Tri-Layer Medical Tubing Extrusion Systems

Extrusion systems designed specifically to produce tri-layer micro tubing. Can be re-configured for single layer, dual layer, striping & wire jacketing applications.

The extrusion system consists of three American Kuhne™ Compact Modular extruders with the main Navigator® operator control station mounted on the primary extruder for interfacing with the co-extruders & downstream equipment. The control configuration allows for operating of all line components from one point of command & has the ability to run all three extruders, two extruders, or primary extruder independently. The co-extruders have their own operator controls stations so that they can be run independently. The system is optimized for automatic closed-loop control of product OD and has automated good/bad quality sorting.

The barrel modules are completely interchangeable between the extruders. Therefore, each modular extruder could be used as a ½”, ¾”, ¾” or 1.0” extruder. Additional barrel modules can be purchased separately & are available in a high-temperature (HT) &/or corrosive resistant (CR) configurations for polymers including, PEEK & FEP. Systems are available with, or without, melt pumps.

The system offers the full power & functionality of the Navigator® control system for a multiple component extrusion system. The HMI is via a swing-arm mounted screen map with integrated hard-wired E-stop, Start, Stop, & Reset pushbuttons along with USB port, mouse & keyboard. The Industrial PC is capable of a complete range of monitoring, control & diagnostics for each component of the extrusion line. The system offers intuitive navigation, easy to understand graphical display of controls, statuses & alarms along with integrated machine documentation. HMI text for foreign languages, including Chinese, Japanese & Korean, can be added per customer’s request.

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1. 6FT Conveyor with Blow-Off
2. Puller/Cutter
3. Measurement & Control System
4. Cooling Tank
5. 1/2" Extruder with HMI (Shown with Melt Pump)
6. 1/2" Extruder without HMI (Shown with Melt Pump)
7. Tri-Layer Head with Heater, Melt Pump Adaptors & RTDs
8. Servo Pressure Valve Units Mounted on Stand
9. 3/4" Extruder with HMI (Shown with Melt Pump)