Crash Damper

ACE: Your partner for industrial shock absorbers, gas springs and vibration control

Special Catalogue 2021
Crash Dampers

Highly effective aluminium and steel emergency stop

As single-use solutions, the robust crash dampers complement ACE’s range of safety products. They are made of special aluminium or steel piping that folds by design in the event of a crash, converting the kinetic energy generated into heat.

The tough crash elements efficiently protect structures when incidents occur by evenly absorbing 98 percent of the energy. They deliver great long-term stability in everyday operation and outstanding protection in the event of an emergency stop. All crash boxes are easy to install and replace after a crash. Crash dampers also offer impressive performance for the price.

98 percent energy absorption
Excellent price-performance ratio
Very sturdy and reliable
Long stroke ensures low reacting forces
Easy to install and replace
High energy capacity
Crash Dampers
Highly effective aluminium and steel energy absorption elements

Single-use emergency stop dampers
Energy capacity 670 Nm/Cycle to 11,200 Nm/Cycle
Stroke 45 mm to 160 mm

Single-use, yet extremely useful protection: With its crash dampers, ACE offers engineers a single-use solution as a high-efficiency plant safety option. Each crash element, made of custom designed aluminium piping or steel, absorbs even high inertia forces almost instantaneously in the event of an impact. When arranged in series or parallel, the crash elements can absorb even higher energy values at once.

Other advantages of the emergency stop systems developed in sophisticated test series are their simple installation, ease of retrofitting in existing plants, speed of replacement and reduced downtime after a crash. The deformation of the crash box also allows the incident to be reconstructed, ideally helping avoid the same problem in future.

With these benefits, the crash dampers are already protecting many linear axes in robotics applications as well as the limit positions of tool machines, conveyor systems and high bay rack feeders.

Technical Data

- **Energy capacity**: 670 Nm/Cycle to 11,200 Nm/Cycle
- **Stroke**: 45 mm to 160 mm
- **Energy absorption**: 98%
- **Reacting Force**: averaged 13,000 N to 70,000 N
- **Operating temperature range**: -10° C to +50° C
- **Standard colour**: Umbra grey RAL 7022: Outer diameter 88
  Ruby red RAL 3003: Outer diameter 38 and 63
- **Construction size**: 38 mm to 88 mm
- **Material**: Outer body: Powder-coated aluminium or Steel
- **Mounting**: In any position
- **Impact velocity range**: Max. 5 m/s
- **Application field**: Emergency stop damping in linear axes, Portal systems, Tool machines, Test stations, Electro-mechanical drives

Note: The single-use damper must be replaced after each impact.
Safety instructions: Where necessary, use thread locking fluid to secure the threaded pins
On request: Also available with centring pins and other special versions
Crash Dampers

The calculation and selection of the most suitable damper should be carried out or be approved by ACE.

Ordering Example

Type _____________________________

Outer diameter _____________________________

High energy absorption _____________________________

Performance and Dimensions

<table>
<thead>
<tr>
<th>TYPES</th>
<th>Energy capacity (Nm/cycle)</th>
<th>Stroke (mm)</th>
<th>Reacting Force (kN)</th>
<th>Material</th>
<th>A (mm)</th>
<th>B (mm)</th>
<th>d1 (mm)</th>
<th>d2 (mm)</th>
<th>L (mm)</th>
<th>M</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD-88-50</td>
<td>670</td>
<td>50</td>
<td>13,000</td>
<td>Aluminium</td>
<td>123</td>
<td>99</td>
<td>88</td>
<td>105</td>
<td>26</td>
<td>M10</td>
<td>0.41</td>
</tr>
<tr>
<td>CD-88-45</td>
<td>1,020</td>
<td>45</td>
<td>23,000</td>
<td>Aluminium</td>
<td>123</td>
<td>99</td>
<td>88</td>
<td>105</td>
<td>26</td>
<td>M10</td>
<td>0.44</td>
</tr>
<tr>
<td>CD-88-53</td>
<td>1,430</td>
<td>53</td>
<td>27,000</td>
<td>Aluminium</td>
<td>134</td>
<td>110</td>
<td>88</td>
<td>105</td>
<td>26</td>
<td>M10</td>
<td>0.52</td>
</tr>
<tr>
<td>CD-88-56</td>
<td>1,680</td>
<td>56</td>
<td>30,000</td>
<td>Aluminium</td>
<td>147</td>
<td>124</td>
<td>88</td>
<td>105</td>
<td>26</td>
<td>M10</td>
<td>0.54</td>
</tr>
<tr>
<td>CD-88-56-H</td>
<td>2,130</td>
<td>56</td>
<td>38,000</td>
<td>Aluminium</td>
<td>147</td>
<td>124</td>
<td>88</td>
<td>105</td>
<td>26</td>
<td>M10</td>
<td>0.56</td>
</tr>
<tr>
<td>CD-38-80</td>
<td>3,760</td>
<td>80</td>
<td>47,000</td>
<td>Steel</td>
<td>161</td>
<td>135</td>
<td>38</td>
<td>46</td>
<td>26</td>
<td>M16</td>
<td>0.46</td>
</tr>
<tr>
<td>CD-88-145</td>
<td>5,370</td>
<td>145</td>
<td>37,000</td>
<td>Aluminium</td>
<td>239</td>
<td>216</td>
<td>88</td>
<td>140</td>
<td>26</td>
<td>M10</td>
<td>0.72</td>
</tr>
<tr>
<td>CD-88-145-H</td>
<td>7,690</td>
<td>145</td>
<td>53,000</td>
<td>Steel</td>
<td>239</td>
<td>216</td>
<td>88</td>
<td>140</td>
<td>26</td>
<td>M10</td>
<td>0.75</td>
</tr>
<tr>
<td>CD-63-160</td>
<td>11,200</td>
<td>160</td>
<td>70,000</td>
<td>Steel</td>
<td>452</td>
<td>273</td>
<td>63</td>
<td>72</td>
<td>180</td>
<td>M36</td>
<td>2.20</td>
</tr>
</tbody>
</table>

1 averaged Reacting Force

Note: All specifications are nominal dimensions. Tolerances are available on request.
ACE Germany
The shortest way to the perfect shock absorber

ACE Stoßdämpfer GmbH
PO Box 1510
40740 Langenfeld
Albert-Einstein-Straße 15
40764 Langenfeld
Germany
T +49 (0)2173 - 9226-4100
F +49 (0)2173 - 9226-89
info@ace-int.eu
www.ace-ace.com

Global but always near
International ACE Sales Locations

GREAT BRITAIN
ACE Fabreeka UK
Unit 404 Easter Park, Haydock Lane
Haydock, WA11 9TH, U.K.
T +44 (0)1942 - 727 440
F +44 (0)1942 - 717 273
www.ace-controls.co.uk

JAPAN
ACE Controls Japan L.L.C.
City Center Bldg. II 2F
3-1-42, Chigasaki-minami, Tsuzuki-ku
Yokohama, 224-0037, Japan
T +81 (0)45 - 945-0123
F +81 (0)45 - 945-0122
www.acecontrols.co.jp

P.R. CHINA
ACE Controls
No. 8 Longxiang Road, Wujin National High-tech Industrial Zone,
Changzhou, Jiangsu Province, CN-213164, P. R. China
T +86 (0)519 - 8622-3520
F +86 (0)519 - 8622-3550
www.ace-ace.cn

USA
ACE Controls International Inc.
23425 Industrial Park Dr., Farmington Hills
Michigan 48335, USA
T +1 248 - 476-0213
F +1 248 - 476-2470
www.acecontrols.com