RNPW Co.,LTD.

Rnpw HYDRAULIC

HYDRAULIC HOSES
HYDRAULIC PUMPS
HYDRAULIC MOTOR
HYDRAULIC CYLINDER
HYDRAULIC POWER PACK
HYDRAULIC ACCESSORIES
DIRECTIONAL CONTROL VALVE

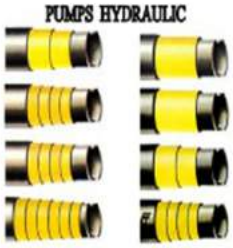
PUMPS HYDRAULIC

PUMPS HYDRAULIC

FITTING HYDRAULIC

PISTON PUMPS

PUMPS HYDRAULIC



SOLENOID VALVE

CYLINDER HYDRAULIC

YUKEN
OIL HYDRAULIC EQUIPMENT

HYDRAULIC PUMPS

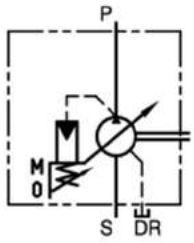
AR Series Variable Piston Pumps Max. Pressure 16 MPa

Model Number Designation

AR16 - F R 01 B S - 22

- Series Number: AR16 (15.8cm³/rev), AR22 (22.2cm³/rev)
- Type of Mounting: F: Flange Mounting, L: Foot Mounting
- Direction of Rotation (View from the shaft end): R: Clockwise (Normal)
- Control Type: 01: Pressure Compensator Valve
- Pressure Adj. Range: B : 1.2 ~ 7 MPa, C : 2.0 ~ 16 MPa
- Suction Port Position (View from shaft end): S: Side Port (Normal), None: Axial Port
- Design Number

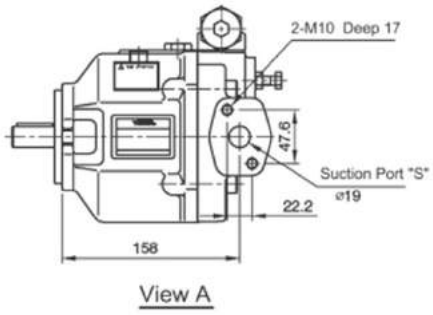
Graphic Symbol



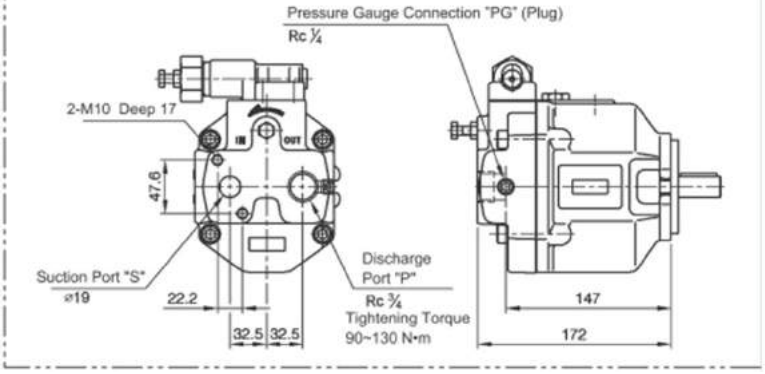
Specifications

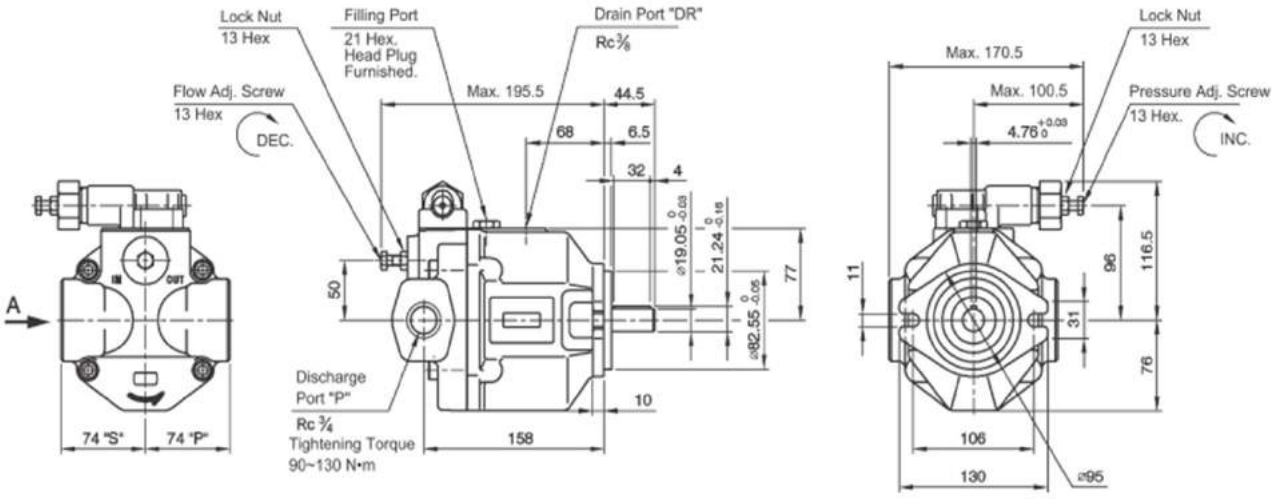
Model No.	Geometric Displacement cm³/rev	Min. Adj. Pressure MPa	Max Operating Pressure MPa	Rotation Speed Range r/min		Min. Adj. Flow cm³/rev	Mass kg	
				Min.	Max.		Flange Mounting	Foot Mounting
AR※-※R01※-22	AR16: 15.8	1.2	16	1800	600	AR16 : 6	12.3	14.5
AR※-※R01※S-22	AR22: 22.2					AR22 : 8.5	13.0	15.5

AR※-FR01※S-22



AR※-FR01※-22

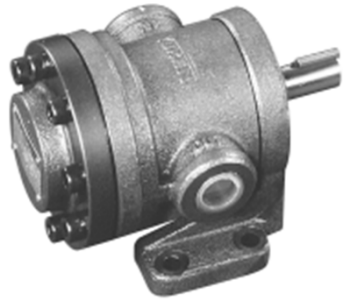




YUKEN
OIL HYDRAULIC EQUIPMENT

HYDRAULIC PUMPS

Single Vane Pumps — Max. Pressure 7 MPa



Graphic Symbol

Model Number Designation

50 T-7-L-R L-※

- Series Number
- Type of Connection
  T : Threaded Connection
- Nominal Displacement cm^3/rev
- Shaft Rotation(Viewed from shaft end)
  R : Clockwise (Normal)
  L : Anti-clockwise
- Type of Mounting
  L : Foot Mounting
  F : Flange Mounting
- Discharge Port Position
  (View from shaft end)
  L: Left (Normal)
  R: Right
- Design Number

These pumps are widely used as a source of hydraulic power, owing to their features of stable performance and robust construction with a wide range of delivery rate.

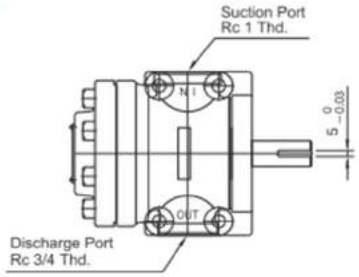
Rating

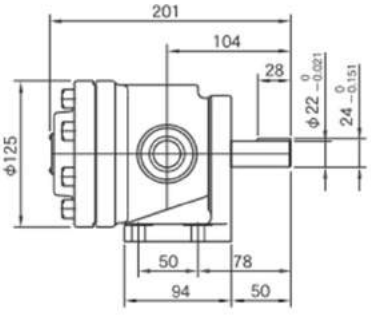
Model	Geometric Displace cm^3/rev	Max. Pressure MPa (kgf/cm^2)	Shaft Speed Range r/min	Mass kg	
				Flange Mtg	Foot Mtg
50T-7-※-※※※-30	6.8	7 (70)	*800~2000	9	10.5
50T-12-※-※※※-30	11.6		*600~2000		
50T-17-※-※※※-30	16.5		*600~1800		
50T-23-※-※※※-30	22.9				
50T-26-※-※※※-30	25.9				
50T-36-※-※※※-30	36.0				
150T-48-※-※※※-40	47.7	7 (70)	600~1500	25	26
150T-61-※-※※※-40	61.1				
150T-75-※-※※※-40	74.9				
150T-94-※-※※※-40	93.6		600~1200		
150T-116-※-※※※-40	115.6				

*For starting at low speed, the maximum viscosity is limited. Please refer to page 8 for details (Table 2).

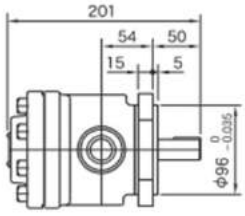
50 T

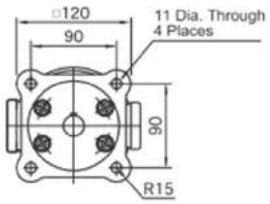
Foot Mtg.



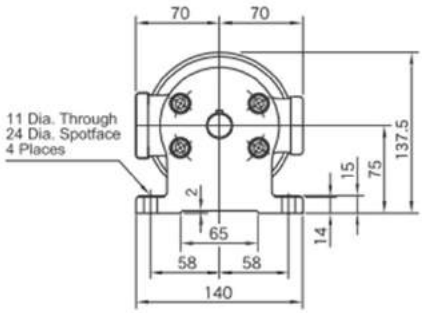


Flange Mtg.





For other dimensions, please refer to "Foot Mtg."

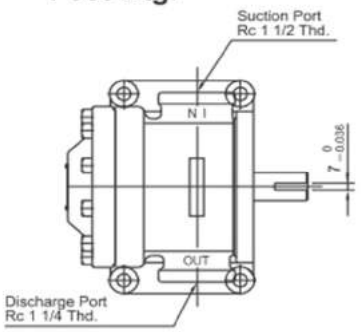


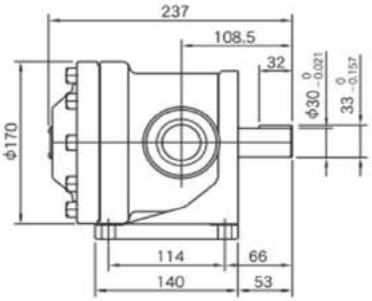
Single Vane Pumps

Max. Pressure 7 MPa

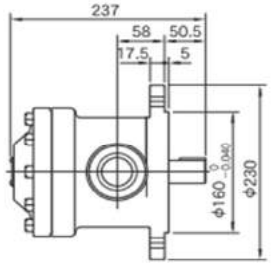
150 T

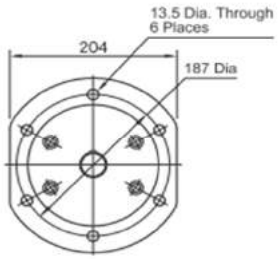
Foot Mtg.



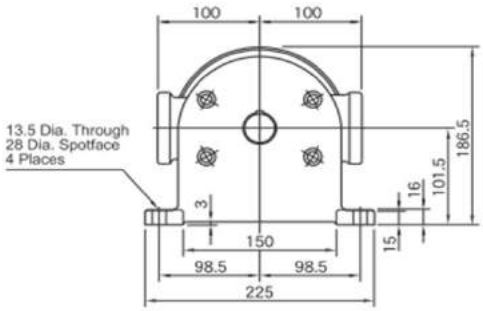


Flange Mtg.





For other dimensions, please refer to "Foot Mtg."



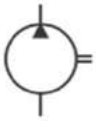
YUKEN
OIL HYDRAULIC EQUIPMENT

HYDRAULIC PUMPS

PV2R Series Single Vane Pumps Max. Pressure 21 MPa

- The pumps with high pressure and high quality, have been developed especially for low noise operation.
- The pumps can be used on various applications including injection moulding machines and machine tools...etc, with output range: 5.8~237 cm^3/rev.
- The pump cartridge kit is assembled by screws, so it is easy to assemble and maintain.

Graphic Symbol



Rating

Model	Geometric Displace cm^3/rev	Max. Pressure MPa (kgf/cm^2)	Shaft Speed Range r/min	Mass kg	
				Flange Mtg	Foot Mtg
*3 PV2R1- 6-※-※※※-43	5.8	21 (210)	*1 750~1800	9.0	11.2
*3 PV2R1- 8-※-※※※-43	8.0				
PV2R1-10-※-※※※-43	9.4				
PV2R1-12-※-※※※-43	12.2				
PV2R1-14-※-※※※-43	13.7				
PV2R1-17-※-※※※-43	16.6				
PV2R1-19-※-※※※-43	18.6				
PV2R1-23-※-※※※-43	22.7				
PV2R1-25-※-※※※-43	25.3				
PV2R1-31-※-※※※-43	31.0	16 (160)			
PV2R2-26-※-※※※-41	26.6	21 (210)	*1 600~1800	19.0	23.3
PV2R2-33-※-※※※-41	33.3				
PV2R2-41-※-※※※-41	41.3				
PV2R2-47-※-※※※-41	47.2				
PV2R2-53-※-※※※-41	52.5				
PV2R2-59-※-※※※-41	58.2				
PV2R2-65-※-※※※-41	64.7				
PV2R2-75-※-※※※-4103	75	16 (160)			
PV2R3-60-※-※※※-31	59.6	21 (210)	600~1800	36.7	46.7
PV2R3-66-※-※※※-31	66.3				
PV2R3-76-※-※※※-31	76.4				
PV2R3-85-※-※※※-3103	85				
PV2R3-94-※-※※※-31	93.6				
PV2R3-108-※-※※※-3103	108	17.5 (175)			
PV2R3-116-※-※※※-31 *2	115.6	16 (160)			
PV2R3-125-※-※※※-3103	125	14 (140)			
PV2R4-136-※-※※※-30	136	17.5 (175)	600~1800	68.5	93.5
PV2R4-153-※-※※※-30	153				
PV2R4-184-※-※※※-30	184				
PV2R4-200-※-※※※-30	201				
PV2R4-237-※-※※※-30 *2	237				

*1.For starting at low speed, the maximum viscosity is limited. Please refer to page 8 (Table 2) for details.
*2.When operating with a shaft speed exceeding 1700rpm, set the nominal displacement at 116cm^3/rev, the suction pressure i restricted to 0 kgf/cm^2. Please refer to page 8 (Table 1) for details.
*3.When operating with a shaft speed exceeding 1700rpm, set the nominal displacement at 237cm^3/rev, the suction pressure is restricted to -100 mmHg. Please refer to page 8 (Table 1) for details.
*4.When pressure is over 16 MPa (160 kgf/cm^2), raise the speed of shaft rotation to more than 1450 rpm.

- Anti-wear type petroleum hydraulic fluids are recommended to use with these pumps.
- For pressure - output flow & input power characteristics, please refer to page 28-34.
- PV2R1 series are assembled with intermal compulsory extruded cartridge kits..

YUKEN
OIL HYDRAULIC EQUIPMENT

HYDRAULIC PUMPS

PV2R Series Single Vane Pumps Max. Pressure 21 MPa

Model Number Designation

PV2R2-41-F-R A A-*

- Series Number
- Nominal displacement cm^3/rev
- Type of Mounting
  - **L :** Foot mounting
  - **F :** Flange Mounting
- Shaft Rotation (Viewed from shaft end)
  - **R :** Clockwise(Normal)
  - **L :** Anti-clockwise
- Design Number
- Suction Port Position (Viewed from shaft end)
  - **A :** Upwards(Normal)
  - **B :** Downwards
  - **R :** Right
  - **L :** Left
- Discharge Port Position (View from shaft end)
  - **A :** Upwards(Normal)
  - **B :** Downwards
  - **R :** Right
  - **L :** Left

* Flange mounting is available for A only

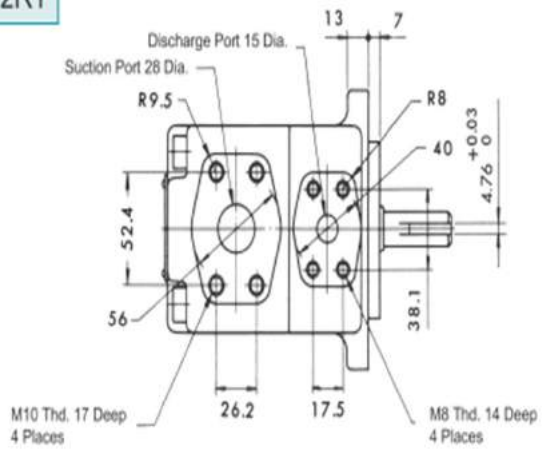
Pipe Flange

Pump Model Number	Name of Ports	Pipe Flange Kit Model No.
PV2R1	Suction	F5-08-A-10T
	Discharge	F5-04-A-10T
PV2R2	Suction	F5-10-A-10T
	Discharge	F5-06-A-10T
PV2R3	Suction	F5-16-A-10T
	Discharge	F5-10-A-10T
PV2R4	Suction	F5-24-B-10T
	Discharge	F5-12-B-10T

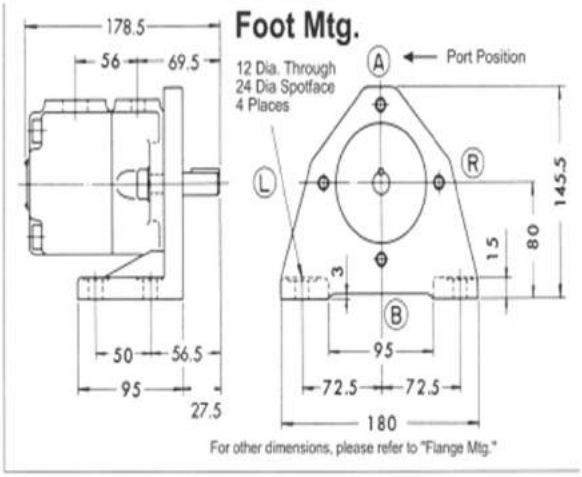
- In Pipe Flange Kit Model No. A: Threaded Connection / B: For Pipe Socket Welding.
- Details of the pipe flange kit please refer to page 50.
- When ordering, please specify pipe flange kit model.

PV2R1

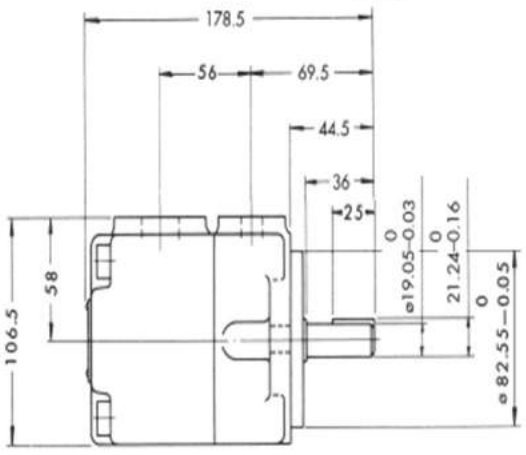
Flange Mtg.

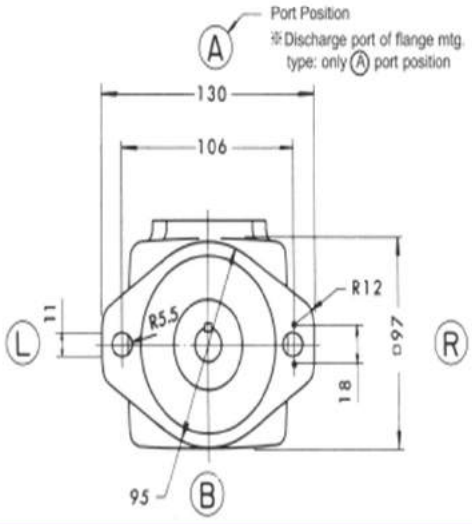


Foot Mtg.



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





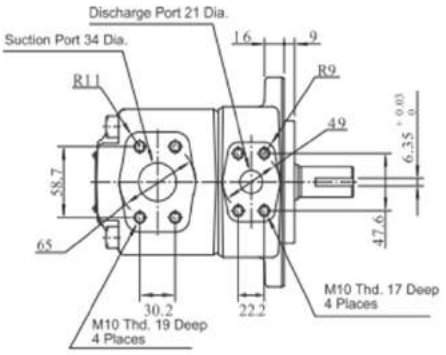
YUKEN
OIL HYDRAULIC EQUIPMENT

HYDRAULIC PUMPS

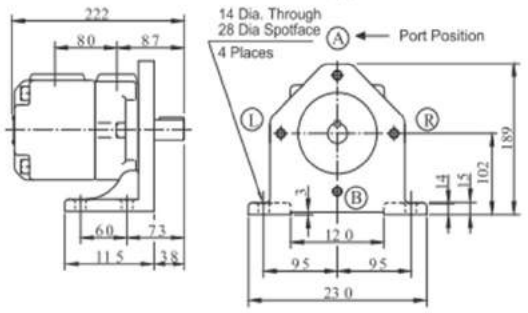
PV2R Series Single Vane Pumps Max. Pressure 21 MPa

PV2R2

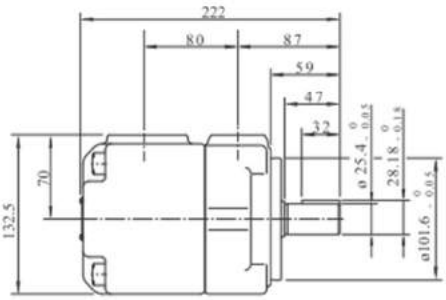
Flange Mtg.

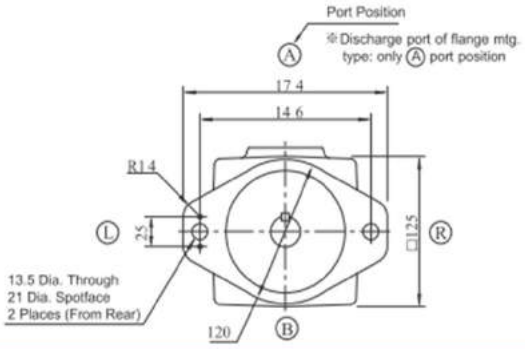


Foot Mtg.



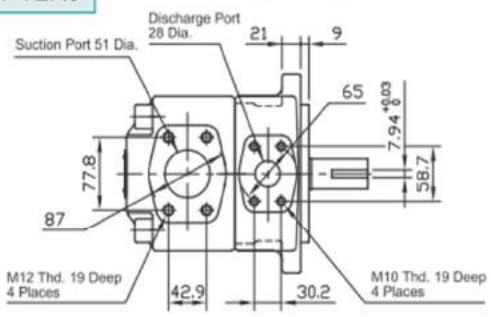
For other dimensions, please refer to "Flange Mtg."



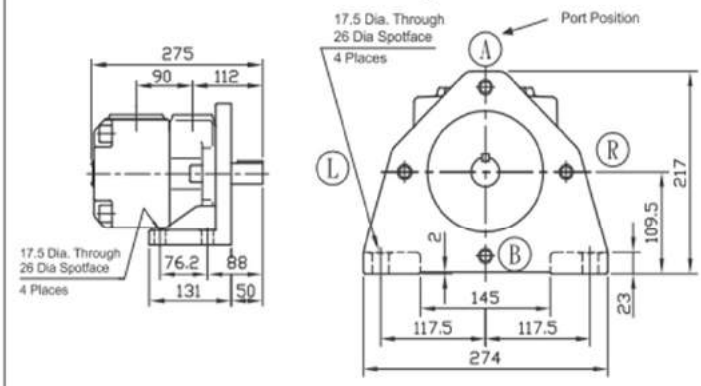


PV2R3

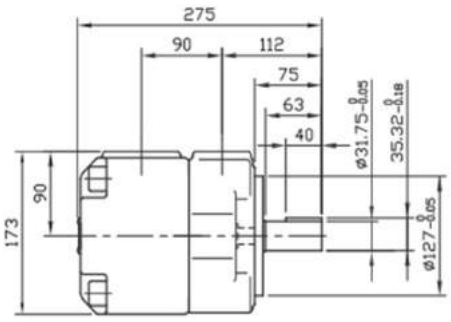
Flange Mtg.

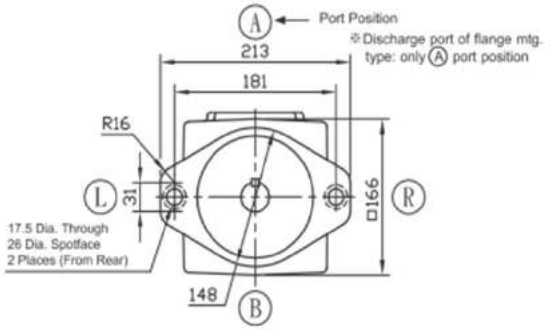


Foot Mtg.



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





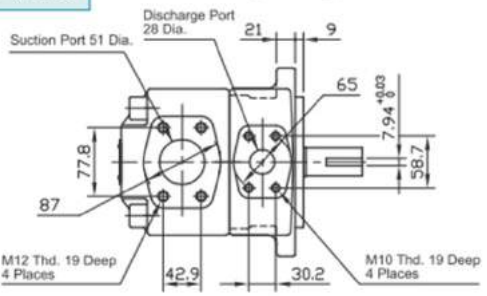
YUKEN
OIL HYDRAULIC EQUIPMENT

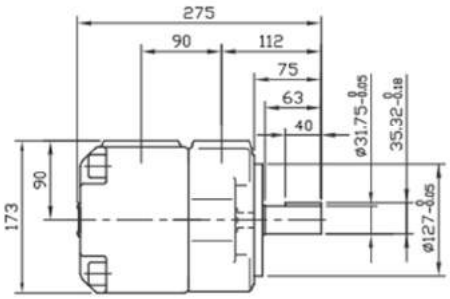
HYDRAULIC PUMPS

PV2R Series Single Vane Pumps Max. Pressure 21 MPa

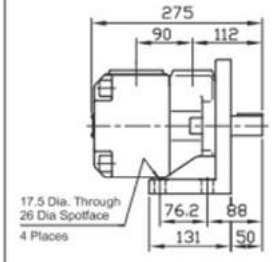
PV2R3

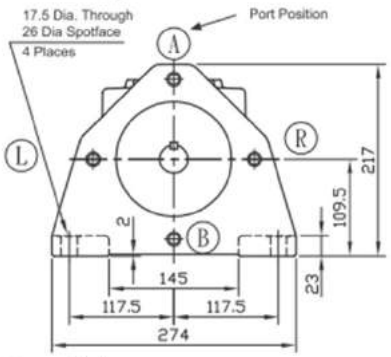
Flange Mtg.



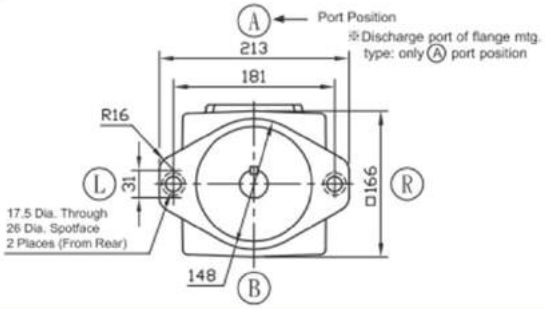


Foot Mtg.



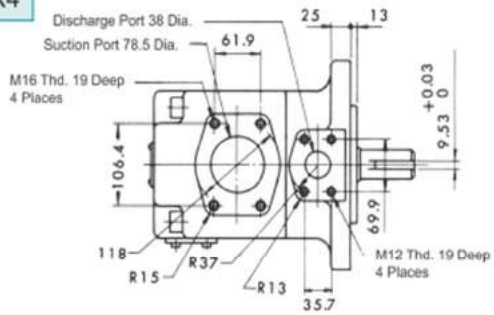


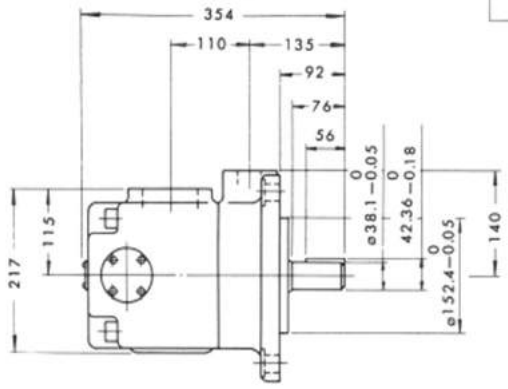
For other dimensions, please refer to "Flange Mtg."



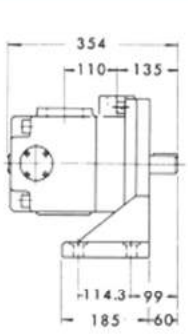
PV2R4

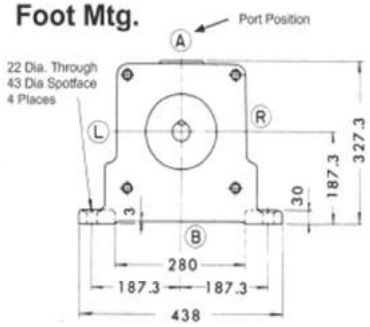
Flange Mtg.



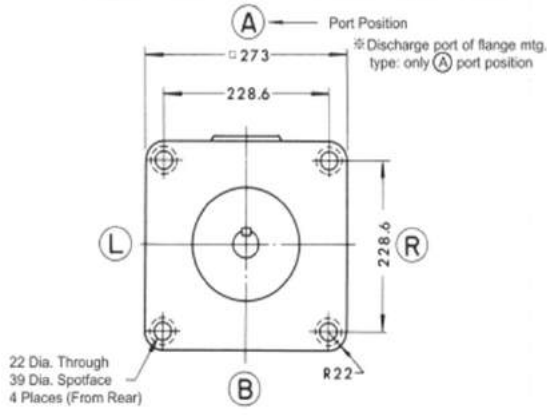


Foot Mtg.





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



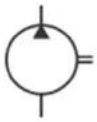
YUKEN
OIL HYDRAULIC EQUIPMENT

HYDRAULIC PUMPS

S-PV2R Series Single Vane Pumps Max. Pressure 21 MPa

- The pumps with high pressure and high quality, have been developed especially for low noise operation
- The pumps can be used on various applications including injection moulding machines and machine tools...etc, with output range: 26.6~237cm³/rev.
- The pump cartridge kit is assembled by screws, so it is easy to assemble and maintain.
- Because of small pressure pulsation, noise level of mother machine can be reduced considerably.

Graphic Symbol



Rating

Model No.	Geometric Displace cm³/rev	Max. Pressure MPa (kgf/cm²)	Shaft Speed Range r/min	Mass kg	
				Flange Mtg.	Foot Mtg.
S-PV2R2-26-※-※※※-45	26.6	21 (210)	★1 600~1800	31.0	39.0
S-PV2R2-33-※-※※※-45	33.3				
S-PV2R2-41-※-※※※-45	41.3				
S-PV2R2-47-※-※※※-45	47.2				
S-PV2R2-53-※-※※※-45	52.5				
S-PV2R2-59-※-※※※-45	58.2				
S-PV2R2-65-※-※※※-45	64.7				
S-PV2R3-60-※-※※※-35	59.6	21 (210)	600~1800	55.5	63.5
S-PV2R3-66-※-※※※-35	66.3				
S-PV2R3-76-※-※※※-35	76.4				
S-PV2R3-85-※-※※※-35	85				
S-PV2R3-94-※-※※※-35	93.6				
S-PV2R3-108-※-※※※-35	108	17.5 (175)			
S-PV2R3-116-※-※※※-35 ★2	115.6	16 (160)			
S-PV2R3-125-※-※※※-35	125	14 (140)			
S-PV2R4-136-※-※※※-35	136	17.5 (175)	600~1800	70	95
S-PV2R4-153-※-※※※-35	153				
S-PV2R4-184-※-※※※-35	184				
S-PV2R4-200-※-※※※-35	201				
S-PV2R4-237-※-※※※-35 ★2	237				

Model Number Designation

S-PV2R2-41-F-R A A-※

- Series Number (Super low noise type)
- Nominal displacement cm³/rev
- Type of Mounting
  - L : Foot mounting
  - F : Flange Mounting
- Shaft Rotation(Viewed from shaft end)
  - R : Clockwise(Normal)
  - L : Anti-clockwise
- Design Number
- Suction Port Position (Viewed from shaft end)
  - A : Upwards(Normal) B : Downwards
  - R : Right L : Left
- Discharge Port Position (view from shaft end)
  - A : Upwards(Normal) B : Downwards
  - R : Right L : Left
  - Flange mounting is available for A only

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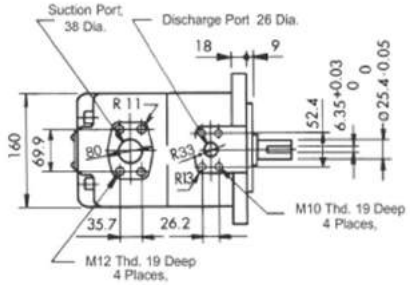
OIL HYDRAULIC EQUIPMENT

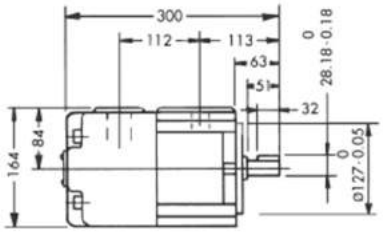
HYDRAULIC PUMPS

S-PV2R Series Single Vane Pumps Max. Pressure 21 MPa

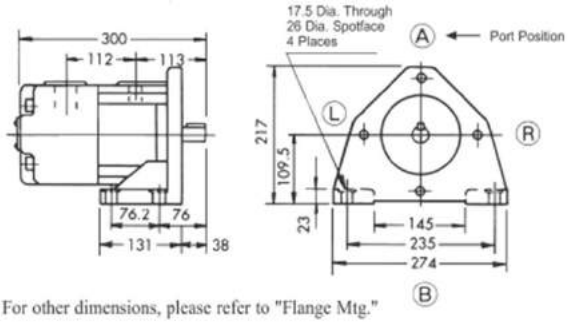
S-PV2R2

Flange Mtg.

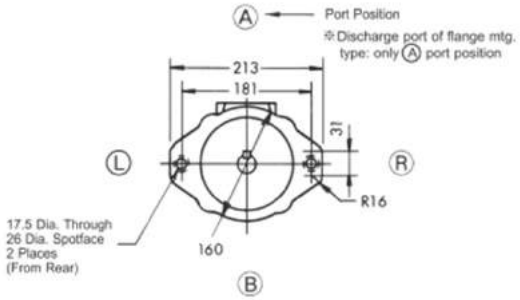




Foot Mtg.

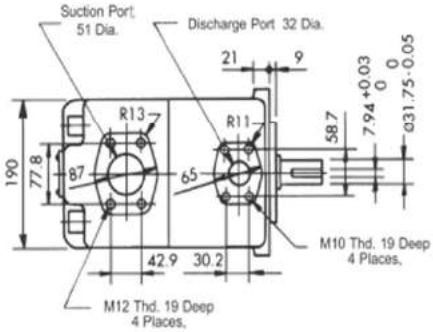


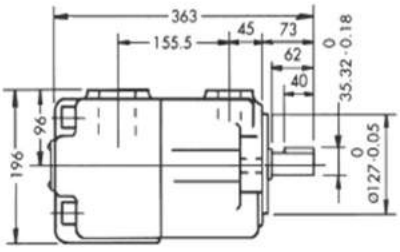
For other dimensions, please refer to "Flange Mtg."



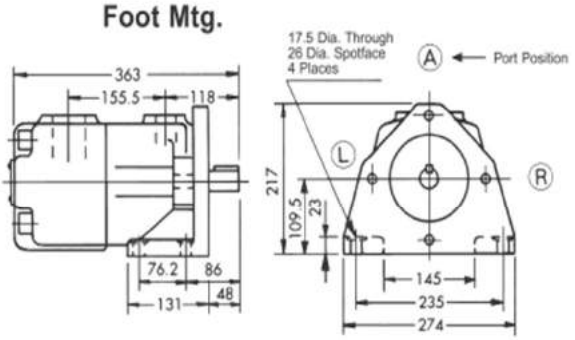
S-PV2R3

Flange Mtg.

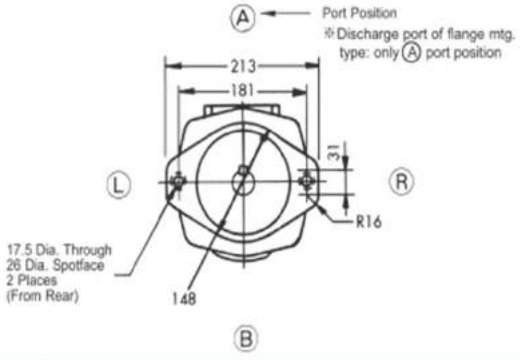




Foot Mtg.



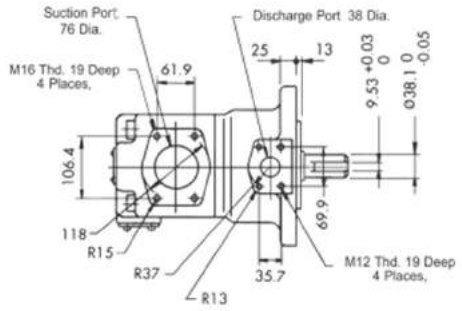
For other dimensions, please refer to "Flange Mtg."

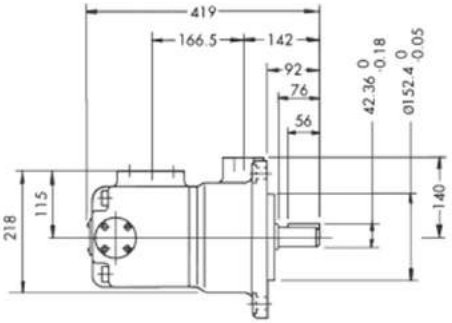


S-PV2R Series Single Vane Pumps Max. Pressure 21 MPa

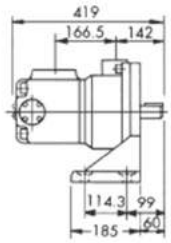
S-PV2R4

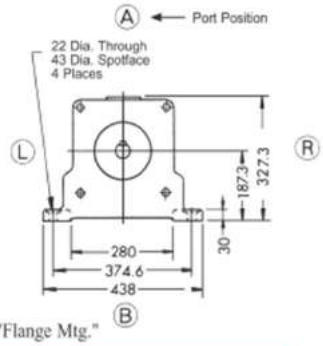
Flange Mtg.



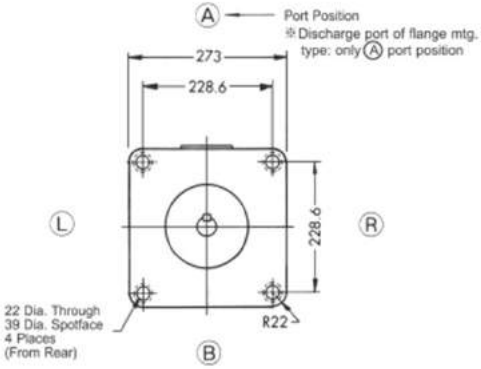


Foot Mtg.





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

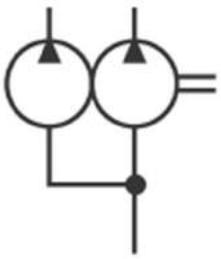


YUKEN
OIL HYDRAULIC EQUIPMENT

HYDRAULIC PUMPS

S-PV2R Series Double Vane Pumps Max. Pressure 21 MPa

Graphic Symbol



Model Number Designation

S-PV2R12	−6	−65	−L	−R	E	A	A	−42
Series Number	Small Volume Pump Nominal Displacement cm^3/rev	Large Volume Pump Nominal Displacement cm^3/rev	Mounting	Direction of Rotation (view from shaft end)	Small Volume Pump Discharge port position (viewed from shaft end)	Large Volume Pump Discharge port position (viewed from shaft end)	Suction Port Position (viewed from shaft end)	Design Number
PV2R12	6 8 10 12 14 17 19 23 25 31 (Compulsory Extruded Vanes Type)	26 33 41 47 53 59 65 75	L: Foot Mounting F: Flange Mounting	R: Clockwise (Normal) L: Anti-clockwise	E: Left up (Normal) F: Right up G: Right down H: Left down	A: Upwards (Normal) B: Downwards R: Right L: Left	A: Upwards (Normal) B: Downwards R: Right L: Left	43
S-PV2R12								45
PV2R13		60 66 76 85 94 108 116 125			A: Upwards (Normal) B: Downwards R: Right L: Left			43
S-PV2R13								45
★1 PV2R14		136 153 184 200 237						33
S-PV2R14								35
PV2R22	26 33 41 47 53 59 65 75	26 33 41 47 53 59 65 75 (Close to shaft end)						40
PV2R23		60 66 76 85 94 108 116 125			E: Left up (Normal) F: Right up G: Right down H: Left down			41
S-PV2R23								45
★1 PV2R24		136 153 184 200 237			A:Upwards(Normal) B:Downwards R:Right L:Left			31
S-PV2R24					E: Left up (Normal) F: Right up G: Right down H: Left down			35
★1 PV2R34	60 66 76 85 94 108 116 125							31
S-PV2R34								35
★1 PV2R33		60 66 76 85 94 108 116 125			A: Upwards (Normal) B: Right down R: Right L: Left			31
S-PV2R33								35

Pipe Flange

Pump Model No.	Pipe Flange Kit Model No.		
	Suction	Large Pump Discharge	Small Pump Discharge
PV2R12	F5-16 -A- 10T	F5-06 -A- 10T	F5-04 -A- 10T
S-PV2R12	F5-20 -A- 10T	F5-08 -A- 10T	F5-06 -A- 10T
PV2R13	F5-24 -B- 10T	F5-10 -A- 10T	F5-04 -A- 10T
S-PV2R13	F5-24 -B- 10T	F5-10 -A- 10T	F5-06 -A- 10T
PV2R14	F5-28 -B- 10T	F5-12 -A- 10T	F5-04 -A- 10T
S-PV2R14	F5-28 -B- 10T	F5-12 -B- 10T	F5-06 -B- 10T
PV2R22	F5-20 -A- 10T	F5-06 -A- 10T	F5-06 -A- 10T
PV2R23	F5-24 -B- 10T	F5-10 -A- 10T	F5-06 -A- 10T
S-PV2R23	F5-24 -B- 10T	F5-10 -A- 10T	F5-08 -A- 10T
PV2R24	F5-28 -B- 10T	F5-12 -A- 10T	F5-06 -A- 10T
S-PV2R24	F5-28 -B- 10T	F5-12 -B- 10T	F5-08 -B- 10T
PV2R33	F5-28 -B- 10T	F5-10 -A- 10T	F5-10 -A- 10T
S-PV2R33	F5-28 -B- 10T	F5-10 -A- 10T	F5-10 -A- 10T
PV2R34	F5-32 -B- 10T	F5-12 -B- 10T	F5-10 -B- 10T
S-PV2R34	F5-32 -B- 10T	F5-12 -B- 10T	F5-10 -B- 10T

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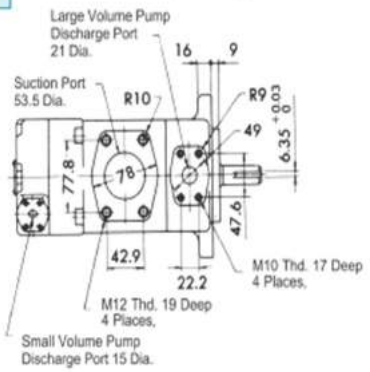
OIL HYDRAULIC EQUIPMENT

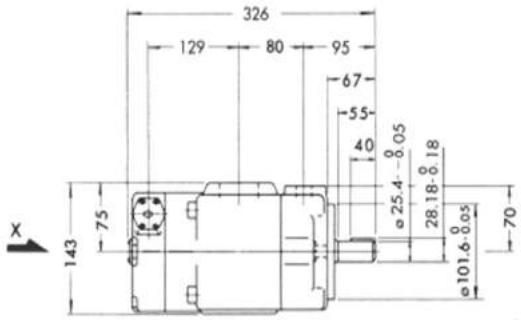
HYDRAULIC PUMPS

S-PV2R Series Double Vane Pumps Max. Pressure 21 MPa

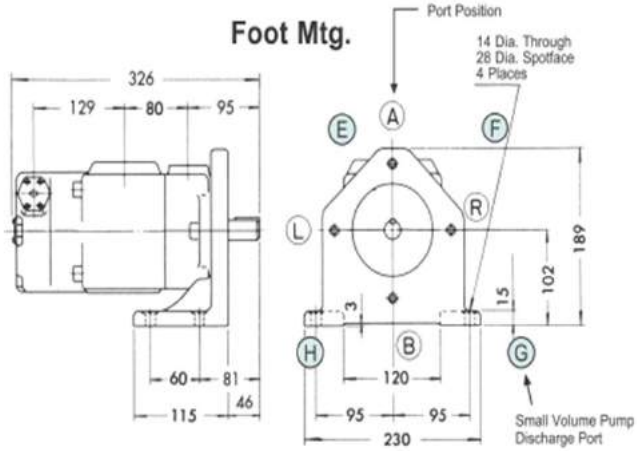
PV2R12

Flange Mtg.

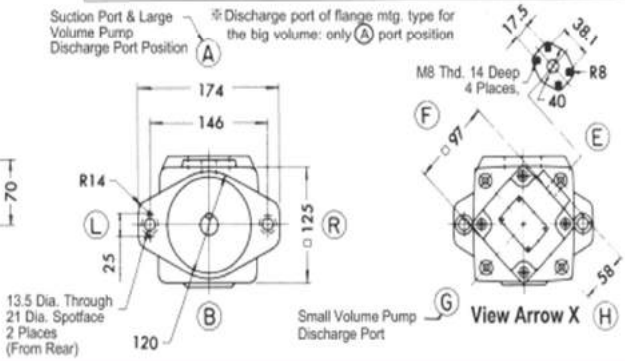




Foot Mtg.

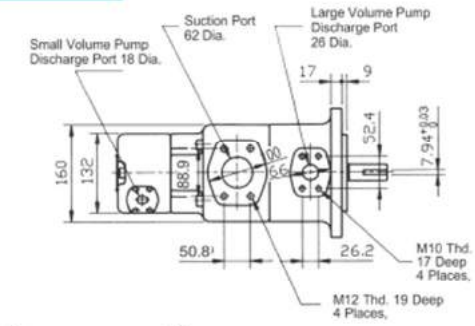


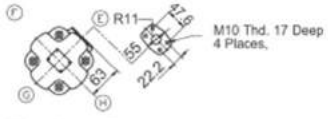
For other dimensions, please refer to "Flange Mtg."



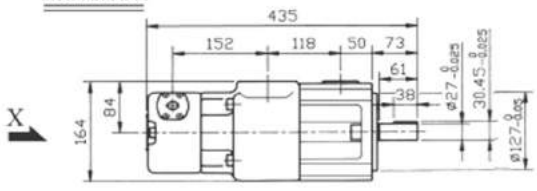
S-PV2R12

Flange Mtg.

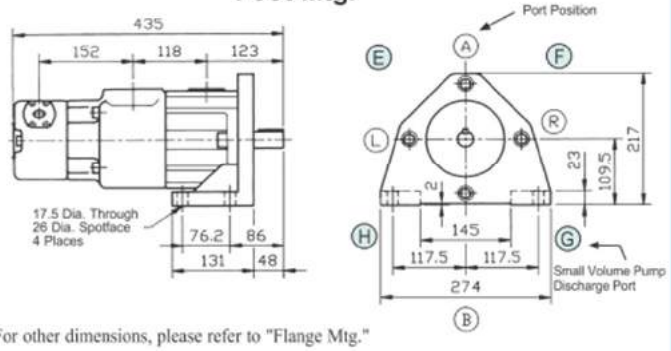




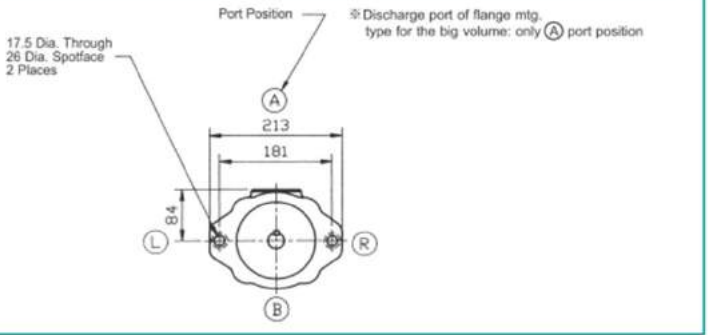
View Arrow X



Foot Mtg.



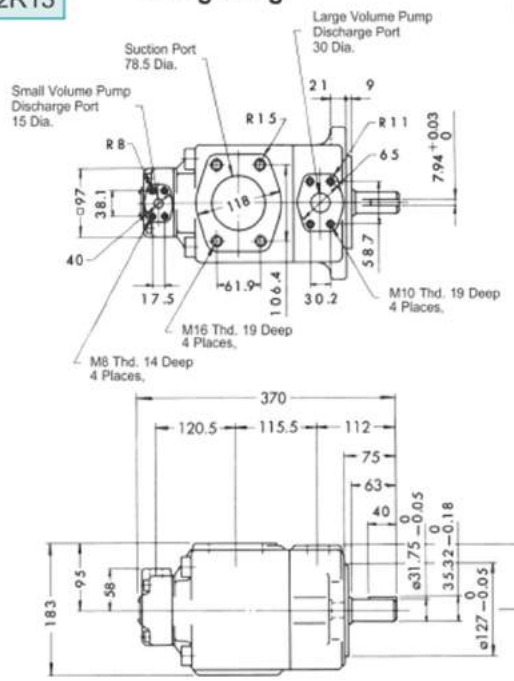
For other dimensions, please refer to "Flange Mtg."



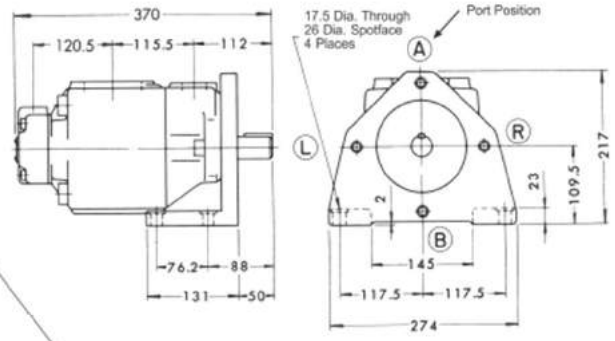
S-PV2R Series Double Vane Pumps Max. Pressure 21 MPa

PV2R13

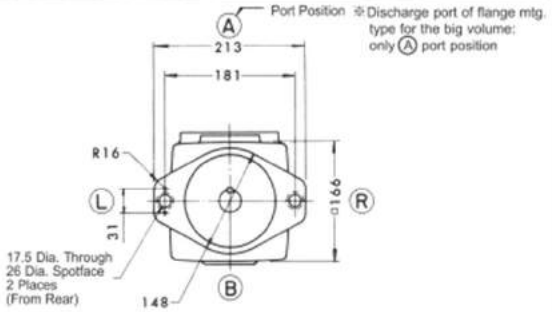
Flange Mtg.



Foot Mtg.

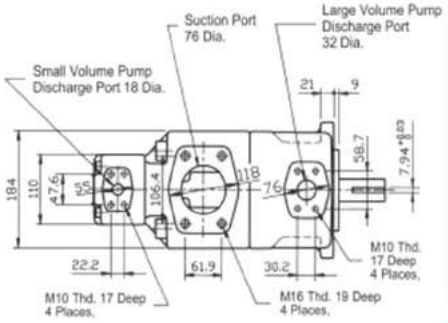


For other dimensions, please refer to "Flange Mtg."

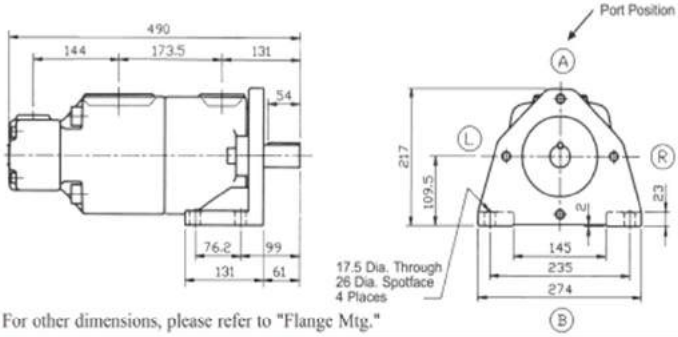


S-PV2R13

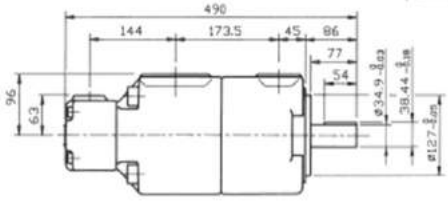
Flange Mtg.

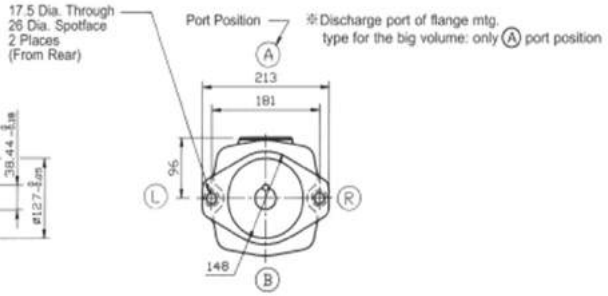


Foot Mtg.



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

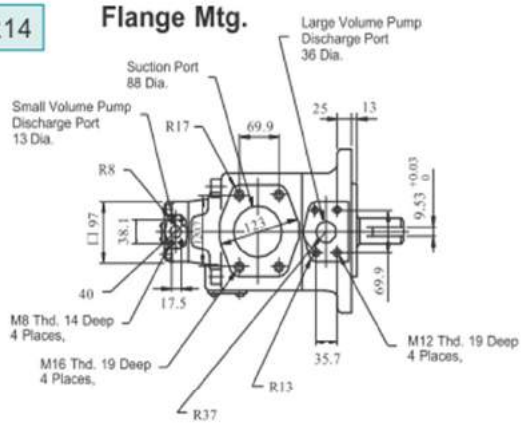




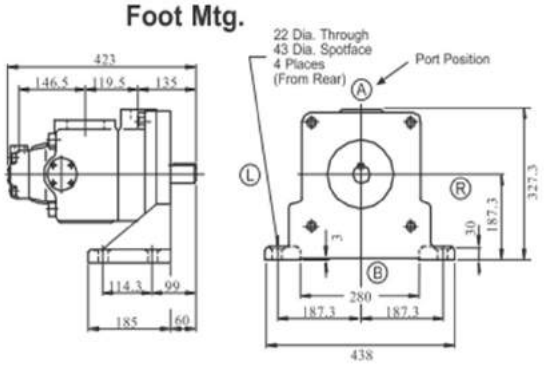
S-PV2R Series Double Vane Pumps Max. Pressure 21 MPa

PV2R14

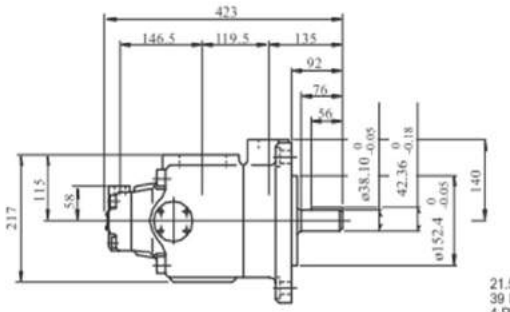
Flange Mtg.

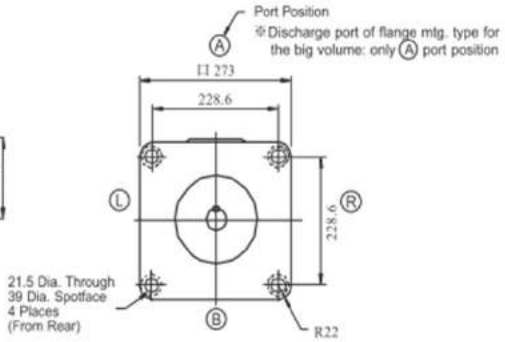


Foot Mtg.



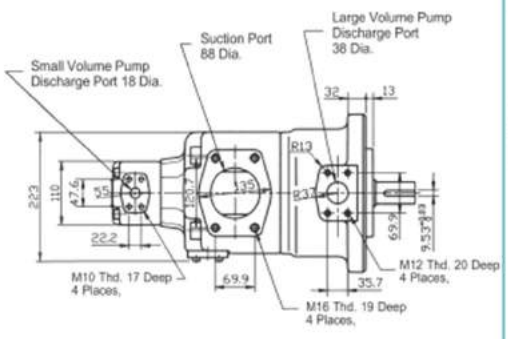
For other dimensions, please refer to "Flange Mtg."



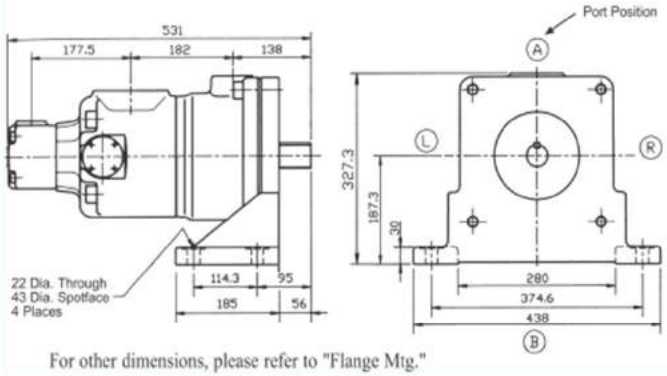


S-PV2R14

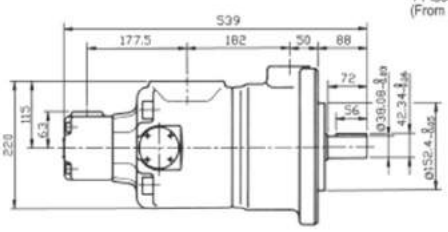
Flange Mtg.

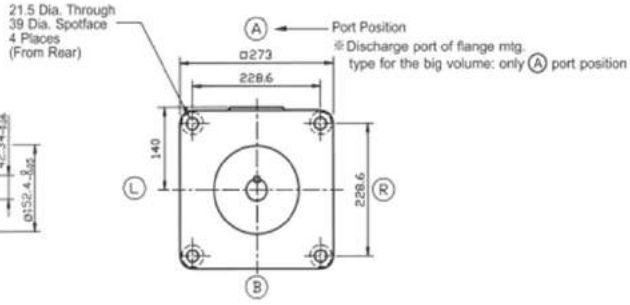


Foot Mtg.



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

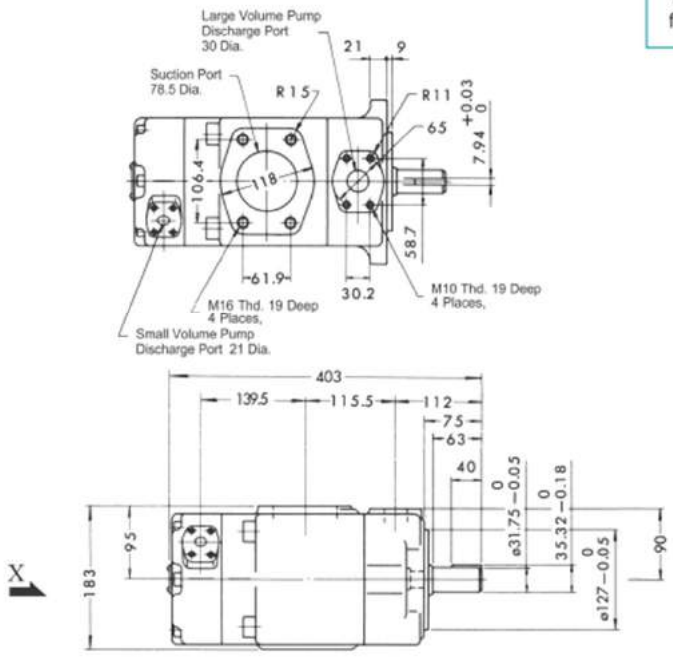




S-PV2R Series Double Vane Pumps Max. Pressure 21 MPa

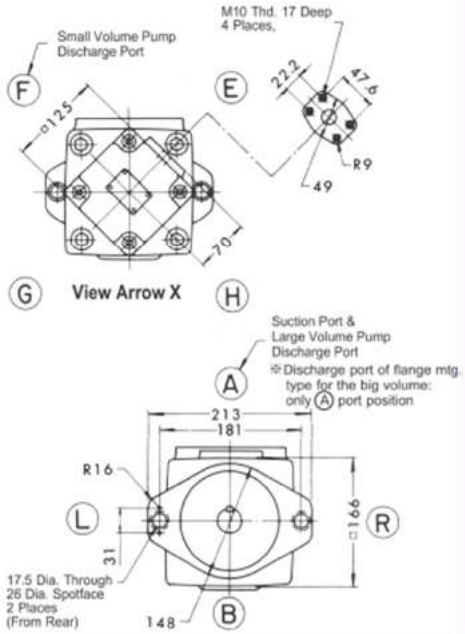
PV2R23

Flange Mtg.



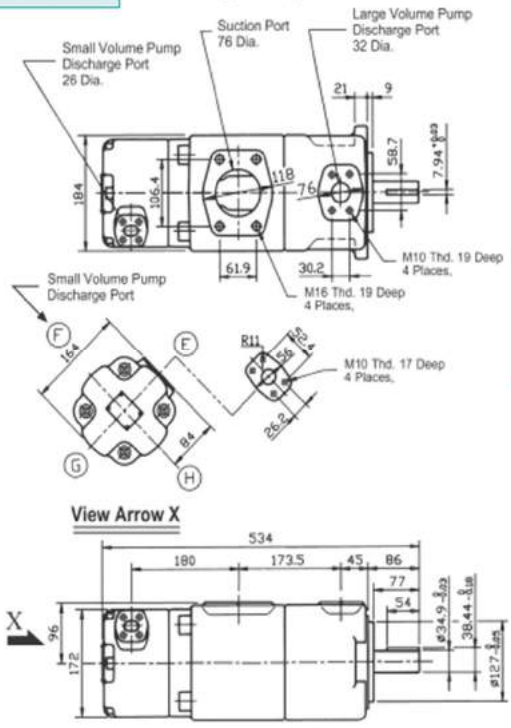
Foot Mtg.

The foot bracket is the same as S-PV2R23 series, therefore, for dimensions of foot bracket, please refer to S-PV2R23 series.

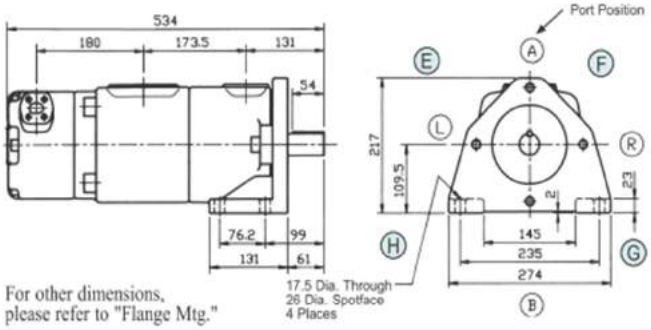


S-PV2R23

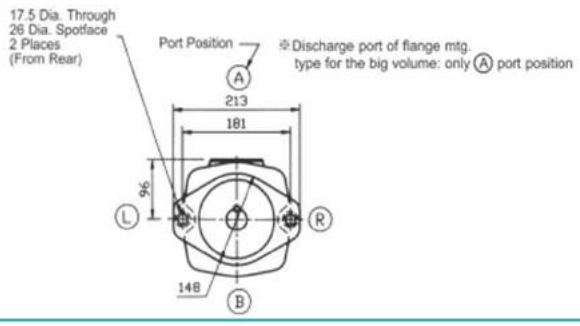
Flange Mtg.



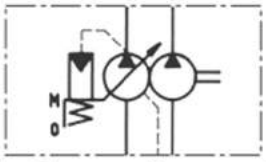
Foot Mtg.



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

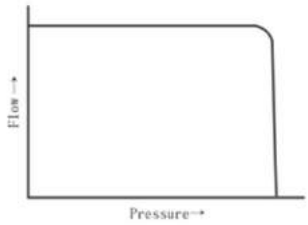


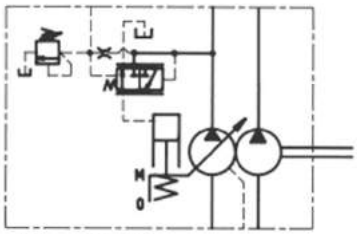
A^{16}_{22}SR Series Piston & Vane Pumps Max. Pressure 21 MPa



01 : Pressure Compensator Control Valve

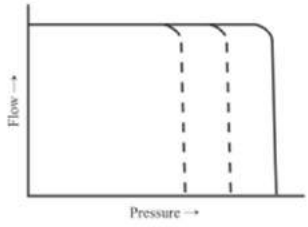
★1. Pressure Compensator Control Type:
When the system pressure increases and comes close to the preset cut-off pressure, the pump flow decreases automatically while maintaining the set pressure as it is. According to your requirements, flow and cut-off pressure can be adjusted manually.





07 : Pilot Pressure Control type Valve

★2. Pilot Pressure Control Type:
The pump is used in combination with the pilot relief valve or multistage pressure control valve. By controlling the pilot remote-controlled according to your requirements.



- This double pump combines characteristics of piston pump's high cut-off pressure and vane pump's large volume low noise; with high and low pressure circuit design, the motor power can be used most effectively.
- Piston pumps also have options of AR16/AR22 piston pumps (the maximum operating pressure 16.3 MPa). Please refer to page 16-19.

Rating

Model No.	Geometric Displace. cm^3/rev		Max. Pressure MPa (kgf/cm^2)		Minimum Adj. Flow L/min	Shaft Speed Range r/min	Mass kg	
	Piston Pump	Vane Pump	Piston Pump	Vane Pump	Piston Pump		Flange Mtg.	Foot Mtg.
*1 A16SR3-※-※-35	15.8	60 66 76 85 94 108	21.4	21.0 (16.0/14.0)	4	*2 600~1800	72	80
*1 A22SR3-※-※-35	22.2	*2 116 125	16.3		6		72	80
A16SR4-※-※-35	15.8	136 153 184	21.4	17.5	4		86.5	111.5
A22SR4-※-※-35	22.2	200 *2 237	16.3		6		86.5	111.5

※1.When starting at low speed, the maximum viscosity is limited. Please refer to page 8 (Table 2).
※2.When operating with a shaft speed exceeding 1700rpm, the minimum suction pressure is restricted. Please refer to page 8 (Table 1)

- For pressure - output flow & input power characteristics, please refer to page 32~34.
- Anti-wear type petroleum hydraulic fluids are recommended to use with these pumps.(please refer to page 7)
- Care in application of Piston Pump

1.Must be careful about the contamination control of the hydraulic fluid. Please keep the contamination rate under NAS10. Suction port must be installed with at least 100 μm filter, return circuit must be installed with spin-on return filter less than 25 μm.
2.Install the pump so that the "Filling Port" is at the top.
3.Suction port pressure is between -125mmHg ~ +0.05MPa(0.5kgf/cm²), piping diameter of suction ports is the same as the piping diameter of flanges.
4.To prevent extra noise when piping for suction port or discharge port, please use soft rubber pipes.
5.Make sure to keep the pressure inside the pump under 0.1MPa(1kgf/cm²), compact pressure under 0.5MPa (5kgf/cm²), please use piping connection size of 3/8(caliber is bigger than ø8.5),piping caliber is bigger than ø10,piping length should be less than 1m, pipe's end should be immersed in the fluid.
6.Before you operate for the first time, please put 600cc clean fluid into the pump through the suction port.
7.When the pump is ready to dispatch, please set the pump at maximum flow and minimum pressure.
8.Whenever setting the pressure, make sure the full cut-off pressure never exceeds the permissible maximum intermittent pressure.

Model Number Designation

A16 SR3-F R 01 C S -76-A-A-※

- Piston Pump: A16,A22
- Vane Pump: SR3:S-PV2R3; SR4:S-PV2R4
- Mounting: L : Foot Mtg. / F : Flange Mtg.
- Direction of Rotation(View from Shaft End): R : Clockwise(Normal)
- Piston Pump Control Type: ★1 01 : Pressure Compensator Control Type / ★2 07 : Pilot Pressure Control Type
- Piston Pump Port Position: S : Side Port
- Piston Pump Press. Adj. Range: B :12.2~71.4kgf/cm² / C :12.2~163kgf/cm² / H :12.2~214kgf/cm² (Applicable only for A16)
- Vane Pump Nominal Displacement (cm^3/rev): A※SR3:.60.66.76.94.108.116.125 / A※SR4:136.153.184.200.237
- Vane Pump Discharge Port Position(view from shaft end): A : upwards(normal) B : downwards / R : right L : left
- Vane Pump Suction Port Position(view from shaft end): A : upwards(normal) B : downwards / R : right L : left
- Design Number

Pipe Flange Kits

Pump Model No.	Piston Pump Pipe Flange Kit Model No.			
	Piston Pump		Vane Pump	
	Suction	Discharge	Suction	Discharge
A16SR3 A22SR3	F5-06-A-10T	F5-06-A-10T	F5-16-A-10T	F5-10-A-10T
A16SR4 A22SR4	F5-06-A-10T	F5-06-A-10T	F5-24-B-10T	F5-12-B-10T

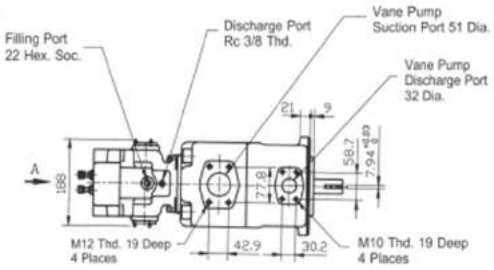
- In Pipe Flange Kit Model No. A: Threaded Connection / B: For Pipe Socket Welding.
- Details of the pipe flange kit please refer to page 50.
- When ordering, please specify pipe flange kit model.

HYDRAULIC PUMPS

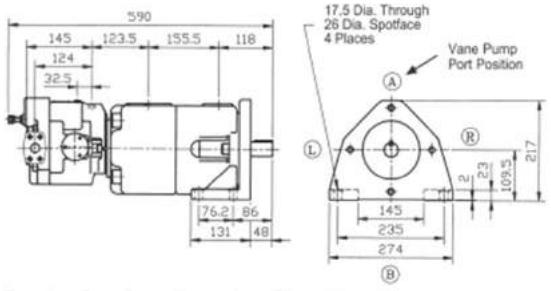
A_{22}^{16}SR Series Piston & Vane Pumps — Max. Pressure 21 MPa

A_{22}^{16}SR3

Flange Mtg.(Side Port)

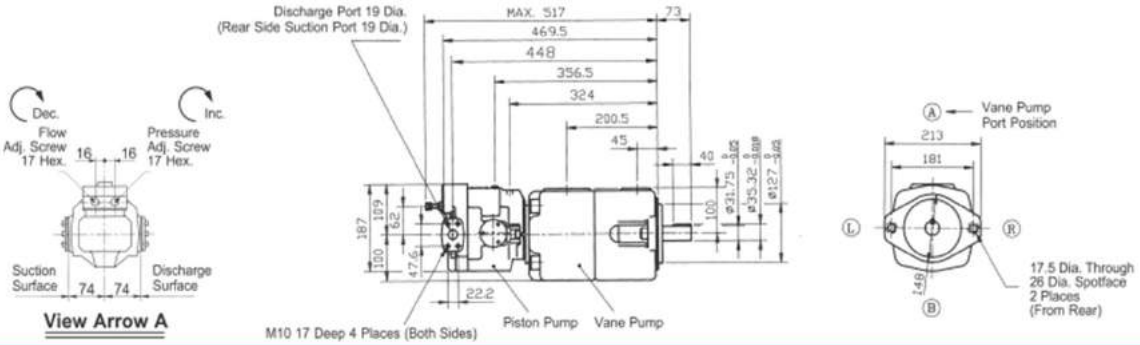


Foot Mtg.(Side Port)



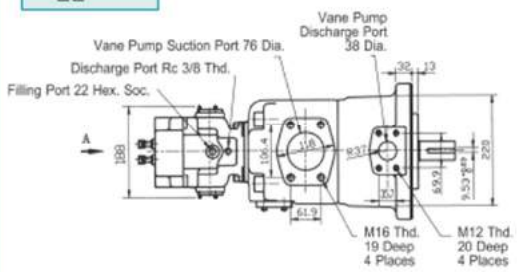
For other dimensions, please refer to Flange Mtg.

Flange Mtg.(Side Port)

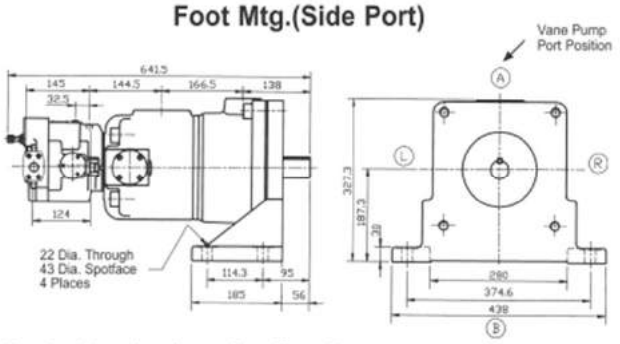


A_{22}^{16}SR4

Flange Mtg.(Side Port)

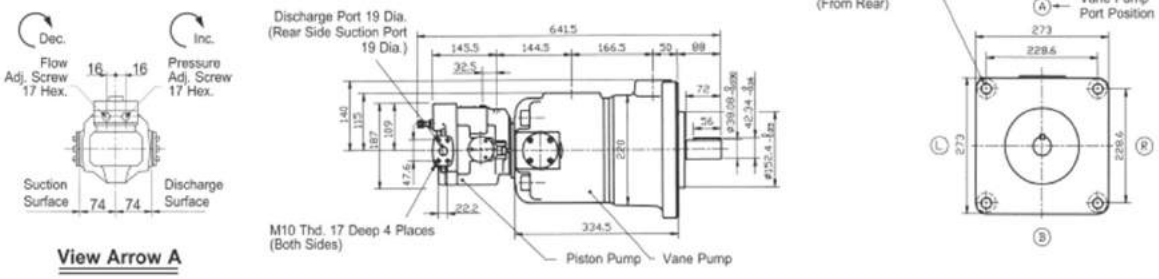


Foot Mtg.(Side Port)



For other dimensions, please refer to Flange Mtg.

Flange Mtg.(Side Port)



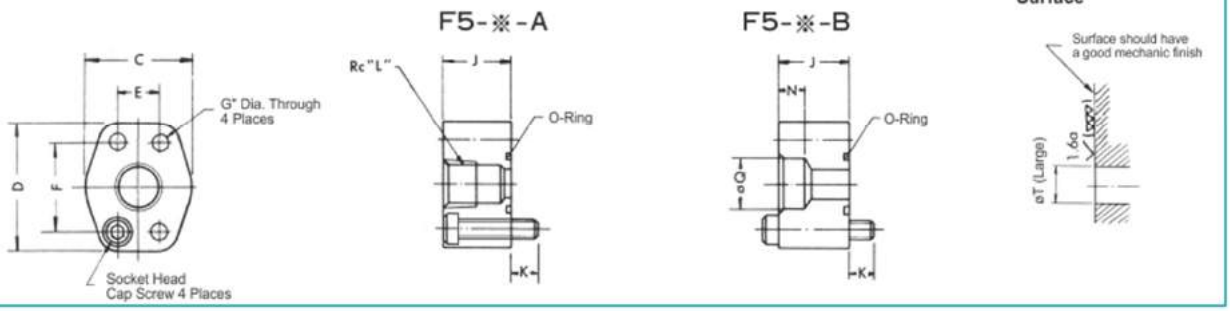
YUKEN
OIL HYDRAULIC EQUIPMENT

HYDRAULIC PUMPS

F5 Series Pipe Flange Kits

Max. Pressure 21 MPa

Flange Mtg. Dimensions: SAE 4 Bolt Solid Flanges



Rating

1 MPa = 10.2 kgf/cm²

Model No.	Piping Size	Dimension mm C	D	E	F	G	J	K	L	N	Q	T	O-Ring	Socket Head Cap Screw	Max. Pressure MPa	Mass kg
F5-04W-A	3/8	40	56	17.5	38.1	8.8	26	12	3/8	-	-	16	P22	M 8 x 30	21	0.5
F5-04W-B								9	-	9	17.8			M 8 x 35		
F5-04 -A	1/2							12	1/2	-	-			M8 x 30		
F5-04 -B								9	-	11	22.2			M8 x 35		
F5-06X-A	3/4	54	71	22.2	47.6	8.8	28.5	12	3/4	-	-	20	G30	M 8 x 30	21	0.7
F5-06X-B									-	12	27.7			M 8 x 40		
F5-06 -A						11		17	3/4	-	-			M10 x 35		
F5-06 -B									-	12	27.7			M10 x 45		
F5-08W-A	3/4	56	76	26.2	52.4	11	28.5	17	3/4	-	-	26	G35	M10 x 35	21	0.9
F5-08W-B									-	12	27.7			M10 x 45		
F5-08 -A	1								1	-	-			M10 x 35		
F5-08 -B									-	14	34.5			M10 x 45		
F5-10 -A	1-1/4	72	84	30.2	58.7	11	28.5	17	1-1/4	-	-	32	G40	M10 x 35	21	1.2
F5-10 -B									-	16	43.2			M10 x 45		
F5-12 -A	1-1/2	74	96	35.7	69.9	13.5	30	17	1-1/2	-	-	38	G50	M12 x 35	21	1.5
F5-12 -B								15	-	18	49.1			M12 x 45		
F5-16W-A	1-1/2	96	107	42.9	77.8	13.5	29.5	15.5	1-1/2	-	-	48	G65	M12 x 30	21	1.8
F5-16W-B									-	18	49.1			M12 x 45		
F5-16 -A	2								2	-	-	51		M12 x 30	17.5	1.7
F5-16 -B									-	20	61.1			M12 x 45		
F5-20W-B	2	100	117	50.8	88.9	13.5	38	17	-	20	61.1	51	G70	M12 x 55	17.5	2
F5-20 -B	2-1/2								-	20	77.1	62		M12 x 55		
F5-24 -B	3	116	135	61.9	106.4	17.5	38	17	-	20	90.0	76	G85	M16 x 55	3.5	2.7
F5-28 -B	3-1/2	134	153	69.9	120.7	17.5	38	17	-	28	102.8	88	G100	M16 x 55	3.5	3.4
F5-32 -B	4	150	162	77.8	130.2	17.5	43	17	-	28	115.5	101	G115	M16 x 60	3.5	3.7

Model Number Designation

F - F5 - 06 X - A - 10T

- F : Type of Hydraulic Fluids — No : Standard; F : For Phosphate Ester Fluids Use Only
- F5 : Series Number
- 06 : Flange Size
- X : Special Spec. — No : Standard; X : Special Bolts; W : Piping Size Smaller
- A : Type of Connection — A : Threaded Connection; B : For Pipe Socket Welding
- 10T : Design No.

Note:
1.Flange kits include bolts and o-ring as a attachment.
2.Material of 0-Ring is described below.
F5-※-※-10T NBR(Buna N) HS 90
F-F5-※-※-10T FPM(Viton) HS 90
3.The strength of bolt is 12.9T

Tightening Torque for Bolts

Bolt Size	Tightening Torque N • m Recommendation	Tolerance
M8	34.3	±10%
M10	67.2	
M12	115.7	
M16	281.5	

Tightening Torque above is applicable to pressure line only.

YUKEN
OIL HYDRAULIC EQUIPMENT

HYDRAULIC PUMPS

SVPF Series Variable Vane Pump — Max. Pressure 7 MPa

This pump is quiet, small, high efficiency, longevity, and quick response, the pressure and flow of this pump are adjustable and it is suitable for small and light equipment such as machine tool and shoe machine.

Model Number Designation

SVPF	-12	-70	-B	-20
Series number	Geometric Displace. L/min (1800 rpm)	Max. Operating Pressure MPa (kgf/cm²)	Shaft size (mm)	Design number
SVPF	12	20 : 2.0 (20 kgf/cm²)	B : shaft size ø15.875 (suggestion) None : shaft size ø12.7	20
	20	35 : 3.5 (35 kgf/cm²)		
	30	55 : 5.5 (55 kgf/cm²)	None :ø19.05 mm	
	40	70 : 7.0 (70 kgf/cm²)		

Graphic Symbol

Piping for drain

The piping of the drain port should not be set over 0.05 Mpa of the body. The length of Piping should not be over 1 M and please do not mix the return piping with other solenoid valves. The end of the piping should be put into the fluid. Recommend the size of the drain piping is as follows:
The fitting of the piping: 1/4 (internal diameter Ø6.6 plus)
The internal diameter of the piping:Ø7 plus

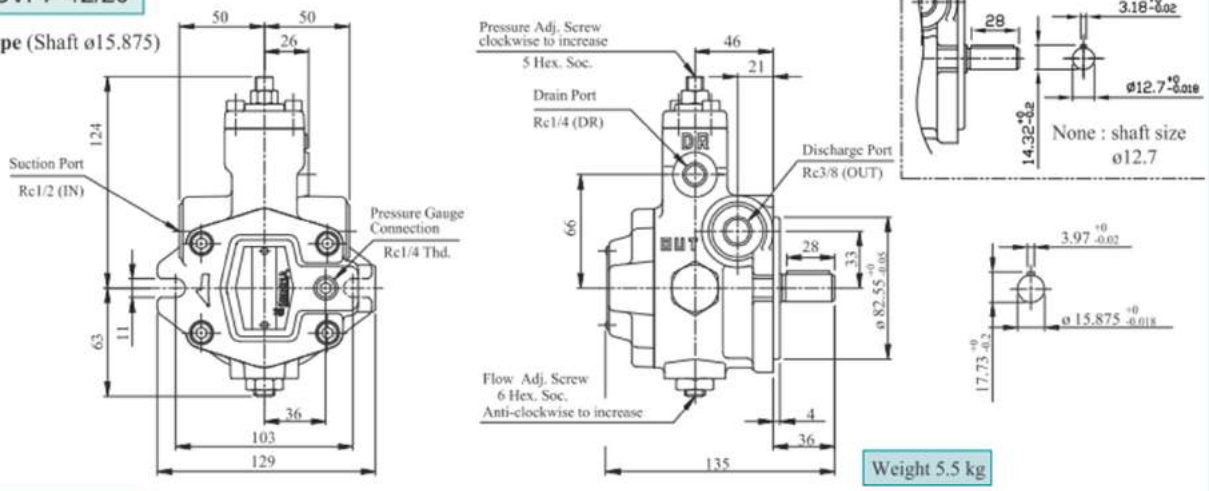
Setting of the pressure and displacement

The flow of the this pump is set at the Max. and the pressure of this pump is set at the lowest while the pump dispatched. Please reset the pressure and flow according to real working condition after receiving the pump.

Please refer to page 52 for other characteristics.

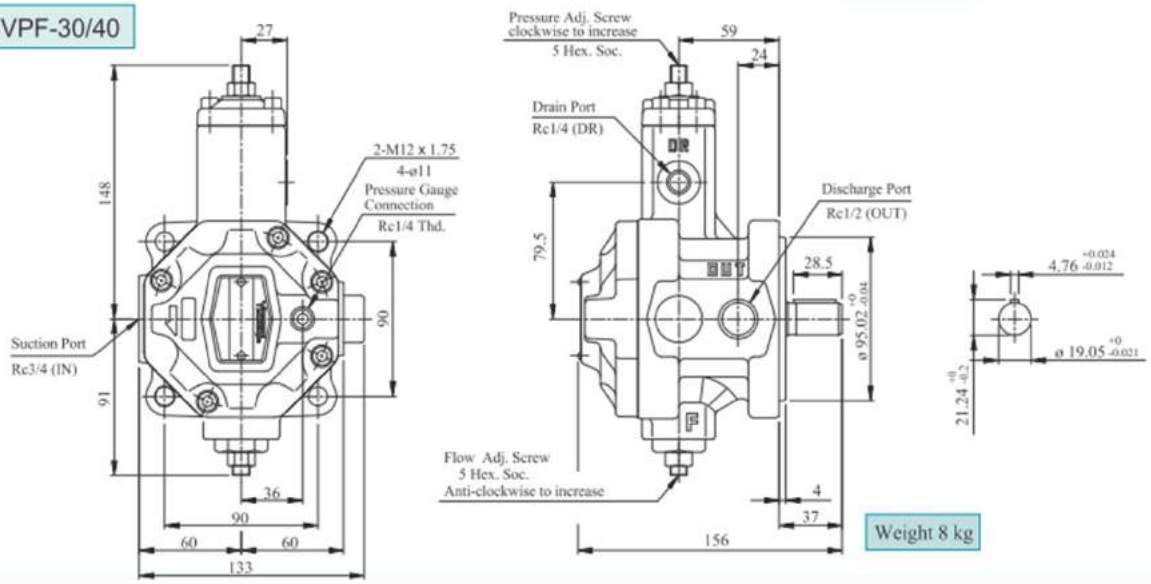
SVPF-12/20

B Type (Shaft ø15.875)



Weight 5.5 kg

SVPF-30/40



Weight 8 kg

YUKEN
OIL HYDRAULIC EQUIPMENT

HYDRAULIC PUMPS

SVPDF Series Double Variable Vane Pump Max. Pressure 7 MPa

This pump is quiet, small, high efficiency, longevity, and quick response. The double variable vane pump can save the installing space, the suction port and discharge port is separate.

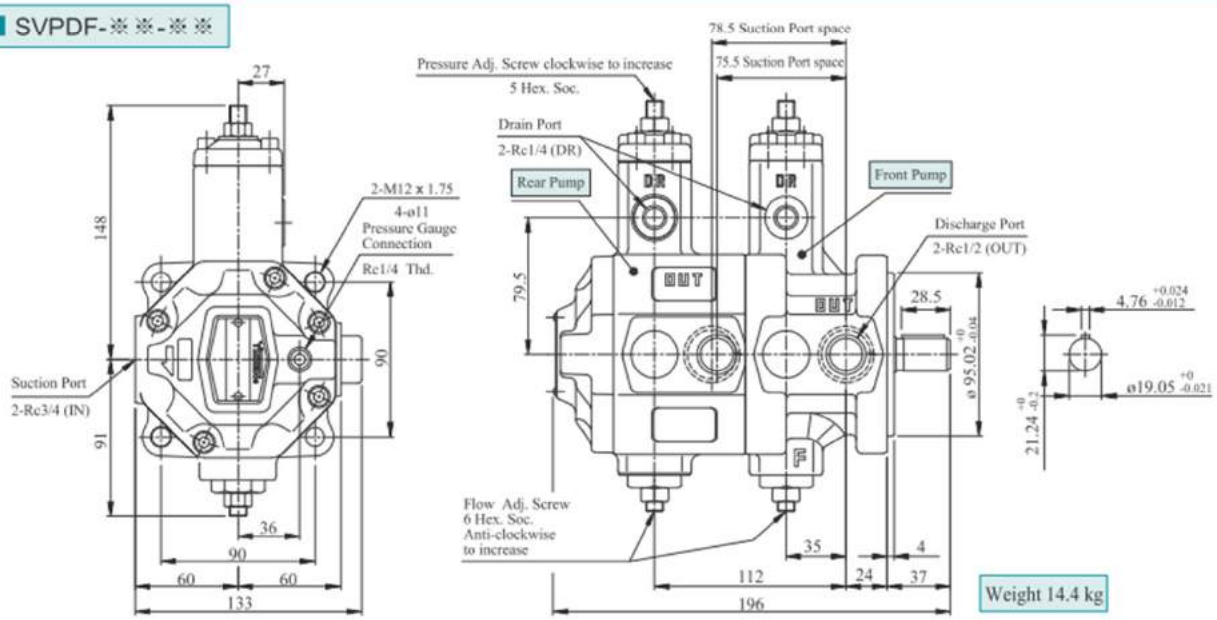
Model Number Designation

SVPDF	-30	70	-30	70	-20
Series Number	Front Pump Geometric Displace L/min (1800 rpm)	Front Pump Max. Operating Pressure MPa (kgf/cm²)	Rear Pump Geometric Displace L/min (1800 rpm)	Reart Pump Max. Operating Pressure MPa (kgf/cm²)	Design Number
SVPDF	30	20 : 2.0 (20 kgf/cm²) 35 : 3.5 (35 kgf/cm²)	30	20 : 20 (20 kgf/cm²) 35 : 35 (35 kgf/cm²)	20
	40	55 : 5.5 (55 kgf/cm²) 70 : 7.0 (70 kgf/cm²)	40	55 : 55 (55 kgf/cm²) 70 : 70 (70 kgf/cm²)	

Graphic Symbol

Please refer to page 51 for the piping of the drain port, the setting of the pressure and displacement

SVPDF-※※-※※



Characteristics : The following characteristics are based on fluid viscosity 46 mm²/s (ISO VG-46 40°C)