



MINSTER

SHELL & END CONVERSION

PRESS UPGRADES & AFTERMARKET OFFERINGS

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Shell & End Conversion Press Upgrades

ECH-125 Low Deflection Slide Package

Part No. 810-0553

This package includes a slide with thicker and taller center walls to reduce deflection. Can be purchased as an individual item or an entire slide assembly. For use only on ECH-125 presses with adjustable bolster.

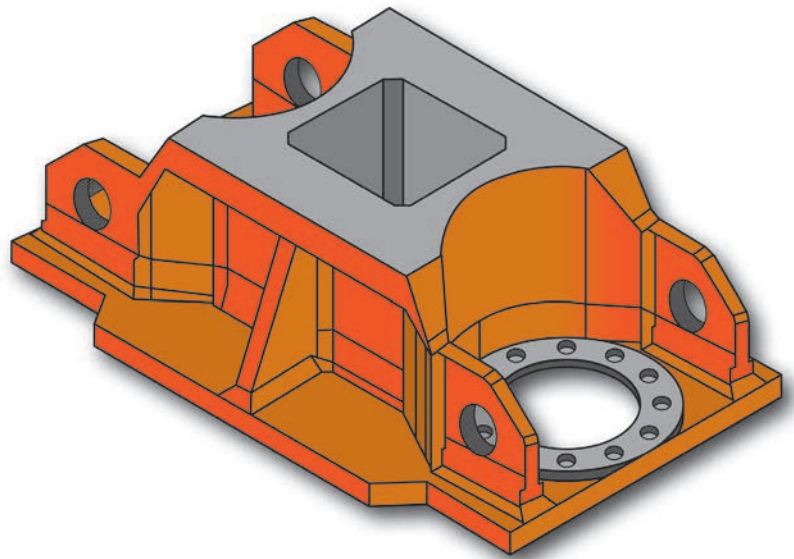
Benefits:

- Increases Part Quality
 - The slide construction reduces deflection, which improves consistency of parallelism between the upper and lower die shoes when a load is being applied.
- Increases Tooling Life
 - Improved parallelism between upper and lower die shoes reduces die wear.

Package Includes:

Complete Slide Assembly, Including:

- Quick Lift Pistons
- Quick Lift Piston Housings
- Slide Manifolds
- Piston Retainers
- O-Rings and Seals
- Quick Lift Piston Housing Spacers



Shell & End Conversion Press Upgrades

Bolster Lock and Adjust Upgrades

This package includes upgrades for the adjustable bolster to allow for a smoother adjustment and increased life. Some machining may be required.

Benefits:

- Reduces Required Adjust Torque.
- Smoother, More Reliable Adjustment.
- Increases Part Life.

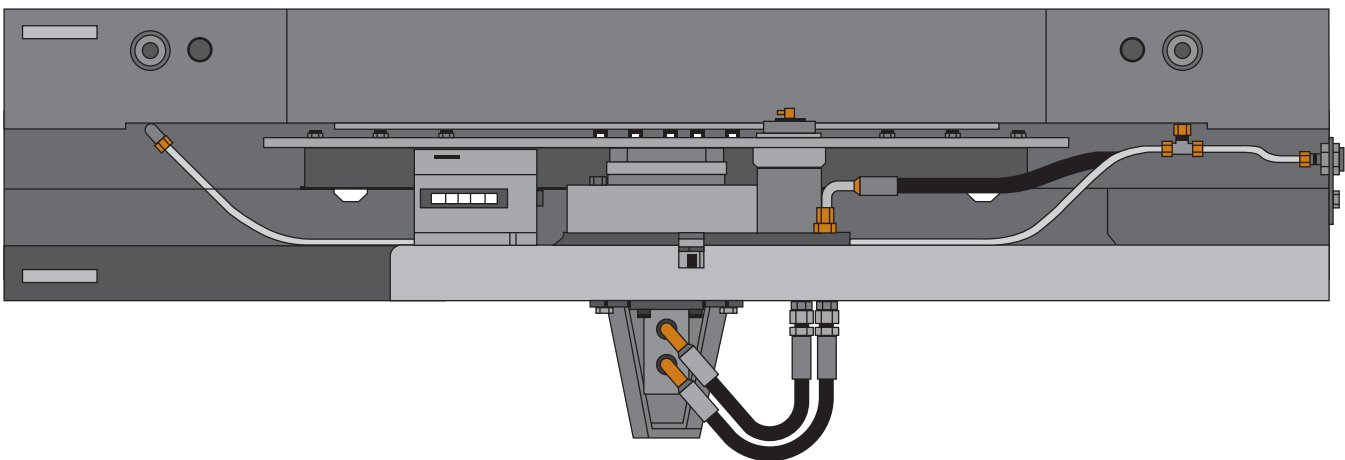
Package Includes:

- Hydraulic lock control valve and check valve
- All necessary plumbing and mounting equipment
- Additional idler sprockets
- Actuator clamp collar and keyed bushing
- Long-tooth idler sprockets

** Parts will vary depending on type and vintage of bolster assembly*

Press Lines:

- ECH



ECH Bolster Digital Shutheight Readout

Part No. 810-1918

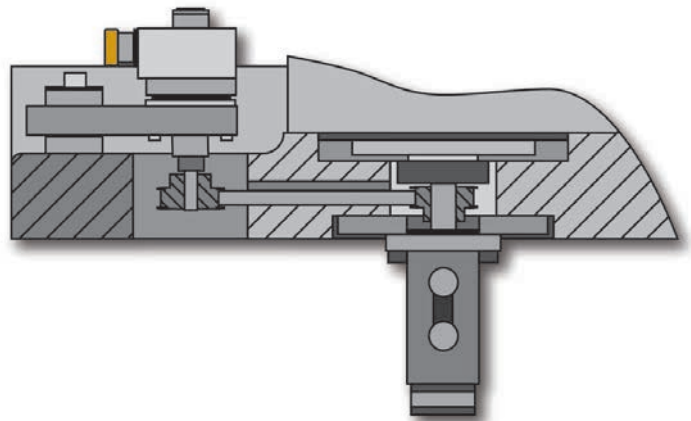
This package converts the mechanical shutheight counter in the bolster to an encoder with a digital readout. Can be used for either inch or metric readout.

Benefits:

- Allows for accurate gauging of shutheight during die setting or adjustment.
- Shutheight can be monitored from a more easily accessible location outside of the Bolster.
- Can be easily incorporated into some controls.

Package Includes:

- Digital Encoder and 15' Connector Cable
- Timing Belt Pulleys and Belt
- Digital Readout
- All Necessary Mounting Equipment



Shell & End Conversion Press Upgrades

ECH -125 Vertical Lube System Upgrade

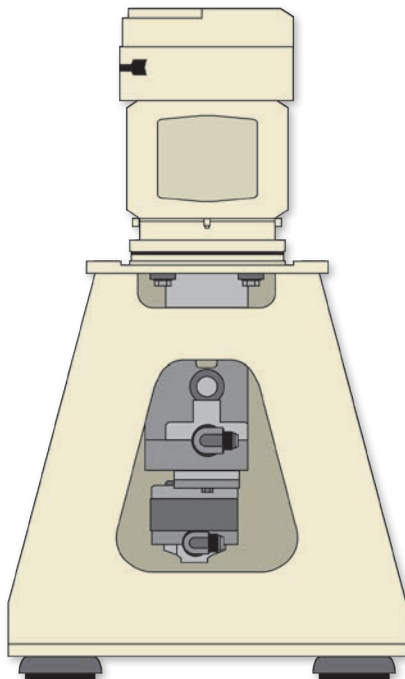
This package removes the lubrication unit from the press mounted brackets and places it on a freestanding mount that sits upon the floor separate from the press. Package compatible with most existing pump configurations.

Benefits:

- Lubrication components are isolated from the majority of vibration created during normal press operation.
- Accessibility of vital lubrication system components for easier inspection and maintenance.

Package Includes:

- Upgraded 7.5 Hp motor
- Rubber isolated pump stand
- All necessary hose and fittings
- New pump set and mounting collar available upon request.



ECH-125 7.5 Horsepower Hydraulic Motor Upgrade

Ref. Part No. 810-0687-27569

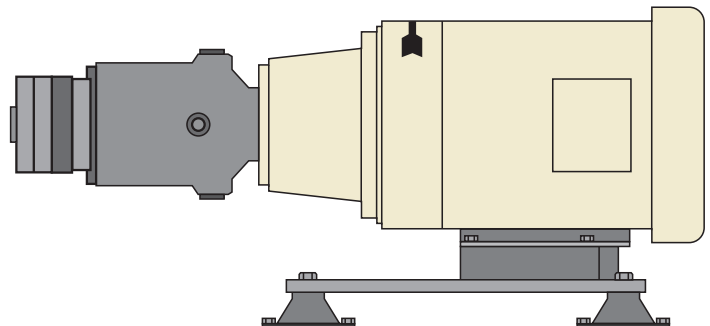
This package is used to upgrade the existing hydraulic unit motor to a 7.5 HP motor. The existing lube & hydraulic pumps can be reused, but this is an ideal time to replace them since the rest of the unit is being updated.

Benefits:

- Will reduce motor load to help provide maximum motor life.

Package Includes:

- 7.5 HP motor and mounting plate
- Motor/pump flange and coupling
- Mounting hardware



External Press Sump Strainer

Replaces submerged sump strainer with “shot-gun” style external strainer for press reservoir.

Benefits:

- Reduces down time by replacing press strainer without draining bed oil reservoir.

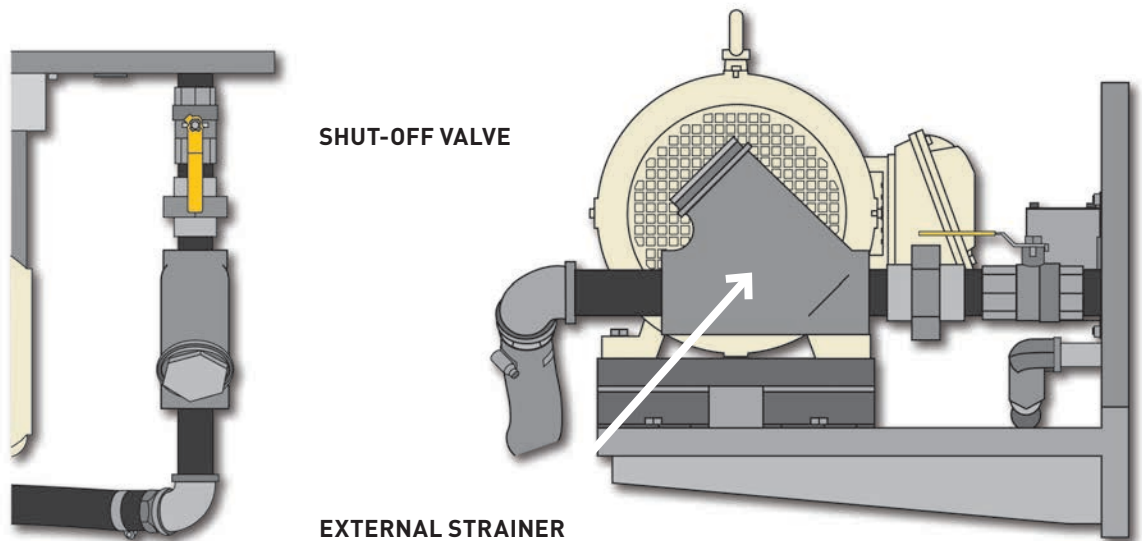
Package Includes:

- External strainers
- Shutoff valve
- Necessary mounting equipment

**Some press styles may require stand-alone vertical lube unit.*

Press Lines:

- DAS-H200, SAS-H60, DAC-H165 & OPT-H200



Shell & End Conversion Press Upgrades

Seal Retainer Wiper Upgrade

This package adds a wiper ring above the seal to better control the oil before it reaches the seal. (Press must already be equipped with vacuum unit.)

Benefits:

- Extends the life of the seals.
- Minimizes the amount of vacuum needed.
- Better oil control.

Package Includes:

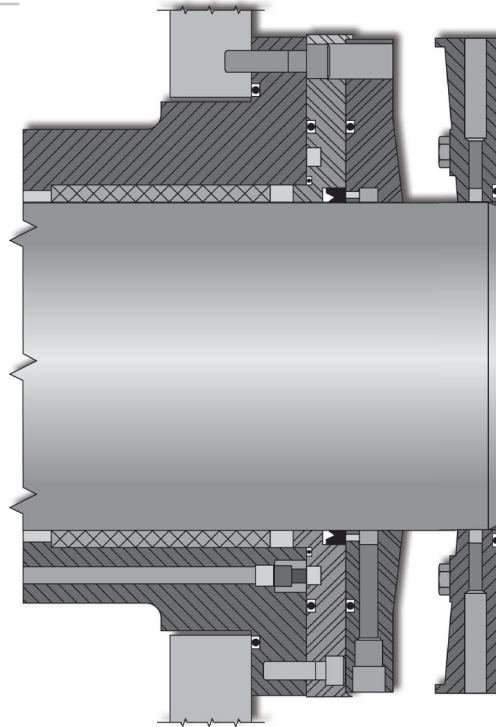
- New clutch sleeve
- Shaft locking assembly
- Oil seal and O-ring
- Installation information

Package Includes:

- Piston Seal Housings
- O-Rings
- Wiper Rings
- Oil Seal
- Orifices
- Mounting Hardware

Press Lines:

- DASH-200, P2H, OPTH-200, ECH, and SAS-H100



ECH-125 Piston Seal Replacement Kit

Ref. Part No. 810-0964 or Part No. 810-1423

This kit contains a complete set of all the seals, o-rings, orifices, and wipers contained in the drive piston and quick lift piston areas. Quick lift housing bolts are also in the kit.

Benefits:

- Simplifies maintenance planning
 - Ordering one kit (part number) provides all required components.
- Quick delivery
 - Kits are stocked by minster.
- Reduced system downtime
 - Significant downtime is required to replace any one of these items.
 - Replacing all wear items while the press is down adds negligible costs and provides maximum life for the assembly.

Package Includes:

- O-rings for drive pistons and quick lift pistons
- Oil seals for drive pistons and quick lift pistons
- Wiper rings for drive pistons and quick lift pistons
- Piston housing orifices
- Required sealant
- New quick lift housing bolts



Shell & End Conversion Press Upgrades

Clutch Sleeve Anti-Fretting Mounting Package

Part No. 810-1015

This package replaces the existing clutch sleeve with a new clutch sleeve that is designed to incorporate an internal shaft locking device. This device virtually eliminates any fretting that may occur between the clutch sleeve and the crankshaft.

Benefits:

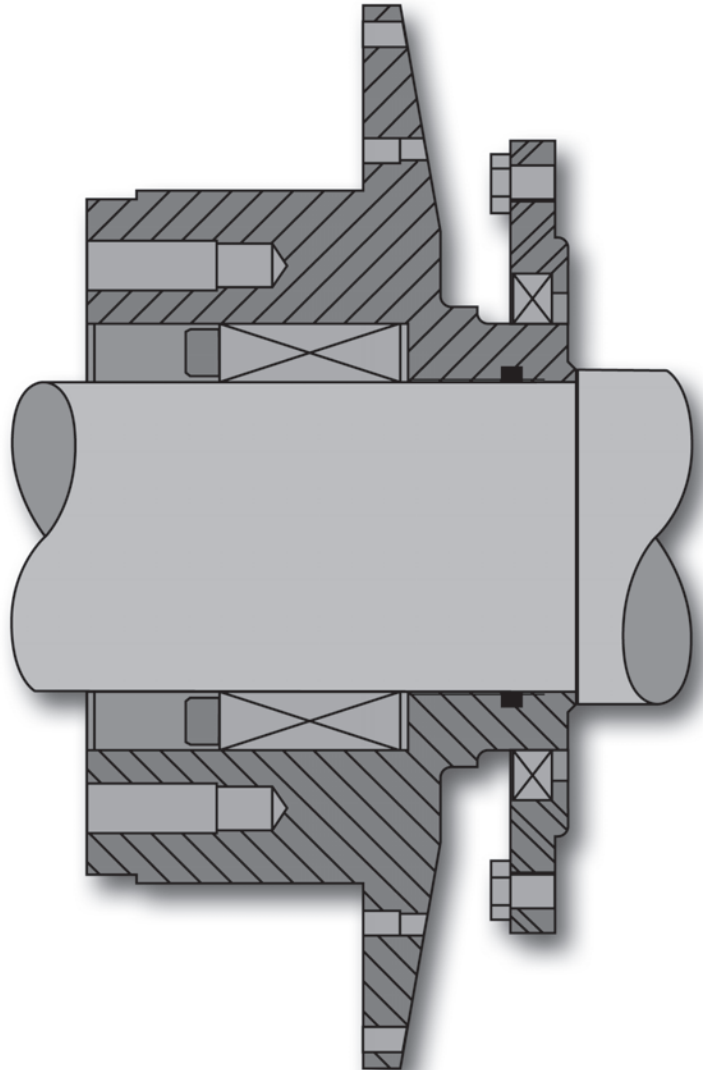
- Reduces risk of extended and unplanned downtime due to crankshaft failure. By reducing crankshaft fretting, the crankshaft life is significantly increased.
- Reduces potential maintenance costs.

Package includes:

- New clutch sleeve
- Shaft locking assembly
- Oil seal and O-ring
- Installation information

Press Lines:

- ECH, EC, PM3, PM2, P2H, DASH, DACH, OPTH, and SASH



Flywheel Bearing Re-Grease Package

Part No. 810-0104

This package provides an easily accessible method of replenishing the grease for the flywheel bearings. It also includes new flywheel bearings and bearing spacers that are assembled to tighter tolerances than the previous bearings. Note, the flywheel typically requires rework to incorporate this new package. This package is standard with all spherical bearing upgrades.

Benefits:

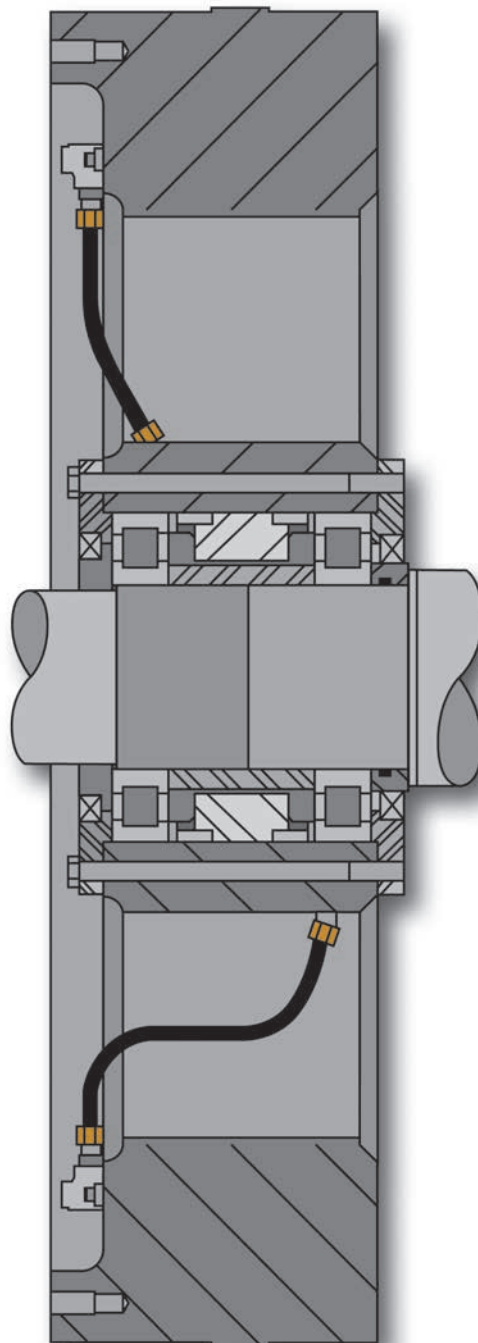
- Increases flywheel bearing life by an average of 250% over non re-grease installations.
 - Re-greasing the bearings allows them to run cooler and more efficient, resulting in prolonged life.
 - Modified bearing installation tolerances optimize bearing life.
- Reduced maintenance costs.
- Reduced unplanned downtime.

Package includes:

- Flywheel bearings
- Bearing spacers and retainers
- Bearing oil seals
- O-rings
- Fittings and hoses required for installation
- Drawings and instructions for required flywheel modifications

Press Lines:

- ECH, EC, PM3, PM2, P2H, DASH, DAC, DAS, OPTH, SASH and TR2



Shell & End Conversion Press Upgrades

Conversion to Flywheel Spherical Bearings

Part No. 810-2247

This package replaces crankshaft flywheel cylindrical bearings with spherical roller bearings. Flywheel re-work may be required for proper lubrication. This package incorporates the flywheel regrease package. This package incorporates the flywheel regrease package.

Benefits:

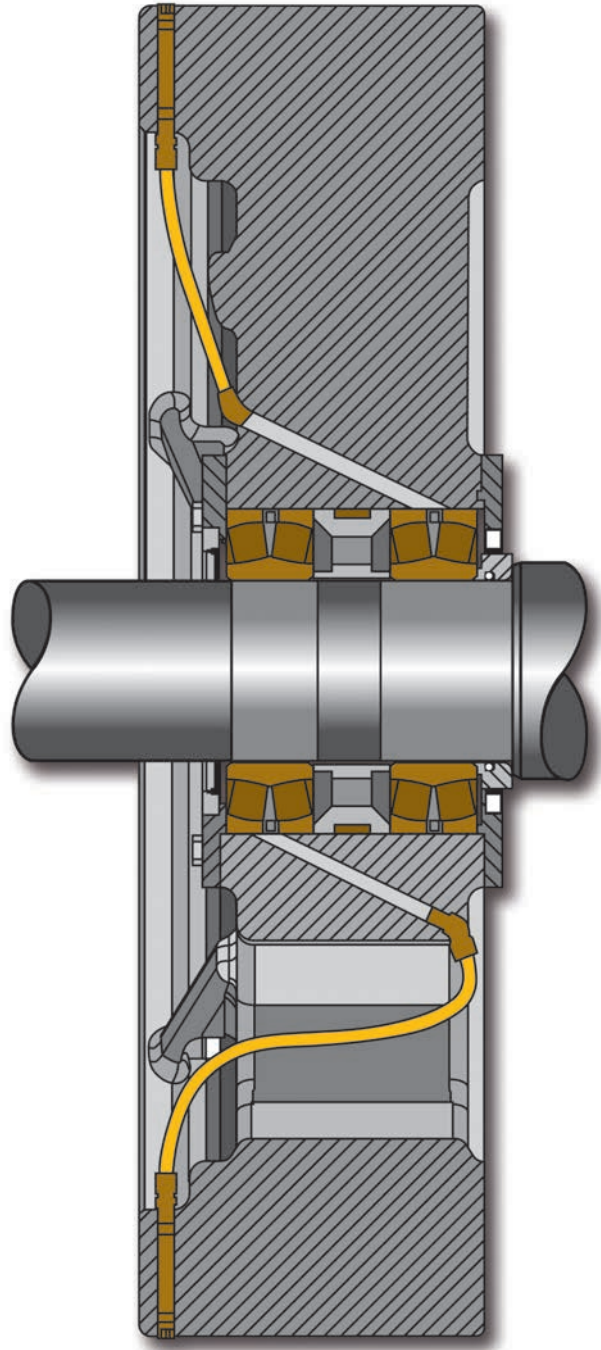
- Prevents false brinelling.
- Improves bearing life.
- Simplifies installation.

Package Includes:

- Fly wheel bearings.
- Bearing and cone spacers.
- Retainers and seals.
- Misc. mounting and lubrication hardware.

Press Lines:

- P2H, ECH, SASH and EC
(May not be available for some models.)



Vacuum Drain/Oil Control Package

Part No. 810-0750

This package replaces the existing double seal arrangement on the drive pistons. The new package contains a single upper seal, and a vacuum drain system in place of the lower seal. If any oil gets past the oil seal, this system pulls it off of the piston and returns the oil to the press sump.

Benefits:

- Reduces unplanned downtime due to worn and leaking drive piston seals.
- Allows scheduling the replacement of worn drive piston seals.
- Reduces drapt oil contamination.

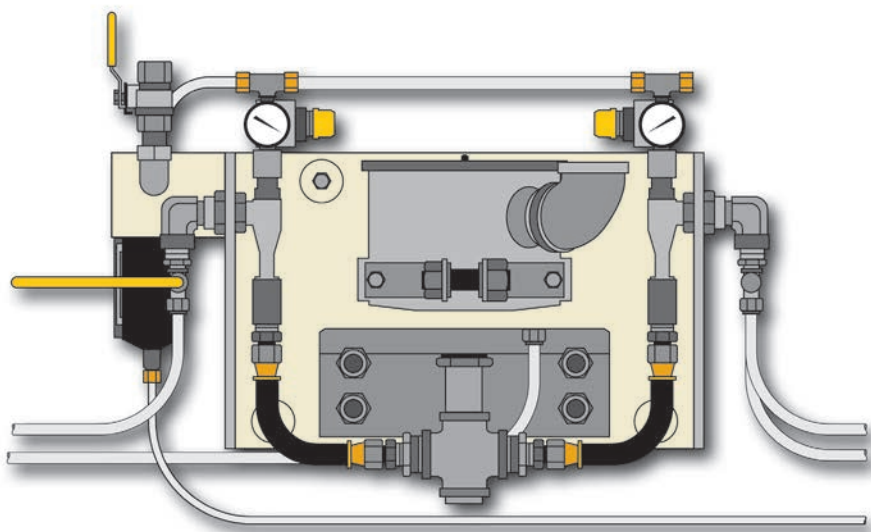
Package Includes:

- All necessary plumbing for installation
- 1 De-mister assembly*
- 2 Piston seal housings*
- 2 Vacuum drain housings*
- Drive piston orifices and seals
- Installation instructions

** Quantities are doubled for DASH*

Press Lines:

- DASH, ECH, and SAS4



Shell & End Conversion Press Upgrades

OPTH-200 Slide Piston Oil Trough

Part No. 810-1402

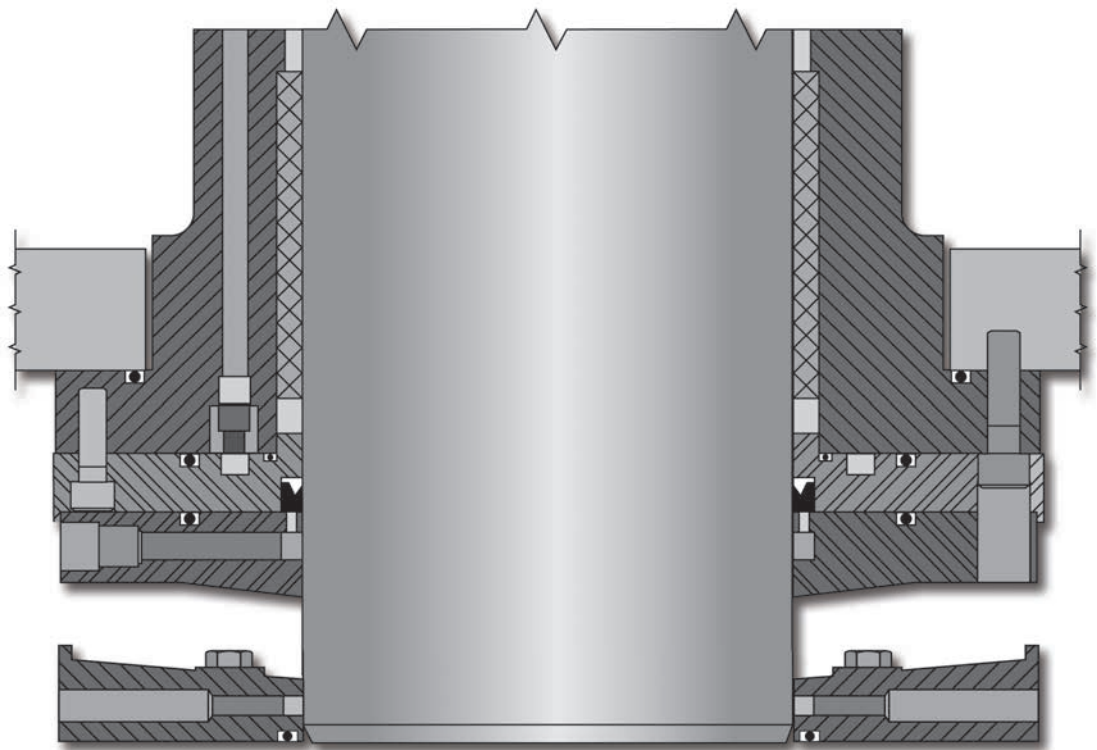
This package adds an additional oil trough under the slide piston housing mounted to the slide. The trough works with the current vacuum drain and is designed to catch any oil that makes it through the vacuum housing.

Benefits:

- Improves the performance of the drive piston vacuum system.

Package Includes:

- Oil troughs
- Mounting equipment and fittings



Heat Exchanger Package

Part No. 810-0251

This package incorporates a heat exchanger into the press sump in order to maintain a consistent press oil temperature. This results in a consistent oil viscosity and increased thermal stability.

Benefits:

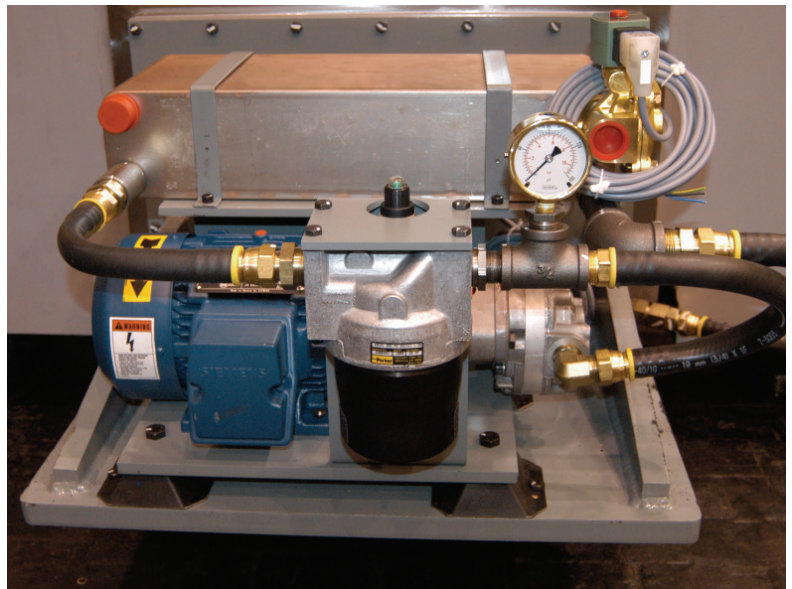
- Improves part quality.
 - The slide guiding system effectiveness is increased due to the desired oil pressure being maintained in the slide guide housings as a result of consistent oil viscosity.
- Improves part consistency by better maintaining bottom dead center repeatability.
 - Shutheight stability is increased as a result of reduced thermal growth.
- Increases efficiency of press lubrication system and reduces lubrication faults.
 - Consistent operating temperature results in consistent oil viscosity, which improves oil flow

Package Includes:

- Heat exchanger
- Motor, pump and oil filter
- Water control valve
- Thermalprobe and thermometer
- Level switch
- Omron temperature controller
- Installation information
- All necessary plumbing, brackets and mounting hardware to add this unit to the press.

Press Lines:

- ECH, SASH, DASH and EC



Shell & End Conversion Press Upgrades

Piston Accumulator Package

Part No. 1262-1259

This package replaces the bladder type hydraulic accumulator with a modern nitrogen charged piston accumulator.

Benefits:

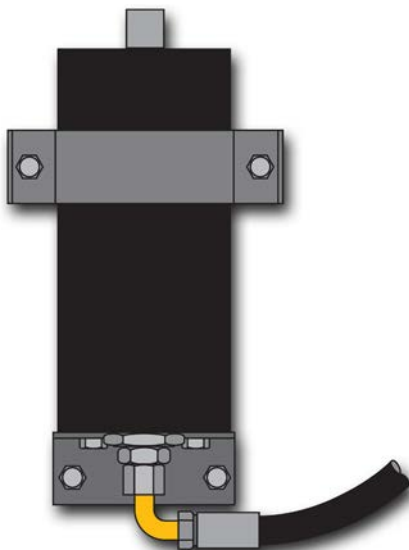
- Improved availability of parts.
- Easier maintenance.
- Constant system pressure during inch and single stroking operations.

Package Includes:

- Piston type accumulator
- Mounting bracket and hardware
- All necessary hoses and fittings

Press Lines:

- EC, ECH, OPTH, DASH, SASH, P2H and TR2



Dynamic Balancer MonitorFlow® Package

Part No. 810-0344

This package adds a MonitorFlow system to ensure that the lubrication to the balancer guides is not interrupted due to blockage.

Benefits:

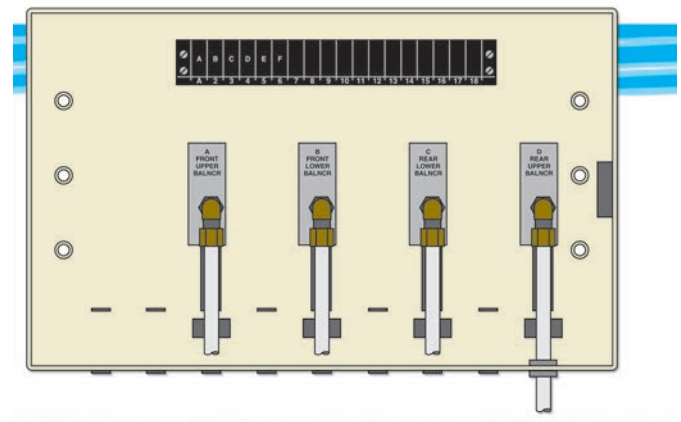
- Prevents catastrophic downtime that could result if the oil supply to the dynamic balancer is interrupted.

Package Includes:

- MonitorFlow control panel
- All necessary plumbing to install the MonitorFlow kit
- Updated hydraulic diagram
- New plumbing layout

Press Lines:

- DASH, EC, PM2, PM3, OPTH, ECH and SASH



Hydura Pump Replacement Package

Part No. 1222-293

This package is necessary to replace the obsolete Hydura Pumps used for the hydraulics and lubrication on Minster press styles EC, PM3, & PM2.

Benefits:

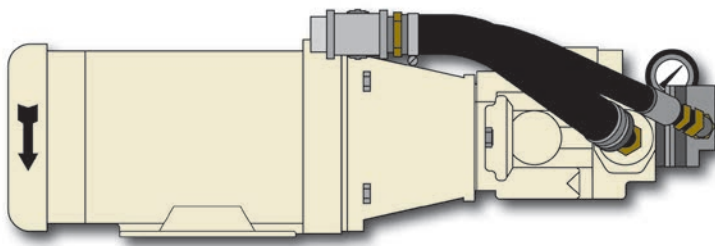
- Direct replacement for obsolete hydura design.
- Current design allows for improved part availability.

Package Includes:

- New motor w/pump mounting flange and coupling
- (1) Hydraulic and (1) lube pump

Press Lines:

- EC, PM3 and PM2



Shell & End Conversion Press Upgrades

Conversion to Variable Frequency Drive

Conversion of press main drive motor to a press rated, inverter-duty motor with a VFD control.

Benefits:

VFD Controller:

- Provides higher performance throughout the full speed range
- Reduces operating costs by maintaining an electrical power factor of up to 18% higher than eddy current motors
- Provides tighter speed/torque control
- Includes an EMI (electromagnetic interference) filter to prevent disturbances of other electronic equipment within your plant
- VFD control replacement parts and support is readily available 24/7/365
- 12-Month warranty as a standard on the VFD control
- 24-Month extended warranty if the control is installed by a certified Nidec Press & Automation technician

Press Rated, Inverter Duty Drive Motor:

- 10:1 Torque speed ratio. Motor supplies constant torque from 10% to 100% of full speed.
- Provides longer life than a standard ac motor in VFD applications
- Shielded motor cable included, increases motor bearing life by reducing electrical noise emissions and their negative effects
- 36-Month warranty that is backed by Nidec Press & Automation and more than 1000 world wide service outlets
- Significantly quieter than an eddy current motor

Package Includes:

- Press rated inverter duty motor equipped with an EMI filter
- Variable frequency control in wall mountable, NEMA 12 enclosure
- Motor mounting parts and layout drawing for mounting modifications
- 50 Feet of shielded motor cable
- Installation and VFD setup information
- Options which can be included:
 - Installation and VFD commissioning by certified Nidec Press & Automation service technicians
 - New main contactor
 - Remote fwd/rev selector switch
 - Remote speed control
 - Remote speed & load meters



Minster Rotary Union for Hydraulic Clutches

Part No. 810-1155 for E2's and DAC's

The Minster Rotary Union (MRU) is designed to transfer fluid up to 10,000 psi into rotating machinery at speeds of up to 1,500 rpm. The MRU was designed with hydrodynamic oil film type bearing and high pressure seal arrangement in place of the failure prone face seals and roller bearings utilized in typical rotary unions. The MRU has been the standard for all for Minster hydraulic clutches since 1998.

Benefits:

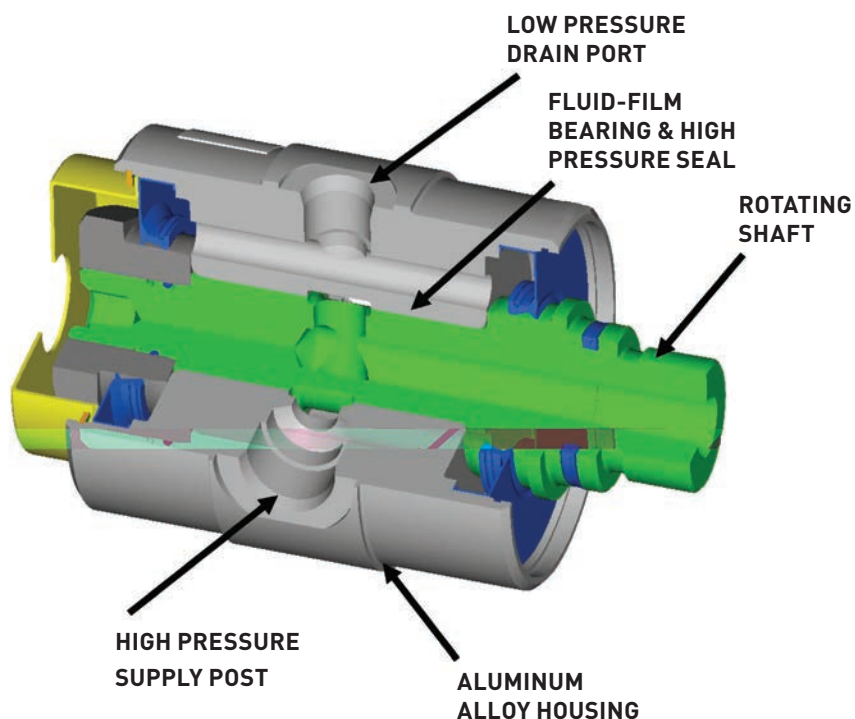
- 3 To 5 times the life of typical rotary unions due to:
 - Elimination of high pressure face seals
 - Elimination of rolling element bearings
- Ability to withstand high vibration environments
- Units can be rebuilt.
- Alternative and custom designs are available

Package Includes:

- Rotary union
- High pressure hose
- Drain hose
- All necessary plumbing and mounting hardware

Press Lines:

- Any Minster press with a hydraulic clutch



Shell & End Conversion Press Upgrades

Replaceable Brake Key Linings

This package adds new, more durable brake keys with replaceable linings to existing Minster Clutch/ Brake Units.

Benefits:

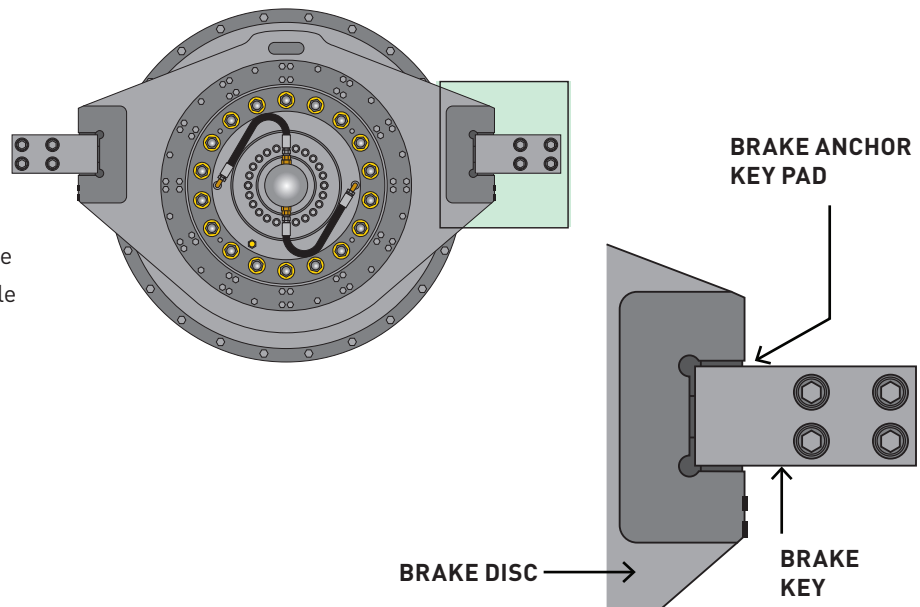
- Reduces damage to the brake disc anchor slot and the brake key incurred during normal operation and single stroke applications

Package Includes:

- New brake keys
- Brake anchor key pads
- All necessary mounting hardware

Press Lines:

- All presses utilizing the Minster MC, EFHC and MHC clutch/brake units.



Flywheel Brake Packages

This package adds a pneumatic operated brake unit to stop the Flywheel after the press has shut down.

Benefits:

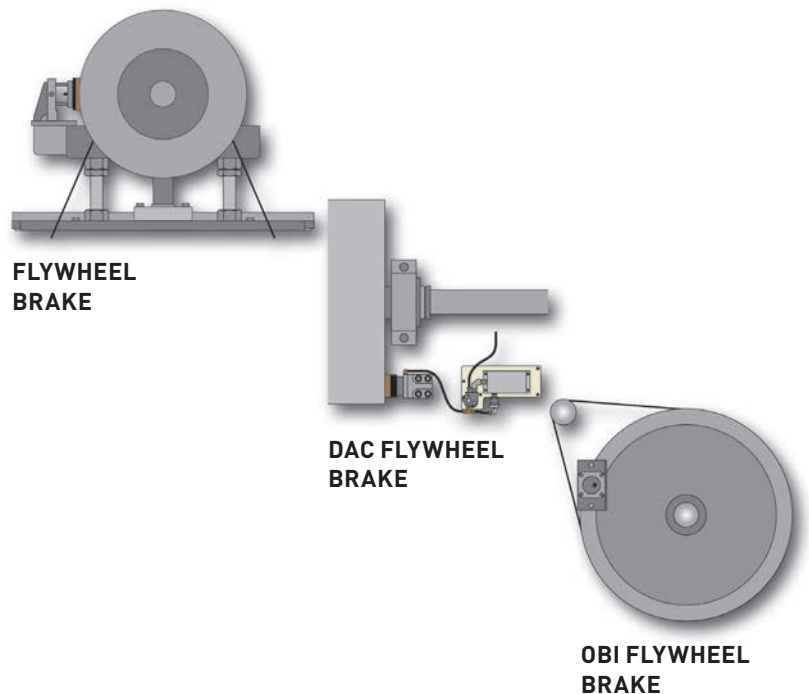
- Quicker access to the press after shutdown.
- Safer for maintenance personnel servicing the press.

Package Includes:

- Mounting bracket
- Brake unit and facings
- Activation valve and pressure switch
- All necessary lines and fittings
- Installation instructions

Press Lines:

- OPTH and DASH



Oil Sump Heaters

Part No. 810-0562

Heaters are provided to put in the reservoir to heat the oil before it is distributed throughout the press. The heaters are regulated to maintain the proper oil temperature and are activated when the press is NOT cycling.

Benefits:

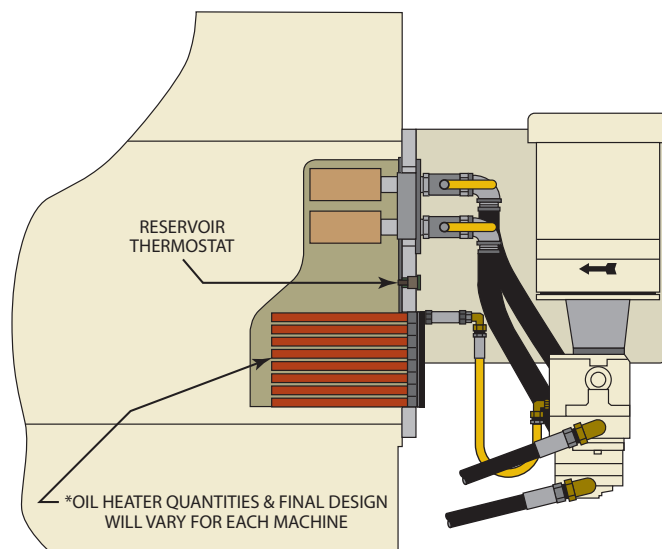
- Will maintain proper oil operating temperature while the press is not cycling, which is especially critical in cooler climates.
- Allows for faster press start-up.

Package Includes:

- Immersion heaters
- Preset thermostat
- Oil reservoir cover(s)
- Installation hardware
- Installation instructions

Press Lines:

- All Minster press lines with proper sump capacity



Shell & End Conversion Press Upgrades

Piston and Connection Heaters

Part No. 1218-193

When a press is initially started, heat, generated by friction, will begin to warm the structure. Until the connections and/or pistons reach a stable operating temperature, the shutheight may vary. By preheating the connections and/or pistons to operating temperature, any changes in shutheight can be minimized.

Benefits:

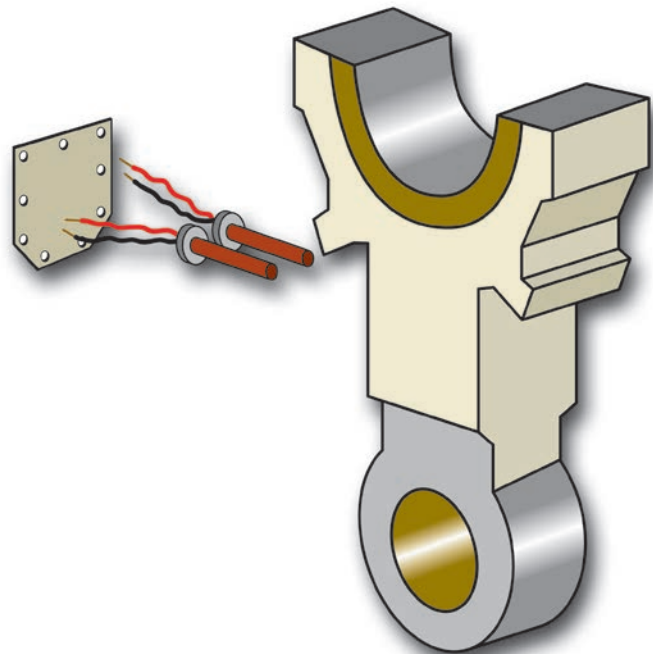
- Helps to limit loss of shutheight due to thermal elongation of the connections and pistons after the press has been running
- Can be used to maintain the connection temperature whenever the press has been shut down for short periods of time

Package Includes:

- [2] cartridge-type heaters per connection of piston
- Electrical control box
- Connection remachine print
- Wiring diagram

Press Lines:

- Most Minster press lines



Vibration Isolators

This package will provide vibration isolators for each corner of the press.

Benefits:

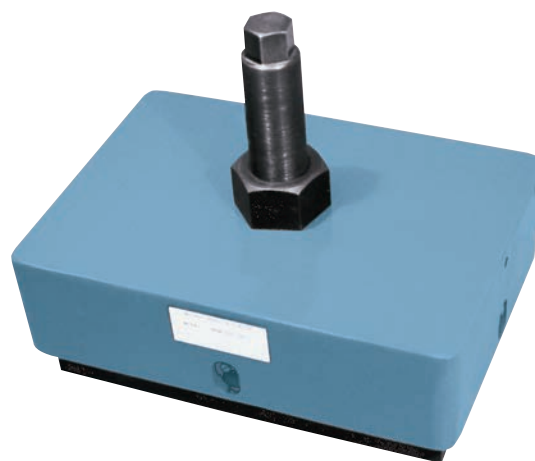
- Reduces transmitted shock and vibration.
- Provides an adjustment means to precisely level, align and properly support your press.
- Can provide the same level of isolation as air mounts but without the same risk of damage or leakage.

Package Includes:

- Isolator Assemblies
- Leveling Screws

Press Lines:

- All presses



Shell & End Conversion Press Upgrades

Aluminum Die Safety Blocks

This package is for adding die safety blocks with repetitive shutheights. Each block has a predetermined static load rating and is made to a specific length.

Benefits:

- Strong for static loads and lightweight for handling.
- Can be supplied for a large range of shutheights.
- Meets OSHA regulations.

Package Includes:

- Lightweight safety block(s)
- Interlocking plug and receptacle
- Optional safety block holder available

Press Lines:

- All Minster presses



Adjustable Die Safety Block Package

This package simplifies using die safety blocks with frequent shutheight variations. Each block has a predetermined adjustable range and specific load rating.

Benefits:

- Reduces die set up time.
- Versatile for a variety of shutheights.
- Adjustable height feature to eliminate the need for wedges.
- Meets OSHA regulations.

Package Includes:

- Height adjustable safety block
- Interlocking plug and receptacle
- Optional safety block holder available

Press Lines:

- All presses



Shell & End Conversion Press Upgrades

Press Remanufacturing & Component Rebuild

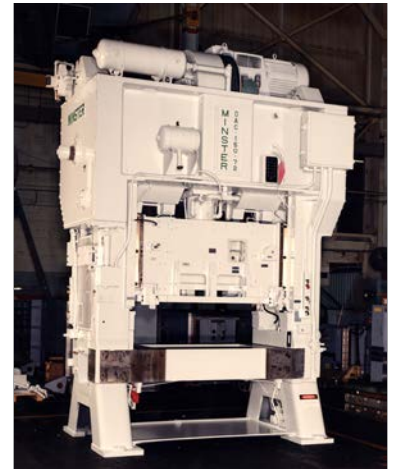
Nidec Press & Automation's Services Division can modify and enhance your equipment to better meet your current requirements. You make the choice whether to refurbish, rebuild or remanufacture your equipment. Nidec Press & Automation can handle your project from start to finish including: tear down, transport, upgrade, modify and install. Nidec Press & Automation's years of experience and skill have been applied to non-Minster equipment for years. Think Nidec Press & Automation for all you press room equipment needs.

Benefits:

- Minimizes damage by having Nidec Press & Automation do the tear down, removal and installation.
- Rebuild to suit your unique requirements. Whether you're faced with budget or time constraints, or for any other reason, we will quote the scope of work that makes sense for you.
- Incorporates newer technology and upgrades.

Press Lines:

- Minster press line equipment and most of the other brands' equipment.





One Brand: A World of Resources

Nidec Press & Automation is the full service press room provider of choice for businesses in more than 90 countries and on six continents. Comprised of leading press room product brands, we ensure a complete offering of machinery, services and technology to meet your exact needs, enabling you to rely on one source for your press room.

Discover the freedom to achieve, to maximize and to drive your operation to exceed your goals. At Nidec Press & Automation, your success is the core of our focus and how we design our solutions to meet the rigid needs of the metal forming industry.

Choosing to work with us means you gain a constant resource with a global footprint who not only has the brightest minds behind our solutions for you, but also has regionally based OEM support ready to work as a natural extension of your team.

**Our promise to you is simple:
We're with you whenever and wherever
business takes you.**



MACHINERY

Turn Key Systems
Individual Components
System/Tech Upgrades
i4.0 Software Upgrades
Integrated Controls

METAL FORMING PRESS APPLICATIONS

Mechanical
Servo
Transfer
Notching
High-Speed & Electrical
Electrical Vehicle (EV)
Lamination
Container Cupping
Container End-Conversion
Container Shell
Gap/D-Frame

AUTOMATION

Press Tending / Robotics
Integrated Transfer
Systems
High Speed Servo Feeds
High Speed Gripper Feeds
Heavy-Duty Coil Lines

GLOBAL SERVICE NETWORK

Field Service
Emergency Response
Technical Service & Support
OEM Replacement Parts
Machine & Component
Remanufacturing
Technical Training



One Brand: A World of Resources

A single source solution that will help you find the efficiencies you want — all from the products, services and technology of Nidec Press & Automation.

nidecpa.com