Rotary Damper

FRN-P2 Series(Adjustable Types: Variable Torque Models)



* Max. rotation speed	50rpm
* Max. cycle rate	10cycle/min
* Operating temperature	0~50℃
* Weight	64g
* Body and cap material	PBT
* Rotating shaft material	SUS
* Gear, adjustment knob	POM
* Oil type	Silicone oil

Specifications

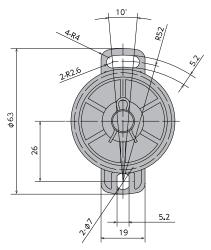
Model	Rated torque	Damping direction
FRN-P2-R501G*	0.05±0.01 N·m	Clockwise direction
FRN-P2-L501G*	(0.5±0.1 kgf·cm)	Counter-clockwise direction
FRN-P2-R102G*	0.10±0.02 N·m	Clockwise direction
FRN-P2-L102G*	(1.0±0.2 kgf·cm)	Counter-clockwise direction
FRN-P2-R202G*	0.20±0.04 N·m	Clockwise direction
FRN-P2-L202G*	(2.0±0.4 kgf·cm)	Counter-clockwise direction

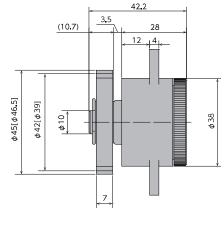
Note 1) Rated torque is measured at a rotation speed of 20rpm at 23°C (adjustment knob set at MAX)

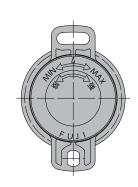
There are dampers that generate torque in the CW direction or CCW direction when the rotating axle is viewed from the top.

Gear Specifications

Model	G1	*G2
Туре	Standard spur gear	Shifted spur gear
Tooth profile	Involute	
Module	1.5	3.0
Pressure angle	20°	
Number of teeth	28	13
Pitch circle diameter	φ42	φ39
Addendum modification coefficient	_	+0.25



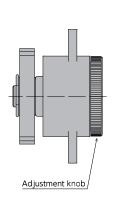


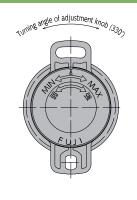


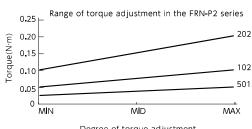
Dimensions of G2 gear are in []

How to Adjust Torque

Range of Torque Adjustment







Degree of torque adjustment

RoHS Compliant

Products specification might be changed without notice.

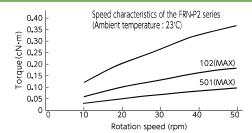
Characteristics

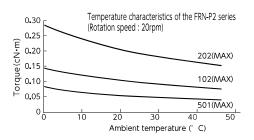
1. Speed characteristics

A rotary damper's torque varies according to the rotation speed. In general, as shown in the graph to the right, the torque increases as the rotation speed increases, and the torque decreases as the rotation speed decreases. In addition, please note that the starting torque slightly differs from the rated torque.

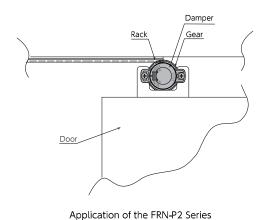
2. Temperature characteristics

A rotary damper's torque varies according to the ambient temperature. In addition, as shown in the graph to the right, the torque decreases as the ambient temperature increases, and the torque increases as the ambient temperature decreases. This is because the viscosity of the silicone oil inside the damper varies according to the temperature. When the temperature returns to normal, the torque will return to normal as well.





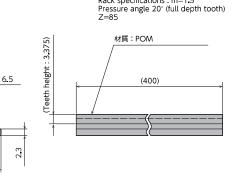
Example of Using a Damper



Option Rack

G1 Rack: ROP-020P2-1

Applicable Models	Model
FRN-P2	ROP-020P2-1



Rack specifications: m=1.5

There is no provision for option racks complying with the gear specification G2 (shifted spur gear) of FRN-P2