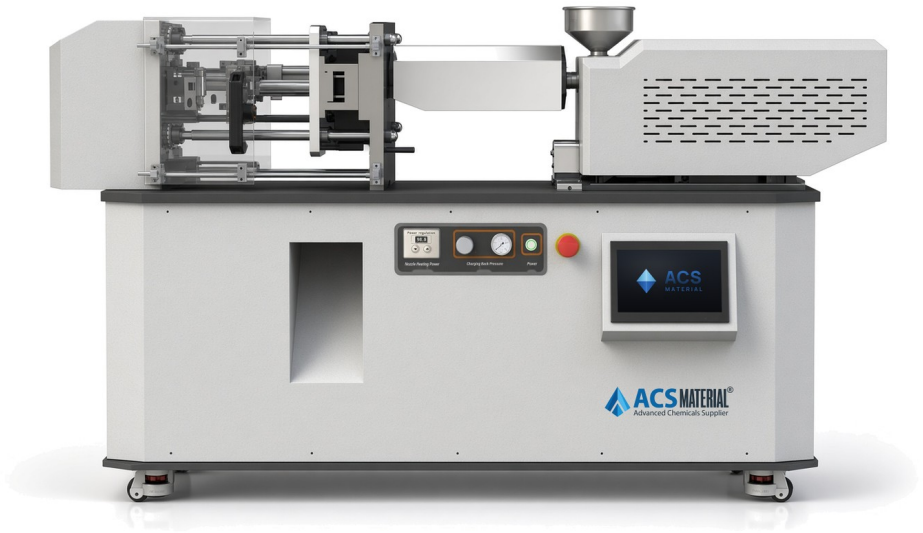
TECHNICAL DATA SHEET

Polytevo Series Precision Injection Molding Machine

Pneumatic ACS-7003 and hydraulic ACS-7003H · 20 mm single screw · up to 360°C · PLC color touch screen · fast changing mold core



Polytevo Series Precision Injection Molding Machine — ACS-7003 shown

The Polytevo Series Precision Injection Molding Machine is offered as the pneumatic ACS-7003 and the hydraulic ACS-7003H. Image shown for reference; final configuration is confirmed in the quotation.

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ACS MATERIAL, LLC

959 E Walnut St., Suite 100
Pasadena, CA 91106, USA

Phone +1 (866) 227-0656
Fax +1 (781) 518-0284

contact@acsmaterial.com

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SECTION I

Product Overview

Polytevo Series Precision Injection Molding Machine (ACS-7003 pneumatic and ACS-7003H hydraulic) is a pair of compact precision injection molding machines with a 20 mm single screw, heating zones 1/2/3 with a maximum temperature of 360℃ and a PLC color touch screen with one-button operation, for classroom teaching and sample making.

The ACS-7003 and ACS-7003H use a single-screw structure that plasticizes more fully than a plunger structure and a small mold that is convenient to make and replace; mechanical and electronic double protection devices provide safety. The ACS-7003 is small and easy to move, suits classroom teaching and small sample making, and runs from a 220 V supply. The ACS-7003H adds a hydraulic drive with adjustable injection pressure, locking force, ejection force and back pressure, and suits classroom teaching, laboratory sample making and small batch production.

SECTION II

Core Advantages

— **Pneumatic and hydraulic versions** ACS-7003 is pneumatic with a hyperbolic arm clamping device (5 T locking force); ACS-7003H is hydraulic with a servo hydraulic system (0–150 kN adjustable locking force).

— **PLC color touch screen** PLC human-machine interface (color touch screen) with a one-button operating system for simple operation and convenient maintenance.

— **Small, replaceable molds** A small mold is convenient to make and replace; the fast changing mold core can be replaced within 10 seconds.

— **Adjustable settings on the ACS-7003H** Injection pressure 0–178 MPa, back pressure 0.5–6 MPa, up to 3 adjustable injection sections, ejection force 0–8 kN and 12 formula record groups.

— **Single-screw plasticizing** 20 mm single-screw structure plasticizes more fully than a plunger structure.

— **Dual safety protection** Mechanical and electronic double protection devices.

— **Compact and easy to move** Small and easy to move; suitable for classroom teaching and sample making.

— **Optional mold temperature control** Optional cooling channel with quick couplings; a TMC or chiller is prepared by the user.

SECTION III

Specifications

Technical data — ACS-7003 and ACS-7003H

Specifications	
Parameter	**Specification**
Brand	Polytevo Series by ACS Material
Product Name	Polytevo Series Precision Injection Molding Machine
Models	ACS-7003 (pneumatic) / ACS-7003H (hydraulic)
SKU #	ERP7IM01 (ACS-7003) / ERP7IMH1 (ACS-7003H)
Product type	Precision injection molding machine
Screw diameter	20 mm
Plasticizing	Single-screw structure
Maximum temperature	Zones 1/2/3: up to 360℃
Temperature accuracy	±0.5℃ (at constant temperature)
Injection resolution	0.1 mm
Die ring outer diameter	50 mm
Control	PLC color touch screen with one-button operating system
Safety	Mechanical and electronic double protection devices
Mold types	Integrated mold or fast changing mold; the mold is optional (specimen mold or customized)
Optional mold temperature control	With cooling channel and quick couplings; TMC or chiller prepared by the user

Model comparison — ACS-7003 / ACS-7003H

Model comparison		
Parameter	**ACS-7003**	**ACS-7003H**
SKU #	ERP7IM01	ERP7IMH1
Drive	Pneumatic	Servo hydraulic system
Locking force	5 T (hyperbolic arm clamping device)	0–150 kN adjustable
Shot / injection volume	25 cm^3 (injection stroke 0–80 mm)	0–28 cm^3 (0–90 mm)
Injection pressure	57 MPa	0–178 MPa adjustable
Feeding / loading torque	105 N·m (servo motor and planetary gear reducer)	215 N·m
Hopper capacity	0.2 L	3 L
Feeding screw speed	0.1–60 rpm	1–136 rpm
Mold size	360 × 90 × 72 mm (L × W × T)	280 × 90 × 72 mm (L × D × T)
Opening stroke	70 mm (excluding the mold)	120 mm (maximum)
Column spacing	280 × 186 mm (center distance)	300 × 226 mm
Suitable materials	PP, PE, PA, ABS, PBT etc.	PP, PE, ABS, PLA, PET, PC, PBT etc.
Power supply	Single phase 220 V ±10%, 50 Hz; 2.2 kW; 10 A	AC 380 V ±10%; 50/60 Hz; 6.5 kW
Net weight	480 kg	680 kg

ACS-7003 additional specifications

ACS-7003 additional specifications	
Parameter	**Specification**
Air pressure	≥0.8 MPa
Air source (user supplied)	Compressed air pipeline or air compressor; air pressure ≥0.8 MPa; air compressor capacity ≥60 L
Water source (user supplied)	Required only if a water cooling function is added

ACS-7003H additional specifications

ACS-7003H additional specifications	
Parameter	**Specification**
Screw L/D	20:1
Injection rate	0–53.3 cm^3/s (0–170 mm/s)
Segmented injection	Max. 3 sections adjustable
Ejection force	0–8 kN adjustable
Ejection stroke	0–30 mm
Back pressure	0.5–6 MPa adjustable
Formula record	12 groups
Hydraulic oil (user supplied)	Prepared by the user
Water source (user supplied)	Required only if a water cooling function is added

Accessories — Mold types

Accessories	
Accessory	**Description**
Integrated mold	To replace the mold, the entire mold must be disassembled. Suitable for requirements of a single size; low cost and economical.
Fast changing mold	Easy to replace; the mold core can be changed in 10 seconds. Suitable for requirements of various shapes and sizes.

Scope of delivery

— **Standard configuration:** mainframe, material tray, scissors, user manual and AC power cord (1 each); the mold (specimen mold or customized) is optional.

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

SECTION IV

Applications

For research, testing and modification work in scientific research institutions and mechanical enterprises, and for classroom teaching and sample making. Specimen types include stretch, impact, light transmittance, electric breakdown, shrinkage, fluidity, thermal deformation and color plate.

Product value: compact pneumatic and hydraulic precision injection molding machines with a 20 mm single screw, up to 360°C and a PLC color touch screen.

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