Elanco Spiral Plate Heat Exchangers
Applications for Elanco Spiral Plate Heat Exchangers

Slurries:
- Paper & Pulp
- Digester Heaters for Waste Treatment
- Textile and Laundry Plants
- PVC Production

High Temperature & Low Temperature:
- Exhaust Coolers
- High Temp Gas-to-Gas, (up to 1650°F)
- Liquid Nitrogen & other Cryogenics

High Viscous:
- Distillation Columns Bottom Coolers
- Fatty Acid Coolers
- Resin/Plastic Feed Heaters (20,000 C_p)

High Efficiency & Close Approach:
- Heat Recovery and Cogeneration
- Bottoms to Feed Interchangers
- Partial & Knockback Condensers
- Vacuum Service
- Thermosiphon Reboilers

Other Equipment Produced by Elanco Inc

Stainless Steel Air-Cooled Heat Exchangers
Standard units available

Double Walled Tube Heat Exchanger
Where zero leakage must be maintained

Specialized Shell and Tube Heat Exchangers
High alloys, high pressures, & high temperatures

Plate and Shell Heat Exchangers
Compact, high efficiency, & high pressure

Special Fabrications
High alloy pressure vessels, filters & fabrications
The Spiral Plate Heat Exchanger is actually a family of heat exchangers all based on the basic Type A spiral core. By adding or taking away weld-seam and head arrangements we get the other varieties of spiral heat exchangers. This versatility makes the spiral attractive to many services. Listed below are the five different type of spirals available from Elanco Inc.

**Type A**  
Spiral in both circuits, removable heads both sides for clean out. Used for fouling flows on both sides where cleaning of the prime surface is required.  
Example: bottoms to feed interchanger.

**Type B**  
Spiral in both circuits, removable head on one side and all welded on other side. Used when only one of the flows is fouling or when gasketing of one flow is a problem.  
Example: condensate cooler with river (muddy river water on cleanable side).

**Type C**  
Spiral in both circuits, all welded on both sides. Used when the flows are clean, when gasketing is problematic, or when cost must be kept to a minimum.  
Example: deionized water to tap water.

**Type D**  
Spiral/axial circuit for boiling or condensing, on one side or both sides. Could have both, one or none of the heads removable for cleaning. The boiling feed enters as liquid to the spiral from the periphery, and boils up axially. Vapors enter the center, condense down and exit the peripheral. With careful design, sub-cooling can be controlled.  
Example: sludge header with steam, or natural circulation reboiler for distillation.

**Type E**  
Spiral on one circuit, axial on the other circuit. The spiral side is all welded, and the axial side flows through the heat exchanger with no spiral action. Used when there is a large difference in flow volume.  
Example: vacuum cold traps, or air-to-water applications.
Applications for Standard Encoils

By a large margin the most popular application is heating and cooling deionized (DI) water. This is often inside another machine such as a laser, or X-ray. DI water is very corrosive and so the stainless material is important; DI water is most often generated with cartridge resins and circulated by pump so pressure is low, >75 psi.

Applications:

- **High Powered Electronics**
  - Lasers
  - Radars
  - Microwave
  - Large Capacitors
  - Large Transformers
  - Rectifiers

- **Test Equipment & Instruments** (laboratory equipment, engine test stands, etc.)
- **Sample Coolers** (on-line analysis often requiring cooling before the instrument, usually M-1/2)
- **Swimming Pools & Spas** (heating & cooling)
- **Steam Boiler Feed Heater & Blowdown Coolers** (also excellent air-cooled application)
- **Trim Coolers** (often with control valves)
- **Small Scale Distillation** (mostly solvents)
  - Condensers
  - Feed Heaters
  - Interchangers
  - Reboilers

Sample Encoils

Sample Custom Encoils

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