

PRESSFEEDING



P/A INDUSTRIES - A BRIEF HISTORY

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



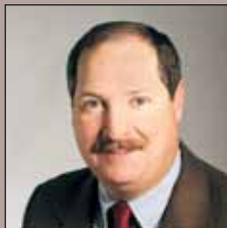
Edward Morris
Executive Vice President
Since 1999



Andreas Hoefler
Chief Financial Officer
Since 2003



Chris Crider
Chief Engineer
Since 1983



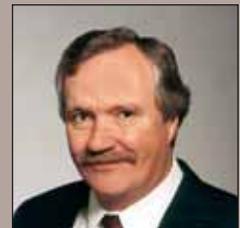
David Gaffey
Service Manager
Since 1979



Ken Jansen
Automation Engineer
Since 1993



John Labowski
Application Sales Engineer
Since 1999



Dave Burnham
Customer Sales & Service
Since 1999



Don Frank
Regional Sales Manager
Since 1996



Peter Kahl
Regional Sales Manager
Since 1990



Tim Qualls
Regional Sales Manager
Since 2002



Bob Marshalkowski
Regional Sales Manager
Since 1993



Joseph Palmer
Application Sales Engineer
Since 2004



Corporate Facilities

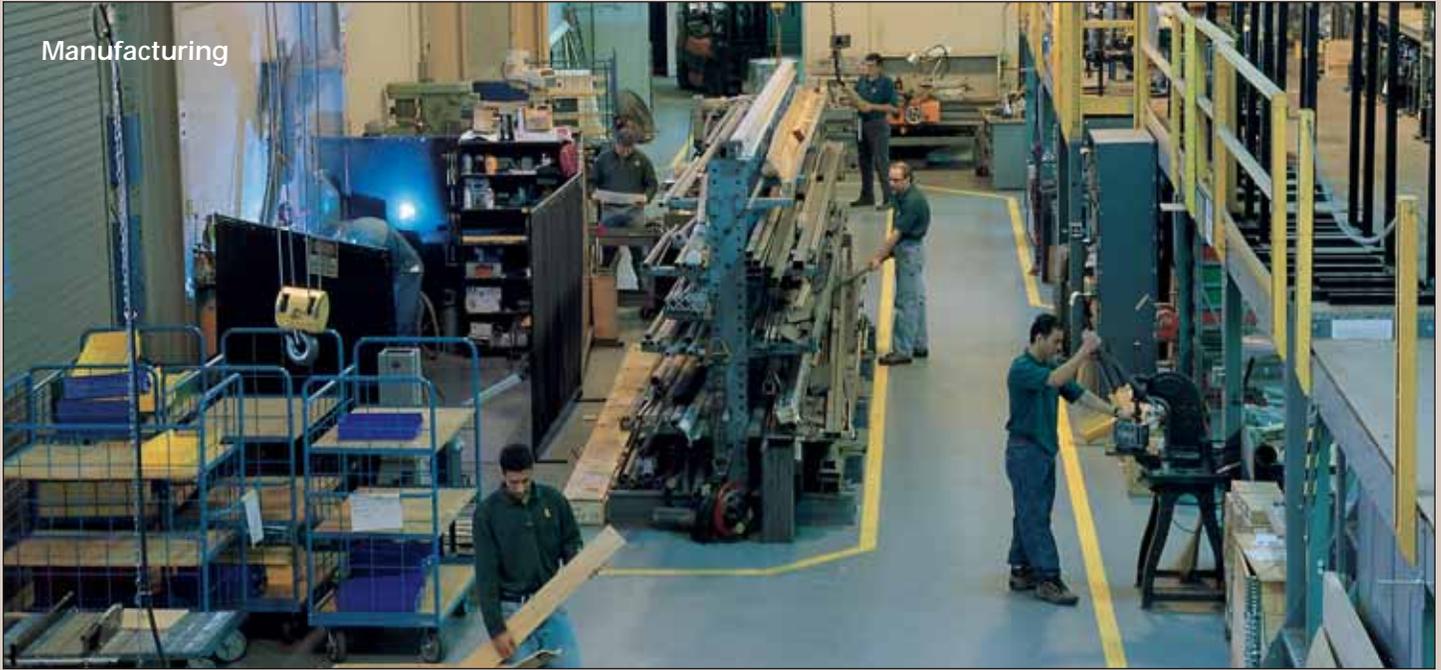


Plant No. 2



A VERY SPECIAL COMPANY . . . INDEED!

Manufacturing



Showroom

Assembly & Testing



CONTENTS

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

MICRO FEED



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

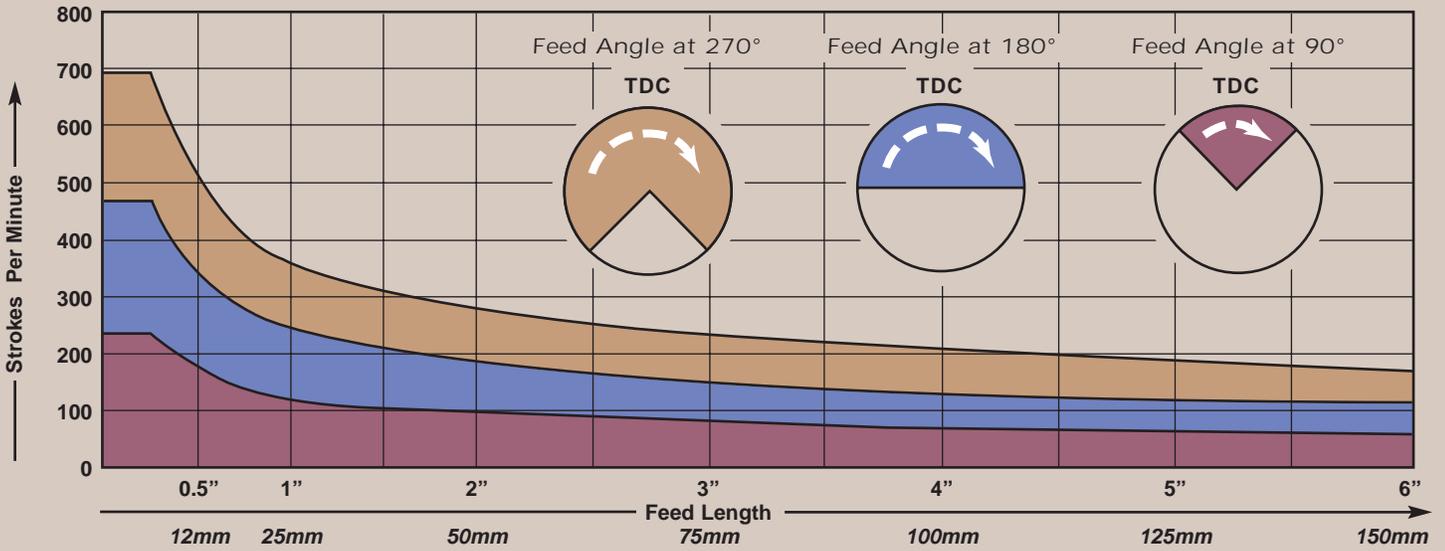
manual stroke set-up. The only air required by the Micro is for the pilot release function.

The most Affordable, Compact, High Technology Electronic Feeder is now ready for your operation.



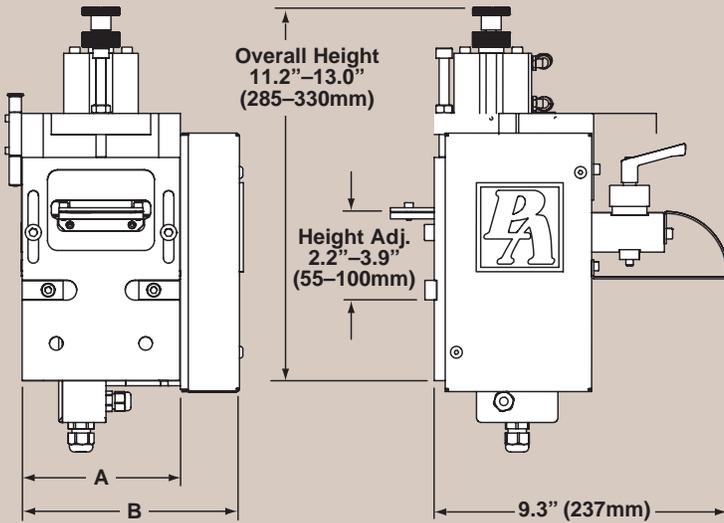
MICRO FEED SPECIFICATIONS

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.

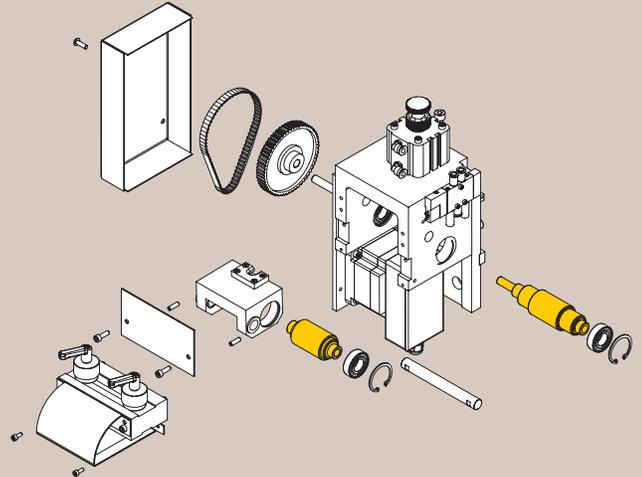
DIMENSIONS



DIMENSIONS - inches		
Model	A	B
MF 2	5.0	6.9
MF 4	7.0	8.9
MF 6	9.0	10.9

DIMENSIONS - mm		
Model	A	B
MF 2	127	175.0
MF 4	178	225.4
MF 6	228	276.8

QUICK-CHANGE ROLLS



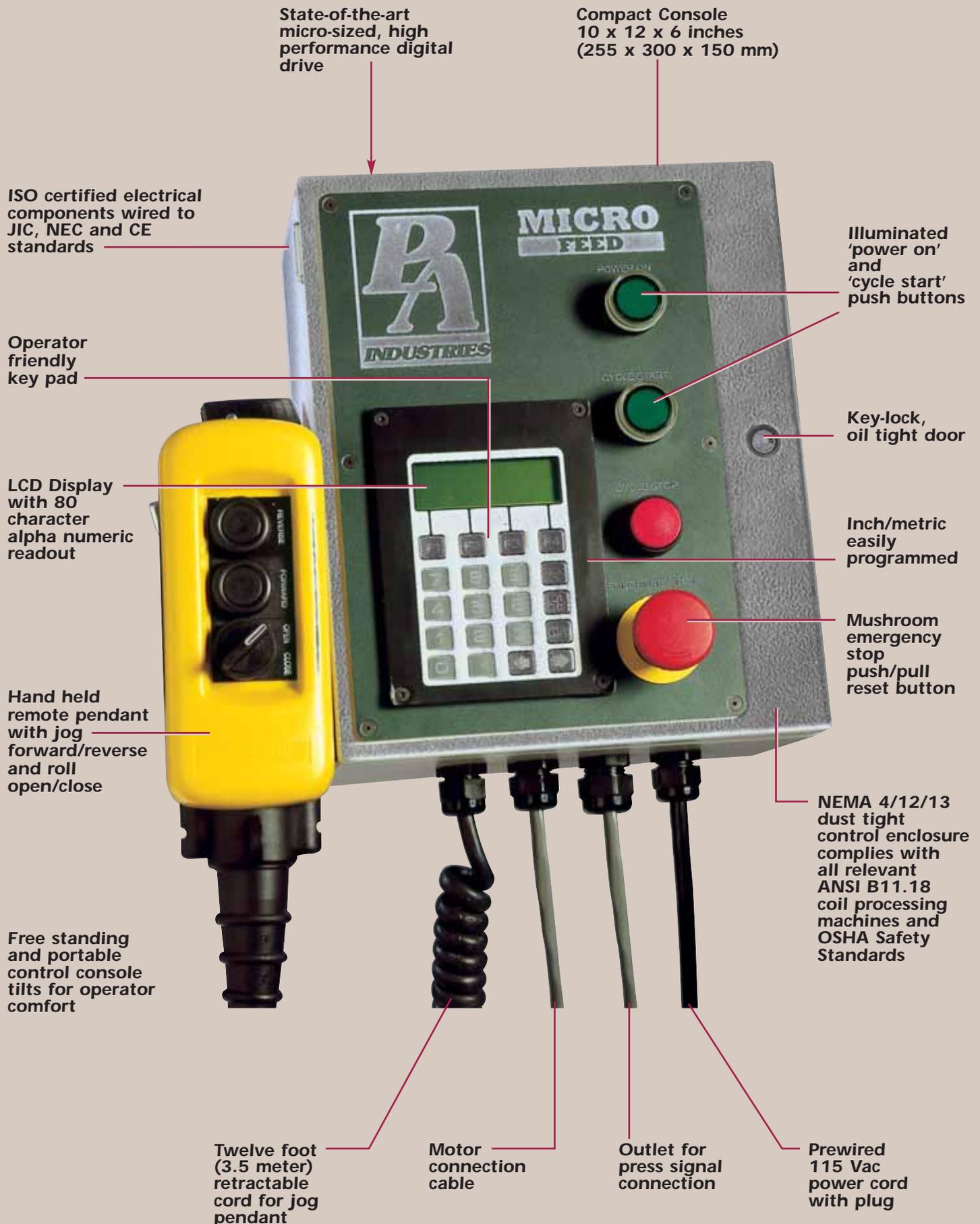
SPECIFICATIONS - USA

Model	Feed Roll		Capacity at Full Width (in.)	Pulling Power (lbs.)	AC Power Input				
	Dia. (in.)	Opening (in.)			V	Ph	Hz	A	
MF 2	1.33	.100	.040	2	100	115	1	60	7
MF 4	1.33	.100	.040	4	100	115	1	60	7
MF 6	1.33	.100	.040	6	100	115	1	60	7

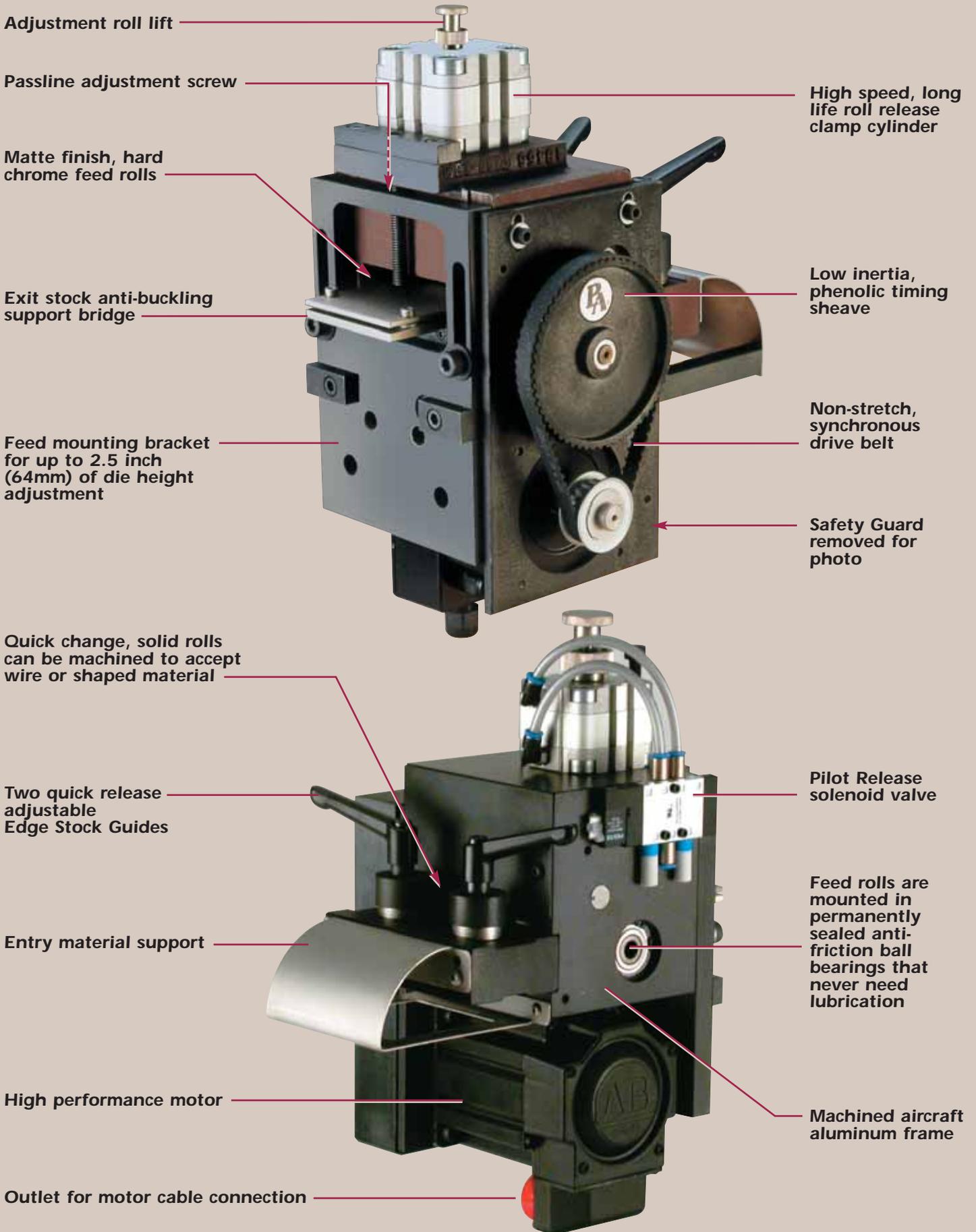
SPECIFICATIONS - mm

Model	Feed Roll		Capacity at Full Width (mm)	Pulling Power (N)	AC Power Input				
	Dia. (mm)	Opening (mm)			V	Ph	Hz	A	
MF 2	34	2.5	1.0	50	37	230	1	50	4
MF 4	34	2.5	1.0	100	37	230	1	50	4
MF 6	34	2.5	1.0	150	37	230	1	50	4

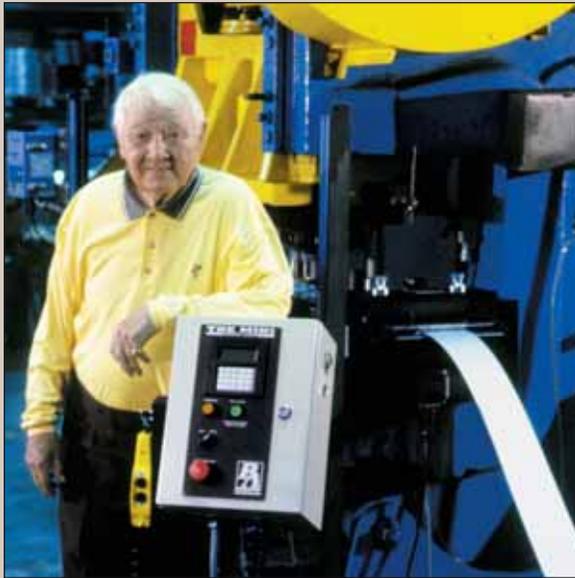
MICRO FEED ELECTRONIC FEATURES



MICRO FEED MECHANICAL FEATURES



MINI SERVO ROLL FEED



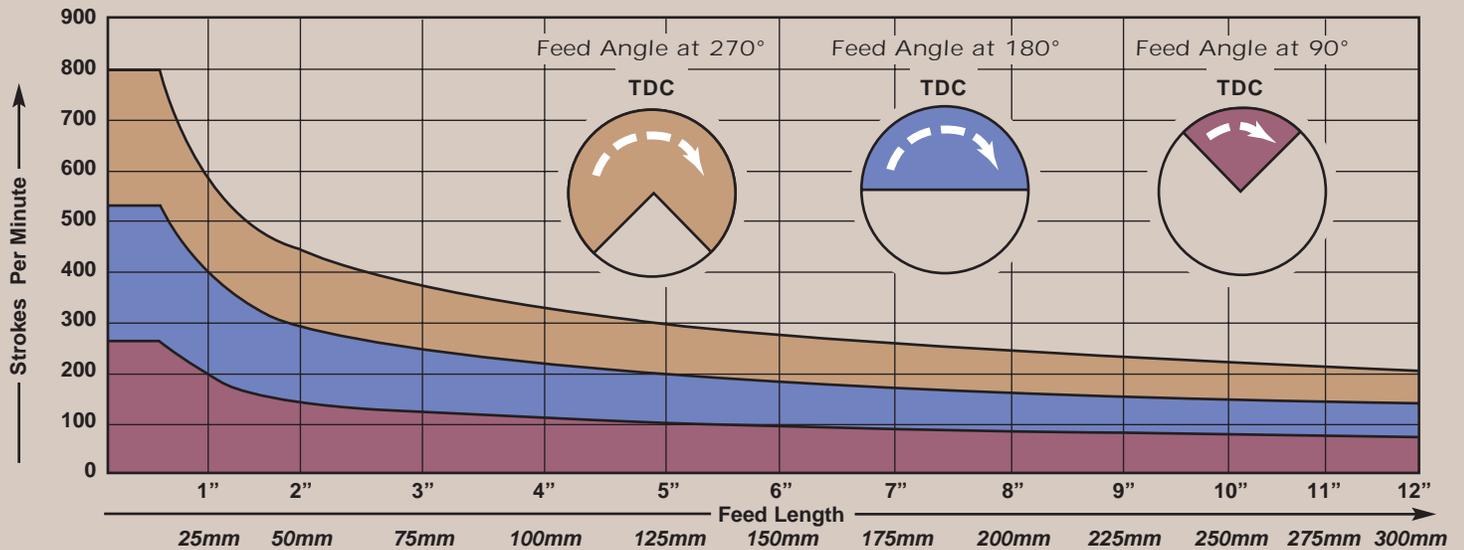
Compact and Affordable. Designed to replace Rapid Wearing Air Feeders. Zero maintenance, dependable accuracy, feed pitch, and increased speeds easily justifies the switch to our new Mini Servo Roll Feed.

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.



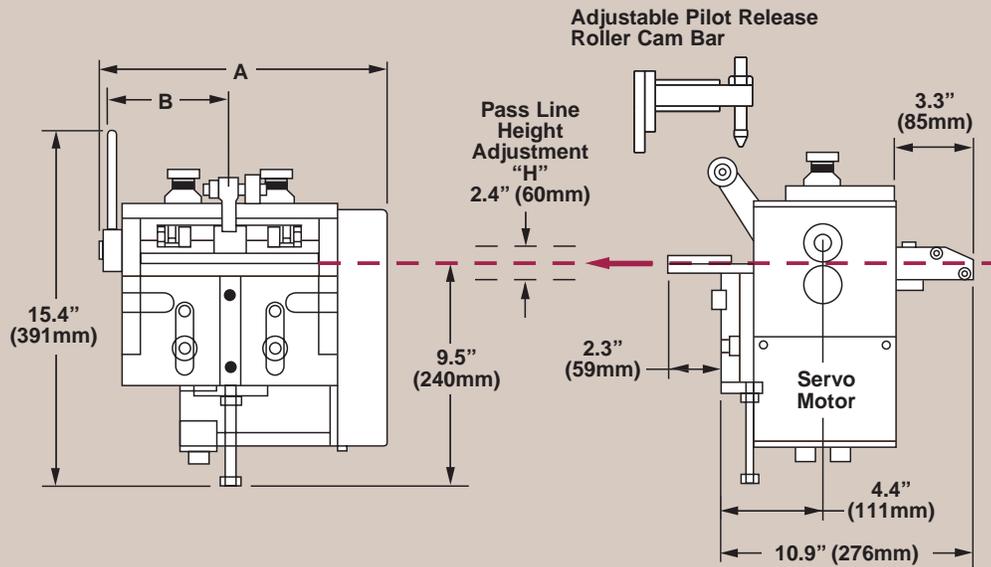
MINI SPECIFICATIONS

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



DIMENSIONS - inches		
Model	A	B
SRF 105M	12.3	5.6
SRF 220M	16.8	7.8
SRF 320M	20.7	9.7

DIMENSIONS - mm		
Model	A	B
SRF 105M	311	141
SRF 220M	426	199
SRF 320M	526	245

SPECIFICATIONS - USA										
Model	Feed Roll Dia. Opening (in.)		Capacity at Full Width (in.)		Pulling Power Peak Cont. (lbs.)		AC Power Input V Ph Hz A			
SRF 105M	1.8	.098	.060	4	115	45	115	1	60	10
SRF 220M	1.8	.098	.060	8.5	115	45	115	1	60	10
SRF 320M	1.8	.098	.060	12.5	206	72	115	1	60	10

SPECIFICATIONS - METRIC										
Model	Feed Roll Dia. Opening (mm)		Capacity at Full Width (mm)		Pulling Power Peak Cont. (N)		AC Power Input V Ph Hz A			
SRF 105M	45	2.5	1.5	105	511	200	230	1	50	10
SRF 220M	45	2.5	1.5	220	511	200	230	1	50	10
SRF 320M	45	2.5	1.5	320	915	320	230	1	50	10

MINI ELECTRONIC FEATURES

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

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

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

Inch/metric programmability

Operator key pad

Illuminated 'power on' push button

Key-lock, oil tight door

Hand held remote forward or reverse pendant

Automatic and set-up selection switch

Mushroom emergency stop push/pull reset button

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

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

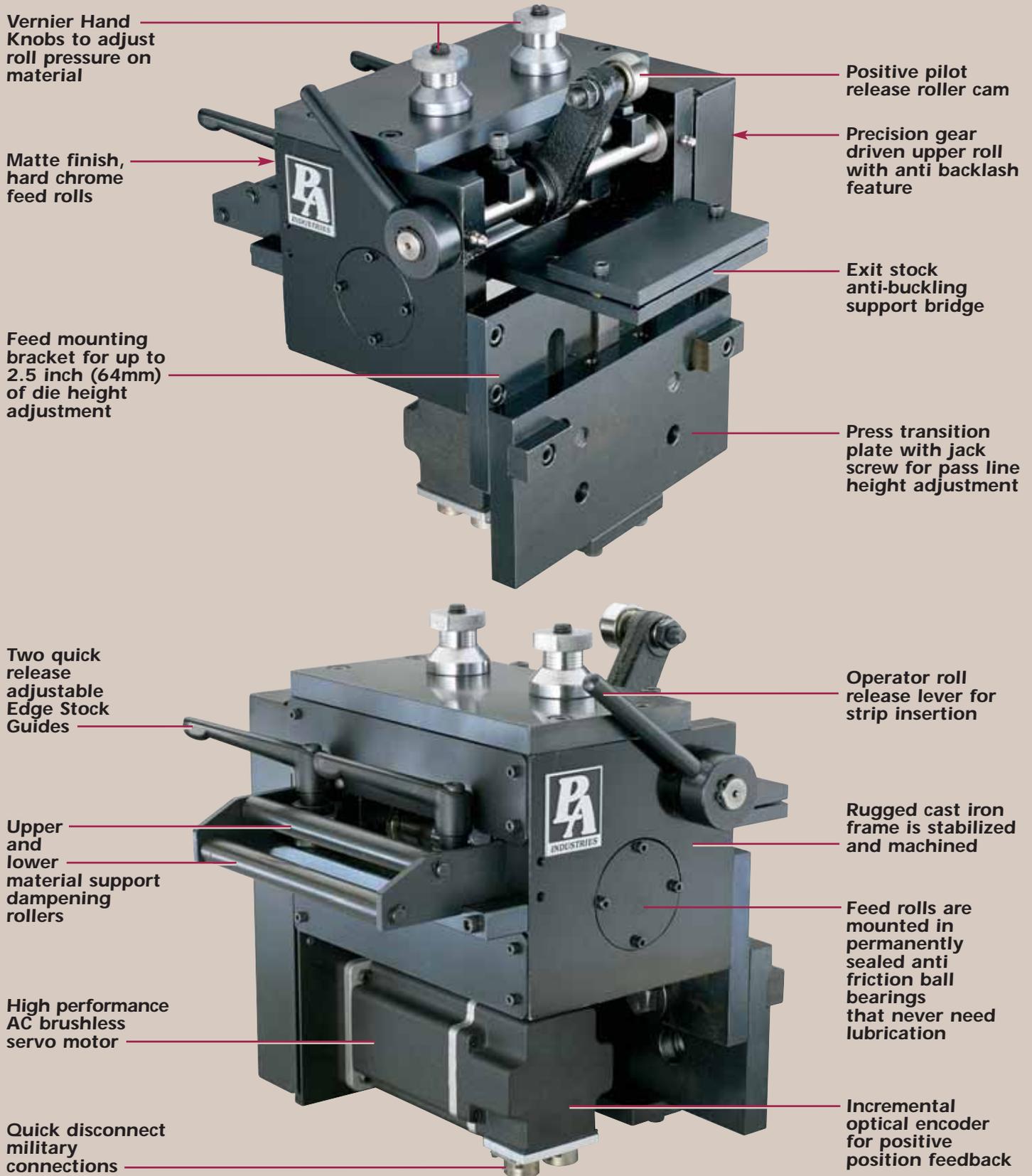
Twelve foot (3.5 meter) retractable cord for jog pendant



OPTIONS

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

MINI MECHANICAL FEATURES



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.

EDGE SERVO ROLL FEED

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.

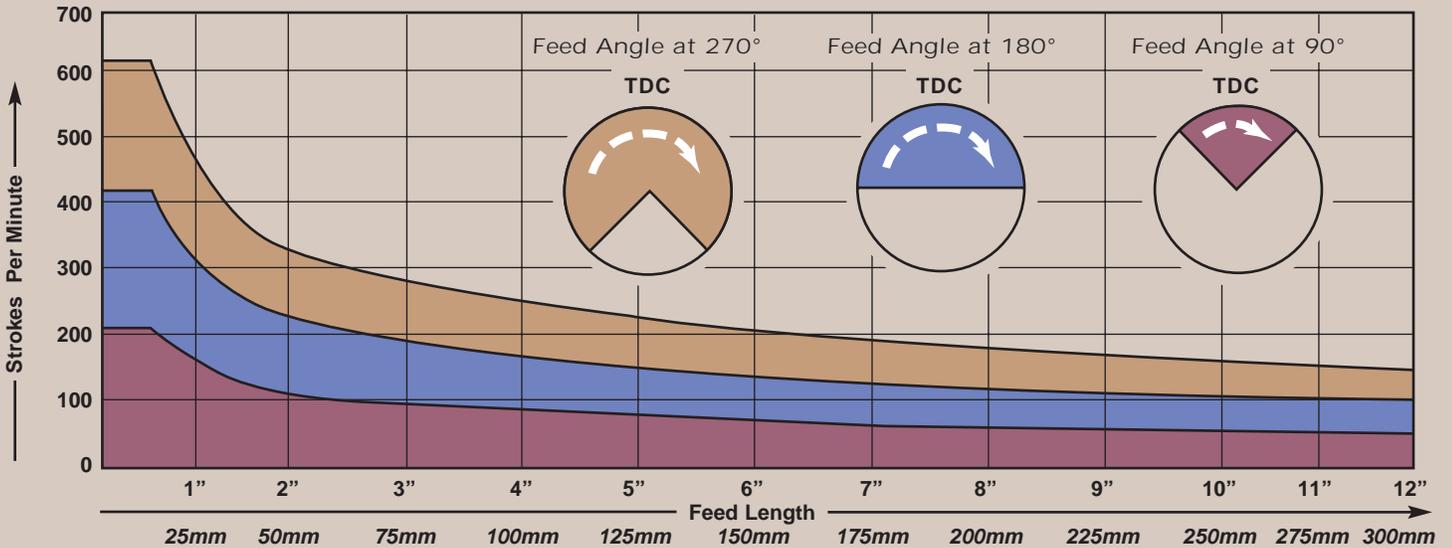
Allen Bradley, a world leader in electronics and industrial controls, worked as a partner with P/A for three years to develop the latest technology for servo feed controls. Introduced in 2002, this new, powerful control is loaded with innovative features. The drive, available in this compact package,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



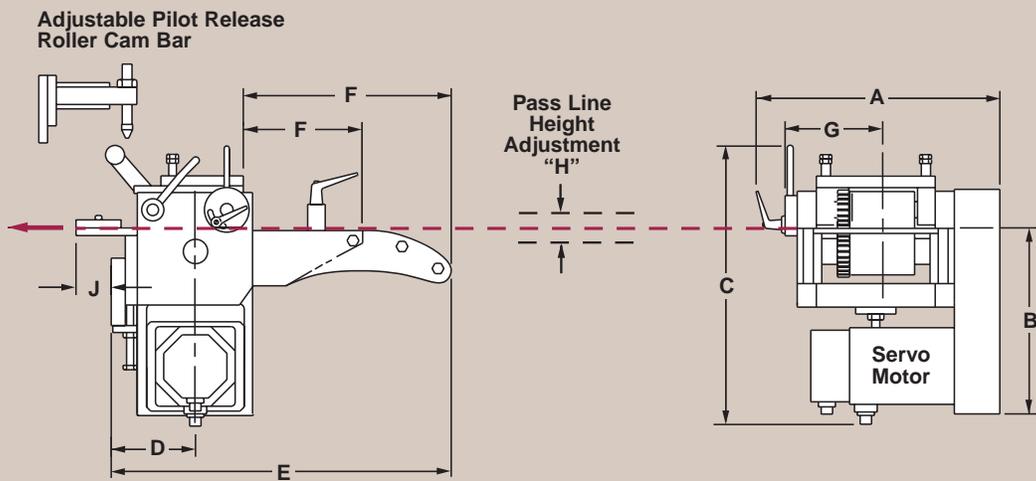
EDGE SPECIFICATIONS

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



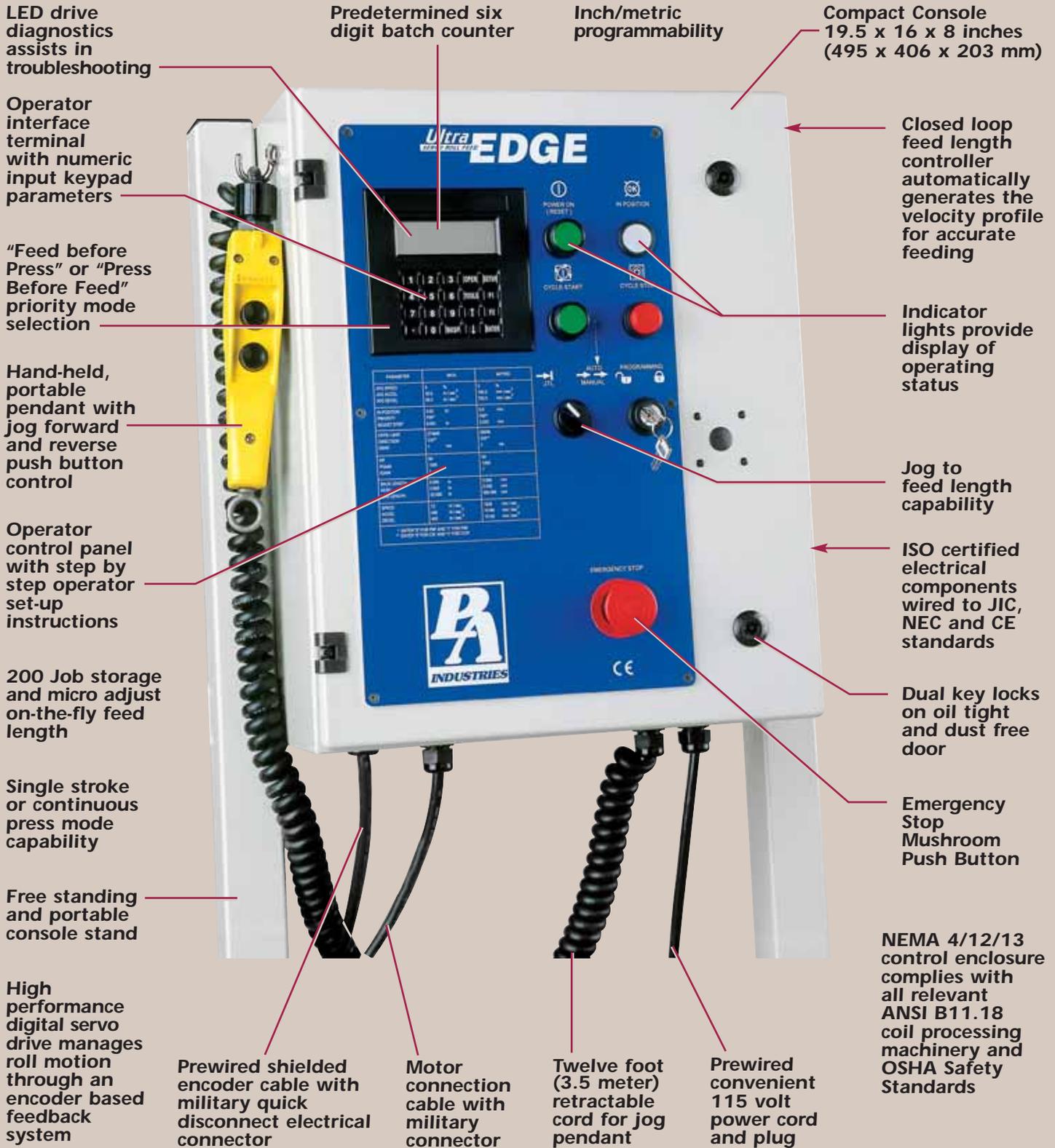
DIMENSIONS - inches									
Model	A	B	C	D	E	F	G	H	J
SRF 100	15	11.4	21.0	5.0	15.3	7.5	6.0	2.0	2.2
SRF 125	20	11.9	22.0	5.5	24.0	15	7.5	2.4	2.9
SRF 200	23	11.9	23.5	6.4	25.0	15	9.5	2.4	2.9
SRF 300	27	11.9	23.5	6.4	25.0	15	11.5	2.4	2.9
SRF 400	31	11.9	23.5	6.4	25.0	15	13.5	2.4	2.9
SRF 500	35	11.9	23.5	6.4	25.0	15	15.5	2.4	2.9
SRF 600	39	11.9	23.5	6.4	25.0	15	17.5	2.4	2.9

DIMENSIONS - mm									
Model	A	B	C	D	E	F	G	H	J
SRF 100	381	290	533	127	389	191	152	51	56
SRF 125	509	302	559	140	610	381	191	61	74
SRF 200	584	302	597	163	635	381	241	61	74
SRF 300	686	302	597	163	635	381	292	61	74
SRF 400	787	302	597	163	635	381	343	61	74
SRF 500	889	302	597	163	635	381	394	61	74
SRF 600	991	302	597	163	635	381	445	61	74

SPECIFICATIONS - USA										
Model	Feed Roll		Capacity at		Pulling Power		AC Power			
	Dia.	Opening	Full Width		Peak	Cont.	V	Ph	Hz	A
	(in.)	(in.)	(in.)		(lbs.)					
SRF 100	2.9	.098	.080	4	210	70	115	1	60	18
SRF 125	3.0	.138	.100	5	252	84	115	1	60	18
SRF 200	3.0	.138	.080	8	252	84	115	1	60	18
SRF 300	3.0	.138	.080	12	398	132	115	1	60	18
SRF 400	3.0	.138	.060	16	398	132	115	1	60	18
SRF 500	3.0	.138	.050	20	398	132	115	1	60	18
SRF 600	3.0	.138	.040	24	398	132	115	1	60	18

SPECIFICATIONS - METRIC										
Model	Feed Roll		Capacity at		Pulling Power		AC Power			
	Dia.	Opening	Full Width		Peak	Cont.	V	Ph	Hz	A
	(mm)	(mm)	(mm)		(N)					
SRF 100	57	2.5	2.0	100	935	311	230	1	50	18
SRF 125	75	3.5	2.5	125	1120	373	230	1	50	18
SRF 200	75	3.5	2.0	200	1120	373	230	1	50	18
SRF 300	75	3.5	2.0	300	1770	587	230	1	50	18
SRF 400	75	3.5	1.5	400	1770	587	230	1	50	18
SRF 500	75	3.5	1.3	500	1770	587	230	1	50	18
SRF 600	75	3.5	1.0	600	1770	587	230	1	50	18

EDGE ELECTRONIC FEATURES



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.

EDGE MECHANICAL FEATURES

Operator roll release lever for strip insertion with safety lock

Stock thickness adjustment lever

Rugged cast iron frame is stabilized and machined for precision feeding

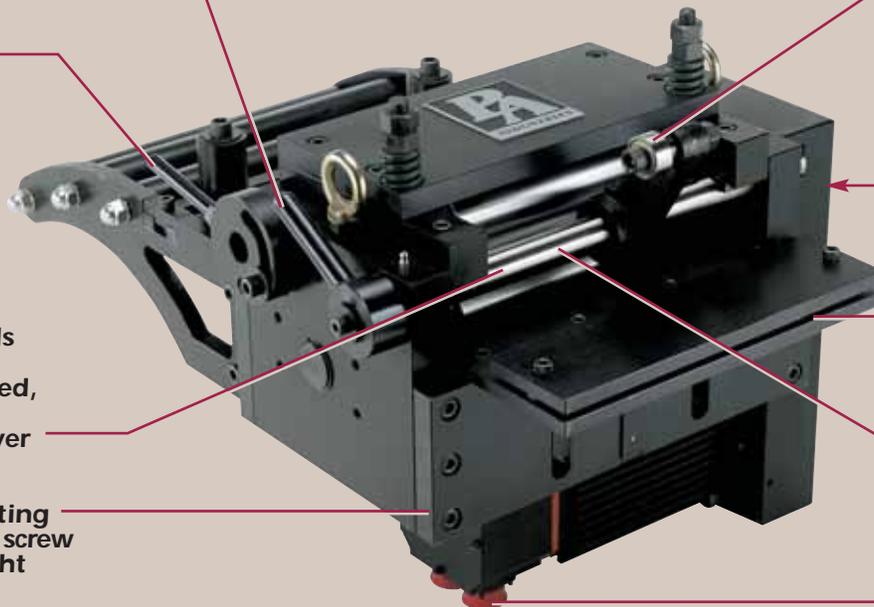
Large diameter, textured feed rolls are mounted in permanently sealed, anti-friction ball bearings that never need lubrication

Adjustable mounting bracket with jack screw for pass line height adjustment of $\pm 2"$ (50mm)

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

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

Incoming catenary rolls maintain and support straightened material



Mechanical roller-bearing cam pilot release for easy set-up at any press speed

Anti-backlash precision gear driven upper roll to ensure non-slip, positive feeding

Anti-buckle stock support bridge

Low inertia, chrome plated, feed rolls are precision ground for concentricity

Military Quick Disconnect electrical connectors

Pneumatic Pilot Release

Two Positive pressure die springs apply adjustable upper roll pressure

Safety guard removed for photo

Non-stretch, synchronous Kevlar drive timing belt eliminates gear backlash, wear, noise and lubrication

Quick Disconnect Military Connectors on motor and encoder cables

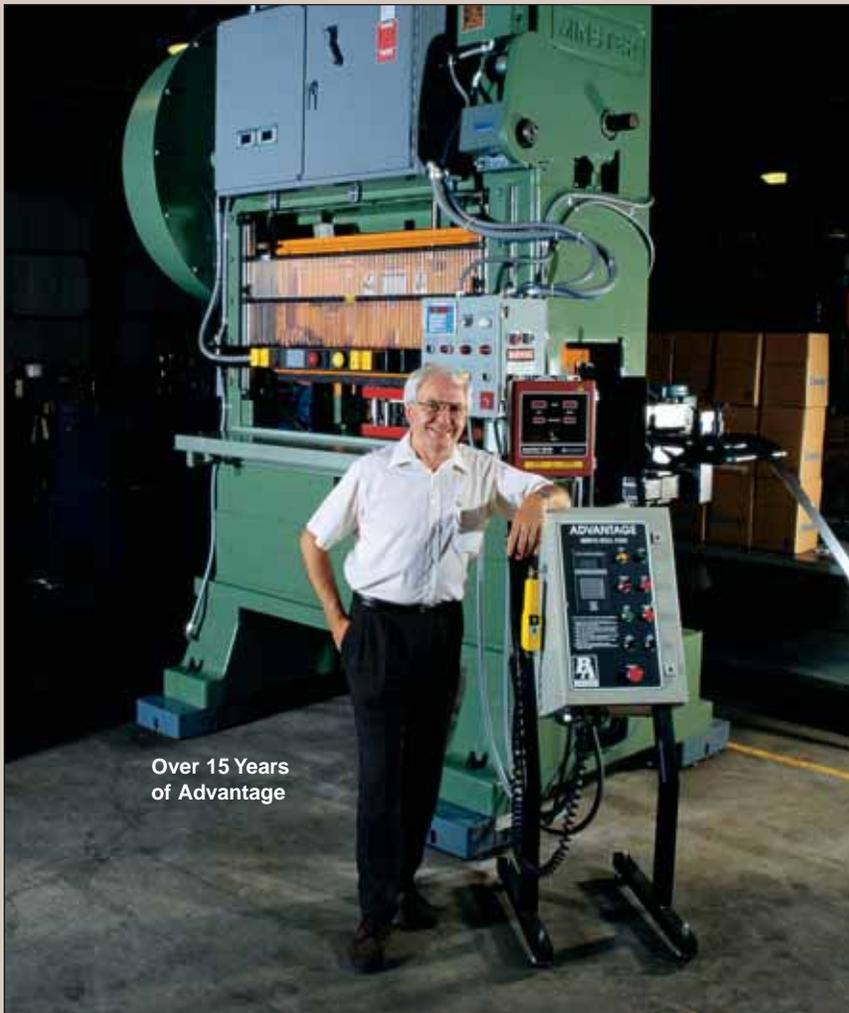
New, high energy AC brushless servo motor with rare earth magnet rotor totally enclosed to eliminate contamination



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.

ADVANTAGE SERVO ROLL FEED



Over 15 Years
of Advantage

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.

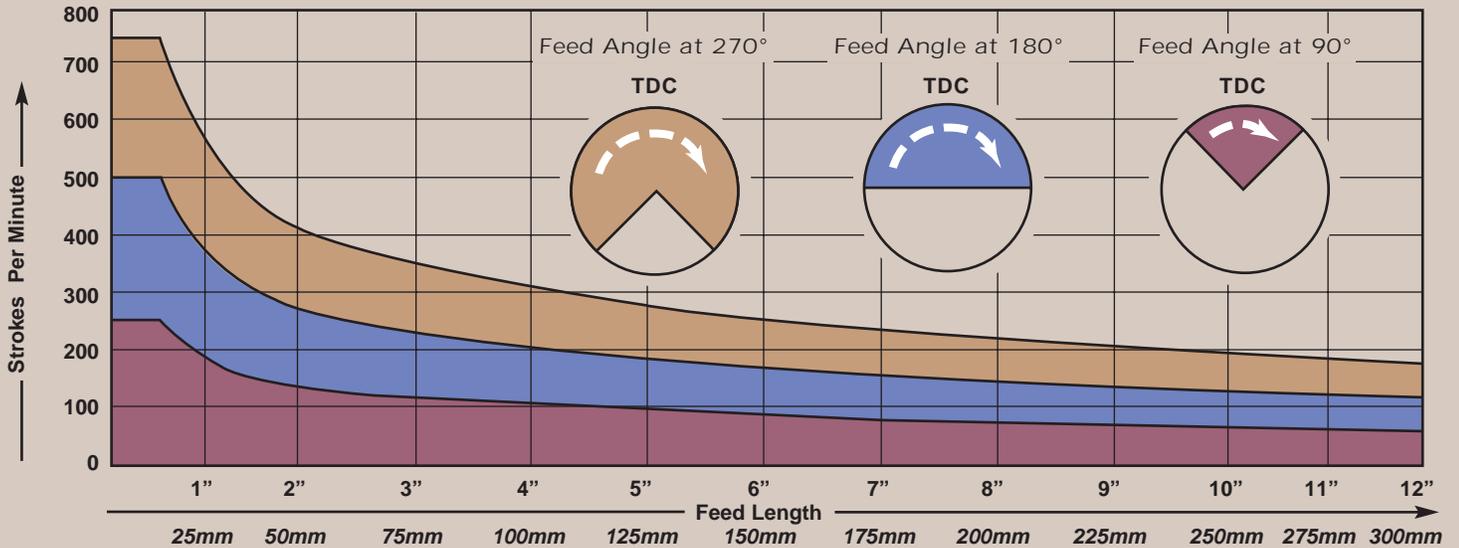
In 2002, P/A and Allen Bradley introduced a new generation of servo feed technology by integrating the motion controller, PLC and the servo control into one programmable module. This allows P/A to further refine our existing software and develop many new programs for other applications. This new ultra 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.



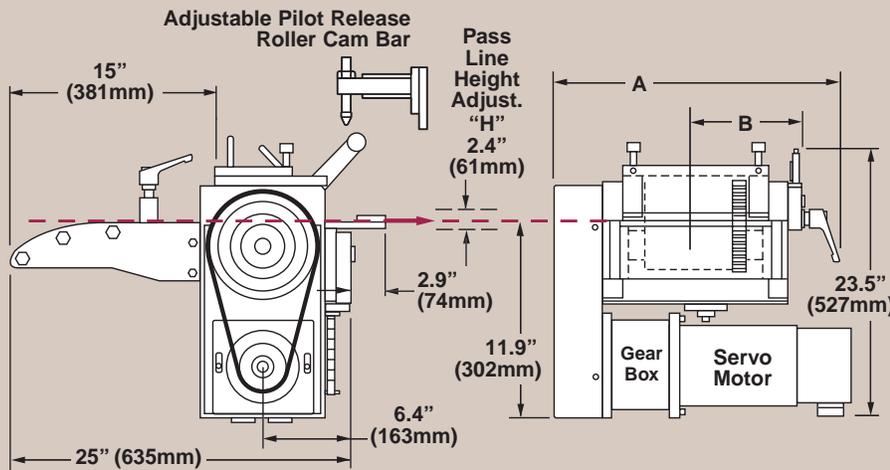
ADVANTAGE SPECIFICATIONS

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



DIMENSIONS - in.			DIMENSIONS - mm		
Model	A	B	Model	A	B
SRF 5	20	8.0	SRF 5	509	204
SRF 8	23	9.5	SRF 8	584	242
SRF 12	27	11.5	SRF 12	686	292
SRF 16	31	13.5	SRF 16	787	343
SRF 20	35	15.5	SRF 20	889	394
SRF 24	39	17.5	SRF 24	991	445
SRF 28	43	19.5	SRF 28	1093	496
SRF 32	47	21.5	SRF 32	1195	547
SRF 36	51	23.5	SRF 36	1295	597

Note: SRFX Models have same mechanical dimensions as SRF. Consult Factory for SRF 48, SRF 60 & SRF 72 Models.

SPECIFICATIONS - USA										
Model	Feed Roll Dia. Opening		Capacity at Full Width		Pulling Power Peak Cont.		AC Power Input			
	(in.)	(in.)	(in.)	(in.)	(lbs.)	(lbs.)	V	Ph	Hz	A
SRF 5	3.5	.138	.138	5	624	230	1	60	18	
SRF 8	3.5	.138	.138	8	624	230	1	60	18	
SRF 12	3.5	.138	.138	12	624	230	1	60	18	
SRF 16	3.5	.138	.120	16	624	230	1	60	18	
SRF 20	3.5	.138	.105	20	624	230	1	60	18	
SRF 24	3.5	.138	.090	24	624	230	1	60	18	
SRF 28	3.5	.138	.105	28	1092	400	230	1	60	18
SRF 32	3.5	.138	.090	32	1092	400	230	1	60	18
SRF 36	3.5	.138	.075	36	1092	400	230	1	60	18
SRF 48	3.4	.158	.050	48	1092	400	230	1	60	18
SRF 60	3.4	.158	.040	60	1092	400	230	1	60	18
SRF 72	3.4	.158	.032	72	1092	400	230	1	60	18
SRFX 5	3.5	.188	.188	5	1092	400	230	1	60	18
SRFX 8	3.5	.188	.180	8	1092	400	230	1	60	18
SRFX 12	3.5	.188	.165	12	1092	400	230	1	60	18
SRFX 16	3.5	.188	.150	16	1092	400	230	1	60	18
SRFX 20	3.5	.188	.135	20	1092	400	230	1	60	18
SRFX 24	3.5	.188	.120	24	1092	400	230	1	60	18

SPECIFICATIONS - METRIC										
Model	Feed Roll Dia. Opening		Capacity at Full Width		Pulling Power Peak Cont.		AC Power Input			
	(mm)	(mm)	(mm)	(mm)	(N)	(N)	V	Ph	Hz	A
SRF 5	90	3.5	3.5	125	2780	1023	230	1	50	18
SRF 8	90	3.5	3.5	200	2780	1023	230	1	50	18
SRF 12	90	3.5	3.5	300	2780	1023	230	1	50	18
SRF 16	90	3.5	3.0	400	2780	1023	230	1	50	18
SRF 20	90	3.5	2.7	500	2780	1023	230	1	50	18
SRF 24	90	3.5	2.3	600	2780	1023	230	1	50	18
SRF 28	90	3.5	2.7	700	4860	1780	230	1	50	18
SRF 32	90	3.5	2.3	800	4860	1780	230	1	50	18
SRF 36	90	3.5	1.9	900	4860	1780	230	1	50	18
SRF 48	86	4.0	1.2	1250	4860	1780	230	1	50	18
SRF 60	86	4.0	1.0	1550	4860	1780	230	1	50	18
SRF 72	86	4.0	0.8	1830	4860	1780	230	1	50	18
SRFX 5	90	4.7	4.7	125	4860	1780	230	1	50	18
SRFX 8	90	4.7	4.6	200	4860	1780	230	1	50	18
SRFX 12	90	4.7	4.2	300	4860	1780	230	1	50	18
SRFX 16	90	4.7	3.8	400	4860	1780	230	1	50	18
SRFX 20	90	4.7	3.4	500	4860	1780	230	1	50	18
SRFX 24	90	4.7	3.0	600	4860	1780	230	1	50	18

ADVANTAGE ELECTRONIC FEATURES

Predetermined six digit batch counter and LED Drive Status Backlit Display

Inch/metric programmability

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

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

NEMA 4/12/13 control enclosure

Operator interface terminal with numeric keypad

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

"Feed Before Press" or "Press Before Feed" priority mode selection

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

Allen Bradley "Advantage" digital Servo Drive manages roll motion through an encoder based feedback system

Single stroke or continuous press mode capability

Prewired shielded encoder cable with quick disconnect motor connector

Motor connection cable with amphenol connectors

Twelve foot (3.5 meter) retractable cord for jog pendant

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

Dual key locks on oil tight and dust free door

Comprehensive indicator lights provide display of operating status

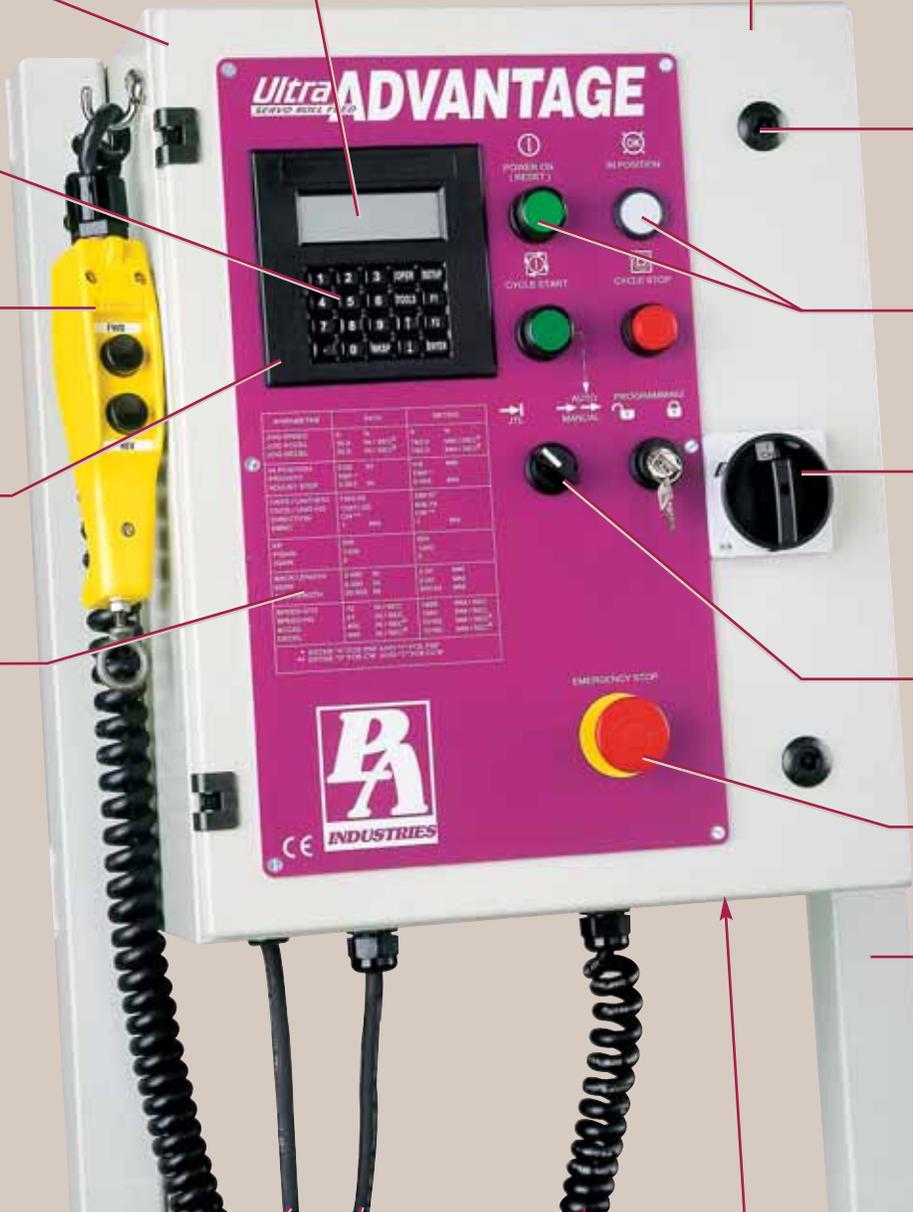
Lockable power disconnect switch

Jog to feed length capability

Red Emergency Stop Push Button

Free standing and portable console stand

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



OPTIONS

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.

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

Two quick release adjustable roller stock edge guides

Incoming catenary with large radius rolls supports straightened material

- 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)

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

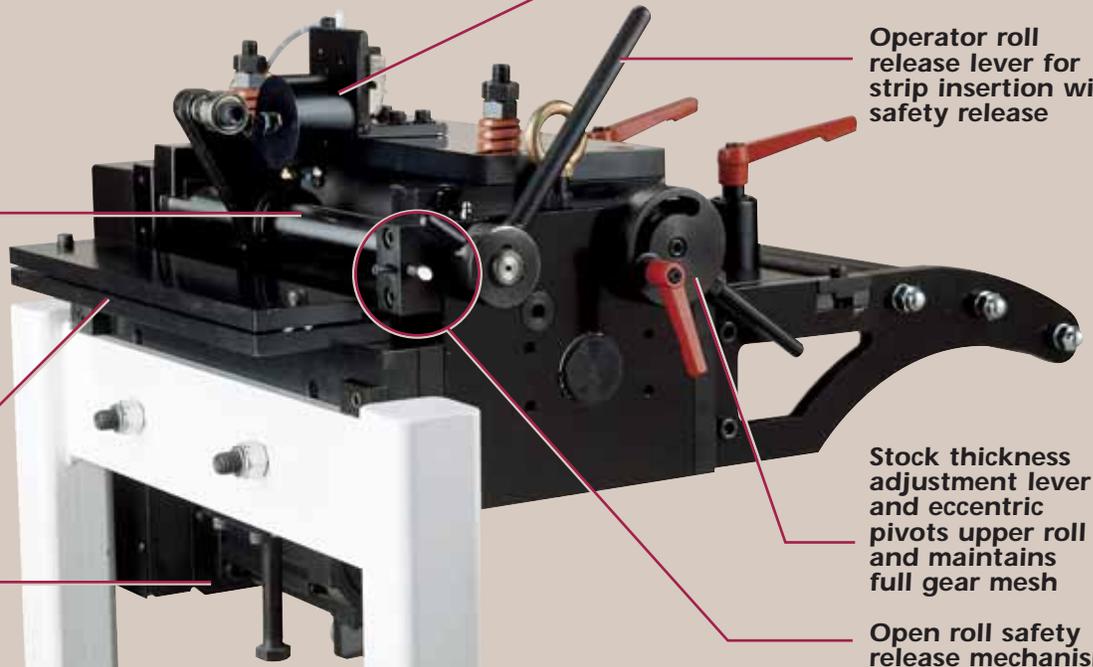
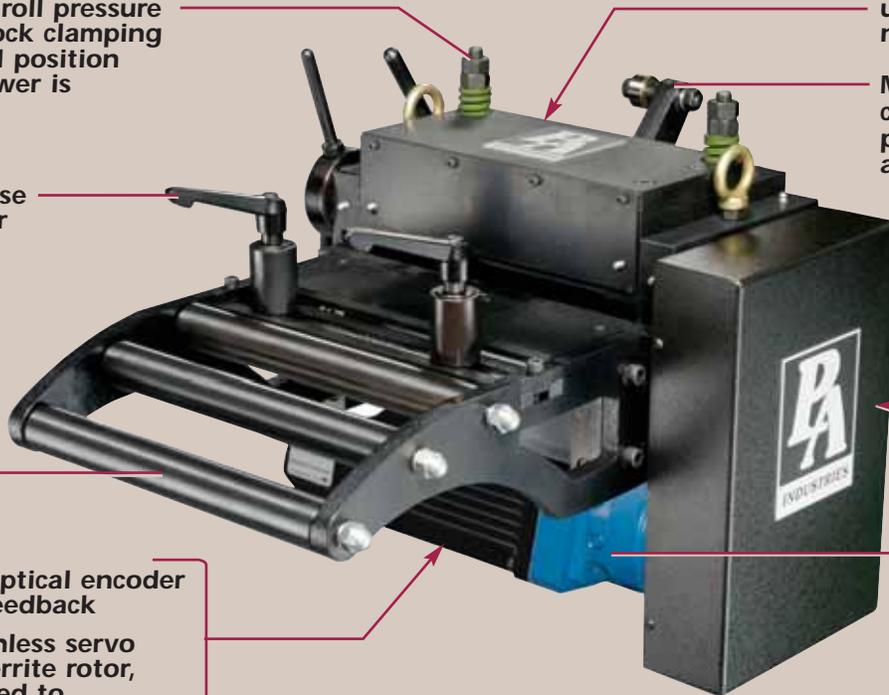
Precision Planetary Gearbox multiplies servo motor torque four times

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



OPTIONS

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.
6. Pull Thru Straightener.

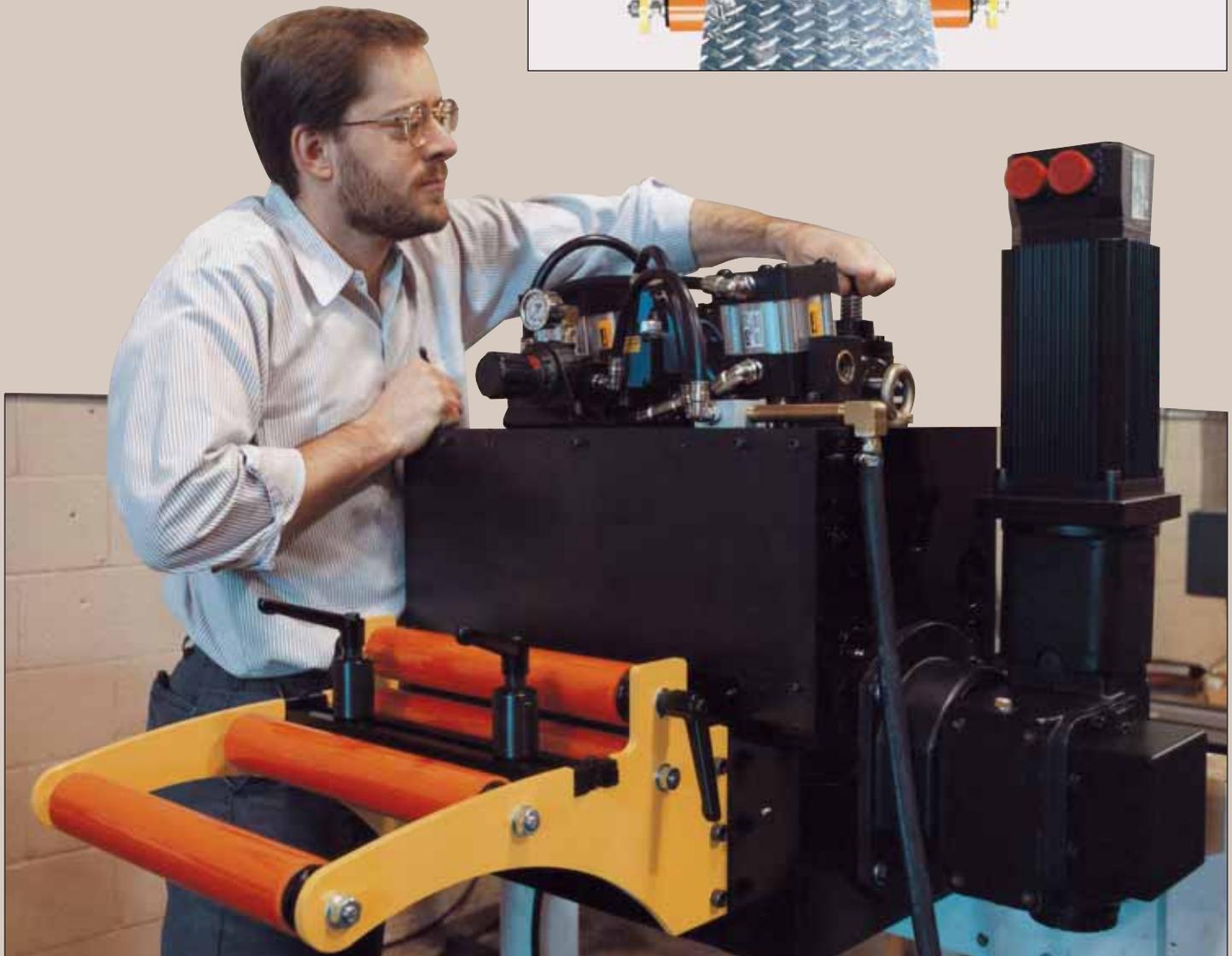
MAGNUM SERVO ROLL FEED

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.

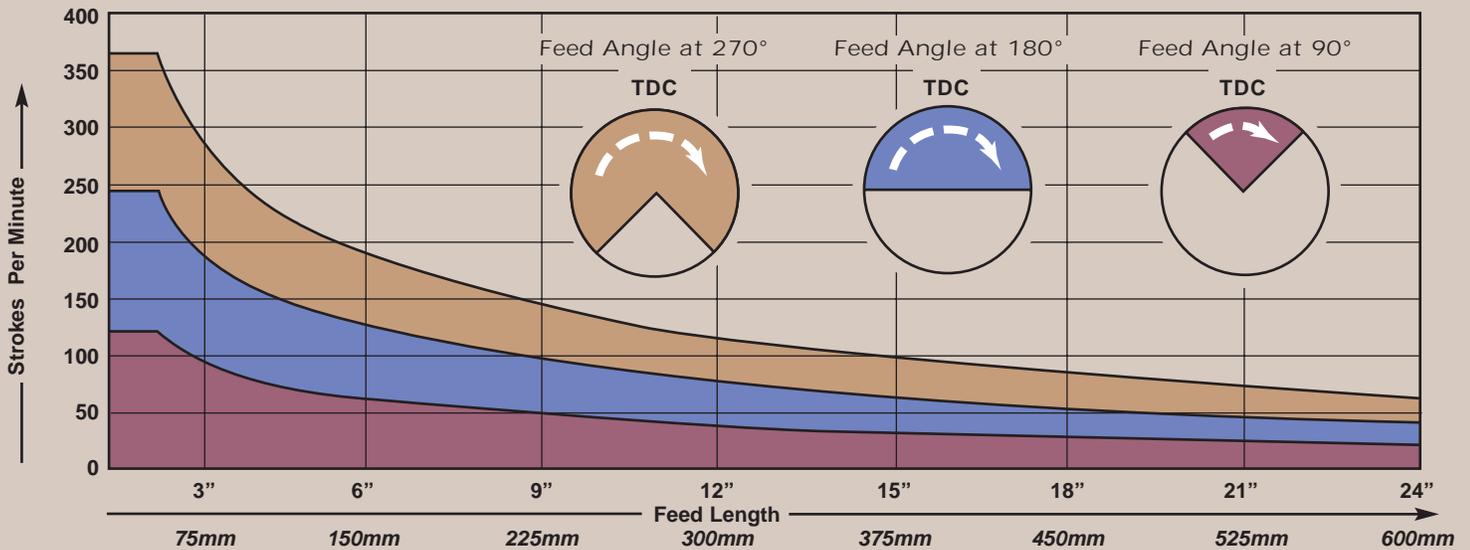
The new Allen Bradley 2002 Ultra Control features the very latest Servo Feed technology. Standard features include 200 Job Storage, Press or Feed Priority Selection, Press/Feeder Synchronous Checking, Jog-to-Feed Length, Six-Digital Batch Counter, and a new optional Programmable Rotary Limit Switch that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

Cover and Guard Removed



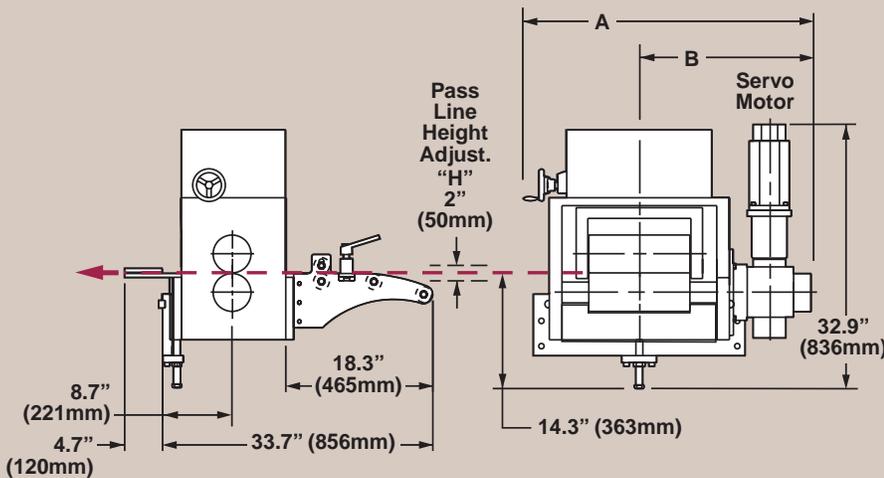
MAGNUM SPECIFICATIONS

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



DIMENSIONS - inches		
Model	A	B
SRF-M12	35.9	20.8
SRF-M18	41.9	23.7
SRF-M24	47.9	26.7
SRF-M32	56.0	32.0
SRF-M36	59.9	32.7
SRF-M48	71.6	38.7

DIMENSIONS - mm		
Model	A	B
SRF-M12	911	528
SRF-M18	1063	603
SRF-M24	1216	678
SRF-M32	1423	800
SRF-M36	1521	830
SRF-M48	1818	983

Note: **SRFX Models** have same mechanical dimensions as **SRF**.

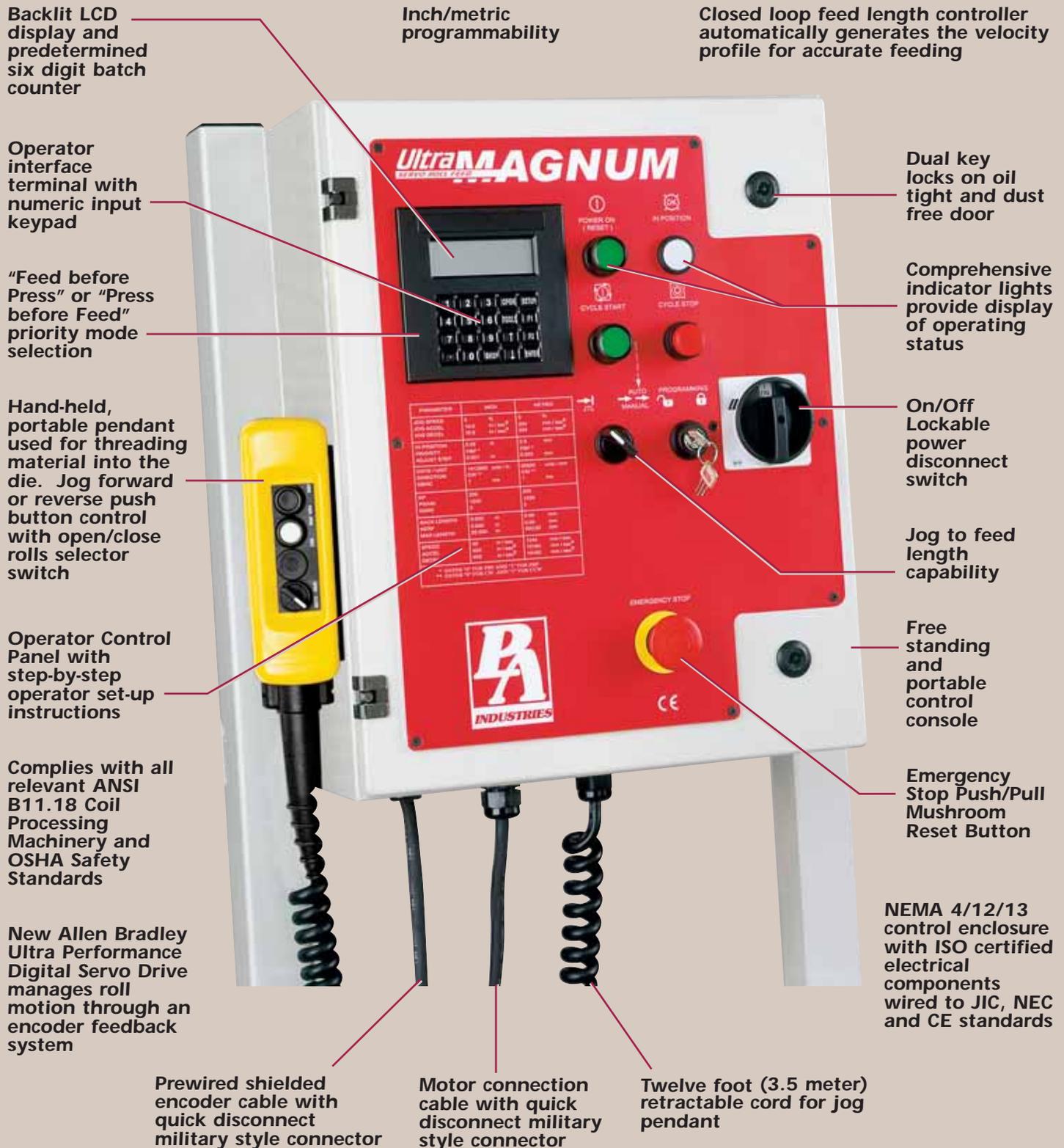
SPECIFICATIONS - USA

Model	Feed Roll		Capacity at Full Width		Pulling Power		AC Power			
	Dia.	Opening	(in.)		Peak	Cont.	V	Ph	Hz	A
SRF-M12	5	.400	.200	12	1080	540	230	1	60	28
SRF-M18	5	.400	.190	18	1080	540	230	1	60	28
SRF-M24	5	.400	.165	24	1080	540	230	1	60	28
SRF-M32	5	.400	.136	32	1080	540	230	1	60	28
SRF-M36	5	.400	.125	36	1080	540	230	1	60	28
SRF-M48	5	.400	.095	48	1080	540	230	1	60	28
SRFX-M12	5	.400	.315	12	1620	810	230	1	60	28
SRFX-M18	5	.400	.290	18	1620	810	230	1	60	28
SRFX-M24	5	.400	.255	24	1620	810	230	1	60	28
SRFX-M32	5	.400	.215	32	1620	810	230	1	60	28
SRFX-M36	5	.400	.195	36	1620	810	230	1	60	28
SRFX-M48	5	.400	.155	48	1620	810	230	1	60	28

SPECIFICATIONS - METRIC

Model	Feed Roll		Capacity at Full Width		Pulling Power		AC Power			
	Dia.	Opening	(mm)		Peak	Cont.	V	Ph	Hz	A
SRF-M12	120	10	5.1	300	4800	2400	230	1	50	28
SRF-M18	120	10	4.8	455	4800	2400	230	1	50	28
SRF-M24	120	10	4.2	610	4800	2400	230	1	50	28
SRF-M32	120	10	3.4	810	4800	2400	230	1	50	28
SRF-M36	120	10	3.2	915	4800	2400	230	1	50	28
SRF-M48	120	10	2.4	1220	4800	2400	230	1	50	28
SRFX-M12	120	10	8.0	300	7200	3600	230	1	50	28
SRFX-M18	120	10	7.4	455	7200	3600	230	1	50	28
SRFX-M24	120	10	6.5	610	7200	3600	230	1	50	28
SRFX-M32	120	10	5.5	810	7200	3600	230	1	50	28
SRFX-M36	120	10	5.0	915	7200	3600	230	1	50	28
SRFX-M48	120	10	3.9	1220	7200	3600	230	1	50	28

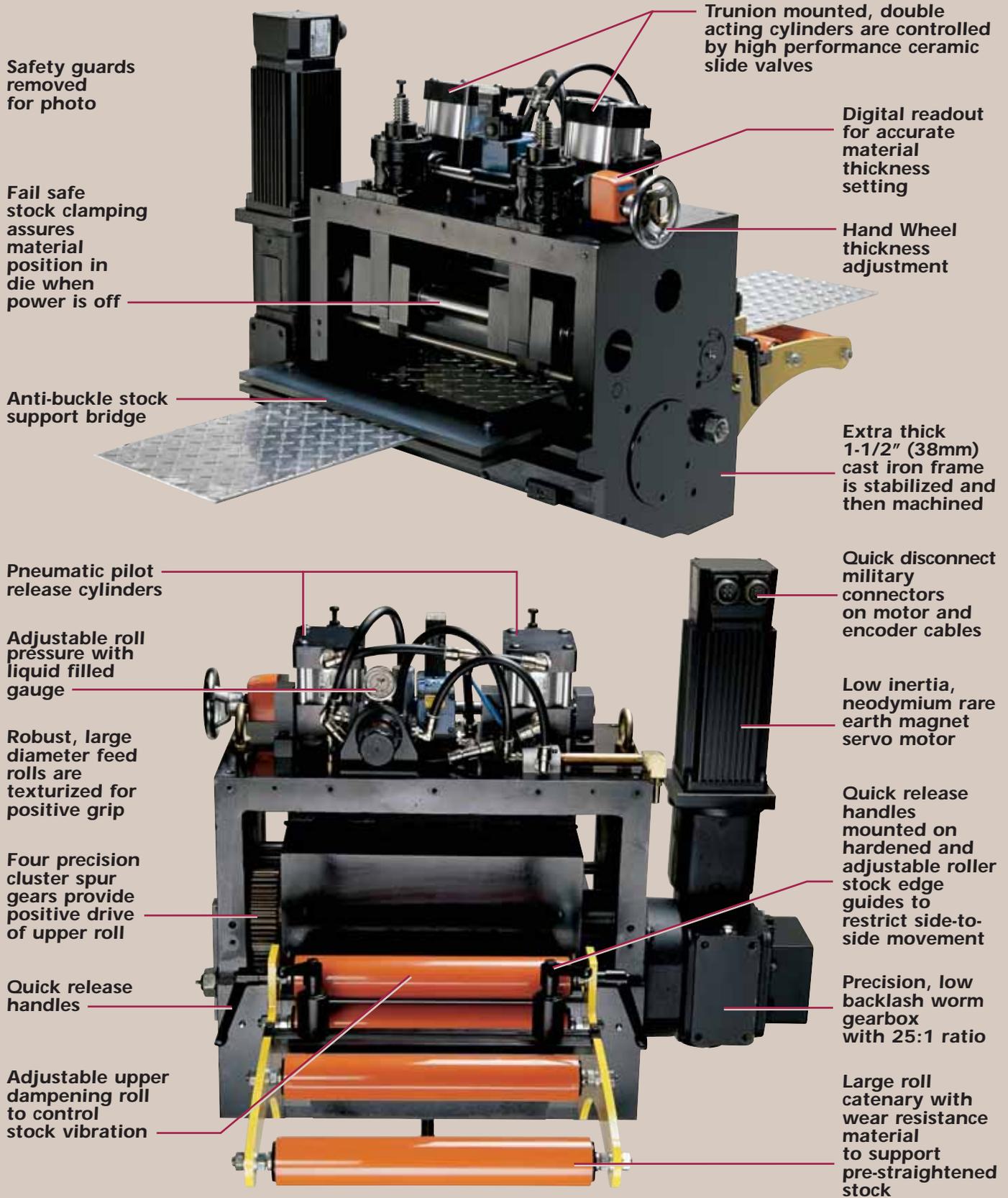
MAGNUM ELECTRONIC FEATURES



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 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



OPTIONS

1. Extra heavy duty cabinet base with hydraulic jack for $\pm 6"$ (150mm) feed height adjustment.
2. Motorized Rollerlube System provides controlled film on both sides of stock.
3. Pull Thru Straightener.

MAXIMUS SERVO ROLL FEED

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.

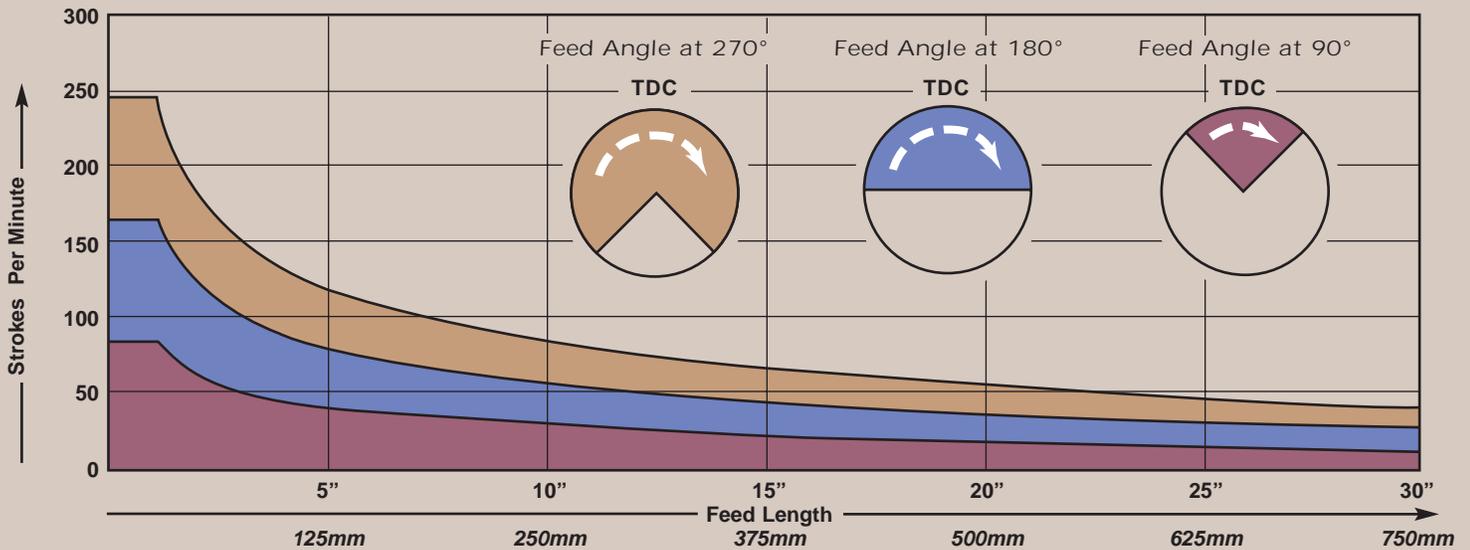
A rugged base cabinet with pass line adjustment is standard, as well as, extended length, heavy-duty catenary entrance rolls and self-centering stock edge guides. The additional rolls provide maximum support for prestraightened material.

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.



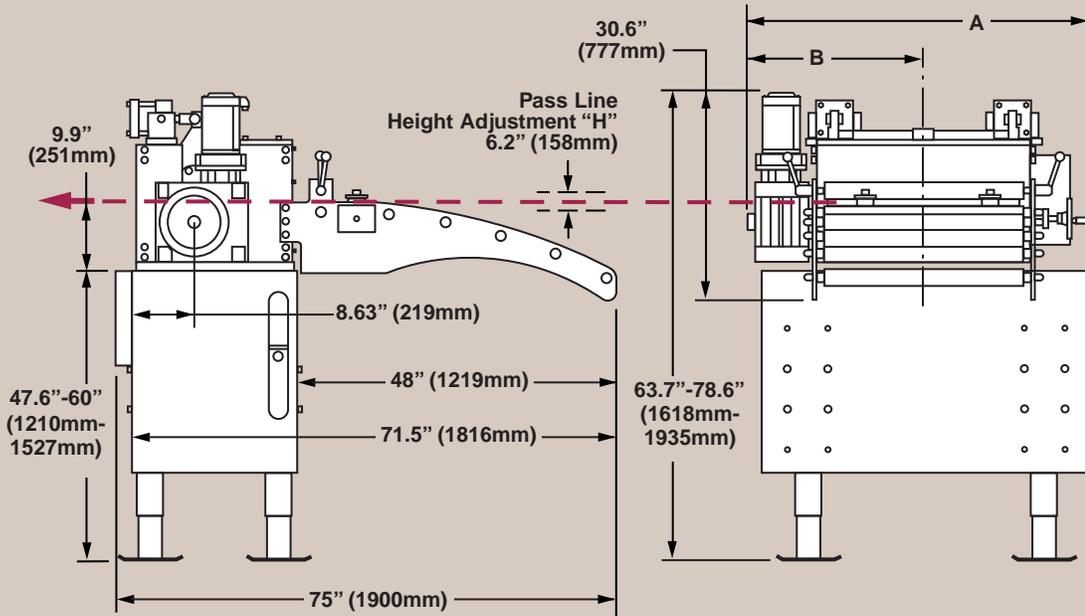
MAXIMUS SPECIFICATIONS

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



DIMENSIONS - inches		
Model	A	B
SRF 612	38.9	20.25
SRF 618	44.9	23.25
SRF 624	50.9	26.25
SRF 636	62.9	32.25
SRF 648	74.9	38.25
SRF 660	86.9	44.25
SRF 672	98.9	50.25

DIMENSIONS - mm		
Model	A	B
SRF 612	987	514
SRF 618	1139	591
SRF 624	1292	667
SRF 636	1597	819
SRF 648	1901	972
SRF 660	2206	1124
SRF 672	2511	1276

SPECIFICATIONS - USA											
Model	Feed Roll		Capacity at Full Width		Pulling Power		AC Power				
	Dia.	Opening	(in.)	(in.)	Peak	Cont.	V	Ph	Hz	A	
SRFHD-612	6	.500	.500	12	3360	1444	480	3	60	16	
SRFHD-618	6	.500	.430	18	3360	1444	480	3	60	16	
SRFHD-624	6	.500	.375	24	3360	1444	480	3	60	16	
SRFHD-636	6	.500	.312	36	3360	1444	480	3	60	16	
SRFHD-648	6	.500	.250	48	3360	1444	480	3	60	16	
SRFHD-660	6	.500	.190	60	3360	1444	480	3	60	16	
SRFHD-672	6	.500	.150	72	3360	1444	480	3	60	16	

SPECIFICATIONS - METRIC											
Model	Feed Roll		Capacity at Full Width		Pulling Power		AC Power				
	Dia.	Opening	(mm)	(mm)	Peak	Cont.	V	Ph	Hz	A	
SRFHD-612	150	12.7	12.7	300	14900	6400	480	3	60	16	
SRFHD-618	150	12.7	11.0	455	14900	6400	480	3	60	16	
SRFHD-624	150	12.7	9.5	610	14900	6400	480	3	60	16	
SRFHD-636	150	12.7	8.0	915	14900	6400	480	3	60	16	
SRFHD-648	150	12.7	6.3	1220	14900	6400	480	3	60	16	
SRFHD-660	150	12.7	4.8	1525	14900	6400	480	3	60	16	
SRFHD-672	150	12.7	3.8	1830	14900	6400	480	3	60	16	

MAXIMUS ELECTRONIC FEATURES

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

Backlit LCD display and predetermined six digit batch counter

Inch/metric programmability

Operator interface terminal with numeric input keypad

Twelve foot (3.5 meter) retractable cord for jog pendant

"Feed before Press" or "Press before Feed" priority mode selection

Dual key locks on oil tight and dust free door

Jog to feed length capability

Comprehensive indicator lights provide display of operating status

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

On/Off Lockable power disconnect switch

New Allen Bradley Ultra Performance Digital Servo Drive manages roll motion through an encoder feedback system

Hand-held, portable pendant used for threading material into the die. Jog forward or reverse push button control with open/close rolls selector switch

Prewired shielded encoder cable with quick disconnect military style connector

Motor connection cable with quick disconnect military style connector

Emergency Stop Push/Pull Mushroom Reset Button

Filtered Climate Controlled Cooling Fan

Free standing and portable control console

NEMA 4/12/13 control enclosure with ISO certified electrical components wired to JIC, NEC and CE standards

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

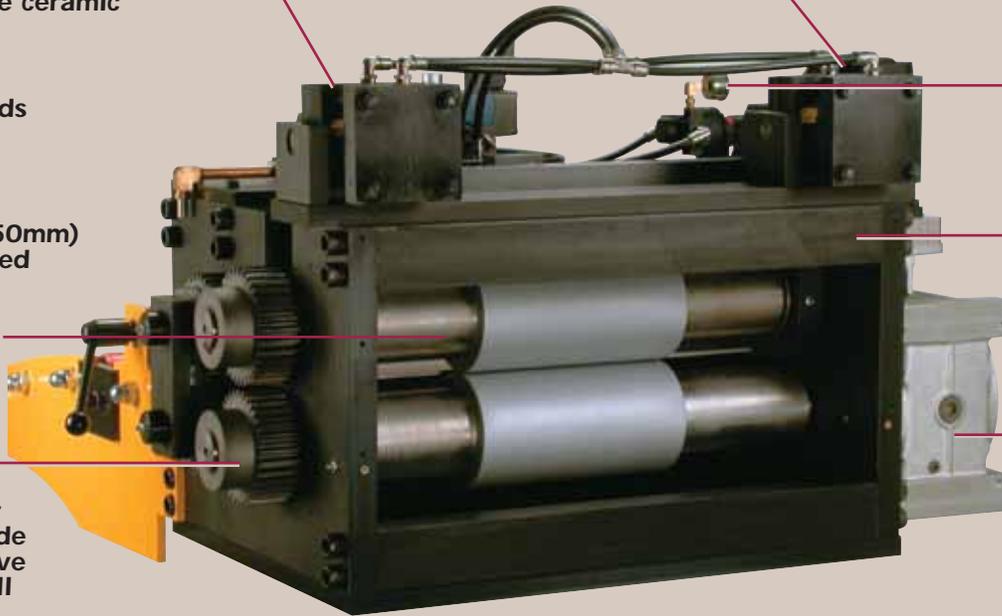
Six inch (150mm) diameter feed rolls are texturized for positive grip

Four precision cluster spur gears provide positive drive of upper roll

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



Quick disconnect military connectors on motor and encoder cables

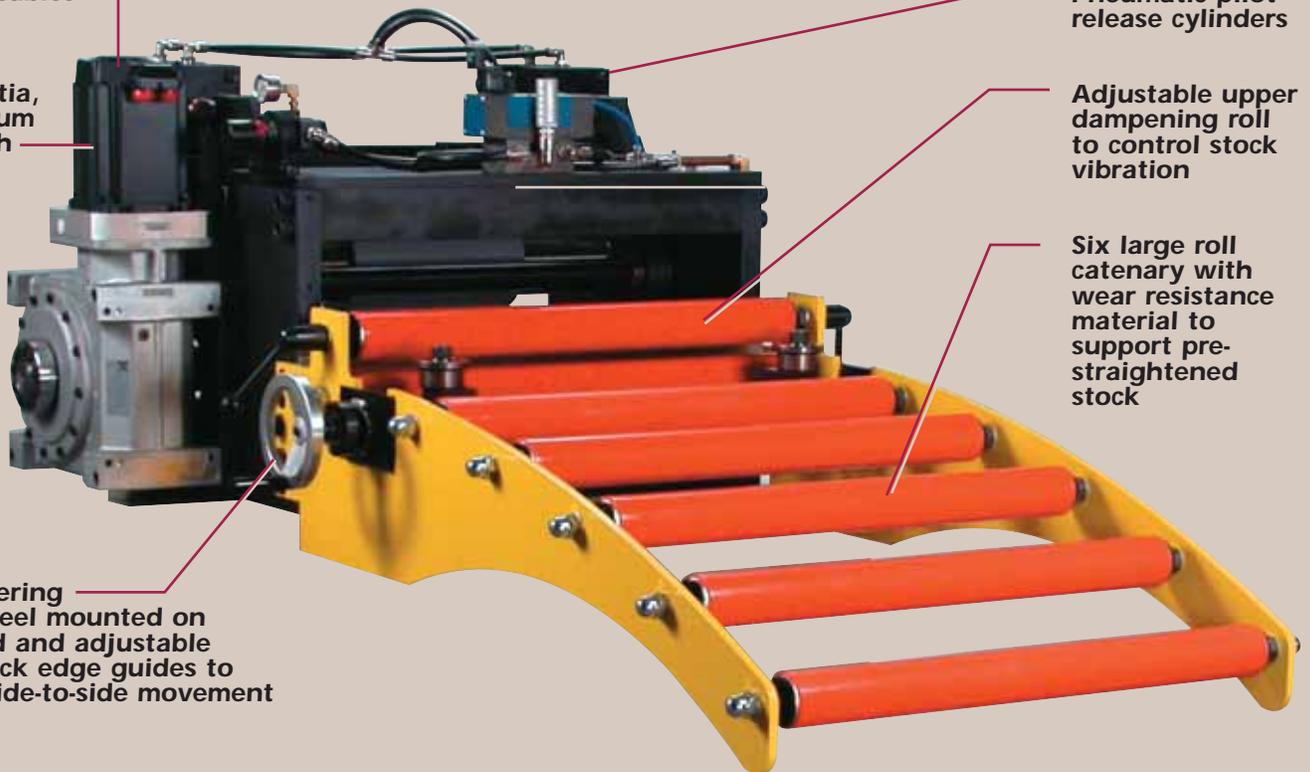
Low inertia, neodymium rare earth magnet servo motor

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

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



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



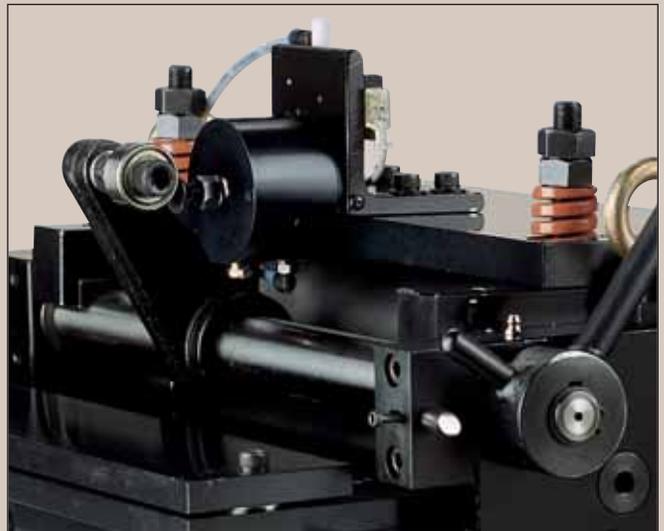
SERVO PILOT RELEASE



ROTARY STRIP MATERIAL ENCODER



PNEUMATIC PILOT RELEASE



INTEGRAL PROGRAMMABLE
ROTARY LIMIT SWITCH

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

PRECISION PRESS ENCODER



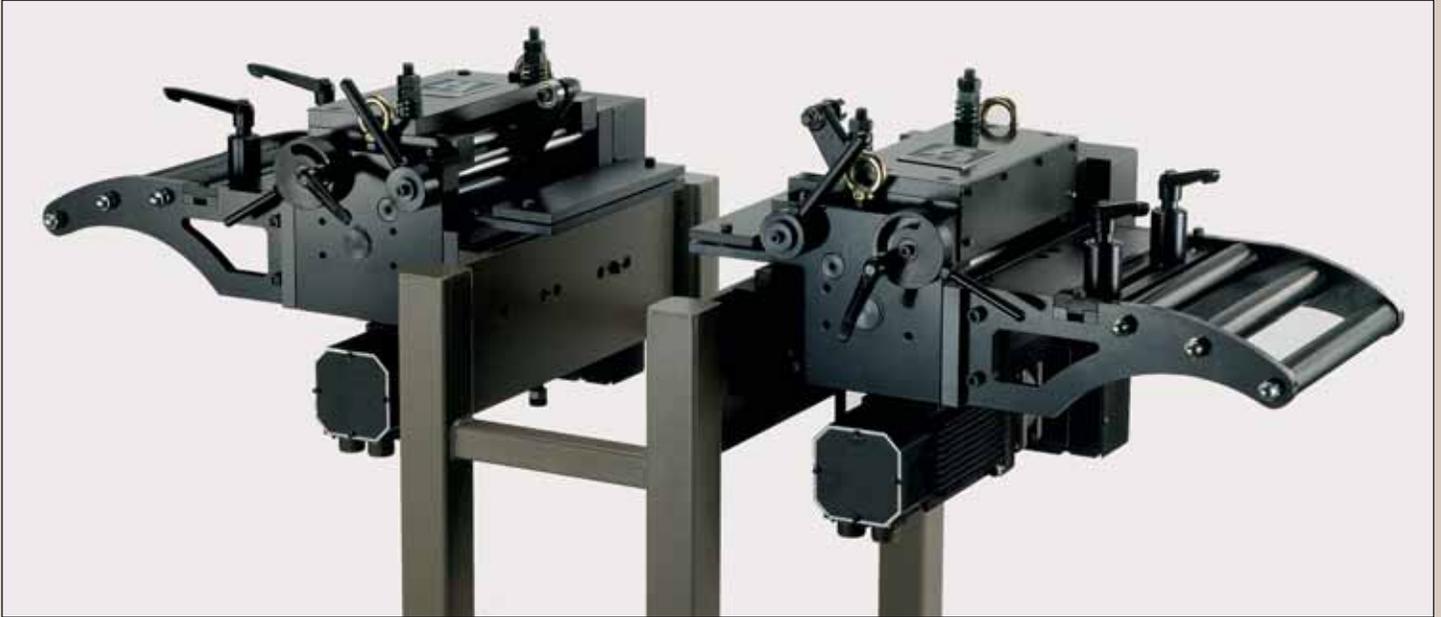
CUT-TO-LENGTH SYSTEM



DOUBLE SERVO ROLL FEED

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.



EDGE SPECIFICATIONS – USA

Model	Feed Roll		Capacity at Full Width		Pulling Power		AC Power			
	Dia. (in.)	Opening (in.)	(in.)	(in.)	Peak (lbs.)	Cont. (lbs.)	V	Ph	Hz	A
SRFD 100	2.9	.098	.080	4	210	70	115	1	60	18
SRFD 125	3.0	.138	.100	5	252	84	115	1	60	18
SRFD 200	3.0	.138	.080	8	252	84	115	1	60	18
SRFD 300	3.0	.138	.080	12	398	132	115	1	60	18
SRFD 400	3.0	.138	.060	16	398	132	115	1	60	18
SRFD 500	3.0	.138	.050	20	398	132	115	1	60	18
SRFD 600	3.0	.138	.040	24	398	132	115	1	60	18

EDGE SPECIFICATIONS – METRIC

Model	Feed Roll		Capacity at Full Width		Pulling Power		AC Power			
	Dia. (mm)	Opening (mm)	(mm)	(mm)	Peak (N)	Cont. (N)	V	Ph	Hz	A
SRFD 100	57	2.5	2.0	100	935	311	230	1	50	18
SRFD 125	75	3.5	2.5	125	1120	373	230	1	50	18
SRFD 200	75	3.5	2.0	200	1120	373	230	1	50	18
SRFD 300	75	3.5	2.0	300	1770	587	115	1	50	18
SRFD 400	75	3.5	1.5	400	1770	587	115	1	50	18
SRFD 500	75	3.5	1.3	500	1770	587	115	1	50	18
SRFD 600	75	3.5	1.0	600	1770	587	115	1	50	18

ADVANTAGE SPECIFICATIONS – USA

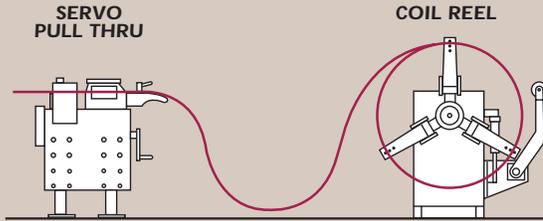
Model	Feed Roll		Capacity at Full Width		Pulling Power		AC Power			
	Dia. (in.)	Opening (in.)	(in.)	(in.)	Peak (lbs.)	Cont. (lbs.)	V	Ph	Hz	A
SRFD 5	3.5	.138	.138	5	624	230	230	1	60	18
SRFD 8	3.5	.138	.138	8	624	230	230	1	60	18
SRFD 12	3.5	.138	.138	12	624	230	230	1	60	18
SRFD 16	3.5	.138	.120	16	624	230	230	1	60	18
SRFD 20	3.5	.138	.105	20	624	230	230	1	60	18
SRFD 24	3.5	.138	.090	24	624	230	230	1	60	18
SRFD 28	3.5	.138	.105	28	1092	400	230	1	60	18
SRFD 32	3.5	.138	.090	32	1092	400	230	1	60	18
SRFD 36	3.5	.138	.075	36	1092	400	230	1	60	18
SRFXD 5	3.5	.188	.188	5	1092	400	230	1	60	18
SRFXD 8	3.5	.188	.180	8	1092	400	230	1	60	18
SRFXD 12	3.5	.188	.165	12	1092	400	230	1	60	18
SRFXD 16	3.5	.188	.150	16	1092	400	230	1	60	18
SRFXD 20	3.5	.188	.135	20	1092	400	230	1	60	18
SRFXD 24	3.5	.188	.120	24	1092	400	230	1	60	18

ADVANTAGE SPECIFICATIONS – METRIC

Model	Feed Roll		Capacity at Full Width		Pulling Power		AC Power			
	Dia. (mm)	Opening (mm)	(mm)	(mm)	Peak (N)	Cont. (N)	V	Ph	Hz	A
SRFD 5	90	3.5	3.5	125	2780	1025	230	1	50	18
SRFD 8	90	3.5	3.5	200	2780	1025	230	1	50	18
SRFD 12	90	3.5	3.5	300	2780	1025	230	1	50	18
SRFD 16	90	3.5	3.0	400	2780	1025	230	1	50	18
SRFD 20	90	3.5	2.6	500	2780	1025	230	1	50	18
SRFD 24	90	3.5	2.3	600	2780	1025	230	1	50	18
SRFD 28	90	3.5	2.7	700	4860	1780	230	1	50	18
SRFD 32	90	3.5	2.3	800	4860	1780	230	1	50	18
SRFD 36	90	3.5	1.9	900	4860	1780	230	1	50	18
SRFXD 5	90	4.7	4.8	125	4860	1780	230	1	50	18
SRFXD 8	90	4.7	4.6	200	4860	1780	230	1	50	18
SRFXD 12	90	4.7	4.2	300	4860	1780	230	1	50	18
SRFXD 16	90	4.7	3.8	400	4860	1780	230	1	50	18
SRFXD 20	90	4.7	3.4	500	4860	1780	230	1	50	18
SRFXD 24	90	4.7	3.0	600	4860	1780	230	1	50	18

SERVO with PULL THRU STRAIGHTENER

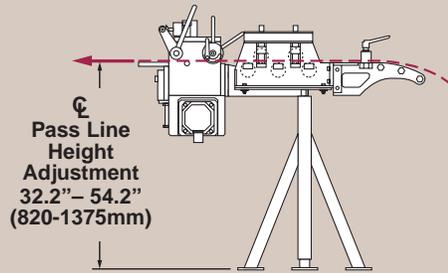
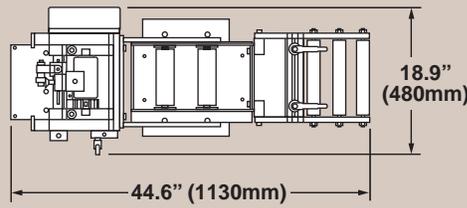
These standard Cabinet-Mounted Servo Feeds are equipped with five-roll, pull-thru stock straighteners. The compact design is ideal for applications where saving floor space is essential. Manual or powered pinch rolls to facilitate loading are optional. A generous hand crank for pass-line height adjustment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

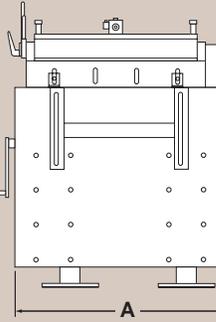
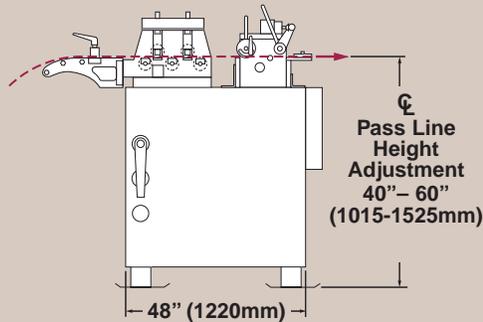
ADVANTAGE STAND



SPECIFICATIONS - USA										
Model	Feed Roll		Capacity at Full Width		Pulling Power		AC Power Input			
	Dia.	Opening	(in.)	(in.)	Peak	Cont.	V	Ph	Hz	A
SRF-6S	3.5	.138	.100	6	624	230	230	1	60	18
SRF-12S	3.5	.138	.100	12	624	230	230	1	60	18

SPECIFICATIONS - METRIC										
Model	Feed Roll		Capacity at Full Width		Pulling Power		AC Power Input			
	Dia.	Opening	(mm)	(mm)	Peak	Cont.	V	Ph	Hz	A
SRF-6S	90	3.5	2.5	150	2780	1023	230	1	50	18
SRF-12S	90	3.5	2.5	300	2780	1023	230	1	50	18

ADVANTAGE CABINET



DIMENSIONS - inches	
Model	A
SRF-12S	32.5
SRF-18S	32.5
SRF-24S	36.5
SRF-30S	44.5
SRF-36S	48.5

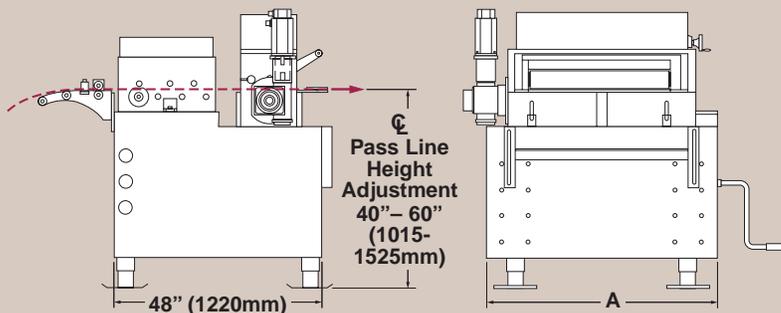
DIMENSIONS - mm	
Model	A
SRF-12S	796
SRF-18S	796
SRF-24S	895
SRF-30S	1090
SRF-36S	1188

Specify L to R, or R to L

SPECIFICATIONS - USA										
Model	Feed Roll		Capacity at Full Width		Pulling Power		AC Power Input			
	Dia.	Opening	(in.)	(in.)	Peak	Cont.	V	Ph	Hz	A
SRF 12S	3.5	.138	.100	12	624	230	230	1	60	18
SRF 18S	3.5	.138	.075	18	624	230	230	1	60	18
SRF 24S	3.5	.138	.065	24	624	230	230	1	60	18
SRF 30S	3.5	.138	.060	30	1092	400	230	1	60	18
SRF 36S	3.5	.138	.055	36	1092	400	230	1	60	18

SPECIFICATIONS - METRIC										
Model	Feed Roll		Capacity at Full Width		Pulling Power		AC Power Input			
	Dia.	Opening	(mm)	(mm)	Peak	Cont.	V	Ph	Hz	A
SRF 12S	90	3.5	2.5	300	2780	1023	230	1	50	18
SRF 18S	90	3.5	1.9	450	2780	1023	230	1	50	18
SRF 24S	90	3.5	1.7	600	2780	1023	230	1	50	18
SRF 30S	90	3.5	1.5	760	4860	1780	230	1	50	16
SRF 36S	90	3.5	1.4	900	4860	1780	230	1	50	18

MAGNUM CABINET



DIMENSIONS - inches	
Model	A
SRFM-12S	32.5
SRFM-18S	32.5
SRFM-24S	38.5
SRFM-30S	38.5
SRFM-36S	50.5
SRFM-48S	62.5

DIMENSIONS - mm	
Model	A
SRFM-12S	796
SRFM-18S	796
SRFM-24S	943
SRFM-30S	943
SRFM-36S	1237
SRFM-48S	1531

Specify L to R, or R to L

SPECIFICATIONS - USA										
Model	Feed Roll		Capacity at Full Width		Pulling Power		AC Power Input			
	Dia.	Opening	(in.)	(in.)	Peak	Cont.	V	Ph	Hz	A
SRF-M12S	5	.315	.140	12	1080	540	230	1	60	28
SRF-M18S	5	.315	.130	18	1080	540	230	1	60	28
SRF-M24S	5	.315	.115	24	1080	540	230	1	60	28
SRF-M30S	5	.315	.095	30	1080	540	230	1	60	28
SRF-M36S	5	.315	.085	36	1080	540	230	1	60	28
SRF-M48S	5	.315	.070	48	1080	540	230	1	60	28

SPECIFICATIONS - METRIC										
Model	Feed Roll		Capacity at Full Width		Pulling Power		AC Power Input			
	Dia.	Opening	(mm)	(mm)	Peak	Cont.	V	Ph	Hz	A
SRF-M12S	120	8	3.6	300	4800	2400	230	1	50	28
SRF-M18S	120	8	3.3	450	4800	2400	230	1	50	28
SRF-M24S	120	8	2.9	600	4800	2400	230	1	50	28
SRF-M30S	120	8	2.4	760	4800	2400	230	1	50	28
SRF-M36S	120	8	2.2	900	4800	2400	230	1	50	28
SRF-M48S	120	8	1.8	1220	4800	2400	230	1	50	28

Note: Speed will be reduced approximately 25% from standard model rates when using a Pull Thru Straightener.

LOOP LESS™

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.

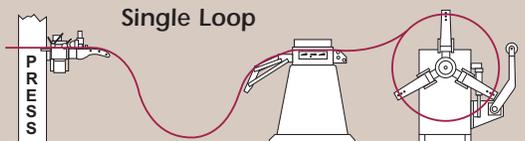


CONVENTIONAL PRESSROOMS

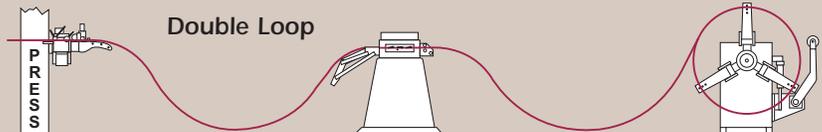
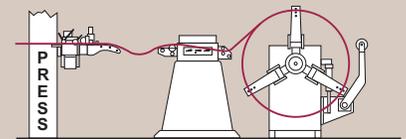


CONVENTIONAL PRESSROOM LAYOUTS

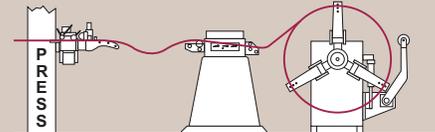
LOOP LESS™



Maximum floor space for material up to .065" (1.6mm)



Maximum floor space for material up to .128" (3.2mm)



SEQUENTIAL



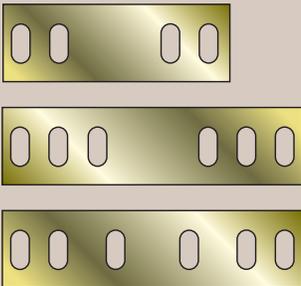
Another P/A innovation is the new sequential control for all Edge, Advantage, Magnum and Maximus models. The sequential software that provides the ability for step feeding, tool signaling, gagging and multiple programs off of one press or punching machine easily obtains flexible manufacturing using simple 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.

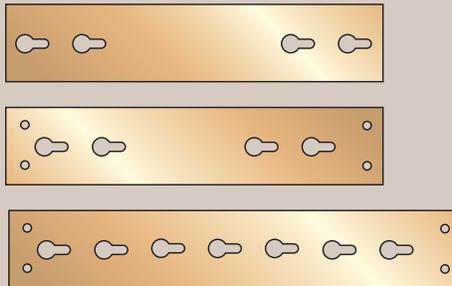
Easy step-by-step programming and job storage provide maximum flexibility and reduced set-up time.

TYPICAL PARTS PRODUCTION

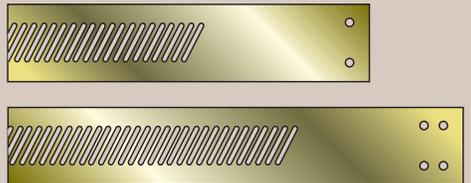
Straps and Hangers



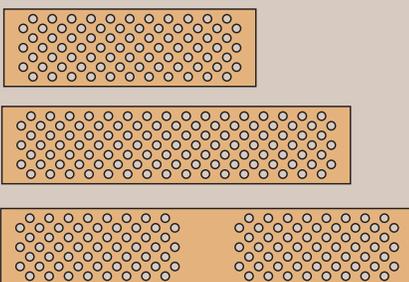
Adjustable Shelving and Hangers



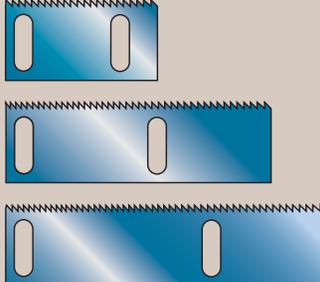
Hose Clamps



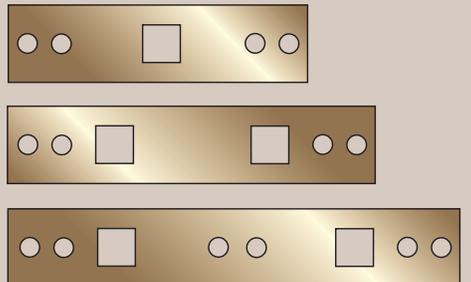
Perforating – Filter Screens, Electronic Shielding



Hole Saw Blades or Hack Saw Blades



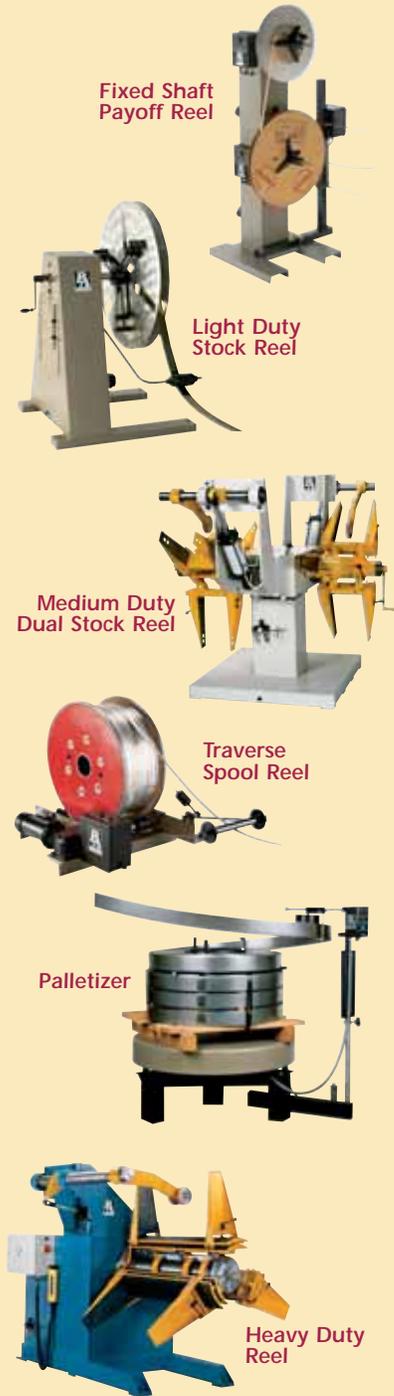
Light Fixtures and Drawer Slide Frames



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

Heavy Duty Reel



STRAIGHTENERS



Leveler Straightener

Flip Top Straightener

Medium Duty Straightener

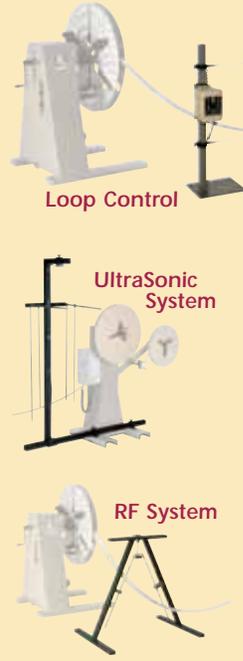
Precision Reel Straightener

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

FEEDING AND COIL HANDLING EQUIPMENT

The diagram illustrates the sequential stages of coil handling equipment:

- FEEDS:** Represented by a red arrow icon. Equipment includes:
 - Ultra Advantage Servo Feed
 - Precision Air Feed
 - Ultra Magnum Servo Feed
 - Mini Servo Feed
 - Ultra Edge Servo Feed
- CUTTERS:** Represented by a red scissors icon. Equipment includes:
 - Micro Feed
 - Ram Scrap Chopper
 - Air Scrap Chopper
 - Pneumatic Scrap Chopper
 - Advantage Double Roll Feed System
- TRANSPORTERS:** Represented by a red icon of a coil on a transporter. Equipment includes:
 - TP-3
 - TP-10
 - TP-40
 - TP-70
 - TP-140
- WINDERS:** Represented by a red spiral icon. Equipment includes:
 - 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)

Press Speed (Strokes Per Minute)		40	60	70	80	100	120	150	200	250	300
Efficiency Rate	100%	2400	3600	4200	4800	6000	7200	9000	12000	15000	18000
	90%	2160	3240	3780	4320	5400	6480	8100	10800	13500	16200
	80%	1920	2800	3360	3840	4800	5760	7200	9600	12000	14400
	75%	1800	2700	3150	3600	4500	5400	6750	9000	11250	13500
	70%	1680	2520	2940	3360	4200	5040	6300	8400	10500	12600
	60%	1440	2160	2520	2880	3600	4320	5400	7200	9000	10800
	50%	1200	1800	2100	2400	3000	3600	4500	6000	7500	9000

STRIP CONSUMPTION - FEET PER MINUTE

Feed Length (Inches)		0.5	1	1.5	2	3	4	5	6	8	10	12	16
Press Speed (Strokes Per Minute)	40	1.7	3.3	5.2	6.5	10	13	16	20	26	33	40	52
	60	2.5	5	7.5	10	15	20	25	30	40	50	60	80
	70	2.9	5.8	8.8	11	17	23	29	35	46	57	70	92
	80	3.3	6.6	10	13	20	26	33	40	52	66	80	105
	100	4.2	8.2	13	16	25	33	41	50	66	82	100	131
	120	5.0	10	15	20	30	40	50	60	80	100	120	160
	150	6.3	12	18	25	37	50	62	75	100	125	150	200
	200	8.3	16	25	34	50	66	82	100	131	164	200	266
	250	10.4	21	31	41	62	83	103	125	164	205	250	328
	300	12.5	25	40	50	75	100	125	150	200	250	300	400

COIL ROTATIONAL SPEEDS - REVOLUTIONS PER MINUTE

Strip Consumption (Feet Per Minute)		5	15	30	45	60	75	90	120	150	180	210	240	270	300	330	360
Coil Diameter (Inches)	60	0.3	1.0	1.9	2.9	3.8	4.8	5.7	7.6	9.5	11.5	13.4	15.3	17.2	19.1	21.0	22.9
	48	0.4	1.2	2.4	3.6	4.8	6.0	7.2	9.5	11.9	14.3	16.7	19.1	21.5	23.9	26.3	28.6
	36	0.5	1.6	3.2	4.8	6.4	8.0	9.5	12.7	15.9	19.1	22.3	25.5	28.6	31.8	35	38.2
	24	0.8	2.4	4.8	7.2	9.5	11.9	14.3	19.1	23.9	28.6	33.4	38.2	43.0	47.7	52.5	57.3
	18	1.1	3.2	6.4	9.5	12.7	15.9	19.1	25.5	31.8	38.2	44.6	50.9	57.3	63.7	70.0	76.4
	12	1.6	4.8	9.5	14.3	19.1	23.9	28.6	38.2	47.7	57.3	66.8	76.4	85.9	95.9	105.0	114.6

COIL WEIGHT REFERENCE CHART

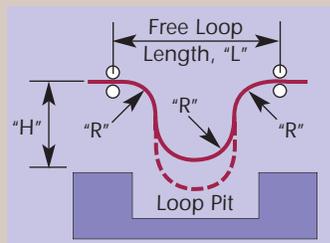
Based on 1 Inch Strip Width - Steel.
Factor From Chart x Width of Coil = Total Coil Weight.

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

Inside Diameter	6	8	10	12	14	16	18	20	22	24
Outside Diameter	10	15	-	-	-	-	-	-	-	-
	12	25	15	-	-	-	-	-	-	-
	14	35	20	20	-	-	-	-	-	-
	16	50	40	35	25	-	-	-	-	-
	18	65	60	50	40	30	-	-	-	-
	20	80	75	65	55	45	35	-	-	-
	24	120	110	105	95	85	70	55	40	-
	28	170	160	150	140	130	120	105	85	65
	32	220	210	205	195	185	170	155	140	120
	36	280	270	265	255	245	230	215	200	180
	40	350	340	330	325	310	300	285	265	250
	44	420	410	405	400	385	375	360	340	325
	48	500	490	485	480	470	455	440	425	405
	52	590	580	575	570	560	545	530	510	495
	56	690	680	670	665	655	640	625	610	590
60	800	790	780	770	760	745	730	710	695	

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

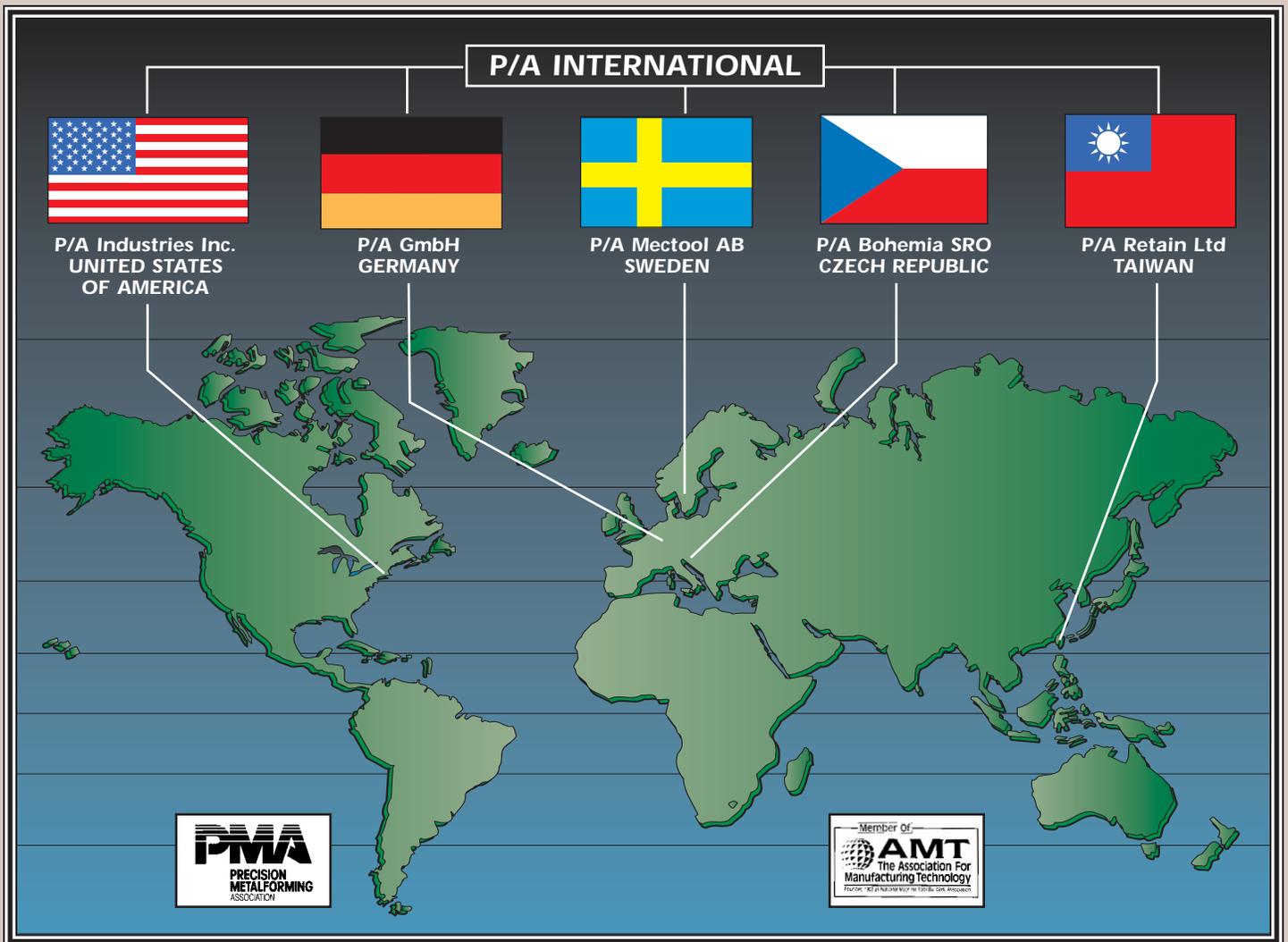


"R" = Radius desirable to avoid distortion of material in free loop calculated at approximately 360 times metal thickness.

Loop Pit can provide 2 inches of additional slack material for each inch of depth; once "H" is equal to at least two times "R".

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

Material Thickness T, (Ins.)	Free Loop Length L, (Ins.)	Pass Line Height H, (Ins.)							
		36	42	48	54	60	66	72	
		Accumulated Slack							
0.015	22	63	75	87	99	111	123	135	
0.031	45	53	65	77	89	101	113	125	
0.062	90	34	46	58	70	82	94	106	
0.093	135	22	30	40	51	62	74	86	
0.125	180	16	22	29	38	47	57	67	
0.187	270	10	14	19	24	30	37	57	
0.250	360	8	10	14	20	22	27	32	



WARRANTY

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.

WARNING !

This equipment offers various means of operating metal forming machines, delivers the material or parts to the machine, or removes material, parts, or scrap from the machine. The operators 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.



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