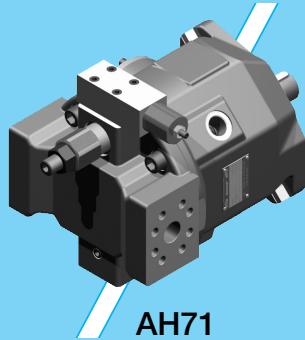
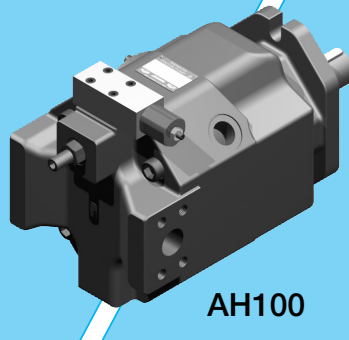


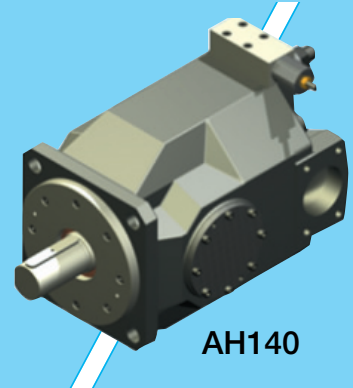
AH Series Variable Displacement Piston Pump



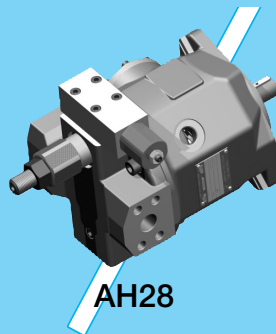
AH71



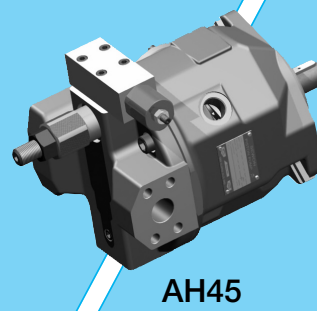
AH100



AH140



AH28



AH45

Series	KS Graphic Symbol	Geometric Displacement cm ³ /rev															Max. Operating Pres. MPa {kgf/cm ² }	Page
		0	10	20	30	40	50	60	70	80	90	100	110	120	130	140		
AH28-F-R-01-K-S-10																	30.9 {315}	A-40
AH45-F-R-01-K-S-10																		
AH71-F-R-01-K-S-10																		
AH100-F-R-01-K-S-10																		
AH140-F-R-01-K-S-10																		

30.9
{315}

A-40

Hydraulic Fluids for A series Variable Displacement Piston Pump

1. Hydraulic Fluids

Equivalent to ISO VG32 or VG46 clean petroleum-based hydraulic fluid viscosity 20 ~ 400mm²/s {cSt} and use oil to meet the temperature range of 0℃~ 60℃

2. Control of Contamination

Due caution must be paid to maintaining control contamination of the operating oil which can otherwise to breakdowns and shorten the life of the unit. Please maintain the degree of contamination within NAS Grade 10. The suction port must be equipped with at least a 100 μm mesh) reservoir type filter and the return line must have a filter of under 10 μm.

Please take notice that when use the AH series Variable Displacement Piston Pump

1. Mounting

Equivalent to ISO VG32 or VG46 clean petroleum-based hydraulic fluid viscosity 20 ~ 400mm²/s {cSt} and use oil to meet the temperature range of 0℃~ 60℃

2. Alignment of Shaft

Employ a flexible coupling whenever possible, and avoid any stress from bending or thrust. Maximum permissible misalignment is less than 0.1 mm TIR and maximum permissible mis-angle is less than 0.2 °

3. Suction Pressure

Permissible suction pressure at inlet port of the pump is between -16 and +50 kPa. For piping to the suction port, use the pipes of the same diameter as that of the specified pipe flange to be used. Make sure that the height of the pump suction port is within one meter from the oil level in the reservoir.

4. Hints on Piping

When using steel pipes for the suction or discharge ports, excessive load from the piping to the pump generates excessive noise. Whenever there is fear of excessive load, please use rubber hoses.

5. Suction Piping

In case the pump is installed above the oil level, the suction piping and suction line filter should be located lower than the pump position to prevent air in the suction line.

6. Drain Piping

Install drain piping according to the chart and ensure that pressure within the pump housing should be maintained at a normal pressure of less than 0.1 MPa and surge pressure of less than 0.5 Mpa. Length of piping should be less than 1 m, and the pipe end should be submerged in oil. In case AR16 and AR22 pump, a screw-in torque of fitting is 40 to 50 Nm. Do not apply bending and thrust torque to the fitting.

[Drain Piping Size]

Model	Fitting Size
AH28	M18 X P1.5
AH45	M22 X P1.5
AH71	M22 X P1.5
AH100	M27 X P2.0
AH140	M27 X P2.0

7. Bleeding Air

It may be necessary to bleed air from pump case and outlet line to remove causes of vibration. An air bleed valve (Model No. ST1004- ※-10 ※) is recommended for this purpose.

8. Starting

Before first starting, fill pump case with clean operating oil via the fill port. In order to avoid air blockage when first starting, adjust the control valves so that the discharged oil from the pump is returned direct to the tank or the actuator moves in a free load.

9. Setting Discharge Pressure and Delivery

At the time of shipment, the unit has been preset to maximum delivery and minimum discharge pressure. Adjust the preset delivery and pressure to meet your system requirements.

[Adjustment of Pressure]

Turning the adjustment screw clockwise, increases pressure. Volume adjusted by each full turn of the pressure adjustment screw.

[Volume adjusted by each full turn of the pressure adjustment screw]

Model Numbers	Adjustable pressure with each full turn of the adjustment screw MPa {kgf/cm ² }
AH28	5.5 {56.4}
AH45	
AH71	
AH100	
AH140	

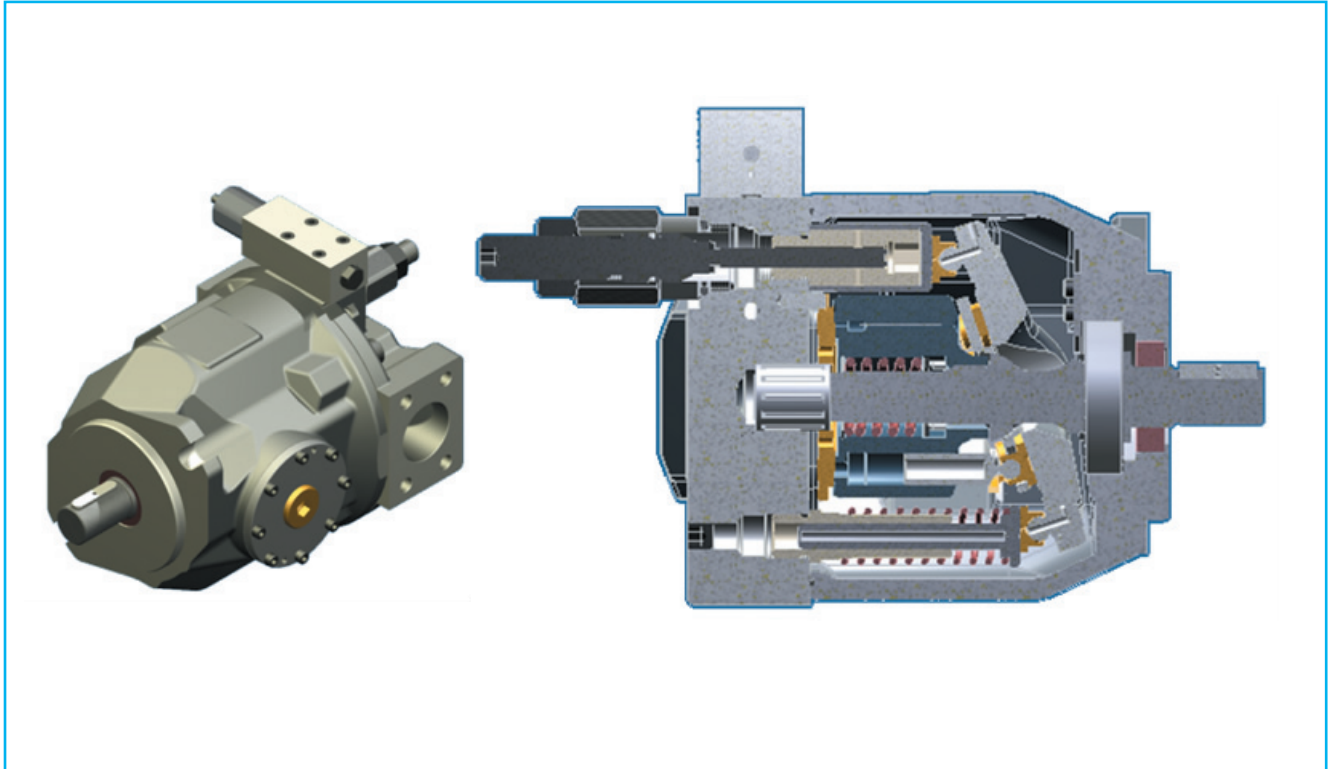
[Adjustment of Delivery]

Turning the delivery adjustment screw clockwise, decreases delivery. The minimum adjustable flow and adjustable volume of each full turn of the delivery adjustment screw.

[The minimum adjustable flow and adjustable volume of each full turn of the delivery adjustment screw]

Model Numbers	Adjustable volume with each full turn of the adjustment screw cm ³ /rev	Minimum adjustment flow cm ³ /rev
AH28	2.6	13.1
AH45	3.5	21.5
AH71	5.2	33.8
AH100	6.4	50
AH140	6.6	0

AH Series Variable Displacement Piston Pump



■ Feature

● High Pressure

Nominal Pressure : 27.5 MPa {280 kgf/cm²}

Max Pressure : 30.9 MPa {315 kgf/cm²}

Peak Pressure : 34.3 MPa {350 kgf/cm²}

In time, the percentage of load within 5 seconds 30.9 MPa {315 kgf/cm²} can be applied to the areas.

● Return Guide

Inflow discharge pressure control returns to the guide structure has been improved.

● High Rotation

Max. 3000 r/min {rpm} (AH28)

Max. 2600 r/min {rpm} (AH45)

Max. 2200 r/min {rpm} (AH71)

Max. 2000 r/min {rpm} (AH100)

Max. 1800 r/min {rpm} (AH140)

● Yoke Support High Power Journal Bearing

Compared to the conventional swash plate bearing support system increases the rigidity of the housing and at the same time be significantly reduced by the noise.

With the use of high-strength brass was gay and abrasion resistance is improved.

● Pressure Compensator Valve

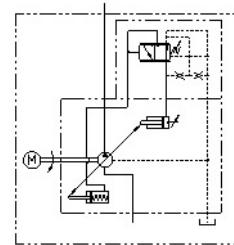
Orifice pressure compensated control valve mounted in the circuit change and a full cut-off time has been improved durability by minimizing Shock.

AH Series Variable Displacement Piston Pumps

- Single Pump, Pressure Compensator Type



KS Graphic Symbol



Ratings

Model Code	Geometric Displacement cm ³ /rev	Minimum Adj. Flow cm ³ /rev	Operating Pres. MPa {kgf/cm ² }		Shaft Speed Range r/min {rpm}		Mass. kg
			Rated	Intermittent	Operating	Max	
AH28-F-R-01-K-S-10	28	13.1	27.5 {280}	34.3 {350}	1500	3000	18
AH45-F-R-01-K-S-10	45	21.5	27.5 {280}	34.3 {350}	1500	2600	23
AH71-F-R-01-K-S-10	71	33.3	27.5 {280}	34.3 {350}	1500	2200	35
AH100-F-R-01-K-S-10	100.3	50	27.5 {280}	34.3 {350}	1500	2000	49
AH140-F-R-01-K-S-10	140	0	27.5 {280}	34.3 {350}	1500	1800	70

- ★1. When you use beyond the rated pressure is limited to the terms of use. In time, the percentage of load within 5 seconds 30.9 MPa {315 kgf/cm²} can be applied to the areas to. This condition is different depending on the environment of use, please contact SC for details.
- ★2. Speed up to the suction port pressure 0 kPa {0 kgf/cm²} revolutions is one of the.

Model Number Designation

AH28	-F	-R	-01	-K	-S	-10
Series Number	Mounting	Direction of Rotation	Control Type	Pres.Adg.Range MPa {kgf/cm ² }	Direction of Piping	Design Number
AH28(28cm ³ /rev)	F : Flange Mtg.	(Viewed from Shaft End) R : Clockwise (Standard)	01 : Pressure Compensator	K : 7 ~ 30.9 {71.4 ~ 315}	S : Side Port	10
AH45(45cm ³ /rev)						
AH71(71cm ³ /rev)						
AH100(100.3cm ³ /rev)						
AH140(140cm ³ /rev)						

- ★1. Available to supply pump with anti-clockwise rotation. Consult Sewon for details.

Pipe Flange Kits

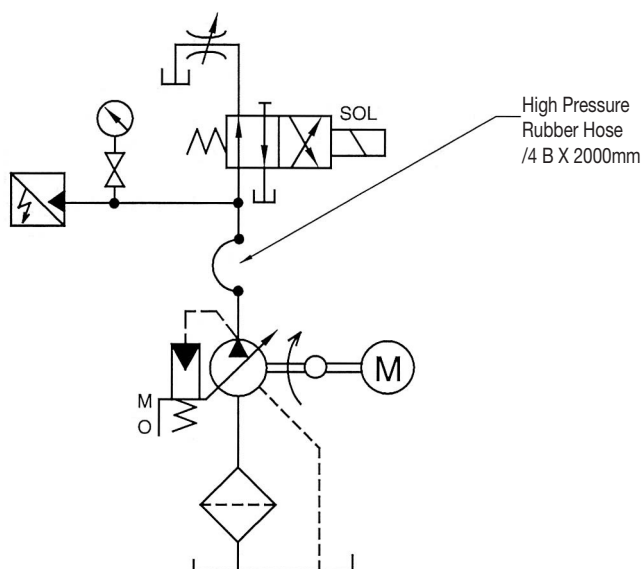
This pump does not include the port flange. When using the flange if you need to produce a separate table below.

Pump Model Numbers	Name of Port	Port Specifications
AH28-F-R-01-K-S-10	Suction	SAE 1 1/4 " (Standard Pressure Series)
	Discharge	SAE 3/4 " (Standard Pressure Series)
AH45-F-R-01-K-S-10	Suction	SAE 1 1/2 " (Standard Pressure Series)
	Discharge	SAE 1 " (Standard Pressure Series)
AH71-F-R-01-K-S-10	Suction	SAE 2 " (Standard Pressure Series)
	Discharge	SAE 1 1/4 " (Standard Pressure Series) , SAE 1 " (High Pressure Series)
AH100-F-R-01-K-S-10	Suction	SAE 2 1/2 " (Standard Pressure Series)
AH140-F-R-01-K-S-10	Discharge	SAE 1 1/4 " (Standard Pressure Series)

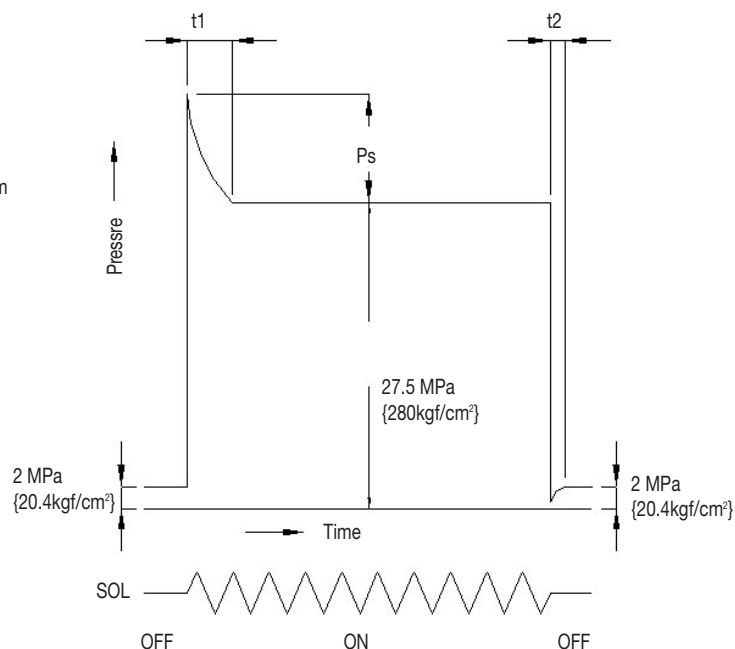
Response Characteristics Response Characteristics Change in Accordance with Circuits and Operating Conditions.

Test Circuit and Conditions

Circuit



Result of Measurement



Conditions

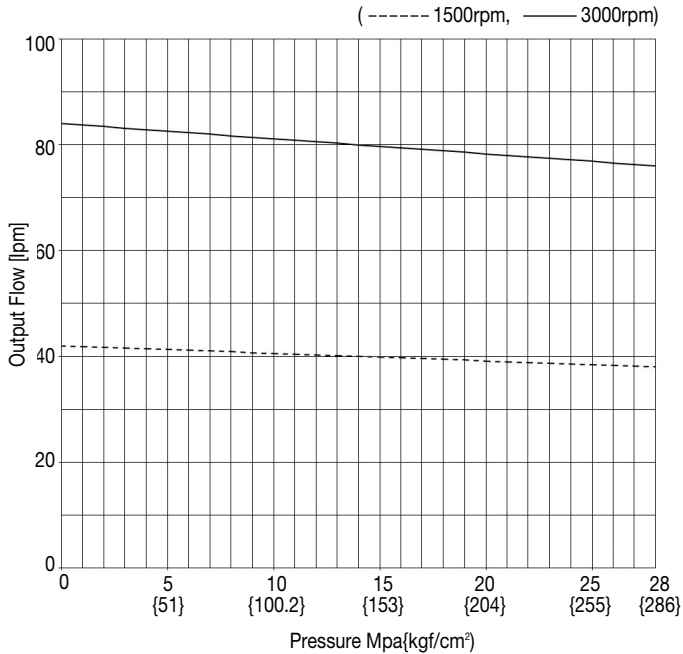
Drive Speed: 1500 r/min {rpm}
 Hydraulic Fluid : Equivalent to ISO VG32
 Temperature : 40 °C (Viscosity 32 mm²/s {cSt})

Model	Response Time ms		Overshoot Pressure Ps MPa {kgf/cm²}
	t1	t2	
AH28	100	200	9.8 {100}
AH45	200	300	9.8 {120}
AH71	200	300	9.8 {120}
AH100	300	400	9.8 {140}
AH140	300	400	9.8 {140}

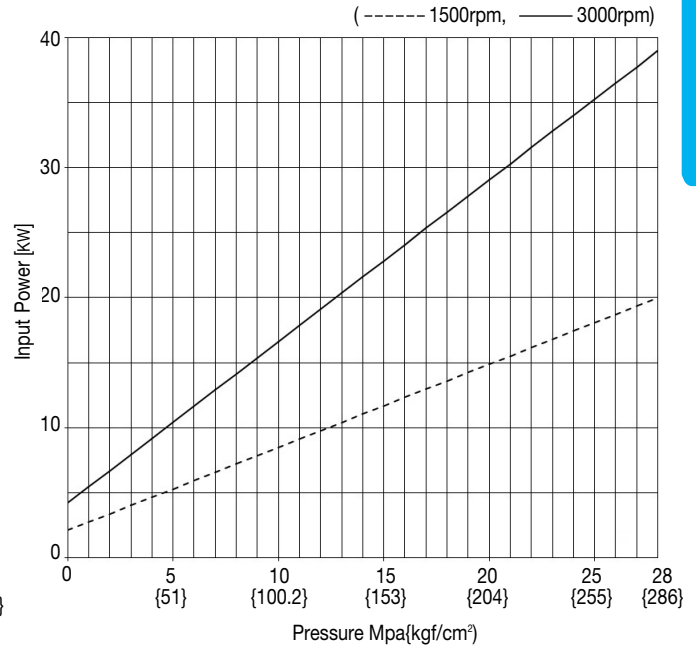
AH 28 Characteristics

Typical performance characteristics at viscosity 32mm²/s(ISO VG 32 Oil, 50 °C)

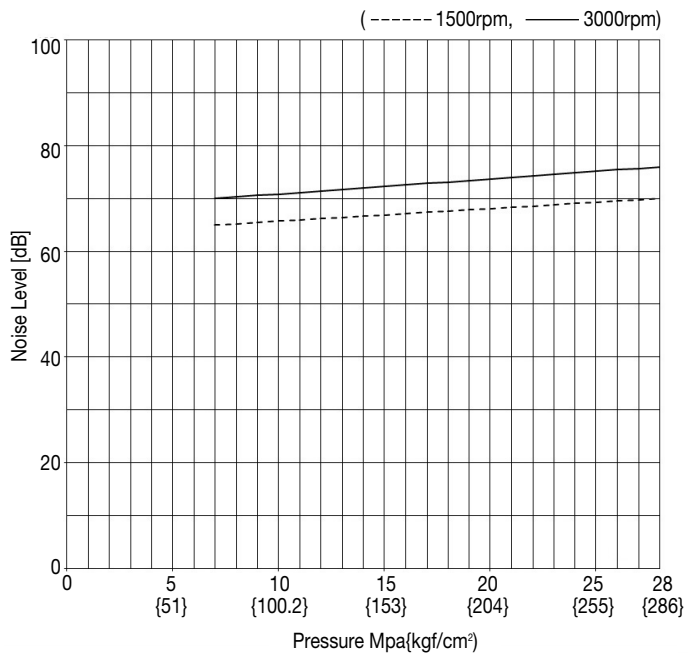
Output Flow



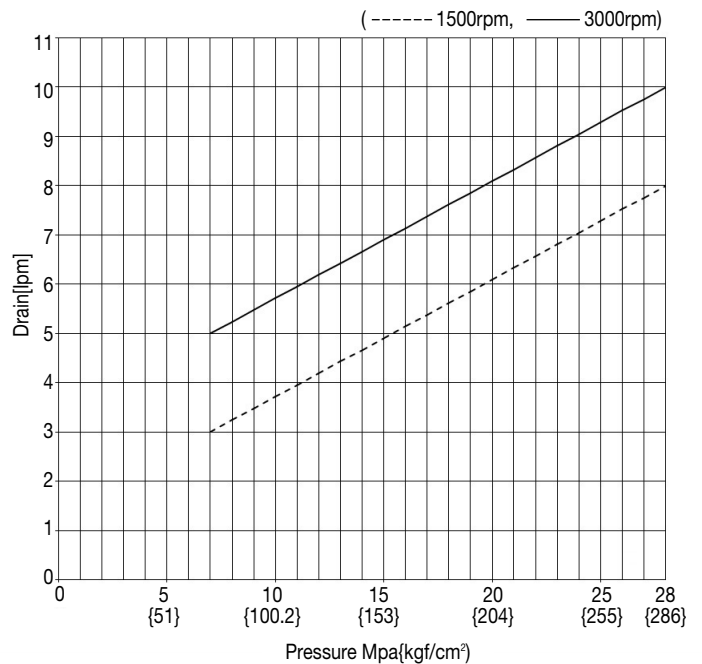
Input Power



Noise Level



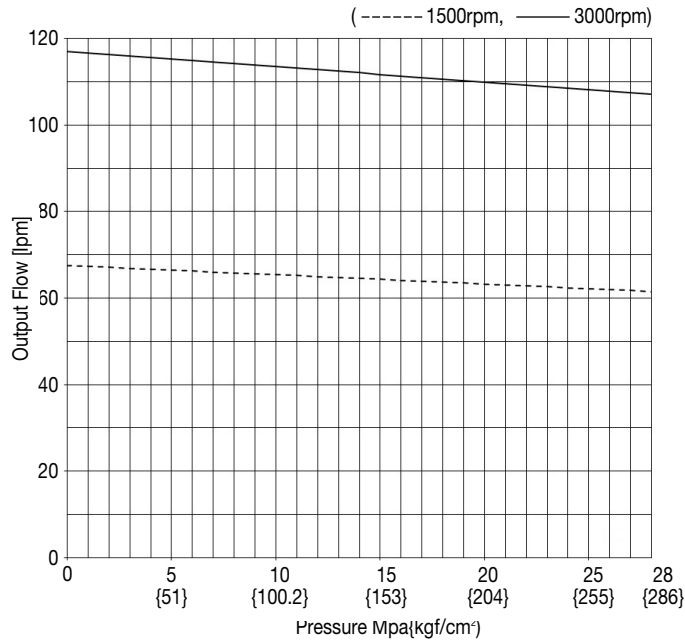
Drain



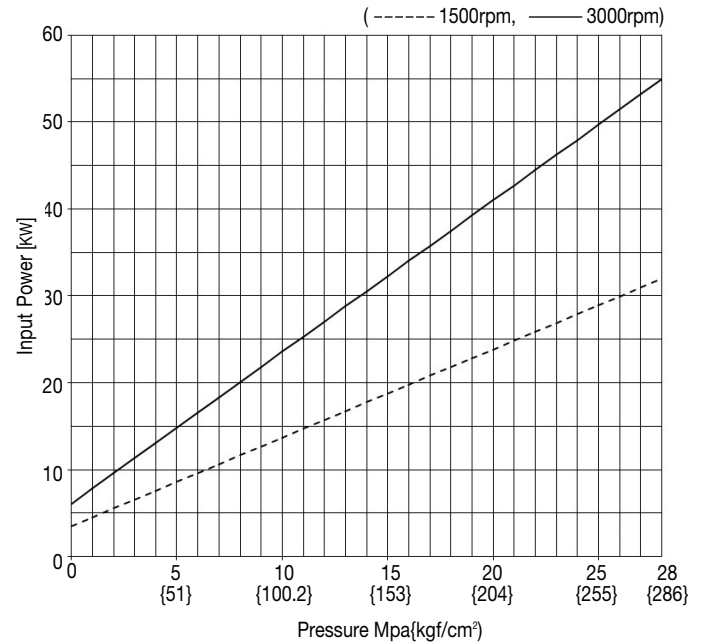
AH 45 Characteristics

Typical performance characteristics at viscosity 32mm²/s(ISO VG 32 Oil, 50 ℃)

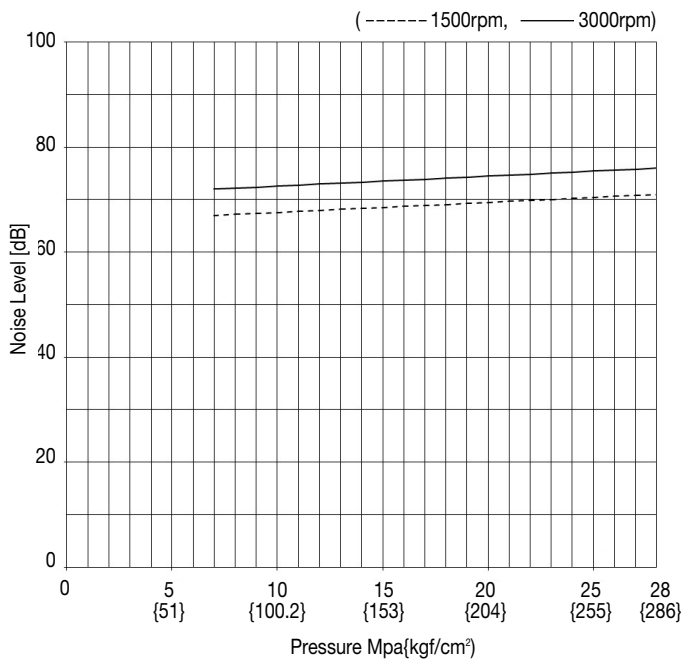
Output Flow



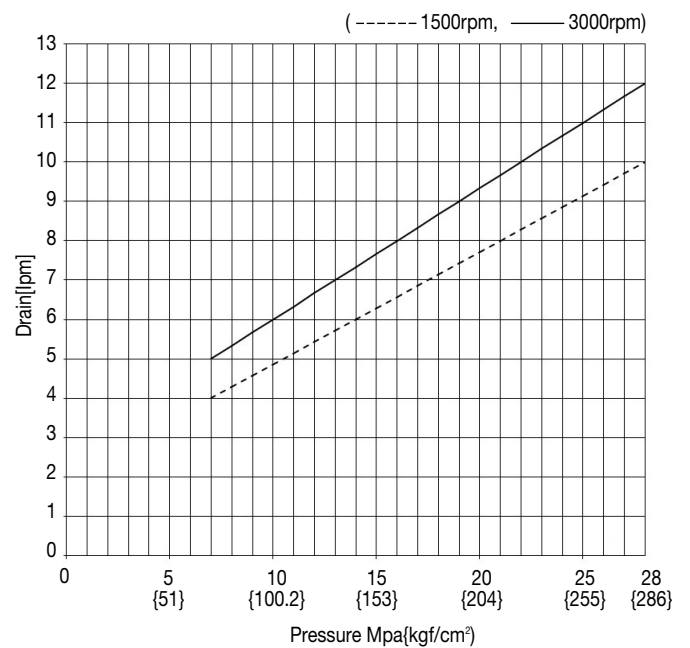
Input Power



Noise Level



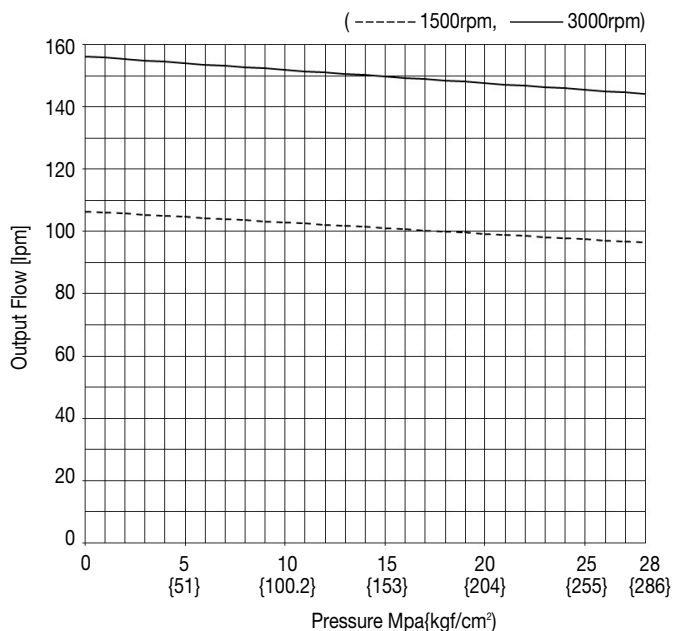
Drain



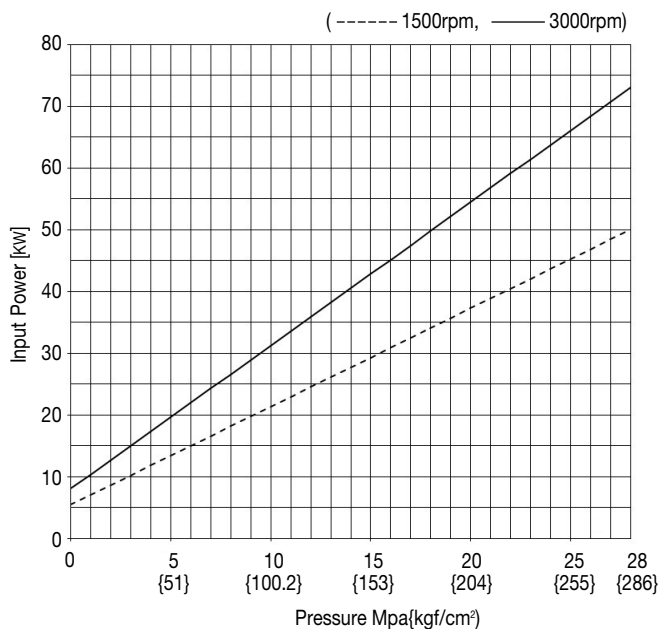
AH 71 Characteristics

Typical performance characteristics at viscosity 32mm²/s(ISO VG 32 Oil, 50℃)

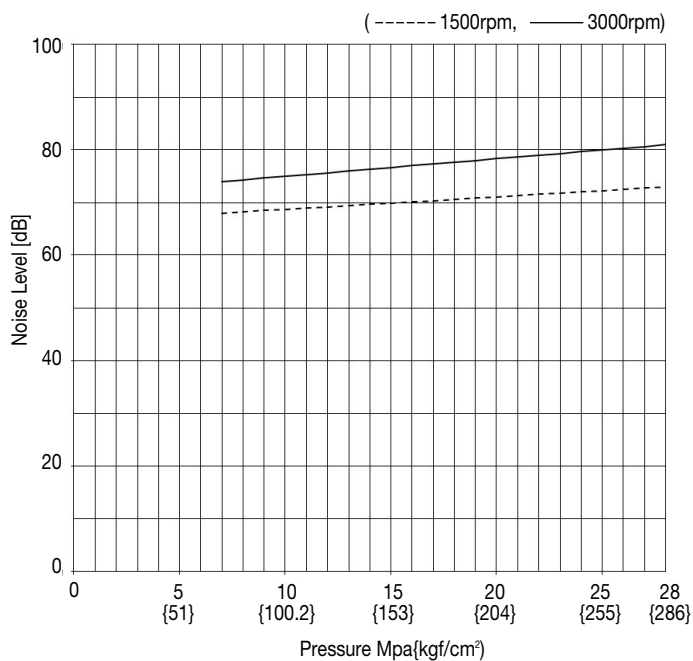
Output Flow



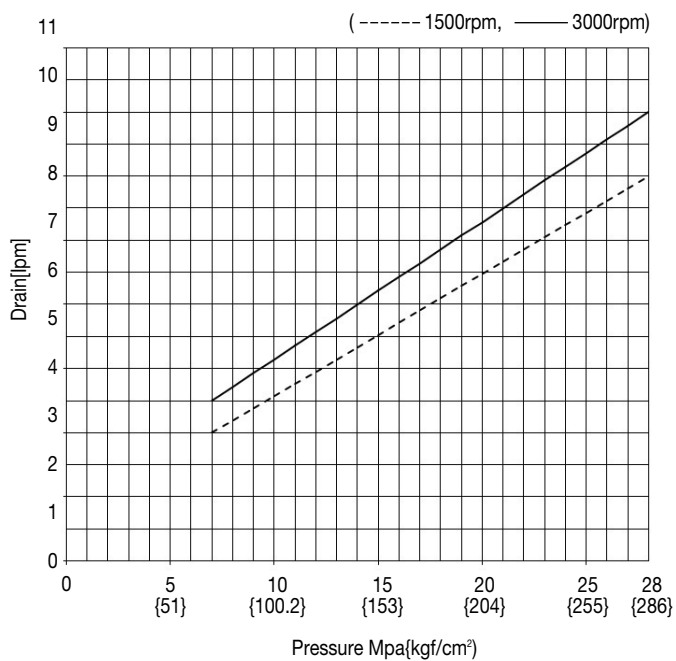
Input Power



Noise Level



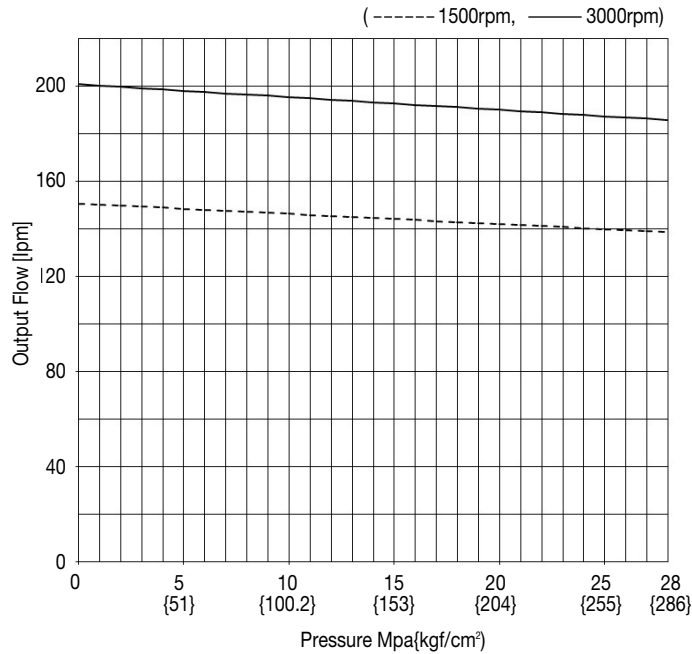
Drain



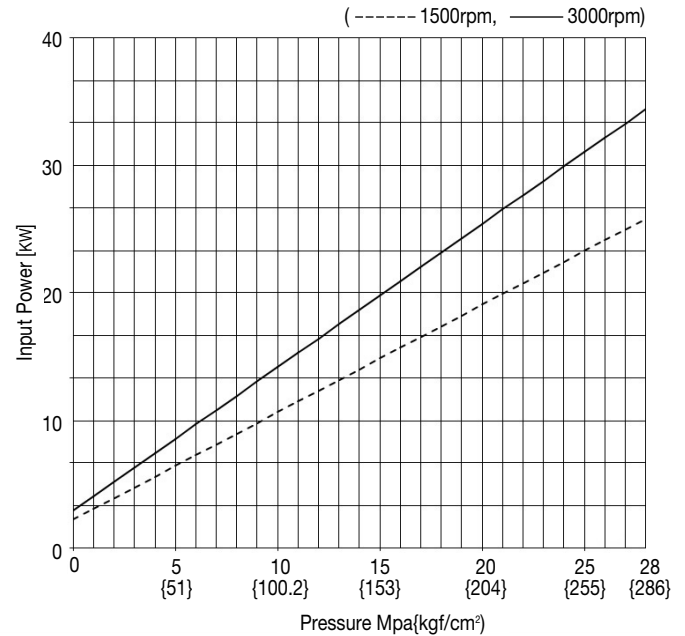
AH 100 Characteristics

Typical performance characteristics at viscosity 32mm²/s(ISO VG 32 Oil, 50℃)

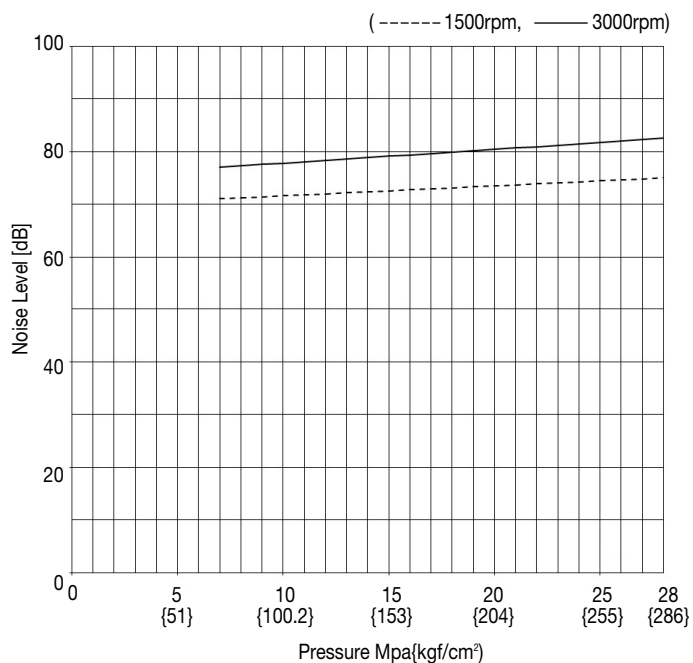
Output Flow



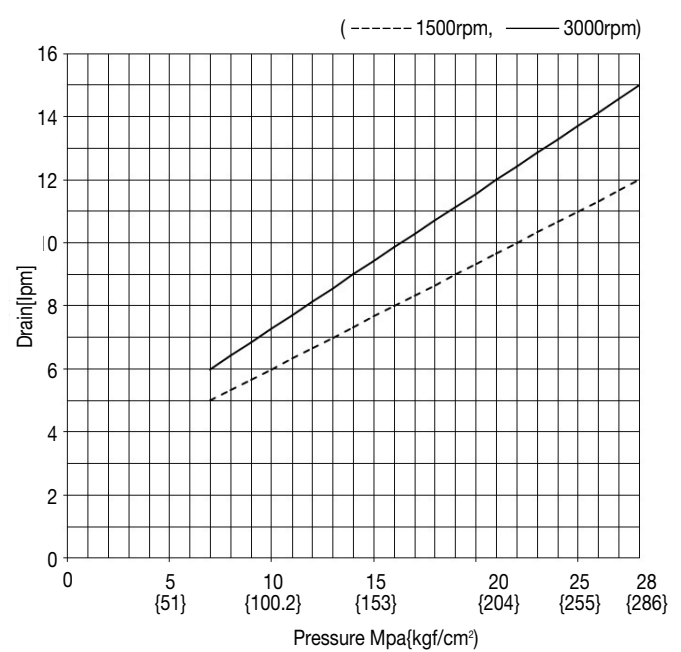
Input Power



Noise Level



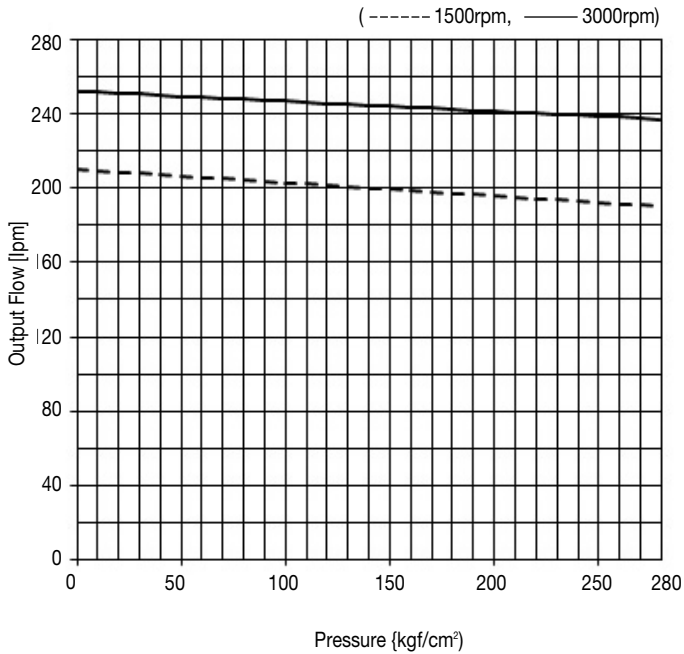
Drain



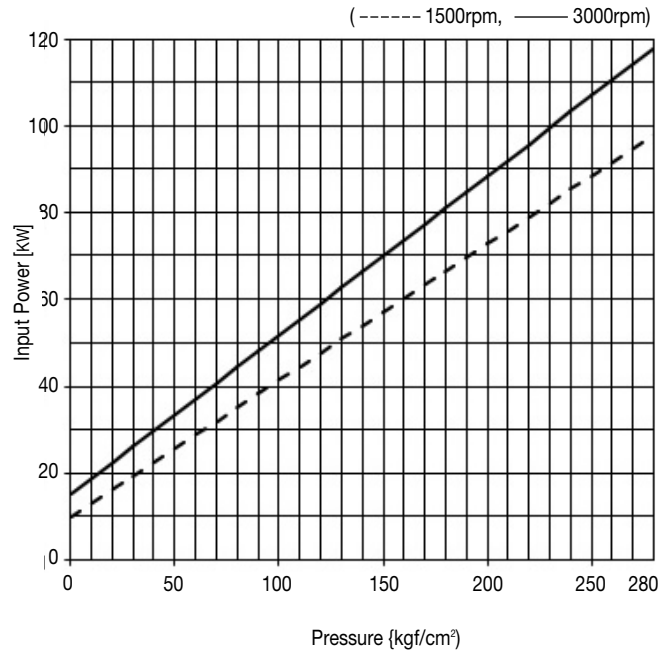
AH 140 Characteristics

Below characteristics is typical performance at viscosity 32mm²/s(ISO VG 32 Oil, 50 °C)

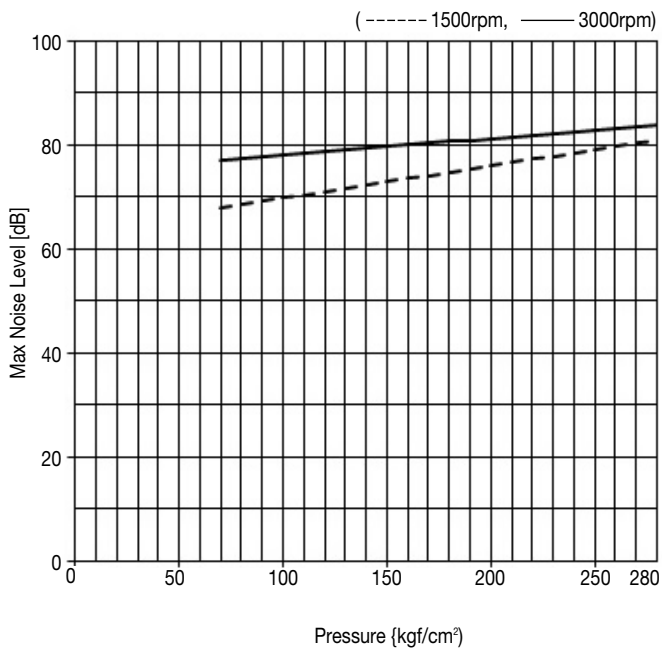
Performance Characteristic Curve



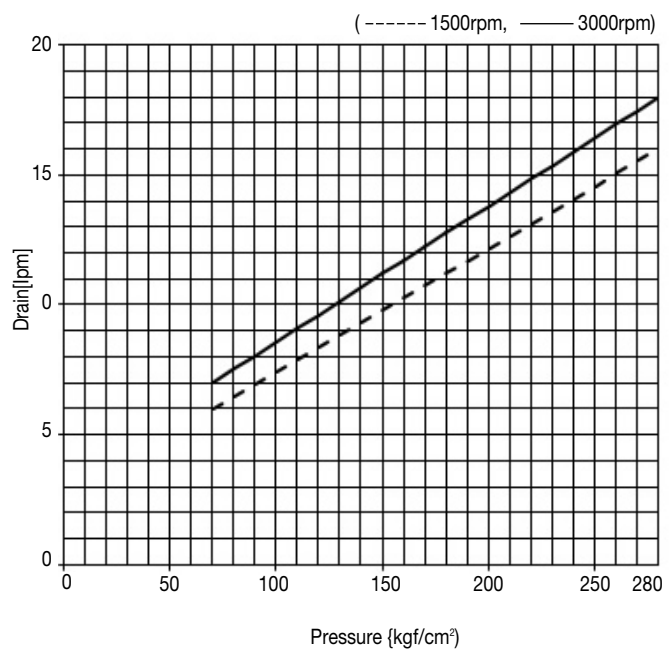
Input Power



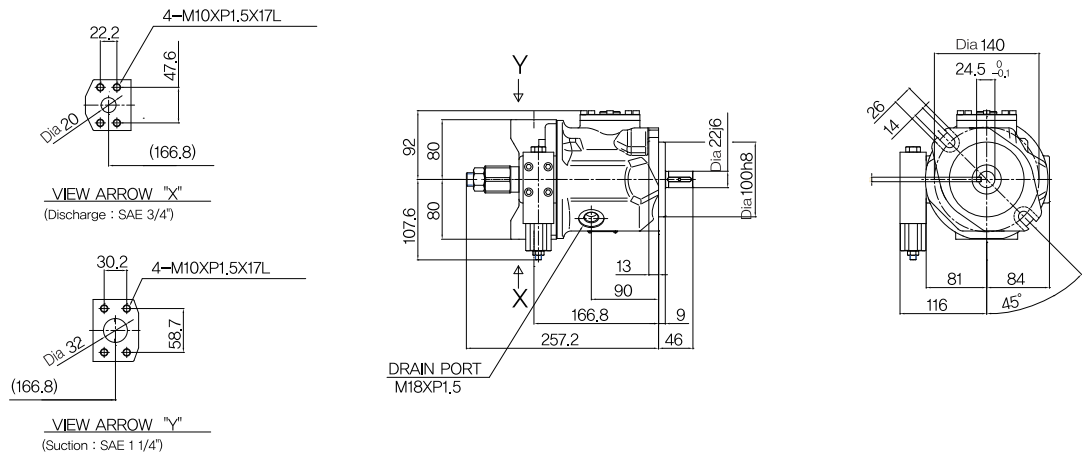
Noise



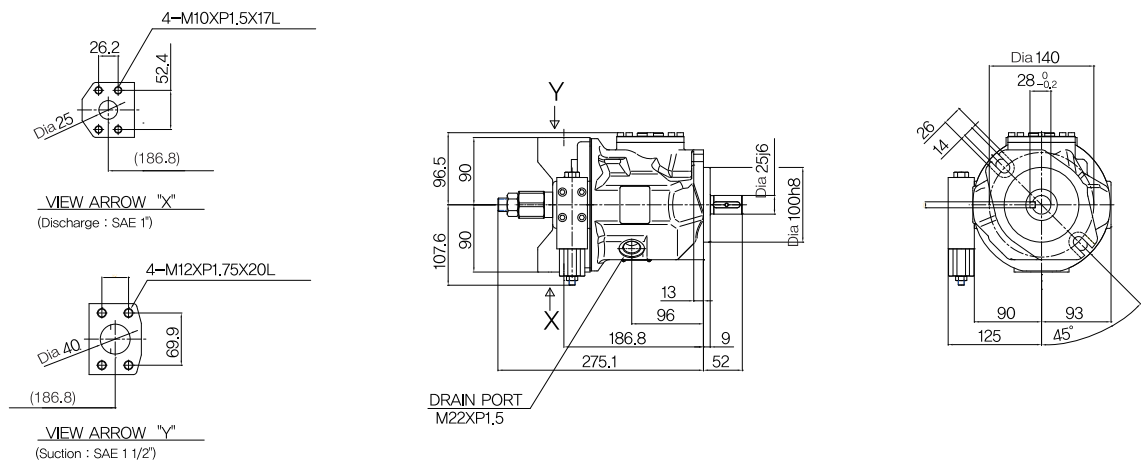
Drain



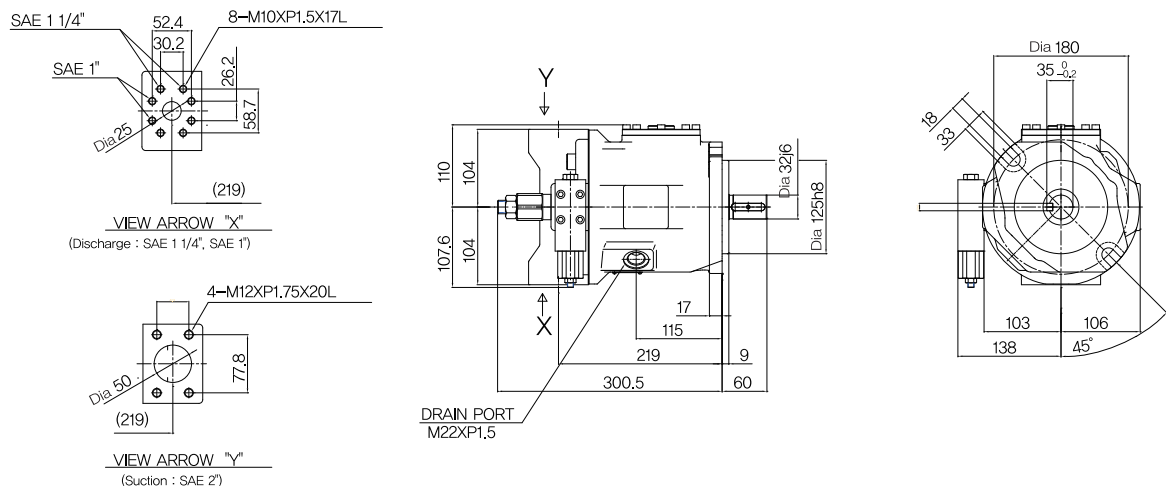
AH28-F-R-01-K-S-10 (Flange Mtg.)



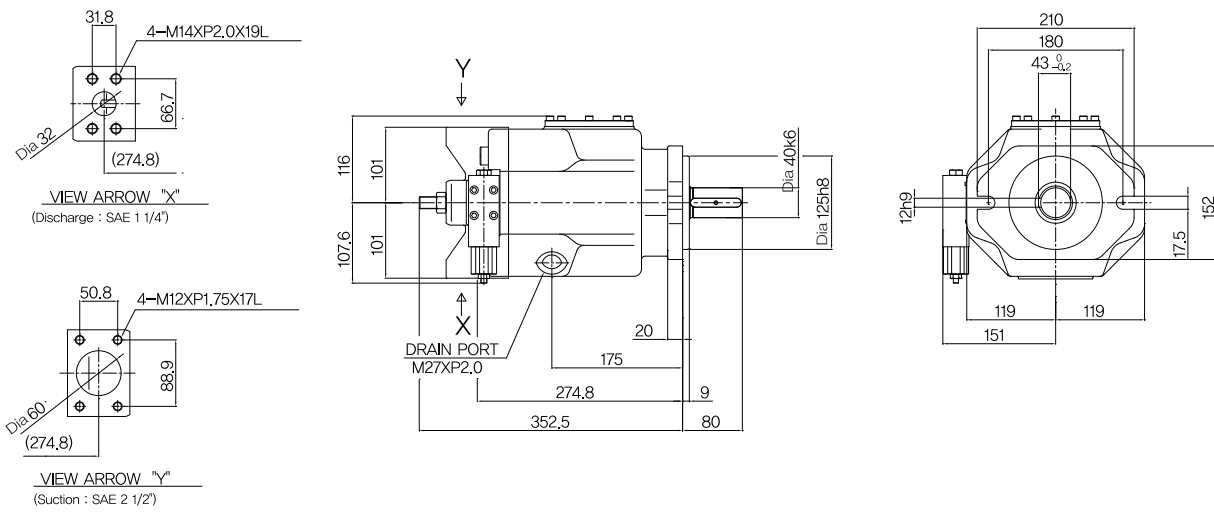
AH45-F-R-01-K-S-10 (Flange Mtg.)



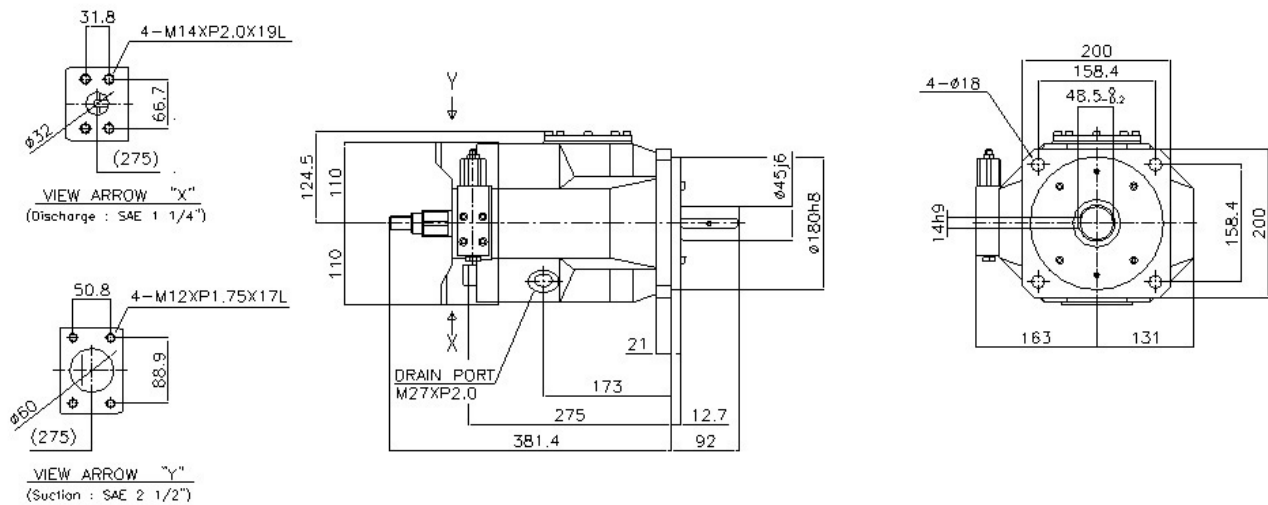
AH71-F-R-01-K-S-10 (Flange Mtg.)



AH100-F-R-01-K-S-10 (Flange Mtg.)



AH140-F-R-01-K-S-10 (Flange Mtg.)



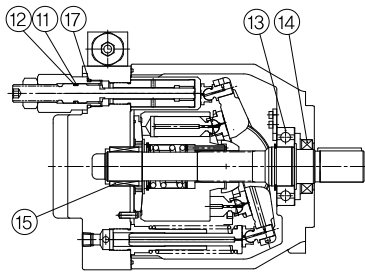


CAUTION

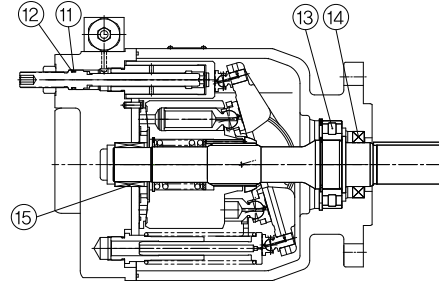
When making replacement of seals or bearing, please do it carefully after reading through the relevant instructions in the Operator's Manual.

■ Lis of Seals & Bearings

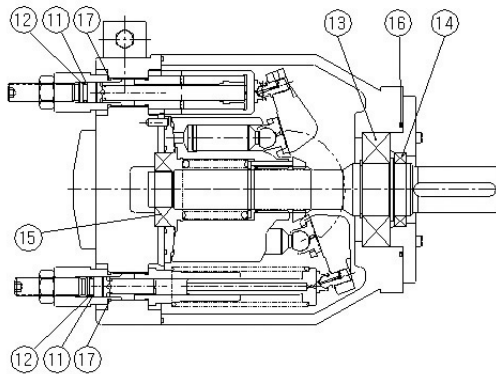
AH28/45/71-F-R-01-K-S-10



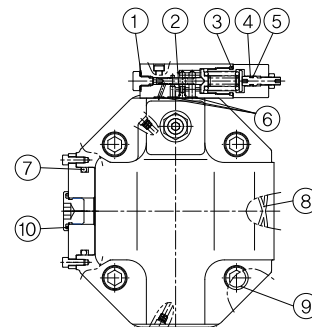
AH100-F-R-01-K-S-10



AH140-F-R-01-K-S-10



AH28/45/71/100-F-R-01-K-S-10



No.	Part List	Part Numbers					Qty.
		AH28	AH45	AH71	AH100	(AH140)	
1	Seal Washer	W10 (10X18X1.2)					1 (1)
2	O-Ring	SO-NB-P7					1 (1)
3	O-Ring	SO-NB-P24					1 (1)
4	O-Ring	SO-NB-P7					1 (1)
5	Back-up Ring	SO-BB-P7					1 (1)
6	O-Ring	SO-NA-S8					3 (3)
7	O-Ring	SO-NA-P50A	SO-NA-P60	SO-NA-P70	SO-NA-P80	SO-NA-P80	1 (1)
8	O-Ring	SO-NA-S150	SO-NA-A165	SO-NA-A170	SO-NA-A172	SO-NA-A175	1 (1)
9	O-Ring	JASO-1013A	JASO-1015A	JASO-1017A	JASO-1019A	SO-NB-P21	4 (4)
10	O-Ring	SO-NA-P20	SO-NA-P25		SO-NA-P30		1 (1)
11	O-Ring	SO-NB-P16					1 (2)
12	Back-up Ring	SO-BB-P16					1 (2)
13	Bearing	NUP 206E	NUP 206E	NUP208E	NUP 210E	NUP310E	1 (1)
14	Oil-Seal	AP1338F0	AP1563J4	AP2085G	TCN AP2668	TCN AP2864	1 (1)
15	Bearing	HMK 2030	HMK 2530	HMK3030	HMK 3530	NUP207E	1 (1)
16	O-Ring	-	-	-	-	SO-NB-G125	0 (1)
17	O-Ring	SO-NB-P24	SO-NB-P24	SO-NB-P24	SO-NB-P24	SO-NB-P24	1 (2)