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ISO 9001

spirax/sarco

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VAHTERUS PSHE Series Plate & Shell® Heat Exchangers

Description

The PSHE range of heat exchangers are designed and manufactured by Spirax Sarco's partner Vahterus. They 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 nozzle combinations.

Standard equipment

Feet, nozzles, lifting lugs, earthing lugs, finishing and flanges.

Standards

This product fully complies with the requirements of the European Pressure Equipment Directive 97/23/EC and carries the **CE** mark when so required. Other design approvals are available on request, please contact Spirax Sarco.

Certification

One set of the following documents is available as standard:

- EC declaration of conformity (**CE** marked units).
- Dimensional drawing.
- Technical data sheet/test certificate.
- Operation and Maintenance Manual.

Please note that additional documentation is available on request.

Note: All certification/inspection requirements must be stated at the time of order placement.

Quality systems and approvals

Quality system • ISO 9001:2000 • EN ISO 384-2 • PED Module B + D

Approvals • ASME VIII Div1 • SQL China • AD-2000 • Germanischer Lloyd • Lloyd's Register
• R.I.N.A. • ABS Europe Ltd. • Bureau Veritas • PD5500 - DNV • Stoomwesen



Fully welded



Openable



Compact

Sizes, pipe connections and available options

Model	Area / Plate m ²	Plate side connection	Shell side connection	Fully welded Shell construction	Openable Easy to open and clean	Compact All connections in the end plate
PSHE 2	0.032	DN25	DN20 - DN80	•	•	
PSHE 3	0.076	DN50	DN25 - DN250	•	•	•
PSHE 4	0.150	DN80	DN25 - DN300	•	•	•
PSHE 5	0.260	DN100	DN25 - DN350	•	•	•
PSHE 7	0.460	DN150	DN25 - DN500	•	•	•
PSHE 9	0.800	DN200	DN25 - DN700	•	•	
PSHE 14	1.550	DN300	DN25 - DN1000	•	•	

Local regulations may restrict the use of this product to below the conditions quoted.

In the interests of development and improvement of the product, we reserve the right to change the specification without notice.

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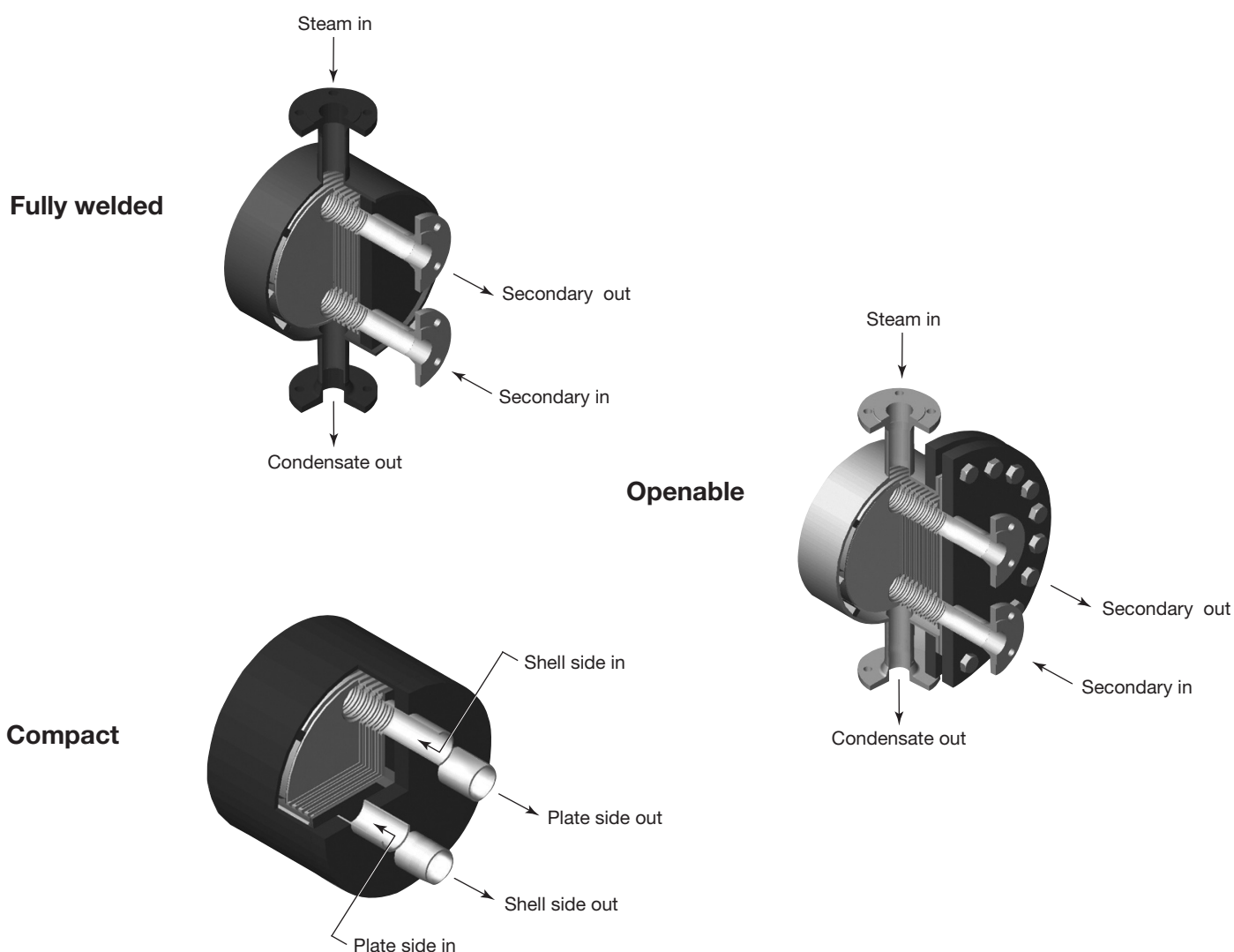
Materials (Please note: Other materials are available on request.)

Shell	Plates
ST 35.8/P265GH/P355NL	AISI 316L
AISI 316L	AISI 904L
AISI 904L	254 SMO
254 SMO	Hastelloy
	Duplex
	Titanium
	Nickel

Pressure/temperature limits

TMA	Maximum allowable temperature (higher and lower temperatures available on request)	Minimum temperature (plate side and shell side):	-80°C
		Maximum temperature (plate side and shell side):	400°C
PMA	Maximum allowable pressure	Standard PMA's 16 bar, 25 bar, 40 bar, 60 bar	
		Higher PMA's (up to 100 bar) available on request	

PSHE operation



Safety information, installation and maintenance

For full details see the Operation and Maintenance Manual supplied with the product.

How to order

Contact your local Spirax Sarco office with your application details, who will select, size and configure the correct Vahterus Plate and Shell® heat exchanger for your application.