



# Pantera™ DP1600i S5 SURFACE DRILLS

## TECHNICAL SPECIFICATION

Pantera™ DP1600i is intelligent, self-propelled, self-contained, crawler based surface drilling rig equipped with a cabin and a rod changer.

Pantera™ DP1600i with practical intelligence fits perfectly for production drilling in large quarries or open pit mines and construction work sites. It suits well also for wall control and development works. To customize the rig it can be equipped with a variety of options to meet special requirements.

### KEY FEATURES

|                      |                                                     |
|----------------------|-----------------------------------------------------|
| Hole diameter:       | 102 - 178 mm (4" - 7")                              |
| Rock tools:          | LT90 and 60 mm rods or 87 mm tubes                  |
| Rock Drill           | 49 kW                                               |
| Engine output:       | 280 kW (TIER 4F/EU Stage V)                         |
| Flushing air:        | 14 m3/min up to 10 bar (depends on used rock tools) |
| Production capacity: | 3,5 Mt/year                                         |
| Total weight :       | 22 700 kg                                           |



| HYDRAULIC ROCK DRILL    |                               |
|-------------------------|-------------------------------|
| Rock drill              | RD1840C / RD1635CF (optional) |
| Rock tools              | 60, 76, 87, LT90              |
| Operating pressure      | 90 - 220 bar                  |
| Percussion rate         | 35 - 40 Hz                    |
| Percussion output power | 49 / 35 kW                    |
| Maximum rotation torque | 3 050 Nm                      |
| Shank lubrication       | Air / oil mist                |
| Flushing                | Air                           |
| Weight                  | 470 kg                        |

| FEED                       |                           |
|----------------------------|---------------------------|
| Feed type                  | LF 1514 HR with hose reel |
| Total length               | 9 154 mm                  |
| Rock drill travel          | 4 980 mm                  |
| Max. length of starter rod | (18')                     |
| Hose reel                  | Standard                  |
| Feed extension travel      | 1 480 mm                  |
| Feed/pull out force        | 36 kN                     |
| Feed swing                 | -56/+52° (-20/+94°)       |
| Feed tilt                  | 13-135°                   |

| ROD CHANGER      |                                        |
|------------------|----------------------------------------|
| Rod changer type | RC 1614                                |
| Storage capacity | 7+1 (60 mm rods)\ 5+1 (LT90)           |
| Rod length       | 4 270 mm                               |
| Max. hole depth  | 32,6 m (7+1) x 14', 24,2 m (5+1) x 14' |

| BOOM             |                        |
|------------------|------------------------|
| Boom type        | ZB 1550 H, telescopic  |
| Boom extension   | 500 mm                 |
| Boom swing       | -2/+30°                |
| Collaring height | +1.24 /-4.1 m          |
| Horizontal holes | To the right hand side |

| CABIN                    |                                                     |
|--------------------------|-----------------------------------------------------|
| Cabin type               | Ergo cool                                           |
| Certificates             | F.O.P.S. and R.O.P.S.                               |
| Noise level in the cabin | 80 dB (A)                                           |
| Air conditioning         | Standard *                                          |
| Pressurization           | Standard                                            |
| Seat                     | Ergonomic, adjustable                               |
| Vibration dampening      | Standard                                            |
| Windows                  | Safety laminated, tinted selective glass with wiper |

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

| POWERPACK             |                                 |
|-----------------------|---------------------------------|
| Engine type           | Caterpillar C 9.3B (T4F/StageV) |
| DEF tank              | AdBlue 42 l                     |
| Number of cylinders   | 6                               |
| Engine output         | 280 kW/1800 rpm                 |
| Transmission type     | Gear box                        |
| Screw compressor type | Enduro 25                       |
| Air filters           | 2 pcs, dry type with ejector    |
| Fuel tank             | 680 l                           |

| HYDRAULIC SYSTEM         |                                                     |
|--------------------------|-----------------------------------------------------|
| Number of gear pumps     | 3 pcs. for dust collector and cooling               |
| Number of piston pumps   | 2 pcs. for drilling, tramming, boom and rodhandling |
| Filtration rate          | 12 micron abs.                                      |
| Cooling capacity         | up to +50°C ambient                                 |
| Hydraulic oil tank       | 390 l                                               |
| Shank lubrication device | CSL                                                 |

| CONTROL SYSTEM                  |                                                               |
|---------------------------------|---------------------------------------------------------------|
| Control system type             | Sandvik SICA, PLC controlled proportional electro- hydraulics |
| Tramming/boom/ drilling control | PLC controlled                                                |
| User interface                  | Electro proportional joysticks and touchscreen                |
| Control system diagnostics      | Graphical flow chart type                                     |
| Drilling control system type    | iTorque                                                       |
| Antijamming system              | For rotation and flushing                                     |
| Collaring control               | Automatic                                                     |
| Preset drilling parameters      | Adjustable for fine tuning for different rock conditions      |
| Voltage                         | 24 VDC                                                        |

| DUST COLLECTOR           |                                               |
|--------------------------|-----------------------------------------------|
| Dust collector type      | DC 1550                                       |
| Capacity/vacuum          | 35 m <sup>3</sup> /min at 1 200 mm vacuum H2O |
| Filter elements/material | 20 pcs / fiber                                |
| Total filter surface     | 16 m <sup>2</sup>                             |
| Primary cyclone          | PE 80                                         |
| Movable suction head     | MS 250                                        |

| CARRIER               |                        |
|-----------------------|------------------------|
| Track type            | FL 6                   |
| Grouser plate width   | 400 mm                 |
| Ground contact length | 2510 mm                |
| Ground pressure       | 1.1 kg/cm <sup>2</sup> |
| Ground clearance      | 360 mm                 |
| Oscillation angles    | +/- 11°                |
| Tramming force        | 150 kN                 |
| Max. tramming speed   | 1.8/3.2 km/h           |

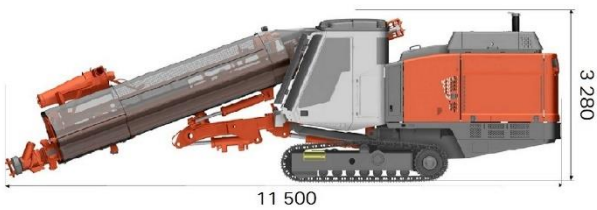
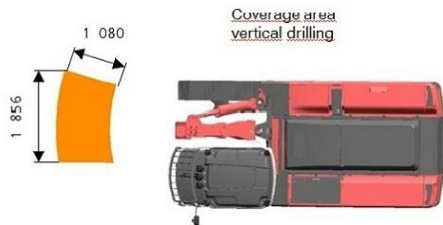
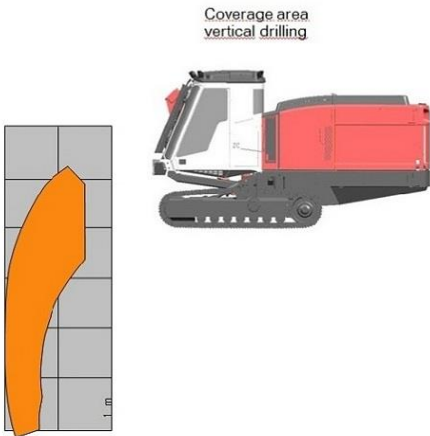
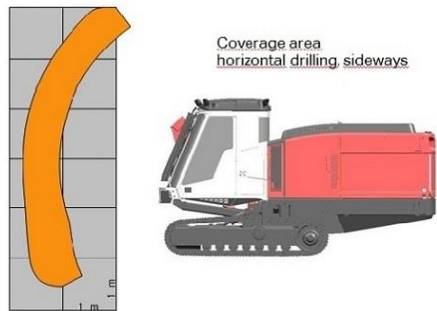
| STANDARD COMPONENTS                                              |
|------------------------------------------------------------------|
| Rock drill RD1840C, hydraulic                                    |
| Cylinder feed LF 1514 HR                                         |
| Safety cage                                                      |
| Hose reel, drum type                                             |
| Rod changer RC 1514                                              |
| Boom ZB 1550 H, telescopic                                       |
| Carrier FL 6, oscillating                                        |
| Powerpack, diesel driven, hydraulic pumps and onboard compressor |
| Hydraulic system, load sensing                                   |
| Operator's cabin, Ergo Cool with AC                              |
| Dust collection system DC 1550 H, hydraulic                      |
| Working lights, 15 pcs (9 forward)                               |
| Reversing alarm                                                  |
| TIMi for vertical holes and depth measuring                      |
| Movable drill steel support                                      |
| Suction shut down for water holes                                |
| Flushing control automatics                                      |
| EU-safety devices                                                |
| Gauge set for accumulator pressure checking                      |
| 1 Set Manuals, paper copy                                        |
| 1 Set Manuals, USB memory                                        |
| SanRemo Mobile, Bluetooth connectivity                           |

| THE JAWS FOR DRILL STEELS |                      |                             |
|---------------------------|----------------------|-----------------------------|
| DRILL STEEL TYPE          | DRILL STEEL DIAMETER | RECOMMENDED HOLE DIAMETER   |
| MF-rods                   | 60 mm 2 3/8"         | 102 -140 mm 4 1/2" - 5 1/2" |
| MF-rods                   | LT90                 | 140 - 178 mm 4" - 5 1/2"    |
| Tubes                     | 87 mm 3 1/2"         | 102 - 152 mm 4" - 6"        |

| SELECTION OF OPTIONS                                                              |
|-----------------------------------------------------------------------------------|
| Alternative seat with 3-point seat belt and air cushioning                        |
| Cooler bag in cabin                                                               |
| Radio with CD-MP3 player                                                          |
| Reversing camera                                                                  |
| Roller blinds for cabin windows                                                   |
| Vacuum cleaner for cabin                                                          |
| Driller's Notes - MWD Data Collection for TIM3D                                   |
| Automatic feed alignment for TIMi                                                 |
| GPS aiming device for TIM and TIMi inclined holes                                 |
| RAMP UP OPTION TIM3D hole navigation system (Trimble)                             |
| TIM3D hole navigation system readiness (Trimble)                                  |
| TIM3D hole navigation system readiness (Leica)                                    |
| TIMi for inclined holes and hole depth measuring                                  |
| TIMi laser level based depth measuring                                            |
| Kit for alternative steels, each                                                  |
| LF 1522 feed with hose reel ( max starter rod 20 ft )                             |
| Thread greasing                                                                   |
| Thread greasing with 5 gallon bucket                                              |
| Full cycle one hole automatic drilling                                            |
| Anti- freeze system for air lines                                                 |
| Central lubrication system Sandvik                                                |
| Electric fuel filling pump                                                        |
| Electric hydraulic oil filling pump                                               |
| Electric water filling pump                                                       |
| Fast fill connection for engine coolant, hydraulic and engine oils                |
| Fast fill connection for fuel and water tanks (not with option 5110)              |
| Guides for grousers                                                               |
| 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 (Tablet or mobile phone not included).                    |
| Single bar grouser plates                                                         |
| Towing hook                                                                       |
| Xenon lights, 9 pcs                                                               |
| Led lights 15 pcs.                                                                |
| Ether starting aid for engine without ether bottle                                |
| Fuel powered heater for engine and cabin                                          |
| Fuel powered heater for engine, cabin and water tank                              |
| Readiness for fuel powered heater                                                 |
| Dustmizer requires flap feeder (engine heater option needed below freezing point) |
| Water injection system                                                            |
| Extra manuals, price will be added according to pricing sheet                     |
| First service kit for DP1500i/DP1600i                                             |
| Special tools for RD1840C, field kit                                              |
| Special tools for RD1840C complete                                                |
| Service agreement - select level from extra item                                  |
| SanRemo - select level from extra item                                            |

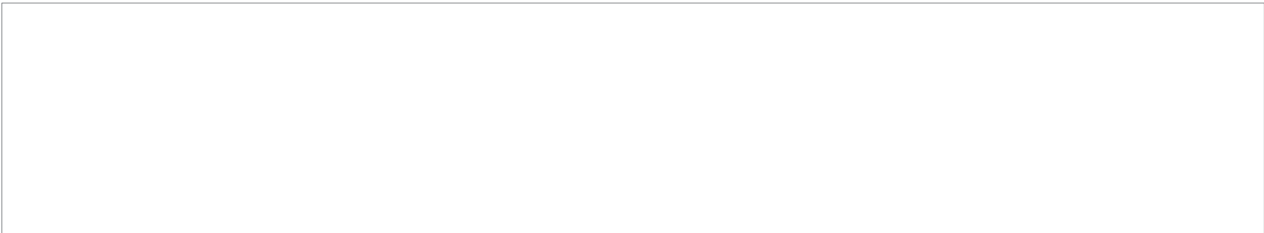
COVERAGE AREA AND DIMENSIONS

COVERAGE AREA



DIMENSIONS

|              |               |
|--------------|---------------|
| Weight       | 22 700 kg     |
| Width        | 2.5 m         |
| Height       | 3.28 m/3.34 m |
| Total length | 11.5 / 11.1 m |



Sandvik Mining and Rock Solutions reserves the right to make changes to the information on this data sheet without prior notification to users. Please contact a Sandvik representative for clarification on specifications and options.

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