

WINTRISS®

AUTOMATED PRESS SETUP

RamPAC™

Save setup time with automatic adjustment of shut-height, counterbalance and die cushion pressures for each die changeover



 DATA INSTRUMENTS
Wintriss Controls Group

AUTOMATED SHUT-HEIGHT ADJUSTMENT

SAVE SETUP TIME BY AUTOMATICALLY ADJUSTING SHUT HEIGHT, COUNTERBALANCE AND DIE CUSHION PRESSURES WITH EACH TOOL/DIE CHANGEOVER.

- IMPROVE PRODUCTIVITY BY REDUCING SETUP TIME
- SAVE ENERGY WITH CORRECT COUNTERBALANCE SETTING FOR EACH TOOL
- INCREASE CLUTCH AND PRESS LIFE
- ACCURATE COUNTERBALANCE AND CUSHION PRESSURE SETTINGS EVERY TIME

RamPAC allows you to add one or more of these powerful features to your SmartPAC press control

- Automatic shut-height adjustment
- Automatic counterbalance pressure settings
- Automatic adjustment of die cushion pressure.

AUTOMATIC SHUT-HEIGHT ADJUSTMENT

RamPAC uses a specially designed linear position sensor to measure the exact ram shut height. When a die is loaded, RamPAC activates the ram adjust mechanism, moving

the ram to the proper shut-height setting.

• INCREASE PRODUCTIVITY

RamPAC decreases setup time and increases production time by automatically setting the shut height for you. Once you've adjusted the shut height to the correct setting, a simple touch of a button saves that setting with all the tool information. From then on, RamPAC sets the shut height for you, accurately and automatically.

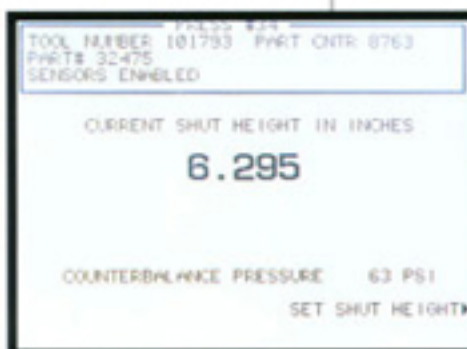
• EASY-TO-USE

Once the RamPAC has been installed and set up, its operation is very simple.

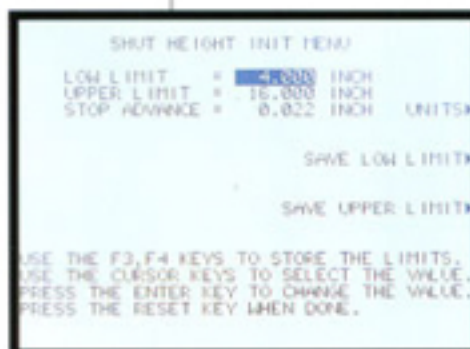
You just select Manual or Automatic with the key switch provided. In Manual another switch moves the ram Up or Down. In Automatic the Down/Up switch moves the ram to the shut-height setpoint or adjusts the shut-height to the upper limit, allowing maximum access for tool change or inspection.

AUTOMATIC ADJUSTMENT OF COUNTERBALANCE PRESSURE

Pneumatic counterbalance cylinders in the press are designed to offset (counterbalance) the weight of the ram and upper die so it takes less energy to move the ram.



DISPLAY SHOWS CURRENT SHUT HEIGHT IN INCHES.



SHUT-HEIGHT INITIALIZATION.



SHUT HEIGHT IS ACCURATELY CONTROLLED BY A RUGGEDLY BUILT DI POSITION SENSOR.

AUTOMATED COUNTERBALANCE AND CUSHION PRESSURE ADJUSTMENT

The correct counterbalance pressure is important for optimum energy consumption and stopping time.

• ACCURATE COUNTERBALANCE PRESSURE FOR EACH TOOL

RamPAC automatically calculates and adjusts the counterbalance pressure for the upper die weight of each tool as soon as it's loaded. All you have to do is enter the upper die weight once and it's saved with the other tool information in SmartPAC. RamPAC also monitors and adjusts the pressure during each stroke to ensure that it doesn't vary more than ± 1 psi. You can also use the

counterbalance in the Manual mode through SmartPAC's programming menu, and set the pressure using the manual regulator. RamPAC still monitors the counterbalance pressure to ensure that it stays above the minimum air pressure setting.

• SAVE ENERGY

An improperly set counterbalance makes the press's main motor work harder. RamPAC helps the press run more economically by automatically setting the proper counterbalance pressure. RamPAC also prevents an overbalanced condition that can waste costly compressed air.

• INCREASE STOPPING PERFORMANCE

The correct counterbalance setting optimizes the stopping power of your press, increasing the effectiveness of any die protection installed on the press. This also can help optimize the placement of safety devices such as light curtains or two-hand controls.

• REDUCE MAINTENANCE

A properly set counterbalance can increase the life of clutch and brake pads by reducing the force required to stop and start the press. By eliminating the possibility of an underbalanced condition, RamPAC ensures that bearing and drive linkage

clearances are taken up before the die closes. This reduces wear and tear on the components. A properly set counterbalance can also help to maintain ram parallelism, reducing premature gib and die wear.

• ACCURATE MEASUREMENTS

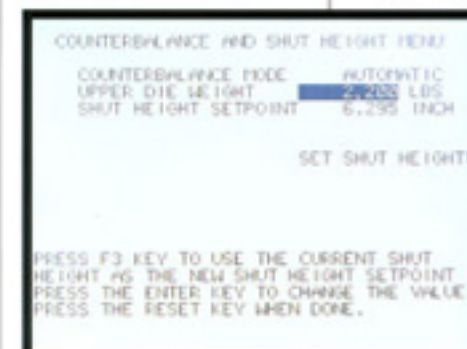
The air pressure transducers used to read the counterbalance and cushion pressures are calibrated to an accuracy of $\pm 1\%$, which is many times more accurate than most gauges.

AUTOMATIC ADJUSTMENT OF DIE CUSHION PRESSURE

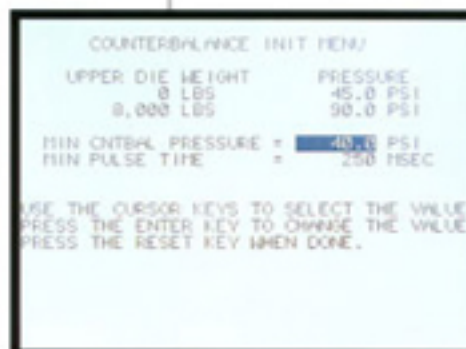
Once you enter the desired cushion air pressure for each tool in the programming menu, it's saved with the tool information. So every time you load that tool, the cushion is set to that pressure.

COMPACT VALVE ASSEMBLY

Fill, dump, check, lockout valves and manual regulator are all combined in one easy-to-install package (counterbalance and cushion require separate valve packages). The valve package allows you to manually dump all air pressure from the counterbalance and/or cushion tanks. Then you can attach a lock to the valve to lock it open so personnel can work on the press. This helps you to comply with OSHA 1910.147 Lockout/Tagout regulations.



COUNTERBALANCE AND SHUT-HEIGHT MENU.



COUNTERBALANCE INITIALIZATION.



COUNTERBALANCE/CUSHION PRESSURE SENSOR (FEMALE PORT ADAPTER REMOVED).



VALVE ASSEMBLY WITH MANUAL LOCKOUT.

SPECIFICATIONS

EQUIPMENT

System enclosure: 10.25" x 12" x 4" (26 x 30.5 x 10.2 cm), NEMA 12, shock mounted. Board available for installation in your console.

Linear Position Transducer: 6", 12", or 18" for up to 5", 11" or 17" shut-height adjustment, respectively. (Other lengths available, consult factory)

Counterbalance and cushion air pressure sensors: 0-200 psi; 1/4" NPT female, monitors counterbalance and cushion volume tank pressures.

Counterbalance or cushion control valve: 6 5/8" x 9 1/4" x 4 3/4"; 150 psi max. 1/2" NPT female; controls air flow to and from counterbalance and cushion volume tanks; manual regulator and lockout/dump valve.

Operator key switches and buttons

Ram Mode keylock switch
Ram Adjust switch
Ram Interrupt push button

ELECTRICAL

Input: 115/230 Vac, 50/60Hz, 30VA

Input check circuit: 12-250 Vac or Vdc

INPUTS

Linear position transducer (for shut height measurement);
2 air pressure sensors (for counterbalance and cushion);
E-stop input; operator control inputs

OUTPUTS

9 relays: Rating 5A @ 120/240 Vac (N/O, held closed); one for stopping the press under fault conditions; the remaining relays control RamPAC features.

OPERATION INTERFACE

Through the SmartPAC Press Automation Control.

SETPOINTS

Shut-Height and Cushion setpoints for each of up to 200 tools stored in SmartPAC. Counterbalance setpoint calculated automatically from upper die weight (entered by user). Minimum counterbalance setting for manual mode.



ABOUT OUR COMPANY

The Wintriss Controls Group is part of Data Instruments Incorporated.

DI was among the first U.S. companies to achieve ISO9001 approval based on continuing audits of our company-wide quality management systems.

Wintriss supplies automation and safety controls for the metal stamping and forming industries, including SmartPAC® press automation controls; die protection systems, safety light curtains, solid-state clutch/brake controls, load analyzers for machine and tool protection; and optical, proximity, and displacement sensors to monitor process conditions.

We're committed to meeting the needs of our customers with innovative engineering, rugged design and construction, reliable performance and continuing support.



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