



# Utimec XL 1100 Agitator ED



Normet reserves the right to change  
this specification without further notice

Pictures may include options and additional equipment.

## INTRODUCTION

**XL 1100 Agitator ED** with practical concrete transport capacity of 10.5 m<sup>3</sup> is designed for concrete transportation in underground mines and tunnels where the tramming height is 3.3 m or more. Concrete drum rotation speed can be adjusted between 0-13 rpm and hydraulically operated discharging chute ease machine positioning.



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.



### POWER TRAIN

XL ED-series units have powerful 6-cylinder liquid cooled turbocharged 250 kW Volvo Penta engine. Emission standard is Stage V that provides clean and efficient operation.

Machine is equipped with electrodynamic powerline and planetary type axles which have dual-circuit, spring applied hydraulically released fail-safe -type service/parking/safety brake with separate hydraulic tank and flushing circuit.



### SAFETY AND USABILITY

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. Enclosed cabin provides low noise level ensuring safe and comfortable driving.

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# TECHNICAL SPECIFICATION

## CONCRETE DRUM

Wear resistant concrete drum	
Carrying capacity	10.5 m <sup>3</sup>
Electrically controlled mixing and unloading	
Remote controller for concrete drum	
Manual concrete drum lock	
Water tank with hydraulic driven pump	500 l

## ENGINE AND DRIVELINE

### Volvo Penta TAD884VE, 250 kW/2200 rpm, with engine brake, 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	280 l
DEF tank capacity	25 l
Permanent magnet generator	
Nominal voltage	750 VDC
Two direct drive permanent magnet electric motors	
4-wheel drive, no separate transmission	
Combined power rating	240 kW

## PERFORMANCE

Tramming speed (horizontal)	20 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

Kessler D91 planetary type axles	
Fixed load end axle	
Suspended engine end axle	
Spring applied-hydraulically released oil cooled multidisc service and parking/safety brakes in both axles	
Brake testing possible from cabin	

## TYRES AND RIMS

Bridgestone 18.00–25" with NDT inspected rims

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## STEERING

Orbitrol type hydraulic frame steering	
Frame articulation	+/- 45°

## HYDRAULIC SYSTEM

Variable displacement pump system for carrier hydraulics	
210 bar, 180 l/min at 2200 rpm	
Hydraulic oil tank capacity	180 l
Variable displacement pump system for brakes	
180 bar, 90 l/min at 2200 rpm	
Brake oil tank capacity	100 l
Closed loop variable displacement system for concrete drum rolling	
380 bar, 160 l/min at 2200 rpm	
Oil cooler for drum rotation	
Emergency pump for steering and drum emptying	

## 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	

Pictures may include options and additional equipment.

## DRIVER'S COMPARTMENT

### Cabin type:

- Open cabin FOPS/ROPS approved
- Enclosed cabin FOPS/ROPS approved

### 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

Cabin door interlock switches with safety brake application

### 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

Front facing pedals

## 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

### 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 specifications

### Reversing camera:

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

Electric pump for brake release

### Text labels in:

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

### Measurements:

- Noise
- Vibration
- Emissions

## ACCESSORIES

### PROCESS PRODUCTIVITY

- Accelerator system with 300 l tank and hydraulic driven pump
- Chemical dosing system
- Form oil system with 30 l tank
- Concrete drum safety guards
- Brake resistor (mandatory in decline haulage)
- Front support legs
- Rear support legs
- Pressure washer
- High voltage power pack for concrete drum discharging
  - 400 V (IEC)
  - 1000 V (AS/NZS)

### CARRIER PRODUCTIVITY

- Accessories for open cabin:
  - Two-piece windscreen with wipers
    - Windshield with wipers
- Accessories for enclosed cabin:
  - Two-piece windscreen
  - Audio system
  - Air conditioning with heating
  - Heated mirrors
- 12 V, 20 A power supply in cabin with socket and connector
- Auto engine shutdown during idling
- Engine shutdown delay
- Inlet plug for jump start
- Block heater with interior heater and battery charger 230 V (Interior heater available with enclosed cabin)
- Fuel operated pre-heater
- Fast fuel filling system
- 24 VDC pump for filling of hydraulic oil tank
- 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

- 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
- Fire extinguisher system
  - Dry chemical
    - Ansul A-101
      - Manual
      - Automatic, Checkfire:
        - 110
        - 210
    - Liquid agent
      - Ansul LVS
        - Manual
        - Automatic, Checkfire:
          - 110
          - 210
  - Front and rear grounding straps
    - Flat cable
    - Chain
  - Engine end roof safety rails
  - 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
  - Service isolator for starter

## 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.

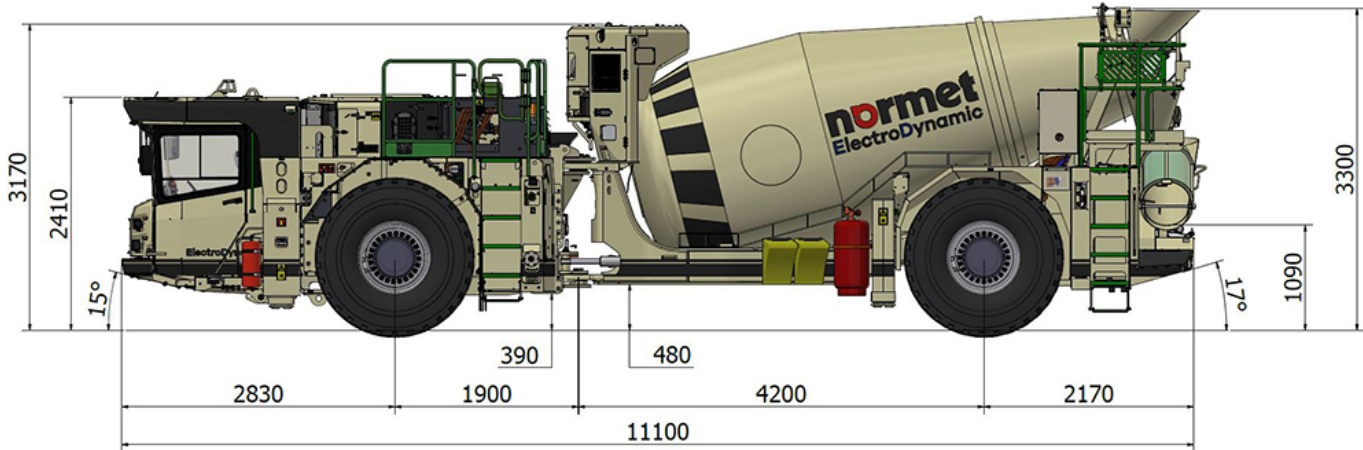
Contact your local Normet office for Upgrade offering to your fleet.

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

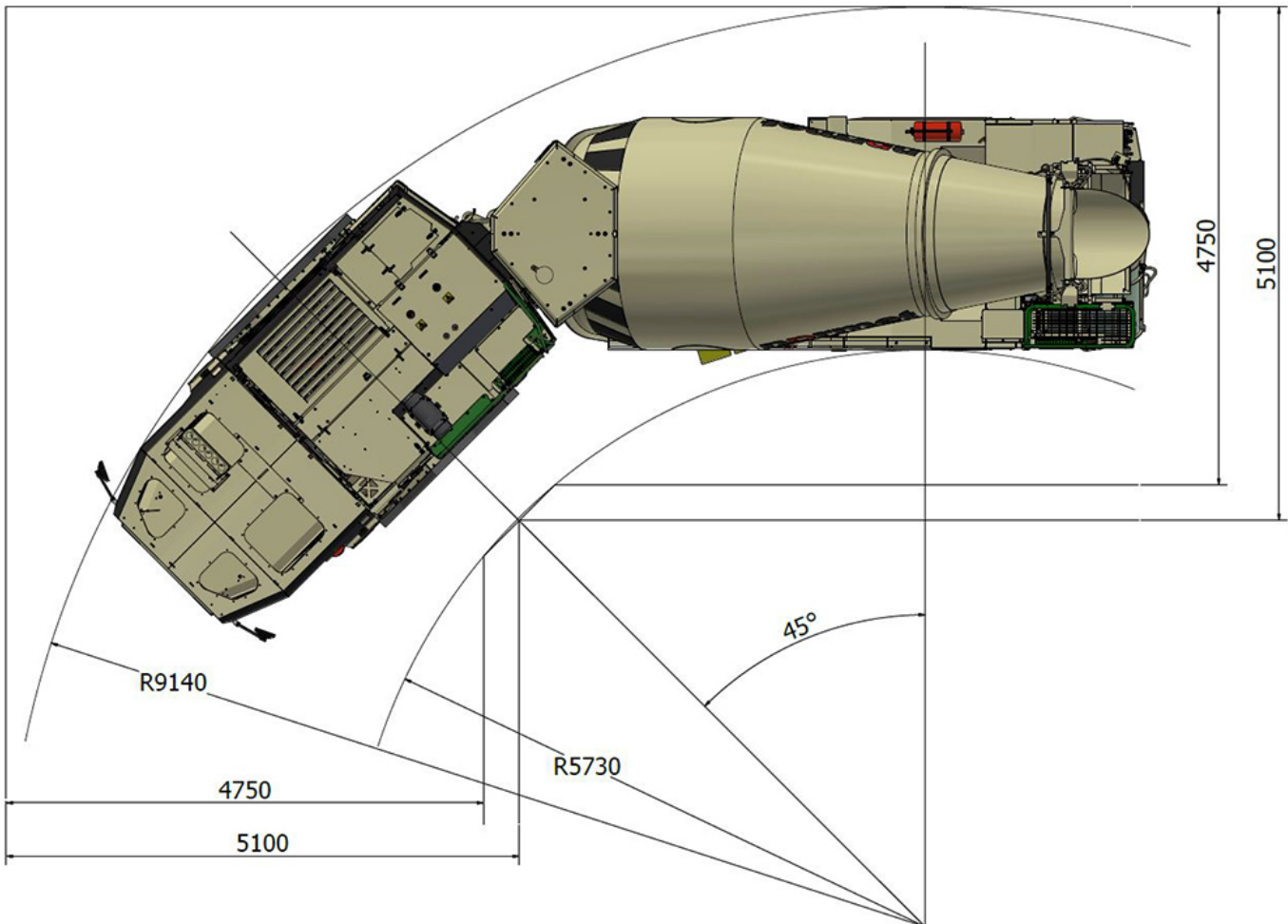
## DIMENSIONS

Length	11100 mm	Track	1800 mm
Width	2310 mm	Ground clearance	280 mm
Height	3300 mm	Turning radius outer	9140 mm
Height of cabin	2410 mm	Turning radius inner	5730 mm
Wheel base	6100 mm		

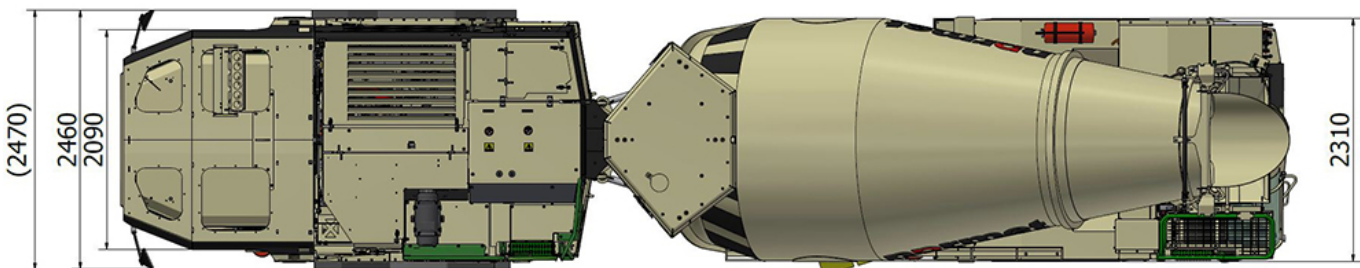
### SIDE VIEW – MACHINE WITH OPTIONS



## TURNING RADIUS

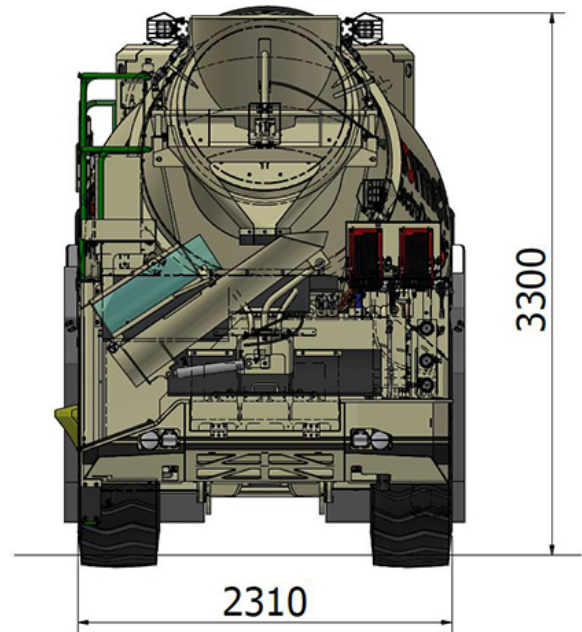
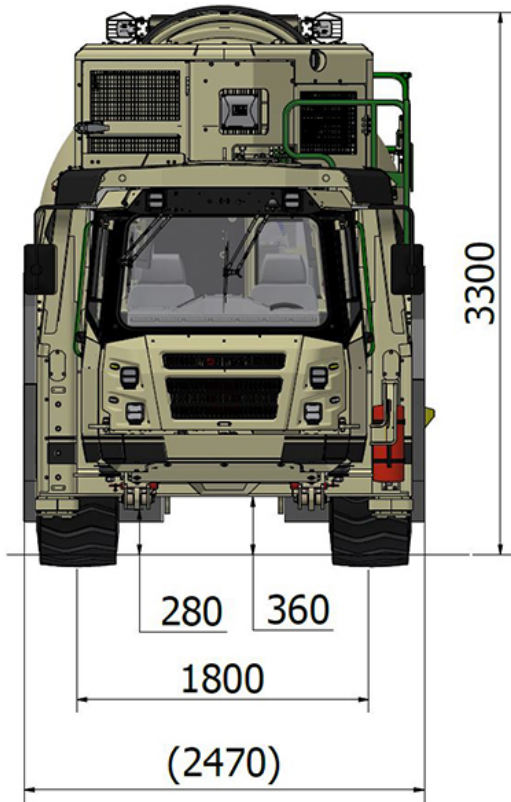


## TOP VIEW





## FRONT AND BACK VIEWS



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## TRACTIVE EFFORTS

### OPERATING WEIGHT

Empty	29 000 kg
Fully loaded	53 000 kg

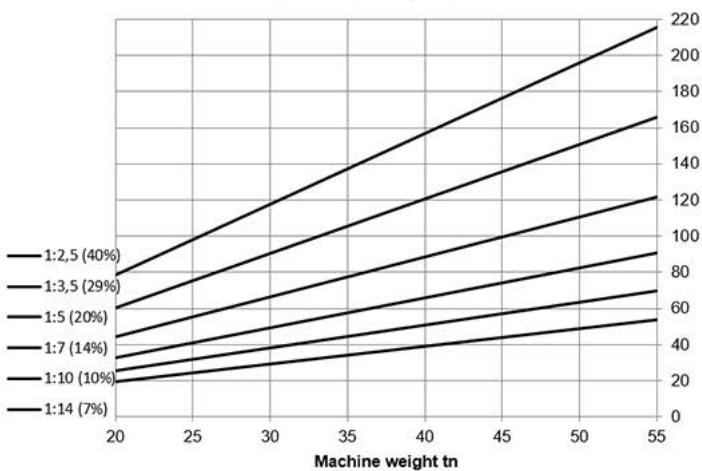
final machine weight variate in agree with selected options

### VOLVO PENTA TAD884 250 KW

Performance curve DOC069556

3 % rolling resistance

**Gradeability kN**



**Tractive effort kN**

