



Model Number Designation

A3H16	-F	R	01	K	K	-10	*
Series Number	Mounting	Direction of Rotation	Control Type	Pres. Adj. Range MPa (PSI)	Shaft Extension *2	Design Number	Design Std.
A3H16 (16.3 cm ³ /rev)	F: Flange Mtg.	(Viewed from Shaft End)	01: Pressure Compensator Type	K: 5 - 35 (725 - 5080)	K : Keyed Shaft	10	Refer to ★3
A3H37 (37.1 cm ³ /rev)						10	
A3H56 (56.3 cm ³ /rev)						10	
A3H71 (70.7 cm ³ /rev)	L: Foot Mtg.	R: Clockwise *1 (Normal)				10	
A3H100 (100.5 cm ³ /rev)	F: Flange Mtg.					10	
A3H145 (145.2 cm ³ /rev)	L: Foot Mtg. *4				K : Keyed Shaft 44.45mm (1.75 IN.) Dia. K1: Keyed Shaft *5 50.8mm (2.0 IN.) Dia.	10	
A3H180 (180.7 cm ³ /rev)						10	

- ★1. Available to supply pump with anti-clockwise rotation. Consult Yuken for details.
- ★2. We can also supply spline-type shaft extension. Consult Yuken for details.
- ★3. Design Standards: None Japanese Standard "JIS"
80 European Design Standard
950 N. American Design Standard (Applicable only for A3H16/37/56/71)
954 N. American Design Standard (Applicable only for A3H100/145/180)
- ★4. Mounting type "L" is not available for N. American Design Standard.
- ★5. Shaft extension "K1" is applicable only for N. American Design Standard.

Pipe Flange Kits

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

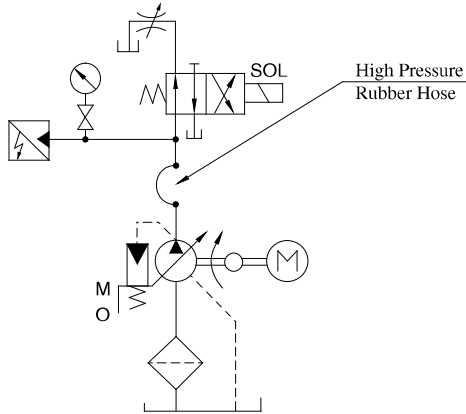
Pump Model Numbers	Name of Port	Threaded Connection			Socket Welding		Butt Welding	
		Japanese Std. "JIS"	European Design Std.	N. American Design Standard	Japanese Std. "JIS" & European Design Std.	N. American Design Standard	Japanese Std. "JIS" & European Design Std.	N. American Design Standard
A3H16-*R01	Suction	F5-08-A-10	F5-08-A-1080	—	F5-08-B-10	F5-08-B-1090	F5-08-C-10	F5-08-C-1090
	Discharge	F6-06-A-M-10 *1	F6-06-A-M-1080	—	F6-06-B-M-10	F6-06-B-U-1090	—	—
A3H37-*R01	Suction	F5-10-A-10	F5-10-A-1080	—	F5-10-B-10	F5-10-B-1090	F5-10-C-10	F5-10-C-1090
	Discharge	F6-08-A-M-10 *1	F6-08-A-M-1080	—	F6-08-B-M-10	F6-08-B-U-1090	—	—
A3H56-*R01	Suction	F5-12-A-10	F5-12-A-1080	—	F5-12-B-10	F5-12-B-1090	F5-12-C-10	F5-12-C-1090
	Discharge	F6-08-A-M-10 *1	F6-08-A-M-1080	—	F6-08-B-M-10	F6-08-B-U-1090	—	—
A3H71-*R01	Suction	F5-16-A-10	F5-16-A-1080	—	F5-16-B-10	F5-16-B-1090	F5-16-C-10	F5-16-C-1090
	Discharge	F6-10-A-M-10 *1	F6-10-A-M-1080	—	F6-10-B-M-10	F6-10-B-U-1090	—	—
A3H100-*R01 A3H145-*R01	Suction	F5-20-A-10	F5-20-A-1080	—	F5-20-B-10	F5-20-B-1090	F5-20-C-10	F5-20-C-1090
	Discharge	F6-10-A-M-10 *1	F6-10-A-M-1080	—	F6-10-B-M-10	F6-10-B-U-1090	—	—
A3H180-*R01	Suction	F5-24-A-10	F5-24-A-1080	—	F5-24-B-10	F5-24-B-1090	—	—
	Discharge	F6-12-A-M-10 *1	F6-12-A-M-1080	—	F6-12-B-M-10	F6-12-B-U-1090	—	—

- ★1. These flanges are with tapered threaded port, maximum pressure is restricted at 31 MPa (4500 PSI).
- ★2. As dimensions of the surface of pipe flanges are conformed to the SAE standards mentioned below, the pipe flanges conforming to the SAE standards can be used.
 - Suction Port: SAE 4 Bolt Split Flange (Standard Pressure Series)
 - Discharge Port: SAE 4 Bolt Split Flange (High Pressure Series)
- Details of pipe flange kits are shown on page 824 & 829.

Response Characteristics Change in Accordance with Circuits and Operating Conditions.

● **Test Circuit and Conditions**

● **Circuit**



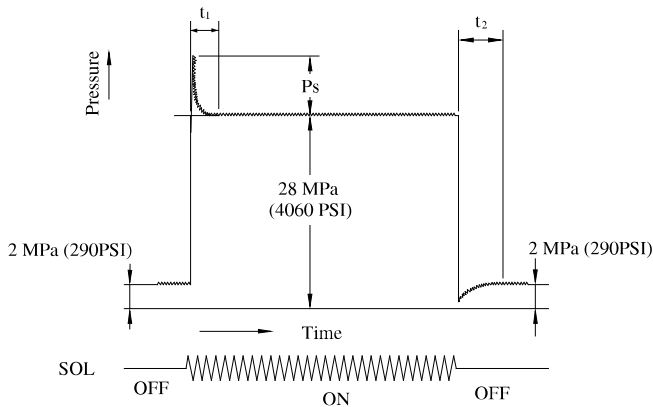
● **Conditions**

Drive Speed: 1500 r/min
 Hydraulic Fluid: ISO VG32 Oil
 Oil Temperature: 40 °C (104 °F) [Viscosity 32 mm²/s (150 SSU)]

● **Size of High Pressure Rubber House**

Model	High Pressure Rubber Housea
A3H16	3/4B × 1500 mm (4.9 ft.)
A3H37/56/71	3/4B × 2000 mm (6.6 ft.)
A3H100/145	1-1/4B × 2000 mm (6.6 ft.)
A3H180	1-1/4B × 2500 mm (8.2 ft.)

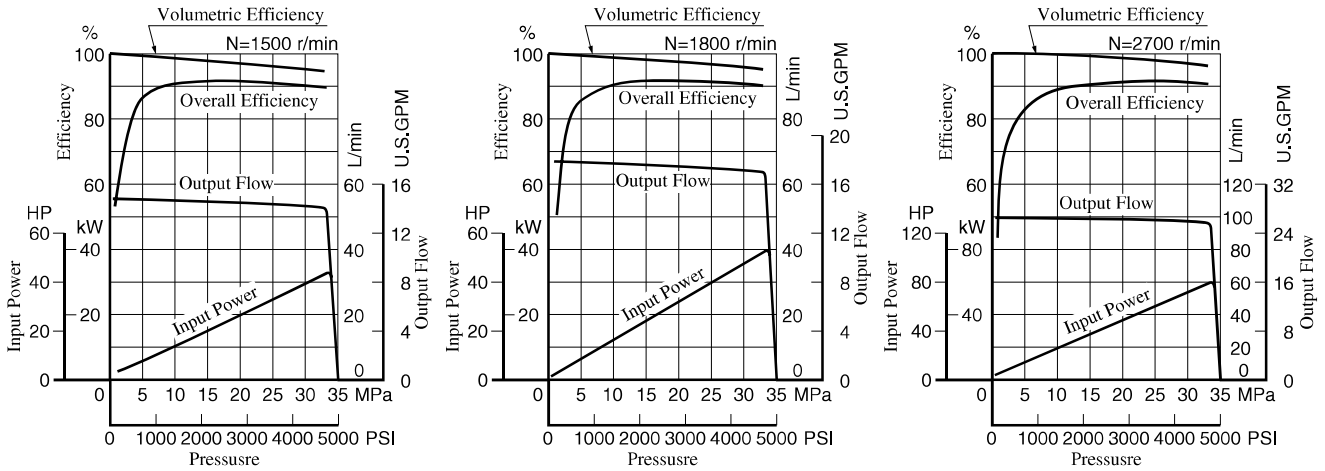
● **Result of Measurement**



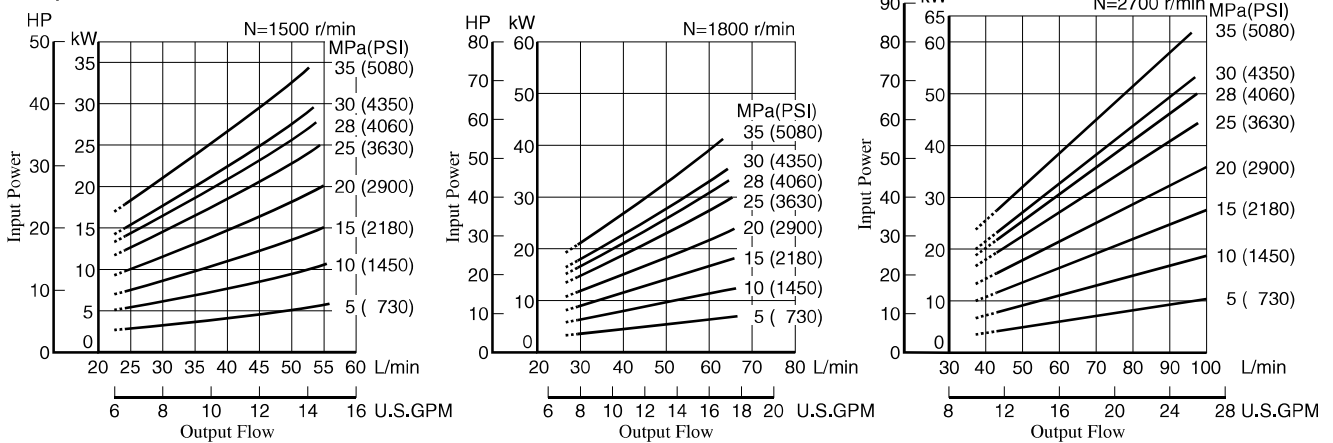
Model	Response Time ms		Ps Overshoot Pres. MPa (PSI)
	t ₁	t ₂	
A3H 16	30	140	2.5 (363)
A3H 37	40	80	3.5 (508)
A3H 56	50	90	7.5 (1088)
A3H 71	50	140	10.0 (1450)
A3H100	70	170	11.0 (1595)
A3H145	70	180	12.5 (1813)
A3H180	70	220	12.0 (1740)

Typical Performance Characteristics of Type "A3H37" at Viscosity 32 mm²/s (150 SSU) [ISO VG32 oils, 40°C (104°F)]

Performance Characteristic Curve

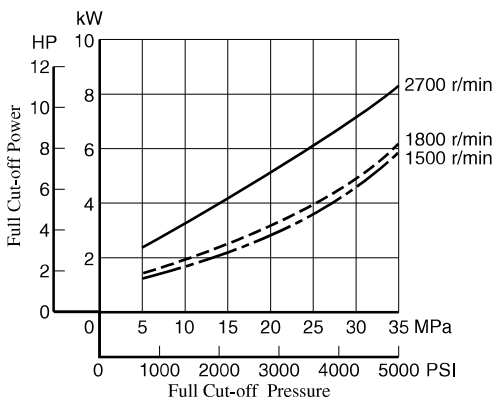


Input Power

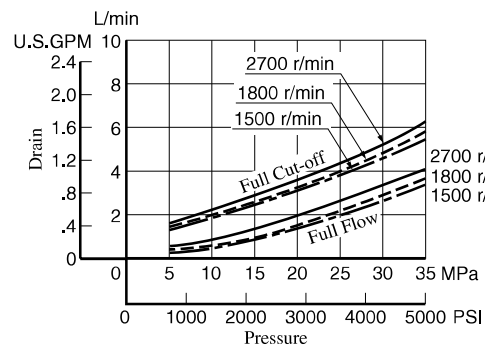


Note) The dotted line in the graph indicates less than minimum adjustable flow.

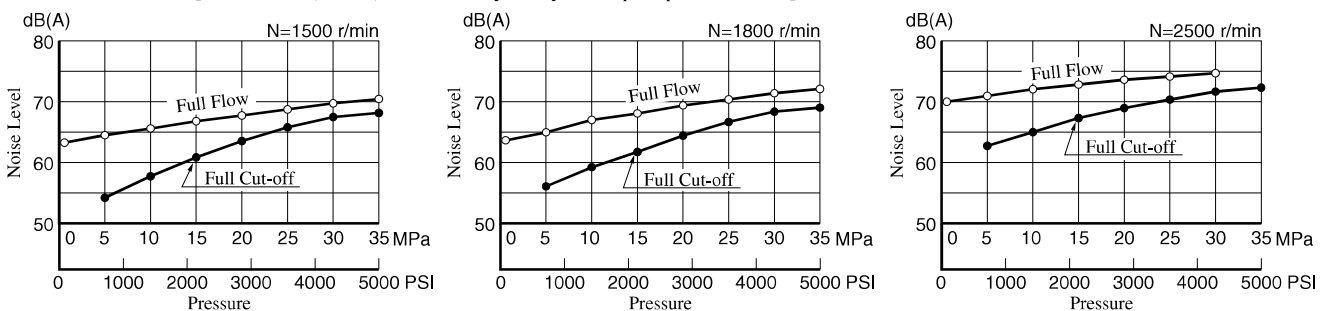
Full Cut-off Power



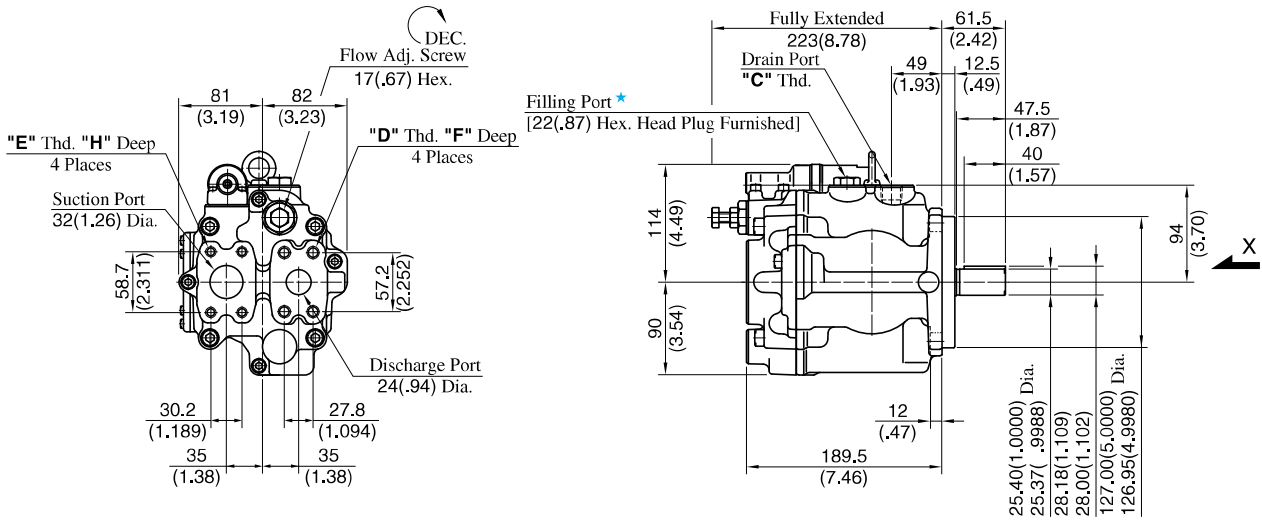
Drain



Noise Level [One metre (3.3 ft.) horizontally away from pump head cover]

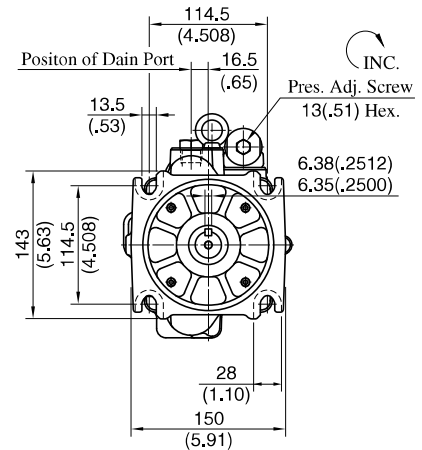


Flange Mtg.: A3H37-FR01KK-10/1080/10950



★ Install the pump so that the "Filling port" is at the top.

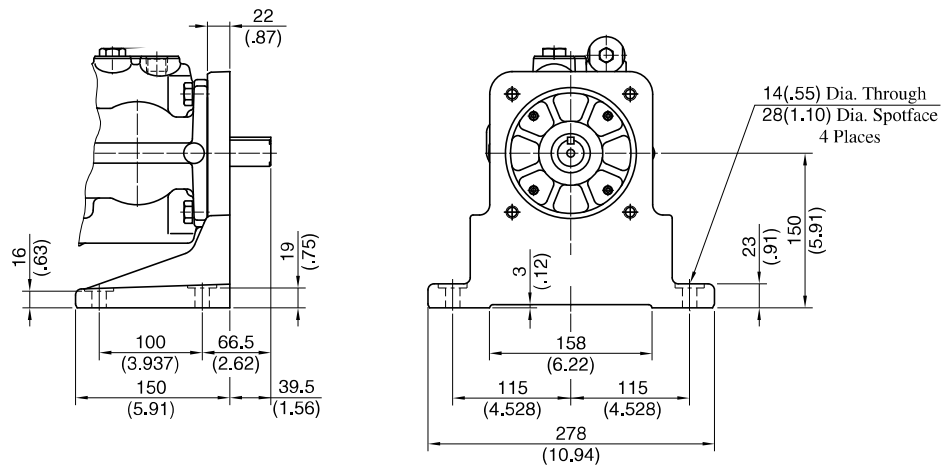
Model Numbers	"C" Thd.	"D" Thd.	"E" Thd.	F mm(IN.)	H mm(IN.)
A3H37-FR01KK-10	Rc 1/2	M12	M10	22 (.87)	18 (.71)
A3H37-FR01KK-1080	1/2 BSP.F				
A3H37-FR01KK-10950	SAE #10	1/2-13 UNC	7/16-14 UNC	21 (.83)	20 (.79)



View Arrow X

DIMENSIONS IN MILLIMETRES (INCHES)

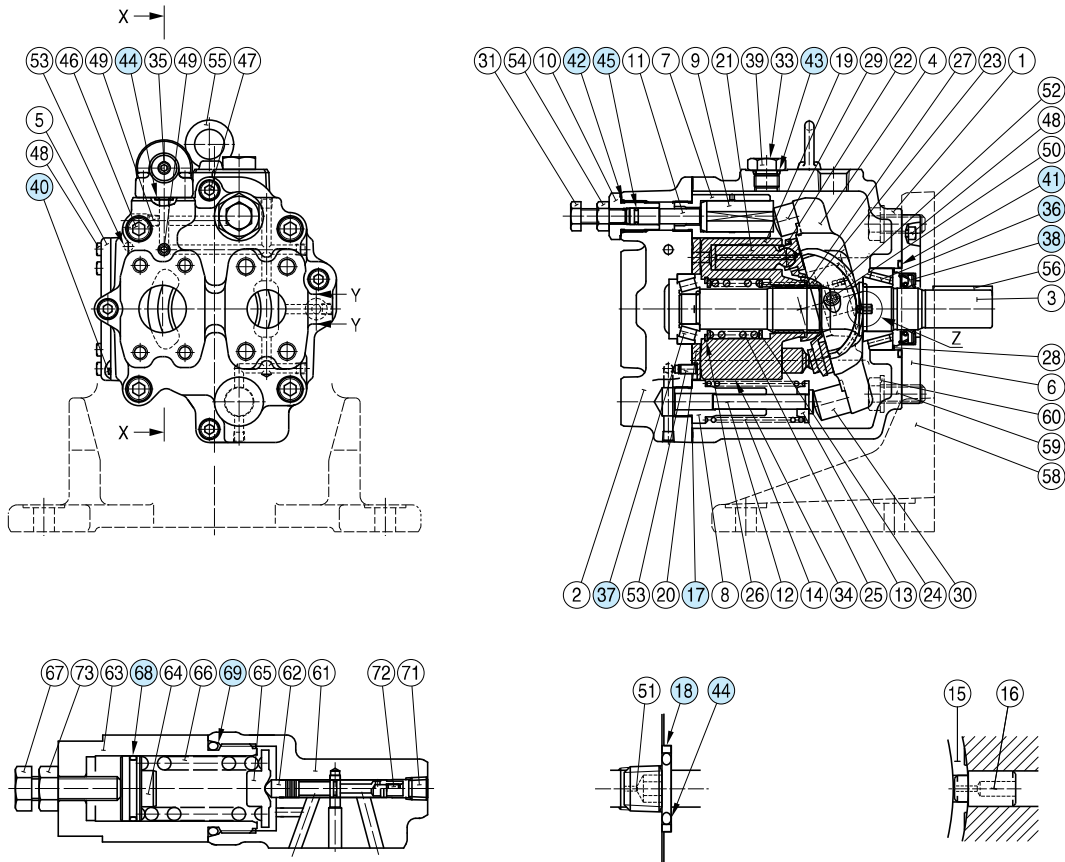
Foot Mtg.: A3H37-LR01KK-10/1080/10950



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

Spear Parts List

A3H16/A3H37/A3H56-*R01KK-10/1080/10950



Detail of Section X – X

Detail of Section Y – Y

Detail of "Z"

● List of Seals and Bearings

Item	Name of Parts	Part Numbers			Q'ty.
		A3H16	A3H37	A3H56	
17*	Gasket	2270-PK313655-3	2271-PK-313518-3	2272-PK313433-5	1
18*	Back Up Ring	1310E-PK412440-0			1
36	Cylindrical Roller Bearing	NUP205E	—	—	1
	Tapered Roller Bearing	—	4T-30204	4T-33008	
37	Needle Roller Bearing	HMK2025V2	—	—	1
	Tapered Roller Bearing	—	4T-33006	4T-32205R	
38*	Oil Seal	TCN254511 (FKM)	TCN284811 (FKM)	TCN355511 (FKM)	1
40*	O-Ring	S65 (NBR, Hs70)	S85 (NBR, Hs70)	S95 (NBR, Hs70)	1
41*	O-Ring	SO-NA-G60	SO-NA-G60	S71 (NBR, Hs70)	1
42*	O-Ring	SO-NB-P14	SO-NB-P18	SO-NB-P21	1
43*	O-Ring	SO-NB-P14			1
44*	O-Ring	SO-NB-P9			4
45*	O-Ring	SO-NB-P6	SO-NB-P8	SO-NB-P9	1
68*	O-Ring	SO-NA-A018			1
69*	O-Ring	SO-NB-P26			1

★ When ordering seals, please specify the kit number from the table below.

● List of Seals kit

Pump Model Numbers	Seal Kit Numbers
A3H16-*R01KK-10/1080/10950	A3H16-01-10
A3H37-*R01KK-10/1080/10950	A3H37-01-10
A3H56-*R01KK-10/1080/10950	A3H56-01-10