

# Series P16

- Available in various configurations
  - P16 — Standard
  - TP16 — Tandem, 2 & 3 Place
  - PVP16 — Priority Valve
  - CP16 — Clutch Pump
    - 'V' Belt and Serpentine
  - TP-PVP — Combination P16
    - with Priority Valve
  - PB16-P2 — Piggy Back
  - HP16 — High Pressure
  - THP16 — Tandem High Pressure
  - FPR16 — Cast Iron, Bi-Directional
- Cast iron pumping sections for durability
- Aluminum flanges and covers (except for the FPR, 'All Cast Iron' pump) for optimum power to weight ratio.
- Journal bearings for long life and good over-hung load capability
- Buna-N Seals are standard for petroleum and glycol based fluids  
"Viton™" seals are optional.
- Pressure balanced plates for greater efficiency.

Viton is a trademark of the DuPont Co.

# Model P16 Seal Kits

MODEL	ASSEMBLY DRAWING	SHAFT SEAL	WHERE USED	SHAFT SEAL KIT	SOFT GOODS KIT	RELIEF VALVE KIT
P16	60900	14881	#1, 2, 3, 5, 6, 9 shafts	15537*	15419*	N/A
VP16	61168	14881	#1, 2, 3, 5, 6, 9 shafts	15538*	15585*	N/A
HP16	61318	14881 15370	#2, 5, 6 shafts #7, 8 shafts	15537* 15539*	15462* 15812*	N/A
VHP16	61345	14881 15370	#2, 5, 6 shafts #7, 8 shafts	15538* 15540*	15463* 15814*	N/A
CP16	61260	14881	#1, 2, 3 shafts	15537*	15419*	N/A
CGP16	62184	14881	#1, 6 shafts	17002*	17001*	N/A
PVP16	61252	14881	#1, 2, 5, 6 shafts	15537*	15811*	16183
VPVP16	62640	14881	#1, 2, 5, 6 shafts	15538*	16498*	N/A
TP16	60973	14881	#2, 5 shafts	15537*	15623*	N/A
VTP16	61338	14881	#2, 5 shafts	15538*	15622*	N/A
TP16 3-Place	61552	14881	#2, 5 shafts	15537*	15609*	N/A
VTP16 3-Place	61553	14881	#2, 5 shafts	15538*	15610*	N/A
TP16-PVP16	61588	14881	#2, 5 shafts	15537*	15626*	16183
THP16	61495	14881 15370	#2, 5 shafts #7, 8 shafts	15537* 15539*	15562* 15564*	N/A
VTHP16	61497	14881 15370	#2, 5 shafts #7, 8 shafts	15538* 15540*	15561* 15563*	N/A
THP16-P16	61447	14881 15370	#2, 5 shafts #7, 8 shafts	15547* 15539*	15541* 15543*	N/A
VTHP16-P16	61449	14881 15370	#2, 5 shafts #7, 8 shafts	15538* 15540*	15542* 15544*	N/A
PB16-P12	61480	14881 14881	#2, 5 shafts #1, 2, 5, 6, 9 shafts for D & N flanges	15537* N/A	15810* 16312*	N/A
FPR16	62399	15370 15370 14881	#7, 8 shafts for D & N flanges #7, 8 shafts for 'P' flange #2 shaft with 'S' flange	N/A N/A N/A	16568* 16569 16570	N/A

\*These kits contain two (2) shaft seals.

# Model P16



Description . . . . . 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 Plate

## 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	3.902	.0639	63.942	.0140	2000	138	2200

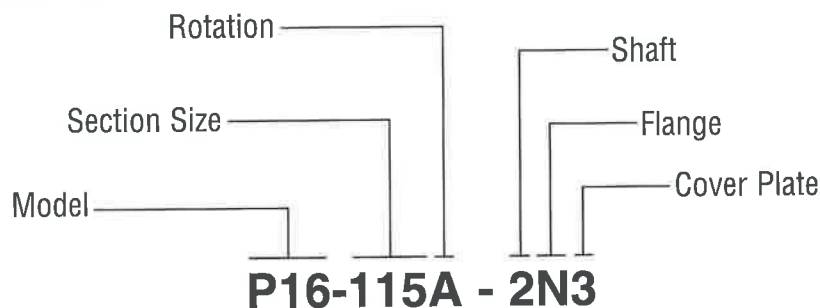
All data based on SAE 10W oil at 150°F.  
 Available with Viton Seals for use with phosphate ester base fluids.

**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



Note: Add prefix 'V' to pump model number (VP16-) when ordering pumps with Viton Seals for use with phosphate ester base fluids.

# Shafts Available

<p><b>1 5/8" Dia. 9 Tooth Spline Flat Root Side Fit</b> Torque Limit 52 Lbs. Ft. (70,5 Nm) Available with 'D' 'F' &amp; 'N' Flanges only</p> <p><b>CAUTION:</b> Due to shaft torque limitations, Consult the Factory for approval before applying this shaft in models of -115 size and larger pumps.</p> <p>Spline Data Diametral Pitch . . . . . 16/32 Pressure Angle . . . . . 30° No. Of Teeth . . . . . 9</p>	<p><b>2 7/8" Dia. 13 Tooth Spline Flat Root Side Fit</b> Torque Limit 184 Lbs. Ft. (249,4 Nm)</p> <p>Spline Data Diametral Pitch . . . . . 16/32 Pressure Angle . . . . . 30° No. Of Teeth . . . . . 13</p>	<p><b>3 7/8" Straight Shaft for Piggy-Back</b> Torque Limit 184 Lbs. Ft. (249,4 Nm) Available with 'N' Flange Only</p>
<p><b>5 7/8" Straight Shaft</b> Torque Limit 184 Lbs. Ft. (249,4 Nm)</p>	<p><b>6 3/4" Straight Shaft</b> Torque Limit 105 Lbs. Ft. (142,3 Nm)</p> <p><b>CAUTION:</b> Due to shaft torque limitations, Consult the Factory for approval before applying this shaft in models of -115 size and larger pumps.</p>	<p><b>9 7/8" Tapered Shaft</b> Torque Limit 184 Lbs. Ft. (249,4 Nm)</p>

# Mounting Flanges Available

<p><b>D SAE 'A' 2-Bolt</b></p>	<p><b>E 6-Bolt Round</b> Available with No. 2 or 5 Shaft Only</p>
<p><b>F Pad Mount</b></p>	<p><b>G SAE 'C' 4-Bolt</b> Available for No. 2 or 5 Shaft Only</p>



# Mounting Flanges Available, Continued

<p><b>J SAE 'B' 4-Bolt</b> Available with No. 2 or 5 Shaft Only (Typ.)</p>	<p><b>N SAE 'B' 2-Bolt</b></p>
<p><b>S P.T.O. Direct Mount</b> Available with No. 2 Shaft Only</p>	<p><b>T P.T.O. Direct Mount T19C Trans</b> Available with No. 2 Shaft Only</p>

# Cover Plates Available

<p><b>1 Rear Ported Straight Thread</b></p>	<p><b>2 Rear Ported NPT</b></p> <p><b>7 Rear Ported BSPT</b></p>	<p><b>3 Side Ported SAE 4-Bolt</b></p> <p>* Metric Threads are available – Consult factory SAE 4-Bolt NPT Connectors Are Available. See Accessory Section</p>
<p><b>4 Side Ported NPT</b></p> <p><b>8 Side Ported BSPT</b></p>	<p><b>5 Side Ported Straight Thread SAE 12 Discharge</b></p> <p><b>9 Side Ported Straight Thread SAE 16 Discharge</b></p>	<p><b>6 Rear Ported Straight Thread</b></p>

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

\*Suction Port Adaptor Fitting to Reduce SAE 20 to SAE 16 (1-5/16-12UN-2B) Order Kit 15369

# Dimensional Data

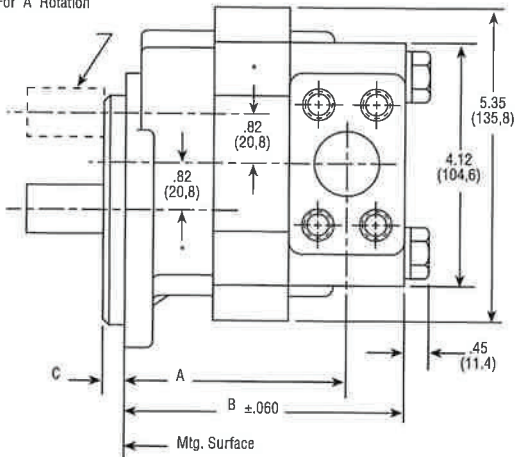
## Mounting Dimensions

PUMP MODELS	FLANGE TYPE						SHIPPING WEIGHTS (Approx.)	
	D		E		F			
	A	B	A	B	A	B	lbs.	kgs.
P16 - 45	3.54 (89,9)	4.55 (115,6)	4.66 (118,4)	5.67 (144,1)	3.66 (92,9)	4.67 (118,6)	12	5.5
P16 - 65	3.75 (95,3)	4.77 (121,2)	4.88 (123,6)	5.89 (149,6)	3.88 (98,6)	4.89 (124,2)	13	5.9
P16 - 85	3.97 (100,9)	4.98 (126,5)	5.09 (129,3)	6.10 (154,9)	4.09 (103,6)	5.10 (129,5)	14	6.4
P16 - 100	4.13 (104,9)	5.14 (130,6)	5.25 (133,3)	6.26 (159,0)	4.25 (107,9)	5.26 (133,6)	15	6.8
P16 - 115	4.29 (108,9)	5.30 (134,6)	5.41 (137,4)	6.42 (163,1)	4.41 (112,0)	5.42 (137,7)	16	7.3
P16 - 150	4.66 (118,4)	5.67 (144,1)	5.78 (146,8)	6.79 (172,5)	4.78 (121,4)	5.79 (147,1)	17	7.7
P16 - 180	4.98 (126,5)	5.99 (152,2)	6.10 (154,9)	7.11 (180,6)	5.10 (129,5)	6.11 (155,2)	19	8.6
P16 - 200	5.19 (131,8)	6.20 (157,5)	6.31 (160,3)	7.32 (185,9)	5.31 (134,9)	6.32 (160,5)	20	9.1

## Mounting Dimensions

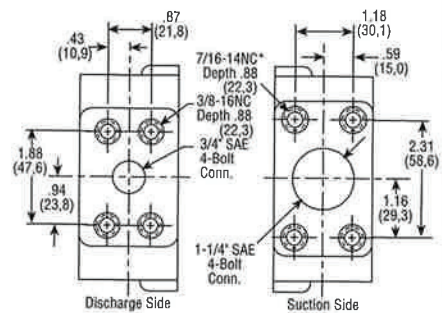
PUMP MODELS	FLANGE TYPE						SHIPPING WEIGHTS (Approx.)	
	G & J		N		S & T			
	A	B	A	B	A	B	lbs.	kgs.
P16 - 45	4.66 (118,4)	5.67 (144,1)	3.47 (88,1)	4.48 (113,8)	5.22 (132,6)	6.23 (158,2)	12	5.5
P16 - 65	4.88 (123,6)	5.89 (149,6)	3.69 (93,7)	4.70 (119,4)	5.44 (138,2)	6.45 (163,8)	13	5.9
P16 - 85	5.09 (129,3)	6.10 (154,9)	3.90 (99,1)	4.91 (124,7)	5.65 (143,5)	6.66 (169,2)	14	6.4
P16 - 100	5.25 (133,3)	6.26 (159,0)	4.06 (103,1)	5.07 (128,8)	5.81 (147,6)	6.82 (173,2)	15	6.8
P16 - 115	5.41 (137,4)	6.42 (163,1)	4.22 (107,2)	5.23 (132,8)	5.97 (151,6)	6.98 (177,3)	16	7.3
P16 - 150	5.78 (146,8)	6.79 (172,5)	4.59 (116,6)	5.60 (142,2)	6.34 (161,0)	7.35 (186,7)	17	7.7
P16 - 180	6.10 (154,9)	7.11 (180,6)	4.91 (124,7)	5.92 (150,4)	6.66 (169,2)	7.67 (194,8)	19	8.6
P16 - 200	6.31 (160,3)	7.32 (185,9)	5.12 (130,1)	6.13 (155,7)	6.87 (174,5)	7.88 (200,1)	20	9.1

Shaft Location For 'A' Rotation



## C Dimensions

FLANGE TYPE	IN	MM
D	.250	(6,35)
E	.187	(4,74)
F	—	—
G	.250	(6,35)
J	.250	(6,35)
N	.375	(9,52)
S	.200	(5,08)
T	.200	(5,08)



\*These dimensions locate  $\bar{C}$  of bolt pattern only.