

SmartPAC2 Press Automation Control for Servo Presses

The SmartPAC 2 Servo uses a linear position sensor to monitor the slide position and saves unique bottom and top return positions for each tool. The SmartPAC 2 Servo can store information for up to 200 jobs, and features optional programmable limit switches, die protection sensor inputs, and tonnage monitoring. The SmartPAC 2 Servo can monitor up to ten stages of slide motion. The SmartPAC 2 Servo considers a “stage” a direction change of the slide, so velocity changes and dwell periods do not consume any of the SmartPAC Servo’s available stages.

Self Learning

The SmartPAC 2 Servo has the ability to “learn” the upper and lower limits for up to ten stages of slide movement per cycle. The operator simply places the SmartPAC 2 Servo into the “learn mode,” then runs the machine through a complete cycle. The SmartPAC 2 will automatically store the upper and lower limits for each stage, for each tool. In addition, the SmartPAC 2 Servo will increment the parts counter only after the completion of all stages in a cycle.

Ability to “Mask” Cam Outputs and Die Protection Sensor Inputs

In many applications, it is necessary to activate outputs and/or monitor sensor inputs only during specific stages of a cycle. For example, if it takes several hits in separate stages to produce a part, it doesn’t make sense to trigger a part blow-off or try to monitor part ejection until the last stage. The new SmartPAC 2 Servo allows you to operate limit

switch outputs and monitor sensor inputs only during the stages where they are required.

Selectable Motion Curves

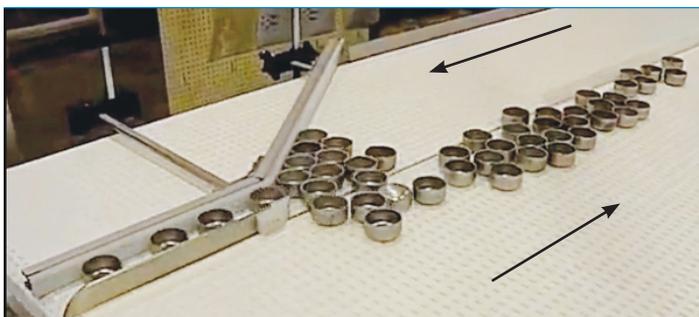
The SmartPAC 2 Servo features three selectable built-in motion curves for programming programmable limit switch and sensor timing:

- **Sinusoidal**—This curve most closely approximates the operation of a standard part revolution mechanical power press.
- **Proportional**—This motion curve most closely approximates the motion of a hydraulic press, with each timing adjustment increment equal throughout the upstroke and downstroke.
- **Asymmetrical**—There are three variable resolution curves built in to the SmartPAC 2 Servo. These curves are proportional through the top of the stroke, and feature high resolution areas near the bottom. By selecting these curves, you will be able to time limit switches and sensor monitoring widows to resolutions as small 0.001” of slide motion (on a 2-1/2” stroke).



Dorner Low Profile Conveyors Help Reduce Product Jams

Jams in bottleneck areas can be a major production issue, especially when trying to singulate small parts on their way from one process to another.



With the correct guiding, speed and belting, conveyors solve these bottlenecking issues. Dorner provides accumulation solutions using a recirculation method, allowing the product to keep moving in a stirring motion before the transfer.

A video is available that shows multiple conveyors moving in opposite directions with guide rails (http://www.dornerconveyors.com/newsletter/04_2010/news/04_2010_deploy.htm). At a cost-effective price, this application keeps the product recirculating in an accumulation area before transferring to a single conveyor.

Oscillating Shear Dies

Sesco Products Group provides a variety of coil processing machinery that is designed to optimize production efficiency and material utilization. These machines are typically incorporated into Cut-to-Length Lines and Blanking Lines to provide the end-user with the most versatile and flexible coil processing system possible. The shear blade oscillates up to ± 30 degrees with each press stroke to produce near net-shaped blanks for optimum material utilization.

The Oscillating Shear Die turns a conventional blanking press into a high production trapezoid and parallel shape blanker. This unique tool is provided on a self-contained die set for easy locating and clamping to the bolster plate. The center pivoting plate floats on a unique air-bearing system to reduce friction and optimize speed. The hardened trim steels have multiple cutting edges for ease of sharpening.

As standard, the Oscillating Shear Die is designed as a “bump-die” configuration and is not attached to the upper ram of the press. This system is designed with a hydraulic shock dampening system that reduces bounce

of the upper die and allows production rates up to 60 SPM. For high speed applications a “ram-attached” die is recommended.



The Oscillating Shear Die combines the capabilities of conventional shears with modern servo technology to provide a high production and flexible shearing operation. Sesco Products Group uses state-of-the-art servo driven positioning systems, where other builders use mechanical and hydraulic systems. Programmability of the necessary shear angle is possible with these dies and part set-up information is typically stored in the Job Recipe matrix and recalled through the Panelview MMI.



ServoMaster Retrofit Controllers from COE

Need an affordable competitive edge?

Tight budgets may be keeping you from investing in new coil handling and feeding equipment, but COE can help you gain a productive edge over your competitors in simple and affordable ways.

COE's ServoMaster Plug-n-Run controls are designed to be quickly implemented to upgrade existing coil-lines for any OEM manufacturer. Within a few hours, you'll reap immediate savings. Save time and improve product quality with COE's Feed Advisor™ feature that calculates job setups, allows on-the-fly feed length micro adjustment, and provides many other user-friendly features.

Everything you need comes complete on a single pallet...ready to go!

COE's ServoMaster Controller integrates with all popular press controls to provide a complete and compact controls system with “single point of entry” for all job specific parameters. Interfaces are available for Wintriss and many other press automation controls. Choose from six different standard drive sizes for servo feeds from 2" to 8" diameter and 6" to 78" in width.

Call today, and have your ServoMaster Plug-n-Run Controls within a few days.



Did You Know?

How And Why To Use The Wintriss Tonnage Monitor Repeatability Function

The Repeatability setpoint for the AutoSetPAC tonnage monitor can be a powerful and effective tonnage monitor feature. Yet, it is often misunderstood and under utilized on the shop floor. Repeatability is designed to monitor the allowable variation of tonnage from one stroke to the next stroke. When programmed correctly it allows a very tight operating window. This assists in assuring part quality and also allows the low and high setpoints to be opened up and help eliminate nuisance tonnage faults. Nuisance faults are defined as the press stopping as the result of a tonnage fault that is not an actual problem within the tool or press.

In order to help explain how repeatability can be used effectively, let us review how low, high, and repeatability setpoints are programmed and calculated. In our example we will calculate tonnage setpoints on a 400-ton Press with four strain link inputs. Each column of the press is capable of handling 100 tons. In the tool number each setpoint requires a percentage to be used and one sample period which is the number of strokes used to calculate the actual setpoints. A convenient starting point is 25% for high, 25% for low and 35% for repeatability and a sample period of 15 strokes. Please note that during the sample period the AutoSetPAC provides 125% of full scale tonnage protection; in our example this would mean that the high setpoint is set to 125 tons per corner during the sample period. After the 15-stroke sample period the setpoints for each individual input are set based upon the tonnages recorded. The high for each input is calculated by taking the highest load registered during the sample period and setting the maximum allowable load 25% above this reading. The low setpoint is set to 25% below the lowest reading and repeatability is set 35% above and 35% below the highest variation recorded during the sample period. During our 15-stroke sample period the highest load produced is 75 tons, the lowest tonnage reading is 70 tons and the largest variation, or change in tonnage from one stroke to the next is 3 tons on the front left column. Based on these readings the setpoints would be set as follows: high would be 25% above 75 tons which would provide a high setpoint of 94 tons; low

Dorner Does Wide Right

Building a high-performance, low-profile conveyor wider than it is long may seem like a stretch; however, Dorner's broad line of pre-engineered conveyors makes this possible.

All of their belts up to 48" wide are custom cut and spliced in our plant, allowing Dorner to customize every belt to your specifications in 2" increments. Wider belts up to 80" are available as well, upon consultation from our factory. Plus, we have over six different types of belts on hand at all times in order to meet your needs on tight deadlines.

For example, say you are moving 80" wide parts from a stamping press to a palletizer 6 feet away. Depending



on variables specific to the application, Dorner's 3200 Series conveyor could be an ideal solution and could ship from their plant in just days.

Offering a vast selection of belts and pre-engineered designs for extra wide conveyors, complemented with short lead times, we can provide a smart solution to help you achieve fast results.



is 35% less than 70 tons which equates to 52 tons. Our operating tonnage range is from 52 tons for a minimum and 94 tons for a maximum on the front left column. This may seem like a very large window and the tendency in the field is to adjust the high and the low to tighten this window and provide a greater degree of control. This is where the ability of the repeatability feature comes into play. The maximum variation in our application is 3 tons.

Did You Know—Continued on Page 4

New Compact Series Pax Spray Cabinets For Efficient And Clean Coil Stock Lubrication

Pax offers a new compact spray cabinet design that can be mounted to a feed or bolster plate to lubricate coil stock as it's fed into the die. The spray cabinet contains



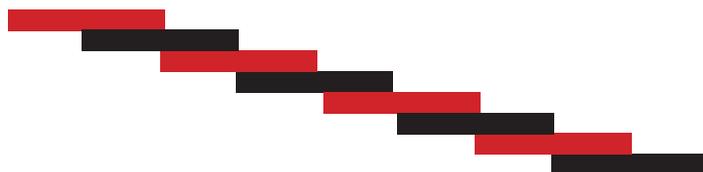
4" Wide Cabinet Fastens to Bolster

nozzles plumbed to a Pax pre-pressurized or V-series lubrication system and allows lubrication of the top of the stock, bottom, or both.

Spray cabinets are available to handle 2" wide to 72" wide stock of any thickness. The amount of lubricant is adjustable and the lubrication is timed to the press and feeding cycle. The spray cabinet contains the lubricant to ensure cleanliness and recycles any excess to the reservoir. Wear items such as lubricant rollers are eliminated and the non contact system eliminates any stock marking issues. Stock guides and anti-buckling provisions are optional. Vanishing oils, synthetics, and conventional stamping lubricants are compatible. Additional airless spray nozzles may be added to provide lubrication in down stream die stations as required.

Did You Know—Continued from Page 3

The repeatability setpoint of 35% provides a setpoint of 1.1 tons. What this means is the tonnage on the left front input cannot vary more than 1.1 tons above nor 1.1 tons below the previous stroke. For instance, if the first stroke after our sample period on the left front is 74 tons, the very next stroke cannot be more than 1.1 tons above or 1.1 tons below the previous stroke. Thus, repeatability provides a very tight operating load limit variation based on the immediate preceding stroke. Repeatability allows gradual increases or decreases in tonnage to take into account changes in material thickness and hardness; it will also allow the load to change slowly as the tool wears over time. The repeatability percentage can also be adjusted in the run mode if, after calculating, you find the setpoint to be too tight or too loose for your operation. As you will come to find, setting and using the repeatability setpoint properly will afford you a very potent tool to help you control any variations in the load produced during the job run to help ensure quality throughout the coil. The repeatability feature will also afford the luxury of opening up the low and high setpoints which if set too close to one another, can result in nuisance shutdowns.



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