



A STABILUS COMPANY

WHEN PERFORMANCE MATTERS

Crash Damper

NEW

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

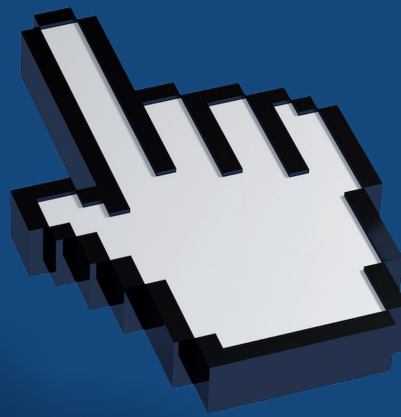
Special Catalogue 2021



Safety Products

**Complete Product Range
Data Sheets & Catalogues
CAD Database
Free Calculation Programs
Distributors
Services
News
etc.**

www.ace-ace.com



Crash Dampers

Highly effective aluminium and steel emergency stop systems

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 100 Nm/Cycle to 11.200 Nm/Cycle

Stroke 11 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: 100 Nm/Cycle to 11.200 Nm/Cycle

Stroke: 11 mm to 160 mm

Energy absorption: 98 %

Max. Reacting Force: approx. 13,000 N to 92,000 N

Operating temperature range: -30° C to + 100° C

Standard colour:

Umbra grey RAL 7022 (powder-coated):
Diameter 88 mm

Ruby red RAL 3003 (powder-coated):
Diameter 38 mm and 63 mm

Zinc-plated: Diameter 20 mm

Alu blank: Diameter 21 mm

Construction size: Diameter 20 mm to 88 mm

Material: Aluminium or Steel

Mounting: In any position

Impact velocity range: Max. 5 m/s

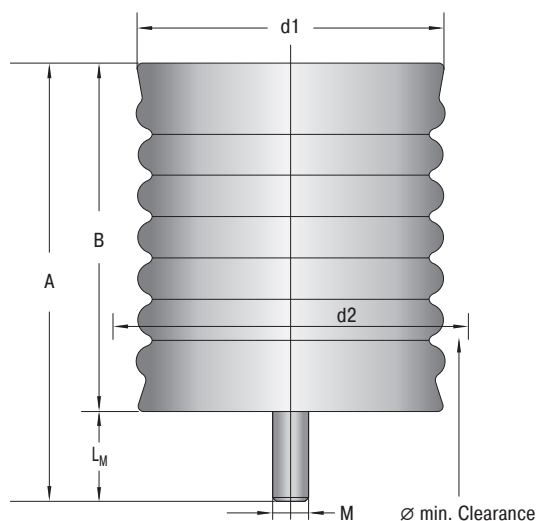
Application field: Emergency stop damping in linear axes, Portal systems, Tool machines, Test stations, Electro-mechanical drives

Note: The single-use damper must be replaced after each impact.

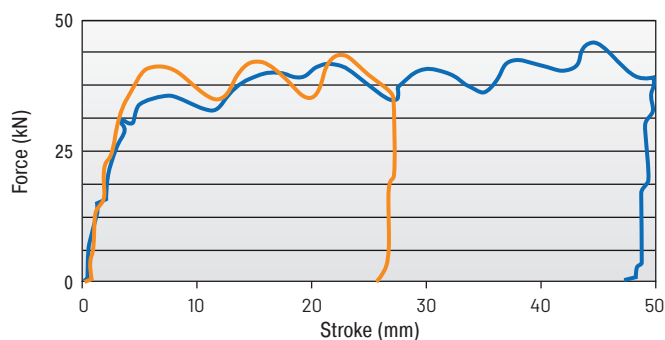
Safety instructions: Where necessary, use thread locking fluid to secure the threaded pins or the fixing screw

On request: Also available with centring pins and other special versions

Crash Dampers



Example CD-88-53 Force-Stroke Characteristic



	Stroke use 28 mm	Stroke use 50 mm
Stroke:	28 mm	50 mm
Absorbed energy:	779 Nm	1,468 Nm
Efficiency:	98 %	98 %
Approx. reacting force max.	40 kN	43 kN

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

Ordering Example

Type CD-88-145-H
Outer diameter
Stroke
High energy absorption

Performance and Dimensions

TYPES	max. Energy capacity emergency use Nm/cycle	max. Stroke mm	max. Reacting Force ¹ N	Material	A mm	B mm	d1 mm	d2 mm	L _M mm	M	Weight kg
CD-21-11	100	11	13,000	Aluminium	41	34	21	25	7	M5	0,026
CD-20-13	200	13	19,500	Steel	41	34	20	25	7	M5	0,024
CD-20-24	350	24	19,500	Steel	61	53	20	25	8	M5	0,032
CD-88-50	950	50	26,000	Aluminium	123	99	88	105	26	M10	0.41
CD-88-45	1,200	45	40,000	Aluminium	123	99	88	105	26	M10	0.44
CD-88-53	1,600	53	43,000	Aluminium	134	110	88	105	26	M10	0.52
CD-88-56	1,680	56	45,000	Aluminium	147	124	88	105	26	M10	0.54
CD-88-56-H	2,130	56	57,000	Aluminium	147	124	88	105	26	M10	0.56
CD-38-80	4,400	80	80,000	Steel	161	135	38	46	26	M16	0.46
CD-88-145	5,370	145	56,000	Aluminium	239	216	88	140	26	M10	0.72
CD-63-80	5,600	80	92,000	Steel	160	134	63	72	26	M16	0.72
CD-88-145-H	7,690	145	80,000	Aluminium	239	216	88	140	26	M10	0.75
CD-63-160	11,200	160	92,000	Steel	452	273	63	72	180	M36	2.20

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 2fl
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

