

CUPPING PRESS

PRESS UPGRADES & AFTERMARKET OFFERINGS



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Cupping Press Upgrades

DAC-150 Width Increase Package

Part No. 810-0151, 810-1322 & 810-0377

This package provides a width increase to 82.5 inches between uprights allowing for die sets up to 81.5 inches. For 72" machines, the increase in width comes from the narrow base of the new uprights.

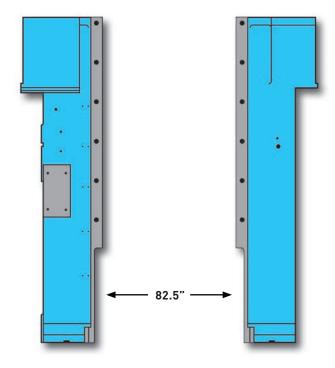
Benefits:

- Allows use of optimal coil size
- Reduces raw material costs
- Increases production
- Allows for an increase in the number of cups produced per stroke

Package Includes:

- Uprights
- Tie rods & nuts
- Oil troughs & screens
- Slide & upright covers
- Oil reservoir cover
- Gib deflectors
- New style air manifold system
- Air bag counterbalance parts
- Necessary mounting hardware
- Necessary plumbing hardware
- Installation information

Note: Customer needs to connect tooling supplier for any modifications required to the die space area.



Cupping Press Upgrades

DAC-150 Speed-Up Package To 250 SPM

This package allows the press to run at an increased rate of 250 SPM. The press must have an inner slide stroke of 5" and outer slide stroke of 2". Also, 75 tons per slide maximum compression load and 37.5 tons per slide maximum tensile load are required. The upper die and any risers cannot exceed 6,000 lbs. for the outer slide and 2,750 lbs. for the inner slide.

Benefits:

- Increased production from existing equipment
- Assurance of OEM quality designed and manufactured components

Package Includes:

- Counterweighted main gears & drive pinions with covers
- Hydraulic clutch assembly
 - Required to keep appropriate stopping time to protect the press & dies
 - Crown must be re-machined for installation of the new clutch.
- Motor sheave, tapered bushing & belts
- Improved oil control guarding
- A514 steel large pin connections
- Outer slide air bag counterbalance
- Inner slide upgraded counterbalance
- Inner & outer slide adjust lock-up
- Rolled thread tie rods & nuts

DAC-150 Speed-Up Package To 180 SPM

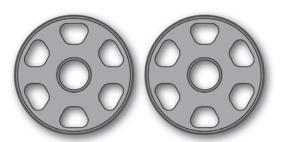
This package allows the press to run at an increased rate of 180 SPM.

Benefits:

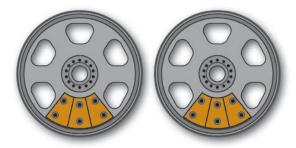
- Increased production from existing equipment
- Assurance of OEM quality designed and manufactured components

Package Includes:

- · Counterweighted main gears
- Drive pinions
 - Only required when gear changes are needed
- Motor sheave, tapered bushing & belts
- Improved oil control guarding



Standard Gears



Counterweighted Gears

DAC-150 Inner Counterbalance Wear Band Package

Part No. 810-1880 or 810-1881

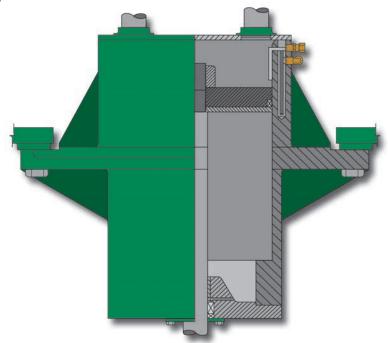
This package provides new polymer seals for both the piston and the rod, replacing the old style packings. Also included is a wear band to protect both the piston seal and the cylinder wall. The package is for both standard cylinder bores and bores oversized by .020".

Benefits:

- Enhanced life of the piston seals reduces downtime
- Improved protection against counterbalance cylinder wall scarring.

Package Includes:

- Piston, piston plate & piston rod bushing
- Seals, seal retainer & wear band
- Wire core wick
- All necessary hardware
- Installation information



Cupping Press Upgrades

Inner & Outer Wormshaft Lock Package

Part No. 810-0699

This package eliminates the free clearances in the slide adjustment assembly, simultaneously locks both worm gears on inner and outer slides after each adjustment, and maintains adjustment position during production. This is achieved by relocating the outer slide wormshaft locks closer to the adjust screw, eliminating two couplings on the outer slide adjustment, and locking the inner slide assembly with a wormshaft.

Benefits:

- Increased part consistency due to increased stability of slide to bed parallelism
- Decreases maintenance of outer slide wormshaft mechanism

Package Includes:

- · Wormshafts for the outer slide
- · Shaft bearings
- Slide adjust bearing & seal caps
- Miter gears
- Cross shaft couplings
- Shutheight indicator gears & pinions
- Shutheight indicator locking sleeve
- Installation information

Press Lines:



Large Pin Conversion Package

Part No. 810-0158

Replaces the standard saddle bushing arrangement with a design that utilizes a large diameter wristpin, high tensile connections, and an updated screw package designed for the larger tensile loads created by increased production speeds.

Benefits:

- Eliminates saddle bushing wear
- Reduces wear on wrist pins, connections and bushings

Package Includes:

- Larger diameter wrist pin
- Wrist pin bushings
- Connection
- Connection screw
- Slide adjusting nut
- Slide adjusting worm gear
- Slide adjusting sleeve
- All necessary flow switches, orifices, trabon blocks and plumbing required.
- Installation information

Press Lines:



Cupping Press Upgrades

Firestone Outer Slide Airbag Package

Part No. 810-0377

Replaces the outer slide counterbalance cylinders with a low maintenance assembly for machines with up to a 4.5" stroke.

Benefits:

- Reduces unplanned downtime due to outer slide counterbalance maintenance
- Eliminates counterbalance cylinder maintenance
- Eliminates counterbalance seals
- Reduces oil contamination
- Air bags do not require lubrication and will not produce lubricated air that can be emitted from counterbalance cylinder breathers
- Reduces plant air consumption requirements

Package Includes:

- Counterbalance airbags
- Upright slide mounting brackets
- Replacement upright covers
- Air plumbing parts required for installation
- Installation information

Press Lines:



DAC-150 Oil Control Package

Part No. 810-0151, 810-1322 & 810-0377

This package provides improved oil control for DAC's running 145 SPM or faster.

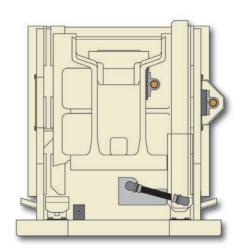
Benefits:

- Prevention of part contamination.
- Allows for increased production due to faster press speeds.

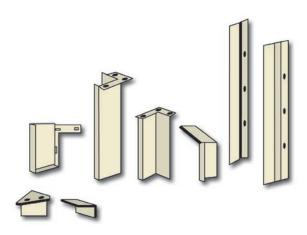
Package Includes:

- All necessary guards & covers
- All necessary oil troughs & screens
- All necessary plumbing & hardware

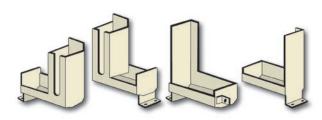
Press Lines:



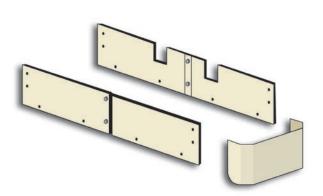
Inner to Outer Slide Rigid Drain



Slide & Gib Deflectors



Slide Oil Troughs



Inner Slide Oil Deflectors

Cupping Press Upgrades

DAC-150 Driveshaft Covers

Part No. 810-2072

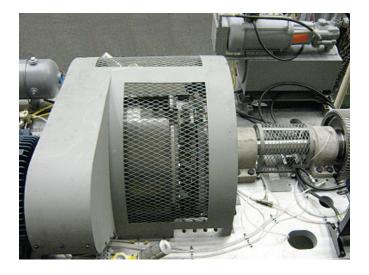
This package provides flywheel and driveshaft covers for the crown. Covers will be painted to customer specifications. May require some fitting at assembly.

Benefits:

- Protects rotating parts from debris
- Protects personnel from rotating parts when working on crown

Package Includes:

- (1) Flywheel and sheeve cover
- (2) Driveshaft covers
- Safety cables
- Mounting equipment



DAC-150 Press Gib Conversion Package

Part No. 810-0233

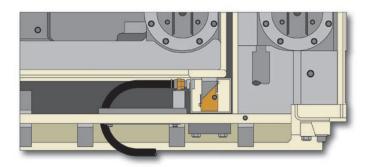
This package eliminates the inner slide guide rollers. They are replaced with 45° gib guiding. Gibs are mounted onto the inner slide using the same mounting holes and gibs are mounted onto the outer slide using brackets in place of the rollers. Oil control guards are provided to prevent oil contamination of the cups.

Benefits:

- Press guiding is capable of speeds up to 250 SPM
- Decreases maintenance since rollers have a finite life

Package Includes:

- (4) Inner gibs & mounting brackets
- (2) Slide & upright oil troughs
- Oil deflectors & slide re-work print
- All necessary mounting & plumbing hardware
- Installation information



Top View of Slides

DAC-150 Express MC-61 Clutch & Driveshaft Rebuild

MC-61 clutch & driveshaft rebuilds for DAC-150 presses in four work days. The four days do not include any shipping or if the driveshaft needs repaired. The rebuild uses pre-built clutch assemblies consisting of new & used Nidec Press & Automation certified parts. Each assembly is 100% guaranteed by Nidec Press & Automation and comes with the standard one-year warranty.

Benefits:

• Less downtime than standard rebuild (four days vs. Two to three weeks)

Package includes:

- Labor to tear down, inspect, re-assemble paint clutch and driveshaft
- Dynamic balancing of the clutch and flywh
- Pre-built clutch assembly
- All necessary bearings



Cupping Press Upgrades

Conversion To Flywheel Spherical Bearings

Part No. 810-2178

This package replaces driveshaft flywheel tapered roller bearings with spherical roller bearing. Rework of flywheel and driveshaft required at an approved Nidec Press & Automation manufacturing facility. This package incorporates the flywheel regrease package.

Benefits:

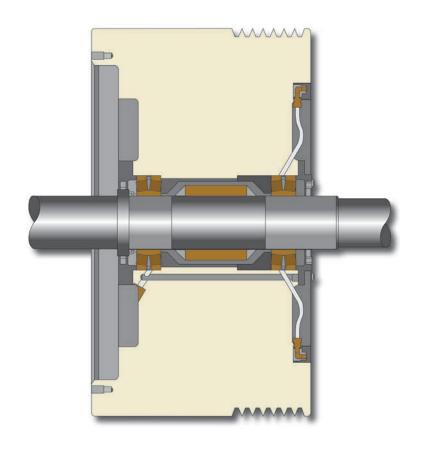
- Prevents false brinelling
- Improves bearing life
- Simplifies installation
- Incorporates re-grease package with access points for both bearings on the non clutch side of the flywheel for easy access

Package includes:

- Flywheel bearings
- Bearing and cone spacers
- Retainer and seals
- Miscellaneous mounting and hardware

Press line:

• DAC-150 and DAC-300



Flywheel Bearing Re-Grease Package

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:

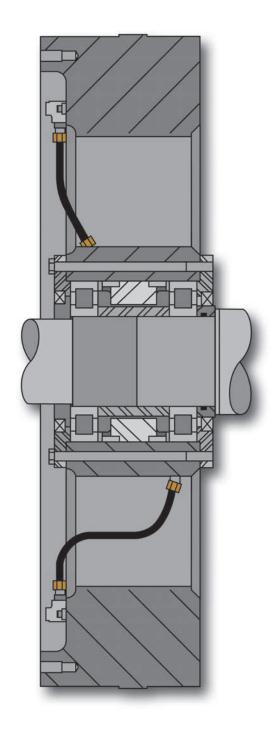
- Increases flywheel bearing life by an average of 250% over non re-grease installations
 - Re-greasing the bearings allows them to run cooler and more efficient, resulting in prolonged life
 - Modified bearing installation tolerances optimize bearing life
- Reduced maintenance costs
- · Reduced unplanned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

Package includes:

- Flywheel bearings
- Bearing spacers and retainers
- Bearing oil seals
- 0-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



Cupping Press Upgrades

Wide Stance Flywheel Package

This package replaces a narrow hub flywheel with a wider hub flywheel and new bearings.

Benefits:

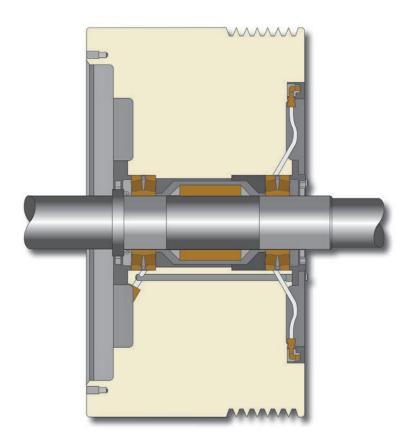
- The wider hub flywheel allows the bearings to be spaced farther apart. This increases the rotational stability of the flywheel which reduces bearing wear and increases bearing life.
- Ideal to update to spherical bearings at the same time.

Package includes:

- Flywheel
- Fly wheel bearings
- Cup and cone spacers
- Retainers (if needed)

Press lines:

DAC



DAC-150 Thermal Stability Reservoir Package

This package provides a separate single 40 gallon external oil reservoir instead of the dual reservoirs located in either the ends of the bed or each upright. Provides thermal stability for the press oil by providing more volume and options for heating and cooling the oil as needed. Ideal for regions with either extreme heat or cold temperatures. Customer responsible for providing voltage and frequency, paint color and height from floor to bottom of press foot as the bottom of the reservoir must be level with that of the bottom of the press foot. Customer can integrate into their own control or Nidec Press & Automation can provide a stand alone control.

Benefits:

- Reduces down time by preventing oil faults created by too hot or cold press oil
- Reduces the need to have special oils for various climates or times of year
- Maintains oil temperature for optimal performance

Package includes:

- 40 Gallon oil reservoir
- Thermostat probe and optic level switch
- All necessary plumbing and hardware

Package options:

- Water cooled heat exchanger
- 1500 Watt oil heater
- Cart for improved mobility





Cupping Press Upgrades

DAC-150 Hydraulic Air / Oil Cooler

This package provides a crown mounted air over oil cooler to the clutch hydraulic system. This upgrade is available for DAC-150 presses with a hydraulic clutch.

Benefits:

- Reduces down time by improving life of clutch parts
- Improves clutch stopping time reliability

Package includes:

- Air over oil cooler
- All necessary mounting and fittings
- Mounting instructions



MC Clutch/Brake Unit Spring Package

This package adds four brake springs to your existing 12-spring MC Clutch/Brake Unit.

Benefits:

 Increased brake torque for reduced brake activation time (increased brake torque reduces clutch torque)

Package includes:

- Pressure plate*
- Cylinder plate*
- New brake studs
- New brake springs
- Steel brake disk
 - *Original parts can be reworked to accept four more springs

Press lines:

• All presses utilizing the Minster MC clutch/brake unit



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
- 1 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

Press lines:

• Available for all Minster presses

Cupping Press Upgrades

Internal Locking Assemblies (For Solid Drive Pinions)

This package allows the original "keyed" drive pinions to be converted to utilize an internal locking assembly.

Benefits:

- Eliminates the key and the high stress points keyways create
- Reduces the possibility of damage to other keys and keyways, should an overload condition occur
- Allows for easier and quicker geartrain timing and setting of backlash by eliminating the need to fit new keys

Package includes:

- Internal locking assemblies
- Drawing for customer to re-machine pinions, or pinions can be re-machined by Nidec Press & Automation

Press Lines: • DAC and DAS Keyway left open Solid pinion reworked to use internal locking assembly

Air Rotary Union Package

Part No. 810-0343

The new air rotary union package replaces the old slower speed leather seal style rotary air union.

Benefits:

- Applicable to higher press speeds
- Better part availability
- · Ease of maintenance

Package includes:

- Rotary union
- Distributor spindle, seal and adapter
- All necessary plumbing and mounting hardware
- Installation instructions

Press lines:

• Any Minster press with an air clutch



Replaceable Brake Key Linings

Part No. 810-2178

This package adds new, more durable brake keys with replaceable linings to existing Minster clutch/brake units.

Benefits:

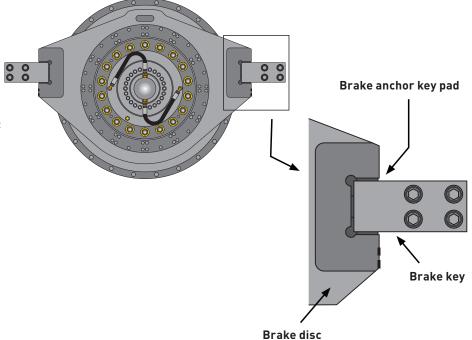
 Reduces damage to the brake disc anchor slot and the brake key incurred during normal operation and single stroke applications

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



Cupping Press Upgrades

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:

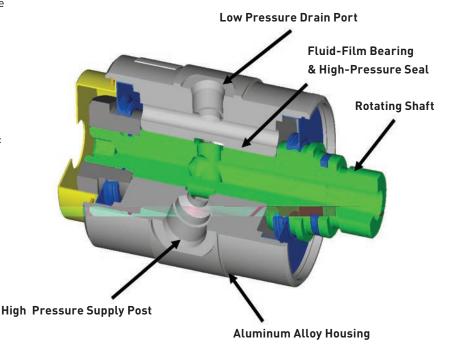
- 3 to 5 times the life of typical rotary unions due to:
 - Elimination of high pressure face seals
 - Elimination of rolling element bearings
- Ability to withstand high vibration environments
- Units can be rebuilt
- Alternative and custom designs are available

Package includes:

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

Press lines:

• Any Minster press with a hydraulic clutch



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:

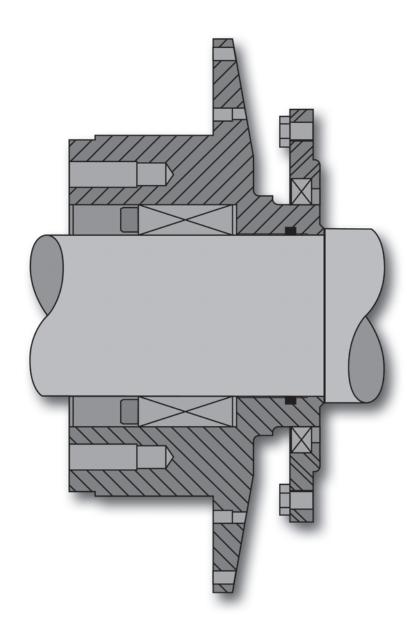
- Reduces risk of extended and unplanned downtime due to driveshaft failure
 - By reducing the fretting, the shaft life is significantly increased
- Reduces potential maintenance costs

Package includes:

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

Press lines:

DAC and DACH



Cupping 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:

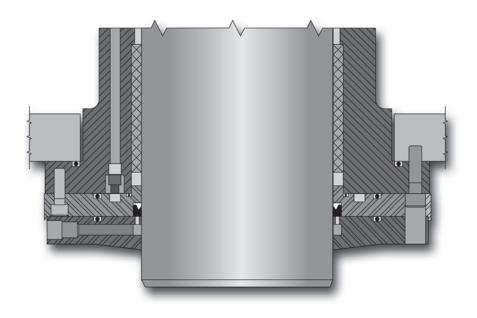
- Extends the life of the seals
- Minimizes the amount of vacuum needed
- Better oil control

Package includes:

- Piston seal housings
- 0-rings
- Wiper rings
- Oil seal
- Orifices
- Mounting hardware

Press lines:

• DACH-200



Flywheel Brake Packages

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

Benefits:

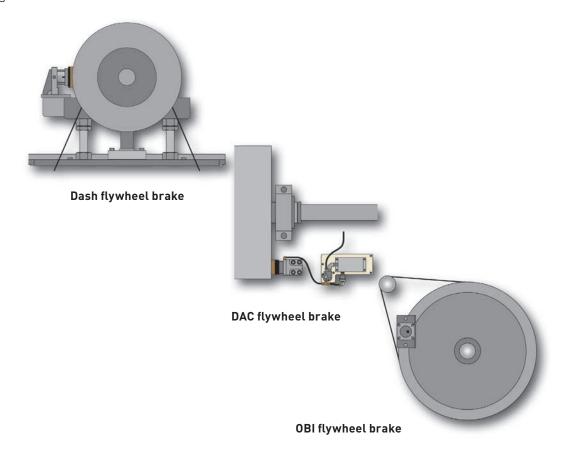
- Quicker access to the press after shutdown
- Safer for maintenance personnel servicing the press

Package includes:

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

Press lines:

DASH and DAC



Cupping Press Upgrades

Converting To a Spin-On Filter Design

Part No. 1232-059

This package replaces the cartridge type filters utilized on Trabon lubrication systems with an easy replacement, 10 micron spin-on filter.

Benefits:

- Increased effectiveness and reduced maintenance of the lubrication system as a result of:
 - Filtering the oil prior to it's entering the pump
 - Automatically top stops the press in the event of a clogged filter
 - Built-in clogged filter indicator light system
 - Easily replaceable spin-on type filter

Package includes:

- Filter base and mounting bracket
- 10-Micron spin-on type filter canister
- Vacuum switch
- Vacuum gauge
- Clogged filter indicator light
- Installation bulletin TB2423
 (Customer is responsible for specific plumbing and mounting hardware and installation.)

Press lines:

DAC and DAS

Original Trabon Filtering System



Updated Spin-On Filtering System





Shutheight Indicator Package

This package adds a visible shutheight indicator to the press slide.

Benefits:

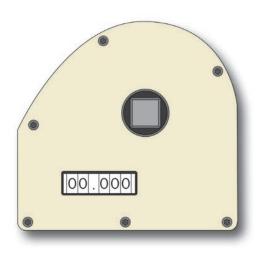
 Allows for accurate gauging of shutheight during die setting or adjustment without special tools or gauges

Package includes:

- English or metric indicator
- Indicator housing and cover
- All necessary gearing and hardware

Press lines:

• All Minster presses with slide height adjust



Detachable Slide Adjust Motor Package

Part No. 810-1856 or 810-1866

Detachable motorized adjustment motor to be used to adjust the press shutheight for die setting. Fastens into a bracket mounted on the press slide yet can be removed for use on other presses after set up is complete.

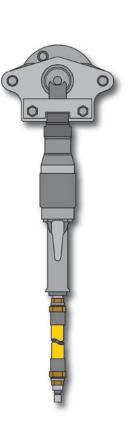
Benefits:

- Reduced die set up time by using this detachable air powered shutheight adjustment motor to adjust press shutheight
- Easier to use than manual slide adjustment wrenches

Package includes:

- Air motor
- · Air motor anti-rotation bracket
- Adjust socket
- Air hose
- Quick disconnect coupling
- Installation information

Press lines:



Cupping Press Upgrades

Oil Sump Heaters

Ref. 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:

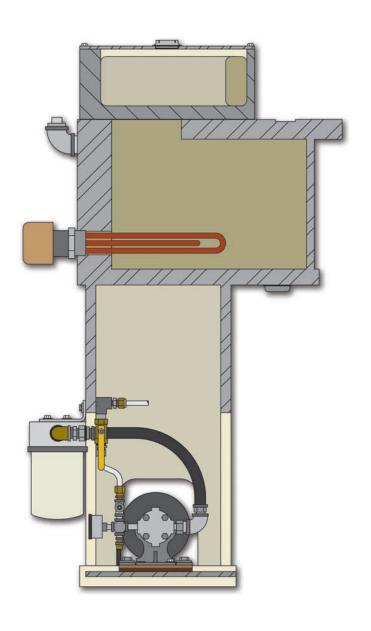
- Will maintain proper oil operating temperature while press is not cycling, which is especially critical in cooler climates
- Allows for faster press start-up

Package includes:

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

Press lines:

• All Minster presses with proper sump capacity



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



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



Cupping Press Upgrades

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



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

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