SERVO PRESS CUSHIONS

INTRODUCING HYSON CUSTOM ENGINEERED SERVO PRESS CUSHIONS
A HISTORY OF INNOVATION

Hyson Products designed and manufactured the first pneumatic die cylinder in 1939. From that auspicious start, we continued to expand the technology of force to answer customer needs, developing the first nitrogen gas spring in 1964 and delivering the first nitrogen manifold system that same year. A recognized leader in nitrogen gas systems, Hyson acquired the hydraulic Di-Dro Advanced Forming System in 2007 and has enhanced and redesigned the product to include both modular and custom-designed systems with a maximum force of 4000 psi.

Hyson brands, including Nitro-Dyne® and Tanker®, are well-respected throughout the industry, and our ISO 9001-2008 and PED certifications attest to our ongoing commitment to the highest standards of quality.

Hyson Products has adopted a Lean culture that embraces all aspects of our business operations and encourages continuous improvement throughout the organization. With each employee actively involved, sharing knowledge and ideas, we strengthen our value proposition to customers and drive our company to be world class. The solutions we offer you are based on the same underlying philosophy of improving your manufacturing processes and ultimately your business results.

Hyson is backed by the financial strength and long history of Barnes Group Inc. (NYSE:B), a diversified global manufacturer and logistical services company focused on providing precision component manufacturing and operating service support. Founded in 1857, Barnes Group Inc. employs almost 5,000 worldwide.

SOLUTIONS DESIGNED AROUND YOU

Hyson Products remains at the forefront of technical innovation, working with customers like you to provide cushions for new press builds as well as press upgrades and retrofits. Our success across a wide range of industries and applications lies with our ability to establish long-term relationships and to offer tailored solutions to meet customer needs.

Our strength stems from working closely with you to create value and to provide support from design and production through installation and service. We have the experience and expertise to do just that, and our engineering team and sales and service personnel are ready for your call.
PRESS SOLUTION TIERS

TIER 1
Most controllability
Active hydraulic
*Characteristics:* HPU, electrical interface, dual-acting cylinders, multiple feedback, pre-acceleration

TIER 2
Active hydraulic
*Characteristics:* HPU, single acting cylinders, simple feedback and electronics, no pre-acceleration

TIER 3
Self-contained hydraulic-no HPU
Di-Dro with heat exchanger

TIER 4
Self-contained hydraulic-no HPU
Di-Dro without heat exchanger

TIER 5
Self-contained nitrogen
Simple nitrogen control panel to adjust force
DIGITAL TOUCH SCREEN INTERFACE FOR COMPLETE CONTROL OF THE CUSHION

FEATURING

ADJUSTABLE/PROGRAMMABLE FORCE PROFILE
Using the system’s advanced proportional valves, forces can be programmed and controlled through the stroke of the press.

PRE-ACCELERATION FUNCTION
Incorporated in the system to lessen the load at initial contact, it pre-accelerates at your desired speed and timing.

DELAY FUNCTION
Designed to decrease press wear and extend press life, the system can delay/hold at BDC to avoid reverse tonnage back into the part and the press.

PART KNOCKOUT/EJECTION CAPABLE
Accumulators provide a short burst of energy to knockout/eject the part in a deep draw application in a lower tool.

FORCE VARIES WHILE RAM STATIONARY
The system is engineered so you can vary the force while the ram of the press is in a holding or stationary position.

EASY OPERATION/USER FRIENDLY
The nitrogen cushion has a simple to use Human Machine Interface (HMI) mounted in a convenient location for quick pressure changes.

SMOOTH INTEGRATION
The hydraulic cushion is custom designed and mounted to the bottom of the bolster plate.