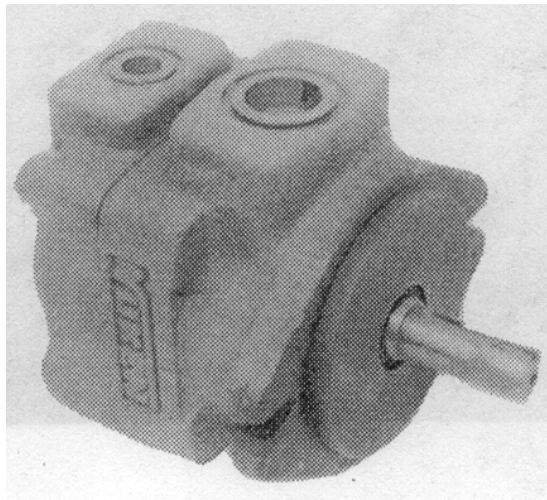
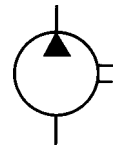


## ■ PVRIT Series Single Vane Pumps

These Pumps are widely used as a source of hydraulic power. They Combine stable performance and robust construction with a wide range of delivery rates.



Graphic Symbol



## ■ Ratings

Model Number	Geometric Displacement cc/rev.	Max Opt. Pressure kgf/cm <sup>2</sup>	Output Flow and Input Power	Shaft Speed Range rpm		Mass kg.	
				Max.	Min.	Foot Mounting	Flange Mounting
PVRIT-4	4.0	125	Refer to Page 26 & 27	1800	750	8.5	5.5
PVRIT-6	5.6	175					
PVRIT-8	7.8						
PVRIT-10	9.5						
PVRIT-12	12.0						
PVRIT-15	14.6						
PVRIT-17	16.0						

## ■ Model Number Designation

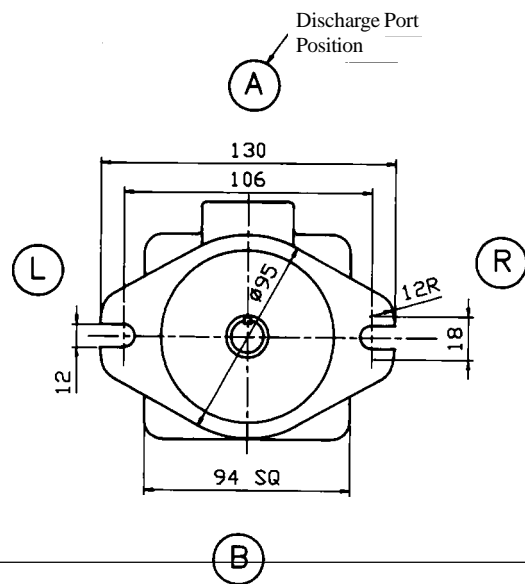
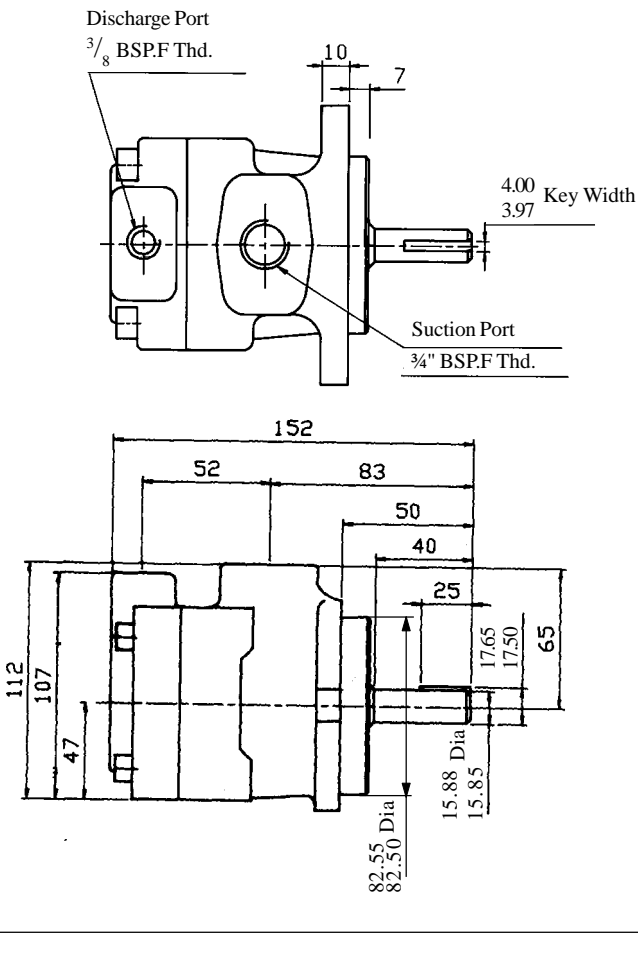
F	-PVR1T	-4	-L	-R	A	-20	80
Applicable Hyd. Fluids	Series Number	Nominal Displacement	Mounting	Direction of Rotation Viewed From Shaft Side	Discharge Port Position	Design * Number	Design Standard
<b>F:</b> For Phosphate Ester Type Fluids (Omit if not required)	<b>PVR1T</b>	<b>4,6</b> <b>8,10,</b> <b>12,15</b> <b>17</b>	<b>L :</b> Foot Type  <b>F :</b> Flange Type	<b>R :</b> Clock Wise (Normal)  <b>L :</b> Counter Clock Wise	See Drawing <b>A :</b> Normal (Upwards) <b>B :</b> Bottom <b>R :</b> Right <b>L :</b> Left	<b>20</b>	<b>80</b>

\* Design numbers subject to change, but installation dimension remain as shown as per design number 20 through 29

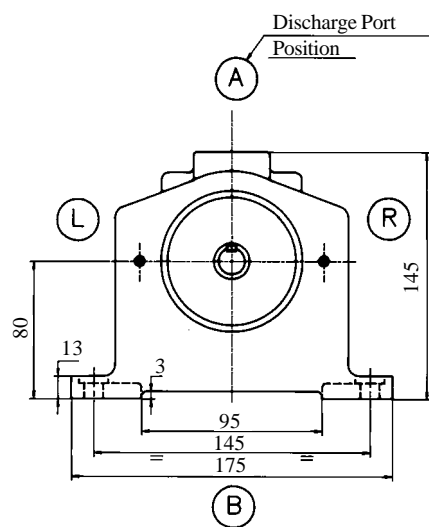
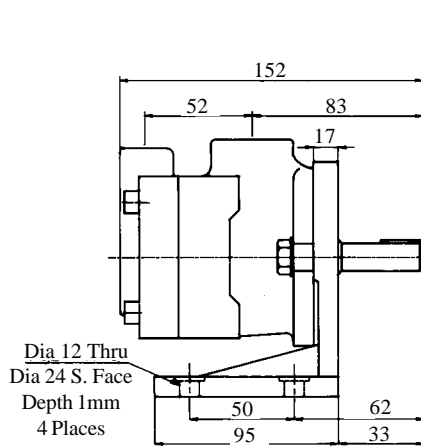
PVR1T-\*\*\*-2080

DIMENSION IN MILLIMETRES

## Flange Mounting

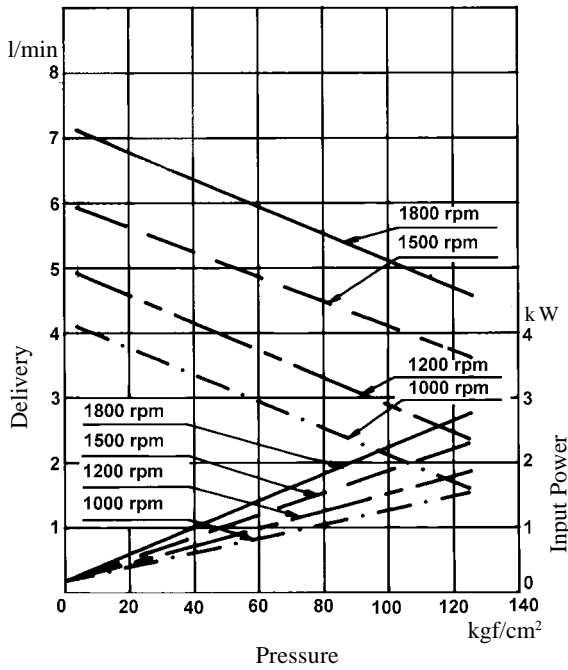


## Foot Mounting

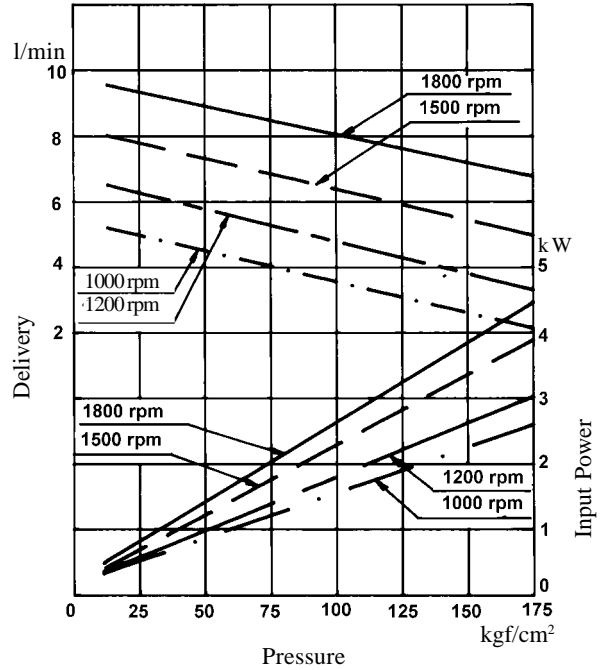


## Typical Pump Characteristics Viscosity 20 cSt Temp 50°C

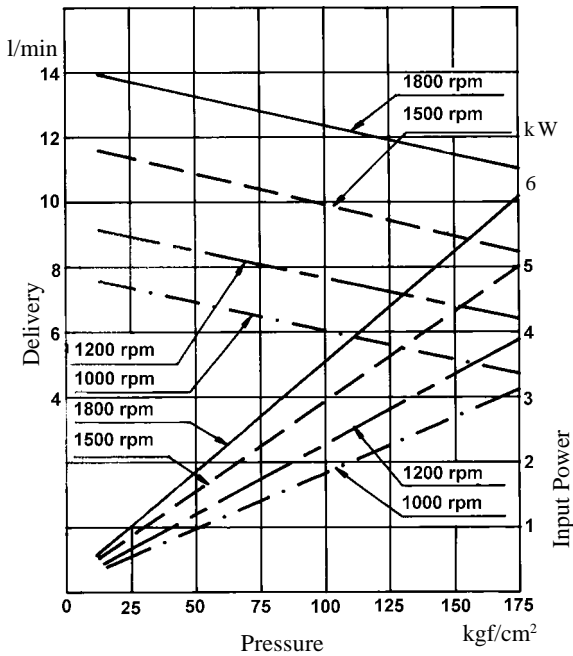
● PVR1T - 4



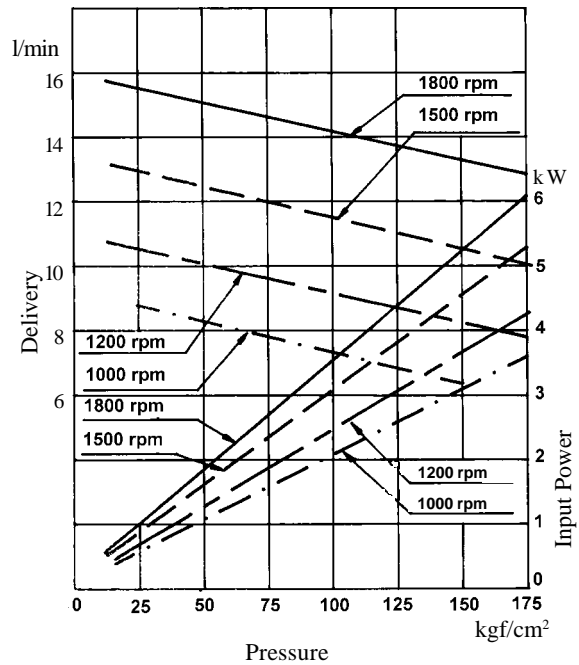
● PVR1T - 6



● PVR1T - 8

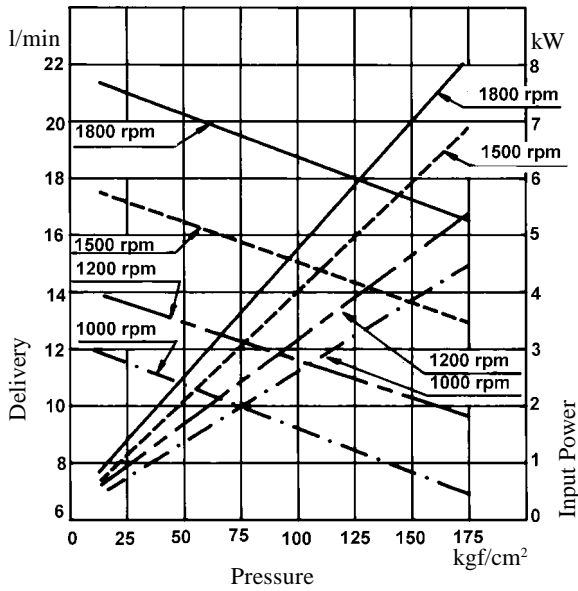


● PVR1T - 10

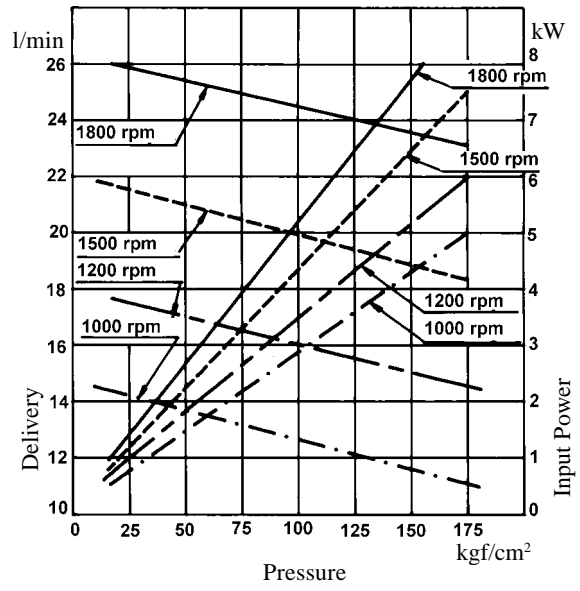


Typical Pump Characteristics Viscosity 20 Cst Temp 50° C

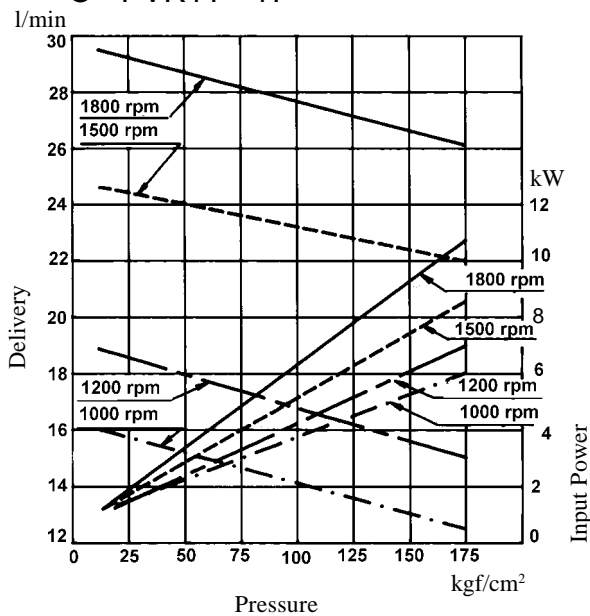
● PVR1T - 12



● PVR1T - 15

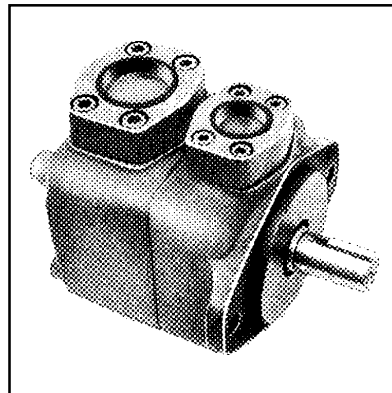


● PVR1T - 17

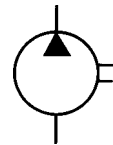


## ■ PVR 50 - Series Single Vane Pumps

These pumps are widely used as a source of hydraulic power. They combine stable performance and robust construction with a wide range of delivery rates.



Graphic Symbol



## ■ Ratings

Model Number	Geometric Displacement cc/rev	Max. Oper. Pressure kgf/cm <sup>2</sup>	Output Flow and Input Power	Shaft Speed Range RPM		Mass (Approx) kg.	
				Max.	Min.	Flange Mounting	Foot Mounting
PVR50 - 13	10.0	175	Ref. Page 30 & 31	2000	600	12	14.7
PVR50 - 20	15.0						
PVR50 - 26	21.0						
PVR50 - 30	24.5						
PVR50 - 36	29.5						
PVR50 - 39	31.5						
PVR50 - 45	39.0						

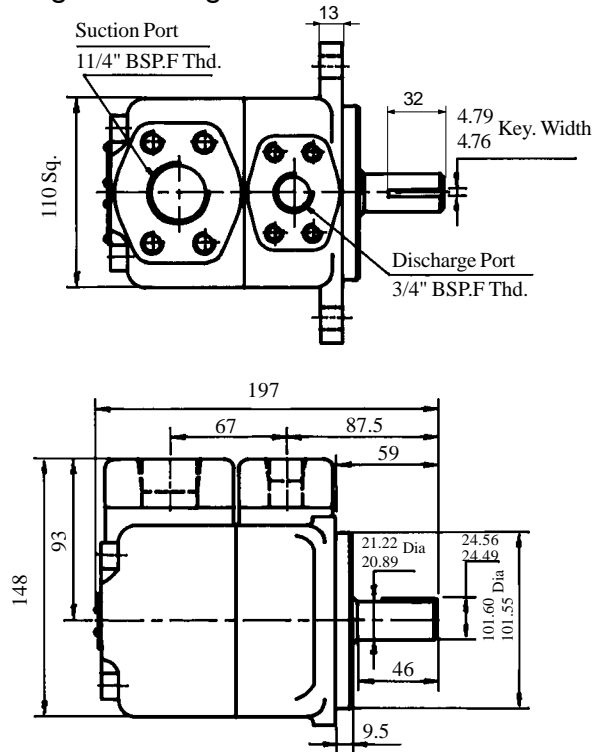
## ■ Model Number Designation

F-	PVR50	-L	-F	-13	-R	A	A	-31	80
Applicable Hydraulic Fluids	Series Number	Type of Mounting	Type of Pipe Connection	Nominal Displacement	Direction of Rotation Viewed From Shaft End	Discharge Port Position	Suction Port Position	Design* Number	Design Standard
<b>F:</b> For Phosphate Easter Type Fluids (Omit if not required)	<b>PVR50</b>	<b>L:</b> Foot Type  <b>F:</b> Flange Type	<b>F:</b> Flange Connection	13	<b>R:</b> Clockwise (Normal)  <b>L:</b> Counter Clockwise	See Drawing <b>A:</b> Normal & Upward <b>B:</b> Bottom <b>R:</b> Right <b>L:</b> Left	See Drawing <b>A:</b> Normal (Upward) <b>B:</b> Bottom <b>R:</b> Right <b>L:</b> Left	<b>31</b>	<b>80</b>
				20					
				26					
				30					
				36					
39									
45									

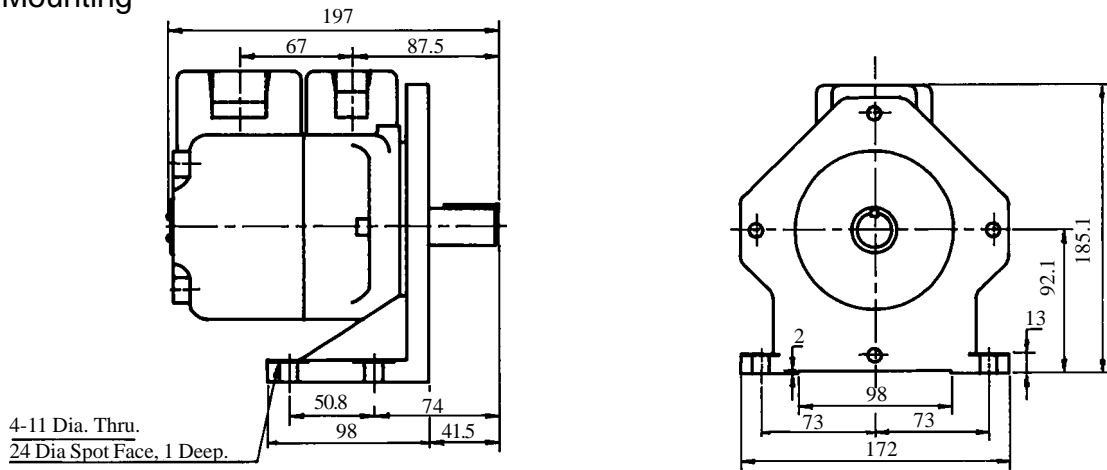
\* Design numbers subject to change. But installation dimensions remain as shown for design numbers 30 to 39

PVR50 - \* - F-\*-\*-\*-\*3180

## Flange Mounting

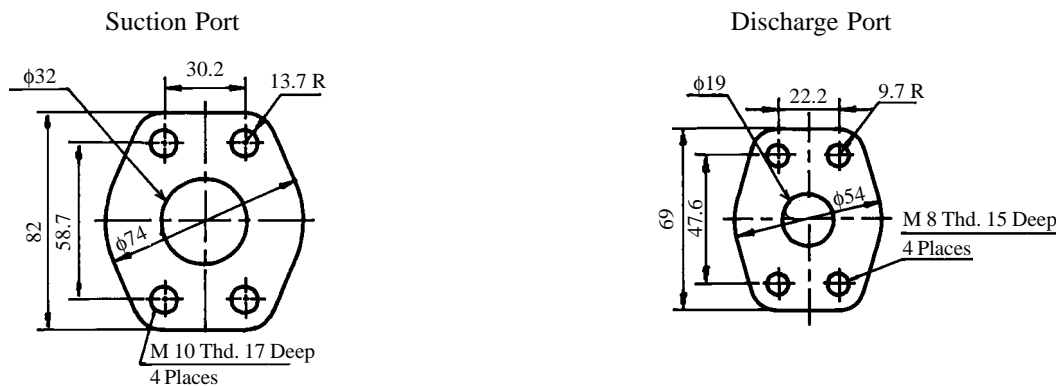


## Foot Mounting

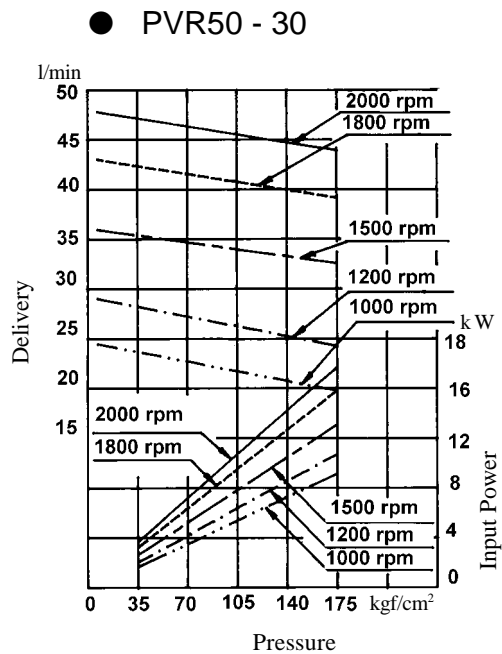
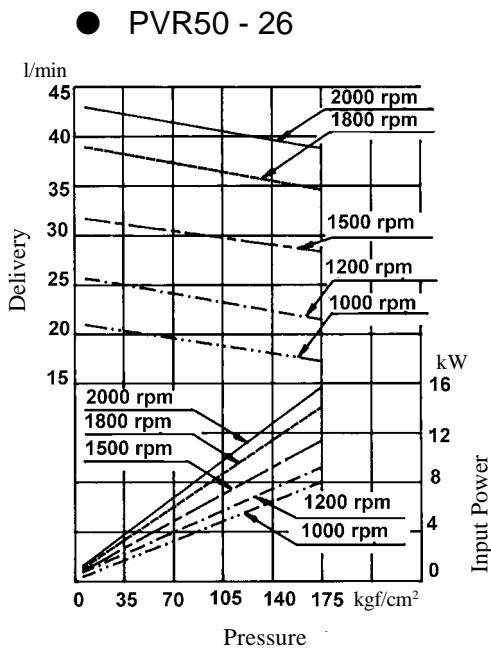
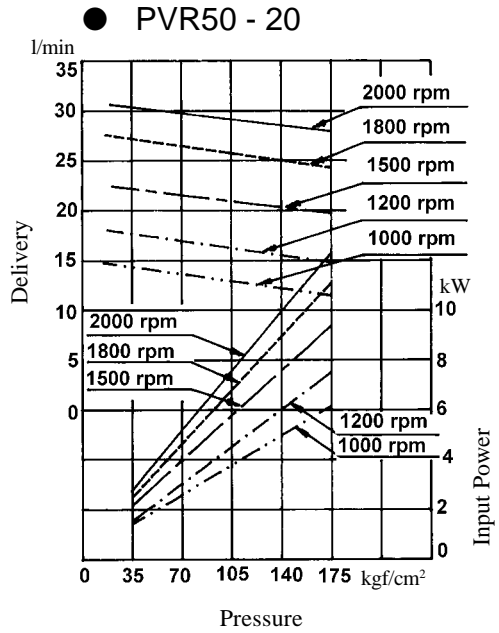
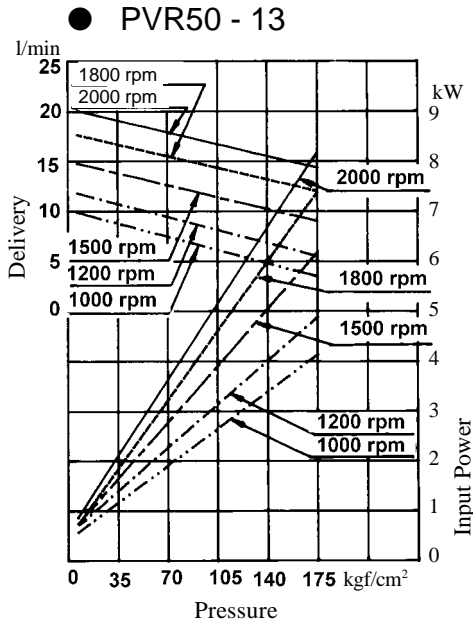


For Other Dimensions See Flange Mounting

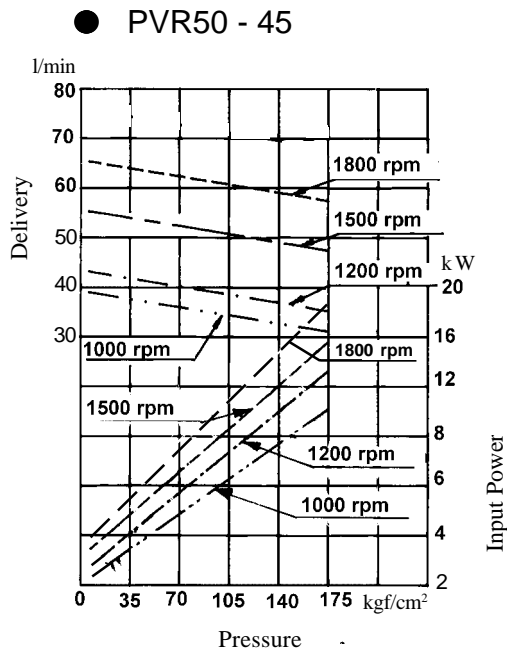
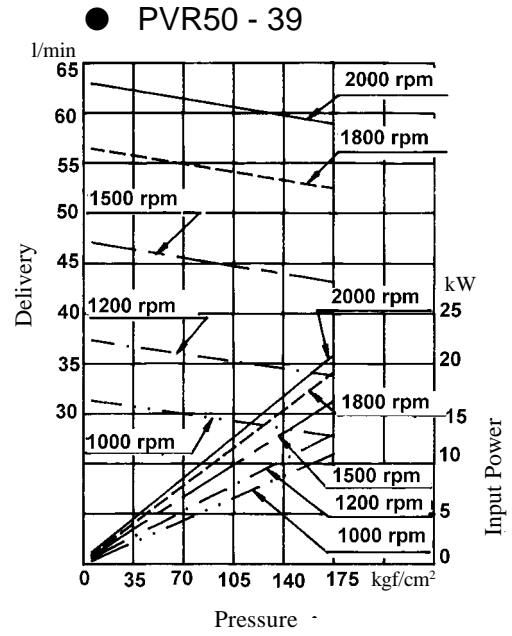
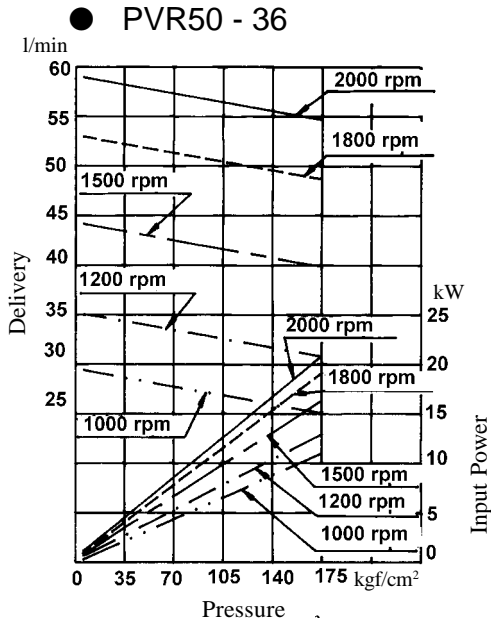
For Reference: Dimensions of Pipe Flange Mounting Surfaces



## Typical Pump Characteristics oil viscosity 20 cSt [ISO VG-32 Temp 50°C]

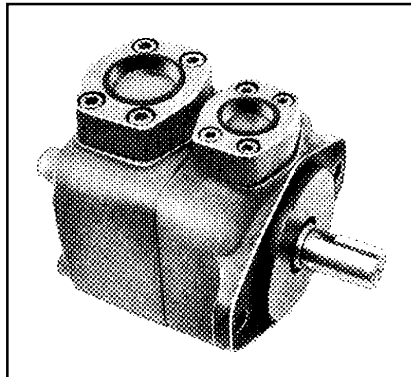


Typical Pump Characteristics oil viscosity 20 cSt [ISO VG-32 Temp 50°C]

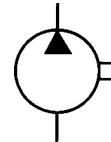


## ■ PVR 150-Series Single Vane Pumps

These pumps are widely used as a source of hydraulic power. They combine stable performance and robust construction with a wide range of delivery rates.



Graphic Symbol



## ■ Ratings

Model Number	Geometric Displacement cc/rev.	Max. Oper. Pressure kgf/cm <sup>2</sup>	Output Flow and Input Power	Shaft Speed Range RPM		Mass kg.	
				Max.	Min.	Foot Mounting	Flange Mounting
PVR150 - 60	47	175	Refer Page 34	2000	600	35.9	29.3
PVR150 - 70	57						
PVR150 - 90	75						
PVR150 - 110	88						
PVR150 - 140	98						

## ■ Model Number Designation

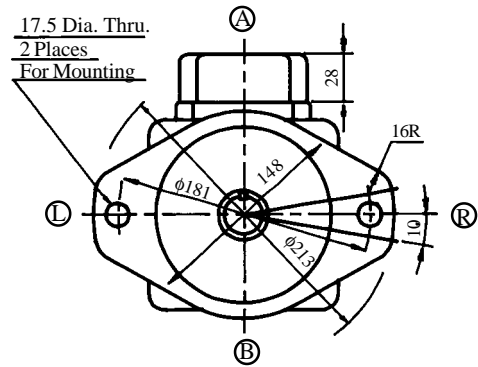
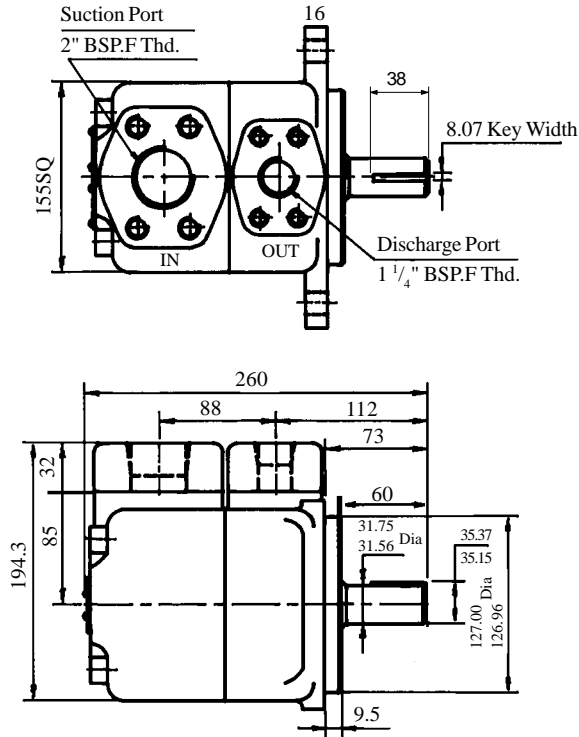
F-	PVR150	-L	-F	-60	-R	A	A	34	80
Applicable Hydraulic Fluids	Series Number	Type of Mounting	Type of Pipe Connection	Nominal Displacement	Direction of Rotation Viewed From Shaft End	Discharge Port Position	Suction Port Position	Design * Number	Design Standard
<b>F:</b> For Phosphate Ester Type Fluids (Omit if not required)	<b>PVR150</b>	<b>L:</b> Foot Type  <b>F:</b> Flange	<b>F:</b> Flange Connection	<b>60</b> <b>70</b> <b>90</b> <b>110</b> <b>140</b>	<b>R:</b> Clockwise (Normal)  <b>L:</b> Counter Clockwise	See Drawing <b>A:</b> Normal & Upward <b>B:</b> Bottom <b>R:</b> Right <b>L:</b> Left	See Drawing <b>A:</b> Normal & Upward <b>B:</b> Bottom <b>R:</b> Right <b>L:</b> Left	<b>34</b>	<b>80</b>

\* Design numbers subject to change. But installation dimensions remain as shown for design numbers 30 to 39

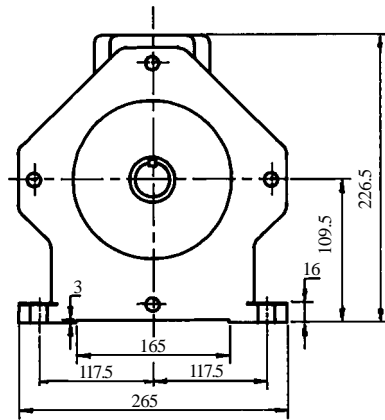
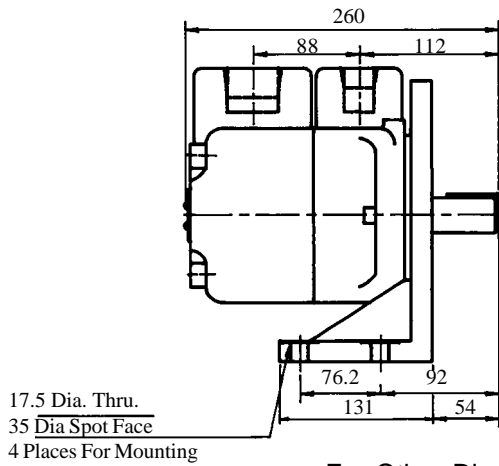
PVR150-F-3480

DIMENSION IN MILLIMETRES

## Flange Mounting

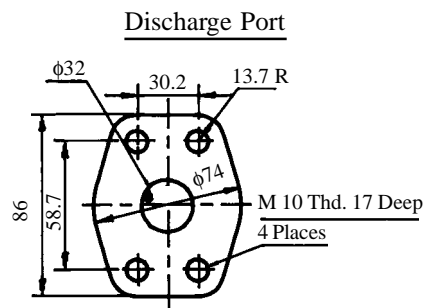
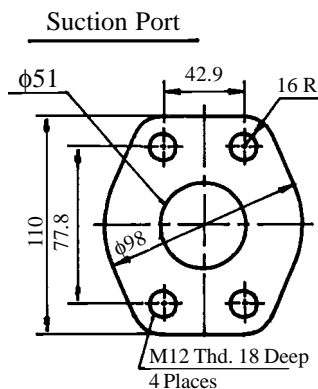


## Foot Mounting

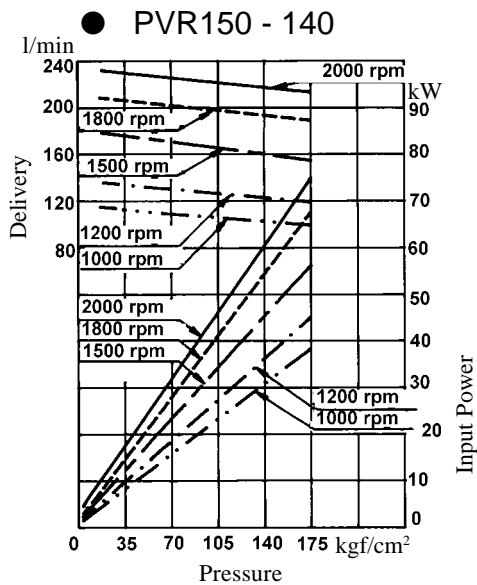
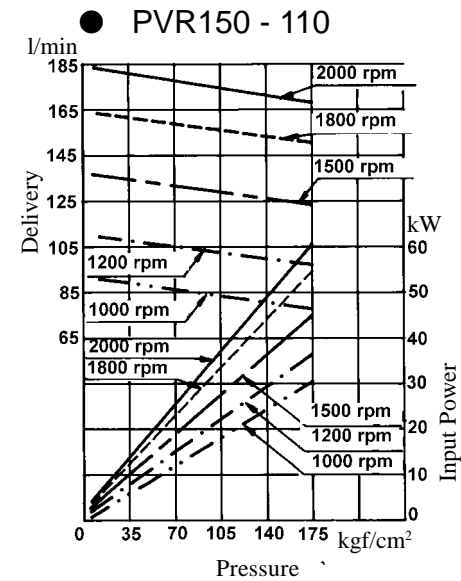
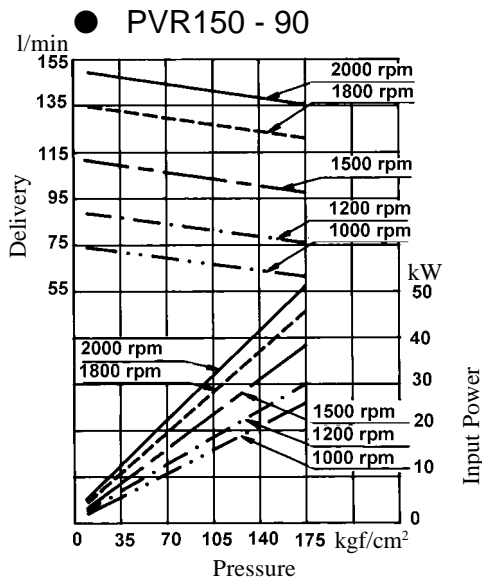
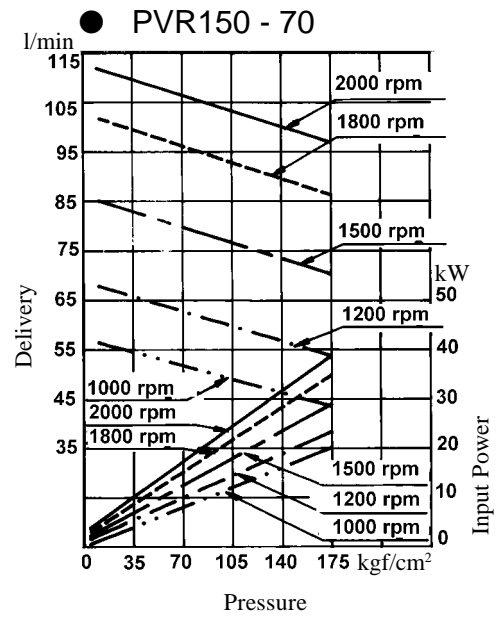
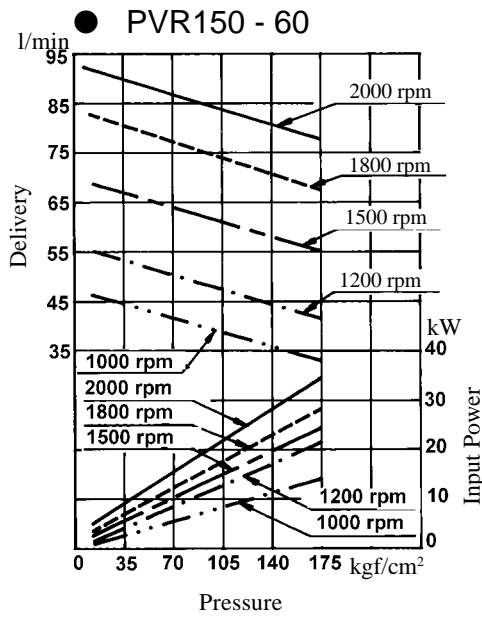


For Other Dimensions See Flange Mounting

For Reference: Dimensions of Pipe Flange Mounting Surfaces

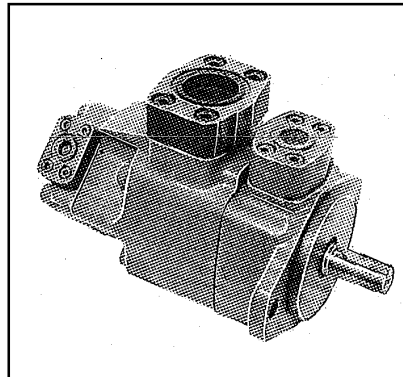


## Typical Pump Characteristics oil viscosity 20 cSt Temp 50°C

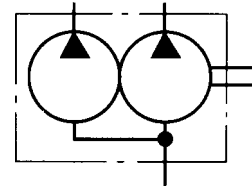


## ■ PVR 1050 Series Double Vane Pumps

These double pumps consists of one. PVRIT and one. PVR50 series single pumps combined in tandem within a single housing and driven by a common shaft. Fluid delivered from the two seperate ports can be either supplied to seperate or common circuits.



Graphic Symbol



## ■ Ratings

Model Number	Small Volume pump Geometric Displacement cc/rev.	Large Volume pump Geometric Displacement cc/rev.	Max. Operating Pressure kgf/cm <sup>2</sup>	Output Flow and Input Power	Shaft Speed Range RPM		Mass Kg.	
					Max.	Min.	Flange Mounting	Foot Mounting
PVR1050	Refer Ratings in page No. 24	Refer Ratings in page No. 28	175	Refer Page 26, 27, 30 and 31	200	600	17.75	20.56

## ■ Model Number Designation

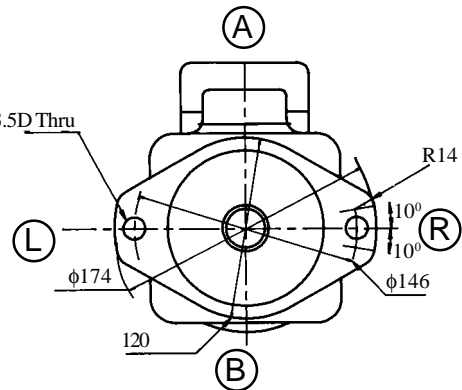
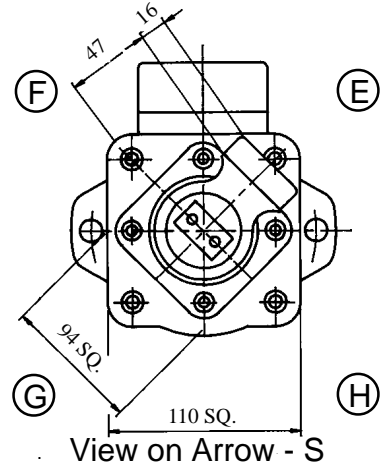
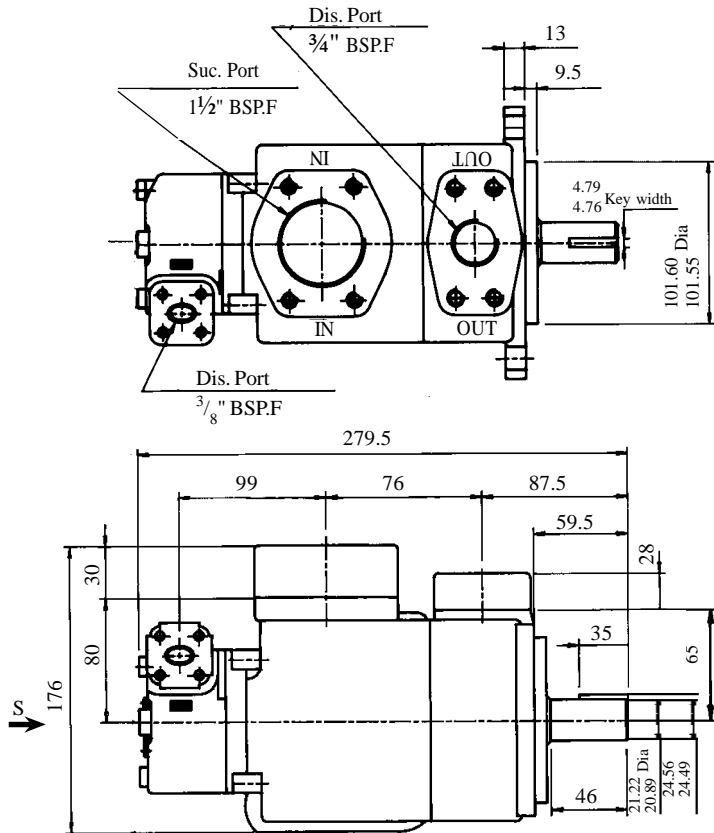
F-	PVR1050	-L	-F	-4	-39	-R	E	A	A	-10	80
Applicable Hydraulic Fluids	Series Number	Mounting	Type of Pipe Connection	Small Volume Pump Nominal Displacement	Large Volume Pump Nominal Displacement	Direction of Rotation	Small Volume Pump Discharge Position	Large Volume Pump Discharge Position	Suction Port Position	Design NO. *	Design Std.
<b>F:</b> For Phosphate Easter Type Fluids. (Omit if not required)	<b>PVR1050</b>	<b>L:</b> Foot Mounting  <b>F:</b> Flange Mounting	<b>F:</b> Flange Connection	<b>4, 6</b>  <b>8, 10</b>  <b>12, 15</b>  <b>17</b>	<b>13, 20</b>  <b>26, 30</b>  <b>36, 39</b>  <b>45</b>	<b>R:</b> Clockwise (Normal)  <b>L:</b> Anticlock- wise				<b>10</b>	<b>80</b>
As viewed from shaft end											

\* Design numbers subject to change but installation dimensions remain as shown

PVR1050- $\ast$ -F- $\ast$ - $\ast$ - $\ast$ - $\ast$ - $\ast$ - $\ast$ -1080

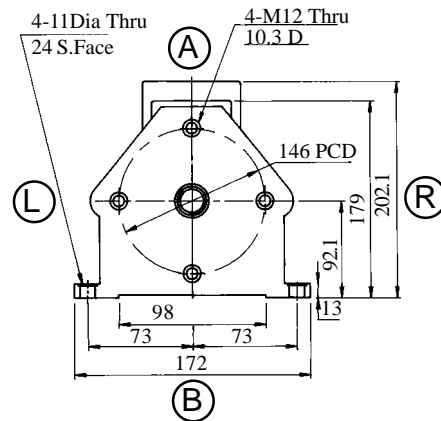
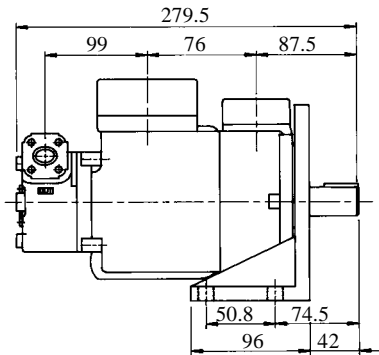
DIMENSION IN MILLIMETRES

## Flange Mounting



Note: The Suction and Delivery Ports are always with Flange Connection only

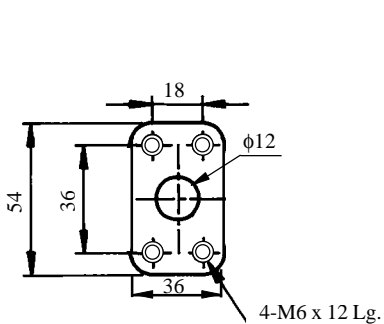
## Foot Mounting



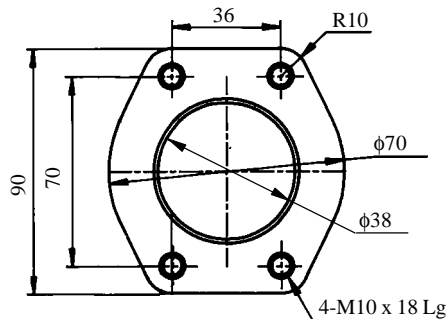
For Other Dimensions See Flange Mounting

## For Reference: Dimensions of Pipe Flange Mounting Surface

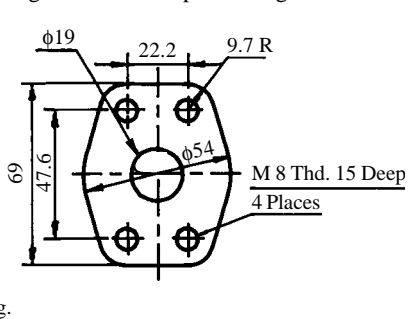
Small Volume Pump Discharge Port



Suction Port

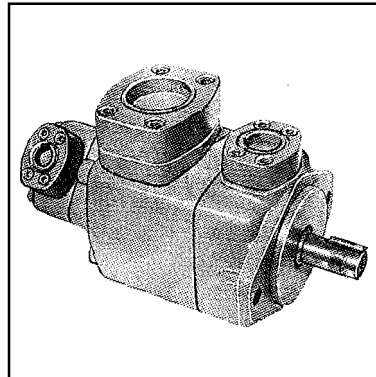


Large Volume Pump Discharge Port

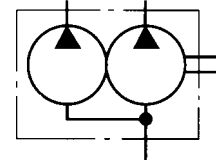


## ■ PVR 50150 Series Double Vane Pumps

These double pumps consist of one PVR50 and one PVR150 series single pumps combined in tandem within a single housing and driven by a common shaft. Fluid delivered from the two separate ports can be either supplied to separate or common circuits.



Graphic Symbol



## ■ Ratings

Model Number	Small Volume pump Geometric Displacement cc/rev.	Large Volume pump Geometric Displacement cc/rev.	Max. Operating Pressure kgf/cm <sup>2</sup>	Output Flow and Input Power	Shaft Speed Range RPM		Mass Kg.	
					Max.	Min.	Flange Mounting	Foot Mounting
PVR50150	Refer Ratings in page No. 28	Refer Ratings in page No. 32	175	Refer Page 30 31 and 34	2000	600	42.5	49

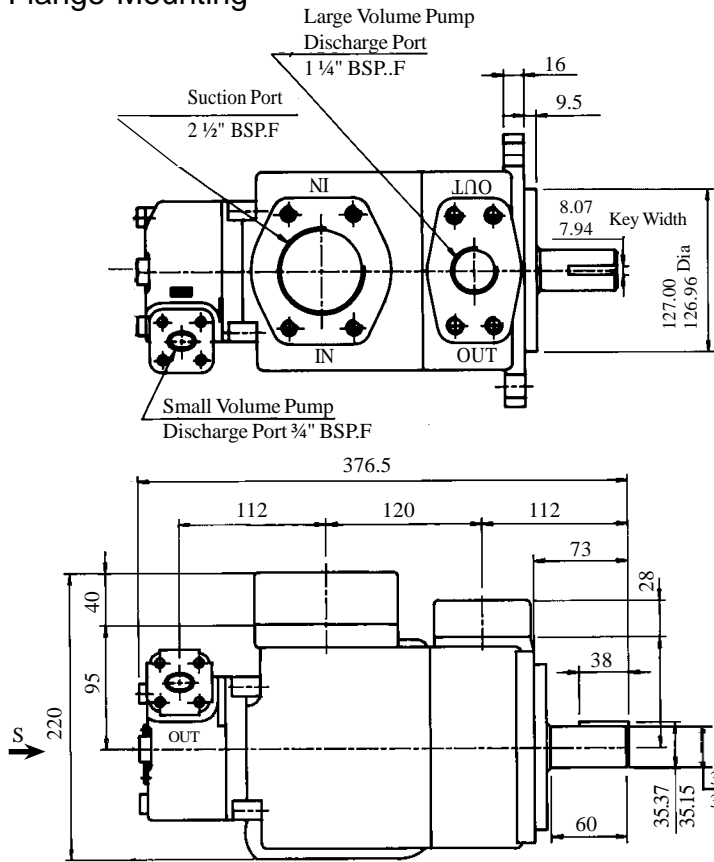
## ■ Model Number Designation

F-	PVR50150	-L	F	-13	-60	-R	E	A	A	-15	80	
Applicable Hydraulic Fluids	Series Number	Mounting	Type of Pipe Connection	Small Volume Pump Nominal Displacement	Large Volume Pump Nominal Displacement	Direction of Rotation	Small Volume Pump Discharge Position	Large Volume Pump Discharge Position	Suction Port Position	Design NO.	Design Std.	
As viewed from shaft end												
<b>F:</b> Phosphate Easter Type Fluids (Omit if not required)	<b>PVR50150</b>	<b>L:</b> Foot Mounting  <b>F:</b> Flange Mounting	<b>F:</b> Flange Attachment	<b>13, 20</b> <b>26, 30</b> <b>36, 39</b> <b>45</b>	<b>60, 70</b> <b>90, 110</b> <b>140</b>	<b>R:</b> Clockwise (Normal)  <b>L:</b> Anticlock- wise					<b>15</b>	<b>80</b>

\* Design numbers subject to change but installation dimensions remain as shown

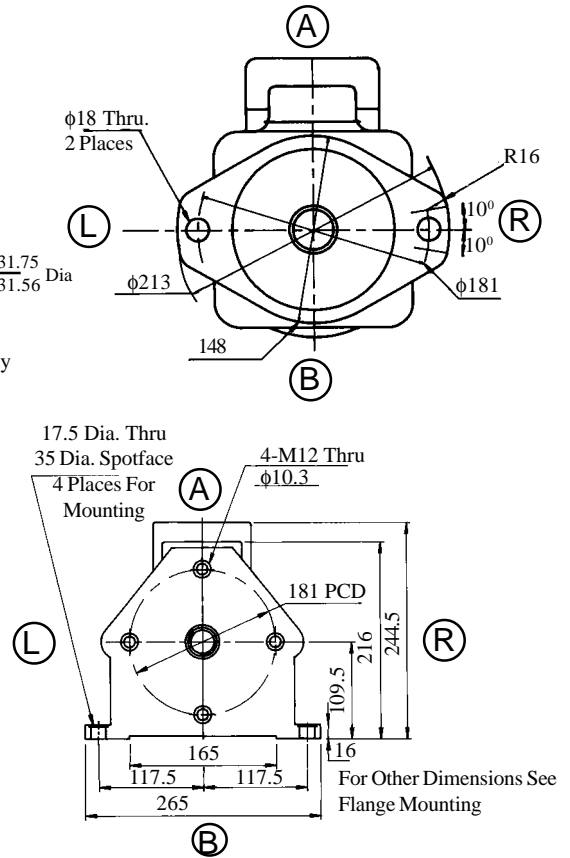
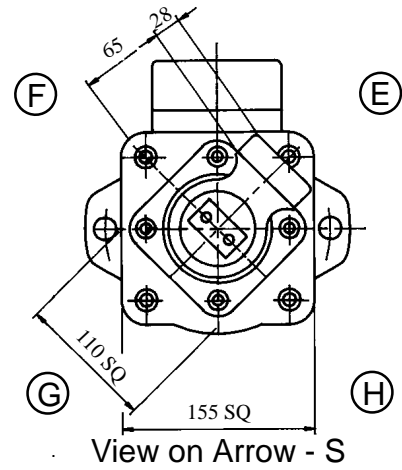
PVR50150- $\ast$ -F- $\ast$ - $\ast$ - $\ast$  $\ast$  $\ast$  $\ast$ -1580

## Flange Mounting

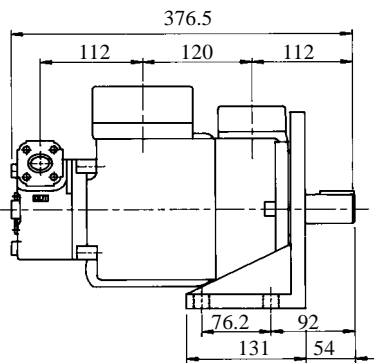


Note: The Suction and Delivery Ports are always with Flange Connection only

DIMENSION IN MILLIMETRES

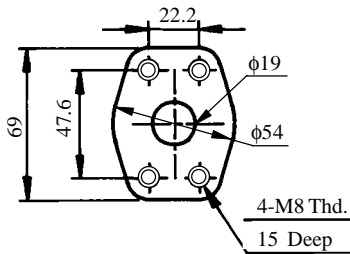


## Foot Mounting

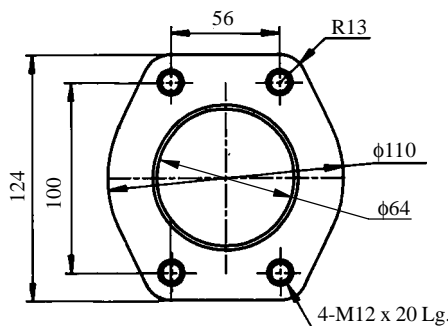


## For Reference: Dimensions of Pipe Flange Mounting Surface

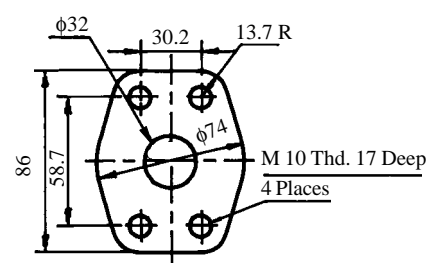
Small Volume Pump Discharge Port



Suction Port

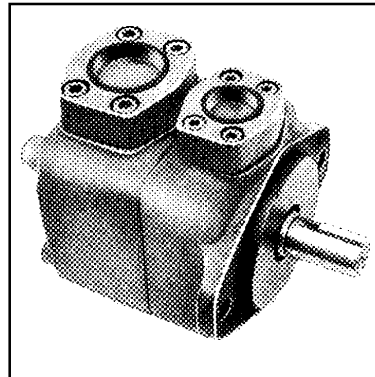


Large Volume Pump Discharge Port

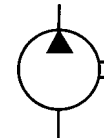


## ■ PVM 50 - Series Single Vane Pumps

These pumps are widely used as a source of hydraulic power in mobile application. They combine stable performance and robust construction with a wide range of delivery rates.



Graphic Symbol



## ■ Ratings

Model Number	Geometric Displacement cc/rev.	Max. Oper. Pressure kgf/cm <sup>2</sup>	Output Flow and Input Power	Shaft Speed Range RPM		Mass (approx.) kg.	
				Max.	Min.	Flange Mounting	Foot Mounting
PVM50-13 PVM50-20 PVM50-26 PVM50-30 PVM50-36 PVM50-39 PVM50-45	Refer Ratings in page No.28	175	Refer Page 30 and 31	2000*	600	12	14.7

\* For speeds above 1500 rpm consult factory for information

Note: For mounting dimensions ref. PVR50 dimensional drawing on page 29

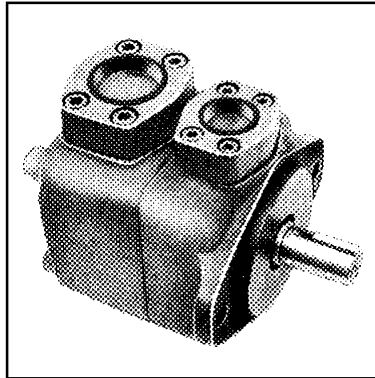
## ■ Model Number Designation

PVM50	-L	-F	-13	-R	A	A	-31	80H01
Series Number	Type of Mounting	Type of Pipe Connection	Nominal Displacement	Direction of Rotation Viewed From Shaft End	Discharge Port Position	Suction Port Position	Design* Number	Design Standard
PVM50	L: Foot Type F: Flange Type	F: Flange Connection	13 20 26 30 36 39 45	R: Clockwise (Normal) L: Counter Clockwise	See Drawing A: Normal and Upward B: Bottom R: Right L: Left	See Drawing A: Normal and Upward B: Bottom R: Right L: Left	31	80H01

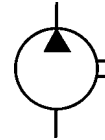
\* Design numbers subject to change. But installation dimension remain as shown for design numbers 30 to 39

## ■ PVM 150 - Series Single Vane Pumps

These pumps are widely used as a source of hydraulic power in mobile application. They combine stable performance and robust constructions with a wide range of delivery rates.



Graphic Symbol



## ■ Ratings

Model Number	Geometric Displacement cc/rev.	Max. Oper. Pressure kgf/cm <sup>2</sup>	Output Flow and Input Power	Shaft Speed Range in RPM		Mass (approx.) kg.	
				Max.	Min.	Foot Mounting	Flange Mounting
PVM150 - 60	Refer Ratings in page No. 32	175	Refer Page 34	2000	600	35.9	29.3
PVM150 - 70							
PVM150 - 90							
PVM150 - 110							
PVM150 - 140							

\* For speeds above 1500 rpm consult factory for information

Note: For mounting dimensions ref. PVR 150 dimensional drawing on page 33

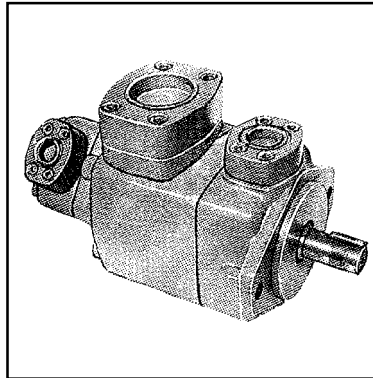
## ■ Model Number Designation

PVM150	-L	-F	-60	-R	A	A	-34	80H01
Series Number	Type of Mounting	Type of Pipe Connection	Nominal Displacement	Direction of Rotation Viewed From Shaft End	Discharge Port Position	Suction Port Position	Design * Number	Design Standard
PVM150	L: Foot Type	F: Flange Connection	60	R: Clockwise (Normal)	See Drawing	See Drawing	-34	80H01
	F: Flange Type		70 90 110 140	L: Counter Clockwise	A: Normal and Upward B: Bottom R: Right L: Left	A: Normal and Upward B: Bottom R: Right L: Left		

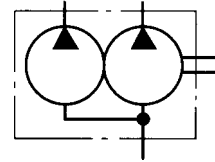
\* Design numbers subject to change. But installation dimension remain as shown for design for design numbers 30 to 39

## ■ PVM 50150 Series Double Vane Pumps

These double pumps consist of one PVM 50 and one PVM 150 series single pumps combined in tandem within a single housing and driven by a common shaft. Fluid delivered from the two separate ports can be either supplied to separate or common circuits. These pumps are used in mobile application.



Graphic Symbol



## ■ Ratings

Model Number	Small volume pump Geometric Displacement cc/rev.	Large volume pump Geometric Displacement cc/rev.	Max. Operating Pressure kgf/cm <sup>2</sup>	Output Flow and Input Power	Shaft Speed Range RPM		Mass Kg.	
					Max.	Min.	Flange Mounting	Foot Mounting
PVM50150	Refer Ratings in Page 28	Refer Ratings in Page 32	175	Refer Page 30 31 and 34	2000	600	42.5	49

Note: For mounting dimensions ref. PVR50150 dimensional drawing on page 38

## ■ Model Number Designation

PVM50150	- L	- F	- 13	- 60	- R	E	A	A	15	80H01
Series Number	Mounting	Type of Pipe Connection	Small Volume Pump Nominal Displacement	Large Volume Pump Nominal Displacement	Direction of Rotation	Small Volume Pump Discharge Position	Large Volume Pump Discharge Position	Suction Port Position	Design NO.	Design Std.
PVM50150	L: Foot Mounting F: Flange Mounting	F: Flange Attachment	13, 20	60, 70	R: Clockwise (Normal) L: Anticlockwise				15	80H01
			26, 30 36, 39 45	90, 110 140						

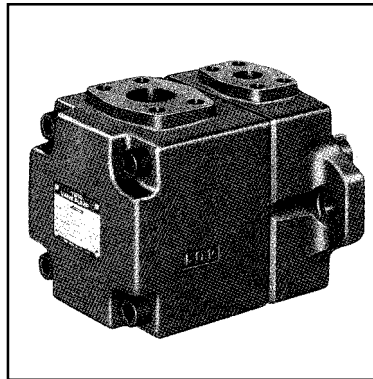
\* Design numbers subject to change but installation dimensions remain as shown

## ■ PV2R Series Single Vane Pumps

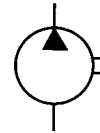
The pumps have been developed especially for low noise operation. To comply with a wide range of applications for instance the injection moulding machine industry, we provide the wide range of delivery volume [5.8-237.0 cm<sup>3</sup>/rev.] for the pumps.

The main internal spare parts of the pumps are built in as cartridge kit.

Therefore, the maintenance can be easily done by simply changing the cartridges.



Graphic Symbol



## ■ Ratings

Model Number	Geometric Displacement cm <sup>3</sup> /rev	Max. Operating Pressure kgf/cm <sup>2</sup>							Output Flow Input Power	Shaft Speed Range rpm	
		Peroleum Base Oils			Water Containing Fluids		Synthetic Fluids	Max.		Min.	
		Specially *6 Specified	Antiwear Type	R & O Type	Antiwear Type *6 Water Glycols	Water Glycols	Water in Oil Emulsions				Phosphate Esters
PV2R1-6	5.8	210 *5	175 *5	160	160	70	70	160	Refer Page 49, 50 & 51	1800 (1200) <sup>*3</sup>	750 <sup>*4</sup>
PV2R1-8	8.0										
PV2R1-10	9.4										
PV2R1-12	12.2										
PV2R1-14	13.7										
PV2R1-17	16.6										
PV2R1-19	18.6										
PV2R1-23	22.7										
PV2R1-25	25.3										
PV2R1-31	31.0	160	160								
PV2R2-41	41.3	210	175	140	160	70	70	140	Refer Page 51 & 52	1800 (1200) <sup>*3</sup>	600 <sup>*4</sup>
PV2R2-47	47.2										
PV2R2-53	52.5										
PV2R2-59	58.2										
PV2R2-65	64.7										
PV2R3-76	76.4	210	175	140	160	70	70	140	Refer Page 52 & 53	1800 (1200) <sup>*3</sup>	600
PV2R3-94	93.6									1800 <sup>*1</sup> (1200) <sup>*3</sup>	
PV2R3-116	115.6										
PV2R4-136	136	175	175	140	160	70	70	140	Refer Page 53 & 54	1800 <sup>*2</sup> (1200) <sup>*3</sup>	600
PV2R4-153	153										
PV2R4-184	184										
PV2R4-200	201										
PV2R4-237	237										

\*1. If PV2R3-116 is used at speed above 1700 rpm, the suction pressure is limited to 0 kgf/cm<sup>2</sup> (0 in. Hg)

\*2. If PV2R4-237 is used at speed above 1700 rpm, the suction pressure is limited to 0.13 kgf/cm<sup>2</sup> (3.94 in Hg. vacuum)

\*3. If phosphate esters or water containing fluids are used, the maximum speed is limited to 1200 rpm.

\*4. For starting at low speed, the maximum viscosity is limited. For details, see Hydraulic Fluids.

\*5. With pressure above 160 kgf/cm<sup>2</sup> raise the speed over 1450 rpm.

\*6. For the brands of 'Antiwear type water glycol' and 'Specially specified' petroleum based oils see the 'Hydraulic fluids' in page 362

## ■ Model Number Designation

F-	PV2R1	-6	-L	-R	A	A	-40
Special Seals	Series Number	Nominal Displacement	Type of Mounting	Shaft Rotation	Discharge Port Position	Suction Port Position	Design Number
<b>F:</b> For Phosphate Ester Type Fluids (Omit if not required)	<b>PV2R1</b>	<b>6, 8 10, 12 14, 17 19, 23 25, 31</b>	<b>L:</b> Foot Mounting	<b>R:</b> Clockwise (Normal)	(Viewed from Shaft End)		<b>40</b>
	<b>PV2R2</b>	<b>41, 47 53, 59 65</b>			<b>A:</b> Upwards (Normal)	<b>A:</b> Upwards (Normal)	
	<b>PV2R3</b>	<b>76, 94 116</b>	<b>F:</b> Flange Mounting		<b>B:</b> Bottom	<b>B:</b> Bottom	<b>30</b>
	<b>PV2R4</b>	<b>136, 153 184, 200 237</b>			<b>R:</b> Right	<b>R:</b> Right	
				<b>L:</b> Left	<b>L:</b> Left		

I Available to supply pump with anti-clockwise rotation. Consult Yuken for details.

## ■ Pipe Flange Kits

Pipe flange Kits are available. When ordering, specify kits from the table below.

Pump Model Numbers	Name of Port	Pipe Flange Kit Numbers
		Threaded Connection
PV2R1	Suction	F5-08-A-1080
	Discharge	F5-04-A-1080
PV2R2	Suction	F5-10-A-1080
	Discharge	F5-06-A-1080
PV2R3	Suction	F5-16-A-1080
	Discharge	F5-10-A-1080
PV2R4	Suction	----
	Discharge	F5-12-A-1080

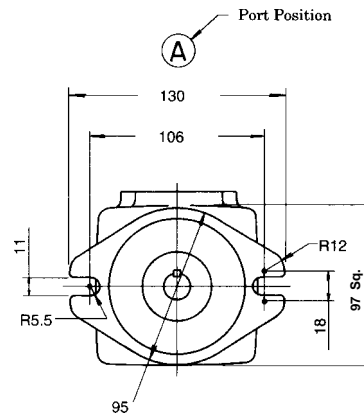
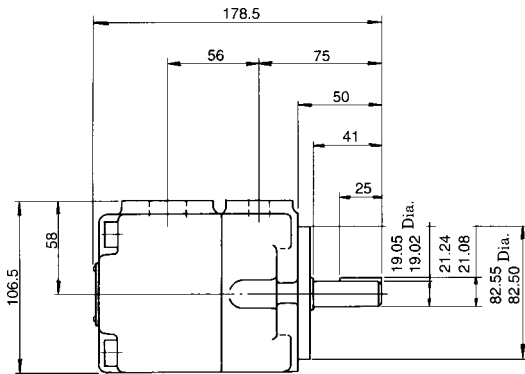
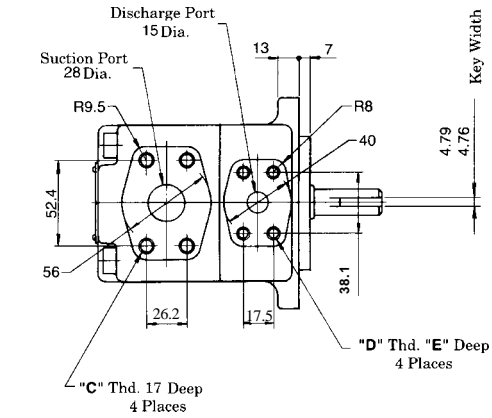
Notes: Special seals (Viton Seals) are required when phosphate ester type fluids are used. (put "F" before model code of pipe flange when ordering).


\* Detail of the pipe flange kit is described on page 358

## ■ Mass

Model Numbers	Mass kg.	
	Flange Mtg.	Foot Mtg.
PV2R1	9.0	11.2
PV2R2	19.0	23.3
PV2R3	36.7	46.7
PV2R4	68.5	93.5

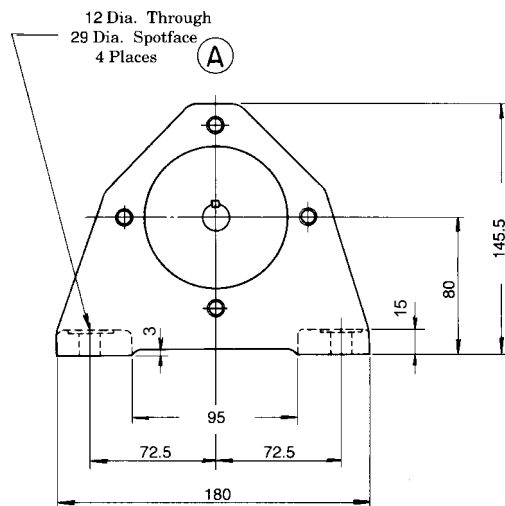
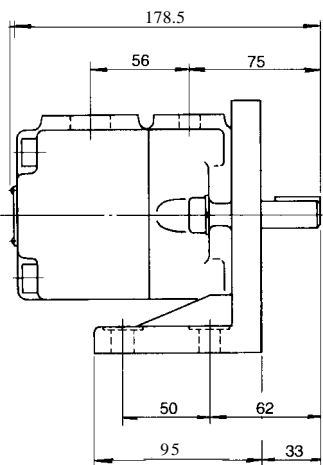
## Flange Mtg. : PV2R1--F-RAA-40



Model Numbers	"C" Thd.	"D" Thd.	E mm.
PV2R1-  -F-RAA-40	M10	M8	14

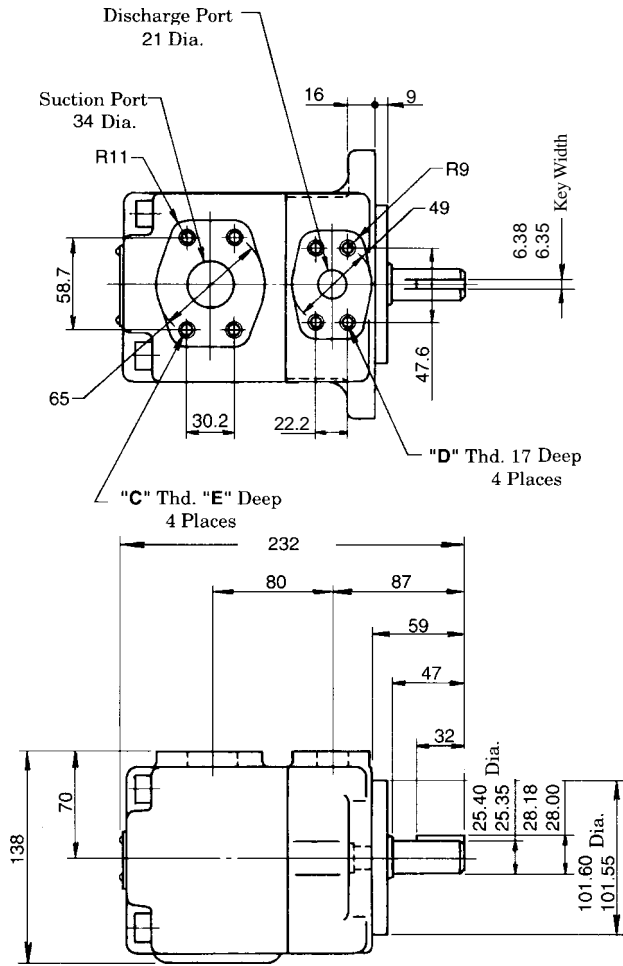
DIMENSION IN MILLIMETRES

## Foot Mtg. : PV2R1--L-RAA-40

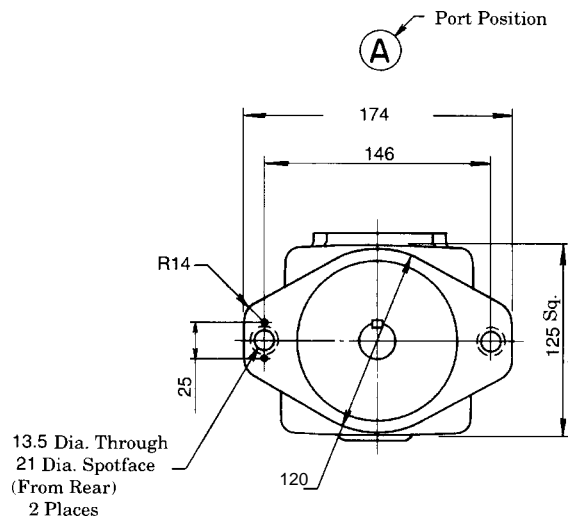


● For other dimensions, refer to "Flange Mtg".

## Flange Mtg. : PV2R2-☼-F-RAA-40

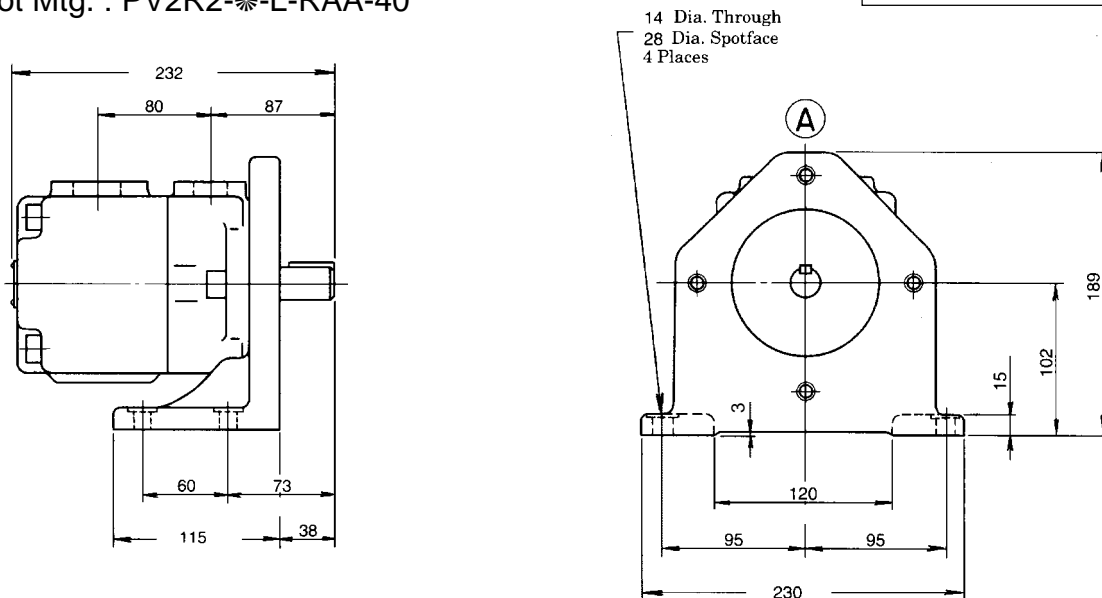


Model Numbers	"C" Thd.	"D" Thd.	E mm.
PV2R2-☼-F-RAA-40	M10	M8	19

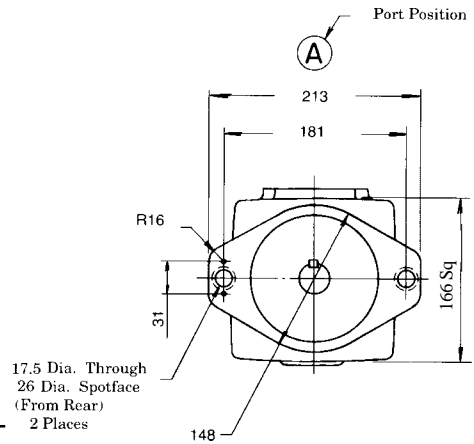
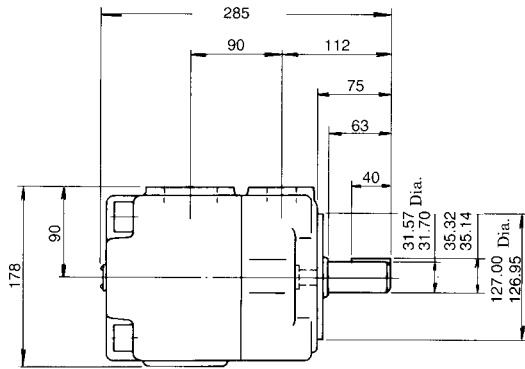
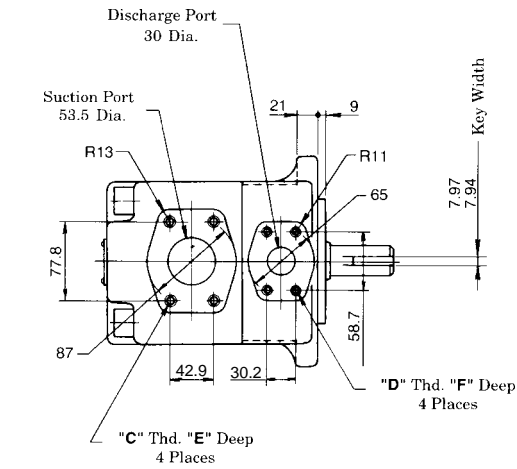



DIMENSION IN  
MILLIMETRES

## Foot Mtg. : PV2R2-☼-L-RAA-40



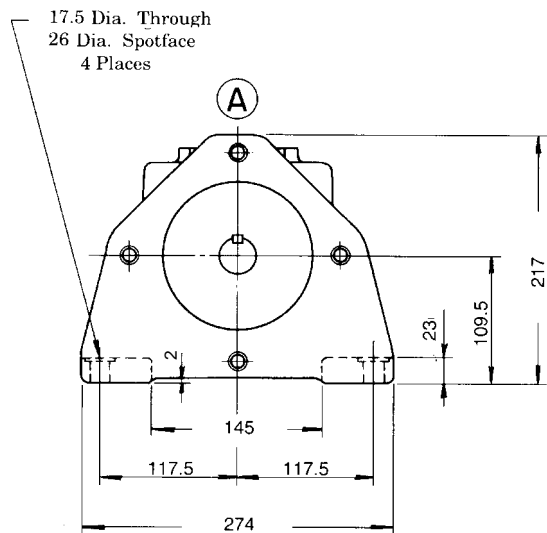
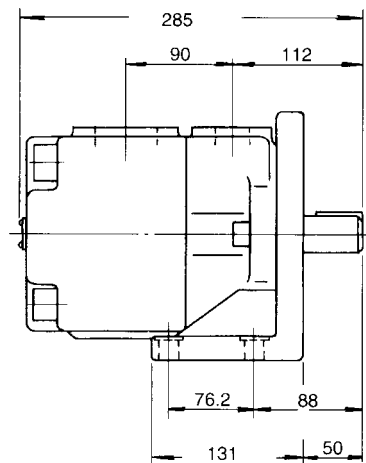
## Flange Mtg. : PV2R3--F-RAA-30



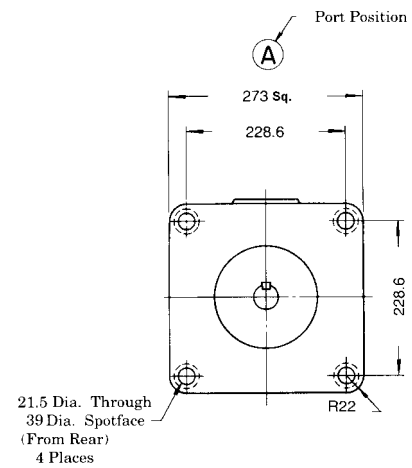
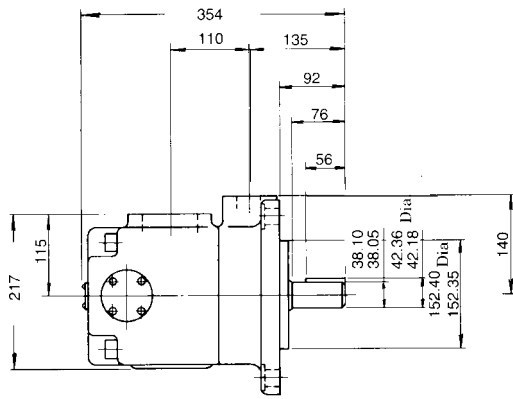
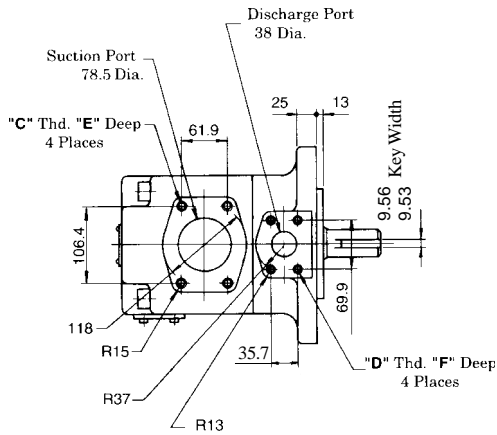
Model Numbers	"C" Thd.	"D" Thd.	Dimensions mm.	
			E	F
PV2R3-  -F-RAA-30	M12	M10	19	19

DIMENSION IN MILLIMETRES

## Foot Mtg. : PV2R3--L-RAA-40



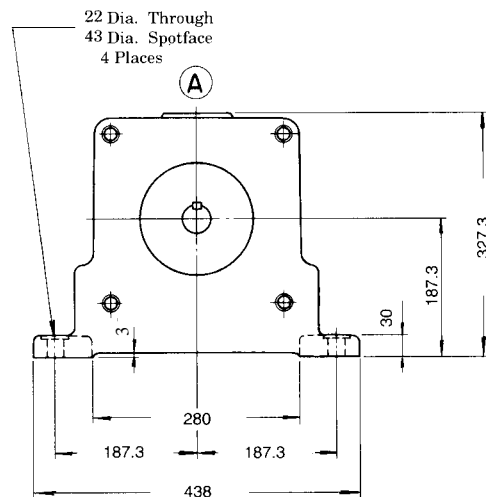
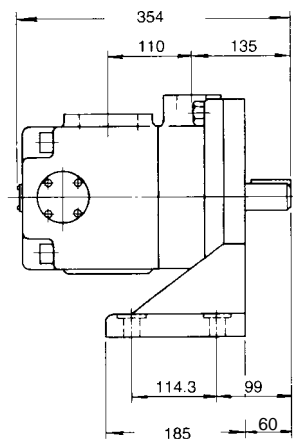
## Flange Mtg. : PV2R4-☼-F-RAA-30



Model Numbers	"C" Thd.	"D" Thd.	Dimensions mm.	
			E	F
PV2R4-☼-F-RAA-30	M16	M12	19	19

DIMENSION IN  
MILLIMETRES

## Foot Mtg. : PV2R4-☼-L-RAA-30



● For other dimensions, refer to "Flange Mtg".

## ■ Noise Level

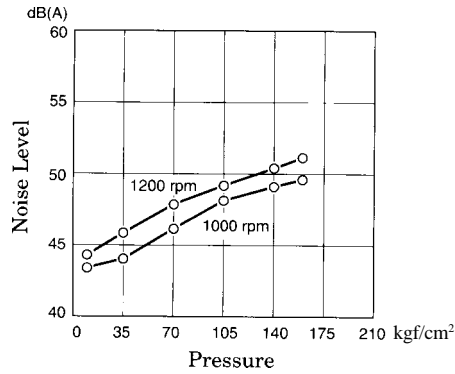
### ● Measuring Conditions

Fluid Viscosity : 20 cSt (100 SSU)

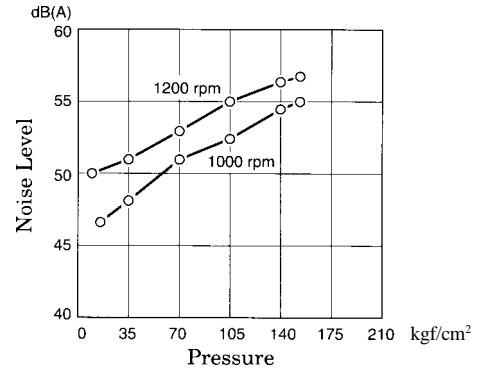
Measurement Point : One Metre horizontally away from pump head cover

Background Noise : 40dB (A)

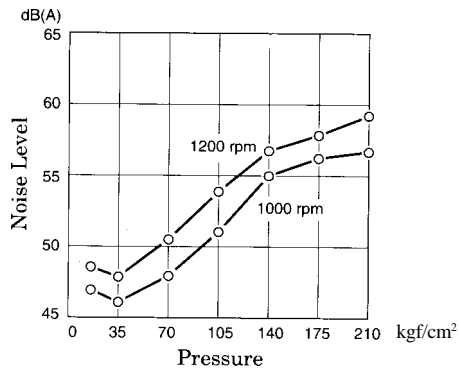
#### ● PV2R1-6



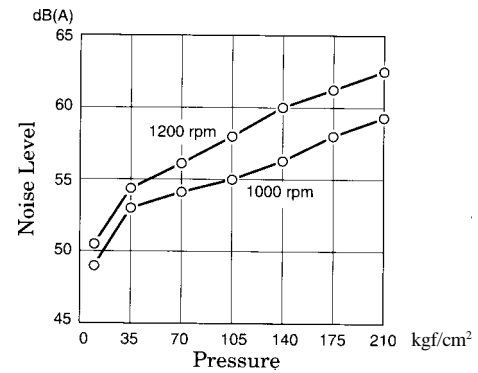
#### ● PV2R1-31



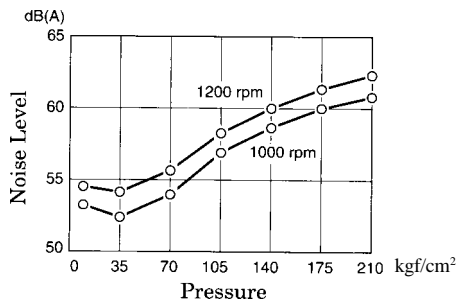
#### ● PV2R2-41



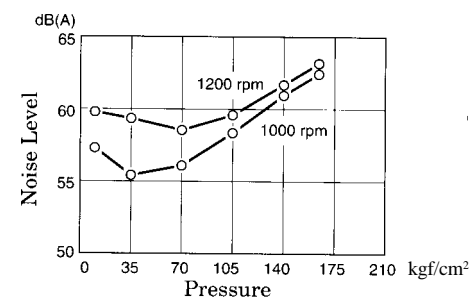
#### ● PV2R2-65



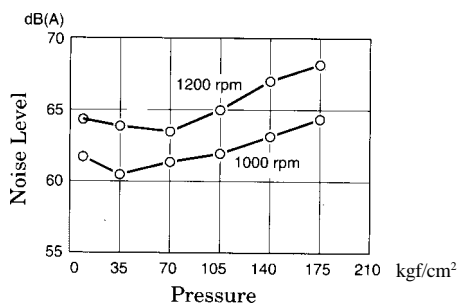
#### ● PV2R3-76



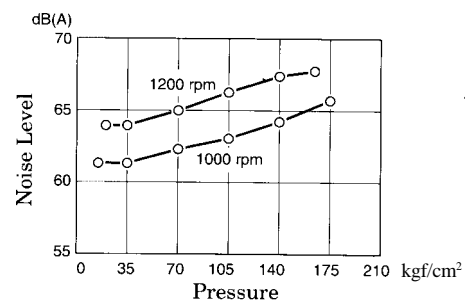
#### ● PV2R3-116



#### ● PV2R4-136



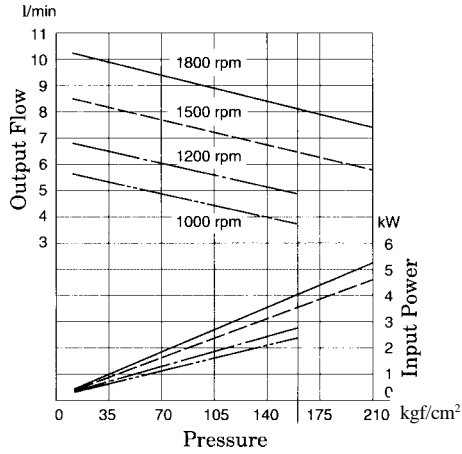
#### ● PV2R4-184



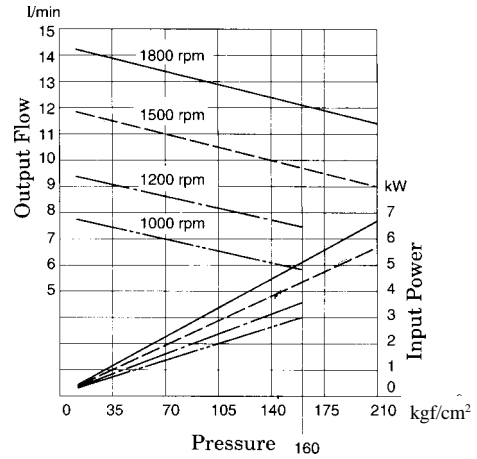
# VANE PUMPS

Typical Pump Characteristics at viscosity 20 cSt (100) SSU [ISO VG32 Oils, 50°C (122°F)]

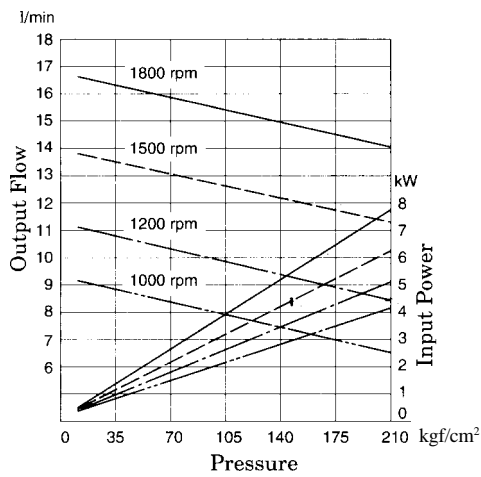
## ● PV2R1-6



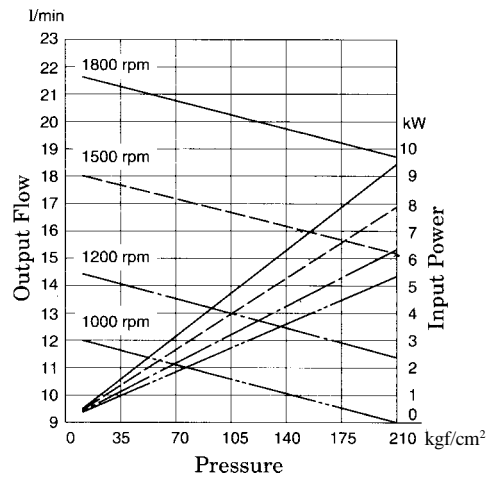
## ● PV2R1-8



## ● PV2R1-10

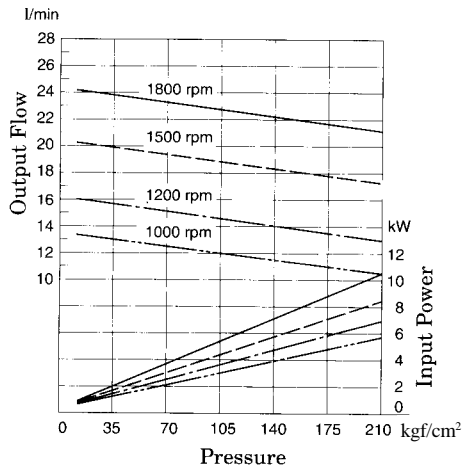


## ● PV2R1-12

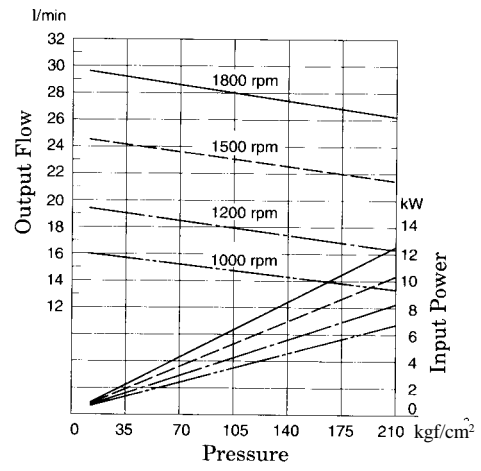


Typical Pump Characteristics at viscosity 20 cSt (100) SSU [ISO VG32 Oils, 50°C]

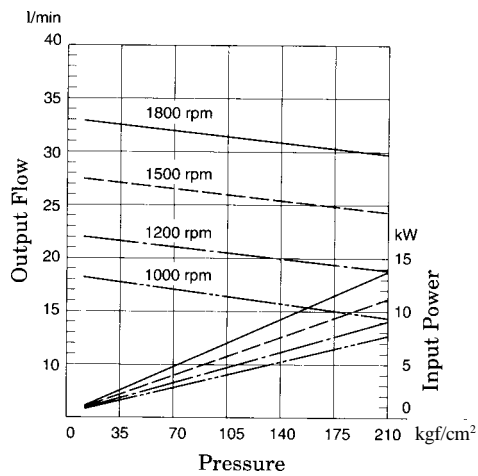
● PV2R1-14



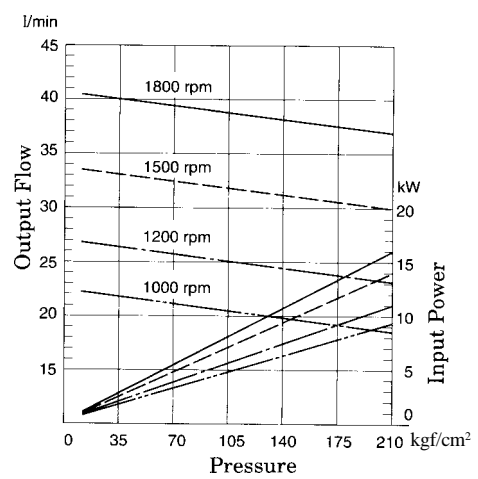
● PV2R1-17



● PV2R1-19

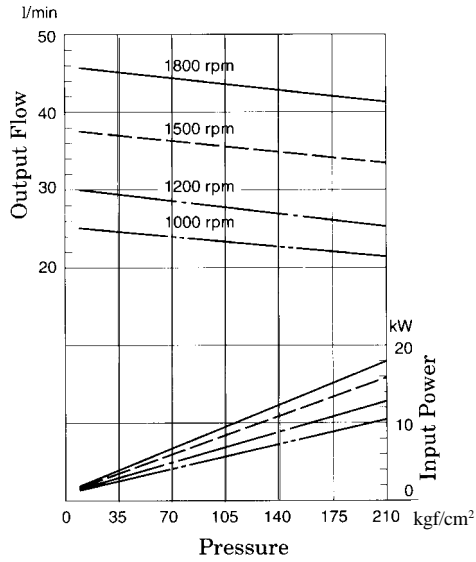


● PV2R1-23

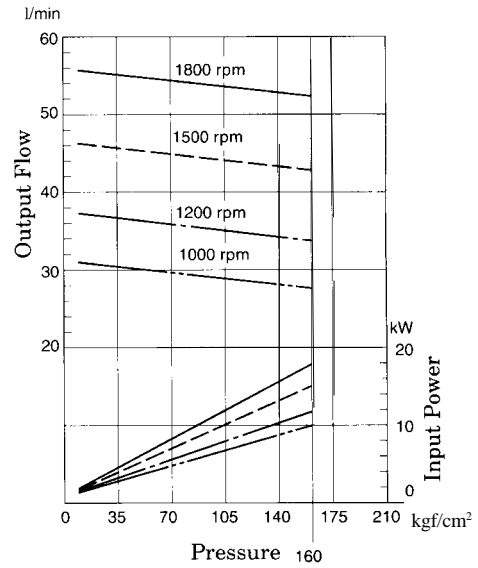


Typical Pump Characteristics at viscosity 20 cSt (100) SSU [ISO VG32 Oils]

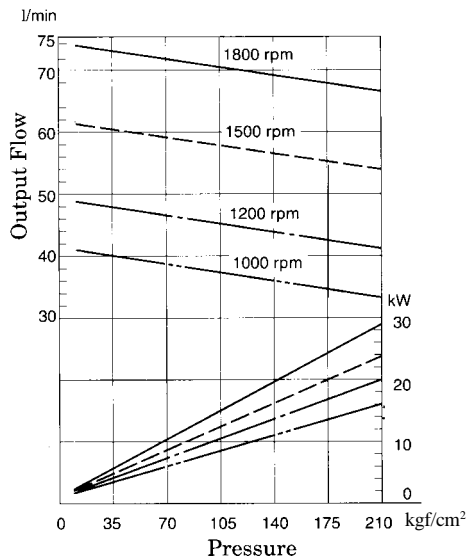
## ● PV2R1-25



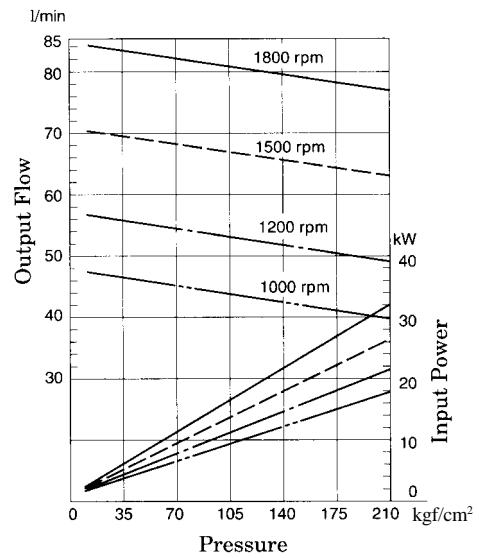
## ● PV2R1-31



## ● PV2R2-41

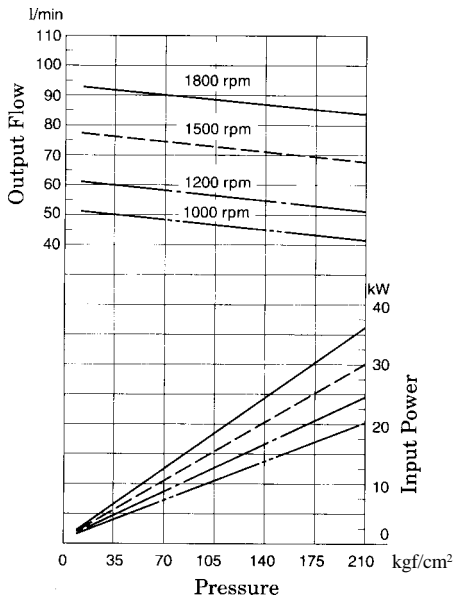


## ● PV2R2-47

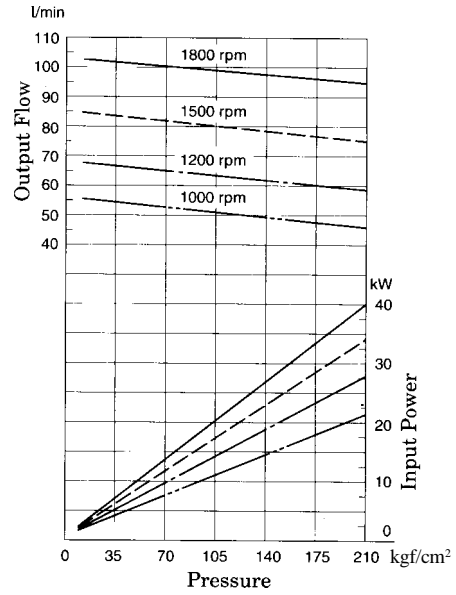


## Typical Pump Characteristics at viscosity 20 cSt (100) SSU [ISO VG32 Oils, 50°C]

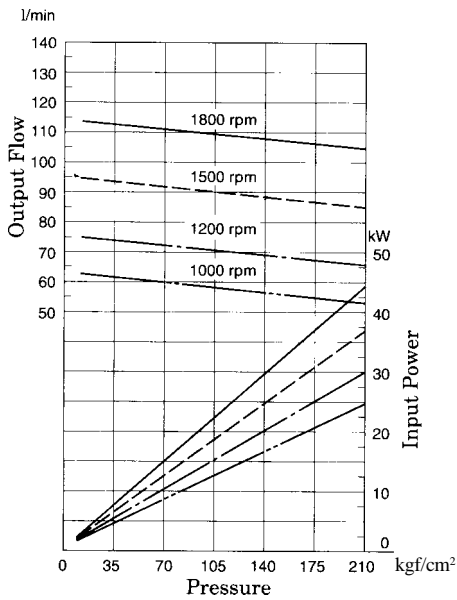
● PV2R2-53



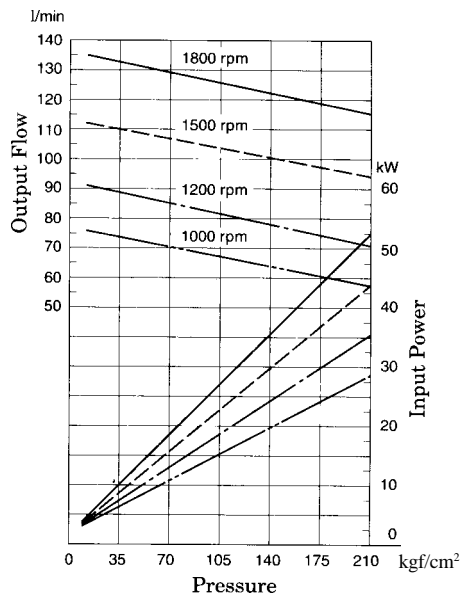
● PV2R2-59



● PV2R2-65

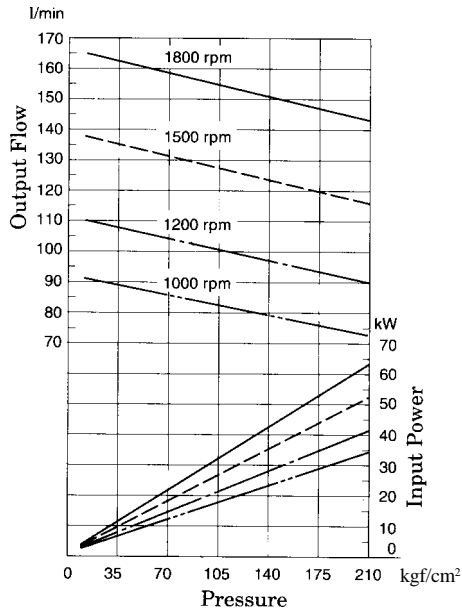


● PV2R3-76

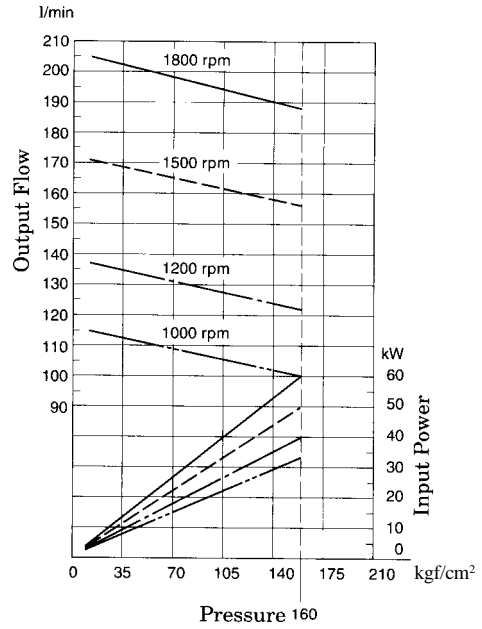


Typical Pump Characteristics at viscosity 20 cSt (100 SSU) [ISO VG32 Oils, 50°C]

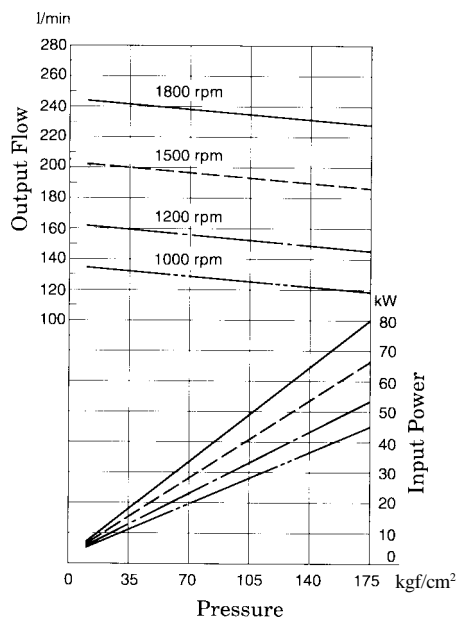
● PV2R3-94



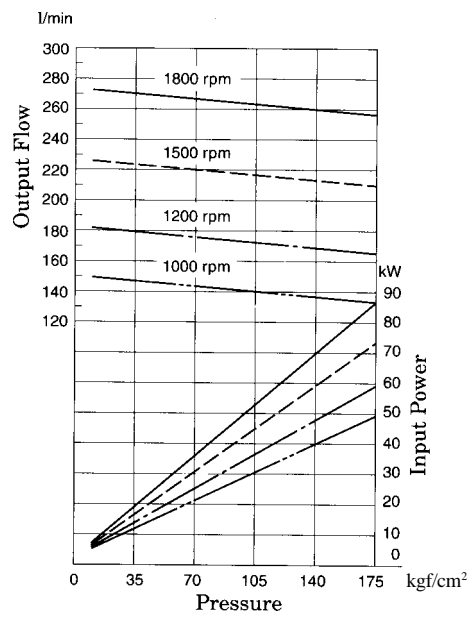
● PV2R3-116



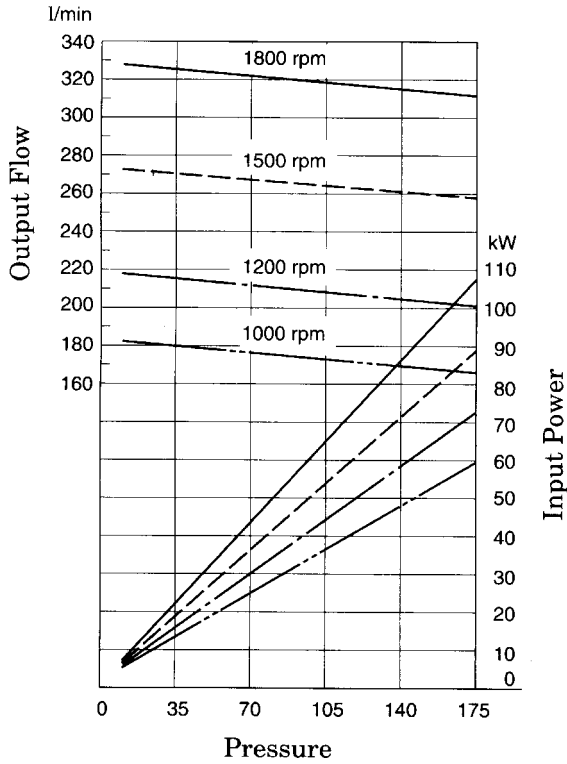
● PV2R4-136



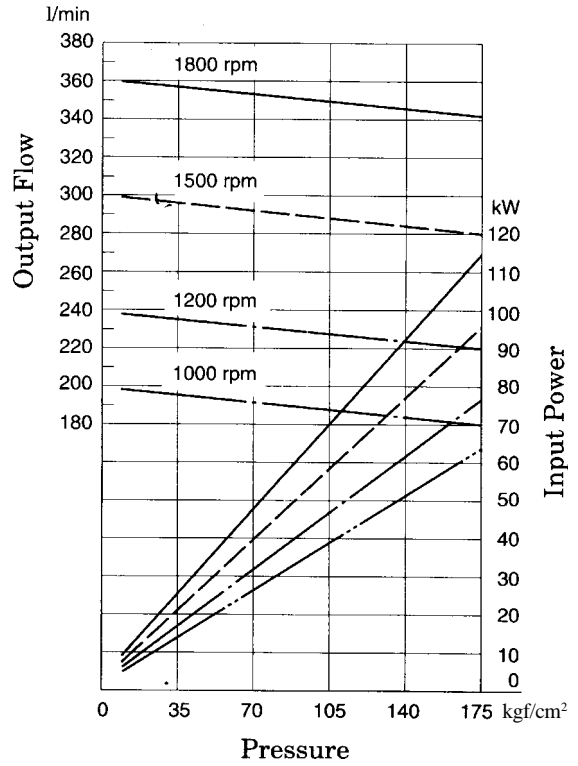
● PV2R4-153



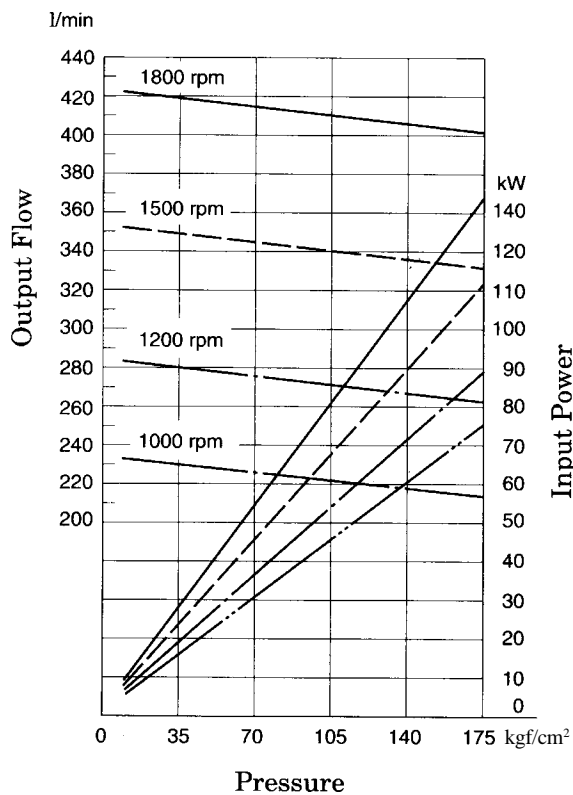
● PV2R4-184



● PV2R4-200

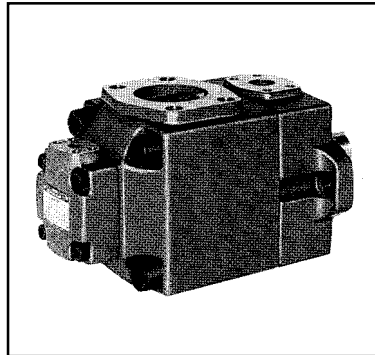


● PV2R4-237

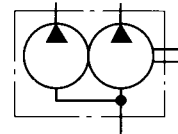


## ■ PV2R Series Double Vane Pumps

These double pumps consist of two PV2R series single pumps combined in tandem within a single housing and driven by a common shaft. Output flow from the two separate ports can be either supplied or common circuits



Graphical Symbol



## ■ Ratings

### ● Maximum Operating Pressure

Nominal Displacement	Maximum Operating Pressure kgf/cm <sup>2</sup>						
	Petroleum Base Oils			Water Containing Fluids			Synthetic Fluids
	Specially *3 Specified	Anti-Wear Type	R & O Type	Anti-Wear *3 Type Water Glycols	Water Glycols	Water in Oil Emulsions	Phosphate Esters
6	210 *1	175 *1	160	160	70	70	160
8							
10							
12	210	175					
14							
17							
19							
23 *2							
25							
31							
26	210	175	140	160	70	70	140
33							
41							
47							
53							
59							
65							
52							
60							
66							
76							
94							
116	175	175	140	160	70	70	140
136							
153							
184							
200							
237							

Notes: 1) For the relation between model (series) No. and nominal displacement, see the table below.

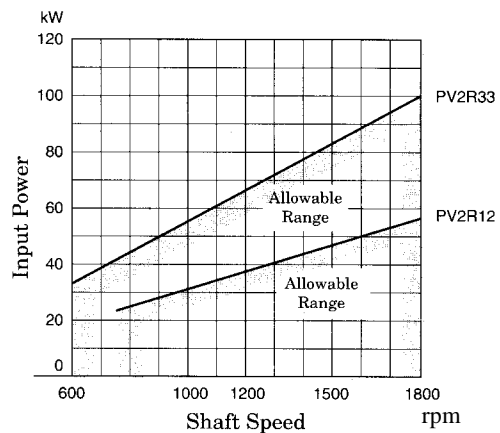
2) With PV2R12 and PV2R33 series, the sum of the input powers to small volume pump and large volume pump is limited against shaft speed as follows

## Model Number Designation

F-	PV2R13	-6	-76	-L	-R	A	A	A	-40	
Special Seals	Series Number	Small Volume Pump Nominal Displacement cm <sup>3</sup> /rev	Large Volume Pump Nominal Displacement cm <sup>3</sup> /rev	Mounting	Direction of Rotation	Small Volume Pump Discharge Port Position	Large Volume Pump Discharge Port Position	Suction Port Position	Design Number	
F: Special Seals for phosphate ester type fluids (omit if not required)	PV2R12	6, 8 10, 12 14, 17 19, 23 25, 31	26, 33 41, 47 53, 59 65	L: Foot Mtg.	R: *1 Clockwise (Normal)	(Viewed from Shaft End)			40	
	PV2R13	6, 8 10, 12 14, 17 19, 23 25, 31	76, 94 116			F: Flange Mtg.	E: Left 45° Upwards (Normal)	A: Upwards (Normal)		40
	PV2R23	41, 47 53, 59 65	52, 60 66, 76 94, 116				F: Right 45° (upwards)	B: Bottom		
	PV2R33	76, 94 116	76, 94 116	G: Right 45° (Downwards)		L: Left	30			
	PV2R14	6, 8 10, 12 14, 17 19, 23	136, 153 184, 200 237	30		H: Left 45° (Downwards)		A: Upwards (Normal)	R: Right	30
	PV2R24	26, 33 41, 47					30			
	PV2R34	52, 60 66, 76 94, 116						30		

\*1. Available to supply pump with anti-clockwise rotation.  
Consult Yuken for details

		Nominal Displacement, Large Volume Pump			
		26, 33, 41, 47 53, 59, 65	52, 60 66	76, 94 116	136, 153, 184 200, 237
Nominal Displacement, Small Volume Pump	6	PV2R12	PV2R12	PV2R14	
	8				
	10				
	13				
	14				
	17	PV2R24			
	19				
	23				
	25				
	31				
26	PV2R23	PV2R23	PV2R24		
33					
41					
47					
53					
59	PV2R34	PV2R34	PV2R34		
65					
66					
76					
94					
116	PV2R33	PV2R33	PV2R34		



- \*1 With pressures above 160 kgf/cm<sup>2</sup>, raise the speed over 1450 rpm
- \*2 If nominal displacement "23", with the PV2R14 series, is selected, the maximum operating pressure is limited to 160 kgf/cm<sup>2</sup>
- \*3 For the brands of Specially Specified & Anti-wear type water Glycol see the 'Hydraulic Fluids' in page 362.

## ● Shaft Speed Range

Model Numbers	Shaft Speed Range rpm			
	Petroleum Base Oils		Water Containing Fluids Phosphate Esters	
	Max.	Min.	Max.	Min.
PV2R12	1800	750	1200	750
PV2R13	1800*2	750	1200	750
PV2R23	1800*2	600	1200	600
PV2R33	1800*2 (1500)*1	600	1200	600
PV2R14	1800*2	750	1200	750
PV2R24	1800*2	600	1200	600
PV2R34	1800*2	600	1200	600

\*1. With PV2R33-116-116, the maximum speed is limited to 1500 rpm.

\*2. With the models (nominal displacements) listed below, the minimum suction pressures are limited in accordance with speeds.

[With other models, the minimum suction pressure is -0.2 kgf/cm<sup>2</sup> (5.9 in. Hg vacuum) irrespective of speed.]

Model Numbers	Min. Suction Pres. kgf/cm <sup>2</sup> (in. Hg Vacuum)	
	Less than 1700 rpm	1700-1800 rpm
PV2R13--116 PV2R23--116	-0.2 (5.9)	0 (0)
PV2R23--76 PV2R23--94 PV2R33--76	-0.2 (5.9)	-0.07 (1.97)
PV2R33--94 PV2R33--116 PV2R33--94 PV2R33--116	-0.2 (5.9)	0 (0)
PV2R14--237 PV2R24--237 PV2R34--237	-0.2 (5.9)	-0.13 (3.94)
PV2R34--116	-0.2 (5.9)	0 (0)

## ● Mass

Model Numbers	Mass kg.						
	PV2R12	PV2R13	PV2R23	PV2R33	PV2R14	PV2R24	PV2R34
Flange Mtg.	25	45.6	51	84	75	78	98
Foot Mtg.	29.3	55.6	61	94	100	103	123

## ■ Pipe Flange Kits

Pipe flange kits are available. When ordering, specify kits from the table below.

Pump Model Numbers	Name of Port	Pipe Flange Kit Numbers
		Threaded Connection
PV2R12	Suction	F5-16-A-1080
	Large Discharge	F5-06-A-1080
	Small Discharge	F5-04-A-1080
PV2R13	Suction	---
	Large Discharge	F5-10-A-1080
	Small Discharge	F5-04-A-1080
PV2R23	Suction	---
	Large Discharge	F5-10-A-1080
	Small Discharge	F5-06-A-1080
PV2R33	Suction	---
	Large Discharge	F5-10-A-1080
	Small Discharge	F5-10-A-1080

## ● Output Flow & Input Power

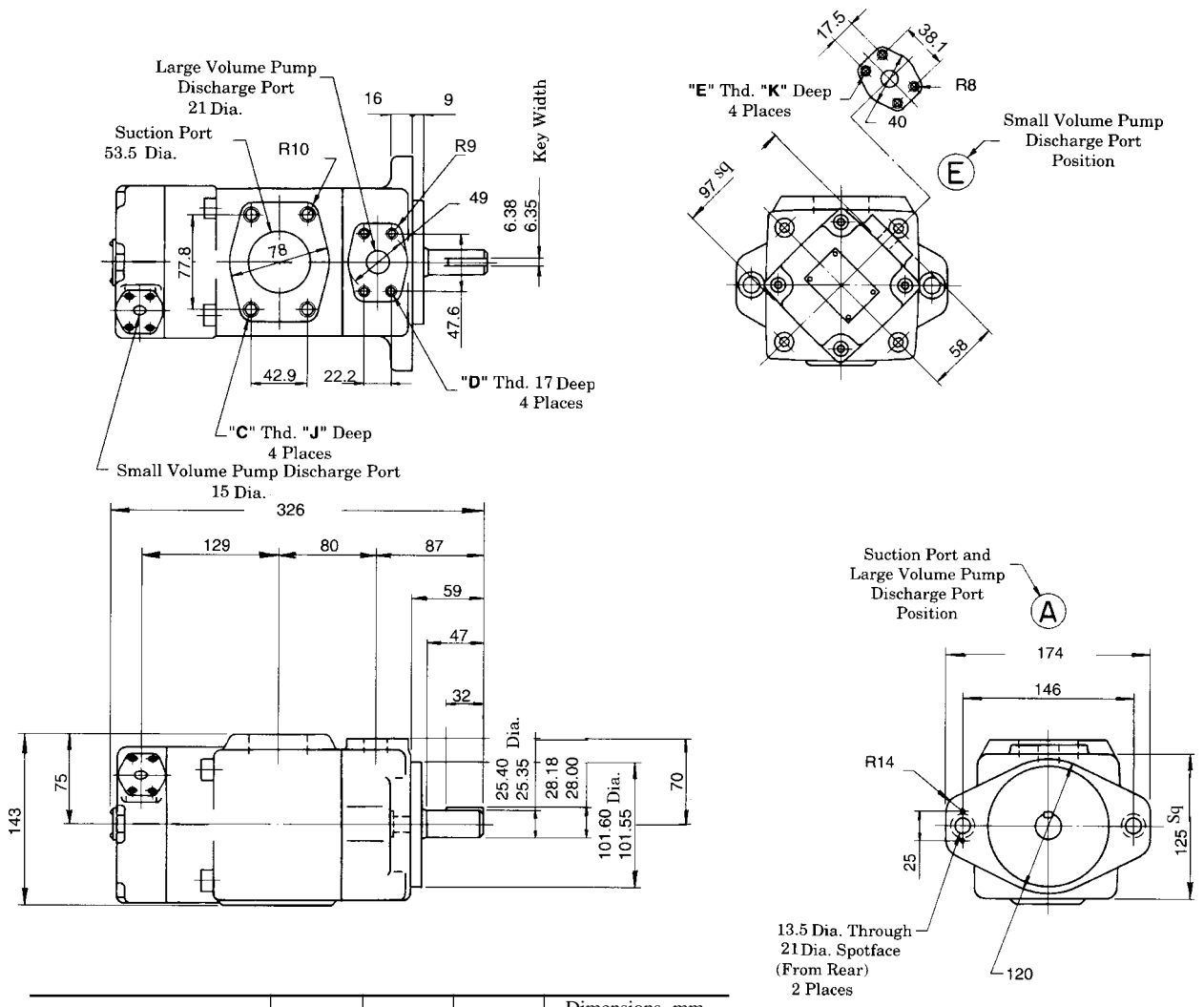
The pump characteristics are the same as for PV2R series single pumps. See the pages concerned.



Model Numbers	Output Flow & Input Power	
	Small Volume Pump	Large Volume Pump
PV2R12	Same as single pump "PV2R1", refer page 49 to 51.	Same as single pump "PV2R2", refer page 51 & 52. However, as for displacement of "26" & "33" ref. page 65.
PV2R13	Same as single pump "PV2R1", refer page 49 to 51.	Same as single pump "PV2R3", refer page 52 and 53.
PV2R23	Same as single pump "PV2R2", refer page 51 & 52.	Same as single pump "PV2R3", refer page 52 and 53. However, as for displacement of "52", "60" & "66", refer page 65 & 66.
PV2R33	Same as single pump "PV2R3", refer page 52 and 53.	Same as single pump "PV2R3", refer page 52 and 53.
PV2R14	Same as single pump "PV2R1", refer page 49 to 51.	Same as single pump "PV2R4", refer page 53 & 54
PV2R24	Same as single pump "PV2R2", refer page 51 & 52. However, as for displacement of "26" and "33", refer page 65.	
PV2R34	Same as single pump "PV2R3", refer page 52 & 53. However, as for displacement of "52", "60" and "66", refer page 65 and 66.	

Note: Special seals (Viton seals) are required when phosphate ester type fluids are used.

● Detail of the pipe flange kit is described on page 358.

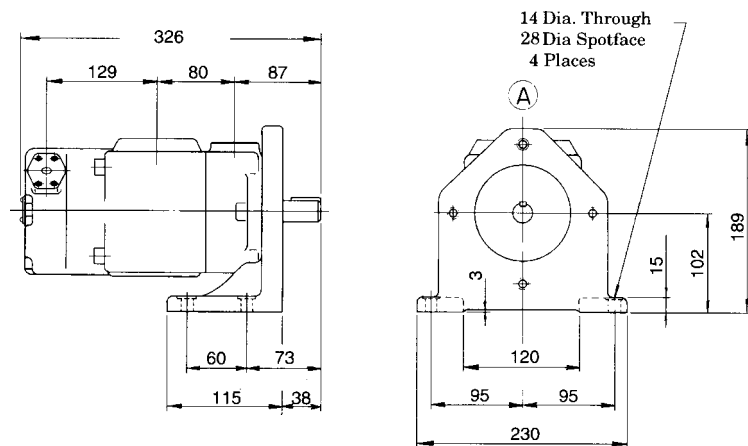
## Flange Mtg.: PV2R12---F-REAA-40



Model Numbers	"C" Thd.	"D" Thd.	"E" Thd.	Dimensions mm	
				J	K
PV2R12-  -  -F-REAA-40	M12	M10	M8	19	14

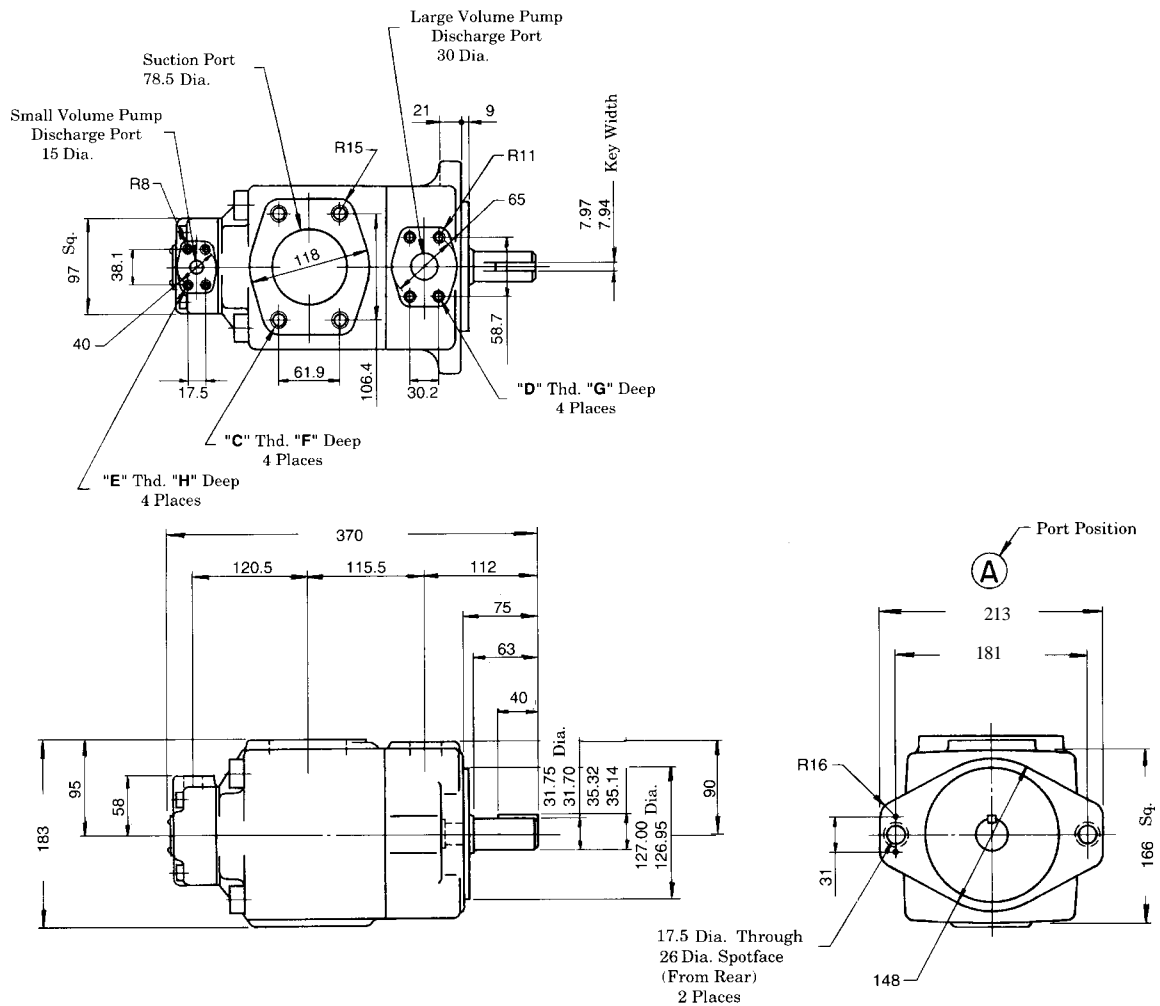
DIMENSION IN MILLIMETRES



## Foot Mtg.: PV2R12---L-REAA-40



● For other dimensions, refer to "Flange Mtg."

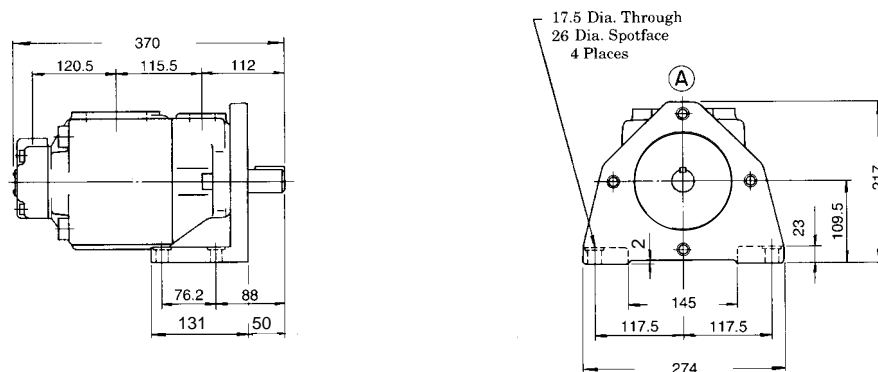
## Flange Mtg.: PV2R13---F-RAAA-40



Model Numbers	"C" Thd.	"D" Thd.	"E" Thd.	Dimensions mm		
				F	G	H
PV2R13-  -  -F-RAAA-40	M16	M10	M8	19	19	14

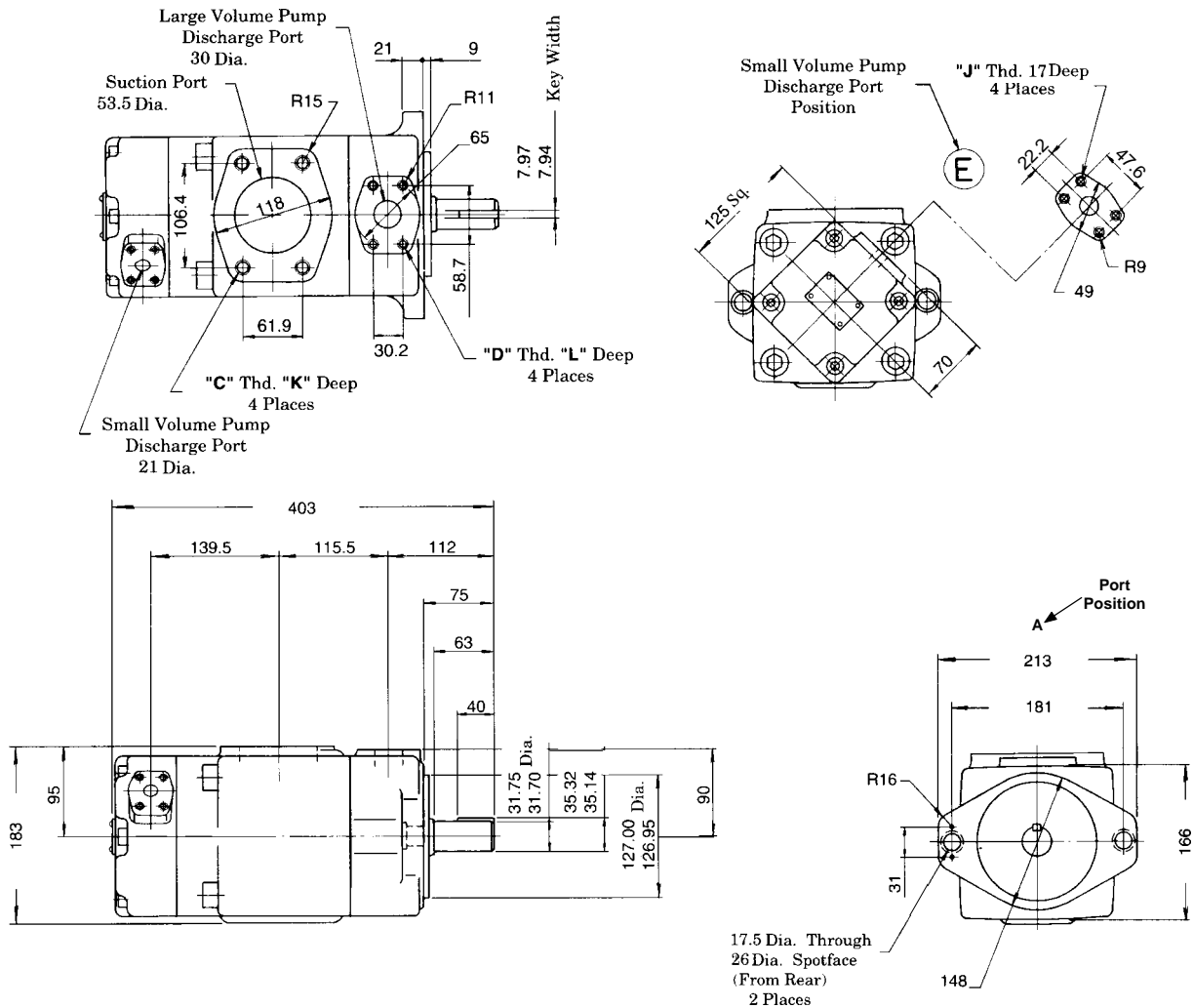
DIMENSION IN MILLIMETRES



## Foot Mtg.: PV2R13---L-RAAA-40



● For other dimensions, refer to "Flange Mtg."

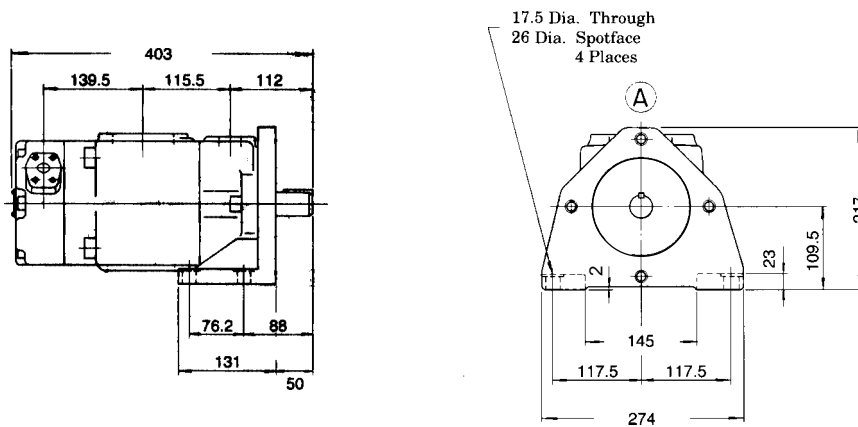
## Flange Mtg.: PV2R23---F-REAA-40



Model Numbers	"C" Thd.	"D" Thd.	"J" Thd.	Dimensions mm	
				K	L
PV2R23-  -  -F-REAA-40	M16	M10	M10	19	19

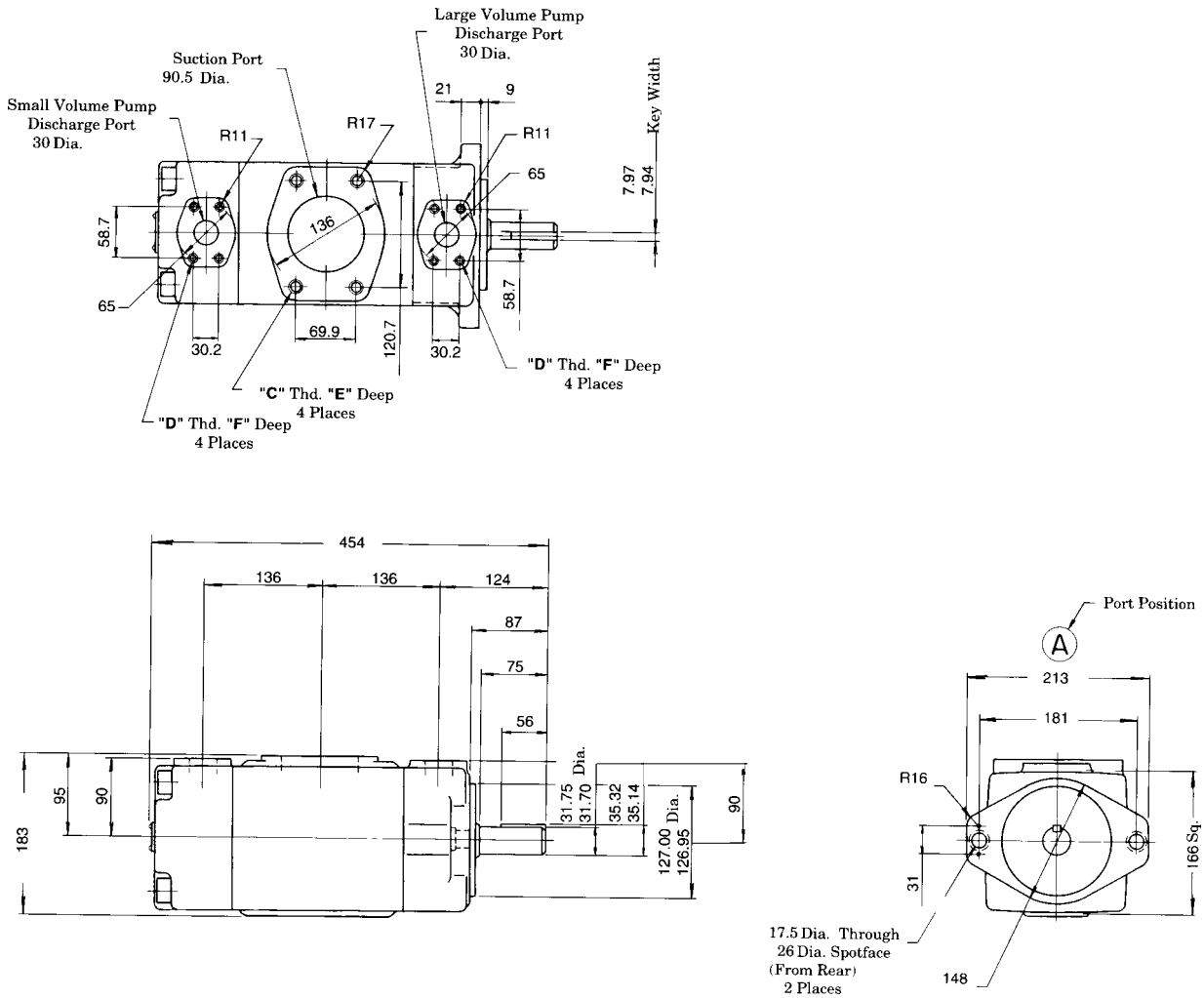
DIMENSION IN MILLIMETRES

## Foot Mtg.: PV2R23---L-REAA-40



● For other dimensions, refer to "Flange Mtg."

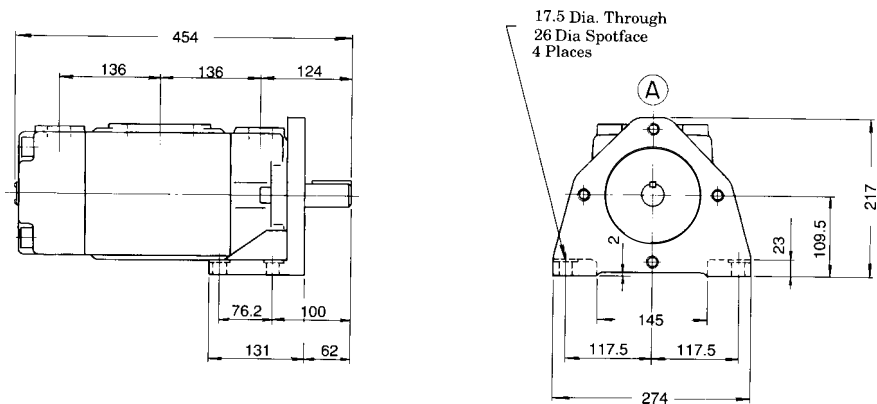
## Flange Mtg.: PV2R33---F--30



Model Numbers	"C" Thd.	"D" Thd.	Dimensions mm	
			E	F
PV2R33---F-RAAA-30	M16	M10	19	19

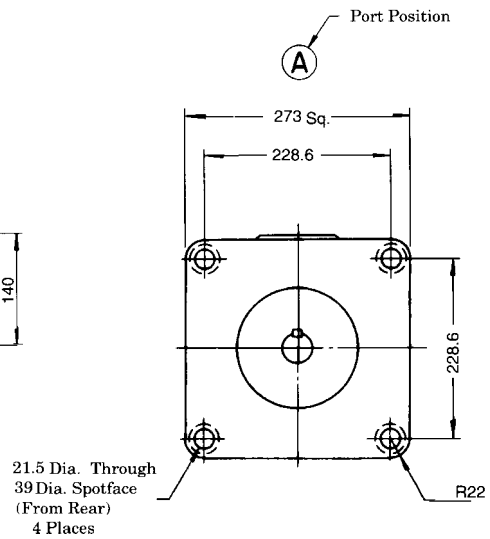
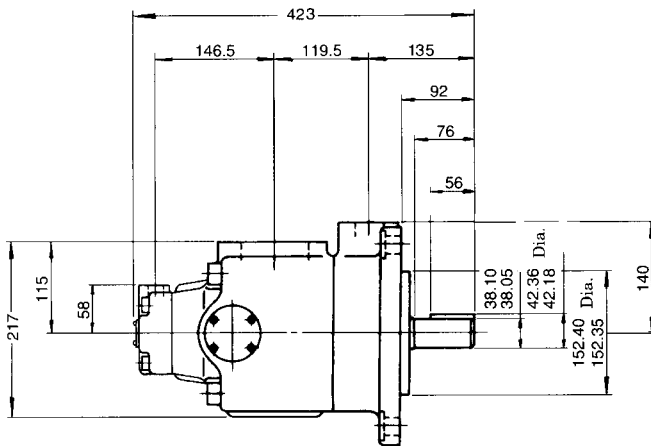
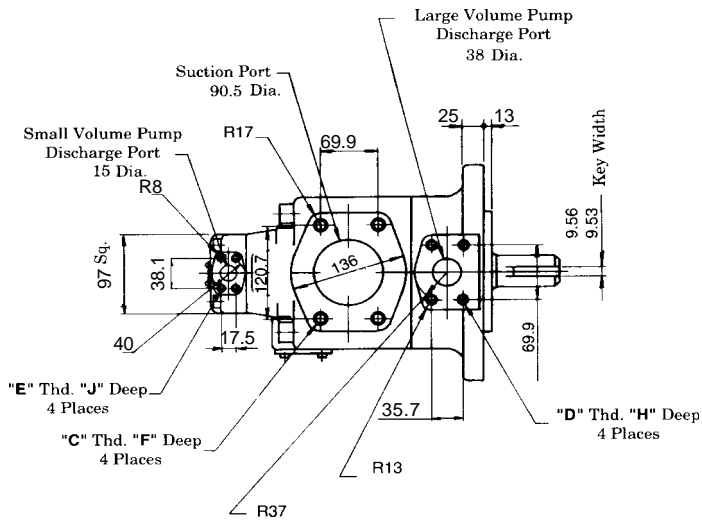
DIMENSION IN MILLIMETRES


## Foot Mtg.: PV2R33---L-RAAA-30



● For other dimensions, refer to "Flange Mtg."

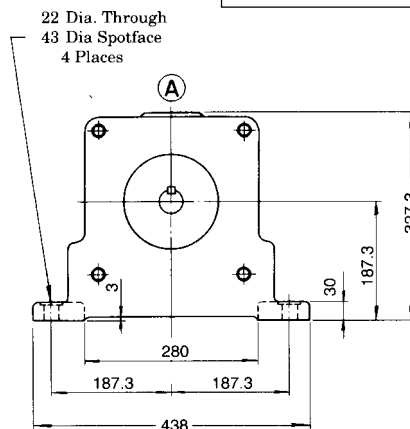
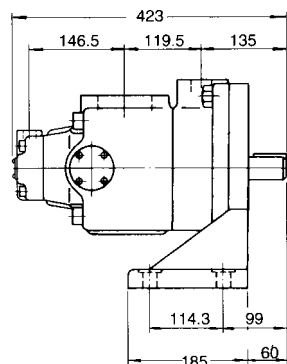
## Flange Mtg.: PV2R14--F-RAAA-30



Model Numbers	"C" Thd.	"D" Thd.	"E" Thd.	Dimensions		
				F	H	J
PV2R14-  -F-RAAA-30	M16	M12	M8	19	19	14

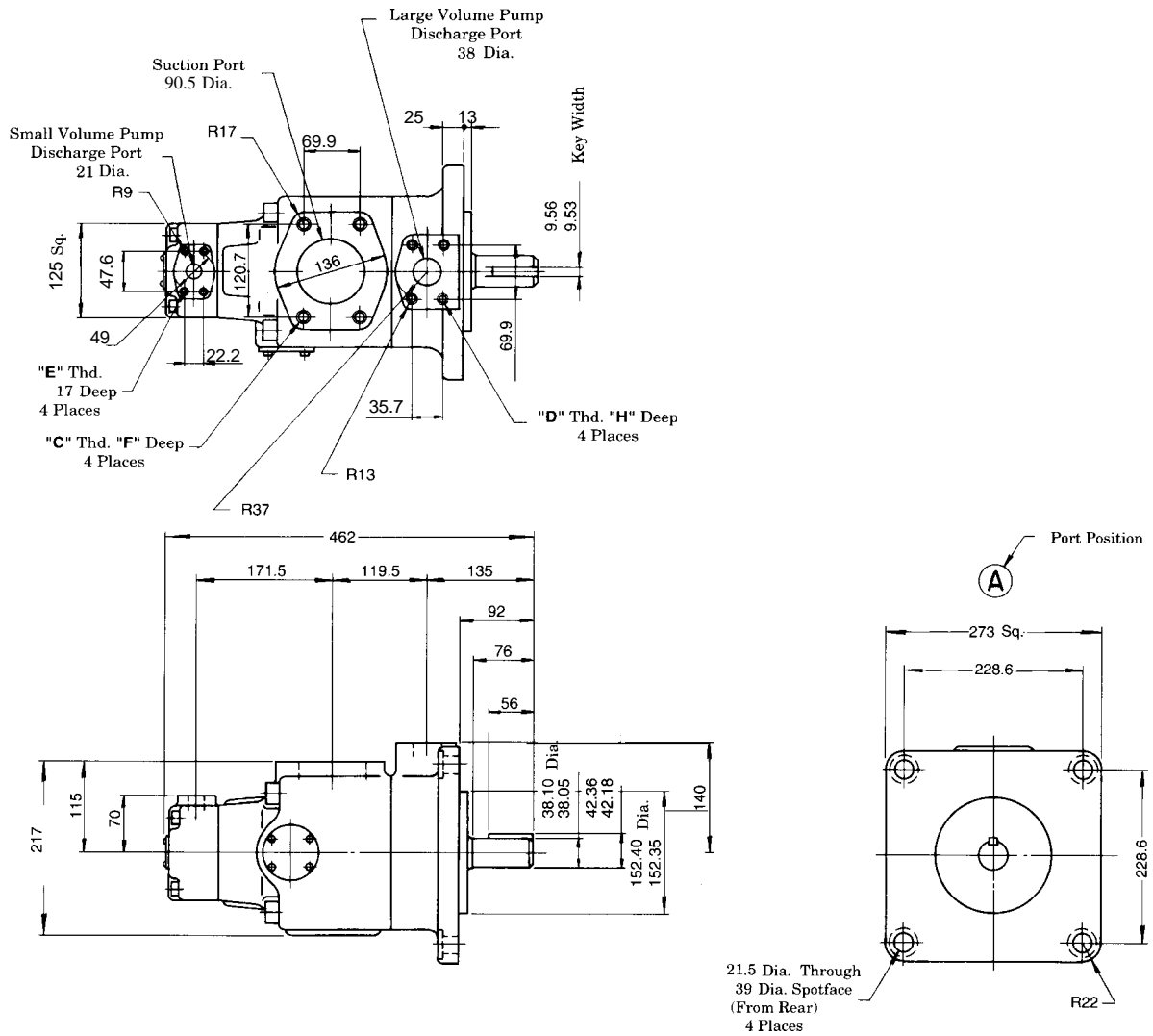
DIMENSION IN MILLIMETRES



## Foot Mtg.: PV2R14--L-RAAA-30



● For other dimensions, refer to "Flange Mtg.".

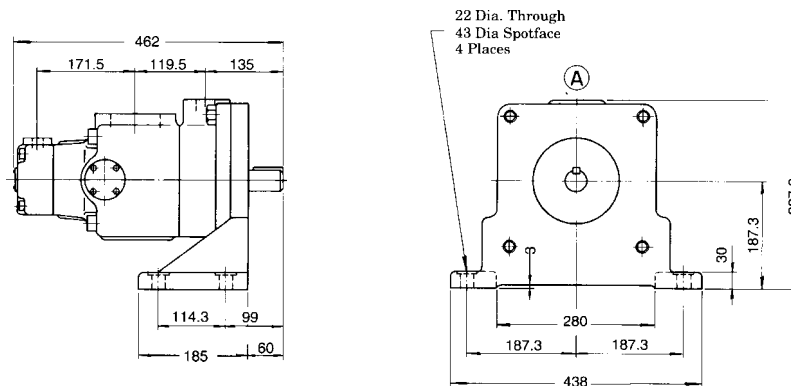
## Flange Mtg.: PV2R24---F-RAAA-30



Model Numbers	"C" Thd.	"D" Thd.	"E" Thd.	Dimensions	
				F	H
PV2R24-  -  -F-RAAA-30	M16	M12	M8	19	19

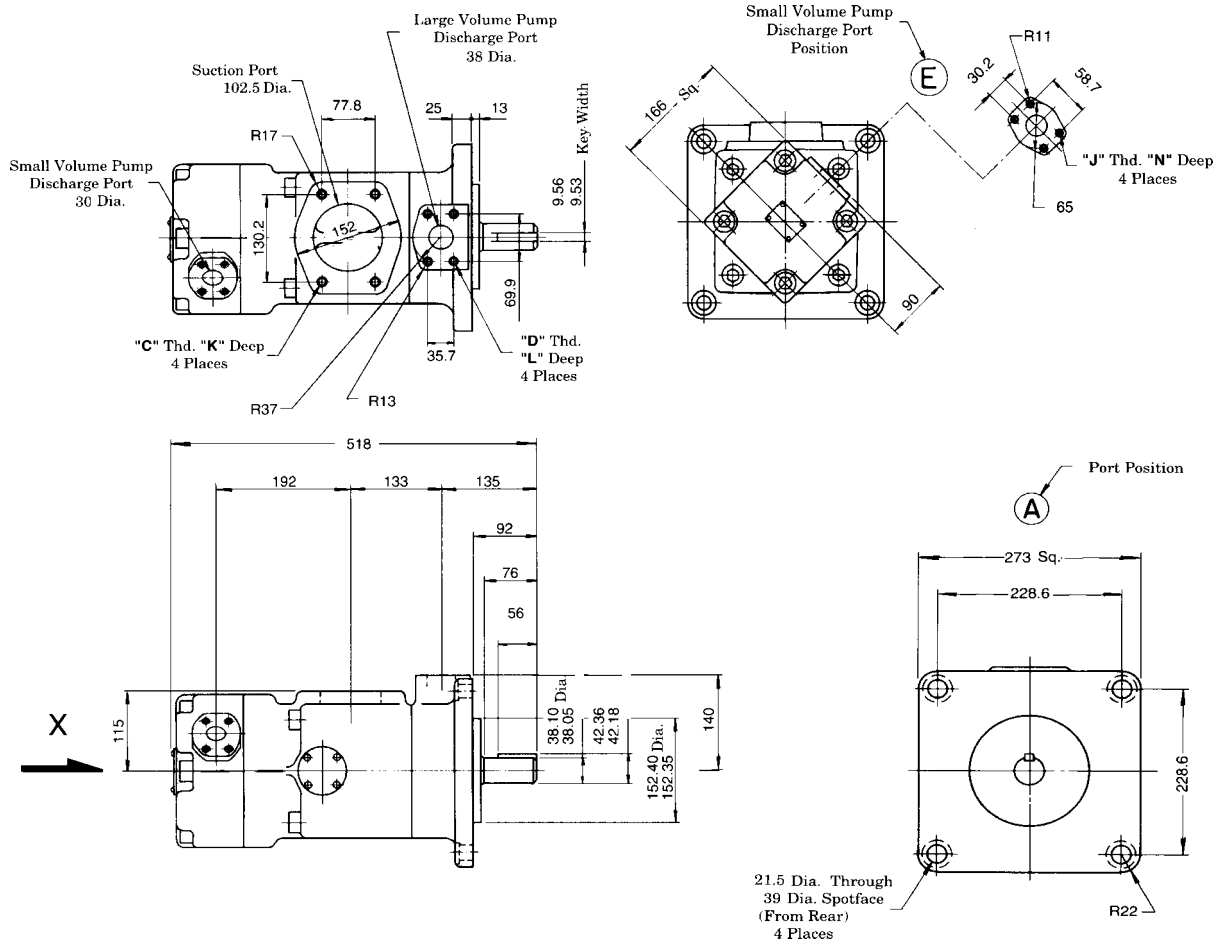
DIMENSION IN MILLIMETRES



## Foot Mtg.: PV2R24---L-RAAA-30



● For other dimensions, refer to "Flange Mtg.".

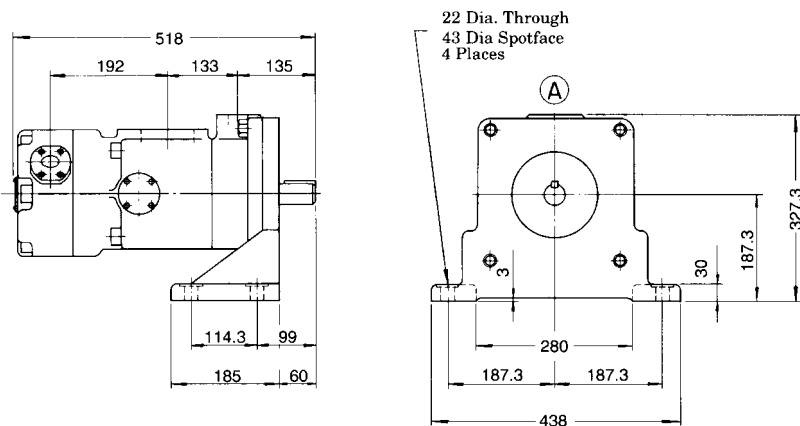
## Flange Mtg.: PV2R34---F-REAA-30



Model Numbers	"C" Thd.	"D" Thd.	"J" Thd.	Dimensions		
				K	L	N
PV2R34-  -  -F-REAA-30	M16	M12	M8	19	19	19

DIMENSION IN MILLIMETRES

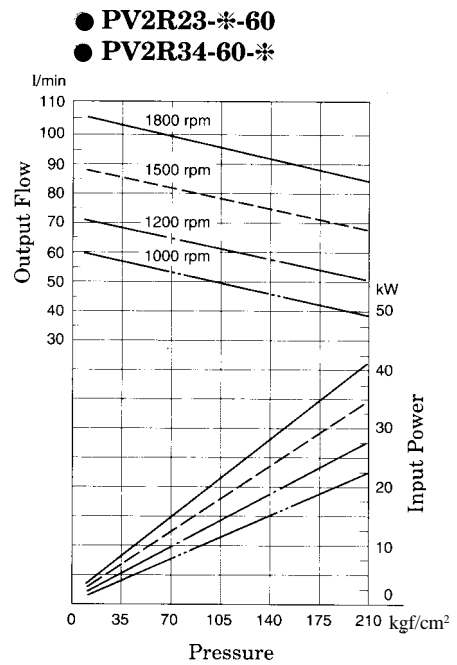
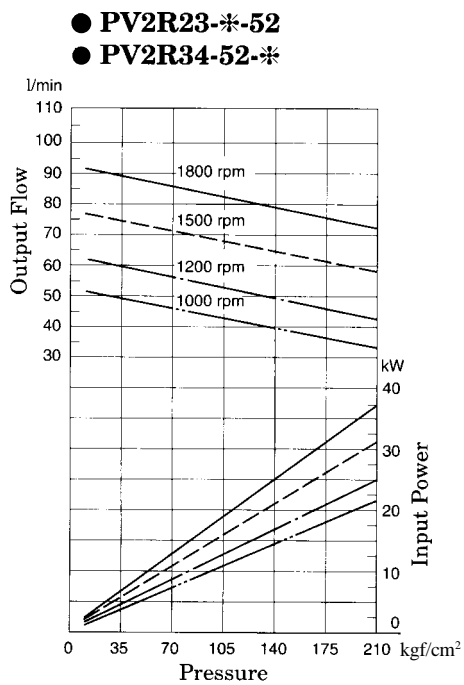
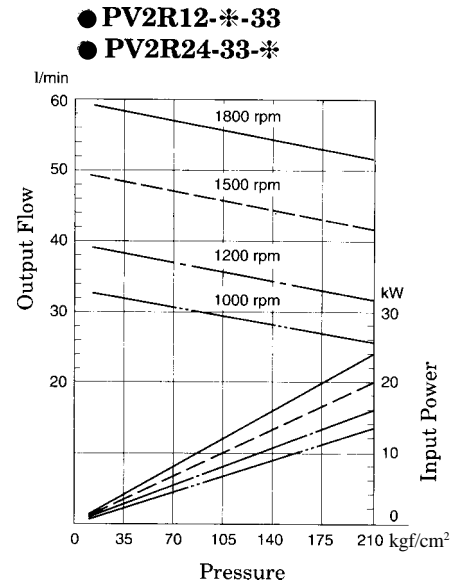
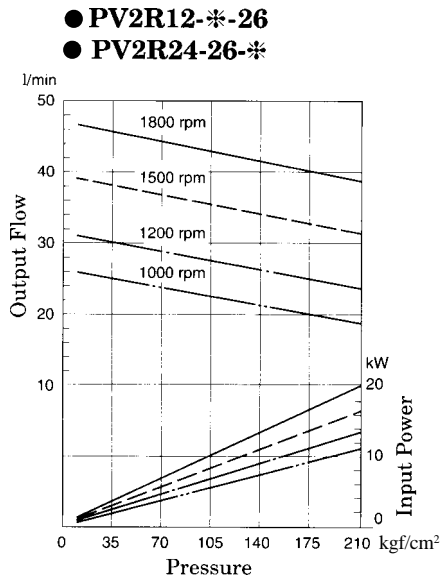
## Foot Mtg.: PV2R34---L-REAA-30



● For other dimensions, refer to "Flange Mtg.".

# VANE PUMPS

Typical Pump Characteristics at viscosity 20 cSt (100) SSU [ISO VG32 Oils, 50°C (122°F)]



Typical Pump Characteristics at viscosity 20 cSt (100 SSU) [ISO VG32 Oils, 50°C (122°F)]

