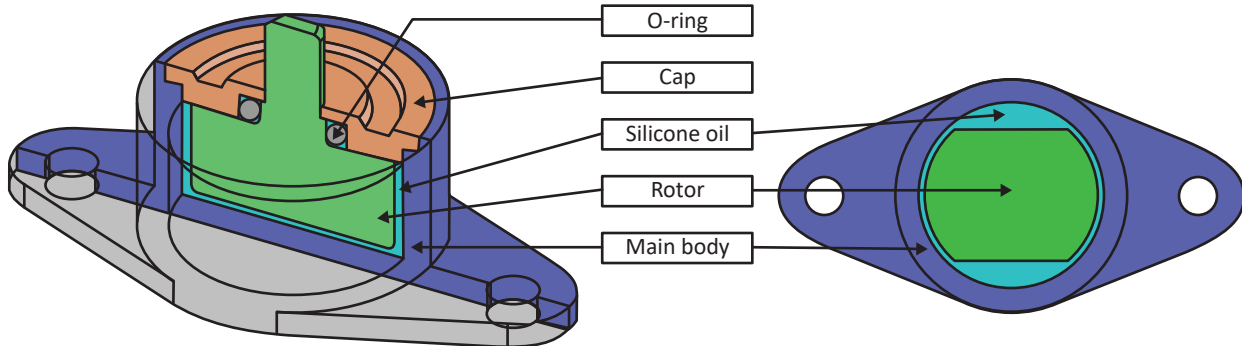


ROTARY DAMPER

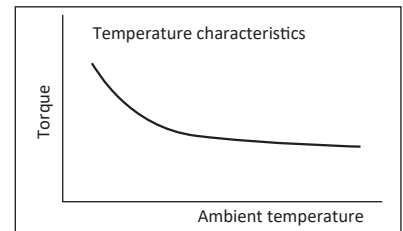
Basic Structure



This is a rotary damper that utilizes the braking force generated by the oil's viscosity resistance. The braking force generated by oil viscosity, clearance between the rotor and the main body, and the oil's contact area varies based on the structure shown above.

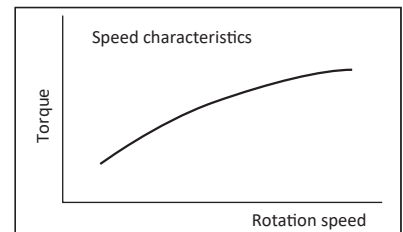
1-1) Temperature characteristics

The torque of a rotary damper varies according to the ambient temperature. This is because the viscosity of the oil inside the damper changes according to the temperature.



1-2) Speed characteristics

The braking torque of a rotary damper varies according to the cycle rate. In general, the torque increases when the cycle rate increases, and the torque decreases when the cycle rate decreases. The rated torque listed in the catalogue is the torque generated when the cycle rate is 20rpm.

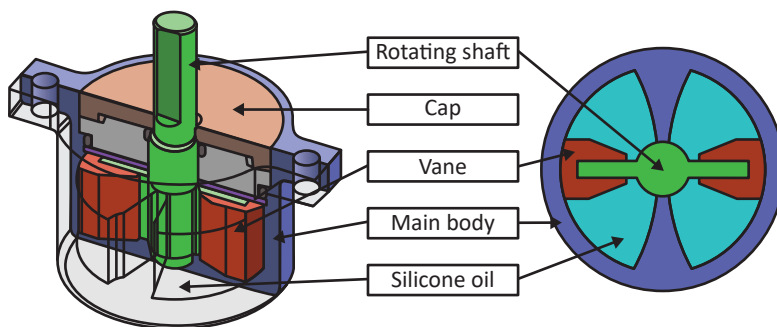


1-3) Direction of torque generation

The torque is generated in both directions in principle, but one-way rotary dampers are available for some of the models with an implemented one-way clutch.

VANE DAMPER

Basic Structure



This is a rotating-type damper that utilizes the oil pressure. The braking force generated by oil viscosity, clearance between the rotor and the main body, and the vane's pressure-receiving area varies based on the structure shown above.

Basic characteristics

Similar to the rotary damper, the torque varies according to the ambient temperature. Its basic structure is a dashpot structure (single orifice). The internal pressure of a damper increases as the rotation speed increases, which consequently increases the torque.

