

# **SYNERGY AUTOMATION SYSTEMS**

Design ★ Manufacture ★ Maintenance



Press Shop Machines | Material Handling Equipments | Wire Product Solutions SPM's | Customized Automation | Bending Machines | Welding Automation



### **Vertical Decoiler**

Vertical Decoilers are available in both Motorised (MVD) and Non-Motorised (NVD) models. The Machines are equipped with screw/link operating, self-centralising expanding mandrel, manually operated by a built in adjusting handle. Coil support arms give quick loading and well balanced coil location. Quick removable guide rings are provided for coil support and safety. A Non-Motorised Machine include an adjustable drag brake while in a Motorised Machine motor-gear box drive is operated via an adjustable torque limiter to ensure safe operation.

Standard Models available in wide range from 150 Kgs up to 4000 Kgs. Higher capacity Models are also available on demand.

### **Double Headed Decoiler**

The Double Headed Decoiler Models minimizes the down time of coil changing. It is possible to load the next coil while decoiling the first without stopping the production. By simply unlocking and indexing the next coil comes in line with the press.

Standard Models available from 150 Kgs to 4000 Kgs.



### **Horizontal Decoiler**

Horizontal uncoiling is a well proven and highly effective method of uncoiling smaller width strip into a press. Simply place coil on the turntable, take the end of the strip from the centre of the coil and feed it into the press. The horizontal stock reel takes care of the rest, unwinding and stopping according to demand.

We offer standard Model with Motorised (MHD) and Non-Motorised (NHD) option from coil weight of 100 Kgs to 1000 Kgs. Non-Motorised Option is suitable for coils of spring nature.



### **Straightener**

All rollers are mounted in precision needle roller bearings. Each of the three upper rollers has a central adjustment screw for quick easy setting. Both pinch drive rollers and all lower straightening rollers are geared together to achieve maximum traction and minimise roller slip.

In a Motorised version, Straightener head is mounted on a sturdy cabinet enclosing Motor, Variable Speed Transmission including Touch Type Loop Control.

Straightener Models are available from strip thickness 0.2 mm - 8.0 mm and width up to 600 mm.



### **Feed Combination Unit**

It is a conventional combination where two independent units are mounted on one base assembly. These types of Machines are ideally suited for handling very thick materials and coils with bigger outer diameter.

The Machines are available in wide range of coil weight, material size and combinations.

### **Compact Unit**

As the name suggests Compact Unit compress both Decoiler, Straightener and Loop Control into one compact stand-alone strip dispensing Machine.

It is an economical, space efficient and self-contained Compact Unit.

The central gap between strip guide drum and Straightener also allows loading of coil from overhead with the help of E.O.T Crane.

The Selection of Model can be done as per your requirement of Decoiler & Straightener Capacities.



### **Pneumatic Feeders**

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### SYNERGY is now authorised representative for POWAIR Pneumatic Feeders.

Pneumatic Feeders are versatile, easy to fit, simple to use and inexpensive and our range of top quality precision engineered POWAIR feeders provide the user with consistent accuracy of pitch and reliability together with long life and easy serviceability.

POWAIR press feeds work on the soundest of principles. The material being fed is powerfully griped all the time, alternately by the fixed and moving clamps, so it cannot

slip or be misfed. On all feed units shock absorbing cushioned dead stops at either end of the stroke provide unerring feed repeatability of  $\pm$  0.03 mm (0.001 inch) without any bounce.

Feeders can be directly mounted on die or feeder mounting bracket. Our standard Feeders are supplied with Pneumatic Activation through Pneumatic Roller Switch. Optional Electrical Activation is available for high speed application.

We have wide range of Feeders available divided into Light Duty, Heavy Duty and Extra Heavy Duty categories with additional accessories like Pilot Release System and Repeater Control Unit.

### **Servo Feeder**

Synergy make servo Roll Feeds are supplied as a complete system to feed presses and other machinery requiring Automatic Strip Feeding.

It incorporates the very latest Servo Motors and Drive technology. It can be integrated into multi-signal controlled installations. This provides a degree of versatility and simplicity that conventional feeds cannot achieve.

The ability to feed variable lengths in a programmed, in any combination, means production can be optimized in batch quantities. Efficiency goes up, costs come down. It saves time and material, reduces work in progress and greatly simplifies planning and scheduling. Quality, accuracy and reliability are assured because it is manufactured by SYNERGY.



### **Recoilers / Scrap Winder**

A Decoiler operating in reverse may be perfectly adequate for some simple task but when strip tension needs to controlled, precision coil build up is required or efficient reliable recoiling is necessary a specialised Recoiler Machine is essential.

Braked tensioning rollers impart coiling tension without interfering with preceding production processes. Alternative Strip Guidance Systems and Snubber Pressure Rollers assist in building tight even sided coils.

The Machines are available in wide range from 150 Kgs to 2000 Kgs.



### **Coil Lifter**

Coil Lifters are specially designed and engineered to provide flexibility and reliability in loading small capacity coils on the Decoiler. It is an ideal solution where there is no provision of EOT crane. It is provided with Manual Winch Drive fitted on moving trolley with sturdy construction.

Available in two Models of 200 kgs and 500 kgs.

### **Roll Bending Machine**

We are now in tie up with ELEKTROMAG to promote & maintain Sheet Roll Forming Machines, for width up to 2000mm & thickness up to 8 mm, with option of both Manual and Motorised Rolling Machines.

Machine is fitted with manually operated with crowned rolls. The lower roll is adjusted by means of a hand wheel on the right-hand side of the machine in Non-Motorised models whereas a Motorised Machine is delivered with motor, stand as well as foot-operated forward/reverse switch with protective casing.





### **Welding Automation – Linear & Spot Projection**

We are providing complete solution for longitudinal Welding Automation.

The Machines are designed to weld cylindrical objects in MS, SS and GI with TIG or MIG welding technology. We can use TIG welding for 0.3 mm to 3.0 mm thick sheet and for higher thickness MIG welding is used.

Standard Models are available from 300 mm up to 1500 mm in both options; Semi-Automatic with normal DC motor driven and Fully Automatic Servo Operated PLC based controls.

We also provide customised solutions as per customers' requirements.

## We also offer following Press Shop accessories

- Wire Product Solutions Straightener / Ring Making /
  2D Bending Machines
- Scrap Choppers
- Press Tool Development

- Cut To Length Line
- Pick and Place Solutions
- Transfer Systems for second / forming operations.
- SPM's

For more detail Information about our products, please visit our website <a href="https://www.synergyautomationsystems.com">www.synergyautomationsystems.com</a> or contact us on below address.



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