

Ideal for Stretch Rod and Mold Applications



Model SCP 650ML-1-QCM-FG
Quick-Change Mount Shock
Shown actual size

PET Shock Absorber Benefits

- Increased production
- Increased system performance
- Increased shock absorber life
- Reduced downtime
- Reduced reaction forces
- Reduced cross contamination issues with H1 oil
- Reduced component wear
- Reduced damage-causing impact forces
- Solves previous form and fit issues
- Lifetime warranty against material and workmanship
- Highly cost-competitive

ACE Controls now offers a NEW GENERATION of industrial shock absorbers for the PET container industry. These durable models are ideally suited for stretch rod and mold applications on Sidel and KRONES production machines.

This versatile line of ACE PET shock absorbers includes the dual benefits of soft contact and self-compensating performance, allowing for reaction to changing conditions without adjustment. In addition, the effective weight is now configurable, adding even more application capability to these rugged performers.

PET shock absorbers from ACE include H1 food grade oil, USDA, FDA, and NSF approved. Numerous models now include a rear female hex design for ease and speed of installation.

ACE PET shock absorbers allow production machinery to run faster and longer with considerably reduced reaction forces, reduced component wear and reduced downtime.



Lifetime Warranty

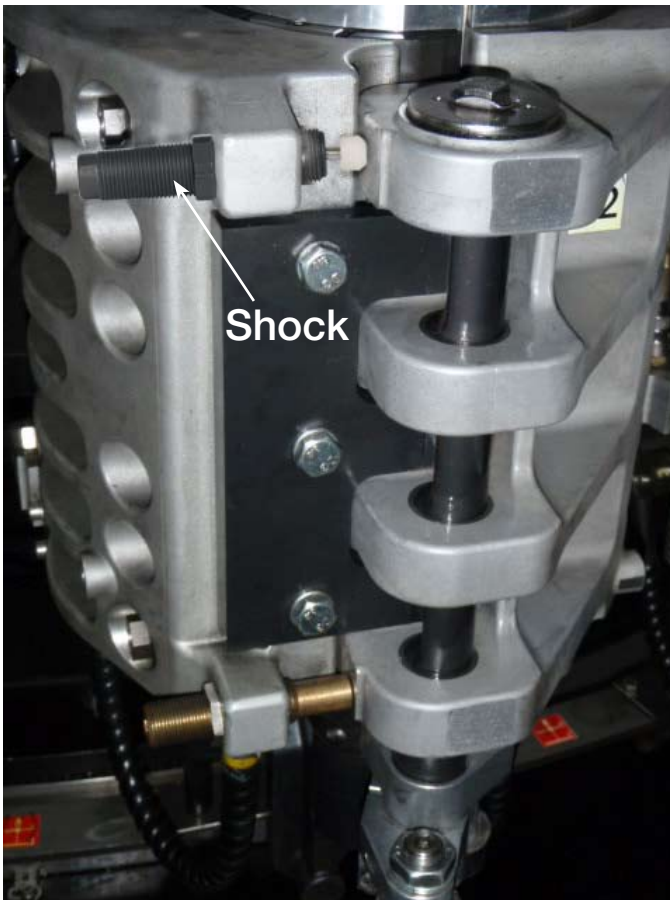
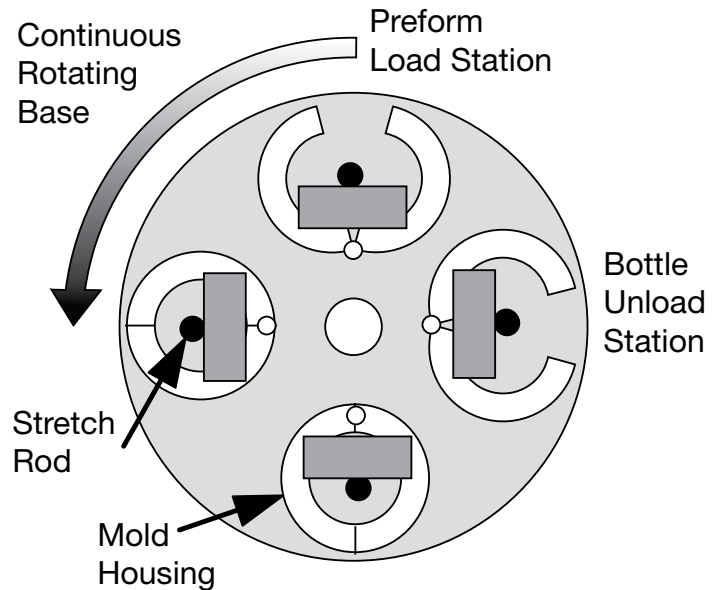
ACE Controls Inc. products are guaranteed to be free of defects in materials and workmanship. ACE will repair or replace any of its products determined to have a defect in materials or workmanship at any time for the life of the product.

PET Shock Absorber Features

- Initial soft-contact
- Fast through-stroke time
- Quick change capability on SCP 650ML-1-QCM-FG model
- Rugged design to handle stretch rod applications
- Hardened steel high pressure inner tube
- Effective weight is now configurable
- H1 food grade oil, USDA, FDA, and NSF approved

Machine Type and Applications

- Machines have a carousel style rotating base.
- They can have from 4 to 48 Mold stations.
- The mold accepts a heated PET preform, closes and engages a shock.
- The stretch rod stretches the preform and then strikes the shock at end of stroke.
- After the bottle has been sized, the stretch rod is then retracted. On some machines there is a shock for the up direction.
- Mold opens and the bottle is ejected
- Shock applications are the mold close, stretch rod down and stretch rod up positions on some machines

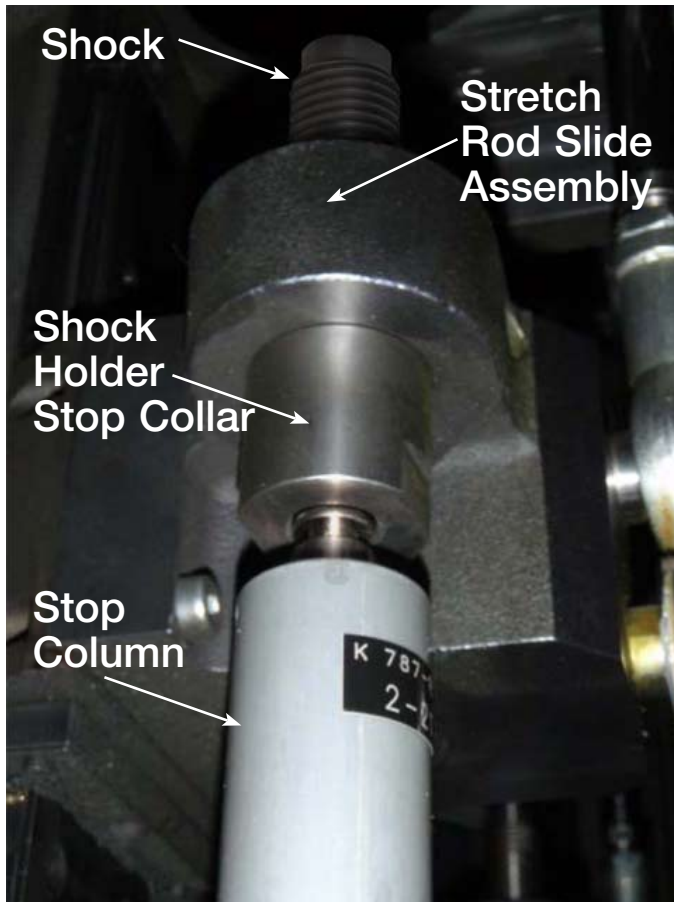


Mold Shown in Closed and Locked Position

The application image on the left shows the mold in the closed and locked position. In this application, the shock absorber is mainly used as a snubber. The shock tightens any slack in the mechanical linkages and prevents the mold halves from hammering each other.

ACE Controls reserves the right to change models, dimensions or specifications without notice or obligation. Please refer to the online catalog for the latest information.

Machine Type and Applications Continued

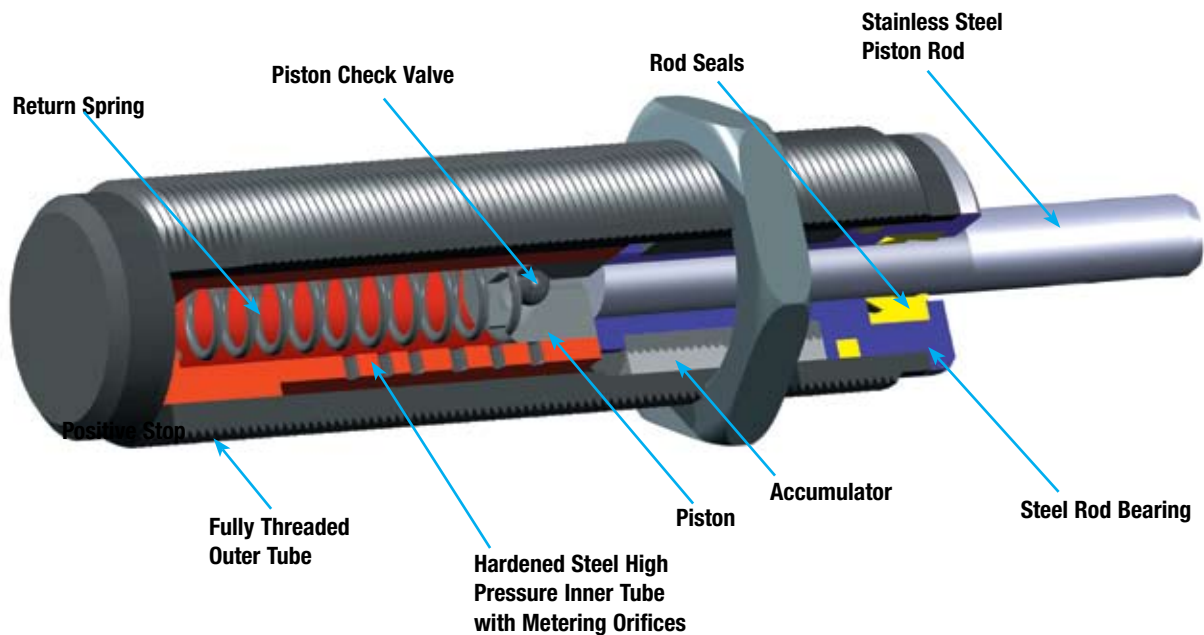


The PET application image on the left shows the stretch rod slide, shock absorber, shock holder and in this case a height stop column.

In this particular application, the machine only has a stretch down and a mold shock absorber

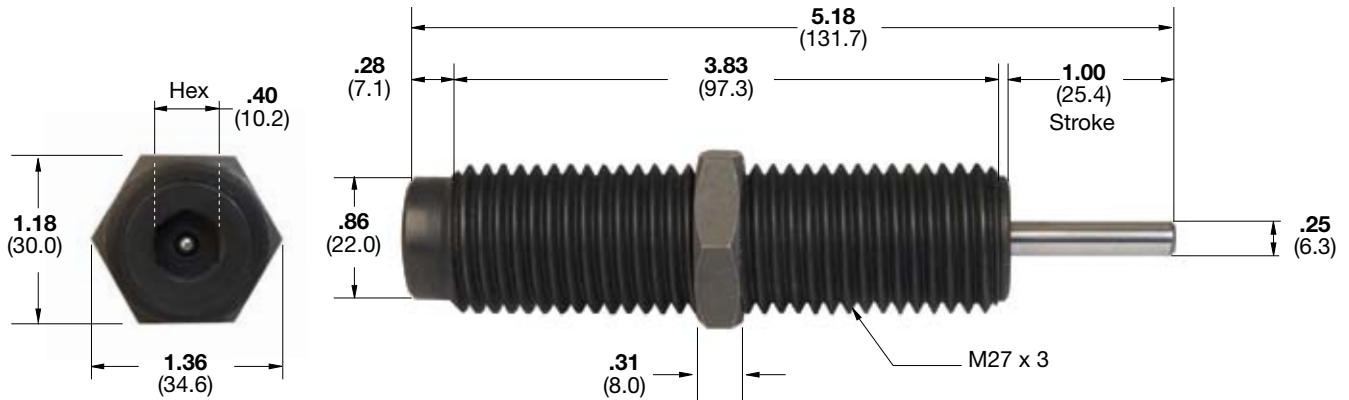
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PET Shock Absorbers Construction



Application: Sidel Series 1, 2 & Universal Machines

Dimensions in inches (millimeters)



Specifications

Model	Effective Weight (stiffness)	E ₃ Energy per Cycle in lbs (Nm)	E ₄ Energy per Hour in lbs/hour (Nm/hour)	Return Force lbs (N)	Return Time sec	Shipping Weight lbs (kg)
SCP 650ML-1-NB-FG	(-1) Ultra Light	650 (73)	600,000 (68,000)	2.40 - 6.87 (10.67 - 30.55)	0.20	0.67 (0.31)
SCP 650ML-3-NB-FG	(-3) Medium					

Technical Data

- Impact velocity range:** 0.5 to 12 ft/sec (0.15 to 3.66 m/sec)
- Mechanical stop:** integral mechanical stop built into front of units
- Oil type:** (-FG) H1 food grade oil, USDA, FDA & NSF approved
- Materials:** steel body with Weartec Plus finish. Stainless steel piston rod
- Effective weight:** selectable
- Rear female hex:** for ease and speed of installation
- Mold applications:** Sidel Series 1, 2 and Universal machines with large molds
- Stretch applications:** Sidel Series 1, 2 and Universal machines without a shock holder

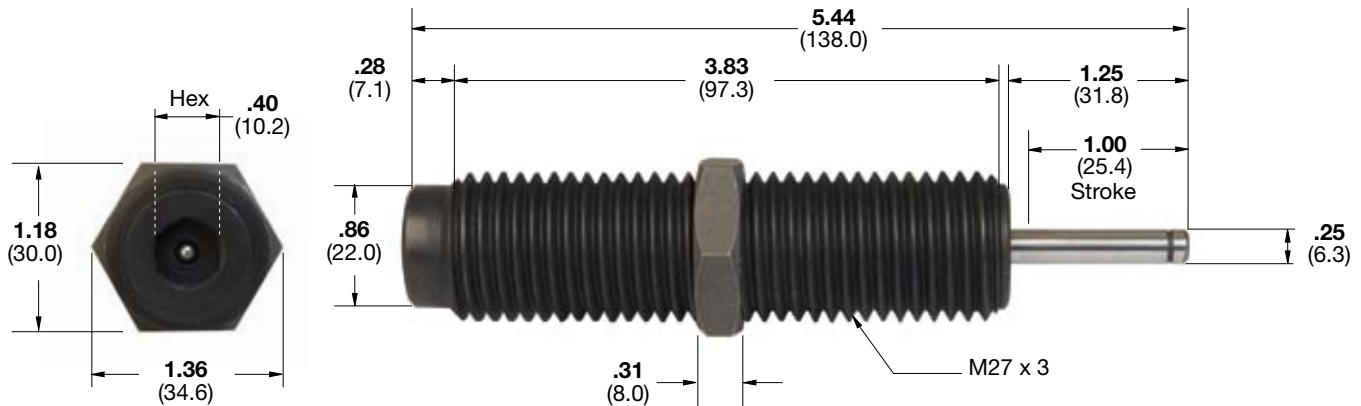
Ordering Information - All Models

SCP 650ML -1 -QCM -FG

SCP ² Series & Model Number	Effective Weight	Mount, Button Options	Oil Type
SCP 190ME-3-439	-1 Ultra Light	SCP 190ME (NO Options)	-FG Food Grade H1
SCP 300M	-2 Light	SCP 300M (NO Options)	
SCP 650ML	-3 Medium	SCP 650ML Options:	
	-4 Heavy	-QCM Quick Change Mount (For Series 2 Machines Only)	
		-ERSB Extended Rod, Small Button	
		-SBUC Small Button, Urethane Cap	
		-880 No Button, Standard Rod	
		-NB No Button, Short Rod	

Application: Sidel Series 2 & Universal Machines

Dimensions in inches (millimeters)



Specifications

Model	Effective Weight (stiffness)	Energy		Return Force lbs (N)	Return Time sec	Shipping Weight lbs (kg)
		E ₃ Energy per Cycle in lbs (Nm)	E ₄ Energy per Hour in lbs/hour (Nm/hour)			
SCP 650ML-1-880-FG	(-1) Ultra Light	650 (73)	600,000 (68,000)	2.40 - 6.87 (10.67 - 30.55)	0.20	0.67 (0.31)

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Sidel Universal Shock Holder



Sidel Series 2 Shock Holder (P/N 1131136901)



Technical Data

Impact velocity range: 0.5 to 12 ft/sec (0.15 to 3.66 m/sec)

Mechanical stop: integral mechanical stop built into front of units. Shock holder becomes a positive stop.

Oil type: (-FG) H1 food grade oil, USDA, FDA & NSF approved

Materials: steel body with Weartec Plus finish. Stainless steel piston rod.

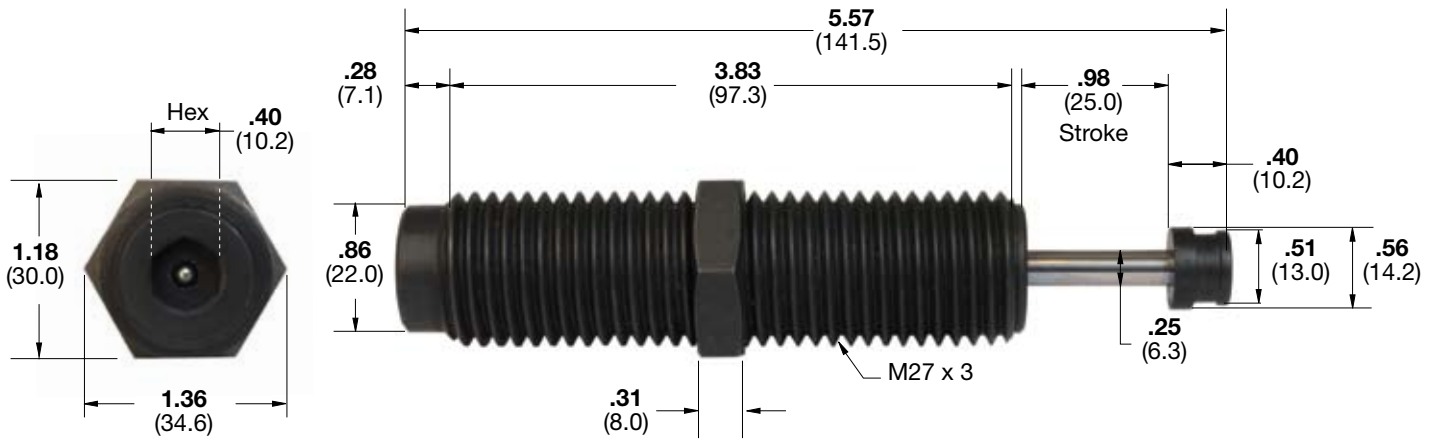
Effective weight: selectable

Rear female hex: for ease and speed of installation

Sidel Series 2 stretch application: used only with shock holder part number 1131136901

Sidel Universal stretch rod application: used with all shock holders

Application: Sidel Series 1 & 2 Machines **Dimensions in inches (millimeters)**



Specifications

Model	Effective Weight (stiffness)	E_3 Energy per Cycle in lbs (Nm)	E_4 Energy per Hour in lbs/hour (Nm/hour)	Return Force lbs (N)	Return Time sec	Shipping Weight lbs (kg)
SCP 650ML-1-ERSB-FG	(-1) Ultra Light	650 (73)	600,000 (68,000)	2.40 - 6.87 (10.67 - 30.55)	0.20	0.67 (0.31)

Sidel 1 Shock Holder (one of several types)



Sidel Series 2 Shock Holder (P/N 1073679102)



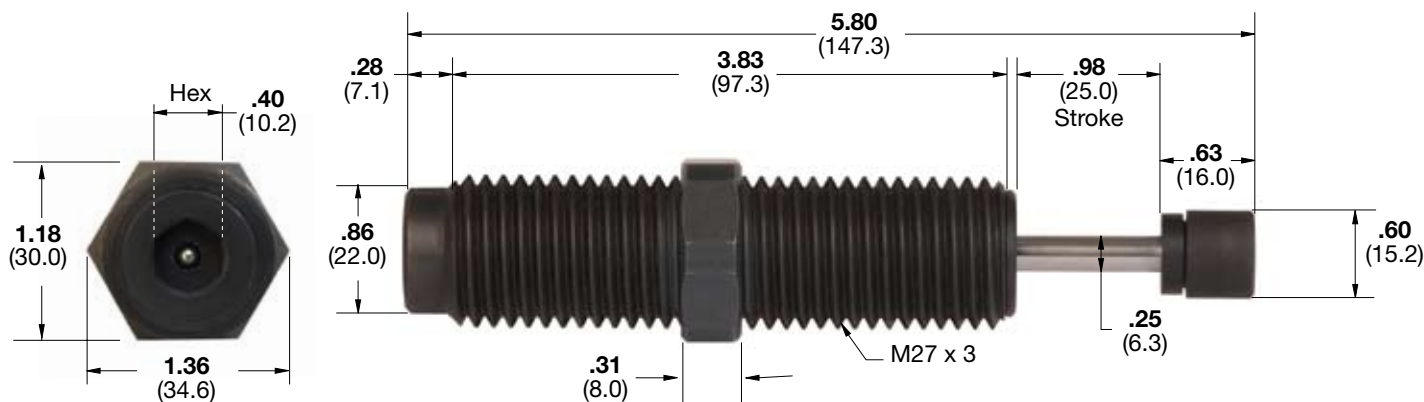
Technical Data

Impact velocity range: 0.5 to 12 ft/sec (0.15 to 3.66 m/sec)
Mechanical stop: integral mechanical stop built into front of units. Shock holder also becomes a positive stop.
Oil type: (-FG) H1 food grade oil, USDA, FDA & NSF approved
Materials: steel body with Weartec Plus finish. Stainless steel piston rod.

Effective weight: selectable
Rear female hex: for ease and speed of installation
Sidel Series 1 stretch rod application: all that use shock holders
Sidel Series 2 stretch rod application: used only with shock holder part number 1073679102

Application: KRONES Machines

Dimensions in inches (millimeters)



Specifications

Model	Effective Weight (stiffness)	Energy per Cycle in lbs (Nm)	Energy per Hour in lbs/hour (Nm/hour)	Return Force lbs (N)	Return Time sec	Shipping Weight lbs (kg)
SCP 650ML-1-SBUC-FG	(-1) Ultra Light	650 (73)	600,000 (68,000)	2.40 - 6.87 (10.67 - 30.55)	0.20	0.67 (0.31)

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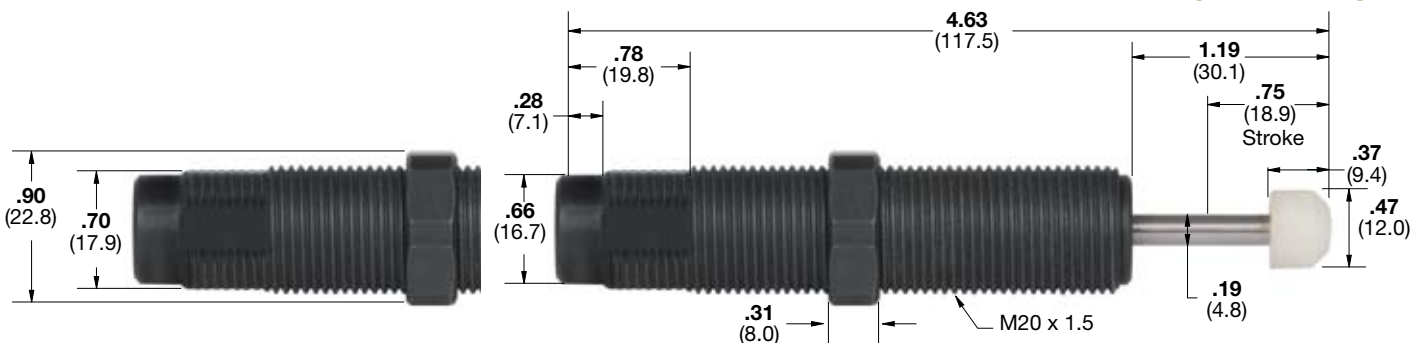
Technical Data

Impact velocity range: 0.5 to 12 ft/sec (0.15 to 3.66 m/sec)
Mechanical stop: integral mechanical stop built into front of units
Oil type: (-FG) H1 food grade oil, USDA, FDA & NSF approved
Materials: steel body with Weartec Plus finish. Stainless steel piston rod.

Effective weight: selectable
Rear female hex: for ease and speed of installation
Applications: KRONES stretch rod with unit shock holders

SCP 300M-3-B-FG

Dimensions in inches (millimeters)



Specifications

Model	Effective Weight (stiffness)	Energy per Cycle in lbs (Nm)	Energy per Hour in lbs/hour (Nm/hour)	Return Force lbs (N)	Return Time sec	Shipping Weight lbs (kg)
SCP 300M-3-B-FG	(-3) Medium	300 (33)	400,000 (45,000)	1.05 - 2.15 (4.67 - 9.56)	0.10	0.25 (0.11)

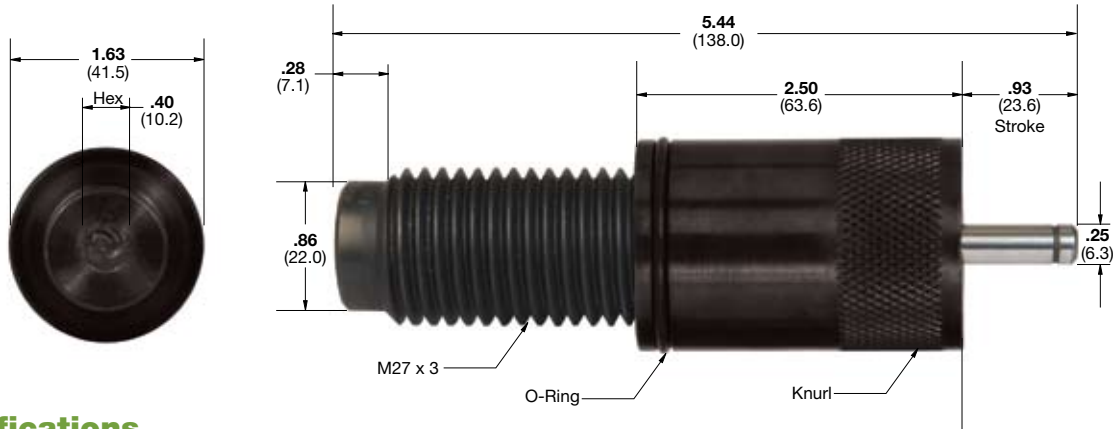
Technical Data

Impact velocity range: 0.5 to 12 ft/sec (0.15 to 3.66 m/sec)
Mechanical stop: integral mechanical stop built into front of units
Oil type: (-FG) H1 food grade oil, USDA, FDA & NSF approved

Materials: steel body with Weartec Plus finish. Stainless steel piston rod.
Effective weight: selectable
Applications: KRONES large molds

Application: Sidel Series 2 Machines

Dimensions in inches (millimeters)



Specifications

Model	Effective Weight (stiffness)	Energy per Cycle in lbs (Nm)	Energy per Hour in lbs/hour (Nm/hour)	Return Force lbs (N)	Return Time sec	Shipping Weight lbs (kg)
SCP 650ML-1-QCM-FG	(-1) Ultra Light	650 (73)	600,000 (68,000)	2.40 - 6.87 (10.67 - 30.55)	0.20	0.67 (0.31)

Technical Data

Impact velocity range: 0.5 to 12 ft/sec (0.15 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: (-FG) H1 food grade oil, USDA, FDA & NSF approved

Materials: steel body with Weartec Plus finish. Stainless steel piston rod.

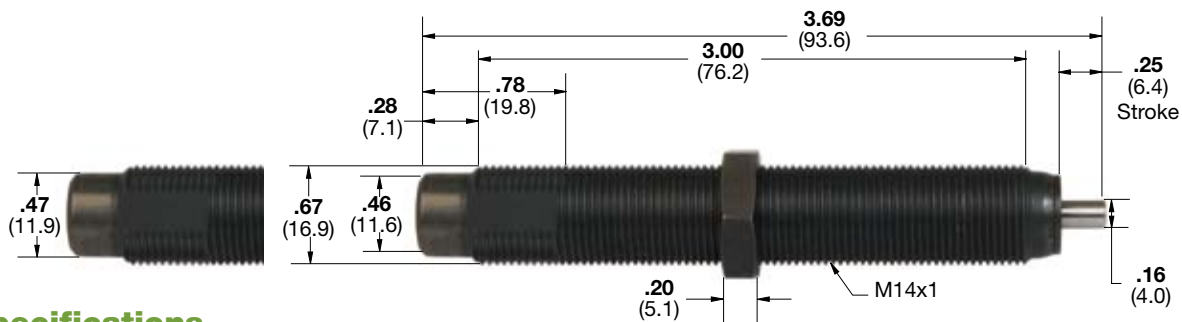
Effective weight: selectable

Sidel Series 2 application: stretch rod down only

SCP 190ME-3-439

Application: Sidel Universal Machines-Small Molds

Dimensions in inches (millimeters)



Specifications

Model	Effective Weight (stiffness)	Energy per Cycle in lbs (Nm)	Energy per Hour in lbs/hour (Nm/hour)	Return Force lbs (N)	Return Time sec	Shipping Weight lbs (kg)
SCP 190ME-3-439	(-3) Medium	225 (25)	300,000 (34,000)	0.90 - 1.90 (4.00 - 8.95)	0.25	0.18 (0.08)

Technical Data

Impact velocity range: 0.5 to 12 ft/sec (0.15 to 3.66 m/sec)

Mechanical stop: integral mechanical stop built into front of units

Oil type: H1 food grade oil, USDA, FDA & NSF approved

Materials: steel body with Weartec Plus finish. Stainless steel piston rod.

Effective weight: not selectable

Application: Sidel Universal small molds

Sidel Series 1 Machines

Stretch Rod Used without a shock holder	Stretch Rod Used with a unit's shock holder	Mold All Applications	Mold Exception
SCP 650ML-1-NB-FG	SCP 650ML-1-ERSB-FG	SCP 650ML-3-NB-FG Used as a snubber.	Except the few SBO-40 machines

Note: all models listed are a common interchange selection. The effective weight stiffness can be changed to accommodate customer preference or application requirements.



SCP 650ML-1-NB-FG or SCP 650ML-3-NB-FG



SCP 650ML-1-ERSB-FG

Sidel Series 2 Machines

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Stretch Rod Down QCM Assembly	Stretch Rod Down Select a model for your specific shock holder	Stretch Rod Up Heat Set Machines	Mold All Machines
SCP 650ML-1-QCM-FG Quick Change Mount. This model eliminates the confusion and potential application problems.	SCP 650ML-1-ERSB-FG Used with shock holder #1073679102 (gold) SCP 650ML-1-880-FG Used with shock holder #1131136901 (silver)	SCP 650ML-3-NB-FG Used as a snubber. Some customers may prefer to use a "-4" effective weight	SCP 650ML-3-NB-FG Used as a snubber. Some customers may prefer to use a "-2" effective weight

Note: all models listed are a common interchange selection. The effective weight stiffness can be changed to accommodate customer preference or application requirements.



SCP 650ML-3-NB-FG



SCP 650ML-1-ERSB-FG



SCP 650ML-1-QCM-FG



SCP 650ML-1-880-FG

Sidel Universal Machines

Stretch Rod Used without a shock holder	Stretch Rod Used with a unit's shock holder	Stretch Rod Up Large M27x3 thread	Mold Small M14x1 thread
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SCP 650ML-1-NB-FG
Not used on all machines.

SCP 650ML-1-880-FG

SCP 650ML-3-NB-FG
Used as a snubber.

SCP 190ME-3-439
Used as a snubber.

Some customers may prefer to use a "-2" effective weight

Note: All models listed are a common interchange selection. The effective weight stiffness can be changed to accommodate customer preference or application requirements.



SCP 650ML-1-NB-FG or SCP 650ML-3-NB-FG



SCP 650ML-1-880-FG



SCP 190ME-3-439

KRONES Machines

Stretch Rod Used without a shock holder	Mold Large M20x1.5 thread	Mold Small M14x1.5 thread
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SCP 650ML-1-SBUC-FG

SCP 300M-3-B-FG

To be determined

Note: All models listed are a common interchange selection. The effective weight stiffness can be changed to accommodate customer preference or application requirements.



SCP 650ML-1-SBUC-FG



SCP 300M-3-B-FG

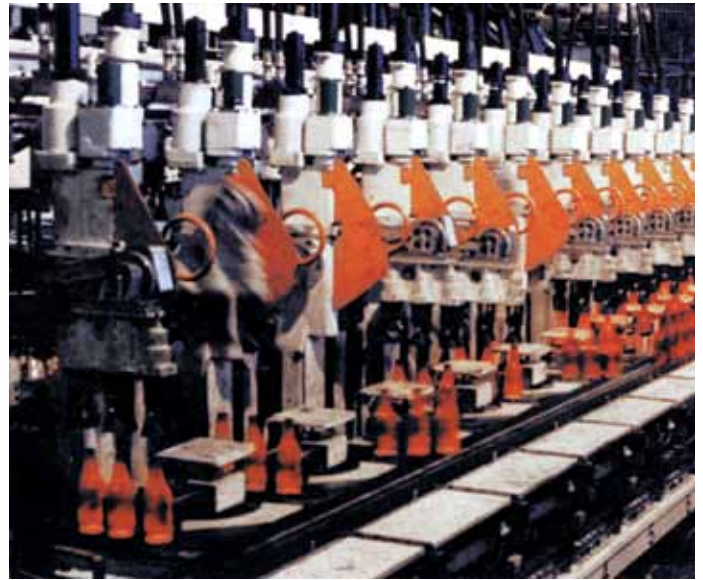


Shown actual size

ACE Controls proven GLASS Shock Absorbers were developed to handle the high temperatures and rapid cycle rates of independent station (I.S.) glass molding machines.

The take out-in, take out-out, and blow head mechanisms are subjected to both high heat and high cycle rates. These fast moving mechanisms must be stopped quickly and precisely.

ACE Controls GLASS Shocks provide the required controlled linear deceleration over a range of speed and weight combinations, compensating for changes in both weight and velocity.



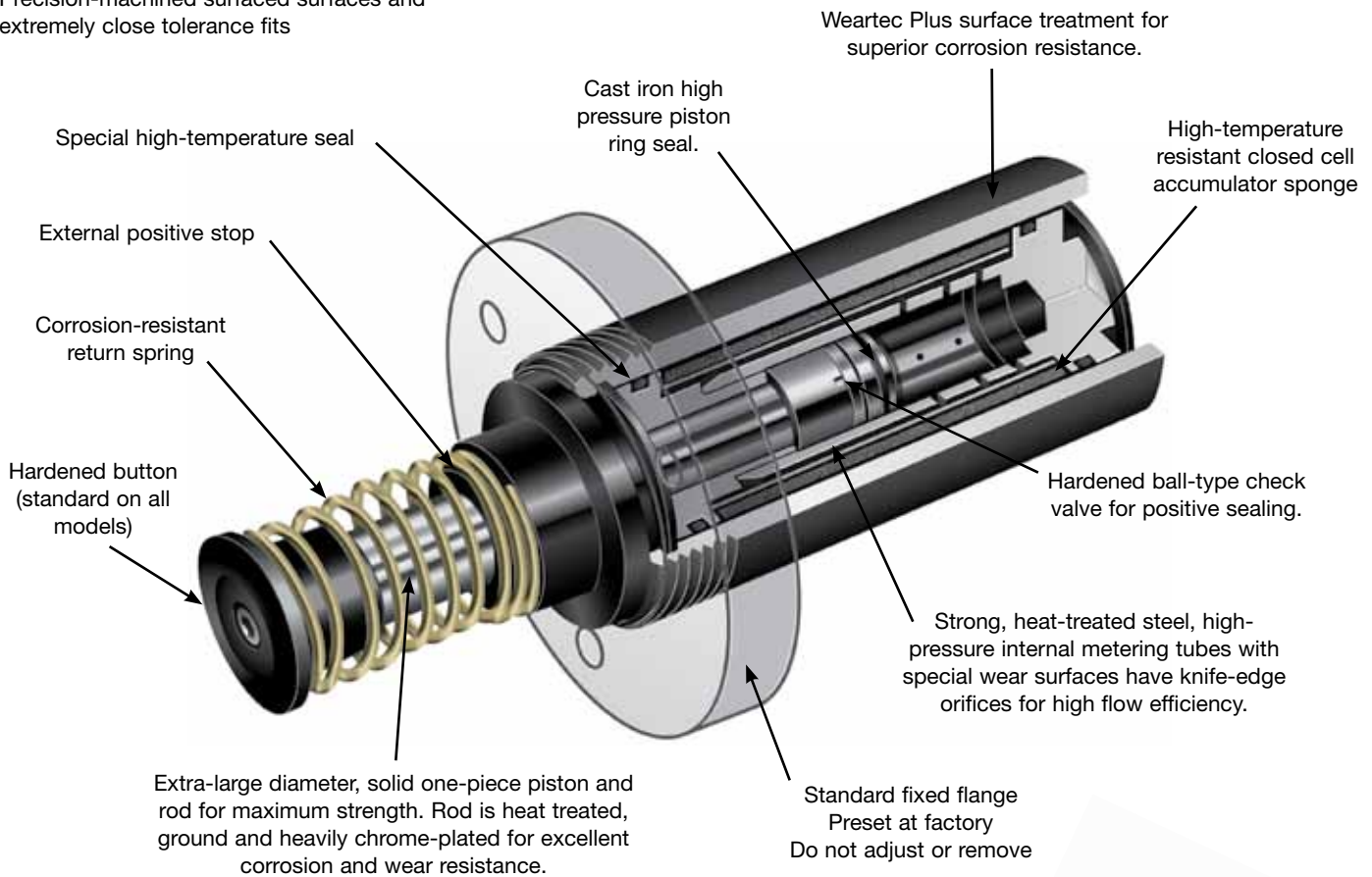
Controlling Shock Loads On Independent Station Glass Molding Machines...

Installing an ACE GLASS Shock on take out-in, take out-out, and blow-head mechanisms will eliminate damaging bounce and shock loads. The result will be an...

- Increase in speed
- Decrease in maintenance
- Increase in profits

The ACE extra heavy-duty design and construction, coupled with long-life seals and over-sized bearings, means that an ACE GLASS Shock Absorber will out-perform and outlast any other brand now available on your most demanding applications.

Precision-machined surfaced surfaces and extremely close tolerance fits



GLASS Shock Features

- Tamper-proof self-compensating design
- Split flange models offered for easy adjustment and drop-in mounting
- Extra heavy-duty design and construction with long-life seals and oversized bearings
- Weartec Plus coating for long lasting corrosion protection

GLASS Shock Benefits

- Increased cycle rates
- Extended shock performance under adverse conditions
- Increased productivity and profitability
- Lifetime warranty against material defects and workmanship

Lifetime Warranty

ACE Controls products are guaranteed to be free of defects in materials and workmanship. ACE will repair or replace any of its products determined to have a defect in materials or workmanship at anytime for the life of the product.



**Adaptable to IS Glass Molding Blowhead Machine Position
Interchangeable with Competitor Models**



**Controlling Shock Loads On
Independent Station Glass
Molding Machines...**

ACE Controls Self-Compensating M64 x 2 GLASS Industry Shock Absorbers were designed to handle the demanding high-temperatures and rapid cycle rates of independent station (I.S.) glass molding machines.

These rugged performers provide controlled linear deceleration over a range of speed and weight combinations, compensating for changes in both weight and velocity. Time consuming adjusting of the shock absorber has been eliminated.

Blowhead mechanisms are subjected to both high heat and high cycle rates. These fast moving mechanisms must be stopped quickly and precisely. ACE's M64 x 2 GLASS Shocks will handle the heat, reduce damage causing impact forces and increase blow-molding equipment life.

The one piece, solid construction, high-pressure inner tube in combination with high-temperature seals and a solid one-piece piston rod enable the ACE M64 x 2 GLASS Shock to offer unmatched long-lasting performance.

GLASS Shock Features

- Tamper-proof self-compensating design eliminates adjustment time
- High-temp seals for long-life performance
- Solid one-piece piston rod for maximum strength
- Solid one piece construction, heat treated high-pressure inner tube
- Hardened steel piston head and rod button
- Weartec Plus coating for superior corrosion protection
- External positive stop
- Wrench flats for ease of installation

GLASS Shock Benefits

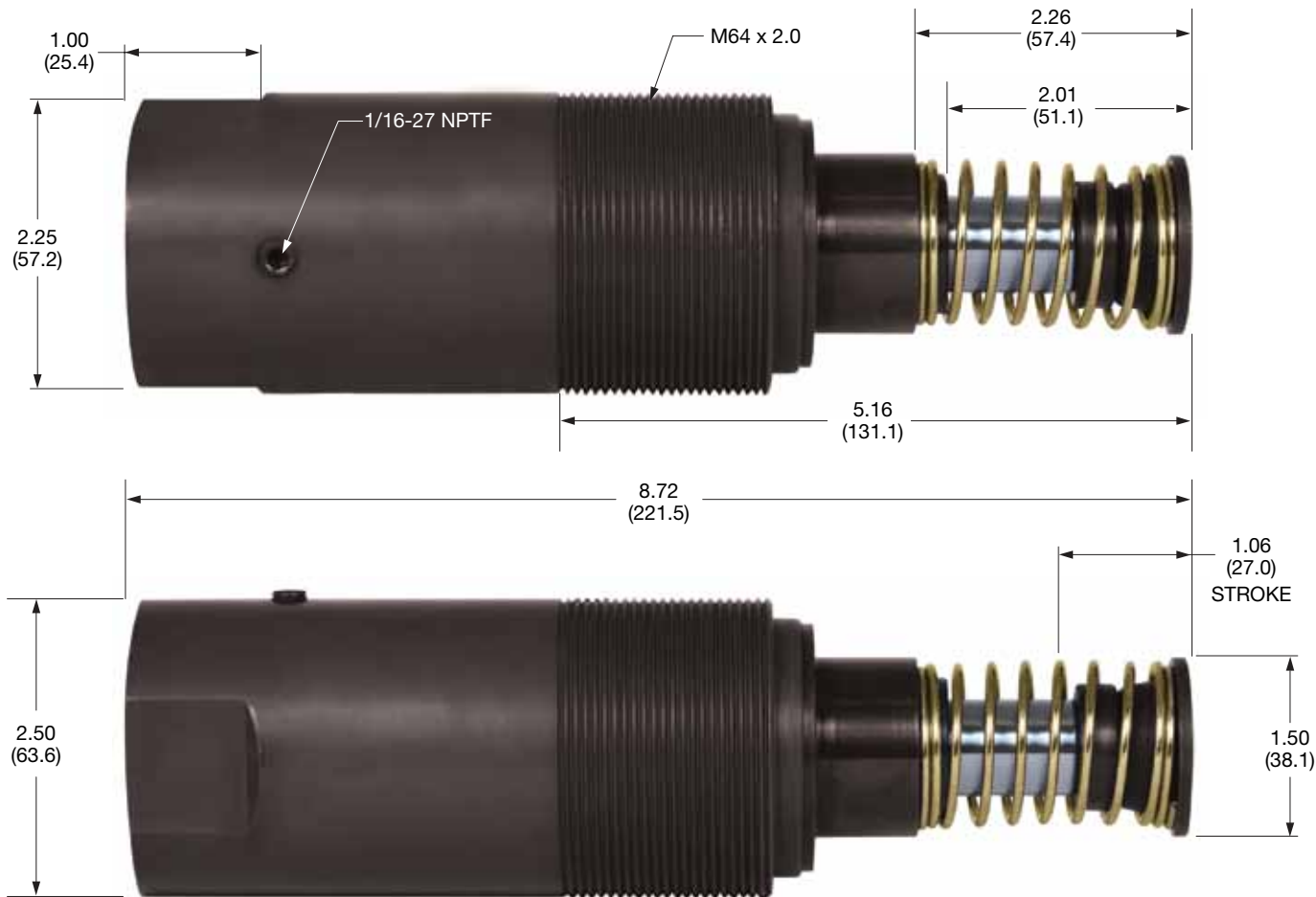
- No adjustment required
- Increased cycle rates
- Increased system performance
- Reduced reaction forces
- Reduced damage-causing impact forces
- Extended shock performance under adverse conditions
- Lifetime warranty against material defects and workmanship
- Easily rebuilt with available seal kit

Lifetime Warranty

ACE Controls products are guaranteed to be free of defects in materials and workmanship. ACE will repair or replace any of its products determined to have a defect in materials or workmanship at anytime for the life of the product.

GLASS Shock M64 x 2 Dimensions

MC 1-1/8 x 2-P-589SV & MC 1-1/8 x 2-P-592GR Dimensions in inches (millimeters)



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Model	Part Numbers	Energy per Cycle in lbs (Nm)	Energy per Hour in lbs/hour (Nm/hour)	Shipping Weight lbs (kg)
*MC 1-1/8 x 2-P-589SV	218-9227	10,000 (1,130)	2,400,000 (271,000)	6.65 (3.02)
MC 1-1/8 x 2-P-592GR	218-9228	10,000 (1,130)	2,400,000 (271,000)	6.65 (3.02)

***MC 1-1/8 x 2-P-589SV will have a slower set-down at the end of stroke (stiffer).**

Rebuild kit available and includes: viton wiper, viton seal, (2) viton o-rings for inner tube and bearing, piston ring, accumulator deflector and accumulator.

Additional GLASS Shock models available for take out/in, take out/out and blowhead mechanisms. Visit the ACE Controls website or contact ACE direct.