



# Shell & Tube Heat Exchangers

PRE-ENGINEERED SERIES: BCF/SSCF/SX2000/B300

# Shell & Tube Heat Exchangers

As the recognized leader in heat exchanger products, systems and technology, Standard Xchange has been providing state-of-the-art solutions to heat transfer problems for more than 100 years.

Today, the company is devoted exclusively to the design, engineering and manufacture of shell-and-tube, gasketed plate, brazed plate and air-cooled heat exchanger products. Standard Xchange heat exchangers are engineered and manufactured by experienced craftsmen who have been devoted to the science of heat transfer not just for years, but for generations. And because we offer such a wide assortment of different heat exchanger designs, we can assure you of getting the optimum heat transfer solution to your specific application, without bias toward any one particular (or proprietary) product line.

## **Standard Xchange Shell & Tube**

heat exchangers  
are manufactured  
with the highest  
standards of quality.

Some of Standard Xchange's code qualification options include:

**ISO 9001**

**ASME Code**

**Pressure Equipment  
Directive (97/23EC)**

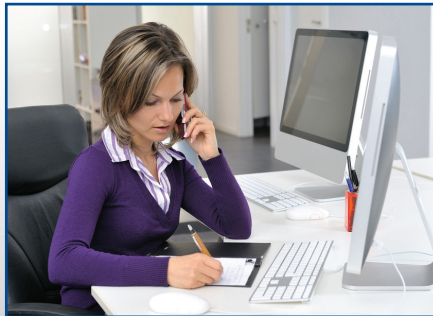
**China ML**

**Korean KGS**

**Brazilian NR-10**



Standard Xchange is headquartered in one of the largest and best-supported heat exchanger centers in the world.



Our design staff and computerized selection process will help you choose the best heat exchanger for your application.



Advanced computerized design integrated with lean manufacturing processes provides for the industry leading Quick Ship Program.



High standards of quality are found in every aspect of manufacturing, packaging and shipping.

## THE NEW STANDARD IN COST-EFFECTIVE SOLUTIONS.



From water to oil to process fluid and corrosive fluid applications, there's an Standard Xchange heat exchanger that will get the job done. Our comprehensive range of shell & tube heat exchangers are dependable, rugged, and proven - with more than 100 years of research and engineering backing every design. With

state-of-the-art computerized design and configuration integrated with our advanced lean manufacturing cells, hundreds of design options are available through our Quick Ship Program providing unparalleled yet cost-effective lead-times.

## THE NEW STANDARD IN INNOVATION.

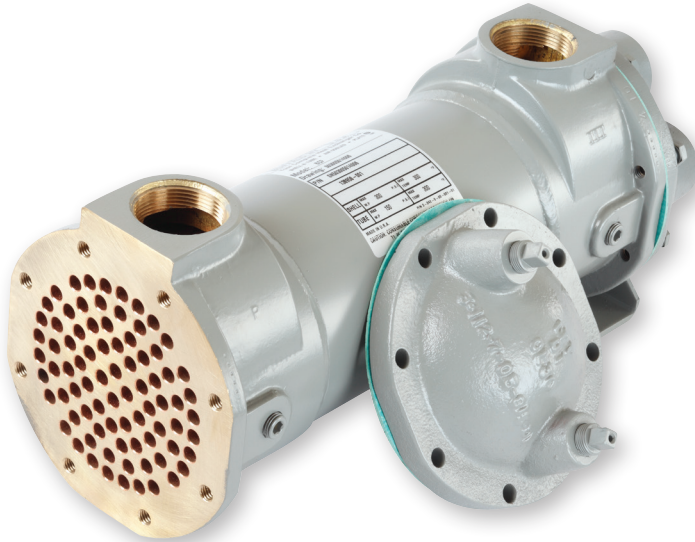


It's true that Standard Xchange has been leading the way in state-of-the-art heat transfer solutions. Our advanced thermal research lab is one of the largest and best equipped facilities in the industry. Staffed with a team of highly qualified engineers, Standard Xchange's research efforts are used to analyze complex heat transfer

solutions and advanced new product development. It is also made available to industry groups, to develop standards and guidelines for product design and testing.



# BCF/HCF/HFF



## MATERIALS

|                           |                                                                                           |
|---------------------------|-------------------------------------------------------------------------------------------|
| <b>SHELL</b>              | Brass                                                                                     |
| <b>TUBES</b>              | Copper with option for 90/10 or 70/30 CuNi<br>Tube Diameter Options: 1/4", 3/8", and 5/8" |
| <b>HUBS</b>               | Brass with optional SAE four bolts connections                                            |
| <b>BONNETS</b>            | Cast Iron with option for Cast Bronze                                                     |
| <b>FEET &amp; BOLTING</b> | Carbon Steel                                                                              |

## BCF/HCF/HFF STANDARD DESIGN CAPABILITIES

|                   | DESIGN PRESSURE                    | DESIGN TEMPERATURE |
|-------------------|------------------------------------|--------------------|
| <b>Tube Side</b>  | 150 psi<br>10.5 kg/cm <sup>2</sup> | 300°F<br>148.9°C   |
| <b>Shell Side</b> | 300 psi<br>21.1 kg/cm <sup>2</sup> | 300°F<br>148.9°C   |

## DETAILS

- Compact design with shell diameters 2" to 8", standard tube lengths 8" to 72" with custom tube lengths to 144".
- Available in 1, 2 & 4 tube side pass configurations.
- Same day, three-day, or five-day Quick Ship Program available.
- ASME Code options available.

### EXCHANGER TYPE:

Straight Tube  
Fixed Tubesheet

### 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 manufacturers.

Flanged lip baffles ensure close tolerance, high efficiency and additional tube support.

Enlarged bundle entrance area of hub/tubesheet design lowers entrance velocity and pressure loss.

Tube side can be steam or mechanically cleaned.

Only tube side fluids exposed to gaskets.

No packed joints.

### LIMITATIONS:

No provision for differential expansion of tubes and shell.

Shell side may not be mechanically cleaned.

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Enlarged bundle entrance area of hub/tubesheet design lowers entrance velocity and pressure loss.

Tube side can be steam or mechanically cleaned.

Only tube side fluids exposed to gaskets.

No packed joints.

**LIMITATIONS:**

No provision for differential expansion of tubes and shell.

Shell side may not be mechanically cleaned.

# SSCF/SSCF-C



**MATERIALS**

|                           |                                                                                                                |
|---------------------------|----------------------------------------------------------------------------------------------------------------|
| <b>SHELL</b>              | Stainless Steel 316                                                                                            |
| <b>TUBES</b>              | Stainless Steel 316 with option for Copper, 90/10 or 70/30 CuNi<br>Tube Diameter Options: 1/4", 3/8", and 5/8" |
| <b>HUBS</b>               | Cast Stainless Steel 316                                                                                       |
| <b>BONNETS</b>            | Cast Stainless Steel 316 with Cast Iron and Cast Bronze options                                                |
| <b>FEET &amp; BOLTING</b> | Carbon Steel with Stainless option                                                                             |

**SSCF/SSCF-C  
STANDARD DESIGN CAPABILITIES**

|                   | <b>DESIGN PRESSURE</b>             | <b>DESIGN TEMPERATURE</b> |
|-------------------|------------------------------------|---------------------------|
| <b>Tube Side</b>  | 150 psi<br>10.5 kg/cm <sup>2</sup> | 450°F<br>232°C            |
| <b>Shell Side</b> | 225 psi<br>15.8 kg/cm <sup>2</sup> | 450°F<br>232°C            |

## SX2000/ SX2000C



### MATERIALS

|                           |                                                                                               |
|---------------------------|-----------------------------------------------------------------------------------------------|
| <b>SHELL</b>              | Fabricated Carbon Steel                                                                       |
| <b>TUBE SHEETS</b>        | Fabricated Carbon Steel with option for Stainless Steel 316 or 90/10 CuNi                     |
| <b>TUBES</b>              | Copper with option for Stainless Steel 316, 90/10 or 70/30 CuNi. Tube Diameter: 1/4" and 3/8" |
| <b>BONNETS</b>            | Cast Iron with cast Stainless Steel 316 and Cast Bronze options                               |
| <b>FEET &amp; BOLTING</b> | Carbon Steel                                                                                  |

### SX2000/SX2000C STANDARD DESIGN CAPABILITIES

|                   | <b>DESIGN PRESSURE</b>             | <b>DESIGN TEMPERATURE</b> |
|-------------------|------------------------------------|---------------------------|
| <b>Tube Side</b>  | 150 psi<br>10.5 kg/cm <sup>2</sup> | 300°F<br>148.9°C          |
| <b>Shell Side</b> | 300 psi<br>21.1 kg/cm <sup>2</sup> | 300°F<br>148.9°C          |

### DETAILS

- Compact design with shell diameters 2" to 8", standard tube lengths 8" to 72" with custom tube lengths to 144".
- Available in 1, 2 & 4 tube side pass configurations.
- Same day, three-day, or five-day Quick Ship Program available.
- ASME Code options available.
- Flanged connection options available.

#### EXCHANGER TYPE:

Straight Tube  
Fixed Tubesheet

#### ADVANTAGES:

All welded rugged carbon steel shell side construction provides maximum durability.

Less costly than removable bundle exchangers.

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

Easily interchangeable with designs of various manufacturers.

Tube side can be steam or mechanically cleaned.

Only tube side fluids exposed to gaskets.

No packed joints.

#### LIMITATIONS:

No provision for differential expansion of tubes and shell.

Shell side may not be mechanically cleaned.

## DETAILS

- SX2000U utilizes compact 3/8" OD tubes for compact selections. Pre-engineered units 4" thru 12" shell diameters.
- B300 utilizes larger 3/4" OD tubes to handle wide range of fluids. Shell diameters from 4" to 30" OD.
- Available in 2, 4 or 6 pass arrangements to optimize performance requirements.
- ASME Section VIII Div. 1 "U" Stamp as standard.

### EXCHANGER TYPE:

U-Tube

Removable Floating Bundle

### ADVANTAGES:

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

Capable of withstanding thermal shock.

All welded rugged carbon steel shell side construction provides maximum durability.

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

Easily interchangeable with designs of various manufacturers.

### LIMITATIONS:

Individual tube replacement not always possible.

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

Tube side can be cleaned by chemical means only.

# SX2000U/B300



## MATERIALS

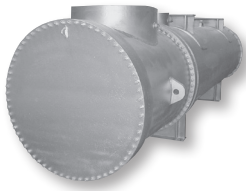
|                           |                                                                      |
|---------------------------|----------------------------------------------------------------------|
| <b>SHELL</b>              | Fabricated Carbon Steel with Stainless options                       |
| <b>TUBES SHEETS</b>       | Fabricated Carbon Steel with Stainless, 90/10 CuNi and Brass options |
| <b>TUBES</b>              | Copper with option for Stainless Steel, 90/10 or 70/30 CuNi          |
| <b>BONNETS</b>            | Cast Iron with Cast Stainless Steel 316 and Cast Bronze options      |
| <b>FEET &amp; BOLTING</b> | Carbon Steel                                                         |

## SX2000U/B300

### STANDARD DESIGN CAPABILITIES

|                   | <b>DESIGN PRESSURE</b>                                                 | <b>DESIGN TEMPERATURE</b> |
|-------------------|------------------------------------------------------------------------|---------------------------|
| <b>Tube Side</b>  | 4" thru 8" Dia.-150 10" Dia. and up-150 psi (10.5 kg/cm <sup>2</sup> ) | 375°F<br>190.6°C          |
| <b>Shell Side</b> | 150 psi<br>10.5 kg/cm <sup>2</sup>                                     | 375°F<br>190.6°C          |

# Models of Efficiency



## CENTURY SERIES®

Engineered/  
customized heat  
exchangers for  
process and other  
heating/cooling  
applications.



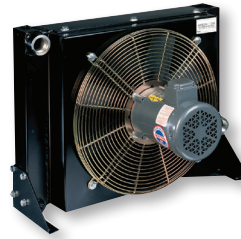
## BRAZEPAK®

Brazed plate  
heat exchanger.



## PLATEFLOW®

Gasketed plate  
& frame heat  
exchanger.



## AIREX® AND FANEX®

Air/oil, air/air,  
or air/water  
heat exchangers.



## PRE-ENGINEERED SERIES

BCF®/SSCF®/  
SX2000®/B300®  
Pre-engineered  
shell and tube  
heat exchanger.

## Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're a global team unified in a common purpose: creating advanced technology solutions to the world's water challenges. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. Our products and services move, treat, analyze, monitor and return water to the environment, in public utility, industrial, residential and commercial building services settings. Xylem also provides a leading portfolio of smart metering, network technologies and advanced analytics solutions for water, electric and gas utilities. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise with a strong focus on developing comprehensive, sustainable solutions.

**For more information on how Xylem can help you, go to [www.xylem.com](http://www.xylem.com)**



Xylem  
[www.xylem.com/standardxchange](http://www.xylem.com/standardxchange)

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