

The MSI MS1000 Mandrel Straightening Equipment recycles bent or bowed mandrels through an automated straightening process. The straightener utilizes a pick and place handling system capable of picking a single mandrel from a bin and automatically running it through the straightening process to be placed in the output tube upon completion. The MS1000 has been configured for use with bare and coated stainless steel mandrels of various diameters and lengths with no need for tooling change.

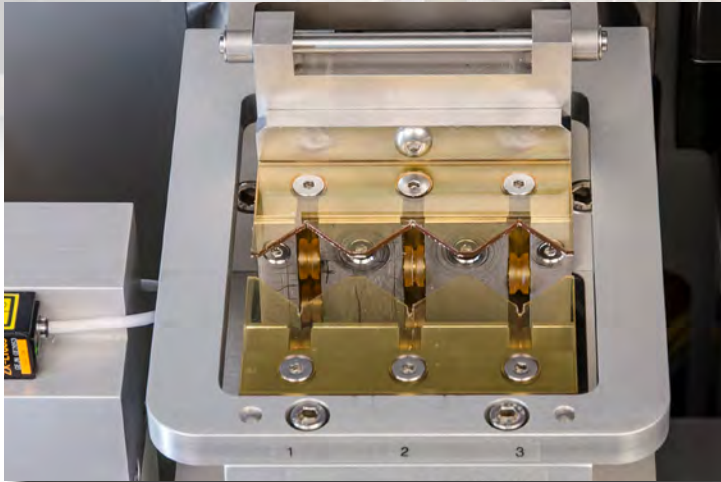
The Mandrel Straightening Equipment features a touch screen interface and servo motor driven motion. The PLC control system allows for easy recipe setup, product change over, and precise control of the straightening process. Mechanical setup of the MS1000 is recipe driven and automatically configured based on process parameters for any given mandrel diameter, with the ability to barcode scan or quick recipe selection.

MS1000 Features

- **Recycle bent or bowed mandrels.**
- **Reduce material costs.**
- **Automated pick and place product handling.**
- **Process multiple mandrel diameters without tooling changes.**
- **Work with bare, embedded and coated (permanently adhered) stainless steel mandrels. (Temporary coated mandrels are not recommended.)**
- **Optional post process diameter inspection.**

MS1000

Mandrel Straightening Equipment



MS1000 Equipment Specifications

- Three (3) sets of straightening dies.
- Automated pick and place system.
- Servo actuated product handling system.
- Processed mandrels loaded into plastic output tube.
- Automatically configure dies based on profile selection.
- Laser measurement verifies mandrel diameter prior to processing.
- Diameter measurements falling outside of the profile specifications are placed in the reject tube.
- User defined lot size.

Control System Specifications

- PLC control system.
- Touch screen user interface.
- Process parameters stored and recalled via the HMI.
- Servo controlled parameters include: rotational speed, collet torque, pull rate/distance, straightening rollers separation and force.
- Password protected user manager.
- Interlock safety feature monitored by the PLC and halts the machine.
- Ethernet port for remote support and network access.

Summary of Spec Data

Mandrel OD Range	0.012–0.040"
Mandrel Length Range	25–65cm
Straightness Less Than Or Equal To	0.025" of bend per 6" length
Max Incoming Mandrel Bend/Kink Condition	Bend - 0.12"/6" Kink - .002"/0.5"
3 Sets Of Straightening Dies	0.012-0.021", 0.021–0.031" 0.031-0.040"
Input Tube Quantity	Approx 100 parts (Depending on mandrel OD)
Power Requirement	120/220 VAC
Pneumatic Requirement	100psi

MS1000 Machine Dimensions

- Shipping Weight: 660 lbs (300 kg)
- Machine Weight: 450 lbs (204 kg)
- Height: 72" (1829 mm)
- Width: 43" (1092 mm)
- Depth: 27" (686 mm)