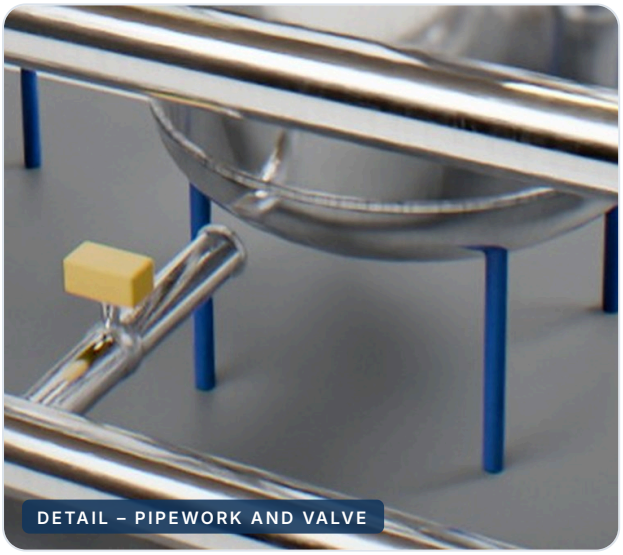
PRODUCT DATASHEET

Walnut Shell Filter

Nutshell filter train for produced-water deoiling





DETAIL – PIPEWORK AND VALVE

OVERVIEW

The Tech Inc. Walnut Shell Filter removes residual oil and suspended solids from produced water after primary separation, making the water fit for injection back into the reservoir or for disposal wells. Each vessel holds a deep bed of crushed walnut shell that traps oil droplets and fine solids.

MODELS AND CONFIGURATIONS

- **TI-NSF100** – walnut-shell filter train for 100,000 barrels of produced water a day.
- **Multi-train installations** – several trains in parallel for larger water-handling facilities.
- **Duty and backwash arrangement** – vessel count chosen to keep the train on line while one vessel backwashes.

TYPICAL DESIGN DATA

Capacity	Typically 100,000 barrels a day per TI-NSF100 train (about 662 m^3/h), or to client specification
Filter media	Crushed walnut shell, cleaned by scrubbing and backwash
Inlet oil and solids loading	Sized to the duty, or to client specification
Outlet quality	To the project's injection or disposal specification
Design pressure and temperature	To client specification
Vessels	Designed to ASME VIII or client specification
Materials	Carbon steel with internal lining or coating, or to client specification
Backwash initiation	On differential pressure, timer or operator command

APPLICATIONS

Produced-water deoiling, water injection for reservoir pressure support, disposal-well protection, gathering centres and central processing facilities, and offshore platforms.

KEY ADVANTAGES

- **Reusable media** – the walnut-shell bed is scrubbed and backwashed in place, with only periodic top-up
- **Captures fine oil** – the deep bed traps droplets and solids that pass primary separation
- **Continuous duty** – one vessel backwashes while the rest of the train stays on line
- **Backwash recovered** – backwash water and oil return to the upstream separation stage
- **Automatic operation** – PLC sequencing limits operator work to routine checks

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

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