

Product lineup



Features

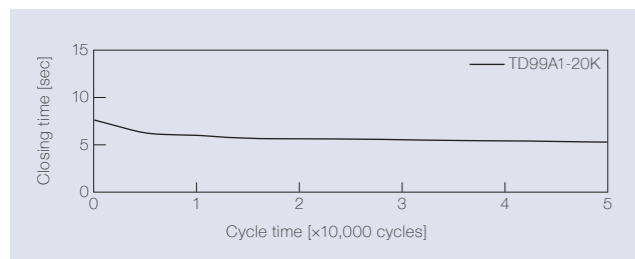
- Made with chemical-resistant PBT plastic is used
- Best-selling products
- The most popular damper design
- TD99 series is identifiable by the shaft color

Product name	Torque [N·m] (lbf·in)	Damping direction	Shaft color
TD99A1-10K	0.98 (8.67)	CW	Natural
TD99A1-15K	1.47 (13.01)		
TD99A1-20K	1.96 (17.35)		

Product name	Torque [N·m] (lbf·in)	Damping direction	Shaft color
TD99B1-10K	0.98 (8.67)	CCW	Black
TD99B1-15K	1.47 (13.01)		
TD99B1-20K	1.96 (17.35)		

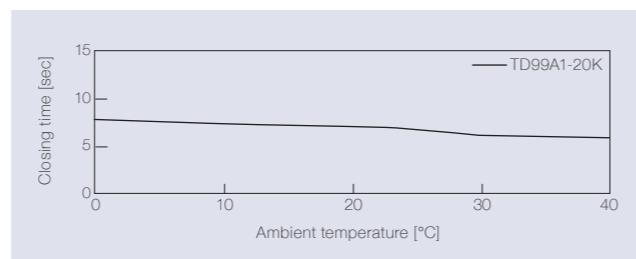
Product specifications

Durability



Torque	1.96 N·m (17.35 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	50,000 cycles

Temperature characteristics



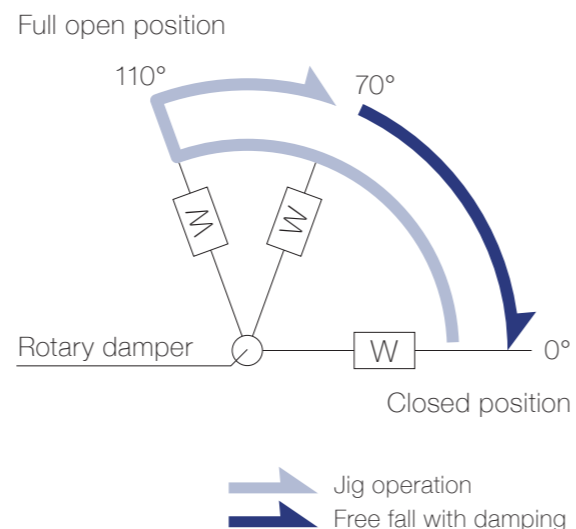
Measured according to the performance management testing method shown below after leaving in each designated ambient temperature for over one hour.

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.

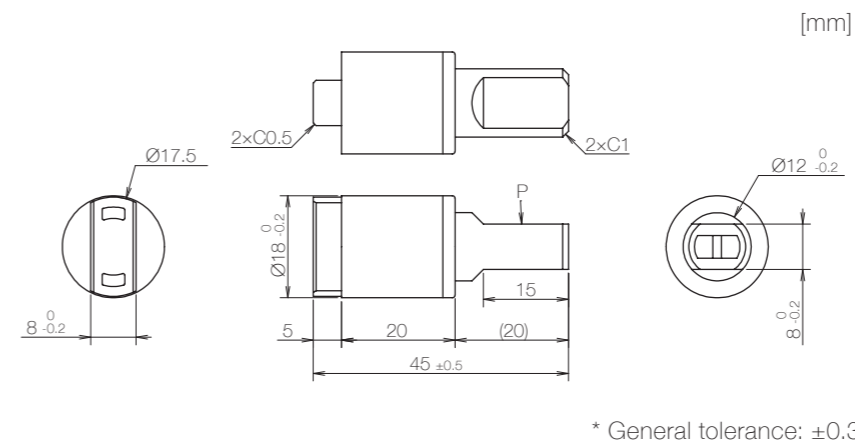
Test mode [110° → 70° (Pause) → (Free fall with damping) → 0°]
 * Horizontal plane: 0°



Inspection specification before shipping

Type	Preset torque [N·m] (lbf·in)	Closing time
10K	0.98 (8.67)	5 to 15 sec
15K	1.47 (13.01)	
20K	1.96 (17.35)	3 to 12 sec

Product information

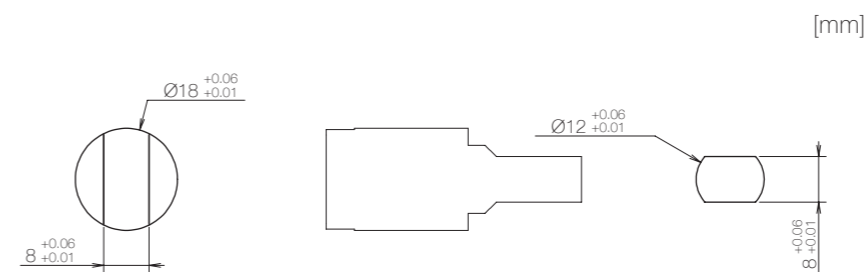


- Opening angle: 110°
- Product weight: Approx. 10 g
- Allowable radial load (P): 29.4 N

Main materials

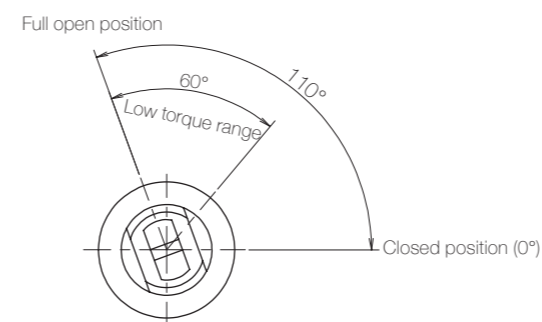
Housing	Plastic (PBT)
Cap	Plastic (PBT)
Shaft	Plastic (PBT)

Dimensions related to mounting

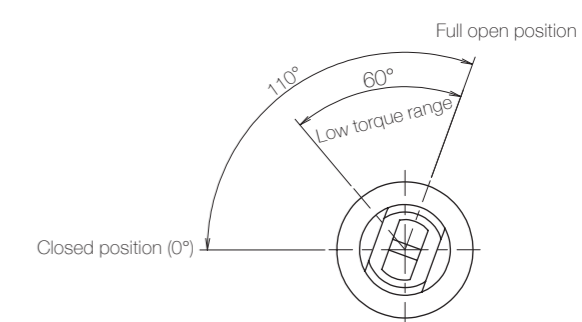


Opening angle

TD99A



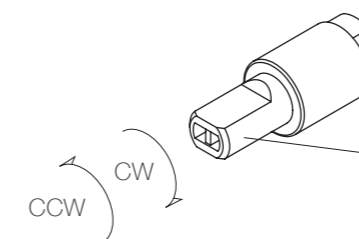
TD99B



* Shaft position at the time of shipping: Closed position

Damping directions

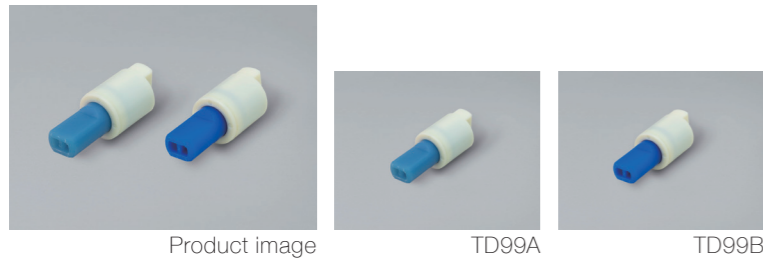
Rotation directions of the shaft to which torque is applied



* Housing secured / Shaft rotatable

Damping direction	Shaft color
CW	Natural
CCW	Black

Product lineup



Features

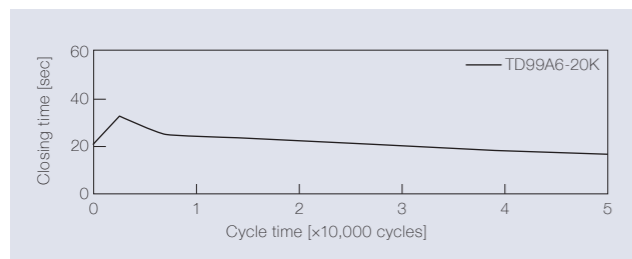
- The most popular damper design
- Vertical use version of TD99
- TD99 series is identifiable by the shaft color

Product name	Torque [N·m] (lbf·in)	Damping direction	Shaft color
TD99A6-10K	1.0 (8.85)	CW	Light blue
TD99A6-15K	1.5 (13.28)		
TD99A6-20K	2.0 (17.70)		

Product name	Torque [N·m] (lbf·in)	Damping direction	Shaft color
TD99B6-10K	1.0 (8.85)	CCW	Blue
TD99B6-15K	1.5 (13.28)		
TD99B6-20K	2.0 (17.70)		

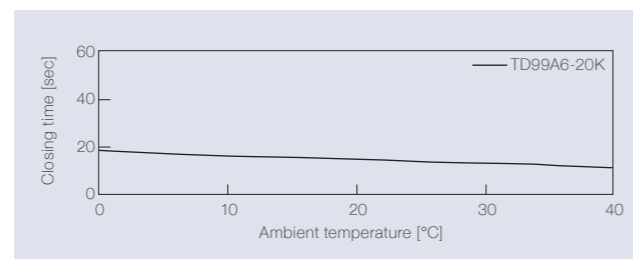
Product specifications

Durability



Torque	2.0 N·m (17.70 lbf·in)
Radial load	N/A
Angle range of closing time	90 to 5 deg.
Temperature	23 ± 2°C (73.4 ± 35.6°F)
Durability	50,000 cycles

Temperature characteristics



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

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]

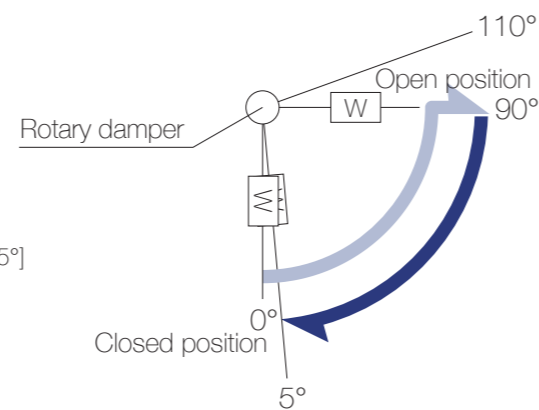
(Secures the housing of a rotary damper and moves its shaft)

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

Durability test mode [5° → 90° (Pause) → (Free fall with damping) → 5°]

Shipping inspection mode [0° → 90° (Pause) → (Free fall with damping) → 5°]

* Horizontal plane: 90°

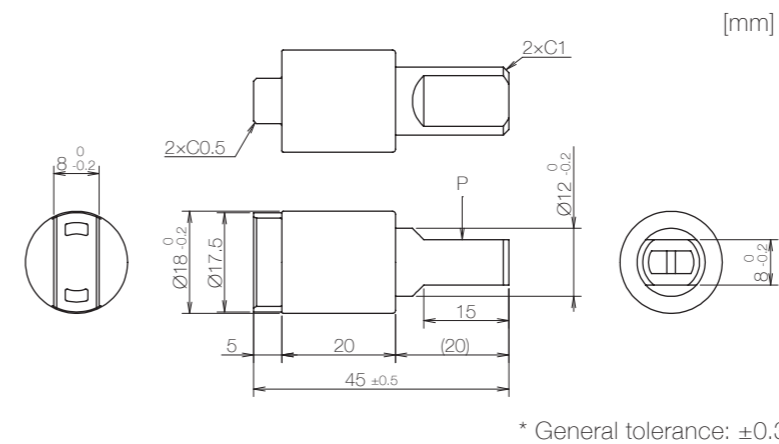


➡ Jig operation
➡ Free fall with damping

Inspection specification before shipping

Type	Preset torque [N·m] (lbf·in)	Closing time
10K	1.0 (8.85)	5 to 20 sec
15K	1.5 (13.28)	
20K	2.0 (17.70)	

Product information



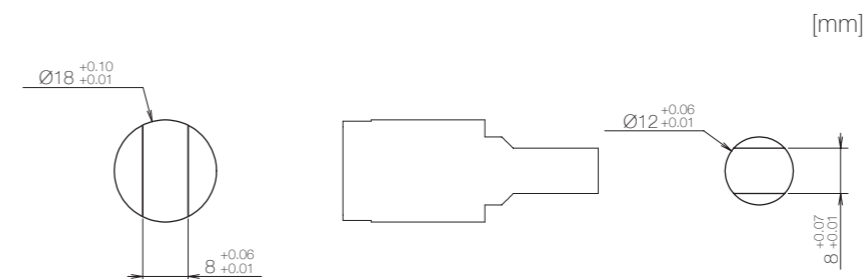
* General tolerance: ±0.3

- Opening angle: 110°
- Product weight: Approx. 10 g
- Allowable radial load (P): 29.4 N

Main materials

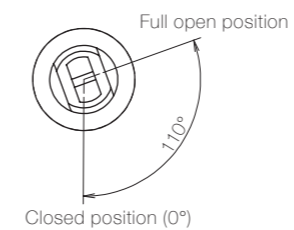
Housing	Plastic (PBT)
Cap	Plastic (PBT)
Shaft	Plastic (PA)

Dimensions related to mounting

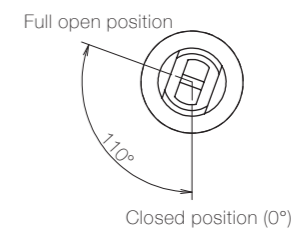


Opening angle

TD99A



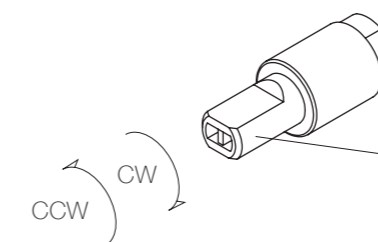
TD99B



* Shaft position at the time of shipping: Closed position

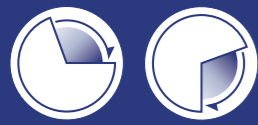
Damping directions

Rotation directions of the shaft to which torque is applied



* Housing secured / Shaft rotatable

Damping direction	Shaft color
CW	Light blue
CCW	Blue



TD99

Horizontal and Vertical use

RoHS compliant

Product lineup



Product image



TD99A



TD99B

Features

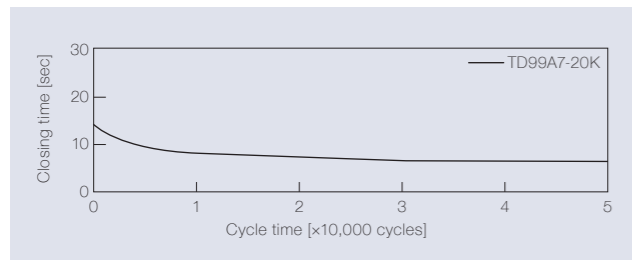
- Made with chemical-resistant PBT plastic is used
- Capable of achieving high torque at all opening angles
- TD99 series is identifiable by the shaft color

Product name	Torque [N·m] (lbf·in)	Damping direction	Shaft color
TD99A7-10K	1.0 (8.85)	CW	North brown
TD99A7-15K	1.5 (13.28)		
TD99A7-20K	2.0 (17.70)		

Product name	Torque [N·m] (lbf·in)	Damping direction	Shaft color
TD99B7-10K	1.0 (8.85)	CCW	Coffee brown
TD99B7-15K	1.5 (13.28)		
TD99B7-20K	2.0 (17.70)		

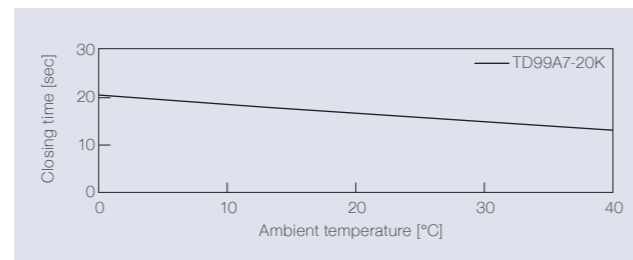
Product specifications

Durability



Torque	2.0 N·m (17.70 lbf·in)
Radial load	N/A
Angle range of closing time	65 to -45 deg.
Temperature	23 ± 2°C (73.4 ± 35.6°F)
Durability	50,000 cycles

Temperature characteristics



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

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.

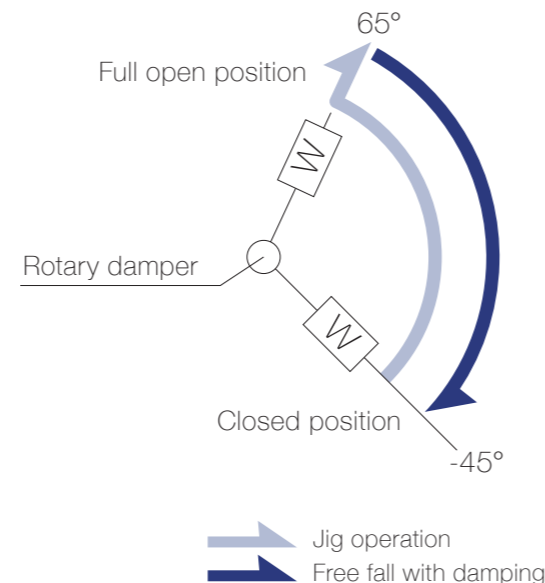
[Operation during measurement]

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

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

Test mode [-45° → 65° (Pause) → (Free fall with damping) → -45°]

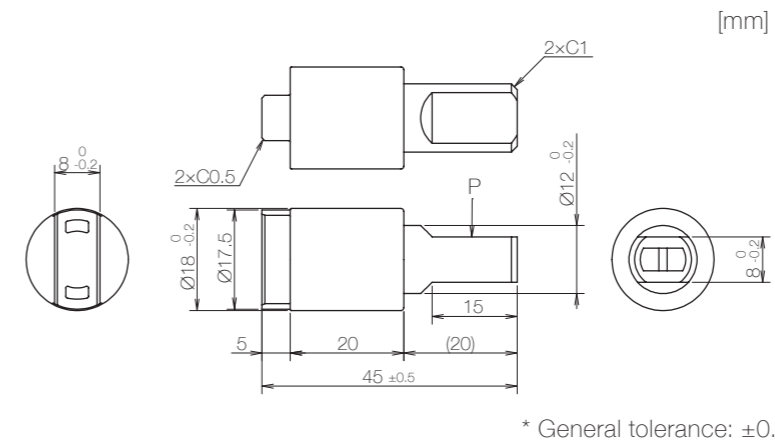
* Horizontal plane: 0°



Inspection specification before shipping

Type	Preset torque [N·m] (lbf·in)	Closing time
10K	1.0 (8.85)	5 to 20 sec
15K	1.5 (13.28)	
20K	2.0 (17.70)	

Product information



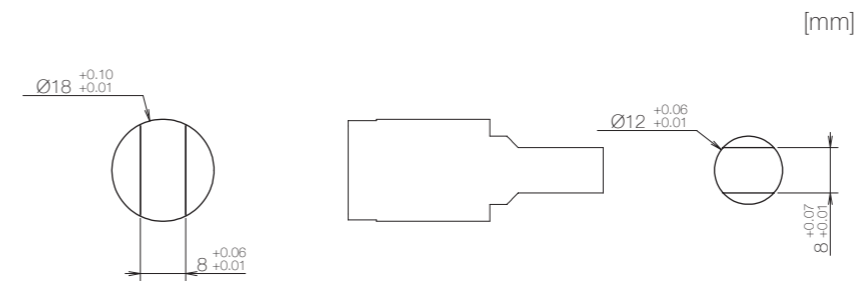
* General tolerance: ±0.3

- Opening angle: 110°
- Product weight: Approx. 10 g
- Allowable radial load (P): 29.4 N

Main materials

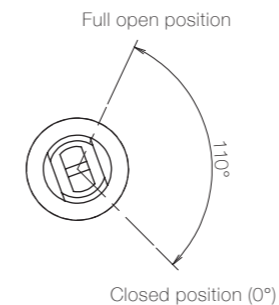
Housing	Plastic (PBT)
Cap	Plastic (PBT)
Shaft	Plastic (PBT)

Dimensions related to mounting

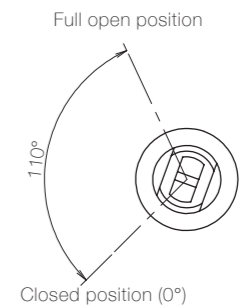


Opening angle

TD99A



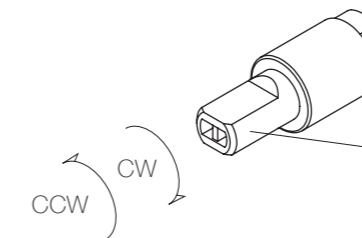
TD99B



* 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	Shaft color
CW	North brown
CCW	Coffee brown