

“ A3HG ” Series Variable Displacement Piston Pump

Single Pump with Through-Drive Shaft

“A3HG” Series Piston Pumps

The new Yuken A3HG series variable piston pumps is a result of the enhanced development based on the exceptional performance characteristics, reliability and innate quality of our current existing A3H series pumps. The Yuken A3HG series, now has an improved nominal pressure of 31.5 MPa (315 bar) from 28MPa (280 bar) and a maximum pressure of 35 MPa (350 bar) that is maintaining the high performance of the A3H series. We have widened the range and now have available pumps not only with JIS mounting but also ISO and SAE variants as standard depending on market needs. With a wide flow range, varying from 16 cm³/rev to 180 cm³/rev, optional through drive - allowing, if required, both pumps to be the same size, we can offer a wide displacement with various control possibilities.

Features

Enhancing Variety of Port Flange Mounting

European Standard : Conform to ISO3019-2

N. American Standard : Conform to SAE J744

* Both Keyed Shaft and Spline Shaft are available as standard design.

Wide range of Displacements, with superb

Volumetric Efficiency

Maintaining the high performance of our A3H pumps, the improved A3HG series now offers a nominal pressure of 31.5 MPa (315 bar).

With the choice of keyed or splined shaft this pump can be used in a wide range of applications.

Optional Through Drive

Inboard and outboard pumps can be the same size, and any pump which has JIS/ISO or SAE mounting can be fitted to the appropriate inboard pump

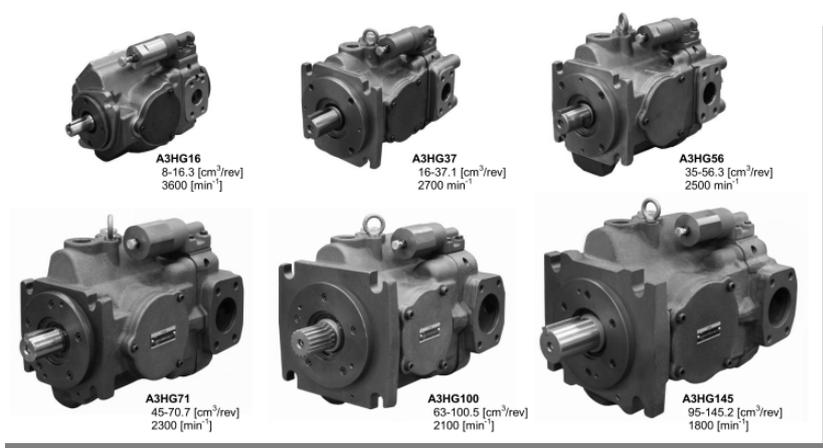
Control Type

Pressure Compensator Type (01), Pilot Pressure Control Type Pressure Compensator (07),

Load Sensing Type (14)

Displacement & Rotational Speed

• Displacement : 16-180 cm³/rev (7 sizes) • Shaft Speed : A3HG16:3600min⁻¹-A3HG180:1800min⁻¹



Applications

Pressing Machine, Pipe-bending machine, Pipe Terminal Processing Machine, Tube Molding Machine, Steel Mill Equipment, Rolling Equipment, Concrete Production Equipment, Compactor, Industrial Machinery Equipment, Industrial Vehicle

Launch Schedule April.2013

Specification

Model		A3HG16	A3HG37	A3HG56	A3HG71	A3HG100	A3HG145	A3HG180
Displacement	cm ³ /rev	16.3	37.1	56.3	70.7	100.5	145.2	180.7
Min. Adj. Displace.	cm ³ /rev	8.0	16.0	35.0	45.0	63.0	95.0	125.0
Nominal Pressure	MPa	31.5						
Max. Pressure	MPa	35.0						
Shaft Speed	Max.	3600	2700	2500	2300	2100	1800	1800
	r/min	600						
Suction Pressure		600-1800 r/min : -16.7 kPa ~ 50 kPa, 1800 r/min or more : 0-50 kPa Gauge Pressure						
Hydraulic Fluid		Petroleum Base Fluid (equivalent to ISO VG32 or 46)						
Viscosity	mm ² /s	20-400						
Oil Temperature		0 ~ 60 (Satisfy both Viscosity and Temperature)						
Seal Material		FKM (Fluoro-plastic)						
Mass ¹⁾	kg	17	26.5	32.5	45	56.5	68.5	88

Note1) A3HG*-FR01KK-E1-10

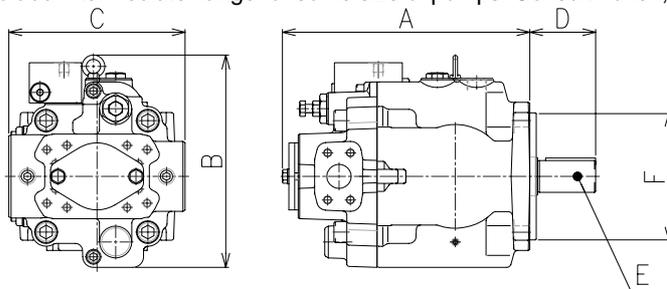
Model Number Designation

A3HG	145	- F	R	01	K	K	- E1			D	- 10													
Series Number	Displacement	Mtg.	Direction of Rotation	Control Type	Press. Adjust Range	Shaft Ext.	Port/Flange			Pump Mtg. Bolt	Des. No.													
A3HG :	16			01 :		K :	<table border="1"> <tr> <td></td> <td>Flange</td> <td>Port & Flange Screw</td> </tr> <tr> <td>E1</td> <td>ISO</td> <td>Metric</td> </tr> <tr> <td>U1</td> <td>SAE</td> <td>UNC (Unified)</td> </tr> <tr> <td>U2</td> <td>SAE</td> <td>BSPF/Metric</td> </tr> <tr> <td>J1</td> <td>SAE</td> <td>Rc/Metric</td> </tr> </table>		Flange	Port & Flange Screw	E1	ISO	Metric	U1	SAE	UNC (Unified)	U2	SAE	BSPF/Metric	J1	SAE	Rc/Metric	C:2 pcs D:4 pcs	10
	Flange	Port & Flange Screw																						
E1	ISO	Metric																						
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J1	SAE	Rc/Metric																						
A3HG Series	37	F :	R :	Pressure Compensator	K :																			
Variable	56	Flange Mtg.	Clock-wise	07 :	5~35 MPa																			
Piston	71			Pilot Press. Control	07,14 :																			
Pump	100			Load sensing Type	None																			

Typical Dimensions

Model	Pump Mtg. Bolt	A	B	C	Shaft end					
					ISO Version			SAE Version		
					D:Key/Sp	E:Key/Sp	F Dia.	D:Key/Sp	E:Key/Sp	F Dia.
A3HG16	2bolt	221	160.5	184	36/38	18Dia./11T-16/32	8	41/38	19.05Dia./11T16/32	82.55.
A3HG37	2bolt	273	210.5	174	52/46	25Dia./15T-16/32	100	46/46	25.4Dia./15T-16/32	101.6.
	4bolt	258.5	210.5	170	60/56	32Dia./14T-12/24	125	56/56	31.75Dia./14T-12/24	127
A3HG56	2bolt	300	242.5	176	52/46	25Dia./15T-16/32	100	46/46	25.4Dia./15T-16/32	101.6.
	4bolt	275	242.5	176	60/56	32Dia./14T-12/24	125	56/56	31.75Dia./14T-12/24	127
A3HG71	4bolt	296.5	264.5	204	60/56	32Dia./14T-12/24	160	56/56	31.75Dia./14T-12/24	127
A3HG100	4bolt	322	281.5	225	80/62	40Dia./17T-12/24	180	62/62	38.1Dia./17T-12/24	152.4
A3HG145	4bolt	345.5	301.5	246	92/75	45Dia./13T-8/16	180	75/75	44.45Dia./13T-8/16	152.4
A3HG180	4bolt	384.5	328	258	92/75	45Dia./13T-8/16	180	75/75	44.45Dia./13T-8/16	152.4

Note) It is necessary to add intermediate flange for some size of pumps. Consult Yuken, when require more details.



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