

Shell & Tube Heat Exchangers

ENGINEERED SERIES: CENTURY® C300 / C320 Series

Southgate Process Equipment, Inc.
87 Hickory Springs Industrial Dr.
Canton, GA 30115
Phone: (770) 345-0010
Email: Sales@southgateprocess.com
Website: www.southgateprocess.com

Southgate
Process Equipment, Inc.

Standard **X**change
a xylem brand

DETAILS

- U-tube, removable bundle (C300) or suction-heater (open-end shell) construction (C320).
- Multi-pass tube arrangements for maximum efficiency over a variety of tube side flow volumes.
- The C320 is much like the C300, but has an open-end shell and special tube layout for tank suction heating applications.
- 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:

Allows for differential thermal expansion between shell and tubes as well as between individual tubes.

High heat transfer surface area for given shell and tube size.

Capable of withstanding thermal shock.

The most economical of all shell-and-tube exchangers, and the least expensive of all basic designs.

Shell side can be steam or mechanically cleaned.

Bundle can be removed for shell side cleaning and maintenance.

LIMITATIONS:

Individual tube replacement is difficult.

Cannot be made single-pass on tube side, so true counter current flow not possible.

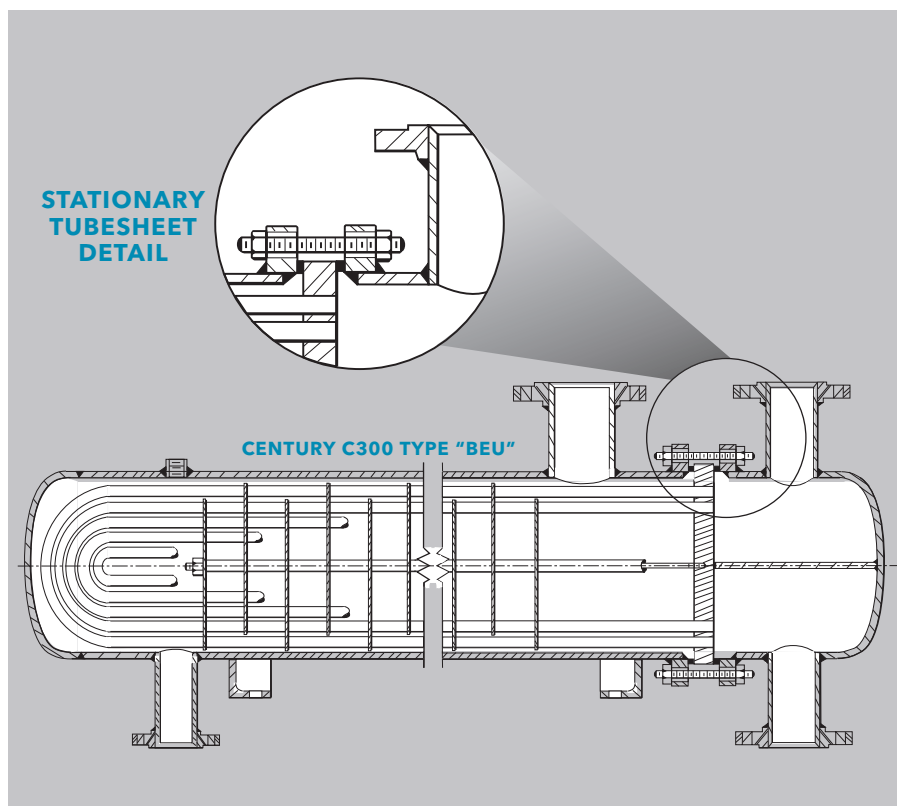
Draining tube side is difficult in vertical (head-up) position.

Tube side can be cleaned by chemical means only.

TEMA Type AEU or BEU.

Can meet TEMA "B", "C" and "R", ASME Section VIII Div. 1 and ASME Section III "N" stamp.

CENTURY® C300 | C320



CENTURY® C300 AND C320 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.

MATERIALS

Standard Designs

Shells

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

Bonnets/Channels

- Bonnets/channels - Steel, 304SS, 316SS, 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).

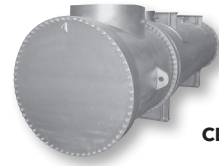
Weight

- 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



CENTURY SERIES®



BRAZEPAK®



PLATEFLOW®



AIREX® AND FANEX®



PRE-ENGINEERED SERIES

Southgate
Process Equipment, Inc.

Southgate Process Equipment, Inc.

87 Hickory Springs Industrial Dr.

Canton, GA 30115

Phone: (770) 345-0010

Email: Sales@southgateprocess.com

Website: www.southgateprocess.com