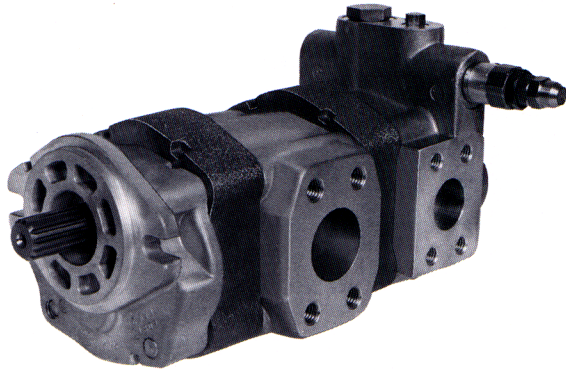


Model TP16-PVP16



Description Priority Valve Gear Pumps
 Flow Range To 38 GPM (143.8 LTR)
 Displacements To 3.904 C.I.R. (63.94 CC's/REV.)
 Maximum Pressure to 3000 PSI (207 BAR)
 Maximum Speed to 3600 RPM
 Rotation A or C
 Bearings Journal
 Construction Cast Iron Gear Plate with Aluminum Flange and Cover Plates

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
P16	45	.0038	.878	.0144	14.388	.0031	3000	207	3600
P16	65	.0055	1.270	.0208	20.812	.0045	3000	207	3600
P16	85	.0072	1.663	.0273	27.252	.0059	3000	207	3400
P16	100	.0085	1.964	.0321	32.184	.0070	3000	207	3300
P16	115	.0097	2.241	.0367	36.723	.0080	3000	207	3100
P16	150	.0127	2.934	.0481	48.080	.0105	3000	207	2800
P16	180	.0152	3.511	.0575	57.535	.0126	2200	152	2500
P16	200	.0169	3.904	.0639	63.942	.0140	2000	138	2200

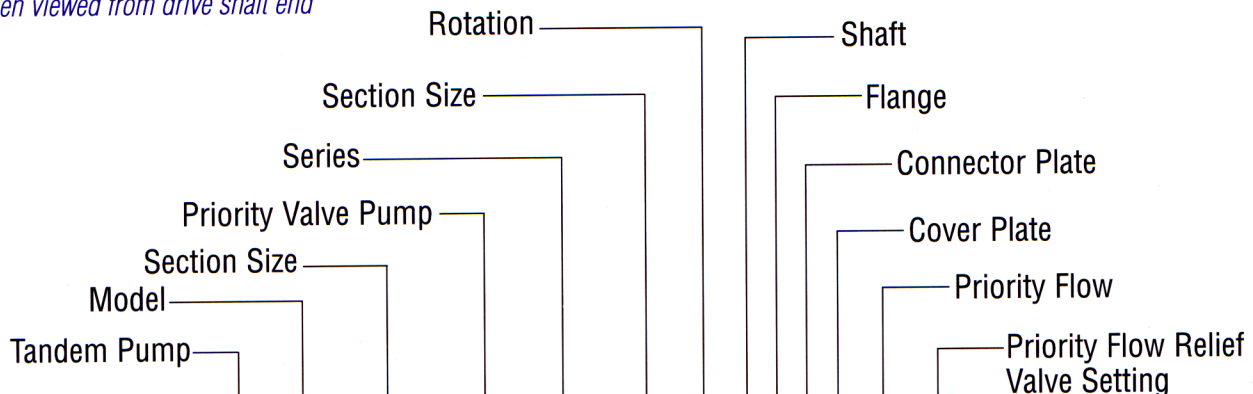
All data based on SAE 10W oil at 150°F.
 Available with Viton Seals for use with phosphate ester base fluids.

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

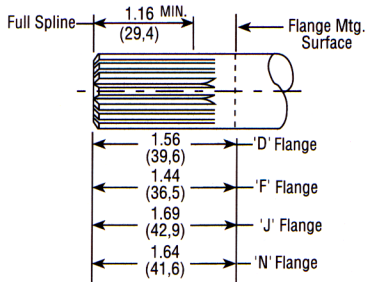


TP16-115-PVP16-100A-2N33-3-13

Note: Add prefix 'V' to pump model number (VTP16) when ordering pumps with Viton Seals for use with phosphate ester base fluids.

Shafts Available

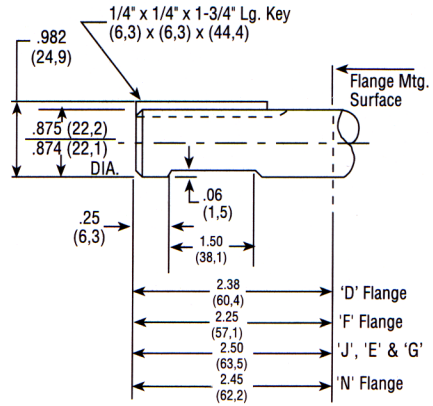
2 7/8" Dia. 13 Tooth Spline
 Flat Root Side Fit
 Torque Limit 184 Lbs. Ft. (249,4 Nm)



Spline Data

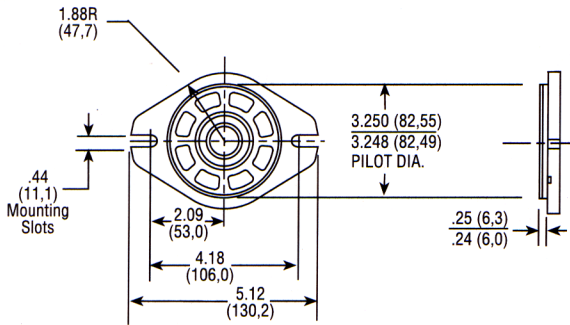
Diametral Pitch 16/32
 Pressure Angle 30°
 No. Of Teeth 13

5 7/8" Straight Shaft
 Torque Limit 184 Lbs. Ft. (249,4 Nm)

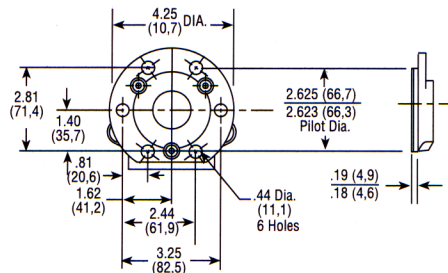


Mounting Flanges Available

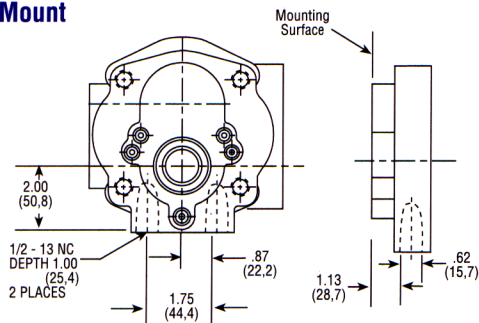
D SAE 'A' 2-Bolt



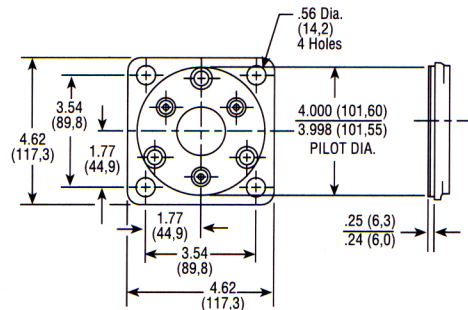
E 6-Bolt Round
 Available with No. 2 or 5 Shaft Only



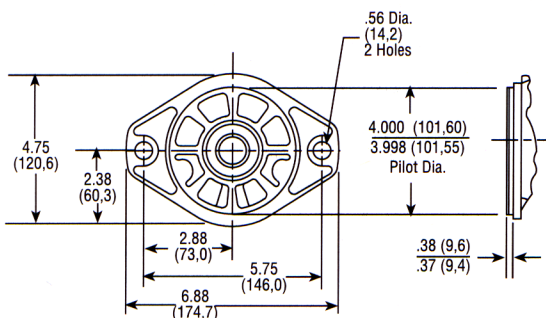
F Pad Mount



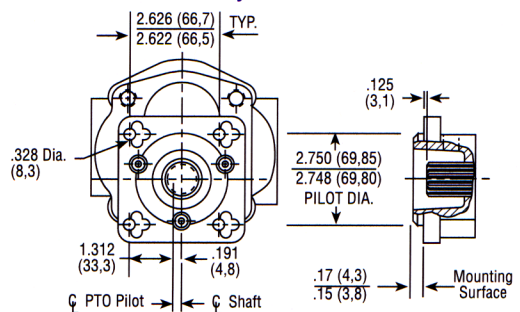
J SAE 'B' 4-Bolt
 Available with No. 2 or 5 Shaft Only (Typ.)



N SAE 'B' 2-Bolt



S P.T.O. Direct Mount
 Available with No. 2 Shaft Only



Cover Plates Available

<p>3 Side Ported SAE 4-Bolt</p> <p>SAE 4-Bolt NPT Connectors Are Available. See Accessory Section</p>	<p>5 Side Ported Straight Thread</p>	<p>6 Rear Ported Straight Thread</p>
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Discharge Ports for Connector Plates

<p>3 SAE 4-Bolt</p> <p>*Metric threads are available – Consult factory. SAE 4-Bolt NPT Connectors Are Available. See Accessory Section</p>	<p>4 NPTF-Pipe Thread</p> <p>8 BSPT-Pipe Thread</p> <p>3/4-14 PT</p>	<p>5 SAE Straight Thread</p> <p>1-1/16-12UN-2B</p>
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* These dimensions locate \varnothing of bolt pattern only.

PD Factors

The maximum size and number of sections of a tandem pump for a given application is limited to the torque capability of the input drive shaft and the spline coupling between the sections. To determine this capability, a “PD Factor” is used:

*Maximum allowable PD for the 7/8" drive shaft is 53.
Maximum allowable PD for a coupling is also 53.*

When: P = PSI (The relief valve setting of each individual section).
D = Displacement (In U.S. gallons per revolution of each individual section).

Example: Assume a two-place pump TP16-150–150 with front and rear sections on pressure at the same time at 2000 PSI.

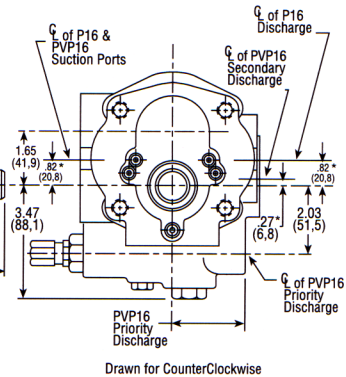
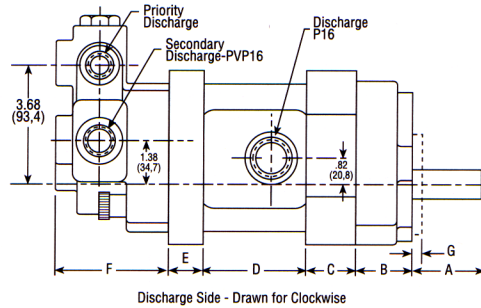
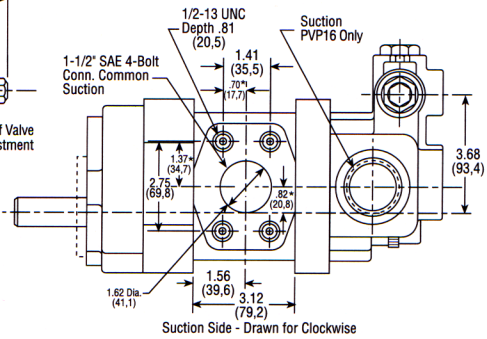
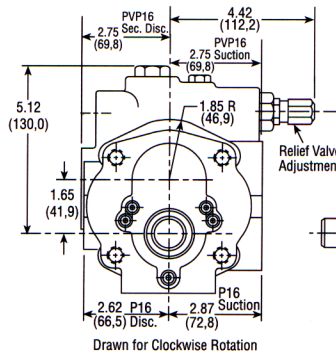
- A. Drive Shaft:
 (1) $PD = (2000) (.0127) + (2000) (.0127) = 50.8$ vs. 53. Capability is OK
- B. Coupling between front and rear sections:
 (1) $PD = (2000) (.0127) = 25.4$ vs. 53. Capability is OK.

Dimensional Data

P16 PUMP SECTION SIZES

SHIPPING WEIGHTS (Approx.)

FRONT	REAR	lbs.	kgs.
-45	-45	21	9.5
-65	-45	22	10.0
-65	-65	23	10.4
-85	-45	24	10.9
-85	-65	25	11.3
-85	-85	26	11.8
-100	-45	27	12.3
-100	-65	28	12.7
-100	-85	29	13.2
-100	-100	30	13.6
-115	-45	31	14.1
-115	-65	32	14.5
-115	-85	33	15.0
-115	-100	34	15.4
-115	-115	35	15.9
-150	-45	36	16.3
-150	-65	37	16.8
-150	-85	38	17.2
-150	-100	39	17.7
-150	-115	40	18.1
-150	-150	40	18.6
-180	-45	42	19.1
-180	-65	43	19.5
-180	-85	44	20.0
-180	-100	45	20.4
-180	-115	46	20.9
-180	-150	47	21.3
-180	-180	48	21.8
-200	-45	49	22.2
-200	-65	50	22.7
-200	-85	51	23.1
-200	-100	52	23.6
-200	-115	53	24.0
-200	-150	54	24.6
-200	-180	55	25.0
-200	-200	56	25.5



Gear Plate Length

'C' AND 'E' DIMENSIONS SECTION SIZE LENGTH

SECTION SIZE	LENGTH
-45	.86 (21,8)
-65	1.07 (27,2)
-85	1.29 (32,8)
-100	1.45 (36,8)
-115	1.61 (40,9)
-150	1.98 (50,3)
-180	2.30 (58,4)
-200	2.51 (63,7)

Flange Dimensions

FLANGE TYPE	'B'	'G'
D	1.62 (41,1)	.250 (6,3)
E	2.75 (68,8)	.187 (4,7)
F	1.75 (44,4)	-
J	2.75 (68,8)	.250 (6,3)
N	1.55 (39,4)	.375 (9,5)
S	3.31 (84,1)	.200 (5,1)

Priority Flow

CAT. NO 2	CAT. NO 3	CAT. NO 4	CAT. NO 5	CAT. NO 6	CAT. NO 7	CAT. NO 8	CAT. NO 9
2 to 3 GPM	3 to 4 GPM	4 to 5 GPM	5 to 6 GPM	6 to 7 GPM	7 to 8 GPM	8 to 9 GPM	9 to 10 GPM
7.6 to 11.4 LTR	11.4 to 15.1 LTR	15.1 to 18.9 LTR	18.9 to 22.7 LTR	22.7 to 26.5 LTR	26.5 to 30.3 LTR	30.3 to 34.1 LTR	34.1 to 37.8 LTR

To Determine Overall Pump Length

Add together the dimensions that apply to the pump you are considering

A = _____ Shaft Extension

B = _____ Flange Length

C = _____ Front Gear Plate Length

D = $\frac{3.12 \text{ in.}}{79.25 \text{ mm}}$ Connector Plate Length

E = _____ Rear Gear Plate Length

F = $\frac{3.44 \text{ in.}}{87.38 \text{ mm}}$ Cover Plate Length

_____ Total = Overall Length