SPXFLOW

APV® Zephyr

FOR GENERAL HEATING AND COOLING DUTIES

The APV® brand Zephyr is a 16" (400 mm) ported plate heat exchanger offering two different plate designs – "DuraFlow" and "EnergySaver" - and 8 plate lengths. The large variety of design options means that the APV® brand Zephyr can be dimensioned to meet specific customer needs, delivering high thermal efficiency and large flow capacity.

APPLICATION

The APV® brand Zephyr was designed to meet general heating and cooling duties in a wide range of industries, including chemical, marine, metallurgy, oil & gas, petrochemical and power.

STANDARD DESIGN

The APV® brand Zephyr plate heat exchanger is available in a range of frame designs complying with ASME and EN PED rules, manufactured in materials and with mechanical strengths matching design conditions.

- **Carbon steel materials** are provided with protective coating in alternate high grade painting systems, including customized painting.
- **Nozzles** are studded and available in carbon steel or with metal linings identical with or compatible to plate materials. All flange connections are normally at the head (fixed cover) but optionally available at the follower (moveable cover) as well.
- **Stud bolts and nuts** for flange connections are included.
- **Follower** includes roller bearings for easy movement along the carrying bar and guide bar, which are optionally available with stainless steel contact surface. The design eliminates all pressure-loaded or media-exposed weldings.
- **Tie bars** are provided in full length for future expansion to maximum plate capacity of frames and are optionally available as electro-galvanized. Galvanized footplates are provided with variable fixing position for anchor bolts.
- **Plates** are selected for the specific duty in high-grade corrosion resistant metals. The plate design maximizes pressure performance versus plate thickness.
- **Gaskets** employ the latest polymer technology and are selected for best performance in relation to media and duty. Gaskets are fixed using the patented APV® Easyclip feature.

WORKING PRINCIPLE

The APV® brand Zephyr plate heat exchanger transfers heat between warm side and cold media. The media are separated by a metal plate wall with polymer gasket seals. The compressed plates form flow channels through which the medium passes. Heat transfer takes place through the plate wall.

The counter current flow together with a plate design that induces evenly distributed turbulent flow in the liquid streams, thin plate material and plate-to-plate contact ensure highly efficient heat transfer and minimum pumping costs.

APV®

STANDARD MATERIALS

FRAME TYPES	
HEAD & FOLLOWER	Carbon steel material, protective coating
TIE BARS & NUTS	Carbon steel material, optionally coated by galvanization
STUD BOLTS & NUTS	Carbon steel material coated by galvanization
CARRYING & GUIDING BAR	Carbon steel material, protective coating, optionally clad with stainless steel band

FRAME TYPE	APPROX. HEIGHT (H)		APPROX. WIDTH (W)		MAX. LENGTH	
	INCHES	MM	INCHES	MM	INCHES	MM
Z155	106	2,690	51	1,284	256	6,500
Z195	118	2,995	51	1,284	256	6,500
Z230	130	3,302	51	1,284	256	6,500
Z270	142	3,608	51	1,284	256	6,500
Z310	154	3,914	51	1,284	256	6,500
Z350	166	4,220	51	1,284	256	6,500
Z390	178	4,527	51	1,284	256	6,500
Z430	190	4,833	51	1,284	256	6,500

Dimensions are for guidance only. For specific application, refer to the drawing supplied with the order.

	PLATES	GASKETS
MATERIAL	Stainless grades 316; 316L; 304, 317L Titanium, Incoloy 27-7Mo. Hastelloy C22, C276, C2000 254SMO, AL6XN	Nitrile, EPDM and Fluoroelastomers
PLATE THICKNESS	0.4; 0.5; 0.6; 0.7; 0.8 mm	
GASKET ATTACHMENT		EasyClip glue free

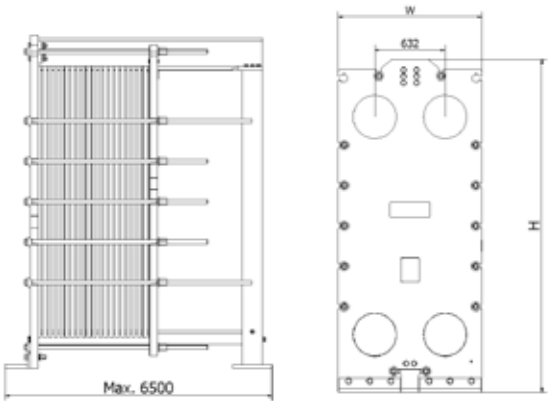
PORTS & CONNECTIONS	
PORTHOLE SIZE	16" (400 mm)
LINING	Unlined; AISI316L; Ti; C276, etc.
CONNECTION TYPE	NW400 studded DIN2501 NPS16 studded CL. 150 ANSI B16.5
CONNECTION LOAD	Allowable connection load according to API 662, Table 2 (ASME rating 150)

MECHANICAL DESIGN PARAMETERS	
DESIGN TEMP.	Up to 392°F (200°C)
MIN. DESIGN TEMP.	Down to -20°F (-29°C)
DESIGN PRESSURE	Up to 232 psi (16 bar)
APPROVALS	PED ASME VIII division 1 APV

Typical capacities: Flow rate up to 13,200 gpm (3,000 m^3/h)- based on 20 ft/s (6 m/sec.), depending on media, allowed pressure drop and temperature profile.

Max. heat transfer area: Up to 31,000 ft^2 (2,900 m^2)

Other design options available on request



Based in Charlotte, North Carolina, SPX FLOW, Inc. (NYSE: FLOW) is a multi-industry manufacturing leader.

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