

SC² Heavyweight Series...
 Named One of Best Products of the
 Year in Fluid Power by Design News.



ACE's award winning SC² 300 and SC² 650 Heavyweight Series Shock Absorbers deliver up to **950% of the effective weight capacity and 280% of the energy absorption capability** of standard models. These durable units are ideal for decelerating heavy weights moving at low velocities. The Heavyweight Series design combines the piston and the inner tube into a single component, the piston tube. It acts as both the pressure creating and pressure controlling device.

ACE's SC² 300 and SC² 650 Heavyweight Series Shock Absorbers offer **expanded effective weight ranges and dramatic increases in energy absorption capability, for handling a wider range of applications.**

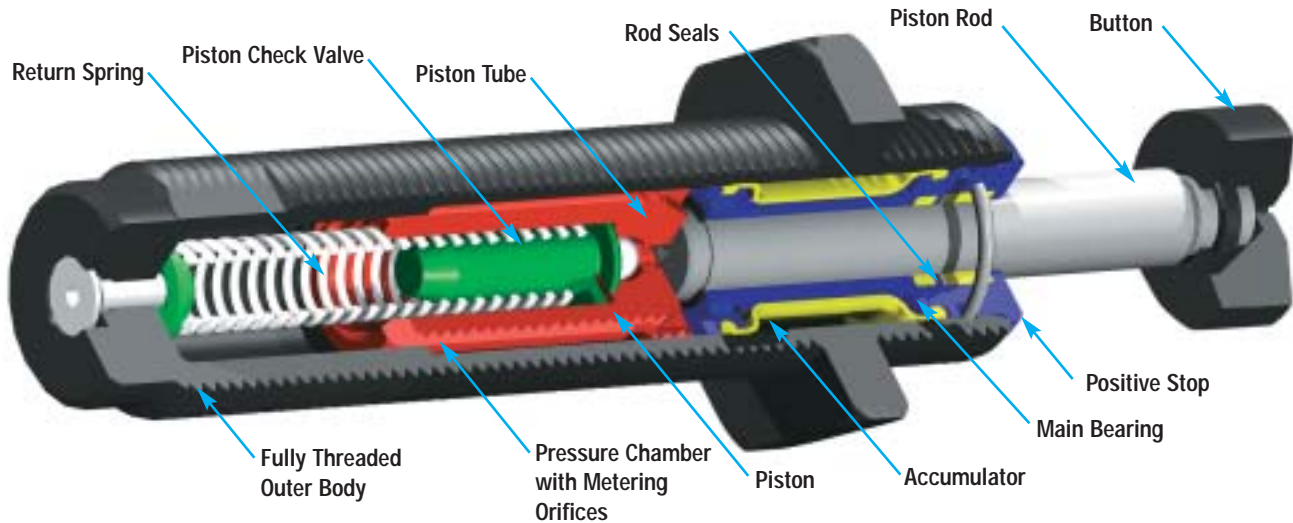
These revolutionary shock absorbers provide dual performance benefits. They offer **soft contact** deceleration where initial impact reaction forces are very low with the advantages of **self-compensation** to cope with changing input energy conditions without adjustment.

Applications include: rotary actuators, rodless cylinders, conveyors, pick and place operations, slides as well as operations turning heavy weights at slow speeds.

30

Heavyweight Shock Absorbers SC 300 and SC 650

Soft Contact and Self-Compensating



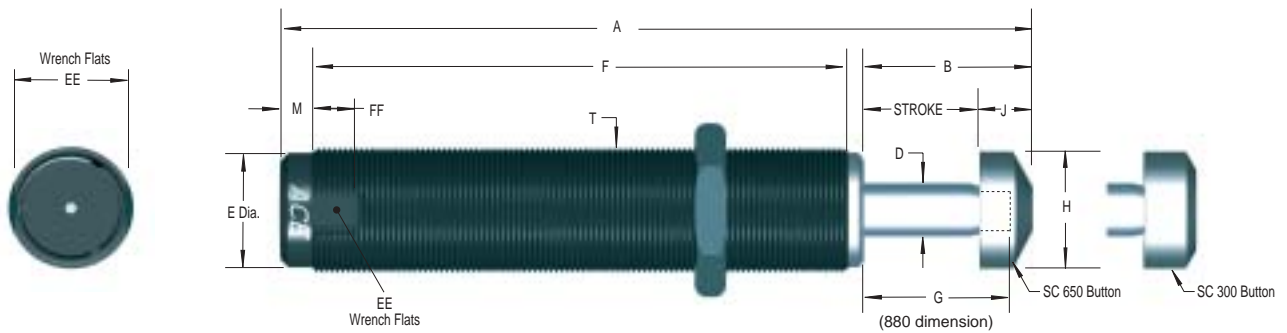
Ordering Information

SC 300 - 5

SC ² Series	Model Number	Mounting Thread	Effective Weight	Button Options
Soft Contact Self-Compensating	300 650	- Standard (UNF) M Metric	-5 Heavy -6 Heavy Plus -7 Heavy Duty -8 Extra Heavy -9 Ultra Heavy	- Standard with Button -NB No Button, Short Rod -880 No Button, Standard Rod -BP Steel Button/Urethane Cap Assembly

Button Option:

The ACE **steel button/urethane cap assembly (-BP)** is available if more quiet equipment operation is desired. For the SC² 300 and 650 models, this button should only be considered when **applications require less than maximum energy levels.**



See page 21 for steel button/urethane cap assembly (-BP) dimensions.

Heavyweight Series Dimensions in inches (millimeters)

Model	Stroke	A	B	D	E	F	G	H	J	M	T	EE	FF
SC 300-5													
SC 300-6													
SC 300-7													
SC 300-8													
SC 300-9	.59	4.15	1.02	.25	.66	2.78	.84	.67	.43	.28	3/4-16 UNF	11/16	.50
SC 300M-5	(15.0)	(105.4)	(25.9)	(6.4)	(16.8)	(70.6)	(21.3)	(17.0)	(11.0)	(7.1)	M20x1.5	(17.5)	(12.7)
SC 300M-6													
SC 300M-7													
SC 300M-8													
SC 300M-9													
SC 650-5													
SC 650-6													
SC 650-7													
SC 650-8													
SC 650-9	.91	5.51	1.33	.38	.87	3.83	1.16	.88	.43	.28	1-12 UNF	7/8	.50
SC 650M-5	(23.1)	(140.0)	(33.8)	(9.6)	(22.1)	(97.3)	(29.5)	(22.4)	(11.0)	(7.1)	M25x1.5	(22.2)	(12.7)
SC 650M-6													
SC 650M-7													
SC 650M-8													
SC 650M-9													

Specifications

Model	Soft Contact	Self-Compensating	E ₃	E ₄	Return Force	Return Time	Shipping Weight
	We	We					
	Effective Weight lbs (kg)	Effective Weight lbs (kg)	Energy per Cycle in lbs (Nm)	Energy per Hour in lbs/hour (Nm/hour)	lbs (N)	sec	lbs (kg)
SC 300-5	38 - 90 (17 - 41)	25 - 100 (11 - 45)					
SC 300-6	115 - 270 (52 - 123)	75 - 300 (34 - 136)	650	400,000	1.70 - 4.00	0.20	0.33
SC 300-7	300 - 360 (136 - 163)	200 - 400 (91 - 181)	(73)	(45,194)	(7.56 - 17.79)		(0.15)
SC 300-8	450 - 1,350 (204 - 612)	300 - 1,500 (136 - 680)	620	400,000	1.70 - 4.00	0.20	0.33
SC 300-9	1,050 - 3,900 (476 - 1,769)	700 - 4,300 (318 - 1,950)	(70)	(45,194)	(7.56 - 17.79)		(0.15)
SC 650-5	75 - 225 (34 - 102)	50 - 250 (23 - 113)					
SC 650-6	300 - 720 (136 - 327)	200 - 800 (91 - 363)	1,860	600,000	2.40 - 7.30	0.30	0.76
SC 650-7	1,050 - 2,150 (476 - 975)	700 - 2,400 (317 - 1089)	(210)	(67,791)	(10.68 - 32.99)		(0.34)
SC 650-8	2,500 - 5,200 (1,134 - 2,359)	1,700 - 5,800 (771 - 2,631)	1,860	600,000	2.40 - 7.30	0.30	0.76
SC 650-9	6,000 - 12,500 (2,722 - 5,670)	4,000 - 14,000 (1,814 - 6,350)	(210)	(67,791)	(10.68 - 32.47)		(0.34)

Technical Data – Heavyweight and Heavyweight II Series

Impact velocity range: .30 to 12.0 ft/sec (0.09 to 3.66 m/sec)

Operating temperature: 32° to 150°F (0° to 66°C)

Mechanical stop: Integral mechanical stop built into front of units.

Oil type: ACE #5

Materials: Steel body with black oxide finish. Hardened stainless steel piston rod.

Technical data applies to standard and metric threaded models.

Maximum side load depends on application. For additional information contact ACE Controls' Applications Department.

Lock nut included with each shock absorber.