WELDED PLATE HEAT EXCHANGERS

- General information

WST type

The welded plate heat exchanger is assembled of a packet of plates, one behind the other and welded together by TIG method. The plates are so shaped by it in the flowing medium to intense turbulence occurs, whereby the heat transfer increases and counteracts the formation of depositions.

Benefits – Application and Practical experience

- Weld in place of the seal
- Temperatures up to 300 ° C
- Working pressure up to 70 bar
- Highly effective heat transfer
- High resistance to static and dynamic loading (pressure, temperature) – variant of connection with expansion joint
- High reliability, for example Steam, Thermal oils, Food oils
- Condensation ,Evaporation, Heating , Cooling
- Suitable in terms of process control
- High reliability when hazardous materials
- Advanced design, long-term operational experience with a broad spectrum of users.

TECHNICAL DATA

Heat Exchanger type			WST03	WST12	WST18	WST30	WST40
Channel type			H	H, W	H, W	H, W	H, W
Operating pressure	bar(g)	max	10/25/(40)	10/25/(40)	10/25/(40)	10/25/(40)	10/25/(40)
	bar(g)	min	-1	-1	-1	-1	-1
Operating Temperature	°C	max	250	250	250	250	250
	°C	min	-195	-195	-195	-195	-195
Max. Volume Flow	m^3/h		8,5	35	35	450	450
Plate Number	-	min	12	16	16	16	16
		max	120	120	120	200	200
Heating Surface	m2	min	0,2	2	3,4	4,8	7,3
		max	2,7	16,5	25,3	60,8	91,6
Connections	DN		DN 25	DN 50	DN 50	DN 150	DN 150
	inch		1"	2"	2"	6"	6"
Volume - Channel 1	dm^3	min	0,3	2,1	2,9	6,8	9,36
		max	2,7	16	21,7	85	117
Volume - Channel 2	dm^3	min	0,2	1,9	2,5	5,9	8,2
		max	2,7	15,7	21,4	84,1	115,8
Weight	kg	min	9	100	136	400	500
		max	25	177	247	1050	1310

CLEANING AND MAINTENANCE

- The advantage of this Heat Exchanger design is its compactness - the exchanger is welded with using a suitable material for the given application (there is no seal, no copper brase, no nickel brase).
- The cleaning can be made by flow of a chemical detergent, in reference to the Heat Exchanger construction can also use the cheapest means, such as sodium hydroxide or nitric acid are used..

DESIGN AND SIZING

- For the Design of Heat Exchanger type, for the given application is a comprehensive software available. If necessary, Design of Heat Exchanger will be calculate immediatelly, available to be performed with high accuracy using our calculation tools, based on extensive thermodynamic and hydrodynamic measurements.
- Calculation is based on these parameters:
  - Operating Temperature program
  - Flow rate or Heatload
  - Operating pressure, Allowable Pressure drop
  - Flow medium or Physical properties

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WST type

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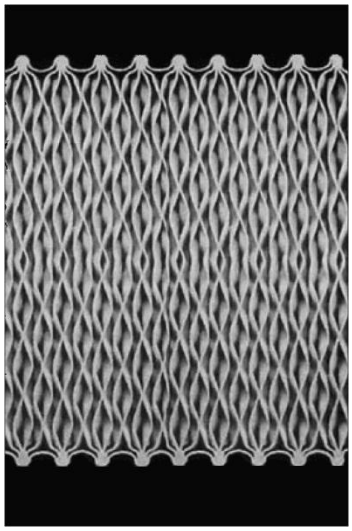
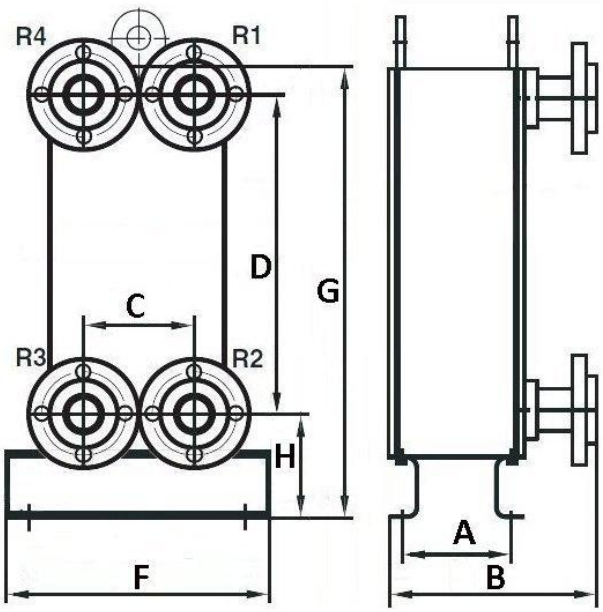
DIMENSIONS

Heat Exchanger Type			WST03	WST12	WST18	WST30	WST40
Length A	mm	min	50	100	100	150	150
		max	340	385	385	770	770
Length B	mm	min	140	230	230	410	410
		max	420	495	495	1260	1260
Length C	mm		50	166	166	255	255
Length D	mm		250	490	734	710	1010
Width F	mm		195	400	400	550	550
Heigth G	mm		303	770	1015	1210	1520
Length H	mm		29	156,5	156,5	287,5	287,5



Detail of welded plate packet.
TIG welding is used. The welded plate packet is tighten in stainless steel or painted carbon steel frame.



MATERIAL

- Plates - standard material : AISI 304 (1.4301); AISI 316 L (1.4404); AISI 316 Ti (1.4571)
- Plates - special material : AISI 904 L (1.4539); SMO 254 (1.4547); Nickel Alloys; Titanium, Titanium-PD
- Thickness of sheet - 0,6 mm
- Welded Frame : Stainless Steel (1.4571); Painted Carbon Steel
- Connections - Standard material: 1.4571
  - **WST03** - **DN25**
  - **WST12** and **18** - **DN50**
  - **WST30** and **40** - **DN100** or **DN150**
- Available all common conections

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