



Innovation in

Mechanical Motion & Vibration Controls

ACE[®]



ACE Controls Inc. located in Farmington Hills, Michigan, is a leading innovator in deceleration, vibration and motion control technology. For over a half century, ACE has provided both standard and custom products to meet your most demanding application requirements. We are committed to delivering the highest quality with the latest technology to solve your problems. Call us at 800-521-3320 to learn how ACE can help.

With over 250 distributors across the globe, there's always an ACE expert nearby. Visit our website to find your nearest supplier, www.acecontrols.com.

Automation Control

single direction
deceleration along
one axis

bidirectional force
management along
multiple axes

Motion Control

Vibration Control

high & low
frequency
isolation and
noise reduction

high energy,
low cycle
deceleration

Safety Products

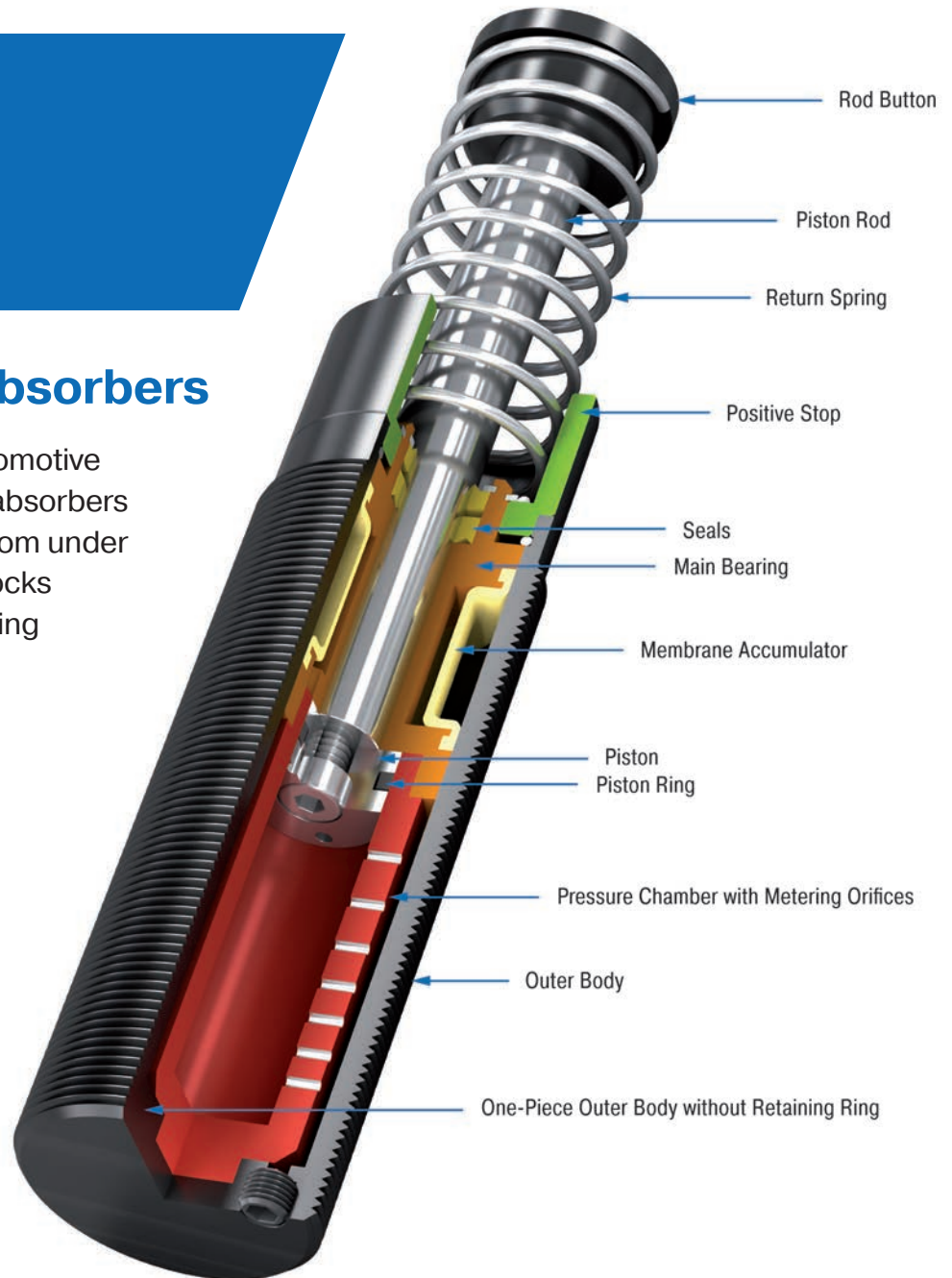
Where it all started

Industrial shock absorbers

Originally produced for the automotive industry, ACE industrial shock absorbers are now utilized everywhere. From under the sea to up in the sky, our shocks decelerate and slow down moving loads to:

- Increase throughput
- Reduce downtime
- Increase safety
- Protect against wear and tear on machines

Our products are built using innovative sealing techniques and inner pressure chambers fully machined from hardened or stainless steel to ensure durability and a long service life.



Automation Control



Increase productivity by quickly decelerating moving loads without damaging impacts

Kinetic energy is turned into heat with ACE's automation product line. This makes machines faster, quieter, more durable, lighter and therefore more competitive and profitable.

Here you will find the perfect selection of machine elements, which turn damaging forces into harmless heat. These solutions smoothly decelerate moving loads. This involves the lowest possible stress on machines, which makes the damping products from ACE so valuable.

- Miniature shock absorbers
- Industrial shock absorbers
- Heavy industrial shock absorbers
- Profile dampers
- Damping pads



Motion Control

Enhance operator or machine control through the entire range of motion

The products in this segment enhance the quality of any type of movement. Anyone who wants to raise or lower loads, regulate the feed of an object to the precise millimeter or gently decelerate rotating or linear movements will find the right product here.

ACE delivers industry leading quality. Our innovative solutions correspond with stringent requirements for ergonomics and individuality, including custom pressurized gas springs.

- Push & pull type gas springs
- Hydraulic dampers
- Hydraulic feed controls
- Rotary dampers



Vibration Control



Solutions for vibration isolation and noise reduction

This ACE product group includes innovative solutions to provide customers with the best assistance in isolation technology and vibration isolation. These machine elements are also distinguished by their light design and wide variety.

The product range extends from extremely low frequency isolating pneumatic leveling mounts to ready-to-install rubber-metal isolators and damping pads. With this portfolio, ACE is capable of offering you customized vibration isolation for almost any application.

- Vibration-isolating pads
- Rubber-metal isolators
- Low frequency pneumatic leveling mounts



Safety Products

Decelerate loads in low cycle, emergency situations

This product group provides emergency braking to safely slow down moving loads and reduce damaging forces. Although the safety shock absorbers, TUBUS elastomer bumpers and clamping elements differ so much in design, every single ACE component provides the best protection for your machine.

They demonstrate their main advantages in emergency stop situations and, based on the protection they provide, are very cost-effective. All of these products can be easily integrated into existing design and largely work independent of energy supplies.

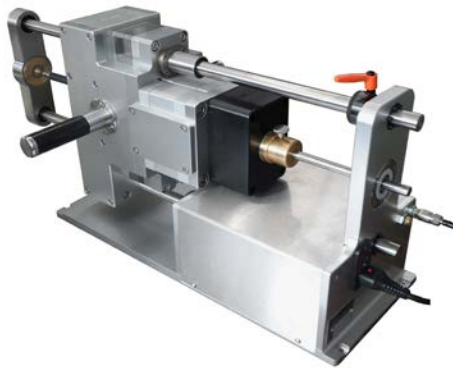
- Safety shock absorbers
- Safety dampers
- Clamping elements



Real World Applications

The application of ACE products and components are limited only by an engineer's creativity

Our shock absorbers, gas springs and vibration products help you improve quality and reduce damaging vibration. The following are just a few unique examples of our products in action.



■ MC5 to MC75 Miniature Shock Absorbers



Compact control

Integrated into a high-tech cable cutting machine's braking system, ACE miniature shocks provide small, but powerful protection for both operating personnel and the machine itself.

■ GS-8-V4A to GS-70-V4A Stainless Steel Gas Springs



Made-to-measure stainless steel gas springs

With incline angles of 15 degrees to the front and rear, ACE stainless steel gas make caregivers jobs easier and improve patient comfort and safety.

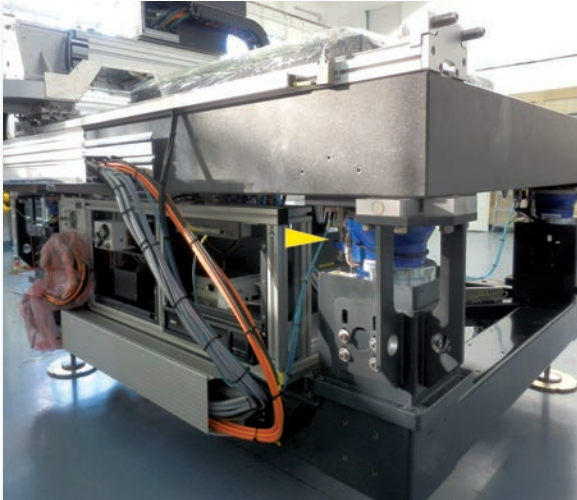
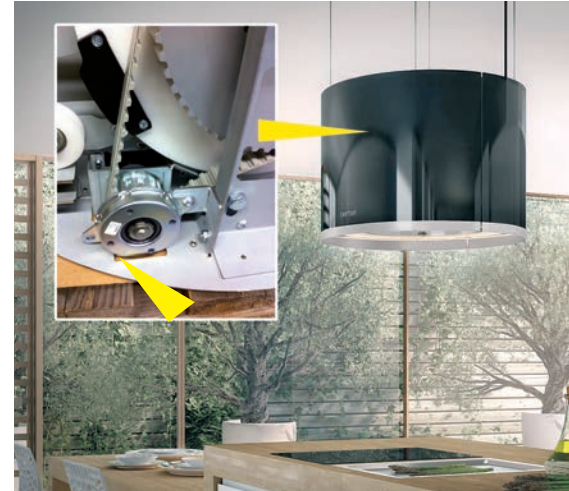


FDN Rotary Dampers



Invisible protection for ventilation hoods

Rotary dampers in high-end commercial kitchen ventilation systems safeguard the protection of drive units and protect chefs, even during power failures.



PAL Pneumatic Leveling Mounts

Ambient vibration reduction

PAL pneumatic isolators with automatic level control measuring machines by providing optimal low-frequency isolation.



SCS38 to SCS63 Heavy Industrial Shock Absorbers



Catastrophic safety protection for driving simulator

Safety shock absorbers installed in driving simulators effectively absorb extremely heavy weights, providing added security to machinery, vehicles and their operators in the event of catastrophic machine failure.



Industries Served



From up in the sky to under the sea, ACE products can be found everywhere

Our products help to make your production processes faster, more efficient, quieter, safer and more sustainable. ACE provides superior deceleration products to meet the needs and demands of machine building and many other industries, including:

- Aerospace
- Agriculture
- Amusement
- Aviation
- Automotive
- Construction
- Energy
- Food & beverage
- Lumber
- Machine building
- Manufacturing
- Marine
- Medical
- Mining
- Oil & gas
- Packaging
- Paper & pulp
- Robotics
- Semiconductors
- Steel



Packaging



Medical

Industries Served



Oil & gas



Heavy equipment



Aerospace & aviation



Marine



Food & beverage

Standard Products & Customs



Our capabilities extend far beyond our products

STANDARD PRODUCTS

We offer a wide range of products to solve your motion and vibration challenges. Each product undergoes rigorous lab testing to assure products are capable of meeting the most demanding conditions. Products are regularly evaluated for endurance, cycle life and material strength. ACE is committed to continuous innovation.

CUSTOMIZATIONS

Most of our standard product line can be modified to suit your needs.

Customizations can be as simple as filling a stainless steel gas spring with FDA-approved oil to safely use in a food or beverage production facility or building shock absorbers with a longer piston rod to increase stroke length and compensate for low G-forces. We go the extra mile to make sure our products exceed your expectations.





Custom Engineering & Design

Facing a unique issue?

We offer custom engineering services, including working one-on-one with product engineers to develop patented components exclusive to your needs. No job is too small; a few examples of our custom offerings include:

- Alternate materials
 - Water as a damping medium for underwater uses
 - Oils better suited for extreme temperature fluctuations
- Unique orificing of internal flow paths ensures highest performance
 - Fast or slow impact velocities
 - High or low temperatures
- Cutting
 - Damping pads in any shape or size
- Specialized accessories
 - Custom flanges for shock absorbers
 - Non-standard end fittings for gas springs and hydraulic dampers
- Special environmental protection
 - Seals, paints & coatings unique to your application



Services & Resources



ONLINE

Find simple tools and tutorials to help you get the job done

We not only pride ourselves on developing great products, but providing great services and resources both online and one-on-one. Each online resource below is designed to provide quick and easy tips to solve your motion and vibration issues.

- Downloadable calculation software & online calculation services
- Extensive CAD component libraries
- ACE YouTube channel and video tips
- Blog featuring case studies & whitepapers detailing unique product uses
- VibroChecker – free award-winning iPhone App

ONE-ON-ONE

Need help choosing the right product? Just ask ACE!

ACE's team provides custom engineering services, assisting you in selecting the right product for your needs. Our application engineers will work with you to assess and calculate the best solution your project. Provide us with some basic information and we'll do the rest.

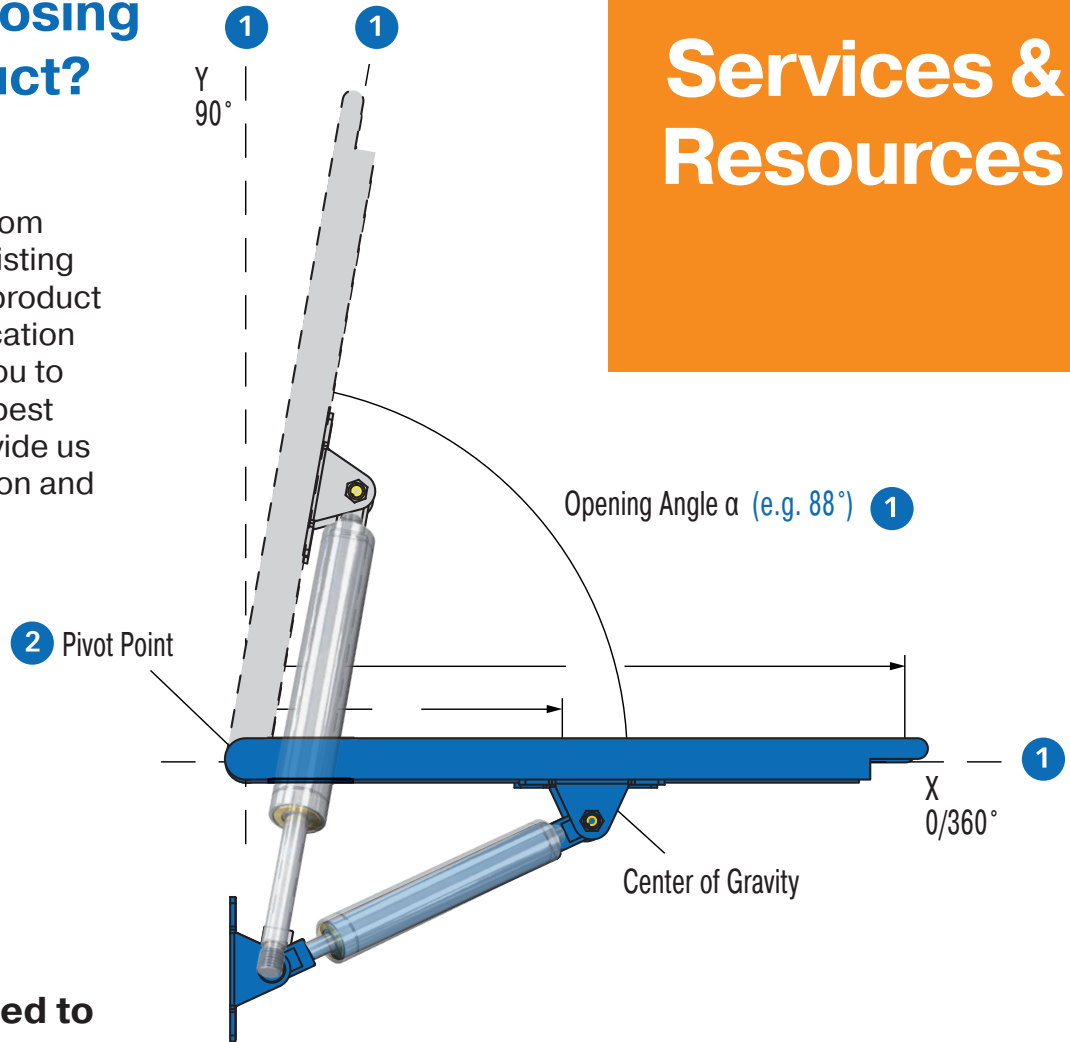
Determining which gas spring, for example, requires a bit of information from you:

What data do you need to size a gas spring?

1 Provide details for the flap, including:

1. Length
2. Width
3. Height
4. Handle distance
5. Mass
6. Opening angle
7. Number of gas springs
8. Hinge position

2 Select the position of the flap and pivot point.



Services & Resources





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