



**JINCHEN**

金晨 · 板壳换热器

**Plate & Shell Heat Exchanger**

Fully-welded · Compact · High-Performance

[www.jinchen-sphe.com](http://www.jinchen-sphe.com)



## Plate & Shell Heat Exchanger (PSHE)

The PSHE range of heat exchangers are new generation heat exchangers, combining the best properties of the Plate & Frame and Shell & Tube heat exchangers. The PSHE provides high heat transfer rates with a high pressure and temperature operating range. They have no gaskets, are compact, low fouling and can operate at close approach temperatures.

At the heart of the PSHE is a fully welded pack of circular plates without gaskets. This plate pack is housed within a tubular shell to provide a strong compact construction. The PSHE series have a very wide operating range with capacities of up to 100 MW / units, and can operate at pressures up to **100 bar** and temperatures up to **400°C**. They have a low maintenance design that provides flexibility to select different material and

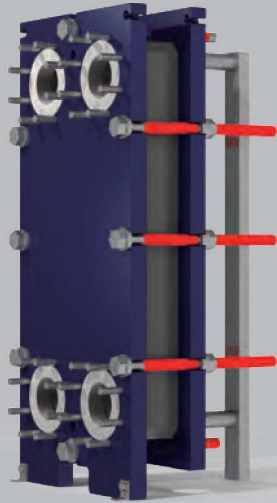
### Benefits:

- No Gaskets or Brazing
- High Integrity / Total Containment
- Strong and Safe Construction
- Protection to Thermal and Pressure Cycling
- Thermally Efficient
- Compact and Low Weight
- Flexible Construction
- Proven, Reliable Technology
- Low Fouling
- Minimal Maintenance Requirement
- Close Approach Temperatures

# Heat Exchangers Comparison

## Gasket PHE

- + Compact
- + Low fouling
- + Small  $\Delta T$  approach
- Low pressure
- Low temperature
- Gasket sealing



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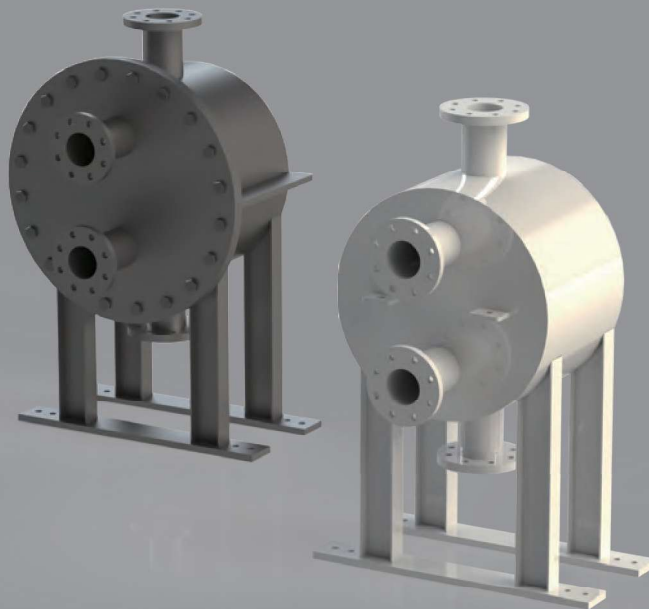
## Shell & Tube HEX

- + High temperature
- + High pressure
- + No Gaskets
- Big and Heavy
- High fouling



## Plate & Shell heat exchanger

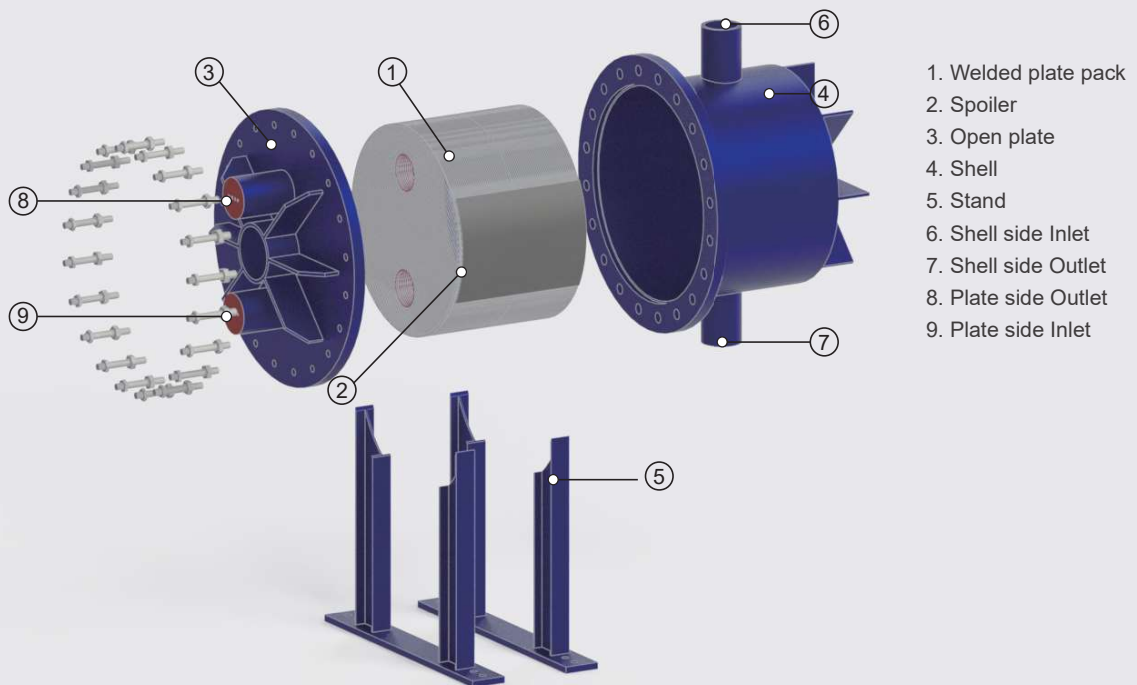
- + Compact
- + Low fouling
- + Small  $\Delta T$  approach
- + High temperature
- + High pressure
- + No Gaskets





### Applications:

- Steam condensers and generators
- Condensate heaters and coolers
- Exhaust gas recovery
- LNG applications
- Crude oil heaters and coolers
- Gas heaters and coolers
- Hydrocarbon condensers and evaporators
- Product heaters and coolers
- Gas heaters and coolers
- Heat-recovery exchangers like feed/effluent
- Overhead condensers and gas liquefiers
- Thermosyphon and kettle reboilers
- Reactor temperature-control heat exchangers
- Cryogenic applications
- Evaporators
- Droplet separators
- Evaporators/droplet separators (Combined)
- Cascades
- Desuperheaters
- Oil coolers
- Subcoolers
- Condensers





### Technical Specification

- Maximum Heat Transfer Area = 2,000 m<sup>2</sup>/unit
- Maximum **100 bar** possible
- -164 to +**400°C**
- plates thickness: 0.8-1.5mm

### Material:

#### Shell

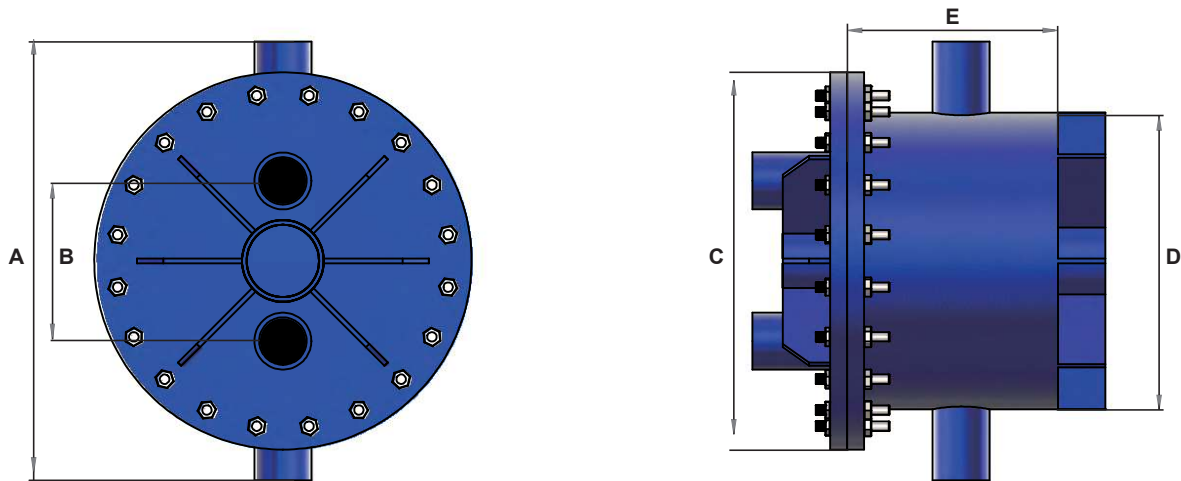
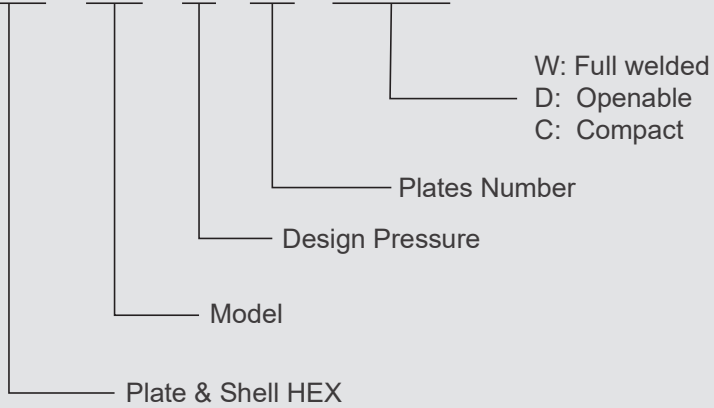
Carbon steel  
AISI 304L  
AISI 316L  
AISI 904L  
SMO  
Ti  
Hastelloy

#### Plates

AISI 304  
AISI 316L  
AISI 904L  
SMO  
Ti  
Nickle  
Hastelloy C276

## Model Name Code:

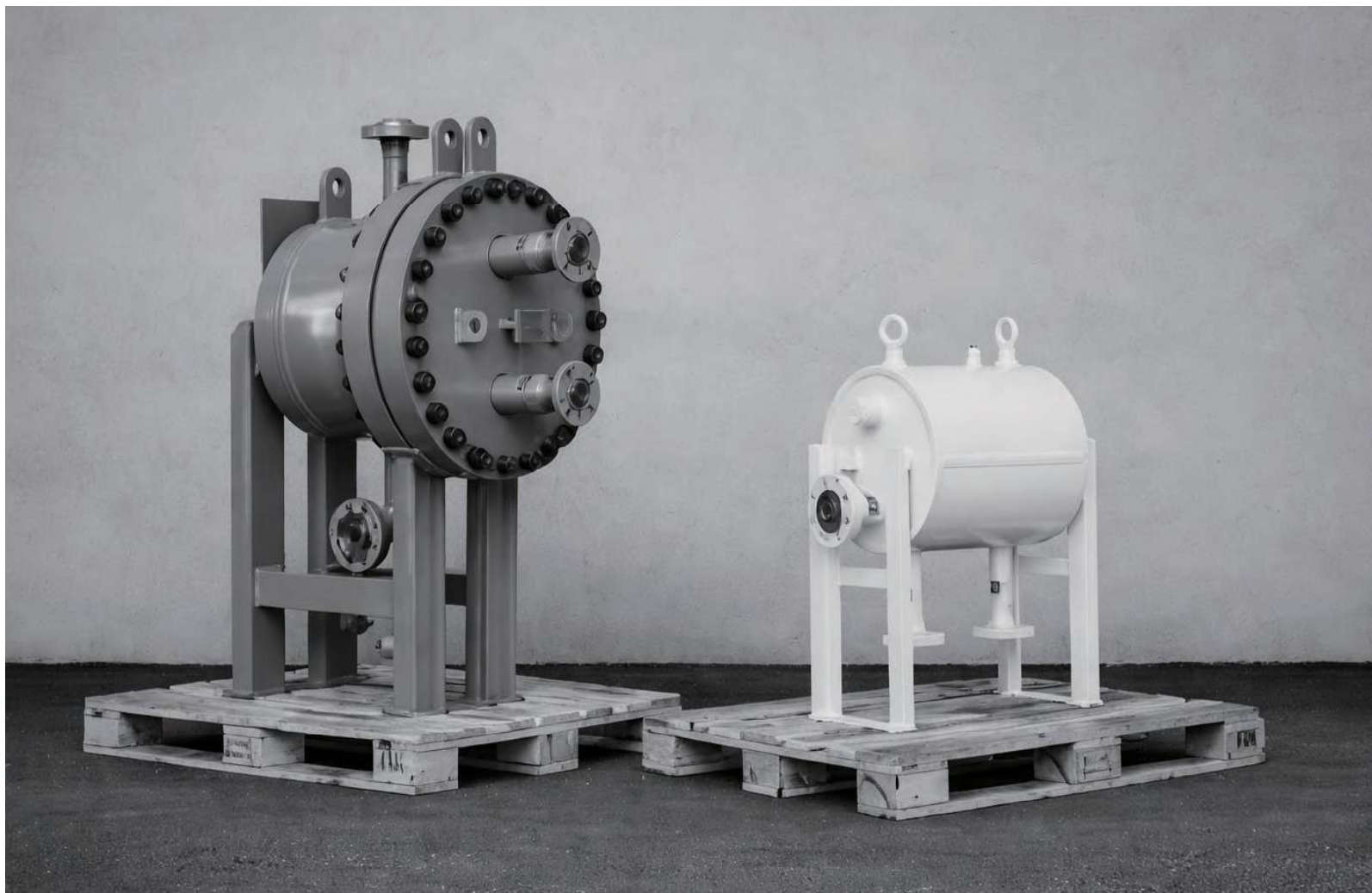
BPS - 179 - 16 - 96 - W/D/C



*\*\*Dimensions in mm*

Model	A	B	C	D	E	Plates side port	Shell side port
BPS16	240	98	250	168	$2.4 \times N + 2$	DN15	DN15-DN80
BPS22	448	135	310	219	$2.4 \times N + 3$	DN20	DN20-DN100
BPS46	469	174	368	269	$2.4 \times N + 4$	DN40	DN25-DN200
BPS72	565	277	460	355	$2.8 \times N + 4$	DN50	DN25-DN300
BPS128	600	298	694	464	$2.8 \times N + 6$	DN80	DN25-DN350
BPS179	963	338	725	559	$2.8 \times N + 6$	DN100	DN25-DN400
BPS647	1520	650	1250	1016	$3.2 \times N + 6$	DN150	DN25-DN700
BPS1200	1828	900	1548	1372	$3.2 \times N + 8$	DN300	DN25-DN1000
BPS1600	2098	1000	1838	1562	$3.2 \times N + 8$	DN350	DN25-DN1200







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