Scooptram ST7LP

Low-profile underground loader with 6.8-tonne capacity

Epiroc

Superior productivity in low seam applications

The low-profile Scooptram ST7LP – with a back height of only 1.6 M – is a robust underground loader built for demanding low-seam applications. Thanks to a host of smart features, the Scooptram ST7LP is superior in its class in terms of safety, ergonomics and productivity.

Main benefits

Safety first when the Scooptram ST1030 has been designed with safety in focus, with many standard features to secure your operation

Excellent comfort thanks to the first-class working environment in any surroundings in the Sooptram's air-conditioned, roomy cab

Maximum productivity when load-sensing hydraulics and the intelligent Epiroc Rig Control System (RCS) is incorporated in the Scooptram ST7LP

The comfortable ROPS, FOPS and RSPS certified cabin is air conditioned and features the unique Epiroc footbox to maximize leg room.

The loader's short, yet powerful frame and its lengthy wheel base make the Scooptram ST7LP easy to maneuver and minimize the risk of its back end hitting the ceiling.

The Scooptram ST7LP includes traction control – a unique Epiroc feature that reduces wheel spin and tire wear in the muck pile to improve penetration and to enable one-pass loading.

ROPS, FOPS and RSPS certified cabin with air conditioning and Epiroc's unique footbox

Status beacon

Rig Control System, RCS

Machine protection

Short back end

Forward and reverse video cameras

Steering soft stops

Traction control

Technical specifications

● = Standard ○ = Option ◐ = Local adaption

Features

Safety

- Spring-applied, hydraulic release (SAHR) brakes
- Automatic brake test with diagnostics and logging
- ISO ROPS, FOPS and RSPS certified, oil-free cabin with door interlock. (When cabin door is opened, the brakes are applied and steering and bucket/boom movement is blocked.)
- Forward and reverse cameras mounted on the right side to enhance operator visibility in both tramming directions
- Speed limiter

Comfort

- Epiroc footbox to expand leg room
- Rubber-mounted cab to reduce vibration and noise
- Soft-stop steering to further reduce vibration
- Ergonomic, multifunction-control joysticks
- Easy-to-read multifunctional display with intuitive operator interface, available in 11 languages
- Comfortable T-back seat

Sustainability

- Traction control to reduce tire spin, extend tire life and improve loading performance
- Integrated de-clutch function to save fuel and extend the life of drive-train components
- Durable power-train components
- Fuel-efficient, clean-burning EPA Tier 3/EU Stage IIIA engine
- Rock-tough catalytic purifier
- L and M V-tube core radiator

Productivity

- Load-sensing variable displacement hydraulic pump for increased traction and reduced fuel consumption
- On-board diagnostics with indoor and outdoor indication lights to give the operator and nearby personnel a clear indication of machine status
- Load-weighing system

Serviceability

- Epiroc Rig Control System (RCS) to provide clear service information on the operator's monitor
- Automatic lubrication system with low-level warning and lube-fault detection to service all daily lube points
- Sensors with data collection on air, hydraulic and transmission filters
- Easy access to filters, valve blocks and other service points for swift maintenance
- All daily maintenance from ground level
- Quick access to outside maintenance when necessary to maximize uptime and production

Specifications

Capacities	
Tramming	6 800 kg
Breakout force, hydraulic	12 000 kg
Breakout force, mechanical	10 300 kg
Motion times	
Boom raising	3.7 sec
Boom lowering	2.8 sec
Dumping	3.7 sec
Weights (standard empty vehicle)	
Approximate weight	19 100 kg
Axle load, front end	8 700 kg
Axle load, rear end	10 400 kg

Engine

Brand/model: Cummins QSB6.7	EPA Tier 3/EU Stage IIIA
Power rating at 2 200 rpm	144 kW/193 hp
Maximum torque at 1 400 rpm	931 Nm
MSHA Part 7 ventilation rate	241 m3/min
MSHA Part 7 particulate index	269 m3/min

Standard: Dry type air filter, catalytic purifier and silencer, exhaust heat protection, cooling package with tube type radiator, remote engine oil and cooling fuel drain.

Fuel

Fuel tank capacity: 190 litres	●
Fuel filtration, primary, including water trap: 7 µm	●
Fuel filtration, secondary: 3 µm	●

Transmission

Automatic power shift with integrated converter, fully modulated 4 speed shifting, forward/reverse with de-clutch function	●
Brand/model: Funk DF150	●

Axles

Brand/model: Okubo rock tough 406	●
Degree of rear axle oscillation: 14° (7° on each side)	●
Differentials: front, no spin	●
Differentials: rear, open	●

Brakes

Fully enclosed, force-cooled, multiple wet discs at each wheel end	●
Service/parking/emergency brakes: SAHR	●
Brake apply after 3 sec in neutral	○
Brake release retriever tow hook	○

Tires

Tubeless tires design for underground mine service*	●
Tire size front and rear: 17.5R25 (slicks)	○
Tire size front and rear: 17.5R25 (treaded)	○

*As applications and conditions vary, Epiroc recommends that the user consults with tire suppliers to obtain the optimum tire selection.

Technical specifications

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Operator's compartment

Canopy (ISO ROPS, FOPS and RSPS)	●
Cabin with automatic climate control, pressurized with filtrered air (ISO ROPS, FOPS and RSPS)	○
Door interlock (applies brakes, blocks steering and bucket/boom movement when door opens)	●
Open door retainer	●
Side seated operator for bi-directional operation	●
Comfortable T-back seat with retractable seat belt	●
External sound level according to ISO 6393 LwA 124.5 dB(A)	
Sound level in cabin according to ISO 6394 LpA 80 dB(A)	
Sound level in canopy according to ISO 6394 LpA 99 dB(A)	
Whole body vibration value according to below EN 14253 A(8)w maximum 0.55+/-0.2 m/s²	

Hydraulic system

Heavy duty load sensing piston pump	●
System pressure: 24.0 MPa	●
Hydraulic tank capacity: 111 litres	●
Filtration, return line: 12 µm	●
Electric pump for hydraulic tank fill, 24 V	○
Arctic oil	○
Steer cylinders: chrome plated stems, 2x80 mm diameter	
Hoist cylinders: chrome plated stems, 2x110 mm diameter	
Tilt cylinder: chrome plated stems, 1x140 mm diameter	

Control system

Operator display with intuitive interface	●
Logging of production data, number of buckets, fuel consumption and tramming distance etc.	●
Brake test function with logging	●
Engine, transmission and hydraulic system diagnostics and logging	●
Save machine logged data on USB memory stick	●
Front and rear cameras	●
Audio-visual reverse alarm	●
Machine status indicator light mounted on canopy/cabin	●
Joystick controls for dump and hoist and steering	●
Joystick with forward, neutral, reverse toggle switch	○
Steering soft stop	●
Bucket float	●
Traction control	●
Speed limiter	◐
Machine protection	◐
Load weighing system	○
Emergency steering	○
Redundant steering	○

Electrical system

System voltage: starts and accessories 24 V, 24/12 V converter	●
Mine duty high output alternator: 140 Amps	●
Isolation switch lockout	●
Driving lights: 2x40 W LED front	●
Driving lights: 6x40 W LED back	●
Detachable service light	○

Main frame

Center hinge and boom locking pins	●
EOD ejector bucket	○
Ground engagement tools	○
Wheel chocks and brackets	○
Knockdown construction	○
Inverted rims - tire lock on the inside	●
Central manual lubrication system	●
Central automatic lubrication system	○
240 V block heater	○
Wiggins fast fuel fill	○
Wiggins fast hydraulic oil fill	●
Hand held fire extinguisher	○
Ansul manually activated fire suppression system with engine shut down	○
Ansul checkfire automatically activated fire suppression system	○
3xmachine stop buttons with fuel shut off valve	●

Automation

Scooptram radio remote interface	●
Scooptram radio remote control	○
Certiq telematics solution professional*	○

*Certain country restriction may exist

Parts and services

Preventive maintenance kits	○
Repair and rebuild kits	○
Upgrade kits	○
Face mechanics tool set	○
Shop mechanics tool set	○
Service tool box for RCS	○
Operators training in simulator	○

Documentation

Operator, service and spare parts manual on CD and hard copy	●

Technical specifications

Grade performance

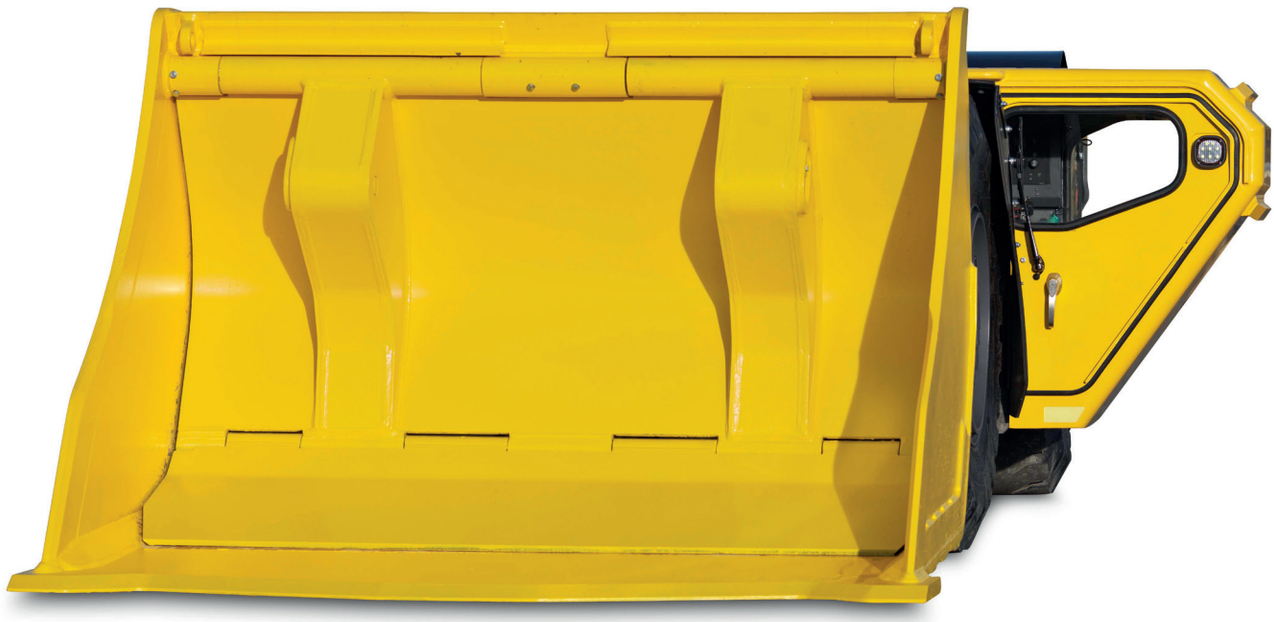
Standard configuration, empty bucket													
%	Grade	0.0	2.0	4.0	6.0	8.0	10.0	12.5	14.3	16.0	18.0	20.0	25.0
Ratio	Grade	–	–	–	–	–	1:10	1:8	1:7	–	–	1:5	1:4
Km/h	1 st gear	4.6	4.6	4.5	4.5	4.3	4.3	4.1	4.1	4.1	4.0	4.0	3.8
	2 nd gear	7.7	7.5	7.4	7.2	7.0	6.9	6.7	6.4	6.2	6.1	5.7	5.1
	3 rd gear	14.9	14.3	13.6	12.8	12.0	11.1	9.4	–	–	–	–	–
	4 th gear	24.0	22.2	19.6	16.5	12.2	–	–	–	–	–	–	–

3% rolling resistance assumed. Actual performance may vary depending on the application. Continuous operation is recommended on maximum 1:7 grade.

Grade performance

Standard configuration, loaded bucket													
%	Grade	0.0	2.0	4.0	6.0	8.0	10.0	12.5	14.3	16.0	18.0	20.0	25.0
Ratio	Grade	–	–	–	–	–	1:10	1:8	1:7	–	–	1:5	1:4
Km/h	1 st gear	4.3	4.3	4.1	4.1	4.0	4.0	3.8	3.8	3.8	3.7	3.5	3.3
	2 nd gear	7.2	7.0	6.9	6.7	6.4	6.2	5.9	5.6	5.3	4.9	4.6	3.5
	3 rd gear	14.0	13.1	12.2	11.1	9.8	8.3	–	–	–	–	–	–
	4 th gear	22.2	19.3	15.6	–	–	–	–	–	–	–	–	–

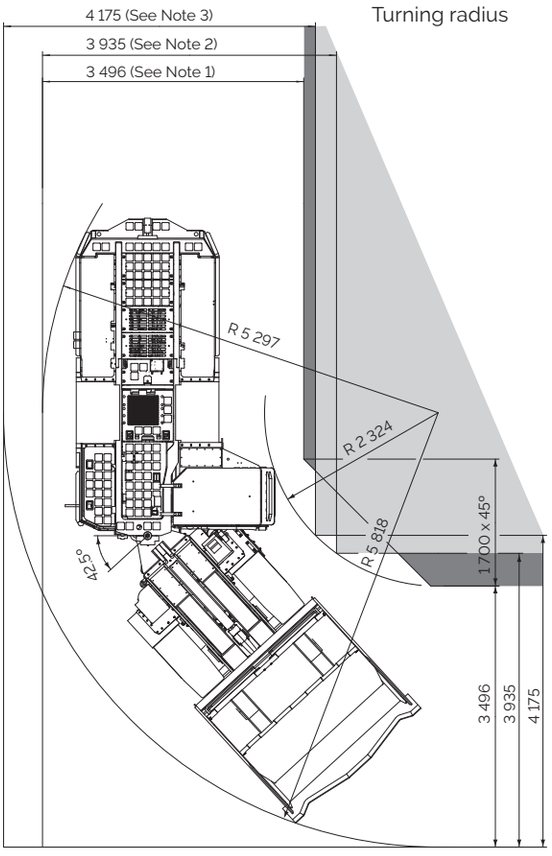
3% rolling resistance assumed. Actual performance may vary depending on the application. Continuous operation is recommended on maximum 1:7 grade.



Scooptram ST7LP frontal view

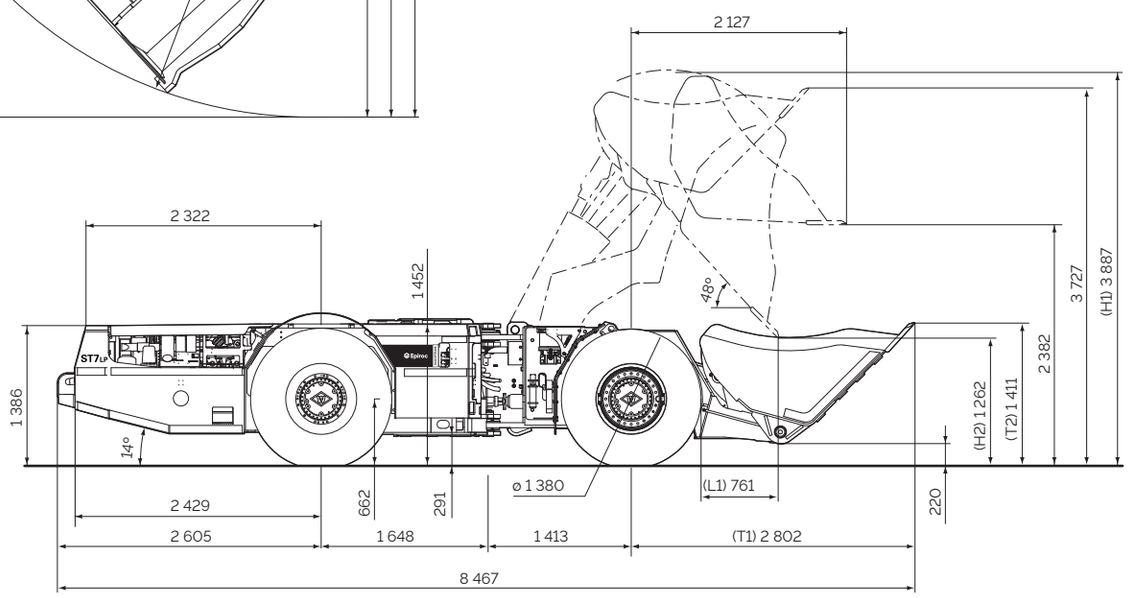
Technical specifications

Measurements and weights



Dimensions
- All dimensions are shown in millimetres
- All dimensions shown are based on standard vehicle configuration with 28 mm tire deflection, unloaded EOD bucket 2.2 t/m3

Notes turning radius
1: Max 90 degree turn, 45 degree chamfer
2: Max 90 degree turn, straight corner
3: Full circle, straight corner



Bucket data

		Standard	EOD
Volume, nominal heaped (m3)		3.1	2.7
Maximum material density (t/m3)		2.2	2.2
Width, bucket (mm)		2 276	2 276
Maximum width		2 674	2 674
Power frame width		1 919	1 919
Tramming position: axle centreline to bucket lip (mm)	T1	2 797	2 802
Tramming position: ground to bucket tip (mm)	T2	1 416	1 411
Reach (mm)	L1	830	761
Raised position: max height (mm)	H1	3 888	3 887
Raised position: bucket tip, height (mm)	H2	1 318	1 262

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Performance unites us, innovation inspires us, and commitment drives us to keep moving forward. Count on Epiroc to deliver the solutions you need to succeed today and the technology to lead tomorrow.
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