

**SONDEX** PLATE HEAT EXCHANGERS

SANITARY APPLICATIONS



**SONDEX**



**Fit earlier models**

**“Sonder Safe” (safety plates) available**

**Effective and glueless “Sonder Lock” or “Sonder Snap” gasket**

**Available in all pressable materials**

**3A frame and intermediate frames**

**Lower inventory costs**

**Standard high temperature nitrile gasket meeting 3A spec.**

**Higher heat transfer**

**Rigid plate inlet design**

**Reinforced plate side band (edge reinforcement)**

**Fully sanitary**

**Higher performance**

**High differential pressure**

**Full drain leak detect**

**Gasket with plate alignment for the adjacent plate**

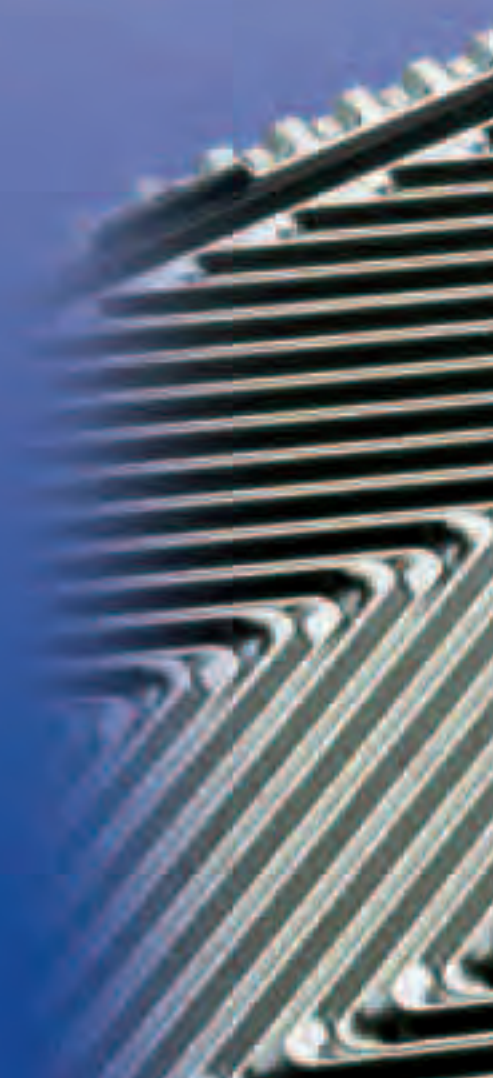
The Sondex “Sonder Flex Series” has been specifically designed to provide improved efficiency compared to existing plate heat exchangers and to reduce the overall operating costs.

The Sondex “Sonder Flex Series” contains many innovative features developed and refined from existing sanitary plate designs.

The Sondex “Sonder Flex Series” offers a wide range of plates with different thermal characteristics ensuring optimal plate selection for any given process and thereby the most cost effective solution.

Sondex is a global company specialising in the design, manufacture and sale of plate heat exchangers.

Since the establishment in 1984 Sondex has continually expanded its range of plate heat exchangers to cover virtually all types of heating and cooling applications for different liquids, steam and other gaseous products.



## **PLATE DESIGN**

### **The inlet section:**

Is designed to achieve a perfect distribution of the product over the entire heat transfer surface.

This is done by enlarging the port inlet and provide the inlet with lead grooves which also guarantee no "dead spots" on the plate.

The multi-level inlet design secures rigid plate inlet with a minimum of contact points with forms line contact.

The inlet parts are designed with leak detecting groove meeting 3A specifications.

### **The plate pattern:**

Chevron angles give high thermal efficiency and are available in two versions giving high and low turbulence values.

By combining these in a plate pack an optimal design can be offered.

The chevron or fishbone pattern has been proven to give the highest heat transmission for a given pressure drop.

### **Edge reinforcement:**

In order to reinforce the gasket groove the Sondex "Sonder Flex Series" is designed with a protective groove making it rigid with an excellent hold on the gasket giving a long lifetime of the gasket and the plate.

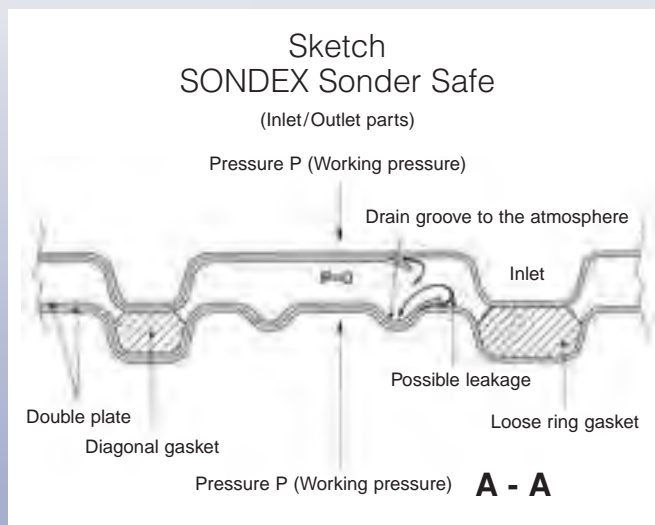


### The “Sonder Lock Gasket”:

In the fully protected gasket groove the “Sonder Lock Gasket” is fixed in place by strong rubber tabs which contrary to most glueless gaskets known today, really fix the gasket to the groove.

High temperature nitrile gaskets are standard equipment, meeting specifications stated by FDA. For even higher temperatures gaskets made of EPDM can be used.

For extremely high temperatures, gaskets of flourcarbon materials (i.e. Viton) can be delivered.

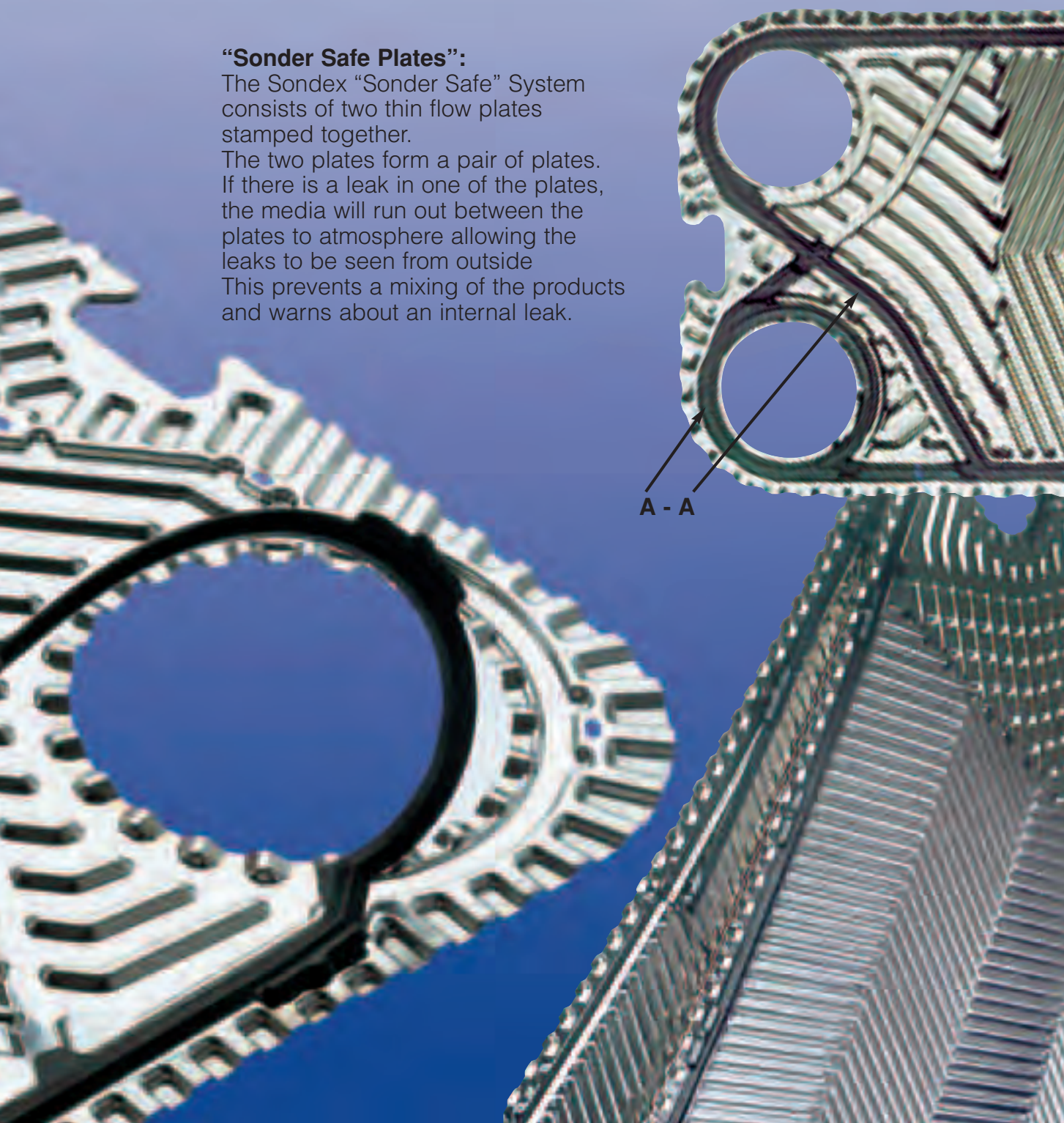


### “Sonder Safe Plates”:

The Sondex “Sonder Safe” System consists of two thin flow plates stamped together.

The two plates form a pair of plates. If there is a leak in one of the plates, the media will run out between the plates to atmosphere allowing the leaks to be seen from outside

This prevents a mixing of the products and warns about an internal leak.



**Frames:**

The Sondex "Sonder Flex Series" has a minimum of tightening bolts making an even pressure over the whole frame area. This ensures a long lifetime for plates as well as for gaskets.

There are various types of frames: Solid stainless steel, steel frames clad with stainless steel or painted steel. The frames are built up in modules so the heat exchanger can be rebuilt if production is changed or if the frame is to be used for other purposes. Adjustable legs are standard for all stainless steel units.

**Intermediate frames:**

The frames can be delivered with intermediate frames dividing the plate heat exchanger into various sections where preheating, pasteurization and cooling can take place.



## Free flow plate heat exchangers

## Semi-welded plate heat exchangers

## Plate and shell heat exchangers

## Brazed plate heat exchangers

## World-wide distribution

## Other SONDEX products for sanitary applications

- FREE FLOW Plates.
- Can be used for fibrous and viscous food products.
- CIP cleaning is possible.
- Very high thermal performances.
- Strong and rigid plate design.
- SONDEX patented hanging system which ensures correct assembling of the plate pack year after year.
- The plates and gaskets fully comply with the US 3A sanitary standard.

Useful for high temperature and high pressure applications as well as for refrigeration or for which the product is too aggressive for using plate heat exchangers with rubber gaskets or brazed plate heat exchangers. The plate pack is built up in plate cassettes (2 plates welded together) and can easily be disassembled and cleaned on the secondary side, which is equipped with rubber gaskets.

This heat exchanger works in the same way as an ordinary tubular unit. However, it is more efficient because plates have been used instead of tubes. The plates are laser/TIG welded to form a plate pack, which is then mounted inside a traditional cylindrical shell.

Pressure rating: PN16/PN25.

Max temp.: Up to 250°C.

The heat exchanger is produced as a total welded exchanger or with flanges as shown on the photo.

This makes manual cleaning possible.

Contrary to the traditional plate heat exchanger the brazed plate heat exchanger does not contain rubber gaskets and can thus operate continuously at temperatures from minus 180°C up to plus 200°C.

The operating pressure can be as high as 30 bar.

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