



## LM90 Modular Diamond Drill System

HYDROSTATIC PUMPS	Main Pump	Recirculation Pump
<b>Application</b>	All Drill Functions	Oil cooling and charge pump
<b>Type</b>	Variable Displacement Axial Piston with pressure compensated load sensing control.	Gear Fixed displacement
<b>Manufacturer</b>	Rexroth	Rexroth
<b>Operating conditions as used on LM90 drill:</b>		
Maximum pressure	31 MPa (4500 psi) forward rotation, reverse rotation, and rod handling	5 bar (72 psi)
<b>Normal speed</b>	1450 rpm (50 hz) 1750 rpm (60 hz)	1450 rpm (50 hz) 1750 rpm (60 hz)
<b>Hydraulic tank volume</b>	66 L (17.4 U.S. gallons)	

### FEED FRAME

<b>Feed length:</b>	1830 mm (72 in)
<b>Max. rated pushing force:</b>	61 kN @ 28 MPa (13,420 lbf @ 4060 psi)
<b>Max. rated pulling force:</b>	123.4 kN @ 28 MPa (27,148 lbf @ 4060 psi)
<b>Rated carriage speed:</b>	0.70 m/sec (3 ft/sec) for one complete cycle
<b>Normal rod handling speed:</b>	Approx. 15 m/min (50 ft/min) Actual rod handling time may vary with working conditions.

**NOTE:** Feed Frame is reversible.

CHUCK AND ROD HOLDER	HQ Chuck	PQ Rod Holder
<b>Maximum opening</b>	97.0 mm (3.82 in) diameter corresponding to the ID of the HQ guide bushing.	125 mm (4.875 in) diameter corresponding to the ID of the PQ guide bushing.
<b>Type</b>	Closed hydraulically Opened mechanically Automatic synchronization with rod holder	Closed mechanically Opened hydraulically Automatic synchronization with chuck Manual override
<b>Jaws: Quantity</b>	3	3 (same as used in chuck)
<b>Type</b>	Tungsten carbide inserts	Tungsten carbide inserts
<b>Max. rated axial holding capacity</b>	Forward and Reverse rotation 130 kN (33,750 lbf) ●	130 kN (33,750 lbf) ▼
<b>Max. rated static torsional holding capacity</b>	5800 Nm (4255 lbf ft) ●	5800 Nm (4255 lbf ft) ▼

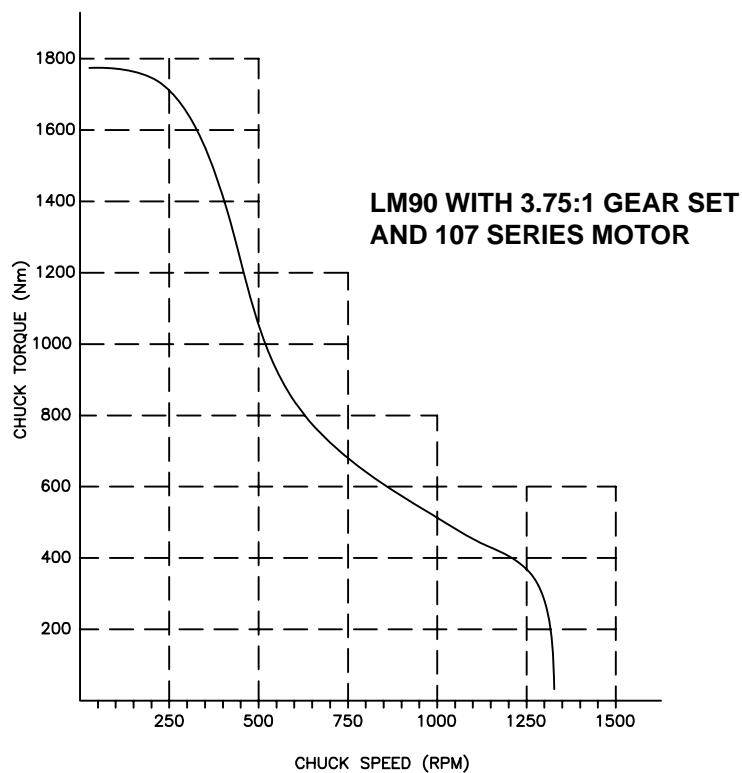
▼ at 7 MPa (1015 psi), with new jaws and rods

● at 11 MPa (1600 psi), with new jaws and rods

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HQ DRILL HEAD	Forward	Reverse
<b>Chuck speed</b>	0-1350 RPM Continuously adjustable. Speeds will vary with oil type and temperature, and are only approximate.	100 RPM Fixed to help prevent rod thread damage.
<b>Chuck output torque</b>	371 Nm (272 lbft) at 1250 RPM 1030 Nm (757 lbft) at 500 RPM	3750 Nm (2765 lbft) at 28 MPa (4060 psi) with break-out device

### Chuck Output Curve



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### DIMENSIONS AND WEIGHTS

#### Feed Frame

Weight: 1364 kg (3000 lb)

Includes:

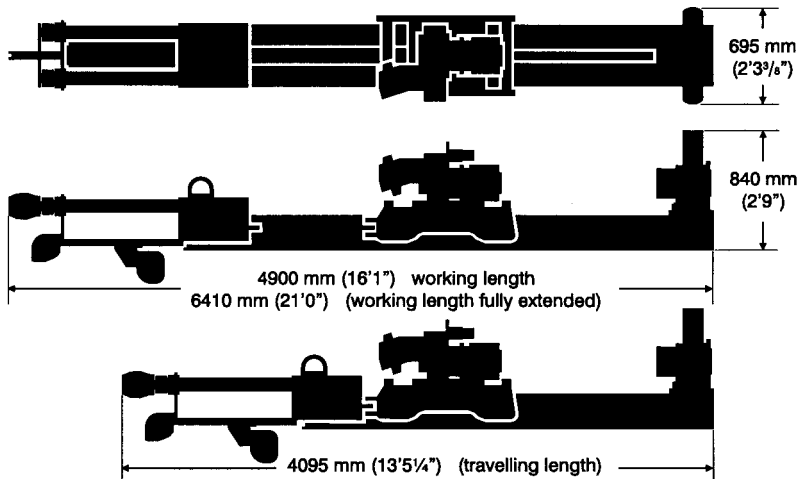
#### Rotation Unit c/w Chuck

Weight: 234kg (515 lb)

and

#### Rod Clamp Assembly

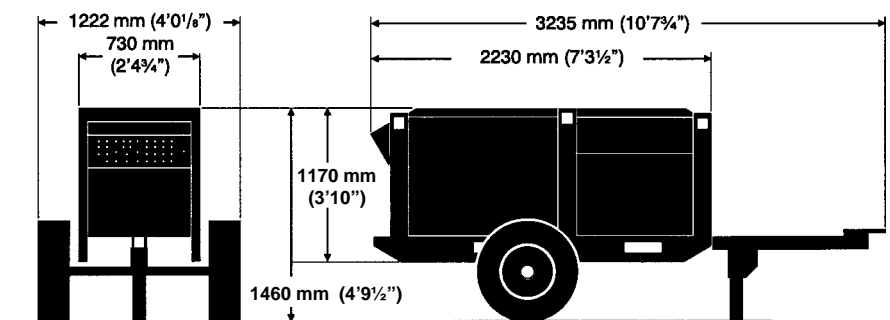
Weight: 155kg (340 lb)



#### Power Pack

Weight: 1500kg (3302 lb)

without towing group



#### Control Panel

Weight: 46kg (101 lb)

without hoses.

Add 42 kg (92 lb) for hoses.

