



Breaker Boom X68-Series



Normet reserves the right to change
this specification without further notice

Pictures may include options and additional equipment.

INTRODUCTION

Xrock X68-Series of breaker booms are suitable for gyratory crushing plants and large grizzlies. The boom design allows flexible operation in dump pocket areas and gives good access to clean gyratory inlet area.

The boom structure is a robust steel plate design able to carry loads in harsh environments. The X68-Series consists of four different models from 9.2 m horizontal reach up to 15.8 m.

Xrock X68-Series booms are designed to carry hydraulic breakers from 1500 kg to 3500 kg and especially tailored for Normet Xrock XB breakers. The system is powered by Normet Xrock Hydraulic power units which are streamlined to fit for the Normet Xrock breaker and the boom.

SLEW RING DESIGN

X68-Series of booms are slew ring type booms with 360 deg turning radius. The pedestal slew mechanism has separated slew bearing ring and gear ring to reduce service costs in the life cycle.

Two robust hydraulic motors with planetary gears ensure smooth and powerful rotation force. Service access to critical areas has been made as easy as possible.



normet XROCK®

POWER UNITS

All Normet Xrock power units offer a streamlined power resource for breaker booms and breakers to maximize the performance. The Power units are modular systems with wide access points for service. Power unit motor control panels are PLC controlled. All electric connections and panels are IP65 rated.

Power units have minimum 110 % capacity integrated trip drays for hydraulic oil to meet environmental regulations and avoid oil leakages. The system can be equipped with an automatic fire extinguisher.



RELIABLE CONTROL SYSTEM AND ELECTRONICS

The boom is controlled by accessorial radio remote control.

All exposed control components are IP65 rated. Cables and connections between boom, radio controller and power unit are designed for harsh mining environment.



AVAILABILITY FOR STATE-OF-THE-ART AUTOMATION

XROCK[®]

AUTOMATION

All Normet Xrock breaker booms have availability for Xrock[®] Automation platform. Xrock[®] Automation system optimizes the mine's processes in a responsible way and gives you the time to focus on anticipating and developing your business.

Xrock[®] Automation lets operators' control everything ergonomically from the safety of a control room. The Xrock[®] Automation system itself is specifically designed to be user-friendly: it's easy to learn and intuitive to use, so users will quickly get acquainted with productive work. Boom operation, management and diagnostics are available straight from the control station.

All Xrock[®] Automation platforms are made flexible and scalable to the mine's current and future demands. As your business grows and develops, we'll deliver you readily available solutions straight from the shelf.



TECHNICAL SPECIFICATION

BOOM

	X68-900R	X68-1050R	X68-1150R
Maximum reach (incl. nominal breaker), m	11.6	12.7	14.0
Horizontal reach, max (breaker vertical), m	9.2	10.3	11.5
Vertical reach, max (incl. nominal breaker), m	8.9	10.1	11.0
Nominal breaker length, m	2.7	2.7	2.7
Lift boom length, m	5.65	5.65	6.95
Dipper boom length, m	3.4	4.6	4.6

	X68-1250R	X68-1450R	X68-1550R
Maximum reach (incl. nominal breaker), m	15.0	16.9	18.3
Horizontal reach, max (breaker vertical), m	12.5	14.4	15.7
Vertical reach, max (incl. nominal breaker), m	12.1	13.5	14.9
Nominal breaker length, m	2.7	2.7	2.7
Lift boom length, m	6.95	8.95	8.95
Dipper boom length, m	5.6	5.6	7.0

Welded steel structure with bended C-beam
 Reinforced swivel points
 Heat treated conical locking pins
 Heat treated steel bushings

PEDESTAL

Welded steel plate structure
 Bolted on a steel assembly ring
 Slew mechanism with bearing ring and independent gear ring
 High torque hydraulic motor and gearbox (2 pcs.)

Slew angle	270°
Foundation plate width	2.29 m
Foundation plate length	2.29 m

BREAKER

With boom specified configuration

Recommended Normet Breakers:

XB23
 XB27
 XB32
 XB36
 XB45

Boom installed breakers includes 1 pcs. blunt tool, Idle blow protection standard on XB11 and above breaker models.

Recommended weight (900R - 1250R) 1500 kg - 3500 kg

Recommended weight (1450R & 1550R) 1500 kg - 2200 kg

CONTROL SYSTEM

Control valve with 4 proportional sections and 1 on/off section to control:

- Boom movements
- Breaker

Five mechanical control levers on the main control valve.

Can be equipped with a Radio control unit sold as an accessory.

HYDRAULIC SYSTEM

Power unit PU110-200, LS-pump

Cylinders:

Double acting cylinders with self-aligning bearings (ISO6020/1)

Easily replaceable seals

Max. pressure 25.0 MPa

Hoist (2 pcs.) 200/125-1400 mm

Dipper 200/125-1400 mm

Breaker tilt 200/125-1400 mm

X68-900R

Hydraulic lifting force 60 kN

X68-1050R

Hydraulic lifting force 44 kN

X68-1150R

Hydraulic lifting force 45 kN

X68-1250R

Hydraulic lifting force 37 kN

X68-1450R

Hydraulic lifting force 27 kN

X68-1550R

Hydraulic lifting force 23 kN

POWER UNIT

Variable displacement axial piston pump

Tank with 110% drip tray, service hatch (2 pcs.) and oil level indicators (3 pcs.)

Oil filtration 10 µm

Electric cut-off switch for too low and too high oil level

Warning level switch for low oil level

Thermometer and PLC controlled air cooler for oil with 3 kW fan

Oil pressure gauge 0-35.0 MPa

Adjustable cut-off pressure 0-25.0 MPa

PU110-200

Pump displacement 200 cc

Pump capacity at 1500 rpm 300 l/min

Pump capacity at 1800 rpm 360 l/min

Oil tank 600 l

REMOTE CONTROL SYSTEM

Wireless remote control with 2 joysticks and cable support

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

- Boom slew left/right
- Boom lift up/down
- Boom stick in/out
- Breaker tilt in/out
- Breaker on/off
- Power unit start/stop

ELECTRICAL SYSTEM

Mains supply voltage:

- 50 Hz
 - 380 V (IEC)
 - 400 V (IEC)
 - 415 V (IEC)
 - 420 V (IEC)
 - 525 V (IEC)
 - Special voltage
- 60 Hz
 - 440 V (IEC)
 - 460 V (IEC)
 - 480 V (IEC)
 - 480 V (cULus)
 - 575 V (IEC)
 - 575 V (cULus)
 - Special voltage

Flange mounted squirrel cage electric motor:

	1500 rpm (50 Hz)	1800 rpm (60 Hz)
PU110-200	110 kW	132 kW

TECHNICAL DOCUMENTATION

Standard documents:

Instruction manuals, hard copy 1 pcs:

- English
- Russian
- One of destination EU languages

Spare parts manuals, hard copy 1 pcs:

- English

PDF manuals on USB-stick 1 pcs, includes instruction and spare parts manuals

Boom placement drawing superimposed customer's plant lay-out drawing

Dimensional (G.A.) drawings

Coverage drawing

Pedestal load data table

Foundation plate drawing

Additional documentation:

- Other than standard language manuals

ACCESSORIES

MAIN ACCESSORIES

- PU110-200 Power unit
- XB23 (XB23LIBPB) Hydraulic Breaker
- XB27 (XB27LIBPB) Hydraulic Breaker
- XB32 (XB32LIBPB) Hydraulic Breaker
- XB36 (XB36LIBPB) Hydraulic Breaker
- XB45 (XB45LIBPB) Hydraulic Breaker
- Wireless remote control
 - 434 MHz
 - 458 MHz (US, Canada, Mexico)

One Power unit and one Breaker can be selected for the boom.

Boom installed breakers include 1 pcs. blunt tool. Idle blow protection standard on XB11 and above breaker models.

PROCESS PRODUCTIVITY

- Automatic lubrication system
- Manual lubrication system
- Automatic breaker lubrication system
- Off-line oil filtering system

Automatic and Manual lubrication cannot be selected together.

SAFETY (BOOM)

- Slew limiter kit
- Boom limiter kit

SAFETY (POWER UNIT)

- Fire extinguisher system

COLD CLIMATE ACCESSORIES (POWER UNIT)

- Oil heater
- Oil circulation valve

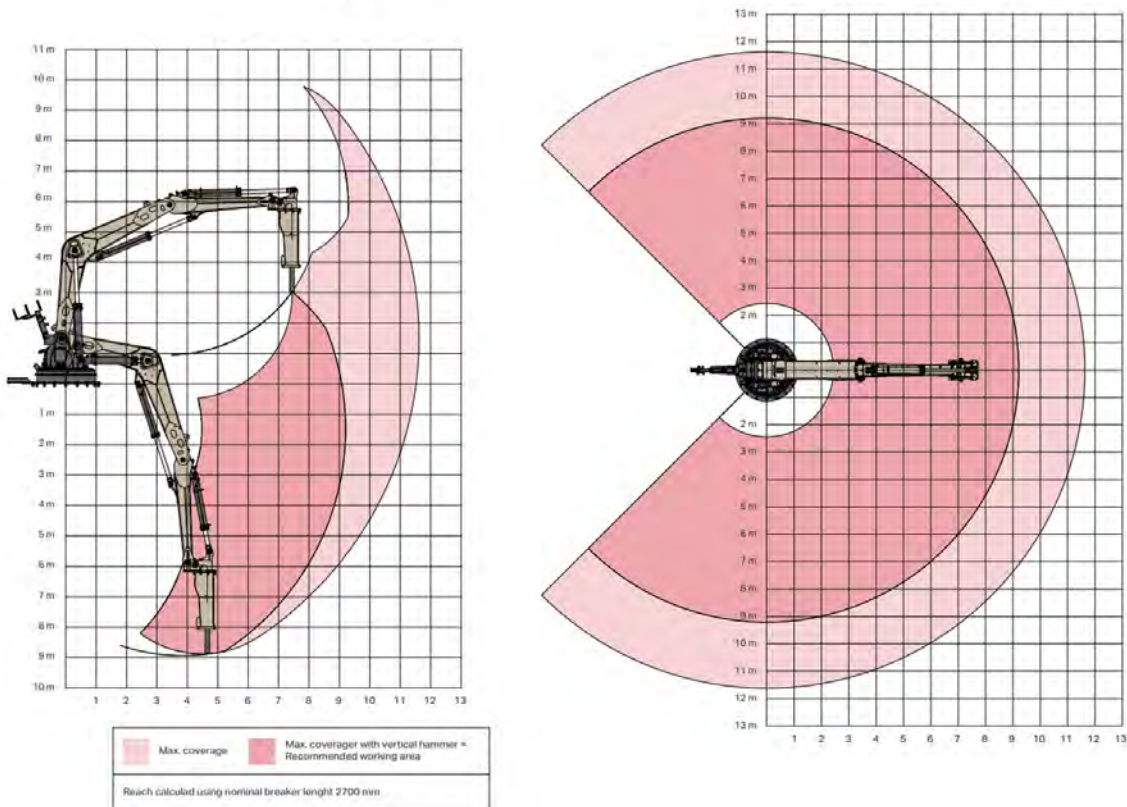
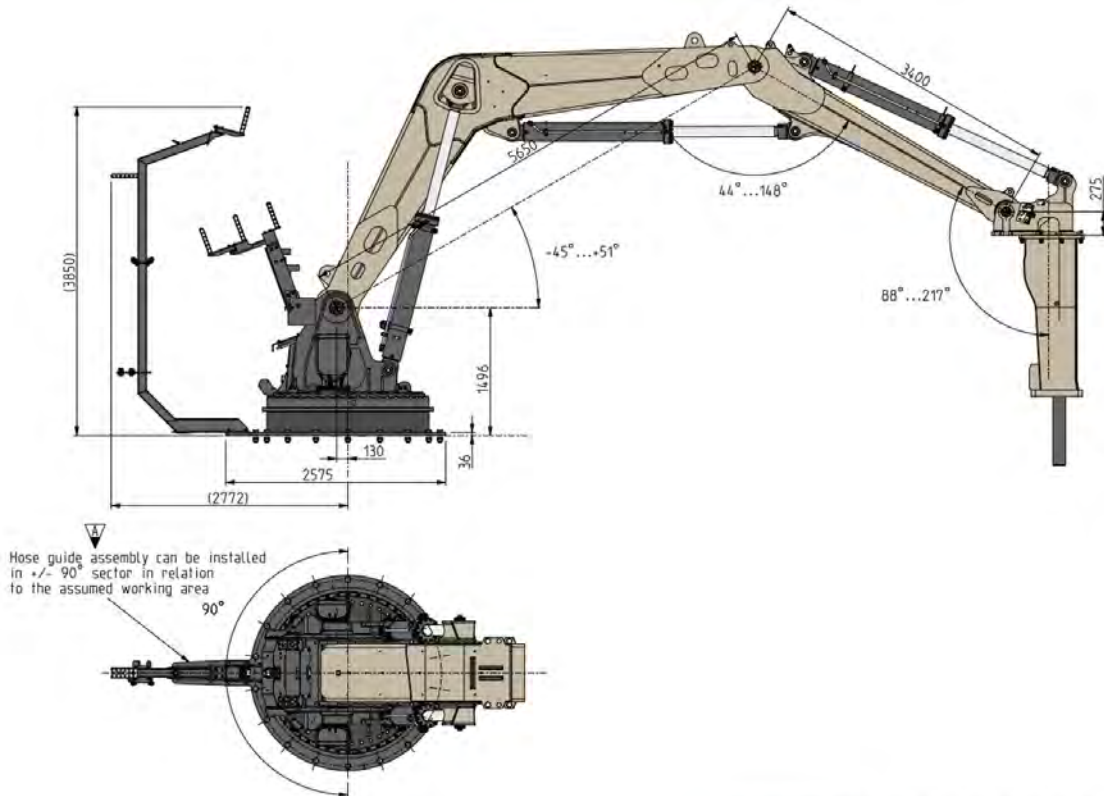
OTHER ACCESSORIES

- Extended hydraulic hoses, 12 m
- Extended control cable, 20 m
- Extended valve control cable, 12 m
- Special voltage
- Special motor

Tropical motor, special insulation, above 2000 m M.A.S.L. etc..

DIMENSIONS

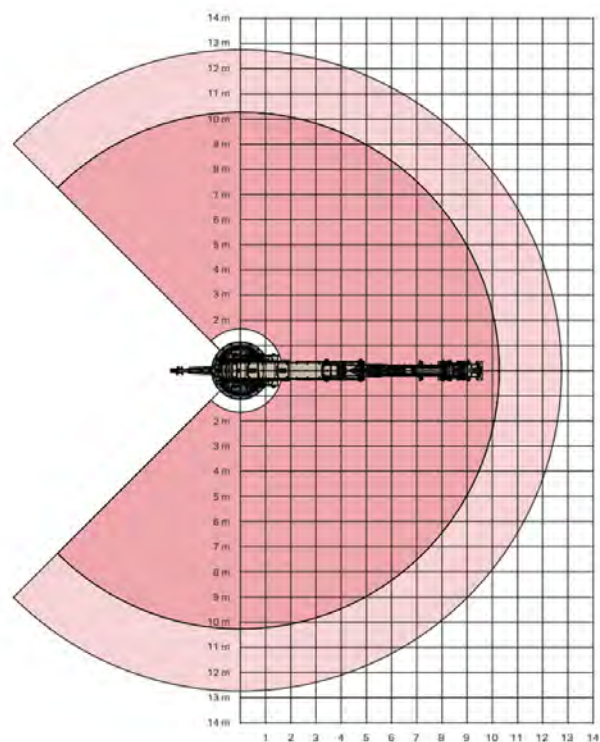
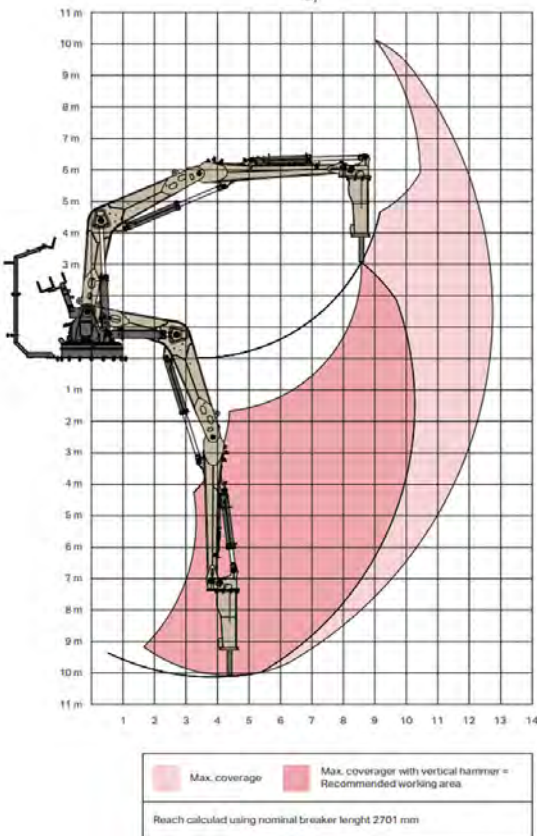
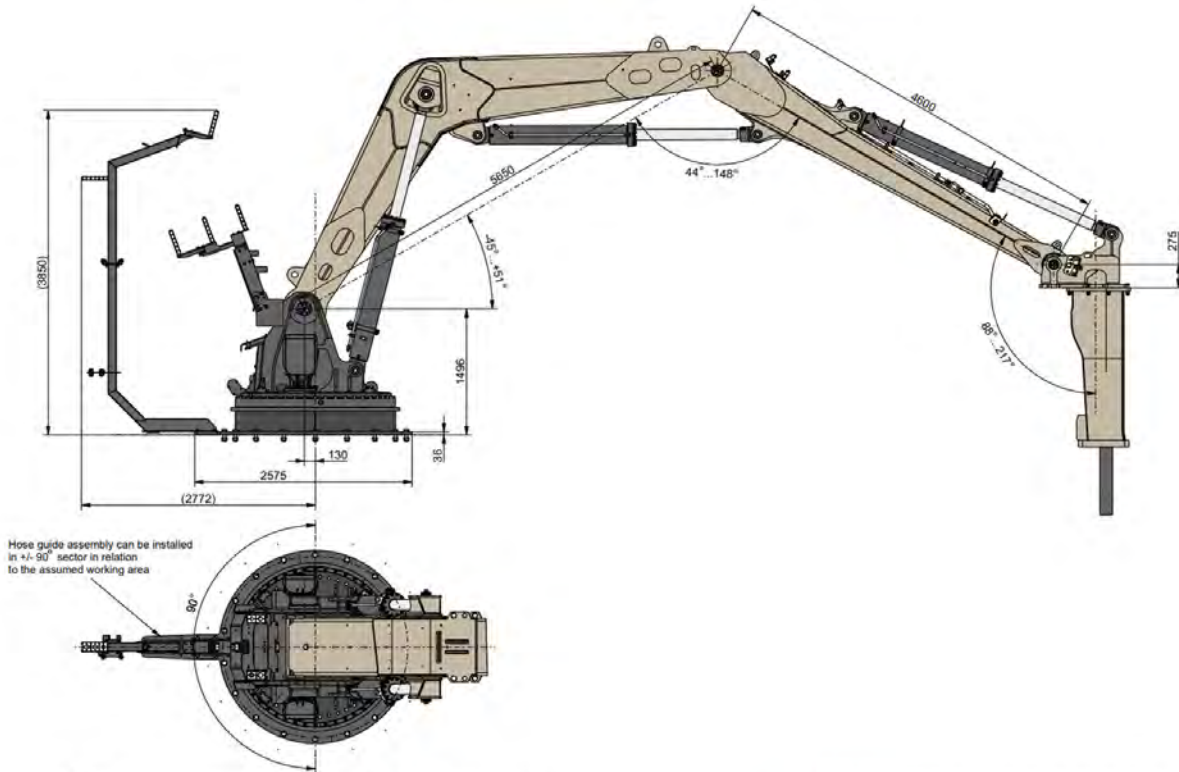
SIDE VIEW & REACH AREA X68-900R



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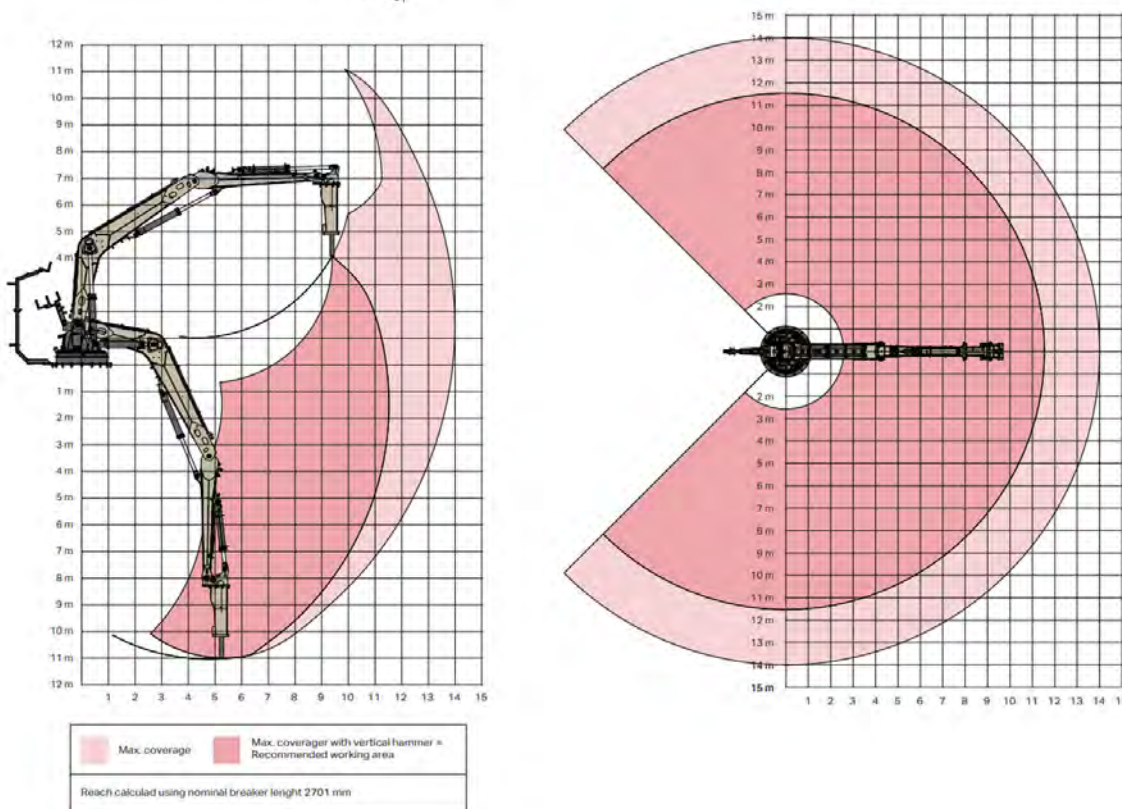
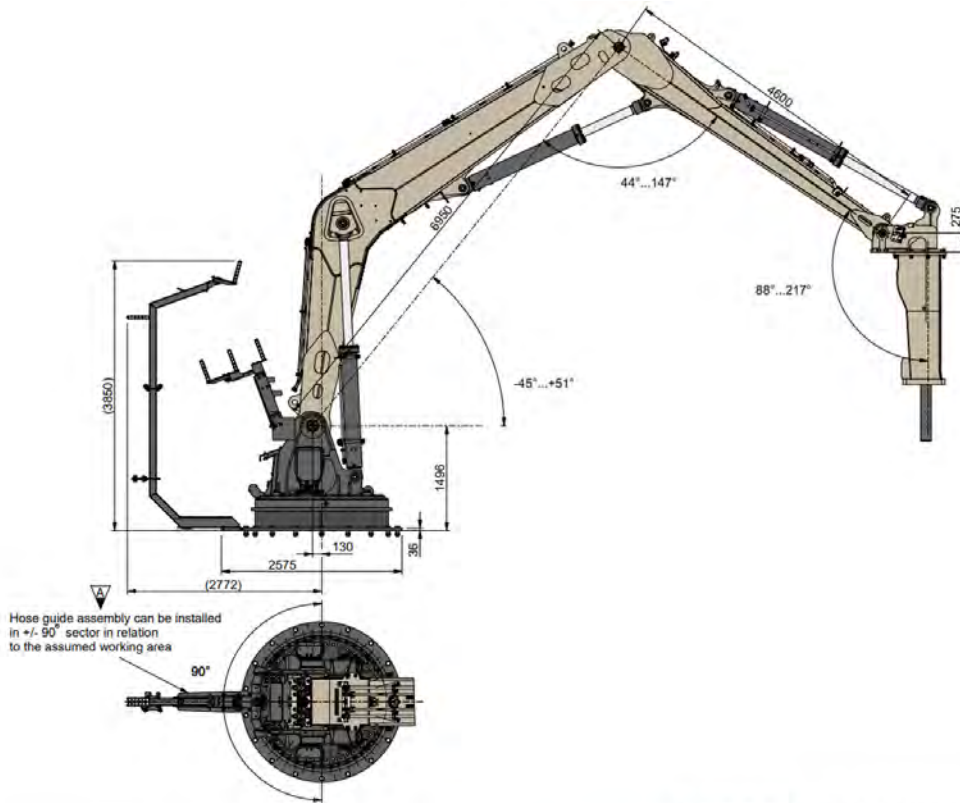
SIDE VIEW & REACH AREA X68-1050R



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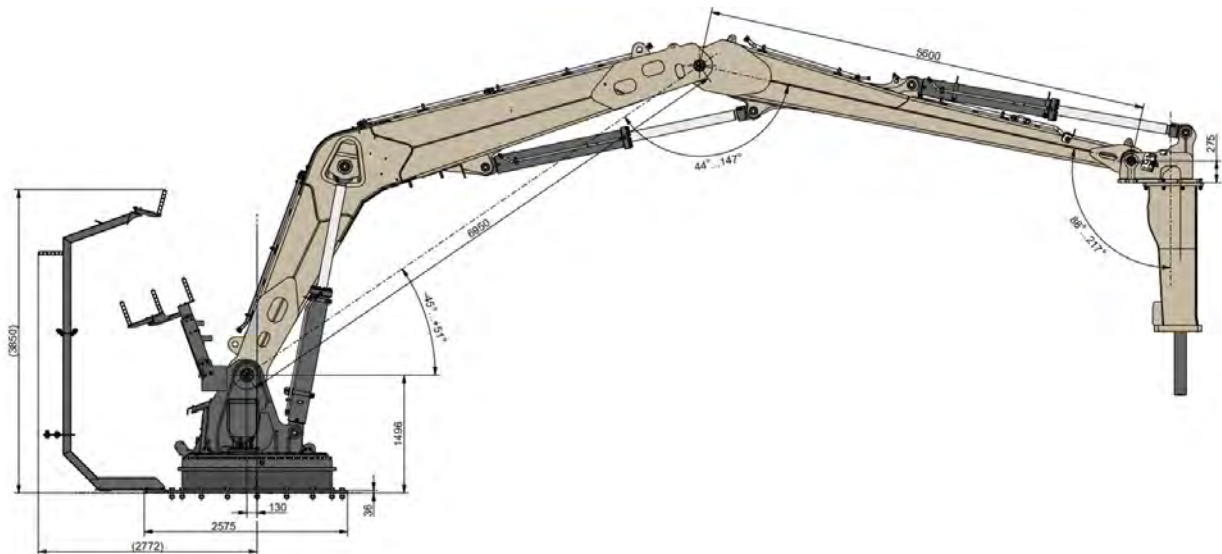
SIDE VIEW & REACH AREA X68-1150R



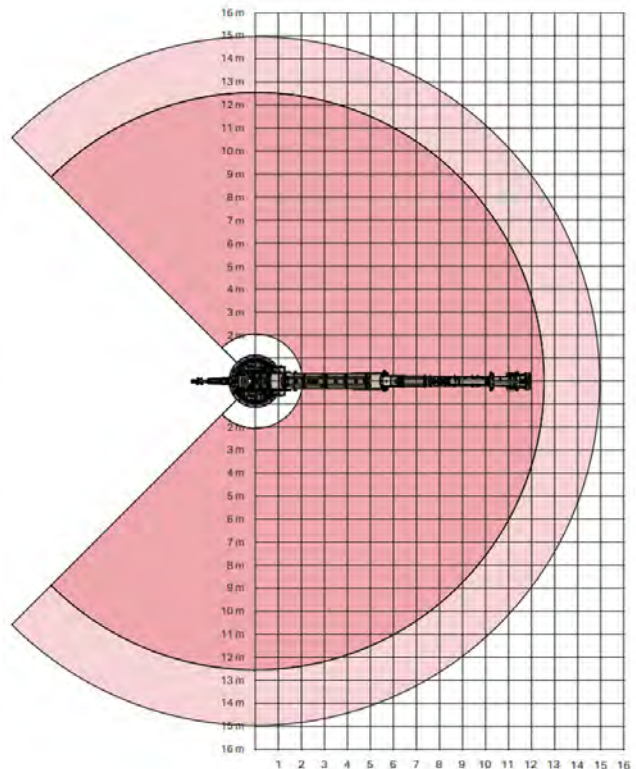
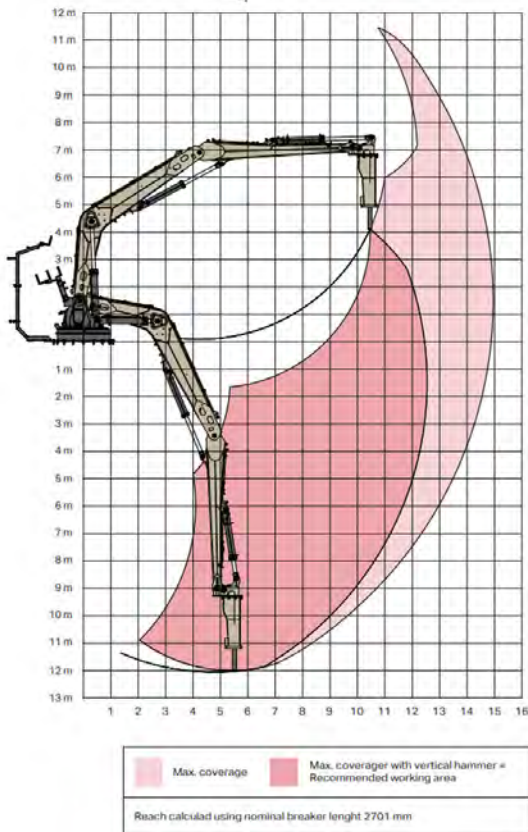
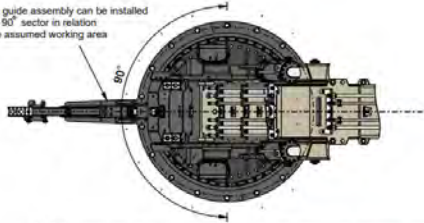
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SIDE VIEW & REACH AREA X68-1250R



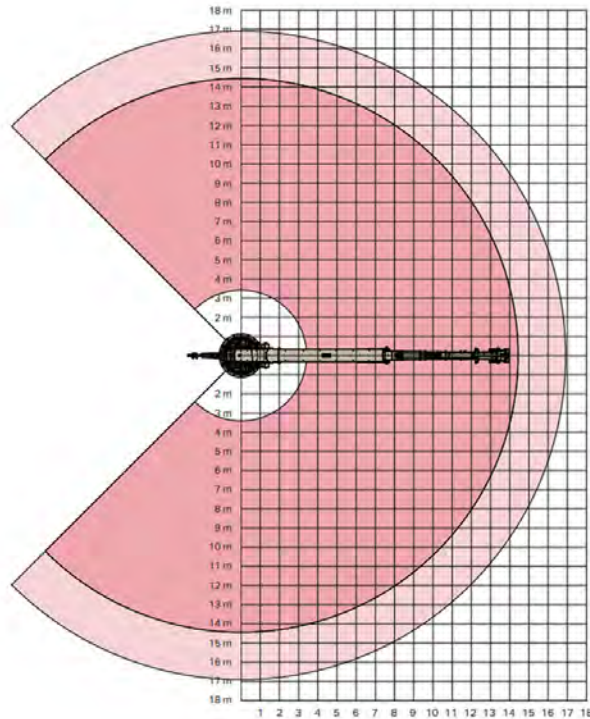
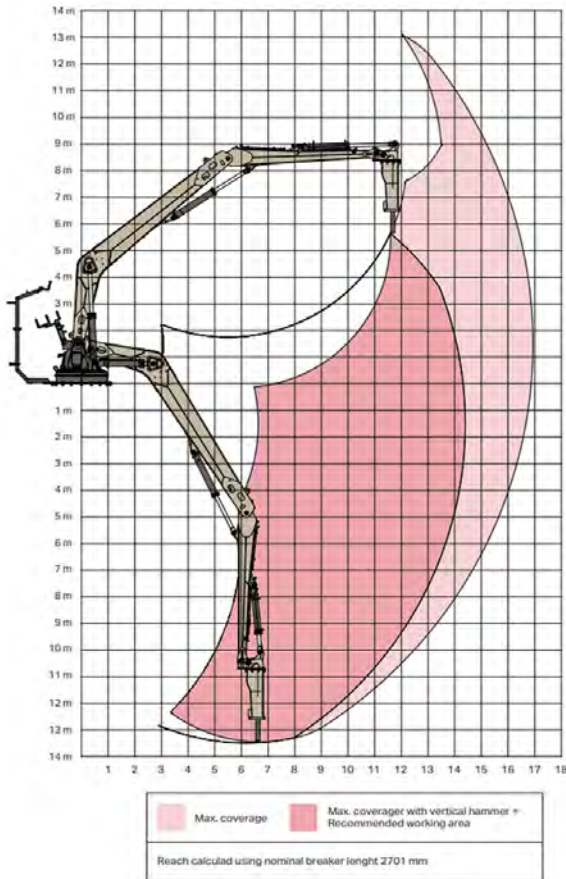
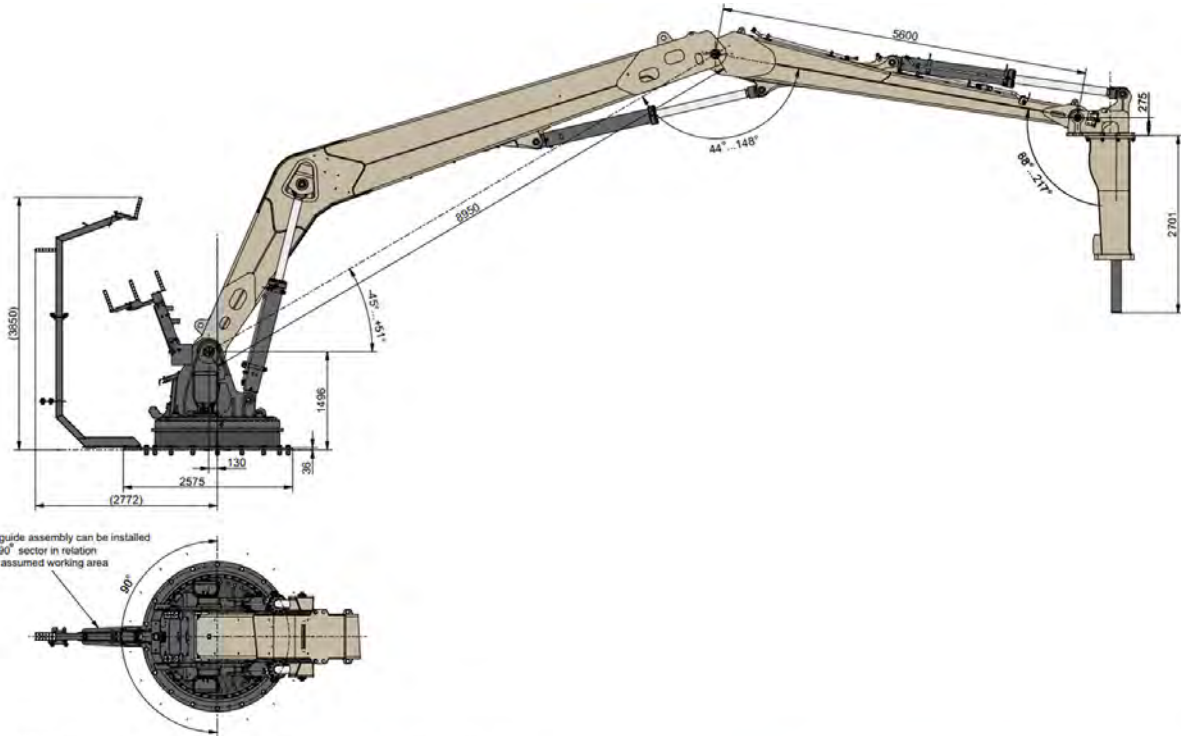
Hose guide assembly can be installed in $\pm 90^\circ$ sector in relation to the assumed working area



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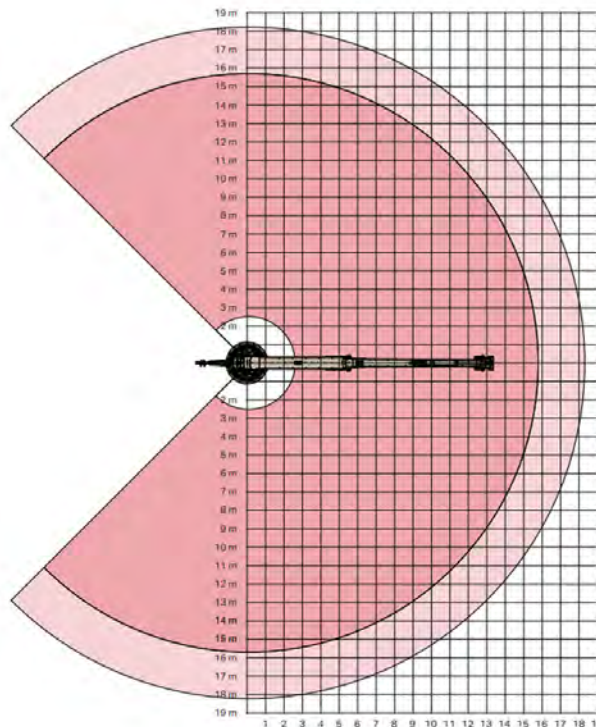
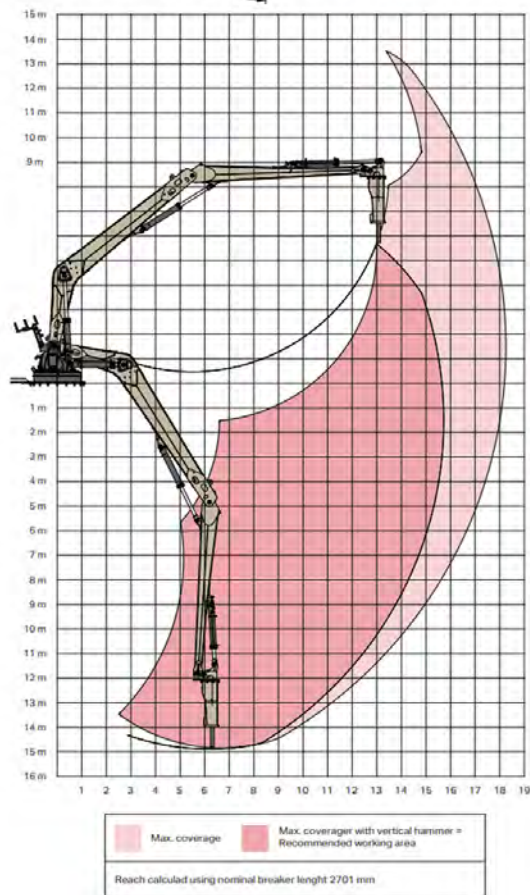
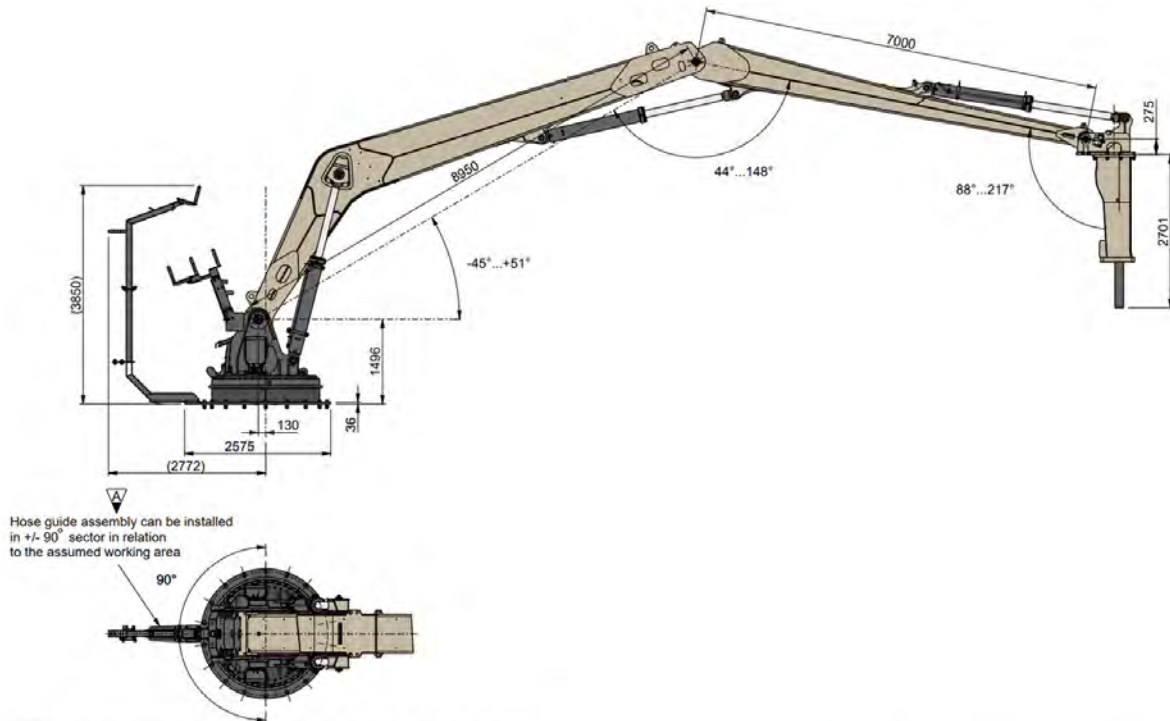
SIDE VIEW & REACH AREA X68-1450R



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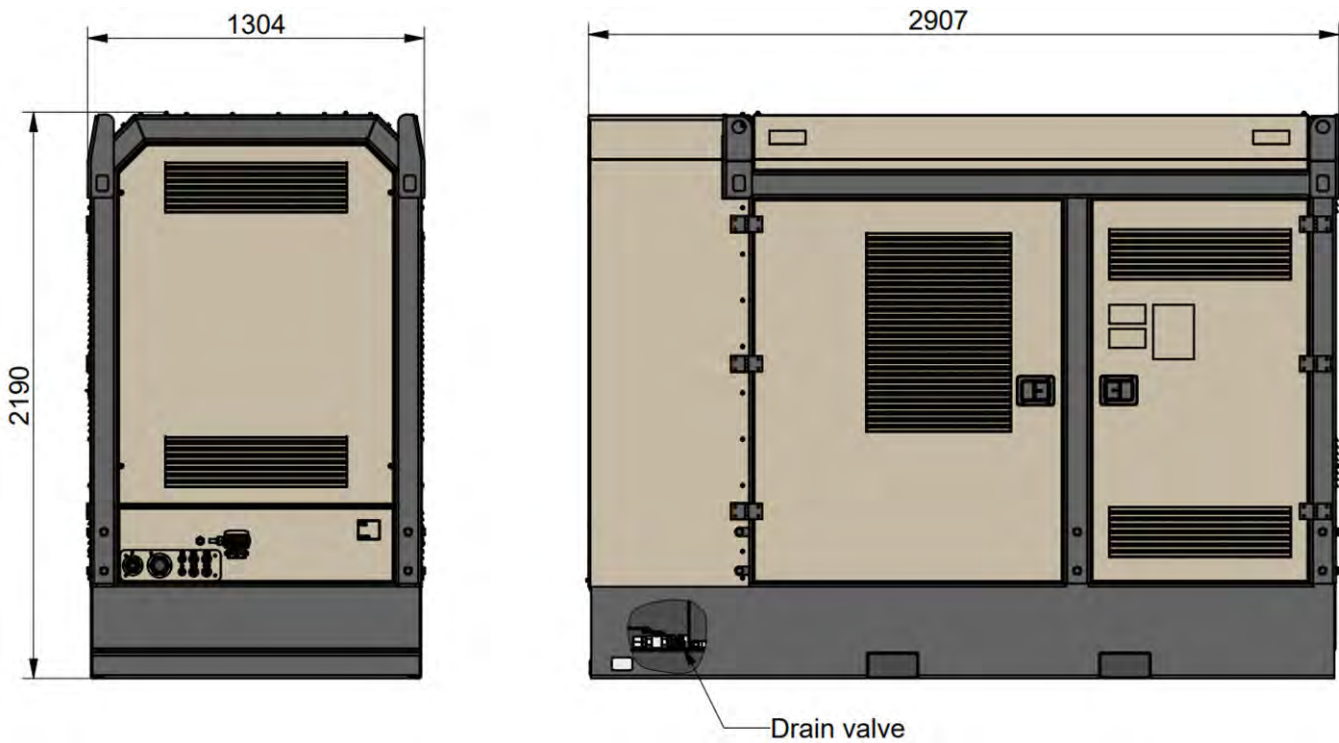
SIDE VIEW & REACH AREA X68-1550R



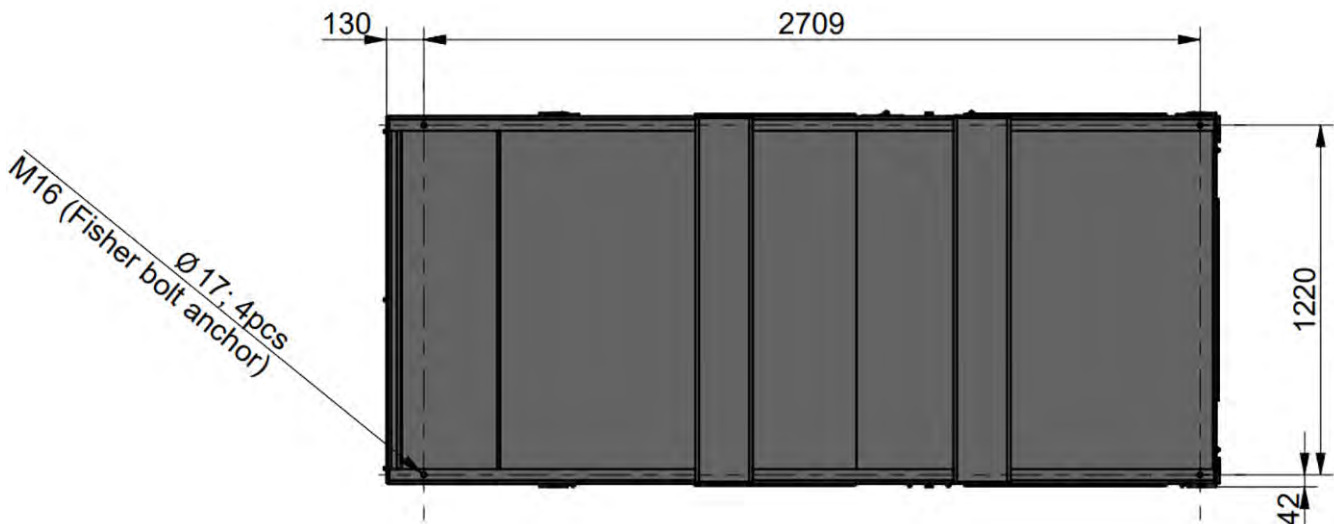
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SIDE VIEW POWER UNIT



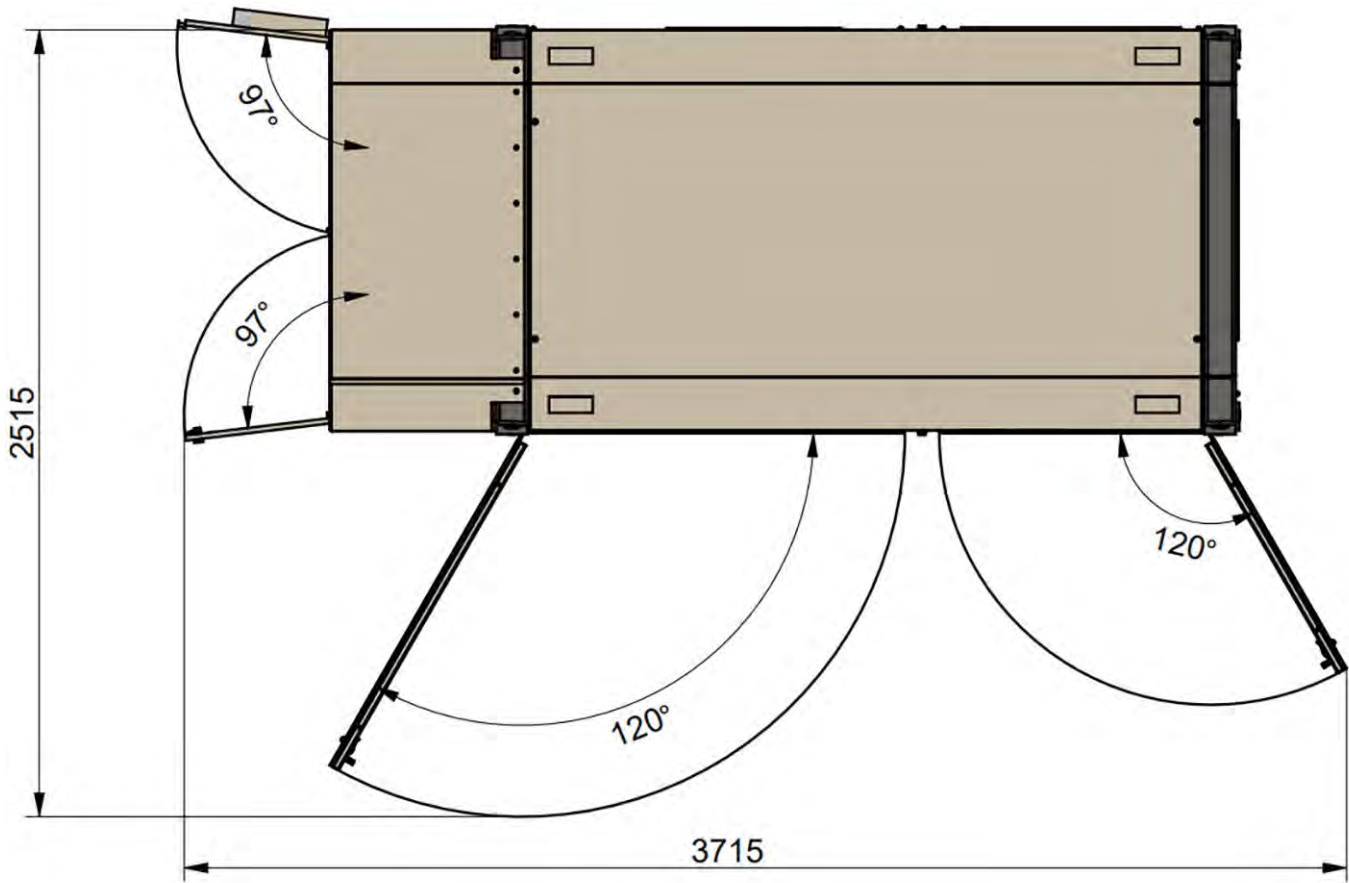
BOTTOM VIEW POWER UNIT



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TOP VIEW POWER UNIT



OPERATING WEIGHT (WITHOUT BREAKER)

Base machine X68-900R	14400 kg
Base machine X68-1050R	14800 kg
Base machine X68-1150R	15300 kg
Base machine X68-1250R	15600 kg
Base machine X68-1450R	16500 kg
Base machine X68-1550R	17000 kg
Power unit (without oil):	
Base machine PU110-200	2900 kg

final machine weight variate in agree with selected options

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.

Spare part recommendation / Start-up Spare Part package

Normet Xrock products have service kits available for commissioning, 2-year and 4-year operation and most critical parts.

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

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).

