



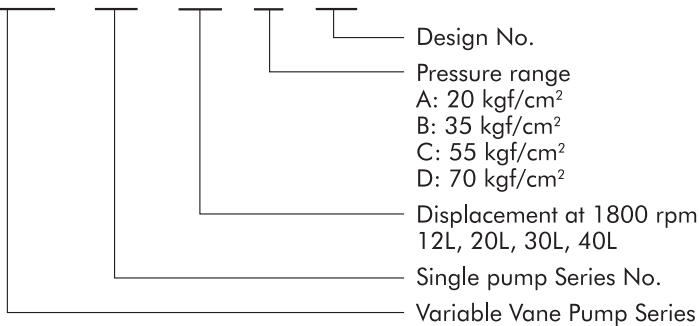
Variable Displacement Vane Pump

Features:

1. High efficiency operation with minimum power loss.
2. Quiet operation, even in high pressure range, with minimum vibration.
3. Compact and simple design, easy for operation.
4. Precision characteristics and prompt response.
5. Sturdy structure for high efficiency and long service life.

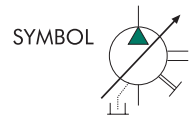
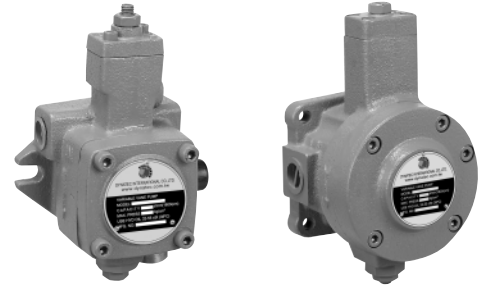
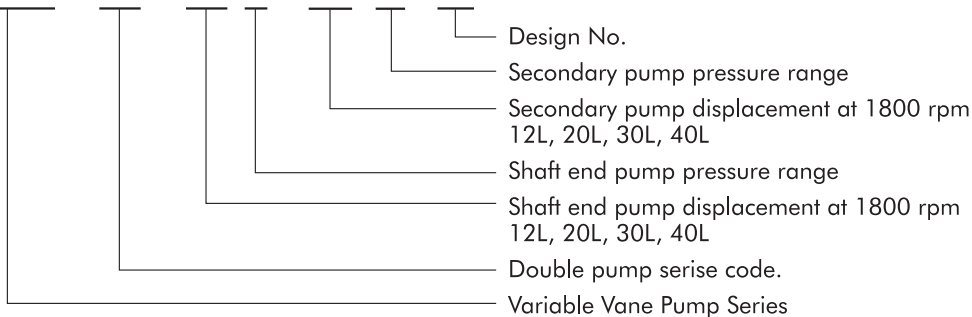
■ HOW TO ORDER Single pump:

DVVP - SF - 20 - B - 10



Double pump:

DVVP - DF - 30-B / 30- B - 10



Handling:

1. The direction of rotation is always clockwise when viewed from the shaft end..
2. Drain piping must be direct pipe up to a point that is below the tank fluid level. And the back pressure should not exceed 0.3 kgf/cm².
3. When adjusting the pressure, pressure is increased by clockwise rotation and decreased by counterclockwise rotation.
4. When adjusting the flow rate, the flow rate is decreased by clockwise rotation, and increased by counterclockwise rotation.
5. Factory default P-Q settings: Flow rate setting =Maximum flow rate for model as indicated in the
 Pressure setting =Show as following
 A:20 kgf/cm², B:35 kgf/cm², C:55 kgf/cm², D:70 kgf/cm²
 $Q = q \times N \times 10^{-3}$
 Q:No load discharge rate (L/min)
 q:Capacity (c.c./rev)
 N:Revolution speed (rpm)
6. Thrust Screw: This screw was precision adjusted at the factory, **Never touch this screw.**
7. Initial operation: Before operation the pump in first time, put the out port side at no-load state, and then repeat start and stop the motor to bleed all air from the inside of pump. After confirming the out-port is discharging oil, continue the no-load operation at least 10 minutes.
8. Hydraulic oil: Please use wear resistant hydraulic oil, ISO VG32 to 68 or equivalent.
9. Operating temperature: Within 15 to 60°C. When oil temperature is under 15°C, use a warm-up operation at low pressure until oil temperature is higher than 15°C.
10. Suction pressure is within -0.3 to 0.3 kgf/cm².
11. Avoid to use pulley and gear to drive the shaft.
12. Use suction strainer with filtering grade of 150 mesh.
13. Oil contamination must within the class of NAS 10 degree.
14. Add a bleed valve in the circuit when it is difficult to bleed air off.
15. When centering the pump and motor shaft: eccentricity should be no greater than 0.05mm. and the angle error should be within 1°.

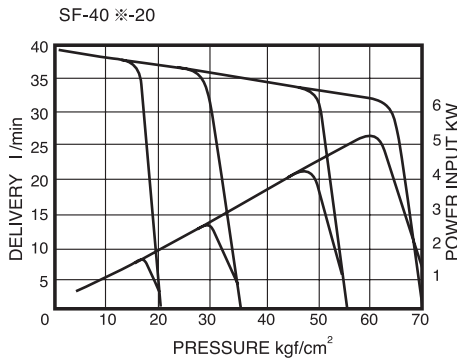
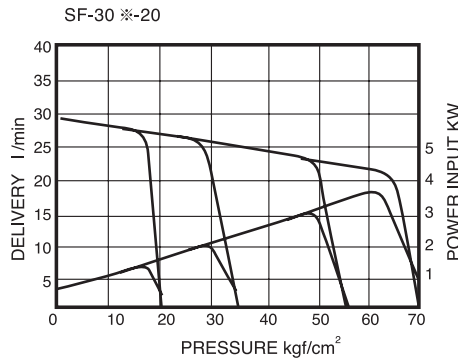
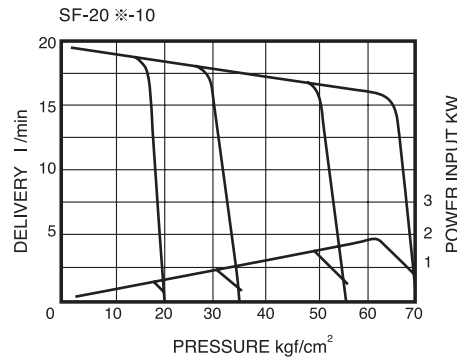
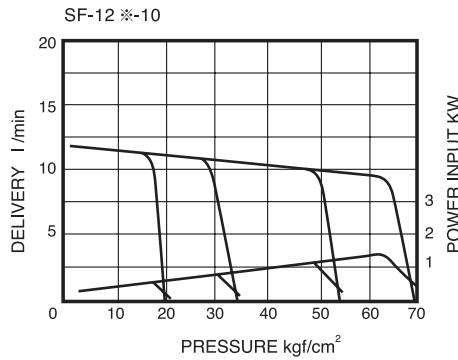


Variable Displacement Vane Pump

TECHNICAL DATA

Model No.	Delivery at no load L/min		Pressure Adj Range kgf/cm ²	Shaft Speed RPM		Max Pressure kgf/cm ²	Weight kg
	1800rpm	1500rpm		Max	Min		
SF-12A	12	10	10-20	1800	800	20	5.0
SF-12B			15-35			35	
SF-12C			30-55			55	
SF-12D			50-70			70	
SF-20A	20	17	10-20	1800	800	20	5.0
SF-20B			15-35			35	
SF-20C			30-55			55	
SF-20D			50-70			70	
SF-30A	30	25	10-20	1800	800	20	9.0
SF-30B			15-35			35	
SF-30C			30-55			55	
SF-30D			50-70			70	
SF-40A	40	35	10-20	1800	800	20	9.0
SF-40B			15-35			35	
SF-40C			30-55			55	
SF-40D			50-70			70	

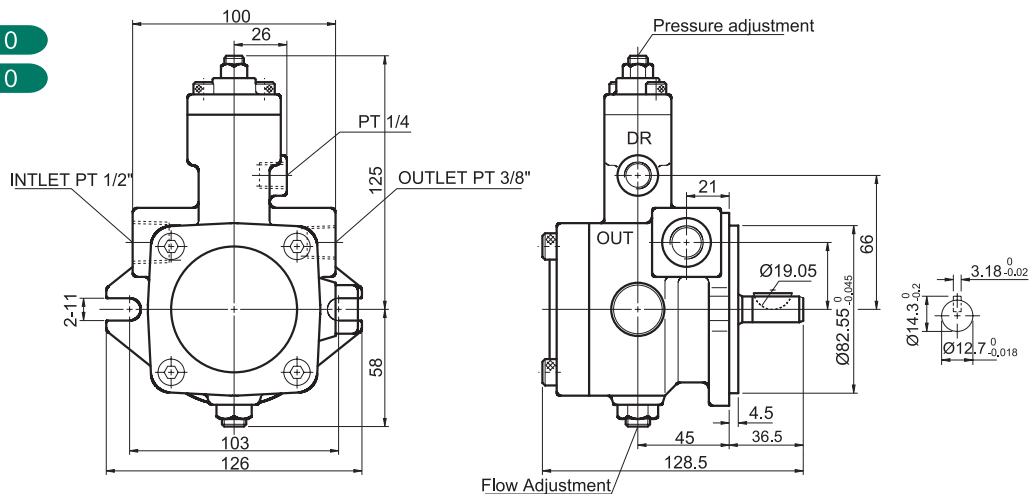
PERFORMANCE CURVE



DIMENSIONS:

UNIT: mm

- SF-12※-10
- SF-20※-10



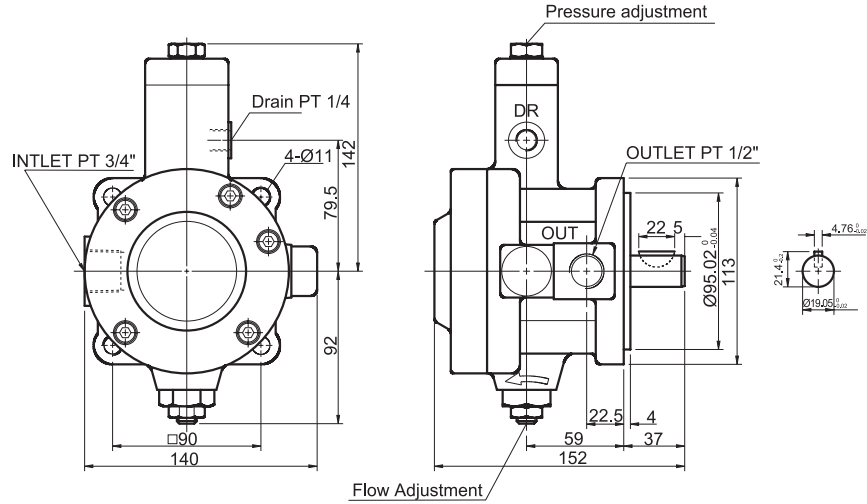


Variable Displacement Vane Pump

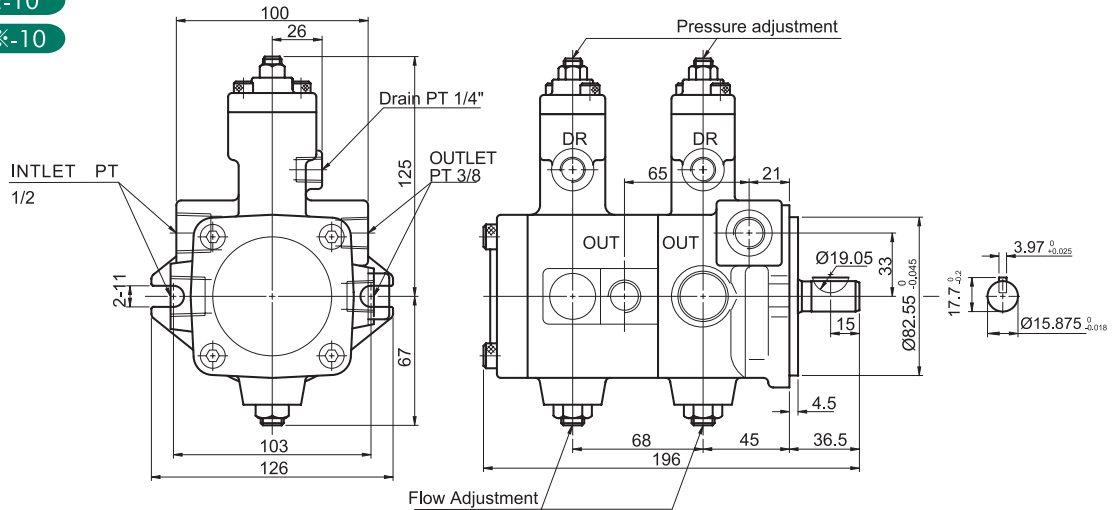
DIMENSIONS:

UNIT: mm

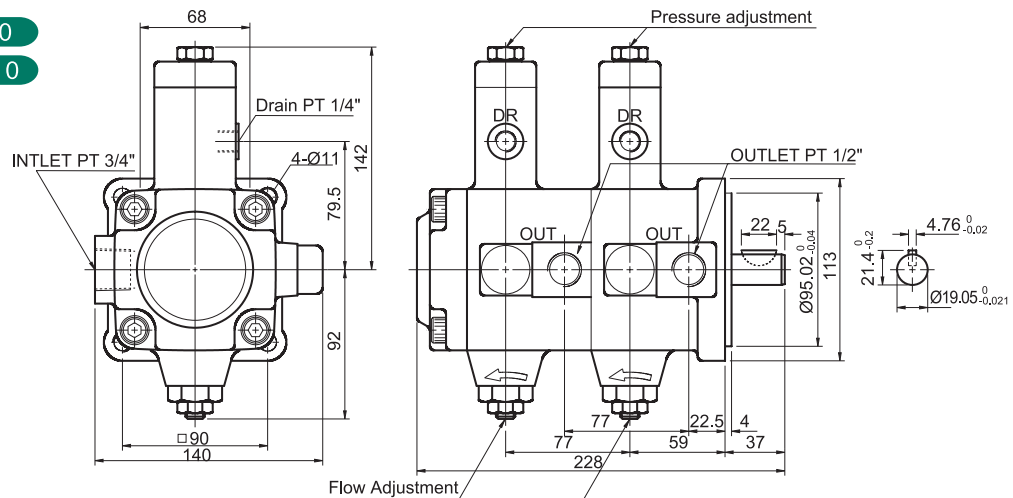
- SF-30※-20
- SF-40※-20



- DF-12※-12※-10
- DF-20※-20※-10



- DF-30※-30※-10
- DF-40※-40※-10





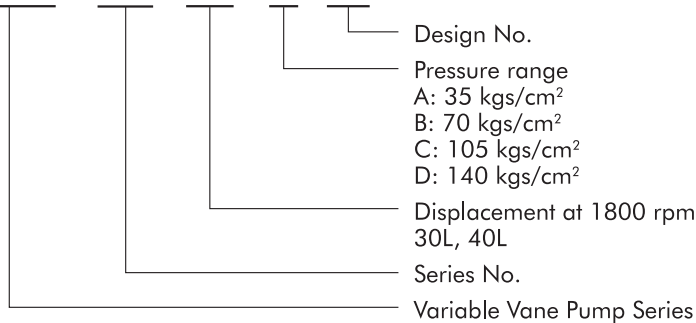
Variable Displacement Vane Pump

Features:

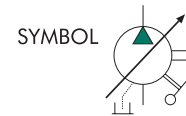
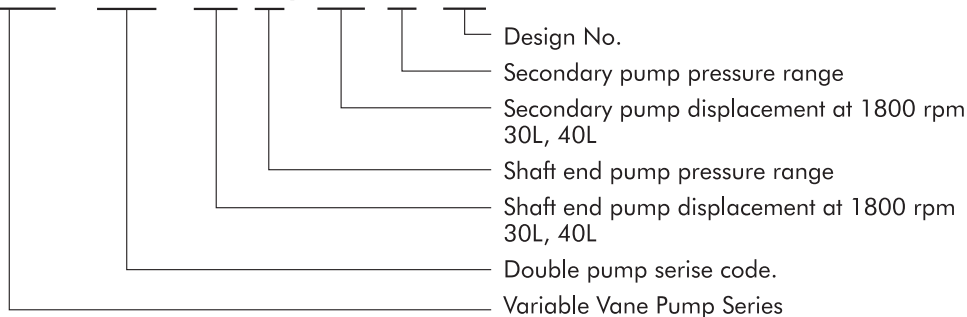
1. High efficiency, high-pressure operation
2. Extremely low vibration and noise level.
3. Instant response for precision operation.
4. Stable and sharp cut-off characteristics.
5. Sturdy structure for high efficiency and long service life.
6. Easy adjustment in handling and maintenance.

■ HOW TO ORDER

DVVP - SM - 30 - B - 10



DVVP - DM - 30-B / 30- B -10



Handling:

1. The direction of rotation is always clockwise when viewed from the shaft end..
2. Drain piping must be direct pipe up to a point that is below the tank fluid level. And the back pressure should not exceed 0.3 kgf/cm².
3. When adjusting the pressure, pressure is increased by clockwise rotation, and decreased by counterclockwise rotation.
4. When adjusting the flow rate, the flow rate is decreased by clockwise rotation, and increased by counterclockwise rotation.
5. Factory default P-Q settings: Flow rate setting =Maximum flow rate for model as indicated in the
 Pressure setting =Show as following
 A:20 kgf/cm², B: 35 kgf/cm², C: 55 kgf/cm², D: 70 kgf/cm²
 $Q=q \times n \times 10^{-3}$
 Q: No load discharge rage (L/min)
 q: Capacity (c.c./rev)
 N: Revolution speed (rpm)
6. Thrust Screw: This screw was precision adjusted at the factory, **Never touch this screw.**
7. Intial opeartion: Before operation the pump in first time, put the out port side at no-load state,and then repeat start and stop the motor to bleed all air from the inside of pump. After confirming the out-port is discharging oil, continue the no-load opeartation at least 10 minutes.
8. Hydraulic oil: Please use wear resistant hydraulic oil, ISO VG32 to 68 or equivalent.
9. Operating temperature:Within 15 to 60°C. When oil temperature is under 15°C, use a warm-up opeartion at low pressure until oil temperature is higher then 15°C.
10. Suction pressure is within -0.3 to 0.3 kgf/cm².
11. Avoid to use pully and gear to drive the shaft.
12. Use suction strainer for vane with filtering grade of 150 mesh.
13. Oil contamination must within the class of NAS 10 degree.
14. Add a bleed valve in the circuit when it is difficult to bleed air off.

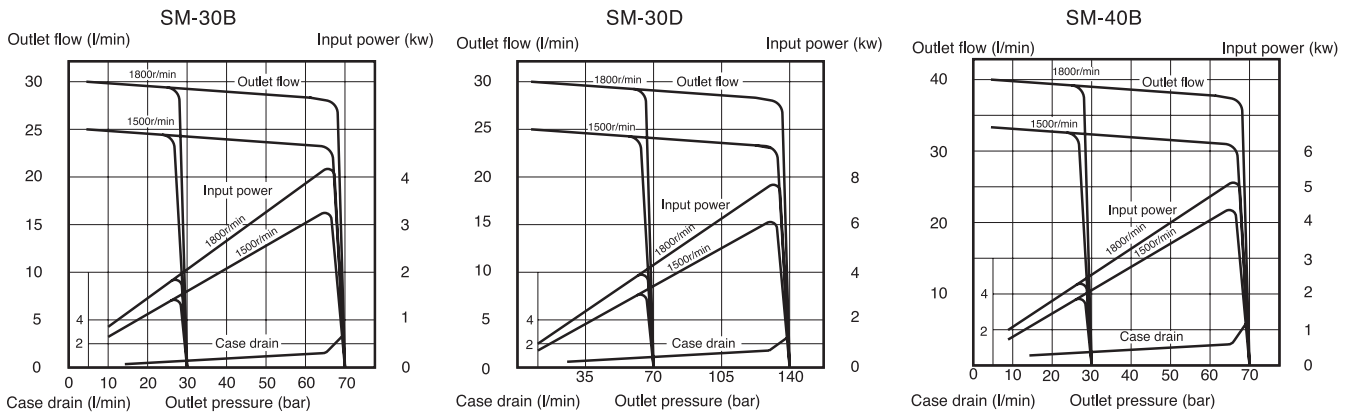


Variable Displacement Vane Pump

TECHNICAL DATA

Model No.	Delivery at no load L/min		Pressure Adj Range kgf/cm ²	Shaft Speed RPM		Max Pressure kgf/cm ²	Weight kg
	1800rpm	1500rpm		Max	Min		
SM-30A	30	25	15-35	1800	800	35	9.7
SM-30B			20-70			70	
SM-30C			50-105			105	
SM-30D			70-140			140	
SM-40A	40	35	15-35	1800	800	35	9.7
SM-40B			20-70			70	

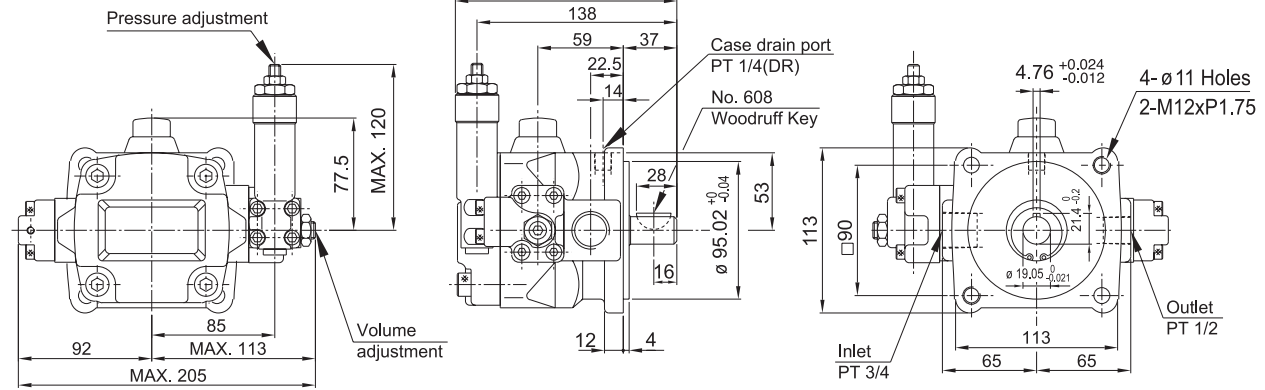
PERFORMANCE CURVE



DIMENSIONS:

UNIT: mm

SM Single pump



DM Double pump

