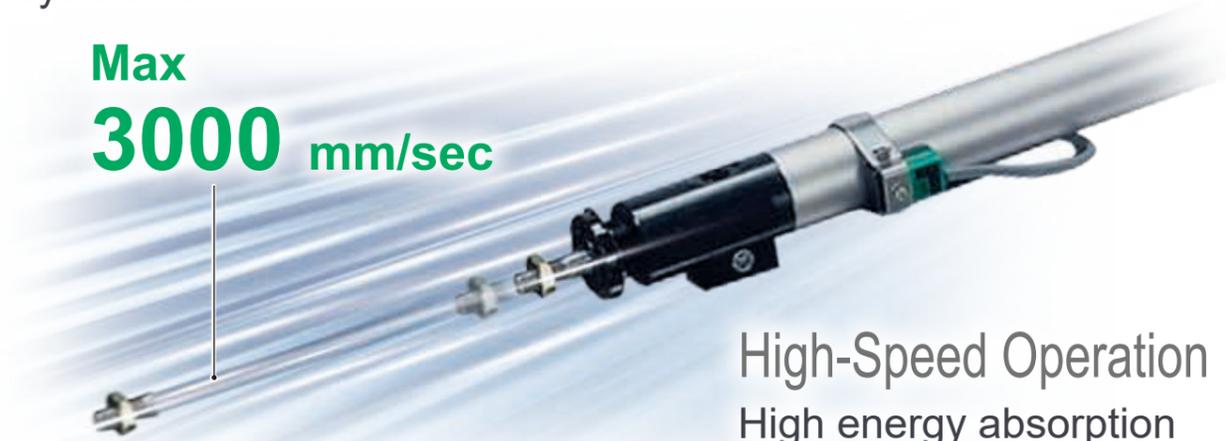


# High-Speed System Cylinder

Cylinder capable of high-speed operation and high energy absorption

Reliably absorbs energy even in locations where shock absorber installation is difficult, greatly contributing to shortening equipment cycle time

Max **3000** mm/sec



High-Speed Operation  
High energy absorption eliminates the need for shock absorbers

\* Use within the allowable shock absorption energy.

## 2 Selectable Series

High Energy Absorption Cylinder

**HCM Series**

Max Speed  
**2,000**  
mm/s



High Speed Cylinder

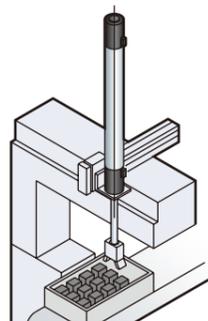
**HCA Series**

Max Speed  
**3,000**  
mm/s

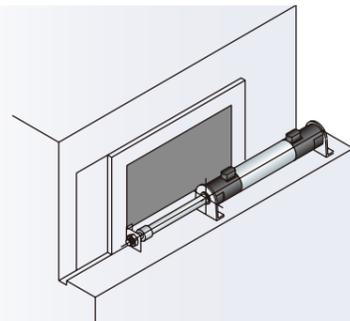


## Application Example

Resin Molding Machine Take-out Robot



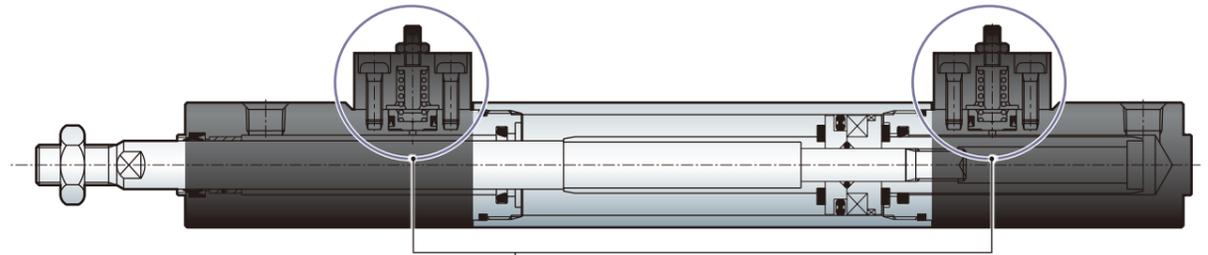
For Machine Tool Door Opening/Closing



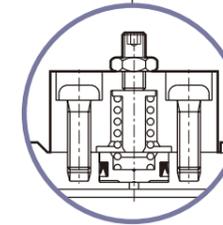
## High Energy Absorption Cylinder **HCM Series**

Bore Size:  $\phi 20$  to  $\phi 63$   
Max Speed 2000 m/s

Shock absorption capacity 5 times that of conventional cylinders  
Particularly excellent characteristics for heavy loads at medium to high speeds.



New Cushion Mechanism Built-in  
Achieves smooth stopping at the stroke end. With adjustment mechanism, easily adjustable to a wide range of conditions.



Prevention of jumping out at start  
Floating method adopted for cushion. Prevents jumping out due to cracking pressure at start.

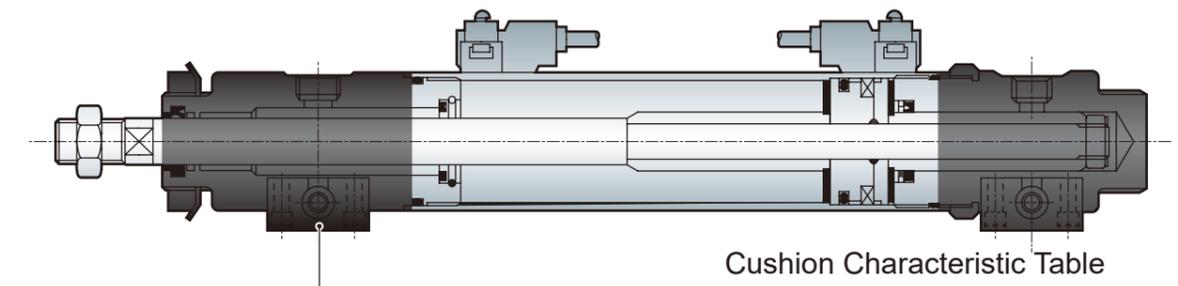
Cushion Characteristic Table

Bore Size (mm)	Allowable Absorption Energy (J)
$\phi 20$	3
$\phi 25$	5
$\phi 32$	9
$\phi 40$	14
$\phi 50$	23
$\phi 63$	30

## High Speed Cylinder **HCA Series**

Bore Size:  $\phi 20$  to  $\phi 100$   
Max Speed 3000 m/s

Shock absorption capacity 6 to 8 times that of conventional cylinders  
Higher speed operation possible at Max speed of 3000 mm/sec.



Cushion adjustment is easy with only relief pressure setting

High Absorption Energy  
The compressibility of air works effectively, providing superior shock absorption performance than shock absorbers.

Cushion Characteristic Table

Bore Size (mm)	Allowable Absorption Energy (J)
$\phi 20$	7.54
$\phi 25$	11.8
$\phi 32$	18.6
$\phi 40$	29.4
$\phi 50$	46.1
$\phi 63$	73.5
$\phi 80$	118
$\phi 100$	184

High Speed Type

HCM

HCA

High Speed Type

HCM

HCA

Cylinder Switch

Ending

Cylinder Switch

Ending

