

Extrusion Die Stretcher

Model EDS-3x68

- 172cm draw length
- 6-digit LCD display for draw speed and draw distance readout
- Chain Drive with air activated engage/disengage clutch
- Optical limit switches
- Quick release mechanism for fast exchange of the extrusion dies
- Air clamps with polyurethane soft jaws or stainless steel serrated jaws available

GENERAL INFORMATION

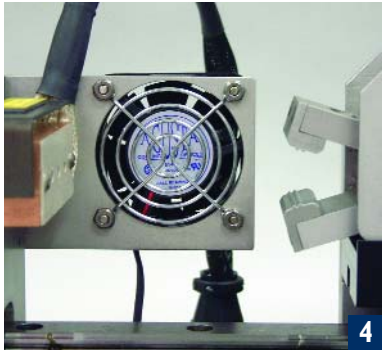
Interface Associates' Extrusion Die Stretching Machine (figure 1) performs hot die draw-down of plastic tubing used in catheter production. The process enhances material strength and improves O.D. tolerances. The machine can process up to three tubes in parallel. The typical applications include tubing neck down, balloon tubing pre-stretching, and sheathed balloon heat setting on completed catheters. Model EDS-3X68 can also be used to jacket hypotubes and other applications requiring stretching long tubing lengths.

OPERATION

Thinned down tubing ends are inserted through the hot extrusion die (figure 2). An air clamp with serrated hard jaws (figure 4) or optional urethane soft jaws grip the tubing. The draw slide travels on a precision ball bearing carriage along a central guide rail. Adjustable home switch and end of draw switch slide along the central rail and their position can be set against the S.S. ruler graduated in centimeters. A microprocessor based control unit provides function sequencing, timing and safety interlocks.

The machine can perform one step or two step pulls. During the two step pull the tubing tail is first drawn through the die a short distance of 0.5 or 1.0 inches. Secondly the jaws release, reposition themselves close to the die, grip the tube again by its thickest section and perform the final pull.

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OPTIONS

Tubing Support Slide Assembly 502222

Extrusion Dies are sold separately. They are fabricated from 440C stainless steel, heat treated to RC 62 and diamond polished to a mirror finish. The dies are available in sizes 0.014 to 0.126 in 0.001 inch increments.

SUMMARY OF FEATURED PHOTOS

Figure 2 - Detail view of the heater block showing three dies side-by-side. The dies are easily removed by loosening two retaining screws at the upper rim of the dies.

Figure 3 - Examples of finished parisons.

Figure 4 - A small fan adjacent to the heater block cools the tubing as it leaves the hot die. A detail of open jaws of the air clamp is shown on the right.

Figure 5 - A row of four switches at the front edge of the machine is used during each cycle for loading/unloading the tubing and starting the cycle. The controls on the panel in the top half of the picture are used for setting the process parameters.

Figure 6 - Detail of the guideblock with tension roller lifted 45 degrees. This mechanism allows simultaneous loading of three tubes in parallel while the roller maintains tension on the tubing during the process. The tension level is adjustable.

SPECIFICATIONS

Dimensions:	8" H x 17.25" W x 77" L
Weight:	67 lbs
Power Requirements:	115 VAC/220 VAC, 50/60 HZ, 550 W
Draw Length:	Up to 172 cm
Heating Power:	500 W
Temperature Controller:	0.1F resolution, ambient to 450°F (260°C)
Tubing Diameter Capacity:	0.020 to 0.150 inch (0.5 to 4.0mm)
Configuration:	3 extrusion dies side-by-side (3 tubes in parallel)



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