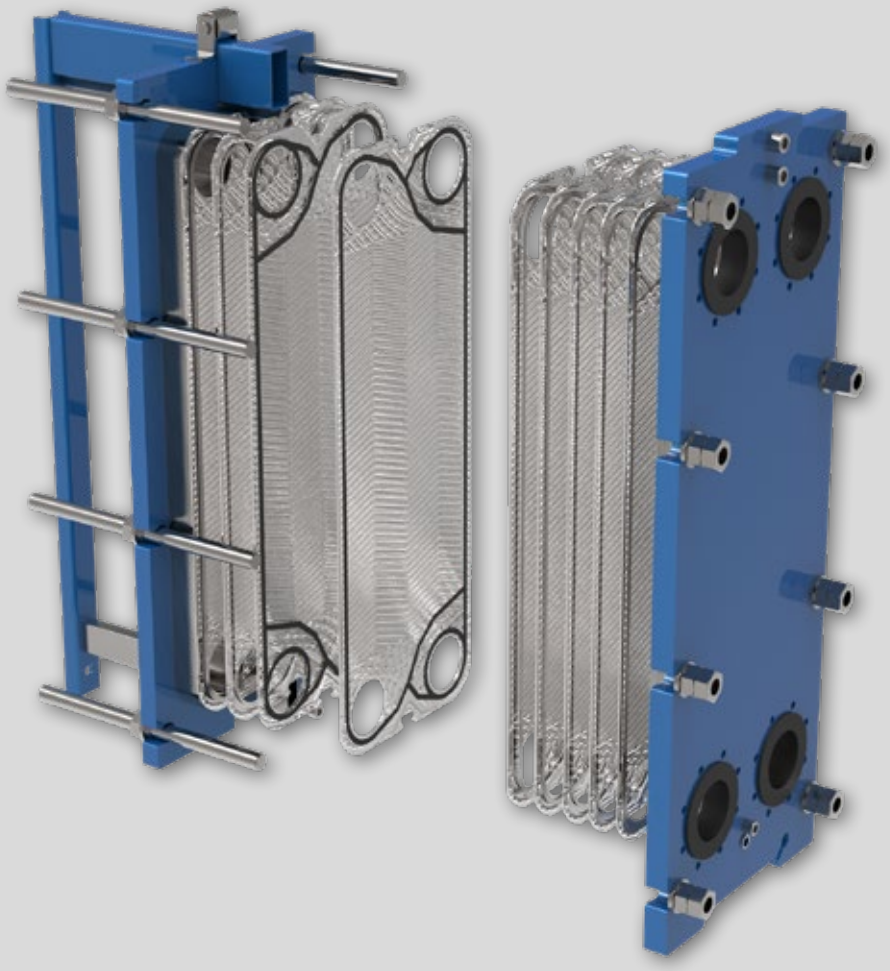
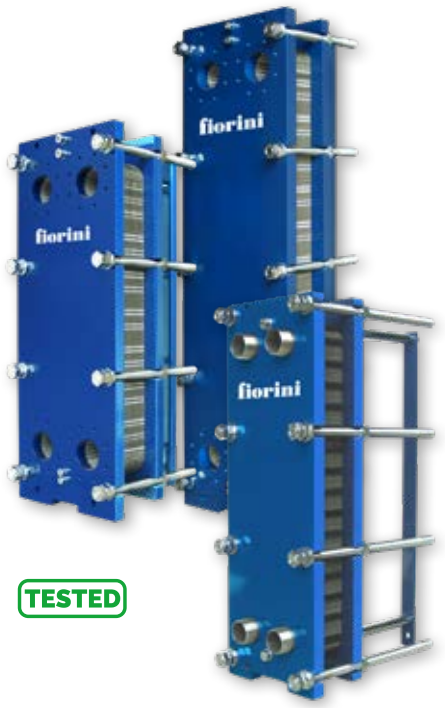
Gasketed plate heat exchangers



Gasketed plate heat exchangers K and F series

The heat exchangers (K and F series) are designed and manufactured with materials and applications which guarantee high, durable efficiency standards in residential applications as well as industrial processes.

- The plates are made in high quality materials which makes it possible to reach an excellent overall heat exchange coefficient and guarantees resistance against corrosion;
- The plates can be manufactured with several corrugations which improve the exchange performance in function of the operative conditions (fluid type, viscosity). Their particular conformation makes the fluid in the device move turbulently and guarantees an elevated heat exchange coefficient.
- The lining is available in several materials, adapted to the different applications (gasoline, oil, alimentary fluids, aggressive fluids, high temperature fluids, etc.) and desired performance;
- The frame is made of varnished carbon steel, designed in such a way that it can be easily accessed, inspected and maintained;
- All exchangers are tested (leakage test) before dispatch in order to verify possible losses.



WRAS APPROVED MATERIAL





Gasketed plate heat exchangers K and F series

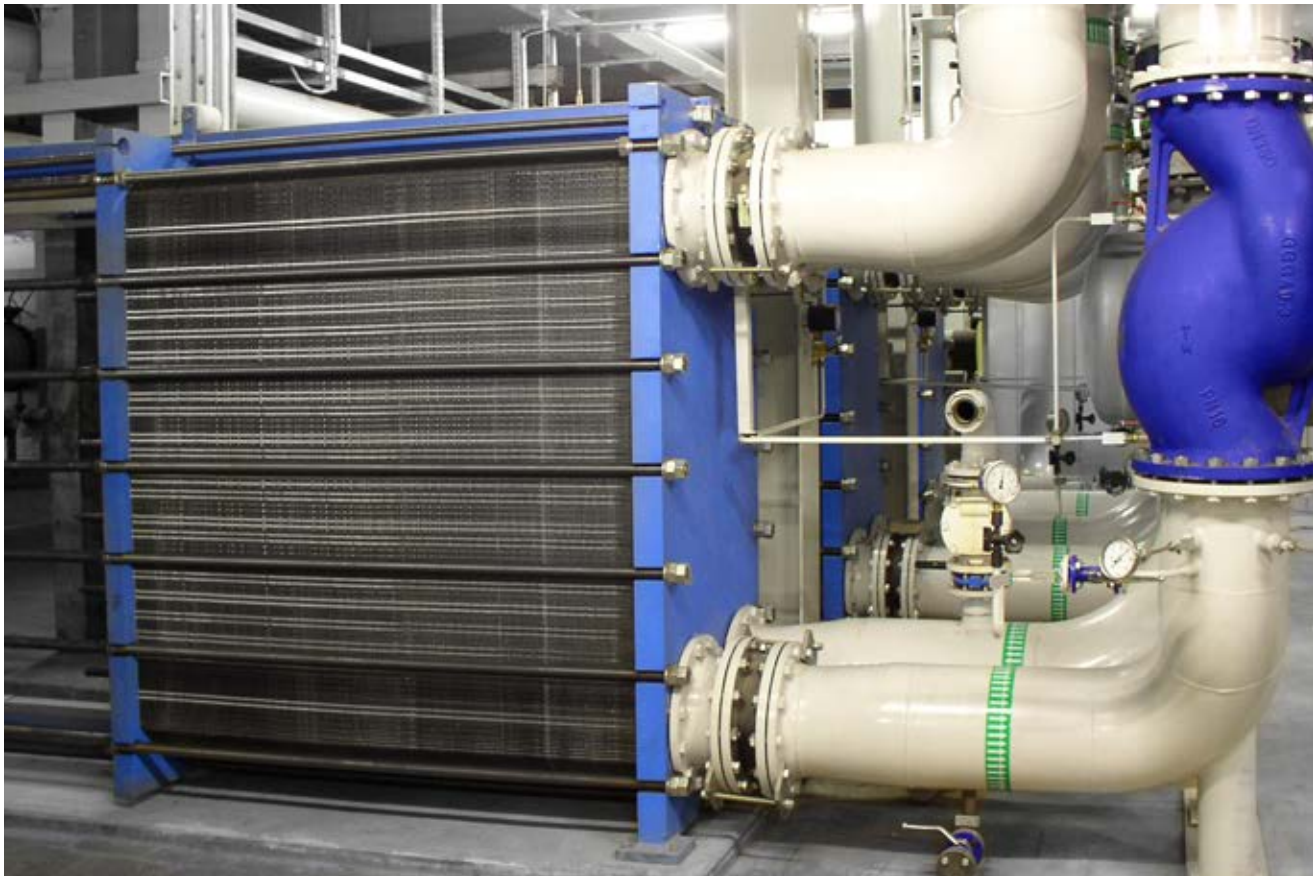
Environment and sectors of application

Wherever a heat exchange between two fluids takes place, the Fiorini plate heat exchangers guarantee a series of significant advantages:

- high efficiency
- long life span
- low cost
- compact dimensions
- possibility to expand
- easy maintenance
- trustworthiness

Fiorini heat exchangers are products of reference in the residential and industrial sectors (HVAC, food, chemical, renewable energy, cooling, oil and gas).
They offer the best options for numerous applications, such as:

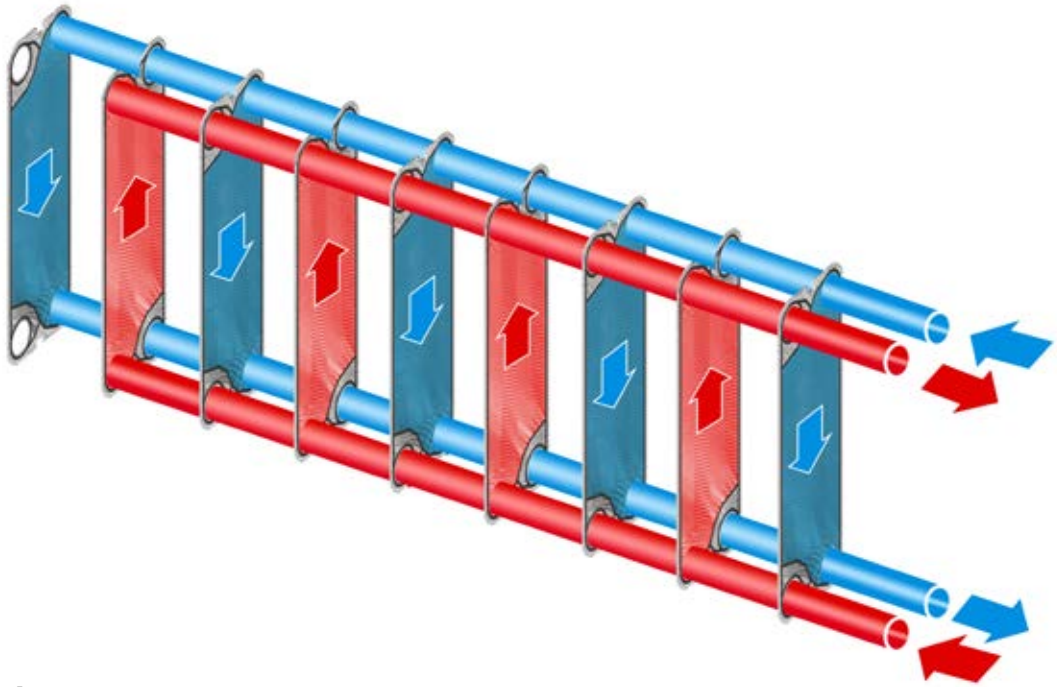
- DHW production
- heat exchanging in heating systems
- teleheating
- pool water heating
- solar power systems
- heating/cooling of alimentary fluids (milk, beer, wine…)
- cooling of machines
- recuperation of heat from industrial processes
- hydraulics



Principles

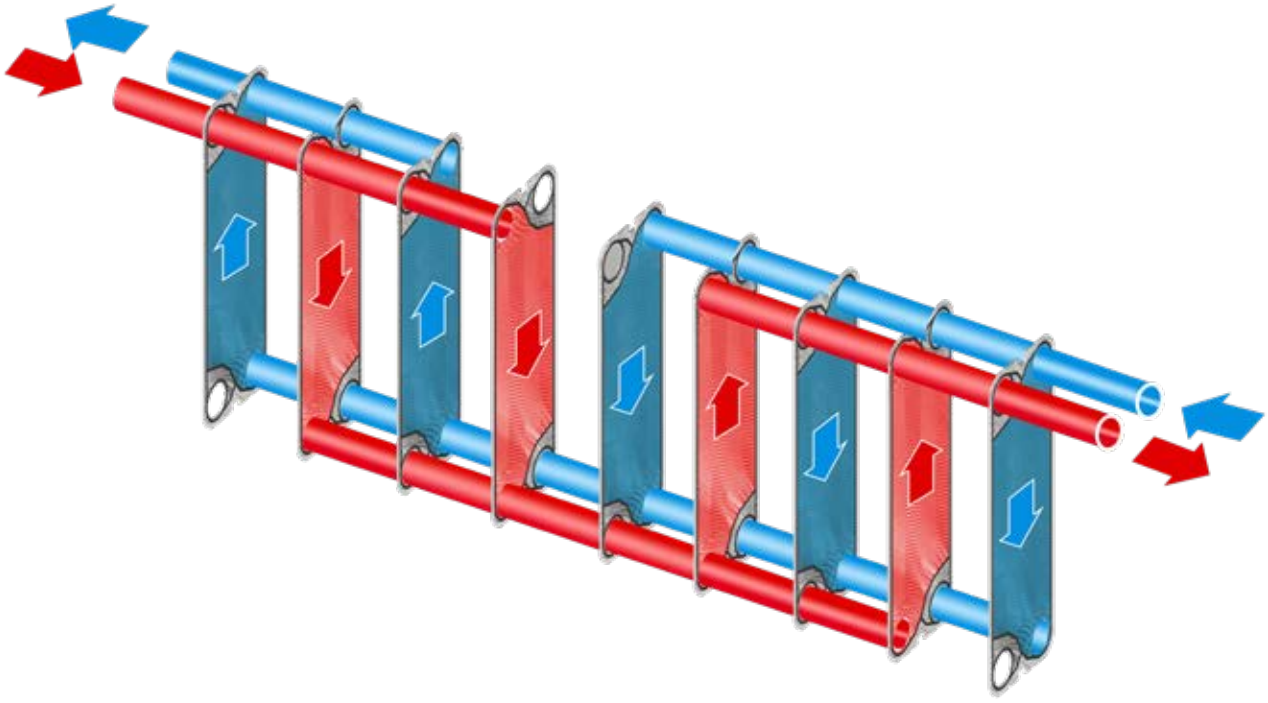
Single passage

In the version with a single passage the fluid which runs through the exchangers, goes through one canal (the space between two adjacent plates). This is the most commonly used layout.

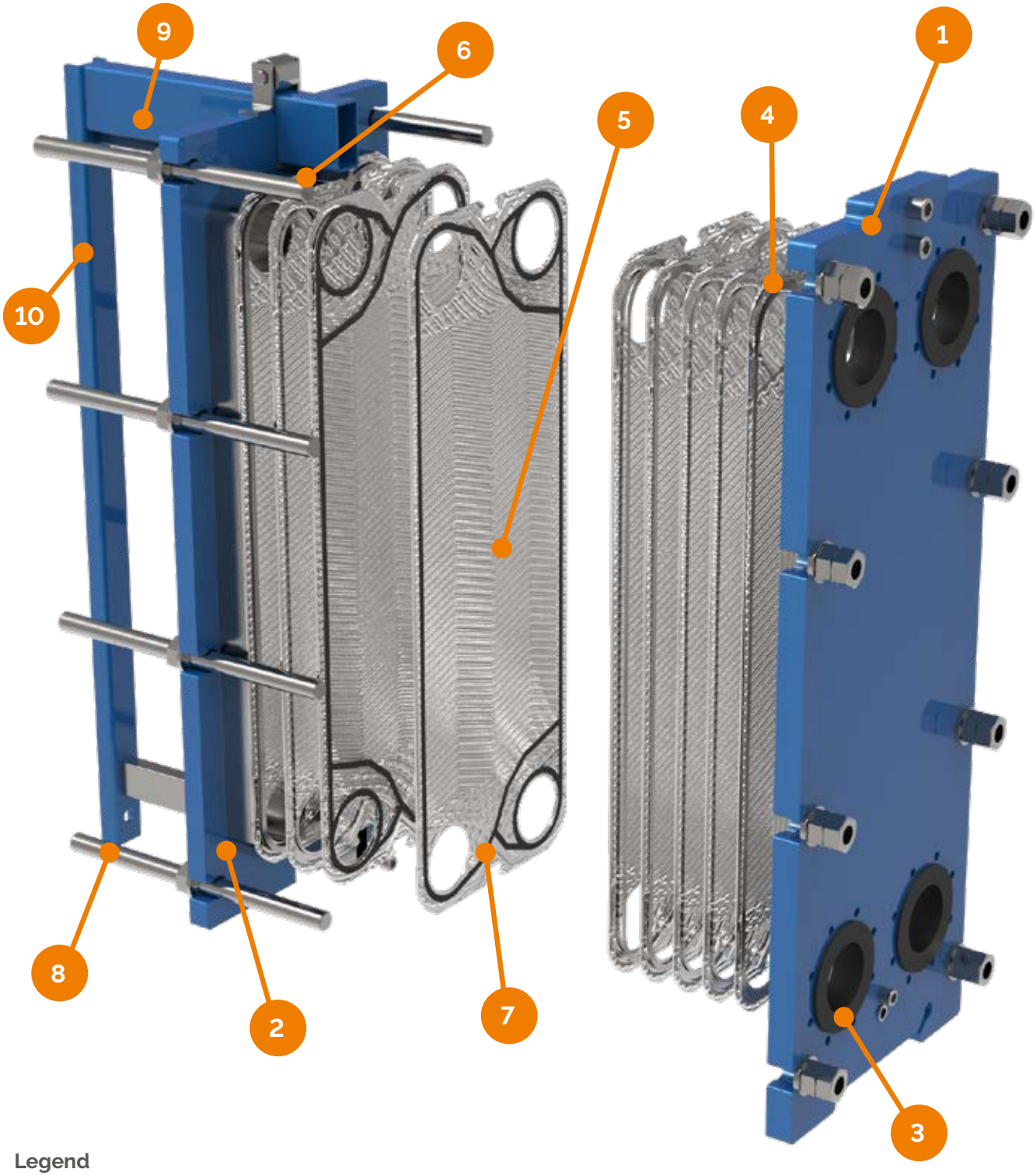


Multiple passage

In this version the thermal length of the exchanger increases with the number of passages (double length with 2 passages, triple length with 3 passages, etc.) This solution is advantageous when there are high Δt within the individual circuits, allowing to adopt a compact exchanger and making it function as a tall and slender exchanger.



Main components



Legend

1. Front frame
2. Rear frame
3. Connection
4. Start plate
5. Intermediate plate
6. End plate
7. Gasket
8. Tie rods
9. Guides
10. Column

Fiorini Plate heat exchangers are designed to ease access and maintenance. Furthermore, its modularity allows to increase number of the plates according to the heat exchange requirements.

Gasketed plate heat exchangers
Our range



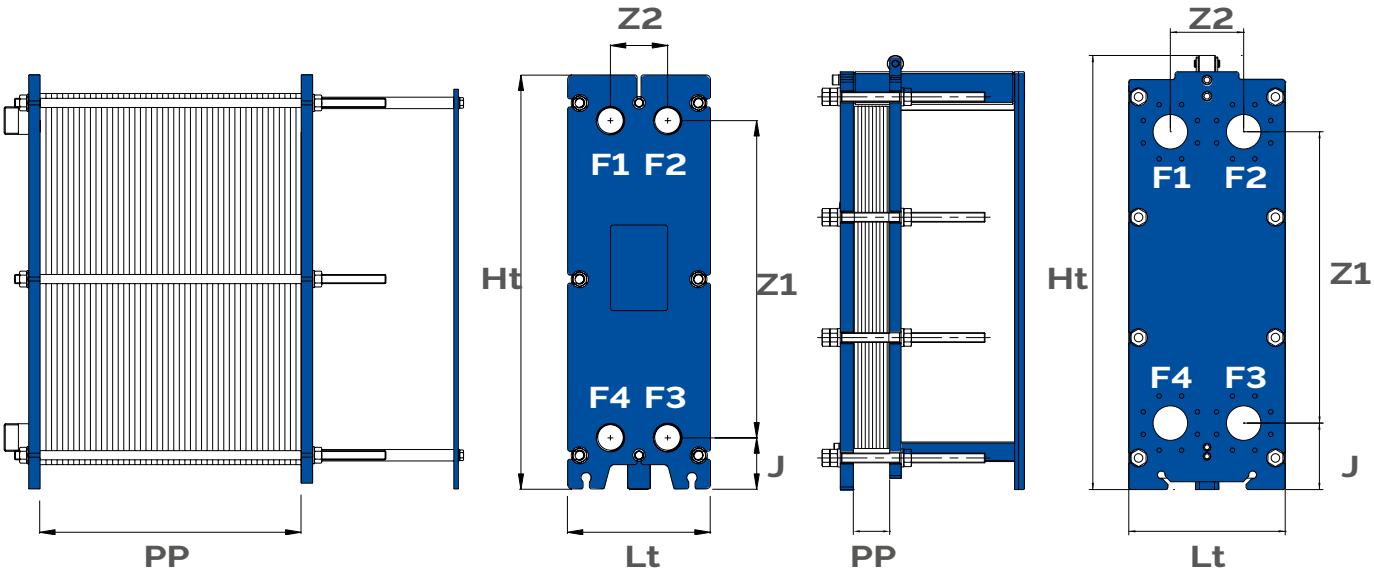
Model		Nominal pressure	Available corrugations	Standard coupling	PP mm	Plate thk mm	Ht mm	Lt mm	Z1 mm	Z2 mm	J mm
DN 32	K042/H1	PN10/PN16	H	1"1/4 GAS M	(NP-1)x3.1+2	0,6	470	200	380	68	45
	F09	PN10/PN16	H - L	1"1/4 GAS M	NPx2.7+3	0,5	827	200	676	70	76
DN40	K080/H2	PN10/PN16	H - V	1"1/2 GAS M	(NP-1)x3.05+2	0,6	725	250	555	100	90
DN 50	F2010	PN10/PN16/PN25	H - L	2" GAS M	NP.x 2.9+3	0,5	732	310	494	126	128
	F2016	PN10/PN16/PN25	H - L	2" GAS M	NP.x 2.9+3	0,5	932	310	694	126	128
	F2022	PN10/PN16/PN25	H - L	2" GAS M	NP.x 2.9+3	0,5	1132	310	894	126	128
DN 65	F3017	PN10/PN16	H - M	DN 65 UNI PN16	N.P. x 2.6 *	0,4	1071	400	620	188	180
	F3030	PN10/PN16	H - M	DN 65 UNI PN16	N.P. x 2.6 *	0,4	1421	400	1020	188	180
	F3043	PN10/PN16	H - M	DN 65 UNI PN16	N.P. x 2.6 *	0,4	1871	400	1420	188	180
DN 100	F4206	PN10/PN16/PN25	H - L	DN 100 UNI PN16	NP.x 3.1 *	0,5	1158	480	719	225	204
	F4031	PN10/PN16/PN25	H - L	DN 100 UNI PN16	NP.x 3.1 *	0,5	1332	480	894	225	204
	F4050	PN10/PN16/PN25	H - L	DN 100 UNI PN16	NP.x 3.1 *	0,5	1826	480	1388	225	204
	F4071	PN10/PN16/PN25	H - L	DN 100 UNI PN16	NP.x 3.1 *	0,5	2320	480	1882	225	204
DN 150	F42	PN10/PN16/PN25	H - L	DN 150 UNI PN16	NP.x 3.1 *	0,5	1470	610	941	290	225
	F62	PN10/PN16/PN25	H - L	DN 150 UNI PN16	NP.x 3.1 *	0,5	1834	610	1306	290	225
	F82	PN10/PN16/PN25	H - L	DN 150 UNI PN16	NP.x 3.1 *	0,5	2150	610	1671	290	225
	F112	PN10/PN16/PN25	H - L	DN 150 UNI PN16	NP.x 3.1 *	0,5	2687	620	2157	290	290
DN 200	F405	PN10/PN16/PN25	H - L	DN 200 UNI PN16	NP.x 3.1 *	0,5	1380	760	770	395	395
	F70	PN10/PN16/PN25	H - L	DN 200 UNI PN16	NP.x 3.1 *	0,5	1740	760	1130	395	395
	F100	PN10/PN16/PN25	H - L	DN 200 UNI PN16	NP.x 3.1 *	0,5	2100	760	1490	395	395
	F130	PN10/PN16/PN25	H - L	DN 200 UNI PN16	NP.x 3.1 *	0,5	2460	760	1850	395	395
DN 300	F81	PN10/PN16/PN25	H - L	DN 300 UNI PN16	NP.x 3.7 *	0,5	930	980	1100	480	480
	F120	PN10/PN16/PN25	H - L	DN 300 UNI PN16	NP.x 3.7 *	0,5	2320	980	1490	480	480
	F160	PN10/PN16/PN25	H - L	DN 300 UNI PN16	NP.x 3.7 *	0,5	2710	980	1879	480	480
	F190	PN10/PN16/PN25	H - L	DN 300 UNI PN16	NP.x 3.7 *	0,5	3100	980	2267	480	480
DN 500	F150	PN10/PN16/PN25	H - L	DN 500 UNI PN16	NP.x 3,9 *	0,5	2500	1370	1466	672	672
	F200	PN10/PN16/PN25	H - L	DN 500 UNI PN16	NP.x 3,9 *	0,5	2855	1370	1822	672	672
	F250	PN10/PN16/PN25	H - L	DN 500 UNI PN16	NP.x 3,9 *	0,5	3211	1370	2178	672	672

* With rubber liner add 1.5 mm

› Special executions are available on request

Gasketed plate heat exchangers
Our range

Couplings
Primary: Inlet F1 - Outlet F4
Secondary: Inlet F3 - Outlet F2

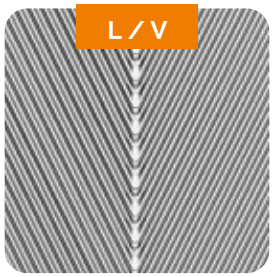


Corrugations

The plates are available with various corrugations and can be combined in order to reach better performances.



H: this type of corrugation maximizes the thermal power which is exchanged



L and V: these versions minimize the pressure loss



M: this version is a great mix between performance and losses (F3017, F3030, F3043 only)

Available materials

	Plates			Gaskets			Covers		Tie rod	
Model	AISI 304	AISI 316L	TITANIO	NBR	EPDM	VITON	PAINTED STEEL	AISI 304/316	GALVANIZED STEEL	AISI 304/316
K serie	-	✔	✔	✔	✔	-	✔	❍	✔	❍
F serie (up to DN32)	-	✔	✔	✔	✔	❍	✔	❍	✔	❍
F serie (from DN50)	✔	✔	✔	✔	✔	❍	✔	❍	✔	❍

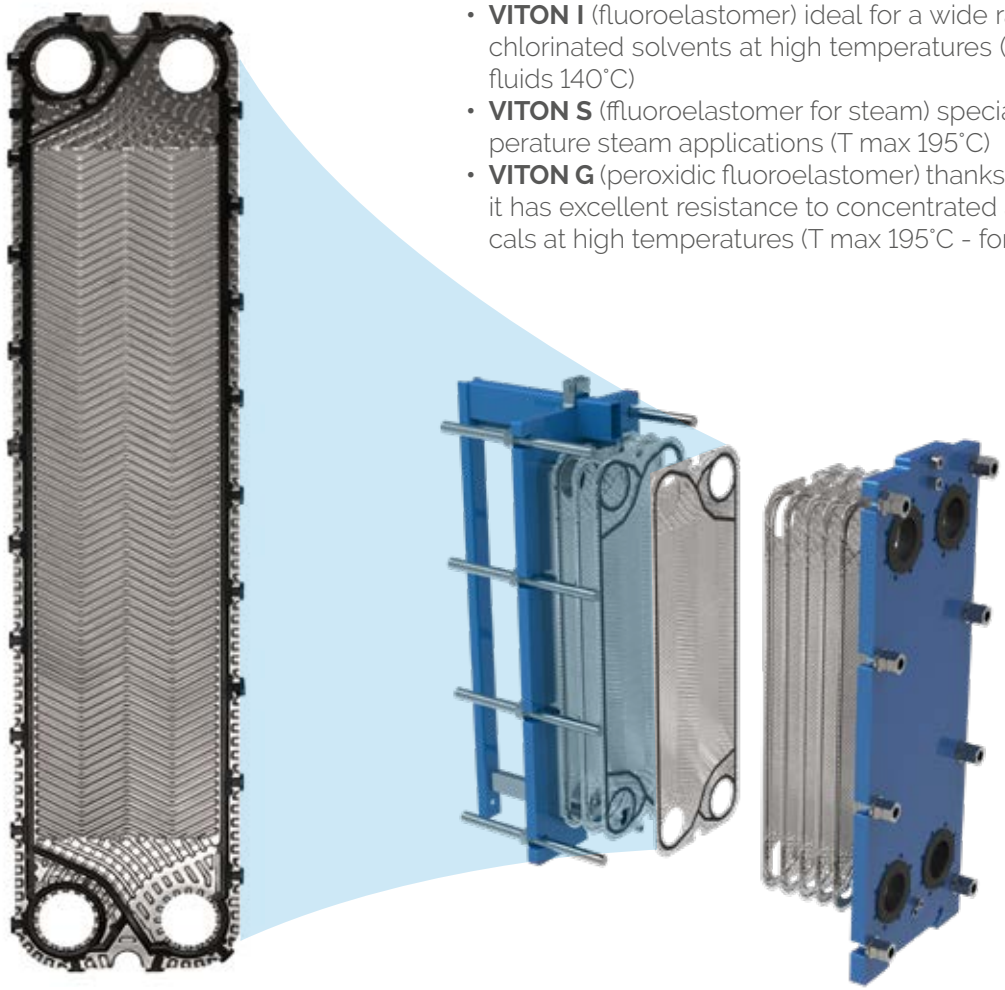
Legend: ✔ standard ❍ upon request - not available
F serie available upon request with plates in the following materials; 245 SMO, AISI 904L, ALLOY C276.



Gaskets

The gaskets are attached to the plates through a clip-on system, which ensures hygiene and easy maintenance and does not use glue and solvents. The particular conformation of the gaskets creates a double barrier and prevents accidental contamination of the two fluids, also in case of loss. The gaskets are available in various materials, to be used in function of the different user parameters:

- **NBR/NBRHT** (nitrile rubber): generally used with water, other liquids, oily mineral liquids (T max 130°C / 140°C)
- **EPDM/EPDM HT** (ethylene-propylene rubber) broad range of use, such as with non-mineral oils, water, steam, caustic soda, alcohol, low % acids, etc. (T max 150°C/160°C)
- **VITON I** (fluoroelastomer) ideal for a wide range of oils, gasolines and chlorinated solvents at high temperatures (T max 195°C - for aqueous fluids 140°C)
- **VITON S** (ffluoroelastomer for steam) specially designed for high temperature steam applications (T max 195°C)
- **VITON G** (peroxidic fluoroelastomer) thanks to the high level of fluorine it has excellent resistance to concentrated acids and aqueous chemicals at high temperatures (T max 195°C - for aqueous fluids 165°C)



Fluid/material compatibility

In the table, some guidelines for the correct combination of materials are outlined.

Fluid type	Fluid	Plates			Gaskets		Couplings	
		AISI 304*	AISI 316L	TITANIUM	NBR	EPDM	STAINLESS STEEL	NYLON (TMAX 50°C)
WATER	water (tmax < 110°c)	✔	✔	✔	✔	✔	✔	✔
	water (tmax > 110°c)	-	✔	✔	-	✔	✔	-
	water demineralized	-	✔	✔	✔	-	✔	✔
	sea water (NaCl)	-		✔	✔	-	-	✔
	chlorinated water for swimming pool	-	✔	✔	✔	-	✔	✔
	thermal water	-		✔	-	✔		✔
	mineral water	-	✔	-	-	✔	✔	-
	steam < 4 bar	-	✔	-	-	✔	✔	-
WATER & GLYCOL	ethylene glycol (glycol < 30%)	✔	✔	✔	✔	✔	✔	✔
	ethylene glycol (glycol > 30%)	✔	✔	✔	-	✔	✔	✔
	propylene glycol (glycol < 30%)	✔	✔	✔	✔	✔	✔	✔
	propylene glycol (glycol > 30%)	✔	✔	✔	-	✔	✔	✔
HYDROCARBONS	diesel fuel	-	✔	✔	✔	-	✔	-
	kerosene	-	✔	✔	✔	-	✔	-
	Petroleum	-	✔	✔	✔	-	✔	-
	pure gasoline	-	✔	✔	✔	-	✔	-
	naphtha	-	✔	✔	✔	-	✔	-
OILS	sae oil	-	✔	✔	✔	-	✔	-
	oil iso vg	-	✔	✔	✔	-	✔	-
	diathermic oil	-	✔	✔	✔	-	✔	-
	hardening oil	-	✔	✔	✔	-	✔	-
	mineral oil	-	✔	✔	✔	-	✔	-
	synthetic oil	-	✔	✔	-	✔	✔	-
	olive oil	-	✔	✔	✔	-	✔	-
	seeds oil	-	✔	✔	✔	-	✔	-
ACIDS	sulfuric acid 20% (aqueous), 50°c	-	**	-	-	✔	-	✔
	hydrochloric acid 1% (aqueous), 20°c	-	**	-	-	✔	-	✔
	acetic acid 70°c	-	✔	-	-	✔	-	✔
	chromic acid 20%, 20°c	-	✔	-	-	✔	-	✔
FOOD	milk	✔	✔	-	✔	✔	✔	-
	wine, juice	✔	✔	-	✔	✔	✔	-
	beer	✔	✔	-	✔	✔	✔	-
	whiskey	✔	✔	-	✔	✔	✔	-
	wine vinegar	-	✔	-	-	✔	✔	-
	liquor	✔	✔	-	-	✔	✔	-
OTHER FLUID	acetone	-	✔	✔	-	✔	✔	-
	ethyl alcohol	-	✔	✔	-	✔	✔	-
	ethanol	-	✔	✔	-	✔	✔	-
	ethylene	-	✔	✔	✔	-	✔	-
	methanol	-	✔	✔	-	✔	✔	-

Legend: ✔ compatible - in compatible
* Only for closed circuits and with a chloride concentration less than 25 ppm and Tmax 80C
**To evaluate the ideal combination of suitable materials, contact the sales office.

Couplings

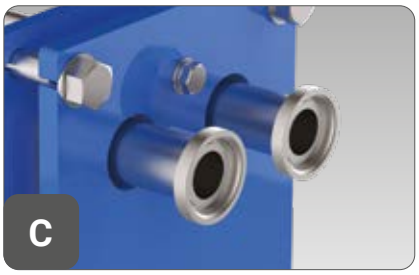
Our gasketed plate heat exchangers can be manufactured with numerous kinds of couplings, threaded, with a free flange, with a welded flange and with liner. Liner is the coating in the shaft connection edges, that can be made of steel or rubber.



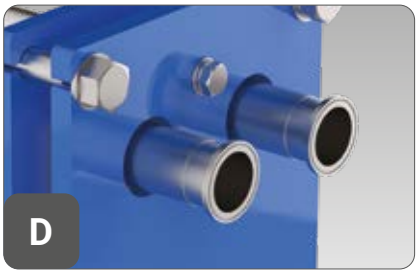
Threaded coupling (steel or nylon)



Grooved coupling



DIN 11851 coupling



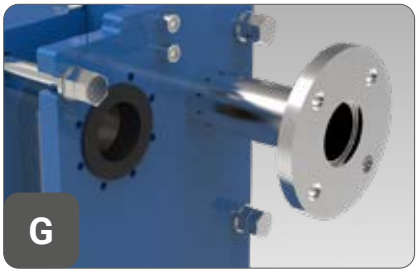
Triclamp coupling



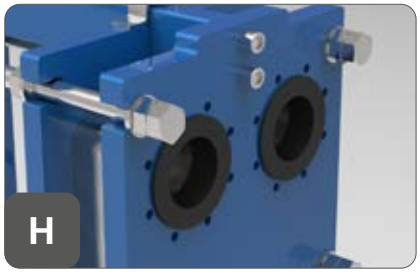
Free Flange coupling



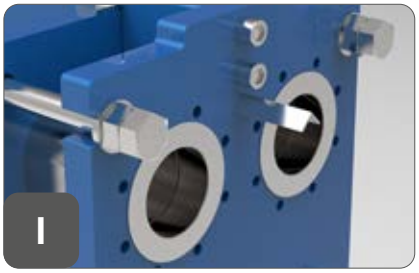
Welded Flange coupling



Liner + Flange coupling



Rubber Liner coupling



Metal Liner coupling

Coupling compatibility

Model	A	B	C	D	E	F	G	H	I
K042	✔	✔	✔	✔	✔	✔	-	-	-
F09	✔	✔	✔	✔	✔	✔	-	-	-
F2010 - F2016 - F2022	✔	✔	✔	✔	✔	✔	✔	-	-
F3017 - F3030 - F3043	✔	✔	✔	✔	✔	✔	✔	✔	✔
F4206 - F4031 - F4050 - F4071	-	-	✔	✔	✔	✔	✔	✔	✔
F42 - F62 - F82 - F112	-	-	-	-	-	✔	✔	✔	✔
F405 - F70 - F100 - F130	-	-	-	-	-	✔	✔	✔	✔
F81 - F120 - F160 - F190	-	-	-	-	-	✔	✔	✔	✔
F150 - F200 - F250	-	-	-	-	-	✔	✔	✔	✔

Accessories

Insulation box, Condensate collection tub, Feet set

For **models K042 e H1** it is available a **thermoformed** insulation box, removable by coupling with velcro strips (**feet set included**).

		Thermoformed Insulation Box	
Model	**Plates threshold**	**Code**	**Price**
K042	up to 64 plates	843090028X	
H1	up to 64 plates	843090028X	
F09	up to 101 plates	843090111X	





Legend

1. Galvanized steel Insulation Box: Available for the entire range, it is made of a galvanized steel structure covered with insulating material.
2. Condensate collection tank: **mandatory in applications in refrigeration and cooling plants**
3. Support feet set

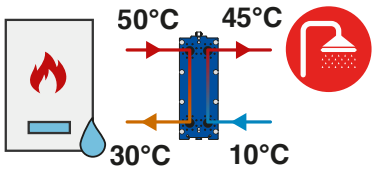
		Aluminium insulation box			Condensate collection tub (mandatory T<15°C)			Feet set	
Model	**Plates threshold**	**Code**	**Price**	**Ht x Lt x Wt mm**	**Code**	**Price**	**Ht x Lt x Wt mm**	**Code**	**Price**
K042	up to 38 plates	821080214X		491x246x215	829097145X		20x295x310	821070049X	
	up to 64 plates	821080215X		491x246x298	829097146X		20x295x410		
K080	up to 38 plates	821080216X		746x296x220	829097147X		50x345x370	821070051X	
	up to 64 plates	821080217X		746x296x299	829097148X		50x345x450		
H1	up to 38 plates	821080214X		491x246x215	829097145X		20x295x310	821070049X	
	up to 64 plates	821080215X		491x246x298	829097146X		20x295x410		
H2	up to 38 plates	821080216X		746x296x220	829097147X		50x345x370	821070051X	
	up to 64 plates	821080217X		746x296x299	829097148X		50x345x450		
F09	up to 44 plates	821080161X		848x247x212	829095331X		20x275x372	821070241X	
	up to 69 plates	821080162X		848x247x280	829095331X		20x275x372		
	up to 101 plates	821080163X		848x247x366	829095332X		20x275x472		
F2010	up to 30 plates	821080186X		754x354x230	829097141X		50x400x310	821070031X	
	up to 80 plates	821080187X		754x354x379	829097142X		50x400x555		
	up to 120 plates	821080188X		754x354x499	829097143X		50x400x805		
	up to 180 plates	821080189X		754x354x679	829097144X		50x400x1055		
F2016	up to 30 plates	821080190X		954x354x230	829097141X		50x400x310	821070031X	
	up to 80 plates	821080191X		954x354x379	829097142X		50x400x555		
	up to 120 plates	821080192X		954x354x499	829097143X		50x400x805		
	up to 180 plates	821080193X		954x354x679	829097144X		50x400x1055		
F2022	up to 30 plates	821080194X		1154x354x230	829097141X		50x400x310	821070031X	
	up to 80 plates	821080195X		1154x354x379	829097142X		50x400x555		
	up to 120 plates	821080196X		1154x354x499	829097143X		50x400x805		
	up to 180 plates	821080197X		1154x354x679	829097144X		50x400x1055		
F3017	up to 80 plates	821080146X		992x446x372	829096013X		50x450x500	821070247X	
	up to 120 plates	821080147X		992x446x464	829096014X		50x500x750		
	up to 180 plates	821080148X		992x446x569	829096015X		50x500x1000		
	up to 250 plates	821080149X		992x446x834	829096016X		50x500x1390		
F3030	up to 80 plates	821080142X		1392x446x370	829096013X		50x450x500	821070247X	
	up to 120 plates	821080150X		1392x446x464	829096014X		50x500x750		
	up to 180 plates	821080151X		1392x446x642	829096015X		50x500x1000		
	up to 250 plates	821080152X		1392x446x834	829096016X		50x500x1390		
F3043	up to 80 plates	821080153X		1792x446x372	829096013X		50x450x500	821070247X	
	up to 120 plates	821080154X		1792x446x464	829096014X		50x500x750		
	up to 180 plates	821080155X		1792x446x642	829096015X		50x500x1000		
	up to 250 plates	821080156X		1792x446x834	829096016X		50x500x1390		
F4206	up to 80 plates	821080205X		1108x524x429	829097137X		50x575x550	821070032X	
	up to 120 plates	821080204X		1108x524x557	829097138X		50x575x750		
	up to 180 plates	821080203X		1108x524x749	829097139X		50x575x1000		
	up to 250 plates	821080202X		1108x524x973	829097140X		50x575x1390		
F4031	up to 80 plates	821080201X		1284x524x429	829097137X		50x575x550	821070032X	
	up to 120 plates	821080200X		1284x524x557	829097138X		50x575x750		
	up to 180 plates	821080199X		1284x524x749	829097139X		50x575x1000		
	up to 250 plates	821080198X		1284x524x973	829097140X		50x575x1390		
F4050	up to 80 plates	821080209X		1778x524x429	829097137X		50x575x550	821070032X	
	up to 120 plates	821080208X		1778x524x557	829097138X		50x575x750		
	up to 180 plates	821080207X		1778x524x749	829097139X		50x575x1000		
	up to 250 plates	821080206X		1778x524x973	829097140X		50x575x1390		
F4071	up to 80 plates	821080213X		2272x524x429	829097137X		50x575x550	821070032X	
	up to 120 plates	821080212X		2272x524x557	829097138X		50x575x750		
	up to 180 plates	821080211X		2272x524x749	829097139X		50x575x1000		
	up to 250 plates	821080210X		2272x524x973	829097140X		50x575x1390		

Tables for fast selection - GASKETED

INSTANTANEOUS DHW with LOW temperature source

Project conditions

Circuit	Source - endpoint	T_{IN}	T_{OUT}	P_{MAX}	Fluid
HOT side	Water heater	50°C	30°C	10 bar	H_2O
COLD side	Domestic Hot Water	10°C	45°C	10 bar	H_2O



								Packaging	
Power	Hot side		Cold		Model*	Plates number*	Code	Price	Dimensions	Weight
kW	l/h	kPa	l/h	kPa					cm	kg
20	871	4	494	1	K080	9	821K080AHNN009		77x27x42	78
25	1088	4	618	1	K080	11	821K080AHNN011		77x27x42	79
30	1306	4	741	1	K080	13	821K080AHNN013		77x27x42	80
35	1524	4	865	1	K080	15	821K080AHNN015		77x27x54	82
40	1714	5	988	2	K080	15	821K080AHNN015		77x27x54	82
50	2177	5	1235	2	K080	19	821K080AHNN019		77x27x54	84
60	2612	6	1482	2	K080	21	821K080AHNN021		77x27x54	85
75	3265	7	1853	2	K080	25	821K080AHNN025		77x27x54	88
85	3700	6	2100	2	K080	29	821K080AHNN029		77x27x54	90
100	4353	7	2471	2	K080	33	821K080AHNN033		77x27x54	93
120	5224	32	2965	10	F2016	15	821F2016AN015-1HH07XX00N		97x33x75	134
150	6530	30	3706	9	F2016	19	821F2016AN019-1HH09XX00N		97x33x75	137
180	7836	36	4447	11	F2016	21	821F2016AN021-1HH10XX00N		97x33x75	139
210	9142	34	5189	11	F2016	25	821F2016AN025-1HH12XX00N		97x33x75	142
240	10448	33	5930	10	F2016	29	821F2016AN029-1HH14XX00N		97x33x75	145
270	11754	32	6671	10	F2016	33	821F2016AN033-1HH16XX00N		97x33x75	152
300	13060	35	7412	11	F2016	35	821F2016AN035-1HH17XX00N		97x33x75	153

*Accessories see pag. 37 (See Model and plates number)

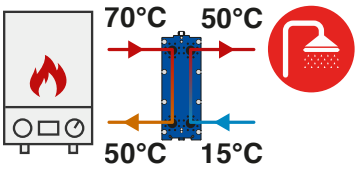
Alternative solution with brazed heat exchangers: see pag. 50

Tables for fast selection - GASKETED

INSTANTANEOUS DHW with HIGH temperature source

Project conditions

Circuit	Source - endpoint	T_{IN}	T_{OUT}	P_{MAX}	Fluid
HOT side	Water heater	70°C	50°C	10 bar	H_2O
COLD side	Domestic Hot Water	15°C	50°C	10 bar	H_2O



								Packaging	
Power	Hot side		Cold		Model*	Plates number*	Code	Price	Dimensions	Weight
kW	l/h	kPa	l/h	kPa					cm	kg
20	879	10	495	3	K042	7	821K042AHNN007		50x25x35	31
25	1099	9	619	3	K042	9	821K042AHNN009		50x25x35	32
30	1319	13	743	4	K042	9	821K042AHNN009		50x25x35	32
35	1539	17	867	6	K042	9	821K042AHNN009		50x25x35	32
40	1759	14	991	5	K042	11	821K042AHNN011		50x25x35	33
50	2199	15	1236	5	K042	13	821K042AHNN013		50x25x35	33
60	2638	22	1486	8	K042	13	821K042AHNN013		50x25x35	33
75	3298	25	1858	9	K042	15	821K042AHNN015		50x25x45	34
85	3737	25	2106	9	K042	17	821K042AHNN017		50x25x45	34
100	4397	23	2477	8	K042	21	821K042AHNN021		50x25x45	36
120	5276	32	2973	11	K042	21	821K042AHNN021		50x25x45	36
150	6596	36	3716	13	K042	25	821K042AHNN025		50x25x45	37
180	7915	35	4459	12	K042	31	821K042AHNN031		50x25x45	39
210	9234	34	5202	12	K042	37	821K042AHNN037		50x25x45	41
240	10533	32	5945	11	F2010	17	821F2010AN017-1HH03HL05N		77x33x47	106
270	11872	35	6688	12	F2010	19	821F2010AN019-1HH04HL05N		77x33x47	107
300	13191	34	7431	12	F2010	21	821F2010AN021-1HH04HL06N		77x33x47	108

*Accessories see pag. 37 (See Model and plates number)

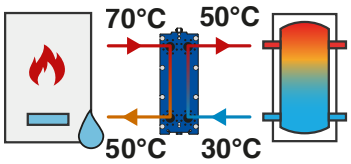
Alternative solution with brazed heat exchangers: see pag. 51

Tables for fast selection - GASKETED

DHW with STORAGE TANK and HIGH temperature source

Project conditions 1

Circuit	Source - endpoint	T_{IN}	T_{OUT}	P_{MAX}	Fluid
HOT side	Water heater	70°C	50°C	10 bar	H_2O
COLD side	Domestic Hot Water	30°C	50°C	10 bar	H_2O



								Packaging	
Power	Hot side		Cold		Model*	Plates number*	Code	Price	Dimensions	Weight
kW	l/h	kPa	l/h	kPa					cm	kg
20	878	6	871	6	K042	9	821K042AHNN009		50x25x35	32
25	1098	9	1087	9	K042	9	821K042AHNN009		50x25x35	32
30	1318	13	1307	13	K042	9	821K042AHNN009		50x25x35	32
35	1537	17	1523	17	K042	9	821K042AHNN009		50x25x35	32
40	1760	22	1742	22	K042	9	821K042AHNN009		50x25x35	32
50	2200	22	2174	22	K042	11	821K042AHNN011		50x25x35	33
60	2640	22	2610	22	K042	13	821K042AHNN013		50x25x35	33
75	3298	25	3265	26	K042	15	821K042AHNN015		50x25x45	34
85	3737	25	3697	26	K042	17	821K042AHNN017		50x25x45	34
100	4396	28	4352	28	K042	19	821K042AHNN019		50x25x45	35
120	5278	27	5223	28	K042	23	821K042AHNN023		50x25x45	36
150	6595	27	6527	28	K042	29	821K042AHNN029		50x25x45	38
180	7916	28	7834	28	K042	35	821K042AHNN035		50x25x45	40
210	9234	28	9140	28	F2010	17	821F2010AN017-1HH04HL04N		77x33x47	106
240	10055	27	10044	27	F2010	21	821F2010AN021-1HH06HL04N		77x33x47	108
270	11930	27	11808	27	F2010	21	821F2010AN021-1HH06HL04N		77x33x47	108
300	13190	30	13053	29	F2010	25	821F2010AN025-1HH07HL05N		77x33x47	111

*Accessories see pag. 37 (See Model and plates number)

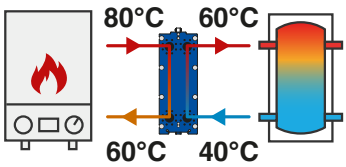
Alternative solution with brazed heat exchangers: see pag. 52

Tables for fast selection - GASKETED

DHW with STORAGE TANK and HIGH temperature source

Project conditions 2

Circuit	Source - endpoint	T_{IN}	T_{OUT}	P_{MAX}	Fluid
HOT side	Water heater	80°C	60°C	10 bar	H_2O
COLD side	Domestic Hot Water	40°C	60°C	10 bar	H_2O



								Packaging	
Power	Hot side		Cold		Model*	Plates number*	Code	Price	Dimensions	Weight
kW	l/h	kPa	l/h	kPa					cm	kg
20	882	6	864	6	K042	9	821K042AHNN009		50x25x35	32
25	1105	9	1094	9	K042	9	821K042AHNN009		50x25x35	32
30	1324	12	1310	13	K042	9	821K042AHNN009		50x25x35	32
35	1548	17	1530	17	K042	9	821K042AHNN009		50x25x35	32
40	1767	22	1749	22	K042	9	821K042AHNN009		50x25x35	32
50	2210	22	2185	22	K042	11	821K042AHNN011		50x25x35	33
60	2649	22	26244	22	K042	13	821K042AHNN013		50x25x35	33
75	3312	25	3279	25	K042	15	821K042AHNN015		50x25x45	34
85	3754	25	3718	25	K042	17	821K042AHNN017		50x25x45	34
100	4597	27	4374	28	K042	19	821K042AHNN019		50x25x45	35
120	5302	27	5248	27	K042	23	821K042AHNN023		50x25x45	36
150	6627	28	6559	28	K042	29	821K042AHNN029		50x25x45	38
180	7952	28	7873	28	K042	35	821K042AHNN035		50x25x45	40
210	9277	19	9184	20	K080	23	821K080AVNN023		77x27x54	87
240	10605	27	10497	27	F2010	19	821F2010AN019-1HH04HL05N		77x33x47	107
270	11930	27	11808	27	F2010	21	821F2010AN021-1HH04HL06N		77x33x47	108
300	13255	30	13122	29	F2010	23	821F2010AN023-1HH05HL06N		77x33x47	109

*Accessories see pag. 37 (See Model and plates number)

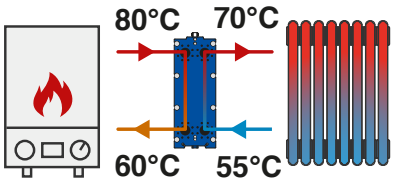
Alternative solution with brazed heat exchangers: see pag. 53

Tables for fast selection - GASKETED

HEATING with HIGH temperature endpoints

Project conditions 1

0,3	Source - endpoint	T_{IN}	T_{OUT}	P_{MAX}	Fluid
HOT side	Water heater	80°C	60°C	10 bar	H_2O
COLD side	Radiators	55°C	70°C	10 bar	H_2O

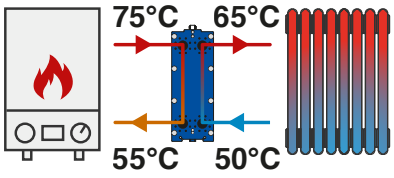


Power	Hot side		Cold		Model*	Plates number*	Code	Price	Packaging	
									Dimensions	Weight
kW	l/h	kPa	l/h	kPa					cm	kg
15	663	1	880	1	K042	19	821K042AHNN019		50x25x45	35
25	1104	4	1467	7	K080	11	821K080AHNN011		77x27x42	79
35	1546	5	2054	9	K080	13	821K080AHNN013		77x27x42	80
50	2209	6	2934	11	K080	17	821K080AHNN017		77x27x54	83
75	3314	8	4401	8	K080	23	821K080AHNN023		77x27x54	87
100	4418	8	5868	15	K080	29	821K080AHNN029		77x27x54	90
115	5081	9	6748	15	K080	33	821K080AHNN033		77x27x54	93
130	5744	9	7628	16	K080	37	821K080AHNN037		77x27x54	95
150	6628	10	8802	17	K080	41	821K080AHNN041		77x27x64	98
180	7953	11	10562	20	F2016	27	821F2016AN027-1HH06HL07N		97x33x75	144
200	8837	11	11736	19	F2016	31	821F2016AN031-1HH07HL08N		97x33x75	150

*Accessories see pag. 37 (See Model and plates number)

Project conditions 2

0,3	Source - endpoint	T_{IN}	T_{OUT}	P_{MAX}	Fluid
HOT side	Water heater	75°C	55°C	10 bar	H_2O
COLD side	Radiators	50°C	65°C	10 bar	H_2O



Power	Hot side		Cold		Model*	Plates number*	Code	Price	Packaging	
									Dimensions	Weight
kW	l/h	kPa	l/h	kPa					cm	kg
15	661	4	878	7	K80	7	821K080AHNN007		77x27x42	76
25	1102	4	1463	7	K80	11	821K080AHNN011		77x27x42	79
35	1542	5	2049	10	K80	13	821K080AHNN013		77x27x42	80
50	2203	6	2927	11	K80	17	821K080AHNN017		77x27x54	83
75	3305	8	4390	13	K80	23	821K080AHNN023		77x27x54	87
100	4407	9	5853	15	K80	29	821K080AHNN029		77x27x54	90
115	5068	9	6732	15	K80	33	821K080AHNN033		77x27x54	93
130	5730	9	7609	16	K80	37	821K080AHNN037		77x27x54	95
150	6612	9	8780	16	K80	43	821K080AHNN043		77x27x64	99
180	7934	12	10536	20	F2016	27	821F2016AN027-1HH10LL03N		97x33x75	144
200	8815	11	11706	19	F2016	31	821F2016AN031-1HH07HL08N		97x33x75	150

*Accessories see pag. 37 (See Model and plates number)

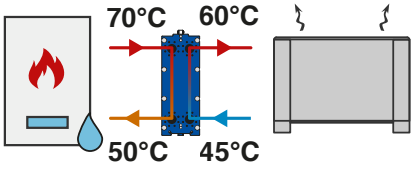
Alternative solution with brazed heat exchangers: see pag. 54

Tables for fast selection - GASKETED

HEATING with HIGH temperature endpoints

Project conditions 3

Circuit	Source - endpoint	T_{IN}	T_{OUT}	P_{MAX}	Fluid
HOT side	Water heater	70°C	50°C	10 bar	H_2O
COLD side	Radiators / Fan Coil	45°C	60°C	10 bar	H_2O

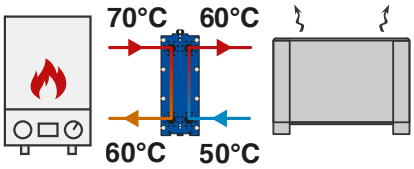


Power	Hot side		Cold		Model*	Plates number*	Code	Price	Packaging	
									Dimensions	Weight
kW	l/h	kPa	l/h	kPa					cm	kg
15	660	1	876	1	K042	21	821K042AHNN021		50x25x45	36
25	1099	4	1460	7	K080	11	821K080AHNN011		77x27x42	79
35	1539	5	2044	10	K080	13	821K080AHNN013		77x27x42	80
50	2199	6	2920	11	K080	17	821K080AHNN017		77x27x54	83
75	3298	6	4379	11	K080	25	821K080AHNN025		77x27x54	88
100	4397	8	5839	13	K080	31	821K080AHNN031		77x27x54	92
115	5057	8	6715	14	K080	35	821K080AHNN035		77x27x54	94
130	5716	8	7591	15	K080	39	821K080AHNN039		77x27x64	97
150	6596	9	8759	15	K080	45	821K080AHNN045		77x27x64	101
180	7915	9	10510	16	K080	53	821K080AHNN053		77x27x64	106
200	8794	10	11678	17	K080	59	821K080AHNN059		77x27x64	109

*Accessories see pag. 37 (See Model and plates number)

Project conditions 4

Circuit	Source - endpoint	T_{IN}	T_{OUT}	P_{MAX}	Fluid
HOT side	Water heater	70°C	60°C	10 bar	H_2O
COLD side	Radiators / Fan Coil	50°C	60°C	10 bar	H_2O



Power	Hot side		Cold		Model*	Plates number*	Code	Price	Packaging	
									Dimensions	Weight
kW	l/h	kPa	l/h	kPa					cm	kg
15	1322	12	1315	13	K042	9	821K042AHNN009		50x25x35	32
25	2203	15	2192	16	K042	13	821K042AHNN013		50x25x35	33
35	3085	17	3069	17	K042	17	821K042AHNN017		50x25x45	34
50	4408	19	4385	19	K042	23	821K042AHNN023		50x25x45	36
75	6612	18	6577	18	K080	17	821K080AHNN017		77x27x54	83
100	8816	17	8769	18	K080	23	821K080AHNN023		77x27x54	87
115	10138	19	10085	20	K080	25	821K080AHNN025		77x27x54	88
130	11460	19	11400	19	K080	29	821K080AHNN029		77x27x54	90
150	13223	19	13154	19	F2010	27	821F2010AN027-1HH04HL09N		77x33x47	112
180	15868	20	15785	20	F2010	31	821F2010AN031-1HH03HL12N		77x33x71	118
200	17631	19	17539	19	F2010	35	821F2010AN035-1HH03HL14N		77x33x71	120

*Accessories see pag. 37 (See Model and plates number)

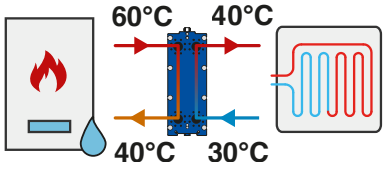
Alternative solution with brazed heat exchangers: see pag. 55

Tables for fast selection - GASKETED

HEATING with LOW temperature endpoints

Project conditions 1

Circuit	Source - endpoint	T_{IN}	T_{OUT}	P_{MAX}	Fluid
HOT side	Water heater	60°C	40°C	10 bar	H_2O
COLD side	Radiating floor / Fan Coil	30°C	40°C	10 bar	H_2O

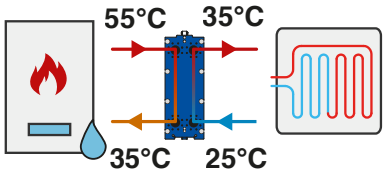


Power	Hot side		Cold		Model*	Plates number*	Code	Price	Packaging	
									Dimensions	Weight
kW	l/h	kPa	l/h	kPa					cm	kg
15	656	3	1302	13	K042	9	821K042AHNN009		50x25x35	32
25	1093	4	2170	16	K042	13	821K042AHNN013		50x25x35	33
35	1531	5	3038	18	K042	17	821K042AHNN017		50x25x45	35
50	2187	5	4340	20	K042	23	821K042AHNN023		50x25x45	36
75	3281	6	6511	20	K080	17	821K080AHNN017		77x27x54	83
100	4375	5	8681	19	K080	23	821K080AHNN023		77x27x54	87
115	5032	5	9983	18	F2010	19	821F2010AN019-1HH05LL04N		77x33x47	107
130	5687	5	11285	18	F2010	21	821F2010AN021-1HH05LL05N		77x33x47	108
150	6563	6	13022	19	F2010	25	821F2010AN025-1HH07LL05N		77x33x47	111
180	7876	6	15626	19	F2010	29	821F2010AN029-1HH07LL07N		77x33x47	113
200	8751	6	17362	19	F2010	33	821F2010AN033-1HH08LL08N		77x33x71	119

*Accessories see pag. 37 (See Model and plates number)

Project conditions 2

Circuit	Source - endpoint	T_{IN}	T_{OUT}	P_{MAX}	Fluid
HOT side	Water heater	55°C	35°C	10 bar	H_2O
COLD side	Radiating floor	25°C	35°C	10 bar	H_2O



Power	Hot side		Cold		Model*	Plates number*	Code	Price	Packaging	
									Dimensions	Weight
kW	l/h	kPa	l/h	kPa					cm	kg
15	655	3	1299	13	K042	9	821K042AHNN009		50x25x35	32
25	1092	4	2165	16	K042	13	821K042AHNN013		50x25x35	33
35	1528	5	3031	18	K042	17	821K042AHNN017		50x25x45	35
50	2182	5	4329	20	K042	23	821K042AHNN023		50x25x45	36
75	3273	5	6494	17	K080	19	821K080AHNN019		77x27x54	84
100	4364	5	8659	20	K080	23	821K080AHNN023		77x27x54	87
115	5019	6	9958	18	F2010	19	821F2010AN019-1HH05LL04N		77x33x47	107
130	5674	5	11257	20	F2010	23	821F2010AN023-1HH03HL08N		77x33x47	109
150	6547	6	12988	20	F2010	25	821F2010AN025-1HH07LL05N		77x33x47	111
180	7856	6	15586	19	F2010	29	821F2010AN029-1HH07LL07N		77x33x47	113
200	8729	6	17318	19	F2010	33	821F2010AN033-1HH08LL08N		77x33x71	119

*Accessories see pag. 37 (See Model and plates number)

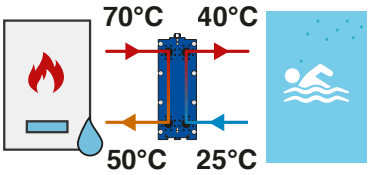
Alternative solution with brazed heat exchangers: see pag. 56

Tables for fast selection - GASKETED

HEATING for CHLORINATED pool

Project conditions

Circuit	Source - endpoint	T_{IN}	T_{OUT}	P_{MAX}	Fluid
HOT side	Water heater	70°C	50°C	10 bar	H_2O
COLD side	Piscina Acqua Clorata	25°C	40°C	10 bar	H_2O+Cl



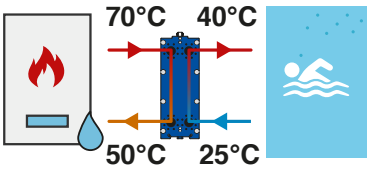
Power	Hot side		Cold		Model*	Plates number*	Code	Price	Packaging	
									Dimensions	Weight
kW	l/h	kPa	l/h	kPa					cm	kg
20	880	4	1156	7	K042	11	821K042AHNN011		50x25x35	33
25	1099	6	1445	10	K042	11	821K042AHNN011		50x25x35	33
35	1539	8	2023	14	K042	13	821K042AHNN013		50x25x35	33
50	2199	8	2890	13	K042	19	821K042AHNN019		50x25x45	35
75	3298	7	4335	12	K080	15	821K080AVNN015		77x27x54	82
100	4397	7	5780	14	K080	19	821K080AVNN019		77x27x54	84
115	5057	8	6647	14	F2010	11	821F2010AN011-1LL05XX00N		77x33x47	102
130	5716	9	7514	14	F2010	13	821F2010AN013-1HL03LL03N		77x33x47	103
150	6596	9	8670	14	F2010	15	821F2010AN015-1HL03LL04N		77x33x47	104
180	7915	8	10404	14	F2010	17	821F2010AN017-1LL08XX00N		77x33x47	106
200	8794	9	11560	15	F2010	19	821F2010AN019-1HL03LL06N		77x33x47	107

*Accessories see pag. 37 (See Model and plates number)

HEATING for SEA WATER pool (Titanium plates)

Project conditions

Circuit	Source - endpoint	T_{IN}	T_{OUT}	P_{MAX}	Fluid
HOT side	Water heater	70°C	50°C	10 bar	H_2O
COLD side	Piscina Acqua Salata	25°C	40°C	10 bar	H_2O+NaCl



Power	Hot side		Cold		Model*	Plates number*	Code	Price	Packaging	
									Dimensions	Weight
kW	l/h	kPa	l/h	kPa					cm	kg
20	879	6	1156	10	K042	9	821K042CHNP009		50x25x35	31
25	1099	6	1445	10	K042	11	821K042CHNP011		50x25x35	31
35	1539	8	2023	14	K080	7	821K080CVNP007		77x27x42	74
50	2198	6	2890	11	K080	11	821K080CVNP011		77x27x42	76
75	3297	7	4335	12	K080	15	821K080CVNP015		77x27x54	77
100	4396	6	5780	10	F2010	11	821F2010CN011-1LL05XX00N		77x33x47	100
115	5055	8	6647	13	F2010	11	821F2010CN011-1LL05XX00N		77x33x47	100
130	5714	9	7514	14	F2010	13	821F2010CN013-1HL03LL03N		77x33x47	100
150	6593	9	8670	14	F2010	15	821F2010CN015-1HL03LL04N		77x33x47	101
180	7912	8	10404	14	F2010	17	821F2010CN017-1LL08XX00N		77x33x47	102
200	8791	9	11560	15	F2010	19	821F2010CN019-1HL03LL06N		77x33x47	103

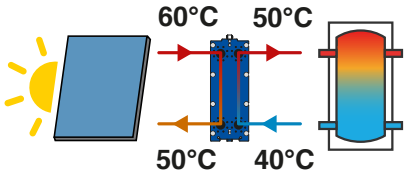
*Accessories see pag. 37 (See Model and plates number)

Tables for fast selection - GASKETED

HEATING with Thermal Solar

Project conditions

Circuit	Source - endpoint	T_{IN}	T_{OUT}	P_{MAX}	Fluid
HOT side	Solar panel	60°C	50°C	10 bar	Glic. 30%
COLD side	Heating / Domestic Hot Water	40°C	50°C	10 bar	H_2O



								Packaging	
Power	Hot side		Cold		Model*	Plates number*	Code	Price	Dimensions	Weight
kW	l/h	kPa	l/h	kPa					cm	kg
20	1839	12	1745	10	K042	13	821K042AHEN013		50x25x35	33
35	3218	14	3054	12	K042	21	821K042AHEN021		50x25x45	36
50	4598	10	4363	8	K080	19	821K080AVEN019		77x27x54	84
75	6897	11	6544	9	K080	27	821K080AVEN027		77x27x54	89
100	9196	14	8726	11	F2010	25	821F2010AE025-1HH05HL07N		77x33x47	111

*Accessories see pag. 37 (See Model and plates number)

The solar thermal makes it roughly 0.8 kW/m^2.
Example 10 Fiorini collectors H2500 (pag. 284) is equal to 25m^2= 20kW

Alternative solution with brazed heat exchangers: see pag. 57



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