



# SEC HEAT EXCHANGERS

2546 Iona Road, Belfast, PEI, Canada, C0A 1A0

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## Performance

Plate and Shell Heat Exchangers ( PSH) have been developed over recent years to bridge the performance and price gaps between the traditional Shell and Tube and the higher thermal-ly efficient Plate type Heat Exchanger.

The aim being to extend the range of the successful Plate Heat Exchanger, while removing the temperature and pressure limitations.

High thermal efficiency can now be enjoyed from – 200 to 350 degrees C and pressures up to 100bar.

Plate and Shell heat exchangers consist of a series of corrugated plates welded on alternative ends, without peripheral gaskets.

The welded plate pack is inserted and either welded or bolted within a steel frame. All liquid contact surfaces are manufactured in stainless steel that eliminates corrosion due to aggressive media. If stainless steel is not suitable other higher grade materials are available, such as Titanium, 245 SMO or Nickel.

### ***Plate and Shell Heat Exchanger - A Shell and Tube Alternative -***

Backed by a large engineering based manufacturer with the newest plate presses in the industry.

Extensive R & D is continuing to ensure that an ever larger range of units is made available to meet customer requirements exactly.

Thermal Calculations are undertaken using advanced industry standard parameters.

Extensive contacts and reference sites in countries such as Kuwait, Taiwan, Thailand, South Korea over 25 years, in the most exacting industries is testament to the long term quality and performance of these world class Heat Exchanges.

SEC Plate and Shell Heat Exchangers are Work Cover Approved and manufactured in an ISO 9001 quality approved manufacturing facility, to meet all international heat exchange standards.

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ISO9001 Quality Certified Manufacture



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## Features Of The Plate and Shell

### High Performance :

Thermally efficient:

The total heat transfer co-efficient of the PSH is 5,000- 7,000 Kcal/ m<sup>2</sup>/ hrC. The value is 3 to 8 times higher than the traditional shell and tube heat exchanger.

Pressure rating Up to 100bar  
Temperature rating Up to 350 degrees C  
Thermal duty Up to 100MW

Variety of Options:

The PSH has been developed to allow many types of plates for a large number of applications.

Excellent versatility :

Liquid/ Liquid Liquid / Gas

The PSH can carry out many kinds of processes from ice making, cooling, heating and condensing or evaporation, with one set of suitable plates.

### Some Typical Applications:

Chemical Industry:

Refined Oils, Brine, Hexane,  
Polymerisation Process, Heating of  
Glycerine and Condensing of Ethanol

Steel Industry:

Cooling of Mould, Furnace, Coking Plant,  
Casting Facilities, Ammonia Water,  
Electrolysis Gilt, Compressor, Oil Press Oil,  
and Recovering of Waste Heats.

Mechanical Industry:

Cooling of Mechanical Apparatus, Emulsion,  
Press Oil, Grinding Liquid, Furnace,  
Engines, and Waste Heat Recovery.

Scaling Duties:

Model DPSA: When scaling or burn on are anticipated the DPSA unit can handle the duty due to the removable plate pack which is achieved via a bolted end connection.