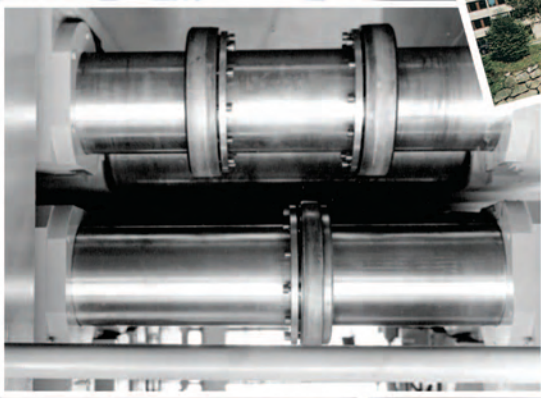


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High Capacity Straightening Machine

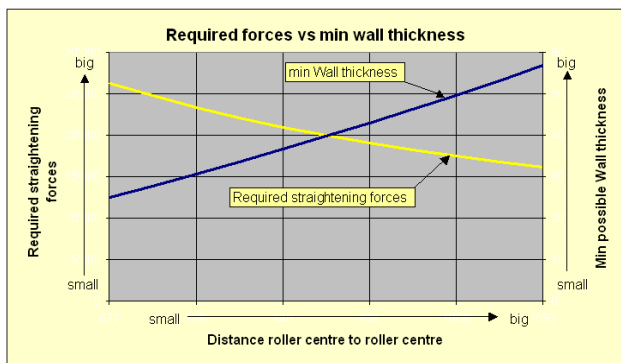
HAEUSLER AG was founded in Dornach, Switzerland, in 1936 and is mainly specialized in the production of plate and section bending machines. In close collaboration with our customers and partners worldwide, HAEUSLER has been offering optimized solutions in numerous industrial branches for decades. As an independent family business, we keep maximum flexibility to fulfill even most specific customer inquiries.

High capacity straightening machine - RI

HAEUSLER RI is designed to straighten sheet metal of various dimensions and materials. The standard range of the RI family covers plate widths of up to 4500 mm and wall thicknesses of up to 100 mm. Depending on customer requirements the RI can be constructed as a 5 roller (RI5), 7 roller (RI7) or 9 (RI9) Roller straightening machine. The number of straightening rollers depends mainly on the required process time (the more straightening rollers the shorter the total straightening time).

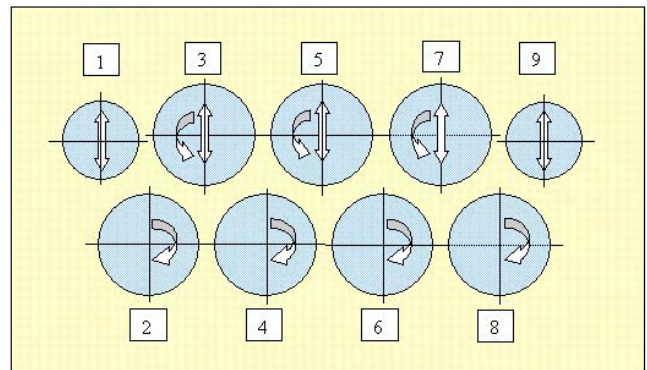


On custom order, or in case the ratio between max wallthickness and min wall-thickness exceeds 2 to 4 RI can also be equipped with additional supported lower straightening rolls and even upper supported straightening rolls. This allows a tighter straightening geometry but causes an increase of necessary straightening forces.



Setup of straightening rollers

(Here showing an RI9):

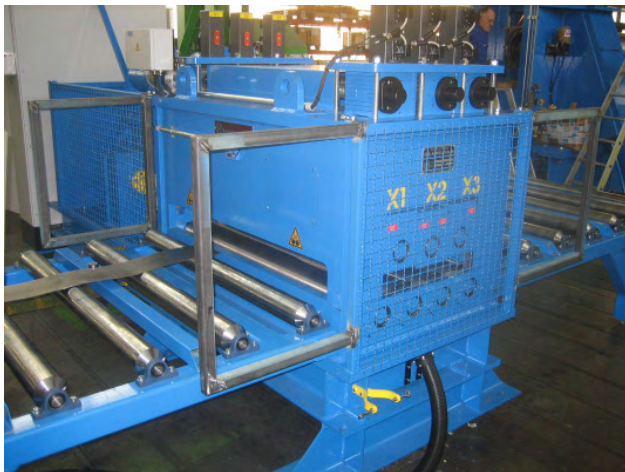


Advantages of the HAEUSLER RI

- Heavy rigid welded steel frame construction ensures no process forces are inducted into the machine foundation.
- Extra-short non-straightened end in straightened product because of smaller first and last straightening rollers, which provide a tighter straightening geometry.
- Machine is easy to operate and allows continuous excellent straightening results due to having 4 (RI7) or 5 (RI9) upper rollers respectively. By adjusting the position of the final upper roller straightening results can be fine-tuned.
- Easier operation with constant straightening quality due to optional control modes (see detailed description of Control System)
- Direct drive for all straightening rollers (except for first and last one) ensures a safe sheet passage without slipping.
- The arrangement of the straightening rollers is symmetrical and each roller is individually adjustable. Therefore the machine can be operated in both directions. This is important if multiple straightening passes are needed, which might be necessary in case the incoming sheets are extremely uneven.
- Rigid straightening roller design (through big roller diameters) for minimal deformation, thereby reducing sheet camber. Therefore a wide range of wall thicknesses can be processed at a high quality level.
- Rollers are made of high-alloy steel, thus avoiding blistering. (In contrast to hardened rollers, which usually only have a very thin hardened surface layer).

Control System

One single operator controls the straightening machine as well as the infeed and outfeed conveyors from one control panel. This control panel includes all necessary buttons, switches, pre-selectors and pressure gauges for all adjustments and regulations. All axes feature absolute position encoders (no reference runs necessary).

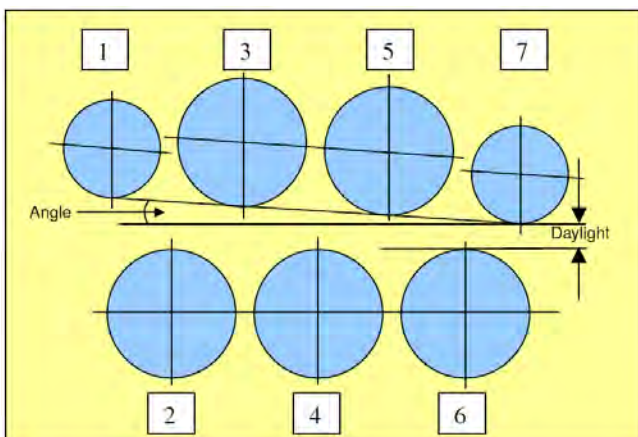


Adjustment of the straightening rollers can be done in three different modes (modes No 2 and No 3 are optional):

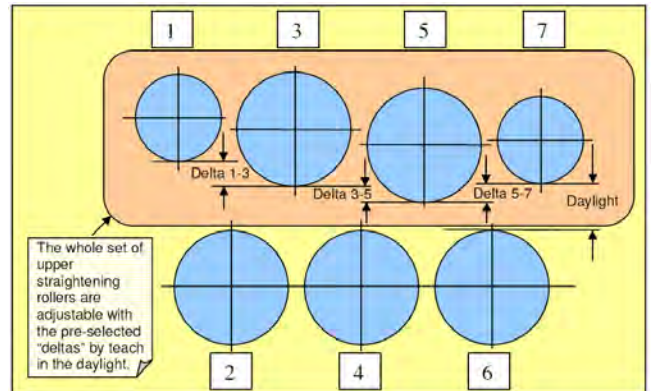
Custom mode: Each upper straightening roller will be adjusted individually by teaching roller position and/or inclination angle in cross direction (max inclination for each straightening roller is approx. 50 mm).

Automatic Mode 1: Collective adjustment of all upper straightening rollers as a group by teaching the following parameters:

- Max. gap between upper and lower rollers ('daylight')
- Angle of inclination.

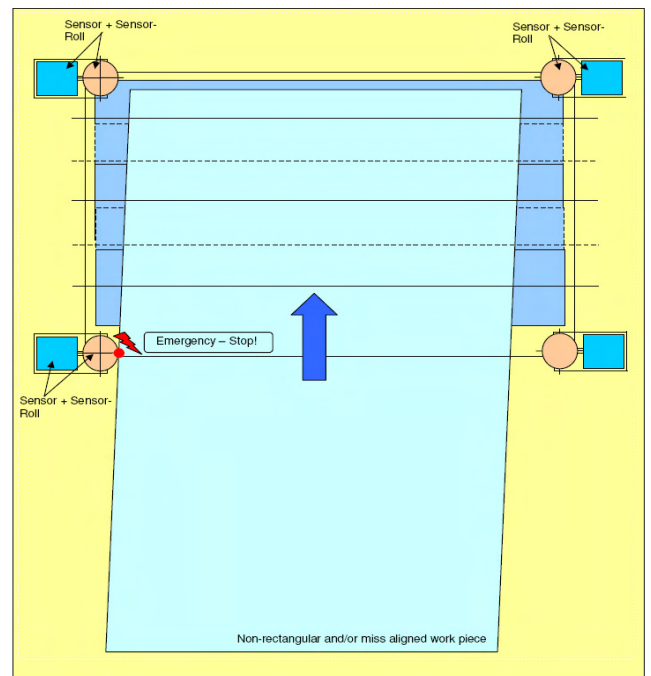


Automatic Mode 2: Collective adjustment of all upper straightening rolls as a group by teaching all position differences between neighbour rolls. With these pre-selected position-differences the upper straightening rolls can be adjusted as a group by teaching only one daylight parameter between the straightening roller 6 and 7.



Further options of HAEUSLER RI

- Infeed Protection System. Long sheets may move laterally while being processed thus causing sheet edge or machine damage. A sensor equipped protection system which stops the straightening process in case of such miss-feeding can be included as an option.



- Infeed roller conveyor with automatic aligning device. Equipped with driven rolls and an integrated automatic aligning device. Driven hydraulically or mechanically to ensure proper centring and positioning of sheets while entering the straightening machine.

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