



OTHER PRODUCTS

REDUCER/INCREASER 50 PGR Series Specification Sheet



The CROSS Series 50 PGR gear reducer is a high torque, low speed unit with a peak output of 10,000 in. lbs. and a maximum continuous output torque of 8,000 in. lbs. This 5.33 to 1 planetary reducer also provides a radial load capacity almost double that of competitive units. Designed for use with the Cross 50 Series hydraulic motors, or other equivalent motors, they may be used for many general mechanical speed reduction or increase applications.

GENERAL SPECIFICATIONS:

Reduction ratio	5.33 to 1 / increaser ratio	1 to 5.33
Efficiency (average)		96%
Maximum output speed		750 RPM
Maximum output torque (continuous)		8,000 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 torque)		95 hp (71 Kw)
Input mounting		SAE "B" 2-bolt
Input shaft (female)		7/8" spline, 13 tooth, 16/32 pitch, 30° P.A. flat root side fit
Output mounting		SAE "C" 4-bolt
Output shaft		SEE Standard SHAFT CHART on BACK
Weight		21 pounds

MATERIAL SPECIFICATIONS:

Housing	sandcast aluminum alloy
Gears	hardened steel cut
Shaft	ductile iron

STANDARD FEATURES:

Tapered roller bearings for end load and side thrust

OPTIONAL FEATURES:

Output shafts - 1 1/2" spline - 17 tooth, 1 1/4" spline - 14 tooth; 1 1/2" and 1 1/4" Keyed

APPLICATION INFORMATION:

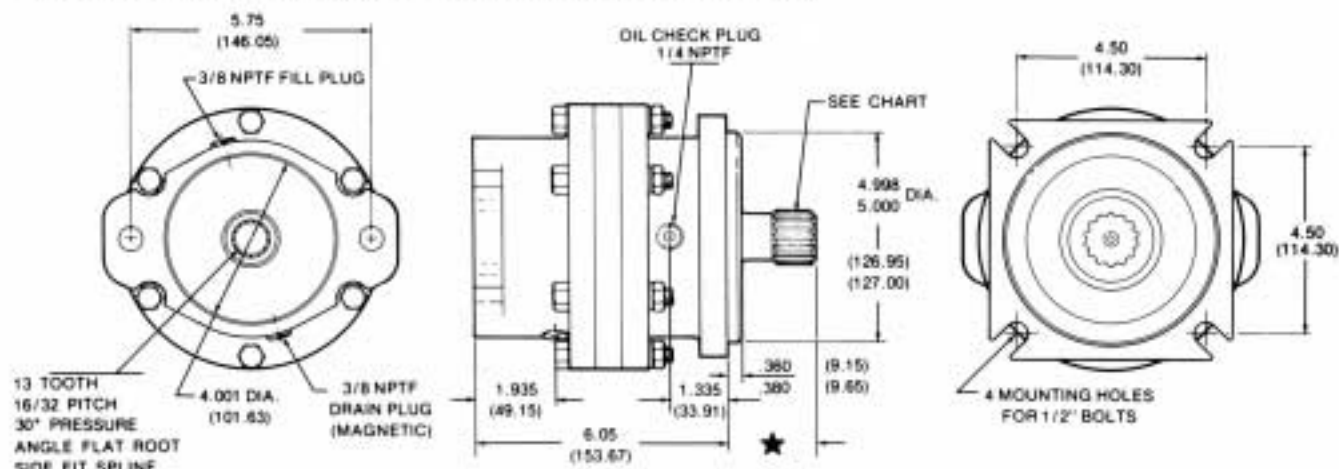
Can be mounted in any position, maximum input speed-4000 RPM, maximum input torque 1500 in. lbs. (17KG-M) continuous, 1875 in. lbs. (22KG-M) intermittent.

LUBRICATION REQUIREMENTS:

Use EP 90 wt. gear lubricant. Change after first 50 hours of use and periodically thereafter as indicated by inspection for contamination. Capacity 150-160 CC.



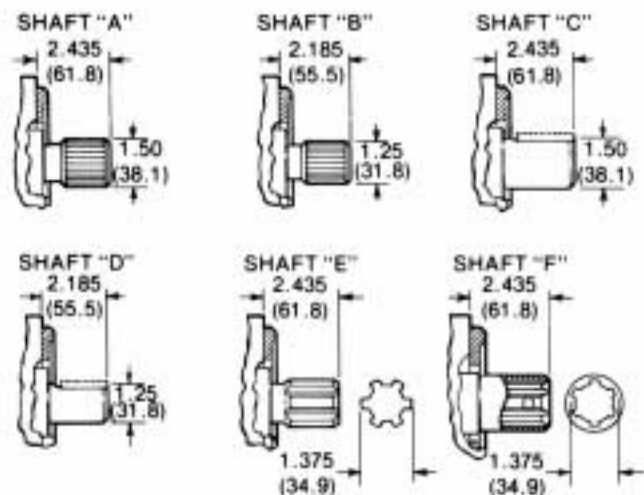
DIMENSIONAL DATA: in inches and (millimeters)



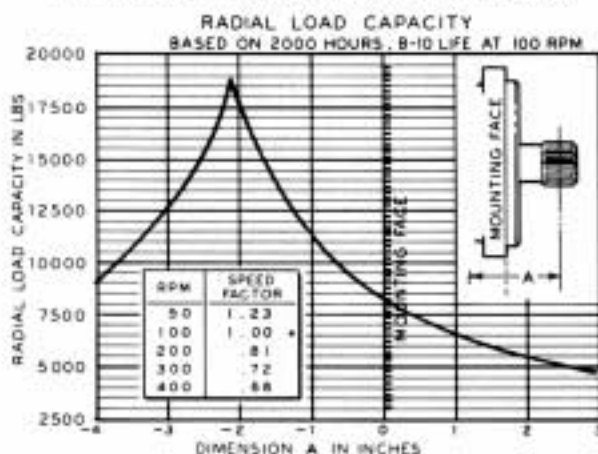
★ This Dimension is 2.185 for the 1 1/4" Shaft; 2.435 for the 1 1/2" Shaft.
 (55.90) (61.85)

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 keyway for 3/8" key
D	1 1/4" dia. with keyway for 1/8" key



TYPICAL PERFORMANCE DATA



ORDERING INFORMATION

5P0020-066 For A Type Shaft	5P0020-071 For C Type Shaft
5P0020-069 For B Type Shaft	5P0020-073 For D Type Shaft

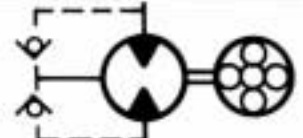


CROSS MANUFACTURING, INC.
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HYDRAULIC MOTORS

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)

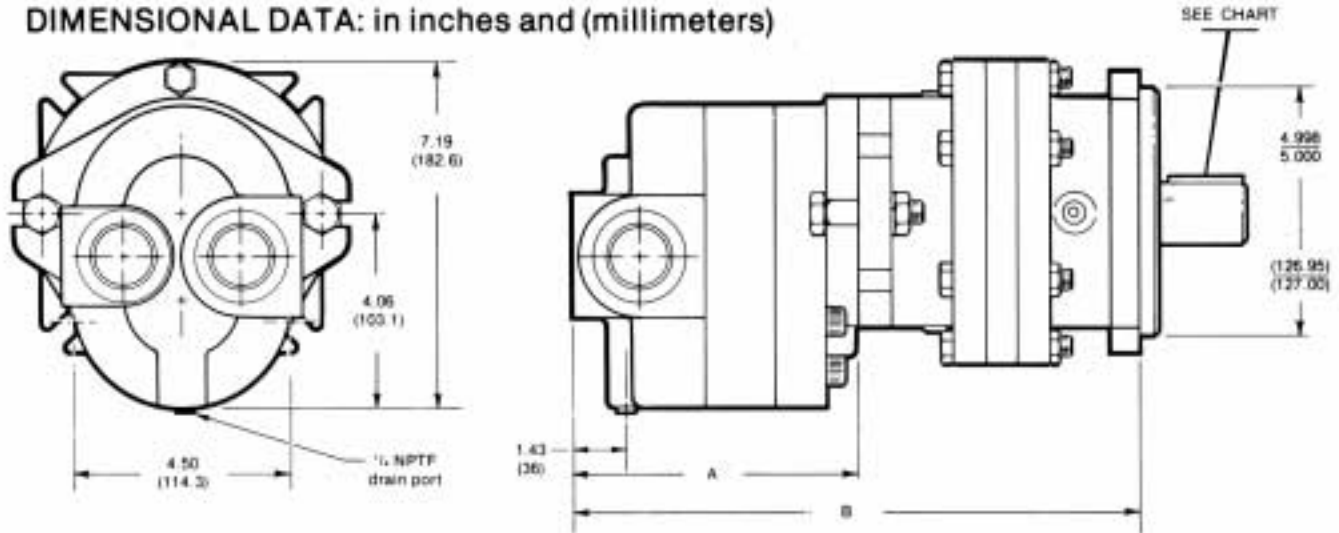
OPTIONAL FEATURES

- 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

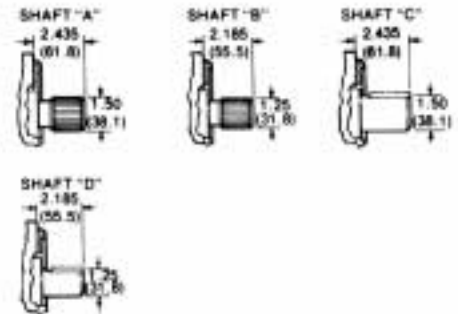
NOTE: Refer to Cross pump and motor technical/service sheet for side load and end load limitations and lubrication requirements.



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 (295.67)	11.85 (300.97)	12.01 (305.07)	12.20 (309.67)	12.45 (316.27)	12.67 (321.77)	13.26 (338.77)	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 1/16"	1 1/16"	Side Ports
			104			B 1 1/4" Spline				
			124			C 1 1/2" Keyed				
			146			D 1 1/4" Keyed				
			176							
			203							
277										
						RF	1 1/16"	1 1/16"	Rear Ports	

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 1/16" inlet and outlet side ports.



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