

Scooptram ST18 SG

Fully battery electric loader with 17.5-tonne capacity
Built for high productivity in large-size underground mines



Strength and sustainability combined

Built for demanding underground applications, the highly productive, zero-emission Scooptram ST18 SG gives you the ability to work in the toughest conditions without exposure to diesel particulates and toxic gases. With a 20% longer drivetime, your operation enjoys new levels of productivity.

+ Main benefits

High productivity The strong electrical drivetrain in combination with the aggressive front end, traction control and kickdown, safeguards an improved productivity. Acceleration and traction from the electrical drivetrain are unmatched by any diesel machine.

Safety at its core ST18 SG ensures that every operation can be carried out in the best way for both people and equipment without compromising on productivity and sustainability.

Zero-emission No diesel emissions underground for a better local working environment and the possibility to fulfill environmental commitments, while being a sustainable contributor to society.

Thanks to the electrical drivetrain and the traction control function you can experience a more powerful and agile feeling of the machine when entering the pile.



Focus on your task and be productive with the controls you have in close reach on the joystick.



Dedicated camera displays in the direction of operation improves visibility, focus and by that safety.



Prepared for automation and remote control thanks to Epiroc's Rig Control System (RCS)

Set up for automation thanks to the laser towers

Rig control system (RCS) opens up possibilities for smart and safe features, together with data management for improved processes.



Electrical system built for durability and easy routing

Productivity redefined

Scooptram ST18 SG builds on Epiroc's well proven electrification knowledge, setting safety and environment in focus, while further increasing productivity thanks to the 20% longer drivetime.



+ Battery autonomy

Highest energy density in the industry safeguards autonomy and productivity without taking focus from the safety of the operation. Epiroc's design gives over 50% higher autonomy compared to competition, resulting in higher value and better productivity.



+ Local environment in the mine

With the zero-emission Scooptram ST18 SG comes reduced heat, water vapor and noise, improving the local environment underground for everyone working daily in the mine. This is especially beneficial in areas close to places where people are working for long periods like workshops, crushers or stationary workplaces.



+ Operator comfort

The operator compartment is ergonomic and spacious, providing extra room for the legs to get a more relaxed working position. Noise and vibration are very low thanks to the electrical drivetrain, and this makes every day work easier, leaving energy for other things outside work.



A comprehensive service offering

Even the best equipment needs to be serviced regularly to make sure it sustains peak performance. An Epiroc service solution offers peace of mind, maximizing availability and performance throughout the lifetime of your equipment. We focus on safety, productivity and reliability. By combining genuine parts and an Epiroc service from our certified technicians, we safeguard your productivity – wherever you are.

Wearpact for improved bucket life

Enhance your loader bucket with Wearpact - a safe, high-quality, bolt-on Ground Engagement Tool (GET). Its low-profile, self-sharpening edge guarantees optimal penetration and clean engagement with each pass. Expertly engineered for peak performance, Wearpact ensures maximum longevity for your GET.

Additionally, its design minimizes material build-up above the lip, preventing extra carryback.



Reduced bucket repair costs



Up to 40% increased wearlife



Increased machine availability



Continuous operation with fast and easy service

Technical specifications

Scooptram ST18 SG

Scooptram ST18 SG is what defines safety standards thanks to its ISO ROPS and FOPS certified cabin, speed limiter and best operator visibility in its class. Enjoying a robust built, this underground zero-emissions loader is made for rough mining environments, always keeping operators and the operation safe.

Without overlooking the comfort of operators, the Scooptram ST18 SG increases their well-being by offering, among others, a spacious leg-room with the Epiroc footbox, air suspended seat as well as steering soft stop.

Moreover, it is not only the boom suspension and traction control, but also the smart control system and long battery autonomy, that offers your operation new levels of productivity.

Through our Certiq system, machine data can be used to optimize day to day work and processes, for increased productivity and flow in the mine.

Keeping up a productive operation requires, a high utilization rate of the machine. That is why, we have made the service of the Scooptram ST18 SG as safe, fast and accessible as possible. All entrances to the machine are accessed with three-point contact.

All of these and more come with a machine that is made for a sustainable business, industry and society, leaving no emissions and contributing to a better working environment underground.

Specifications

Capacities	
Tramming capacity*	17 500 kg
Breakout force, hydraulic	28 500 kg
Breakout force, mechanical	26 000 kg
*Tramming capacity with EOD bucket 15 200 kg	
Weights, including battery (standard empty vehicle)	
Approximate weight, including battery (unloaded)	54 500 kg
Approximate weight, including battery (loaded)	72 000 kg
Motion times	
Boom raising	72 sec
Boom lowering	4.0 sec
Dumping	2.2 sec

Sound and vibration

Cabin	
A-weighted sound pressure level, LpA according to ISO 6396:2008	69 +/- 6 dB
Weighted whole body vibration level, A(8)w according to ISO 2631-1	0.8 +/- 0.4 m/s ²
External	
A-weighted sound power level, LwA according to ISO 6395:2008	98 +/- 6 dB

Requirements and compliances

2014/35/EC Low voltage directive
 2014/30/EC Electromagnetic compatibility directive
 2006/42/EC Machinery directive
 ISO 19296:2019 Machines for underground mines

Motor

	Traction	Auxiliary
Brand	ABB	ABB
Type	Permanent magnet	Permanent magnet
IP	65	65
Nominal power	260 kW	150 kW
Nominal torque	1 100 Nm	600 Nm
Nominal voltage	400 VAC	400 VAC
Cooling	Liquid cooled	Liquid cooled

Axles

Front and rear axle	Kessler/ D111
Front and rear differential	Limited slip
Oscillation	16° (8° each side)

Transmission

Brand/model	Dana ERTE32
Type	Automatic power shift with fully modulated 4 speed shifting

Tires

Front and rear size	29.5 R29 L5 (slicks/treaded)
As applications and conditions vary, Epiroc recommends that the user consults with tire suppliers to obtain the optimum tire selection.	

Operator's compartment

Cabin	
Closed cabin	
FOPS according to ISO 3449	
ROPS according to ISO 3471	
Heating Ventilation Air Condition (HVAC) in cabin roof	
Isolated sound barriers	
Sealed door and windows	
Ergonomic adjustable joysticks	
Oilfree environment	
Emergency exit in large window, all windows possible to open from outside and inside	
Safe, three point access into and out of cabin	
5V USB outlet	
Diagnostic outlets	
Physical dimensions of operators and minimum operator space envelope according to ISO 3411	
Zones of comfort and reach for controls according to ISO 6682	
Operator's control according to ISO 10968	
Side seated for bi-directional control	
Steering joystick with Forward/Neutral/Reverse toggle switch	
Operator's seat	
Air suspended	
Adjustable height, depth, lumbar	
Adjustable joysticks with padded support	
Soft padded with water resistant material	
Two point safety belt	

Technical specifications



Control system

Operator display with intuitive interface and integrated BMS information
Logging of production data, number of bucket, etc
Logging of machine data; transmission, hydraulic, energy consumption etc
Brake test
Traction control
Bucket float
Certiq telematics hardware for Wifi or LTE

Electrical system

Batteries	2x 12V, 125 Ah
System voltages	24V
Front working lights	1400 lumen
Rear working lights	1400 lumen
Front driving lights	1400 lumen
Position and brake lights	
Battery jumpstart receptacle	
Locatable main switch	
Emergency stop	
Machine status indicator	
Audio-visual reverse alarm	

Power electrics; inverters, transformers

Brand	ABB
IP	67
Max voltage	850 VDC
Cooling	Liquid cooled

Battery pack

Chemistry	Li-Ion NMC
Useable capacity (kWh)	450
Cell cooling	Liquid cooled
Thermal management	Integrated
Operating ambient temperature	0° to 40°C
Charging contact	CCS type 1 or 2
Charging source	External charger
On-board battery with off-board charger	Yes
Off-board battery with off-board charger	Yes, battery swap
Minimum charging time 0-90%	1 hour 20 minutes
Weight	6 000 kg

Hydraulic system

System pressure	27 Mpa
Hydraulic tank capacity	290 litres
Filtration, return line	10 µm
Lift cylinder	2x 200 mm
Tilt cylinder	1x 260 mm
Steer cylinder	2x 125 mm
Main valve	Open circuit, LS controlled
Steering pump	Piston type
Bucket hydraulics pump	Piston type
Automatic boom suspension system, ride control	
Steering cylinder soft stop	
Emergency steering	
Steering according to ISO 5010	

Brakes

Type	Fully enclosed, force-cooled, multiple wet discs at each wheel end
Service brake	Regenerative braking, SAHR
Park brake / emergency brake	SAHR
Brake system according to ISO 3450	

Buckets

Type	Volume (m ³)	Material density (t/m ³)		Width (mm)
		Straight blade	Wearpact (GET)*	
Straight blade and Wearpact (GET)*	10.3	1.6	1.6	3 480
	9.7	1.8	1.7	3 330
	8.8	2.0	2.0	3 330
	7.9	2.2	2.2	3 330
	7.3	2.4	2.4	3 330
	6.7	2.6	2.6	3 330
EOD straight blade	7.4	2.0	-	3 330
	7.1	2.2	-	3 330

* Wearpact (GET) is optional

Main frame

Center hinge and boom lock up pins
Central manual lubrication system
3x emergency stop buttons



Options

Automation

- Radio Remote Control (RRC)
- Video assist
- Tele Remote Control
- Automation solutions

Operator's compartment

- Camera monitoring, front and rear with dedicated displays (CE requirement)
- Machine protection
- Media player

Control system

- Speed limiter
- Machine protection
- Collision Avoidance System Interface (CAS)
- Certiq telematics solution professional

Electrical system

- Detachable service light (CE requirement)
- Always on strobe

Hydraulic system

- Electric pump for hydraulic tank fill, 24V
- Arctic oils

Brake

- Neutral brake apply, NBA (Park brake on neutral)
- Hydraulic brake release tow hook

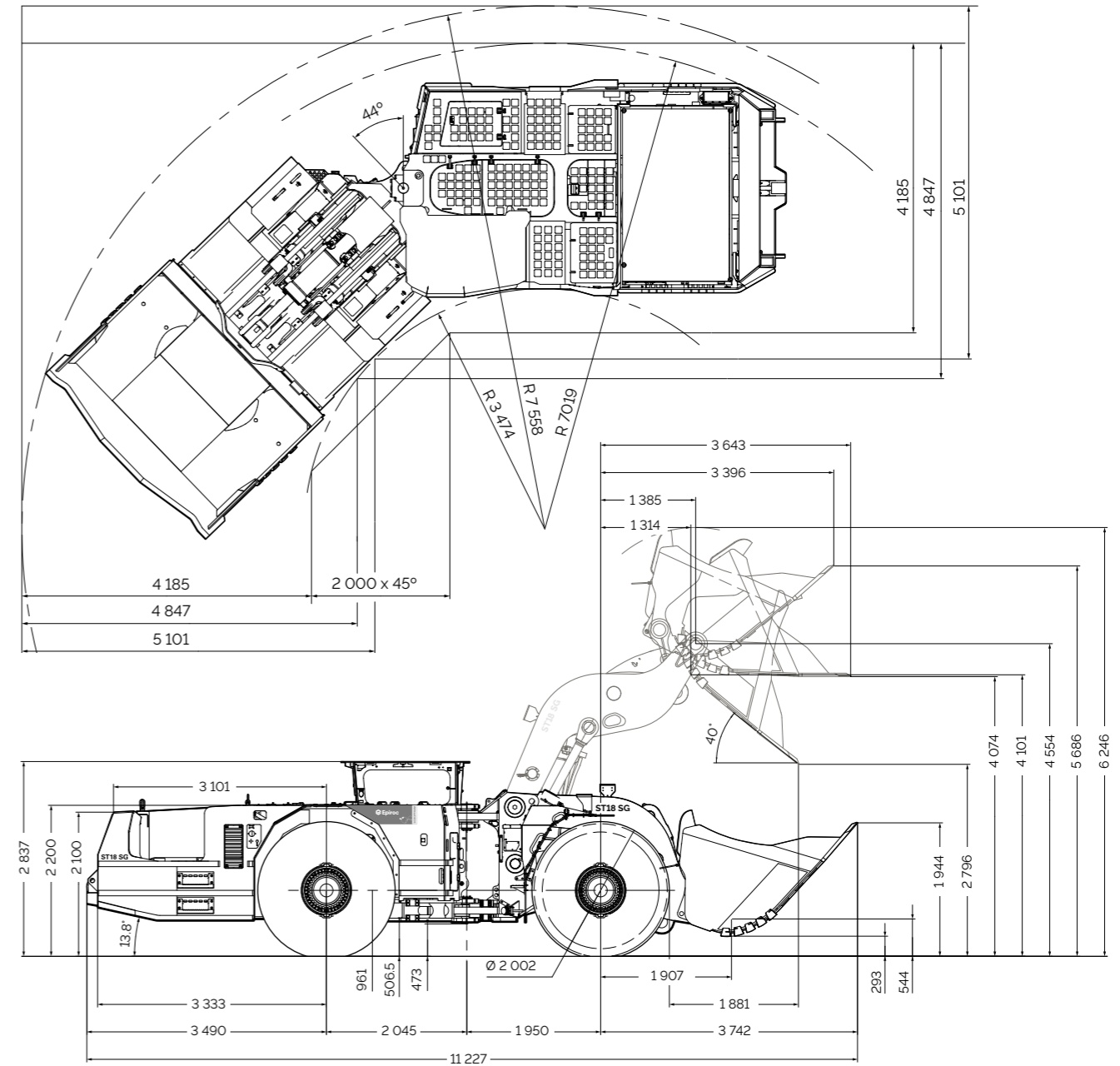
Main frame

- EOD ejector bucket
- Wheel chocks and brackets
- Ground engagement tools, GET
- Ansul A-101 Dry Chemical Fire Suppression system with manual release (CE requirement)
- Ansul Checkfire 210 Suppression Detection and Actuation system (CE requirement)
- Central automatic lubrication system
- Wiggins fast fill for transmission and hydraulic oil
- Handheld fire extinguisher
- Foldable guard rails
- Corrosion resistant radiator
- Wiggins central service point

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

Turning radius and dimensions (2.2 t/m³ standard bucket)



All dimensions are shown in millimeters (mm). Dimensions and calculations shown are based on standard vehicle configuration.

Grade performance

Grade %	0	2	4	6	8	10	12.5	14.3	16	18	20
Grade	-	1:50	1:25	1:16.7	1:12.5	1:10	1:8	1:7	1:6.3	1:5.6	1:5
Empty bucket (km/h)											
1st gear	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
2nd gear	10.5	10.5	10.5	10.5	10.5	10.5	10.5	9.9	9.2	8.3	7.6
3rd gear	17.2	17.2	17.2	17.2	15.7	13.3	11.2	9.9	9.2	8.3	-
4th gear	31.2	31.2	24.6	19.1	15.7	-	-	-	-	-	-
Loaded bucket (km/h)											
1st gear	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
2nd gear	10.7	10.7	10.7	10.7	10.7	9.9	8.3	7.4	6.8	6.2	5.7
3rd gear	17.0	17.0	17.0	15.0	11.6	9.9	8.3	-	-	-	-
4th gear	31.9	25.5	18.3	-	-	-	-	-	-	-	-

3% rolling resistance assumed. Actual performance may vary depending on the application, lock up engaged. Continuous operation is recommended on maximum 17 grade.

Automate your operation

Your Scooptram loader can be provided with well proven teleremote and automation capabilities, matching the needs of your operation – from small stoping to large block caving.

+ Increased safety

By operating the machine from a control room located in a safe environment, the operator will not be exposed to hazardous areas within the mine.

+ Boost productivity

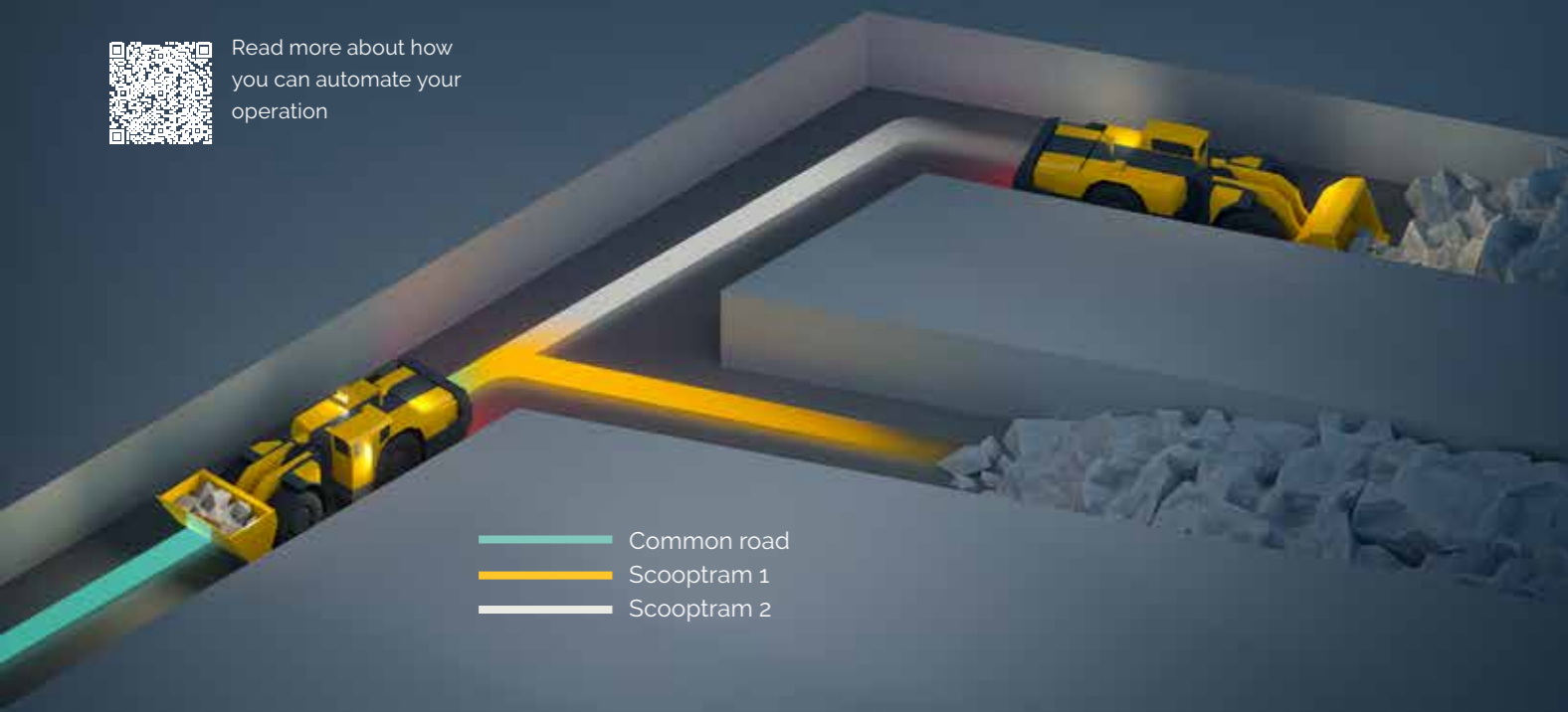
Automation enables you to utilize your loader even when people are not allowed in the mine due to blasting and shift changes, which increases uptime and produced tonnes. Thanks to hauling on repeatable routes, your machine will have fewer wall hits and spend less time in the repair shop.

+ Optimization

Adding automation to your fleet means reaching the full potential of your operation by controlling production assignments, fleet traffic, and work area access. This eliminates the risk of collisions in common drifts and enables a continuous operation.



Read more about how you can automate your operation



Related mine truck - Minetruck MT42 SG

Supreme strength, impressively fast

Minetruck MT42 SG is Epiroc's largest battery-operated Minetruck on the market. It is impressively fast on inclines, accelerating your dump cycles and increasing your overall productivity. The result is unmatched, zero emission performance in underground mining and construction operations.



Specifications

Capacities	
Tramming capacity	42 000 kg
Standard box volume (SAE heaped)	19.0 m ³
Motion times	
Dumping	13 sec
Operating weight, including battery	
Approximate weight	37 700 kg
Front axle load	27 500 kg
Rear axle load	10 200 kg

Motors

	Traction	Auxiliary
Brand	ABB	ABB
IP	65	65
Nominal power	2 x 200 kW	160 kW
Nominal torque	2 x 1 100 Nm	600 Nm
Nominal voltage	400 VAC	400 VAC
Cooling	Liquid cooled	Liquid cooled

United in performance. Inspired by innovation.

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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