

Scooptram ST7

Underground small size loader
with 6.8-tonne capacity



Features

Safety

- Safety
- Spring applied, hydraulic released (SAHR) brakes
- Automatic brake-test with diagnostics and logging
- ISO ROPS and FOPS-certified, oil-free cabin with door interlock (when cabin door is opened, the brakes are applied and steering and bucket/boom movement are blocked)
- The best operator visibility in its class due to the low back end
- Speed limiter

Comfort

- Epiroc footbox to expand leg room
- Rubber-mounted cab to reduce vibration and noise
- Ride control boom suspension keeps the bucket stable while tramming and offers smoother ride
- Ergonomic, multifunction control joysticks
- Simple and clear, multifunction display with intuitive operator interface, available in 11 languages
- Comfortable air suspended seat
- Steering and boom soft stop to further reduce noise and vibration

Sustainability

- Traction control to reduce tire spin, to 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 tractive effort and reduced fuel consumption
- Ride control to provide a smooth ride, allowing to travel at higher speed and reducing spillage
- 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 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 and easy service resulting in more time for production

Specifications

Capacities	
Tramming capacity	6 800 kg
Breakout force, hydraulic	13 350 kg
Breakout force, mechanical	11 750 kg
Motion times	
Boom raising	5.3 sec
Boom lowering	3.5 sec
Dumping	2.1 sec
Weights (standard empty vehicle)	
Approximate weight	19 300 kg
Axle load, front end	8 600 kg
Axle load, rear end	10 700 kg

Engine

	Standard
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 m ³ /min
MSHA Part 7 particulate index	269 m ³ /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 filtrations, 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	●

Axels

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*	●
Inverted rims - tire lock on inside	○
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.

Operator's compartment

Canopy (ISO ROPS and FOPS)	●
Cabin with automatic climate control, pressurized with filtered air (ISO ROPS and FOPS)	○
Door interlock (applies brakes, blocks steering and bucket/boom movement when door opens)	●
Open door retainer	●
Side seated operator for bi-directional operation	●
Air suspension seat with 2-point retractable seat belt	●
Media player	○
External sound level according to ISO 6393 LwA 124.5 dB(A)	
Sound level in canopy according to ISO 6394 LpA 105 dB(A)	
Sound level in cabin according to ISO 6394 LpA 82 dB(A)	
Whole body vibration value according to below EN 14253 A(8)w maximum 0.55+/-0.2 m/s ²	

Hydraulic system

Heavy duty load sensing piston pump	●
System pressure: 24.0 MPa	●
Hydraulic tank capacity: 111 litres	●
Filtration, return line: 12 µm	●
Manual pump for hydraulic tank fill	●
Electric pump for hydraulic tank fill, 24 V	○
Arctic oil	○
Steer cylinders: chrome plated stems, 2x80 mm diameter	●
Hoist cylinders: chrome plated stems, 2x125 mm diameter	●
Stabilizer cylinder: chrome plated stem, 1x150 mm diameter	●

Control system

Epiroc Rig Control System (RCS)	●
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, hoist and steering	●
Joystick with forward-neutral-reverse toggle switch	○
Bucket float	●
Automatic ride control (boom suspension)	○
Traction control	●
Speed limiter	○
Machine protection	○
Machine warm up	●
Load weighing system	○
Delayed engine off, turbo cool down	○
Engine pre-start warning	○
Emergency steering (required for CE approved vehicles)	○
Redundant steering (required for CE approved vehicles)	○

Electrical system

System voltage: start and accessories, 24/12 V converter	●
Mine duty high output alternator: 140 Amps	●
Isolation switch lockout	●
Driving lights LED: 13x40 W	●
Detachable service light (required for CE approved vehicles)	○
Cold weather package 240 V; block heater	○

Main frame

Center hinge and boom locking pins	●
EOD ejector bucket	○
GET ground engagement tools	○
Wheel chocks and brackets	○
Knockdown construction	○
Central manual lubrication system	●
Central automatic lubrication system	○
Wiggins fast fuel fill	○
Hand held fire extinguisher	○
Ansul manually activated fire suppression system with engine shut down	○
Ansul checkfire automatically activated fire suppression system	○
3x emergency stop buttons with fuel shut off valve	●

Automation

Scooptram Radio Remote Control interface	●
Scooptram Radio Remote Control	○
Video assist	○
Scooptram Automation Regular	○
Scooptram Automation Total	○
Collision Avoidance System Interface	○
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	●
Plasticized parts and service manuals	○

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	1st gear	4.5	4.4	4.3	4.3	4.2	4.2	4.1	4.1	4.0	4.0	3.9	3.8
	2nd gear	7.4	7.3	7.1	7.0	6.8	6.7	6.5	6.3	6.1	5.4	5.7	5.2
	3rd gear	14.3	13.7	13.1	12.4	11.6	10.8	9.6	8.3	7.1	-	-	-
	4th gear	23.1	21.4	19.1	16.5	12.7	-	-	-	-	-	-	-

3% rolling resistance assumed. Actual performance may vary depending on the application.

Grade performance

Standard configuration, loaded bucket

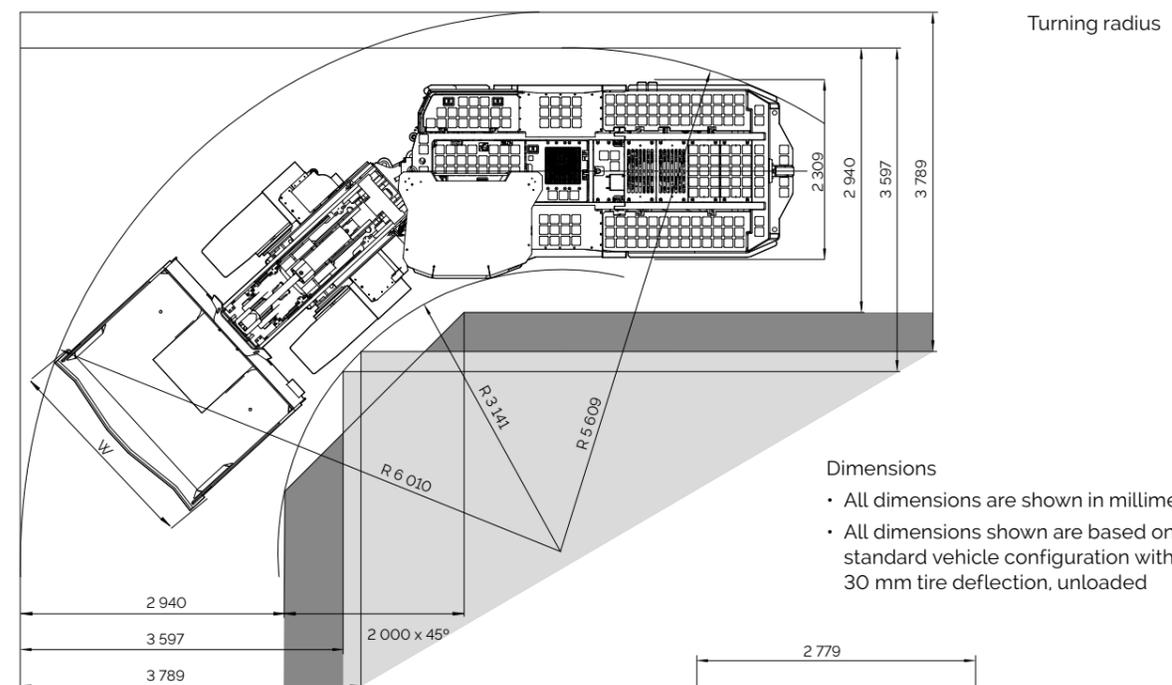
%	Grade	0.0	2.0	4.0	6.0	8.0	10.0	12.5	14.3	16.0	18.0	20.0	25.0
Ratio	Grade	-	-	-	-	-	1:10	1:8	1:7	-	-	1:5	1:4
km/h	1st gear	4.4	4.4	4.3	4.2	4.1	4.1	4.0	3.9	3.8	3.8	3.7	3.4
	2nd gear	7.3	7.1	6.9	6.7	6.5	6.3	5.9	5.6	5.4	5.1	4.7	3.5
	3rd gear	14.0	13.2	12.2	11.1	9.8	8.1	-	-	-	-	-	-
	4th gear	22.2	19.3	15.5	-	-	-	-	-	-	-	-	-

3% rolling resistance assumed. Actual performance may vary depending on the application.



Technical specifications

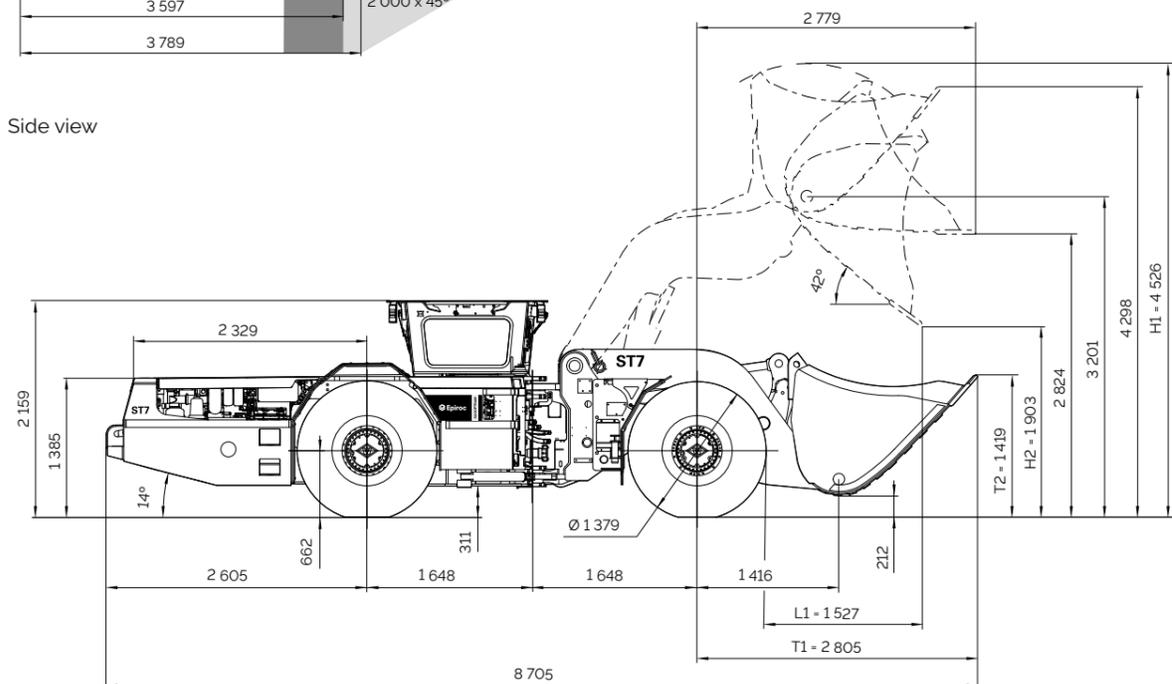
Measurements and weights



Dimensions

- All dimensions are shown in millimetres
- All dimensions shown are based on standard vehicle configuration with 30 mm tire deflection, unloaded

Side view



Bucket data

	Standard							EOD						
		3.8	3.4	3.1	2.8	2.6	2.4	2.3	3.2	2.9	2.7	2.5	2.4	2.2
Volume, nominal heaped (m3)	STD													
Maximum material density (t/m3)		1.8	2.0	2.2	2.4	2.6	2.8	3.0	1.8	2.0	2.2	2.4	2.6	2.8
Width, bucket (mm)	W	2 230	2 230	2 230	2 230	2 230	2 230	2 230	2 276	2 276	2 276	2 276	2 276	2 276
Total width (mm)		2 334	2 334	2 334	2 334	2 334	2 334	2 334	2 334	2 334	2 334	2 334	2 334	2 334
Tramming position: axle centreline to bucket lip (mm)	T1	2 970	2 900	2 800	2 770	2 650	2 670	2 600	3 020	2 970	2 920	2 870	2 830	2 780
Tramming position: ground to bucket tip (mm)	T2	1 540	1 450	1 400	1 330	1 200	1 230	1 190	1 650	1 580	1 530	1 480	1 430	1 370
Reach (mm)	L1	1 690	1 594	1 527	1 475	1 334	1 363	1 310	1 757	1 701	1 678	1 621	1 580	1 505
Raised position: max height (mm)	H1	4 760	4 660	4 570	4 540	4 540	4 500	4 490	4 650	4 600	4 530	4 510	4 490	4 490
Raised position: bucket tip, height (mm)	H2	1 750	1 850	1 890	1 940	2 050	2 020	2 070	1 700	1 740	1 800	1 840	1 880	1 940

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