

Laboratory machines for the processing of polymers

Single-Screw Extruder E 16 T - E 20 T Height-Adjustable Extruder E 20 TH

Extruding thermoplastics and elastomers in very small batches



Application

The E 16 T and E 20 T extruders of the TEACH-LINE® range are designed for training in training and educational purposes. Operated in conjunction with Collin's extensive range of downstream equipment, these lines can be used for studying polymer processing methods on a small scale. Due to their versatility, they are also suitable for processing polymer material at very small throughput rates as required for research and development applications.

Design

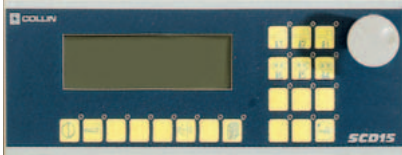
Both the electric drive components and the control system are integrated into the machine's substructure. An ergonomically inclined operator panel with a logical design provides easy access to operating buttons and displays. The drive and processing unit is mounted on the machine substructure. The thrust bearing assembly and the barrel are installed on the A.C. gear motor.

Screws and barrel

The barrel and the screw are made from nitrided steel. Collin supplies a wide range of screws for processing all established thermoplastics and elastomers. The barrel is heated by three heating zones, two of which operate with air cooling. A quick-release hopper facilitates material changes and cleaning. The unit is equipped with a water-cooled feed section.

Control system

The new generation of SCD micro-processor control systems allow quick and intuitive parameter setting. Set values can be adjusted individually or in groups.



All data are acquired and registered via the integrated RS 485 interface. The extruder can be easily integrated into a co-extrusion line if required.

Safety

The following features ensure a high level of operational safety:

- The drive is switched off if the maximum permissible torque is reached
- The drive is switched off if the maximum permissible melt pressure is exceeded
- Safe start-up due to temperature controllers with tolerance bands
- The entire barrel is covered

Height adjustable extruder E 20 TH

The extruder can be adjusted in height and inclination to accommodate multi-layer lines when used as an ancillary extruder.



Technical Data

Type		E 16 T	E 20 T	E 20 TH
Screw diameter	(mm)	16	20	20
Screw length	(mm)	25	25	25
Drive power	kW	0,96	1,5	1,5
Screw speed	1/min.	20 – 200	18 – 180	18 – 180
Maximum throughput	kg/h	1,5	4	4
Connected load	kW	5,7	6,4	6,4
Power supply		3 x 400/230V, 50/60 Hz		
Central height of screw	mm	355	355	900 – 1200
Inclination angle	degree	0	0	+/- 30

Subject to technical changes

Version 10E2000

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