



DL2720 TOP HAMMER LONGHOLE DRILL

TECHNICAL SPECIFICATION

Sandvik DL2720 is a fully mechanized and compact electro-hydraulic top hammer longhole drill designed for underground mining in 3.2 x 3.2 meters or larger production drifts. It is capable of drilling vertical and inclined fans and single or parallel diameter 64 – 89 mm longholes up to 38 meters in length, using T38, T45 and T51 MF-rods or Ø65 mm tube rods.

Sandvik DL2720 is mounted on a 4-wheel drive frame-steered and diesel powered carrier. It is equipped with HL820ST hydraulic rock drill, LFRC700 drilling module, FR10 longhole boom, VIC control system and FOPS operator's safety canopy for high drilling capacity, good hole accuracy and maximum safety. The 360° drilling module rotation and wide boom swing and tilt angles make the drill suitable for most mining methods and various service support applications.

The layout of the Sandvik DL2720 undercarriage is designed for good visibility, mobility and stability, ensuring fast and safe tramming in narrow mine drifts. The operator's canopy and maintenance interface are designed for easy access, safe operation and all service points are accessible from the ground level.

KEY FEATURES

| | |
|----------------------------|--|
| Hydraulic rock drill | HL820ST (21 kW) |
| Drilling module | LFRC700 (20 + 1 rods) |
| Rod length | 4' - 6' (1 220 - 1 830 mm) |
| Single section boom | FR10 (on front stabilizer) |
| Minimum drift size (H x W) | 3 150 x 3 150 mm (4' drilling module) |
| Pivot point height | 1 390 - 1 640 mm |
| Vertical holes covering | 1 500 mm |
| T-section width in turning | 3 500 mm |
| Transport width | 1 600 mm |
| Transport height | 2 715 / 2 750 mm |
| Transport length | 8 570 mm |
| Transport weight | 14 800 kg |

ROCK TOOLS AND HOLE LENGTH

| Thread | Rod Ø (mm) | Hole Ø (mm) | Hole length (m)* |
|--------|------------|-------------|------------------|
| T38 | 39 | 64 | 25 - 38 |
| T45 | 46 | 76 | 25 - 38 |
| T45 | 65 (tube) | 76 - 89 | 25 - 38 |
| T51 | 52 | 89 | 25 - 38 |

**) Feed in contact with rock, front stinger retracted*



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HYDRAULIC ROCK DRILL

| | |
|---------------------------|-------------------|
| Type of rock drill | HL820ST (TS2-301) |
| Percussion power | 21 kW |
| Percussion pressure | 200 bar |
| Percussion rate | 42 - 53 Hz |
| Rotation speed | 0 - 180 rpm |
| Rotation torque | 1 095 Nm (OMT200) |
| Weight | 260 kg |
| Length with shank adapter | 1 241 mm |

DRILLING MODULE

| | |
|-----------------------------|----------------------------|
| Type of drilling module | LFRC700 (TS2-175) |
| Rod length | 4' - 6' (1 220 - 1 830 mm) |
| Storing capacity | 20 + 1 rods (all threads) |
| Fan distance from drift end | 1 250 mm (minimum) |
| Feed force | 31 kN |
| Feed and return speed | Up to 0.3 m/s |
| Retaining centralizer | Pito 7 |
| Cuttings diverter | CC705 |
| Front stinger | Extension 2 000 mm |

DRILLING MODULE DIMENSIONS

| Type | Rod length | Total length |
|---------|------------|--------------|
| LFRC704 | 1 220 mm | 2 940 mm |
| LFRC705 | 1 525 mm | 3 240 mm |
| LFRC706 | 1 830 mm | 3 550 mm |

LONGHOLE BOOM

| | |
|----------------------------------|--|
| Type of boom | FR10 (TS2-297) |
| Boom swing | Left 37° / Right 37° |
| Fan tilt (upholes) | Backward 20° / Forward 40° |
| Drilling module roll-over | 360° |
| Drilling module travel | 1 050 mm (LFRC705 and 706) 920 mm (LFRC704) |
| Vertical hole drilling coverage | 1 500 mm (up) 1 200 mm (down) |
| Pivot point height | 1 390 - 1 640 mm |
| Rear stinger | Mounted on feed cradle |
| Rear stinger extension | 1 250 mm |
| Front stabilizer | Horseshoe (long) |
| Laser distance from drill center | 1 430 mm (vertical holes) |

HYDRAULIC SYSTEM

| | |
|--------------------------------|--|
| Type of hydraulic system | TPC LH |
| Operating principle | Electric pilot control |
| Powerpack | HPP 755 (1 x 55 kW) |
| Filtration (pressure / return) | 10 µ / 10 µ |
| Oil tank volume | 200 liters |
| Oil cooler (water actuated) | OW30 oil-to-water (1 x 30 kW) |
| Low oil level indication | Level indicator and automatic switch-off |

DRILLING CONTROL SYSTEM

| | |
|----------------------------|---|
| Type of control system | Sandvik VIC |
| Control panel | In safety canopy |
| Power control (adjustable) | Full percussion Collaring Rotation / Threading Feed / Anti-jamming Flushing |
| Diagnostics system | Interactive |

ELECTRIC SYSTEM

| | |
|--|--------------------------------|
| Standard voltages | 380 - 690 V (± 10%) |
| Frequency | 50 - 60 Hz |
| Total installed power | 72 kW |
| Main switch gear | NSX160N/38 |
| IP classification | Specification TS2-132 |
| Starting method | Star delta starter 380 - 575 V |
| Automatic cable reel | CR with tramming interlock |
| Cable reel remote control | At the operator station |
| Phase inverter detector | Automatic |
| Front working lights (combined working and driving) | 4 x 48 W LED (24 V) |
| Rear tramming lights | 2 x 48 W LED (24 V) |
| Operator station light | 1 x 5 W (24V) |
| Carrier positioning lights | 2 x Laser type |
| Batteries | 2 x 12 V, 80Ah |
| Battery charger | 24 V, 10A |

AIR AND WATER SYSTEM

| | |
|----------------------------|--|
| Flushing of holes | By water |
| Water booster pump type | WBP2 (4 kW) |
| Water pump capacity | 60 l/min at 14 bar (inlet 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 | CTN9, 1 m³/min (7 bar) |
| Rock drill oil consumption | 250 - 550 g/h |
| Rock drill air consumption | 200 - 300 l/min |

OPERATOR'S SAFETY CANOPY

| | |
|--------------------------------|---|
| Canopy certification | FOPS (ISO 3449) |
| Unit height in tramming (FOPS) | High position : 2 750 mm Low position : 2 535 mm |
| Sound pressure level EN 16228 | Operator station: 100 dB(A) Emitted: 124 dB(A) |
| Operator's seat | For working / tramming Adjustable with seat belt |

CARRIER

| | |
|------------------------------|---|
| Type of carrier | MERCURY (frame steered) |
| Carrier articulation | ± 35° |
| Rear axle oscillation | ± 6° |
| Ground clearance | 240 mm |
| Diesel engine | DeutzTCD3.6 L4EDG, 74 kW, China IV |
| Exhaust catalyzer | DPF for China IV |
| Transmission | Hydrostatic, automotive |
| Wheel motors | 4 x radial piston |
| Tires | 10.00 - 15 |
| Service brakes | Hydrostatic and positive braking |
| Parking and emergency brakes | SAHR fail safe type wet disc brakes |
| Tramming speed | 9 km/h (Horizontal) 4 km/h (14%=1:7=8°) |
| Gradeability / sideways tilt | 15° / 5° |
| Fuel tank | 60 liters |
| Carrier stabilization | 2 x hydraulic jacks (rear) |
| Brake release | Manual hand pump |
| Centralized greasing points | Carrier |
| Hand held fire extinguisher | 1 x 6 kg (type ABC) |
| Tramming alarm | Backward alarm |
| Knowledge Box™ | Connectivity solution (TS2-535) My Sandvik insight readiness (TS2-390) |
| Colour scheme | Sandvik |
| Documentation | 1 x Operator's manual 1 x Maintenance manual 1 x Technical manual (in English only) 1 x Parts manual (in English only) 2 x USB key of manuals (PDF files) 1 x Online parts manuals (MySandvik) |

OPTIONAL FEATURES AND PACKAGES

Rock drill

| | |
|--------------------|----------------|
| Type of rock drill | HL710S |
| Power extractor | PE for HL820ST |

Drilling module

| | |
|--------------------------------|-----------------------|
| Drilling module wear parts kit | For alternative tools |
|--------------------------------|-----------------------|

Hydraulic system

| | |
|--------------------------------|----------|
| Filling pump for hydraulic oil | Electric |
|--------------------------------|----------|

Instrumentation

| | |
|-------------------------------|------------------------------|
| Drilling instrument | TIS with USB data collection |
| Spirit level angle indicators | On the side drilling module |

Cleaning system

| | |
|---------------------|-------------------------|
| LP system with reel | Up to 15 bar (TS2-343) |
| HP system with reel | Up to 180 bar (TS2-343) |

Air and water system

| | |
|----------------------------|--|
| *Air compressor | CT28 (2.8 l/min at 7 bar) |
| *Air mist flushing | For external air and water supply (IP5 air cleaner included) |
| Air cleaner | IP5 with air supply |
| *End-of-hole flushing | CT28 with 2 x 60L air receiver |
| Hooks for water / air hose | 2 hooks |

Greasing system

| | |
|---------------|--|
| Manual system | Greasing unit with pump, reel and nozzle (TS2-463) |
|---------------|--|

Electric system

| | |
|---|---|
| *Multi-voltage | 1 000 V (50 Hz) with multivoltage transformer |
| *Electric cables | Specification TS2-121 |
| *Starting method | DOL for voltage above 575 V |
| Ground fault and overcurrent protection | VYK200, VYK1000 |
| Battery jump start | Optional |
| Dewatering pump outlet | 8 kW (site voltage 380 - 1 000 V) |
| Amber flashing light | LED (24V) |

Operator's safety canopy

| | |
|--------------|------------|
| Safety grill | For canopy |
|--------------|------------|

Fire suppression system

| | |
|-------------------------------|----------------------------|
| Manual or automatic system | Ansul, 6 nozzles (TS2-460) |
| Auto. fire suppression system | Sandvik Eclipse™ (TS2-461) |

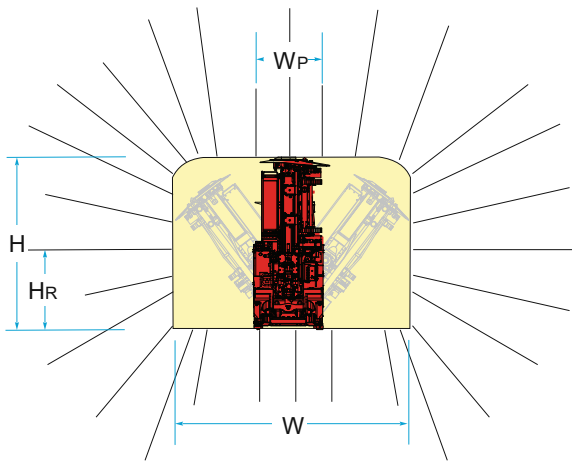
Carrier

| | |
|----------------------------|--|
| *Diesel engine | TCD3.6L4EDG, 74kW, Stage IIIA |
| High altitude engine start | Hydraulic unloading for high altitude engine start |
| *Foam filled tires | 4 pcs |
| Carrier stabilization | U-frame (long) jacks (front) |
| Tramming camera | Front |
| Speedometer | For 2700 serie |
| Wheel chocks and holders | 2 Sets |

Extra Items

| | |
|------------------------------|---|
| Berg plug / Berg socket | |
| Spare rock drill | HL820ST or HL710S |
| Spare wheel assembly | Air or foam filled tires |
| Special tools for rock drill | Complete set (TS2-452) Field kit (TS2-453) |
| Documentation | Extra manual (printed) |
| *Package: Harsh water | Advanced (TS2-049) |

**) Replaces standard feature*



MINIMUM PRODUCTION DRIFT SIZE (MM)*

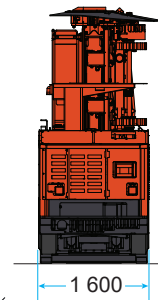
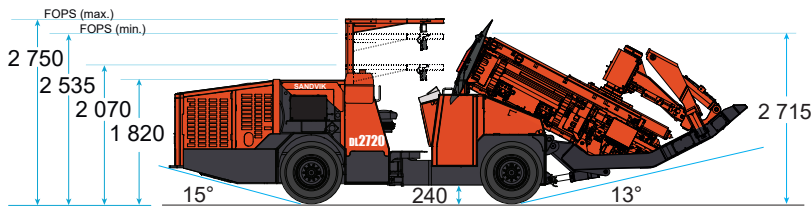
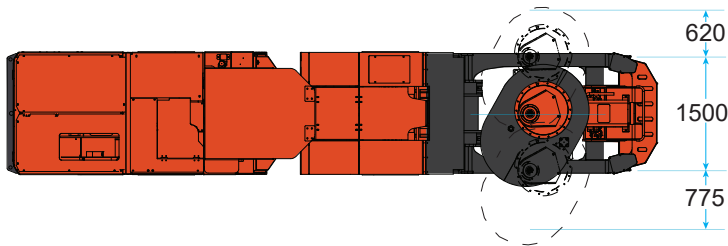
| Model | H | Hr | Wp*** | W |
|---------|----------|----------|------------------|----------|
| LFRC704 | 3 380 mm | 1 390 mm | 1 500 / 1 200 mm | 3 150 mm |
| LFRC705 | 3 680 mm | 1 390 mm | 1 500 / 1 200 mm | 3 450 mm |
| LFRC706 | 3 980 mm | 1 390 mm | 1 500 / 1 200 mm | 3 750 mm |

100 mm clearance on each side *** Upholes / downholes

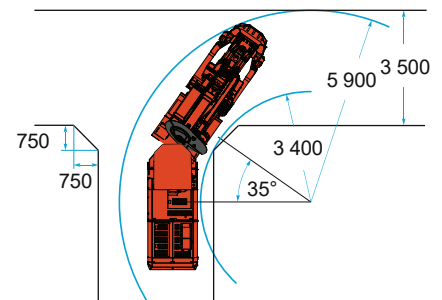
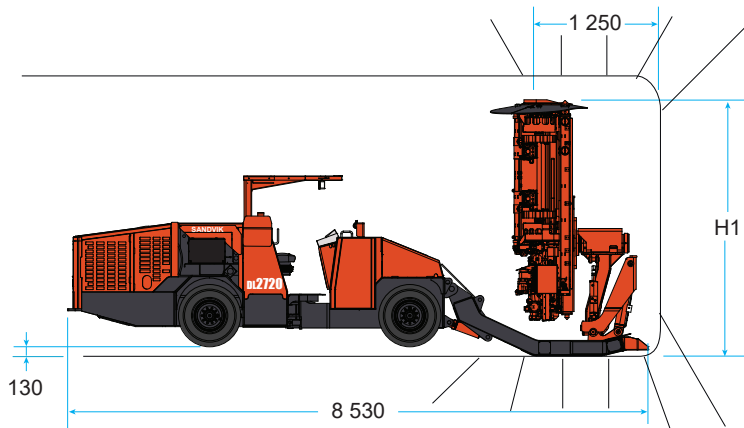
MAXIMUM PRODUCTION DRIFT SIZE (MM)**

| Model | H | Hr | Wp*** | W |
|---------|----------|----------|------------------|----------|
| LFRC704 | 3 500 mm | 1 390 mm | 1 500 / 1 200 mm | 4 180 mm |
| LFRC705 | 3 870 mm | 1 390 mm | 1 500 / 1 200 mm | 4 550 mm |
| LFRC706 | 4 170 mm | 1 390 mm | 1 500 / 1 200 mm | 4 850 mm |

**Rear stinger extended, the use of drilling module mounted front stinger extends the coverage further. Front stinger retracted.
*** Upholes / downholes



| Model | H1 |
|---------|----------|
| LFRC704 | 2 940 mm |
| LFRC705 | 3 240 mm |
| LFRC706 | 3 550 mm |



All dimensions in mm

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