

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 Multi-tube
- 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 6m (20 ft) and 3m (10ft)
- 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 1088 psi (75 bar) 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.

FLOW RATE	Low-Medium-High
VISCOSITIES	Low-Medium
PARTICLES	Yes
AVAILABLE DESIGNS	WELDED DESIGN: CMT/W DISASSEMBLABLE DESIGNS: CMT: With reducers CMT/D: Without reducers



DOUBLE TUBE Type - Two concentrically positioned tubes

FLOW RATE	Low-Medium
VISCOSITIES	Low-Medium
PARTICLES	Yes
AVAILABLE DESIGNS	WELDED DESIGN: CDT/W DISASSEMBLABLE DESIGN: CDT REGENERATOR DESIGN: CDT/R



Annular Space Tubular Heat Exchangers

TRIPLE TUBE Type - Three concentrically positioned tubes

FLOW RATE	Low-Medium
VISCOSITIES	Medium-High
PARTICLES	No
AVAILABLE DESIGNS	WELDED DESIGN: CTT/W Couple or Independent HIGH PRESSURE (no O-rings): CQTT/W Couple or Independent



QUADRUPLE Tube Type - Four concentrically positioned tubes

FLOW RATE	Low-Medium
VISCOSITIES	Medium-High
PARTICLES	Yes
AVAILABLE DESIGNS	WELDED DESIGN: CQT/W Couple



Typical product applications

Food

Baby Food
Broth/Gravies
Sauces
Table Syrup
Tomato Products
Vegetable Oil



Dairy

Cream
Yogurt
Culture Media
Evaporated Milk
Baby Formula
Ice Cream Mix
Margarine
Soy Milk
Whey



Beverage

Beer/Wine
Juices
Juice Concentrate
Soft Drinks
Tea
Sterilized Water





Global locations

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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

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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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