



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 203 to 311 millimeter (8" to 12^{1/4} inch) diameter blastholes with single-pass capacity of 17.8 meters (58.5 feet) or multi-pass capacity of 75.5 meters (247.7 feet).

INNOVATION FOR SAFER OPERATION

Pipes can be handled from within the cab using the Sandvik carousel and breakout system, with optional hands free bits changing capability.

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

Advanced compressor management reduces the compressor load allowing the operator to manage air volumes and pressures to maximize efficiency and reduce fuel burn reducing your CO₂ footprint and extending engine and compressor life.

PERFORMANCE

	Metric	Imperial
Hole diameter	203 to 311 mm	8-12 ^{1/4} in
Maximum hole depth - Standard mast	75.5m	247.7 ft
Maximum hole depth - Extended mast	33.1 m	108.5 ft
First pass capability - Standard mast	12 m	39.5 ft
First pass capability - Extended mast	17.8 m	58.5 ft
Maximum pull down force	356 kN	80,000 lbf
Weight on bit	407 kN	91,500 lbf

POWER GROUP

	Metric	Imperial
Engine options		
Cummins QST30 (Non tier 4)	783 kW	1050 HP
CAT C27 (Non tier 4/Tier 4)	708 kW	950 HP

Compressor options

Rotary Drilling	56.6 m ³ /min @ 6.9 bar	2000 SCFM @ 100 psi
Rotary Drilling (option)	76.6 m ³ /min @ 5.5 bar	2600 SCFM @ 80 psi
DTH Drilling	41 m ³ /min @ 24.1 bar	1450 SCFM @ 350 psi
Advanced Compressor Management		Standard
Fuel tank	3,407 l	900 gal
Ambient operating range	-40° C to 50° C	-40° F to 122° F

*Optional power group shown-consult factory for other configurations

HYDRAULIC SYSTEM

	Metric	Imperial
Reservoir capacity	1,181 l	312 gal
Reservoir pressurization	0.3-0.5 bar	5 - 7 psi

FRAME AND JACKS

	Metric	Imperial
Main frame	Designed with wide flange beam rails, cross beams and design verified by structural FEA and calculations	
Walkways	Slip resistant steel grip strut material	
Leveling jacks	4	
Pad diameter	762 mm	30 in
Pad ground clearance	609 mm/ 635 mm	24 in/ 25 in

UNDERCARRIAGE

	Metric	Imperial
Model	S46HD	
Track shoe width	900 mm	35.4 in
Track shoe width	Triple grouser	
Width over tracks	4.57 m	15 ft
Tram speed	2.1 kph	1.3 mph

FEED SYSTEM (Standard Mast)

	Metric	Imperial
Feed type	Twin cylinders and chain drive	
Chain type	Heavy-duty roller type chains	
Related pull down force	356 kN	80,000 lbf
Feed down rate	0-41.1 m/min	0-135 fpm
Rated pull back force	156 kN	35,000 lbf.
Feed up rate	0-41.1 m.min	0-135 fpm
Chain adjustment	Hydraulic cylinder	

FEED SYSTEM (Extended Mast)

	Metric	Imperial
Feed type	Hydraulic Motor-Gearbox	
Chain type	Heavy-duty roller type chains	
Related pull down force	356 kN	80,000 lbs
Feed down rate	0-43.9m/min	0-140 ft./min.
Rated pull back force	156 kN	35,000 lbf.
Feed up rate	0-43.9 m/min	0-140 ft./min.
Chain adjustment	Grease cylinder	

MAST

	Metric	Imperial
Construction	Designed with rectangular tubing, design verified by structural FEA and calculations	
Pivot bushings	Alloy steel bushings	
Mast raising cylinders	2	
Angle drilling	0° to 30° in 5° increments (Std mast) 0° to 20° in 5° increments (Ext mast)	
Hoist/Winch	30.2 kN	6,500 lbf
Mast locking	2 hydraulic actuated pins	
Pipe loader	4/5 pod loader for Std mast 2 pod loader for Ext mast	

ROTARY HEAD

	Metric	Imperial
Rotary power	193 kW	260 hp
Speed / torque standard @120 rpm	15,479 Nm	11,416 lbf
Speed / torque option @100 rpm	18,642 Nm	13,749 lbf
Speed / torque option @150 rpm	12,428 Nm	9,166 lbf
Bullshaft thread	5 1/2 in API REG.	

OPERATOR'S CAB

	Metric	Imperial
Certification	FOPS rated per ISO 3449 Level II	
Sound level rating	80 dB(A) or less	
Operator's seat	Fully adjustable and swiveling (180°) with adjustable height, lumbar support, and pneumatic suspension, shoulder type 3-point seat belt	
Helper's seat	Fixed with seat belt	
Camera monitor	Standard for tramping	
HVAC	Ambient temp. range -40° c to +50° C -40°F to 122°F	
Sunshades	Standard on all windows	
AM/FM Sirius XM radio	Standard w/bluetooth connectivity	

OPERATOR CONTROLS

	Metric	Imperial
Location	Seat-mounted left and right-hand control panels for all drill functions	
GUI	12" touch screen display	

DUST SUPPRESSION

	Metric	Imperial
Water injection w/o DC	2,271 l	600 gal
Water pump	34 lpm	9 GPM
Dry dust collector	198 m ³ /min	7000 CFM
Dust hood	Hyd. cylinder actuated dust door and curtains	

STANDARD FEATURES

	Metric	Imperial
Lighting	17 LED lights	
Central lubrication	Automatic	
Thread lubrication	Operated from cab	
Chain lubrication	Operated from cab	
Cameras	2 for tramping, 2 for pipe handling	
Safety features	Emergency stops near all ladders and main electrical enclosure; Pull type cable stop on mast; Fuel fill isolator on fluid service center	

Fluid service center	Remote fill points:
	Fuel, Hyd. Oil, Central lube, Chain lube, Engine coolant
Remote drain points:	
	Engine oil, Hyd. oil, Compressor oil, Engine coolant, Pimp drive oil
Srobe light	2 (on mast and on frame)
Oil Sampling	Live SOS sampling points for engine, compressor, engine coolant, hydraulic oil
Diagnostics package	Sensor package for key pump parameters for the ease of troubleshooting

OPTIONS

	Metric	Imperial
Radio remote	For tramping and hoist	
Mast access	Infill for access on mast bottom	
Machine access	Self levelling hydraulic cylinder. actuated stairway	
Wash down	Pressure water wash hose reel	
Hammer lube	115 l (30 gal.) tank for DTH drilling	
Deck crane	For bit and hammer handling	

ARCTIC PACKAGE

	Metric	Imperial
Generator	25kW	
Electric immersion heaters	Hydraulic oil, water, chain lube, pump drive, compressor oil, engine coolant, engine oil, batteries	
Insulation wrap	On water pump	

AUTOMATION FEATURES

	Metric	Imperial
Standard	Auto Level Auto Mast	
Options	-	
Navigation	TIM3D GPS	
Drilling	Auto drill, Auto pipe handling	
Teleremote	Automine off board remote operation	

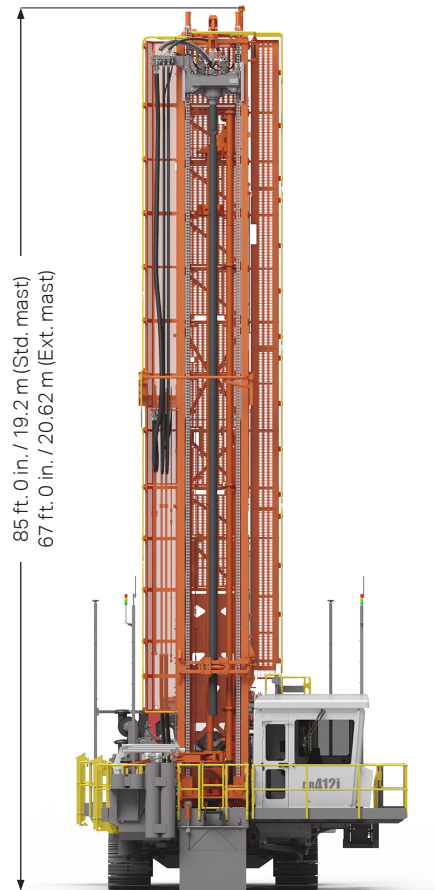
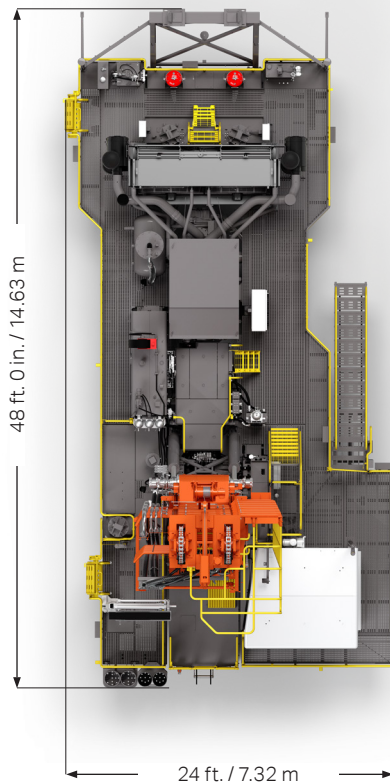
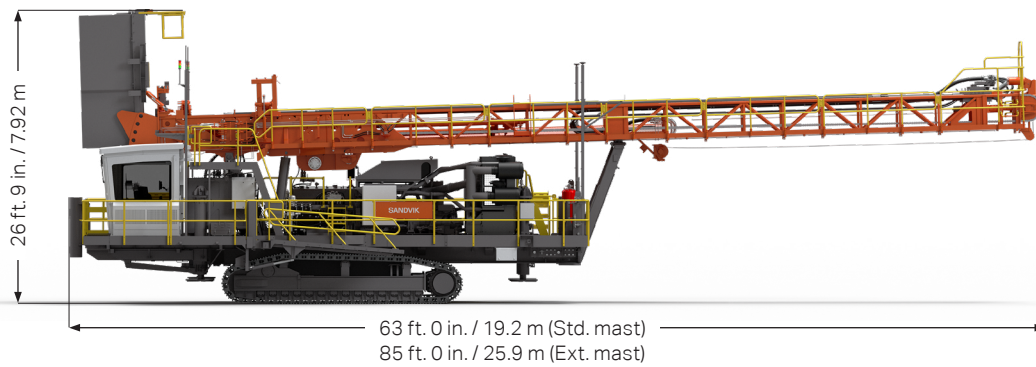
DIMENSIONS

	Metric	Imperial
Length - Mast up	14.63 m	48 ft. 0 in.
Length - Mast down (Std. mast)	19.2 m	63 ft. 0 in.
Length - Mast down (Ext. mast)	25.9 m	85 ft. 0 in.
Height - Mast down	7.92 m	26 ft. 0 in.
Height - Mast up (Std. mast)	19.2 m	85 ft. 0 in.
Height - Mast up (Ext. mast)	20.62 m	67 ft. 0 in.
Width w/ additional deck	7.32 m	24 ft. 0 in.
Width w/o additional deck	-	-

WEIGHT

	Metric	Imperial
Estimated operating weight	109-127 t	240,000 - 280,000 lbs.

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.