

Shell & Tube Heat Exchangers

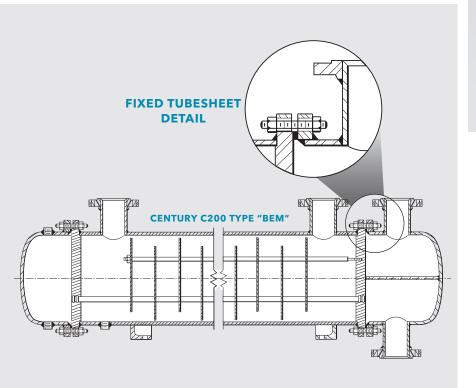
ENGINEERED SERIES: CENTURY® C200 / C210 Series







CENTURY® C200 | C210



CENTURY® C200 and C210 STANDARD DESIGN CAPABILITIES

	DESIGN PRESSURE	DESIGN TEMPERATURE
Tube Side	75 - 450 psi 517 - 3,102 kPa	-20 - 650°F -29 - 343°C
Shell Side	75 - 300 psi 517 - 2,068 kPa	-20 - 650°F -29 - 343°C

Note: Custom designs to 3,600 psi/24,816 kPa and 1000°F/538°C, depending on shell diameter and design temperature.

DETAILS

- Straight tube, fixed tubesheet, removable channel or bonnet (C200) or integral channel (C210).
- Single or multi-pass tube arrangements for maximum efficiency over a wide variety of tube side flow volumes.
- An expansion joint can be added to compensate for severe temperature differentials.
- Standard shell sizes from 5 inches through 42 inches in diameter; custom designs up to 60 inches in diameter.
- Available for horizontal or vertical mounting.

ADVANTAGES:

Less costly than removable bundle exchangers.

Provides maximum heat transfer surface area per given shell and tube size.

Easily interchangeable with designs of various other manufacturers.

Tube side can be steam or mechanically cleaned.

Only tube side fluids are exposed to gaskets. Volatile or toxic fluids possible on shell side.

Easy accessibility for tube side cleaning and inspection.

No packed joints.

LIMITATIONS:

No provision for differential expansion of tubes and shell.

Shell side may not be mechanically cleaned.

TEMA Type AEM, BEM or NEN. Can meet TEMA "B", "C" and "R", ASME Section VIII Div. 1 and ASME Section III "N" stamp.

MATERIALS

Standard Designs

Shells

 Shells - Steel, 304SS, 316SS, 304LSS, 316LSS up to 42-inch diameter

Bonnets/Channels

 Bonnets/channels - Steel, 304SS, 3136SS, 304LSS, 316LSS, Cast Iron, Cast Bronze, Ductile Iron.

Tubesheets

 Tubesheets - Aluminum Bronze, 90/10 CuNi, Muntz, RNB, 304SS, 316SS, 304LSS, 316LSS Steel.

Tubes

 Tubes - Carbon Steel, Stainless Steel, Nickel and Nickel Alloys, Titanium and other Alloys. Bare and Lo-Fin Tubing.

CAPABILITIES

- Hydraulic tube expansion
- Seal and strength welding of tubes to tubesheet
- Expansion joints (flanged and flued head as well as bellows type)
- Surface finish analysis
- Heat transfer test laboratory (4,000 ft2)
- Helium leak testing
- Radiographic, ultrasonic and magnetic particle testing (sub-contracted)
- API oil flushing

DESIGN CAPABILITIES

Custom Designs

Materials

- Stainless steel(s) (including Alloy 20, 317SS, AL6XN, 904LSS, etc.)
- Hastelloy Titanium Monel
- 90/10 CuNi 70/30 CuNi Inconel
- Incoloy® Avesta 254SMO

(Note: Weld qualifications may have to be developed)

Diameter

 Up to 42 inches for standard designs; custom designs up to 60 inches

Length

 Up to 30 feet for standard steel designs and 21 feet for standard stainless steel designs; custom designs up to 40 feet.

Temperature

• From -20°F (-29°C) up to 655°F (343°C) with standard designs; custom designs from -300°F (-184°C) up to 1000°F (538°C).

Weight

• 50 tons maximum

SPECIFICATIONS

- ASME Section III "N" stamp
- ASME Section VIII Division 1
- TEMA Classes "B", "C" and "R"
- API
- ABS
- US Navy (Mil C-15730)
- The Pressure Equipment Directive (97/23/EC)

MODELS OF EFFICIENCY













Southgate Process Equipment, Inc.

87 Hickory Springs Industrial Dr. Canton, GA 30115 Phone: (770) 345-0010

Email: <u>Sales@southgateprocess.com</u> Website: <u>www.southgateprocess.com</u>