

# Model 20

Description . . . . . Gear Pump  
 Flow Range . . . . . To 98 GPM (370.9 LTR.)  
 Displacements . . . . . To 9.10 C.I.R. (149.12 CC's/REV.)  
 Maximum Pressure to . . . . . 2500 PSI (172 BAR)  
 Maximum Speed to . . . . . 2500 RPM  
 Rotation . . . . . A or C  
 Bearing . . . . . Journal  
 Construction . . . . . Aluminum or Cast Iron\*

## Performance Data

PUMP MODEL	SECTION SIZE	DISPLACEMENT/REVOLUTION (Theoretical)					MAXIMUM PRESSURE		MAXIMUM SPEED
		US Gallons	Cubic Inches	Liters	Cubic Centimeters	Imperial Gallons	PSI	BAR	RPM
20	100	.0087	2.01	.0330	32.938	.0072	2500	172	2500
20	150	.0131	3.02	.0496	49.498	.0108	2500	172	2500
20	200	.0175	4.04	.0662	66.204	.0146	2500	172	2500
20	250	.0219	5.06	.0829	82.919	.0182	2500	172	2500
20	300	.0262	6.05	.0992	99.142	.0218	2500 <sup>(1)</sup>	172	2500
20	350	.0306	7.07	.1158	115.857	.0255	2500 <sup>(2)</sup>	172	2500
20	400	.0350	8.08	.1325	132.408	.0292	2500	172	2500
20	450	.0394	9.10	.1491	149.123	.0328	2500	172	2500

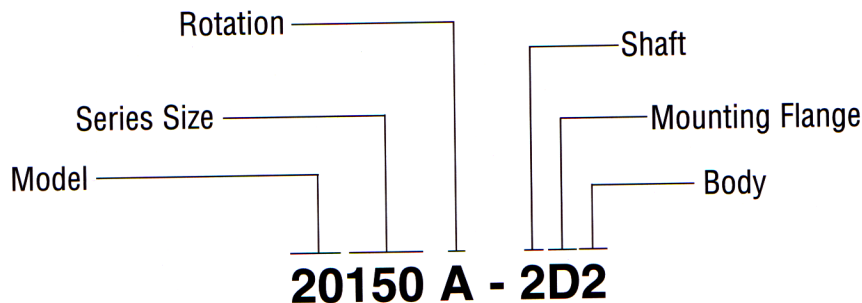
Notes: (1) 2100 PSI maximum due to torque limitations of No. 4 shaft. (2) 1800 PSI maximum due to torque limitations of No. 4 shaft  
 All data based on SAE 10W oil at 150°F. Available with Viton Seals for use with phosphate ester base fluids.  
 \*Some models and sizes are available for pressure up to 3500 PSI. Cast-iron not available on all models. Consult factory for availability.

**CAUTION:** "Inlet vacuum" should not exceed 5" Hg at normal operating speed and temperature. Operation of pumps in excess of 5" Hg requires factory approval.

When sizing pumps, 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 prefix 'V' to pump model number (V20) when ordering pumps with Viton Seals.  
 Add 'FP' to pump model number (FP20- or VFP20) when ordering pumps with cast iron construction.

# Shafts Available

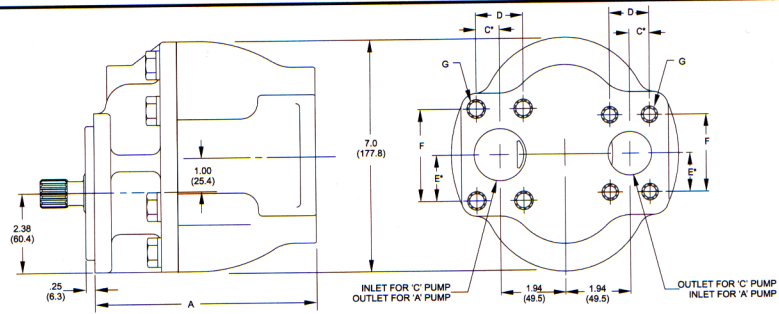
<p><b>1 SAE 'C' 1-1/4" 14-Tooth Spline Flat Root Side Fit</b> Torque limit 655 Lbs. Ft. (888, Nm) "Single" Pumps only</p> <p><b>Spline Data</b> Diametral Pitch ..... 12/24 Pressure Angle ..... 30° No. Of Teeth ..... 14</p>	<p><b>2 1" Dia. Straight Shaft</b> Torque limit 341 Lbs. Ft. (462,3 Nm)</p> <p><b>CAUTION:</b> Due to shaft torque limitations, Consult the Factory for approval before applying this shaft in models of -350 size and larger pumps.</p>	<p><b>3 SAE 'C' 1-1/4" 14 Straight Shaft</b> Torque limit 655 Lbs. Ft. (888, Nm) Available on all sizes.</p>
<p><b>4 7/8" Dia. 13 Tooth Spline Flat Root Side Fit</b> Torque limit 184 Lbs. Ft. (249,4 Nm)</p> <p><b>CAUTION:</b> Due to shaft torque limitations, Consult the Factory for approval before applying this shaft in models of -300 size and larger pumps.</p> <p><b>Spline Data</b> Diametral Pitch ..... 16/32 Pressure Angle ..... 30° No. Of Teeth ..... 13</p>	<p><b>5 1-1/4" Straight Shaft</b> Torque limit 655 Lbs. Ft. (888, Nm) Available on all sizes</p>	

# Mounting Flanges Available

<p><b>D SAE 'C' 4-Bolt</b></p>	<p><b>E SAE 'B' 4-Bolt</b></p>	<p><b>F SAE 'C' 2-Bolt</b></p>
<p><b>M 'M' Pad Mount</b></p>	<p><b>N SAE 'B' 2-Bolt</b></p>	

## Bodies Available

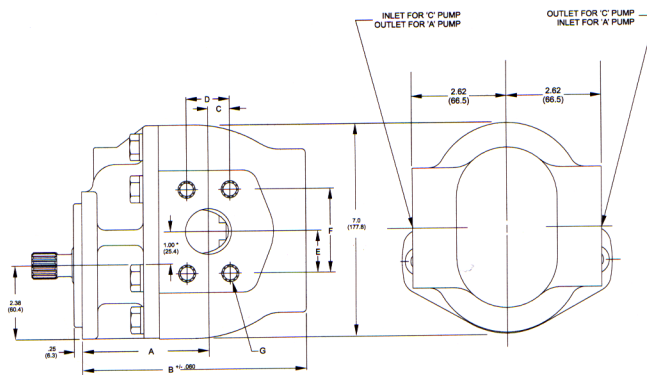
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### Mounting Dimensions

PUMP MODEL	For B & C 4-Bolt & C 2-Bolt Flanges		SAE 4-Bolt Connector Ports				Shipping Weights	
	A		Inlet Conn. Sz.	Inlet Hole Dia.	Outlet Conn. Sz.	Outlet Hole Dia.	lbs.	kgs.
20150	6.61 (167,8)		1-1/4"	1.19 (30,2)	1"	.937 (23,8)	19	8.62
20200	6.61 (167,8)		1-1/2"	1.50 (38,1)	1-1/4"	1.19 (30,2)	21	9.53
20250	6.61 (167,8)		1-1/2"	1.50 (38,1)	1-1/4"	1.19 (30,2)	22	9.98
20300	6.86 (174,2)		1-1/2"	1.50 (38,1)	1-1/4"	1.19 (30,2)	23	10.04

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### Mounting Dimensions

PUMP MODEL	For B & C 4-Bolt & C 2-Bolt Flanges		SAE 4-Bolt Connector Ports				Shipping Weights	
	A	B	Inlet Conn. Sz.	Inlet Hole Dia.	Outlet Conn. Sz.	Outlet Hole Dia.	lbs.	kgs.
20150	4.12 (104,6)	6.61 (167,8)	1-1/4"	1.19 (30,2)	1"	.937 (23,8)	19	8.62
20200	4.12 (104,6)	6.61 (167,8)	1-1/4"	1.19 (30,2)	1"	.937 (23,8)	20	9.07
20250	4.12 (104,6)	6.61 (167,8)	1-1/2"	1.50 (38,1)	1-1/4"	1.19 (30,2)	21	9.53
20300	4.12 (104,6)	6.90 (175,2)	1-1/2"	1.50 (38,1)	1-1/4"	1.19 (30,2)	22	9.98
20350	4.35 (110,4)	7.18 (182,3)	1-1/2"	1.50 (38,1)	1-1/4"	1.19 (30,2)	23	10.4
20400	4.35 (110,4)	7.47 (189,7)	2"	2.00 (50,8)	1-1/4"	1.37 (34,7)	24	10.9
20450	4.66 (118,3)	7.75 (196,8)	2"	2.00 (50,8)	1-1/4"	1.37 (34,7)	25	11.3

## Dimensional Data

### SAE 4-Bolt Connector Ports

Size	C	D	E	F	G
1"	.51 (12,9)	1.031 (26,1)	1.03 (26,1)	2.062 (52,3)	3/8-16NC
1-1/4"	.59 (14,9)	1.188 (30,1)	1.15 (29,2)	2.313 (58,7)	7/16-14NC
1-1/2"	.70 (17,7)	1.406 (35,7)	1.37 (34,7)	2.750 (69,8)	1/2-13NC
2"	.84 (21,3)	1.688 (42,8)	1.53 (38,8)	3.062 (77,7)	1/2-13NC

\* These dimensions locate C of bolt pattern only.

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



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

