ParaTube® Tubular Heat Exchangers
FOR SANITARY APPLICATIONS
As a world leader in heat transfer equipment and process technology, SPX FLOW® supplies a complete line of tubular heat exchangers known as the ParaTube® line.

ParaTube® complements the extensive range of SPX FLOW thermal heat exchange solutions including plate heat exchangers and scraped surface heat exchangers.

SPX FLOW, Inc. (NYSE:FLOW) is a leading manufacturer of innovative flow technologies, many of which help define the industry standard in the market segments they serve. From its headquarters in Charlotte, North Carolina, it operates a sales and support network, centers of manufacturing excellence, and advanced engineering facilities throughout the world. Its cutting-edge flow components and process equipment portfolio includes a wide range of pumps, valves, heat exchangers, mixers, homogenizers, separators, filters, UHT, and drying technology that meet many application needs. Its expert engineering capability also makes it a premium supplier of customized solutions and complete, turn-key packages to meet the most exacting of installation demands.

Incorporating many leading brands, SPX FLOW has a long history of serving the food and beverage, power and energy, and industrial market sectors. Its designs and engineered solutions help customers drive efficiency and productivity, increase quality and reliability, and meet the latest regulatory demands. In-depth understanding of applications and processes, state-of-the-art Innovation Centers, and advanced pilot/testing technology further assist in optimizing processes and reducing timescales to reliably meet production targets.

To learn more about SPX FLOW capabilities, its latest technology innovations and complete service offerings, please visit www.spxflow.com.

ParaTube® tubular heat exchangers - engineered for food & beverage applications.

**FEATURES AND BENEFITS**

- High operating pressure (thermal process of high viscous products)
- High operating temperature
  - Edible oil (regeneration and heating)
  - Heating by steam / thermal oil
- Long running time
  - Aseptic process of dairy products, pulpy juices
- Easy maintenance, low cost
  - Gaskets are the only required spare part

**PRODUCT SPECIFICATIONS**

Available types include:

- Double tube, Triple tube, Quadruple tube or Multtube
- ParaTubes are manufactured with corrugated tubes or smooth tubes

Material in contact with product:

- Standard offering is AISI 316/316L
- Other materials are available for some types and designs (AISI 304 / 304L, AISI 316Ti, DUPLEX (2205, 2507))

Length:

- Standard offering is 6 m (20 ft) and 3 m (10 ft)
- Other lengths are possible depending on types and designs.

Connections:

Product side:

- Clamp fittings are supplied as standard
- For larger tubular heat exchangers, flange connections are supplied
- Other product side connections are available for some types and designs (DIN, SMS)

Service side:

- Clamp fittings are supplied as standard
- Other service side connections are available for some types and designs (Flange, DIN, SMS)

**Design pressure** on product side: up to 75 bar (1088 psi) maximum working pressure depending on ParaTube types and designs

**Design Temperature:** Wide range just limited by gasket material
**PRODUCT TYPES**

Our wide range of equipment allows for processing an expansive list of products that possess unique viscosities, small particles such as pulp and small pieces, while maintaining product integrity when required.

**Corrugation**

In tubular heat exchangers, the heat transfer occurs through tube walls, which if corrugated, increase the turbulence and therefore the heat transfer coefficient. This reduces the required heat transfer surface area (less surface, lower costs). In addition, for certain applications it contributes to reduced fouling.

**ParaTube product portfolio:**

**Multitube Type** - Several smaller diameter tubes aligned in parallel within a larger diameter outer shell.

<table>
<thead>
<tr>
<th>FLOW RATE</th>
<th>Low-Medium-High</th>
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<tbody>
<tr>
<td>VISCOSITIES</td>
<td>Low-Medium</td>
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<tr>
<td>PARTICLES</td>
<td>Yes</td>
</tr>
<tr>
<td>AVAILABLE DESIGNS</td>
<td></td>
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<tr>
<td>WELDED DESIGN: CMT/W</td>
<td></td>
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<tr>
<td>DISASSEMBLABLE DESIGNS: CMT: With reducers CMT/D: Without reducers</td>
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**Double Tube Type** - Two concentrically positioned tubes

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<tr>
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<tr>
<td>AVAILABLE DESIGNS</td>
<td></td>
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<tr>
<td>WELDED DESIGN: CDT/W</td>
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</tr>
<tr>
<td>DISASSEMBLABLE DESIGN: CDT</td>
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<tr>
<td>REGENERATOR DESIGN: CDT/R</td>
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**Annular Space Tubular Heat Exchangers**

**Triple Tube Type** - Three concentrically positioned tubes

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<tbody>
<tr>
<td>VISCOSITIES</td>
<td>Medium-High</td>
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<tr>
<td>PARTICLES</td>
<td>No</td>
</tr>
<tr>
<td>AVAILABLE DESIGNS</td>
<td></td>
</tr>
<tr>
<td>WELDED DESIGN: CTT/W Couple or Independent</td>
<td></td>
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<tr>
<td>HIGH PRESSURE (no O-rings): CQTT/W Couple or Independent</td>
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**Quadruple Tube Type** - Four concentrically positioned tubes

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<tr>
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<tbody>
<tr>
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<tr>
<td>PARTICLES</td>
<td>Yes</td>
</tr>
<tr>
<td>AVAILABLE DESIGNS</td>
<td></td>
</tr>
<tr>
<td>WELDED DESIGN: CQT/W Couple</td>
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</tbody>
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ParaTube® Tubular Heat Exchangers
SANITARY APPLICATIONS

Global locations

**APAC**

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**EMEA**

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Based in Charlotte, North Carolina, SPX FLOW, Inc. (NYSE: FLOW) is a multi-industry manufacturing leader. For more information, please visit www.spxflow.com

SPX FLOW, Inc. reserves the right to incorporate our latest design and material changes without notice or obligation.

Design features, materials of construction, dimensional data and certifications as described in this bulletin, are provided for your information only and should not be relied upon unless confirmed in writing. Please contact your local sales representative for product availability in your region. For more information visit www.spxflow.com.

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