PRODUCT DATASHEET

Lab Gel Spinning Machine

High-strength fibres by gel spinning





DETAIL – HEATED EXTRUDER

OVERVIEW

The Tech Inc. Lab Gel Spinning Machine makes high-strength fibres from gel-state polymers such as UHMWPE and PVA. The heated extruder forms a gel fibre, a quench bath sets it, and drawing ovens stretch it many times to align the molecules.

MODELS AND CONFIGURATIONS

- **Piston-fed machine** – small batches.
- **Screw-fed machine** – continuous runs.
- **Extra draw stages** – higher draw ratios.

TYPICAL DESIGN DATA

Extruder temperature	Up to 300 °C
Draw ratio	Up to about 50, in stages
Ovens	Two or more, to 200 °C
Take-up speed	Up to about 50 m/min

APPLICATIONS

UHMWPE and PVA fibre research, high-strength and ballistic fibres, and fibre-drawing studies.

KEY ADVANTAGES

- **Very high draw ratios** – multi-stage ovens
- **Controlled** – temperatures and speeds set per stage
- **Small scale** – develop recipes with little polymer

Designed and built by Tech Inc. · **Part of the Davey Group since 1990**

Offices: Chennai · Toronto · Tallinn · Al Khobar

mail@techincresearch.com · +1 (289) 622-1032 · www.techincresearch.com

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