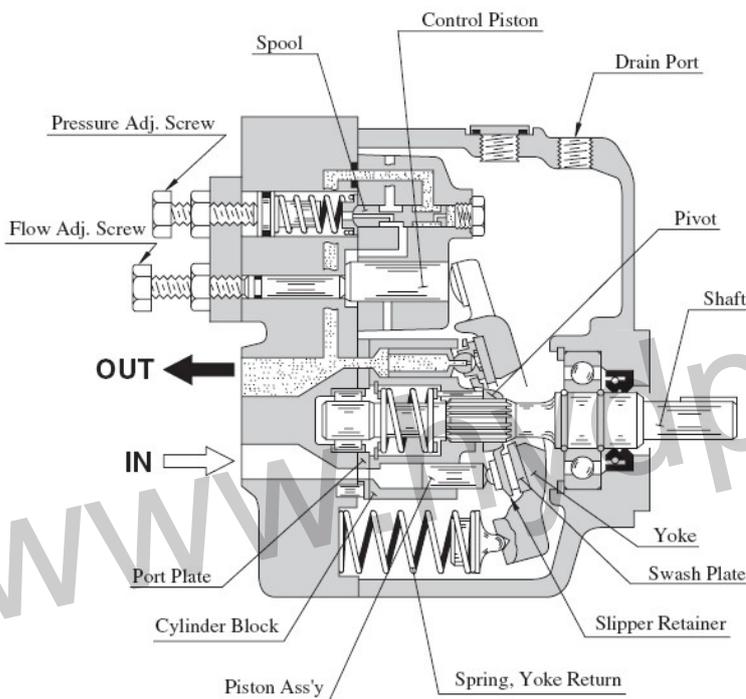




Yuken A Series Variable Displacement Piston Pump



Features:

High efficiency: Under the conditions of pressure 16 MPa (2320 PSI) and speed 1800 r/min, the volumetric efficiency is over 98% and the overall efficiency is over 90%.

Low noise level: In the "A16" pump, the noise level is as low as 57.3 dB(A) [at the full cut-off pressure 21 MPa (3050 PSI) with speed 1500 r/min one meter (3.3 ft.) horizontally away from pump head cover.]

Accomplishment of energy-saving: Because the overall efficiency is high and the cut-off characteristic is sharp, thus the input power may be saved.

Low heat generation: Because of small power loss, it is possible to reduce the rise in oil temperature. Accordingly, capacity of a reservoir can be reduced.

Instructions

Mounting: When installing the pump the filling port should be positioned upwards.

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 (.004 inches) TIR and maximum permissible misangular is less than 0.2°.

Suction Pressure: Permissible suction pressure at inlet port of the pump is between -16.7 and +50 kPa (5 in.Hg Vacuum and 7 PSIG). 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 (3.3 ft) from the oil level in the reservoir.

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.

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. 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.

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 (14.5 PSI) and surge pressure of less than 0.5 MPa (72.5 PSI). Length of piping should be less than 1 m (3.3 ft.), and the pipe end should be submerged in oil.

Control of Contamination: Due caution must be paid to maintaining control over contamination of the operating oil which can otherwise lead 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 (150 mesh) reservoir type filter and the return line must have a line type filter of under 10 μm. **Hydraulic Fluids:** Use petroleum based oils such as anti-wear type hydraulic oils or R & O (Rust and Oxidation inhibitor) type hydraulic oils equivalent to ISO VG-32 or 46. The recommended viscosity range is from 20 to 400 mm²/s (98 to 1800 SSU) and temperature range is from 0 to 60°C (32 to 140°F), both of which have to be satisfied for the use of the above hydraulic oils.

Adjustment of Delivery: Turning the adjustment screw clockwise, increases pressure. (Volume adjusted by each full turn of the pressure adjustment screw)

Model Numbers	Adjustable volume with each full turn of the adjustment screw cm ³ /rev (cu.in./rev)	Minimum adjustment flow cm ³ /rev (cu.in./rev)
A10	1.1 (.067)	2.0 (.122)
A16	1.4 (.085)	4.0 (.244)
A22	2.0 (.122)	6.0 (.366)
A37	2.9 (.177)	10 (.610)
A56	3.9 (.238)	12 (.732)
A70	4.4 (.268)	30 (1.83)
A90	4.8 (.293)	56 (3.42)
A145	7.2 (.439)	83 (5.06)

For more information and technical data, please contact us.