



Machine Control Specialists Inc.

Model MET 105 Cardiac Catheter/Stent Coil Winder

The new Model MET105 is specially designed for precision winding cardiac stent coils. These miniature coils typically have .001-.025" diameter medical grade stainless steel wire wound over a .001-.188" diameter mandrel. In addition to stents, all types of miniature continuous coils can be wound on the machine. The standard machine has a traverse length of 24 inches; however longer versions are available in 12 inch increments.

The machine uses special tooling to hold the thin mandrel wire under tension between two spindles. A moveable tailstock is used to apply mandrel tension using a programmable value. The long mandrel wire is rotated between the spindles driven by two synchronized brushless servomotors.

A linear traverse system moves a wire guide over the full length of the mandrel wire. A brushless servomotor drives the traverse through a zero backlash lead screw. The traverse pitch rate is precisely synchronized to the rotation of the spindles. The pitch can be changed any number of times throughout the length of the mandrel. Pitch rate is calculated to .000001 inch accuracy.

Mounted on the traverse, a special nozzle guides the wire onto the mandrel as it rotates. The wire is applied while under accurately controlled tension. A programmable closed loop tensioner is used to precisely control and regulate the winding tension.

The machine is easily programmed using our CoilPro software. Using the graphical user interface of Microsoft Windows, all parameters for the coil are entered in a program builder screen. Parameters for mandrel diameter, wire diameter, mandrel tension, wire tension, wind speed, pitch and pitch changes are entered.

The multi-media and job folder features of CoilPro also allow production and process information to be entered. The program may include material information, drawings, instructions etc. The instructions can include text, audio, pictures, and videos to train the operator and insure quality.

