

DD220L UNDERGROUND DRILL RIG

TECHNICAL SPECIFICATION

DD220L is a low profile twin-boom electro-hydraulic drilling machine designed to operate in the excavations with a headroom as low as 1.7 m. The robust, universal booms have a large, optimum shaped coverage, 360° rotation, and full automatic parallelism for fast and easy face drilling. The booms can also be used for cross-cutting, and the hose layout is specifically designed to maximize protection in low headings.

The exceptional 'V' shaped 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 in safe, fast and accurate drilling. All service points are well protected but easy to access.

KEY FEATURES

Coverage area	40 m ² (auto-parallel)
Hydraulic rock drills	2 x HLX5
Drill feeds	2 x TF512
Booms	2 x B26F
Hole length	Up to 4 660 mm
Minimum drift size (H x W)	2 500 mm x 2 500 mm
Turning width (T-section)	4 950 mm
Transport width	2 260 mm
Transport height	1 380 mm / 1 950 mm
Transport length	13 210 mm
Total weight	20 000 kg depending on options



HYDRAULIC ROCK DRILL

Type of rock drill	HLX5 (TS2-232)
Percussion power	20 kW
Percussion pressure	Max. 220 bar
Percussion rate	67 Hz
Rotation speed	Max. 250 rpm (with OMS80)
Rotation torque	400 Nm (with OMS80)
Hole size (drifting)	43 - 64 mm
Hole size (cuthole)	76 - 127 mm
Recommended rod	T38 - Hex 35 - R32 T38 - Hex 35 - Alpha 330 T38 - Hex 35 - R35
Shank adapter	T38 (male)
Weight	210 kg
Length	955 mm
Profile height	87 mm
Inflating device for accumulator	Specification 2-9110

DRILLING FEED

Type of feed	Feed force	Total length	Hole length	Rod length	Net weight
TF512	25 kN	5 270 mm	3 440 mm	3 700 mm	500 kg
CF12	31 kN	4 780 mm	3 450 mm	3 700 mm	490 kg
CFX6/12	31 kN	2 930 mm	3 417 mm	3 660 mm	505 kg

BOOM

Type of boom	B26F (TS2-259)
Parallel coverage	29 m ²
Parallelism	Automatic hydraulic
Boom extension	1 200 mm
Feed extension	1 350 mm
Boom weight, net	1 900 kg
Roll-over angle	360°

HYDRAULIC SYSTEM

Powerpack	HPP555 (2 x 55 kW)
Filtration size (pressure / return)	20 µ / 10 µ
Oil tank volume	300 liters
Filling pump for hydraulic oil	Manual
Oil cooler (water actuated)	2 x OW30 (30 kW)
Hydraulic low level indicator	Stop drilling when the oil level in drilling tank is low
Oil drilling safety temperature	Above 75 °C
Tool set for hydraulic adjustment	Specification 2-9100

CONTROL SYSTEM

Type of control system	THC560 (5-1010)
Operating principle	Hydraulic pilot control
Manual boom control	Direct control Fully proportional Hydraulic parallelism
Drilling control	Adjustable collaring power Feed / percussion control Anti-jamming system
Automatic cycle	Stop and return automatics
Drilling reaming selector	Two rotations speeds can be preset
Drilling and boom movement inhibition	2 x switches and 1 x door interlock

ELECTRIC SYSTEM

Standard voltage	380 - 575 V (± 10%), 50 or 60 Hz
Total input power	130 kW
Main switch gear	MSE-1JH
IP classification	Specification TS2-132
Starting method	Star delta starter 380 - 575 V
Automatic cable reel	TCR2 LP with spooling system
Cable reel control	Operator station and rear of unit
Cable reel end switch	Automatic brake application before end of cable
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	1 x 21 W (24 V)
Sealed AGM batteries	2 x 12 V, 95 Ah

FLUSHING SYSTEM

Flushing of holes	By water
Water booster pump	WBP2
Water pump capacity	43 l/min
Water pump inlet pressure	2 bar (min.)
Flushing water pressure	10 - 15 bar
Shank lubrication device	SLU-2 (air / oil mist)
Air compressor	CTN16 (1.6 m ³ /min at 7 bar)
Rock drill oil consumption	180 - 250 g/h
Rock drill air consumption	250 - 350 l/min

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: 102 dB(A) Emitted: 124 dB(A)

CARRIER

Type of carrier	TC2B LP (frame steered)
Carrier articulation	± 37°
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	Foam filled tires Front: 14.5-15 Eternity Rear: 315/85 x 15 Solideal
Service brakes	Hydrostatic braking
Parking and emergency brakes	SAHR fail safe type wet disc brakes
Neutral braking	Brakes applied when neutral position activated
Tramming speed	7 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)
Colour scheme	
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

OPTIONAL FEATURES AND PACKAGES

Rock drill	
*Type of rock drill	RD314 (with CF /CFX feed only)
Drilling feed	
*TF feed lengths	10', 14' CF10', CF12', CF14' (with RD314 only)
*CF feed lengths	CFX6/12, CFX8/14 (with RD314 only)
*Telescopic feed	CFX6/12 with 3R Pito
Boom	
*Type of boom	B26S-NV boom (N/A with TF514 and CFX8/14)
Hydraulic system	
*Filling pump for hydraulic oil	Electric
Additional tramming HP filter	10 micron.
Electric system	
Electric cabinet	Protection door
Electric cables	Specification TS2-121
Ground fault and overcurrent protection	VYK
Electric power interlock	Powerpack starts only when jacks are on ground
Dewatering pump outlet readiness	Site voltage 380 - 575 V (Max. 11 kW)
*LED lights package	43 W LED, excluding additional lights
Extra working HID lights	2 x 35 W HID (24 V).
Extra working LED lights	2 x 43 W LED (24 VDC)

OPTIONAL FEATURES AND PACKAGES

Air and water system	
*Shank lubrication device	KVL10-2 (air/oil mist) KVL10-2 (air/oil mist) with low level indicator
Air mist flushing	External water / external air with IP5
Air mine connection	With IP5 air cleaner
Pressurized air outlet	Hose and reel for accessories
Water hose with hooks	32 mm (1 ¼"), 80 meters 38 mm (1 ½"), 60 meters
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	Hose reel only
Fire suppression system	
Spare fire extinguisher	Desautel, 2 x 6 Type ABC
Manual system	Ansul, 6 nozzles. (2 booms)
Carrier Fast filling systems ABA brakes	Complete Auto brake application on default Fuel and oil tanks
*Lockable filler cap	
Extra items Gate end box Berg plug /Berg base Spare rock drill Spare wheel assembly Special tools for rock drill Documentation	HLX5 or RD314 1 x Solideal or / and 1x Eternity.
Package: Country specific options	Extra paper, PDF manuals
Package: Extra safety	SAS (Specification TS2-155)
Package: *Harsh water	Specification TS2-275 Basic or advanced (TS2-049)
*) replaces standard feature	