

# Vane Damper

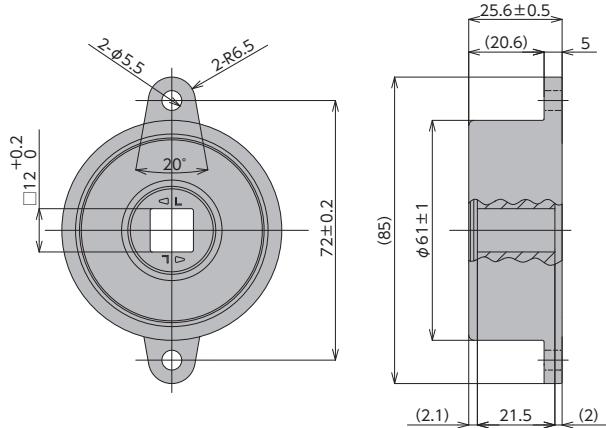
## FYN-A2 Series

### Specifications

Model	Max. torque	Reverse torque	Directions
FYN-A2-R204	20N·m (200kgf·cm)	2N·m or lower (20kgf·cm lower)	Clockwise
FYN-A2-L204			Counterclockwise



- \* Max. angles 120°
- \* Operating temperature -5 ~ 50° C
- \* Weight 222 ± 11g
- \* Body material Zinc die - cast (ZDC)
- \* Cap material Zinc die - cast (ZDC)
- \* Rotor material Zinc die - cast (ZDC)
- \* Oil type Silicone oil
- \* Rotary color L: Black R: White



### How to Use the Damper

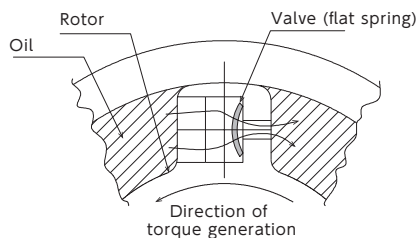
#### 1. Operating characteristics of self-adjusting oscillating dampers

in a conventional oscillating damper, the damping strength (damping constant) does not change regardless of the load torque used.

Therefore, the operating speed is slower when the load torque is small, and faster when the load torque is large.

However, since the self-adjusting FYN-A2 series is designed to self-adjustable the damping strength (damping constant) according to the applied load, its motion-time fluctuates less than that of conventional dampers when the load changes.

The acceptable range of torque is 10 to 15N·m or 20 to 25N·m. Please select your damper by referring to the motion graph below.



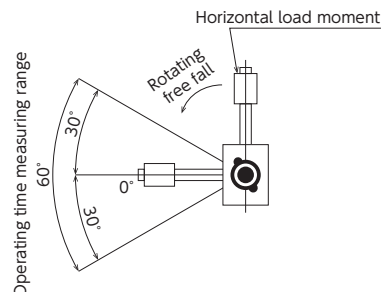
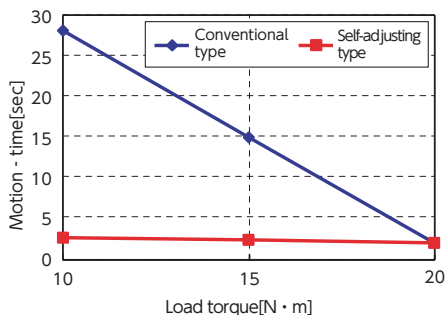
#### [Operating principles of the self-adjusting type]

As shown in the diagram to the left, by changing the shape of the valve (flat spring), the amount of oil flow is altered, adjusting the damper's generated torque. (PAT.P)

#### [Measurement conditions for the motion-time graph]

- Measuring temperature : Room temperature (23±3°C)
- Load torque : 10~20N·m
- Measuring angle : +30°~-30°

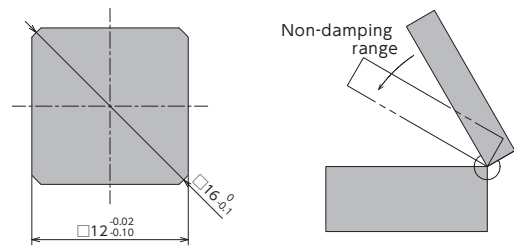
#### [Motion time graph]



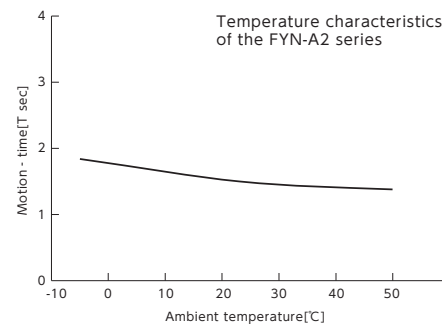
As the level of self-adjustment may vary depending on the range of the working angle of the actual work, please verify under actual working conditions before you select your damper.

●Products specification might be changed without notice.

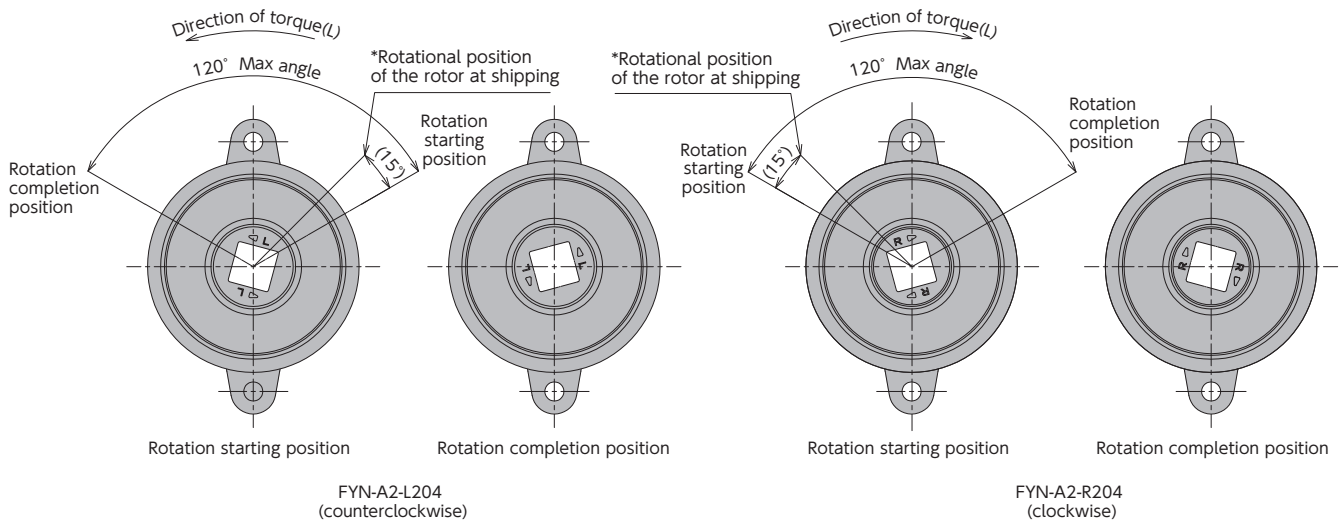
2. When using the damper, please ensure that a shaft with specified angular dimensions is inserted in the damper's shaft opening. Also, please ensure a tight fit between the shaft and the damper shaft's opening. Without a tight fit, the play becomes larger in a closing motion, etc., and the lid may not slow down properly. Please see the diagrams to the right for the recommended shaft dimensions for a damper.



3. Damper characteristics vary according to the ambient temperature. In general, the damper characteristics become weaker as the temperature decreases. This is because the viscosity of the temperature. When the temperature returns to normal, The damper characteristics will return to normal as well. The time it takes for the lid to close is shown in the graph to the right.



4. The damper's working angle is 120° as shown below. Rotating the damper beyond this angle will cause the damage to the damper. Please ensure that an external stopper is in place.



5. Because the FYN-A2 series is a self-adjusting type, the torque cannot be adjusted manually. However, by altering the viscosity of the oil, its damper characteristics can be modified. (Please contact us, as this is a custom order.) 6. The direction in which torque is generated varies according to the model. Please select the appropriate model for your purpose.

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## Precautions for Use

\* When using the vane damper, ensure that after having fully opened the lid, move the lid to a point where free fall starts, and then release the hand from the lid. If the lid is slightly opened and in this state the hand is released, the lid may not be able to sufficiently slow down and the lid may be closed with force, which could result in an injury such as getting the hand caught by the lid.

