



# Utilift MF 330 SD



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## INTRODUCTION



**Utilift MF 330 SD** Scissor Lift with lifting capacity up to 3 tonnes and max. platform height of 3.5 m is designed to provide a safe work platform for all kinds of installation works in tunnels up to 5.5 m high. Optional tiltable FOPS II safety roof creates additional safety when e.g manual scaling is done from the platform.

Typical applications are fan installations, ventilation ducting, electrification works and piping for air and water services. Optional side extensions provide complete drift coverage from single setup practically in all kinds of mine headings. The works can be accomplished safely, efficiently and comfortably from the level work deck, elevated to a optimum work height.

The fully electric vehicle architecture (SmartDrive) includes latest Li-ion battery technology, fast charging capability, and two high-torque direct drive electric motors, which provide instant torque and efficient operation without any local emissions. Energy recuperation technology comes as a standard feature. Batteries are charged during downhill driving and deceleration which further increases total efficiency of the operation.

Maximum speed is 20 km/h. The fully reversible 4WD with high traction capability and instant torque ensures safe and sure movement in difficult ground conditions. Majority of the braking is done via electric motors recuperating energy, but the vehicle also includes efficient hydraulic dual-circuit oil immersed multi-disc brakes to provide additional braking power when it is needed.

Vehicle has an front axle suspension system, which improve safety, driving comfort and increases component lifetime.

Normet's FOPS and ROPS approved safety cabin provides superior visibility and comfortable compartment for the driver and the passenger. Cabin controls are easy and ergonomic to use, and the multifunctional display (MID) provides driving information (speed, RPM, temperatures, safety warnings & alarms etc.), which can be recorded for further analysis. The enclosed cabin and SmartDrive provide low noise level.



NorSmart 3 electric system is designed for harsh underground environment. System consists of self-extinguishing wire harnesses with tinned wires, water tight conduits and all exposed components are minimum IP65 protection class. In addition, vehicle layout allows easy access to all service points, all daily checks can be done from the ground level.

# TECHNICAL SPECIFICATION

## LIFTING PLATFORM

### Dimensions:

- 1800 X 3200 mm  
 Lifting capacity 3000 kg
- 1800 X 3200 mm  
 Lifting capacity 2600 kg  
 Side extensions 730 mm
- 1800 X 3200 mm  
 Lifting capacity 2300 kg  
 Side extensions 730 mm  
 Safety roof with hydraulic lift and fold

Max. lifting height 3600 mm

Start/stop from platform

Battery operated emergency pump

Rear handrails of platform:

Standard gate to climb in platform

Scissors movement alarm

Safety monitoring system of MEWP:

Dangerous movement preventing system  
 (mandatory in NAP, NAS, CE area)

## ELECTRICAL SYSTEM

Main supply voltage

Power supply for the electrical functions

- 50 Hz
  - 380 V (IEC)
  - 400 V (IEC)
  - 415 V (IEC)
  - 525 V (IEC)
  - 690 V (IEC)
  - 1000 V (IEC)
  - 1000 V (AS/NZS)
- 60 Hz
  - 440 V (UL/CSA)
  - 440 V (IEC)
  - 480 V, (460 V) (UL/CSA)
  - 600 V, (575 V) (UL/CSA)
  - 1000 V (UL/CSA)

Robust and abrasion-resistant mains voltage supply cable with PUR outer sheath (excluding plug)

- 7 m cable without cable reel
- Hydraulically driven cable reel
  - No cable
  - 25 m cable
- Hydraulically driven cable reel with spooling device
  - No cable
  - 100 m cable

Pilot circuit

- No
- Yes

## ELECTRIC MOTORS

Two direct drive permanent magnet electric motors

4-wheel drive, no separate transmission

Combined power rating 200 kW

## PERFORMANCE

Max. tractive effort 99 kN

Tramming speed (horizontal) 20 km/h

Lateral gradient for tramming (continuous) 4°

Longitudinal gradient for tramming (continuous) 9°

Lateral gradient for operation 3°

## BATTERY

Li-ion battery technology

Nominal voltage 663 V

Energy content 90 kWh

Liquid cooled

Fast charging capability

## BATTERY CHARGING

25-30 kW on-board 3-phase AC charging system

for up to 2.5 hours of charging time (from 0 to 80%)

CCS type 2 fast-charging socket

to charge batteries from 0-80% in up to 40 min  
 depending on charger

**NOTE:** compatible CCS charging station required with  
 type 2 plug

## AXLES AND BRAKES

Dana planetary type axles

Fixed load end axle

Suspended battery module axle

Electronic braking: energy recuperation  
via electric motor braking

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

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

Brake testing possible from cabin

## TYRES AND RIMS

- Nokian Tyres 12.00–20" with NDT inspected rims
- Bridgestone 12.00–20" with NDT inspected rims

## STEERING

Orbitrol type hydraulic frame steering

Frame articulation +/- 42°

## HYDRAULIC SYSTEM

Hydraulic oil tank capacity 145 l

Variable displacement pump system for carrier:  
200 bar, 100 l/min

## 24 VDC ELECTRICAL SYSTEM

2 x 12 V deep cycle batteries

24 V battery charger (DC/DC converter)

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 2-operator cabin FOPS/ROPS approved

Air conditioning and heating

Driver's seat and seat belt:

- Air suspended T-back seat with 3-point seat belt
- Air suspended heavy duty seat with 3-point seat belt

Passenger's seat:

- T-back seat with 3-point seat belt
- Heavy duty seat with 3-point seat belt
- 2 seats with retractable lap seat belts

Cabin door interlock switches with safety brake application

## 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

Dry chemical fire extinguisher system:

Ansul A-101, Checkfire 210

Powder extinguisher:

- 6 kg
- 12 kg
- Ansul Sentry

Number of extinguishers:

- 1
- 2

Painting and taping:

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

Reversing camera:

- 3 cameras, 3 displays
- 3 cameras, 3 displays and reversing radar
- 6 cameras, 3 displays with recording support

2 pairs of support legs at the load end and standard at the engine end

Electric pump for brake release

Text labels in:

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

Measurements:

- Noise
- Vibration

## ACCESSORIES

### PROCESS PRODUCTIVITY

- Fan rack, Max. diameter of fan 1100 mm, Max. length 2000 mm
- Platform tilt +/- 8° for levelling the platform
- Hydraulic pipe lifters:

Lifting capacity of pipe lifters 350 kg

Stroke length 600 mm

Pipe diameter 70 - 270 mm or pipes with a nominal value from 2½" to 10"

Reduces lifting capacity of platform 400 kg

- Crane Hiab 029:

Lifting capacity 27 kNm, 800 kg/3,4 m

Two hydraulic extensions, max reach 3,4 m

Installation on rear frame

Accessories:

- Load monitoring (CE approved)
- Load monitoring, radio controller and controls for optional grapple (CE approved)
- Grapple for crane:

Pipe diameter 60 - 440 mm

Max. opening 1040 mm

Radio remote control

Rotator for grapple

Reduces max lifting capacity of crane 80 kg

Only available with CE approved crane with radio controller

- Remote driving system (RDS)

Joystick drivable carrier from elevated platform

Speed of carrier, height of platform and incline of terrain limited to ensure safety

Only available with dangerous movement preventing system

- Radio remote controller

Platform functions, support legs

RDS functions if selected

- Hydraulic generator 400/230 V 50 Hz, 9.5 / 14.3 A
- 0,4 m<sup>3</sup>/min compressor with hose reel, air tank and tyre filling pistol (n/a with socket supply transformer or crane)
- Compressed air inlet on carrier and air outlet in platform
- Welding kit

Includes welding generator (180 A welding current and 230V/400VAC output voltage) and welder's equipment; mask, gloves, scratch brush and slag hammer

- Toolbox on platform

- Scaling bars with rack:  
bar lengths 1.8, 2.4 and 3.0 m
- Socket supply voltage (n/a with crane or compressor)
  - No sockets
  - 220/230/240 V
  - 110/120 V

### CARRIER PRODUCTIVITY

- Accessories for enclosed cabin:
  - Two-piece windscreen
  - Sliding rear window for driver's side
  - Audio system
  - Heated mirrors
- 12 V, 20 A power supply in cabin with socket and connector
- Deutch connector for 24 V, 10 A for external power supply
- Drive battery coolant heater with interior heater and 24 VDC battery charger (230 V)
- Fluid evacuation panel with sampling points
- Automatic lubrication system
- Spare rim and tyre
- Toolbox and maintenance tools
- Interior cooling fan
- Wax tape for electric connectors



## SAFETY

- Safety roof hydraulically liftable & tiltable on work platform  
Reduces lifting capacity 300 kg
- 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 warning LED light with battery backup

### 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
- Front and rear grounding straps
  - Flat cable
  - Chain
- Redundant brake monitoring system
- Methane monitoring system
- Protection guards for tunnel curtains
- Tyre pressure indicators
- Warning triangles
- Flashlight with charger
- Hearing protectors
- Wheel chocks with brackets

## BEV SAFETY FEATURES

- Battery safe box (for transportation and storage)

## 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 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.

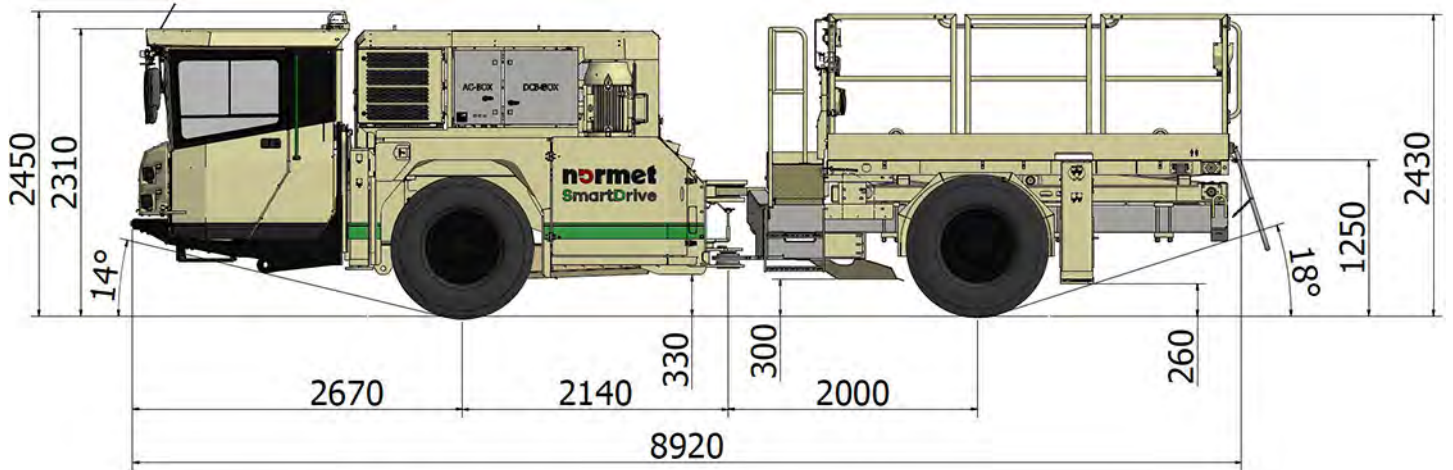
More information check [normet.com](https://www.normet.com).



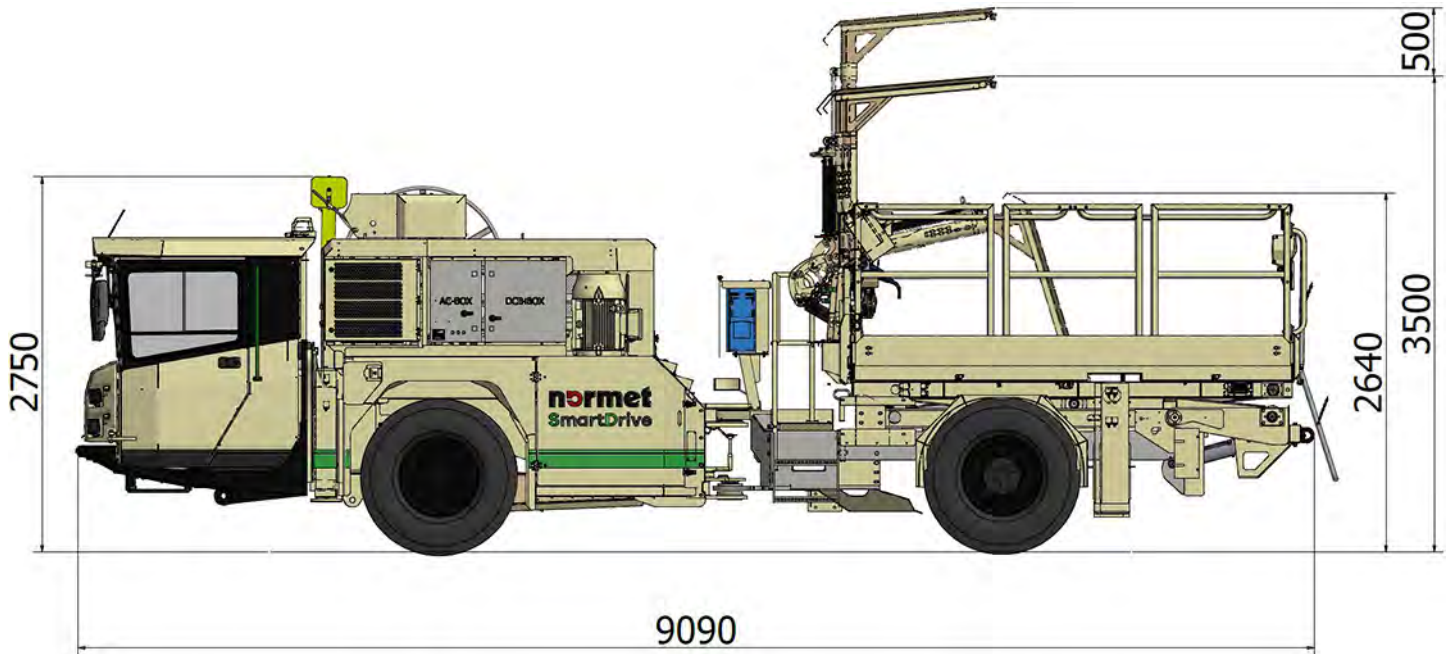
## DIMENSIONS

Length	8920 mm	Track	1670 mm
Width	2040 mm	Ground clearance as shown	300 mm
Height	2650 mm	Turning radius outer	6640 mm
Wheel base	4140 mm	Turning radius inner	4350 mm

### SIDE VIEW – BASIC MACHINE



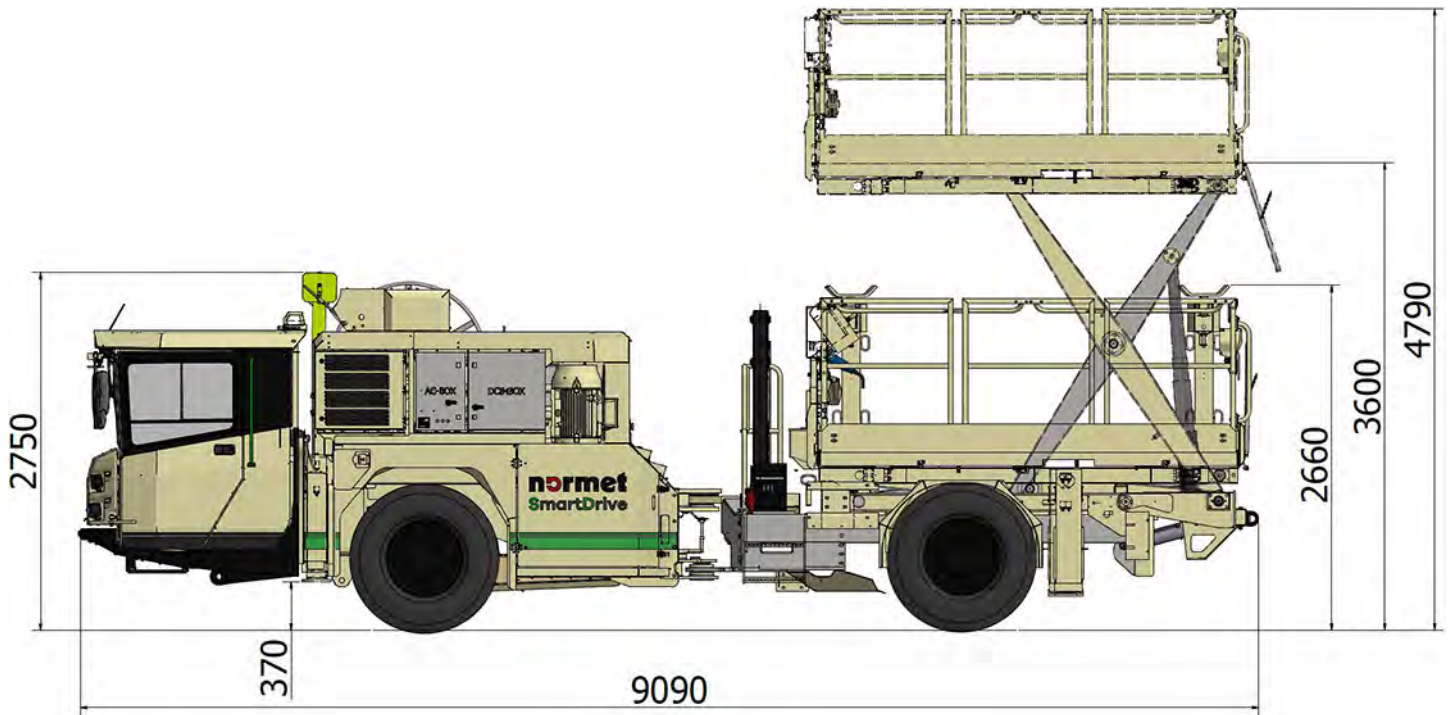
### SIDE VIEW – MACHINE WITH SAFETY ROOF



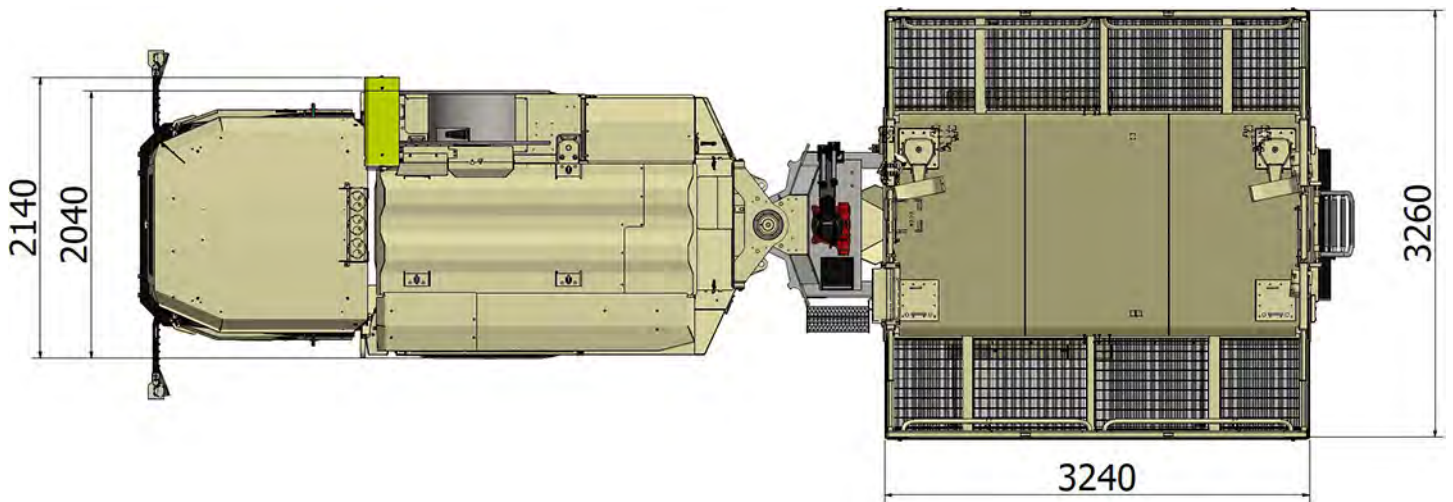
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**SIDE VIEW – MACHINE WITH CRANE**



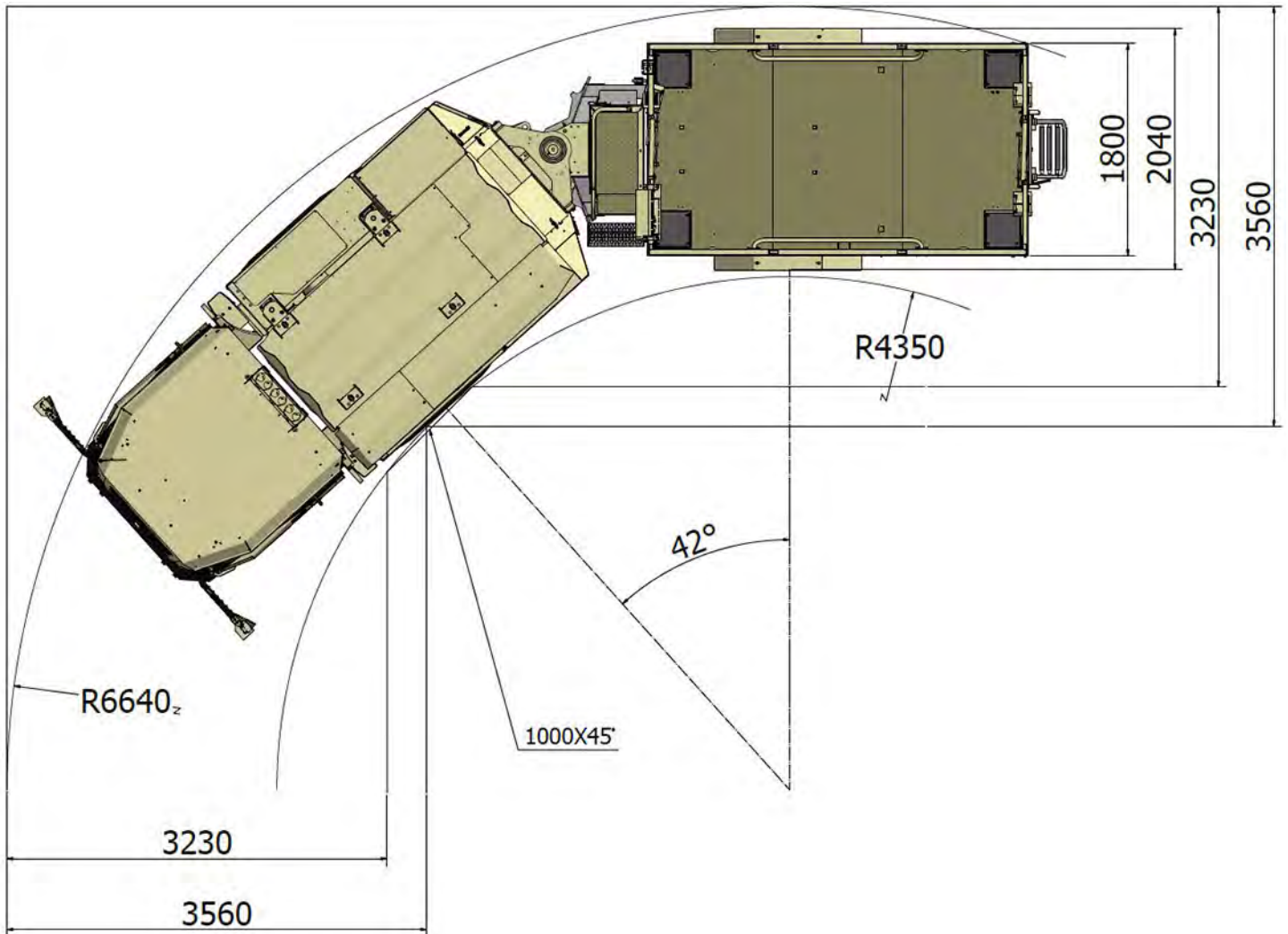
**TOP VIEW**



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TURNING RADIUS



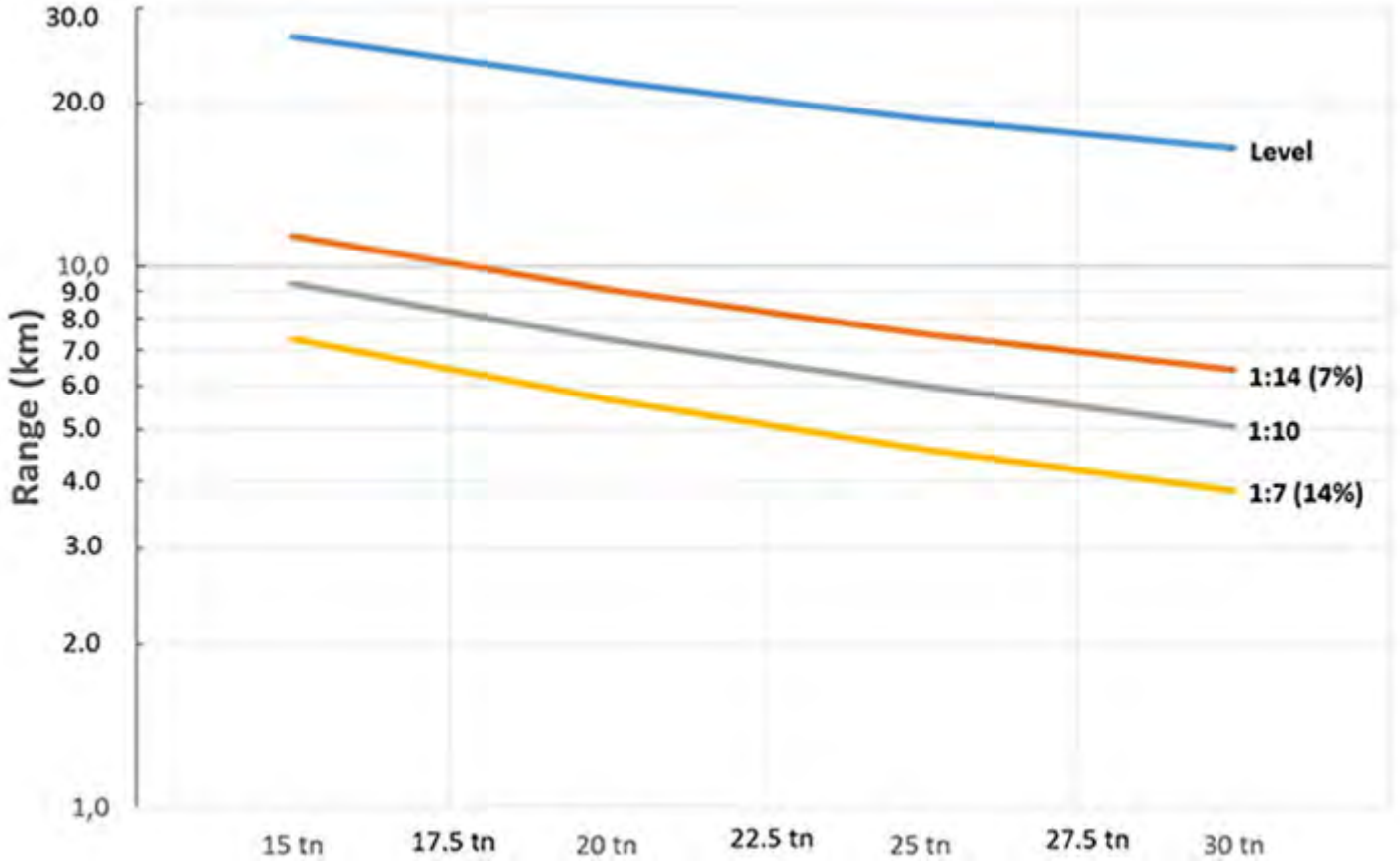
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# DRIVING RANGE AND TRACTIVE EFFORT

## DRIVING RANGE

Driving range curve: DOC060017



## OPERATING WEIGHT

Base machine

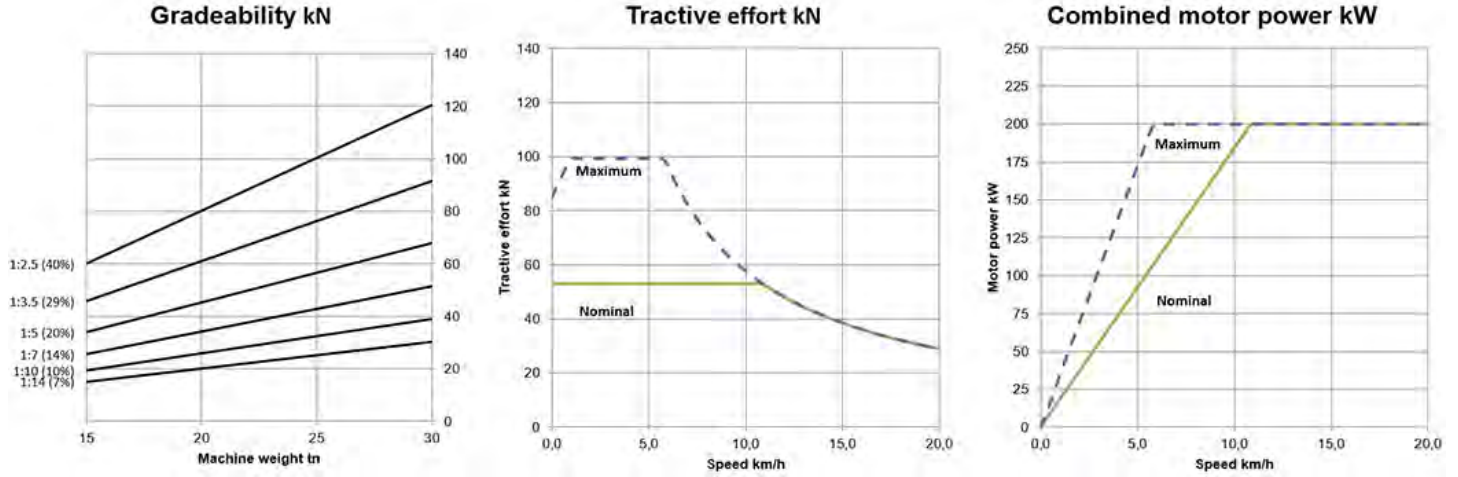
15 500 kg

final machine weight variate in agree with selected options



**TRACTIVE EFFORT**

Performance curve: DOC059935



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