

# Ranger DX600 S5 SURFACE DRILLS

## Technical specification

Ranger DX600 is a hydraulic, self-propelled, self-contained, crawler based surface drilling rig equipped with a cabin (F.O.P.S. and R.O.P.S.) and rod handling system.

Typical applications for Ranger DX600 are road cutting, pipe-line drilling and foundation drilling, as well as production drilling in medium size quarries. Therefore Ranger DX600 is most often used by construction contractors, mines and quarries, and also included in the equipment fleet of rental houses as well.

### KEY FEATURES

|                      |                                   |
|----------------------|-----------------------------------|
| Hole diameter:       | 64- 102 mm (2½"- 4")              |
| Rock tools:          | 38, 45 or 51 mm (1½", 1¾" and 2") |
| Rock Drill           | 17,5kW                            |
| Engine output:       | 168 kW (TIER 4F/EU Stage V)       |
| Flushing air:        | 6,2 m3/min, up to 10 bar          |
| Production capacity: | 2200 m3/8h                        |
| Total weight :       | 15 600 kg                         |





#### HYDRAULIC ROCK DRILL

|                         |                |
|-------------------------|----------------|
| Rock drill              | HL 650         |
| Rock tools              | 38,45,51 mm    |
| Operating pressure      | 100-170 bar    |
| Percussion rate         | 55 Hz          |
| Percussion output power | 17.5 kW        |
| Maximum rotation torque | 1 325          |
| Shank lubrication       | Air / oil mist |
| Flushing                | Air            |
| Weight                  | 245 kg         |

#### FEED

|                            |                       |
|----------------------------|-----------------------|
| Feed type                  | CF 145H               |
| Total length               | 7 700 mm              |
| Rock drill travel          | 4 320 mm              |
| Max. length of starter rod | 4 875 mm (16')        |
| Hose reel                  | Standard              |
| Feed extension travel      | 1350 mm               |
| Feed/pull out force        | 20 kN                 |
| Feed swing                 | -56°/+52° (-20°/+94°) |
| Feed tilt                  | 125°                  |

#### ROD CHANGER

|                  |                                     |
|------------------|-------------------------------------|
| Rod changer type | RH 714                              |
| Storage capacity | 6+1 rods                            |
| Rod length       | 3050, 3660, 4265 mm (10', 12', 14') |
| Max. hole depth  | 26,8 m (6x12'+1x16')                |

#### BOOM

|                   |                                            |
|-------------------|--------------------------------------------|
| Boom type         | DB 800H, articulated                       |
| Boom reach        | 4,8 m                                      |
| Drilling coverage | 17.6 m <sup>2</sup> (26.4 m <sup>2</sup> ) |
| Collaring height  | +2.5 m/-4.5 m                              |
| Horizontal holes  | To the right                               |

#### CABIN

|                          |                                       |
|--------------------------|---------------------------------------|
| Cabin type               | Ergo                                  |
| Certificates             | F.O.P.S. and R.O.P.S.                 |
| Noise level in the cabin | below 80 dB(A)                        |
| Air conditioning         | Standard *                            |
| Pressurization           | Standard                              |
| Seat                     | Multiposition                         |
| Vibration dampening      | Standard                              |
| Windows                  | Safety laminated, tinted, with wipers |
| Power take-off           | 12 VDC                                |

\* Air condition system contains fluorinated greenhouse gases HFC-134a

#### POWERPACK

|                       |                                         |
|-----------------------|-----------------------------------------|
| Engine type           | Caterpillar C 7.1 (TIER 4F/EU Stage V)) |
| DEF tank              | AdBlue, 24 l                            |
| Max. tilt angles      | +/- 45°                                 |
| Number of cylinders   | 6                                       |
| Engine output         | 168 kW / 1 800 rpm                      |
| Transmission type     | Gear box                                |
| Screw compressor type | Enduro 12                               |
| Air filters           | 2 pcs., with ejector and safety element |
| Fuel tank             | 380 l                                   |

#### HYDRAULIC SYSTEM

|                          |                                                    |
|--------------------------|----------------------------------------------------|
| Number of gear pumps     | 4 pcs. for dust collector and cooling              |
| Number of piston pumps   | 2pcs. for drilling, tramming, boom and rodhandling |
| Filtration rate          | 12 micron abs., return 25 micron, pressure         |
| Cooling capacity         | up to +50°C ambient                                |
| Hydraulic oil tank       | 200 l                                              |
| Shank lubrication device | SLU 14-1                                           |

#### CONTROL SYSTEM

|                                 |                                                      |
|---------------------------------|------------------------------------------------------|
| Control system type             | Hydraulic pilot control and relay logic              |
| Tramming/boom/ drilling control | Pilot/direct/ pilot controlled                       |
| User interface                  | Proportional hydraulic joysticks and pressure gauges |
| Drilling control system type    | Rock Pilot+                                          |
| Antijamming system              | For rotation standard and flushing optional          |
| Collaring control               | Stepless                                             |
| Voltage                         | 24 VDC                                               |

#### DUST COLLECTOR

|                          |                                  |
|--------------------------|----------------------------------|
| Dust collector type      | DC 810H                          |
| Capacity/vacuum          | 23 m3/min at 1 000 mm vacuum H2O |
| Filter elements/material | 13 pcs/fiber                     |
| Total filter surface     | 10.4 m <sup>2</sup>              |
| Primary cyclone          | Standard                         |
| Movable suction head     | Standard                         |

#### CARRIER

|                         |                         |
|-------------------------|-------------------------|
| Track type              | FL 6                    |
| Grouser plate width     | 310 mm                  |
| Ground contact length   | 2 590 mm                |
| Ground pressure         | 0.81 kg/cm <sup>2</sup> |
| Ground clearance        | 440 mm                  |
| Turnable superstructure | 120° / 180°             |
| Oscillation angles      | +/- 10°                 |
| Tramming force          | 121 Kn                  |
| Max. tramming speed     | 3.5 km/h                |



#### STANDARD COMPONENTS

|                                               |                                                                                              |
|-----------------------------------------------|----------------------------------------------------------------------------------------------|
| 1 pc                                          | Rock drill HL 650, hydraulic                                                                 |
| 1 pc                                          | Chain feed CF 145H with movable drill steel support                                          |
| 1 pc                                          | Rod handler RH 714 incl. 1 set of jaws                                                       |
| 1 pc                                          | Boom DB 800 H, articulated                                                                   |
| 1 pc                                          | Carrier track mounted, turnable superstructure                                               |
| Guides for grousers                           |                                                                                              |
| 1 pc                                          | Power pack diesel driven, hydraulic pumps and on-board compressor with twin pressure control |
| 1 pc                                          | Control system Rock Pilot+                                                                   |
| 1 pc                                          | Operator's cabin F.O.P.S. and R.O.P.S. with AC                                               |
| 1 pc                                          | Dust collection system DC 810 H, hydraulic, Primary separator                                |
| 9 pcs                                         | Working lights                                                                               |
| 1 pc                                          | Gauge set for accumulator pressure checking                                                  |
| 1 pc                                          | Alarm signal                                                                                 |
| 1 pc                                          | Operator's manual (paper copy)                                                               |
| 1 pc                                          | Alarm beacon                                                                                 |
| 1 pc                                          | Hose reel with 3660 mm (12') steel length                                                    |
| 1 pc                                          | Service light, hand held 12V magnetic                                                        |
| EU-safety devices, EN16228, short safety cage |                                                                                              |

#### THE JAWS FOR DRILL STEELS

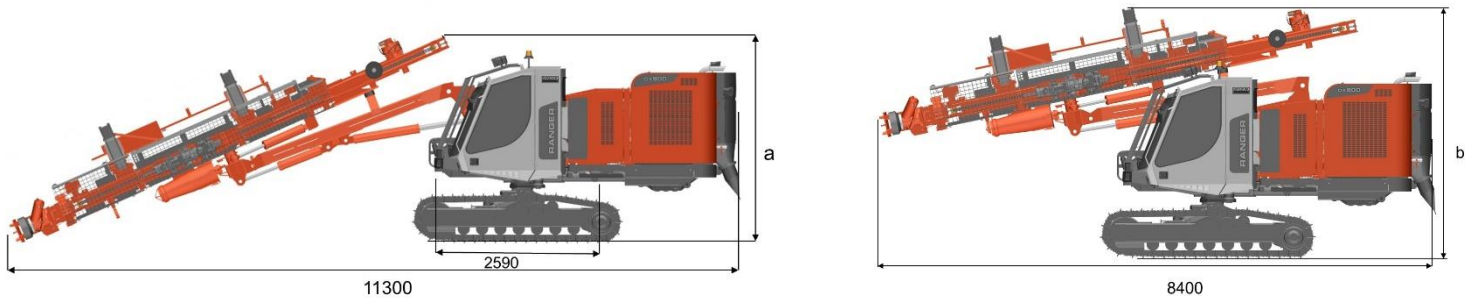
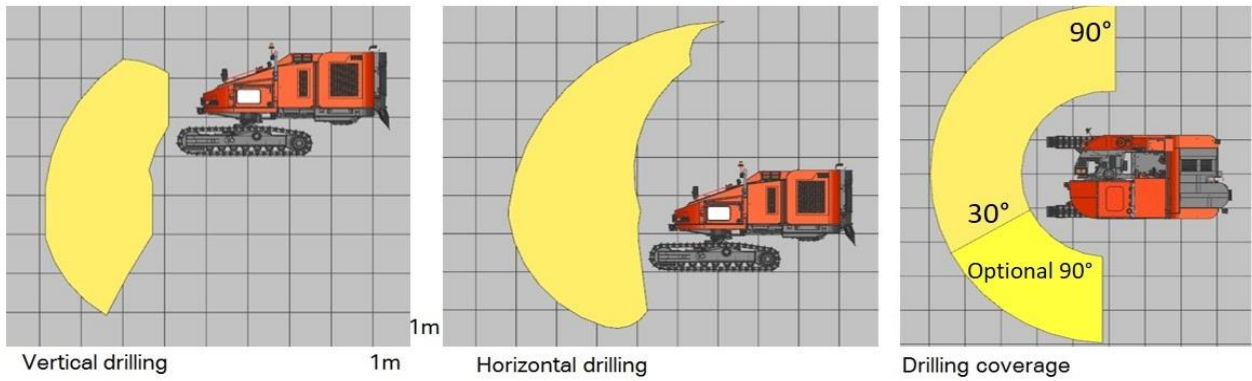
| DRILL STEEL TYPE | DRILL STEEL DIAMETER | RECOMMENDED HOLE DIAMETER |
|------------------|----------------------|---------------------------|
| Extension rods   | 38 mm                | 64 - 70 mm                |
|                  | 1 1/2"               | 2 1/2" - 2 3/4"           |
| MF-rods          | 38 mm                | 64 - 70 mm                |
|                  | 1 1/2"               | 2 1/2" - 2 3/4"           |
| Extension rods   | 45 mm                | 76 - 89 mm                |
|                  | 1 3/4"               | 3" - 3 1/2"               |
| MF-rods          | 45 mm                | 76 - 89 mm                |
|                  | 1 3/4"               | 3" - 3 1/2"               |
| MF-rods          | 51 mm                | 89 - 102 mm               |
|                  | 2"                   | 3 1/2" - 4"               |
| Extension rods   | 51 mm                | 89 - 102 mm               |
|                  | 2"                   | 3 1/2" - 4"               |

#### SELECTION OF OPTIONS

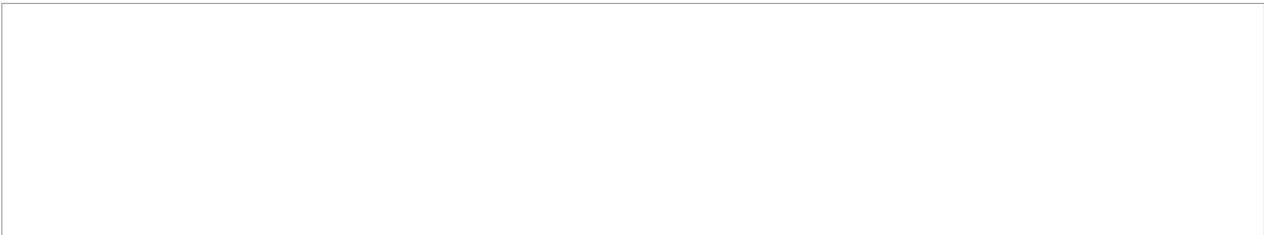
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|-----------------------------------------------------------------------------------------------|
| Alternative seat ISRI 6000                                                                    |
| Radio with CD-MP3 player                                                                      |
| Reversing camera                                                                              |
| Vacuum cleaner for cabin                                                                      |
| Driller's Notes - MWD Data Collection for TIM3D                                               |
| Driller's Office planning software (one-year license)                                         |
| Knowledge Box for TIM3D or readiness (4G/LTE and WiFi for My Sandvik)                         |
| Knowledge Box for TIM5300-6700 (4G/LTE for My Sandvik, no WiFi)                               |
| + My Sandvik Insight, 1-yr license                                                            |
| + My Sandvik Wireless Drill Plan Transfer 1-yr license (Productivity)                         |
| GPS aiming device for TIM and TIMi inclined holes                                             |
| TIM 5200 for vertical holes                                                                   |
| TIM 5300 for vertical holes and depth measuring                                               |
| TIM 6300 for inclined holes and depth measuring                                               |
| TIM 6500 for inclined holes, depth measuring and laser level                                  |
| TIM 6700 (TIM6500 with open interface)                                                        |
| TIMi for inclined holes with touchscreen and TIM3D readiness                                  |
| TIM3D drill navigation system (Trimble)                                                       |
| TIM3D drill navigation system (Leica)                                                         |
| Horizontal drilling kit                                                                       |
| EN 16228 Safety cage for feed, long                                                           |
| Feed 5 485 mm (18'), without hose reel and horizontal drilling                                |
| Long feed 6069 mm 20', no rod changer                                                         |
| Kit for alternative steels, each                                                              |
| Thread greasing                                                                               |
| Thread greasing with 5 gallon bucket                                                          |
| Power extractor                                                                               |
| Ramp up option RD520 drifter, not with silencer option                                        |
| Anti-freeze system for air lines                                                              |
| Biodegradable hydraulic oil, not with CSL                                                     |
| Central lubrication system Sandvik                                                            |
| Central lubrication system Lincoln                                                            |
| Electric fuel filling pump                                                                    |
| Fast fill connection for fuel Wiggins                                                         |
| Hydraulic rear ground support                                                                 |
| Hydraulic winch with radio remote and cable tightness automatics                              |
| Hydraulic winch with full radio drilling, tramming boom and rod handling                      |
| Remote Screen Interface for TIMi and TIM3D                                                    |
| Led lights, 6 pcs                                                                             |
| Radio remote control for rear ground support, tramming and oscillation                        |
| Full radio remote control for drilling, tramming, boom and rod handling                       |
| Three bar grouser plates                                                                      |
| Towing hook                                                                                   |
| Turnable superstructure 180 deg.                                                              |
| Fuel powered heater for engine and cabin                                                      |
| Fuel powered heater for engine, cabin and water tank                                          |
| Readiness for fuel powered heater                                                             |
| Dustmizer, water injection option included (engine heater option needed below freezing point) |
| Flushing control automatics                                                                   |
| Sampling device                                                                               |
| Shut down of suction for water holes                                                          |
| Water injection system                                                                        |
| Grinder, Dynaset                                                                              |
| CME mini junior Grinder                                                                       |



Coverage area and dimensions



| DIMENSIONS          |                  |
|---------------------|------------------|
| Weight              | 15 600 kg        |
| Width               | 2.45 m           |
| Height              | a/b, 3.2 m/3.6 m |
| With safety cage    | 3.3 m/3.8 m      |
| With noise silencer | 3.3 m/4.0 m      |
| Total length        | 11.3 m/8.4 m     |



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