



SANDVIK DR412i ROTARY / DTH BLAST HOLE DRILL

TECHNICAL SPECIFICATION

Sandvik DR412i is a diesel-powered, self-propelled, crawler-mounted blasthole drill for surface mining. It is standard equipped for rotary with optional down-the-hole (DTH) hammer drilling power.

HIGHER PRODUCTIVITY THROUGH INNOVATION

Sandvik DR412i uses a CAN bus controlled hydraulic system to monitor the machine, allowing for timely preventative maintenance and delivering higher availability.

RUGGED DESIGN

Sandvik DR412i is equipped to drill 216 to 311 millimeter (8 1/2 to 12 1/4 inch) diameter blastholes with single-pass capacity of 18 meters (59 feet) or multi-pass capacity of 75 meters (246 feet).

BUILT TO LAST

Heavy-duty undercarriage designed for mining.

INNOVATION FOR SAFER MAINTENANCE

Pipes can be handled from within the cab using the hydraulic breakout wrench.

OPERATOR COMFORT AND CONTROL

The new-generation ergonomically-designed cab includes controls on the armrests, touchscreens, angled windows to reduce glare and a safari-style roof to keep the cab cooler.

EASIER ACCESS

Wider, 360-degree walkways enable superior drill access for routine maintenance. An optional hydraulic main-access stairway can be mounted to provide a parallel step onto and off of the drill.



DESIGNED WITH SAFETY IN MIND

We designed Sandvik DR412i with worldwide standards in mind, such as Mining Design Guidelines (MDG) for mobile and transportable equipment in mines, Earth Moving Equipment Safety Round Table (EMESRT) Design Philosophies and CE conformity marking.

COMPRESSOR MANAGEMENT SYSTEM (CMS)

Our patented Sandvik Compressor Management System (CMS) isolates the compressor and eliminates the need to maintain pressure when your machine is not drilling. This option can deliver fuel savings of up to 35 percent while reducing your environmental impact and extending engine life.

PERFORMANCE

	Metric	Imperial
Hole diameter	216 to 311 mm	8 1/2 to 12 1/4 in
Maximum hole depth - Multi-pass	75 m	246 ft
Maximum hole depth - Single-pass	33 m	109 ft
First pass capability - Multi-pass	12 m	40.5 ft
First pass capability - Single-pass	18 m	59
Drill pipe (sp)	9.1 m	30 ft
Drill pipe (mp)	12.8 m	42 ft
Maximum pull-down	356 kN	80,000 lbf
Maximum bit load	400 kN	90,000 lbf(sp) 100,000 lbf(mp)
Feed rate up/down - Single-pass	0-43.9 m/min	0-144 fpm
Feed rate up - Multi-pass	0-43.9 m/min	0-144 fpm
Feed rate down - Multi-pass	0 - 41.2 m/min	0-135 fpm
Operating weight (sp)*	116,573 kg	257,000 lb
Operating weight (mp)*	118,841 kg	262,000 lb

* Weights are approximate and subject to change without notice. All performance figures are theoretical and at 100% systems efficiency.

POWER GROUP

	Metric	Imperial
Engine rated power	789 KW	1050 hp
Engine, Cummins QST30, Tier II	1,800 RPM	
Standard ambient rating range	54 °C -40°C Cold weather package	130 °F -40 °F Cold weather package
Fuel tank	3,406 l	900 gal
Compressor		
High pressure DTH	Volume Pressure	41 m ³ /min 24.1 bar 1,450 scfm 350 psi
Low pressure Rotary	Volume Pressure	56.6 m ³ /min 6.9 bar 2,000 scfm 100 psi
Low pressure Rotary (optional)	Volume Pressure	67.4 m ³ /min 6.9 bar 2,380 scfm 100 psi

HYDRAULIC SYSTEM

	Metric	Imperial
Oil reservoir	1,287 l	293 gal
Reservoir pressurization	34 - 48 kPa	5 - 7 psi
Reservoir refill capacity	1,325 l	350 gal
Standard ambient rating	-40 to + 100°C	-40 to +212°F

FRAME AND INTEGRAL JACKS

	Metric	Imperial
Main frame	CAD/FEA designed, wide flange beam main rails w/ heavy cross bracing reinforced at high-stress areas	
Walkways	Bolt on inside width open serrated grip strut, 610 mm wide	24 in
Lifting hooks	2 front, 2 rear	
Leveling jacks	4 total	
Pad diameter	762 mm	30 in
Pad ground clearance	584 mm – front 610 mm – rear	23 in – front 24 in – rear

UNDERCARRIAGE

	Metric	Imperial
Model	Sandvik S46HD	
Pad width	900 mm	35.4 in
Pad type	Triple grouser	
Width over tracks	4.57 m	15 ft
Tram speed	2.4 km/h	1.3 mph
Gradeability	17.5% mast down	

FEED

	Metric	Imperial
Feed type	Hydraulic motor and chain for single-pass Cylinder and chain for multi-pass	
Brake	Spring set, hydraulic release	
Chain type	Heavy-duty roller type chains with heavy side bars and through hardened pins	
Chain size	76 mm	3 in
Rotary head stroke	21 m	48 ft (mp) 68.9 ft (sp)
Bit load	400 kN	90,000 lbf
Chain adjustment	Manually adjusted hydraulic	

MAST

	Metric	Imperial
Construction	CAD/FEA designed, rectangular tubing, welded recessed side members reinforced in high-stress areas	
Pivot bushings	Replaceable alloy aluminum bronze	
Hydraulic lines	Pressure-rated steel hydraulic tubing, feed, rotation, air-in plastic clamps	
Table hole diameter	508 mm for holding wrench pilot	20 in for holding wrench pilot
Mast Raising - Number of cylinders	2	
Angle drill (sp)	0° to 20° in 5° increments	
Angle drill (mp)	0° to 30° in 5° increments	
Hoist	SWL rated per ASI418 29 kN	SWL rated per ASI418 6,500 lbf
Lubrication	Lubrication system for pulldown chains	

ROTARY HEAD

	Metric	Imperial
Rotary power	193 kW	260 hp
Standard rotary speed / torque	0 - 160 rpm 11,658 Nm	102,416 in-lb
Alternate rotary speed / torque	0 - 99 rpm 0 - 120 rpm 19,870 Nm 16,444 Nm	165,520 in-lb 136,559 in-lb
Bullshaft thread	5 ½ in API REG.	

OPERATOR'S CAB

	Metric	Imperial
Certification	FOPS rated AS2294, meets drop criteria per SAE J231	
Sound level rating	80 dB(A) or less	
Floor area	4 m ²	43 ft ²
Height inside	2.28 m	90 in
Length	1.83 m	6 ft
Width	2.2 m	87 in
Construction	Welded 10 gauge steel w/ 3/16" sheet steel roof	
Doors	Number Type	2 with heavy duty hinges lockable door latches
Operator's seat	Fully adjustable and swiveling with adjustable lumbar support, shoulder type seat belt	
Helper's seat	Fixed	

CONTROL SYSTEM

	Metric	Imperial
Type	CAN bus w/ SICA operating platform	

DUST SUPPRESSION

	Metric	Imperial
Water injection	2,271 l	600 gal

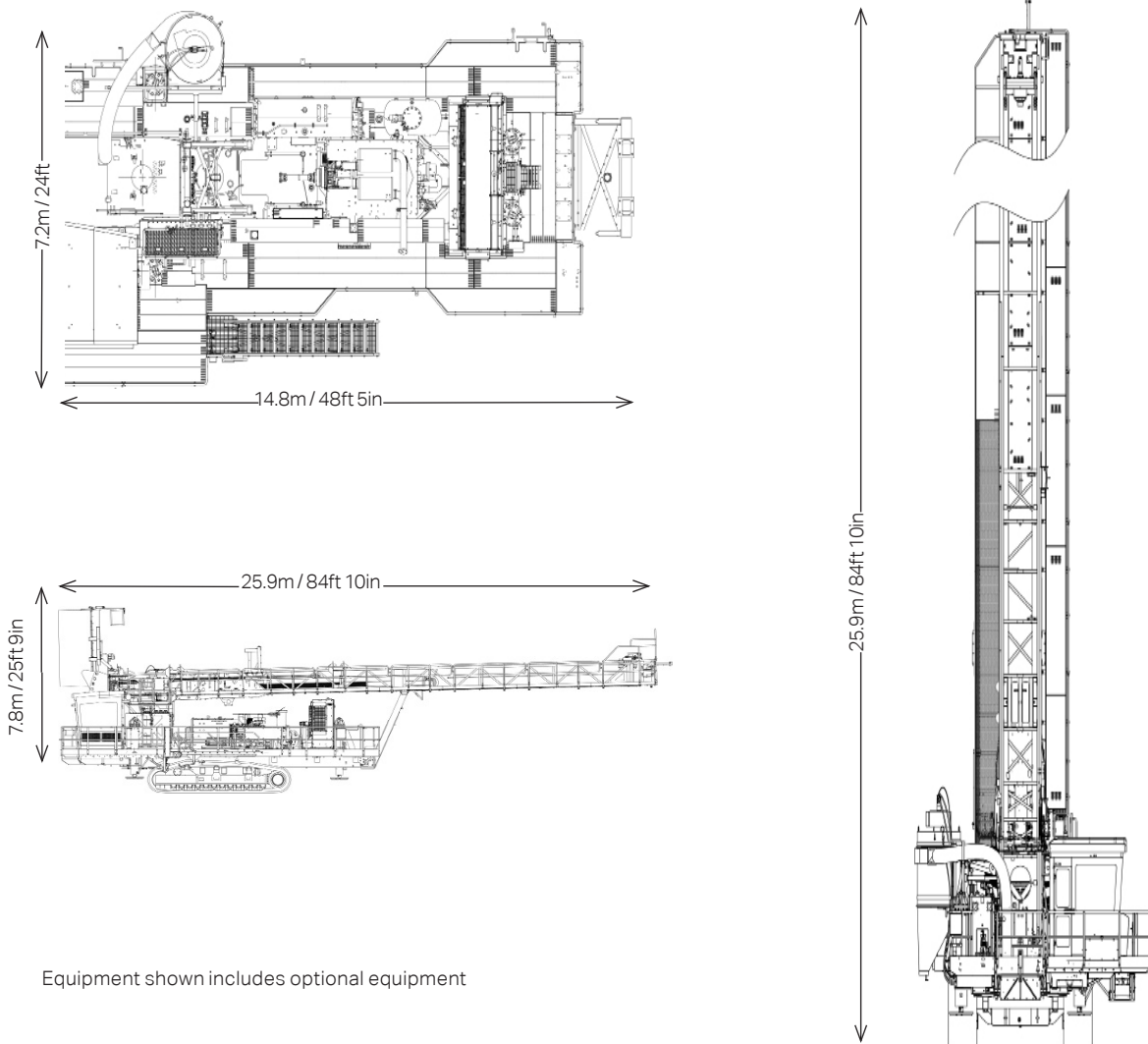
DIMENSIONS

	Metric	Imperial
Mast up height (multi-pass)	19.2 m	62 ft 10 in
Mast up height (single-pass)	25.9 m	84 ft 8 in
Operating Width	7.21 m	24 ft 2 in
Mast down length (multi-pass)	19.2 m	63 ft 2 in
Mast down length (single-pass)	25.9 m	84 ft 10 in
Mast down height w/ work deck	7.8 m	25 ft 9 in
Mast up length	14.8 m	48 ft 5 in

WEIGHT

Base unit (sp) (less tools)	111,584 kg	246,000 lb
Base unit (mp) (less tools)	109,769 kg	242,000 lb

Dimensions are per engineering drawings, actuals may vary slightly. Weights are approximate and subject to change without notice. All performance figures are theoretical and at 100% systems efficiency.



Equipment shown includes optional equipment

Sandvik Mining and Rock Technology 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.