TECHNICAL DATA SHEET

Polytevo Series Film Blowing Machine

PLC-programmable laboratory film blowing machine · 20 mm screw · RT to 380°C · Ø25 mm die · max. folded film width 80 mm



Polytevo Series Film Blowing Machine (ACS-7008FB) — representative configuration

The Polytevo Series Film Blowing Machine (ACS-7008FB) is a PLC-programmable laboratory film blowing machine with a single-screw extruder and film blowing auxiliary equipment. Image shown for reference; final configuration is confirmed in the quotation.

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SECTION I

Product Overview

Polytevo Series Film Blowing Machine (ACS-7008FB) is a PLC-programmable laboratory film blowing machine with a 20 mm single-screw extruder (L/D 28:1, RT to 380℃), a Ø25 mm annular die and a maximum folded film width of 80 mm, used to evaluate the film-blowing feasibility of polymers and degradable materials.

In extrusion film blowing, a plastic melt is continuously extruded through a die, expanded by compressed air and cooled via a cooling ring, and variable-frequency traction produces double-fold plastic film. The ACS-7008FB is primarily used to evaluate the film-blowing feasibility of polymers and degradable materials, to assess the melt gel content within materials, and to examine the dispersibility of colored dispersions, controlled mixtures and extrudates.

SECTION II

Core Advantages

— **PLC programmable control** 10-inch color touch screen with a PLC and HMI control system: centralized configuration and real-time display of zone temperatures, screw speed and traction speed.

— **Annular die and cooling air ring** Ø25 mm annular die opening; the air ring delivers air uniformly around the film bubble at 360° for stable cooling and shaping.

— **Separate traction and reeling controls** Traction and reeling operation panel with independent pull and winding button controls.

— **Emergency stop** Red emergency stop button with operation indicator on the machine.

— **Servo-controlled extrusion** Screw speed 0.1–120 rpm by servo motor speed control; 1:16 planetary gear reducer + synchronous belt drive.

— **Servo-driven traction** One rubber roller and one steel roller (Ø80 × L200 mm) with servo drive and uniformly controllable speed; stepless traction winding speed.

— **Visible material level** High-strength transparent feed hopper with a metal frame; material level and feed flow are visible in real time.

— **Movable units** High-load casters with brakes; the main unit and auxiliary unit can be moved and positioned separately and run stably once locked.

SECTION III

Specifications

Technical data — ACS-7008FB

Specifications	
Parameter	**Specification**
Brand	Polytevo Series by ACS Material
Product Name	Polytevo Series Film Blowing Machine
Model	ACS-7008FB
SKU #	ERP7FB01
Product type	Laboratory film blowing machine (PLC programmable type)
Screw diameter	Ø20 mm
Screw L/D	28:1
Screw compression ratio	2.3:1
Screw material	38CrMoAlA high-grade nitrided ultra-high strength alloy steel
Screw speed	0.1–120 rpm (servo motor speed control)
Drive system	1:16 planetary gear reducer + synchronous belt
Output	Approximately 5 kg/h
Temperature	RT to 380℃
Cylinder cooling device	Ball-insert cooling fan
Main motor	1.5 kW
Electrical control system	PLC, 10-inch color touch screen and human-machine interface (HMI) control system
Dimensions (W × D × H)	Approx. 2150 × 660 × 2060 mm
Power supply	3-phase, AC 380 V ±10%, 5.5 kW
Weight	Approx. 580 kg

Film blowing auxiliary equipment

Film blowing auxiliary equipment	
Parameter	**Specification**
Die opening diameter	Ø25 mm
Inflation gas	Compressed air: 0–0.8 MPa
Cooling gas	Blower flow rate: 65 m^3/h
Traction roller dimensions	Ø80 × L200 mm (one rubber roller, one steel roller)
Reel roller dimensions	Ø100 × L200 mm (rubber roller)
Air-expanding shaft	Ø50 × L200 mm
Guide roll	Ø38 × L200 mm (stainless steel)
Traction winding speed	Stepless speed regulation
Maximum folded film width	80 mm
Pulling motor	400 W (servo motor)
Reel winding motor	400 W (servo motor)
Fan	370 W
Auxiliary power supply	AC 220 V ±10%, 1.17 kW

Main components — Detail views

Main components	
Component	**Description**
Annular die and cooling air ring	Ø25 mm annular die opening for film extrusion; the air ring delivers air uniformly around the film bubble at 360° for stable cooling and shaping.
Traction roller assembly	One rubber roller and one steel roller (Ø80 × L200 mm) with servo drive and uniformly controllable speed.
Traction and reeling operation panel	Independent pull and winding button controls.
Transparent feed hopper	Metal frame with a high-clarity, impact-resistant cylinder; material level and feed flow are visible in real time.

Scope of delivery

— **Standard configuration:** the single-screw extrusion machine and the film blowing auxiliary equipment (traction, winding and cooling air ring).

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

SECTION IV

Applications

For evaluating the film-blowing feasibility of polymers and degradable materials; inspecting internal gel content (fish eyes, crystal spots, etc.); assessing the dispersibility of color masterbatches and formulated blends; and evaluating extrudate dispersibility and developing material formulations.

Product value: a PLC-programmable laboratory film blowing machine with a 20 mm screw (0.1–120 rpm), RT to 380℃, a Ø25 mm annular die and servo-driven traction.

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