



Variomec XS 025 Crane



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Pictures may include options and additional equipment.

INTRODUCTION



Variomec XS 025 Crane is a purpose-built and agile vehicle for material transportation in 3.5 m x 3.5 m or larger tunnels. The vehicle has a 2.5 tn carrying capacity and a roomy platform with a low loading height. It is fitted with a strong 48 kNm crane to enable heavy weight loading and support installation works. Variomec XS can be equipped with several different optional equipment to increase machine versatility.

The XS-series has a larger payload capacity compared to current light vehicles commonly used in underground mines. The XS-series offers a completely new level of safety, ergonomics, and total cost of ownership while retaining the high performance and mobility of the existing fleet.

The versatile XS-carrier features a unique fast-connecting load-end structure, which enables the utilization of one carrier for multiple processes, such as:

- Material deck with an optional crane
- Crew application with a material deck and compartment for three persons
- A personnel compartment for eleven passenger
- Explosives transportation
- Lubrication and fuel transportation
- Emergency vehicle

The basic carrier is equipped with readiness for all load-end applications, and changing the application takes only a few hours.

The Normet XS-series features a powerful Deutz Stage III / Tier 3-approved diesel engine and a reliable Linde hydrostatic transmission. The vehicle is equipped with a full chassis suspension system that enhances driving safety and comfort while reducing fatigue. This suspension system improves efficiency and speed, ensuring a safer and more comfortable experience for both the driver and passengers.

The Normet FOPS and ROPS-approved safety cabin provides superior visibility and a comfortable compartment for the driver and passengers. Designed for safe and easy entry and exit, the cabin has wide door openings, properly positioned handrails, and non-slip steps. The dashboard is user-friendly, and the multi-informational display (MID) provides all necessary information for the operator, including speed, operating hours, temperatures, safety alarms, and warnings, all of which can be recorded for further analysis.

The electric and control system is designed to withstand the harsh underground environment. The electric system consists of self-extinguishing wire harnesses with tinned and watertight conduits, and all exposed components are rated at least IP65.

The vehicle layout allows easy access to all service points, and all daily checks can be performed from ground level.

TECHNICAL SPECIFICATION

MATERIAL PLATFORM

Carrying capacity	3800 kg
Platform inner dimensions	3400 x 1790 mm
Loading height	1160 mm
Crane	
Max lifting moment	48 kNm
Max lifting capacity	2900 Kg
Slewing angle	360°
Max hydraulic vertical outreach	5.85 m
Max hydraulic outreach	4.7 m

ENGINE AND TRANSMISSION

Deutz TCD 2012 L4, 96 kW/2200 rpm, Tier 3 / Stage IIIA approved

Exhaust system for Deutz engine:

- Catalytic exhaust gas purifier and muffler
- Catalytic converter (DOC) & Diesel particulate filter (DPF)

Fuel tank capacity	110 l
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Linde hydrostatic transmission

Pump	105 cm ³
Motor	210 cm ³

4-wheel drive

PERFORMANCE

Tramming speed (horizontal)	30 km/h
Lateral gradient for tramming (continuous)	4°
Longitudinal gradient for tramming (continuous)	9°

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

AXLES AND BRAKES

Dana 212 Planetary type axles

Hydraulically powered dual-circuit oil immersed multidisc service brakes in both axles

Spring applied hydraulically released fail-safe -type parking/safety brakes in both axles

Leaf spring suspended chassis

TYRES AND RIMS

Tire size:

- 9.00-20
- 8.25-15 (100 mm lower machine)

STEERING

4-wheel steering with three steering modes

Front axle steering, concentric 4 WS and crab walk

Orbitrol type

HYDRAULIC SYSTEM

Variable displacement pump system:

190 bar, 90 l/min at 2200 rpm

Hydraulic oil tank capacity	100 l
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24 VDC ELECTRICAL SYSTEM

LED driving and indicator lights

LED work lights

LED side lights

Warning LED light:

Color

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

Light pattern

- Strobe
- Rotating

DRIVER'S COMPARTMENT

Enclosed cabin, FOPS/ROPS approved

- Fresh air blower
- Heating and A/C

Driver's seat and seat belt:

Mechanically suspended T-back seat with 3-point seat belt

Cabin door interlock switches with safety brake application

Passenger's seat:

- Mechanically suspended T-back seat with 3-point seat belt
- 2 seats with 3-point seat belts

MACHINE CONNECTIVITY

- Machine connectivity hardware (WLAN/3G/4G/LTE)
 - Analytics license (includes connectivity hardware)

TECHNICAL DOCUMENTATION

Standard documents:

Instruction manuals, hard copy 2 pcs:

- English
- Russian
- One of destination EU languages

Spare parts manuals, hard copy 2 pcs:

- English
- Russian

PDF manuals on USB-stick 2 pcs, includes instruction and spare parts manuals

Additional documentation:

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

OTHER

6 kg hand held extinguisher

Painting and taping:

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

Text labels in:

- En/Ru/One of destination EU languages
- Other language

Measurements:

- Noise
- Vibration
- Emissions

ACCESSORIES

PROCESS PRODUCTIVITY

- Openable and removable edges for material platform

Height 930 mm

CARRIER PRODUCTIVITY

- Two-piece windscreen
- Audio system
- HEPA filter for driver's compartment
- Heated mirrors
- 12 V 20 A power supply in cabin with socket and connector
- Auto engine shut down during idling
- Engine shut down delay
- Inlet plug for jump start
- Block heater with interior heater and battery charger
- Fuel operated pre-heater
- Fast fuel filling system
- Hand pump for filling of hydraulic tank
- Fluid evacuation panel with sampling points
- Automatic lubrication system
- Reversing camera:
 - 1 camera, 1 display
 - 3 cameras, 2 displays
 - 4 cameras, 1 display with recording support
- Spare rim and tyre
- Toolbox and maintenance tools
- Interior cooling fan
- Wax tape for electric connectors

SAFETY

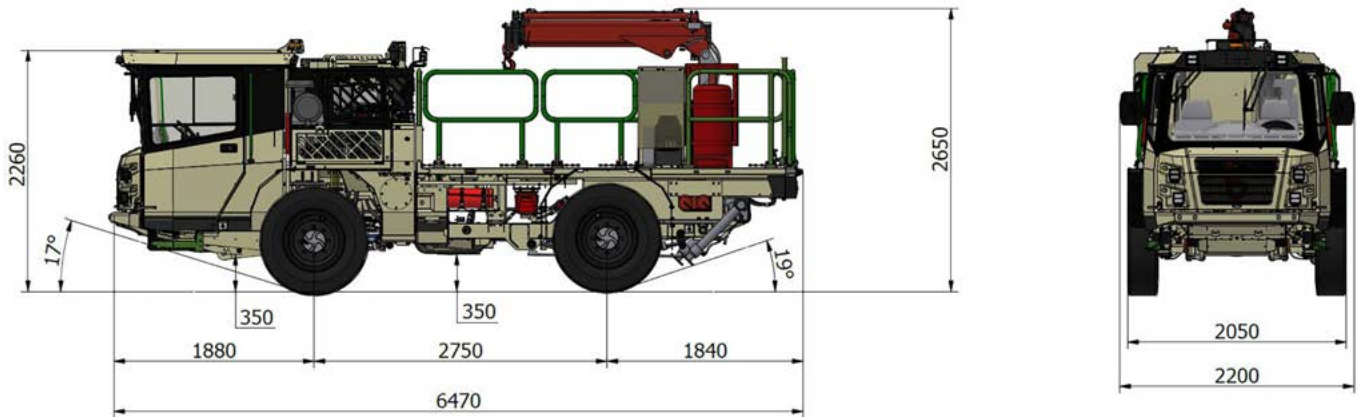
- Cabin door puddle lights
- Extra warning LED light
 - Color
 - Amber
 - Blue
 - Red
 - Green (n/a with rotating light pattern)
 - White (n/a with rotating light pattern)
 - Light pattern
 - Strobe
 - Rotating
- Direction lights (Green/Red)
 - Both lights always on
 - Lights follows driving direction
- Extra service warning LED light
 - Color
 - Amber
 - Blue
 - Red
 - Green (n/a with rotating light pattern)
 - White (n/a with rotating light pattern)
 - Light pattern
 - Strobe
 - Rotating
- Seat belt interlock switch applies safety brake
- Fire extinguisher system
 - Ansul A-101
 - Manual
 - Automatic, Checkfire:
 - 110
 - 210
 - Extra 6 kg hand held fire extinguisher
- Grounding chain
- Pump for brake release
 - Electric pump
 - Hand pump
- Redundant brake monitoring system
- Methane monitoring system
- Protection guards for tunnel curtains
- Tyre pressure indicators
- Warning triangles
- Flash light with charger
- Hearing protectors
- Wheel chocks with brackets
- Service isolator for starter

DIMENSIONS

Length	6470 mm	Track	1760 mm
Width with 20" tires	2050 mm	Ground clearance with 20" tires	350 mm
Height with 20" tires	2650 mm	Turning radius outer	5100 mm
Wheel base	2750 mm	Turning radius inner	2050 mm

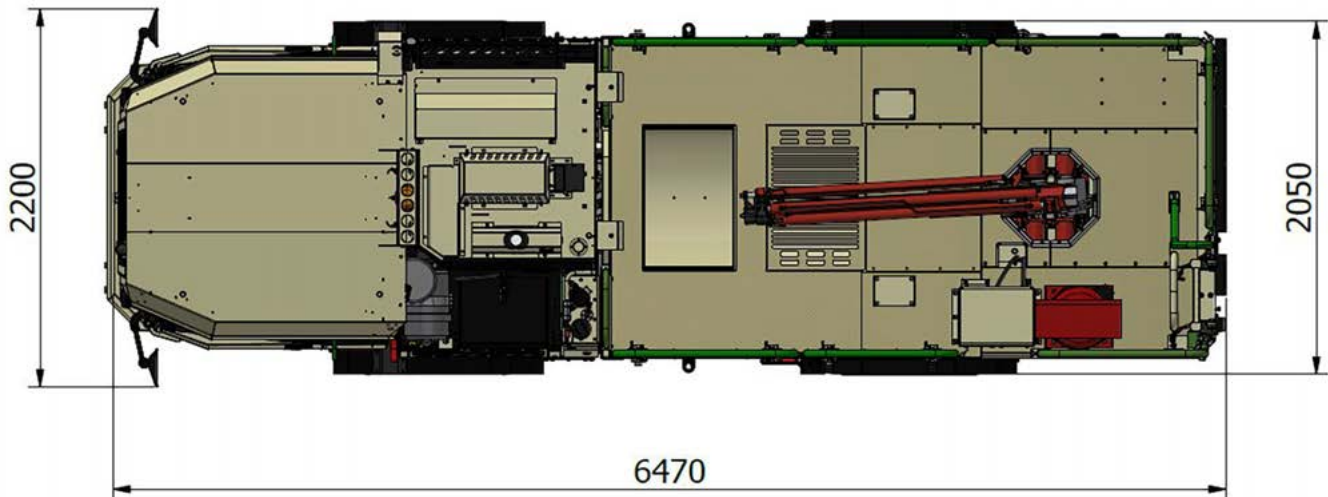
SIDE VIEW

Machine with 20" tires



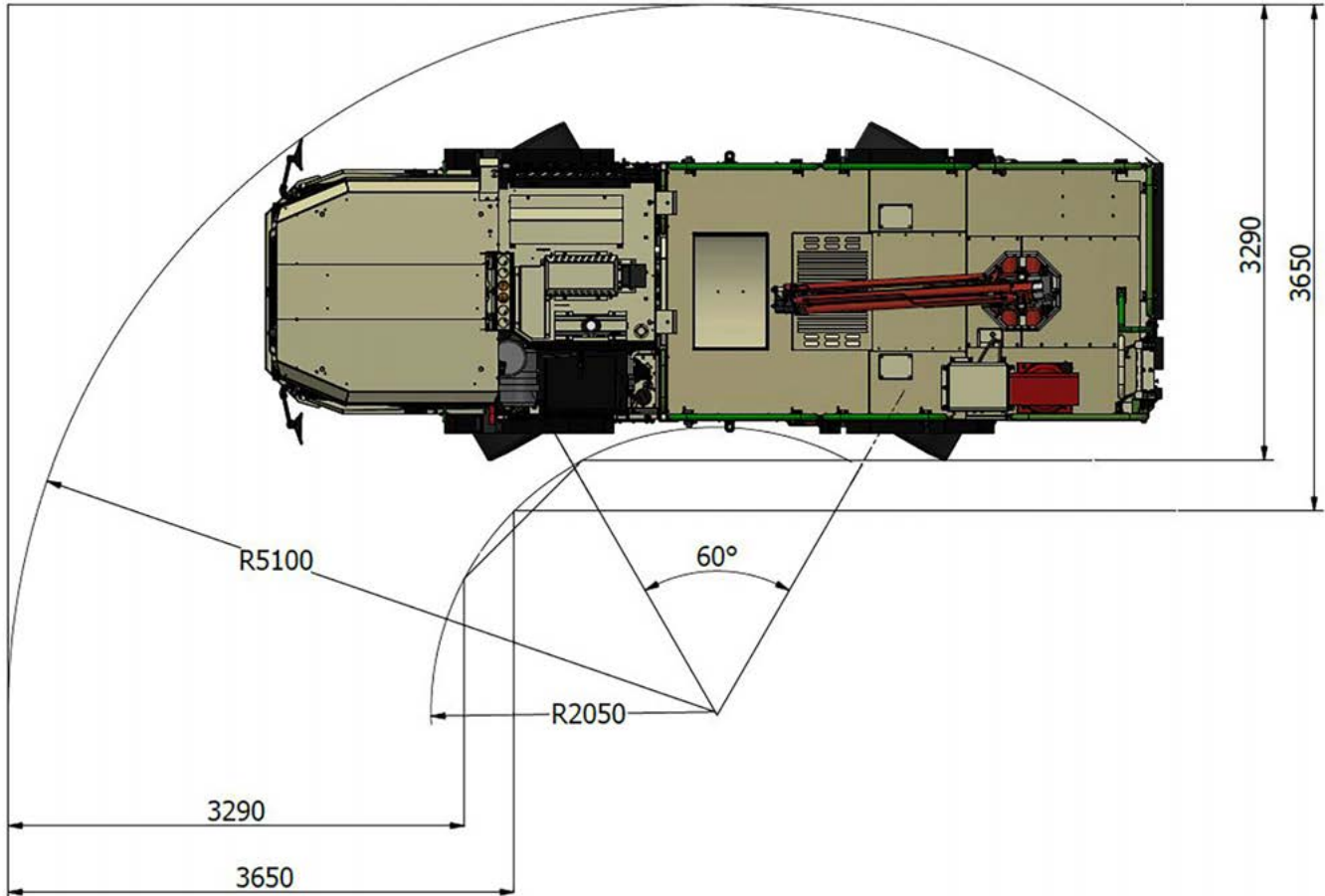
TOP VIEW

Machine with 20" tires



TURNING RADIUS

Machine with 20" tires

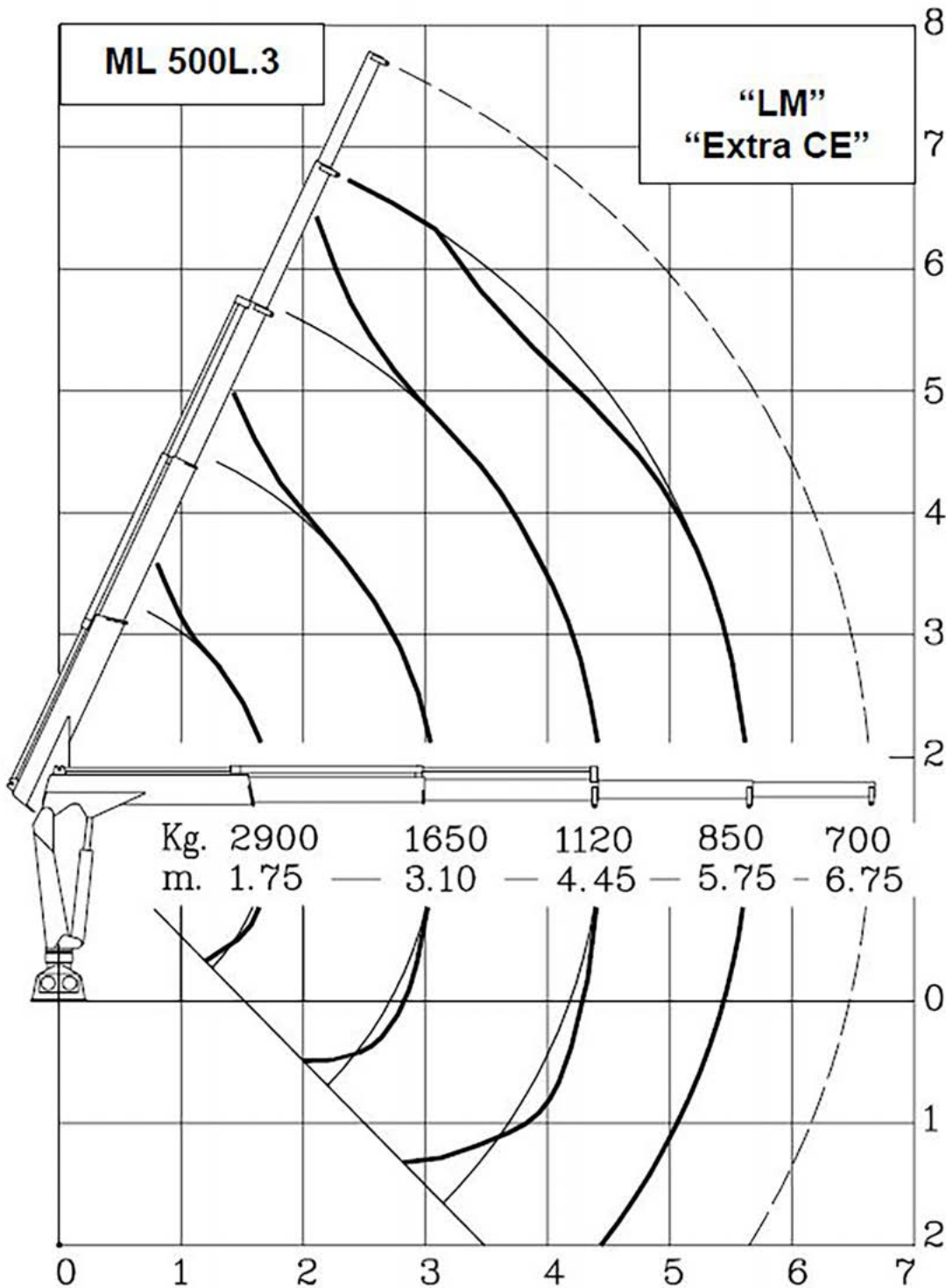


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REACH AREA

Crane Maxilift ML500L.3



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TRACTIVE EFFORTS

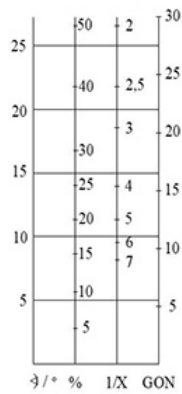
OPERATING WEIGHT

Empty 9000 kg
 Fully loaded 11 500 kg
 final machine weight variate in agree with selected options

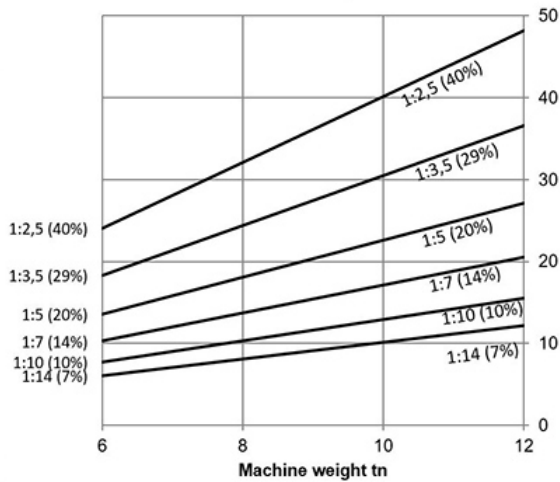
DEUTZ TCD 2012 L4, 96 KW

Performance curve DOC059943

Conversion chart



Gradeability kN



Tractive effort kN

