

DT820

Tunneling drill

Key features

Coverage area	110 m ² (W14.2 m x H8.4 m)
Hydraulic rock drill	2 x RDX5 (20 kW)
Drill feed	2 x TF500-16'
Boom	2 x SB90
Control system	THC560, hydraulic
Hole length	Up to 4 660 mm
Turning width (T-section)	4 840 mm (with TF500-16')
Transport / drilling width	2 500 mm / 3 000 mm
Transport / drilling height	2 750 mm / 3 600 mm
Transport length	14 930 mm (TF500-16')
Total weight (depending on options)	26 500 kg

The Sandvik DT820 is a two boom electro hydraulic jumbo for fast and accurate drilling in tunneling and cavern excavation of 12 - 110 m² cross sections.

The hydraulic controlled drilling system with added automatic functions and different optional instrumentation levels enable productive and high quality excavation.

The RDX5 rock drills deliver superior performance with high consumable life, lowering operating costs and giving long service interval.

The SB90 universal booms have a large optimum shaped coverage and full automatic parallelism. The booms can also be used for cross-cutting and bolt hole drilling.

The powerful 4-wheel-drive center articulated carrier ensures rapid and safe tramming with good balance.



Technical Specification

Hydraulic rock drill

Type of rock drill	RDX5 (TS2-433)
Percussion power	20 kW
Percussion pressure	Max. 220 bar
Percussion rate	67 Hz
Rotation speed	Max. 250 rpm (with OMS125)
Rotation torque	625 Nm (with OMS125)
Hole size (drifting)	43 - 64 mm
Hole size (cut hole)	76 - 127 mm
Recommended tools	T38 – H35 – Alpha 340
43 - 45 mm:	T38 – H35 – Alpha 360
48 - 51 mm:	T38 – R39 – Alpha 360
Shank adapter	T38 (male)
Weight	210 kg
Length	955 mm
Profile height	87 mm

Feed

Type of feed	TF500-10' Optional	TF500-12' Optional	TF500-14' Optional	TF500-16' Standard
Feed force (Max.)	25 kW	25 kW	25 kW	25 kW
Total length	4 690 mm	5 300 mm	5 910 mm	6 520 mm
Hole length	2 830 mm	3 440 mm	4 050 mm	4 660 mm
Rod length	3 090 mm	3 700 mm	4 305 mm	4 915 mm
Net weight	470 kg	500 kg	530 kg	560 kg

Boom

Type of boom	SB90 (TS2-265)
Parallel coverage	90 m²
Parallelism	Hydraulic
Boom extension	1 800 mm
Feed extension	1 650 mm
Boom weight, net	2650 kg
Roll-over angle	358 °

Hydraulic system

Powerpack	HPP555 (2 x 55 kW)
Percussion pump	110 cc (variable)
Rotation pump	60 cc (variable)
Filtration size (pressure / return)	20 µ / 10 µ
Oil tank volume	290 liters
Filling pump for hydraulic oil	Electric
Cooler for hydraulic oil	OW30 oil-to-water (2 x 30 kW)

Control system

Type of control system	THC560, hydraulic (TS2-361)
Operating principle	Hydraulic control
Manual boom control	Direct control Fully proportional Hydraulic parallelism
Drilling control	Manual collaring Feed / percussion control Anti-jamming system Flushing control
Automatic cycle	Stop and return automatics

Electric system

Standard voltage	380 - 690 V (± 10%), 50 Hz
Total input power	135 kW
Main switch	MSE2
IP classification	Specification TS2-132
Starting method	Star-delta starter 380 - 690 V
Automatic cable reel	TCR4E
Cable reel control (in / out)	Operator station
Front lights (combined working and driving)	8 x 35 W HID (24V)
Rear lights (combined working and driving)	4 x 35 W HID (24 V)
Rear parking / brake lights	1 x Red LED (24V)
Stair and service lights	LED (24V)

Air and water system

Flushing of holes	By water
Water booster pump type	WBP2
Water pump capacity	100 l/min
Water pump inlet pressure	2 - 7 bar
Flushing water pressure	10 - 15 bar
Shank lubrication device	SLU-2 (air / oil mist)
Air compressor	CTN10 (1.0 m³/min at 7 bar)
Oil consumption	180 - 250 g/h
Air consumption	250 - 350 l/min

Operator's safety canopy

Canopy certification	FOPS (ISO 3449)
Unit height in tramming	3 600 mm
Sound pressure level according to EN 16228	Cabin < 103 dB(A) Emitted 126 dB(A)
Operation	Standing drilling, seated tramming

Technical Specification

Carrier	
Type of carrier	TC8 (frame-steered)
Carrier articulation	± 37°
Rear axle oscillation	± 8°
Ground clearance	400 mm
Diesel engine	QSB 4.5, 124 kW, Tier 3, Stage IIIA
Transmission	Hydrodynamic, Spicer T20 000
Axles	Dana Spicer 113 (front and rear)
Tires	14.00-24 PR28
Service brakes	Hydraulically applied wet disc brakes
Parking / emergency brakes	SAHR type, fail safe wet disc brakes
Fuel tank	150 liters
Tramming speed	Horizontal (0%): 16 km/h 14% = 1:7 = 8°: 5.4 km/h
Gradeability / sideways tilt	Max. 15° / 5°
Carrier stabilization	TJ60 (front), TJ75 (rear)
Hand throttle	Standard
Hand held fire extinguisher	7.7 kg (type ABC)
Carrier centralized greasing	Specification TS2-463
Tramming alarm	Standard
Colour scheme	Sandvik standard
Documentation	1 x Operator's manual 1 x Maintenance manual 1 x Technical manual (in English only) 1 x Parts manual (in English only) 1 x e-manual

Optional items	
Feed	
*Feed length	10', 12', 14'
*Telescopic feed	TFX8/14
Rod retainer	TRR1 with TFX feed (incl. safety wire)
Carrier	
Exhaust catalyzer	For Tier 3 engines
Extra items	
Spare rock drill	RDX5
Spare wheel assembly	Standard tires
Special tools for rock drill	Field tool set Complete tool set Extra manuals
Documentation	India
Package: Country specific options	
*) Replaces standard feature	

