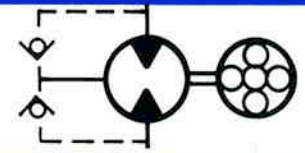
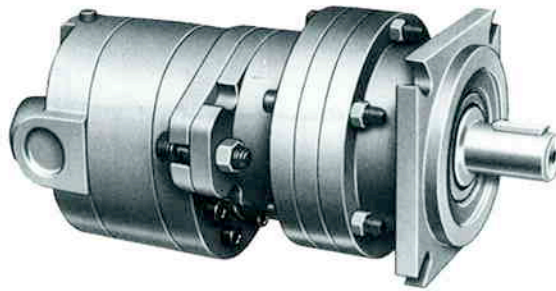




# HYDRAULIC MOTORS

## GEAR MOTORS 50G Series Specification Sheet



The CROSS series 50G high torque hydraulic motors feature the standard series 50 gear type motors combined with a highly efficient 5.33:1 planetary gear reduction unit. These units provide high torque at low speed with excellent starting and running torque characteristics. Motors and reduction units may be purchased separately. (Refer to Series 50 motor and Series PGR literature for additional information).

### GENERAL SPECIFICATIONS

- Rated working pressure (max. relief valve setting at full flow) . . . . . 3000 psi (207 bar)
- Maximum shock and surge pressure. . . . . 3500 psi (242 bar)
- Maximum flow rate (input) . . . . . 56 gpm (212 l/m)
- Maximum output speed (continuous). . . . . 500 rpm
- Maximum running torque (continuous output) . . . . . 8000 in. lbs. (92 Kg-M)
- Peak output torque (intermittent - 2% duty cycle) . . . . . 10,000 in. lbs. (115 Kg-M)
- Maximum horsepower (at rated speed and pressure) . . . . . 64 hp (48 Kw)

Available displacement sizes	8.1	10.4	12.4	14.6	17.6	20.3	27.7	cu.in./R
	132.7	170.4	203.2	239.3	288.4	332.6	453.9	cc/R

- Mounting (any position) . . . . . SAE "C" size, 4-Bolt
- Weight . . . . . Approx. 40 lbs. (18 Kg)

### MATERIAL SPECIFICATIONS

- End covers, pump . . . . . Die cast aluminum alloy
- Gears and shaft. . . . . Hardened steel
- Seals . . . . . Buna N
- Pump body . . . . . Permold aluminum alloy
- Reducer housing . . . . . Sand cast aluminum alloy

### STANDARD FEATURES

- Tapered roller bearings • Two pressure balanced loading plates
- External drain, motor (1/4 NPTF) for case pressure over .100 psi • Dual Rotation
- Ports: inlet and outlet (side location 1" SAE #16 (1 5/16-12)
- Shaft: 1 1/2" spline (17 tooth, 12/24 pitch, 30° P.A. flat root, Class I)
- Shaft seal: high pressure, 250 psi (17.2 bar)

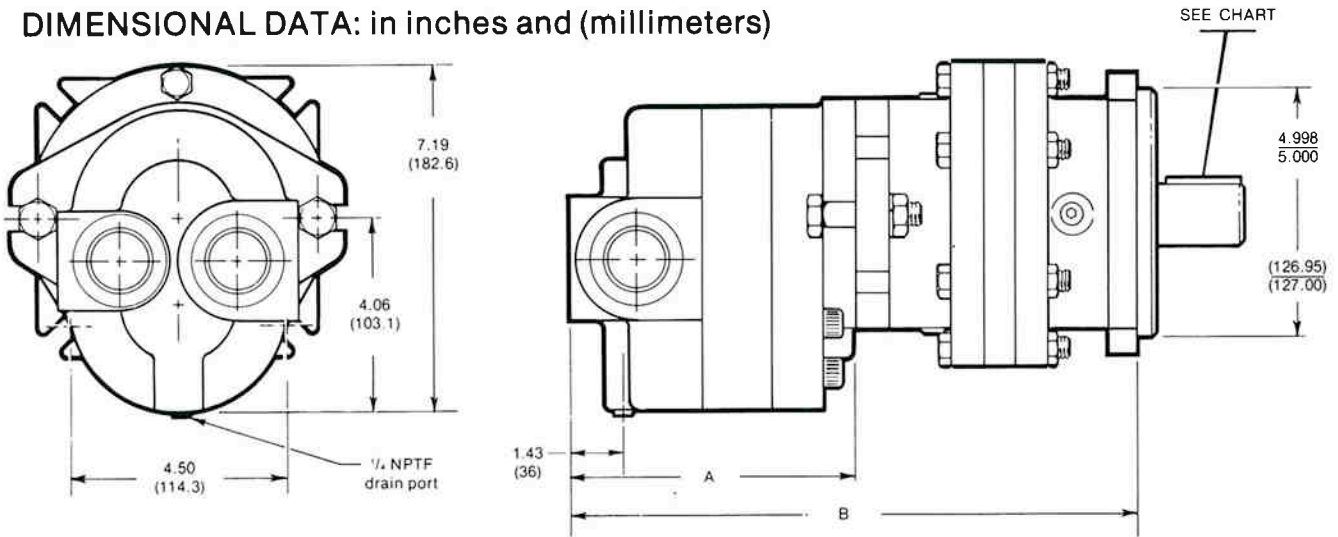
### OPTIONAL FEATURES

- Ports: 1 1/4" SAE#20 (1 5/8-12); 1 1/2" SAE#24 (1 7/8-12) inlets only
- Rear port location • Shafts: 1 1/4" spline (14 tooth); 1 1/4" and 1 1/2" keyed shaft

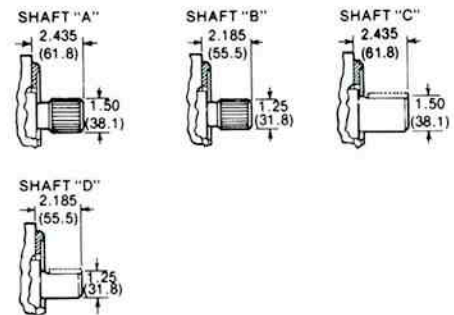
NOTE: Refer to Cross pump and motor technical/service sheet for side load and end load limitations and lubrication requirements.



**DIMENSIONAL DATA: in inches and (millimeters)**



DISPL.	8.1	10.4	12.4	14.6	17.6	20.3	27.7	
Dimension "A"	5.60 (142.2)	5.80 (147.3)	5.96 (151.4)	6.15 (156.2)	6.40 (162.6)	6.62 (168.1)	7.21 (183.1)	Inches (mm)
Dimension "B"	11.65 (295.87)	11.85 (300.97)	12.01 (305.07)	12.20 (309.87)	12.45 (316.27)	12.67 (321.77)	13.26 (336.77)	inches (mm)



**OUTPUT SHAFT**

Shaft Type:	DESCRIPTION
A	1 1/2" spline, 17 tooth, 12/24 pitch, 30° pressure angle, flat root side fit
B	1 1/4" spline, 14 tooth, 12/24 pitch, 30° pressure angle, flat root side fit
C	1 1/2" dia. with 3/8 square key
D	1 1/4" dia. with 5/16 square key

**ORDERING DATA**

Series	Type	Special Options	Size Cu.in./Rev. x 10	Rotation	Mtg.	Shaft Size & Type	Ports Location & Size				
							Inlet	Outlet			
50	G	O None	81	D Dual	C SAE "C" Size 4-Bolt	A 1 1/2" Spline	SC	1 <sup>5</sup> / <sub>16</sub>	1 <sup>5</sup> / <sub>16</sub>	Side Ports	
			104			B 1 1/4" Spline					
			124			C 1 1/2" Keyed					
			146			D 1 1/4" Keyed	RF	1 <sup>5</sup> / <sub>16</sub>	1 <sup>5</sup> / <sub>16</sub>		Rear Ports
			176								
			203								
277											

EXAMPLE: 50G081DCASC is a 50G Series motor, no special options, 8.1 cu. in. displacement per rev., dual rotation, SAE "C" size 4-bolt mounting, 1 1/2" spline shaft with 1 5/16" inlet and outlet side ports.



**CROSS MANUFACTURING, INC.**  
 100 Factory Street  
 Lewis, Kansas 67552  
 Phone 620/324-5525; FAX 620/324-5737; e-mail: info@crossmfg.com