TECHNICAL DATA SHEET

Polytevo Series Single Screw Extruder

Laboratory single screw extruder · 20 mm and 30 mm screws · L/D 28:1 · up to 380°C · cooling tank and air-drying and pelletizing unit



Polytevo Series Single Screw Extruder (ACS-7008) — representative configuration

The Polytevo Series Single Screw Extruder is a laboratory single screw extruder with a 20 mm screw (ACS-7008) or a 30 mm screw (ERP7SSE2), supplied with a cooling tank and an air-drying and pelletizing unit. Image shown for reference; final configuration is confirmed in the quotation.

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SECTION I

Product Overview

Polytevo Series Single Screw Extruder (ACS-7008 with a 20 mm screw and ACS-7008-30 with a 30 mm screw) is a laboratory single screw extruder with L/D 28:1 and a maximum temperature of 380°C, supplied with a cooling tank and an air-drying and pelletizing unit for mixing and processing engineering plastics, modified plastics, masterbatch and other polymers.

The ACS-7008 and ACS-7008-30 suit the mixing and processing of engineering plastics, modified plastics, masterbatch and other polymers, with the advantages of uniform dispersion, plastic coloring and filling modification. The 20 mm screw delivers 3–6 kg/h and the 30 mm screw a maximum output of 5–10 kg/h. Heating zones 1–3 and the die have a maximum temperature of 380°C under four SSR-controlled temperature zones, and a PLC control system runs the machine.

SECTION II

Core Advantages

— **Two screw sizes** 20 mm screw (ERP7SSE1, ACS-7008) with 3–6 kg/h output, or 30 mm screw (ACS-7008-30, ERP7SSE2) with a maximum output of 5–10 kg/h; both L/D 28:1 with a 2.4:1 compression ratio.

— **Broad polymer coverage** Mixing and processing of engineering plastics, modified plastics, masterbatch and other polymers; uniform dispersion, plastic coloring and filling modification.

— **Four SSR temperature zones** Four SSR-controlled temperature zones and one temperature measurement zone; heating zones 1–3 and die have a maximum temperature of 380°C.

— **Extrusion line with cooling and pelletizing** Supplied with a cooling tank and an air-drying and pelletizing unit alongside the extruder.

— **Nitrided alloy-steel screw** Screw made of 38CrMoAl high strength nitride alloy steel, L/D 28:1, compression ratio 2.4:1.

— **PLC control and planetary drive** PLC control system with a 1.5 kW main motor and a 1:20 planetary reducer + synchronous belt drive.

SECTION III

Specifications

Technical data — ACS-7008 and ACS-7008-30

Specifications	
Parameter	**Specification**
Brand	Polytevo Series by ACS Material
Product Name	Polytevo Series Single Screw Extruder
Models	ACS-7008 (20 mm screw) / ACS-7008-30 (30 mm screw)
SKU #	ERP7SSE1 (ACS-7008, 20 mm) / ERP7SSE2 (ACS-7008-30, 30 mm)
Product type	Laboratory single screw extruder
Screw L/D	28:1
Screw compression ratio	2.4:1
Screw material	38CrMoAl high strength nitride alloy steel
Maximum temperature	380°C (heating zones 1–3 and die)
Heating method	Four SSR-controlled temperature zones and one temperature measurement zone
Cooling system	Ball-insert cooling fan
Main motor power	1.5 kW
Drive system	1:20 planetary reducer + synchronous belt
Air-drying and pelletizing unit power	AC 220 V ±10%, 800 W
Cooling tank weight	60 kg
Pelletizing unit size (L × W × H) and weight	590 × 550 × 1100 mm; 79 kg

Model comparison — 20 mm / 30 mm

Model comparison		
Parameter	**ACS-7008 (20 mm)**	**ACS-7008-30 (30 mm)**
SKU #	ERP7SSE1	ERP7SSE2
Screw diameter	20 mm	30 mm
Output	3–6 kg/h	5–10 kg/h (maximum output)
Melt pressure measurement	Measuring range 0.1–50 MPa; measuring accuracy 0.5% FS	Upper measurement limit: 50 MPa; measuring accuracy 0.5% FS
Barrel heating power	5 kW	6 kW
Main machine power supply	AC 380 V ±10%, 6,500 W total power	AC 380 V ±10%, 7,500 W total power
Machine size (L × W × H)	1050 × 570 × 1390 mm	1450 × 570 × 1390 mm
Main machine weight	300 kg	380 kg

ACS-7008 (20 mm) additional specifications

ACS-7008 (20 mm) additional specifications	
Parameter	**Specification**
Screw speed	0.1–100 rpm

System components — Cooling tank and pelletizing unit

System components	
Component	**Description**
Cooling tank	Water cooling tank (water tank length 1000 mm, can be customized); weight 60 kg.
Air-drying and pelletizing unit	Pelletizing unit, 590 × 550 × 1100 mm; weight 79 kg; power AC 220 V ±10%, 800 W.

Scope of delivery

— **Standard configuration:** one set each of the single screw extruder, cooling tank, air-drying and pelletizing unit, PLC control system, accessories and technical data.

— **Scope of supply** — final accessories and scope of supply are confirmed in the quotation.

SECTION IV

Applications

For mixing and processing engineering plastics, modified plastics, masterbatch and other polymers in the laboratory, with uniform dispersion, plastic coloring and filling modification.

Product value: laboratory single screw extruders with 20 mm and 30 mm screws (L/D 28:1, up to 380℃), cooling tank, air-drying and pelletizing unit and PLC control.

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