



# SEC HEAT EXCHANGERS

## **Benefits of SEC Plate and Shell Heat Exchangers**

### Highly Efficient & Compact Design

- Significantly smaller which allows for a reduced footprint when compared to shell and tube heat exchangers
- Much lower cost when compared to traditional old technology
- Allows the economic use of exotic alloys
- Reduced hold up volume



SEC Plate & Shell Heat Exchangers are an extremely efficient design primarily due to the high turbulence created by the strategically designed geometry of the plates. These turbulence allow very high heat transfer co-efficients. These values equate to less required heat transfer surface for any given heat transfer duty. Therefore, the end result is a compact, cost effective heat exchanger.

### **SEC Plate & Shell Heat Exchangers are fabricated by 100% welded construction**

This allows for peace of mind against leakage, and there are no gaskets to deteriorate or replace.

Our line of Plate & Shell Heat Exchangers utilises a fully welded plate pack at its core. Unlike conventional plate heat exchangers they do not have metre upon metre of gaskets which degrade in service. The fully welded pack gives high integrity and resists temperature and pressure cycling and the effects of freezing.

### High Pressure & Temperature Capability

- -100°C to + 500°C possible
- Full vacuum to 100 bar g possible

The intrinsic design of the SEC Plate and Shell heat exchanger will allow the user to take advantage of extremely high pressure and temperature applications that are far beyond conventional plate and frame technologies.

### Cyclic loading

Another inherent feature of our design and construction is the ability to allow multiple pressure and temperature variances with no negative affect on performance or life expectancy.

### Cost effective maintenance

- All SEC Plate and Shell heat exchangers are able to be opened for shell side cleaning
- The plate pack can be easily re-fitted

### Close Approach Temperatures

- 1°C possible

### Proven Technology

SEC has proven that the plate and shell design is a very reliable, cost effective solution applicable in a very wide range of heat transfer applications.

The SEC Plate & Shell line is extensive, with surface areas up to 2000 m<sup>2</sup> and port / connection sizes of 25 mm up to 500 mm dia.

### Plate Materials

SEC offers a wide selection of heat transfer plate materials and can custom design specific alloys to meet our client's demanding applications.



#### Plate Material

The list below is typical although we are able to supply any alloy that can be pressed

- 1.4404 / AISI 316L
- 1.4539 / N08904 / AISI 904 L
- 1.4547 / SMO 254 / UNS S31254
- 1.4462 / 2205 / UNS S31803
- Titanium Gr 1 / 3.7025
- Nickel / 2.4068 / N02201 /201
- Hastelloy C22 / 2.4602 / N06022
- Other alloys such as titanium upon request

#### Shell Material

- SA333Gr6 / SA516Gr60-70
- SA414
- AISI 304L - 316L – 321L
- Other alloys such as titanium upon request

