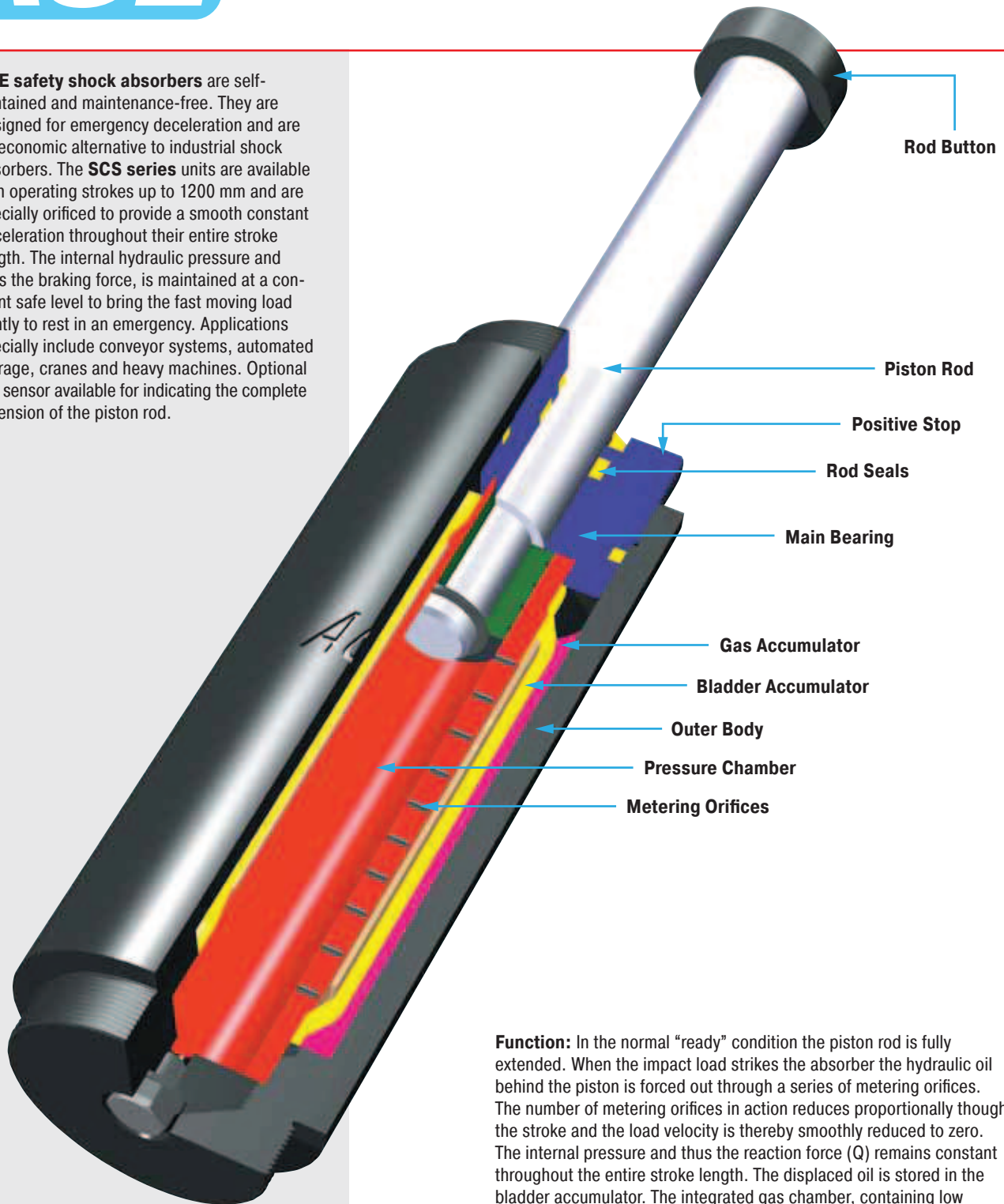


ACE safety shock absorbers are self-contained and maintenance-free. They are designed for emergency deceleration and are an economic alternative to industrial shock absorbers. The **SCS series** units are available with operating strokes up to 1200 mm and are specially orificed to provide a smooth constant 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.



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

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

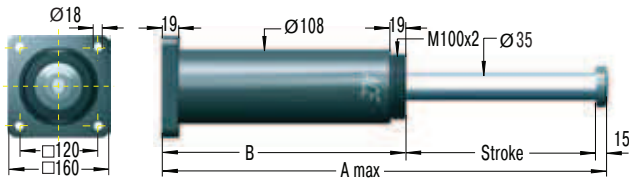
Filling pressure: Approx. 2 bar

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

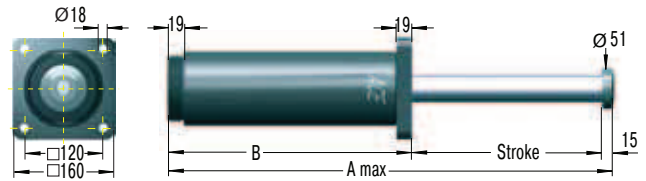
In creep speed: It is possible to use up to approx. 60% of the buffer stroke. In creep speed conditions the shock absorber provides minimal resistance and there is no braking effect.



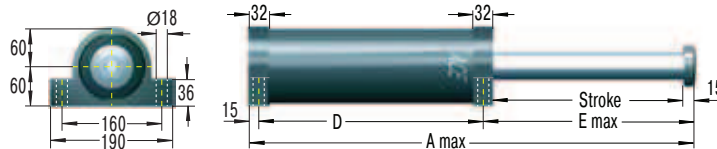
Rear Flange -R



Front Flange -F



Foot Mounting -S



Ordering Example

Safety Shock Absorber _____
 Bore Size Ø 38 mm _____
 Stroke 400 mm _____
 EU Compliant _____
 Mounting Style: Front Flange _____
 Identification No. assigned by ACE _____

SCS38-400EU-F-X

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 15 to 17.

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

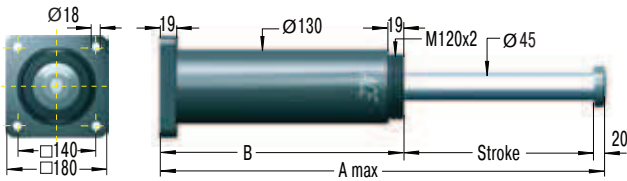
Reacting force Q: At max. capacity rating = **80 kN max.**

Dimensions and Capacity Chart

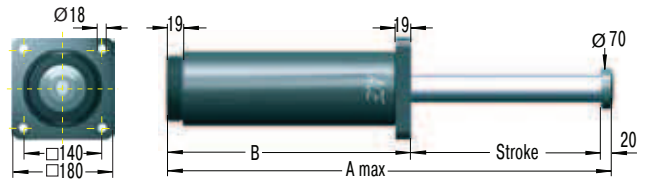
Type	Stroke mm	A max	B	D	E max	Max. Energy Capacity W ₃ Nm/Cycle	Mounting Style							
							Min. Return Force N	Max. Return Force N	F & S		R		S	
									Max. Side Load Angle °	Max. Side Load Angle °	F & R Weight kg	S Weight kg		
SCS38-50EU	50	270	205	175	80	3 600	600	700	5	4	12	13		
SCS38-100EU	100	370	255	225	132	7 200	600	700	5	4	14	15		
SCS38-150EU	150	470	305	275	180	10 800	600	700	5	4	16	17		
SCS38-200EU	200	570	355	325	230	14 400	600	700	5	4	18	19		
SCS38-250EU	250	670	405	375	280	18 000	600	700	4.7	3.7	20	21		
SCS38-300EU	300	785	470	440	330	21 600	600	700	3.9	2.9	22	23		
SCS38-350EU	350	885	520	490	380	25 200	600	700	3.4	2.4	24	25		
SCS38-400EU	400	1 000	585	555	430	28 800	600	700	3	2	26	27		
SCS38-500EU	500	1 215	700	670	530	36 000	600	700	2.4	1.4	30	31		
SCS38-600EU	600	1 430	815	785	630	43 200	600	700	1.9	0.9	34	35		
SCS38-700EU	700	1 645	930	900	730	50 400	600	700	1.6	0.6	38	39		
SCS38-800EU	800	1 860	1 045	1 015	830	57 600	600	700	1.3	0.3	43	44		

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

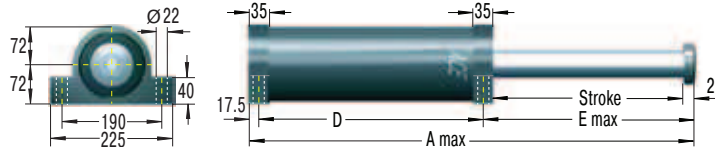
Rear Flange -R



Front Flange -F



Foot Mounting -S



Ordering Example

Safety Shock Absorber _____
 Bore Size Ø 50 mm _____
 Stroke 400 mm _____
 EU Compliant _____
 Mounting Style: Front Flange _____
 Identification No. assigned by ACE _____

SCS50-400EU-F-X

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 15 to 17.

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

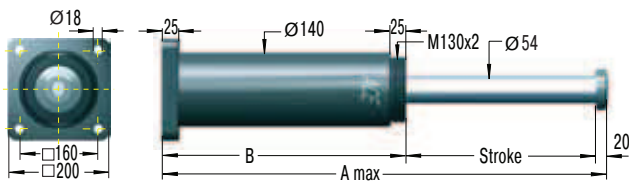
Reacting force Q: At max. capacity rating = **160 kN max.**

Dimensions and Capacity Chart

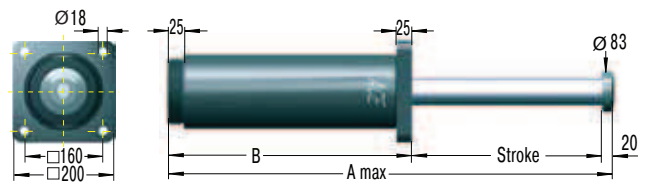
Type	Stroke mm	A max	B	D	E max	Max. Energy Capacity W ₃ Nm/Cycle	Mounting Style							
							Min. Return Force N	Max. Return Force N	F & S		R		S	
									Max. Side Load Angle °	Max. Side Load Angle °	F & R Weight kg	S Weight kg		
SCS50-100EU	100	390	270	235	138	14 000	1 000	1 200	5	4	22	23		
SCS50-150EU	150	490	320	285	188	21 000	1 000	1 200	5	4	25	26		
SCS50-200EU	200	590	370	335	238	28 000	1 000	1 200	5	4	27	28		
SCS50-250EU	250	690	420	385	288	35 000	1 000	1 200	4.5	3.5	30	31		
SCS50-300EU	300	805	485	450	338	42 000	1 000	1 200	3.8	2.8	33	34		
SCS50-350EU	350	905	535	500	388	49 000	1 000	1 200	3.3	2.3	35	37		
SCS50-400EU	400	1 020	600	565	438	56 000	1 000	1 200	2.9	1.9	38	40		
SCS50-500EU	500	1 235	715	680	538	70 000	1 000	1 200	2.3	1.3	44	45		
SCS50-600EU	600	1 450	830	795	638	84 000	1 000	1 200	1.9	0.9	50	51		
SCS50-700EU	700	1 665	945	910	738	98 000	1 000	1 200	1.6	0.6	55	57		
SCS50-800EU	800	1 880	1 060	1 025	838	112 000	1 000	1 200	1.3	0.3	61	63		
SCS50-1000EU	1 000	2 310	1 290	1 255	1 038	140 000	1 000	1 200	1	0	72	74		

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

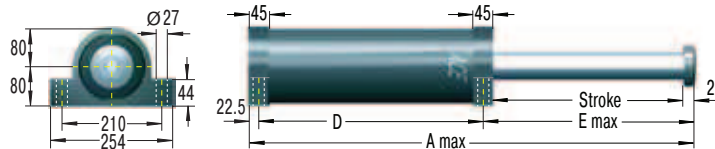
Rear Flange -R



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 _____

SCS63-400EU-F-X

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 15 to 17.

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	Min. Return Force N	Max. Return Force N	Mounting Style		Mounting Style					
									F & S		R		F & R		S	
									Max. Side Load Angle °	Max. Side Load Angle °	Max. Side Load Angle °	Max. Side Load Angle °	Weight kg	Weight kg	Weight kg	Weight kg
SCS63-100EU	100	405	285	240	143	18 000	1 500	2 500	5	4	29	32				
SCS63-150EU	150	505	335	290	193	27 000	1 500	2 500	5	4	32	35				
SCS63-200EU	200	605	385	340	243	36 000	1 500	2 500	5	4	36.2	38				
SCS63-250EU	250	705	435	390	293	45 000	1 500	2 500	5	4	38	42				
SCS63-300EU	300	805	485	440	343	54 000	1 500	2 500	5	4	41	45				
SCS63-350EU	350	925	555	510	393	63 000	1 500	2 500	5	4	45	49				
SCS63-400EU	400	1 025	605	560	443	72 000	1 500	2 500	5	4	48	52				
SCS63-500EU	500	1 245	725	680	543	90 000	1 500	2 500	4.2	3.2	55	60				
SCS63-600EU	600	1 445	825	780	643	108 000	1 500	2 500	3.4	2.4	62	66				
SCS63-700EU	700	1 665	945	900	746	126 000	1 500	2 500	2.9	1.9	69	73				
SCS63-800EU	800	1 865	1 045	1 000	843	144 000	1 500	2 500	2.5	1.5	75	79				
SCS63-1000EU	1 000	2 285	1 265	1 220	1 043	180 000	1 500	2 500	1.9	0.9	89	93				
SCS63-1200EU	1 200	2 705	1 485	1 440	1 243	216 000	1 500	2 500	1.4	0.4	102	106				

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