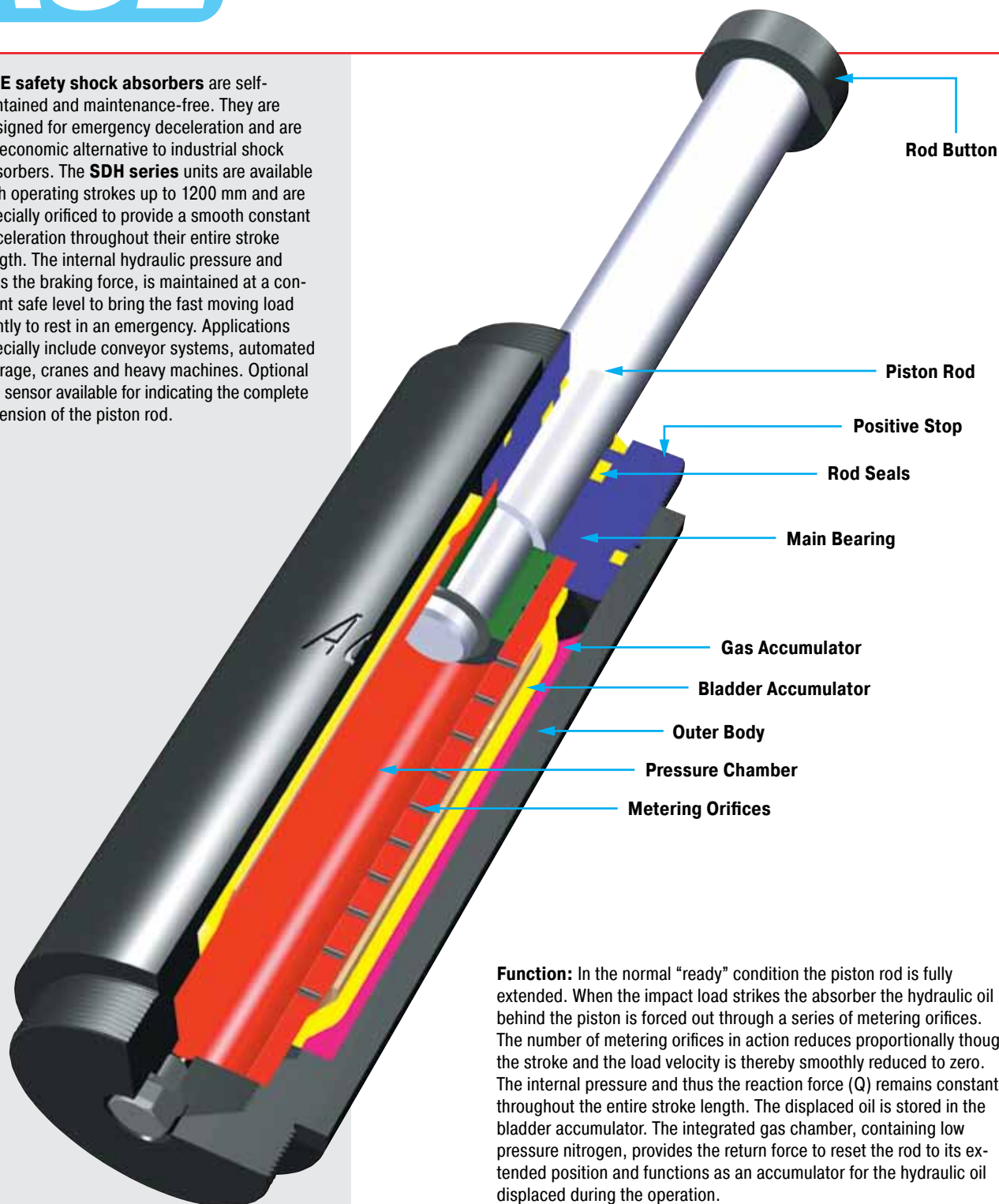


ACE safety shock absorbers are self-contained and maintenance-free. They are designed for emergency deceleration and are an economic alternative to industrial shock absorbers. The **SDH series** units are available with operating strokes up to 1200 mm and are specially orificed to provide a smooth constant deceleration throughout their entire stroke length. The internal hydraulic pressure and thus the braking force, is maintained at a constant safe level to bring the fast moving load gently to rest in an emergency. Applications specially include conveyor systems, automated storage, cranes and heavy machines. Optional rod sensor available for indicating the complete extension of the piston rod. The internal hydraulic pressure and thus the braking force, is maintained at a constant safe level to bring the fast moving load gently to rest in an emergency. Applications specially include conveyor systems, automated storage, cranes and heavy machines. Optional rod sensor available for indicating the complete extension of the piston rod.



Function: In the normal "ready" condition the piston rod is fully extended. When the impact load strikes the absorber the hydraulic oil behind the piston is forced out through a series of metering orifices. The number of metering orifices in action reduces proportionally though the stroke and the load velocity is thereby smoothly reduced to zero. The internal pressure and thus the reaction force (Q) remains constant throughout the entire stroke length. The displaced oil is stored in the bladder accumulator. The integrated gas chamber, containing low pressure nitrogen, provides the return force to reset the rod to its extended position and functions as an accumulator for the hydraulic oil displaced during the operation.

Material: Shock absorber body: Painted steel (RAL 7024). Piston rod: Hard chrome plated.

Energy capacity W_3 : At max. side load angle do not exceed 80 % of rated max. energy capacity below.

Filling pressure: Approx. 5 bar

Operating temperature range:
-20 °C to 60 °C

On request: Integrated rod sensor for indicating the complete extension of the piston rod. Type normally closed or normally open, option PNP or NPN switch.

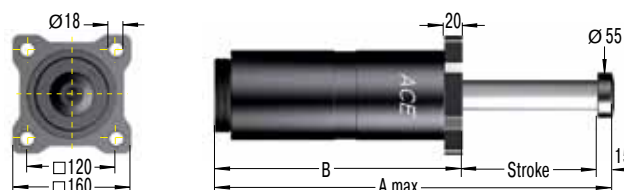
In creep speed: It is possible to use up to approx. 60 % of the buffer stroke. In creep speed conditions the shock absorber provides minimal resistance and there is no braking effect.



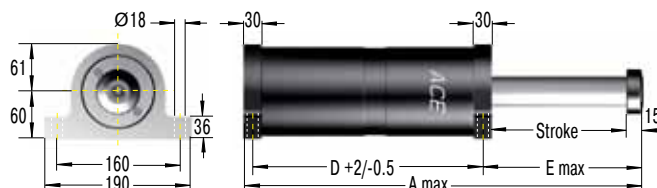
Rear Flange -R



Front Flange -F



Foot Mounting -S



Ordering Example

Safety Shock Absorber **SDH38-400EU-F-XXXXX**
 Bore Size Ø 38 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

Impact velocity range: 0.9 to 4.6 m/s

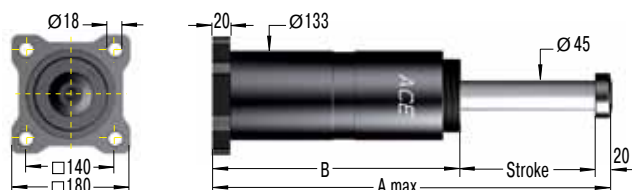
Reacting force Q: At max. capacity rating = **80 kN max.**

Dimensions and Capacity Chart

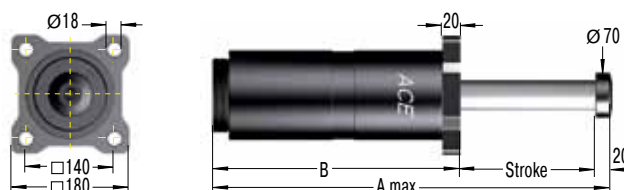
Type	Stroke mm	A max	B	D	E max	Max. Energy Capacity W ₃ Nm/Cycle	Mounting Style					
							Min. Return Force N	Max. Return Force N	F & S Max. Side Load Angle °	R Max. Side Load Angle °	F & R Weight kg	S Weight kg
SDH38-50EU	50	270	204	164	84	3 600	600	700	5	4	13.5	13.7
SDH38-100EU	100	370	254	214	134	7 200	600	700	5	4	15.5	15.7
SDH38-150EU	150	470	304	264	184	10 800	600	700	4.5	3.5	17	17.2
SDH38-200EU	200	585	369	329	234	14 400	600	700	4	3	19.5	19.7
SDH38-250EU	250	685	419	379	284	18 000	600	700	3.7	2.6	21.5	21.7
SDH38-300EU	300	800	484	444	334	21 600	600	700	3.4	2.3	23.5	23.7
SDH38-350EU	350	900	534	494	384	25 200	600	700	3.2	2.1	25.5	25.7
SDH38-400EU	400	1 015	599	559	434	28 800	600	700	3	2	28	28.2
SDH38-500EU	500	1 230	714	674	534	36 000	600	700	2.8	1.8	32	32.2
SDH38-600EU	600	1 445	829	789	634	43 200	600	700	2.5	1.5	36	36.2
SDH38-700EU	700	1 660	944	904	734	50 400	600	700	2	1	40	40.2
SDH38-800EU	800	1 875	1 059	1 019	834	57 600	600	700	1.5	0.5	44	44.2

For other stroke lengths, special options (such as higher or lower impact velocity etc.), please consult ACE.

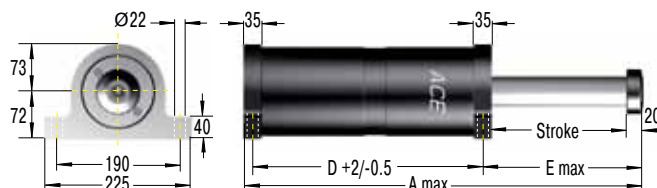
Rear Flange -R



Front Flange -F



Foot Mounting -S



Ordering Example

Safety Shock Absorber **SDH50-400EU-F-XXXXX**
 Bore Size Ø 50 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

Impact velocity range: 0.6 to 4.6 m/s

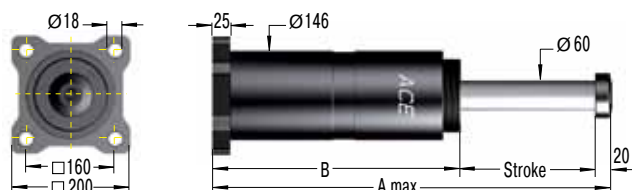
Reacting force Q: At max. capacity rating = 160 kN max.

Dimensions and Capacity Chart

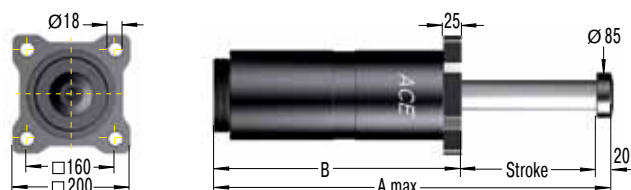
Type	Stroke mm	A max	B	D	E max	Max. Energy Capacity W ₃ Nm/Cycle	Mounting Style					
							Min. Return Force N	Max. Return Force N	F & S Max. Side Load Angle °	R Max. Side Load Angle °	F & R Weight kg	S Weight kg
SDH50-100EU	100	416	297	257	139	14 000	1 000	1 200	5	4	23.5	25
SDH50-150EU	150	516	347	307	189	21 000	1 000	1 200	4.5	3.5	26	27.5
SDH50-200EU	200	616	397	357	239	28 000	1 000	1 200	4	3	28.5	30
SDH50-250EU	250	731	462	422	289	35 000	1 000	1 200	3.7	2.6	32	33.5
SDH50-300EU	300	831	512	472	339	42 000	1 000	1 200	3.4	2.3	34.5	36
SDH50-350EU	350	931	562	522	389	49 000	1 000	1 200	3.2	2.1	37	38.5
SDH50-400EU	400	1 046	627	587	439	56 000	1 000	1 200	3	1.9	40	41.5
SDH50-500EU	500	1 261	742	702	539	70 000	1 000	1 200	2.8	1.7	46	47.5
SDH50-600EU	600	1 476	857	817	639	84 000	1 000	1 200	2.6	1.5	52	53.5
SDH50-700EU	700	1 691	972	932	739	98 000	1 000	1 200	2.4	1.3	58	59.5
SDH50-800EU	800	1 906	1 087	1 047	839	112 000	1 000	1 200	2	1	64	65.5
SDH50-1000EU	1 000	2 336	1 317	1 277	1 039	140 000	1 000	1 200	1.7	0.9	75	76.5

For other stroke lengths, special options (such as higher or lower impact velocity etc.), please consult ACE.

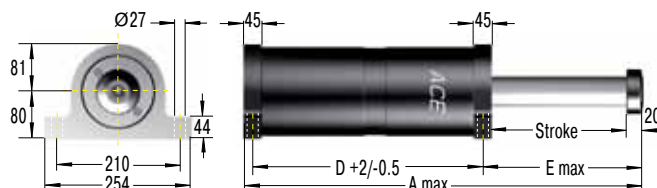
Rear Flange -R



Front Flange -F



Foot Mounting -S



Ordering Example

Safety Shock Absorber _____
 Bore Size Ø 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

SDH63-400EU-F-XXXXX

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

Impact velocity range: 0.5 to 4.6 m/s

Reacting force Q: At max. capacity rating = 210 kN max.

Dimensions and Capacity Chart

Type	Stroke mm	A max	B	D	E max	Max. Energy Capacity W ₃ Nm/Cycle	Mounting Style					
							Min. Return Force N	Max. Return Force N	F & S Max. Side Load Angle °	R Max. Side Load Angle °	F & R Weight kg	S Weight kg
SDH63-100EU	100	420	301	251	144	18 000	1 500	2 500	5	4	32	35
SDH63-150EU	150	520	351	301	194	27 000	1 500	2 500	4.5	3.5	35	38
SDH63-200EU	200	620	401	351	244	36 000	1 500	2 500	4	3	39	42
SDH63-250EU	250	720	451	401	294	45 000	1 500	2 500	3.8	2.8	43	46
SDH63-300EU	300	850	531	481	344	54 000	1 500	2 500	3.5	2.5	48	51
SDH63-350EU	350	950	581	531	394	63 000	1 500	2 500	3.3	2.3	52	55
SDH63-400EU	400	1 080	661	611	444	72 000	1 500	2 500	3	2	60	63
SDH63-500EU	500	1 280	761	711	544	90 000	1 500	2 500	2.8	1.8	68	71
SDH63-600EU	600	1 510	891	841	644	108 000	1 500	2 500	2.6	1.6	78	81
SDH63-700EU	700	1 740	1 021	971	744	126 000	1 500	2 500	2.4	1.5	88	91
SDH63-800EU	800	1 970	1 151	1 101	844	144 000	1 500	2 500	2	1.3	98	101
SDH63-1000EU	1 000	2 430	1 411	1 361	1 044	180 000	1 500	2 500	1.5	1	118	121
SDH63-1200EU	1 200	2 890	1 671	1 621	1 244	216 000	1 500	2 500	1.2	0.8	138	141

For other stroke lengths, special options (such as higher or lower impact velocity etc.), please consult ACE.