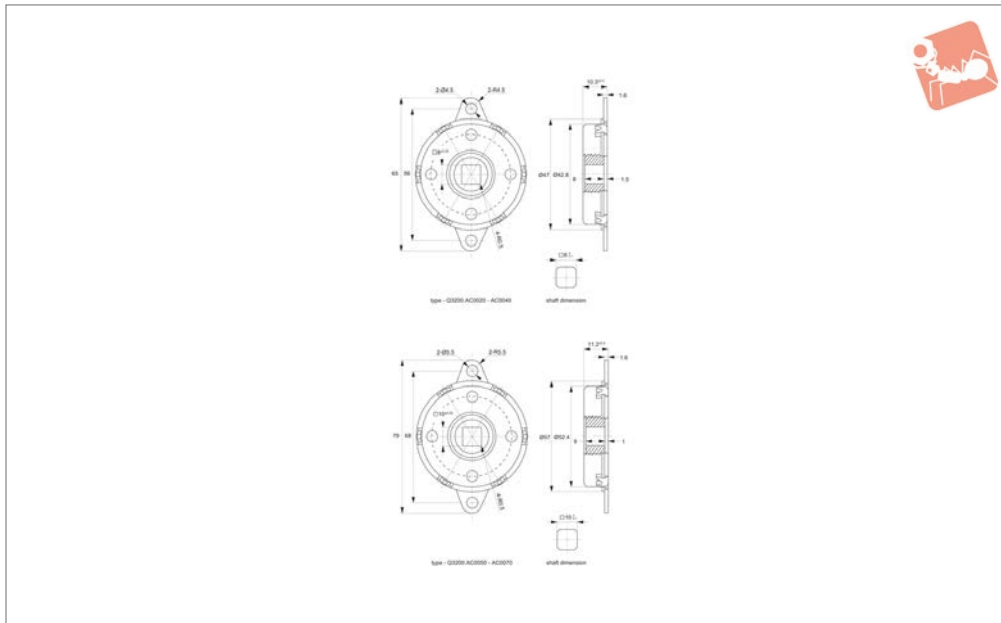




Disk Dampers

bi-directional - continuous rotation - up to 47 Kgf.

Disk Dampers



Q3200

DISK DAMPERS

Material

Body: iron (SPFC).
 Shaft: nylon (with glass).
 Oil: silicone.

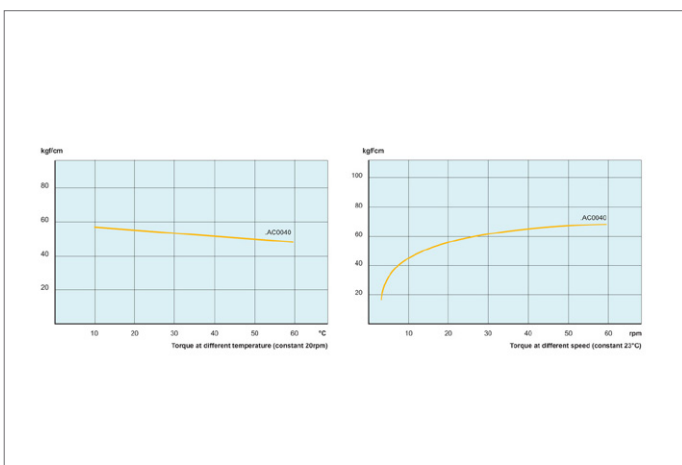
Rotational speed 20rpm at $23^{\circ}\pm 3C^{\circ}$
 Rotational speed 50rpm max.
 Cycle rate 12 cycle/min.
 Dampers are both clockwise and counter clockwise.

Important Notes

Temperature range -10° to $50^{\circ}C$.

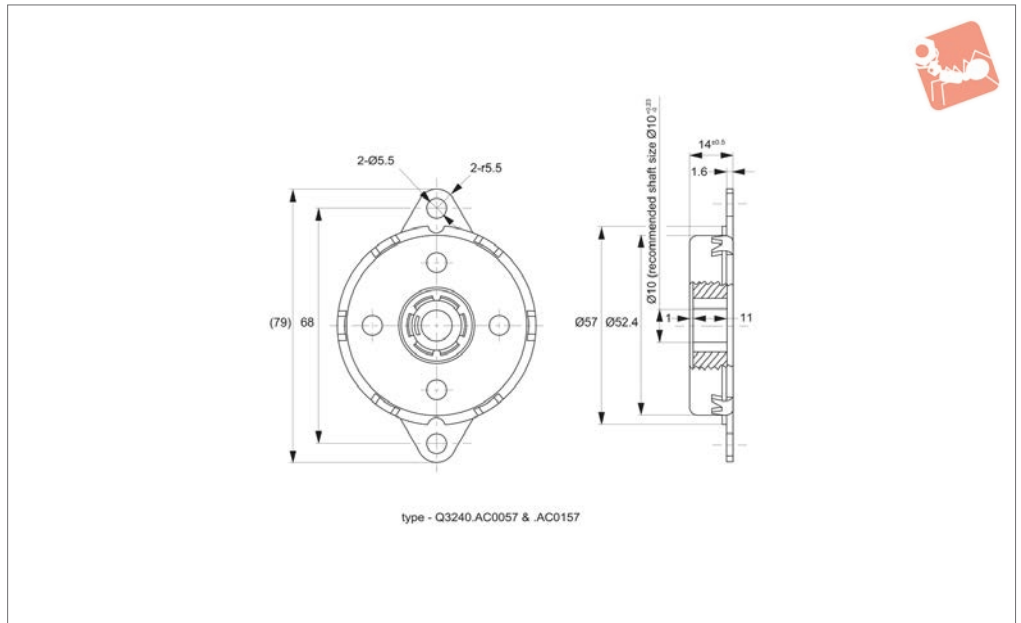
Damper can only take torque load.

Order No.	Damping torque Nm ± 0.5	Damping direction	Weight g
Q3200.AC0020	2	Bi-directional	75
Q3200.AC0030	3	Bi-directional	75
Q3200.AC0040	4	Bi-directional	75
Q3200.AC0050	5	Bi-directional	75
Q3200.AC0060	6	Bi-directional	75
Q3200.AC0070	7	Bi-directional	75





Q3240



Material

Body: iron (SPFC).
Shaft: nylon (with glass).
Oil: silicone.

shaft in opposite direction to the damping direction.
Damper can only take torque load.

Rotational speed 50rpm max.
Cycle rate 12 cycle/min.
Dampers are both clockwise and counter clockwise.
Shaft: recommended shaft size Ø10, hardness HRC55, roughness 1.02 or lower

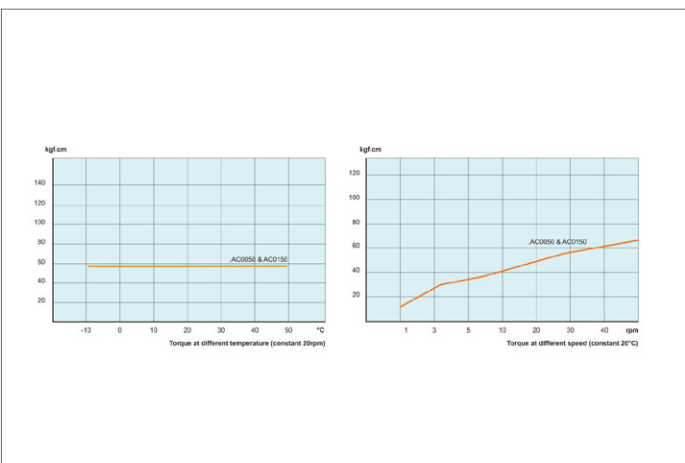
Technical Notes

When inserting shaft, insert by rotating

Important Notes

Temperature range -10° to 50°C.
Rotational speed 20rpm at 23°±3°C.

Order No.	Damping torque Nm ±0.5	Damping direction	Weight g
Q3240.AC0040	4.0	Clockwise	94
Q3240.AC0140	4.0	Counter-clockwise	94
Q3240.AC0050	5.0	Clockwise	94
Q3240.AC0060	6.0	Clockwise	94
Q3240.AC0150	5.0	Counter-clockwise	94
Q3240.AC0160	6.0	Counter-clockwise	94
Q3240.AC0070	7.0	Clockwise	94
Q3240.AC0170	7.0	Counter-clockwise	94

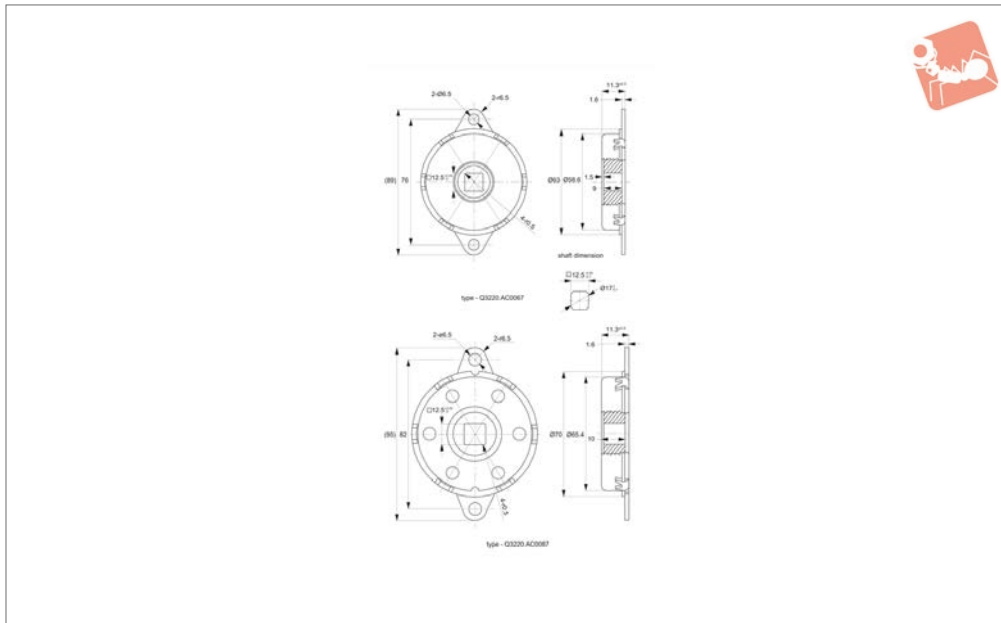




Disk Dampers

bi-directional - continuous rotation - up to 87 Kgf.

Disk Dampers



Q3220

DISK DAMPERS

Material

Body: steel
 Socket: nylon with glass fibre
 Operating fluid: silicone oil.

Tips

For graphs of torque at varying tempera-

ture and speed, see **Torque Closing Speed Graphs** earlier in this section.

Damper can only take torque load.

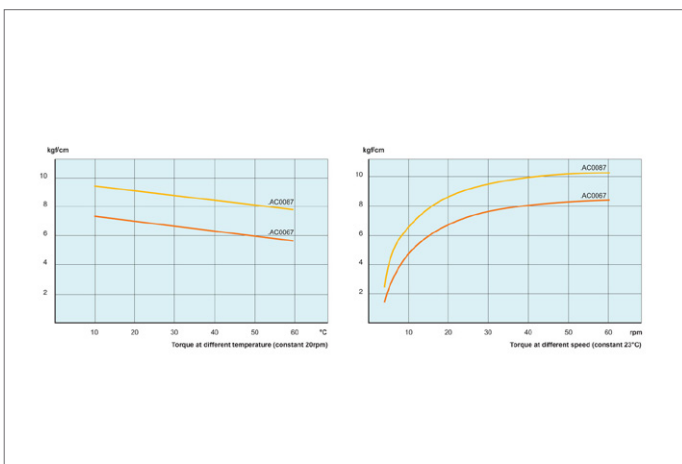
Important Notes

Temperature range -10°C to +50°C.
 Rotational speed 50 rpm max.

Cycle rate 12 cycles/min.

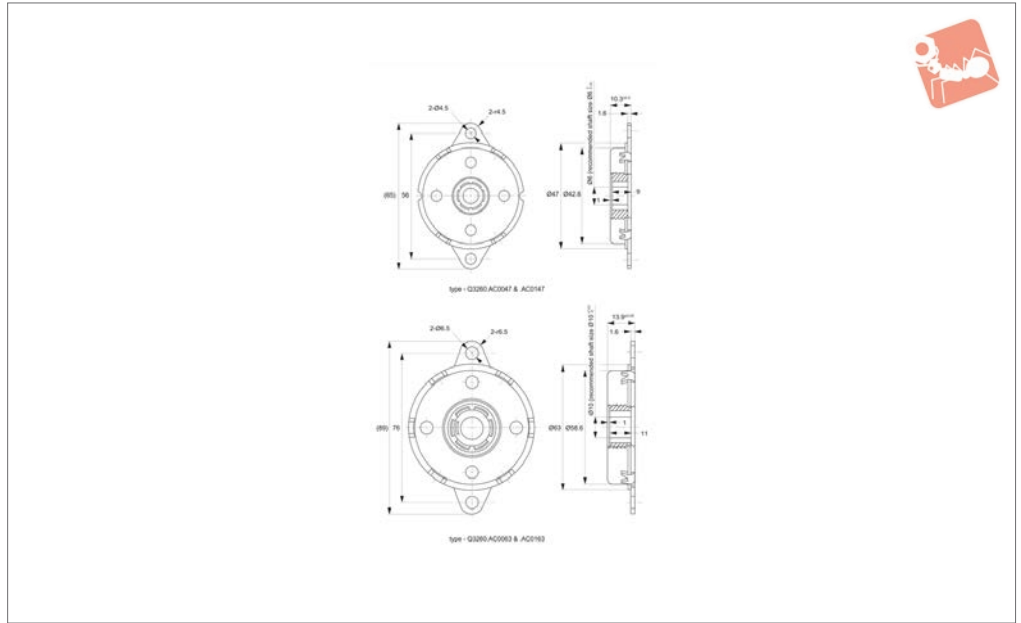
External support for shaft required.

Order No.	Damping torque kgf/cm	Weight capacity kg max.	Weight g
Q3220.AC0067	67	0.12	92
Q3220.AC0087	87	0.12	112





Q3260



Material

Body: steel
 Socket: nylon with glass fibre.
 Operating fluid: silicone oil.

Technical Notes

Shaft specifications:
 Min hardness - 55HRC (min 0.5mm depth).
 Surface roughness - 1.0µm.

End chamfering - R0.2/R0.3.

Tips

For graphs of torque at varying temperature and speed, see Torque Closing Speed Graphs earlier in this section.

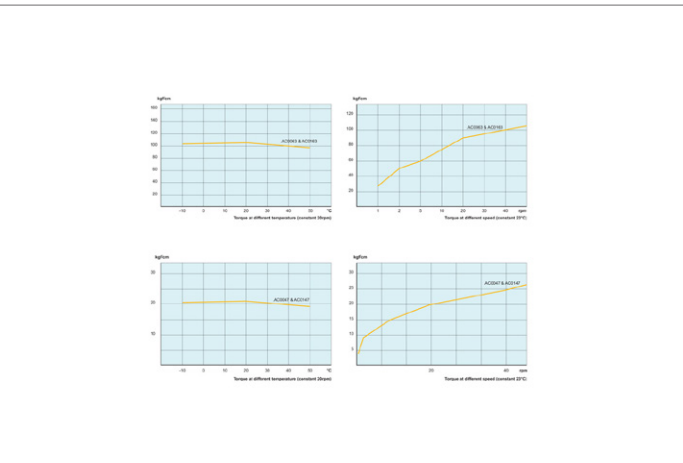
When inserting shaft, insert by rotating shaft in the opposite direction of the dampening direction.

Damper can only take torque load.

Important Notes

Temperature range -10°C to +50°C.
 Rotational speed 50rpm max.
 Cycle rate 12 cycles/ min.
 External support for shaft required.

Order No.	Damping direction	Damping torque kgf/cm	For shaft dia. mm	Weight capacity kg max.	Weight g
Q3260.AC0047	Clockwise	20	6	0.12	55
Q3260.AC0147	Counter Clockwise	20	6	0.12	55
Q3260.AC0063	Clockwise	85	10	0.12	115
Q3260.AC0163	Counter Clockwise	85	10	0.12	115





Disk Dampers

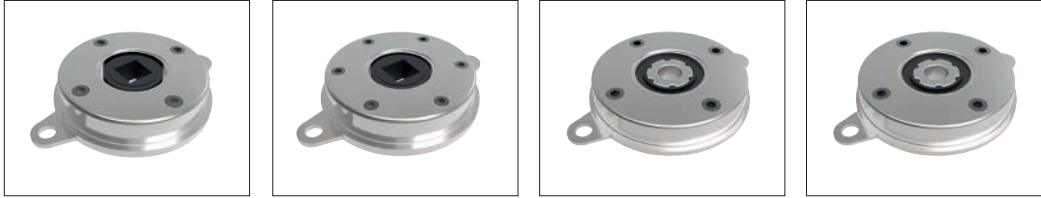
bi or uni-directional continuous rotation

Q3200 - Q3260

Solution for controlled opening and closing motion

Wixroyd disk dampers offer controlled opening and closing of lids, drawers, covers and much more, they provide a range of solutions for a variety of applications creating smooth movement and function. Though unnoticed in many applications, disk dampers are a vital part of many products bringing quality, safety and durability.

Disk dampers provide quality movement enhancing both touch and feel. Available in uni-directional (single) dampening, or bi-directional (double) version.



Disk dampers

Disk dampers utilise the principle of fluid resistance to reduce the speed of moving parts. The oil viscosity is utilised to provide the “braking force” of the damper. The torque or “braking force” can be adjusted by changing the viscosity of the oil.

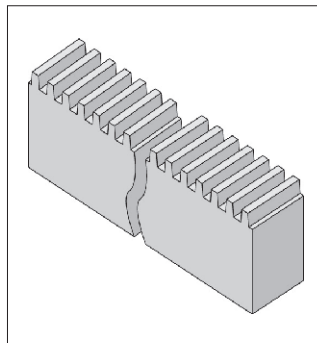
- Loading trays for CD, DVD, VCR, MD players.
- Arm rests, ashtrays, center consoles, glove boxes, handles and storage compartments in passenger vehicles.
- Camcorders, cellular phones and small personal devices.

Introduction

Applications

Disk dampers utilise the movement of fluid forced from one chamber to another via a rotor. Dampening speed is dependent upon the viscosity of the fluid and the diameter of the fluid aperture.

Through the use of toothed plastic rack no. Q3150, disk dampers can be used to dampen on a linear plane rather than the normal dampening directly at the shaft.



Part no.	Q3200 to Q3260
Max. speed	50rpm
Max. cycle rate	12 cycles/min
Nominal torque rating	At 20rpm, 23°C (73°F)
Operating temperature	-10 to 50°C (14 - 122°F)
Storage temperature	-20 to 60°C (-4 to 140°F)

Operating principle and general specification

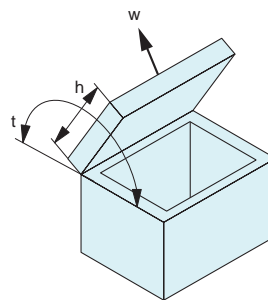
To calculate the torque for your application, the following measurements are necessary.

$$t \text{ (torque)} = w \times 0.5 \times h$$

h = length from pivot point to end of lid (cm)

w = weight of the lid (Kg)

Torque force stated per product (see individual product pages), is the maximum torque to which the specified part can be exposed before the dampening force yields and hence dampening is overcome.



Torque calculation

Note

Dampening direction is determined whilst looking directly onto the output shaft.

Important

Avoid side loading of the disk damper output shaft in order to maximise effectiveness.

Important note: Once calculation has been made choose a disk damper from our range which can accommodate the newly calculated torque of the application. Use the damper closing speed graphs opposite to confirm that the rpm given at the corresponding torque value matches the desired lid closing speed. If the desired rpm is beyond the capacity of the selected damper, then select another damper with a higher torque rating and re-test. If the rpm is too slow select another damper with a lower torque rating and re-test.

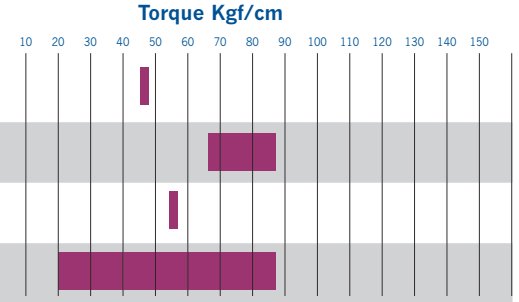


Disk dampers



Part no.	Damping direction	Torque Kgf/cm
Q3200	Two way	47
Q3220	Two way	67 - 87
Q3240	One way	55
Q3260	One way	20 - 85

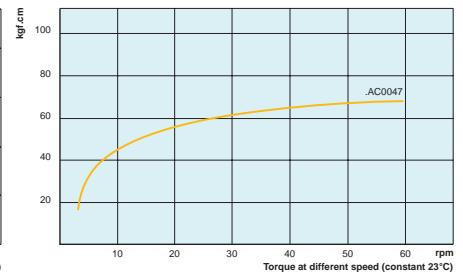
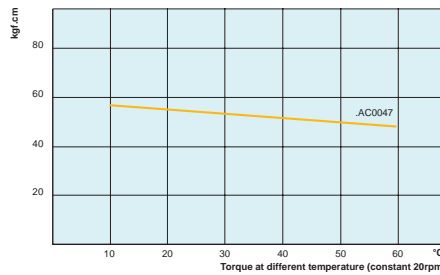
Rotary dampers



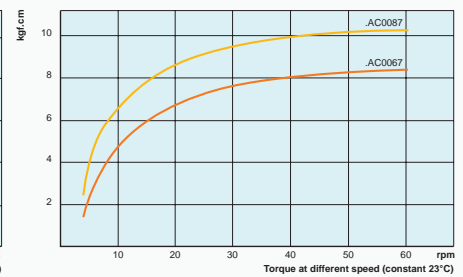
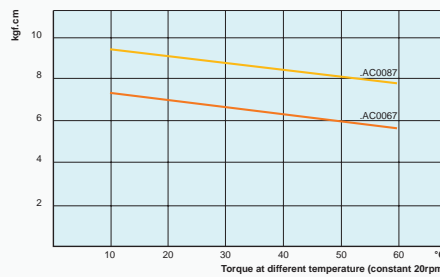
Torque graphs for temperature and speed

Follow the torque calculation formula opposite and utilise the following torque closing speed graphs to ensure the selected disk damper best suits you application.

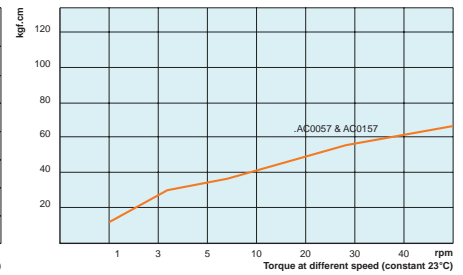
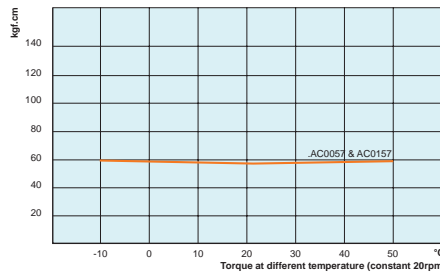
Q3200



Q3220



Q3240



Q3260

