# NC Servo Feeder

High Quality Products for Coil Feeding in Press Room



- Minimum Backlash Gearbox is used for better accuracy & higher torque.
- The accuracy is made by a double measuring system servo motor resolver + measuring wheel on sheet.
- Special TDC arrangement for transmission of power from lower shaft to upper shaft which results in min backlash during too / fro motions.



# **High Speed Series**

### **High Speed Series with Pneumatic Pilot Release**

High Speed Series with Pneumatic Pilot release mechanism is suitable for electrical motor stamping & electrical lamination mfg. industries. Special High Frequency & High Flow Solonoid Valves are using to achive pilot release at high speed of 24 to 30 mpm.



High Speed Series							
Model Max Width Thickness Velocity in mm in mm							
PRSF-A-200-HSS	200	0.1 - 1.0	120				
PRSF-A-300-HSS	300	0.1 - 1.0	120				
PRSF-A-400-HSS	400	0.1 - 0.8	120				

### **High Speed Series with Mechanical Pilot Release**

High Speed Series with Mechanical Pilot release is suitable for electrical motor stamping & electrical lamination mfg. industries where line speed is uptill 40 mpm.



High Speed Series with Mechanical Pilot Release								
Model	Model Max Width Thickness Velocity in mm							
PRSF-B-200-HSS	200	0.1 - 1.0	120					
PRSF-B-300-HSS	300	0.1 - 1.0	120					
PRSF-B-400-HSS	400	0.1 - 0.8	120					

# **Top High Speed Series**

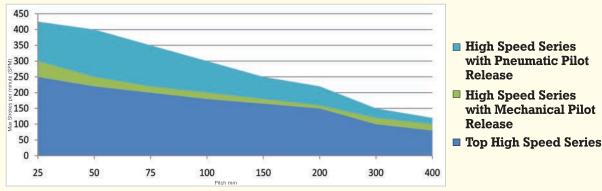
In Top High Speed Series, Feed and Pilot release are done by two separate servo motors. This enables to achieve desired line speed uptill 60 mpm with high accuracy.



Top High Speed Series							
Model Max Width Thickness Velor in mm Range in mm							
PRSF-A-200-THSS	200	0.1 - 1.0	200				
PRSF-A-300-THSS	300	0.1 - 1.0	200				
PRSF-A-400-THSS	400	0.1 - 0.8	200				

# **High Speed Series Feeding Rates**

Max Stokes per minute in continuous running mode for a feeding angle of  $180^{\circ}$ 



• All NC Servo Feeder (in above range) can achieve pilot roll release for SPM as mentioned above.













# **Normal Speed Series**

Extra Light Series (ELS)								
Model	Max Width in mm		ickness ge in mm With Ma Width in		Max Section in mm <sup>2</sup>	Max Velocity in MPM		
		Min	Max	Width III IIIII		111 1411 141		
PRSF-AA-200-ELS	200	0.1	2.0	1.5	300	90		
PRSF-AA-300-ELS	300		1.5	1.0	300	90		

Light Series (LS)								
Model	Max Width in mm	Thickness Range in mm		Max Thickness with Max Width in mm	Max Section in mm <sup>2</sup>	Max Velocity in MPM		
		Min	Max	wiutii iii iiiiii		III IVIF IVI		
PRSF-A-200-LS	200			2.0	400	90		
PRSF-A-300-LS	300	0.1	3.0	1.6	480	90		
PRSF-A-400-LS	400			1.2	480	90		

Mid Series (MS)									
Model	Max Width in mm	Range in mm		Max Thickness with Max Width in mm	Max Section in mm <sup>2</sup>	Max Velocity in MPM			
		Min	Max	width in iniii		111 1411 141			
PRSF-B-200-MS	200			3.0	600	90			
PRSF-B-300-MS	300	0.3	0.3	0.3	0.3	3.5	2.5	750	90
PRSF-B-400-MS	400			2.0	800	90			
PRSF-B-600-MS	600			2.5	1500	90			
PRSF-B-800-MS	800	0.3	2.5	1.6	1280	90			
PRSF-B-1000-MS	1000			1.4	1400	90			

Extra Mid Series (EMS)								
Model	Max Width in mm	Thickness Range in mm		Max Thickness with Max Width in mm	Max Section in mm <sup>2</sup>	Max Velocity in MPM		
			Max	width in iniii		111 1411 141		
PRSF-BH-300-EMS	300		4.0	4.0	1200	90		
PRSF-BH-400-EMS	400	0.3	4.0	3.0	1200	90		

Heavy Series (HS)										
Model	Max Width in mm	Thickness Range in mm		Max Thickness with Max Width in mm	Max Section in mm <sup>2</sup>	Max Velocity in MPM				
		Min	Max	Width in iniii		111 1411 141				
PRSF-CH-300-HS	300	0.5		6.0	1800	90				
PRSF-CH-400-HS	400		0.5	0.5	0.5			5.0	2000	90
PRSF-CH-500-HS	500					6.0	4.8	2400	90	
PRSF-CH-600-HS	600			6.0	4.0	2400	90			
PRSF-CH-800-HS	800						3.0	2400	90	
PRSF-CH-1000-HS	1000			2.0	2000	90				

Extra Heavy Series (EHS)								
Model	Max Width in mm	Thickness Range in mm		Max Thickness with Max Width in mm	Max Section in mm <sup>2</sup>	Max Velocity in MPM		
		Min	Max	width in iniii		111 1411 141		
PRSF-D-200-EHS	200			10.0	2000	20		
PRSF-DH-400-EHS	400	1.0	1.0 10.0	10.0	8.0	3200	20	
PRSF-DH-600-EHS	600			6.3	3780	40		

Press Room in their endure to bring latest technology for feeder, have brought NC Roll Feeder technology for presses in year 2001. Today with installation in various parts of country to handle strip width from 100 mm to 1300 mm & thickness from 0.05 mm to 10.00 mm fully programmable units have been interlinked with small / medium / large presses.

Various models have been manufactured & following standards models are available in short deliveries.

#### **FEATURES**

#### MECHANICAL FEATURES.

- Stabilized Steel frame construction
- Gear driven upper Roll with anti-backlash features to ensure non-slip, positive feeding
- Quick adjustment for stock thickness
- Finished Rolls
- Permanently sealed precision Roll Bearings, no lubrication required
- Low Inertia Timing Sheaves with reinforced Gear Belt
- Roll Release Actuation Lever that adapts to either Mechanical or Pneumatic Pilot Release
- Entry Support Rolls / Cascade Rolls
- Individually adjustable Roller Stock Guides
- Roll Release Lever for Strip insertion;
- Adjustable Mounting Bracket with Transition Plate & Jack Screw for press line adjustment ± 50mm;
- Exit anti-buckle Stock Bridge.

#### **SERVO SYSTEM FEATURES.**

- Servo Motor, Drive, PLC, HMI Make All from Mitsubishi, Japan. Others on request.
- High performance Servo Drive and Low inertia, brushless AC Servo Motor with high energy.
- Precision incremental Optical Encoder (In built) to provide velocity & position loop feed back.
- Industrial Hardened Terminal: Easy-to-read solid state Interface Terminal display area with a backlit 4 line display, sealed membrane keypad with tactile feedback.
- User Friendly Interface: The Interface Terminal directs the operator with clear, descriptive message in plain English. Pressing the Help Key while in different screens directs the operator with instructions on how to change parameters or look at information. Different modes off operation can be selected as well as jogging forward or reverse in manual mode.

- Batch counting: The operator chooses the number of parts to make & the Interface Terminal will display a message when the count is reached. Up to 999,999.
- Advanced Feed-Angle Monitoring: Continually monitors the feed-angle & the material position.
- Compact electronic Control Enclosure with built-in Operation Panel that can be easily adapted for press mounting or used as a freestanding console.

#### ADDITIONAL FEATURES.

- Accuracy to ± 0.025mm roll position is achieved through, closed-loop servo control & precision gearing.
- When connected to the press control, advanced diagnostic protect machinery & dies by automatically stopping the press if a fault is detected.
- On-Screen message displayed in English.
- Smoother feeder operations with controlled acceleration profiles.
- Up to 99 parts can be pre-programmed by part number, each having unique length, feed rate, acceleration & jerk configuration.
- Multiple cycle choices-feed before press, press before feed, or intermittent operations - allow the user to set up the roll feed specific to his needs.
- Input Power: 230 / 415V, 3 Phase. No Transformer Required.

#### **ACCESSORIES & OPTIONS**

- Stock Oiler.
- Electronic Cam Kit:
  - Programmable Rotary Limit Switch for Setting of the Safe Feed and Pilot Release Windows, with digital crank rotation position and Press Speed Indicator.
- Adjustable Pilot Release Cam Pin for mounting to press ram.
- Pneumatic/mechanical/servo roll release for pilot release.
- Proximity sensor to initiate feed cycle instead of limit switch.
- Screw Adjustable Press Mounting Bracket.
- Hydraulic Jack Press Mounting Bracket.
- Special Roll Finish.
- Pull-Through Straightener.
- Remote Pendant with Forward and Reverse Jog Push Buttons.
- Additional measuring wheel on strip for measurement.
- Sequential Press feeding to enter no of pitches in a single setting.



## **Normal Speed Series Feeding Rates**

The max Mechanical Press Speed (in SPM) derives from coil feeding pitch and available feeding angle. The table gives the press rate depending on these parameters.

For the 3 most popular feeding angle values

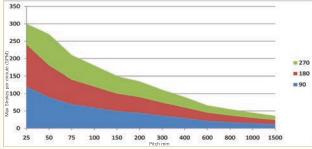
 $90^\circ$  : This value allows short pitches but with high tooling & press safety. Used for complex bending & drawing operations

180°: This is the popular average value.

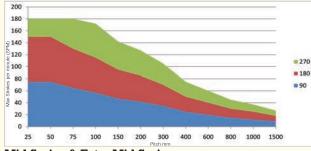
270°: This value gives maximum feeding time in case of simple and safe tool operation. Example: cutting.



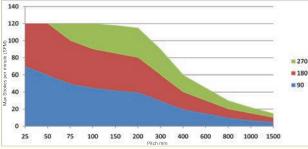
Max Stokes per minute in continuous running mode for a feeding angle of 90° - 180° - 270°



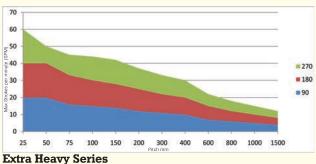
**Extra Light Series & Light Series** 



Mid Series & Extra Mid Series



**Heavy Series** 



- Extra neavy Series
- All NC Servo Feeder (in above range) can achieve pilot roll release uptill 180 SPM only.
- The SPM in feeding rates chart may vary by the load to feeding machine by material, stress, etc.

The above parameters are for the material having tensile strength 40kgf/mm² max.



Transformer Lamination
Punching, Notching & Variable
Cut to Length Line

The above parameters are for the material having tensile strength 40kgf/mm<sup>2</sup> max.

Technical specifications are indicative and subject to change to suit end application.

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