

# IM 12 Pro

## Consistent Moulding | Reliable Samples

### Sample Preparation Solution

The IM 12 Pro is a **laboratory injection moulder designed for reliable and reproducible sample preparation in polymer R&D**. By working with low, adjustable material volumes, it reduces material waste, cost, and development time while delivering precise control of the injection moulding process. Its compact design fits conveniently on a laboratory bench or inside a standard fume hood while providing easy access and safe operation.

### Precision & Control

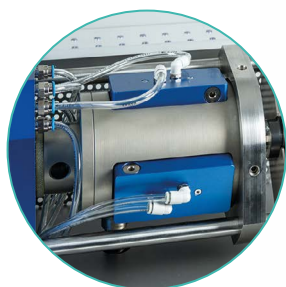
- **Injection Pressure Control:** A fully controllable injection and holding pressure profile ensures reproducible sample preparation with minimized shrinkage.
- **Temperature-Controlled Moulding:** Electrically heated or liquid-cooled moulds with accurate temperature control support structure development during processing, ensuring consistent and reproducible results.
- **Reproducible Sample Quality:** Controlled moulding conditions and accurate material dosing deliver consistent and highly reproducible test specimens.

### Flexible Sample Production

- **Standalone or Integrated Operation:** Operates independently as a laboratory injection moulder or couples directly to Xplore micro-compounders for seamless material development workflows.
- **Flexible Mould Design:** Available in standard geometries according to international standards, with the option to fully customise moulds to specific customer requirements.
- **Multiple Samples per Cycle:** Multi-cavity mould options enable efficient production of multiple test specimens within a single injection cycle.

### System Capabilities

- **Compact Laboratory Design:** Small footprint suitable for laboratory benches and standard fume hoods without requiring additional infrastructure.
- **Processing of Demanding Materials:** High injection force enables reliable moulding of high-viscosity polymers, elastomers, and advanced compounds.
- **Efficient Operation:** Optimized system design and optional liquid-cooling plates support shorter cycle times and efficient operation.



Cooling Plates



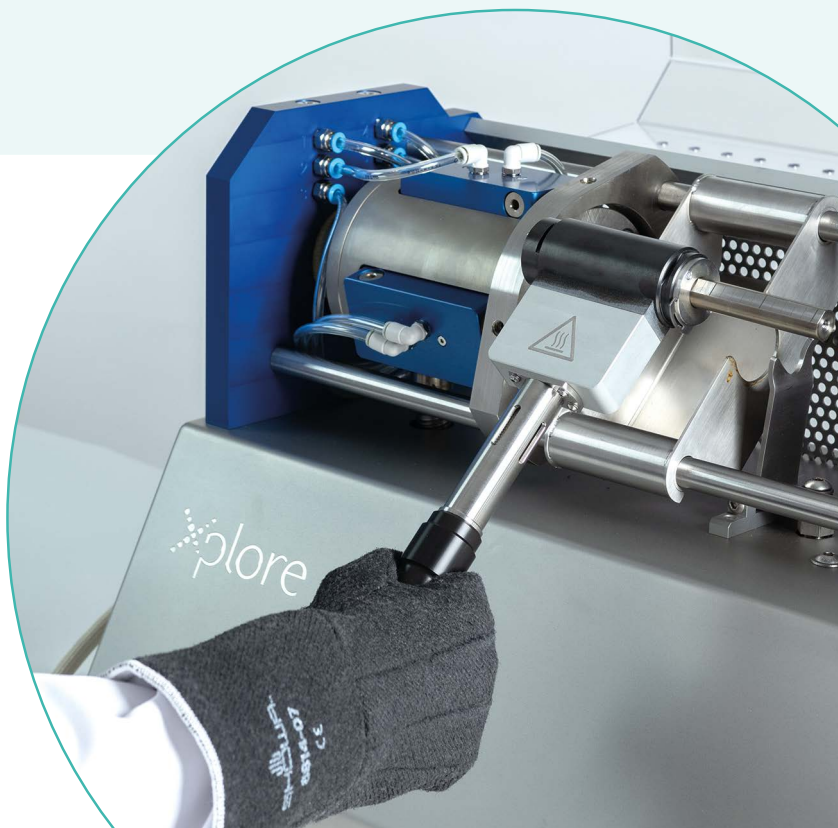
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### Technical Specifications

- Maximum shot volume: 12 ml
- Programmable pressure profile: Between 1–16 bar versus time
- Maximum injection force: 12 kN at 10 bar; 19.5 kN at 16 bar
- Maximum melt temperature in transfer unit: 450°C
- Heating time of transfer unit to 300°C: <5 min
- Maximum mould temperature: 300°C
- Moulds are heated as standard and optionally liquid-cooled:
  - Heating: From room temperature to 100°C <15 min
  - Cooling: Optional liquid-cooling plates (lab-chiller compatible)
  - Cooling: From 100°C to room temperature <15 min (water-cooled)
- Power supply:
  - 110–120 Vac / 50–60 Hz, 3 phase, 16 A
  - 220–240 Vac / 50–60 Hz, 1 phase, 16 A
- Dimensions (L × W × H): 90 cm × 40 cm × 40 cm
- Weight: 50 kg



Contact us at  
[xplore-together.com](http://xplore-together.com)