

Product lineup



Product image

●Black ●Gold ○White ●Silver



Mounting part

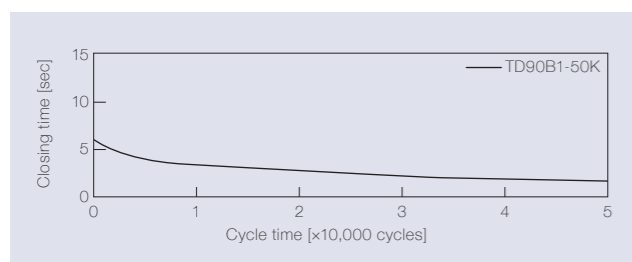
Features

- This product has been developed for additional mounting on piano key lids without damping function
- Removing the load returns the arm to its default position automatically
- 4 color variations are available

Product name	Torque [N·m] (lbf·in)	Damping direction
TD90B1-35K	3.5 (30.98)	CCW
TD90B1-50K	5.0 (44.25)	

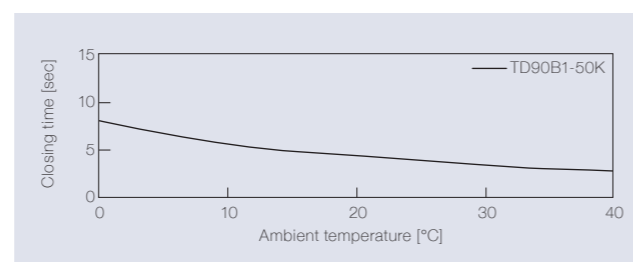
Product specifications

Durability



Torque	5.0 N·m (44.25 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.

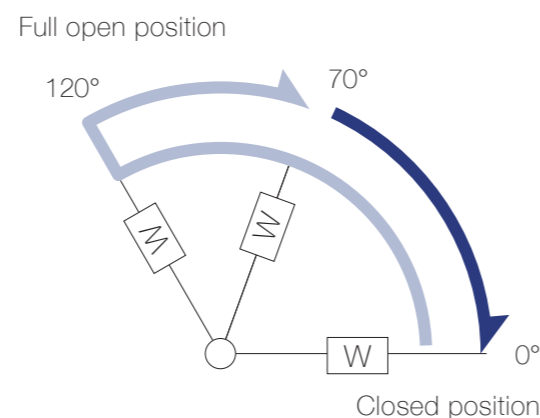
[Operation during measurement]

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

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

Test mode [120° → 70° (Pause) → (Free fall with damping) → 0°]

* Horizontal plane: 0°

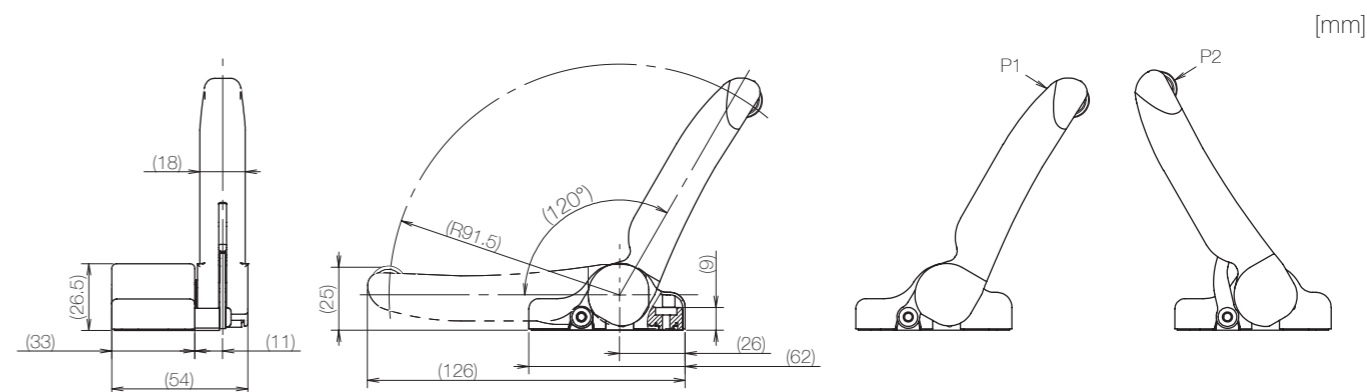


Inspection specification before shipping

Type	Preset torque [N·m] (lbf·in)	Closing time
35K	3.5 (30.98)	2 to 10 sec
50K	5.0 (44.25)	2 to 7 sec

➡ Jig operation
➡ Free fall with damping

Product information



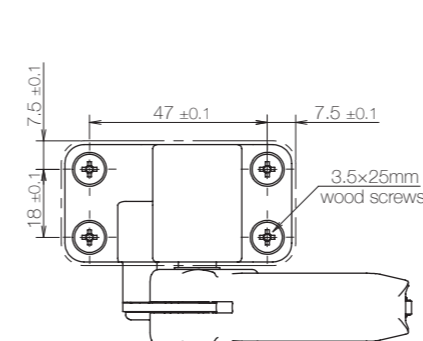
- Opening angle: 120°
(The arm returns from the closed position to the 90° or larger position automatically)
- Product weight: Approx. 124 g
- Allowable radial load: (P1) 50 N, (P2) 45 N

* General tolerance: ±0.3

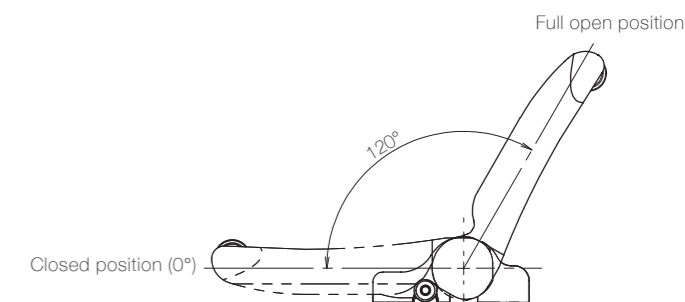
Main materials

Rotary dampers	Plastic (POM)
Rotary dampers cover	Plastic (ABS)
Arm	Zinc alloy (ZDC)
Arm-cover	Plastic (ABS)

Dimensions related to mounting

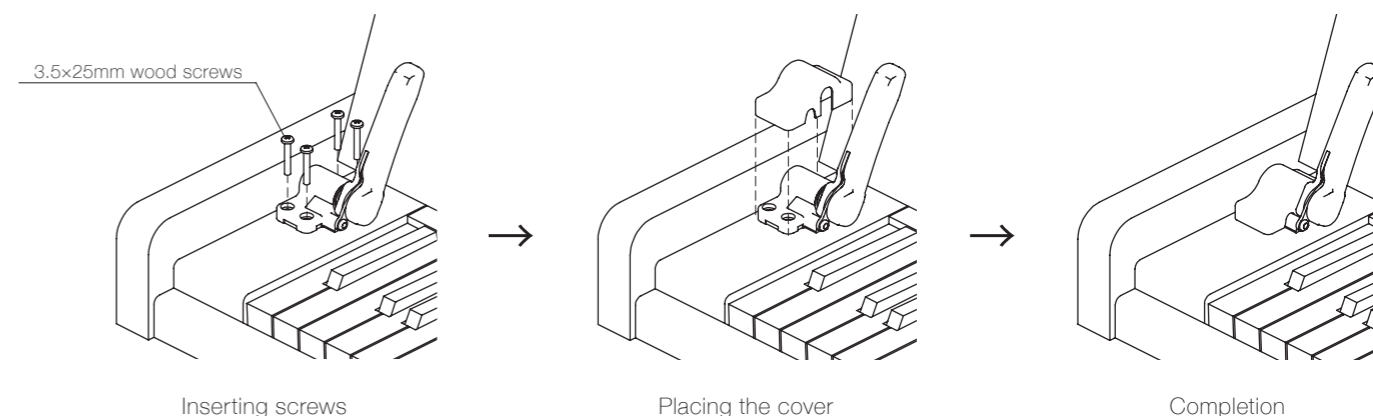


Opening angle



* Arm position at the time of shipping: Open position

Mounting method with screws (Sold separately)



Attention

- Install the damper (TD90) in the position where the key-block operates correctly.
- Be careful not to damage the damper (TD90) or the piano when installing the damper (TD90) on the piano.
- Secure the damper in the position where the arm-cover does not hit a fall board.
- By separating the installation position from the rotation axis of a fall board, the closing time of a fall board becomes longer.