.

The speed of the movements can be adjusted from the radio remote control.

All the movements are pressure compensated and have a proportional output.

Boom coverage for tunnels up to 5 m x 5 m.

- Nozzle rotation 360°
- Nozzle tilt 120°
- Automatic orbitor 60 rpm

CONCRETE PUMP

Normet model BS7622.

- Theoretical Pumping Capacity 20 m³/h
- Pumping cylinder diameter 6" (152,4 mm)
- Cylinder stroke 760 mm
- Pumping pressure max. 50 bar
- Hydraulic pressure max. 190 bar

High pumping pressure enables the conveying of stiff concrete.

RADIO REMOTE CONTROL SYSTEM

Following features can be adjusted or switched on/off from the control box:

- Accelerator dosing rate.
- Accelerator pump on/off.
- Concrete pump on/off/reverse.
- Nozzle rotation on/off.

ACCELERATOR SYSTEM

- Hydraulically driven peristaltic pump.
- Max. pumping pressure 7 bar.
- Dosing rate 0.5...16 L/min (30 - 960 L/h).
- Stainless steel additive tank with a capacity of 350 L.

CONCRETE LINE 2 1/2"

- Concrete line diameter 2 1/2" (63.5 mm).

DRIVER'S COMPARTMENT

- Open 1-man cockpit.
- Suspended driver's seat.
- 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

DIESEL 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 56 cm³.
- Fixed piston motor 75 cm³.

AXLES

- Planetary type.
- Dana 212.
- Fixed rear end axle.
- Boom end axle oscillation +/- 7°.

PERFORMANCE

- Max. speed (horizontal tunnel) 14 km/h.

BRAKES

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

STEERING

- Four-wheel steering as standard.
- Orbitrol type.
- Includes crabwalk.

FUEL TANK

- Stainless steel fuel tank with a capacity of 105 L.

DIESEL HYDRAULIC POWER

- Variable displacement piston pump system with following outputs:
 - 80 L/min for concrete pump (gear pump).
 - 90 L/min for boom (piston pump).
- Hydraulic oil tank capacity 390 L.
- Oil cooler for the whole machine.
- Return oil filtration 10 µm.
- Oil level and temperature indication.
- Return filters with visual indicator.

24 VDC ELECTRICAL SYSTEM

- Battery 2 x 80 Ah.
- Alternator 55 A.

WORKING LIGHTS

- 2 x 6700 lm on boom.
- 1 pc for the concrete pump over the engine hood.

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Additional Equipment

SPARE WHEEL

- 12,5 R18.

FIRE SUPPRESSION

- Ansul Fire Suppression System (manual actuation).

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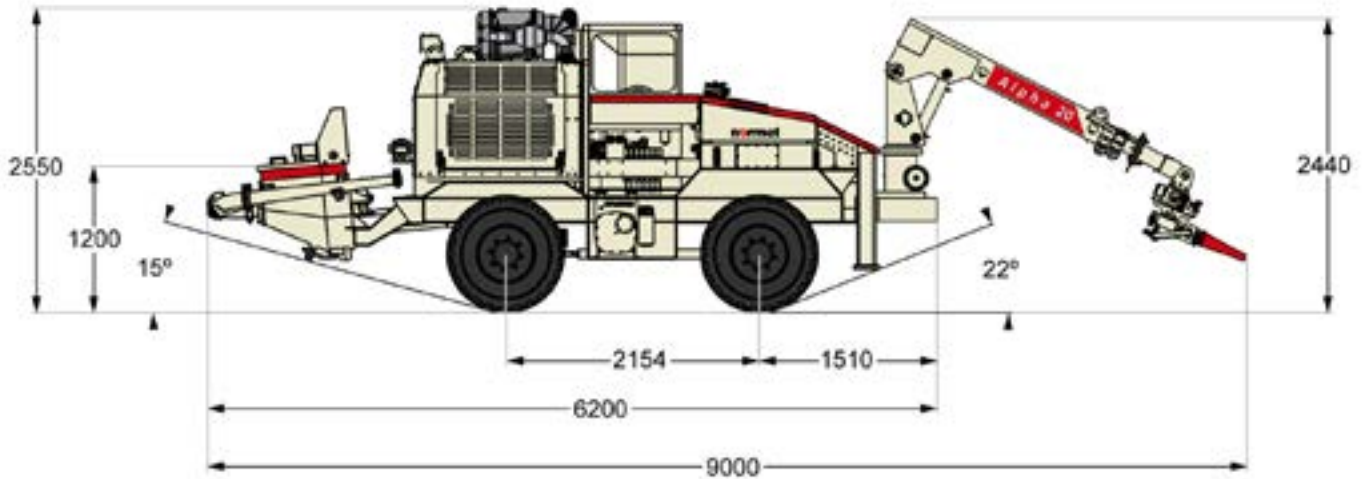
Alpha 20 Tier 3

Technical data sheet

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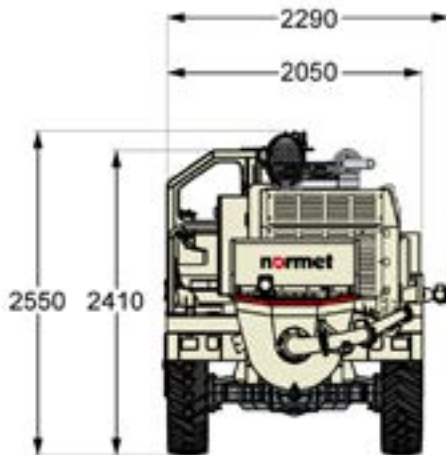
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DIMENSIONS



SIDE VIEW

Basic machine. Driving dimensions at job site.



REAR VIEW

Basic machine. Driving dimensions at job site.

DIMENSIONS

Height	2550 mm
Width	2290 mm
Length	9000 mm
Weight	7500 kg

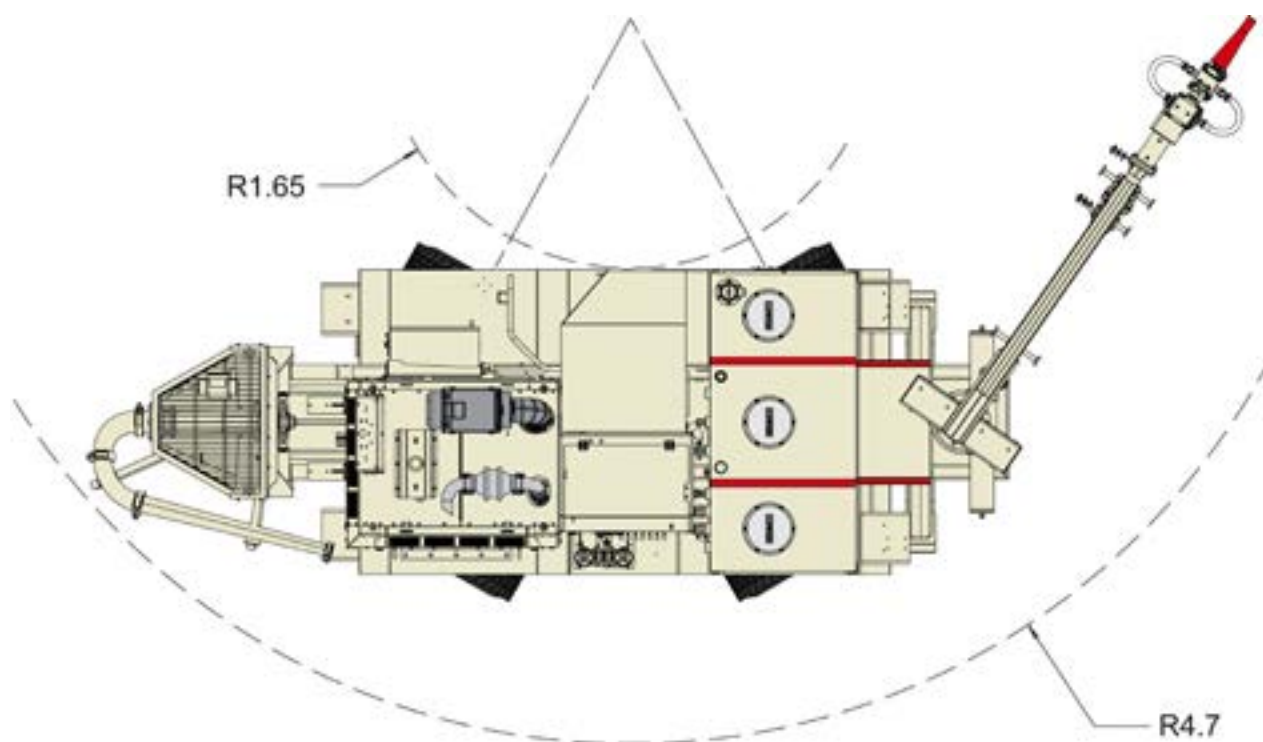
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TURNING RADIUS



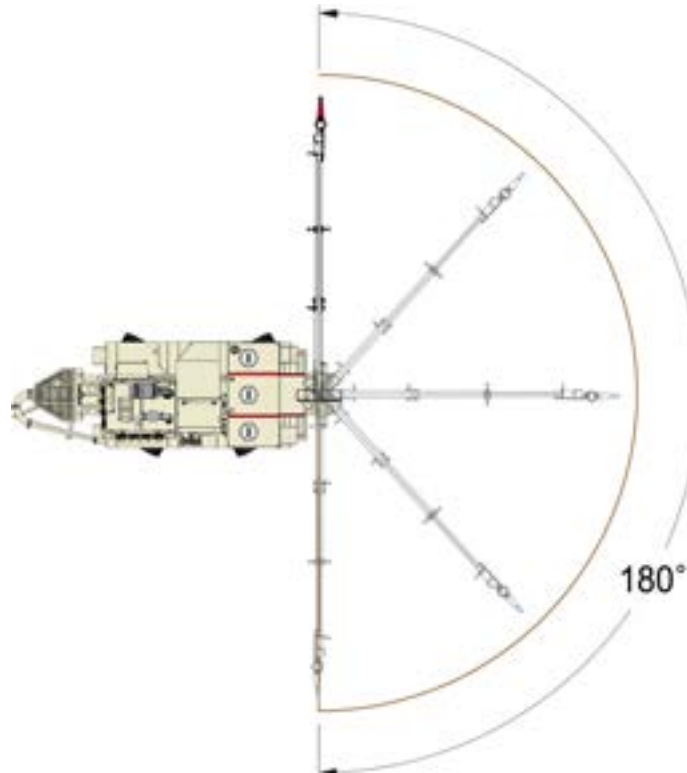
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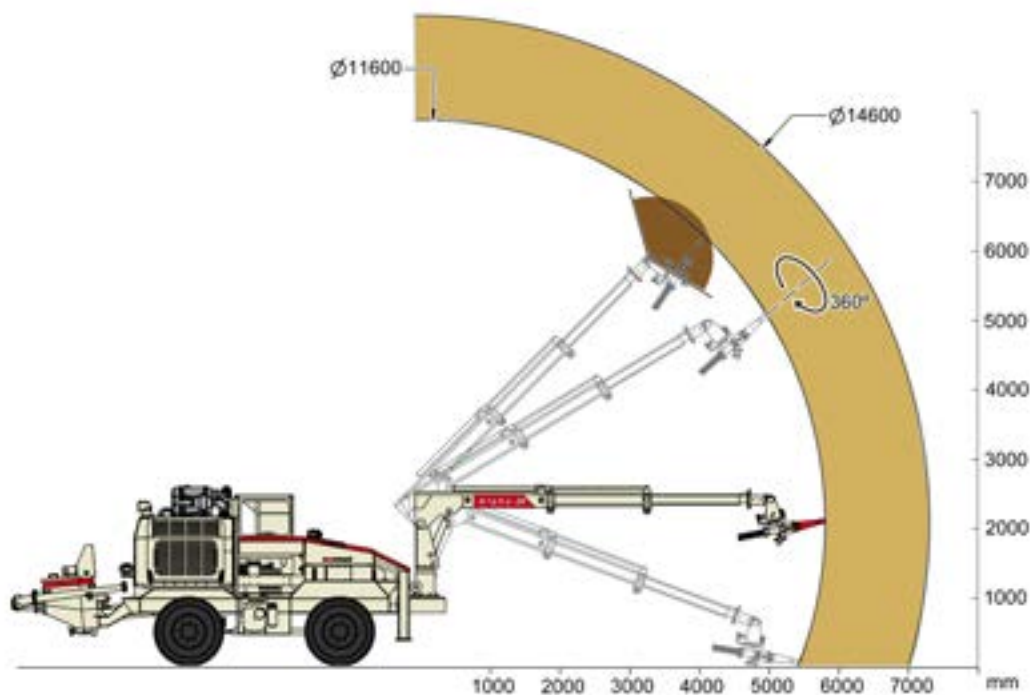
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COVERAGE



HORIZONTAL COVERAGE



VERTICAL COVERAGE

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