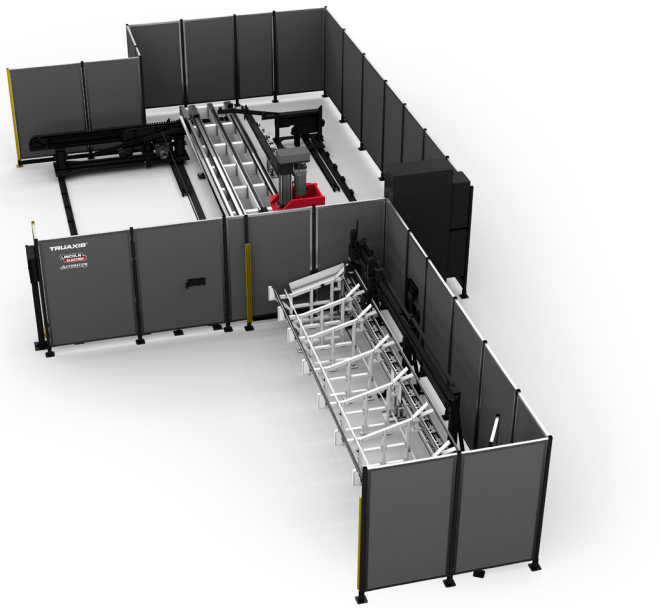
TRUAXIS STRAIGHTENING SYSTEM

For Bars, Tubes and Profiles

AD2490-1



Despite advanced manufacturing processes, many bars and tubes produced for precision applications today are not totally straight. The TruAxis Straightening System solves this problem by using measurement tools that are embedded in the system, that ensure the material measures within the parameter set for the part. Pressing features are used to adjust the part if it is not within the specified parameters.

HOW IT WORKS

Bundles of bars/tubes are loaded onto an accumulation deck and then automatically fed to the straightening equipment. In the straightening process, the tube or bar is rotated to measure the runout with sensors at multiple data points along its length. This data is sent to the PLC where it is compared to the straightness specification to determine where it needs to be corrected.

The PLC determines the initial point needing correction and the servo press is indexed along the bar by a servo rail to the indicated location where it then bends the bar/tube to specification. The piece is then rotated again to collect the data points and determine if there are other points that need attention. This process continues until all the data points are found to be within specification. From there, the bars may be moved out of the machine, automatically or by an operator, to the next process.From there, the bars may be moved out of the machine, automatically or by an operator, to the next process.

Applications:

Masts for Lift Trucks
Forklift Forks
Leaf Springs
Linear Rails
Ball Screws
Prop Shafts
Torque Tubes
Axles & Axle Tubes
Mining Equipment Rollers
Mining Drill Rods
Down Hold Tubes and Pipe Racks
Drive Shafts
Rotors
Medical Tools
Elevator Guides

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KEY FEATURES:

» **Automated X-Axis** – The C-Frame press traverses via servo motion across multiple data points to determine the pre- and post- bent state or straightness of the stock.

» **Measuring Supports** – Cam roller guides support the bar/tube/piece during rotation & measurements.

» **LVDT Measurement** – Linear Variable Differential Transformer (LVDT) measures the straightness of the bar/tube/piece as it rotates.

» **Servo Press** – A servo press moving on a servo-driven axis applies bending force to bar/tube/piece. (40 US Ton – 356kN or 50 US Ton – 445kN)

» **Infeed Queue** – Stock support and feed table queue parts ahead of straightening. Queue configuration design is scalable and can accommodate manual or automatic loading configurations.

» Standard control systems includes 24VDC Allen Bradley® control, Rockwell® servo motors and a 15" HMI screen with manual & automatic modes. System can be configured to accommodate other control platforms.

INDUSTRIES:

» Mining and Drilling
» Metal Fabrication
» Oil Field
» Automotive
» Aerospace
» Construction Equipment
» Motion Control

INCLUDES:

» C-Frame Servo Press/Actuator
» Servo X-Axis rail positioner
» Measuring Devices
» Press Supports
» In-Feed Accumulation Deck

Product Specifications

Input Type (Voltage)	Power Connect – 480V AC
Width (Range)	20' – 40'
Depth (Range)	12' – 20'
Equipment Technologies	Servo-Driven motion and positioning; LVDT Measuring, Servo Press Actuation

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