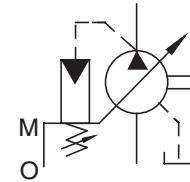


"A" Series Variable Displacement Piston Pumps – Single Pump, Pressure Compensator Type



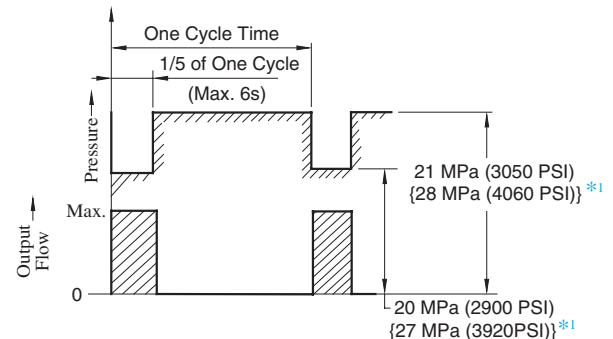
Graphic Symbol



Specifications

Model Numbers	Geometric Displacement cm ³ /rev (cu. in. /rev)	Minimum Adj. Flow cm ³ /rev (cu. in. /rev)	Operating Pressure MPa (PSI)		Shaft Speed Range r/min		Approx. Mass kg (lbs.)	
			Rated ^{*2}	Intermittent ^{*1}	Max.	Min.	Flange Mtg.	Foot Mtg.
A10-FR01B-12*	10.0 (.610)	2 (.122)	16 (2320)	21 (3050)	1800	600	5.1 (11.2)	—
A10-FR01C/H-12*							8.5 (18.7)	
A16-*R-01-*K-32*	15.8 (.964)	4 (.244)	16 (2320)	21 (3050)	1800	600	16.5 (36.4)	18.7 (41.2)
A22-*R-01-*K-32*	22.2 (1.355)	6 (.366)	16 (2320)	16 (2320)	1800	600	16.5 (36.4)	18.7 (41.2)
A37-*R-01-*K-32*	36.9 (2.25)	10 (.610)	16 (2320)	21 (3050)	1800	600	28.0 (61.7)	32.3 (71.2)
A56-*R-01-*K-32*	56.2 (3.43)	12 (.732)	16 (2320)	21 (3050)	1800	600	35.0 (77.2)	39.3 (86.7)
A70-*R01*S-60*	70.0 (4.27)	30 (1.83)	25 (3630)	28 (4060)	1800	600	58.5 (129)	70.5 (155)
A90-*R01*S-60*	91.0 (5.55)	56 (3.42)	25 (3630)	28 (4060)	1800	600	72.5 (160)	93 (205)
A145-*R01*S-60*	145 (8.85)	83 (5.06)	25 (3630)	28 (4060)	1800	600	92.5 (204)	117.5 (259)

- ★1. Whenever setting pressure, make sure the full cut-off pressure never exceeds the maximum intermittent pressure.
- ★2. Care should be taken in cases of used at a higher pressure than the rated pressure, because operating terms may be restricted. For example, if used as per maximum illustrated operating conditions, intermittent time at maximum flow is restricted to under 1/5 of one cycle time and under six seconds simultaneously. Conditions may vary according to the actual working pressure and delivery (inclination angle of the swash plate). Consult factory or Yuken sales representative for further information.
- ★3. The table above shows specifications for using petroleum based oils. Pumps (customized design) for special fluids are also available. Their operating pressure and maximum shaft speed however differ from the values in the table above depending on the fluid type. Range of operating temperature and viscosities may differ from those of petroleum based oils due to their characteristics.



*1. Applicable only for "A70/90/145"

Specifications and Design numbers for Special Fluids

Type of Fluids	Pump Series	Operating Pressure MPa (PSI)		Allowable Maximum Shaft Speed r/min		Temperature Range °C (°F)	Viscosity Range mm ² /s (SSU)	Design Numbers for Special Fluid (Occasion of Japanese Std. "JIS") ^{*3}
		Rated	Intermittent	Rated	Max.			
Water-Glycols	A16 – A56	14(2030)	16(2320) {14(2030)} ^{*1}	1200	(1800) ^{*2}	0 - 50 (32 - 104)	20 - 200(98 - 927)	3230
	A70 – A145	21(3050)	21(3050)					6030
Phosphate Ester Type	A16 – A56	14(2030)	16(2320) {14(2030)} ^{*1}	1200	(1800) ^{*2}	0 - 60 (32 - 140)	20 - 200(98 - 927)	3206
	A70 – A145	21(3050)	21(3050)					6006
Polyol Ester Type	A16 – A56	16(2320)	16(2320)	1800	1800	0 - 60 (32 - 140)	20 - 200(98 - 927)	32450
	A70 – A145	21(3050)	21(3050)					60450

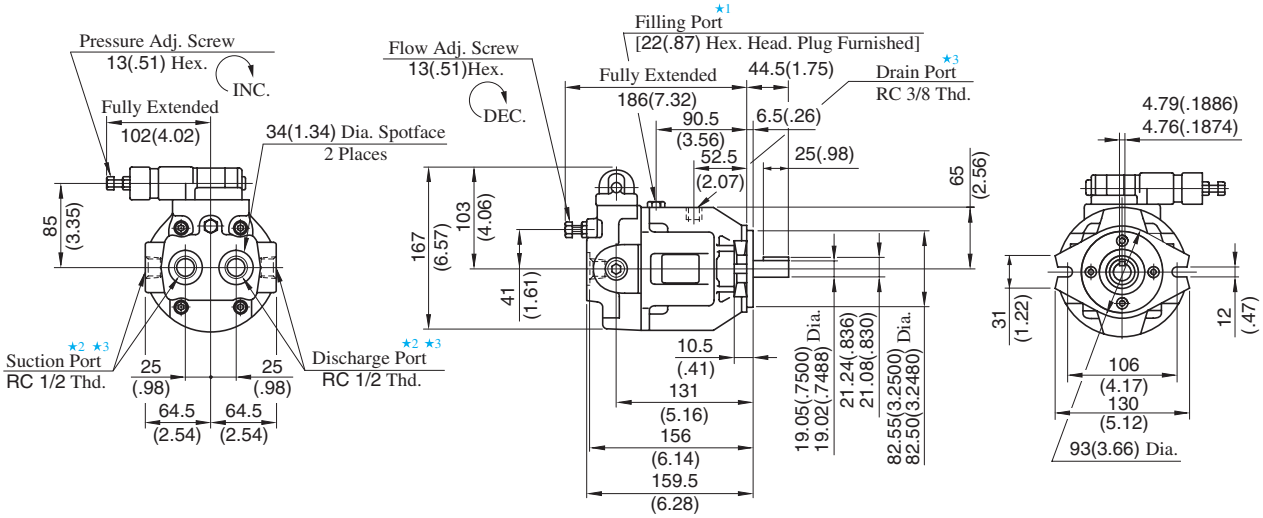
- ★1. The figures in brackets are for A22 type.
- ★2. As the specific gravities of water-glycol fluids and phosphate ester type fluids are higher than one, an overhead reservoir is required when pumps are operated at 1500 r/min or more.
- ★3. For the design numbers of pumps for European Design and North American Design Standards, please contact us.

Flange Mtg.

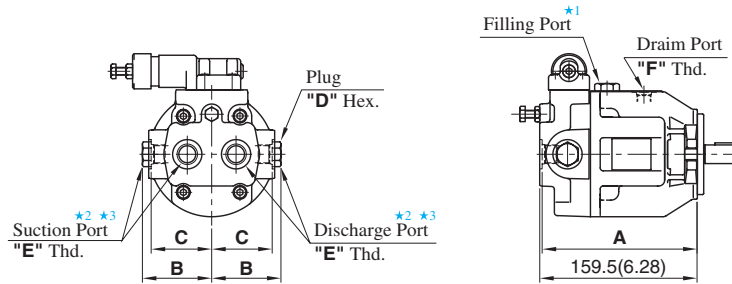
DIMENSIONS IN MILLIMETRES (INCHES)

Pressure Adjustment Range "C" & "H"

- Japanese Standard "JIS": A10-FR01-C/H-12



- European Design Standard: A10-FR01-C/H-1280
- N. American Design Standard: A10-FR01-C/H-12950

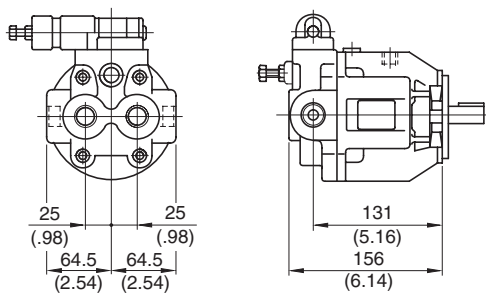


Model Numbers	Dimensions mm(Inches)				Thread Size	
	A	B	C	D	E	F
A10-FR01C/H-1280	159 (6.25)	72 (2.83)	64 (2.52)	27 (1.06)	1/2 BSP. F	3/8 BSP. F
A10-FR01C/H-12950	157 (6.18)	71 (2.80)	62 (2.44)	22 (.87)	SAE #8	SAE #6

● For other dimensions, refer to Japanese Standard "JIS".

Pressure Adjustment Range "B"

- Japanese Standard "JIS": A10-FR01-B-12



● For other dimensions, refer to above Pressure Adj. Range "C" & "H".

- ★ 1. Install the pump so that the "Filling Port" is at the top.
- ★ 2. Use either port of two suction and discharge ports at your option. Keep the remaining ports plugged.
- ★ 3. As the tightening torques of suction, discharge and drain port fittings, conform to the below.

Model Numbers	Tightening Torque Nm(IN. lbs.)	
	Suction Port & Discharge Port	Drain Port
A10-FR01B/C/H-12	65-75 (575-664)	40-50 (354-443)
A10-FR01C/H-1280	56-62 (496-549)	33-36 (292-319)
A10-FR01C/H-12950	47-51 (363-451)	40-50 (354-443)