



Short Path Evaporation System for Vegetable Oil Refining

This advanced short-path evaporation system is designed to produce high-value products such as squalene, sterols, tocopherol, and omega-3 fatty acids, demonstrating De Dietrich's commitment to supporting industries with efficient, sustainable, and innovative solutions.

Short Path Evaporators (SPEs) are a versatile technology engineered to process high-boiling, heat-sensitive, or viscous materials. Key applications include:

- **Distillation:** Ideal for squalene, sterols, tocopherol, and fatty acids
- **Purification:** Ensures essential oils are free from impurities
- **Contaminant Reduction:** Removes unwanted substances from vegetable and fish oils
- **Solvent Stripping:** Facilitates high-efficiency processing in polymers



5m2 horizontal preassembly short path installation at our workshop

PROJECT OVERVIEW

This complete process boasts a feed capacity of 500 kg/hr and achieves exceptional performance metrics:

- **Distillate Cut:** Up to 60% at high vacuum
- **Temperature Capability:** Operates at temperatures up to 300°C
- **Vacuum Levels:** Maintains operating vacuum as low as 0.1 mbar absolute
- **Integrated Solutions:** Comprehensive process development, testing, and design engineering to meet specific customer needs
- **Modular Design:** Fully assembled modular system for seamless installation and operation

ADVANTAGES OF SPE TECHNOLOGY

The Short Path Evaporator delivers unmatched efficiency and performance, thanks to its:

- **Reduced Boiling Temperatures:** Enabled by high vacuum processing and minimized evaporation-to-condensation path
- **Short Residence Time:** Achieved through an agitated thin film created by the internal rotor, minimizing thermal degradation risks
- **High Evaporation Rates:** Supported by superior film coefficients and optimized temperature differentials

This project reflects De Dietrich Process Systems' dedication to driving innovation in thermal separation technology. By combining comprehensive process development, rigorous testing, and expertly engineered designs, we provide clients with turnkey solutions that maximize productivity and product quality while reducing environmental impact.

For more information on how De Dietrich Process Systems can support your process needs with evaporation technologies, contact us today.



Shell and Internal Condenser

