



SONDEX®

▶ SW59 - SW102

Semi-Welded Plate Heat Exchangers

Recommended Applications:

The Semi-Welded plate heat exchanger range is specially designed for the cooling and heating area, heat recovery where one product will be aggressive as well as the refrigeration industry where aggressive products such as ammonia are used.

Design Principle

The Semi-Welded plate heat exchanger uses laser welded cassettes which are made up of two plates welded together. The products pass through the port holes and into the gap between the plates. The product which flows through the cassettes, is only in contact with the special ring gaskets located in two of the four port holes. The opposite product flows through the gap sealed by plate gaskets preventing any leaks.

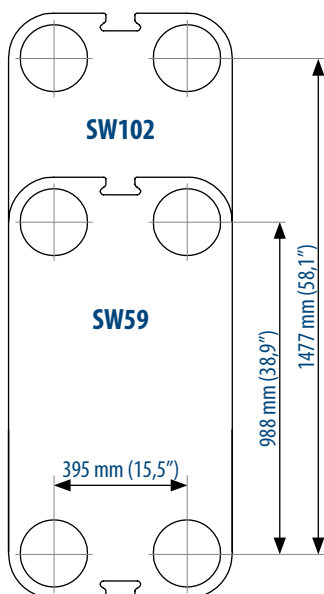
The heat transfer happens when the warmer product transfers energy through the flow plates and delivers it to the colder opposing product without mixing the both products. The design of the plate and inlet allows for effective and easy CIP (cleaning in place) cleaning of all surfaces in touch with the products. The "herringbone" pattern ensures turbulent flow within the effective area. Furthermore this pattern brings "metallic" contact between the plates, leading to a strong and rigid plate pack able to withstand high differential pressure.

The plate pack is assembled and pressed together within the frame containing two strong endplates, (head and follower), upper- and lower bars, column and clamping bolts.

Data Required for Correct Quotation:

- Duty
- Flow rate
- Temperature
- Type of media
- Working pressure
- Working Temperature
- Pressure loss
- Thermodynamic properties

Above data determines the choice of heat exchanger.



Technical Information

Frame:

- Painted frame, colour RAL 5010 (available in other colours)
- The frames comes with clamping bolts placed around the frame edge.

Design pressure:

- Painted frames: 1.6/2.5 MPa (870,2/725,2 PSI)

Construction Standard:

- EN13445 (PED 2014/68/EU)
- ASME sec VIII, Div. 1

Connections:

- DN200 flange clad with AISI 316 or titanium.
- According to all known standards.

Plate Material:

- AISI 316 and titanium
- Other materials available on request.

Gaskets:

- The gasket is placed in the closed gasket groove, that is formed by the plates. This design makes the plate suitable for high working pressures. The plates are strongly guided during the assembly of the plate heat exchanger.
- Plate gasket: Nitrile, EPDM and Viton.
- Ring gasket: Nitrile, EPDM, Viton and Chloroprene.
- Other materials available on request.

Extra Equipment:

- Safety cover in stainless steel
- Insulating jacket
- Assembling spanner
- Foundation feet for frame

For exact dimensions of the PHE please refer to the dimension drawing