

Scooptram ST18

Underground loader with 17.5-tonne capacity



High productivity material handling

The Scooptram ST18 is built for high productivity in large-size underground mines and it combines strength and agility

⊕ Main benefits

Safety first as the Scooptram ST18 offers unbeatable safety feature to secure your operation

Maximum productivity thanks to the integrated converter lock-up, load sensing hydraulic, traction control and the intelligent Epiroc Rig Control System (RCS)

First-class working environment with Scooptram ST18 as the operator can count on a spacious cabin, ergonomic controls, dual ride control and soft stop for steering and boom movements

Load sensing hydraulics





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



Smart built-in features such as traction control and over speed protection will contribute getting the most out of the Scooptram ST18 while protecting your investments.



Innovative boom/bucket design and load-sensing hydraulics ensures one-pass mucking while minimizing the fuel consumption.



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

Teleremote

Rig Control System, RCS

Machine and overspeed protection

Short back end

Forward and reverse video cameras

Traction control and speed limiter

Automatic break test

Features

Safety

- Spring-applied, hydraulic release (SAHR) brakes
- Automatic brake-test with diagnostics and logging
- ISO ROPS and FOPS certified cabin, air-conditioned, oil-free operator's compartment and door interlock (applies brakes, blocks steering and bucket/boom movement when door opens)
- The best operator visibility in its class due to the short back end
- Speed limiter
- Guard rails

Comfort

- Increased leg-room with Epiroc footbox
- Rubber mounted cabin for reduced vibration level
- Ergonomic multifunction control joysticks with integrated forward/neutral/reverse toggle switch
- Simple and clear, multifunction display with intuitive operator interface, available in 11 languages
- Comfortable air suspended seat
- Steering and boom soft stop reduces vibration for the operator

Sustainability

- Fuel efficient, low emission EPA Tier 4 final/EU Stage IV engine
- Traction control reduces tire spin, improves loading performance and extends tire life
- Integrated de-clutch function, saves fuel and improves life of drivetrain components
- Proven powertrain components
- L and M V-tube core radiator
- Machine status indication lights, displays the machine status for personnel working around the machine

Productivity

- Load sensing variable displacement hydraulic pump for increased tractive effort and reduced fuel consumption
- Load weighing system
- Dual ride control to provide a smooth ride, allowing to travel at higher speed and reducing spillage
- Automation ready
- Hydraulically driven fans, allowing maximum power to be sent to the drivetrain or hydraulics

Serviceability

- Epiroc Rig Control System (RCS) with on board diagnostics give the personnel a clear indication of the machine status and speeds up fault finding
- Easy access to service points, filters and valve blocks. The most of the daily controls and maintenance form ground level.
- Filter sensors with data collection for air, hydraulic and transmission filters
- Daily lube points quick and easy to service

Specifications

Capacities	
Tramming	17 500 kg
Breakout force, hydraulic	28 500 kg
Breakout force, mechanical	26 000 kg
Motion times	
Boom raising	7.2 sec
Boom lowering	4.0 sec
Dumping	2.8 sec
Weights (Standard empty vehicle)	
Approximate weight	51 500 kg
Axle load, front end	25 000 kg
Axle load, rear end	26 500 kg

Engine

	Standard	Alternative*
Brand/model	Cummins QSX15	Cummins QSX15
Emissions standard	EPA Tier 3/EU Stage IIIA	EPA Tier 4 final/EU Stage IV
Power rating at 2 000 rpm	336 kW/450 hp	352 kW/472 hp
Maximum torque at 1 000-1 400 rpm	2 100 Nm	2 350 Nm
MSHA Part 7 ventilation rate	495 m ³ /min	481 m ³ /min
MSHA Part 7 particulate index	481 m ³ /min	14 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.
Alternative: Different engine, coolers, different aftertreatment system (dry type air filter with cyclone functionality, SCR, DPF, Diesel emission fluid system with separate tank/fill point including dosing pump and hoses/cables).
 *Please note! Requires ultra low sulphur diesel and low ash engine oil.

Fuel

Fuel tank capacity: 626 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 automatic lock-up and de-clutch functions	●
Brand/model: Dana TE32	●

Axles

Brand/model: Kessler D111	●
Rear axle oscillation 16° (8° on each side)	●
Differentials: front and rear, limited slip	●

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	○
Separate brake cooling tank, capacity: 50 l	●

Tires

Tubeless tire design for underground mine service*	●
Tire size front and rear 29.5R29 (slicks)	○
Tire size front and rear 29.5R29 (treaded)	○

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

Technical specifications

● = Standard ○ = Option ◐ = Local adaption

Operator's compartment

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 seat suspension seat with 2-point retractable seat belt	●
External sound level according to ISO 6393 LwA 118 dB(A)	
Sound level in cabin according to ISO 6394 LpA 80 dB(A)	
Whole body vibration value according to below EN 14253 A(8)w maximum 0.8+/-0.4 m/s ²	

Hydraulic system

Heavy duty load sensing piston pumps	●
System pressure: 270 MPa	●
Hydraulic tank capacity 290 litres	●
Filtration, return line: 12 µm	●
Electric pump for hydraulic tank fill, 24 V	○
Steer cylinders: chrome plated stems, 2x125 mm diameter	
Hoist cylinders: chrome plated stems, 2x200 mm diameter	
Tilt cylinder: chrome plated stem, 1x260 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	●
Joystick controls for dump and hoist and steering	●
Forward/neutral/reverse toggle switch integrated in steering joystick	●
Machine status indicator lights mounted on cabin	●
Steering and boom soft stop	●
Bucket float	●
Automatic dual ride control (boom suspension)	●
Traction control	●
Speed limiter	◐
Machine protection	◐

Electrical system

System voltage: start and accessories 24 V	●
Mine duty high output alternator: 140 Amps	●
Isolation switch lockout	●

Electrical system

24/12 V converter	●
Driving lights LED: 18x1 400 lumen	●
Rear tail/brake LED lamps	●
Detachable service light (required for CE approved vehicles)	○
Battery jump start receptacle	●

Main frame

Center hinge and boom lock up pins	●
Wheel chocks and brackets	○
Knockdown construction	○
Central manual lubrication system	●
Central automatic lubrication system with timer	○
Wiggins fast fuel fill	○
Wiggins fast fill for oils (engine, transmission, hydraulic and brake oils)	○
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	●
Corrosion resistant radiator	○
Emergency steering (required for CE approved vehicles)	○
Redundant steering (required for CE approved vehicles)	○

Automation

Scooptram Radio Remote Control interface	●
Scooptram Radio Remote Control	○
Scooptram automation	○
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	●
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Technical specifications

Grade performance bucket

Standard configuration, empty bucket

%	Grade	0	5	10	15	20	25
Ratio	Grade	0	1:20	1:10	1:7	1:5	1:4
Km/h	1st gear	4	4	4	4	4	4
	2nd gear	9	9	9	9	8	7
	3rd gear	15	15	14	10	-	-
	4th gear	27	24	-	-	-	-

3% rolling resistance assumed, actual performance may vary depending on the application, Tier 4 final, Stage IV engine with lock up engaged. Continuous operation is recommended on maximum 1:7 grade.

Grade performance

Standard configuration, loaded bucket

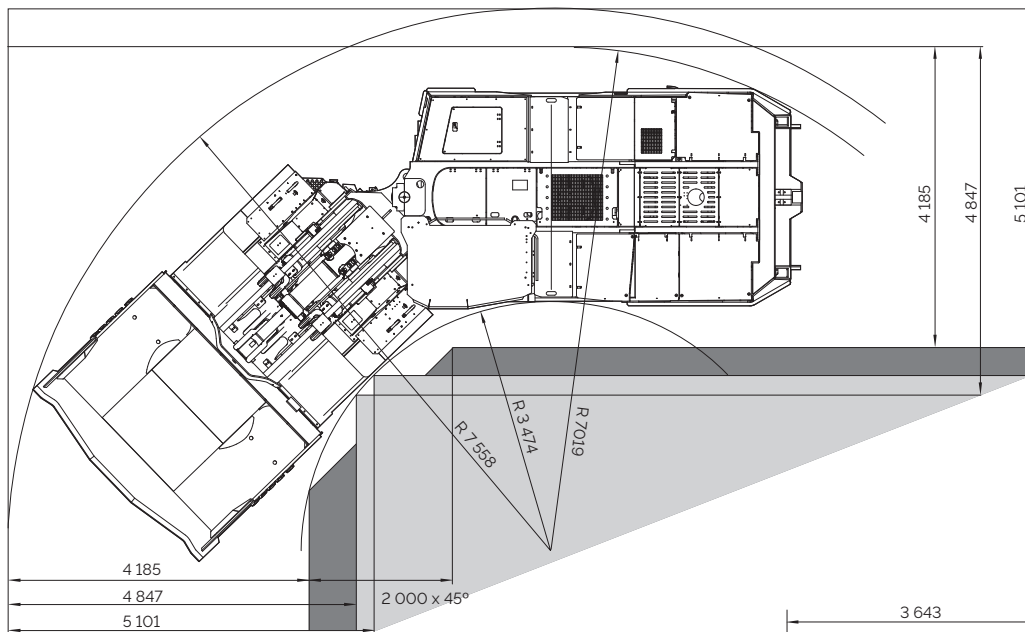
%	Grade	0	5	10	15	20	25
Ratio	Grade	0	1:20	1:10	1:7	1:5	1:4
Km/h	1st gear	4	4	4	4	4	4
	2nd gear	9	9	9	8	-	-
	3rd gear	15	15	11	-	-	-
	4th gear	27	-	-	-	-	-

3% rolling resistance assumed, actual performance may vary depending on the application, Tier 4 final, Stage IV engine with lock up engaged. Continuous operation is recommended on maximum 1:7 grade.



Technical specifications

Measurements and weights

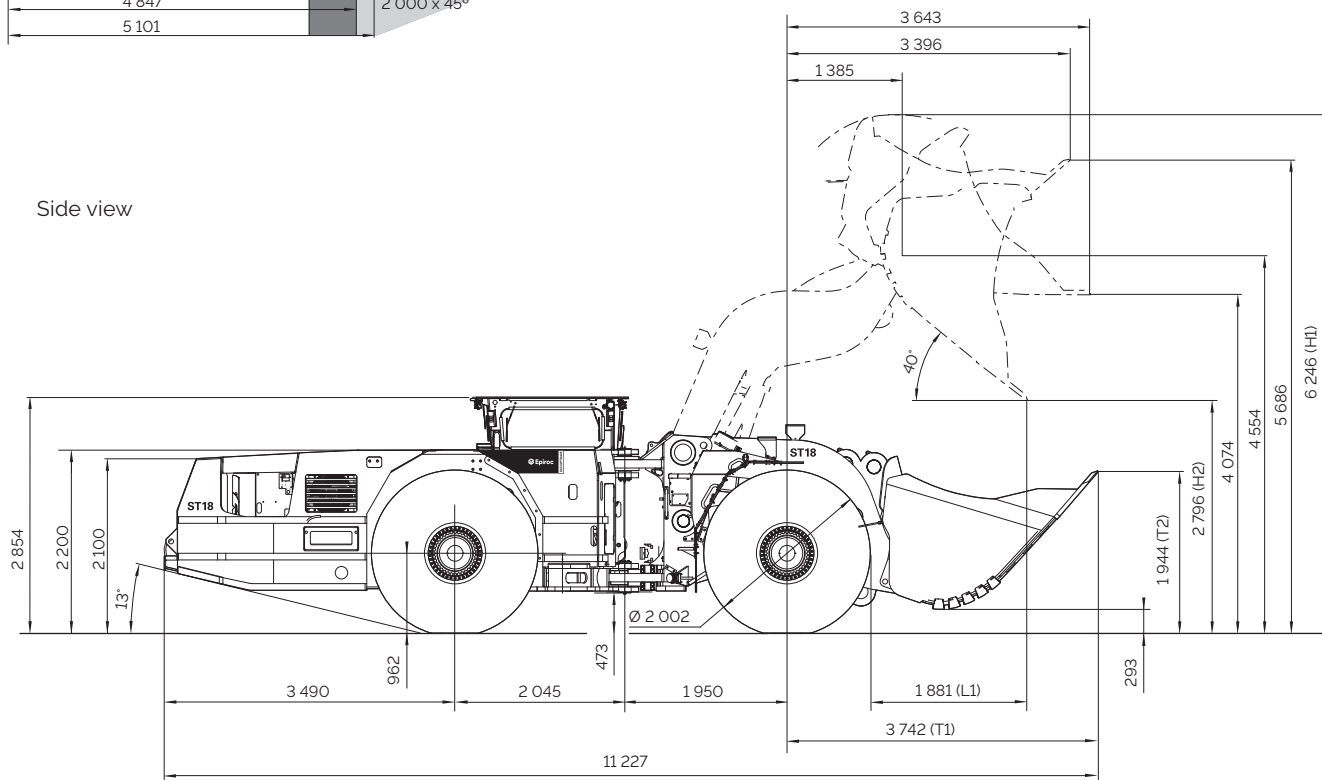


Turning radius

Dimensions

- All dimensions are shown in millimetres
- All dimensions shown are based on standard vehicle configuration with 40 mm tire deflection, unloaded

Side view



Bucket data

				STD			
Volume, nominal heaped (m ³)		9.7	8.8	7.9	7.3	6.7	6.3
Maximum material density (γ/m ³)		1.8	2	2.2	2.4	2.6	2.8
Width, side cutters (mm)		3 190	3 190	3 190	3 190	3 190	3 190
Total width (mm)		3 330	3 330	3 330	3 330	3 330	3 330
Tramming position: axle centerline to bucket lip (mm)	T1	3 941	3 834	3 742	3 663	3 595	3 535
Tramming position: ground to bucket tip (mm)	T2	2 160	2 043	1 944	1 859	1 785	1 719
Reach (mm)	L1	2 107	1 985	1 881	1 791	1 713	1 645
Raised position: max height (mm)	H1	6 478	6 348	6 240	6 240	6 240	6 240
Raised position: bucket tip (mm)	H2	2 609	2 710	2 796	2 870	2 935	2 991



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