

# APV XL Plate Heat Exchangers

FOR HEAVY-DUTY APPLICATIONS



## About APV

SPX provides advanced APV heat transfer solutions for cooling, heating, condensing and evaporation of process fluids - designed to solve heat transfer process challenges in a vast array of industries. They are designed to meet demanding process conditions and to optimize the utilisation of energy. APV heat transfer solutions have proven reliable and highly efficient helping customers worldwide to run their processes safely and economically. Since APV invented the plate heat exchanger in 1923 we have been pioneering applicable technology in pressing, shaping, welding, sealing and testing steel. Dedicated and specialized SPX staff around the world is committed to design and provide efficient and durable heat transfer solutions to help customers optimize energy utilization and minimize downtime for improved profitability.

## About SPX

Based in Charlotte, North Carolina, SPX Corporation (NYSE: SPW) is a global Fortune 500 multi-industry manufacturing leader. The company's highly-specialized, engineered products and technologies serve customers in three primary strategic growth markets: infrastructure, process solutions, and diagnostic systems. Many of SPX's innovative solutions are playing a role in helping to meet rising global demand for electricity, processed foods and beverages and vehicle services, particularly in emerging markets. The company's products include food processing systems for the food and beverage industry, power transformers for utility companies, cooling systems for power plants; and diagnostic tools and equipment for the automotive industry. For more information, please visit [www.spx.com](http://www.spx.com).

## Perfection

### **without compromise**

Whether you need a power plant utility cooling solution, a lean/rich amine interchanger for gas sweetening, central coolers on board a ship or any one of hundreds of other application solutions, the APV XL Series will always offer a perfect fit.

APV created the XL Series in response to the need for a complete platform of gasketed plate heat exchangers that can be customised to specific, heavy-duty heating and cooling applications and performance requirements.

### **Complete range**

APV is the strongest global supplier of a complete range of high-capacity, compact and cost-effective gasketed heat exchanger solutions. With scalable configurations featuring porthole sizes of Ø300, 350, 400 and 500 mm, a range of heat transfer areas up to 3,200 m<sup>2</sup> and flow rates up to 4,500 m<sup>3</sup>/h, the APV XL Series lets you configure the perfect solution for your needs – without compromise.

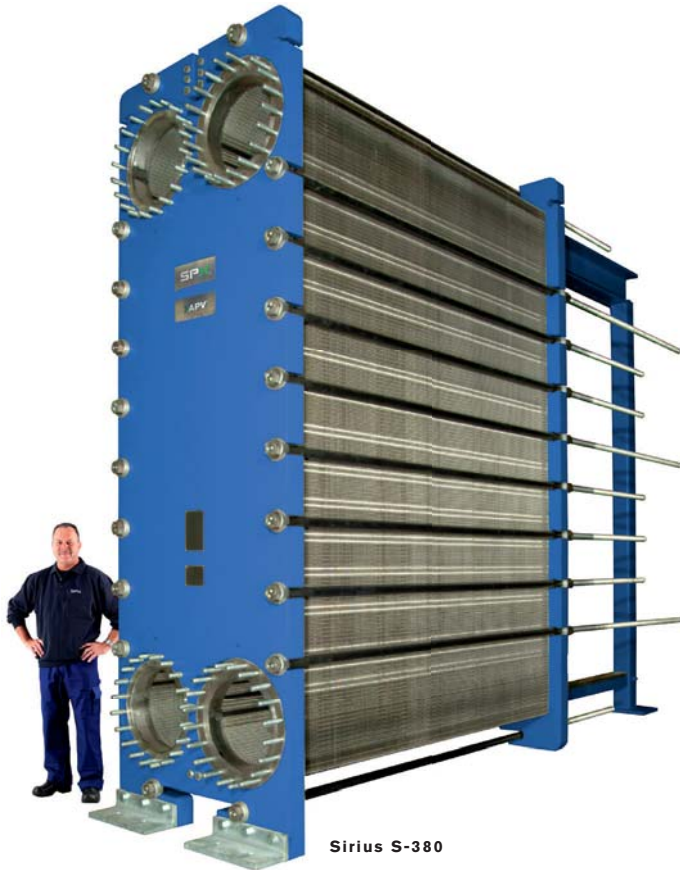
The APV XL Series of high-capacity gasketed plate heat exchangers comprises four families ranging from Sirius and Zephyr to the more compact P and B heat exchangers.

APV Sirius and APV Zephyr offer superior flow rates and high capacity. This means that fewer plate heat exchangers in parallel are required for the cooling job, thus providing for reduced capital investment in the form of lower foundation and installation costs with less piping. In the longer term, a smaller number of units also means lower service costs.

### **Full range from a single supplier**

In addition to the APV XL Series, APV offers a wide range of other heat exchangers including both gasketed heat exchangers for various process applications as well as semi-welded and fully-welded (gasket free) units for use in high-temperature, high-pressure duties running aggressive media (fluid or gasses).

## Typical product applications



Sirius S-380

### From the inventor of the plate heat exchanger

As the original plate heat exchanger pioneer, APV has accumulated almost a century of experience in technology development for a wide range of needs all over the world. We offer:

- State-of-the-art technology based on tried-and-tested methods
- Materials and techniques that vouch for excellent reliability
- Unmatched operator and maintenance friendliness

Everybody at APV – from engineers and designers to technicians and service personnel – takes pride in perfecting performance for our customers.



Chemical



Petrochemical



Marine



Metallurgy



Oil and Gas



Power



# APV XL – the power to perform

## Flexible design options for a perfect fit - always

APV XL Series of gasketed plate heat exchangers can be customised by type and size for any requirement. Based on an in-depth understanding of your needs, APV engineers can guide you in selecting the right plate design, plate length and corrugation pattern to match pressure drop, thermal performance, shear stress, and other performance requirements dictated by your application. The choice of different plate designs enables you to fully exploit pressure loss regardless of the application.

## Convenience and versatility

All APV XL Series gasketed heat exchangers enable full and easy access for cleaning and inspection. Versatility in design means that they can be modified to fit changing or entirely new process conditions and applications, thus protecting your investment.

## APV plate designs

– high performance with less steel, lower weight and lower costs

### EnergySaver – best heat transfer value for money with less cooling or heating medium

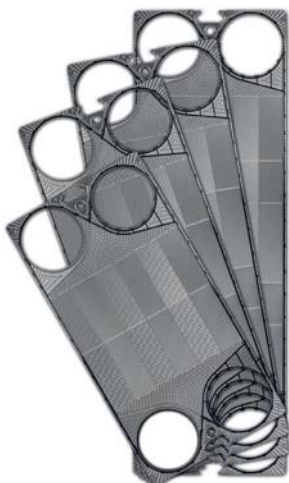
For processing low-viscosity media. Narrow gap and numerous contact points for excellent thermal efficiency and a very close temperature approach. Excellent heat recovery capability.

### DuraFlow – best choice for applications with limited thermal demand

Typically for medium- or high-viscosity media or for low-viscosity media with large temperature difference. Wider gap and reduced number of contact points to ease flow of viscous products.

### ParaWeld – best choice for aggressive media and elevated pressure

Welded plate pairs design for single and two-phase heat transfer in refrigeration, petrochemical, chemical and other industrial sectors. Welded channels allow handling of aggressive fluids. Resistant to thermal stress. Compact and space-saving design providing high efficiency due to full counter current flow and reduced risk of leakage.

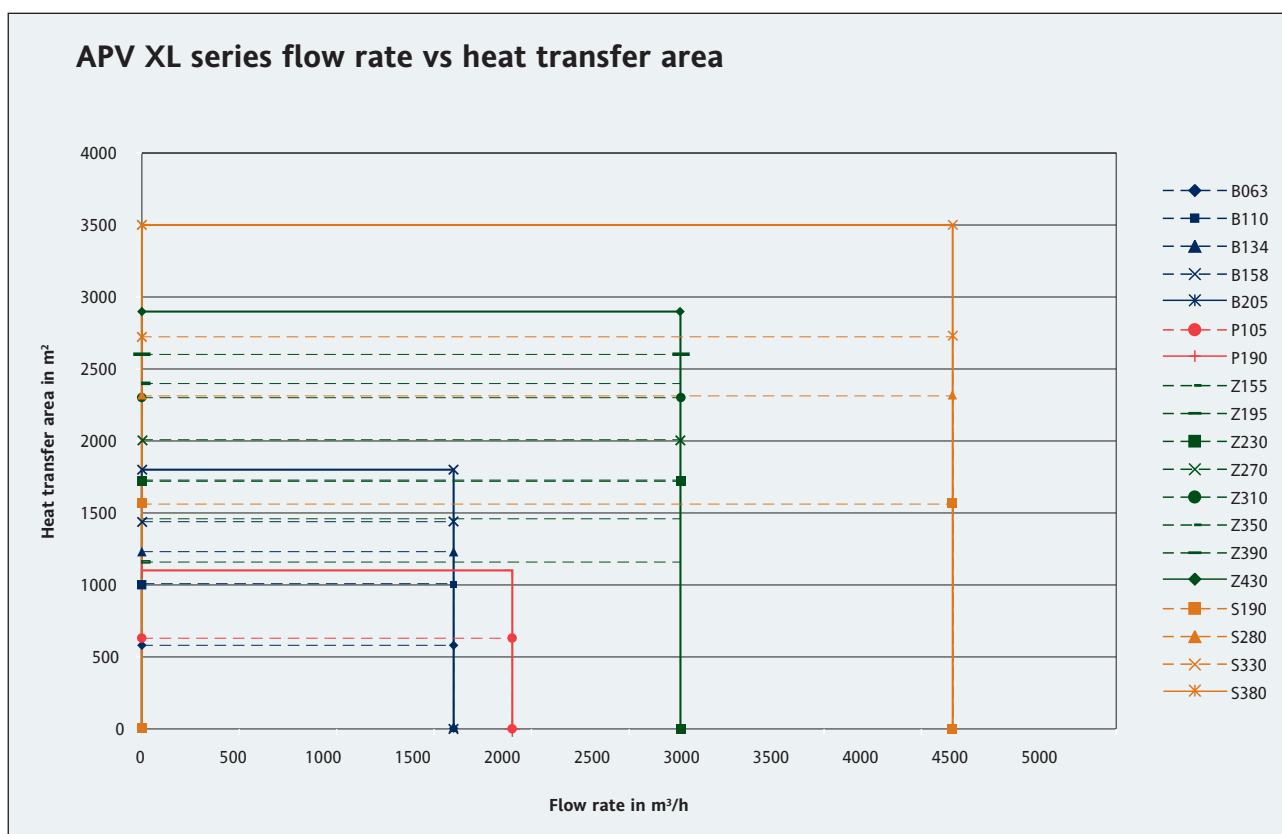


**Sirius**  
The largest cooling capacity and heat transfer area on the market for very large flow applications



**Zephyr**  
The most flexible gasketed heat exchanger for process heating and cooling and utility applications offering the largest variety of design options, high thermal efficiency and large flow capacity

# Bull's eye in any application



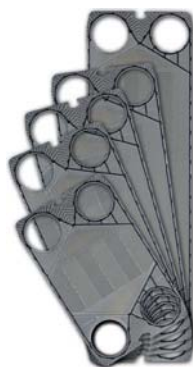
### Profile & applications:

	SIRIUS	ZEPHYR	P	B
PORT CONNECTION	500 mm	400 mm	350 mm	300 mm
FLOW RATE	Up to 4,500 m³/h	Up to 3,000 m³/h	Up to 2,000 m³/h	Up to 1,600 m³/h
HEAT TRANSFER AREA	Up to 3,500 m²	Up to 2,900 m²	Up to 1,100 m²	Up to 1,800 m²
PLATE DESIGN	DuraFlow	EnergySaver/ DuraFlow	DuraFlow	EnergySaver
PLATE MATERIAL	AISI316L, AISI304, Titanium	AISI316L, AISI304, Titanium, various Alloys	AISI316, AISI304, Titanium, various Alloys	AISI316, AISI304, Titanium, various Alloys
GASKET MATERIAL	NBR Per, EPDM Per	NBR Per, NBR Hyd, EPDM Per, EPDM RC, FKM FDA, FKM Steam, FKM GF	NBR Per, EPDM Per	NBR Per, NBR Hyd, EPDM Per, EPDM RC, FKM FDA, FKM Steam, FKM GF

**Note:** The plate types are illustrated proportionally correct in relation to each other.

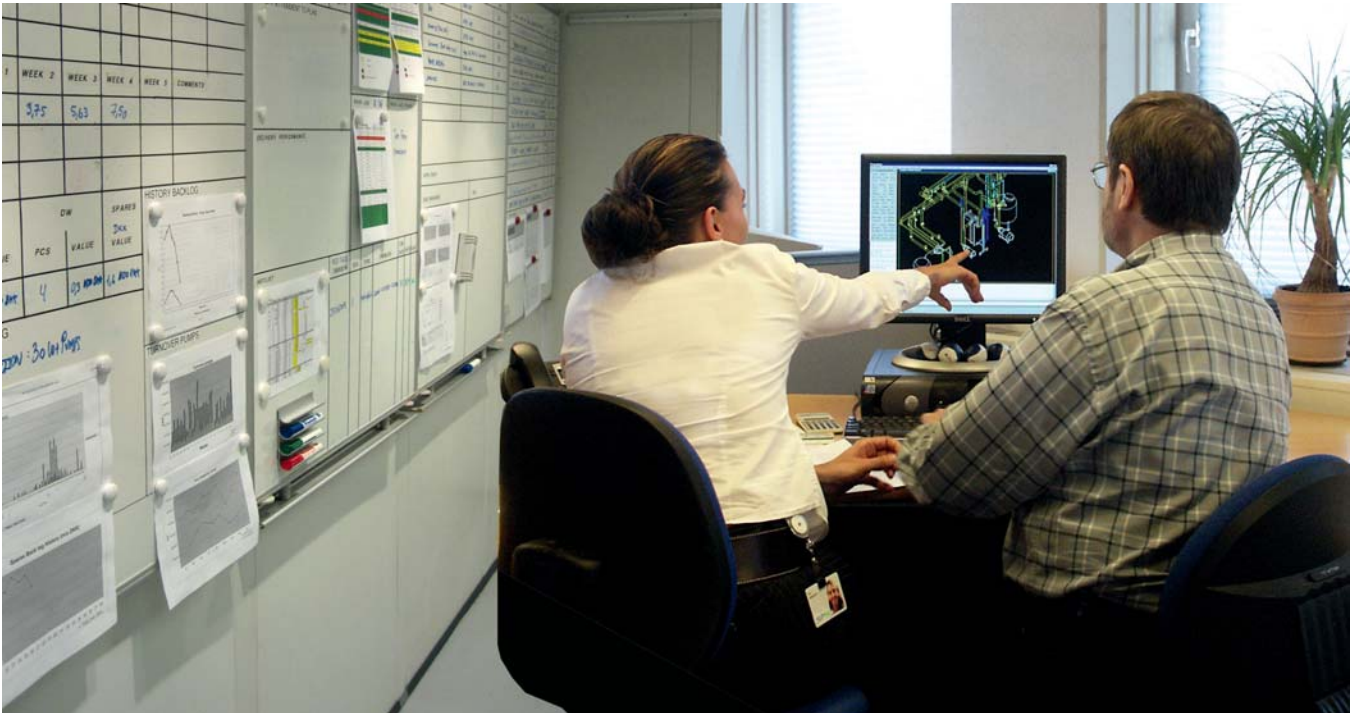


**P**  
Wide plate gap especially suitable for soft duties such as condensing with moderate pressure and large temperature difference



**B**  
Design flexibility to fit most applications. APV ParaWeld plates enable handling of aggressive fluids, for instance in amine regeneration





## Performance perfection

Performance perfection is more than hardware. Equally important to performance and productivity are reliability of supply, convenience and safety, as well as lifetime service and support.

### **Project management supporting timely project delivery**

Compliance with the project time schedule is critical to avoiding unnecessary costs. APV has a highly experienced and skilled project management organisation that understands customer needs and is committed to providing full customer support.

APV also appreciates the importance of providing strong and flexible project documentation to meet specific needs. From the first kick-off meeting through documentation and final inspection and delivery you will partner with a fully dedicated team of people who are passionate about your performance.

### **Global service network**

APV offers various service concepts ranging from a »full-service contract« to »do-it-yourself« service supported by genuine spare parts availability throughout the world. APV service technicians are available at short notice to help customers avoid or reduce the impact of problems.

### **Lifetime partnership and performance**

At APV we focus every necessary resource on finding the optimum solution every time. After commissioning, we continue to contribute with knowledge exchange, technology upgrades, spare parts, training, and optimisation services for the entire lifetime of the equipment.

### Convenience and safety

APV provides compression tools and a specially designed hoist kit for safe and easy dismantling of XL-heat exchangers for maximum service efficiency.

### Hoist kit for safe and easy dismantling

- Pre-installed dual-arm hoist carrying frame on the top bar
- Handles tie bars (up to 80 kg) and nut spinners
- Allows for serviceability all the way around the heat exchanger
- Enables maximum service efficiency and work safety



## Reducing total lifetime costs

- Lower installation costs due to low weight (reduced foundation costs) and small footprint (less piping)
- Lower maintenance costs and higher run time due to minimized fouling, easy CIP and inspection accessibility, and no corrosion
- Lower energy requirement due to excellent thermal efficiency, high heat recovery and less cooling medium
- Flexible design options to match current and future requirements
- Lower capital investment requirement due to very high heating/cooling capacity and heat transfer area per unit
- Higher productivity with service tools for maximum service efficiency and work safety

# APV XL plate heat exchangers

FOR HEAVY-DUTY APPLICATIONS



## Global locations

### SPX FLOW TECHNOLOGY

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### ABOUT SPX

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SPX reserves the right to incorporate our latest design and material changes without notice or obligation.

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