Rotary Damper

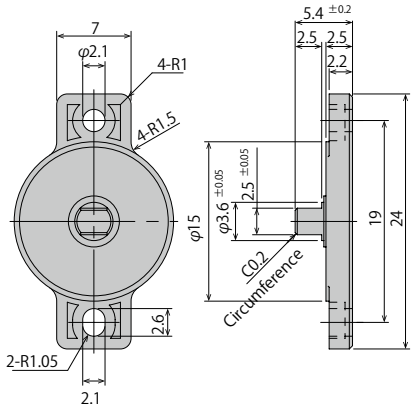
Fixed Type | Bi-Directional | Uni-Directional | Adjustable type | Self-adjusting

FRT-G2 Series

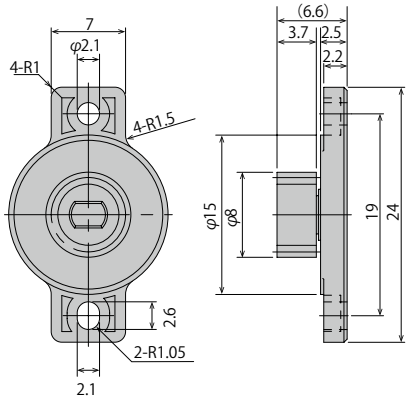
RoHS Compliant

●Products specification might be changed without notice.

〈FRT-G2-※※※〉



〈FRT-G2-※※※G ※〉



Specifications

Model	Rated torque
FRT-G2-200(G*)	(2±0.7)×10 $^{-3}$N·m 20±7 gf·cm
FRT-G2-300(G*)	(3±0.8)×10 $^{-3}$N·m 30±8 gf·cm
FRT-G2-450(G*)	(4.5±1)×10 $^{-3}$N·m 45±10 gf·cm
FRT-G2-600(G*)	(6±1.2)×10 $^{-3}$N·m 60±12 gf·cm
FRT-G2-101(G*)	(10±2)×10 $^{-3}$N·m 100±20 gf·cm

Note 1) Rated torque measured at a rotation speed of 20rpm at 23℃

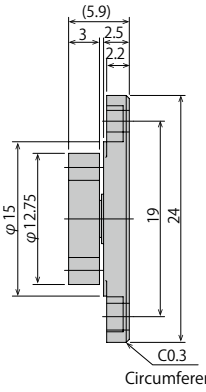
Note 2) Models with gear bears G1, G2, or G3 at the end of their model numbers

Note 3) Torque can be customized by changing the oil viscosity (see Customizable Torque Chart on page 178)

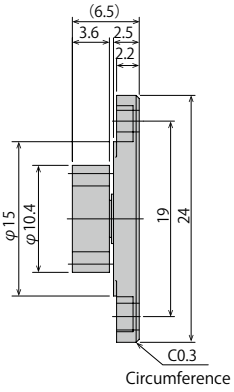
Note 4) The diagrams above are outline drawings of FRT-G2-****. Please refer to the diagrams at the right for G2 and G3.

* Max. rotation speed 50rpm
* Max. cycle rate 10cycle/min
* Operating temperature 0～50℃
* Weight 0.6g(with gear : G1 : 0.8g G2 : 1.0g G3 : 0.9g)
* Body and cap material Polycarbonate (PC)
* Rotating shaft material Polyacetal (POM)
* Gear material Polyacetal (POM)
* Oil type Silicone oil

〈FRT-G2-※※※G2〉



〈FRT-G2-※※※G3〉



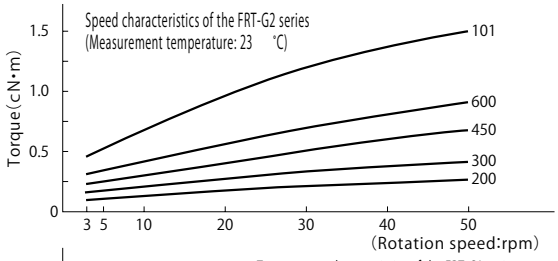
Gear Specifications

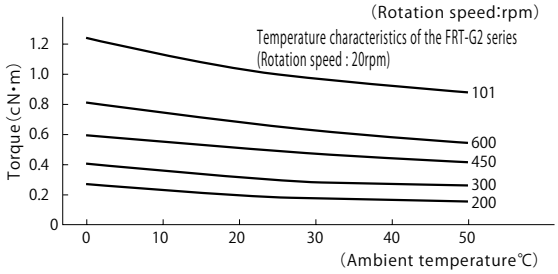
	G1	G2	G3
Type	Standard spur gear	Profile shifted spur gear	Standard spur gear
Tooth profile	Involute		
Module	0.5	1.0	0.8
Pressure angle	20°		
Number of teeth	14	10	11
Pitch circle diameter	φ7	φ10	φ8.8
Addendum modification	—	+0.375	—

Damper 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 tor que 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.