

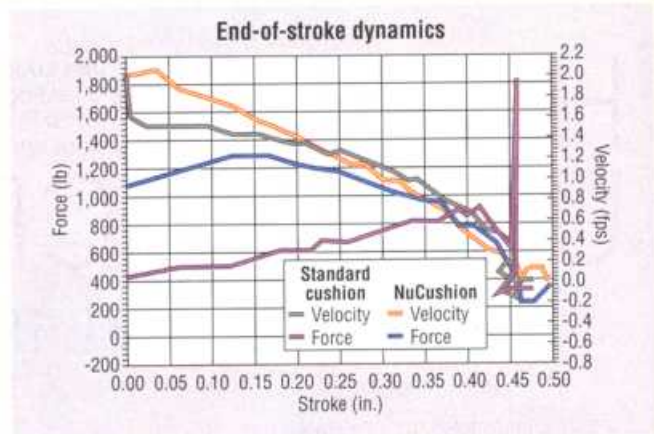
PNEUMATIC SYSTEMS

Cushioning without cushions

Adjusting the standard cushions on today's air cylinders isn't rocket science, but it's something many people don't completely understand. That's one reason why *Hydraulics & Pneumatics* published a two-page article on the subject last year. Excessive cushioning slows down cycle rates, while too little cushioning shortens cylinder and equipment life from excessive end-of-stroke impact.

One remedy is to provide external shock absorbers to the system. But this adds space, weight, complexity, and cost. An alternative now available is NuCushion, a ring that fits inside a standard air cylinder to reduce end-of-stroke impact more effectively than even a properly adjusted standard air cushion.

NuCushion is made of a proprietary elastomeric material molded to a shape to absorb impact energy based on computer-generated dynamic analysis and simulation. Benefits include less noise, longer cylinder life, and minimum cycle times from impact deflection based on NuCushion's shape and elasticity. As shown in the graph, it dramatically reduces impact energy over conventional cushion. Because an air cylinder fitted with NuCushion is interchangeable with standard NFPA cylinders, no adjustments or modifications are needed.



Plots show how NuCushion dramatically reduces the end-of-stroke energy, especially the spike otherwise exhibited at impact. Tests were conducted on 3/4-in. bore cylinders at 70 psi pressure, with 332-lb load and 2 ft/sec initial velocity.

Introductory versions of NuCushion currently are available in sizes for cylinder bores of 3/4 and 4 in. (80 and 100 mm).

For more information on NuCushion, visit www.acecontrols.com or call (248)476-0213.