

Mini-Film Maker Kit

A dedicated polymer thin film making accessory for infrared transmission analysis



Product Features

- Quick and reproducible thin film production
- Sample melt points from ambient to 250°C
- Standard film sizing rings of 50, 100, 250, and 500 microns
- Dedicated film maker accessory with hydraulic press and integrated heated platens

The Specac Mini-Film Maker is designed to produce high-quality thin films of polymer and plastic materials for infrared transmission analysis. This product enables quick and easy hot pressing of pellets and other sample forms from ambient to 250°C, to give constant and reproducible thickness films over the range 50 to 500 microns with a formed diameter of 15 mm.

The accessory consists of an integrated hydraulic press, digital temperature controller, and heated platens, together with a lightweight film maker assembly. This design allows the heated platens to be pre-heated and held at the melt-point temperature required for the sample. The film maker assembly is separately prepared with a few tens of milligrams of the sample material and appropriate sizing ring, before being introduced to the pre-heated platens. After the film maker assembly has stabilised to the preset temperature, a load of typically 0.5 Tons is applied by rotating the press lead screw to hot press the film. On removal from the heated press, the low-thermal mass film maker assembly quickly returns to ambient temperature on the cooling plate and the pressed film is removed. The film may then be mounted in a 3 by 2 inch self adhesive card (Specacard) for infrared transmission analysis. This process appreciably shortens the film making process cycle time compared with conventional methods and, in practice, a cycle time of less than 5 minutes is possible for producing a thin film.

The Specac Mini-Film Maker Kit includes the Mini-Film Maker Press with integrated heated platens and digital temperature controller, a Film Maker Assembly with Film Sizing Rings of 50, 100, 250, and 500 microns, 200 pairs of Aluminium Foil Discs, a Cooling Plate, a pack of 100

Specacards, and Stainless Steel Tweezers (Forceps). A set of US, EU, and UK power leads is provided as standard.

Typical uses of this accessory include producing thin films for infrared quantitative analysis of polymers and plastics for regulatory or production quality assurance purposes, as well as method development for process analysis. Other applications include thin film making for tensile strength studies.

Specifications

Maximum Load	2 Tons
Temperature Range	Ambient to 250°C
Temperature Control	1°C steps
Thin Film Formed Diameter	15 mm
Thin Film Thicknesses (Nominal)	50, 100, 250, and 500 microns
Dimensions of Press (Excluding Lead Screw)	104mm×198mm×197mm (W×H×L)
Weight of Press and Controller	5.7Kg
Supply Voltage	110/220V
Output Voltage	30V dc
Heater Power	35W

Ordering Information

Mini-Film Maker Kit

Part No.	Description
GS03970	Mini-Film Maker Kit

Mini-Film Maker Spares and Consumables

Part No.	Description
GS03971	Mini-Film Maker Assembly (Includes top platen assembly, shield, lower platen assembly, and set of sizing rings)
GS03972	Set of Sizing Rings (50, 100, 250, and 500 microns)
GS03973	Set of Aluminium Foil Discs (200 pairs)
GS03974	Cooling Plate for Mini-Film Maker
GS03975	Mini-Film Maker Platen Set (Includes top platen assembly, shield, and lower platen assembly)
GS03800	Specacards (pkt 100) 10mm diameter aperture
GS15628	Stainless Steel Tweezers (forceps)

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