

## THE ULTIMATE IN MAGNETIC PARTICLE INSPECTION SYSTEMS

### FEATURES/BENEFITS

- Magnetizes in 1, 2 or 3 directions
- Individually controllable outputs
- Infinitely variable current control
- Adjustable shot timer
- Three magnetizing currents available: AC, HWDC, FWDC
- Two modes available - Multi-mag® and conventional
- Demagnetization - auto AC and/or reversing DC
- Electronic plug-in control modules
- Thermal overload protection
- Digital ammeters with hold feature
- Maximum ampere output up to 6,000 amperes
- Unique agitation system maintains bath strength to within



#### 3% of theoretical level

- Stainless steel tank
- "Quick Break" incorporated in all machines
- Auto-flood / auto sequencing (optional)
- Centralized control panel provides operator ergonomics
- Powered conveyor with inspection booth (optional)

**The Gould-Bass Multi-Mag® systems provide outstanding defect detection and provide major time and cost savings over conventional magnetic testing methods.** By providing for magnetization of the part in multiple directions in one firing sequence, virtually all defects can be revealed without having to process the part with a separate head shot and coil shot, which is the case with conventional magnetization techniques.

**In the multidirectional (Multi-Mag®) mode,** each power pack delivers current to the test part, with switching occurring at 0.003-second intervals. During a 0.5-second shot, some 90 directional switches will be made, that is, thirty in each direction occurring over the full 0.5-second. Thus the system appears to provide simultaneous magnetization while separating the application of field in all three directions. Current flows for a duration of 0.000 to 0.009 second based on the current control setting, and will repeat itself every 0.009 second for the full duration of the magnetizing shot. This switching sequence occurs in all three of the power packs on an individual basis. The multidirectional magnetization mode can be carried out with the choice of alternating current (AC), half-wave direct current (HWDC), or full-wave direct current (FWDC).

| <b>Available Models</b>  |  |  |  |                                   |                                   |
|--|--|--|--|-----------------------------------|-----------------------------------|
| <b>Model Number</b>  | <b>3453</b>                              | <b>3553</b>                              | <b>3553A</b>                             | <b>3568</b>                       | <b>3568A</b>                      |
| <b>Part Number</b>   | N520628001                               | N520622001                               | N520629001                               | N520630001                        | N520631001                        |
| <b>Head/Tailstock Opening with Induction fixtures</b>                      | 36"<br>24"                               | 54"<br>42"                               | 100"<br>88"                              | 54"<br>42"                        | 100"<br>80"                       |
| <b>Two Phase Multi-Mag -- Contacts &amp; 12" Coil -- Induction Fixture</b> | 2<br>Directional<br>Standard<br>Optional | 2<br>Directional<br>Standard<br>Optional | 2<br>Directional<br>Standard<br>Optional | N/A                               | N/A                               |
| <b>Max Magnetizing Current Conventional</b>                                | 4000 AC<br>5000 HWDC<br>5000 FWDC        | 4000 AC<br>5000 HWDC<br>5000 FWDC        | 4000 AC<br>5000 HWDC<br>5000 FWDC        | 5000 AC<br>5000 HWDC<br>6000 FWDC | 5000 AC<br>5000 HWDC<br>6000 FWDC |
| <b>Multi-Mag</b>   | 4000 AC<br>5000 HWDC                     | 4000 AC<br>5000 HWDC                     | 4000 AC<br>5000 HWDC                     | 5000 AC<br>5000 HWDC<br>6000 FWDC | 5000 AC<br>5000 HWDC<br>6000 FWDC |
| <b>Demagnetization</b>   | Auto AC                                  | Auto AC                                  | Auto AC                                  | AC / REV DC                       | AC / REV DC                       |
| <b>12" Rail Mounted Moveable Coil</b>                                      | Standard                                 | Standard                                 | Standard                                 | Standard                          | Standard                          |
| <b>16", 20", 25", 30" Coil Sizes</b>                                       | Optional                                 | Optional                                 | Optional                                 | Optional                          | Optional                          |
| <b>Induction Fixtures</b>  | Optional                                 | Optional                                 | Optional                                 | Standard                          | Standard                          |
| <b>Infinitely Variable Current Control</b>                                 | Two                                      | Two                                      | Two                                      | Three                             | Three                             |
| <b>Digital Ammeters with Hold Feature</b>                                  | Two                                      | Two                                      | Two                                      | Three                             | Three                             |
| <b>Quick Break</b>   | Standard                                 | Standard                                 | Standard                                 | Standard                          | Standard                          |
| <b>Current Assurance Indicator</b>   | Standard                                 | Standard                                 | Standard                                 | Standard                          | Standard                          |
| <b>Heavy Duty Head/Tail Stock with crank</b>                               | N/A<br>Push & Lock                       | Standard                                 | Standard                                 | Standard                          | Standard                          |
| <b>Motorized Tailstock</b>   | N/A                                      | N/A                                      | Optional                                 | N/A                               | Optional                          |
| <b>Hip/Push Bar for Mag Shot</b>   | Standard                                 | Standard                                 | Standard                                 | Standard                          | Standard                          |
| <b>Footswitch Headstock Activation</b>                                     | Standard                                 | Standard                                 | Standard                                 | Standard                          | Standard                          |
| <b>Stainless Steel Tank</b>  | Standard                                 | Standard                                 | Standard                                 | Standard                          | Standard                          |
| <b>Front/Rear Hardwood Grilles</b>   | Standard                                 | Standard                                 | Standard                                 | Standard                          | Standard                          |
| <b>Recirculation / Agitation System</b>                                    | Standard                                 | Standard                                 | Standard                                 | Standard                          | Standard                          |
| <b>Auto Flood / Auto Sequencing Selectable Programs</b>                    | Optional                                 | Optional                                 | Optional                                 | Optional                          | Optional                          |
| <b>Blacklight Hood with Fan &amp; Light Console</b>                        | Optional                                 | Optional                                 | Optional                                 | Optional                          | Optional                          |
| <b>Powered Conveyor Inspection Booth</b>                                   | Optional                                 | Optional                                 | Optional                                 | Optional                          | Optional                          |

## **ACCESSORIES AND MATERIALS**

Gould-Bass Company offers a complete line of process control instrumentation and related accessories, such as field strength indicators, clamps, connectors, prods, sprayers, and powder applicators.

All materials necessary for magnetic particle inspection are also available, including dry powders and materials for fluid suspension.