

DD212 NARROW VEIN DRILL

TECHNICAL SPECIFICATION

Sandvik DD212 is a compact and versatile single-boom electro-hydraulic jumbo for tunneling and mining development. The drill is purposely designed for narrow vein operations that will enable miners and drill contractors to:

- Open smaller tunnel sections for better control of dilution
- Improved quality of drilled face and tunnel profiles
- Increase drill performance and meters advanced
- Decrease total cost of ownership compare to existing offers

Sandvik SB20i robust instrumented boom offers a large optimum shaped coverage thanks to the one meter boom extension, it covers tunnels cross sections from 6m² to 25 m².

With its two rotation actuators NV-narrow vein type and full automatic parallelism deliver fast and easy feed positioning, and accurate face drilling.

The modern, powerful and proven hydraulic rock drill RDX5 and the highly efficient THC562 drilling controls system allow high drilling performance with good drill steel economy and great mechanical availability.

The operating environment, and incorporated automatic functions allow the operator to concentrate on safe, precise and productive operations.

Sandvik DD212 compact jumbo layout is designed for good visibility and stability, and all the service points are well-protected but easy to access.

The heavy duty and articulated carrier, with powerful four-wheel-drive transmission, ensures stable and safe maneuvering in small mining drifts or construction tunnels.

KEY FEATURES

| | |
|---------------------------|-----------------------------------|
| Coverage | 25 m ² auto-parallel |
| Rock drill | 1 x RDX5, 20 kW |
| Drilling feed | 1 x TF512 |
| Boom | 1 x SB20i, electronic parallelism |
| Control system | THC562, hydraulic |
| Hole length | Up to 3 440 mm |
| Drift size class (H x W) | 2 500 mm x 2 500 mm |
| Turning width (T-section) | 2 985 mm (TF512) |
| Transport width | 1 400 mm |
| Transport height | 1 900 mm / 2 750 mm |
| Transport length | 9 800 mm (TF512) |
| Total weight | 10 850 kg depending on options |



1. SANDVIK DD212 - NARROW VEIN DRILL

HYDRAULIC ROCK DRILL

| | |
|---------------------------------|--|
| Type of rock drill | RDX5 (TS2-433) |
| Percussion power | 20 kW |
| Percussion pressure | 175 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 (cut hole) | 76 - 127 mm |
| Recommended rod | T38 - Hex 35 - R32 T38 - Hex 35 - Alpha 330 T38 - Hex 35 - R35 |
| Shank adapter (male) | T38 |
| Weight | 210 kg |
| Filling device for accumulators | Specification TS2-430 |

DRILLING FEED

| Type of Feed | TF500-12' (RDX5) Standard | CFX6/12 (RDX5) Option | CFX6/12 (RD314) Option | CFX-XS (RD314) Option |
|---------------------------------|---------------------------|-----------------------|------------------------|-----------------------|
| Feed force | 25 kN | 23 kN | 23 kN | 20 kN |
| Hole length | 3 440 mm | 1 520 / 3 350 mm | 1 587 / 3 417 mm | 1 070 / 2 132 mm |
| Rod length | 3 700 mm | 1 830 / 3 660 mm | 1 830 / 3 660 mm | 1830 / 2 435 mm |
| Total length | 5 270 mm | 3 285 / 5 115 mm | 2 930 / 4 765 mm | 1 965 / 3 035 mm |
| Net weight (without rock drill) | 500 kg | 566 kg | 527 kg | 416 kg |

BOOM

| | |
|----------------------------|--------------------------------------|
| Type of boom | SB20i (TS2-432) Versatile NV boom |
| Boom movements | Hydraulic controls |
| Parallel coverage | 25 m ² auto-parallel |
| Parallelism | Automatic electronic |
| Boom telescopic extension | 1 000 mm |
| Feed extension | 1 350 mm (TF feed) |
| Boom weight, net | 1 550 kg |
| Boom swing, left and right | ± 30° (limited) |
| Roll-over angle | 360° |
| Feed swing angle | 240° |

HYDRAULIC SYSTEM

| | |
|--------------------------------|---|
| Powerpack | HPP 545 (45 kW) |
| Filtration (pressure / return) | 20 µ / 10 µ |
| Oil tank volume | 165 liters |
| Cooler for hydraulic oil | Harsh water cooled OW25 oil-to-water (25 kW) |

DRILLING CONTROL SYSTEM

| | |
|-------------------------|---|
| Type of control system | THC562 |
| Operating principle | Hydraulic control |
| Controls | Direct control Fully proportional Fast rock drill return movement |
| Drilling control | Feed / percussion control Anti-jamming system Torque control |
| Automatic cycle | Stop and return automatics (for feed without rod retainer) |
| Rotation speed selector | Two rotation speeds can be preset |
| Display default | QN panel |
| Boom inhibition switch | At each side of the machine |
| MySandvik insight | Remote monitoring system |

ELECTRIC SYSTEM

| | |
|--|---|
| Standard voltages | 380 - 690V (±10%) |
| Total installed power | 60 kW |
| Main switch gear | QM14 |
| IP classification | Specification TS2-132 |
| Starting method | Star delta 380 - 575 V DOL 600 - 690 V |
| Automatic cable reel | CRQ with six turn indicator light and three turn interlock system |
| Cable reel control | At the operator station |
| Sealed AGM batteries | 2 x 12 V, 90 Ah |
| Low level hydraulic oil | Indicator and switch |
| Emergency stop | On the electric cabinet, at right side machine and on drilling panel |
| Front lights (combined working and driving) | 4 x 50 W LED (4 200 lm, 6 000 K) |
| Rear tramming light | 1 x 50 W LED (4 200 lm, 6 000 K) |
| Parking rear brake / park lights | 1 x red LED |

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 | SLU1 (air / oil mist) |
| Air compressor | CTN9, 1 m ³ /min (7 bar) |
| Rock drill oil consumption | 180 - 250 g/h |
| Rock drill air consumption | 250 - 350 l/min |
| 1 x 60 liters air receiver | For end of hole air flushing |

OPERATOR'S SAFETY CANOPY

| | |
|---|---|
| Canopy certification | FOPS (ISO 3449) |
| Unit height in tramming | 2 750 mm |
| Operation | Standing drilling, seated tramming |
| Operator's seat | Ergonomic, adjustable for tramming including seat belt |
| Sound pressure level according to EN 16228 | Operator station: 102 dB(A) Emitted: 124 dB(A) |

CARRIER

| | |
|------------------------------|---|
| Type of carrier | TCQ (articulated frame) |
| Carrier articulation | ± 27° |
| Rear axle oscillation | ± 6° |
| Ground clearance | 225 mm |
| Diesel engine | Deutz D914L04, 55 kW (Tier 4i, Stage IIIA, MSHA) |
| Exhaust catalyzer | Standard |
| Transmission | Hydrostatic |
| Wheel motor | 4 x radial piston |
| Tires, rim | 300 x 15, 8.00 - 15 |
| Service brakes | Hydrostatic transmission |
| Parking and emergency brakes | SAHR type, fail safe wet disc brakes ABA brakes |
| Tramming speed | 6.0 km/h (Horizontal) 4 km/h (14%=1:7=8°) |
| Gradeability / sideways tilt | Max. 15° / 5° (according to ISO 18758) |
| Fuel tank | 75 liters |
| Carrier stabilization | Telescopic (front) Vertical (rear) |
| Brake release | Manual hand pump |
| Centralized greasing points | Specification TS2-463 |
| Hand held fire extinguisher | 1 x 6 kg (type ABC) |
| Tramming alarm | Standard |
| Colour scheme | Sandvik |
| Documentation | 2 x Operator's manual 2 x Maintenance manual 2 x Technical manual (in English only) 2 x Parts manual (in English only) 2 x USB key of manuals (PDF files) 1 x Online Parts manuals (MySandvik) |

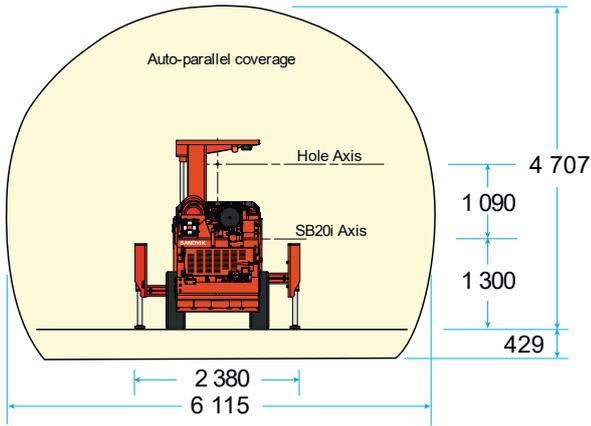
INSTRUMENTATION (OPTION)



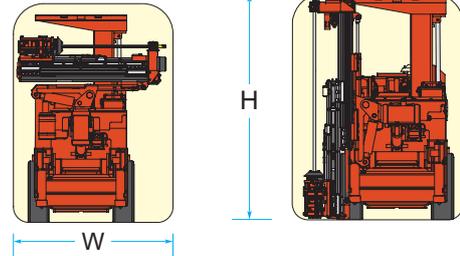
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| Instrumentation with display | Hole parallelism Hole angles: - Horizontal face drilling - Horizontal cross cutting - Vertical and inclined holes Boom angles |
|------------------------------|--|

OPTIONAL FEATURES AND PACKAGES

| | |
|---|---|
| Rock drill | |
| Type of rock drill | RD314 with CFX-feeds |
| Boom | |
| *Boom suspension system | Smooth tramming, Improved ergonomoy |
| Feed | |
| *Type of feed | TF510 feed, CFX6/12 telescopic feed CFX-XS extra compact feed For CFX-feed only |
| Rod retainer | For CFX-feed only |
| Rear stinger | 600 mm (vertical holes), CFX-feed only |
| Hydraulic system | |
| Filling pump for hydraulic oil | Electric |
| Cooler for hydraulic oil | OA25 oil-to-air (25 kW) |
| Drilling control system | |
| MySandvik productivity | Remote monitoring system (TS2-390) |
| Access detector | Mandatory in Europe (TS2-211) |
| Cleaning system | |
| HP system without reel | Up to 180 bar (TS2-343) |
| Greasing system | |
| Manual system | Greasing gun and cartridge with hose reel (TS2-463) |
| Electric system | |
| *Optional voltage | 1 000 V (50 or 60 Hz) with DOL starter (machine height mini 2 470 mm) |
| *Electric cable | Specification TS2-121 |
| Ground fault and overcurrent protection | VYK |
| Battery jump start | Optional |
| Amber flashing light | LED (24 V) |
| Air and water system | |
| Air mist flushing kit | External air / external water External air / internal water (150 liters) |
| Air cleaner for external air | IP5 with air mine connection |
| Water hose with hooks | 32 mm (1 ¼"), 80 meters |
| Operator's safety canopy | |
| Safety grill | Front grill or all around the canopy |
| Fire suppression system | |
| Manual system | Ansul, 6 nozzles (TS2-460) |
| Auto. fire suppression system | Sandvik Eclipse™ (TS2-461) |
| Carrier | |
| *Diesel engine | Deutz D914L04, 58 kW, Tier 3, Stage IIIA, CANMET Deutz BF4L914, EMR, 72 kW, Tier 2 (for high altitude) Deutz TCD2.2, EMR, 55 kW, Tier 4, Stage V |
| *Foam filled tires | 4 pcs |
| Wheel chocks and holders | 2 Sets |
| Extra Item | |
| Berg plug / berg socket | 250A |
| Speedometer | Tramming speed display |
| Spare rock drill | RDX5 or RD314 |
| Spare wheel assembly | Standard or foam filled tire |
| Special tools for rock drill | Field tool set (TS2-434) Complete tool set (TS2-435) |
| Tools and pressure test box | Specification TS2-429 |
| Documentation | Extra paper or PDF manuals |
| Warranty extension | One year (excl. Kazakhstan) |
| Package:Country specific | CIS, AUS, EUR, US/CAN |
| *Package: Harsh water | Basic or Advanced (TS2-049) |
| *Package: Arctic | For extreme conditions (below 0 °C) |
| *Package: Longhole drilling | LHF drilling module (TS2-474) |
| *) Replaces standard feature | |

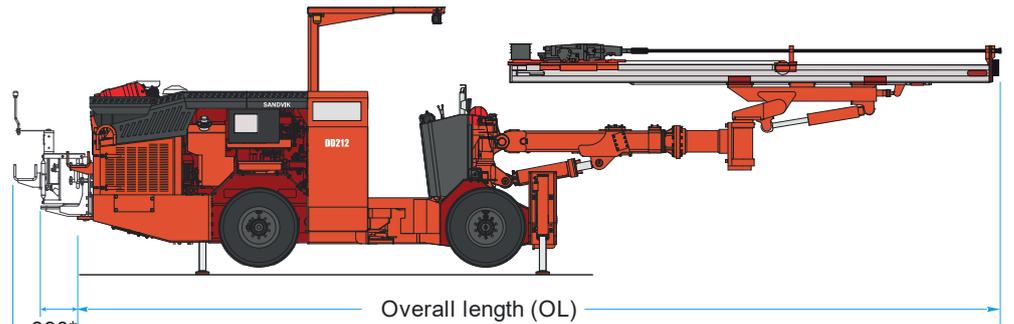
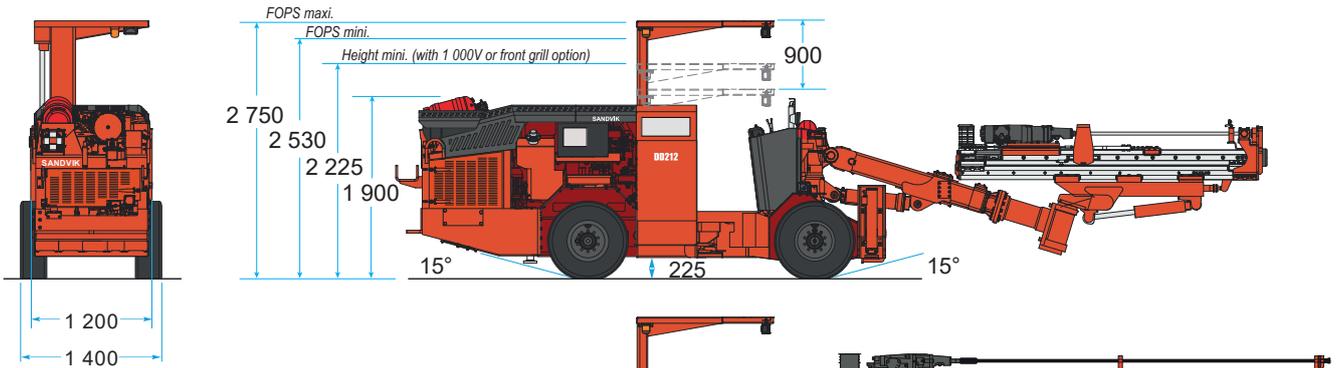


Coverage dimensions with SB20i with CFX6/12+ RDX5

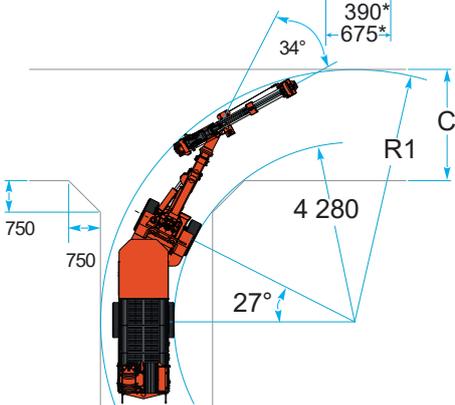


| | CFX6/12 (RDX5) | CFX6/12 (RD314) | CFX-XS (RD314) |
|-----------|----------------|-----------------|----------------------|
| *W (mini) | 3 400 mm | 3 000 mm | 2 100 mm |
| *H (mini) | 3 400 mm | 3 000 mm | 2 530 mm (FOPS mini) |

* 100 mm clearance minimum



*) Dimensions with optional diesel engine Stage V



| | SB20i + CFX6/12 | SB20i + CFX-XS | SB20i + TF512 |
|---------------------|-----------------|----------------|---------------|
| Overall length (OL) | 9 085 mm | 8 135 mm | 9 800 mm |
| Turning radius (R1) | 6 030 mm | 5 960 mm | 6 360 mm |
| Cornering (C) | 2 650 mm | 2 585 mm | 2 985 mm |

Values realised with 5° of the sideways tilt (according to ISO 18758)

All dimensions in mm

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4. SANDVIK DD212 - NARROW VEIN DRILL