Alpha 30 DC

Normet reserves the right to change
this specification without further notice

Pictures may include options and additional equipment.

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INTRODUCTION

Normet´s Alpha 30 DC is a diesel hydraulic mobile concrete sprayer designed for tunnel profiles up to 7 meters in height and 9 meters in width. The maximum longitudinal spraying reach from one set up is 3 meters.

The new NSP 30 concrete pump has a theoretical maximum pumping capacity of 30 m^3/h. Alpha 30 DC's accelerator dosing system uses a peristaltic pump and has two stainless steel tanks with a total volume of 420 liters.

Alpha 30 DC can be equipped with a radio or wired remote control system for controlling boom and nozzle movements and rotation as well as accelerator dosing and concrete pump

To make manouvering easy in narrow tunnels, the Alpha 30 DC has four wheel steering and four weel drive. It has a 120 kW Liquid cooled turbo charged diesel engine meeting Tier 3 regulations.

Operator's cockpit on Alpha 30 DC is FOPS and ROPS approved.

Standard equipment includes Fogmaker fire suppression system. The additional equipment for Alpha 30 DC are a high pressure washer system with 300 liter stainless steel water tank, spare wheel and wired remote control plus cable.

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TECHNICAL SPECIFICATION

SPRAY BOOM

SPRAY BOOM SB 307

Nozzle nutation for better distribution of the spray material and surface quality

Boom working range:

Lateral	16.0 m
Vertical max.	8.6 m
Nozzle head rotation	360°
Nozzle tilting	120°

Spraying nozzle:

Rotating nozzle head (nozzle nutation 7°)

Manual lubrication system for spray boom
(n/a for nozzle head)

CONCRETE PUMP AND DOSING SYSTEM

CONCRETE PUMP NSP 30

Low-wear and low-maintenance double piston pump specially designed for low-pulsation concrete pumping.

Reversing function for concrete pressure relief in case of overpressure.

Pump capacity	3 - 27 m^3/ h
Pumping cylinder diameter and stroke	200/600 mm
Pumping pressure, max.	40 bar
Feeding hopper 300 l at height	1120 mm

The high pumping pressure enables the conveying of stiff concrete.

The pump is capable of conveying concrete with an aggregate size of 16 mm (including crushed material) and all types of structural fibres up to a length of 60 mm.

Hydraulically driven agitator in hopper.

Manual lubrication system for concrete pump

- Nordoser XH
  Non synchronized dosage and concrete pump delivery rate. Concrete pump can be activated or deactivated from the remote. Concrete pump output can be adjusted from hydraulic control block or rear control panel depending on machine configuration.
- ○ Nordoser XE
  Fully synchronized dosage and concrete pump flows. Concrete pump output can be adjusted from hydraulic control block or rear control panel depending on machine configuration.

Vibrator with electric drive 24 VDC

The performance of the pump, including the maximum pumping capacity, are based on a theoretical filling rate of 100%.

DOSING SYSTEM FOR ACCELERATOR NORDOSER

Hydraulically driven dosing pump.

LPPD PUMP

Max. pumping pressure	12 bar
Dosing rate	0.6...16 l/min
	(36 - 960 l/h)

VERDERFLEX PUMP

Max. pumping pressure	12 bar
Dosing rate	0.6...17 l/min
	(36 - 1010 l/h)

XH

The accelerator dosage and concrete delivery can be activated or deactivated from the remote control. Accelerator dosage can be adjusted from hydraulic control block.

XE

The accelerator dosage and concrete delivery rate are fully synchronized. Flow can be adjusted from dedicated control panel.

Accelerator dosing pump

Peristaltic
- Low pulsation roller peristaltic pump
- ○ cam peristaltic pump

Accelerator tank:

420 l

Accelerator filling point on the side of the machine and alternatively the dosing pump can be used to fill up the tanks.

AIR COMPRESSOR

Hydraulically operated screw compressor

Free Air Delivery	7 m^3
Rated operating pressure	7 bar

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CONCRETE LINE

Concrete line assembly side:

Right hand side

Concrete output pipes:

Reduction from 5” to 2½” including HD couplings

Concrete hose diameter:

65 mm (2½”) with HD couplings

Concrete hoses:

Included

Concrete output pipes:

Included

ENGINE AND TRANSMISSION

- **Deutz TCD 2013 L4, 120 kW/2300 rpm, Tier 3 / Stage IIIA approved**

  Catalytic exhaust gas purifier and muffler

  Fuel tank capacity: 165 l

  Hydrostatic 4-wheel transmission
  - **Deutz TCD 5.2 L4, 130 kW/2300 rpm, Stage V approved**

    Requires diesel exhaust fluid (DEF) and Ultra-low sulphur diesel (ULSD)

    Diesel particulate filter (DPF)

    Selective catalytic reduction (SCR)

    Fuel tank capacity: 10 l

    DEF tank capacity: 165 l

PERFORMANCE

Tramming speed (horizontal):

Deutz TCD2013	20 km/h
Deutz 5.2	20 km/h
Lateral gradient for tramming (continuous)	4º
Longitudinal gradient for tramming (continuous)	9º
Lateral gradient for operation	4°

Depending of machine configuration, lateral and longitudinal tramming gradient can temporarily be higher.

AXLES AND BRAKES

Planetary type axles Dana 212

Fixed axle at the rear of the carrier

Oscillating axle +/-5° at the front end of the carrier

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

Safety/Parking brake: spring applied hydraulically released fail-safe -type brake

TYRES AND RIMS

Nokian Tyres 9.00-20" with standard rims

STEERING

Orbitrol type hydraulic frame steering

HYDRAULIC SYSTEM

Diesel powered hydraulic pumps

XH

Variable displacement pump for carrier, sprayboom, agitator and dosing system

Variable displacement pump for concrete pump

XE

Variable displacement pump for carrier, sprayboom and agitator

Variable displacement pump for concrete pump

Fixed displacement gear pump for dosing system

Oil tank capacity	500 l

Return oil filtration 10 µm
Oil level and return filter contamination indicator
Oil cooler for spray boom and dosing circuit
Mineral hydraulic oil

REMOTE CONTROL SYSTEM

Wireless remote control with 2 joysticks

Number of wired remote controls:
- 1
- 2

The following machine components can be controlled by the remote control:

Accelerator pump ON/OFF (XH)
Accelerator dosing rate (XH)
Concrete pump ON/OFF/REVERSE
Nozzle nutation ON/OFF

WATER INLET

1” claw coupling on the water manifold located on the rear part of the machine.

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24 VDC ELECTRICAL SYSTEM

Mechanical main switch in cabin and service switch in battery box

LED driving and indicator lights

LED service brake lights

LED work and reversing lights

LED work light on hopper (1 pcs)

Direction lights (Green/Red)
- Both lights always on
- Lights follows driving direction

Warning LED light:

Color

Amber

Light pattern

Strobe

DRIVER'S COMPARTMENT

Driver's seat and seat belt:

Mechanically suspended

3-point seat belt

Seat belt safety interlock for driver:
- Warning indicator in dashboard
- Safety brake application

Cabin with FOPS/ROPS approved

Enclosed

Full front and door glass

Cabin door interlock switch with safety brake application

TECHNICAL DOCUMENTATION

Standard documents:

Instruction manuals, hard copy 2 pcs:
- Spanish
- English
- Portuguese

Spare parts manuals, hard copy 2 pcs:

English

Additional documentation:
- Extra hard copies of manuals
- Extra PDF manuals
- LinkOne WebView electronic manuals
- Other than standard language manuals

OTHER

Powder extinguisher:

6 kg

Number of extinguishers:

1

Front and rear grounding straps:

Flat cable

Painting and taping:
- Standard painting and taping
- Painting and taping according to customer specifications

Text labels in:
- Spanish
- English
- Portuguese
- Other language

Measurements:
- Noise
- Vibration
- Emissions

Standard tool set:

Cleaning plug
Grease gun with hose
Wheel Wrench
Rubber hose 3/4" 4 m
Suction hose 1" 4 m
Sledge hammer 800 g
Special tools for concrete pump

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ACCESSORIES

PROCESS PRODUCTIVITY

- High pressure washer

  Water circuit with online strainer of 400 µm

  Hydraulically driven pressure washer with hose reel:

Water pressure, max.	140 bar
Water flow, max.	15 l/min
Hose length	15 m
Stainless steel tank	300 l

- Concrete thickness measurement system
  Normet SmartScan
- Automatic lubrication system for concrete pump
- Air pressure-driven system with hose reel:
  Tank capacity 20 l
  Hose length 20 m
  Working pressure 7 bar
- Wired remote control:

  10 m cable control with 2 joysticks

  Number of wired remote controls:
  - 1
  - 2

CARRIER PRODUCTIVITY

- Accessories for enclosed cabin:
  Air conditioning with heating
- Reversing camera
  - 1 camera, 1 display
  - 1 cameras, 1 display with recording support
  - 5 cameras, 2 displays with recording support
- Spare rim and tyre

SAFETY

- Fire extinguisher system
  - Dry chemical
    Ansul A-101
    - Manual
    - Automatic, Checkfire 110
  - Liquid agent
    Fogmaker (Automatic)
- Obstacle detection system
  Two units ultrasound sensor, placed on rear part of the machine for blind spots. Cockpit display with visual signals.
- Wheel nut locker
- Safety Whip
- First aid kit
- laminated cabin glasses
- Additional emergency stops (ground level both sides of the machine)
- Wheel chocks with brackets

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SERVICES

NORMET SERVICES

Normet is committed to servicing its customers all over the world. We provide service from a single machine to an entire fleet. The Normet service offering consists of many different products from delivery of parts and training to fleet performance agreements.

More information check normet.com:

https://www.normet.com/en/products-and-services

For any questions about Normet Services contact local Normet.

https://www.normet.com/en/contact/

SPARE PARTS

As a leading global Original Equipment Manufacturer, we are committed to providing a complete solution to your spare parts needs. All of Normet' s spare parts are manufactured to the highest possible standards to help maintain the safety and profitability of your projects. Our spare parts improve efficiency and total cost of ownership throughout your operations.

Start a carefree journey with Normet equipment by having the right selection of parts available from the beginning.

Spare part recommendation / Start-up Spare Part package: Available for the first 2000h*: includes periodical service parts, most common wearing parts and other recommended parts. (*Recommendations are based on average hours that can vary depending on worksite conditions.)

Underground, every part is critical!

More information check https://www.normet.com

SERVICE AGREEMENTS

Service agreements are always customized to meet our customer needs, consisting of various Normet service products. The service solution is created together with the customer and the level of an agreement can vary with different support agreements (including e.g. parts, periodical maintenance, on-call services, and audits) up to guaranteed fleet availability or process performance (including e.g. parts, all maintenance activities, operator trainings and process audits).

Note that we can provide Digital solutions with connected equipment.

More information check normet.com.

TRAININGS

Training services can be tailored to your individual needs and range from equipment service training to process application training.

We offer a sustainable training path from the beginning of your operation to the execution stage of your project.

More information check normet.com.

COMMISSIONING

Equipment commissioning concerns **equipment familiarization**. This is included as part of Normet vehicle delivery. Safety introduction and operating basics for Normet Equipment. Review of Normet user and spare parts manuals. Hands-on equipment safety device operational training. Ensure product quality and customer satisfaction during handover.

Commissioning includes machinery handover to customers and **safety operating principles** without technical insights or process application training.

EXTENDED COMMISSIONING

We offer an extended training package on top of standard commissioning. Normet provides extended commissioning services that offer basic insights into maintenance manuals, periodical and daily maintenance, as well as modern operating perspectives to maximize handling efficiency. Safety-oriented training ensures reliable operations for Battery Electric Vehicles and Diesel-Driven based on your vehicle fleet. This cost-effective solution covers the essential aspects of equipment operation, safety, and maintenance schedules.

To ensure continuous and maximized safe operations with your new equipment and to expand your knowledge scale of operations, this option is the most suitable and recommended option for extending your new equipment training. This cost-effective solution covers the essential aspects of equipment operation, safety, and maintenance schedules.

UPGRADES AND MODIFICATIONS

We build our machines to last. We also understand that your needs on the ground can change - and reacting to that change makes a big difference in your productivity. Normet Upgrades & Modifications provide you with access to product improvements that meet your evolving requirements and let you stay one step ahead of the curve.

Contact your local Normet office for Upgrade offering to your fleet.

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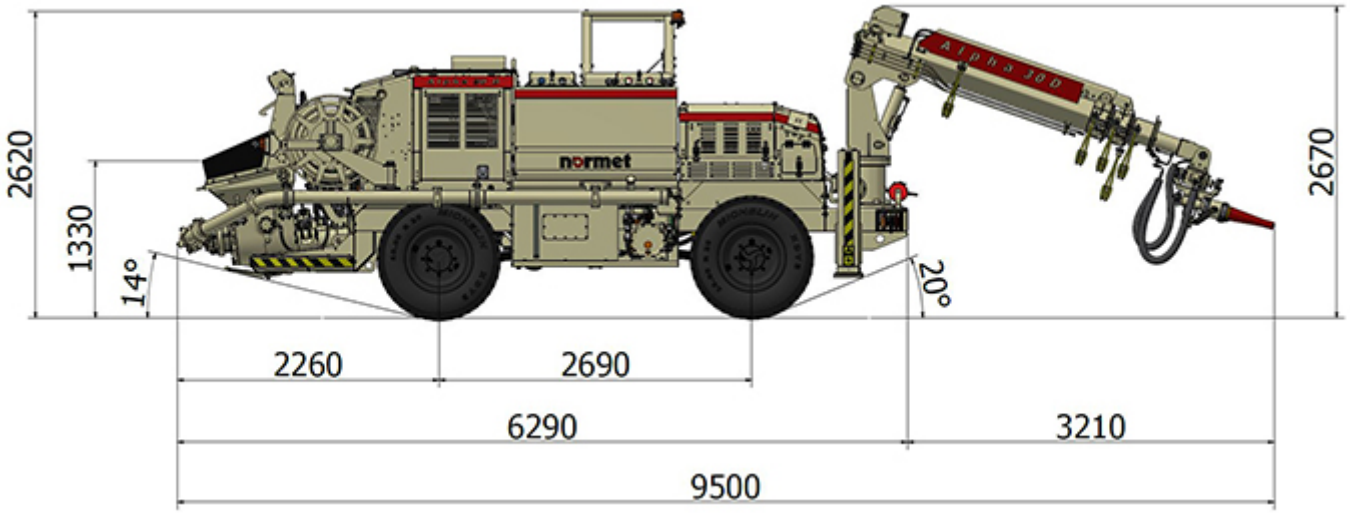
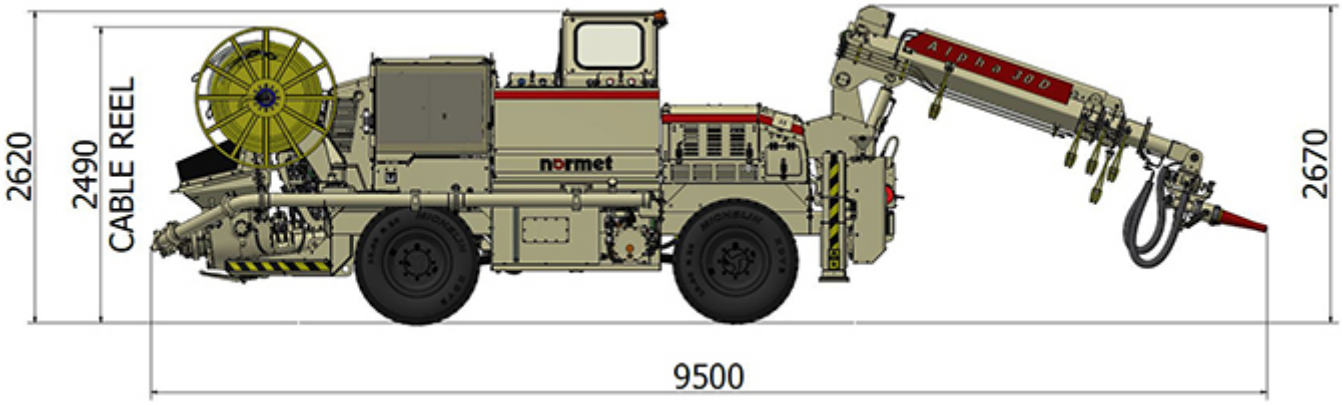
DIMENSIONS

Length	9500 mm	Track	1730 mm
Width	2510 mm	Ground clearance as shown	350 mm
Height	2670 mm	Turning radius outer	4900 mm
Height of cabin	2620 mm	Turning radius inner	1730 mm
Wheel base	2690 mm		

SIDE VIEW - BASIC MACHINE



SIDE VIEW – MACHINE WITH OPTIONS



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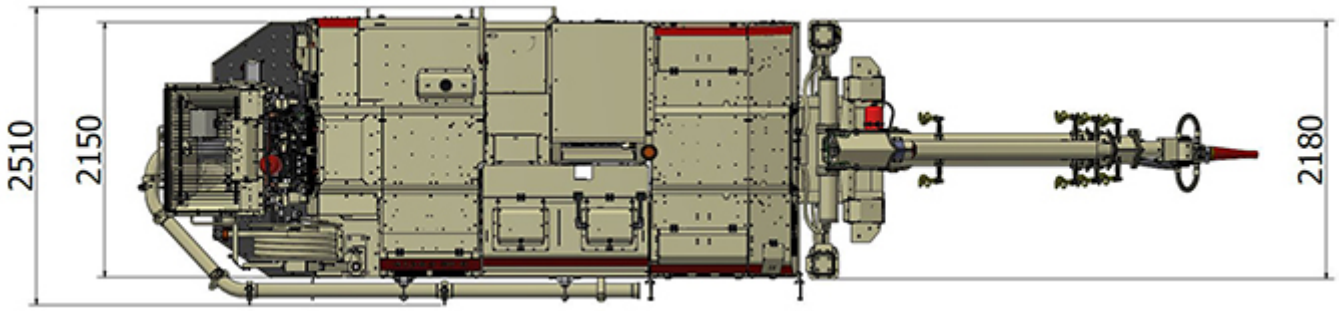
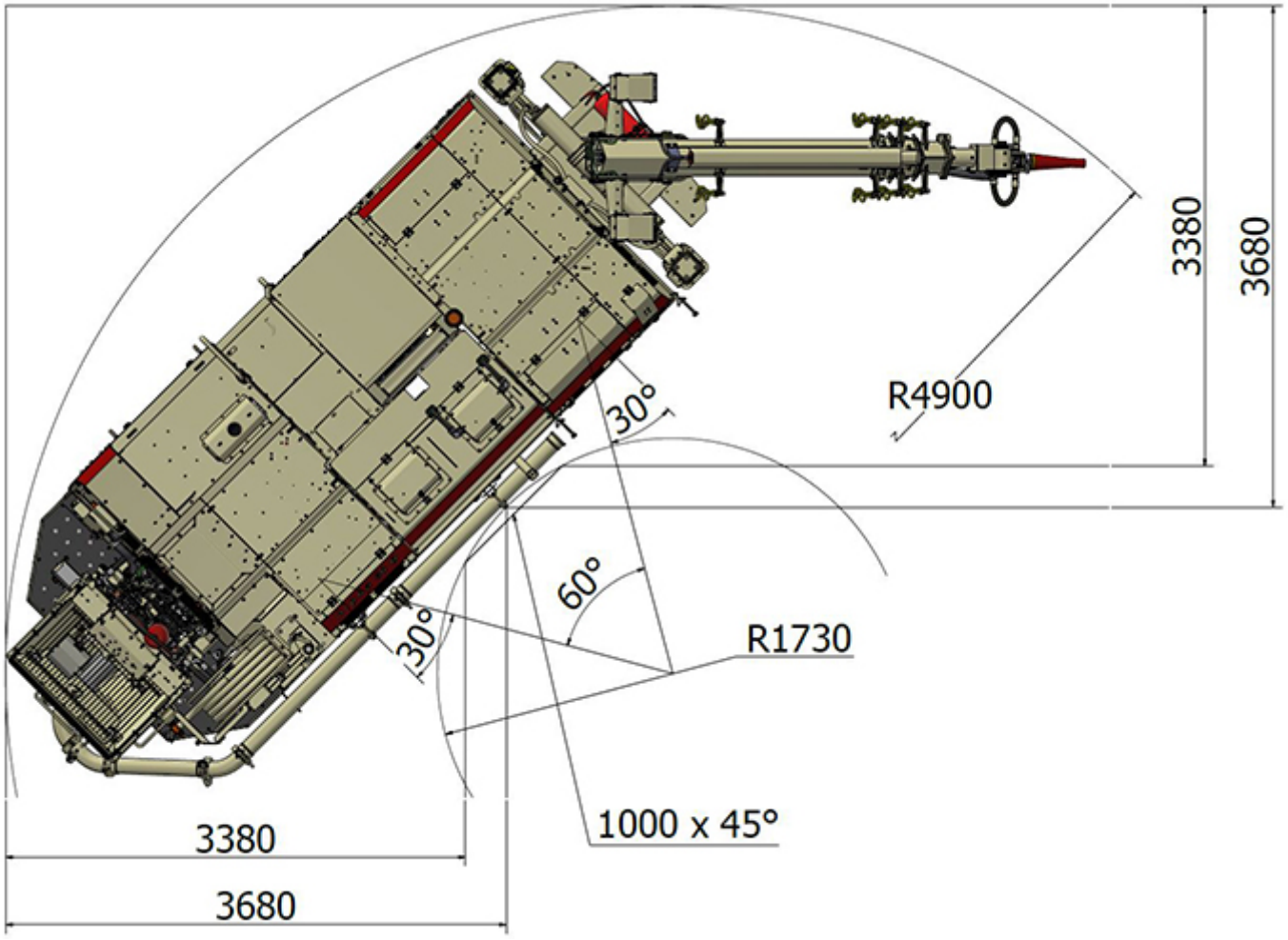
TOP VIEW



TURNING RADIUS



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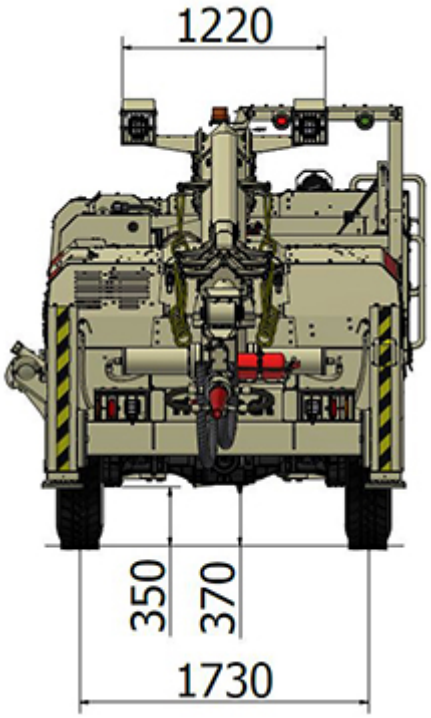
FRONT VIEW



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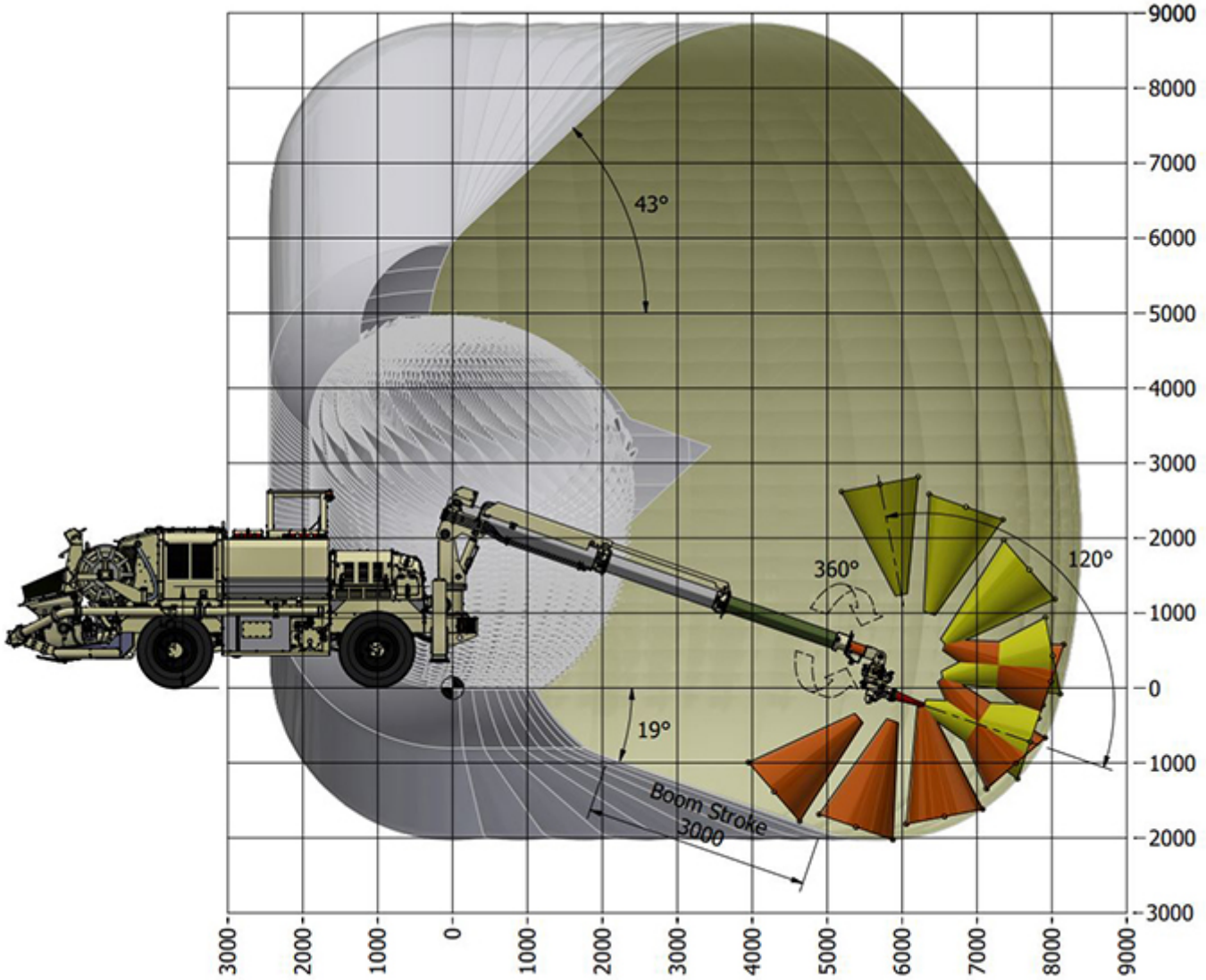
SIDE COVERAGE AREA OF SPRAY BOOM SB 307



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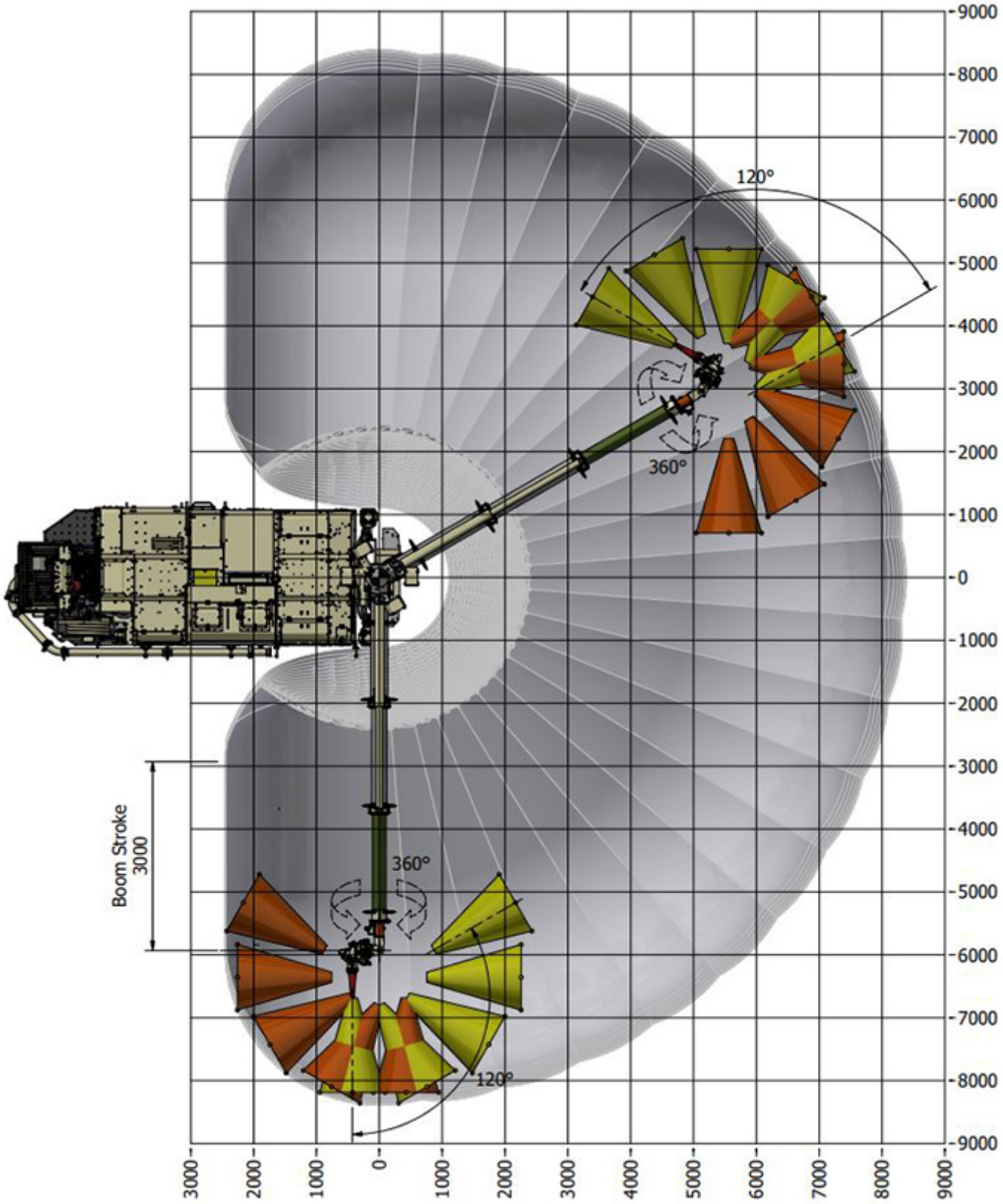
TOP COVERAGE AREA OF SPRAY BOOM SB 307



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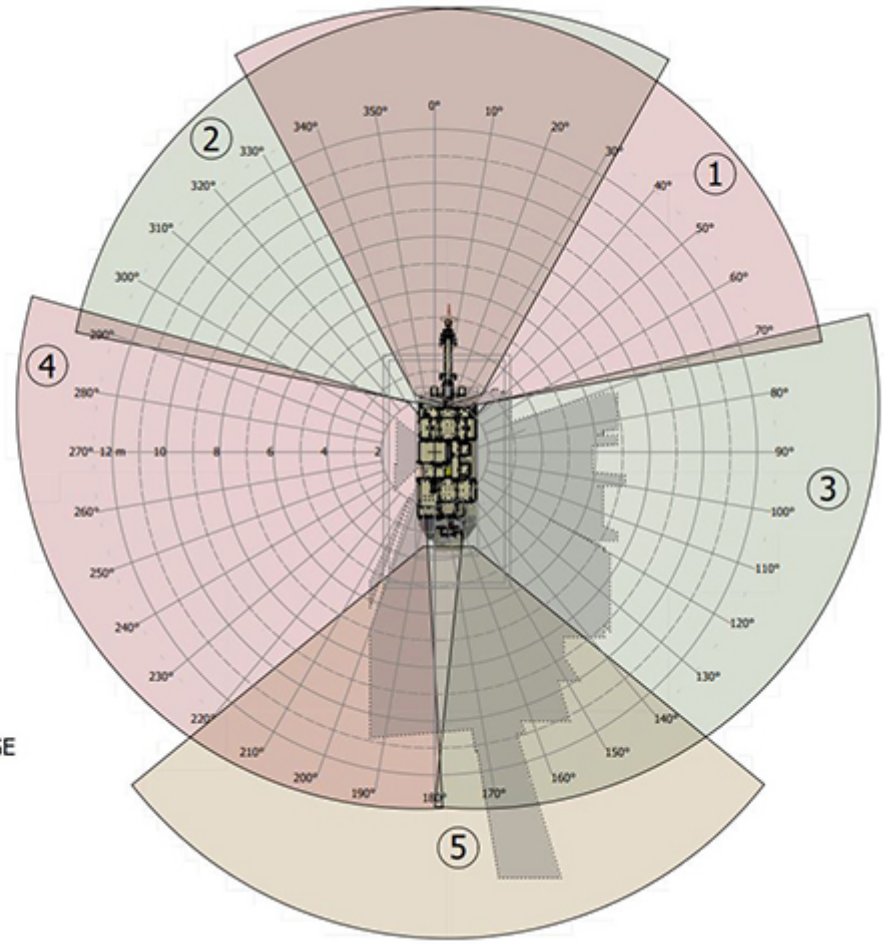
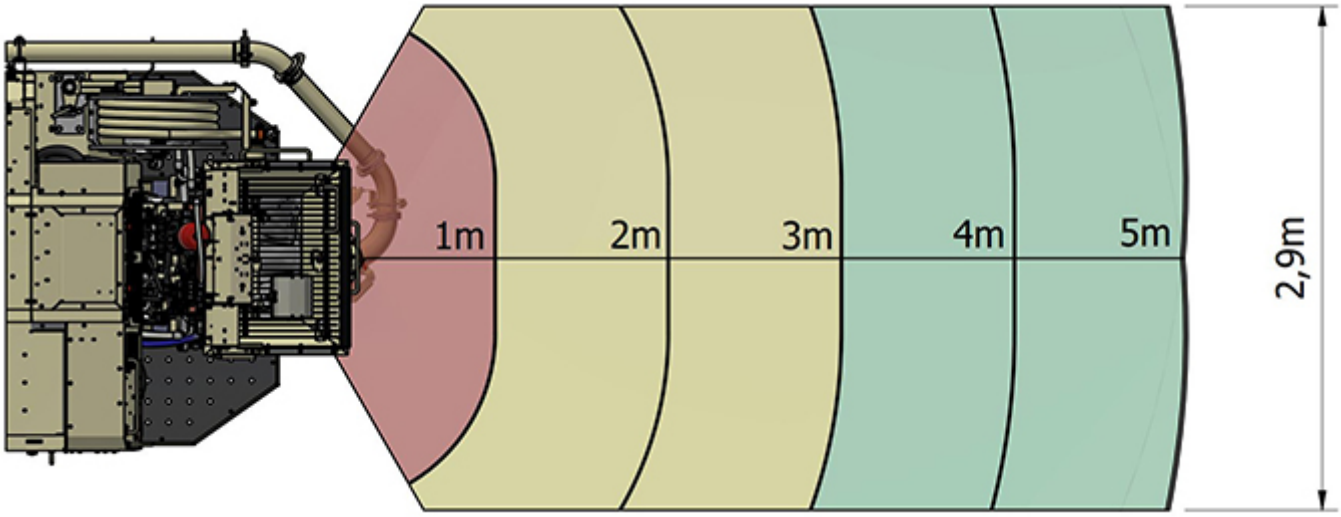
VISIBILITY MAP

ALPHA 30 D



SCHEMA OF REVERSE SENSORS



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TRACTIVE EFFORTS

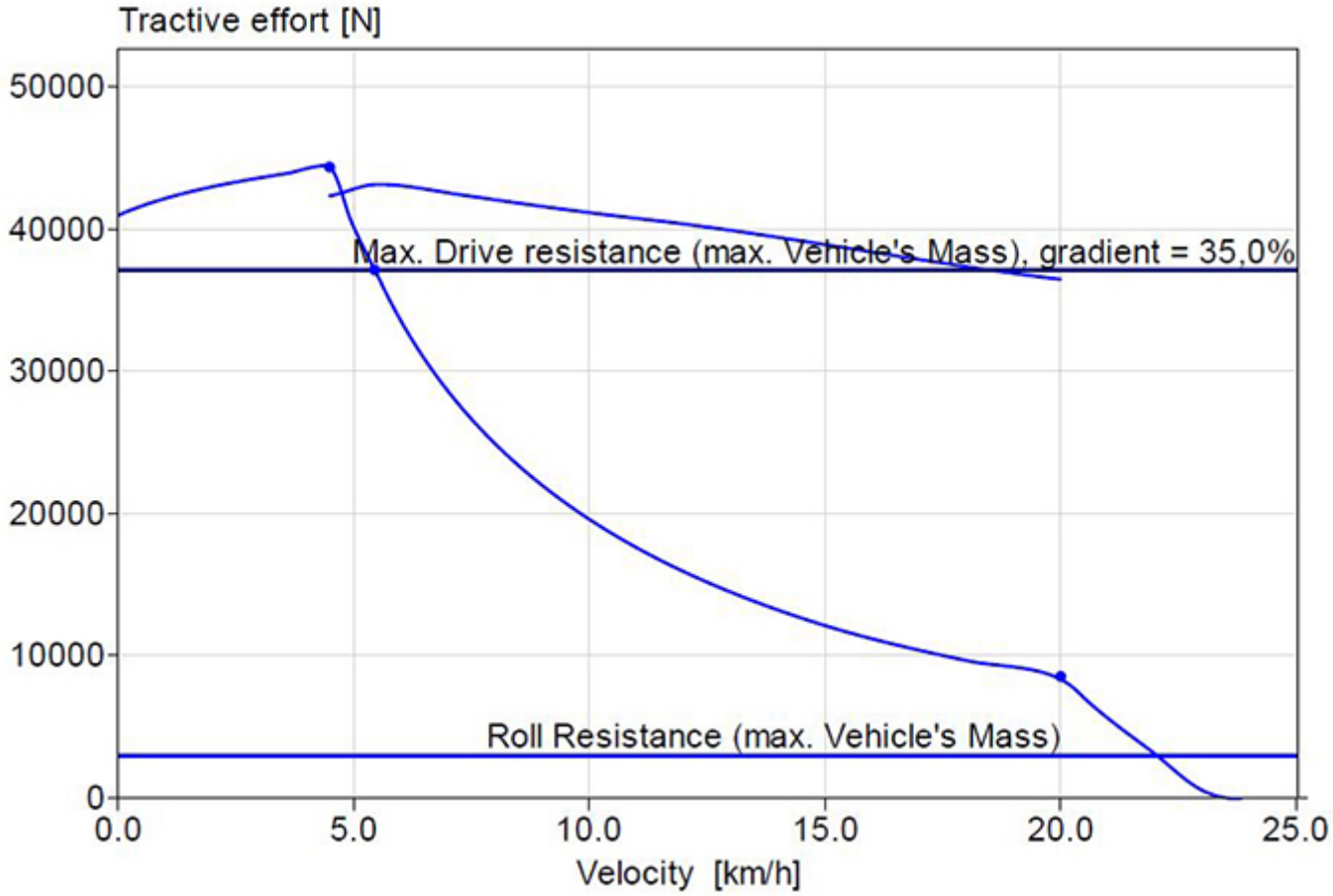
OPERATING WEIGHT

Base machine 10 400 kg

final machine weight variate in agree with selected options

DEUTZ TCD 2013 L4, 120 KW

Performance curve DOC079808.0



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