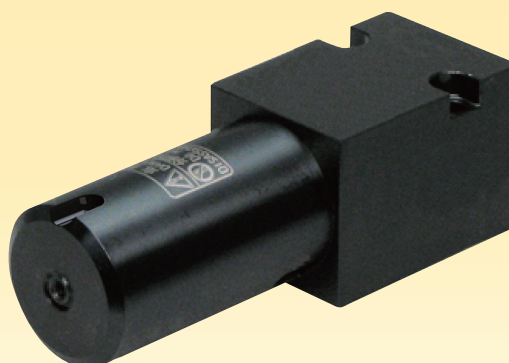


Compact Accumulator

Model JSY007

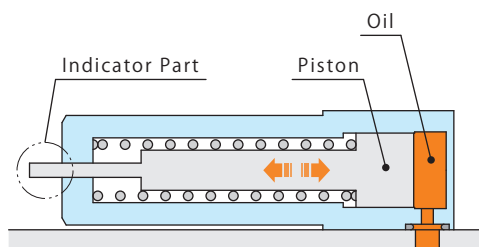


Reduce pressure fluctuation caused by temperature change to a fixture circuit disconnected from a pressure source.

Maintenance-Free Spring Type Accumulator

What is an accumulator?

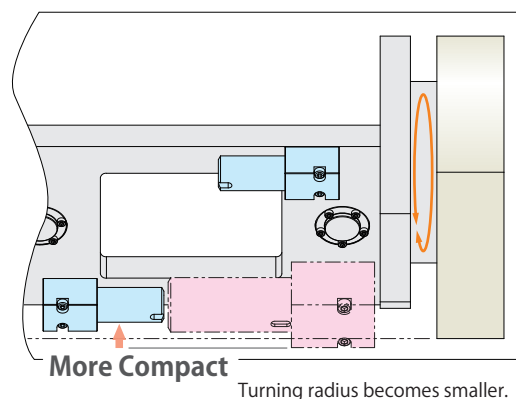
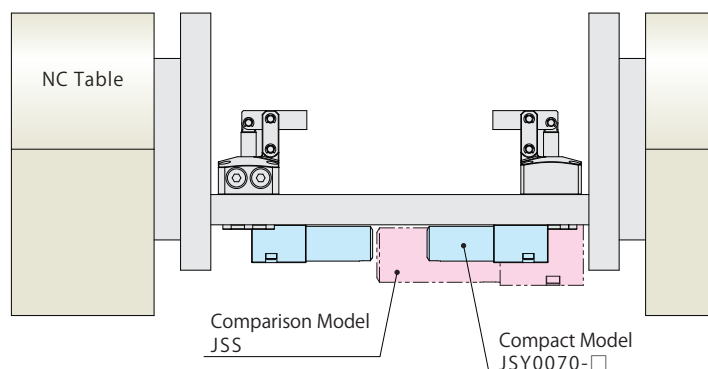
When fixture (closed circuit) is disconnected from the hydraulic pressure source, with the change in volume of the hydraulic fluid due to temperature changes, pressure will increase or decrease. Accumulator avoids damage or deformation of machine and workpiece caused by pressure increase, and falling of workpiece caused by pressure decrease.



Temperature Change	With accumulator	Without accumulator
Hydraulic temperature goes up	Pressure increases as hydraulic temperature goes up. The piston is pushed up by spring to absorb increased pressure. (Absorbs volume of oil expanded)	Pressure increases as hydraulic temperature goes up. Abnormal high pressure may damage the machine and deform the workpiece.
Hydraulic temperature goes down	Pressure decreases as hydraulic temperature goes down. The piston rod is pushed up by spring to absorb decreased pressure. (Discharges volume of oil reduced)	Pressure decreases as hydraulic temperature goes down. Due to a decline of clamping force, machining quality will decrease and workpiece will fall off.

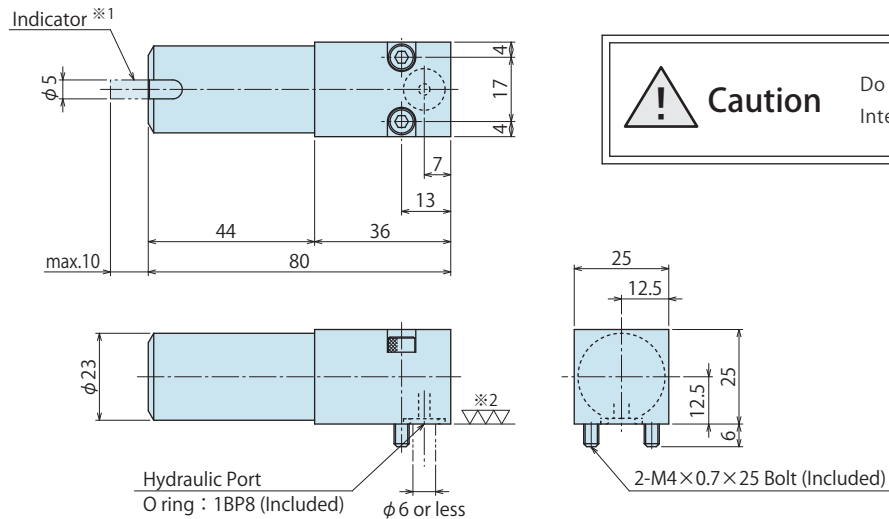
Much More Compact than Comparison Model

The compact accumulator JSY0070-□ is installed to NC table more easily than the comparison model. It is most suitable for equipment that has small circuit capacity. (If circuit capacity is large, it is recommended to use multiple number of JSS or JSY007.)



Details on backside

External Dimensions



Notes

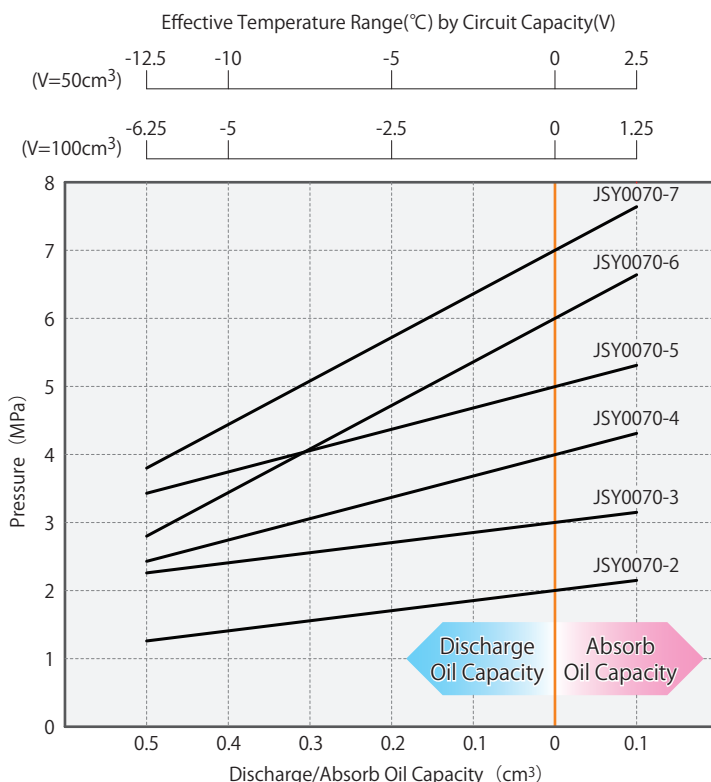
- ※1. Indicator extends according to pressure. Be sure not to interfere with other devices when designing.
- ※2. Roughness of mounting surface (O-ring seal surface) should be 6.3S or better.
 1. Do not disassemble it. Parts may pop out due to the built-in spring.
 2. Only mounting in horizontal direction with manifold option is available. For other mounting methods, please use model JSS.

Specifications

Model No.	JSY0070-2	JSY0070-3	JSY0070-4	JSY0070-5	JSY0070-6	JSY0070-7
Standard Operating Pressure MPa	2.0	3.0	4.0	5.0	6.0	7.0
Withstanding Pressure MPa	14.0					
Discharge Oil Capacity cm ³	0.5					
Absorbing Capacity cm ³	0.1					
Compression Factor (β) ^{※1} MPa/cm ³	1.48	1.48	3.13	3.13	6.41	6.41
Operating Temperature °C	0~70					
Usable Fluid	General Hydraulic Oil Equivalent to ISO-VG-32					
Mass kg	0.3					

Notes ※1. Compression factor (β) means a pressure change (MPa) per 1cm³ charge in oil volume.

Characteristic Graph



How to read the characteristic graph

Requirements (Reference Example)

Cylinder Capacity	In case of 7.0cm ³
Piping Capacity	Inside Diameter $\phi 6 \times 0.5m$ (Pipe capacity per 1m : 28.3cm ³)
Valve Capacity	20cm ³
Temperature change : ΔT	-10°C
Operating Pressure : P	4.0MPa
Thermal Expansion Coefficient : α	8×10^{-4}

Selection Method

- Calculate Fixture Circuit Capacity (V)
Clamp Capacity + Pipe Capacity + Valve Capacity
 $V = (7.0 \times 1) + (28.3 \times 0.5m) + 20 = 41.15cm^3$
- Calculate Change in Capacity (ΔV)
Fixture Circuit Capacity (V) \times Thermal Expansion Coefficient (α)
 \times Amount of Temperature Change (ΔT)
 $\Delta V = 41.15 \times (8 \times 10^{-4}) \times (-10) = -0.33cm^3$
- Select Accumulator Type
Operating pressure (P)= 4.0MPa Select JSY0070-4.
(If required discharge \cdot absorb oil capacity is greater than change in capacity, select JSS or use multiple number of JSY007.)
- Check the accumulator characteristics (Graph on the left)
Pressure after temperature change(-10°C) : 2.96MPa
Residual oil discharge margin : 0.17cm³

Notes

- When selecting, calculate tolerance for the oil capacity taking the spring force deviation into consideration.
- Please contact us for larger amount of absorb oil.