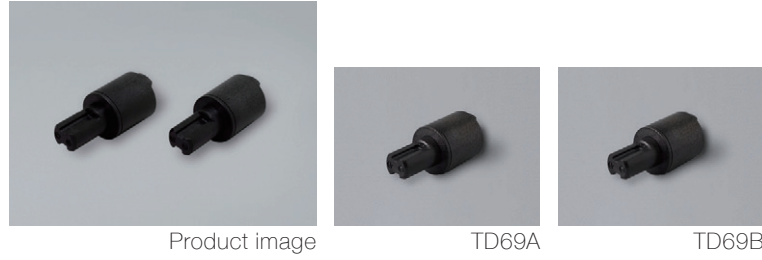


Product lineup



Features

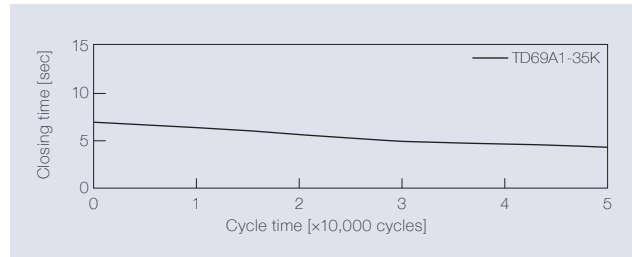
- Made with super engineering plastic (PEI)
- Wide temperature range for operation (-5°C to 80°C)
- Made with chemical-resistant
- Highest torque with Ø 20 mm damper (Up to 4 N·m)

| Product name | Torque [N·m] (lbf·in) | Damping direction | Operating temperature range [°C](°F) |
|--------------|-----------------------|-------------------|--------------------------------------|
| TD69A1-15K | 1.5 (13.28) | CW | -5 to 80 (23 to 176) |
| TD69A1-20K | 2.0 (17.70) | | |
| TD69A1-25K | 2.5 (22.13) | | |
| TD69A1-30K | 3.0 (26.55) | | |
| TD69A1-35K | 3.5 (30.98) | | |
| TD69A1-40K | 4.0 (35.40) | | -5 to 50 (23 to 122) |
| | | | 0 to 40 (32 to 104) |

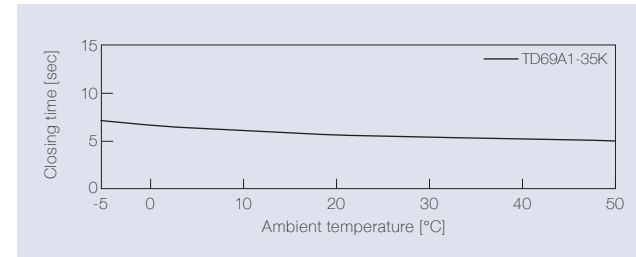
| Product name | Torque [N·m] (lbf·in) | Damping direction | Operating temperature range [°C](°F) |
|--------------|-----------------------|-------------------|--------------------------------------|
| TD69B1-15K | 1.5 (13.28) | CCW | -5 to 80 (23 to 176) |
| TD69B1-20K | 2.0 (17.70) | | |
| TD69B1-25K | 2.5 (22.13) | | |
| TD69B1-30K | 3.0 (26.55) | | |
| TD69B1-35K | 3.5 (30.98) | | |
| TD69B1-40K | 4.0 (35.40) | | -5 to 50 (23 to 122) |
| | | | 0 to 40 (32 to 104) |

Product specifications

Durability



Temperature characteristics



Measured according to the performance management testing method shown below after leaving in each designated ambient temperature for over one hour.

| | |
|-----------------------------|--------------------------|
| Torque | 3.5 N·m (30.98 lbf·in) |
| Radial load | N/A |
| Angle range of closing time | 70 to 0 deg. |
| Temperature | 23 ± 2°C (73.4 ± 35.6°F) |
| Durability | Excluding TD69A1/B1-40K |
| | TD69A1/B1-40K |
| | 50,000 cycles |
| | 20,000 cycles |

Performance management testing method

As the torque of partial rotation angle dampers is not consistent, the closing time measurement jig is used for the performance tests.

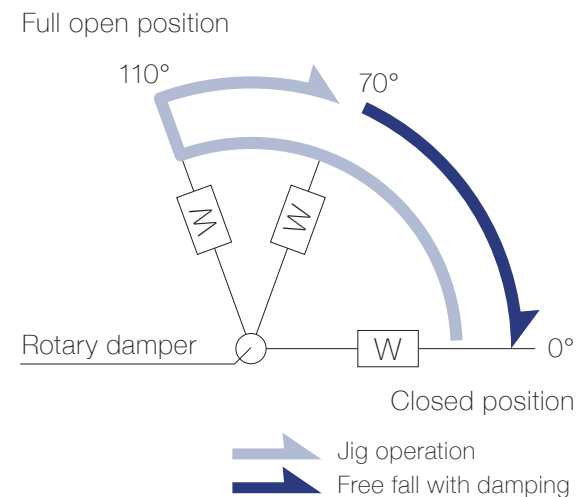
[Operation during measurement]

(Secures the housing of a rotary damper and moves its shaft)

All rotary dampers are managed by the following closing time test.

Test mode [110° → 70° (Pause) → (Free fall with damping) → 0°]

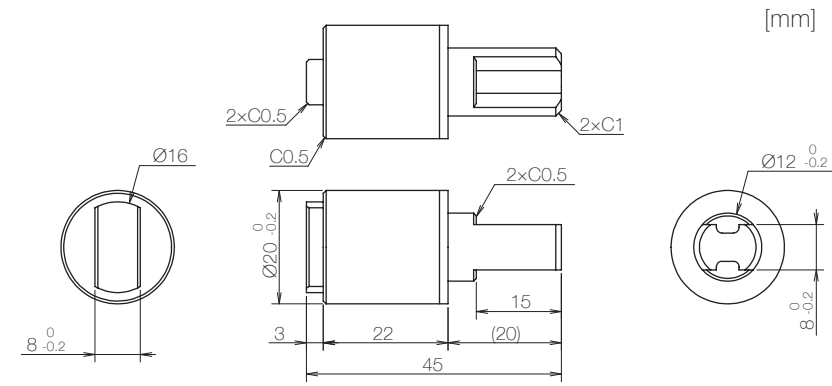
* Horizontal plane: 0°



Inspection specification before shipping

| Type | Preset torque [N·m] (lbf·in) | Closing time |
|------|------------------------------|--------------|
| 15K | 1.5 (13.28) | 3 to 12 sec |
| 20K | 2.0 (17.70) | |
| 25K | 2.5 (22.13) | |
| 30K | 3.0 (26.55) | |
| 35K | 3.5 (30.98) | |
| 40K | 4.0 (35.40) | |

Product information



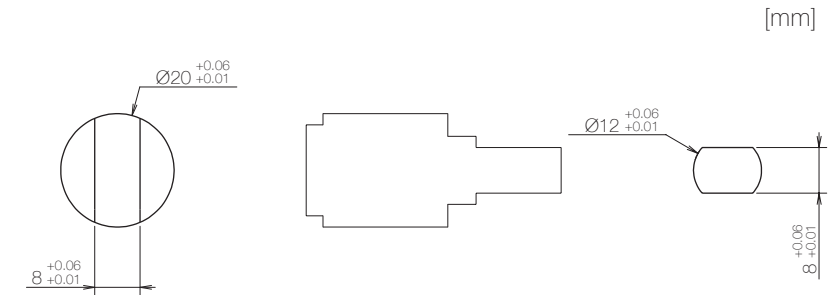
* General tolerance: ±0.3

- Opening angle: 110°
- Product weight: Approx. 12 g
- Allowable radial load (P): 29.4 N

Main materials

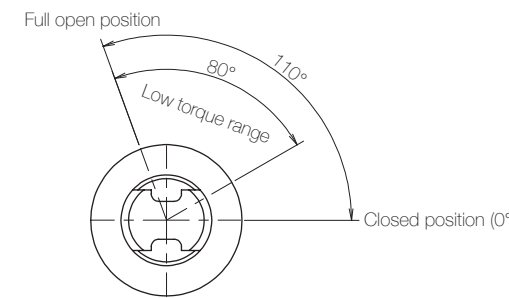
| | |
|---------|---------------|
| Housing | Plastic (PEI) |
| Cap | Plastic (PEI) |
| Shaft | Plastic (PEI) |

Dimensions related to mounting

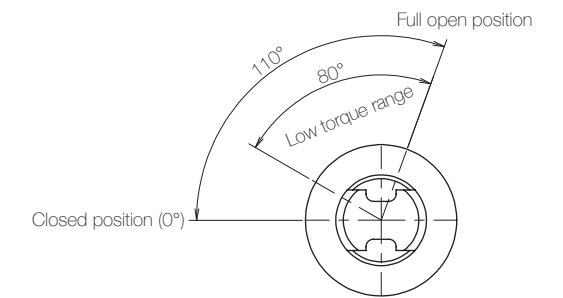


Opening angle

TD69A



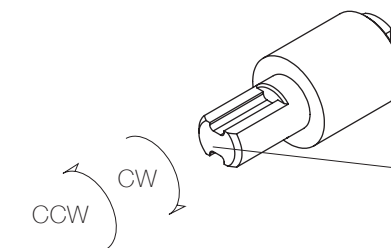
TD69B



* Shaft position at the time of shipping: Closed position

Damping directions

Rotation directions of the shaft to which torque is applied



* Housing secured / Shaft rotatable

| | |
|-------------------|---------------|
| Damping direction | Engraved mark |
| CW | CW |
| CCW | CCW |