The **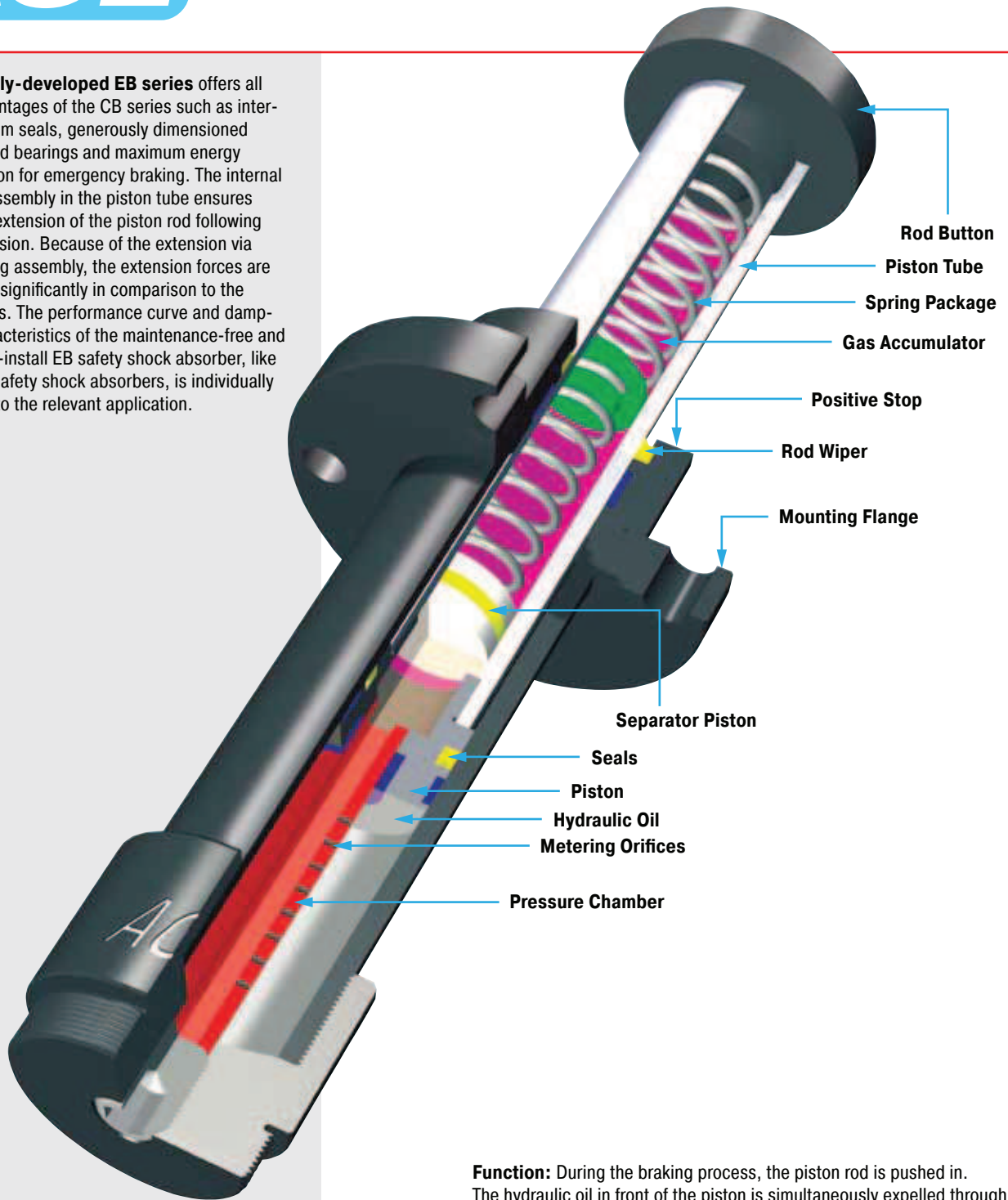newly-developed EB series** offers all the advantages of the CB series such as internal system seals, generously dimensioned piston rod bearings and maximum energy absorption for emergency braking. The internal spring assembly in the piston tube ensures reliable extension of the piston rod following compression. Because of the extension via the spring assembly, the extension forces are reduced significantly in comparison to the CB series. The performance curve and damping characteristics of the maintenance-free and ready-to-install EB safety shock absorber, like all ACE safety shock absorbers, is individually tailored to the relevant application.

Rod Button

Piston Tube

Spring Package

Gas Accumulator

Positive Stop

Rod Wiper

Mounting Flange

Separator Piston

Seals

Piston

Hydraulic Oil

Metering Orifices

Pressure Chamber

Function: During the braking process, the piston rod is pushed in. The hydraulic oil in front of the piston is simultaneously expelled through all orifice openings. The number of orifice openings in effect reduces in proportion to the stroke movement. The retraction speed is reduced. The back-pressure created in front of the piston, and therefore the counterforce (Q), remain constant during the complete stroke. The oil volume displaced by the piston rod is compensated for by the separating piston. The piston rod is extended again by the spring assembly in the piston tube.

Impact velocity range: 0.5 to 4.6 m/s

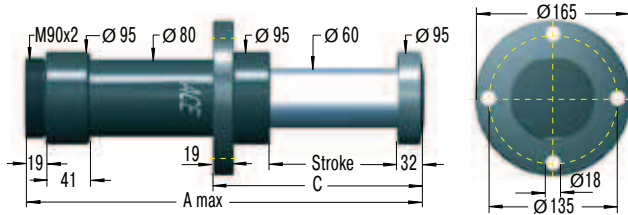**Material:** Steel body with black oxide finish. Piston rod hard chrome plated.

Operating temperature range: -12 °C to 66 °C

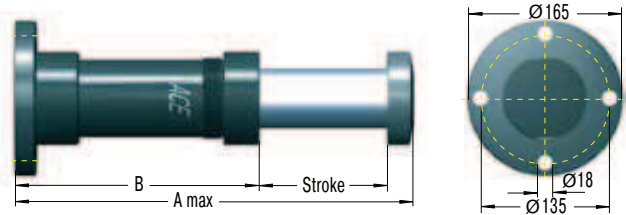**Initial fill pressure:** governs the rod return force.

In creep speed: The shock absorber can be pushed through its stroke.

Front Flange -F

M90x2 ⌀ 95 ⌀ 80 ⌀ 95 ⌀ 60 ⌀ 95

19 19 Stroke 32
41 C
A max

⌀ 165
⌀ 18
⌀ 135

Rear Flange -R

B Stroke
A max

⌀ 165
⌀ 18
⌀ 135

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Ordering Example

EB63-400EU-F-X

Safety Shock Absorber
Bore Size ⌀ 63 mm
Stroke 400 mm
EU Compliant
Mounting Style: Front Flange
Identification No. assigned by ACE
Please indicate identification no. in case of replacement order

Complete Details Required when Ordering

Moving load	m	(kg)
Impact velocity range	v	(m/s)max.
Creep speed	vs	(m/s)
Motor power	P	(kW)
Stall torque factor	ST	(normal 2.5)
Number of absorbers in parallel	n	

or technical data according to formulae and calculations
on page 13 to 15.

The calculation and selection of the correct ACE safety shock absorber for your application should be referred to ACE for approval and assignment of unique identification number.

Technical Data

Reacting force Q: At max. capacity rating = **187 kN max.**

Rod return: Nitrogen accumulator (0.55 bar to 1.03 bar) combined with return spring
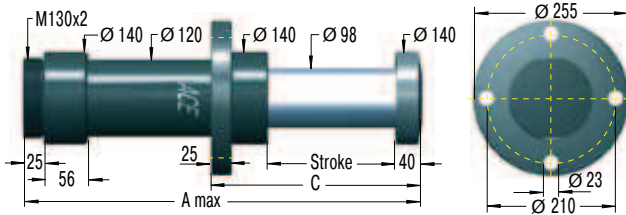
Dimensions and Capacity Chart

| Type	Stroke mm	A max	B	C	Max. Energy Capacity W_3 Nm/Cycle	[1] Effective Weight me me min. kg	me max. kg	Min. Return Force N	Max. Return Force N	Max. Side Load Angle °	Weight kg
EB63-100EU	100	420	288	192	16 000	1 510	128 000	700	6 900	3.5	13.7
EB63-200EU	200	700	468	292	32 000	3 020	256 000	770	9 300	3	16.7
EB63-300EU	300	980	648	392	48 000	4 540	384 000	830	10 600	2.5	21.8
EB63-400EU	400	1 260	828	492	64 000	6 050	512 000	600	11 100	2	25.8
EB63-500EU	500	1 540	1 008	592	80 000	7 560	640 000	670	12 000	1.5	29.8

[1] The correct effective weight range for your application will be calculated by ACE and should fall within this band.
Special options: Special oils, special flanges, additional corrosion protection etc. available on request.

Front Flange -F

Rear Flange -R

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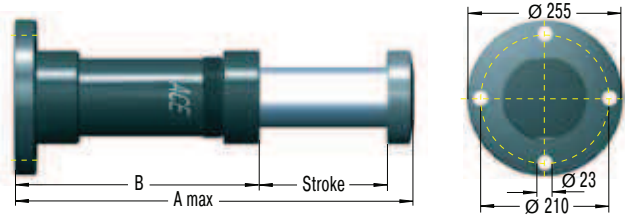
Ordering Example   EB100-400EU-F-X

Safety Shock Absorber
Bore Size Ø 100 mm
Stroke 400 mm
EU Compliant
Mounting Style: Front Flange
Identification No. assigned by ACE

Please indicate identification no. in case of replacement order

Complete Details Required when Ordering

Moving load	m	(kg)
Impact velocity range	v	(m/s)max.
Creep speed	vs	(m/s)
Motor power	P	(kW)
Stall torque factor	ST	(normal 2.5)
Number of absorbers in parallel	n	

or technical data according to formulae and calculations
on page 13 to 15.

The calculation and selection of the correct ACE safety shock absorber for your application should be referred to ACE for approval and assignment of unique identification number.

Technical Data

Reacting force Q: At max. capacity rating = **467 kN max.**

**Rod return:** Nitrogen accumulator (0.55 bar to 1.03 bar) combined with return spring

Dimensions and Capacity Chart

| Type	Stroke mm	A max	B	C	Max. Energy Capacity W₃ Nm/Cycle	¹ Effective Weight me me min. kg	me max. kg	Min. Return Force N	Max. Return Force N	Max. Side Load Angle °	Weight kg
EB100-200EU	200	735	495	320	80 000	7 560	640 000	1 200	8 900	4	42.5
EB100-300EU	300	1 005	665	420	120 000	11 340	960 000	950	14 100	3.5	50.8
EB100-400EU	400	1 275	835	520	160 000	15 120	1 280 000	1 190	18 200	3	59.1
EB100-500EU	500	1 545	1 005	620	200 000	18 900	1 600 000	930	20 800	2.5	68.5
EB100-600EU	600	1 815	1 175	720	240 000	22 680	1 920 000	1 170	23 300	2	76.8

¹ The correct effective weight range for your application will be calculated by ACE and should fall within this band.
Special options: Special oils, special flanges, additional corrosion protection etc. available on request.
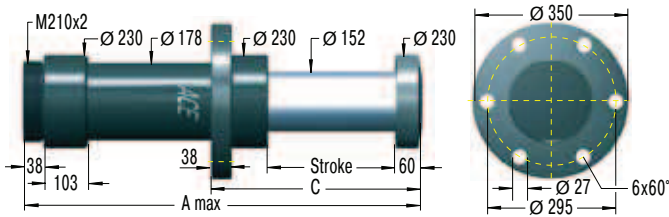
Front Flange -F

Rear Flange -R
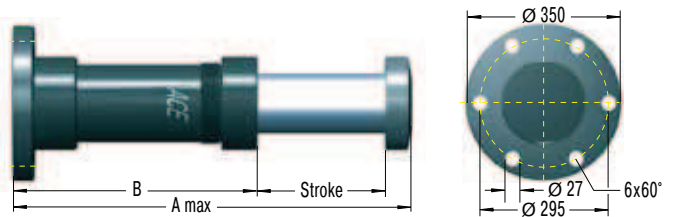
Ordering Example   EB160-400EU-F-X

Safety Shock Absorber
Bore Size Ø 160 mm
Stroke 400 mm
EU Compliant
Mounting Style: Front Flange
Identification No. assigned by ACE

Please indicate identification no. in case of replacement order

Complete Details Required when Ordering

Moving load	m	(kg)
Impact velocity range	v	(m/s)max.
Creep speed	vs	(m/s)
Motor power	P	(kW)
Stall torque factor	ST	(normal 2.5)
Number of absorbers in parallel	n	

or technical data according to formulae and calculations on page 13 to 15.

The calculation and selection of the correct ACE safety shock absorber for your application should be referred to ACE for approval and assignment of unique identification number.

Technical Data

Reacting force Q: At max. capacity rating = **700 kN max.**

Rod return: Nitrogen accumulator (0.55 bar to 1.03 bar) combined with return spring

Dimensions and Capacity Chart

Type	Stroke mm	A max	B	C	Max. Energy Capacity W_3 Nm/Cycle	[1] Effective Weight me me min. kg	me max. kg	Min. Return Force N	Max. Return Force N	Max. Side Load Angle °	Weight kg
EB160-400EU	400	1 400	940	600	240 000	22 700	1 920 000	1 870	18 100	4	155.6
EB160-600EU	600	2 000	1 340	800	360 000	34 000	2 880 000	2 100	18 800	3	189
EB160-800EU	800	2 600	1 740	1 000	480 000	45 400	3 840 000	2 400	19 500	2	222.3

[1] The correct effective weight range for your application will be calculated by ACE and should fall within this band.
Special options: Special oils, special flanges, additional corrosion protection etc. available on request.