NEWS

Brabender® Blown film take-off unit

Downstream equipment for lab-scale film extrusion

What is this instrument for?

The Brabender blown film take-off unit is used in combination with an extruder and a film blowing die head for simultaneous inflation, cooling, flattening, take-off and winding of an extruded film tube.

For which materials is it applicable?

- Thermoplastics
- Thermoplastic elastomers
- Thermoplastic biopolymers
- Polyolefins
- Technical plastics, e.g. polyamide

Why is this important?

This device facilitates

- Testing the processing behavior for new recipes or incoming materials
- Final material inspection
- Quality control during production

How does the device work in conjunction with a Brabender laboratory extruder?

The plastic polymer exits the extruder through an annular die and is blown up to a bubble the diameter of which can be adjusted by the amount of inflation air blown in.

Film blowing die head

The bubble is guided upwards by the film width control unit, then flattened by collapsing frames and taken off by nip rolls. This film is guided over the pulley and the guide rollers to the winder, which produces the finished film rolls.

What are the benefits?

Adaptability to different film dimensions and properties:

- Exact adjustment of the tube diameter via reproduceable setting of inflated air
- Optional control of the flattened film width by ultrasonic measuring system
- Adjustment of the film thickness by control of take-off speed, blow-up ratio, bubble height
- Adjustment of the height of the roller assembly to the material and film thickness by means of an electric lifting column, thus enabling a wider range of film thicknesses to be produced
- Adjustable angle of inclination of the flattening device to different foil diameters
- Adjustable annular gap of the film blowing head (thereby influencing the „frost line" – transition from plastic to solid state)
- Adjustable take-off speed and supporting air

User-friendliness:

- Touchscreen with MetaBridge software for more user-friendly control, including more precise setting of parameters (working height, winding torque, cooling air)

Modular design:

- Optional installation of a camera system for film quality analysis
- Optional ultrasonic sensor for film width measurement and control

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