TECHNICAL DATA SHEET

Polytevo Series Single-Screw Pipe Extrusion Line

Laboratory single-screw pipe extrusion line · Ø20 mm, L/D 28:1 · RT to 380°C · vacuum sizing, haul-off and cutting · pipes up to 11 mm



Polytevo Series Single-Screw Pipe Extrusion Line (ACS-7008D) — representative configuration

The Polytevo Series Single-Screw Pipe Extrusion Line (ACS-7008D) is a laboratory line with a single-screw extruder, vacuum sizing water tank, caterpillar haul-off and fly-knife cutter. Image shown for reference; final configuration is confirmed in the quotation.

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SECTION I

Product Overview

Polytevo Series Single-Screw Pipe Extrusion Line (ACS-7008D) is a laboratory single-screw pipe extrusion line with a Ø20 mm screw (L/D 28:1), six independently controlled heating zones at RT to 380°C, a vacuum sizing tank, caterpillar haul-off and a fly-knife cutter for pipe diameters up to 11 mm.

The ACS-7008D is designed for laboratory mixing, plasticating and extrusion of engineering plastics, modified plastics, masterbatch and other polymers. The line is laid out in three sections: the extrusion section (single-screw extruder and die), the cooling section (vacuum sizing water tank) and the cutting section (caterpillar haul-off and fly-knife cutting). It suits laboratory formulation development and quality control, teaching and research, and small-batch production.

SECTION II

Core Advantages

— **Three-section line** Extrusion section, cooling section and cutting section in one laboratory line (3800 × 570 × 1390 mm including the auxiliary units).

— **Servo-driven extruder** Ø20 mm screw, 0.1–100 rpm, 1500 W servo motor and a 1:16 planetary gearbox with a timing belt.

— **Caterpillar haul-off** Caterpillar haul-off driven by two 200 W motors.

— **PLC and touch screen** Six zone temperatures, screw speed, haul-off speed, cutting length, running time and torque are displayed in real time; process parameters can be set, stored and recalled.

— **Six independent heating zones** Zones 1–6 are independently controlled by six SSR-controlled heating zones, RT to 380°C, with 9 kW total heating power.

— **Vacuum sizing tank** A 1.3 m vacuum sizing water tank with a 750 W vacuum pump.

— **Fly-knife cutting** An 850 W fly-knife motor cuts the pipe to the cutting length set on the controller.

— **Small-diameter pipe** Pipe diameter range up to 11 mm.

SECTION III

Specifications

Technical data — ACS-7008D

Specifications	
Parameter	**Specification**
Brand	Polytevo Series by ACS Material
Product Name	Polytevo Series Single-Screw Pipe Extrusion Line
Model	ACS-7008D
SKU #	ERP7PEX1
Product type	Laboratory single-screw pipe extrusion line
Screw diameter	Ø20 mm
Screw L/D	28:1
Screw compression ratio	2.4:1
Screw material	38CrMoAlA, high-grade nitrided ultra-high-strength alloy steel
Screw speed	0.1–100 rpm
Temperature range	Zones 1–6: RT to 380°C (independent zone control)
Heating	6 SSR-controlled heating zones
Main motor power	1500 W (servo motor)
Transmission	1:16 planetary gearbox + timing belt
Cooling	Ball-bearing insert cooling fan
Total heating power	9 kW
Main unit power supply / total power	AC 380 V ±10%, 50/60 Hz / 10.5 kW (reliable grounding required)

Technical data — ACS-7008D (continued)

Specifications	
Parameter	**Specification**
Sizing and cutting system power supply / power	AC 380 V ±10%, 50/60 Hz / 2 kW (reliable grounding required)
Dimensions (L × W × H)	3800 × 570 × 1390 mm (including auxiliary units)
Weight	Approx. 300 kg main unit; approx. 300 kg auxiliary units

Sizing, haul-off and cutting

Sizing, haul-off and cutting	
Parameter	**Specification**
Water tank length	1.3 m (vacuum sizing tank)
Vacuum pump power	750 W
Caterpillar haul-off motor	200 W × 2
Fly-knife motor	850 W
Pipe diameter range	≤11 mm

Main components — Sizing, haul-off and control

Main components	
Component	**Description**
Vacuum sizing water tank	1.3 m vacuum sizing water tank with a 750 W vacuum pump.
Caterpillar haul-off and fly-knife cutter	Caterpillar haul-off (200 W × 2 motors) and fly-knife cutter (850 W motor).
PLC touch screen	Displays six zone temperatures, screw speed, haul-off speed, cutting length, running time and torque; parameters can be set, stored and recalled.

Scope of delivery

— **Standard configuration:** single-screw extruder, cooling water tank, cutting machine, PLC control system (1 set each), accessories (1 set) and technical documents (1 copy).

— **Scope of supply** — the actual configuration is confirmed in the technical agreement and quotation.

SECTION IV

Applications

For laboratory formulation development and quality control, teaching and research, and small-batch production of small-diameter pipes from engineering plastics, modified plastics, masterbatch and other polymers.

Product value: a complete laboratory pipe line (Ø20 mm extruder, RT to 380℃, vacuum sizing, haul-off and cutting) for pipes up to 11 mm with a PLC controller.

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DISCLAIMER

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