PRODUCT DATASHEET

Short-Path Distillation Unit (Lab, Pilot and Production)

Molecular distillation under high vacuum for fish oil, MCT, tocopherols, sterols and essential oils

Product page





Close-up: wiped-film evaporator and internal condenser

OVERVIEW

The Tech Inc. Short-Path Distillation Unit (Lab, Pilot and Production) separates heat-sensitive oils at very low pressure, so they boil far below their normal temperature and spend only seconds on the hot surface. A wiper spreads the feed into a thin film on a heated jacketed wall; vapour travels a few centimetres to an internal condenser and leaves as distillate, while the residue runs down the wall.

TYPICAL DESIGN DATA

Evaporator area	About 0.06 to 6 m²
Operating pressure	Down to about 0.001 mbar at the evaporator
Wall temperature	Up to about 300 °C by hot oil
Codes and standards	Pressure parts to the client's code; electrical to IEC 60204-1; food-contact materials on request
Materials	316L stainless wetted parts; borosilicate glass for lab units
Wiper	PTFE roller or carbon blade
Control	PLC with recipe and data logging

MODELS AND CAPACITIES

- **TI-SPD-0.06** – about 0.06 m², 0.5 to 3 kg/h (lab)
- **TI-SPD-1.5** – about 1.5 m², 30 to 120 kg/h
- **TI-SPD-0.35** – about 0.35 m², 5 to 25 kg/h (pilot)
- **TI-SPD-6** – about 6 m², 120 to 500 kg/h (production)

Indicative evaporator area and feed rate.

ORDERING CODE

Example **TI-SPD-0.35-2S**: **0.35** evaporator area, m²; **2S** stages: 1S single, 2S degasser plus short path.

SCOPE OF SUPPLY

Included: factory acceptance test with a written report; drawings for approval, material certificates and manual. **Options:** second stage; flameproof (Ex) build; inline colour or refractive-index sensor; trial runs on customer oil.

KEY ADVANTAGES

- **Gentle** – seconds on the hot wall
- **Deep vacuum** – low boiling temperature
- **One design** – lab, pilot and production share the geometry
- **Flexible** – many oils on one unit

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

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