

DeltaBase 420 - DTH Drill Rig

DRILLING DEPTH GUIDELINES

The figures in these tables have been calculated, based on field experiences, and may be reasonably expected.

Actual drilling capacity will depend on in-hole tools and conditions, drilling techniques and equipment used.

	METRIC SYSTEM	U.S. CUSTOMARY SYSTEM
STANDARD DRILLING SYSTEMS	DTH dry hole	DTH dry hole
4" - 6 1/2" DTH HOLE	300 m	985 ft

STANDARD UNIT

PRIME MOVER

Standard Unit	DEUTZ BF4M1013EC Diesel Engine	
Power (maximum)	104 kW @ 2200 rpm	140 hp @ 2200 rpm
Tank Capacity	150 l	39 g
Fuel Consumption	195 g/kWh	
Electrical Circuit	24 V	

NOTE: The engine has sufficient power to run the rig up to 2500 meters above sea level at 25 °C

ROTARY HEAD DB420	TORQUE AND RPM RATINGS	
Low Gear	4600/75 Nm/rpm	3350/75 lb-ft/rpm
High Gear	2300/150 Nm/rpm	1675/150 lb-ft/rpm
Bore - Inside Diameter	52 mm	2 in
Swivel - Inside Diameter	24 mm	1 in
Rotation Motors	Danfoss OMT 160	
Top Drive Flange	2 3/8" API Reg Box	
Gear Ratio	4.047:1	
Distance from drilling line to chain	202 mm	7.95 in

HYDRAULIC SYSTEM

Pump	Variable load-sensing with torque control	
Max flow	230 lpm	60 gpm
Max pressure	280 bar	4060 psi
Hydraulic oil volume	210 l	55 g
Oil cooler capacity	16 kW	21.4 hp

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	METRIC SYSTEM	U.S. CUSTOMARY SYSTEM
DRILL MAST AND FEED SYSTEM		
Feed Stroke	4000 mm	13 ft
Feed Speed - Down	3,9 m/min	12.7 ft/min
Feed Pressure Control	+/- 350 N	+/- 78 lbf
Fast Feed Speed - Up	40 m/min	130 ft/min
- Down	66 m/min	215 ft/min
Pull Down Force	35 kN	7715 lbf
Pull Back Force	70 kN	15400 lbf
MAIN WINCH (Mast Top)		
Pull on Inner Layer (maximum)	9 kN	1980 lbf
Line Speed	35 m/min	115 ft/min
Cable Diameter	8 mm	⁵ / ₁₆ in
ROD CLAMPS		
Maximum Diameter	220 mm	8.7 in
Clamping Sizes	65 to 95 mm sf	2 ¹ / ₂ to 3 ³ / ₄ in sf
Maximum Holding Force	10 kN	22500 lbf
Break-Out-Cylinder		
Max Pull	80 kN	17984 lbf
Max Push	115 kN	25853 lbf
Break-Out-Tong		
Min. Rod Size	66,6 mm	2 ⁵ / ₈ in
Max. Rod Size	81,2 mm	3 ¹ / ₅ in
ROD RACK		
Capacity - 3" rods	60	
Capacity - 3 ¹ / ₂ " rods	45	
UNDERCARRIAGE		
Driving Speed- low gear	2 km/h	1.25 mph
- high gear	4 km/h	2.49 mph
Maximum Grade Ability (low gear)	60 % (~30 deg)	
Rubber Tracks	Standard	

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	METRIC SYSTEM	U.S. CUSTOMARY SYSTEM
LUBRICATION PUMP		
Flow	0-8 l/h	0-2 gph
Tank Capacity	50 l	13.2 g

OPTIONAL EQUIPMENT

NOTE: Options marked with * are included in standard

Slope Winch*

Pull on Inner Layer (maximum)	62 kN	13650 lbf
Line Speed	8 m/min	26 ft/min
Cable Diameter	13 mm	1/2 in
Rope Length (Long Drum)	30 m	98 ft
Drum Diameter	114 mm	4.4 in
Line Pull - 2nd Layer	51 kN	11465 lbf
- 3rd Layer	44 kN	9891 lbf
- 4th Layer	38 kN	8542 lbf

Water Pump*	HPW 200/30-45 ST	
Flow	30 l/min	7.9 gpm
Pressure	200 bar	2900 psi
Self suction up to	3 m	9.8 ft
Suction connection on the rig	3/4" G Female	

Welding Generator*	HWG 180/5k-33	
	3,5 kVA (1-phase 230 VAC)	
	6,5 kVA (3-phase 400 VAC)	

Grinding Machine		
Standard Unit	Type CMI Mini Junior Electrical VS-220HD	
Spindle Speed	20000 rpm	
Electrical Specifications	220-240 V, 10 Amps, Single phase 50 or 60 Hz	
Working Air Pressure	7-8 bar	100-120 psi
Air Consumption	< 0.03 m ³ /min	< 1 cfm
Max Water/Coolant Press	4 bar	60 psi
Sound Level	65 dB (A)	

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	METRIC SYSTEM	U.S. CUSTOMARY SYSTEM
Bit Holder Capacity (maximum)		
Threaded bits, skirt diameter	140 mm	5 1/2 in
Down the hole bit, shank diameter	140 mm	5 1/2 in

GENERAL INFORMATION

Air Connections

Inlet - Compressor Pressure (maximum)	30 bar	435 psi
Connection	2" G Female	
Outlet - Air Tools	3/4" G Female	
Pressure Adjustable From	0,2-8 bar	2.9 - 116 psi
Max. Flow	100 l/sec	1584.4 gpm

DTH Hammers: Suitable for use with 4"- 6" DTH hammers

Drill rods: Designed for use with 3m drill rods with O.D. 3" and 3 1/2"

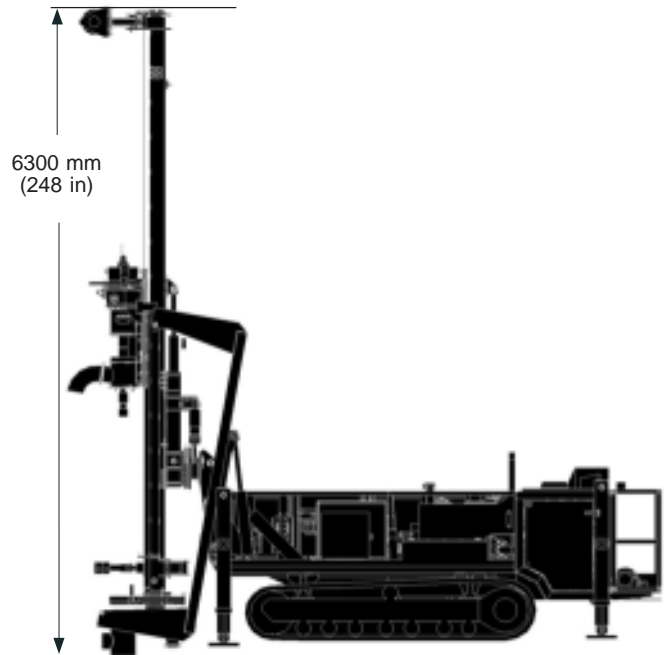
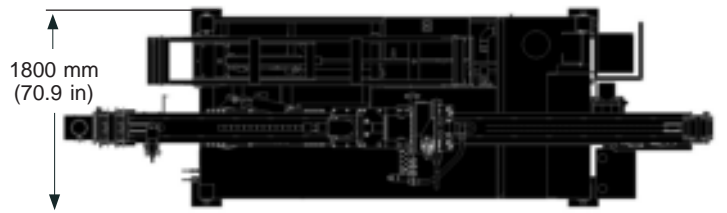
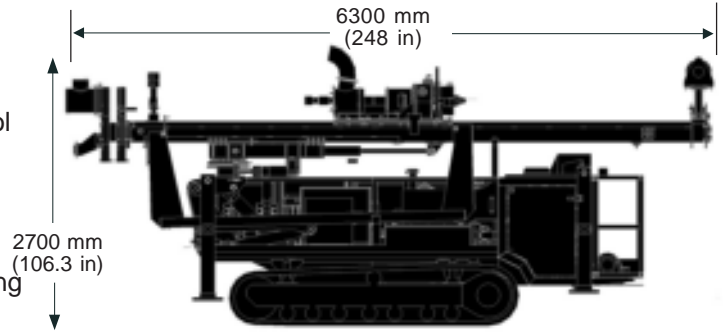
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DIMENSIONS AND WEIGHTS *

Dry Weight : approx. 7000 kg (15500 lb)

Operational Weight : approx. 8000 kg (17640 lb)

- Consists of:
- DEUTZ BF4M1013EC Power Unit Group
 - 4,76 litre 4 cylinder
 - Hydraulic Module
 - Top Winch 900 kg with Proportional Control
 - 24 V DC Electrical System
 - Variable Piston Pump with Load Sensing and Torque Control
 - Hydraulically Driven Lubrication Pump
 - Mast Support for maximum 220 mm Casing with Hydraulic Key
 - Break-out Cylinder
 - Rod Rack Hydraulic with Telescopic movement
 - Rotary Head
 - Crawler
 - Battery
 - Electric Operator Controls
 - Pulling Eye in rig end
 - Remote Control - drill rig only



SLOPE WINCH

Weight: 61 kg (134 lb)

UNDERCARRIAGE

Pad Width: 450 mm (18 in)

ROD RACK

Dimensions: L x W x H
 3120 x 460 x 790 mm
 (122.8 x 18.1 x 31.1 in)

OPTIONS:

Grinding Machine

Weight: 64 kg (141 lb) excluding packaging

Grinder Dimensions: L x W x H
 405 x 318 x 777 mm
 (15.9 x 12.5 x 30.6 in)