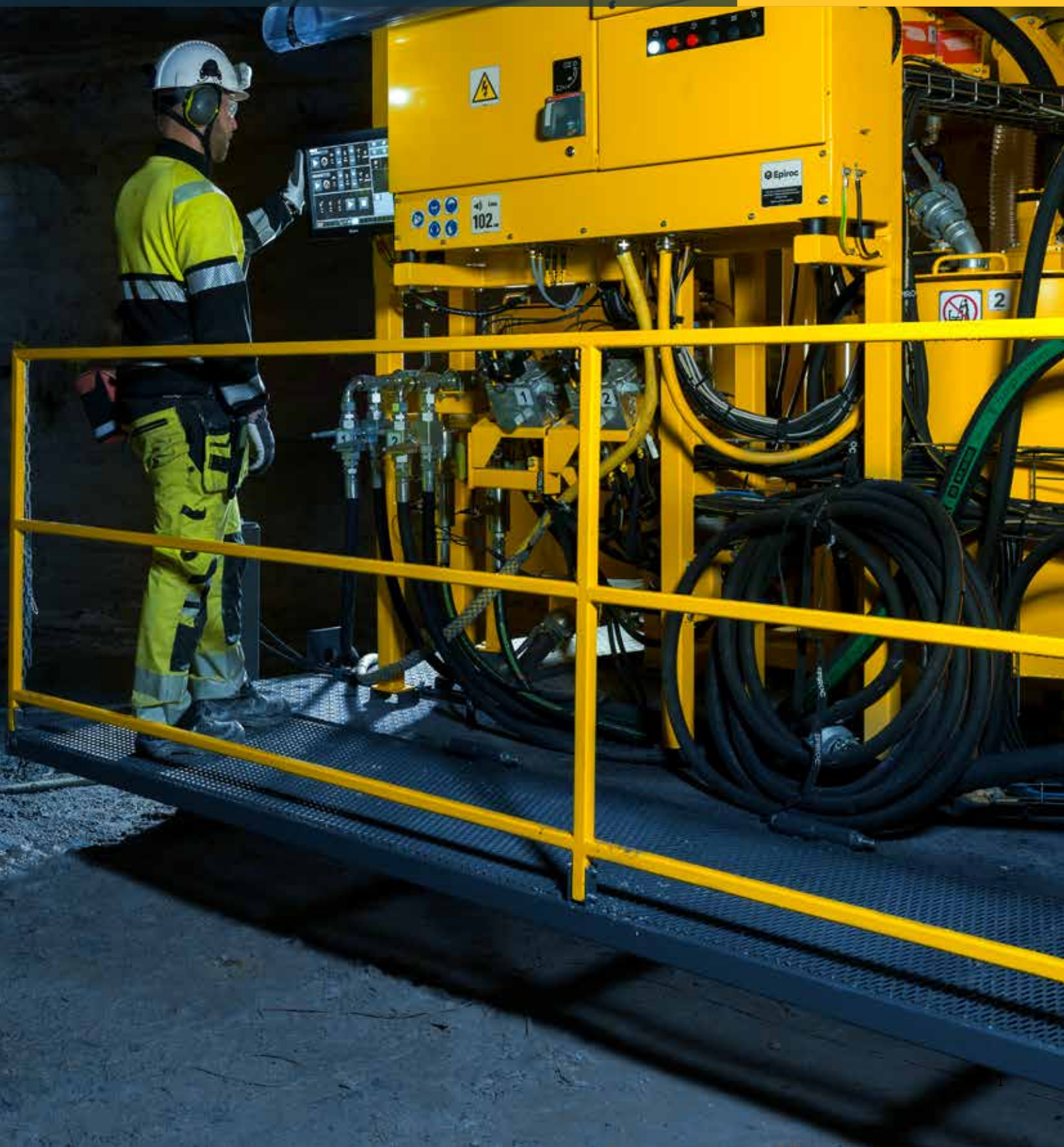


Unigrout M2 S

The new digitalized grouting standard with full connectivity and control



The fully integrated grouting solution

Unigrout M2 got a sibling - the Unigrout M2 S. With the latest addition to the family, Unigrout continues to be the first choice in injection grouting for civil constructions. The connectivity between Unigrout M2 S and the drilling unit, on surface or underground, creates a base for the digitalization of the complete process from hole to grout.

⊕ Main benefits

Mobility thanks to a compact all-in-one design making the rig easy to relocate at the worksite

Connectivity by utilizing Epiroc's well-known Rig Control System (RCS 5) that does not only operate the unit, but also uses MWD (Measure While Drilling) data for maximized performance

User-friendliness thanks to a clear GUI with touch screen where the operator can control the complete process

Touch screen operated design for full control of the grouting process



Operating platform for easy access to all vital functions



The MWD-data from the face drilling rigs can be automatically transferred to the Unigrout M2 S.

Silo and additive tanks included on the platform for automated mixing

Optional hydraulic legs for leveling the platform before use

Complete reporting and overview

All MWG-data (Measure While Grouting) is saved in the Rig Control System along with the MWD-data (Measure While Drilling) from the face drill rig. The Underground Manager software combines MWG-data and MWD-data to display clear and informative graphs and tables for reporting.



+ Safety

The built-in touch screen allows the operator to control all vital functions of Unigrout M2 S. This means a safer working environment all better improved control and overview of the grouting process.



+ Well-known mechanics

The Unigrout M2 S will keep its well-known mixer design as well as the double acting Pumpac. These components constitutes the heart in grouting to ensure state of the art functionality and optimal results.



+ Packers and accessories

Packers are a crucial part of a total grouting solution. They are widely used for grouting works as well as for water tests. We offer a wide range of packers along with the necessary accessories.



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.

Unigrout selection guide

Your choice of Unigrout system depends primarily on three main selection criteria: the grouting type/application, the grouting capacity required and the degree of automation you need for your operation.

Grouting type/application

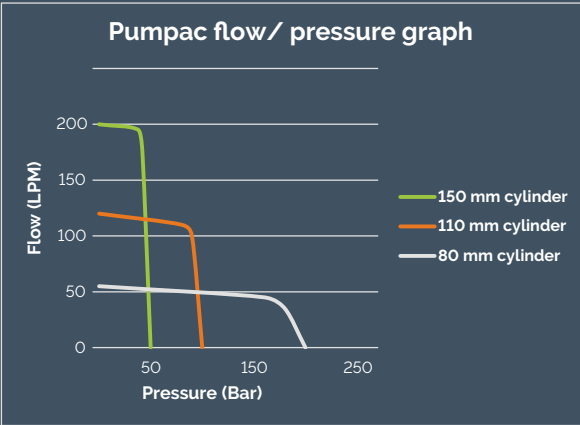
Your selection is influenced mainly by the type of grouting to be performed and by the size of the work place.

Grouting capacity

Pumping capacity is often understood as grouting capacity, but in reality these can differ substantially. Actual grouting capacity always depends on the availability of grout and this is determined by the mixing capacity. For short-time and non-continuous grouting, there are ways to increase the actual capacity, but for continuous injection, mixing capacity is the key. Continuous mixing capacity is the result of several factors such as type and size of mixer, grout mix design, supply of water and cement, and last but not least, whether manual or automated batching/feeding is used.

Automation

Unigrout M2 S with automated batching is the right choice when it is desirable to improve batching accuracy and increase mixing capacity by reducing human error and fatigue.



		Pressure max, bar	Flow max, l/min	Cylinder Ø mm
HP High Pressure	HP1	200	50	80
	HP2	100	100	110
LP Low Pressure	LP1	100	100	110
	LP2	50	200	150

Why grouting? - Minimize risk

Grouting is an engineering method used globally for the treatment of ground and structures in order to achieve the required characteristics. In many cases, it all comes down to risk management and avoiding disastrous accidents or hazards in mining and civil engineering projects, whether in construction or in operation.

Sealing

Water is a crucial resource that needs protecting. On the other hand, water may cause risk and difficulty in mining and construction operations. Grouting reduces permeability, which minimizes the impact of excavation on the ground water, while reducing risk and de-watering costs during construction and operation. Whether it's about sealing the rock mass around a tunnel or underground structure (e.g. pre-grouting), beneath a dam (e.g. curtain grouting) or in a mine. This type of grouting is generally most extensive and demanding.

Strengthening/stabilizing

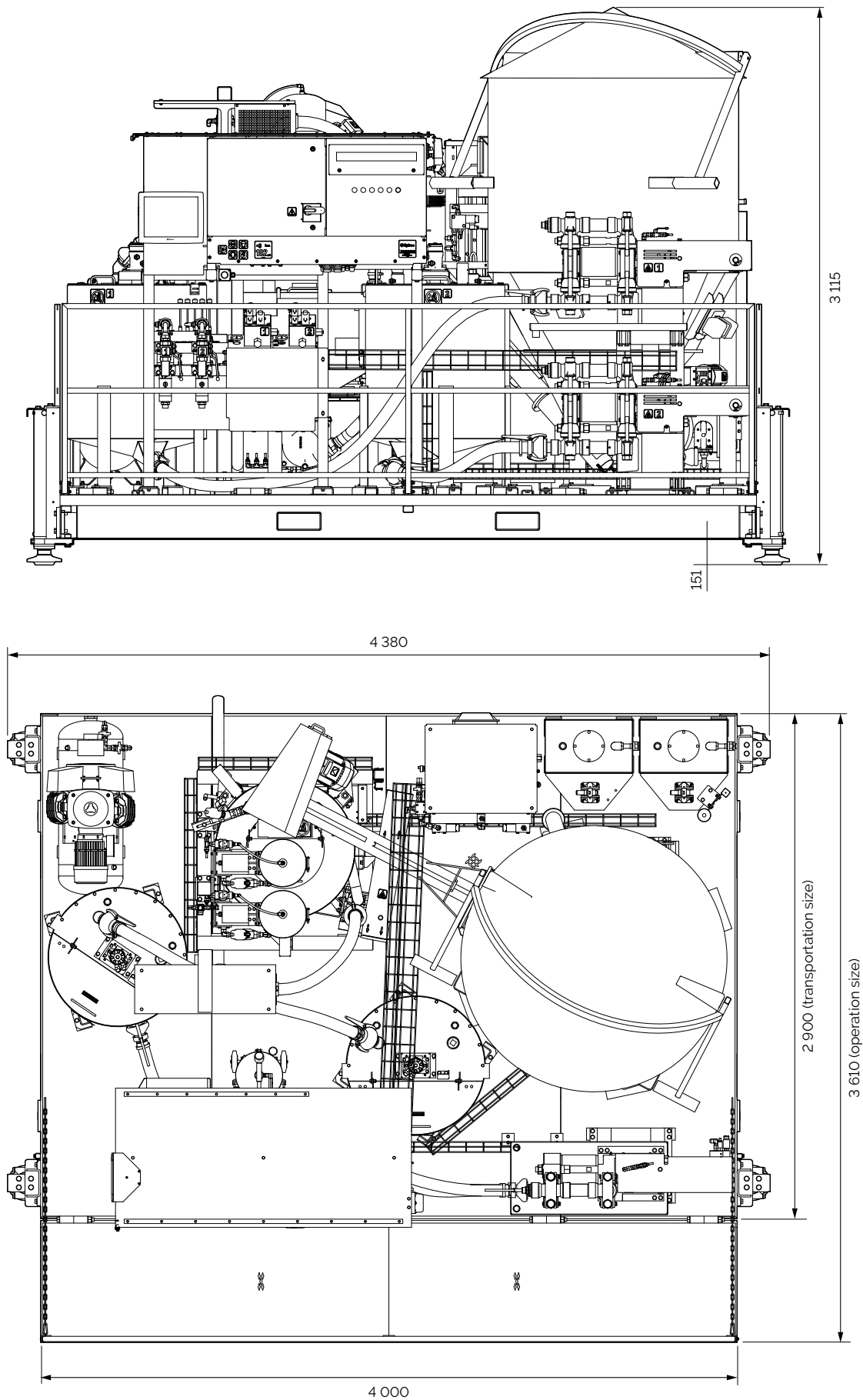
Natural ground conditions do not always meet the full construction specification. Among other methods, grouting is applied to improve ground characteristics. In almost any civil works – tunneling, roads, dam construction, foundations and mining – there is a need to improve the rock or soil using e.g. consolidation grouting.

Filling

Sometimes grouting is used to fill a hole, gap or similar. In this category, common applications include bolting/anchoring, contact grouting/backfilling, piling or micro-piling, cavity grouting, etc.

Technical specifications

Measurements in millimeters



Technical specifications

● - Standard ○ - Option
A - Unigrout M2 B - Unigrout M2 S

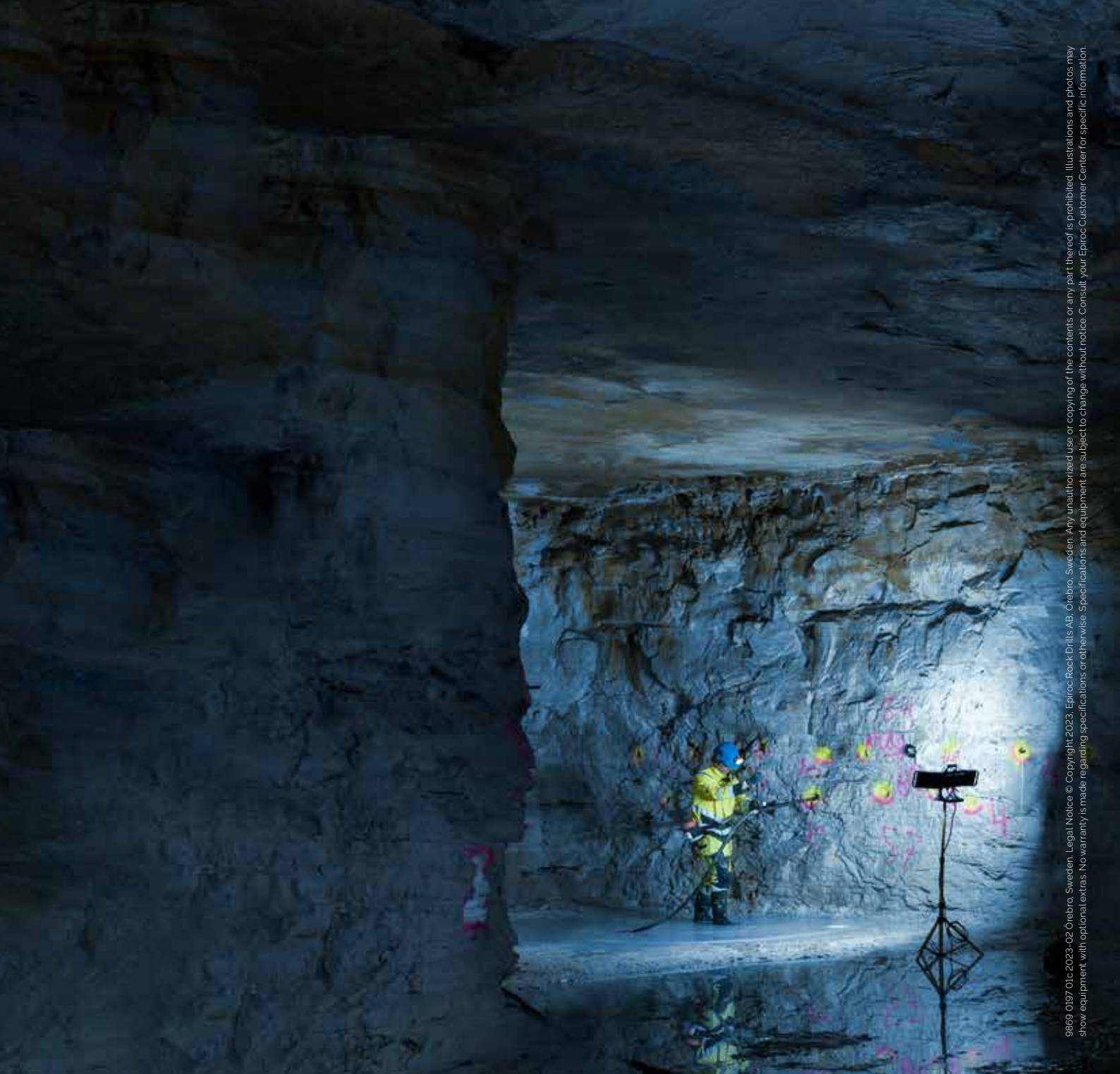
Mixer			Power unit		
	A	B		A	B
200 l tank volume (Cemix 203H)	●	●	45 kW installed power	●	●
1800 rpm rotation speed	●	●	380-690 V voltage	●	●
			1 000 V voltage	○	○
			50/60 Hz frequency	●	●

Agitator			Electrical control system		
	A	B		A	B
400 l tank volume (Cemag 403H)	○	○	Dosac	●	
2 x 400 l tank volume (2 x Cemag 403H)	●	●	Logac	●	
800 l tank volume (Cemag 803H)	○	○	RCS		●
60 rpm rotation speed	●	●			

Grout pump			Optional equipment		
	A	B		A	B
50 bar pressure, 200 l/min flow (Pumpac)	○	○	Hydraulic legs	○	○
100 bar pressure, 100 l/min flow (Pumpac)	○	○	Additive dosing pump (Logac required)	○	○
200 bar pressure, 50 l/min flow (Pumpac)	○	○	WLAN kit	○	○

Silo			Weight		
	A	B			
1.3 tonnes	●	●	Unigrout M2	5 000 kg	
2.3 tonnes	○	○	Unigrout M2 S	5 000 kg	

Additive tank system			Sound and vibrations		
	A	B			
24 l dosing tank + 200 l storage tank	○	○	Unigrout M2	86 dB(A)	0.15 mm/s²
2 x 24 l dosing tank + 2 x 200 l storage tank	●	●	Unigrout M2 S	86 dB(A)	0.15 mm/s²



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