

Shock Absorber: Short Type

Series *RBQ*

Allowable eccentric angle is 5°

Ideal for absorption of rotating energy

Specifications

| Model | Basic type | RBQ1604 | RBQ2007 | RBQ2508 | RBQ3009 | RBQ3213 |
|--|-------------|-----------|----------|----------|----------|----------|
| | With bumper | RBQC1604 | RBQC2007 | RBQC2508 | RBQC3009 | RBQC3213 |
| Max. energy absorption (J) | | 1.96 | 11.8 | 19.6 | 33.3 | 49.0 |
| Stroke absorption (mm) | | 4 | 7 | 8 | 8.5 | 13 |
| Collision speed (m/s) | | 0.05 to 3 | | | | |
| Max. operating frequency * (cycle/min) | | 60 | 60 | 45 | 45 | 30 |
| Max. allowable thrust (N) | | 294 | 490 | 686 | 981 | 1177 |
| Ambient temperature (C°) | | -10 to 80 | | | | |
| Spring force (N) | Extended | 6.08 | 12.75 | 15.69 | 21.57 | 24.52 |
| | Retracted | 13.45 | 27.75 | 37.85 | 44.23 | 54.23 |
| Weight (g) | | 28 | 60 | 110 | 182 | 240 |
| Option/Stopper nut | | RBQ16S | RB20S | RBQ25S | RBQ30S | RBQ32S |

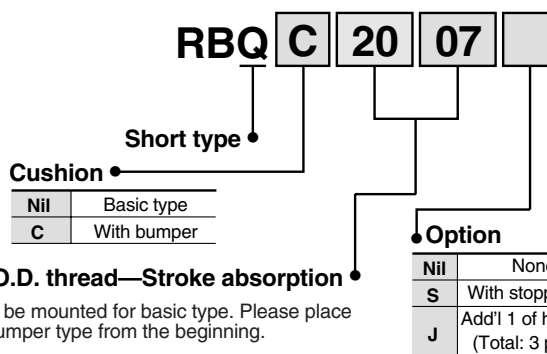
* It denotes the values at the maximum energy absorption per one cycle. Therefore, the operating frequency can be increased according to the energy absorption.



With bumper
Series RBQC

Basic type
Series RBQ

How to Order



Replacement part no./Bumper

RBQC 16 C

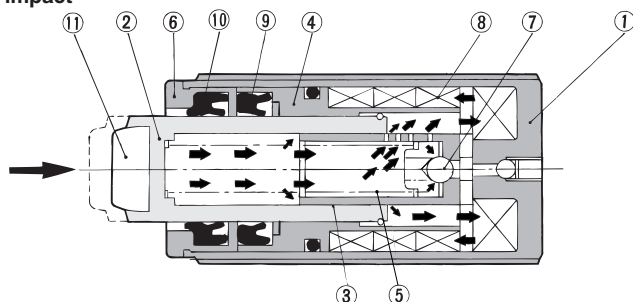
Applicable model

16-RBQC1604
20-RBQC2007
25-RBQC2508
30-RBQC3009
32-RBQC3213

* 2 mounting hexagon nuts are attached as standard.

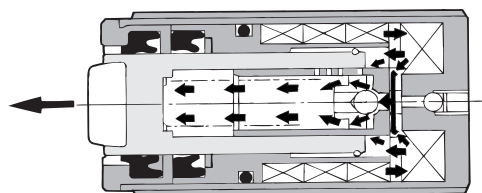
Construction

At impact



An impact object that strikes against the piston rod end pressurizes oil inside the piston. Thus, pressurized oil jets out through the orifice inside the piston, thereby generating hydraulic resistance to absorb the energy of the impacting object. The oil jetted out through the orifice is collected inside the outer tube by means of the stretching action of the accumulator.

At returning



When the impact object is removed, the return spring pushes out the piston rod, and negative pressure, generated at the same time, opens the check ball to permit oil to return to the shock absorber ready for the next impact.

Component Parts

| No. | Description | Material | Treatment |
|-----|---------------|--------------------------|----------------------------------|
| ① | Outer tube | Rolled steel | Black nickel plated |
| ② | Piston rod | Special steel | Heat treated, Hard chrome plated |
| ③ | Piston | Special steel | Heat treated |
| ④ | Bearing | Special bearing material | |
| ⑤ | Return spring | Piano wire | Zinc chromated |
| ⑥ | Stopper | Carbon steel | Zinc chromated |

| No. | Description | Material | Treatment |
|-----|-------------|---------------|------------------|
| ⑦ | Check ball | Bearing steel | |
| ⑧ | Accumulator | Fluoro rubber | Foam rubber |
| ⑨ | Rod seal | NBR | |
| ⑩ | Scraper | NBR | |
| ⑪ | Bumper | Polyurethane | Only with bumper |