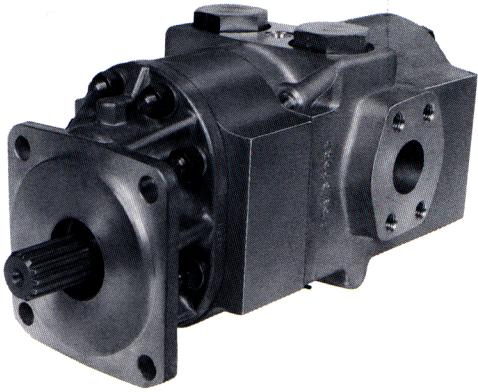


Model SPM20

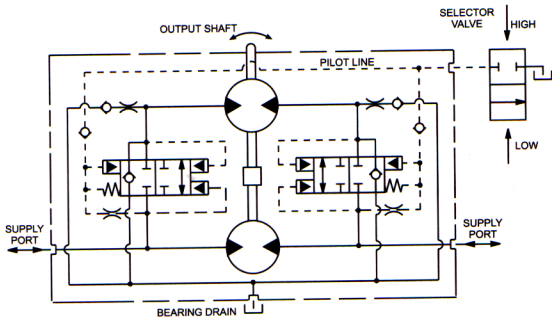


Description	Two-Speed Gear Motors
Flow Range	To 98 GPM Per Section
Displacements	To 9.10 C.I.R. Per Section
Maximum Pressure to	.2500 PSI
Maximum Speed to	.2500 RPM
Rotation	Bi-Directional
Bearings	Journal
Construction	Aluminum

Tandem Motor With Valving To Provide Two-Speed Operation On Constant Input Flow

Gresen two-speed motors consist of two hydraulic motor units and pilot operated valving. From this unique unit either high speed or high torque can be obtained, thereby improving the efficiency of winch drives, track drives, and hydrostatic transmissions. Main features of these units are: *No external pilot pressure source is necessary. Shift to different speed is extremely smooth. Motor will not hesitate during shift. Displacement of the two motors need not be equal. One inlet and one outlet, fully reversible.*

The two motor sections are connected through valving to the common inlet/outlet ports. For low speed, high torque output, the pilot port is vented to tank. For higher speed, lower torque, the pilot port is blocked, causing the internal valves to shift to the closed position, routing the total flow through the rear motor section. The front motor section receives lubrication oil through the valve section and requires very little horsepower in this position since it is only recirculating the fluid.



Performance Data

MOTOR SECTION MODEL SIZE	DISPLACEMENT/REVOLUTION (Theoretical)					Torque Per 1000 PSID				Power at Max. RPM & Max.PSID		Maximum Limits				
	US Gallons	Cubic Inches	Cubic Liters	Imperial Cm's	Imperial Gallons	Start Lb.In.	Run Nm	Start Lb.In.	Run Nm	H.P.	KW	Relief Setting		Continuous		
												PSI	BAR	Pressure PSI	BAR	Speed RPM
SPM20 150	.0131	3.02	.050	49.85	.011	272	368	400	542	38	28.3	2500	172	1700	117	2500
SPM20 200	.0175	4.04	.066	66.20	.015	384	520	588	797	50	37.3	2500	172	1700	117	2500
SPM20 250	.0219	5.06	.083	82.92	.018	496	672	720	976	64	47.7	2500	172	1700	117	2500
SPM20 300	.0262	6.05	.099	99.14	.022	608	824	880	1193	74	55.2	2500	172	1700	117	2500
SPM20 350	.0306	7.07	.116	115.86	.025	720	976	1000	1355	90	67.1	2500	172	1700	117	2500
SPM20 400	.0350	8.08	.133	132.41	.029	820	1111	1120	1518	105	78.3	2500	172	1700	117	2500
SPM20 450	.0394	9.10	.149	149.12	.033	940	1274	1340	1816	124	92.5	2500	172	1700	117	2500

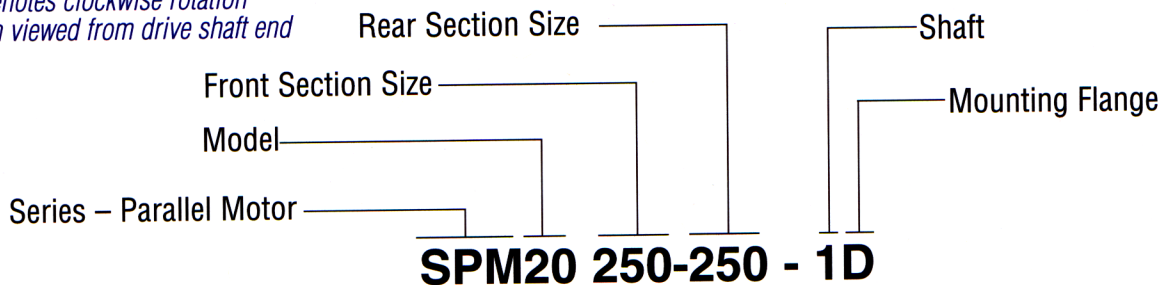
*OUTPUT TORQUE
 • HIGH SPEED (Low Torque) = Torque of Front Motor Section Only.
 • LOW SPEED (High Torque) = Torque of Front and Rear Motor Sections Combined.
 Available with Viton Seals for use with phosphate ester base fluids. All data based on SAE 10W oil at 135°F.

CAUTION: Bearing drain line pressure must not exceed 20 PSIG.

When sizing motors, refer to the performance charts in the back of the catalog to determine the volumetric efficiency and input horsepower requirements.

How To Order

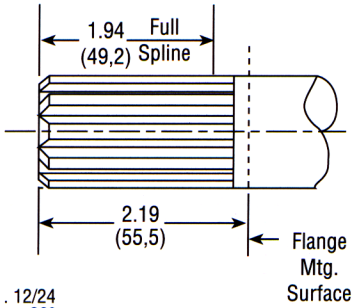
'A' denotes counterclockwise rotation
 'C' denotes clockwise rotation
 When viewed from drive shaft end



Note: Add 'V' to Pump Model Number (VSPM20) when ordering Pumps with Viton Seals for use with Phosphate Ester Base Fluids.

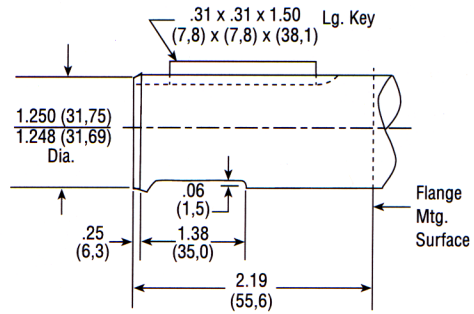
Shafts Available

1 SAE 'C' 1-1/4" 14-Tooth Spline
Flat Root Side Fit
 Torque Limit 655 Lbs. Ft. (888, Nm)
 "Tandem" Pumps Only



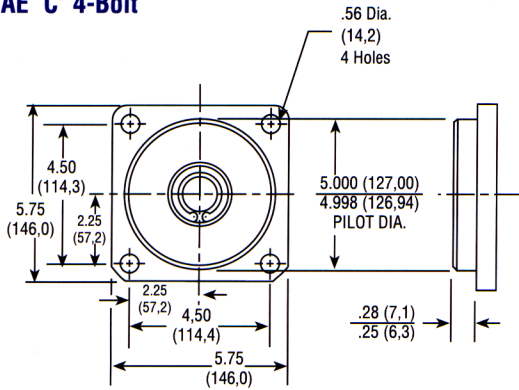
Spline Data
 Diametral Pitch 12/24
 Pressure Angle 30°
 No. Of Teeth 14

3 SAE 'C' 1-1/4" Straight Shaft
 Torque Limit 655 Lbs. Ft. (888, Nm)
 Available on all sizes

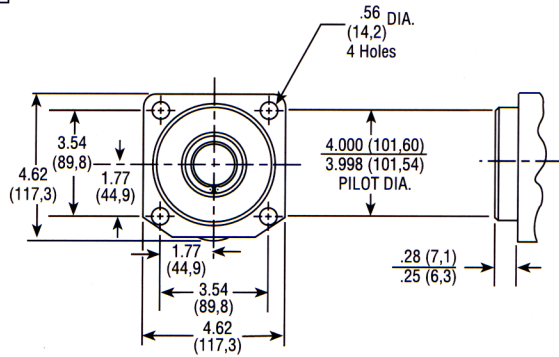


Mounting Flanges Available

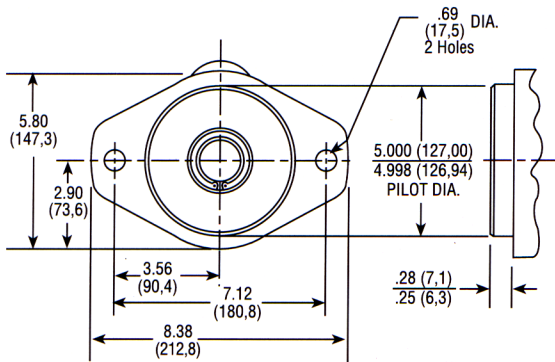
D SAE 'C' 4-Bolt



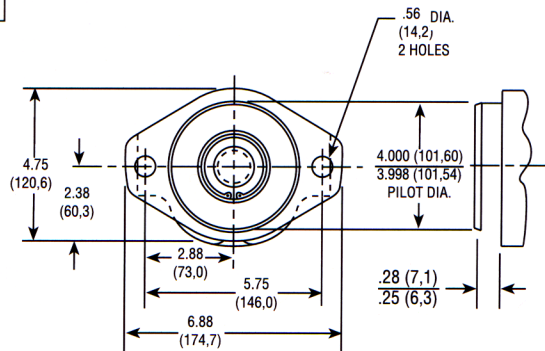
E SAE 'B' 4-Bolt



F SAE 'C' 2-Bolt



N SAE 'B' 2-Bolt



See "General Product & Safety Information" on inside front cover of this catalog



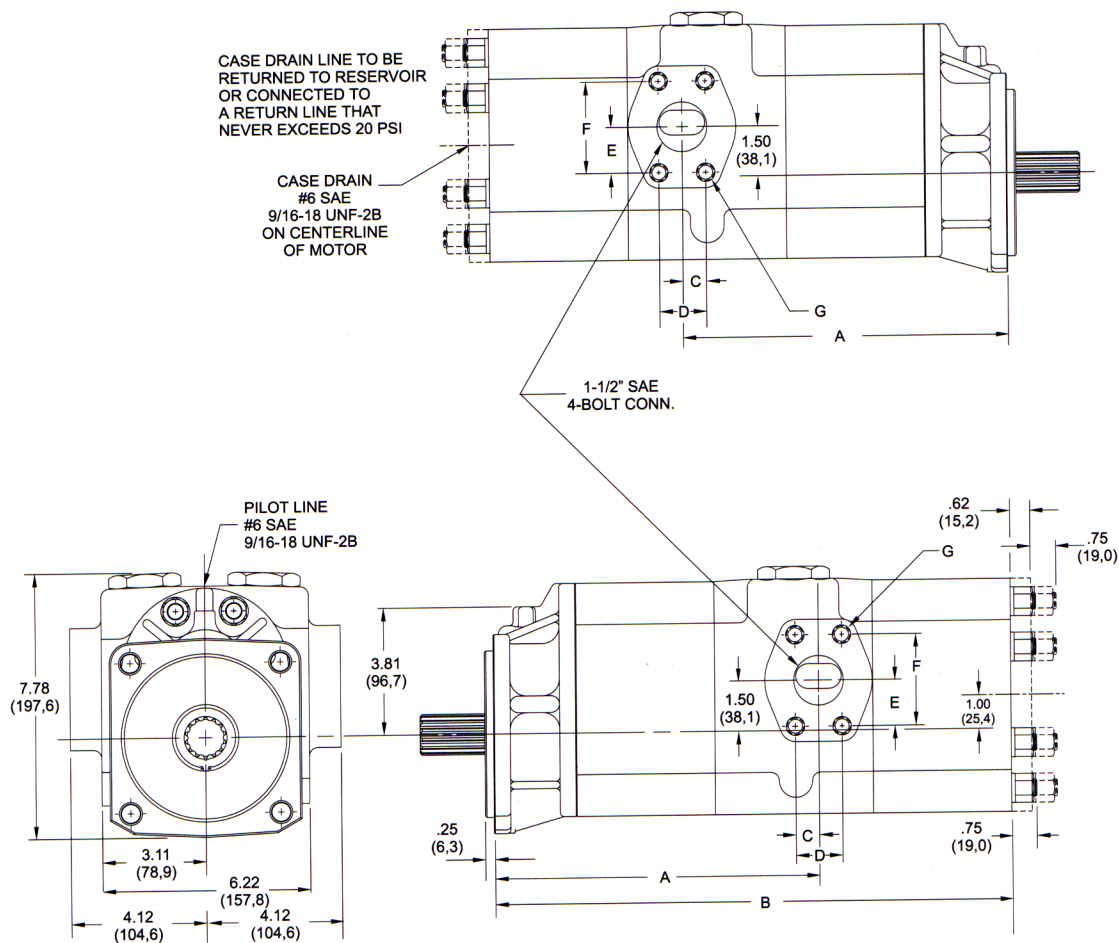
Dimensional Data

Mounting Dimensions

MOTOR SIZES	A	B
SPM20150-150	8.03 (203,9)	12.68 (322,0)
SPM20200-200	8.93 (226,8)	14.43 (366,5)
SPM20250-250	9.21 (233,9)	15.11 (383,7)
SPM20300-300	9.49 (241,0)	15.67 (398,0)
SPM20350-350	9.78 (248,4)	15.57 (395,4)
SPM25400-400	10.06 (255,5)	16.13 (409,7)
SPM20450-450	10.35 (262,8)	16.71 (424,4)

SAE 4-Bolt Connector Ports

SIZE	C	D	E	F	G
1-1/2"	.70 (17,1)	1.40 (35,7)	1.37 (34,7)	2.75 (69,8)	1/2-13UNC



* These dimensions locate \varnothing of bolt pattern only

SAE 4-Bolt NPT Connectors are available. See Accessory Section