TECHNICAL DATA SHEET

# Polytevo Series Cast Film Extrusion Line

*Laboratory cast film extrusion line · Ø20 mm screw · RT to 360°C · 250 mm coat-hanger die · servo-driven casting and winding*




**Polytevo Series Cast Film Extrusion Line (ACS-7008LY) — representative configuration**

The Polytevo Series Cast Film Extrusion Line (ACS-7008LY) is a laboratory line with a single-screw extruder, cast film die, casting, traction and winding systems. Image shown for reference; final configuration is confirmed in the quotation.

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SECTION I

## Product Overview

Polytevo Series Cast Film Extrusion Line (ACS-7008LY) is a laboratory cast film extrusion line with a Ø20 mm single-screw extruder, a coat-hanger die with 250 mm effective width, nine heating zones at RT to 360°C and servo-driven casting, traction and winding.

The ACS-7008LY consists of a precision single-screw extruder, a cast film die, a casting system, a traction system, a winding system and a measurement and control system. It integrates polymer extrusion, casting, traction, edge trimming, thickness measurement and winding, and is suitable for cast film forming of common polymer materials such as PE, PP, TPU, PVDF and PC.

SECTION II

## Core Advantages

— **Independent servo-driven rollers** All driven rollers are independently driven by servo motors for stable low-speed operation, energy saving, low noise and stepless speed regulation.

— **Casting, trimming, flattening and winding** Casting, edge trimming, flattening and winding are integrated in one line.

— **Hard chrome mirror roller** High smoothness and corrosion resistance.

— **Nine SSR heating zones** Nine SSR temperature control zones plus one temperature measurement zone, with 11.1 kW total heating power.

— **10-inch touch screen control** The control system with a 10-inch touch screen displays and adjusts process parameters in real time.

— **Height-adjustable casting roll** The casting roll height can be adjusted to meet the forming requirements of melts with different melt strength.

— **Circulating water cooling** Built-in circulating water cooling controls the casting roll temperature.

— **Functional film research** Provides a laboratory processing solution for functional films such as optical films, photovoltaic films, lithium battery separators, water treatment permeable membranes and high-barrier packaging films.

SECTION III

## Specifications

**Technical data — ACS-7008LY**

| Specifications | |
|---|---|
| **Parameter** | **Specification** |
| **Brand** | Polytevo Series by ACS Material |
| **Product Name** | Polytevo Series Cast Film Extrusion Line |
| **Model** | ACS-7008LY |
| **SKU #** | ERP7CFE1 |
| **Product type** | Laboratory cast film extrusion line |
| **Screw diameter** | Ø20 mm |
| **Screw L/D** | 28:1 |
| **Screw compression ratio** | 3:1 |
| **Screw rotation speed** | Rated 1–125 rpm |
| **Output capacity** | Approx. 5 kg/h (varies with resin type) |
| **Temperature range** | RT to 360°C (9 heating zones) |
| **Heating configuration** | 9 SSR temperature control zones + 1 temperature measurement zone |
| **Heating zone power** | Total 11.1 kW (zones 1 & 2: 1.35 kW × 2; zone 3: 0.9 kW; zones 4 & 5: 1.5 kW × 2; zones 6 & 8: 1.4 kW × 2; zone 7: 0.7 kW; zone 9: 1 kW) |
| **Power supply** | AC 380 V ±10%, 13.5 kW |
| **Melt pressure transducer range** | 0–50 MPa |
| **Main motor power** | 1500 W (servo motor) |
| **Transmission system** | 1:16 precision spiral bevel gear reducer |
| **Cooling fan** | Ball-bearing fin cooling fan |
| **Die type** | Coat-hanger die, effective width 250 mm, die lip gap 1.2 mm |
| **Cast film dimension** | Thickness 0.02–0.1 mm; width less than 100 mm (varies with resin type) |

**Technical data — ACS-7008LY (continued)**

| Specifications | |
|---|---|
| **Parameter** | **Specification** |
| **Traction motor power** | 900 W |
| **Traction line speed** | 0–30 m/min |
| **Auxiliary air pressure** | 0.6 MPa |
| **Overall dimensions (L × W × H)** | 3100 × 1250 × 1680 mm |
| **Net weight** | 800 kg |

**Scope of delivery**

— **Standard configuration:** the cast film extrusion line: precision single-screw extruder, cast film die, casting system, traction system, winding system and measurement and control system.

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

SECTION IV

## Applications

For cast film forming experiments of polymer materials, research and parameter optimization of cast film processes, performance testing of new casting materials, and dispersion testing of color masterbatches.

Product value: a complete laboratory cast film line with a Ø20 mm extruder, nine heating zones (RT to 360℃), a 250 mm die and independent servo-driven rollers.

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