

# 35 mm micro cast film line

10 times faster, 10 times cheaper R&D



 plore

The platform for  
formulation development

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 - 10 g of material in 5 - 10 minutes. In this way material 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 only a 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 continuous feed screws, it is now also possible to process larger samples into extremely long film via continuous extrusion.

#### Film characteristics

The micro cast film line is able to 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.



#### Technical Specifications

- Cast film die: width 35 mm, slit thickness between 0.2, 0.4 or 0.6 mm
- 1 Calender with a speed controlled cast film roll and an adjustable guide roll (Speed controlled cast film roll can be adjusted between 100 – 5000 mm/min)
- 1 Calender with a torque controlled winding roll (Torque controlled winding roll can be adjusted in 230 steps with increments of 1 Nmm)
- Overall dimensions (l x w x h): 43 x 25 x 20 cm
- Weight: ca. 10 kg

#### Controls

- Control box with integrated operating display
- Supply voltage: 230 or 115 Volts

#### Optionally

- Custom made slit die thickness
- Surface finish of slit die can be custom manufactured
- Continuous feed kit to use with one of our micro compounders:
- Cooled hopper
- Continuous feed screws
- Additional calender(s) with a roll(s) with elastic surface finish for processing of slippery film
- Heated film die, width 35 mm (including control box)

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