

DS211L-M UNDERGROUND DRILL RIG

TECHNICAL SPECIFICATION

DS211L-M is a fully mechanized one man operated electro-hydraulic low profile bolting machine for rock reinforcement in excavations with headroom as low as 1.6 meters.

The robust rectangular profile telescopic boom allows the installation of several rows of bolts without moving the machine by a single operator working under the FOPS / ROPS protective canopy. The exceptional «V» shape layout is designed for good visibility and balance, this and the powerful four-wheel-drive articulated carrier ensure fast and safe manoeuvring even in low headroom conditions.

The high performance drilling system allows high drilling performance with good drill steel economy and high machine reliability. The operator environment and added automatic functions allow the operator to concentrate on safe, fast and accurate drilling and bolts installation. All functions are piloted by a radio remote control, with SICA platform for fault finding.

All the service points are well protected but easy to access.

KEY FEATURES

Coverage area	6 900 x 2 955 mm
Hydraulic rock drill	RD106, 6.5kW
Bolting head	TULPM
Boom	B26XLLPMB
Minimum drift size (H x W)	2 500 mm x 2 500 mm
T-section width in turning	4 045 mm
Transport width	2 260 mm
Transport height	1 380 mm / 1 950 mm
Transport length	11 360 mm
Total weight	14 500 kg depending on options



1. SANDVIK DS211L-M - LOW PROFILE BOLTER

HYDRAULIC ROCKDRILL

Type of rock drill	RD106 (TS2-334)
Percussion power	6.5 kW
Percussion pressure	Max. 180 bar
Percussion rate	65 - 85 Hz
Rotation speed	Max. 350 rpm (with OMM32)
Rotation torque	100 Nm (with OMM32)
Hole size (drifting)	22 - 45 mm
Recommended rod	H25
Shank adapter	R23 (male)
Weight	52 kg
Length	600 mm
Profile height	70 mm
Inflating device for accumulator	Spec. sheet 2-9110

HYDRAULIC ROTARY DRILL

Type of rotary drill	RHR54 wrench (TS2-250)
Operating pressure	Max. 210 bar
Rotation speed	Max. 1 000 rpm
Rotation torque	Max. 450 Nm

BOLTING HEAD

Type of bolting head	TU-LPM 60 (8-510S)
Type	Mechanized, double pass
Drill rod	MF R23 - H25
Bolt magazine capacity	5 bolts
Sidewall bolt	Right and left
Bolting method	Resin cartridge injection

BOOM

Type of boom	B26XL-LPMB (TS2-261)
Parallelism	Automatic hydraulic
Boom extension	1 700 mm
Feed extension	500 mm
Bolting head roll-over	240°
Bolting head positioning, left and right	80°, 110°
Boom weight, net	2 000 kg

HYDRAULIC SYSTEM

Powerpack	HPP155 (55 kW)
Filtration (pressure / return)	20 µ / 10 µ
Oil tank volume	160 liters (drilling)
Filling pump for hydraulic oil	Manual
Cooler for hydraulic oil	OW30 oil-to-water (30 kW)
Hydraulic low level indicator	Stops the drilling when the oil level in drilling tank is low
Safety shutdown	Low water pressure, low air pressure, low oil level
Oil drilling safety temperature	Above 75 °C
Tool set for hydraulic adjustment	Specification 2-9100

DRILLING CONTROL SYSTEM

Type of control system	THC561 (TS2-362)
Operating principle	Hydraulic control
Radio remote controls	Drilling / bolting controls Training mode
Power control	Adjustable full power Adjustable collaring power Anti-jamming system
Rotation control	Adjustable rotation speed Reversible rotation
Flushing control	Water flushing
Drilling and boom movement inhibition	2 x switches and 1 x door interlock
MySandvik insight	Remote monitoring system

ELECTRIC SYSTEM

Standard voltage	380 - 575 V (± 10%), 50 Hz
Total input power	70 kW
Main switchgear	MSE-1JH
IP classification	Specification TS2-132
Starting method	Star delta starter 380 - 575 V
Automatic cable reel	TCR LPII with spooling system
Cable reel control	Operator station and rear of unit
Cable reel end switch	Automatic brake application before end of cable
Proximity detection readiness	1 x power cable available in the operator compartment
Battery switch	1 x double pole lockable switch
Front working lights (combined working and driving)	2 x 35 W HID and 4 x 70 W (24 V)
Rear driving lights	2 x 70 W (24 V)
Amber flashing light	LED (24 V)
Operator station light	Standard
Sealed AGM batteries	2 x 12 V, 95 Ah

AIR AND WATER SYSTEM

Flushing of holes	By water
Water booster pump	WBP1 (4 kW)
Water pump capacity	33 l/min at 15 bar (input pressure = 4 bar)
Water pump inlet pressure	2 bar (Min.)
Flushing water pressure	10 - 15 bar
Shank lubrication device	SLU-1 (air / oil mist)
Air compressor	CTN16 (1.6 m³/min at 7 bar)
Rock drill oil consumption	50 - 100 g/h
Rock drill air consumption	250 l/min
Manual air flushing	1 x 60 liters air receiver

OPERATOR'S SAFETY CANOPY

Canopy certification	FOPS / ROPS (ISO 3449)
Unit height in tramming	High position : 1 950 mm Low position : 1 775 mm
Operation	Seated operations
Operator's seat	Ergonomic T-back seat
Sound pressure level EN 791	Operator station: 98 dB(A)
Fault finding device	SICA platform

CARRIER

Type of carrier	TCLP II (framesteered)
Carrier articulation	± 43°
Rear axle oscillation	± 15°
Ground clearance	300 mm
Diesel engine	Deutz BF4M2012 (74 kW, Tier 2)
Diesel engine control	Electronic, EMR
Exhaust catalyzer	Standard
Transmission	Hydrostatic, automotive
Wheel motor	4 x radial piston
Tires	315/85 x15
Service brakes	Hydrostatic and positive braking
Parking and emergency brakes	SAHR fail safe type wet disc brakes
Neutral braking	Brakes applied when neutral position activated
Tramming speed	12 km/h (Horizontal) 5 km/h (14%=1:7=8°)
Gradeability /sideways tilt	Max. 15° / 15°
Fuel tank	60 liters
Tramming oil tank	50 liters
Carrier stabilization	Vertical (front and rear)
Brake release	Manual pump
Tramming alarm	Standard
Wheel chocks and holder	2 pieces
Document box	A3 format
Access point	Yellow reflective (stair and handle)

Documentation	2 x Operator's manual 2 x Maintenance manual 2 x Technical manual (in English only) 2 x Parts manual (in English only) PDF manuals
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OPTIONAL FEATURES AND PACKAGES

Bolting head	
*Type of bolting head	TU-LPM 50 (Bolt length 1.5 - 1.6)
TU-LPM	2.1 meters single pass holes with 2 x 60 liters air receivers
Resin mixing system	Automatic
Additional rod handler	Optional
Hydraulic system	
*Filling pump for hydraulic oil	Electric
Additional tramming HP filter	10 micron
Drilling control system productivity	Remote monitoring system
Electric system	
Electric cabinet	Protection door
*Starting method	Soft starter 380 - 575 V only
Electric cables	Specification TS2-121
Ground fault and overcurrent protection	VYK
Indicator light for jacks up	Sensors in the jacks
Dewatering pump outlet readiness	Site voltage 380 - 575 V (Max. 11 kW)
*Extra lighting halogen	4 x 70 W at canopy + search light
*LED lights package	8 x 43 W LED, excl. additional lights
*Extra lighting LED	4 x 43 W LED at the canopy + search light

OPTIONAL FEATURES AND PACKAGES

Air and water system	
*Shank lubrication device	KVL 10-1 (air/oil mist) with low level indicator
Air mist flushing	External water / internal air, CTN16 + 2 x 60 liters air receivers With IP5 aircleaner
Air mine connection	2 x 60 liters air receivers
End of hole air flushing	Hose and reel for accessories
Pressurized air outlet	32 mm (1 ¼"), 80 meters
Water hose with hooks	38 mm (1 ½"), 60 meters
Operator's safety canopy	
Screen protection	Specification TS2-062
Cleaning system	
HP system without reel	Up to 180 bar
HP system with reel	Up to 180 bar
Greasing systems	
Centralized greasing points	Carrier
Manual system	Greasing gun and cartridge with hose reel
Fire suppression system	
Spare hand held fire extinguisher	1 or 2 x 6 kg Type ABC 2 x 9 kg Type ABC 1 x 11 kg Type ABC Ansul, 6 nozzles
Automatic system	
Carrier	
*Foam filled tires	4 pcs Auto brake application on default
ABA brakes	Fuel and oil tanks
*Lockable filler cap	Specification TS2-381
Proximity interface	
Extra items	Gate end box Berg plug /Berg base Spare rock drill Spare wheel assembly Special tools for rock drill Documentation Warranty extension Package: Country specific options Package: Extra safety Package: *Harshwater
	RD106 Air or foam filled tire RD106 Extra paper, PDF manuals One year (excl. Kazakhstan) SAS (Specification TS2-155) Specification TS2-275 Basic or advanced (TS2-049)
*) replaces standard feature	