

Plate & Shell®
Plate & Ring®



Plate & Ring®

Fully welded heat exchanger



Vahterus Plate & Ring® (PRHE) is a new generation heat exchanger. A pack of circular plates within a fully welded construction are the results of the innovative nature of the Vahterus R&D team.

Compact & Efficient

The new Plate & Ring® construction offers high heat transfer capacity for various applications, e.g. gas heating & cooling, exhaust gas heat recovery and steam condensers.

The special ring-plate, fully welded with no gaskets & no brazings, enables a compact, efficient and durable solution for many applications that are traditionally effected with different types of tubular heat exchangers.

Compact & Effective

The Plate & Ring[®] construction combines the best properties of PHE and Shell & Tube heat exchangers. At the heart of the Plate & Ring[®] heat exchanger is a fully welded pack of circular plates. This pack is housed within a shell, which is a pressure vessel.

The best of both worlds



PHE:

- + High heat transfer
- + Compact
- + Low fouling
- + Close approach temperatures
- Low pressure
- Low temperature
- Gaskets
- High pressure drop



Shell & Tube:

- + High pressure
- + High temperature
- + No gaskets
- + Low pressure drop
- High fouling
- Large size and heavy weight
- Low heat transfer



Plate & Ring[®]

- + High heat transfer
- + Low pressure drop
- + High pressure
- + High temperature
- + No gaskets
- + Compact
- + Low fouling
- + Close approach temperatures
- + Powerful



Gas coolers & heaters

- Process gas coolers & heaters
- Biogas coolers
- Pressurized air coolers



Exhaust gas heat recovery

- Exhaust gas heat recovery for boilers and diesel & gas engines
- Exhaust gas condensers



Condensers

- Low pressure & vacuum steam condensers
- Head condensers
- Partial condensers



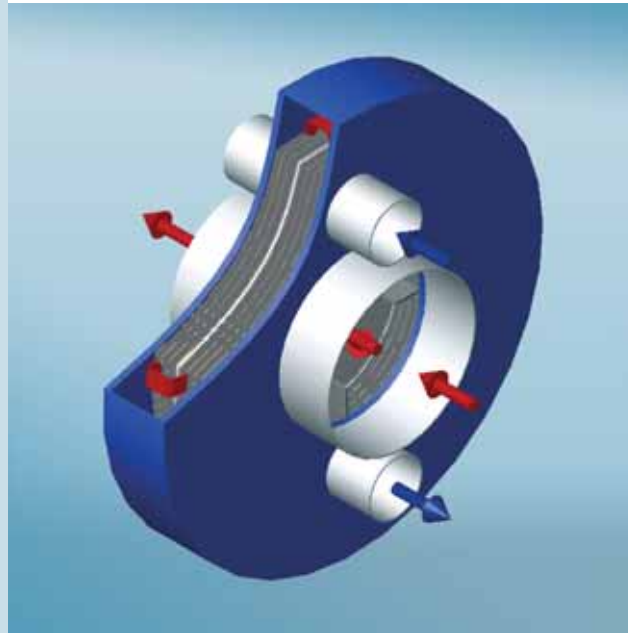
Special applications

- ORC-process economisers
- Customer specific applications

Vahterus provides solutions to most heat transfer needs. We have remarkable experience with heat transfer technology and are continually investing in research & development.

High quality, consistent and reliable products are a matter of principle to us.

Plate & Ring®



Technical specifications:

Design pressure:

- Standard design 1, 6, 10, 16, 25, 40 bar, others by request

Design temperature:

- Standard design - 80 - + 500 °C, others by request

Standard equipment:

- Feet
- Nozzles
- Flanges
- Lifting lugs
- Earthing lugs
- Finishing

Materials:

Shell:	Plates:
• St 35.8	• AISI 316L
• AISI 316L	• AISI 904L
• AISI 904L	• 254 SMO
• 254 SMO	• Hastelloy
• etc.	• Duplex
	• Titanium
	• Nickel
	• etc.

Approvals:

• ASME VIII, Div. 1
• SQL, China
• AD-2000
• Germanischer Lloyd
• Lloyd's Register
• R.I.N.A.
• ABS Europe Ltd
• Bureau Veritas
• PD5500
• DNV
• Stoomwesens

Quality system:

• ISO 9001:2000	
• EN ISO 3834-2	
• PED module B+D	

• ASME U Stamp

Main data:

	Area/plate, m ²	Plate side nozzles, DN	Shell side nozzles, DN
PRHE 12	1	200	200-600



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