Xplore CFL 35
micro cast film line

A high quality add-on for the Xplore Micro-Compounders



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Fast screening of new film formulations:

a 35 mm wide lab cast film line

This micro cast film line is based on Xplore's proprietary technology. In combination with our micro compounder, it is now possible to obtain cast film with just 5 g of material in 10 minutes. In this way, material need and development time is drastically reduced, and considerably less R&D budget is needed.

A representative test film is now obtained in a few minutes with onlya fraction of material used compared to conventional film development on laboratory equipment.

This film line is especially useful when only a small amount of material is available, or when expensive additives are used, like nano-tubes, active pharmaceutical ingredients, etc..

With our continuous feed kit, which consists of a mountable barrel hopper and forced feeding screws, it is now also possible to process larger samples into extremely long film via continuous extrusion.

Film characteristics

The micro cast film line can produce cast film and sheet with 5 - 10 g samples. The integrated air knife enables to process film up to a width of ca. 35 mm.

The cast film drawing speed is between 100 and 5000 mm/min, and the cast roll of the first calender can be adjusted with increments of 1 mm/min.

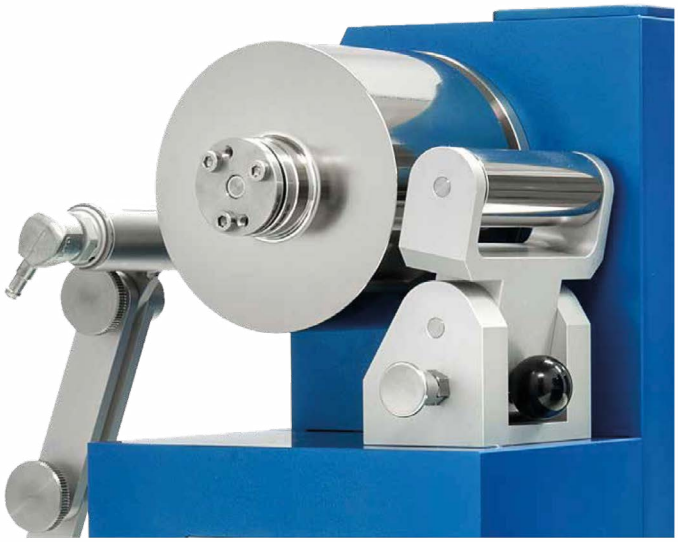
The winding roll of the second calender is torque controlled (its diameter will grow during the test run), and the winding torque can be adjusted with increments of 1 Nmm.

In combination with our micro-compounder, which is equipped with throughput control, Xplore enables you to produce a uniform film thickness without the use of a gear pump. Latest results show that films as thin as 5 µm can be obtained without any holes.

Benefits:

- Large operating window
- Small footprint
- Very slow cast speeds possible
- Easy to operate, hence fast results
- Knecking is prevented by an air knife
- Can be retrofitted into an existing lab-scale extrusion line





Technical Specifications:

- Cast film line dimensions (H × W × D): 25 cm x 43 cm x 20 cm
- Weight: 10 kg
- Air knife width: 74 mm
- Calenders: Two, with rolls measuring 98 × 75 mm
- Speed-controlled calender: Adjustable from 100 to 5,000 mm/min
- Torque-controlled calender: 230 adjustment steps of 1 Nmm each
- Die width: 65 mm
- Available die slit heights: 0.2 mm, 0.4 mm or 0.6 mm

Controls and power supply:

- Control box with display for adjusting speed and torque
- Power supply: 115 or 230 V

Options:

- Custom die slit height
- Custom slit die surface finish
- Elastic surface finish for the calender rolls

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