

Cipriani

Cipriani Heat exchangers are desk equipments, which can be easily dismantled, and which apart from a very simple maintenance allow for an easy rearrangement. Heat exchanging desks are installed into a tightening frame formed by a frontal frame desk with flanges, side guide (4 clamping rods on each side) and rear frame desk (bigger exchangers have other supporting parts, such as back column). Correct desk position is ensured especially by guiding bars in the top and bottom edge of the exchanger. The exchanger should be assembled in a vertical position, feet can be attached.

Individual heat exchanging desks are installed between frontal and back frame desks with ribbings facing each other. The maximum number of desks is given in the table below. Cipriani exchangers can be easily configured by a correct desk installation; the construction enables both Single-pass (1-1) and Multi-pass (2-2) flow. A change can be performed by an insertion of a dividing desk and a rearrangement of a backside of the exchanger. The desks are produced with two types of ribbings to attain suitable values for effective heat exchanges and pressure losses. Quality sealing is inserted between the desks (made from NBR or EPDM and other special types of rubber); the most sensitive part of the exchanger can resist temperatures up to 200 °C due to a thorough treatment of the PLUS+ line. Heat exchanging desks can be made from stainless steel AISI 304, 316L, titanium and other materials. The frame with the frame desks is made from carbon steel or AISI 304 steel.

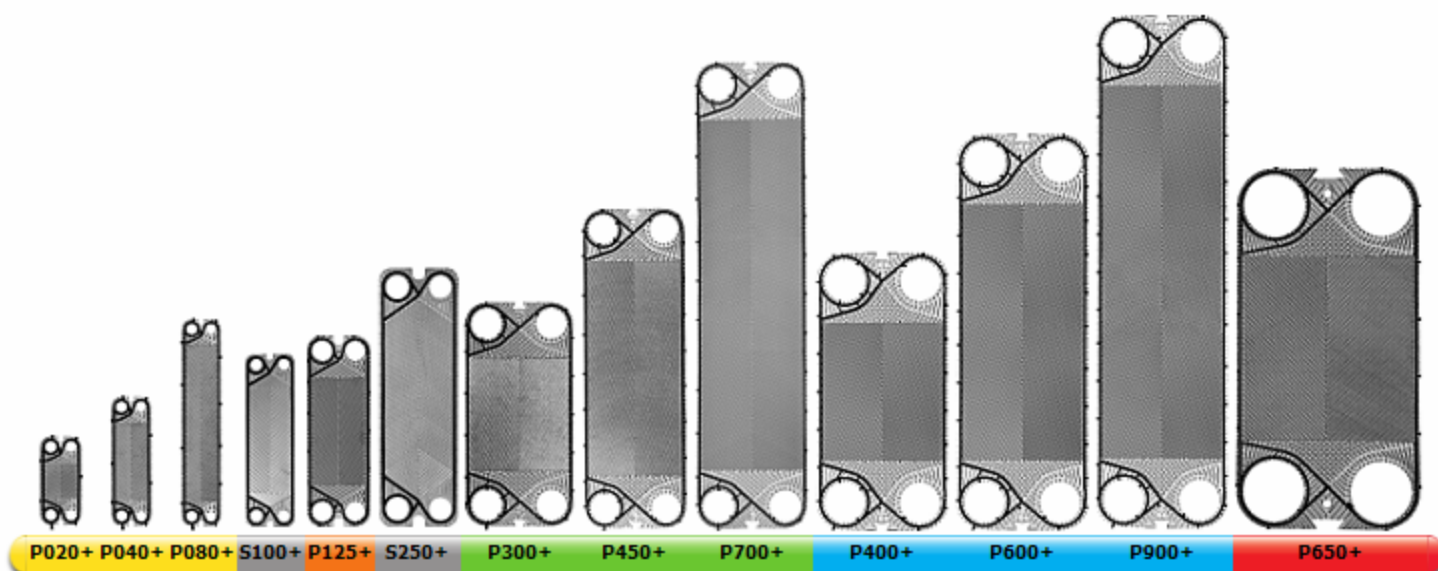
The exchanger can be fitted with various types of flanges or threaded connection (even from non-metal materials). You will find the overview with graphic description in the table below.

The Cipriani heat exchangers are produced in 13 output, respectively volumetric variations. As the last, we included P400+, P600+ and P900+ so far into the series. The technical documentation of the Cipriani products incorporates a number of tables showing basic size and output values of individual types, types of connection and materials. For further information, respectively consultation regarding your choice of suitable equipment, please contact our office.

Cipriani equipments achieved a European certification according to PED for high-pressure equipment; the company developed new layout software. Its pleasant graphic interface enables each interested person to find the most suitable solution for his/her particular application.



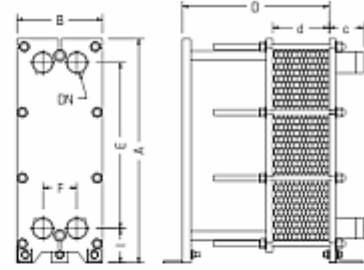
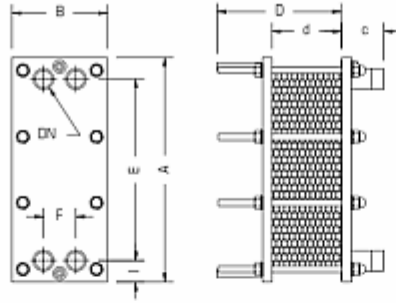
General characteristics



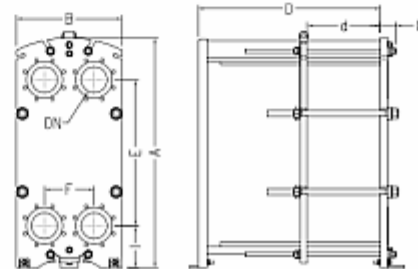
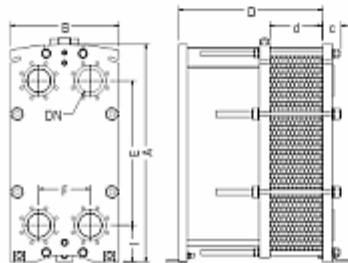
Product range	P020+ P040+ P080+			S100+	P125+	S250+	P300+	P450+	P700+	P400+	P600+	P900+	P650+
Exchange area, m ²	0.021	0.041	0.081	0.080	0.112	0.203	0.268	0.482	0.697	0.390	0.645	0.900	0.606
Width, mm	145			190	245	305	425			500			676
Height, mm	305	457	740	642	723	989	877	1322	1767	1055	1503	1951	1341
Connections diameter	DN32 1"1/4			DN40 1"1/2	DN65 2"1/2	DN80 3"	DN100 4"			DN150 6"			DN200 8"
Channel capacity, l	0.063	0.103	0.181	0.210	0.366	0.645	0.766	1.217	1.669	1.122	1.659	2.197	2.109
Tightening measures	3 × np +2			3.1 × np +2	3.4 × np +2	3.5 × np	3.2 × np						3.4 × np
Plate weight (with gasket), kg	0.21	0.32	0.53	0.60	0.82	1.44	1.67	2.61	2.29	3.58	3.40	4.50	3.73
Thermal length	A			A/B		A	A/B						
Max. water flowrate, m ³ /h	19			25	80	100	240			380			800
PS=> Max working pressure, bar	10/16/20/25			10	10/16	10	10/16/20/25			10/16/20			10/16
PT=> Max test pressure, EXEMPT*, bar	15/21/25/30			15	15/21	15	15/21/25/30			15/21/25			15/21
PT=> Max test pressure, PED, bar	16/26/32/40			16	16/26	16	16/26/32/40			16/26/32			16/26

* Ex. art. 3.3 D.Lgs. 93 of 25/02/2000 in accordance with Directive 97/23
 np - number of plates

Frames sizes



Product range	P020+	P040+	P080+	S100+	P125+	S250+
A	320	470	755	720	819	1080
B	200			250	310	400
E	230	380	665	555	603	843
F	68			100	123	162
I	45			103	128	138
Plates max number	29/49		29/49/75	65/101	41/71/151	71/161/251
D*	160/260		160/260/460	455/655	550/550/1050	630/930/1530
d	$3 \times np + 2$			$3,1 \times np + 2$	$3,4 \times np + 2$	$3,5 \times np$
DN	DN32 1"1/4			DN40 1"1/2	DN65 2"1/2	DN80 3"
C I	I-I J-J Z-Z	63		68	88	120
C II		88		98	118	
C	M-M	80			100	-
	S-S	48 + sp (frame tightening)		55 + sp	65 + sp	
C I	F-F	95		105	150	
C II		165		175	250	

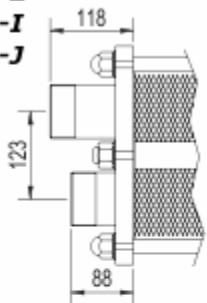
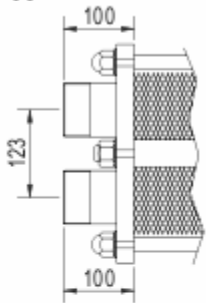
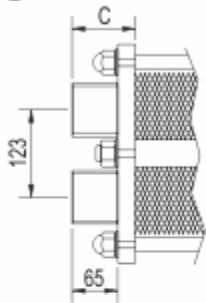
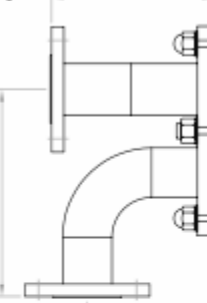
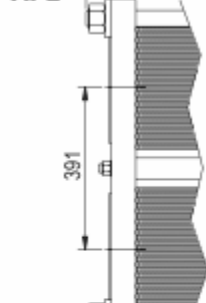


Product range	P300+				P450+				P700+				P400+		P600+		P900+		P650+									
A	PS 10/16/20		PS 25		PS 10/16/20		PS 25		PS 10/16/20		PS 25		PS 10/16		PS 20		PS 10/16		PS 20		PS 10/16		PS 20		PS 10/16			
	1060		1106		1505		1551		1955		2001		1322		1352		1770		1800		2218		2248		1600			
B	530										609										810							
E	705				1150				1595				840				1288				1736				1055			
F	250										287										391							
I	178		208		178		208		178		208		241		256		241		256		241		256		268			
Plates max number	101/201/301/401										101/201/301/401/551										151/251/351/551							
D*	740/1240/ 1740/2240				750/1250/ 1750/2250				740/1250/ 1740/2250				750/1250/1750/2250/3050								1150/1750/ 2150/3150							
d	3.2 × np																		3.4 × np									
DN	DN100 4"										DN150 6"										DN200 8"							
C	AFL	PS 10	PS 16/20	PS 25	PS 10	PS 16/20	PS 25	PS 10	PS 16	PS 20	PS 25	PS 10	PS 16	PS 20	PS 10	PS 16	PS 20	PS 10	PS 16	PS 20	PS 10	PS 16	PS 20	PS 10	PS 16			
		81	86	106	81	86	106	81	86	96	106	86	96	106	86	96	106	86	96	106	86	96	106	128	138			

* To obtain the total measure add the correct connection dimension to D dimension (C, C I or II).
np - number of plates - All dimensions are in mm a.m. = cut to measure.

■ Connection design

Connection designs/materials

<p>Z-Z I-I J-J</p> 	<p>M-M</p> 	<p>S-S</p> 	<p>F-F</p> 	<p>AFL</p> 
<p>Galvanized or stainless steel, male threaded connections. Applied in combination to a spacing aluminium plate in order to obtain a flat surface to support the initial exchange plate.</p>	<p>Moplen male threaded connections. A cavity drilled on the inner side of the front frame plate creates a flat surface to support the first exchange plate.</p>	<p>Carbon steel, female threaded connections directly welded onto the headframe in accordance to the holes of the frame plate.</p>	<p>Welded Carbon steel flanged connections with flanges PN16, welded to the end of the socket. For all models, except S100 and S250, a bent socket at 90° is foreseen in order to avoid the flanges to be too close to each other. X-X connection is similar (instead of carbon stainless steel is used).</p>	<p>Connections to be flanged provided with threaded holes enabling the fixing of the flange directly to the frame plate. The inner hole is lined with a rubber gasket foreseen in the same rubber quality of the plate gaskets.</p>

Exchangers materials

Product range

P020+ P040+ P080+ S100+ P125+ S250+ P300+ P450+ P700+ P400+ P600+ P900+ P650+

Frame materials

Carbon steel	*	*	*	*	*	*	*	*	*	*	*	*	*	*
AISI 304, solid	*	*	*	*	*	*	*	*	*	*	*	*	*	*
AISI 304, covered							*	*	*	*	*	*	*	*

Plate materials

Inox AISI 304							*	*	*	*	*	*	*	*
Inox AISI 316L	*	*	*	*	*	*	*	*	*	*	*	*	*	*
254 SMO	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Titanium	*	*	*	*	*	*	*	*	*	*	*	*	*	*

Gasket materials

NBR	*	*	*	*	*	*	*	*	*	*	*	*	*	*
EPDM	*	*	*	*	*	*	*	*	*	*	*	*	*	*
EPDM Prx.	*	*	*	*	*	*	*	*	*	*	*	*	*	*
FPM	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HNBR	*	*	*	*	*	*	*	*	*	*	*	*	*	*

Connection materials

Galvanized	*	*	*	*	*	*								
AISI 304	*	*	*	*	*	*								
AISI 316	*	*	*	*	*	*								
Moplen	*	*	*	*	*	*								
Flanges	*	*	*	*	*	*								
Welded	*	*	*	*	*	*								
Rubber or inox liner							*	*	*	*	*	*	*	*

Gaskets maximum temperatures

NBR	-20 °C	110 °C
EPDM	-20 °C	120 °C
EPDM Prx.	-20 °C	160 °C
FPM	-20 °C	200 °C
HNBR	-20 °C	160 °C

The temperatures referred to are an indication only and must be considered as general information not applicable in all working conditions.