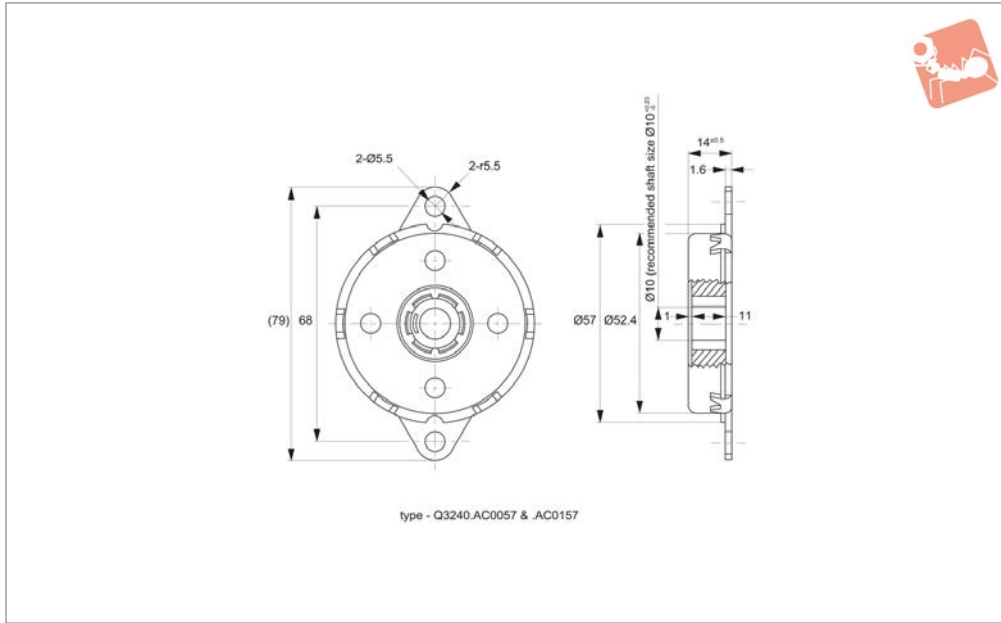




# Disk Dampers

uni-directional - continuous direction - up to 55

# Disk Dampers



## Q3240

DISK DAMPERS

### Material

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

### Technical Notes

When inserting shaft, insert by rotating

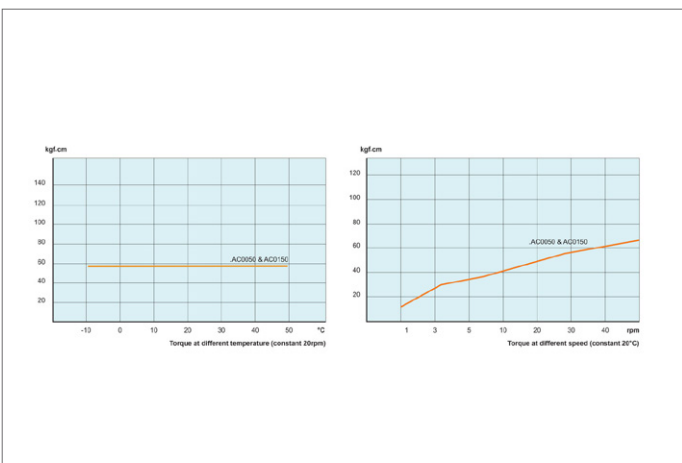
shaft in opposite direction to the damping direction.  
Damper can only take torque load.

### Important Notes

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

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

| Order No.    | Damping torque<br>Nm<br>±0.5 | Damping direction | Weight<br>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          |





## 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

### Introduction

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.

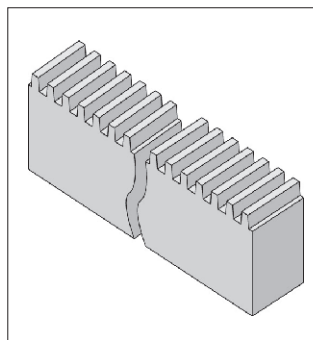
### Applications

- 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.

### Operating principle and general specification

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) |

### Torque calculation

#### Note

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

#### Important

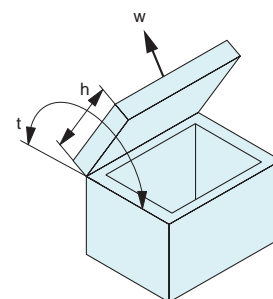
Avoid side loading of the disk damper output shaft in order to maximise effectiveness.

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.



**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.