

MARMOROK CTR

Gemsa's Top Hammer Quarry Drill Rig



more creativity, high productivity

GEMSA

TECHNICAL INFORMATION

Drill Rig Specifications



MARMOROK CTR

DRILLING DEPTH GUIDELINES				
DRILL ROD	Hole Ø "METRIC"	Hole Ø "U.S."	Hole Depth "METRIC"	Hole Depth "U.S."
T38 (1 1/2") Guide Tube - T38 (1 1/2") Guide Rod	70 mm	2,73 in	12 m	39,4 ft

BASE FRAME ASSEMBLY / UNDERCARRIAGE		
	METRIC	U.S.
Weight of the Rig	5.800 kg	12.787 lb
Length	4.500 mm	14,7 ft
Width	2.450 mm	8 ft
Height	1.800 mm	5,9 ft
Stabilization	Four hydraulic jacks sides of the rig	
Traction	Three Wheel Drive, Negative Brake Release Towing Purpose Manual Brake Release	
Wheel	Heavy Duty Tires 7.50x15	
Steering	Hydraulic Control	
Driving Speed	2.7 km/h	1,7 Mph

POWER PACK		
	METRIC	U.S.
Engine	DEUTZ BF 4M 1013 FC	
Type of Cooling	Water - Cooled	
Fuel	Diesel	
Fuel Consumption	204 g/kWh	0,335 lb/hph
Number of cylinders, Method of Operation	4 cylinders, 4 stroke	
Max. Power	118 kW @ 2300 min ⁻¹	158 hp @ 2300 rpm
Max. Torque	700 Nm @ 1400 min ⁻¹	516 lb/ft @ 1400 rpm
Min. Idling Speed	650 min ⁻¹	650 rpm
Electrical Circuit	24 V	
Fuel Tank Capacity	220 liter	58 gal



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AIR COMPRESSOR	METRIC	U.S.
	Onboard Air Compressor ROTORCOMP Screw Compressor	
Working Pressure	10 bar	145 psi
Max. Air Delivery	4,5 m ³ /min	159 cfm
Power (Full load)	30 kW	40 hp
Main Rotor Rotation Max. Speed	7.500 min ⁻¹	7.500 rpm

HYDRAULIC SYSTEM	METRIC	U.S.
	Pump 1 Sauer Danfoss Open Circuit Axial Piston Pump	
Working Input Speeds	Minimum	500 min ⁻¹ / 500 rpm
	Maximum	2880 min ⁻¹ / 2880 rpm
Working Pressure	Continuous	280 bar / 4.060 psi
	Maximum	350 bar / 5.075 psi
Flow at 2000 min ⁻¹ l rpm	200 l/min	53 gal/min
Displacement	100 cm ³	6,10 in ³
Pump 2 Sauer Danfoss Open Circuit Axial Piston Pump		
Working Input Speeds	Continuous	2600 min ⁻¹ / 2600 rpm
	Maximum	3120 min ⁻¹ / 3120 rpm
Working Pressure	Continuous	310 bar / 4.495 psi
	Maximum	400 bar / 5.800 psi
Flow at Rated 2000 min ⁻¹ l rpm	120 l/min	32 gal/min
Displacement	60 cm ³	3.66 in ³
Pump 3 X3P79311BBA Vivoil		
Displacement	43,44 cm ³	2.6509 in ³
Max. Pressure	250 bar	3625.95 psi
Min. Speed	700 min ⁻¹	700 rpm
Max.Speed	2800 min ⁻¹	2800 rpm
Hydraulic Valves	PVG Valves Sauer Danfoss	
Hydraulic Hose, Fittings, Gauges	Parker	
Hydraulic Oil Tank Capacity	300 liter	80 gal



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DRILL MAST and FEED SYSTEM		
	METRIC	U.S.
Mast	Drill Head Operating Surfaces Covered with Hardox Plates	
Cradle	Supported with Rollers	
Feeding System	Negative Brake Planetary Gearbox with Hydraulic Motor	
Drill Mast Length	4.020 m	13,2 ft
Feeding Stroke	2.500 m	8,2 ft
Fast Feeding Down Speed	30 m/min	98,43 ft /min
Pull Back Force	25 kN (2,5 tones @ 160 bar)	5.620 lbf @ 2.321 psi
Pull Back Speed	30 m/min	98,43 ft /min
Maximum Rod Length	1.830 m	6 ft

TOP HAMMER		
	METRIC	U.S.
Model	Doofoor DF550L Hydraulic Rock Drill	
Percussion Power	17 kW	22.8 hp
Percussion Pressure (oil flow)	130 bar (95-120 l/min)	1.885 psi (25-31.7 gal/min)
Rotation Torque	975 Nm	719 lb-ft
Rotation Intermittent Speed	100-250 min	10-250 rpm
Rotation Oil Flow	35-70 l/min	9,2 – 18,4 gpm
Shank Lubrication Air Flow	200-300 l/min	53 – 79 gpm
Flushing Air Pressure	5-7 bar	73-102 psi
Flushing Air Flow	4000 l/min	1057 gpm
Flushing Water Flow	150 l/min	40 gpm

MACHINE CONTROLS	
Drilling Controls	Electric, Cable Control / Pilot Control
Drilling Control Panel	Ergonomic Design
Driving Controls	Left Side, Behind of the Rig.



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DUST COLLECTOR		
	METRIC	U.S.
Model	Gemsa Model Dust Collector with Cyclone	
Powered by	Hydraulic & Pneumatic	
Filter Area	3.2 sqm	34.44 ft ²

SAFETY SYSTEM	
Fire Extinguishers	There are 12 kg fire extinguishers several places where operator and assistant can reach easily .Also fire sensitive balls inside the engine cabinet .
Safety Stops	On each side of the machine where operator and assistant can reach easily.

OPTIONAL EQUIPMENT		
	METRIC	U.S.
Extra Valve Outlet		
Radio Remote Controller	Drilling & Trammig Functions	
Rig Lighting	Extra Nordic Led Lights Optional	
Drill Rig Color	Standard Color : Yellow – Black (Customer's choice is Optional)	

