



Minimec



Normet reserves the right to change this specification without further notice

Pictures may include options and additional equipment.

INTRODUCTION



Very agile and robust carrier

The spray manipulator is mounted on a sturdy tracked carrier which is driven by a powerful, yet quiet diesel engine of the latest generation. The two powerful independent hydraulic drive hub motors allow turning on the spot.

Hydraulically activated stabilizers ensure a safe stand of the carrier during the spraying process. The included additional foot blocks provide even more stability on soft ground and in slopes. Easily accessible lifting points at the center of the machine allow easy and safe lifting.

Plenty of power for a dynamic operation

The electric motor or diesel engine provides the spray arm and spray head with the hydraulic power for a dynamic spraying operation. The well protected air/oil cooler delivers the cooling capacity required for continuous operation.

Built for purpose

Six powerful LED-lights on the boom and carrier provide a great illumination of the working environment which makes any additional lighting obsolete.

The field-tested and fast responding spray head with a wide and high range and the greatest possible degree of movements facilitates the correct application of a high-quality sprayed concrete layer even in very confined spaces.



Safety

The safety is further increased by the stability of the machine and the possibility to drive and spray remotely from a safe distance. In addition, the drive hub motors are equipped with spring applied brakes which are activated whenever the operator releases the controls. Minimec is CE-certified and meets the industry requirements and safety regulations.

TECHNICAL SPECIFICATION

SPRAY BOOM

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

All hydraulic movements are proportionally controlled and pressure compensated.

Boom working range:

- Standard boom

Telescopic boom extension	1900 mm
Lateral	6.0 m
Vertical max.	7.5 m
 - Long reach boom

Telescopic boom extension	2900 mm
Lateral	7.0 m
Vertical max.	8.5 m
- Boom rotation 110°
 Nozzle head rotation 360°
 Nozzle tilting 180°
 Nozzle nutation 5°

CONCRETE LINE ON BOOM

Concrete line diameter 65 mm (2.5")

- 5 m concrete hose with anti-kink spring, mass tube and necessary clamps and gaskets (Standard couplings)
- Without concrete hose (Mass tube with HD-flange)

ACCELERATOR AND AIR LINE ON BOOM

- | | |
|-----------------------|--------|
| Boom air line | 1 1/4" |
| Boom accelerator line | 3/4" |
- Connection block with quick connectors
 Shut-off and bleed valves

BOOM CONTROL SYSTEM

Two joystick radio remote control for spray boom

Control functions:

- Boom movements
- Nozzle head movements
- Nozzle oscillator on/off

Adjustable movement speeds

Back-up cable for radio remote

Radio remote frequency:

- 419 MHz
- 429 MHz
- 434 MHz
- 458 MHz and tilt switch 22,5°

HYDRAULIC SYSTEM

Diesel powered hydraulic pump

Variable displacement pump for carrier and spray boom

Electric power pack 11 kW, 50/60 Hz with hydraulic pump

Variable displacement pump for carrier and spray boom

Oil tank capacity, stainless steel 55 l

Return oil filtration 10 µm

Oil level and return filter contamination indicator

Hydraulic oil cooling system is only active when electric power pack is activated.

PERFORMANCE

- | | |
|----------------------------------|----------|
| Tramming speed (on flat) | 2.5 km/h |
| Max. tramming incline | 20° |
| Max. tramming incline (sideways) | 10° |
| Max. working incline | 10° |

ELECTRICAL SYSTEM

Mains supply voltage:

- 50 Hz
 - 380 V (IEC)
 - 400 V (IEC)
 - 415 V (IEC)
 - 440 V (IEC)
 - 525 V (IEC)
 - 690 V (IEC)
- 60 Hz
 - 440 V (cULus)
 - 480 V, (460 V) (cULus)
 - 600 V, (575 V) (cULus)

Hooks for storing the supply cable

Battery charger for 12/24 V system

12/24 V ELECTRICAL SYSTEM

Mechanical main switch

12 V LED driving and parking lights

24 V LED working lights on boom (4 pcs)

Signal horn

Warning signal for carrier movements

CARRIER

Caterpillar C1.1 18,4 kW at 2800 RPM

Emission certification:

- EU Stage V
 - EPA Tier4 final

12 V Battery

Electric starter

Fuel tank capacity 20 l

Four mechanical operating levers for controlling the tracks and support legs

Hydraulic drive hub motors with spring applied brakes

Hydraulic support legs

Two rubber tracks (surface contact 200 x 1300 mm)

OTHER

Powder extinguisher:

- 6 kg
 - Ansul Sentry

Support leg feet extension blocks

Painting and taping:

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

Text labels in:

- En/One of destination EU languages
 - Other language

Measurements:

- Noise
- Vibration
- Emissions

Standard tool set:

Cleaning plug
Washing ball
Hitting tool for nozzle
Claw coupling
Hose clamp
Rubber hose 3/4", 4 m
Carabiner
Wrench for spraying nozzles
Hammer 800 g
Nozzle tip d45 mm plastic

ACCESSORIES

- Robust and abrasion-resistant mains voltage supply cable with PUR outer sheath

Cable reel capacity:	
Voltage / Frequency	Cable
380 V / 50 Hz	25 m 4 x 6 mm ²
400 V / 50 Hz	25 m 4 x 6 mm ²
415 V / 50 Hz	25 m 4 x 6 mm ²
440 V / 50 Hz	25 m 4 x 6 mm ²
525 V / 50 Hz	25 m 4 x 6 mm ²
690 V / 50 Hz	25 m 4 x 6 mm ²

- Remote Driving System (RDS) to move the machine from the remote control
- Concrete delivery system 12,5 m
65 mm (2½") Concrete hose, standard couplings and gaskets
Accelerator hose 19 mm (¾")
- Dry spraying equipment kit
- Warning LED light (From the options below it is possible to choose 1 combination)

Color

- Amber
- Blue
- Red
- Green (n/a with rotating light pattern)
- White (n/a with rotating light pattern)

Light pattern

- Strobe
- Rotating

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):

<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](https://www.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](https://www.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 breaker boom systems. 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.

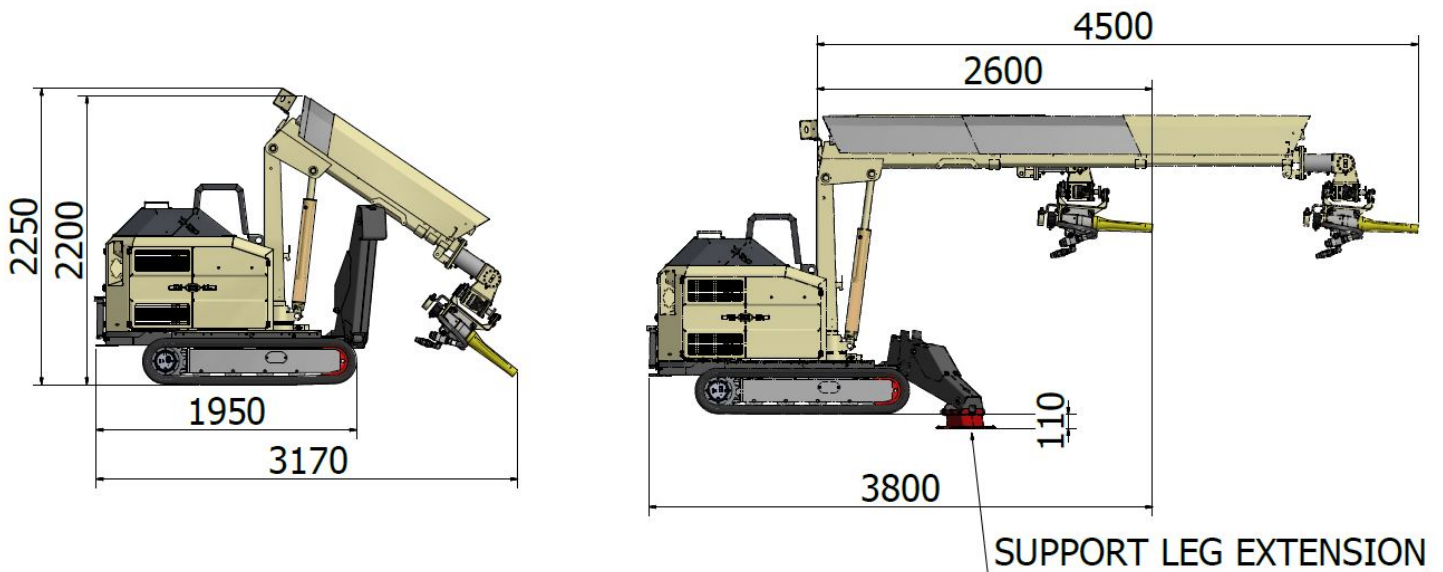
More information check [normet.com](https://www.normet.com).

DIMENSIONS AND WEIGHT

Length (standard boom)	3170 mm	Height	2250 mm
Length (long reach boom)	3240 mm	Ground clearance	180 mm
Width	1100 mm	Weight (standard boom)	2075 kg
Width (standard boom and support legs extended)	2400 mm		
Width (long reach boom and support legs extended)	3260 mm		

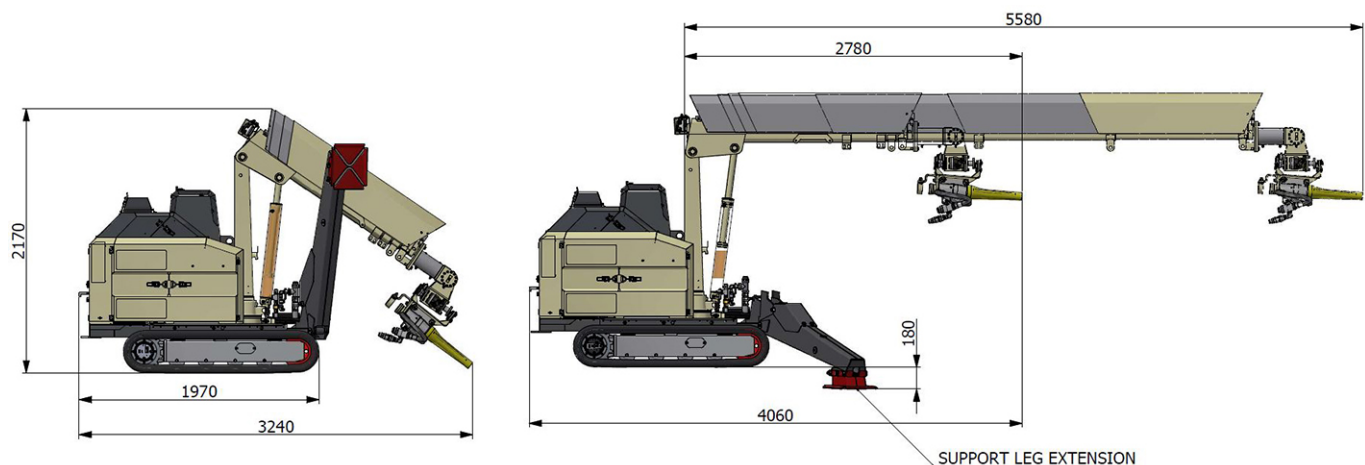
SIDE VIEW WITH STANDARD BOOM

Transportation / Operational



SIDE VIEW WITH LONG REACH BOOM

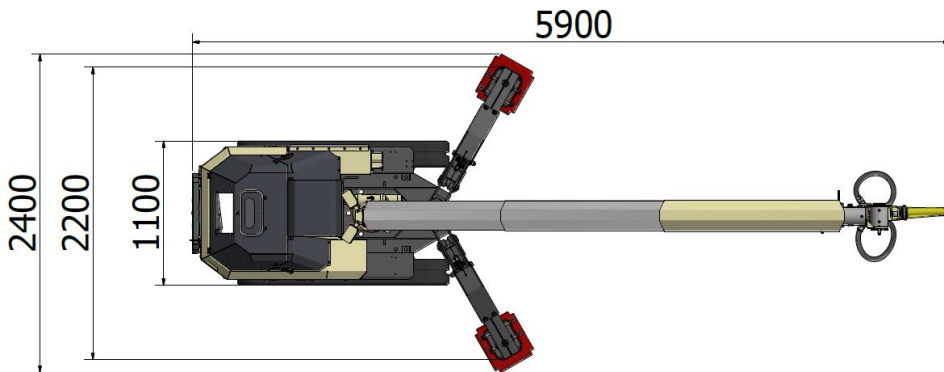
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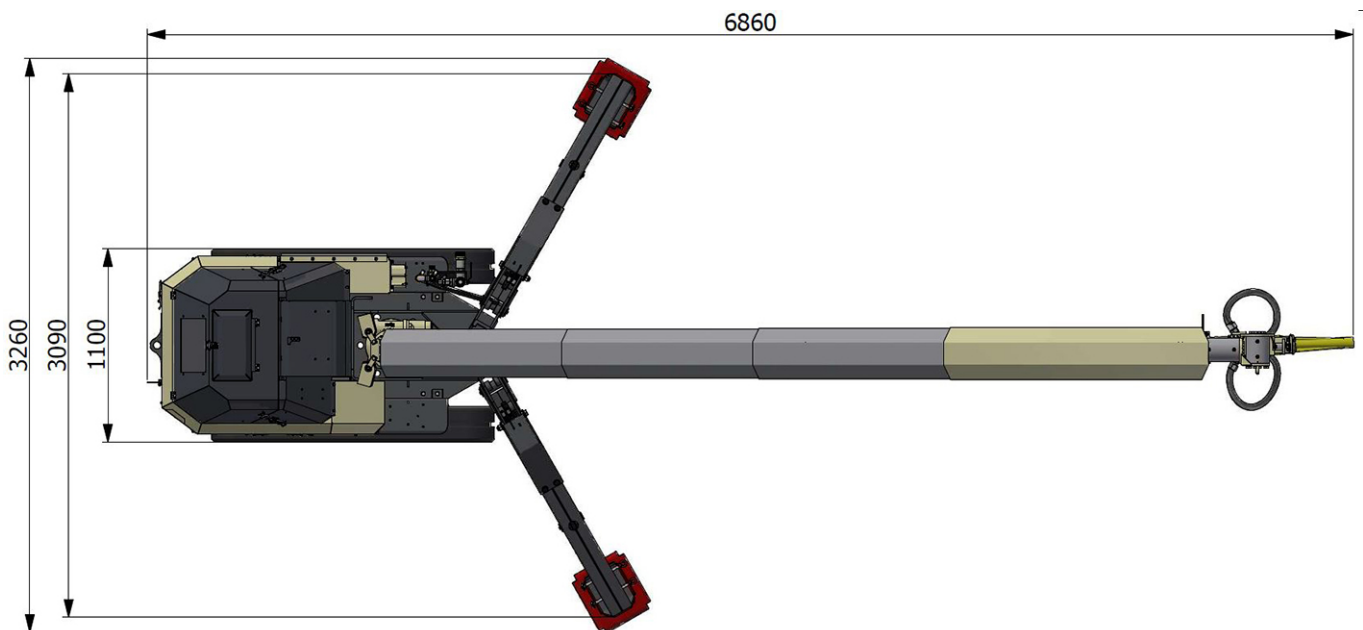
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TOP VIEW WITH STANDARD BOOM

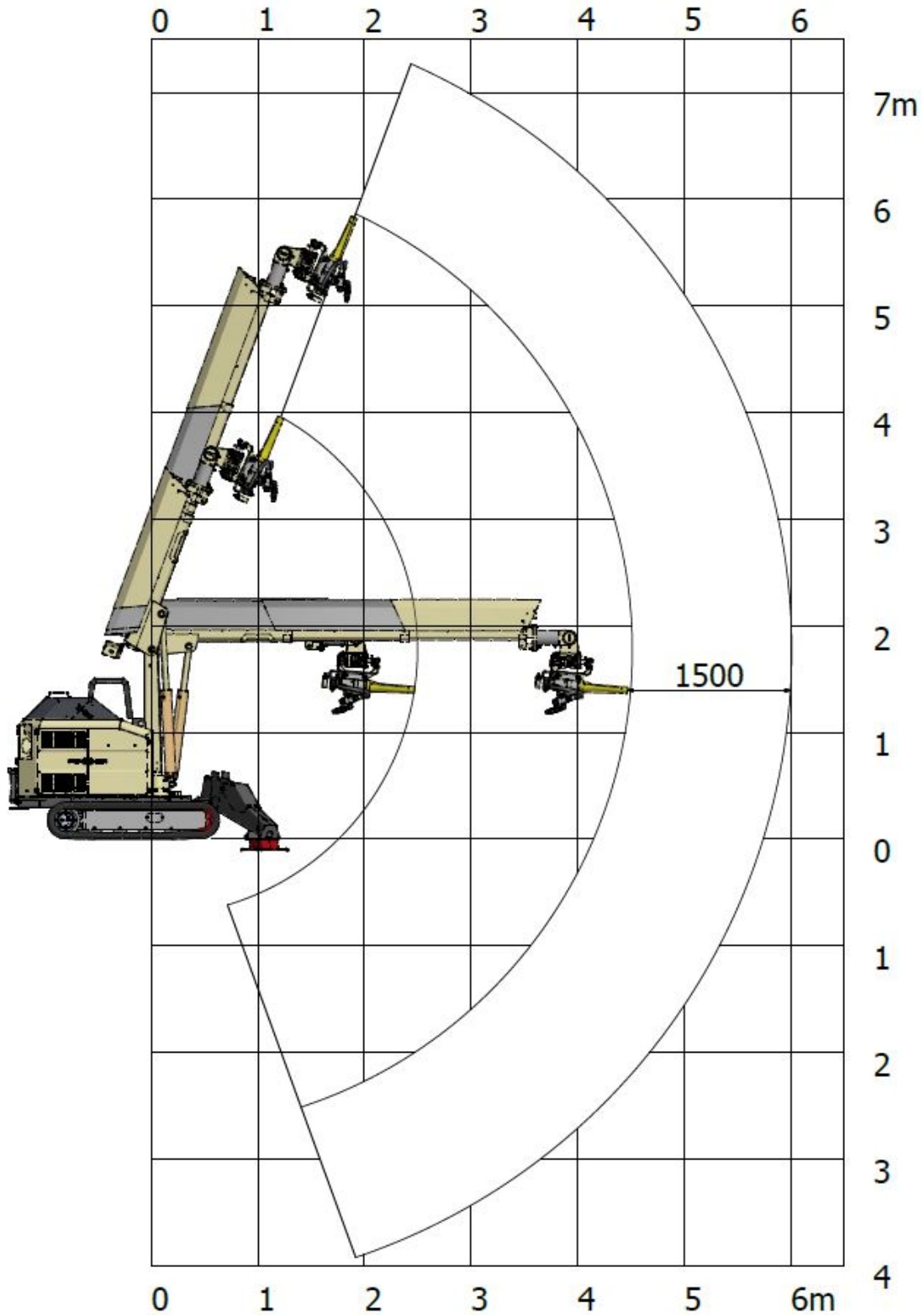


TOP VIEW WITH LONG REACH BOOM



BOOM COVERAGE WITH STANDARD BOOM

Vertical

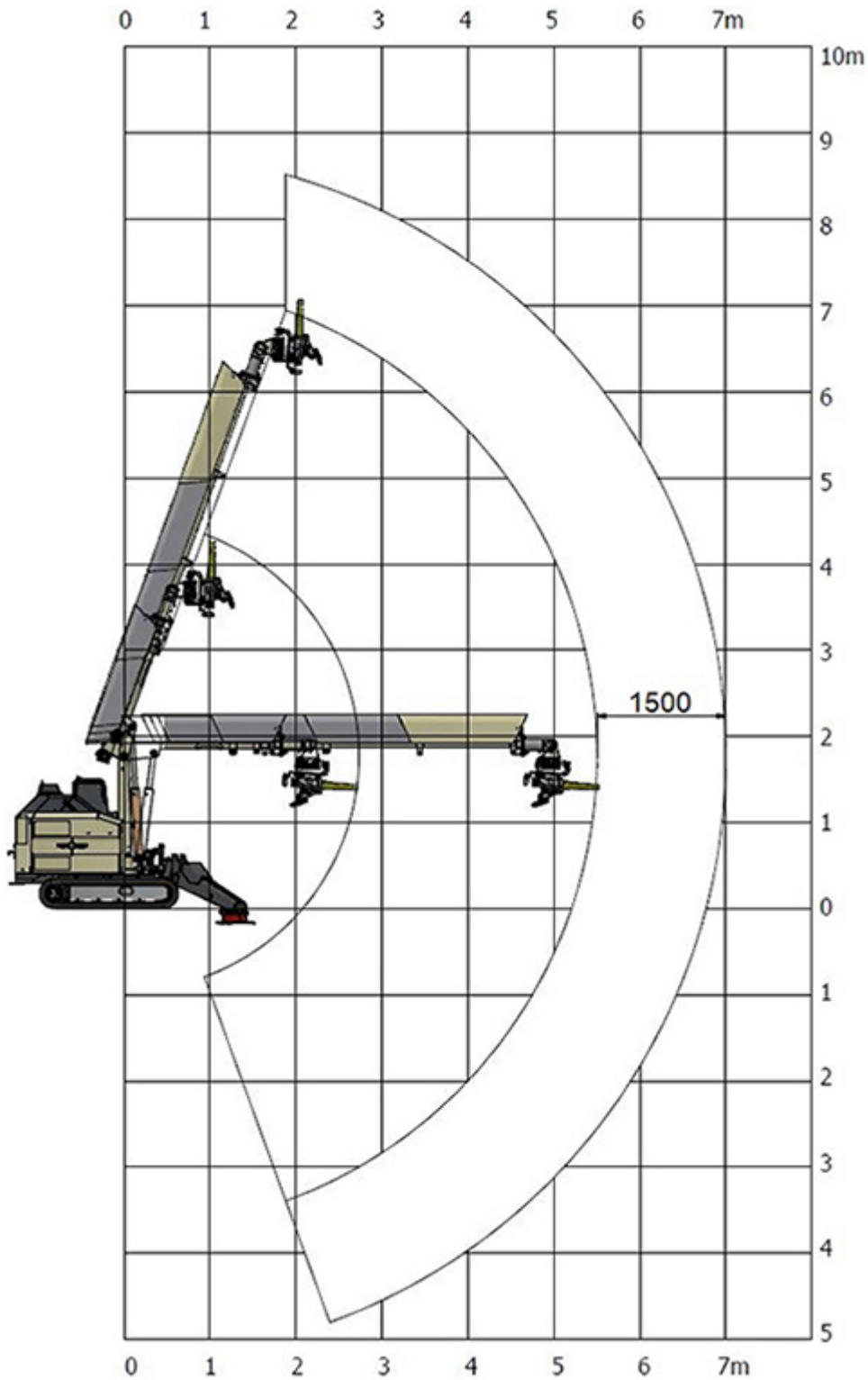


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BOOM COVERAGE WITH LONG REACH BOOM

Vertical

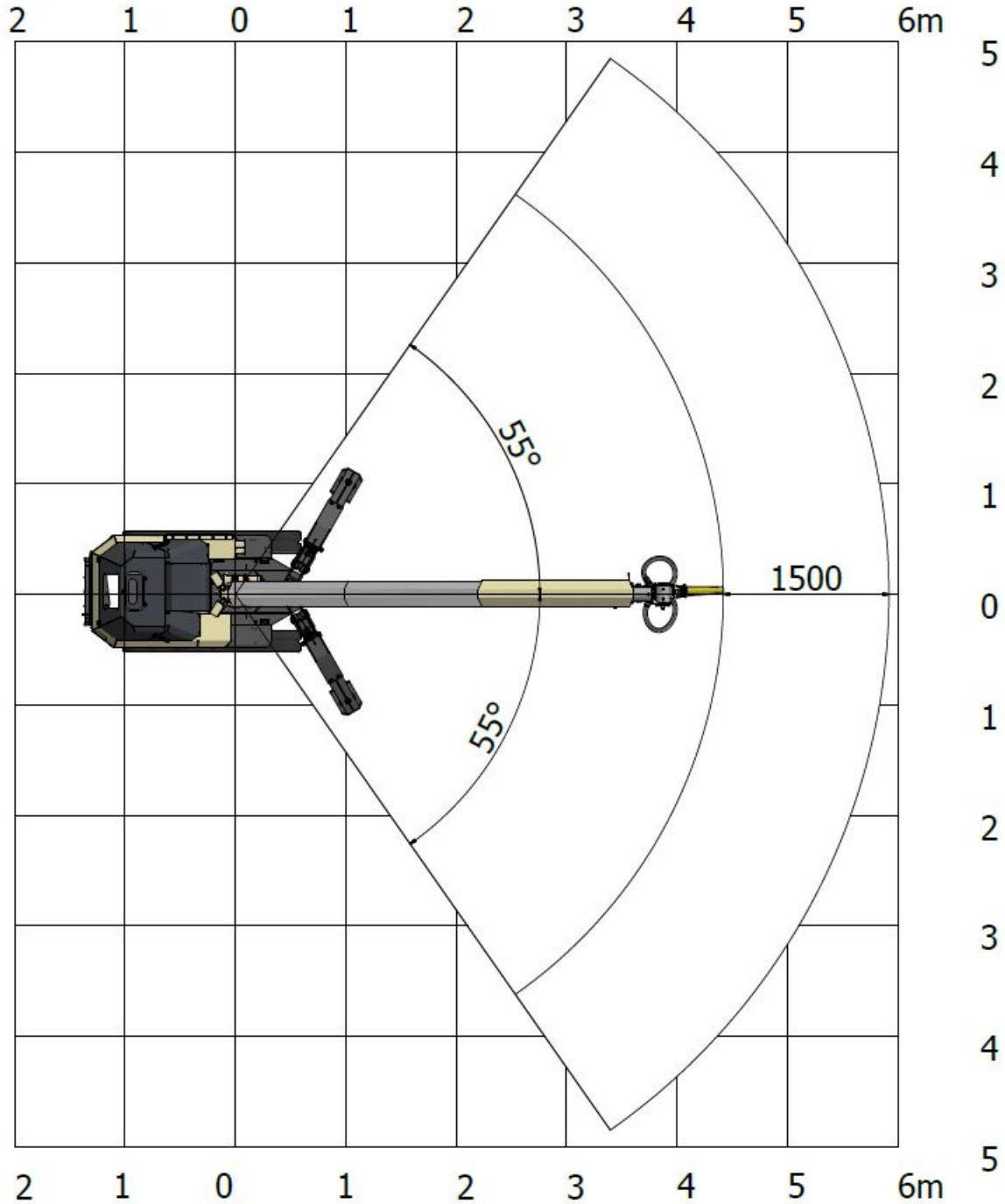


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BOOM COVERAGE WITH STANDARD BOOM

Lateral

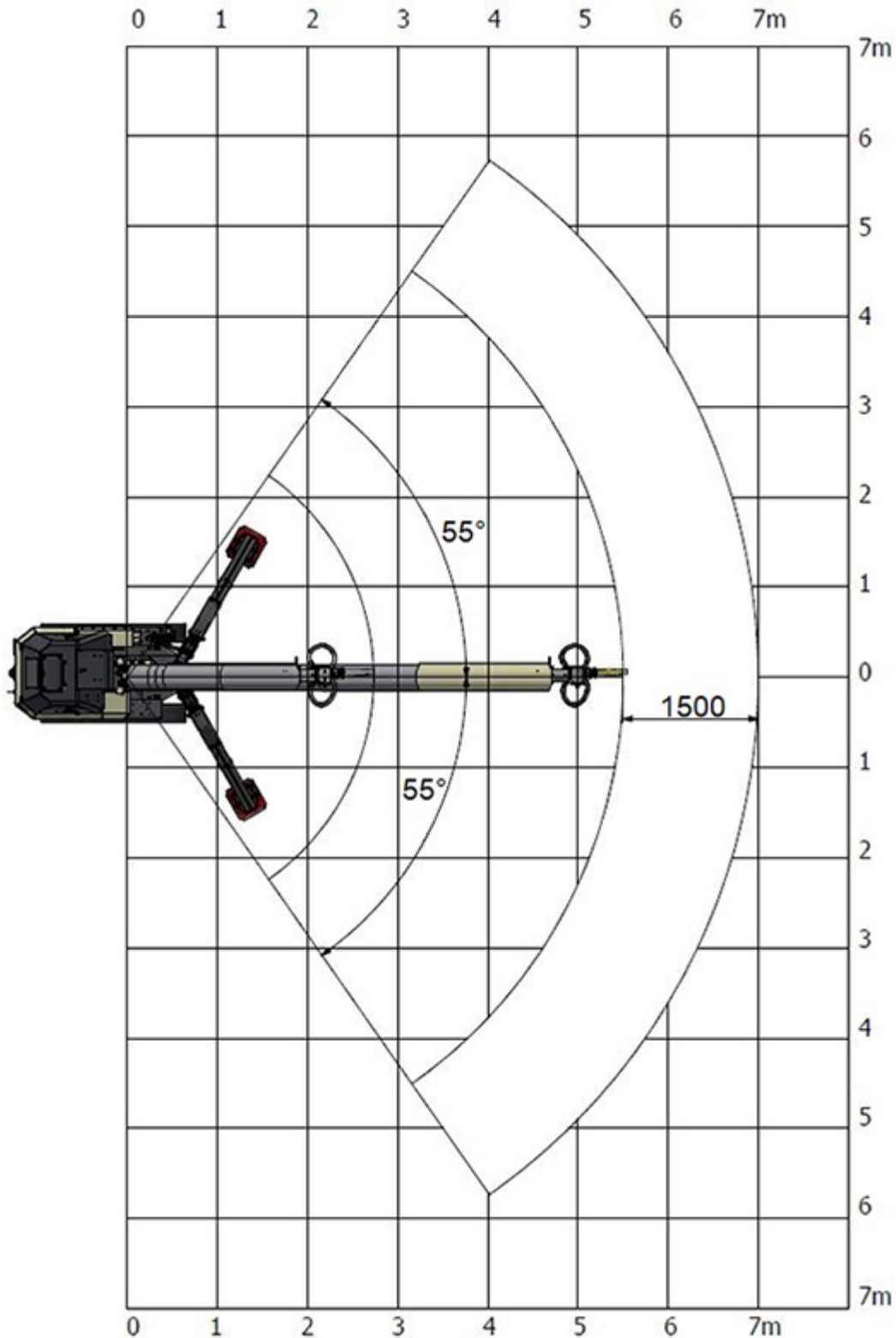


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BOOM COVERAGE WITH LONG REACH BOOM

Lateral



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