



PARATUBE® TUBULAR HEAT EXCHANGERS

For Sanitary Applications



ENGINEERED FOR FOOD & BEVERAGE APPLICATIONS

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

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 Multitube
- 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 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 medium to high 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: With reducers: SMT Without reducers: CMT/D



DOUBLE TUBE TYPE - Two concentrically positioned tubes

Flow Rate	Low-Medium
Viscosities	Low-Medium
Particles	Yes
Available Designs	Welded Design: CDT/W Disassemblable Design: SDT 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





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