

Dynamic Products Long Line

Features & Benefits

1. Self Centering Guide Rolls at the Entrance and Exit Side of the Straightening Head.

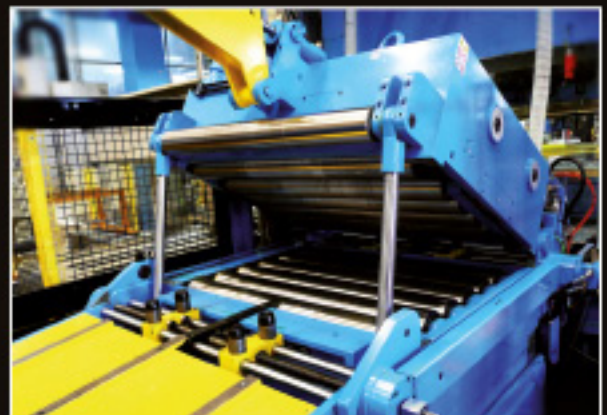
Benefit: Maintains material in the center of the straightener head and eliminates need to adjust separately unit does have provisions to offset from the center by 10mm (.400") The entrance (4) and exit (2) side guides will guarantee that the straightening process is made exactly on the center line of the material to avoid side deformation like camber.



Self Centering Guide Rolls.

2. Hydraulic Opening of the Straightening Head 8".

Benefit: Easy cleaning of the straightening rolls without any disassembly. Makes threading much easier by allowing the head to open then come down on the material. Hydraulic opening also acts as the pilot release on feeders.



Hydraulic Straightener Head Opening.

3. Compact Design to Help Threading.

Benefit: Distance between mandrel and straightener is optimized. The machine includes the necessary hold down arms, threading and peeler tables to assure safe hands free threading in a shorter amount of time.

4. All Components Mounted On a Common Base.

Benefit: Eliminates any chances for mis-alignment of the components and can be moved easily without re-alignment. All hoses and wires are mounted within the chassis of the frame eliminating the chance for damage

5. Powered Bottom Straightening Rolls.

Benefit: Helps drive the material through the straightener with less load on the "pinch rolls" when the competitions straightener is non powered. More traction on the material makes the straightening and/or feeding process easier.

6. Bank Adjustment of Straightening Rolls (Like a Precision Straightener).

Benefit: Rolls are spaced closer together allowing a smaller bending radius. Roll diameters can be smaller with much closer center distances. The smaller radius and closer spacing gives you more traction on the material. Only two adjustments required to set the straightener; entrance and exit gap. The bank system is also more rigid and will guarantee parallelism of the rolls after years of use, versus a system with the single roll adjustment system.



Common Base.

7. Number of Straightening Rolls 9.

Benefit: With more rolls you have alternate bending back and forth thus more deformation. More rolls in a bank adjustment means you are setting only the incoming and the outgoing material gap, thus the central rolls are automatically adjusted

8. Roll Spacing Much Closer.

Benefit: Due to the bank adjustment design the rolls can be smaller and spaced much closer together this allows a tighter bending radius around the rolls thus working the material more and relieving internal stresses. In the case of a system with a roll diameter of 100mm the center distances is 105mm.

9. Ball Bearing Straightener Rollers.

Benefit: Since the ball bearings are lubed and sealed for life so there is no need for a lubrication system. The straightening rolls are hollow to reduce inertia and have 2 bearings mounted on the idle side and 3 bearings on the drive side. It is felt this is the best solution for a rotating part. If bronze bushings are used then lubrication is a must.

10. Rigid Steel Plate Straightener Head Construction.

Benefit: The frame is made of high strength steel and fully welded (no skip welding). The inner bank adjustable head is of a thicker steel to prevent deflection. This heavy duty construction allows a wider range of thicknesses in the same machine. Both the top and inner frame are CNC machined together to assure perfect alignment of the frame and the rolls.

11. Spring loaded pinch roll.

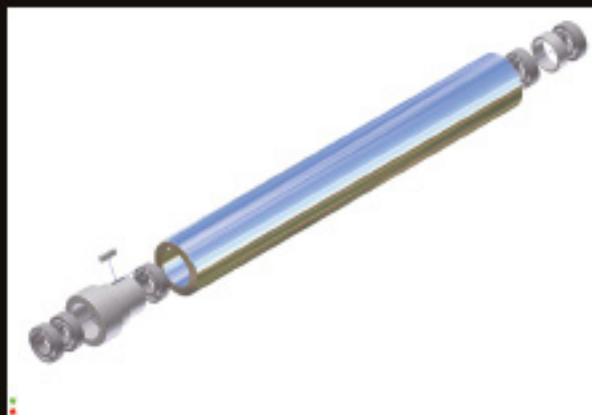
Benefit: Works like an automatic pressure adjustment system. Thicker material will compress the spring more, resulting in a higher compression of the upper roll against the lower one.

12. Eccentric cam actuated bank adjustment

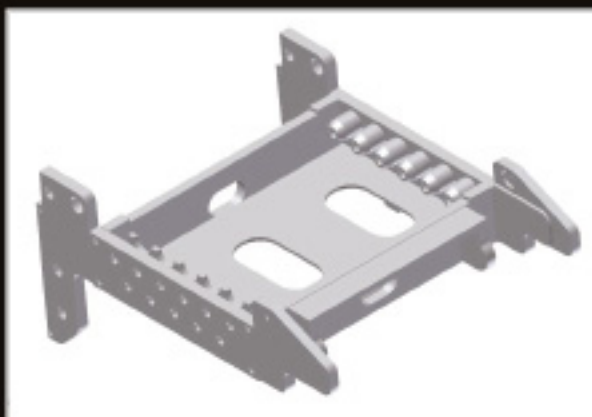
Benefit: Rather than have 4 separate jack screws, we use hydraulic motors to drive two eccentric cam systems to adjust the down position of the bank adjustment. The advantage is you have plenty of power to adjust even with material in the straightening head and you only have two adjustments (entrance and exit gap). There is also a linear feedback system that shows the position digitally on the control panel.

13. Hydraulic down force pressure.

Benefit: To bend around a small radius roll you need more pressure exerted on the straightening head. With a rigid frame there is less deflection but the end result is better on the material. A properly sized hydraulic system will easily handle the forces required to bend the material around the radius of a small roll. Example: for thinner materials you need more deformation and a fine adjustment. For thicker materials typically a few strong deformations are needed to get the material straight. Thus more rolls are required not more adjustments. A single roll adjust system is cheaper and simple to make but requires individual adjustments. Our design is like a precision leveler.



Powered Roll.



Bottom Frame.



Straightening Roll Configuration.

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