PRODUCT DATASHEET

Gas Separation Membrane Permeation Test System

Permeance and selectivity, pure and mixed gas





DETAIL – HEATED MEMBRANE CELL

OVERVIEW

The Tech Inc. Gas Separation Membrane Permeation Test System measures permeance and selectivity of flat-sheet and hollow-fibre gas separation membranes with pure and mixed gases. Mass flow controllers blend the feed, a heated cell holds the membrane, and the permeate is measured by flow meter or analyser, with every value logged automatically.

MODELS AND CONFIGURATIONS

- **Pure-gas system** – constant-pressure or time-lag permeance.
- **Mixed-gas system** – blended feed with analyser on the permeate.
- **High-pressure system** – feeds to 70 bar for natural gas work.
- **Hollow-fibre version** – module holder in place of the flat cell.

TYPICAL DESIGN DATA

Feed pressure	Up to 20 bar standard, 70 bar on request
Temperature	Ambient to 150 °C
Gases	H_2, He, CO_2, CH_4, N_2, O_2 and blends
Membrane area	About 10 to 30 cm^2 flat sheet
Data	Pressure, temperature and flow logged to CSV

APPLICATIONS

Polymer, mixed-matrix, carbon and inorganic membranes for CO_2 capture, biogas upgrading, hydrogen recovery and air separation.

KEY ADVANTAGES

- **Real mixed-gas data** – selectivity measured with blended feeds, not only pure gases
- **Automated** – unattended runs with full data logging
- **Flexible** – flat sheet or hollow fibre, pure or mixed gas
- **Safe** – leak-tested gas panel and enclosure

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

Disclaimer: All products, designs and content are the property of Tech Inc. Tech Inc. reserves the right to change specifications and details without notice. Images are for representation only; the supplied equipment may differ in appearance. Data are typical; final design to client specification.