

Shell & Tube Heat Exchangers

ENGINEERED SERIES: CENTURY® CPK Series



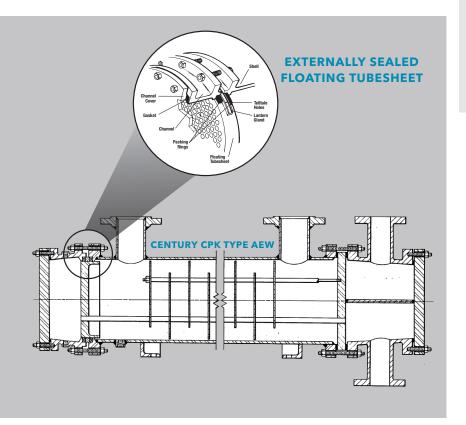
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CENTURY® CPK SERIES



CENTURY® CPK 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

DETAILS

- Straight tube, removable bundle, packed floating tubesheet
- Single or two pass tube arrangements for maximum efficiency over a wide variety of tube side flow rates.
- Standard shell sizes from 3 inches through 31 inches in diameter; custom designs up to 60 inches in diameter.
- Available in horizontal and vertical installations as well as stacked assemblies.

ADVANTAGES:

Floating tubesheet allows differential expansion between the shell and tubes.

Maximum tube count per shell diameter.

Shell side can be steam or mechanically cleaned.

Bundle can be easily replaced or repaired.

Less costly than full internal floating head type construction.

LIMITATIONS:

Both shell side and tube side exposed to packing. Volatile and/or toxic fluids should be avoided.

Packing limits design pressure and temperature for both shell and tube sides.

TEMA Type AEW or BEW. Can meet TEMA "B", "C" and "R", ASME Section VIII Div. 1 "U" stamp 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













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