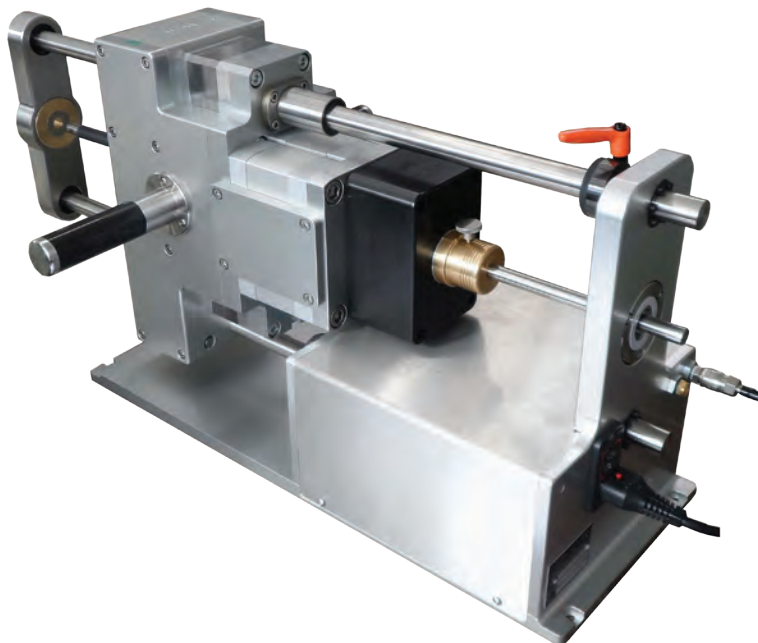


ACE Shock Absorbers And Clamps Used In High-Tech Cable Cutting Machine

When it comes to the cutting operations to make power cables, safety is key. That's why Rittmeyer, a German-based precision engineering company, utilizes a high-tech, coax shielding cutting device called the BERI.CO.CUT. To make operation of this electro-pneumatic machine safer, Rittmeyer integrated ACE shock absorbers and clamping elements into its design.

For half a century, FEINTECHNIK R.Rittmeyer GmbH, a company located in Münster, Germany, has been developing and manufacturing both standard and customized machines for the wire-processing and medical industries.

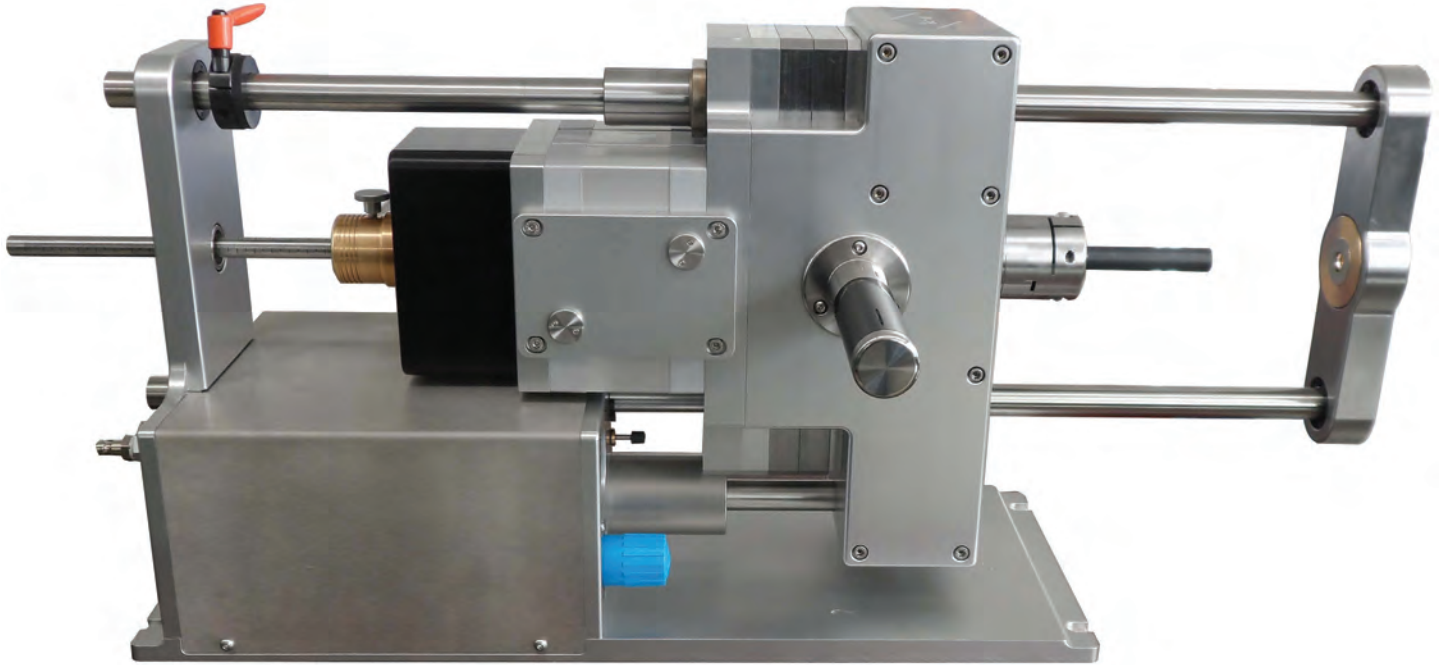


The machine is designed to prevent any damage to layers underneath the cable's braiding, such as dielectrics, other shielding and inner conductors.

One of the company's machines, called the BERI.CO.CUT, precision-cuts the shielding and braids cables used in electric and hybrid vehicles. As the cables are being worked on, the head of the machine moves. To protect both operating personnel and the machine itself, Rittmeyer chose to integrate ACE shock absorbers into the machine's braking system. The company also selected ACE clamping elements to prevent any excess movement during the cutting process.

End Position Protection With ACE Shock Absorbers.

After considering the machine's specifications, including the head's mass and speed during operation, Rittmeyer, together with ACE specialists, selected miniature format MC75EUM-3 shock absorbers. These maintenance-free, hydraulic elements ensure gentle impact of the head against the rear pane, preventing costly damage to both the head and overall structure. Ideal for compact designs, these shock absorbers feature reduced dimensions, short overall lengths and low resetting forces after braking. They can also be integrated quickly and easily into existing systems.

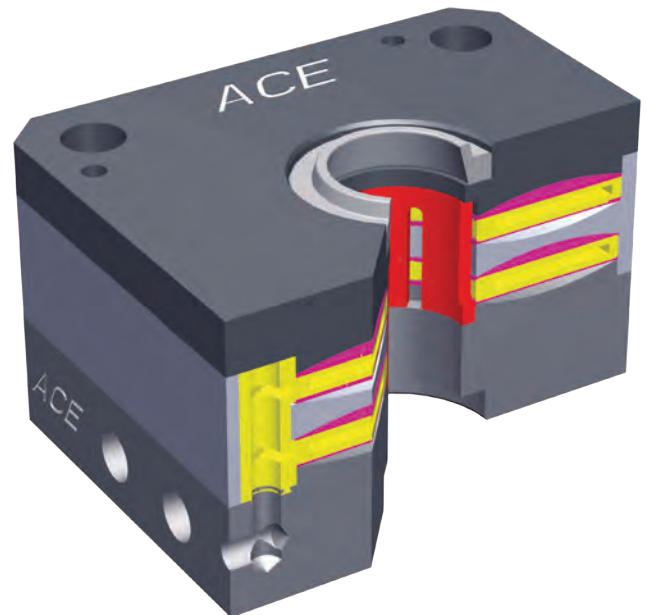


The high-precision, electro-pneumatic BERI.CO.CUT machine cleanly and reliably cuts the shielding of high-voltage cables.

With a net weight of only 30 grams, a length of 70 mm and a reset time of 0.3 seconds, ACE shock absorbers far exceeded the cable cutting machine's compact requirements. Other appealing technical features include an energy capacity of 9 Nm/stroke and 28,200 Nm/h, permissible mass range of 2.7 to 36.2 kg and temperature range of -10 to 66°C. ACE also offers variants with increased corrosion protection and resistance to seawater, should a machine need to operate outside.

Pneumatic Rod Clamping With LOCKED Clamping Elements.

In addition to the shock absorbers, Rittmeyer utilizes ACE LOCKED PN clamping elements for its cable cutting machine. These components are designed to immediately clamp in the event the machine loses pressure as it moves concentrically along two guide shafts, protecting both the operators and the machine itself. They also prevent movement during the cutting process—a critical function, as even the slightest cutting inaccuracy can have serious repercussions in automotive or



LOCKED PN clamping elements handle both axial and rotational forces and can even surpass the levels of hydraulic clamping at lower system costs.

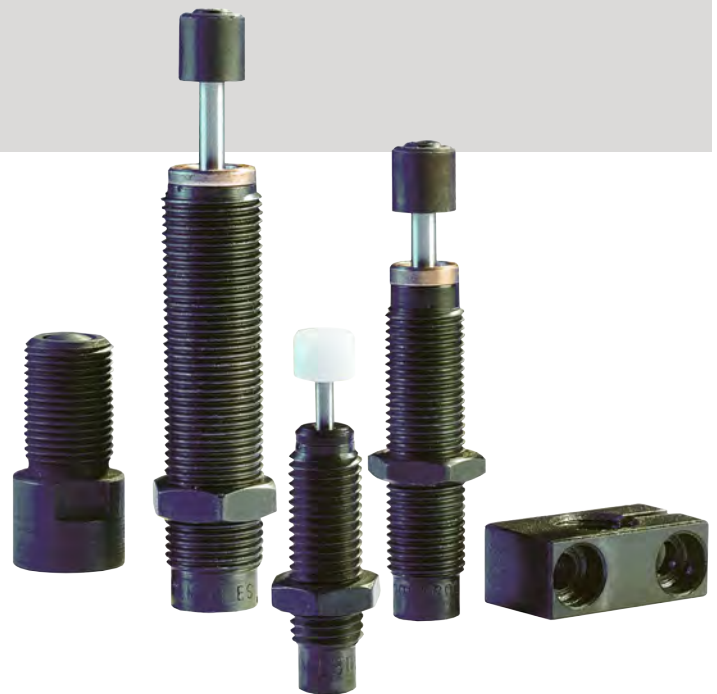
VERSATILE CLAMPING ELEMENTS FOR ANY DESIGN

Available in three different variants, ACE clamping elements ensure secure and reliable static clamping on and alongside trackways. Unlike safety shock absorbers, the LOCKED L, LOCKED P and LOCKED R families of clamps are fixed directly to the moving mass and can thus be brought to a halt at any point. Clamps are activated by the deformation of spring steel sheets loaded by a diaphragm, while its pneumatic pre-tension means the system responds immediately. Ready for use at any moment, they provide high clamping forces—even when the power of the pneumatic drive system fails.

In addition to lower system costs compared to hydraulic and electronic solutions, customers benefit from strong clamping and brake forces in both the axial and radial directions, providing the greatest level of protection for any design. Standard clamping elements are designed for 1 million cycles. For stricter requirements, ACE stands ready to provide its engineering expertise.

aerospace applications. For this reason, absolute precision of the lock process, regardless of the length of the cable being worked on, is key.

Suitable for rods with diameters of 20 to 40 mm, LOCKED PN clamping elements absorb forces axially and rotationally. With a holding force of up to 36,000 N, they reach or exceed the levels of hydraulic clamps without the high cost. In addition to clamping in both directions of motion, these elements also feature a very compact design, requiring less installation space, and are designed to activate during normal operation, as well as when the pressure drops.



ACE shock absorbers have many features that make them ideal for compact designs, including short overall lengths and low restoring forces while braking.

To learn more, please visit: www.acecontrols.com