

Laboratory machines for the processing of polymers

Film Blowing Unit BL 50 T

For the production of high quality thin films

Application

The BL 50 T blown-film tower is primarily used in teaching and research, and for demonstrating and testing the properties of polymers and polymer compounds. These include:

- optical appearance
- haze
- stretchability
- maximum blow-up ratio
- homogenisation performance of the extruder
- gels, agglomerates and contaminants
- dispersion of pigments and other additives



From the abstract polymer to the real properties

Description

The electrical and pneumatic systems are accommodated in the bench-top housing together with the fan for cooling off the film bubble. The take-off unit is centrally positioned on the substructure with the collapsing frame, which is adjustable in height and attached to the central pillar. The pressure between the nip rolls is controlled pneumatically. The nip rolls and the independent centre winder unit are each driven by a separate DC-g geared motor.

The winder has a manually, quick-released, clamping device for fixing cardboard cores on the winder. The inclined control panel enables easy operation and viewing of the operating buttons and displays. These are: controller on/off, nip speed, nip rolls on/off and closed/open, fan on/off, winder on/off, blow-up air setting and torque setting (winding tension). The blown film die is fitted on to the front section of the tower and can be easily removed.

Blown film die

TEACH-LINE® - Blown film die 30 mm nominal diameter
Spiral mandrel, consisting of 3 distributing spirals, and with a 'pin and bush' construction which can relatively be centred to one another with 3 adjusting screws. The die is fitted with an insulated heaterband and bayonet connection suitable for the thermocouple. It is also fitted with a cooling ring in aluminium with three tangential air-feed ducts.

Technical data

Nip roll diameter	50 mm
Nip roll width	200 mm
Max. lay flat width	170 mm
Max. bubble diameter	110 mm
Adjustable take-off height, above die	350 - 750 mm
Max. tensile force	250 N
Take-off speed	1 - 12 m/min.
Drive power of take-off	100 W
Drive power of winder	45 W
Drive power of fan	150 W
Total installed load	530 W
Connection to COLLIN TEACH-LINE® -Extruder	
Connection without COLLIN-TEACH-LINE® -Extruder	1 x 230 V, 6 A, 50 Hz
Compressed air requirement (bubble air)	3 - 5 bar
Connection for bubble air	hose-Ø 6 mm
Winder diameter	max. 300 mm
Required cardboard cores for winder	2" (52 mm) Ø
Length of the cardboard cores	170 - 200 mm
Tension force of winder	95 N
Dimensions: Length x Width x Height	715 x 480 x 880 mm
Weight	65 kg

Design modifications reserved

11E1000

Dr. Collin GmbH
Sportparkstr. 2, D-85560 Ebersberg, Germany
Telefon ++49 8092 /20 96-0, Telefax ++49 8092 /2 08 62

Represented by: