PRESSFEEDING
FIFTY PLUS YEARS

Pneumatic Applications Company was formed in 1953 as a New England manufacturer of press clutches, brakes, controls and press feeding equipment. In 1974, the name was shortened to P/A Industries Inc. and an international trademark was registered for P/A®.

Family owned and operated, this employee driven company is known for its spirit, enthusiasm and exceptionally talented workforce. Our loyal customer base - over 12,000 strong - tells us that our people and their enthusiasm are unmatched. PEACE OF MIND GUARANTEED - P.O.M.G. - is more than a slogan, it is the P/A Standard on how we treat our customers.

INDUSTRY LEADERSHIP

P/A means Press Automation. Our focus is on designing and building the highest quality Press Feeding and Coil Handling Equipment. There is no manufacturer worldwide that has a greater breadth of products or range of equipment solutions within the metal stamping and fabricating industry. Fifty years of experience and continuous improvement has earned P/A’s reputation as one of the finest, most dependable family run companies in America.

WORLDCLASS INNOVATION

P/A was the first company to recognize that electronic press feeds would replace mechanical roll feeders and pneumatic feeds. Working with Allen Bradley, P/A developed specialized control and drive technology for press feed automation. P/A created software that is operator friendly and capable of handling the most demanding production performance requirements in the Metal Stamping Industry. Intellectual Property Patents and Trademarked Technologies include Loopless®, Varatorq®, Sona-Torq®, Precision-Aire®, Soft-Aire®, The Advantage™, Edge™, Magnum™ and Micro Feed™.

INTERNATIONAL ALLIANCES

A long-range strategic plan was developed in the early 90s in order to better serve our customers and open up international markets by creating manufacturing and sales companies around the world.

Dimeco Alipresse is Europe’s premier builder of power press automation equipment since 1963. In 1986, P/A and Dimeco established a strategic alliance and began sharing knowledge, equipment designs and products. Today, we continue this special relationship, which strengthens each company’s new product development capability.

P/A Retain Ltd. was formed in 1994 in Taiwan to manufacture mechanical assemblies and provide sales and service capability in the Pacific Basin. Ten years later, this company has grown and is recognized as the press automation leader in the Pacific Region.

After the fall of the iron curtain, P/A Bohemia SRO was established in 1995 to open up Eastern European markets. A sales and service office is located in Prague, Czech Republic.

In 1996, P/A acquired Mectool Sweden AB, a manufacturer that developed the patented Transporter™. This modern machining company has the latest CNC machine tools and assembles some of our products.

P/A GmbH in Germany was started in 2000 as our Western European Headquarters to handle introduction of all our exportable products. The staff has responsibility for Sales & Service work and maintains an inventory of products and parts for on-time delivery.

Management and Sales Team

Jerome E. Finn
President
Since 1975

Edward Morris
Executive Vice President
Since 1999

Andreas Hoefer
Chief Financial Officer
Since 2003

Chris Crider
Chief Engineer
Since 1983

David Gaffey
Service Manager
Since 1979

Ken Jansen
Automation Engineer
Since 1993

John Labowski
Application Sales Engineer
Since 1999

Dave Burnham
Customer Sales & Service
Since 1999

Dori Frank
Regional Sales Manager
Since 1996

Peter Kahl
Regional Sales Manager
Since 1990

Tim O’Neil
Regional Sales Manager
Since 2002

Bob Marshalkowski
Regional Sales Manager
Since 1993

Joseph Palmer
Application Sales Engineer
Since 2004
A VERY SPECIAL COMPANY . . . INDEED!

Manufacturing

Showroom

Assembly & Testing
<table>
<thead>
<tr>
<th>Servo Feed Model</th>
<th>Page Number</th>
<th>Roll Diameter</th>
<th>Max. Stock Thickness</th>
<th>Max. Stock Width</th>
<th>Pulling Power Peak / Continuous</th>
<th>Max. Material Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro</td>
<td>6–9</td>
<td>1.33 inch</td>
<td>.100 inch</td>
<td>.040 inch</td>
<td>100 / 100 lbs.</td>
<td>250 FPM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>34 mm</td>
<td>2.5 mm</td>
<td>1.0 mm</td>
<td>37 / 37 N</td>
<td>76 M/min.</td>
</tr>
<tr>
<td>Mini</td>
<td>10–13</td>
<td>1.8 inch</td>
<td>.098 inch</td>
<td>12.5 inch</td>
<td>206 / 72 lbs.</td>
<td>450 FPM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>45 mm</td>
<td>2.5 mm</td>
<td>320 mm</td>
<td>915 / 320 N</td>
<td>137 M/min.</td>
</tr>
<tr>
<td>Edge</td>
<td>14–17</td>
<td>3.0 inch</td>
<td>.138 inch</td>
<td>24 inch</td>
<td>398 / 132 lbs.</td>
<td>630 FPM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>75 mm</td>
<td>3.5 mm</td>
<td>600 mm</td>
<td>1770 / 587 N</td>
<td>192 M/min.</td>
</tr>
<tr>
<td>Advantage</td>
<td>18–21</td>
<td>3.5 inch</td>
<td>.188 inch</td>
<td>72 inch</td>
<td>1092 / 400 lbs.</td>
<td>360 FPM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>90 mm</td>
<td>4.7 mm</td>
<td>1830 mm</td>
<td>4860 / 1780 N</td>
<td>110 M/min.</td>
</tr>
<tr>
<td>Magnum</td>
<td>22–25</td>
<td>5 inch</td>
<td>.400 inch</td>
<td>48 inch</td>
<td>1620 / 810 lbs.</td>
<td>200 FPM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>120 mm</td>
<td>10 mm</td>
<td>1220 mm</td>
<td>7200 / 3600 N</td>
<td>61 M/min.</td>
</tr>
<tr>
<td>Maximus</td>
<td>26–29</td>
<td>6 Inch</td>
<td>.500 Inch</td>
<td>72 Inch</td>
<td>1444 / 480 lbs.</td>
<td>165 FPM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>150 mm</td>
<td>12.7 mm</td>
<td>1830 mm</td>
<td>14900 / 6400 N</td>
<td>50 M/min.</td>
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<tr>
<td>Options</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td>Guides, Strip Encoders, Limit Switch, Pilot Releases, Cut-to-Length Systems</td>
<td></td>
</tr>
<tr>
<td>Double Servo Roll Feed</td>
<td>31</td>
<td>3.5 inch</td>
<td>.188 inch</td>
<td>36 inch</td>
<td>1092 / 400 lbs.</td>
<td>360 FPM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>90 mm</td>
<td>4.7 mm</td>
<td>900 mm</td>
<td>4860 / 1780 N</td>
<td>110 M/min.</td>
</tr>
<tr>
<td>Servo with Pull Thru Straightener</td>
<td>32–33</td>
<td>5 inch</td>
<td>.140 inch</td>
<td>48 inch</td>
<td>1080 / 540 lbs.</td>
<td>270 FPM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>120 mm</td>
<td>3.6 mm</td>
<td>1220 mm</td>
<td>4800 / 2400 N</td>
<td>85 M/min.</td>
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<tr>
<td>Loop Less™</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
<td>Eliminates conventional floor space loop between feed and straightener</td>
<td></td>
</tr>
<tr>
<td>Sequential</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td>Provides the ability for step feeding, tool signaling, gagging and multiple programs off of one press</td>
<td></td>
</tr>
</tbody>
</table>
The Revolution in **Feeding Material Faster and more Accurately** continues.

The New Micro Feed is the smallest, least expensive electronic feed available anywhere in the world today. This small but powerful roll feed is precision machined from aluminum casting. Solid steel feed rolls are hard-chrome coated with matte finish. The feed is so compact it can fit in the palm of a hand, making installation in constricted areas possible.

Precision feeding is delivered through the Solid State, High performance drive and Low inertia, brushless DC Motor. Simply enter the feed pitch required and the operator friendly Micro will automatically generate the required motion profile to deliver your material precisely and in the time needed to complete the cycle.

The Solid Feed Roll design can easily be profiled to accommodate almost any type of formed and pre-stamped material. The quick-change upper and lower rolls can be removed and replaced in less than five minutes. Send your sample materials to P/A for custom roll profile quotations.

Replace your Rapid Wearing air feeders with the No Maintenance Micro Feed and eliminate the downtime caused by leaking seals, broken springs and manual stroke set-up. The only air required by the Micro is for the pilot release function.

The most Affordable, Compact, High Technology Electronic Feeder is now ready for your operation.
Performance data shown is for estimating purposes only. Production rates and capacities are dependent upon feed length and material. Consult P/A for specific application needs.
**State-of-the-art micro-sized, high performance digital drive**

**Compact Console**
- 10 x 12 x 6 inches (255 x 300 x 150 mm)

**ISO certified electrical components wired to JIC, NEC and CE standards**

**Operator friendly key pad**

**Hand held remote pendant with jog forward/reverse and roll open/close**

**Twelve foot (3.5 meter) retractable cord for jog pendant**

**Motor connection cable**

**Outlet for press signal connection**

**Prewired 115 Vac power cord with plug**

**Key-lock, oil tight door**

**Inch/metric easily programmed**

**Mushroom emergency stop push/pull reset button**

**Illuminated ‘power on’ and ‘cycle start’ push buttons**

**ISO certified electrical components wired to JIC, NEC and CE standards**

**Free standing and portable control console tilts for operator comfort**

**NEMA 4/12/13 dust tight control enclosure complies with all relevant ANSI B11.18 coil processing machines and OSHA Safety Standards**

**LCD Display with 80 character alpha numeric readout**

**Inch/metric easily programmed**

**Illuminated ‘power on’ and ‘cycle start’ push buttons**

**Operator friendly key pad**

**Compact Console**
- 10 x 12 x 6 inches (255 x 300 x 150 mm)
High speed, long life roll release clamp cylinder

Low inertia, phenolic timing sheave

Non-stretch, synchronous drive belt

Safety Guard removed for photo

Matte finish, hard chrome feed rolls

Exit stock anti-buckling support bridge

Feed mounting bracket for up to 2.5 inch (64mm) of die height adjustment

Quick change, solid rolls can be machined to accept wire or shaped material

Two quick release adjustable Edge Stock Guides

Entry material support

High performance motor

Outlet for motor cable connection

Machined aircraft aluminum frame

Pilot Release solenoid valve

Feed rolls are mounted in permanently sealed anti-friction ball bearings that never need lubrication
Compact and Affordable. Designed to replace Rapid Wearing Air Feeders. Zero maintenance, dependable accuracy, feed pitch, and increased speeds easily justifies the switch to our new Mini Servo Roll Feed.

All models come complete with Roller Entrance Guides, Catenary, Pilot Release, Exit Stock Support Bridge, Vernier Hand knobs to adjust material roll pressure, jack screw Transition Plate for easy pass line height adjustment, control stand, jog pendant, Prewired Power Cord and Encoder Cable with military connectors.
MINI SPECIFICATIONS

SAFE WORKING SPEEDS AT VARYING LENGTHS

Performance data shown is for estimating purposes only. Production rates and capacities are dependent upon feed length and material. Consult P/A for specific application needs.

DIMENSIONS

SPECIFICATIONS - USA

<table>
<thead>
<tr>
<th>Model</th>
<th>Feed Roll Dia. Opening (in.)</th>
<th>Capacity at Full Width (in.)</th>
<th>Pulling Power Cont. (lbs.)</th>
<th>AC Power Input V Ph Hz A</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRF 105M</td>
<td>1.8</td>
<td>.098</td>
<td>4</td>
<td>115 1 60 10</td>
</tr>
<tr>
<td>SRF 220M</td>
<td>1.8</td>
<td>.098</td>
<td>4.5</td>
<td>115 1 60 10</td>
</tr>
<tr>
<td>SRF 320M</td>
<td>1.8</td>
<td>.098</td>
<td>12.5</td>
<td>115 1 60 10</td>
</tr>
</tbody>
</table>

SPECIFICATIONS - METRIC

<table>
<thead>
<tr>
<th>Model</th>
<th>Feed Roll Dia. Opening (mm)</th>
<th>Capacity at Full Width (mm)</th>
<th>Pulling Power Cont. (N)</th>
<th>AC Power Input V Ph Hz A</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRF 105M</td>
<td>45</td>
<td>2.5</td>
<td>105</td>
<td>511 1 50 10</td>
</tr>
<tr>
<td>SRF 220M</td>
<td>45</td>
<td>2.5</td>
<td>220</td>
<td>511 1 50 10</td>
</tr>
<tr>
<td>SRF 320M</td>
<td>45</td>
<td>2.5</td>
<td>320</td>
<td>915 1 50 10</td>
</tr>
</tbody>
</table>
MINI ELECTRONIC FEATURES

New state-of-the-art high performance digital micro-size closed loop servo drive

Operator key pad

LED drive diagnostics for trouble shooting with 80 character alpha numeric readout

Illuminated ‘power on’ push button

Hand held remote forward or reverse pendant

Mushroom emergency stop push/pull reset button

Free standing and portable control console tilts for adjustment

ISO certified electrical components wired to JIC, NEC and CE standards

Motor connection cable with military quick disconnect electrical connector

Prewired shielded encoder cable with military quick disconnect electrical connector

Prewired 115 Vac power cord with plug

Twelve foot (3.5 meter) retractive cord for jog pendant

Compact Console
15.5 x 11.5 x 8 inches
(394 x 292 x 203 mm)

Inch/metric programmability

Key-lock, oil tight door

Automatic and set-up selection switch

NEMA 4/12/13 dust tight control enclosure complies with all relevant ANSI B11.18 coil processing machines and OSHA Safety Standards

Inch/metric programmability

Options

1. Auxiliary output signal for cut-to-length.
2. “SFI” (Servo Feed Interface) chip with cable and switch available.

12
MINI MECHANICAL FEATURES

Vernier Hand Knobs to adjust roll pressure on material

Matte finish, hard chrome feed rolls

Feed mounting bracket for up to 2.5 inch (64mm) of die height adjustment

Two quick release adjustable Edge Stock Guides

Upper and lower material support dampening rollers

High performance AC brushless servo motor

Quick disconnect military connections

Positive pilot release roller cam

Precision gear driven upper roll with anti backlash feature

Exit stock anti-buckling support bridge

Press transition plate with jack screw for pass line height adjustment

Operator roll release lever for strip insertion

Rugged cast iron frame is stabilized and machined

Feed rolls are mounted in permanently sealed anti friction ball bearings that never need lubrication

Incremental optical encoder for positive position feedback

OPTIONS

1. Pneumatic release of upper roll for strip insertion and piloting.
2. Adjustable ram mounted, bullet nose cam bar for a mechanical pilot release.
The Stamping Industry demanded a rugged, dependable replacement for the older mechanical roll feeders and air feeders. P/A introduced the Edge Models with flexible servo feed performance that significantly increased productivity at an affordable price.

Large diameter, full width, low-inertial rolls are mounted in a stabilized cast frame and are the most important mechanical features of any servo feed. P/A has the largest diameter rolls for the size range of any manufacturer in the market today.

Allen Bradley, a world leader in electronics and industrial controls, worked as a partner with P/A for three years to develop the latest technology for servo feed controls. Introduced in 2002, this new, powerful control is loaded with innovative features. The drive, available in this compact package, provides twice the speed and accuracy of earlier models.

Standard features included at no extra charge: Adjustable Eccentric Roll Position to maintain gear mesh regardless of stock thickness; Rugged Catenary with quick-release material edge guide rollers; Inlet and Exit Stock Support Bridges with end-of-stock sensor holes and anti-buckle cover plate; Hand Held Jog Pendant with retractable cord; Transition Mounting Plate with jack screw pass-line adjustment.
SAFE WORKING SPEEDS AT VARYING LENGTHS

Performance data shown is for estimating purposes only. Production rates and capacities are dependent upon feed length and material. Consult P/A for specific application needs.

DIMENSIONS

SPECIFICATIONS - USA

<table>
<thead>
<tr>
<th>Model</th>
<th>Feed Roll Dia. Opening (in.)</th>
<th>Capacity at Full Width (in.)</th>
<th>Pulling Power Peak (lbs.)</th>
<th>AC Power Input V</th>
<th>Ph</th>
<th>Hz</th>
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</thead>
<tbody>
<tr>
<td>SRF 100</td>
<td>2.9</td>
<td>.098</td>
<td>.080</td>
<td>12</td>
<td>398</td>
<td>32</td>
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<tr>
<td>SRF 125</td>
<td>3.0</td>
<td>.138</td>
<td>.080</td>
<td>16</td>
<td>398</td>
<td>32</td>
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<tr>
<td>SRF 200</td>
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<td>.138</td>
<td>.050</td>
<td>20</td>
<td>398</td>
<td>32</td>
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<tr>
<td>SRF 300</td>
<td>3.0</td>
<td>.138</td>
<td>.040</td>
<td>24</td>
<td>398</td>
<td>32</td>
</tr>
<tr>
<td>SRF 400</td>
<td>3.0</td>
<td>.138</td>
<td>.040</td>
<td>16</td>
<td>398</td>
<td>32</td>
</tr>
<tr>
<td>SRF 500</td>
<td>3.0</td>
<td>.138</td>
<td>.040</td>
<td>20</td>
<td>398</td>
<td>32</td>
</tr>
<tr>
<td>SRF 600</td>
<td>3.0</td>
<td>.138</td>
<td>.040</td>
<td>24</td>
<td>398</td>
<td>32</td>
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</table>

SPECIFICATIONS - METRIC

<table>
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<tr>
<th>Model</th>
<th>Feed Roll Dia. Opening (mm)</th>
<th>Capacity at Full Width (mm)</th>
<th>Pulling Power Peak (N)</th>
<th>AC Power Input V</th>
<th>Ph</th>
<th>Hz</th>
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</thead>
<tbody>
<tr>
<td>SRF 100</td>
<td>57</td>
<td>3.5</td>
<td>2.0</td>
<td>300</td>
<td>1770</td>
<td>177</td>
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<tr>
<td>SRF 125</td>
<td>75</td>
<td>3.5</td>
<td>1.5</td>
<td>400</td>
<td>1770</td>
<td>177</td>
</tr>
<tr>
<td>SRF 200</td>
<td>75</td>
<td>3.5</td>
<td>1.3</td>
<td>500</td>
<td>1770</td>
<td>177</td>
</tr>
<tr>
<td>SRF 300</td>
<td>75</td>
<td>3.5</td>
<td>1.0</td>
<td>600</td>
<td>1770</td>
<td>177</td>
</tr>
<tr>
<td>SRF 400</td>
<td>75</td>
<td>3.5</td>
<td>1.0</td>
<td>600</td>
<td>1770</td>
<td>177</td>
</tr>
<tr>
<td>SRF 500</td>
<td>75</td>
<td>3.5</td>
<td>1.0</td>
<td>600</td>
<td>1770</td>
<td>177</td>
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<tr>
<td>SRF 600</td>
<td>75</td>
<td>3.5</td>
<td>1.0</td>
<td>600</td>
<td>1770</td>
<td>177</td>
</tr>
</tbody>
</table>
1. New, Integral Programmable Rotary Limit Switch for setting feed angle, cycle reset, and pilot releasecams with
digital crank position and press speed indicator.
2. “SFI” (Servo Feed Interface) chip with cable and switch available.
3. Edge cut-to-length system.

**EDGE ELECTRONIC FEATURES**

- LED drive diagnostics assists in troubleshooting
- Operator interface terminal with numeric input keypad parameters
- “Feed before Press” or “Press Before Feed” priority mode selection
- Hand-held, portable pendant with jog forward and reverse push button control
- Operator control panel with step by step operator set-up instructions
- 200 Job storage and micro adjust on-the-fly feed length
- Single stroke or continuous press mode capability
- Free standing and portable console stand
- High performance digital servo drive manages roll motion through an encoder based feedback system
- Predetermined six digit batch counter
- Inch/metric programmability
- Compact Console
  - 19.5 x 16 x 8 inches (495 x 406 x 203 mm)
  - Closed loop feed length controller automatically generates the velocity profile for accurate feeding
  - Indicator lights provide display of operating status
  - Jog to feed length capability
  - ISO certified electrical components wired to JIC, NEC and CE standards
  - Dual key locks on oil tight and dust free door
  - Emergency Stop Mushroom Push Button
- NEMA 4/12/13 control enclosure complies with all relevant ANSI B11.18 coil processing machinery and OSHA Safety Standards

**OPTIONS**

1. New, Integral Programmable Rotary Limit Switch for setting feed angle, cycle reset, and pilot release cams with
digital crank position and press speed indicator.
2. “SFI” (Servo Feed Interface) chip with cable and switch available.
3. Edge cut-to-length system.
1. Pneumatic release of upper roll for strip insertion and piloting used on straight side presses.
2. Floor stand to provide pass line adjustment of ±4 inches (100mm) with hydraulic jack.
3. End of stock sensor mounted to stock guide table.
4. Stock lubrication systems to provide a controlled film on strip.
5. Adjustable pilot release bullet nose cam bar for mounting to press ram.

**Options**

1. Pneumatic release of upper roll for strip insertion and piloting used on straight side presses.
2. Floor stand to provide pass line adjustment of ±4 inches (100mm) with hydraulic jack.
3. End of stock sensor mounted to stock guide table.
4. Stock lubrication systems to provide a controlled film on strip.
5. Adjustable pilot release bullet nose cam bar for mounting to press ram.
First produced in 1990, this dependable servo feed is installed on over 3,000 presses worldwide. The most accurate, easy-to-operate servo feed on the market at an affordable price.

Designed to handle medium gauge materials for all kinds of blanking, compound and progressive dies and cut-to-length applications.

The generous cast frame has oversized low-inertial, full-width rolls that are hardened and ground with a matte texturized finish providing extra material gripping power.

In 2002, P/A and Allen Bradley introduced a new generation of servo feed technology by integrating the motion controller, PLC and the servo control into one programmable module. This allows P/A to further refine our existing software and develop many new programs for other applications. This new ultra fast processor significantly increases accurate, high-speed performance from the AC brushless Servo Drive Motor.

Features include 200-Job Storage, in Motion Micro-adjust Pitch Control while the press is running, Max Pitch Control, Servo Feed Interface with press control, Kerf compensation and an Integral Programmable Rotary Limit Switch that can be included.
Performance data shown is for estimating purposes only. Production rates and capacities are dependent upon feed length and material. Consult P/A for specific application needs.

**DIMENSIONS - in.**

<table>
<thead>
<tr>
<th>Model</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
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<td>20</td>
<td>8.0</td>
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<tr>
<td>SRF 8</td>
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<td>SRF 72</td>
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</tbody>
</table>

**DIMENSIONS - mm**

<table>
<thead>
<tr>
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<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
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<td>SRF 8</td>
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<tr>
<td>SRF 12</td>
<td>666</td>
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<td>343</td>
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<tr>
<td>SRF 20</td>
<td>889</td>
<td>394</td>
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Note: SRFX Models have same mechanical dimensions as SRF. Consult Factory for SRF 48, SRF 60 & SRF 72 Models.
1. New, Integral Programmable Rotary Limit Switch with heavy duty press mounted encoder for feed angle, pilot release window and speed indication.

2. Transformers for other than 230 volt, 1 phase, 60 Hz input power.

3. Servo Feed Interface packages to allow integration with press control, monitoring functions, and part program storage by part number.

OPTIONS

1. Predetermined six digit batch counter and LED Drive Status Backlit Display

2. Inch/metric programmability

3. Compact Console 19.5 x 16 x 8 inches (495 x 406 x 203 mm)

4. ISO certified electrical components wired to JIC and NEC and CE standards

5. NEMA 4/12/13 control enclosure

6. Operator interface terminal with numeric input keypad

7. Hand-held, portable pendant used for threading material into the die. Jog forward and reverse push button control

8. “Feed Before Press” or “Press Before Feed” priority mode selection


10. Allen Bradley “Advantage” digital Servo Drive manages roll motion through an encoder based feedback system

11. Single stroke or continuous press mode capability

12. Prewired shielded encoder cable with quick disconnect motor connector

13. Motor connection cable with amphenal connectors

14. Twelve foot (3.5 meter) retractable cord for jog pendant

15. Closed loop feed length controller automatically generates the velocity profile for accurate feeding

16. ISO certified electrical components wired to JIC and NEC and CE standards

17. Dual key locks on oil tight and dust free door

18. Comprehensive indicator lights provide display of operating status

19. Lockable power disconnect switch

20. Jog to feed length capability

21. Red Emergency Stop Push Button

22. Free standing and portable console stand

23. Complies with all relevant CE and ANSI B11.18 Coil Processing Machinery and OSHA Safety Standards

24. Predetermined six digit batch counter and LED Drive Status Backlit Display

25. Inch/metric programmability

26. Compact Console 19.5 x 16 x 8 inches (495 x 406 x 203 mm)

27. ISO certified electrical components wired to JIC and NEC and CE standards

28. NEMA 4/12/13 control enclosure

29. Operator interface terminal with numeric input keypad

30. Hand-held, portable pendant used for threading material into the die. Jog forward and reverse push button control

31. “Feed Before Press” or “Press Before Feed” priority mode selection

32. Operator Control Panel with step-by-step operator set-up instructions

33. Allen Bradley “Advantage” digital Servo Drive manages roll motion through an encoder based feedback system

34. Single stroke or continuous press mode capability

35. Prewired shielded encoder cable with quick disconnect motor connector

36. Motor connection cable with amphenal connectors

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42. Lockable power disconnect switch

43. Jog to feed length capability

44. Red Emergency Stop Push Button

45. Free standing and portable console stand

46. Complies with all relevant CE and ANSI B11.18 Coil Processing Machinery and OSHA Safety Standards
1. Adjustable pilot release, bullet nose cam bar for mechanical pilot release.
2. Pneumatic release of upper roll for piloting and strip insertion.
3. Stock Lubrication system to provide controlled film on strip.
4. End of stock sensor mounted to stock guide table.
5. Heavy duty floor stand equipped with hydraulic jack for ±4 inch (100mm) adjustment.

OPTIONS

- Incremental optical encoder for positive feedback
- New AC brushless servo motor with ferrite rotor, totally enclosed to eliminate contamination
- Quick disconnect military connector on motor
- Texturized, low inertia, precision chrome-plated feed rolls
- Very large diameter full width feed rolls are mounted in permanently sealed anti-friction ball bearings
- Anti-buckle stock support bridge
- Adjustable mounting bracket with jack screw for pass line height adjustment of ±2 inch (50mm)

ADVANTAGE MECHANICAL FEATURES

Two Die Springs apply constant upper roll pressure and fail safe stock clamping assures material position in die when power is turned off

Precision gear driven upper roll to insure non-slip, positive feeding

Mechanical roller-bearing cam pilot release for positive pilot release at any speed

Aramid fiber drive timing belt eliminates gear backlash, wear, noise and lubrication

Precision Planetary Gearbox multiplies servo motor torque four times

Optional Pneumatic Pilot Release

Operator roll release lever for strip insertion with safety release

Stock thickness adjustment lever and eccentric pivots upper roll and maintains full gear mesh

Open roll safety release mechanism
This Heavy-Duty Model was designed for the toughest jobs using thicker materials. The Magnum, like its name, is robust and rugged in mechanical design and size. The generous frame is machined from a stabilized, high-strength casting. The extra large rolls are made from heavy-wall alloy steel tubing. Two large air cylinders apply feed roll clamping pressure which is regulated by an adjustable, liquid-filled gauge.

An extra heavy-duty Servo Motor is coupled with a Precision Gear Reducer for optimum pulling power, speed and accuracy.

The new Allen Bradley 2002 Ultra Control features the very latest Servo Feed technology. Standard features include 200 Job Storage, Press or Feed Priority Selection, Press/Feeder Synchronous Checking, Jog-to-Feed Length, Six-Digital Batch Counter, and a new optional Programmable Rotary Limit Switch that can be built into the control enclosure.
### SAFE WORKING SPEEDS AT VARYING LENGTHS

Performance data shown is for estimating purposes only. Production rates and capacities are dependent upon feed length and material. Consult P/A for specific application needs.

### DIMENSIONS

Note: SRFX Models have same mechanical dimensions as SRF.

### SPECIFICATIONS - USA

<table>
<thead>
<tr>
<th>Model</th>
<th>Feed Roll Dia. Opening (in.)</th>
<th>Capacity at Full Width (in.)</th>
<th>Pulling Power Peak (lbs.)</th>
<th>AC Power Input (V)</th>
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### SPECIFICATIONS - METRIC

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</table>
1. Programmable rotary limit switch with heavy duty press mounted encoder for feed angle, pilot release window and speed indication.
2. Transformers for other than 230 volt, 1 phase, 60 Hz input power.
3. Servo Feed interface packages to allow integration with press control, monitoring functions, and part program storage by part number.
MAGNUM MECHANICAL FEATURES

Safety guards removed for photo

Fail safe stock clamping assures material position in die when power is off

Anti-buckle stock support bridge

Pneumatic pilot release cylinders

Adjustable roll pressure with liquid filled gauge

Robust, large diameter feed rolls are texturized for positive grip

Four precision cluster spur gears provide positive drive of upper roll

Quick release handles

Adjustable upper dampening roll to control stock vibration

Trunion mounted, double acting cylinders are controlled by high performance ceramic slide valves

Digital readout for accurate material thickness setting

Hand Wheel thickness adjustment

Extra thick 1-1/2” (38mm) cast iron frame is stabilized and then machined

Quick disconnect military connectors on motor and encoder cables

Low inertia, neodymium rare earth magnet servo motor

Quick release handles mounted on hardened and adjustable roller stock edge guides to restrict side-to-side movement

Precision, low backlash worm gearbox with 25:1 ratio

Large roll catenary with wear resistance material to support pre-straightened stock

OPTIONS

1. Extra heavy duty cabinet base with hydraulic jack for ±6” (150mm) feed height adjustment.
2. Motorized Rollerlube System provides controlled film on both sides of stock.
The Maximus is built to handle your most demanding feeding applications. The robust frame is designed for feeding material up to half an inch thick.

A heavy-duty servomotor and gearbox, drive the massive six-inch diameter rolls providing optimum pulling power, speed and accuracy. Maximum clamping force is applied with two large air cylinders. The same cylinders are used to retract the upper roll assembly for strip insertion and pilot release.

A rugged base cabinet with pass line adjustment is standard, as well as, extended length, heavy-duty catenary entrance rolls and self-centering stock edge guides. The additional rolls provide maximum support for prestraightened material.

The Allen Bradley Ultra Control provides the latest Servo Feed technology. 200 Job Storage, Press or Feed Priority Selection, Press/Feeder Synchronous Checking, Jog-to-Feed Length and a Six Digit Batch Counter are all standard. A Programmable Rotary Limit Switch can be incorporated into the control package as an option.
Performance data shown is for estimating purposes only. Production rates and capacities are dependent upon feed length and material. Consult P/A for specific application needs.
**OPTIONS**

1. Programmable rotary limit switch with heavy duty press mounted encoder for feed angle, pilot release window and speed indication.
2. Transformers for other than 480 volt, 1 phase, 60 Hz input power.
3. Servo Feed interface packages to allow integration with press control, monitoring functions, and part program storage by part number.
MAXIMUS MECHANICAL FEATURES

Trunion mounted, double acting cylinders are controlled by high performance ceramic slide valves.

Safety guards removed for photo.

Six inch (150mm) diameter feed rolls are texturized for positive grip.

Four precision cluster spur gears provide positive drive of upper roll.

Quick disconnect military connectors on motor and encoder cables.

Low inertia, neodymium rare earth magnet servo motor.

Self centering hand wheel mounted on hardened and adjustable roller stock edge guides to restrict side-to-side movement.

Adjustable roll pressure with liquid filled gauge.

Heavy duty 1-1/2" (38mm) thick machined frame.

Precision, low backlash worm gearbox with 25:1 ratio.

Pneumatic pilot release cylinders.

Adjustable upper dampening roll to control stock vibration.

Six large roll catenary with wear resistance material to support pre-straightened stock.

OPTIONS

1. Motorized Rollerlube System provides controlled film on both sides of stock.
2. Pull Thru Straightener with manual or powered pinch rolls.
OPTIONS

ADJUSTABLE SELF-CENTERING GUIDES

ROTARY STRIP MATERIAL ENCODER

SERVO PILOT RELEASE

INTEGRAL PROGRAMMABLE ROTARY LIMIT SWITCH

Tool #200 Position 360
Feed Cam On 260
Feed Cam Off 90
Part Ejection - Air Blow Off

PNEUMATIC PILOT RELEASE

PRECISION PRESS ENCODER

CUT-TO-LENGTH SYSTEM
Pushing the material into position and simultaneously pulling the strip or skeleton away from the tool provides better control and eliminates buckling. Best for delicate, very-thin flexible materials. Both servo feeds are synchronized by a single control with a proprietary new software.

This system can be used for non-coil strip feeding and can increase your piece part production by as much as 400% vs. many strip feed applications. Used extensively for Gasket, Foil, Fabric, Teflon and other limp, delicate material.

<table>
<thead>
<tr>
<th>Feed Roll Dia. Opening (in.)</th>
<th>Capacity at Full Width (in.)</th>
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**ADVANTAGE SPECIFICATIONS - METRIC**

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**EDGE SPECIFICATIONS - USA**

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These standard Cabinet-Mounted Servo Feeds are equipped with five-roll, pull-thru stock straighteners. The compact design is ideal for applications where saving floor space is essential. Manual or powered pinch rolls to facilitate loading are optional. A generous hand crank for pass-line height adjustment is provided.
## Pull Thru Straightener Specifications

Performance data shown is for estimating purposes only. Production rates and capacities are dependent upon feed length and material. Consult P/A for specific application needs.

### ADVANTAGE STAND

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<thead>
<tr>
<th>Model</th>
<th>Feed Roll Dia. Opening (in.)</th>
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### ADVANTAGE CABINET

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### MAGNUM CABINET

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Note: Speed will be reduced approximately 25% from standard model rates when using a Pull Thru Straightener.
P/A first introduced this exciting new Trademark Technology during the millennium year. Advances in servo drive processor speeds and development of sophisticated software system synchronizes both press feed and the stock straightener servo motors. This eliminates the conventional floor space loop between feed and straightener for both thick and thin materials. This revolutionary new way of controlling material flow creates the opportunity to install more punch presses in the same production space.

Production floor space is expensive - use P/A Loopless technology to drastically reduce your floor space requirements.
Another P/A innovation is the new sequential control for all Edge, Advantage, Magnum and Maximus models. The sequential software that provides the ability for step feeding, tool signaling, gagging and multiple programs off of one press or punching machine easily obtains flexible manufacturing using simple tools. Feed-to-registration capability is another design feature.

Ideal for the racking, lighting, strapping, appliance, screen perforating and other industries that make parts where changing the feed pitch during the operation is necessary.

Easy step-by-step programming and job storage provide maximum flexibility and reduced set-up time.

**Typical Parts Production**

- **Straps and Hangers**
  - ![Straps](image1)
  - ![Straps](image2)
  - ![Straps](image3)
- **Adjustable Shelving and Hangers**
  - ![Shelving](image4)
  - ![Shelving](image5)
  - ![Shelving](image6)
- **Hose Clamps**
  - ![Hose Clamps](image7)
  - ![Hose Clamps](image8)
- **Perforating – Filter Screens, Electronic Shielding**
  - ![Perforating](image9)
  - ![Perforating](image10)
  - ![Perforating](image11)
- **Hole Saw Blades or Hack Saw Blades**
  - ![Hole Saw Blades](image12)
  - ![Hole Saw Blades](image13)
- **Light Fixtures and Drawer Slide Frames**
  - ![Light Fixtures](image14)
  - ![Light Fixtures](image15)
P/A OFFERS A COMPLETE LINE OF PRESS

YOU SUPPLY THE PRESS . . . WE’LL SUPPLY THE REST.

**PAYOFF**
- Fixed Shaft Payoff Reel
- Light Duty Stock Reel
- Medium Duty Dual Stock Reel
- Traverse Spool Reel
- Palletizer

**STRAIGHTENERS**
- Leveler Straightener
- Flip Top Straightener
- Medium Duty Straightener
- Precision Reel Straightener
- Heavy Duty Straightener
- Magnum Straightener

**SENSORS**
- Loop Control
- UltraSonic System
- RF System

**OILERS**
- Roller Lube System
- Slim Line Oiler
- Stock Oiler

**SYSTEMS**
- Reel-Straightener-Feeder
- Loopless™
- Pull-Thru Straightener
- Coil & Feed Line
FEEDS

- Ultra Advantage Servo Feed
- Micro Feed
- Precision Air Feed
- Ultra Magnum Servo Feed
- Mini Servo Feed
- Ultra Edge Servo Feed
- Advantage Double Roll Feed System

CUTTERS

- Ram Scrap Chopper
- Air Scrap Chopper
- Pneumatic Scrap Chopper

TRANSPORTERS

- TP-3
- TP-10
- TP-40
- TP-70
- TP-140

WINDERS

- Rewind Reel
- Automatic Rewind Equipment
- Automatic Horizontal System
- Traverse Layer Winder
## REFERENCE DATA

### PRODUCTION - PARTS PER HOUR  
(Figures Based Upon One Part Per Press Stroke)

<table>
<thead>
<tr>
<th>Press Speed (Strokes Per Minute)</th>
<th>40</th>
<th>60</th>
<th>70</th>
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<th>100</th>
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### STRIP CONSUMPTION - FEET PER MINUTE

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### COIL ROTATIONAL SPEEDS - REVOLUTIONS PER MINUTE

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<th>Strip Consumption (Feet Per Minute)</th>
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<th>75</th>
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<th>180</th>
<th>210</th>
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<td>85</td>
<td>95</td>
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<td>114</td>
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</table>

### COIL WEIGHT REFERENCE CHART

Based on 1 Inch Strip Width - Steel. Factor From Chart x Width of Coil = Total Coil Weight.

To Obtain Weight of:
- Aluminum: Multiply Total Wt. x .344
- Brass: Multiply Total Wt. x 1.08
- Copper: Multiply Total Wt. x 1.14
- Stainless Steel: Multiply Total Wt. x 1.02

### FREE LOOP AREA & SLACK MATERIAL AVAILABILITY FOR MILD STEEL COIL STOCK

Chart below shows inches of loop required for a given thickness & inches of slack material in a full loop.

<table>
<thead>
<tr>
<th>Material Thickness T, (Ins.)</th>
<th>Free Loop Length L, (Ins.)</th>
<th>Pass Line Height H, (Ins.)</th>
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<td>0.187</td>
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<td>123</td>
</tr>
<tr>
<td>0.250</td>
<td>360</td>
<td>135</td>
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</tbody>
</table>
We warrant our mechanical parts against defects under normal use and service for a period of 2 years after date of shipment. We warrant all components installed, but not manufactured by P/A, for 1 year after date of shipment. Our obligation under this warranty is limited to replacing or repairing (at our option) the defective part without charge, F.O.B. our plant in Bloomfield, Connecticut. The defective part must be forwarded to our plant, freight-prepaid, for our inspection prior to replacement or repair. EXCEPT AS EXPRESSLY PROVIDED HEREIN, THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING A WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

This equipment offers various means of operating metal forming machines, delivers material or parts to the machine, or removes material, parts, or scrap from the machine. The operator's hands must NOT be in or near the point-of-operation of the machine, or the operating parts of any equipment installed on the machine, or bodily injury could result. The EMPLOYER must post adequate warning signs on the press with proper warnings for his machine and the specific application to which the machine and equipment are being applied. If the EMPLOYER requires help in preparing wording for his application after he has determined the details of that application, he is invited to contact P/A Industries for such help.

The EMPLOYER must meet all OSHA regulations including, but not limited to, 1910.211, 1910.212, 1910.217 and all applicable state laws. All equipment manufactured by P/A Industries is designed to meet the construction standards of OSHA in effect at the time of sale, but the EMPLOYER installs the equipment, and therefore the EMPLOYER is responsible for installation, use, application, training, and maintenance, as well as adequate signs on the press or other machine onto which this equipment will be installed.

All P/A products are sold for use only in accordance with our installation and operating instructions which accompany the products. P/A accepts no responsibility for any use or application not in accordance with our instructions, or for any modification or alteration of the product.

Accident-free press operation will result from a well developed, management-sponsored and enforced press safety program. P/A Industries is not responsible for notifying the user of this equipment of further changes in State or Federal laws, construction standards, or changes in P/A designed and built products.
P/A PLEDGE: P.O.M.G.

Guaranteed

www.pa.com

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E-Mail: sales@pa.com