

# TUNNEL HEADING AND LOADING MACHINE

## ITC 315N H1

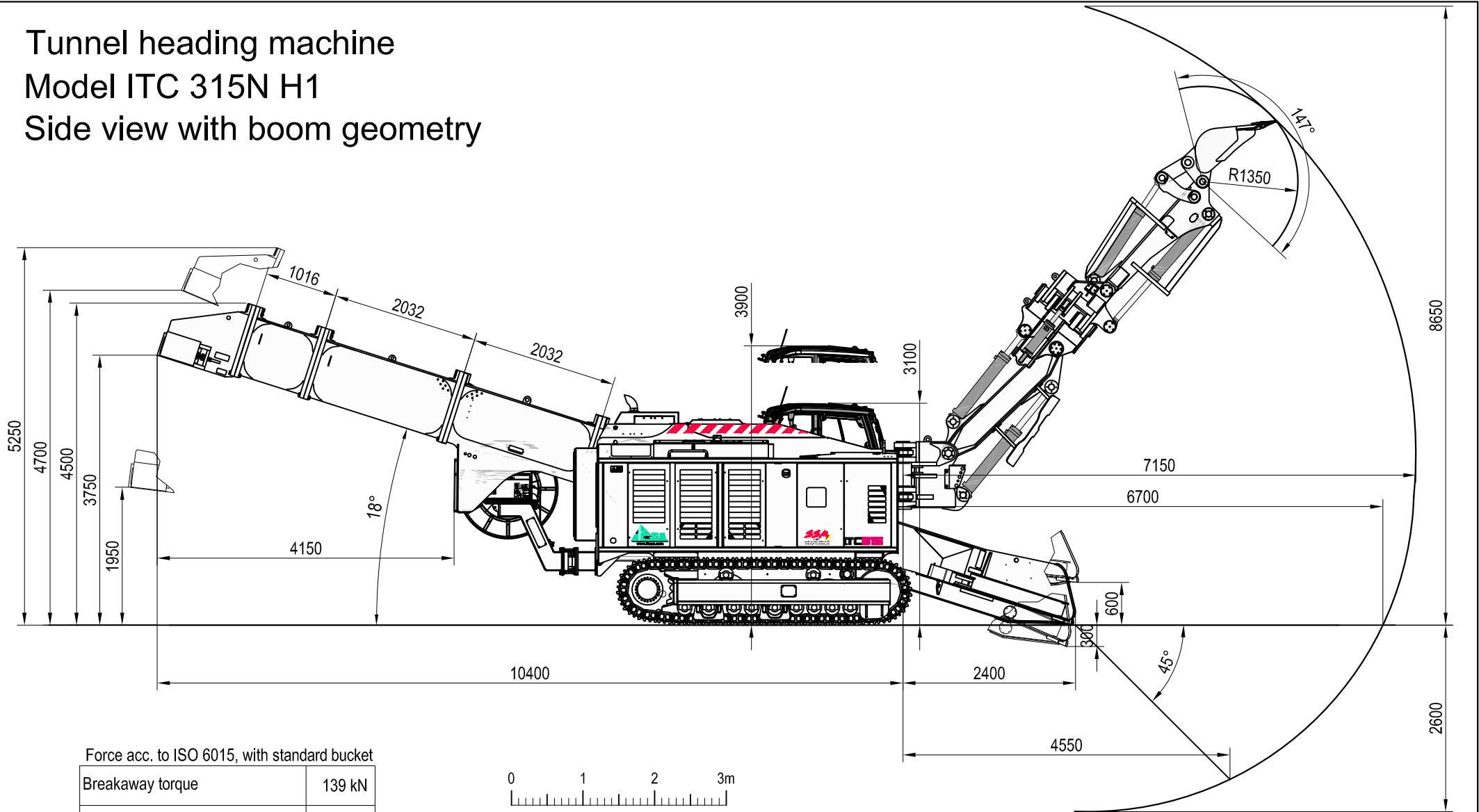


image not contractual, may contain optional equipment.

- Excavation boom with swivel dipper stick for heading in soft ground
- Minimal cross-section approx. 18 m<sup>2</sup>
- Thermal drive 180 kW
- Electric drive 110 kW
- Operating weight 36,3 t

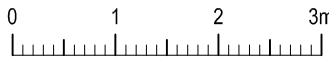


Tunnel heading machine  
 Model ITC 315N H1  
 Side view with boom geometry



Force acc. to ISO 6015, with standard bucket

Breakaway torque	139 kN
Tear-out force over console	68 kN
Tear-out force over dipper stick	73 kN
Lifting power (without working tool)	10 kN



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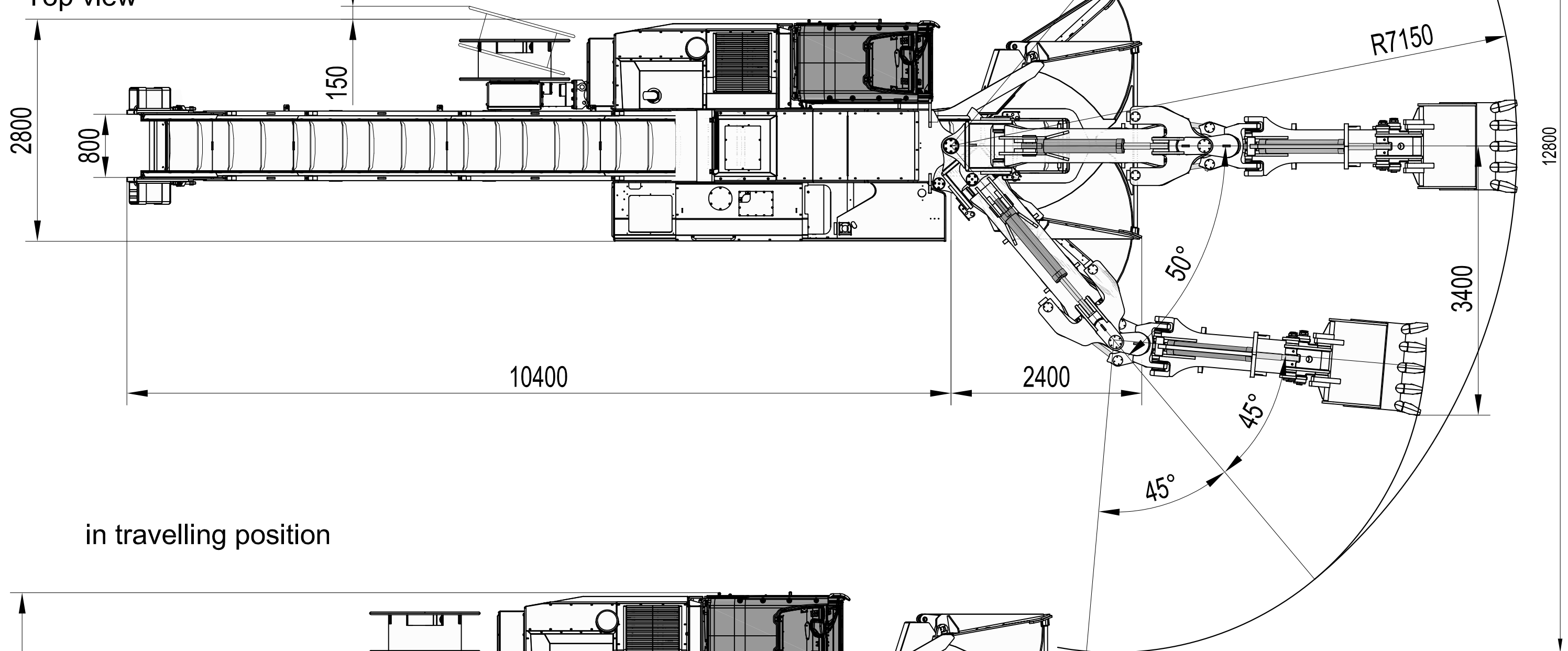
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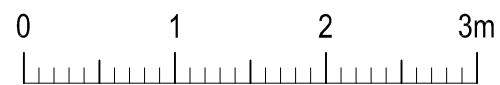
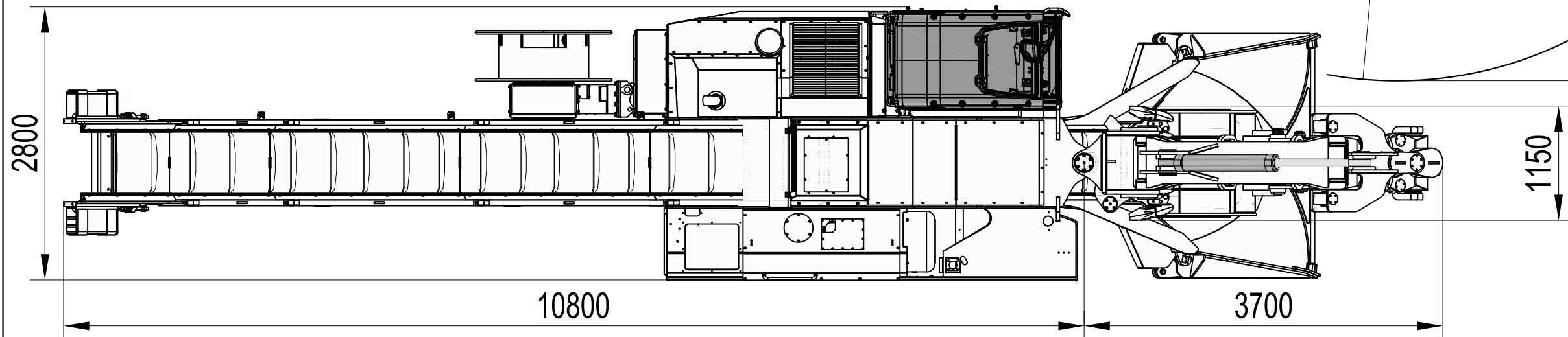
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Tunnel heading machine  
 Model ITC 315N H1  
 Top view

in working position



in travelling position



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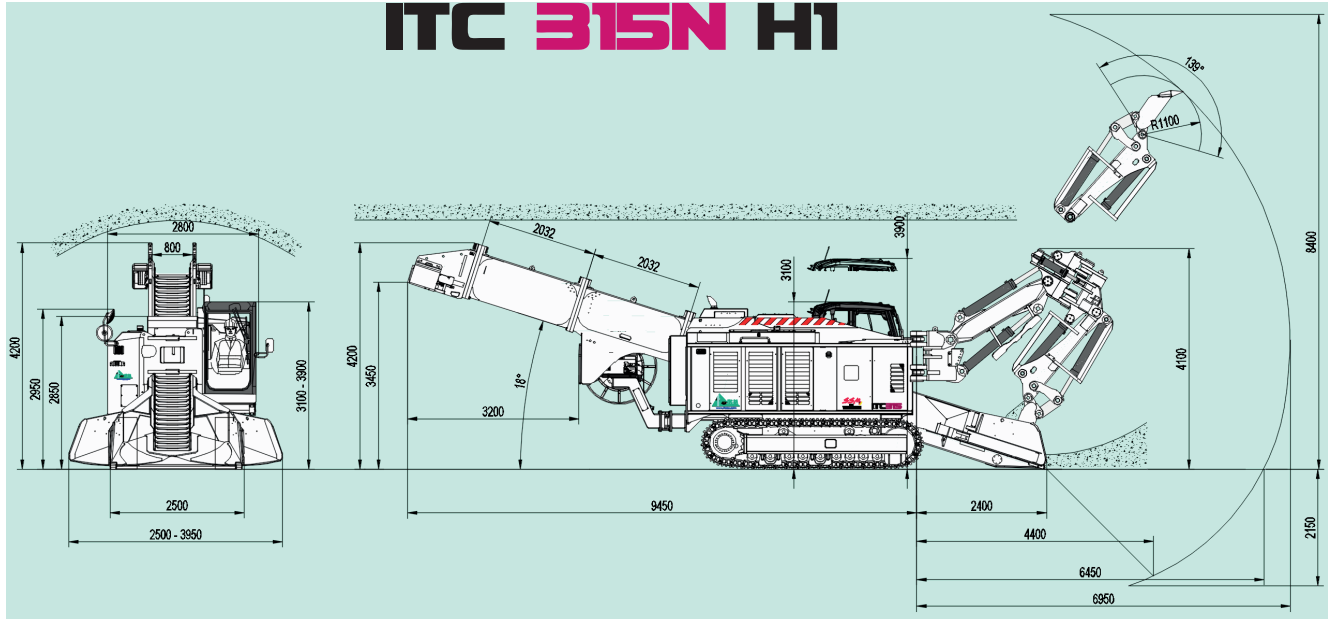
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# ITC 315N H1



## Technical data ITC 315N H1

### Drive units

Electro-hydraulic and Diesel hydraulic power packs each with a separate pump unit with variable flow rate  
 Electric drive for emission-free work at the face  
 Air-cooled electric motor, power at 400 Volt , 50 Hz 110 kW  
 Diesel drive for travelling and operation without electric supply.  
 Water-cooled diesel engine, Deutz TCD 6.1  
 Diesel engine complies with emission standard: EU V ready, US T4f,  
 Option : ROW  
 Power rating at 2'300 r.p.m 180 kW  
 Fuel tank 420 l

### Electrical system (other tension and frequency upon request)

Total installed power 140 kW  
 Voltage (standard) 400 V - 50 Hz AC  
 Pilot voltage 220 V CA  
 Control voltage thermic drive 24 V CC  
 Electrical system acc. to EN 60529 (IP54)  
 Cable reel hydraulically driven with abt 75 m cable capacity

### Operator's stand

Comfortable Volvo closed cab gives all-round visibility, FOPS canopy and front protection grid.  
 Air conditioning.  
 CE conformity incl. video monitoring system for the right and rear side with color LCD in the cab.

### Hydraulic system

Load Sense hydraulic system with combination of a double axial piston pump and gear pump  
 Hydr. pilot control for travelling and main working functions  
 Boom control with 2 joysticks in Euro standards  
 Thermostatic controlled hydr. driven oil/air cooler  
 Max. hydraulic operating pressure 250-350 bar  
 Hydraulic oil tank capacity 400 l  
 Pump delivery Diesel engine 520 l/min  
 Pump delivery Electric motor 540 l/min  
 Hydraulic oil capacity (incl. tank) 500 l

### Operating data

Machine width 2'800 mm  
 Maximal height 3'100 - 3'900 mm  
 Transport height 3'200 mm  
 Transport length with folded equipment ~13'000 mm

### Conveyor system

Width of loading apron (adjust.) 2'500 - 3'950 mm  
 Width of conveyor (internal) 800 mm  
 Height of conveyor (internal) 800 mm  
 Conveyor capacity approx. 300 m<sup>3</sup>/h  
 Conveyor discharge height 2'500-3'800 mm

### Boom H1

- Minimal cross section approx. 18 m<sup>2</sup>

H1 Boom equipment for excavation and loading of soft ground or blasted material, includes:

- King post with jib, tilt-swivel console and dipper stick
- Excavation and mucking bucket, width 350 -900 mm
- Hydraulic circuit for a hydraulic rock breaker
- Loading capacity acc. to rock conditions approx. 3 m<sup>3</sup>/min
- Operating weight 36,3 t

### Options (different possibilities on order)

Elevator cabin, conveyor extension elements, rubber plate conveyor, automatic grease central, automatic fire extinguisher system, quick couplers, other loading and / or excavation tools, water spraying system for dust reduction with hose reel, electric motor 132kW, etc.

Other details, executions (ATEX) and accessories on request.  
 Subject to change without notice.



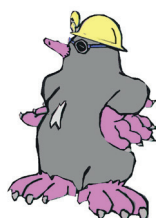
# TUNNEL HEADING AND LOADING MACHINE

## ITC 315N H8

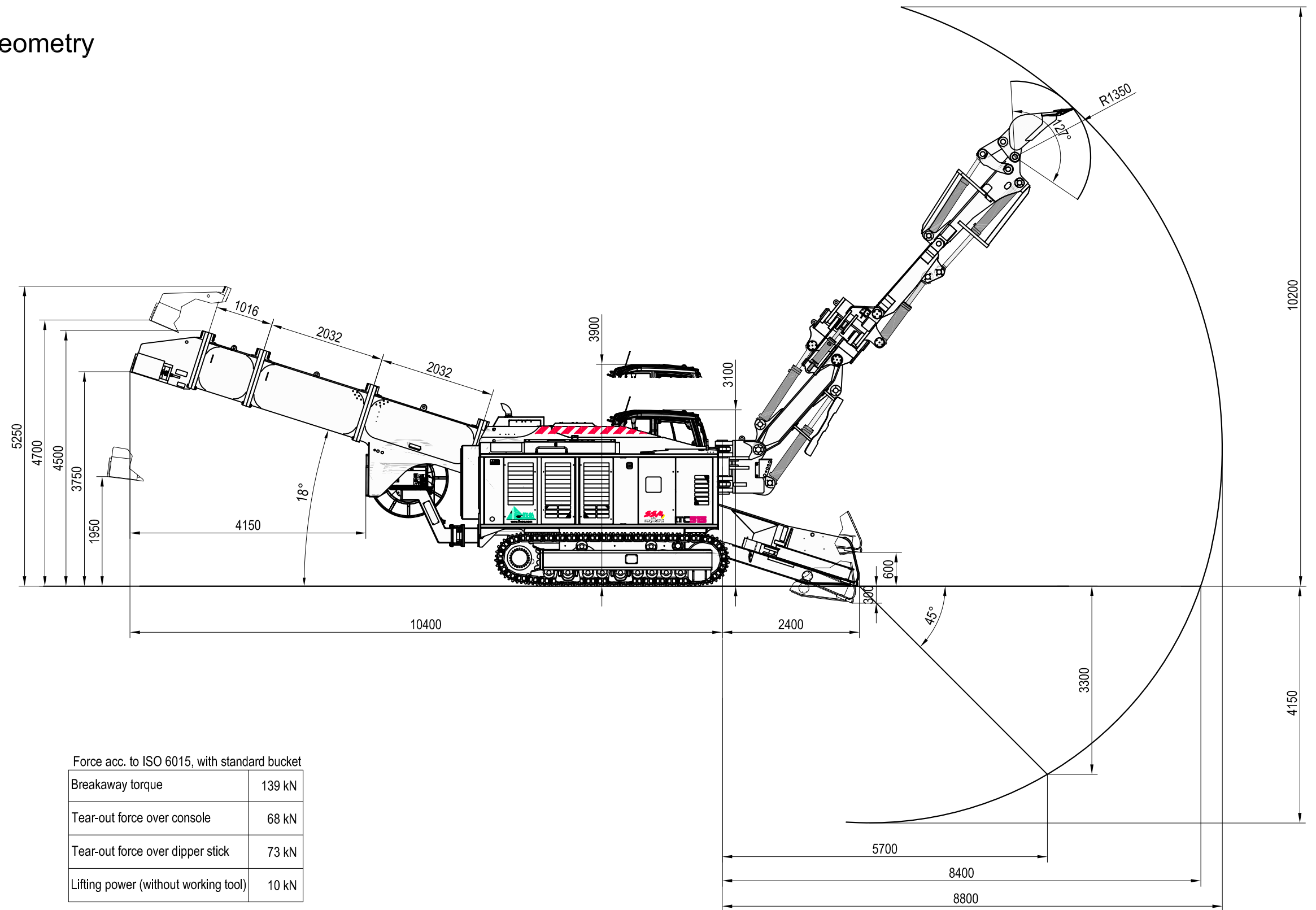


image not contractual, may contain optional equipment.

- Excavation boom with swivel dipper stick for heading in soft ground
- Minimal cross-section approx. 25 m<sup>2</sup>
- Thermal drive 180 kW
- Electric drive 110 kW
- Operating weight 37,4 t



Tunnel heading machine  
 Model ITC 315N H8  
 Side view with boom geometry



Force acc. to ISO 6015, with standard bucket

Breakaway torque	139 kN
Tear-out force over console	68 kN
Tear-out force over dipper stick	73 kN
Lifting power (without working tool)	10 kN



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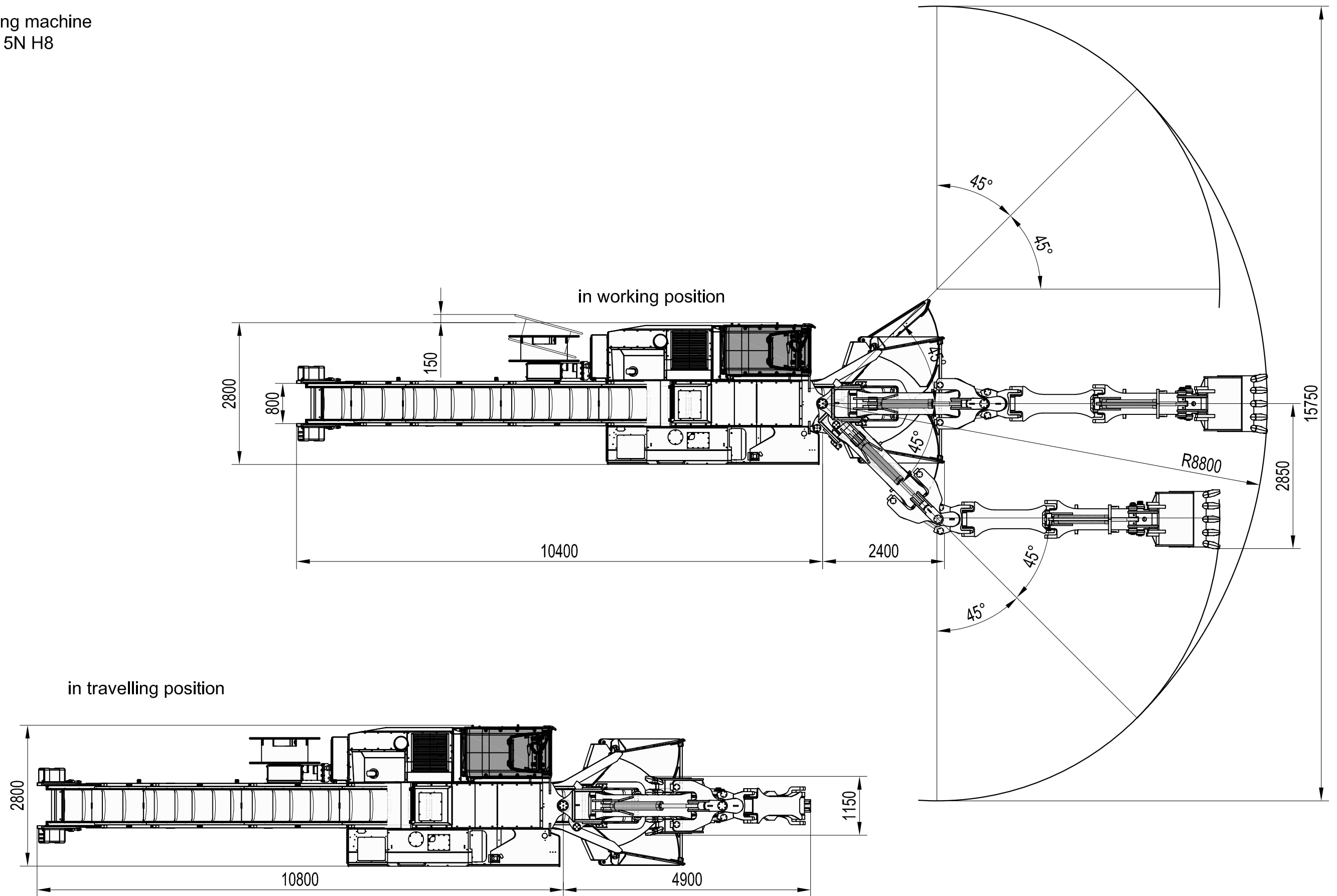
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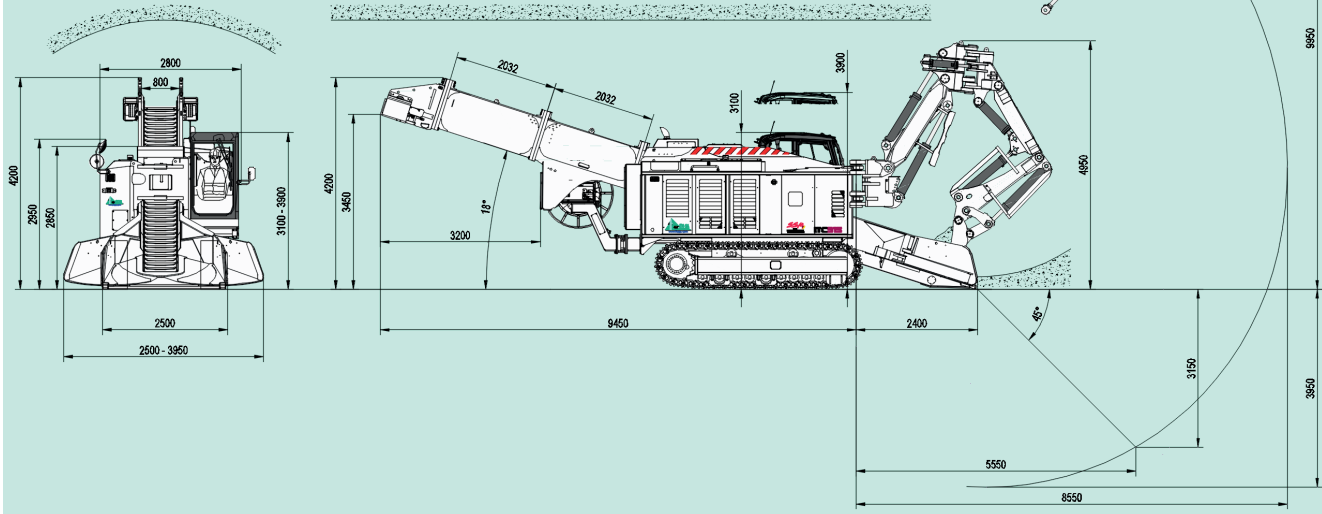
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Tunnel heading machine  
 Model ITC 315N H8  
 Top view



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# ITC 315N H8



## Technical data ITC 315N H8

### Drive units

Electro-hydraulic and Diesel hydraulic power packs each with a separate pump unit with variable flow rate  
 Electric drive for emission-free work at the face  
 Air-cooled electric motor, power at 400 Volt , 50 Hz 110 kW  
 Diesel drive for travelling and operation without electric supply.  
 Water-cooled diesel engine, Deutz TCD 6.1  
 Diesel engine complies with emission standard: EU V ready, US T4f,  
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 Height of conveyor (internal) 800 mm  
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 Conveyor discharge height 2'500-3'800 mm

### Boom H8

- Minimal cross section approx. 25 m<sup>2</sup>

H8 Boom equipment for excavation and loading of soft ground or blasted material, includes:

- King post with jib, tilt-swivel console, intermediate jib and dipper stick
- Excavation and mucking bucket, width 350 -900 mm
- Hydraulic circuit for a hydraulic rock breaker
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