



## **PScale 10-T**

### **Efficient mine scaling**

- **Best price / performance ratio**
- **Largest scaling coverage in its class**
- **Sensitive control**
- **Comfort cab**
- **Ultra-compact design**

## Technical data

6121-00-000 - 02.11.2023

### MAIN FEATURES OF THE MACHINE

12591-3

Compact scaling machine for holding a hydraulic hammer for underground mining

Working height, maximum 10.0 m

### OPERATING CONDITIONS

12224-6

Ambient temperature \* -20 to +50 °C

*\* Note the cold start limit temperature of the diesel engine.*

Permissible longitudinal inclination, maximum 35%

Operating altitude without reduction in power < 1500 m

### WEIGHTS AND LOADS

12674-1

Operating weight \* 16,000 kg

*\* Depending on selected options*

Attachment weight, maximum 400 kg

Permissible front axle load 11,500 kg

Permissible rear axle load 8,000 kg

### CHASSIS

12229-6

Pendulum angle +/- 8 °

- Split chassis with articulated steering
- Fixed front axle and oscillating rear axle
- Automatic locking of the oscillating axis when the turret is swiveled

### ENGINE

12230-8

#### C4.4 diesel engine

Manufacturer CATERPILLAR

Type C 4.4

Emissions level EU: Stage III A  
USA: EPA Tier 3

Power 97 kW

At speed 2,200rpm

Alternator 28 V  
100 A

Starter motor 24 V  
4.5 kW

Cold start limit temperature -15 °C

- Exhaust gas aftertreatment by catalytic converter with measuring points.
- Fuel pre-filter and fine filter with water separator
- Manual fuel pump
- Engine monitoring and operating data display with diagnosis display
- Dry air filter with pre-separator

### ENGINE (OPTIONAL EQUIPMENT)

12250-12

#### TCD 2012 L04 2V diesel engine

Manufacturer DEUTZ

Type TCD 2012 L04  
2V

Emissions level EU: Stage IIIA  
USA: EPA Tier 3

Output 93 kW  
at speed 2,400rpm

Alternator 28 V  
80 A

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Starter motor	24 V 4 kW
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Cold start limit temperature	-15 °C
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- Catalytic converter with measuring points
- Fuel pre-filter and fine filter with water separator
- Automatic shutdown when engine-specific parameters are exceeded
- Information display with engine hours counter
- Dry air filter with pre-separator

### TCD 4.1 diesel engine

Manufacturer	DEUTZ
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Type	TCD 4.1
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EU exhaust gas level	Stage V
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USA exhaust gas level	EPA Tier 4F
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Power	105 kW
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At speed	2,200rpm
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Exhaust gas aftertreatment	DOC DPF SCR
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Cold start limit temperature	-15 °C
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- Fuel pre-filter and fine filter with water separator
- Engine monitoring and operating data display with diagnosis display
- Dry air filter with pre-separator
- For fuels with sulfur content < 10 mg/kg

### FUEL SYSTEM

12592-2

Fuel tank capacity	140 l
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- Electric fill level display
- Shut-off valve to protect against fuel leakage in case of hose rupture

### TRAVEL DRIVE

12593-2

Speed forward	18 km/h
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Speed reverse	18 km/h
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Tractive force	80 kN
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Climbing ability	40 %
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- Hydrostatic travel drive
- Travel drive reversible under load
- all-wheel drive
- Operating data display on diagnosis display

### AXES

12594-1

Manufacturer	DANA
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Front axle type	123
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Front axle differential	100 %
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Rear axle type	123
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Rear axle differential	Open
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### SERVICE BRAKE

11330-1

- Hydraulic foot brake as 2-circuit external force brake system
- Disc brakes running in an oil bath

### PARKING BRAKE

11332-1

- Spring-loaded, hydraulically released (SAHR)
- Hand pump for releasing the brake in case of system failure

### AUXILIARY BRAKE

11333-1

- A circuit of the service brake

## Technical data

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<b>TIRES</b>		12595-4
Tire size	12.00x20	
Tire inflation	PUR	

<b>STEERING</b>		12241-1
<ul style="list-style-type: none"> <li>Hydraulic articulated steering with a double-acting hydraulic cylinder</li> <li>Steering wheel steering</li> <li>Emergency steering properties</li> </ul>		

<b>HYDRAULICS</b>		12240-5
1. Hydraulic fluid reservoir capacity	80 l	
2. Hydraulic fluid reservoir capacity	100 l	
Operating pressure	200 bar	
<ul style="list-style-type: none"> <li>Two separate hydraulic circuits, for hammer hydraulics and travel drive/working hydraulics</li> <li>Load sensing, electrohydraulically piloted</li> <li>Inspection glasses for min/max display</li> <li>Electric fill level display</li> <li>Electric filter monitoring</li> <li>All fittings as JIC version</li> <li>All hydraulic motors and pumps made of cast iron</li> <li>Hand pump for filling the hydraulic fluid reservoirs</li> <li>Hand pump for tilting the cab for maintenance work</li> <li>HYDRAULIC FLUID (ATF)</li> </ul>		

<b>ELECTRICS</b>		12243-5
Operating voltage	24 V	
Number of batteries	2 pcs.	
Battery voltage	12 V	

Battery charge 110 Ah

<b>ELECTRICS (OPTIONAL)</b>		12822-3
<ul style="list-style-type: none"> <li>Jump start socket</li> <li>Enhanced sealing of the connectors by grease filling and sealing tape</li> </ul>		

<b>COMPRESSED AIR SYSTEM</b>		12254-3
<ul style="list-style-type: none"> <li>Piston compressor</li> <li>Compressed air reservoir</li> <li>Pressurization of the hammer housing against dirt penetration</li> </ul>		

<b>LIGHTING</b>		12244-3
All headlights and lamps as LED variants:		
<ul style="list-style-type: none"> <li>Two headlights each for short-range and long-range road illumination</li> <li>Parking lights, reversing lights, brake lights and direction lights</li> <li>Four front lights for the work area</li> <li>Four rear headlights</li> <li>Two working lights on the telescopic tube</li> <li>Yellow strobe lights</li> </ul>		

<b>LIGHTING (OPTIONAL EQUIPMENT)</b>		12984-2
<ul style="list-style-type: none"> <li>Strobes red</li> <li>Strobes blue</li> </ul>		

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### LIGHTING (OPTIONAL)

12253-4

- Two additional working lights at the front of the cab
- Rear working lights, active when reversing
- Direction lights red / green

### DRIVER'S PLATFORM

12245-5

#### Closed cab

- Heating with ventilation and filter
- Sliding windows, left and right
- Wiper/washer for windshield and rear window
- Interior lighting
- DOCUMENTS BOX
- Two exterior mirrors
- All driving-relevant switches and actuations located within reach of the operator
- Safety window made of armored glass in front
- Folding stone chip protective grille for windshield
- Hydraulically tilting for ideal view of the attachment
- Hydraulic hammer operation with foot switch or joystick
- Adjustable hammer interval time and strike frequency
- Driver's display 4.3"

#### Diagnosis display 4.3"

- Active faults and fault history
- Parameter changes with authorization levels
- Miscellaneous operating data

#### Driver's seat

- With lap belt and head restraint
- Imitation leather cover
- Adjustable backrest and seat cushion

### DRIVER'S PLATFORM (OPTIONAL EQUIPMENT)

12985-1

- Heated exterior mirrors
- Driver's seat with air suspension
- 3-point seat belt for driver's seat

### DRIVER'S PLATFORM (OPTIONAL)

12252-4

- Air-conditioning system
- Rear window heating
- Driver's seat contact switch
- Driver's seat belt contact switch
- Driver's display 7"
- Maintenance interval display on the diagnosis display
- Longitudinal and lateral inclination display
- Reversing camera system
- Reversing signal, can be acknowledged
- Radio with USB port

### TURRET AND TELESCOPIC TUBE

12246-1

- Lifting cylinder with counterbalance valve
- Telescopic tube with two extensions
- All bearing points with highly wear-resistant plain bearings
- Robust wipers for sealing the telescopic tubes
- Stone guard on boom for all hydraulic connections
- Rock deflector on the boom

### FRONT DOZER BLADE

12247-1

- Hydraulically lifted and lowered
- Lifting gear protected against stone impact

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### 12982-2 WORK EQUIPMENT (OPTIONAL EQUIPMENT) PH-2TS hydraulic hammer

Manufacturer	NPK
Type	PH-2TS
Operating weight	260 kg
Minimum stroke rate	500per minute
Maximum stroke rate	1,200per minute

- Central lubrication system for hydraulic hammer
- Extra long pointed chisel
- Special hydraulic hammer for scaling operations

### SB 202 T hydraulic hammer

Manufacturer	EPIROC
Type	SB 202 T
Operating weight	199 kg
Minimum stroke rate	1,250per minute
Maximum stroke rate	1,700per minute

- Central lubrication system for hydraulic hammer
- Pointed chisel

### SB 302 T hydraulic hammer

Manufacturer	EPIROC
Type	SB 302 T
Operating weight	315 kg
Minimum stroke rate	950per minute
Maximum stroke rate	1,250per minute

- Central lubrication system for hydraulic hammer
- Pointed chisel

### 12472-11 WORK EQUIPMENT (OPTIONAL) Dust suppression system

- Water tank 130 l
- Water pump
- Flat spray nozzle on hydraulic hammer

### Front supports

- Hydraulic telescopic supports
- Right and left, firmly mounted on the front carriage
- Vertically extending
- Counterbalance valves in the hydraulic cylinders

### Mechanical quick change system

- For mounting interchangeable equipment
- Mounting plate with mechanical lock

### Vibration damping system

- Vibration damping system, automatic / deactivating

### 12818-3 FIRE PROTECTION

- Handheld fire extinguisher (TOTAL) with 10kg dry extinguishing agent

### 12993-3 FIRE PROTECTION (OPTIONAL EQUIPMENT)

- HRD fire-extinguishing system (PROTECFIRE) with manual release and dry extinguishing agent
- HRD fire-extinguishing system (PROTECFIRE) with automatic release and dry extinguishing agent
- HRD fire-extinguishing system (ANSUL) with manual release and wet solution
- HRD fire-extinguishing system (ANSUL) with automatic release and wet solution
- Handheld fire extinguisher (ANSUL) with 7.7 kg dry extinguishing agent

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### PAINTWORK

12248-2

Frame / dozer blade	RAL 1007
Driver's platform / chassis / attachment	RAL 7016

### PAINTWORK

12248-5

Color	RAL 1007 / 7016
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### ACCESSORIES

12249-3

- 2 chocks
- 2 warning triangles
- Tool bag
- Safety helmet and ear protection
- First-aid kit

### ACCESSORIES (OPTIONS)

13014-2

- Spare wheel
- Automatic central lubrication on basic vehicle

### SAFETY EQUIPMENT

12255-6

All machines are designed and manufactured in accordance with the latest safety standards, including the currently applicable European Machinery Directive and the ISO standard for mobile machinery for underground mining. This means that the machines already offer a high level of safety for the operator in the basic version, which can be supplemented by additional optional safety equipment if required.

Standard equipment includes the following safety features:

- ROPS/FOPS protective cover
- Brake system ("failsafe")

- Battery master switch, locking
- EMERGENCY STOP button: 1x on driver's platform, 1x outside
- Engine start warning with start delay
- Audible reversing signal
- 3-point safety entry, left
- Emergency exit, right
- Entrances and exits, slip-resistant and color-contrasting
- Articulated frame lock

The following happens automatically if the driver is absent:

- The travel drive shifts to neutral
- The parking brake is activated

### SAFETY EQUIPMENT (OPTIONAL)

12256-5

- Escape function
- "Plug-in" pre-fitting for radio remote control
- Radio remote control
- Brake test function
- Hill start assist with automatic release / engagement of the parking brake

### DOCUMENTATION

11344-1

- A printed operating manual in the document box on the vehicle
- Operating manual, spare parts list and circuit diagrams in electronic form via online access

### DOCUMENTATION (OPTIONAL)

12825-2

- Another operating manual in local language, in printed form
- A spare parts list in local language or English, in printed form

### MACHINE SOFTWARE

12263-1

- Machine software provided in local language

- Two-way communication
- Approval of machine use
- User management with controlled data release
- Individual reports and statistics
- Direct access at the machine to read out data

### MAINTENANCE PACKAGES

12824-1

- Service package, 2000 operating hours
- Service package, 3000 operating hours

### PAUS CONNECT CLOUD (OPTIONAL)

11355-5

### CUSTOMER SERVICE

11353-1

Repairs and maintenance work are central points in customer care. Here, Paus is broadly positioned and offers its customers and dealers worldwide an extensive service program. Trained employees are available on our service hotline, as are competent contacts at our local dealers.

### SPARE PARTS

11354-1

We attach great importance to a high level of availability of Paus spare parts. In addition to maintenance and service parts, which are available at any time, customers and dealers are able to purchase spare parts for engines, axles, transmissions, etc. easily and quickly through us. Benefit from our online catalog with refined spare parts lists.



The PAUS CONNECT CLOUD collects and visualizes data, messages or location information of the machine.

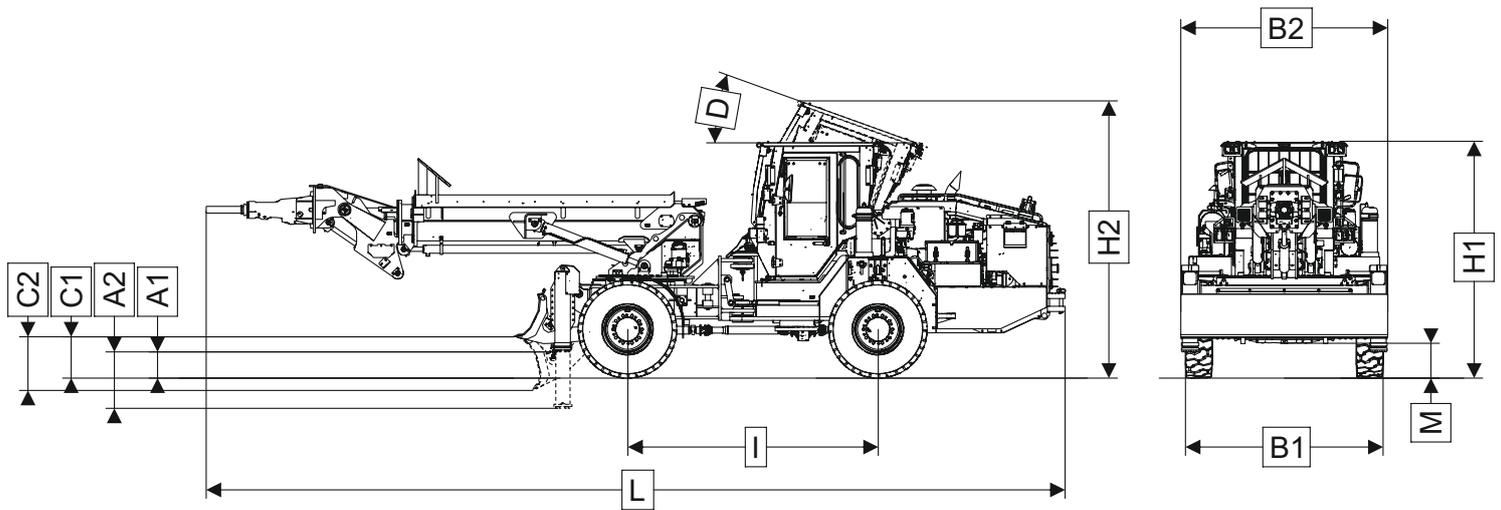
The data is transmitted to the cloud using a built-in telemetry unit.

Your advantages:

- Faster service
- Life cycle cost management
- Data transmission via existing WLAN and/or mobile phone networks
- Temporary storage of all data in case of no connectivity (up to 30 days)
- Access to the PAUS CONNECT Cloud
- Remote diagnosis/remote maintenance
- Statistical deployment evaluation
- Vibration monitoring

## DIMENSIONS

10690-2



The illustration shows a machine of type PScale 10-T with hydraulic hammer of type EPIROC SB 302 Tunnel.

Dimension	Value	Unit
A1	260	mm
A2	595	mm
B1	2.290	mm
B2	2.405	mm
C1	455	mm
C2	555	mm
D	20	°

\* Dimension depends on the installed attachment

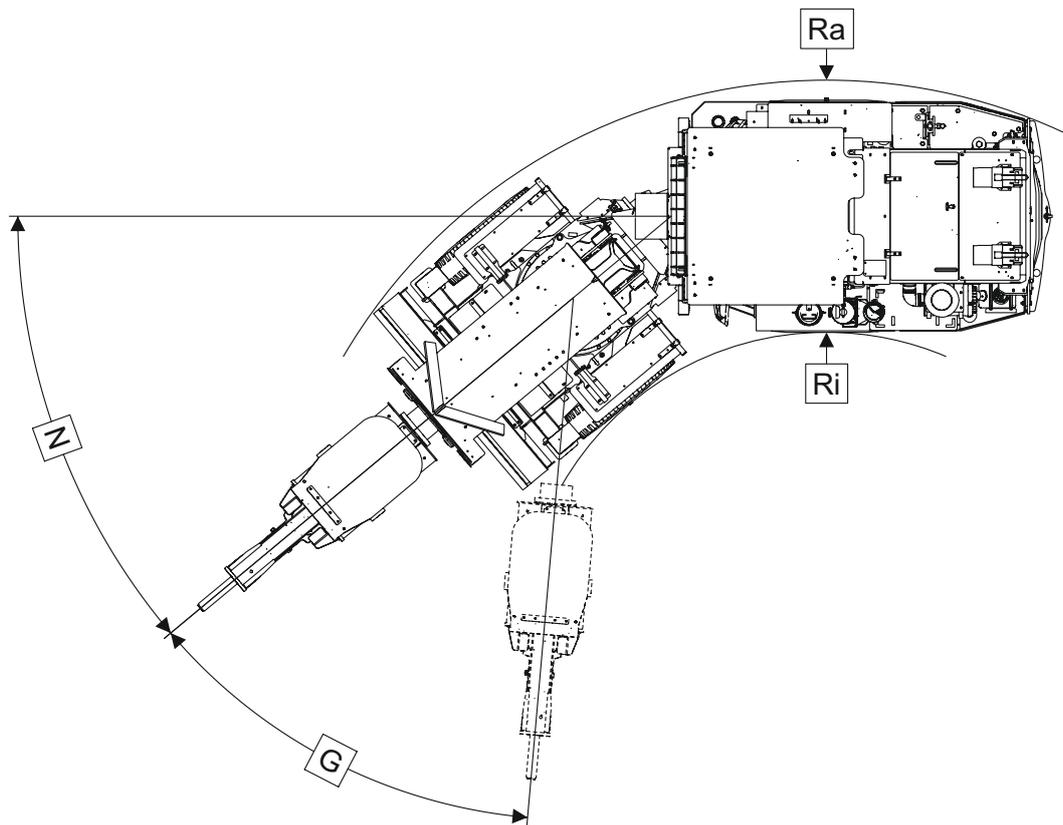
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Dimension	Value	Unit
H1	2.715	mm
H2	3.105	mm
I	2.900	mm
L *	9.950	mm
M	385	mm

\* Dimension depends on the installed attachment

## TURNING RADIUS

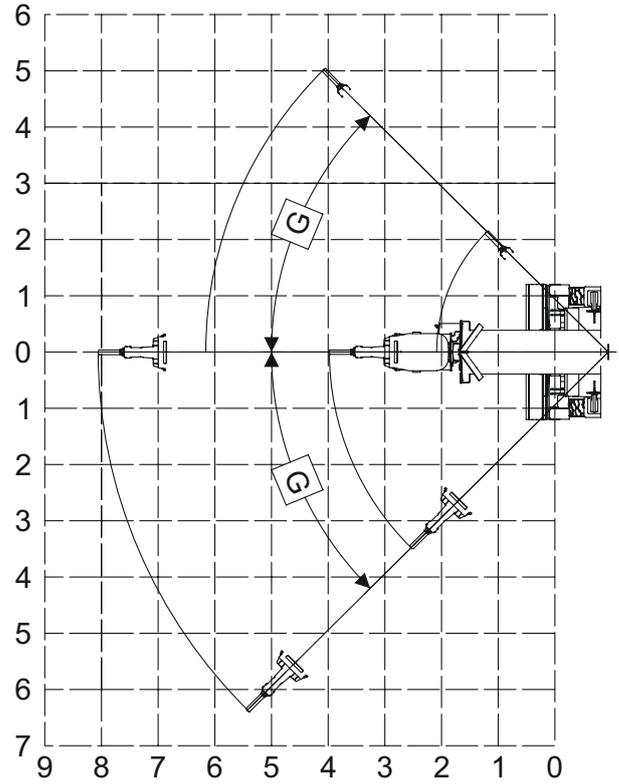
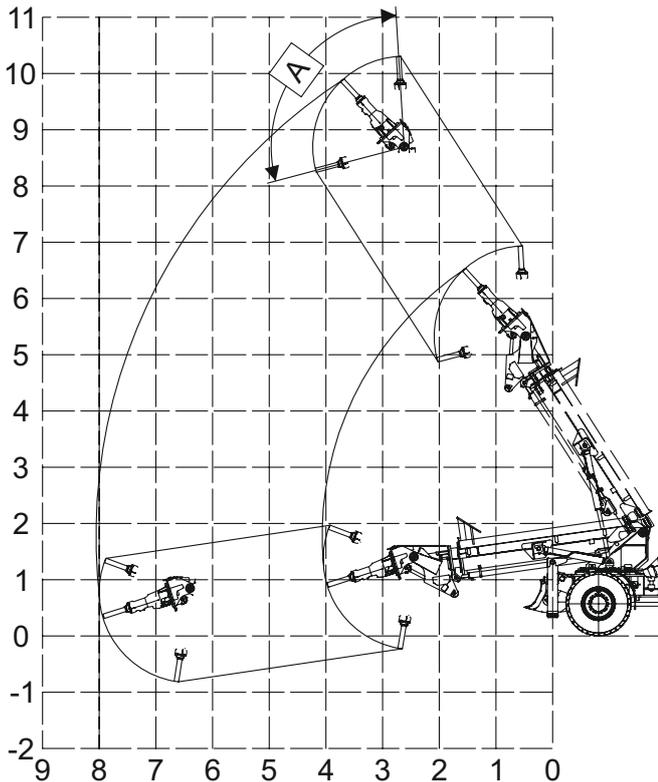


The illustration shows a machine of type PScale 10-T with hydraulic hammer of type EPIROC SB 302 Tunnel.

N = Maximum steering angle

Dimension	Value	Unit
G	45	°
Ri	2,800	mm
Ra	5.360	mm

## HYDRAULIC HAMMER WORK AREA



The illustration shows a machine of type PScale 10-T with hydraulic hammer of type EPIROC SB 302 Tunnel.

Dimension	Value	Unit
A	100	°
G	45	°