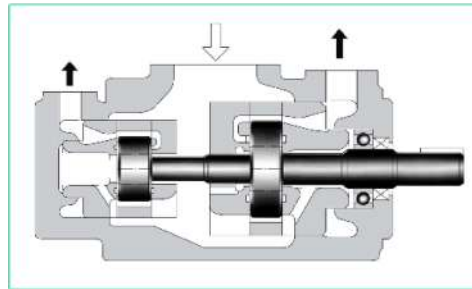
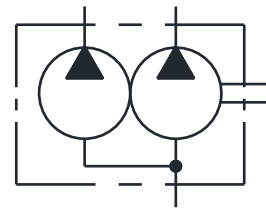


PV2R Series Double Vane Pumps

These double pumps consist of two PV2R series single pumps combined in tandem within a single housing and driven by a common shaft. A single suction port and two discharge ports are provided. So that the output flow can be supplied to separate circuits.



Graphic symbol



Specifications

Maximum Operating Pressure

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

Note: 1) For the relation between model (series) No. and nominal displacement, see the table in next page.

2) As for PV2R12 series, the sum of the input powers to small volume pump and large volume pump is limited against shaft speed. Refer page - 149

^{*1} For pressure above 160 Kg/cm², increase the speed over 1450 r/min.

^{*2} For the brands of specially Specified & Anti-wear type water Glycol see the 'hydraulic Fluids' in page no. 767 of EIC-N-1001.

Model Number Designation

F-	PV2R13	-6	-26	-L	-R	A	A	A	-43
Special Seals **	Series Number	Small Volume Pump Nominal Delivery cm ³ /rev.	Large Volume Pump Nominal Delivery cm ³ /rev.	Mounting	Direction of Rotation	Small Volume Pump Discharge Port Position	Large Volume Pump Discharge Port Position	Suction Port Position	Design Number
(As viewed from Shaft End)									
F: Special Seals for Phosphate Ester type Fluids (Omit if not required)	PV2R12	19, 23 31	33, 41 65	L: Foot Mtg.	R: *1 Clock wise (Normal)				40
	PV2R13	6, 8 10, 12 14, 17 19, 23 25, 31	52, 60, 66, 76, 94, 116						
	PV2R23	26, 33 41, 47 53, 59 65	52, 60 66, 76 94, 116	F: Flange Mtg.					40

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

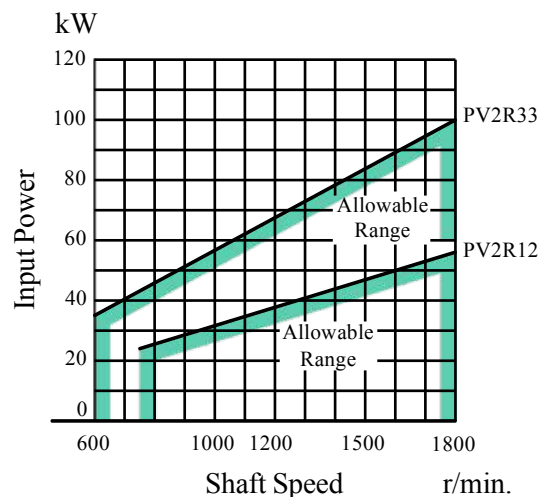
* For instructions regarding changing the port positions, consult CNIP INDIA LTD.

** Before ordering the Special Seals, consult CNIP INDIA LTD.

Relation between Model No. and Nominal Displacement.

	Nominal Delivery, Large Volume pump			
	26, 33, 41, 47 53, 59, 65	52, 60 66	76, 94 116	
Nominal Displacement Small Volume pump	6	PV2R12	—	PV2R13
	8			
	10			
	12			
	14			
	17			
	19			
	23			
	25			
	31			
Small Volume pump	26	—	—	PV2R23
	33			
	41			
	47			
	53			
59				
65				

Sum of Input Power to Small Volume Pump and Large Volume Pump



Shaft Speed Range

Model Number	Shaft Speed Range r/min.			
	Petroleum Base Oils		Water containing Fluids Phosphate Esters	
	Max.	Min.	Max.	Min.
PV2R12	1800	750 ^{*2}	1200	750 ^{*2}
PV2R13	1800 ^{*1}	750 ^{*2}	1200	750 ^{*2}
PV2R23	1800 ^{*1}	600 ^{*2}	1200	600 ^{*2}

*1 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/cm² irrespective of speed.]

*2 For starting at low speed, the maximum viscosity is limited. For details, see the item of "Hydraulic Fluids" on page 120.

Model Number	Min. Suction Pressure Kgf/cm ²	
	Less than 1700 r/min.	1700 ~ 1800 r/min.
PV2R13-※-116	-0.2	0
PV2R23-※-116		
PV2R23-※-76	-0.2	-0.07
PV2R23-※-94		

● Mass

Model Number Mounting	Approx. Mass Kg.		
	PV2R12	PV2R13	PV2R23
Flange Mtg.	25	45.6	51
Foot Mtg.	29.3	55.6	61

● Output Flow & Input Power

The pump characteristics are the same as for PV2R series single pumps. See the corresponding page.

Model Numbers	Output Flow & input Power	
	Small Volume Pump	Large Volume Pump
PV2R12	Refer page 147, 148 & 149.	Same as single pump "PV2R2", refer page 136 & 137 However, as for displacement of "26" & "33" ref. page 149.
PV2R13	Refer page 147, 148 & 149	Same as single pump "PV2R3", refer page 137, 138 & 139
PV2R23	Same as single pump "PV2R2", refer page 136 & 137.	Same as single pump "PV2R3", refer page 137, 138 & 139 However, as for displacement of "52", "60" & "66" ref. page 149 & 150.

■ Pipe Flange Kits

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

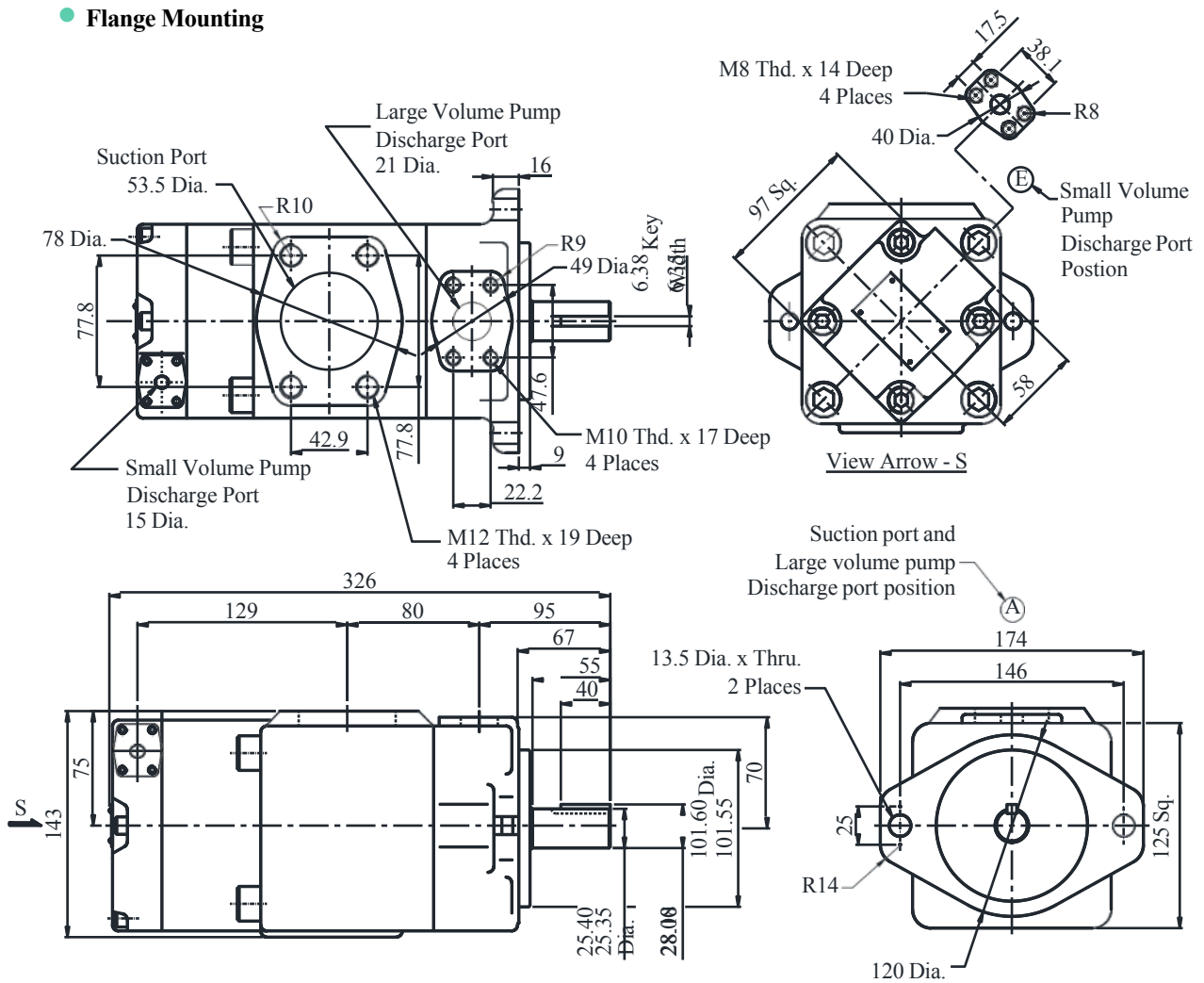
Pump Model Numbers	Name of Port	Pipe Flange Kit Numbers
		Threaded connection
PV2R12	Suction	F5-16-A-1080
	Large Discharge	F5-06-A-1080
	Small Discharge	F5-04-A-1080
PV2R13	Suction	---
	Large Discharge	F5-10-A-1080
	Small Discharge	F5-04-A-1080
PV2R23	Suction	---
	Large Discharge	F5-10-A-1080
	Small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

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

● Detail of the pipe flange kit is described in EIC-L-1001.

PV2R12-**-**-F-R**AA-40

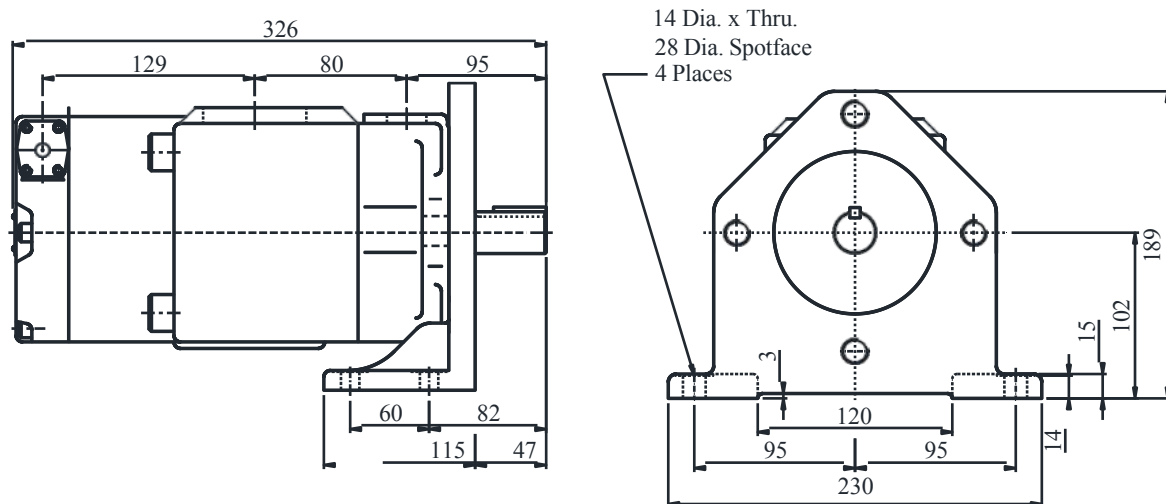
● Flange Mounting



DIMENSIONS IN MILLIMETRES

PV2R12-**-**-L-R**AA-40

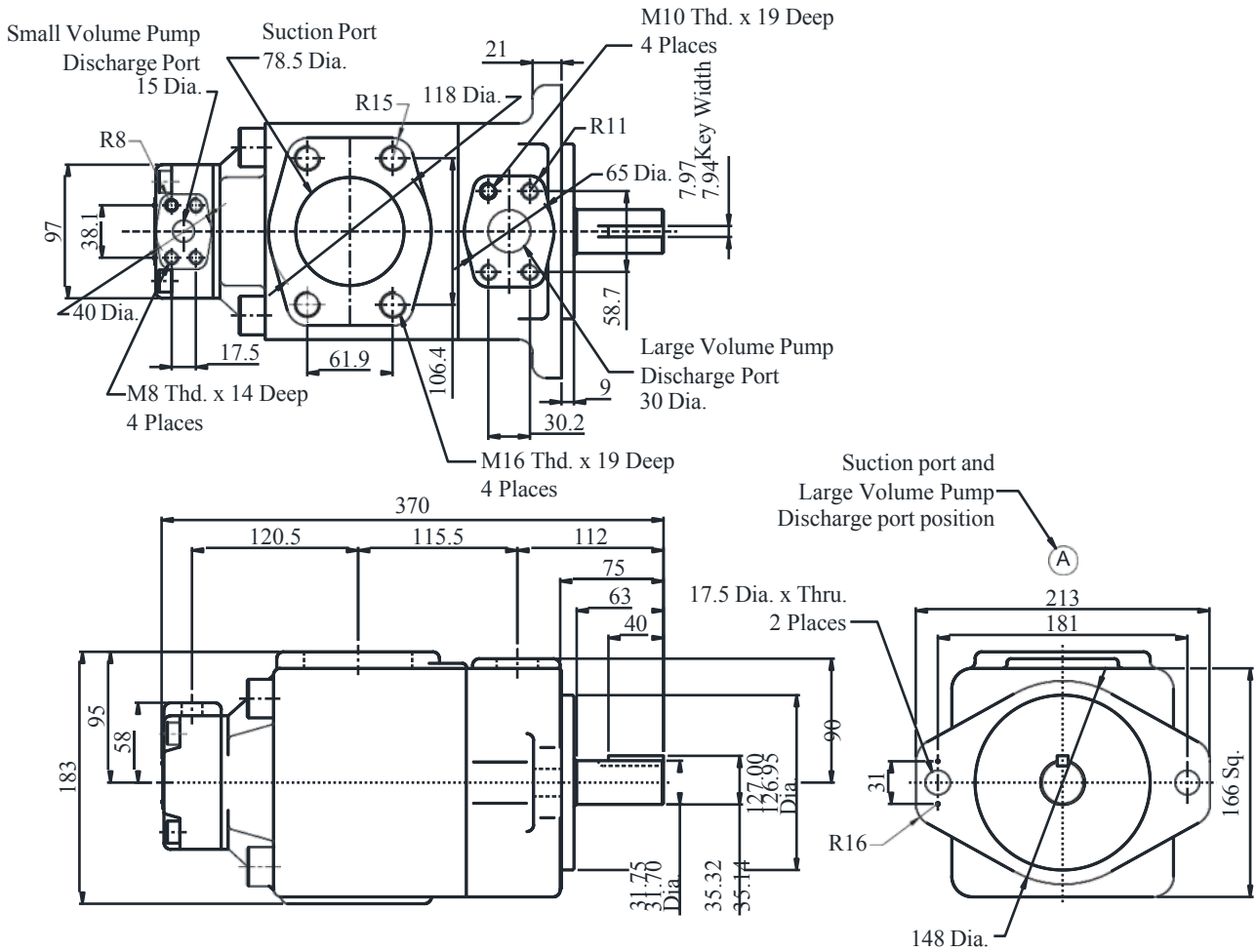
● Foot Mounting



● For other Dimensions, refer to “Flange Mtg.”

PV2R13-**-**-F-R**AA-40

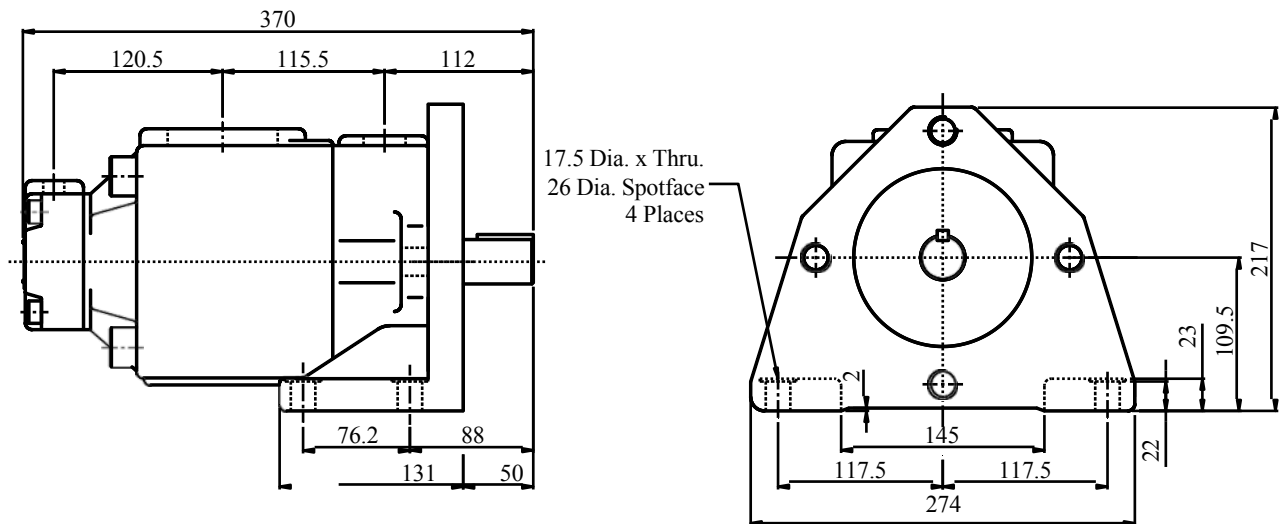
● Flange Mounting



DIMENSIONS IN MILLIMETRES

PV2R13-**-**-L-R**AA-40

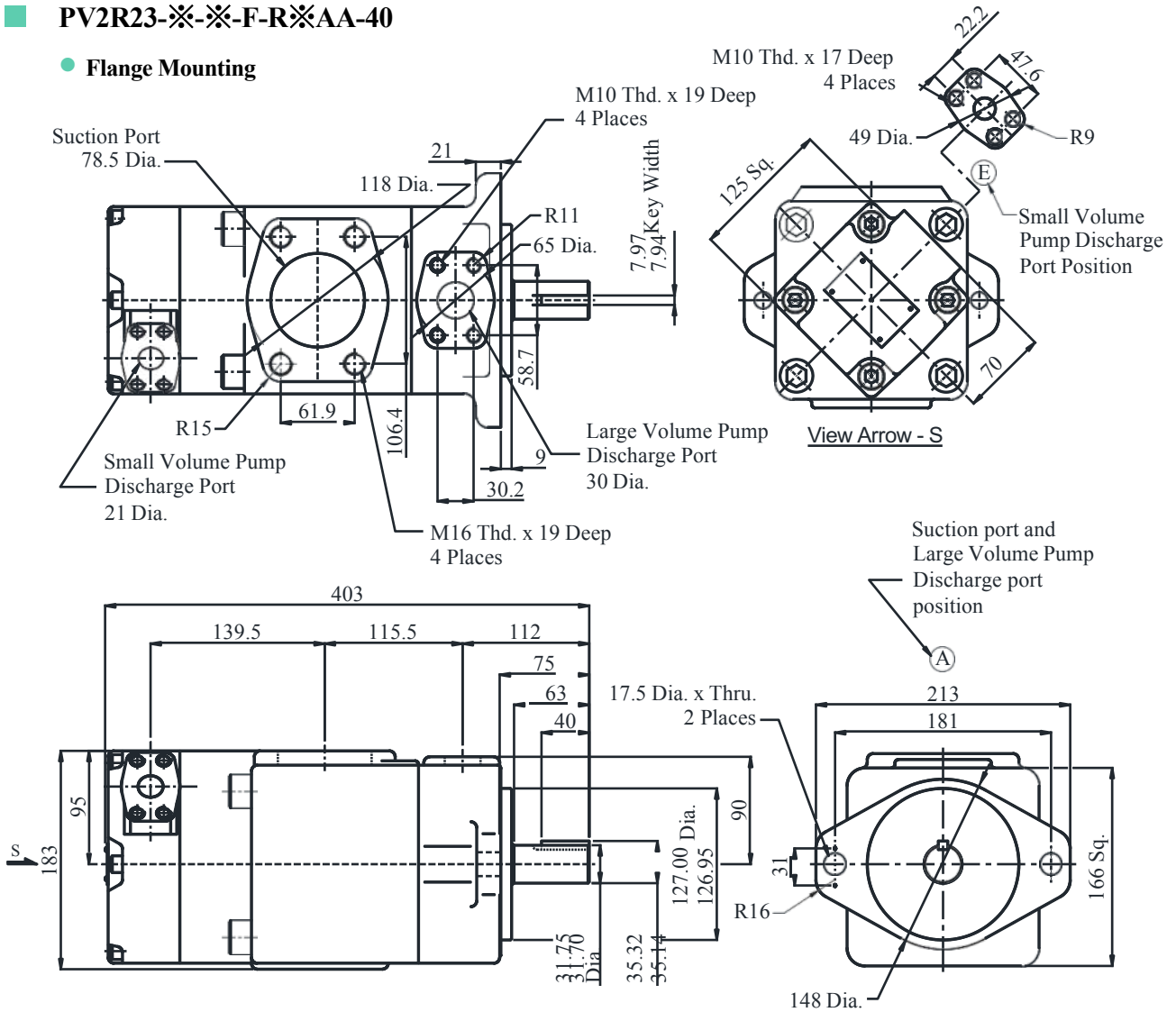
● Foot Mounting



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

PV2R23-**-**-F-R**AA-40

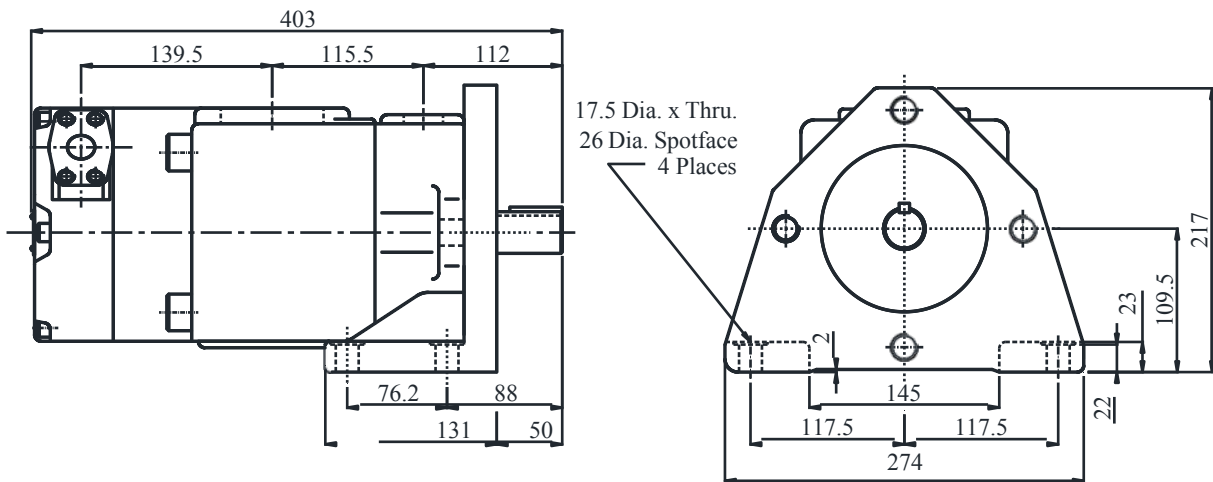
● Flange Mounting



DIMENSIONS IN MILLIMETRES

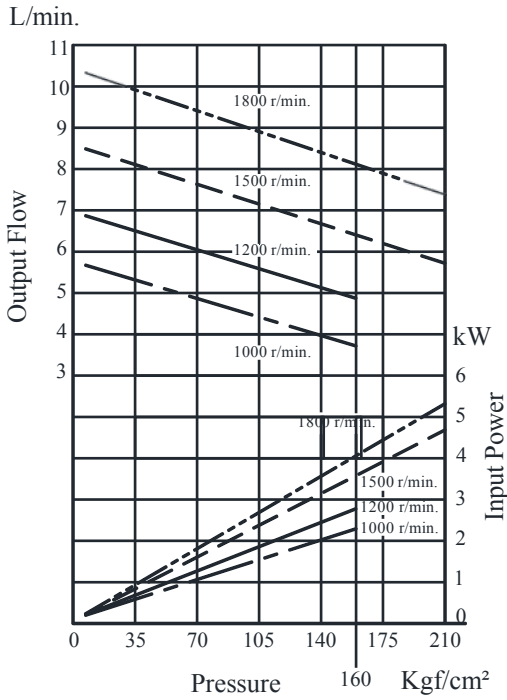
PV2R23-**-**-L-R**AA-40

● Foot Mounting

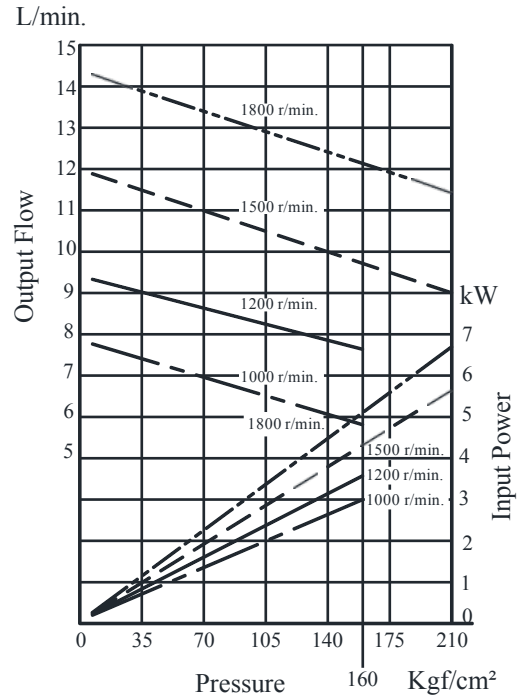


● For other Dimensions, refer to "Flange Mtg."

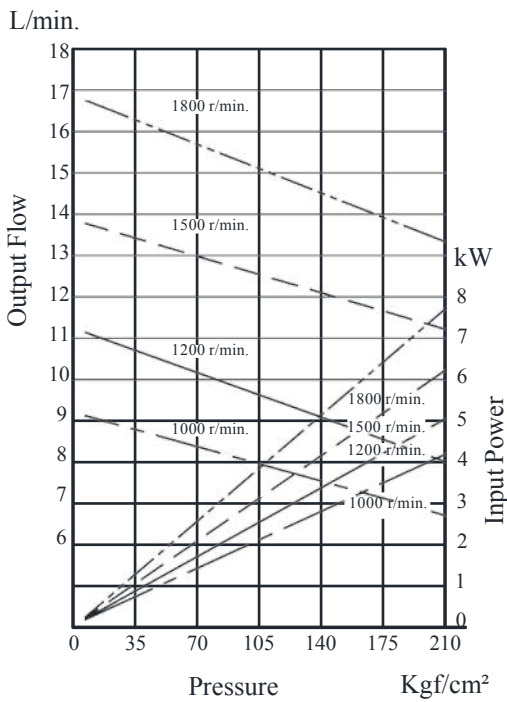
● PV2R1-6



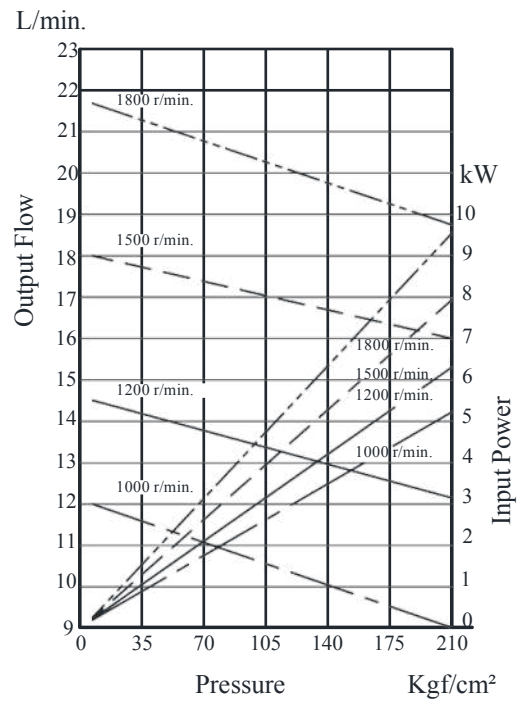
● PV2R1-8



● PV2R1-10

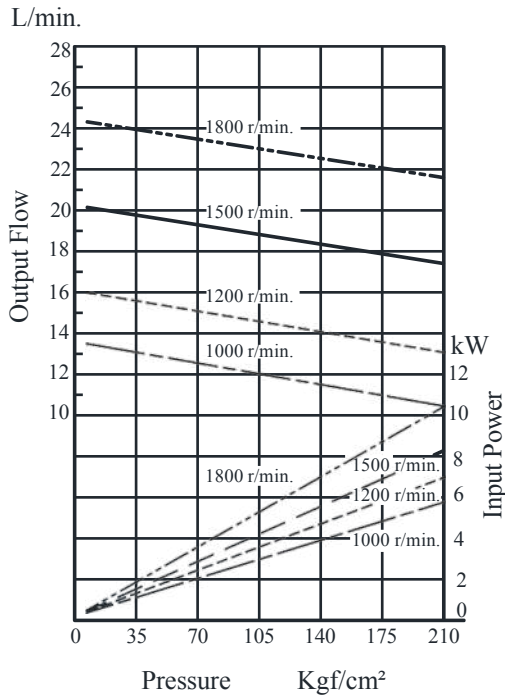


● PV2R1-12

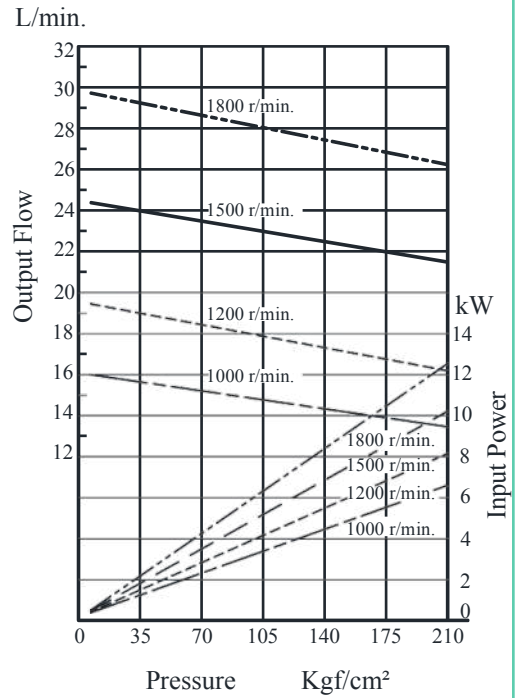


Typical Pump Characteristics Oil Viscosity 20 cSt [ISO VG 32, 50°C]

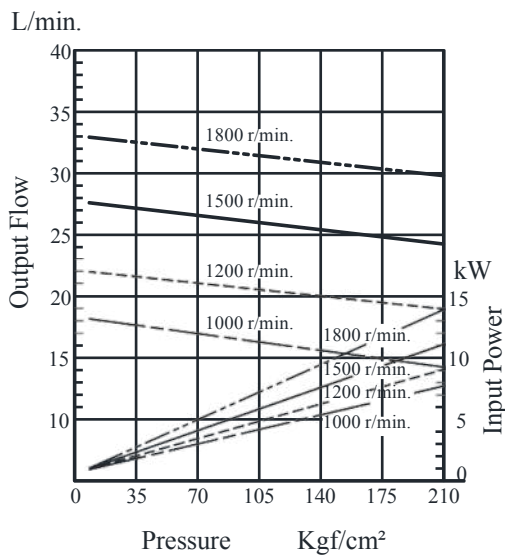
● PV2R1-14



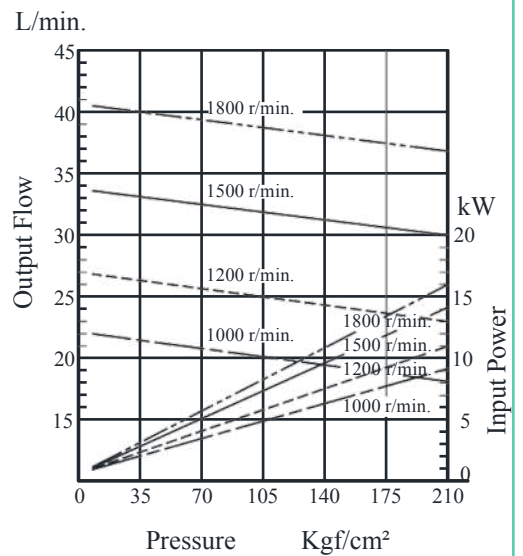
● PV2R1-17



● PV2R1-19

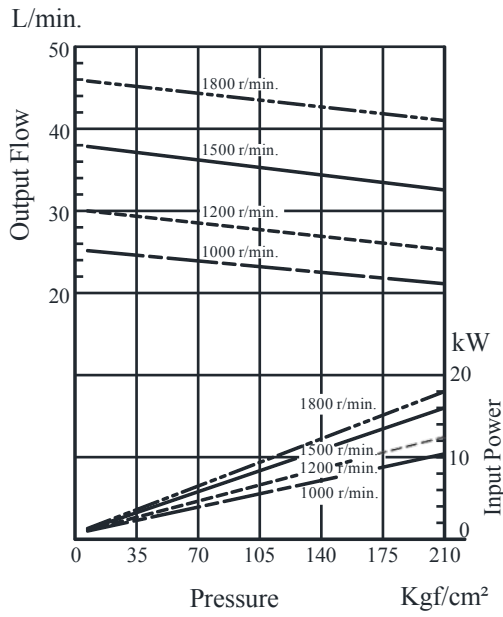


● PV2R1-23

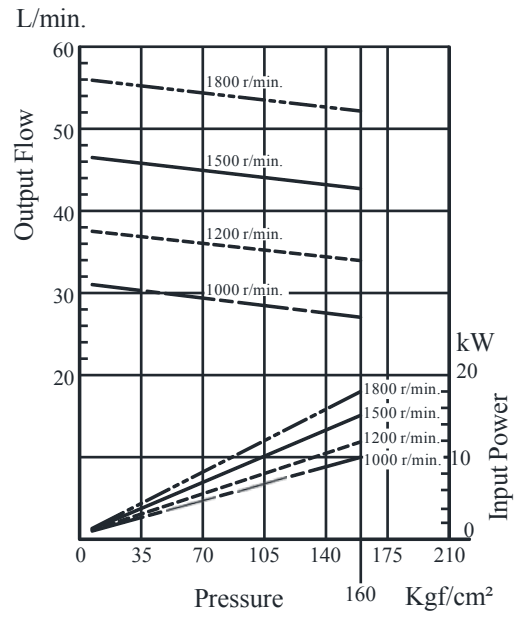


Typical Pump Characteristics Oil Viscosity 20 cSt [ISO VG 32, 50°C]

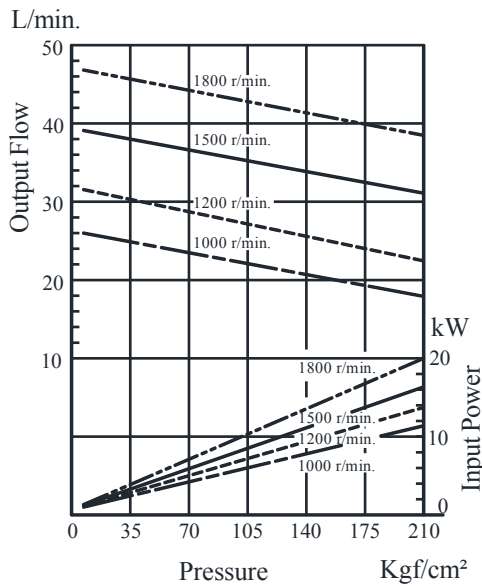
● PV2R1-25



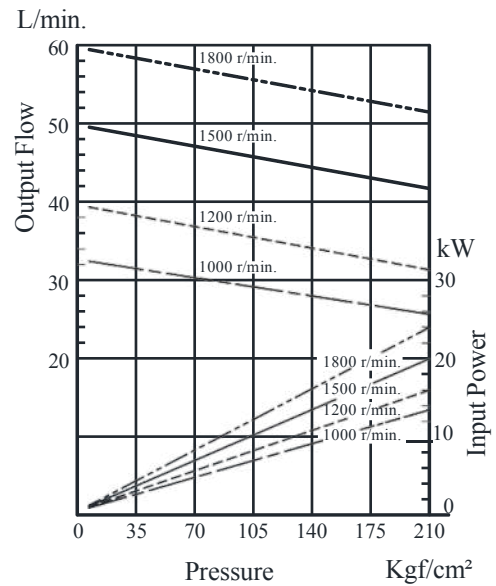
● PV2R1-31



● PV2R12-※-26

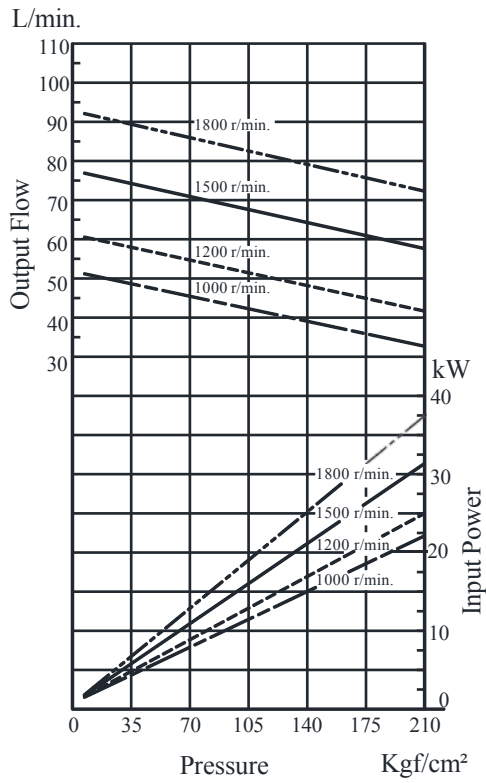


● PV2R12-※-33

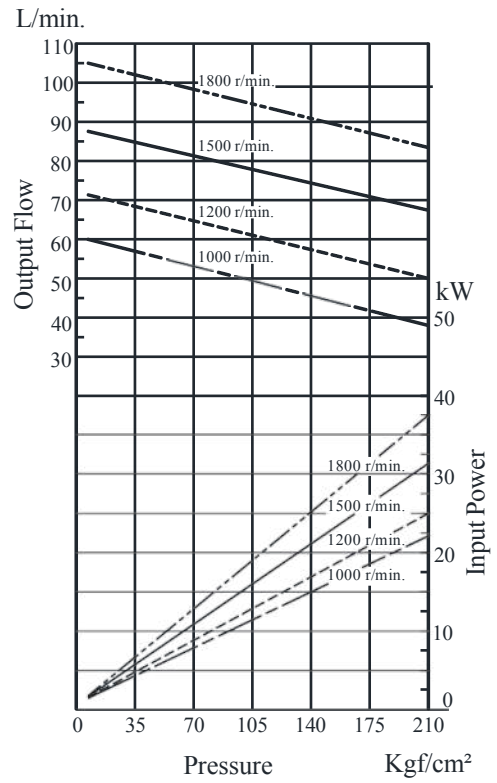


Typical Pump Characteristics Oil Viscosity 20 cSt [ISO VG 32, 50°C]

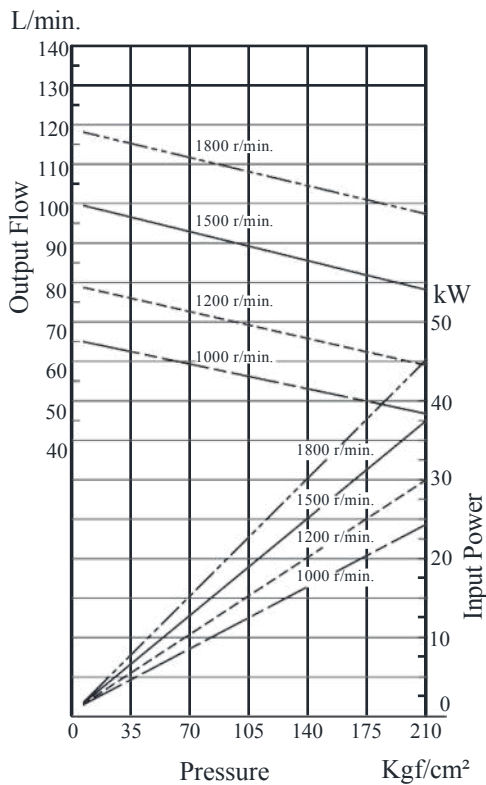
● PV2R23-~~※~~-52



● PV2R23-~~※~~-60



● PV2R23-~~※~~-66



Cartridge Kit Model Number

Model Numbers	Cartridge Kit Numbers	
	Small Volume Pumps	Large Volume Pumps
PV2R12-6-* REAA -40	CPV2R13-6-L-40	CPV2R2-* R -40
PV2R12-8-* REAA -40	CPV2R13-8-L-40	
PV2R12-10-* REAA -40	CPV2R13-10-L-40	
PV2R12-12-* REAA -40	CPV2R13-12-L-40	
PV2R12-14-* REAA -40	CPV2R13-14-L-40	
PV2R12-17-* REAA -40	CPV2R13-17-L-40	
PV2R12-19-* REAA -40	CPV2R13-19-L-40	
PV2R12-23-* REAA -40	CPV2R13-23-L-40	
PV2R12-25-* REAA -40	CPV2R13-25-L-40	
PV2R12-31-* REAA -40	CPV2R13-31-L-40	
PV2R13-6-* RAAA -40	CPV2R13-6-L-40	CPV2R3-* R -40
PV2R13-8-* RAAA -40	CPV2R13-8-L-40	
PV2R13-10-* RAAA -40	CPV2R13-10-L-40	
PV2R13-12-* RAAA -40	CPV2R13-12-L-40	
PV2R13-14-* RAAA -40	CPV2R13-14-L-40	
PV2R13-17-* RAAA -40	CPV2R13-17-L-40	
PV2R13-19-* RAAA -40	CPV2R13-19-L-40	
PV2R13-23-* RAAA -40	CPV2R13-23-L-40	
PV2R13-25-* RAAA -40	CPV2R13-25-L-40	
PV2R13-31-* RAAA -40	CPV2R13-31-L-40	
PV2R23-41-* REAA -40	CPV2R23-41-L-40	CPV2R3-* R -40
PV2R23-47-* REAA -40	CPV2R23-47-L-40	
PV2R23-53-* REAA -40	CPV2R23-53-L-40	
PV2R23-59-* REAA -40	CPV2R23-59-L-40	
PV2R23-65-* REAA -40	CPV2R23-65-L-40	

* For instructions regarding replacing cartridge kit, consult CNIP INDIA LTD.

Spare Parts List

List of Seals

Sl. No.	Name of Parts	Part Numbers			Qty.
		PV2R12	PV2R13	PV2R23	
1	Oil Seal	ISD 30 42 8	ISD 35 55 11	ISD 35 55 11	1
2	O-Ring	SO-NB-G105	SO-NB-G135	SO-NB-G135	1
3	O-Ring	SO-NB-G80	SO-NB-G80	SO-NB-G105	1
4	O-Ring	SO-NB-G85	SO-NB-G115	SO-NB-G115	1
5	O-Ring	SO-NB-P46	SO-NB-A231	SO-NB-A231	1
6	O-Ring	SO-NB-G60	SO-NB-G60	SO-NB-G85	1
7	O-Ring	SO-NB-G30	SO-NB-G30	SO-NB-P46	1

List of Seal kits

Pump Model Numbers	Seal Kit Number
PV2R12-* REAA -40	KS-PV2R12-40
PV2R13-* RAAA -43	KS-PV2R13-40
PV2R23-* REAA -41	KS-PV2R23-40

“PV2R” Series Double Vane Pumps