

Heat Transfer Technology

HEAT TRANSFER TECHNOLOGY TO MEET ALL YOUR NEEDS



About APV

SPX FLOW 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 utilization 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 FLOW 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 FLOW

Based in Charlotte, North Carolina, SPX FLOW is a leading global supplier of highly engineered flow components, process equipment and turn-key systems, along with the related aftermarket parts and services, into the food and beverage, power and energy and industrial end markets. SPX FLOW has more than \$2 billion in annual revenues and approximately 8,000 employees with operations in over 35 countries and sales in over 150 countries around the world. To learn more about SPX FLOW, please visit our website at www.spxflow.com

Efficient Heat Transfer Processes for Improved Performance

HIGHER HEAT RECOVERY MEANS LOWER ENERGY COSTS

Energy consumption and runtime are key parameters affecting production costs in several sectors. Minimizing energy consumption through more efficient process heat recovery is critical to profitability in the face of increasing energy costs. Improving process performance and avoiding unscheduled stoppages can increase runtime. Both deliver immediate and significant cost savings that translate directly to the bottom line.

SPX FLOW provides advanced APV heat transfer solutions for cooling, heating, condensing and evaporation of process fluids and for utility applications in a vast array of industries, ranging from food and beverage to oil and gas and industrial processes. APV's solutions are based on a complete range of plate-type heat exchanger technologies including gasketed, semi-welded and welded plate heat exchangers as well as tubular heat exchangers for hygienic applications. These range from high-capacity, heavy-duty units to small, compact designs, and are available either as standard solutions or as customized units based on ground-breaking designs and a vast variety of materials. APV heat exchangers may be supplied as standalone components or integrated into modules or complete systems.

Lifetime Performance – Maximizing Efficiency & ROI

SPX FLOW is committed to helping you improve the performance and profitability of your heat transfer equipment and solutions throughout its entire lifetime. Lifetime performance depends on a long line of factors that can affect uptime, efficiency and costs. SPX FLOW offers the following services to ensure maximum performance and return on investment from your plant and equipment.

Service & Maintenance Assistance

Service centres and field service technicians available to troubleshoot and rectify any problems, and minimize unscheduled downtime

Original Spare Parts

Robustness and reliability are critical in heat transfer solutions working in challenging process conditions found in several industries. The same applies to components and parts. To minimize the risk of unscheduled stoppages due to premature failure of non-original components and parts spare parts are available all over the world with short notice

SPX FLOW will be pleased to recommend an on-site spare parts inventory to cover your needs, balancing risk against capital outlay.



Typical Applications

Maintenance Agreements

Many customers choose to guard against unexpected stoppages via maintenance agreements based on tried-and-tested standards for their equipment with any necessary adaptations to their particular situation and requirements. Maintenance agreements involve periodic visits by SPX FLOW specialists to service the equipment and take action to rectify any issues that could cause problems before their next visit.

Refurbishment - Maintaining Performance

APV plate heat exchangers are designed for a long and trouble-free working life. Wear and tear are unavoidable, however, and at some point during their service life, refurbishment of the plate heat exchanger and replacement of the plate pack can bring a significant boost to performance and efficiency.

On-Site Audits – Reduce Operating Expenses

SPX FLOW engineers are also available to conduct on-site audits of your plant and equipment in order to identify areas where upgrades or replacements can further lower your cost of ownership by improving efficiency and reducing your operating and maintenance expenses.



Global Presence – Dedicated People

The SPX FLOW global market presence extends throughout the world to where our customers are going — and where they're growing. APV heat transfer specialists assist customers all over the world in selecting the solutions that will deliver the best performance and ROI over a long service life in their particular applications and process conditions. In addition to leading technology and the wealth of experience and expertise available, one of the main reasons why customers prefer heat transfer solutions from SPX FLOW is the close and confidential partnership between our engineers and the customer's own experts. A global team of highly qualified and experienced specialists with special knowledge of sector needs and solution options are dedicated to bring you the best of heat transfer.



SPX FLOW provides advanced APV heat transfer solutions for additional applications including Marine, Industrial Process and many more.

Plate Heat Exchangers for Efficient Heat Transfer

Hygienic frames

Extendable frames to meet stringent hygienic requirements.

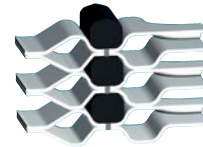


Industrial frames

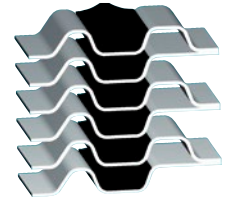
Wide range of extendable frames for meeting various quality needs.

ParaWeld

Welded plate pairs. Designed with welded channels allowing handling of aggressive fluids. Widely used for single and two-phase heat transfer in refrigeration and in chemical, industrial and petrochemical applications.



ParaWeld



Conventional



Welding on plate

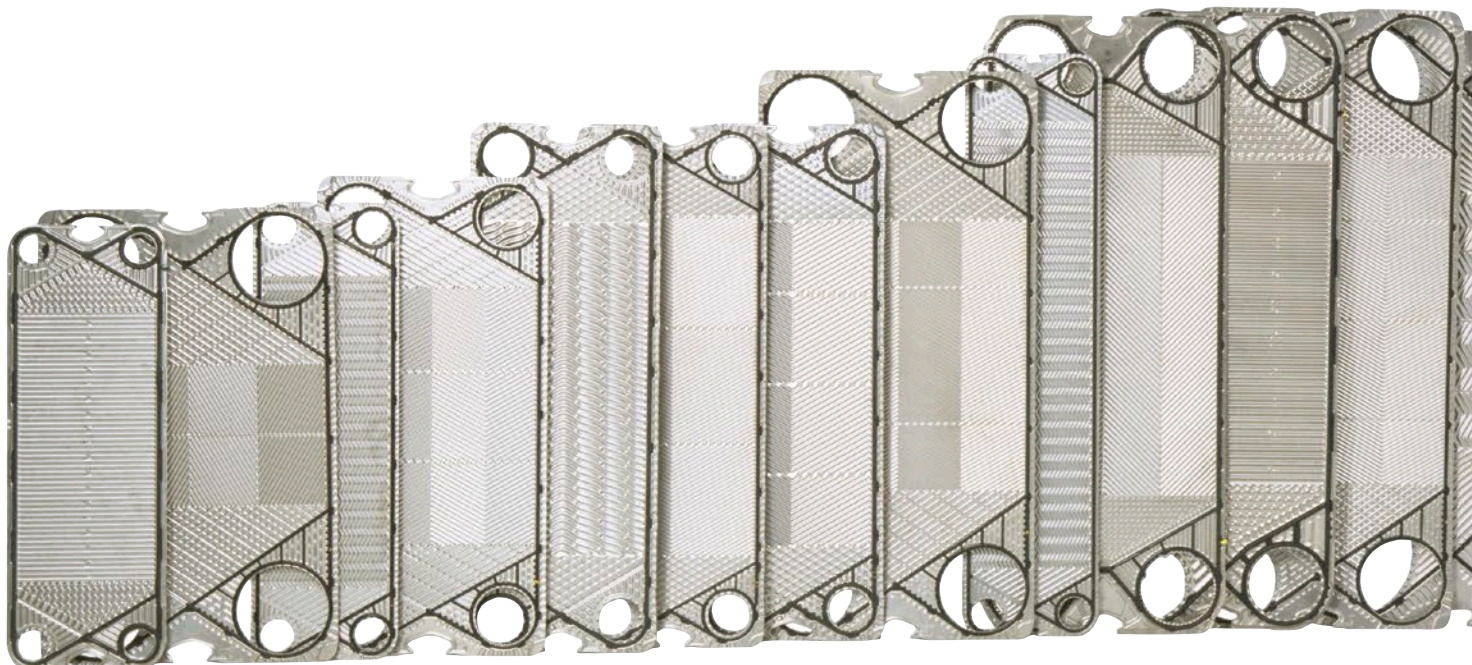
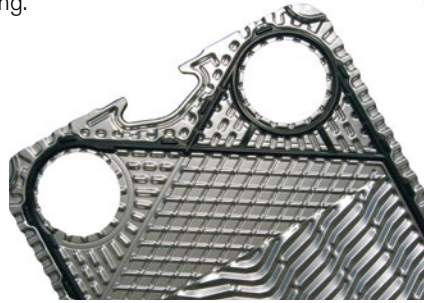


Plate area from 0,01 to 4,6 m² per plate

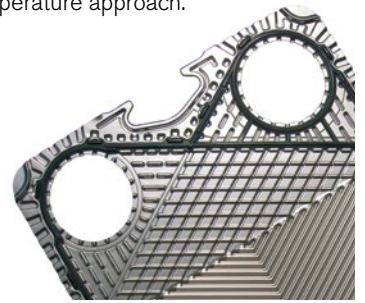
EasyFlow

For media containing fibres or pulp, requiring highest possible recovery without blocking.



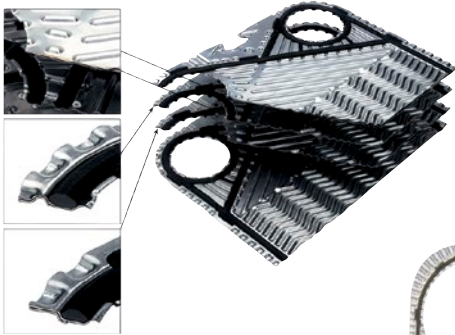
EnergySaver

For processing low-viscosity media. Designed for high thermal efficiency with a very close temperature approach.



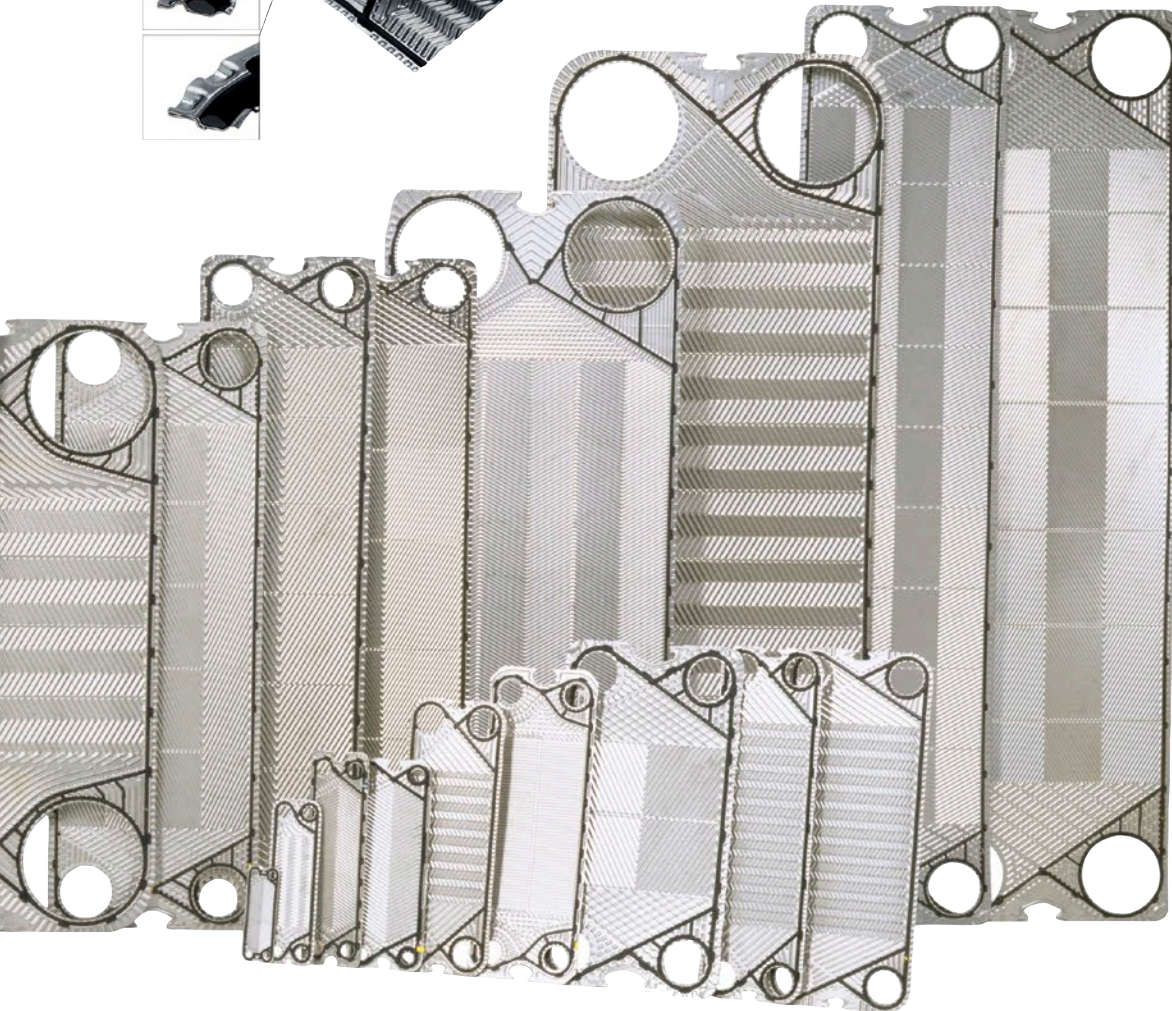
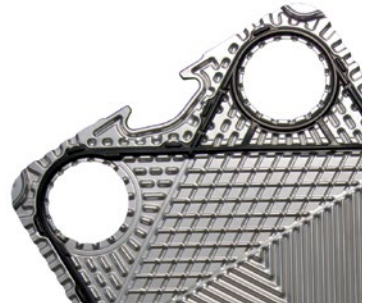
DuoSafety

The DuoSafety system is an early warning system, designed to detect leakages at an early stage and enable the end user to take precautions against intermixing of the fluids.



DuraFlow

For medium or high viscosity media. Designed for continuous process and long run time.

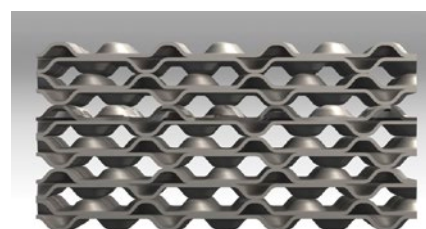
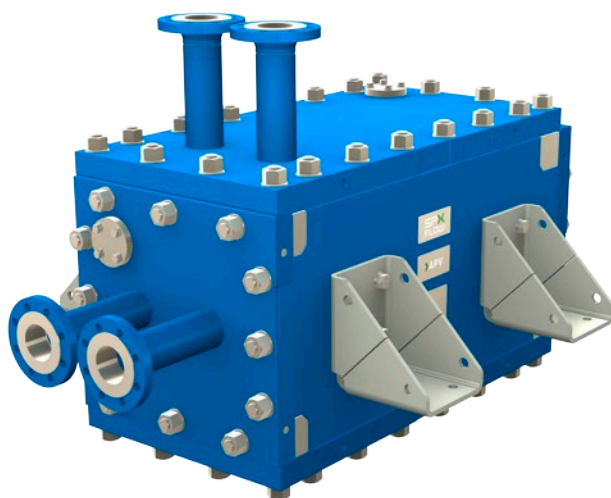


SELECTION GUIDE	DESCRIPTION	MATERIAL		TEMP	PRESS	TRANSMISSION AREA/DUTY	MAINTENANCE ACCESS
		Plates	Gaskets	°C	BAR Gauge		
EnergySaver	Plate with narrow gap and many contact points to secure high thermal efficiency	AISI 316, AISI 304, Titanium & Most Alloys	NBR per, EPDM, FKM, & Others	Rubber Gaskets: -35° to 180	25	Up to 3,800 m2	Full access for cleaning and inspection
DuraFlow	Plate with wide gap and reduced number of contact points to ease the flow of viscous products and products containing small particles. Designed for continuous, durable flow and long run time	AISI 316, AISI 304, Titanium & Most Alloys	NBR per, EPDM, FKM	-35° to 180°	0 - 16	Up to 2,800 m2	Full access for cleaning and inspection
EasyFlow	Wide gap plate with reduced number of contact points to ease the flow of viscous products and products containing fibres or pulp. Designed for long run time, continuous flow, and extra gentle product treatment	AISI 316, AISI 304, Titanium & Most Alloys	NBR per, EPDM, FKM, & Others	-35° to 180°	0 - 16	Up to 680 m2	Full access for cleaning and inspection. Sediments may be CIP cleaned
DuoSafety	Double wall (for added safety) consisting of 2 layers of plates per flow plate in order to drain any fluid from leakage to the atmosphere. For use in gasketed plate heat exchangers	AISI 316, Titanium & Other Alloys	NBR per, EPDM, FKM	-35° to 180°	0 - 16	Up to 650 m2	Full access for cleaning and inspection
ParaWeld	Corrugated plates welded in pairs. Pairs are separated by gaskets (welded pairs on process side, normal gasket technology on the secondary side)	AISI 304, AISI 316, Titanium, C2000, & Most Alloys.	NBR, EPDM, FKM, & Others	Rubber Gaskets: -45° to 250°	0 - 35	Up to 1,800 m2	Welded side: Cleaning by circulation of cleaning fluids (CIP)

Welded Plate Heat Exchangers for High Temperature & Pressure

Hybrid

Fully-welded plate heat exchanger for heating, cooling, condensing and evaporating. Typically used for high temperature and high pressure duties, e.g. in power, chemical and sugar industries.





CERTIFICATION – A GLOBAL PLATFORM

APV heat transfer solutions meet the pressure equipment requirements in Europe, Asia and Americas. They are produced in accordance with the European Pressure Equipment Directive (PED 97/23/EU) and are CE marked accordingly. They can be delivered according to GB standards and comply with ASME U-Stamp and National Board Certification. APV sanitary heat exchangers comply with international hygienic standards including 3A and FDA. Our main production facilities are certified in accordance with the EN ISO 9001 quality assurance standard, and selected sites hold the ISO 3834 Welding Workshop Approval. We are well experienced in working with notified bodies including par example DNV, ABS, BV, GL, Lloyds, CCS, and others. In addition, we hold the Russian GOST/TR approval.

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