

Gasketed plate heat exchangers



информ

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.



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

The 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:

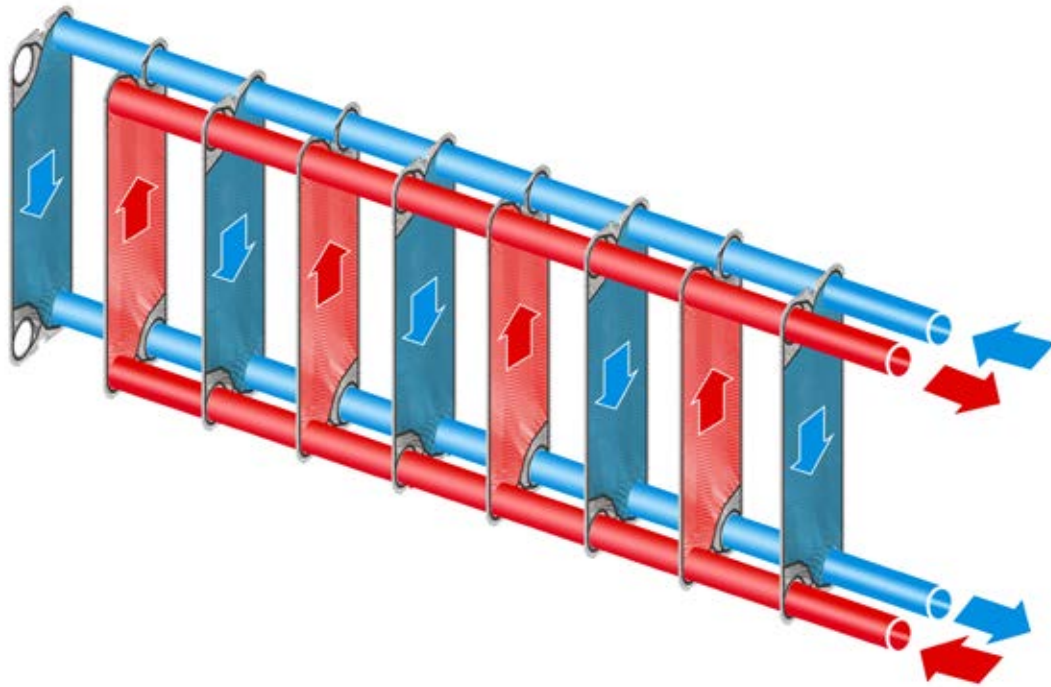
- DHW production
- heat exchanging in heating systems
- teleheating
- pool water heating
- solar power systems
- heating/cooling of alimentary fluids (milk, beer, wine...)
- cooling of machines
- recuperation of heat from industrial processes
- hydraulics



Principles

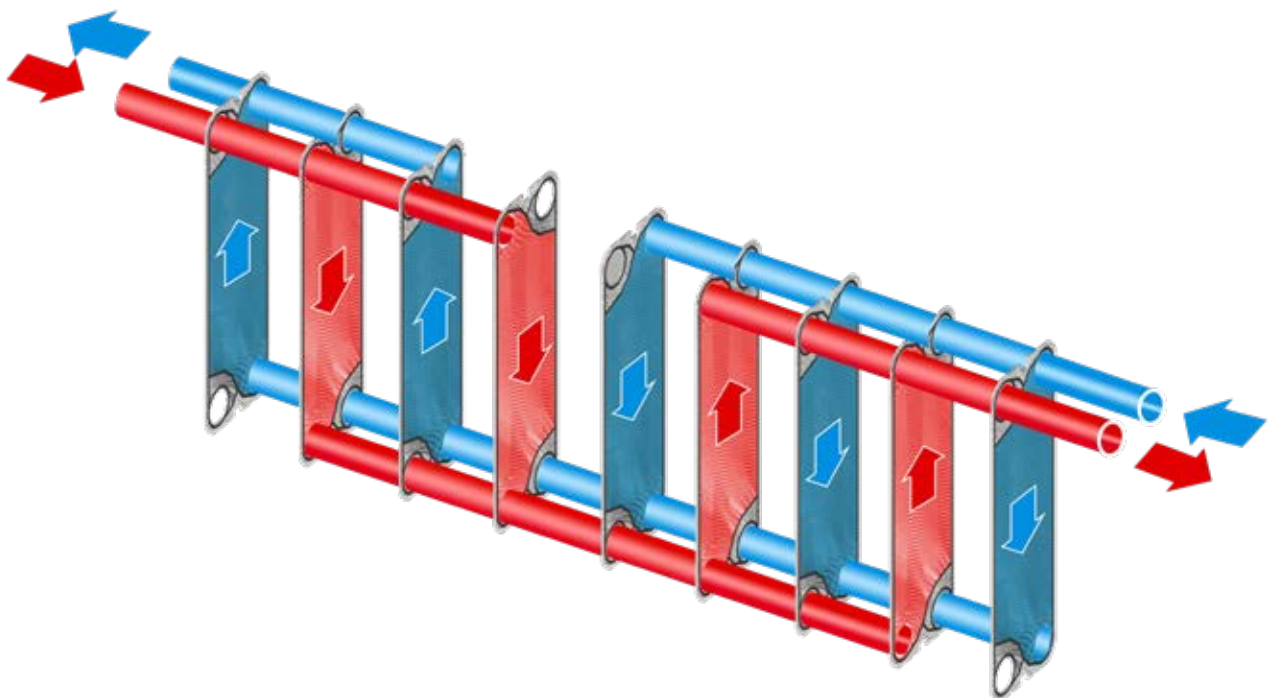
Single passage

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.

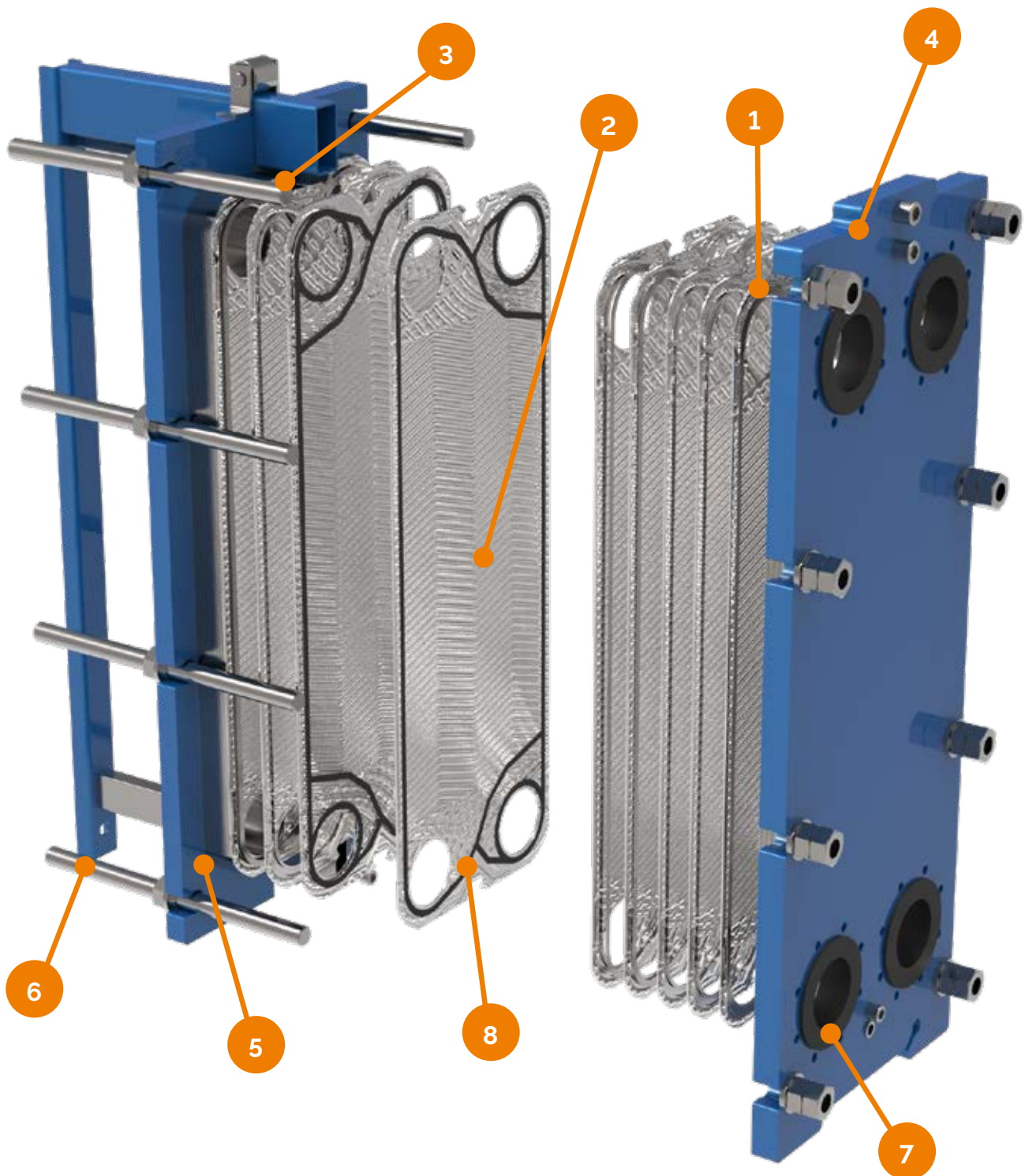


Multiple passage

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. anterior plate
2. mid plate
3. posterior plate
4. fixed cover
5. movable cover
6. tie rod
7. coupling
8. gaskets

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	DN 32		DN 40	DN 50			DN 100				DN 150	
	K042/H1	F009	K080/H2	F010	F016	F022	F206	F031	F050	F071	F041 F042	F060 F062
Plate surface (m ²)	0,042	0,08	0,085	0,10	0,15	0,22	0,21	0,30	0,50	0,70	0,40	0,60
Nominal pressure	PN10/PN16	PN10/PN16	PN10/PN16	PN10/PN16/PN25			PN10/PN16/PN25				PN10/PN16/PN25	
Available corrugations	H	H - L	H - V	H - L	H - L	H - L	H - L	H - L	H - L	H - L	H - L	H - L
Standard coupling	1 1/4 GAS M	1 1/4 GAS M	1 1/2 GAS M	2" GAS M			DN 100 UNI PN16				DN 150 UNI	PN16
PP (mm)	NPx3,1+2	NPx2,7+3	NPx3,05+2	NPx 2,9+3	NPx 2,9+3	NPx 2,9+3	NPx 3,1	NPx 3,1	NPx 3,1	NPx 3,1	NPx 3,5	NPx 3,5
Ht (mm)	470	827	725	733	932	1132	1160	1332	1826	2320	1470	1835
Lt (mm)	200	200	250	310	310	310	480	480	480	480	620	620
Z1 (mm)	380	676	555	494	694	894	719	894	1388	1882	941	1306
Z2 (mm)	68	70	100	126	126	126	225	225	225	225	290	290
J (mm)	45	76	90	128	128	128	204	204	204	225	290	290

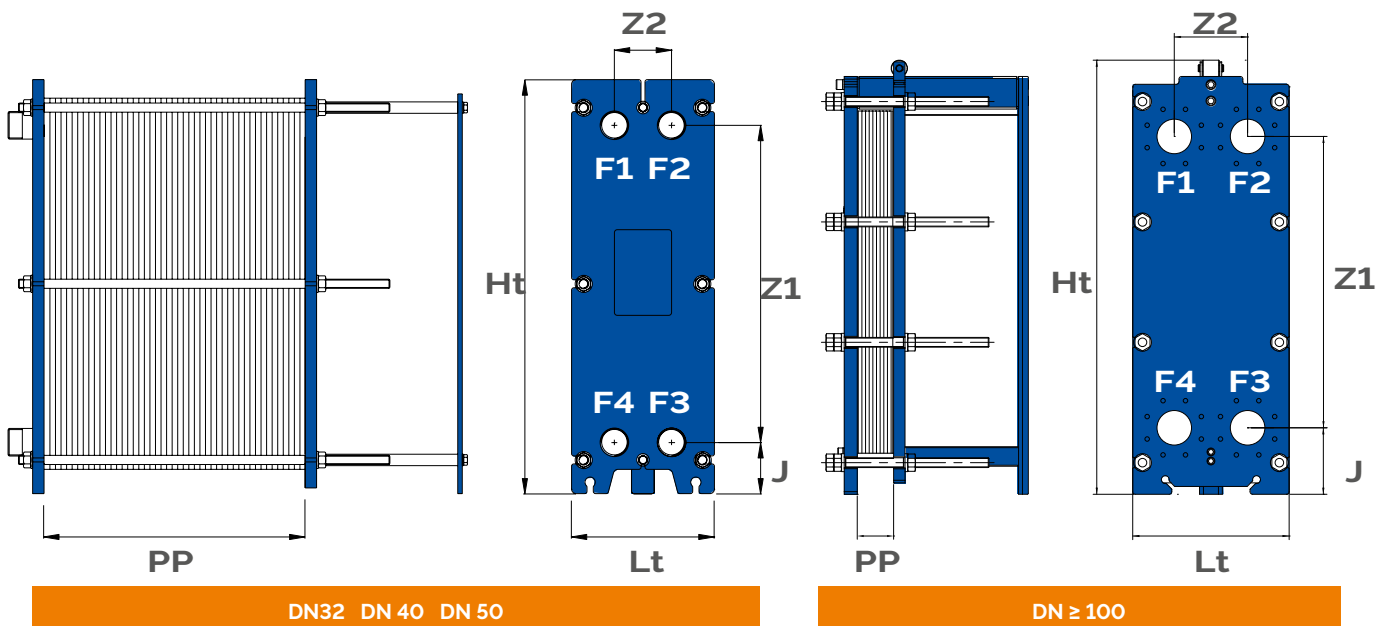
* With rubber liner add 1.5 mm

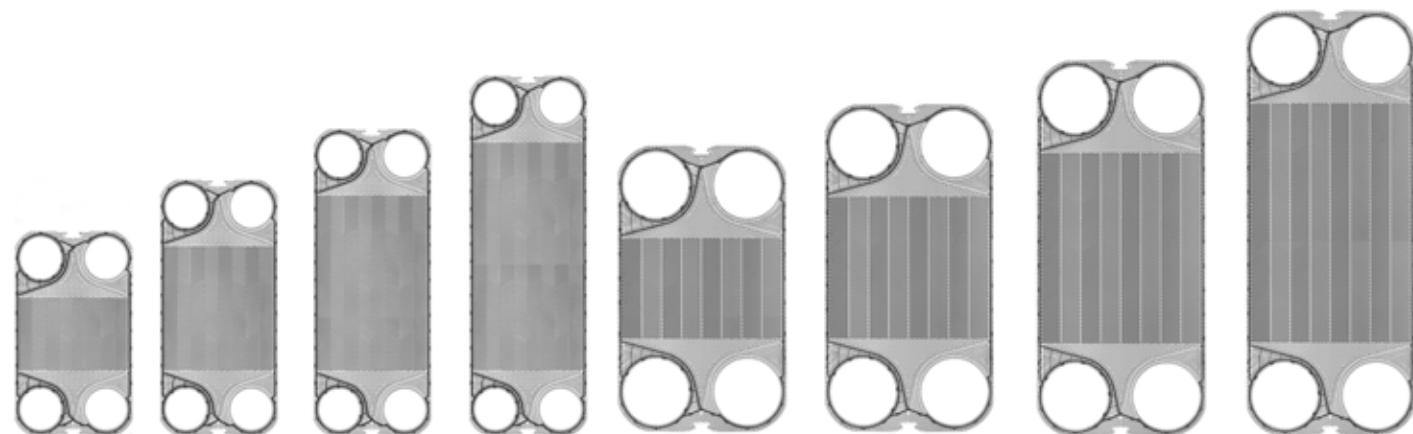
➤ **Special executions are available on request**

Couplings

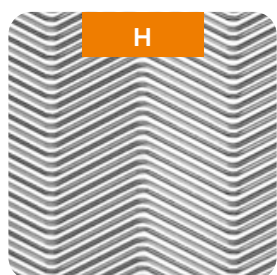
Primary: Inlet F1 - Outlet F4

Secondary: Inlet F3 - Outlet F2





DN 150		DN 200					DN 300				DN 500			
F080 F082	F112	F405	F070	F100	F130	F081	F120	F160	F190	F150	F200	F250	F300	
0.80	1.15	0.41	0.68	1.00	1.30	0.80	1.20	1.60	1.90	1.50	2.00	2.50	3.00	
PN10/PN16/PN25		PN10/PN16/PN25				PN10/PN16/PN25				PN10/PN16/PN25				
H - L	H - L	H - L	H - L	H - L	H - L	H - L	H - L	H - L	H - L	H - L	H - L	H - L	H - L	
DN 150 UNI PN16		DN 200 UNI PN16				DN 300 UNI PN16				DN 500 UNI PN16				
NPx 3.5 *	NPx 3.5 *	NPx 3.1 *	NPx 3.1 *	NPx 3.1 *	NPx 3.1 *	NPx 3.8 *	NPx 3.8 *	NPx 3.8 *	NPx 3.8 *	NPx 4.1 *	NPx 4.1 *	NPx 4.1 *	NPx 4.1 *	
2200	2687	1380	1740	2100	2460	930	2320	2710	3100	2500	2855	3211	3567	
620	620	760	760	760	760	980	980	980	980	1370	1370	1370	1370	
1671	2157	770	1130	1490	1850	1100	1490	1879	2267	1466	1822	2178	2534	
290	290	395	395	395	395	480	480	480	480	672	672	672	672	
290	290	395	395	395	395	480	480	480	480	672	672	672	672	

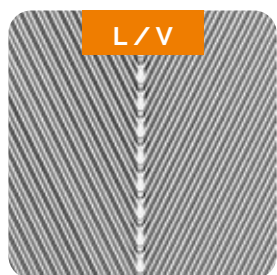


Corrugations

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

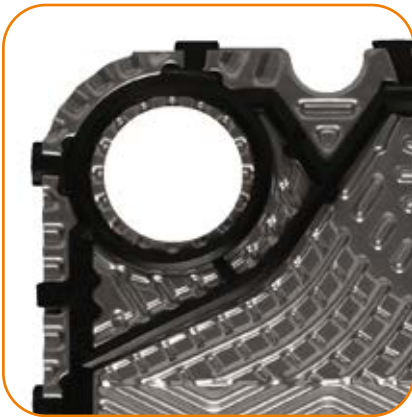


Available materials

Model	Plates			Gaskets			Covers		Tie rod	
	AISI 304	AISI 316L	TITANIO	NBR	EPDM	VITON	PAINTED STEEL	AISI 304/316	GALVANIZED STEEL	AISI 304/316
K serie	-	✓	✓	✓	✓	-	✓	○	✓	○
F serie (up to DN50)	-	✓	✓	✓	✓	○	✓	○	✓	○
F serie (from DN100)	○	✓	✓	✓	✓	○	✓	○	✓	○

Legend: ✓ standard ○ upon request - not available

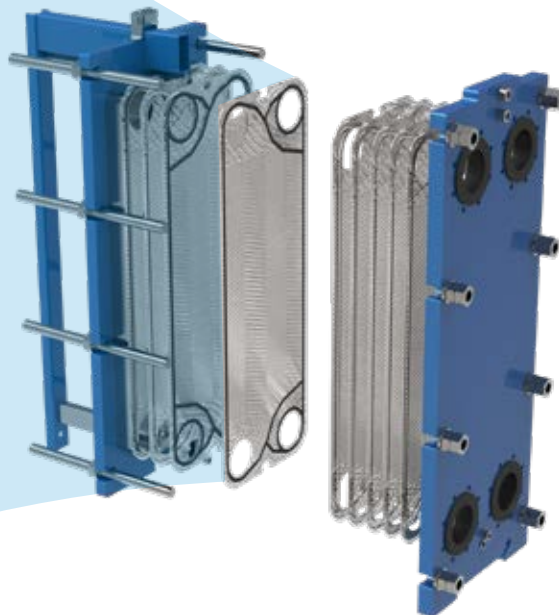
F serie available upon request with plates in the following materials; 245 SMO, AISI 904L, ALLOY C276.



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** (fluoroelastomer 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

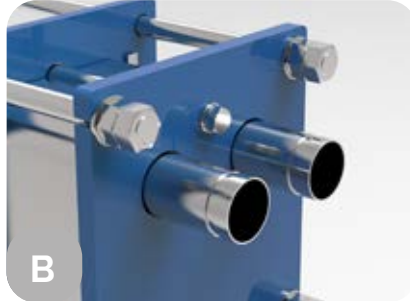
** Use 254 SMO - AISI 904 L - Alloy C276 plates

Couplings

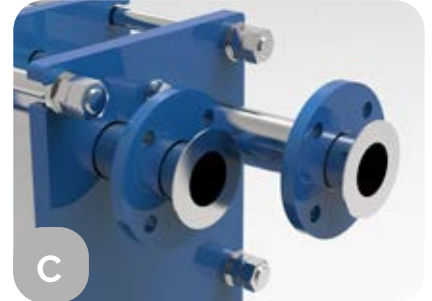
Our gasketed plate heat exchangers can be manufactured with numerous kinds of couplings, threaded, with a free flange, with a welded flange and with liner. Liner is the coating in the shaft connection edges, that can be made of steel or rubber.



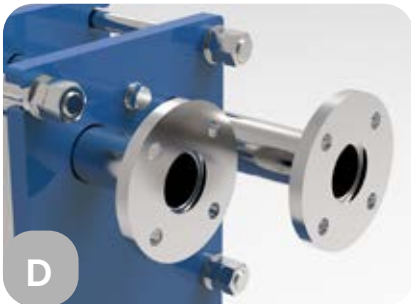
**Threaded coupling
(steel or nylon)**



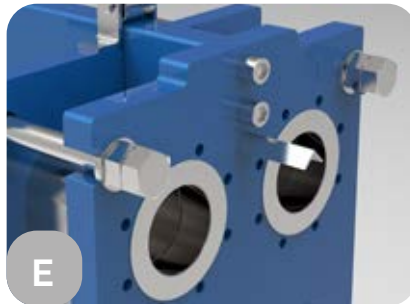
Victaulic coupling



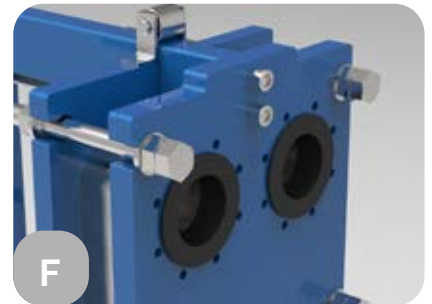
Free Flange coupling



Welded Flange coupling



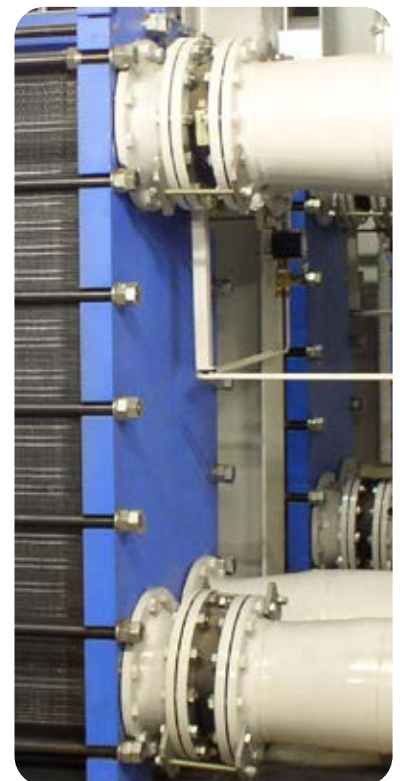
Metal Liner coupling



Rubber Liner coupling

Coupling compatibility

Model	A	B	C	D	E	F
K042	✓	✓	✓	✓	✓	✓
F009	✓	✓	✓	✓	✓	✓
K080	✓	✓	✓	✓	✓	✓
F010	✓	✓	✓	✓	✓	✓
F016	✓	✓	✓	✓	✓	✓
F022	✓	✓	✓	✓	✓	✓
F206				✓	✓	✓
F031				✓	✓	✓
F050				✓	✓	✓
F071				✓	✓	✓
F041 / F042				✓	✓	✓
F060 / F062				✓	✓	✓
F080 / F082				✓	✓	✓
F112				✓	✓	✓
F405				✓	✓	✓
F070				✓	✓	✓
F100				✓	✓	✓
F130				✓	✓	✓
F081				✓	✓	✓
F120				✓	✓	✓
F160				✓	✓	✓
F190				✓	✓	✓
F150				✓	✓	✓
F200				✓	✓	✓
F250				✓	✓	✓
F300				✓	✓	✓



Accessories

Insulation box, Condensate collection tub, Feet set

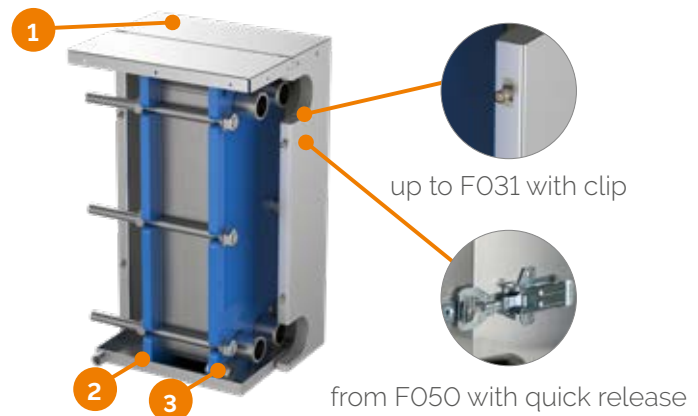
For **models K042 e H1** it is available an **thermoformed** insulation box, removable by coupling with velcro strips (**feet set included**).



Thermoformed Insulation Box			
Model	Plates threshold	Code	Price
K042	up to 64 plates	843090028X	
H1	up to 64 plates	843090028X	
F009	up to 101 plates	843090111X	

Legend

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



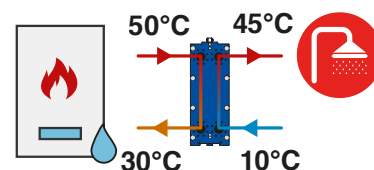
Model	Plates threshold	Code	Aluminium insulation box		Condensate collection tub (mandatory T<15°C)		Feet set	
			Price	Ht x Lt x Wt mm	Code	Price	Code	Price
K042	up to 38 plates	821080037X		493x250x300	829090894X		821070049X	
	up to 64 plates	821080077X		493x250x450	829091409X			
K080	up to 38 plates	821080085X		752x300x455	829091546X		821070051X	
	up to 64 plates	821080091X		752x300x555	829093407X			
H1	up to 38 plates	821080037X		493x250x300	829090894X		821070049X	
	up to 64 plates	821080077X		493x250x450	829091409X			
H2	up to 38 plates	821080085X		752x300x455	829091546X		821070051X	
	up to 64 plates	821080091X		752x300x555	829093407X			
F009	up to 69 plates	-		-	829095331X		821070241X	
	up to 101 plates	-		-	829095332X			
F010	up to 30 plates PN10	821080070X		778x440x400	829092542X		821070031X	
	up to 30 plates PN16	821080080X		778x440x650	829091094X			
	up to 60 plates	821080080X		778x440x650	829091094X			
	up to 150 plates	821080082X		778x440x1150	829090946X			
F016	up to 30 plates PN10	821080063X		978x440x400	829092542X		821070031X	
	up to 30 plates PN16	821080019X		976x388x658	829091094X			
	up to 60 plates	821080019X		976x388x658	829091094X			
	up to 150 plates	821080027X		971x383x1155	829090946X			
F022	up to 30 plates	821080071X		1178x440x400	829092542X		821070031X	
	up to 60 plates	821080054X		1124x384x656	829091094X			
	up to 150 plates	821080032X		1175x387x1157	829090946X			
F206	up to 60 plates	821080055X		1204x540x715	829091028X		821070032X	
	up to 150 plates	821080059X		1204x540x1215	829090857X			
F031	up to 60 plates	821080029X		1371x536x709	829091028X		821070032X	
	up to 150 plates	821080017X		1371x536x1209	829090857X			
F050	up to 60 plates	821080024X		1865x535x700	829091028X		821070032X	
	up to 150 plates	821080021X		1865x535x1209	829090857X			
F071	up to 60 plates	821080096X		2365x535x700	829091028X		821070032X	
	up to 150 plates	821080072X		2365x535x1206	829090857X			

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 ₂ O
COLD side	Domestic Hot Water	10°C	45°C	10 bar	H ₂ O



Power kW	Hot side		Cold		Model*	Plates number*	Code	Price	Packaging	
	L/h	kPa	L/h	kPa					Dimensions cm	Weight 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	F016	15	821F016AN015-1HH07XX00N		97x33x75	134
150	6530	30	3706	9	F016	19	821F016AN019-1HH09XX00N		97x33x75	137
180	7836	36	4447	11	F016	21	821F016AN021-1HH10XX00N		97x33x75	139
210	9142	34	5189	11	F016	25	821F016AN025-1HH12XX00N		97x33x75	142
240	10448	33	5930	10	F016	29	821F016AN029-1HH14XX00N		97x33x75	145
270	11754	32	6671	10	F016	33	821F016AN033-1HH16XX00N		97x33x75	152
300	13060	35	7412	11	F016	35	821F016AN035-1HH17XX00N		97x33x75	153

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

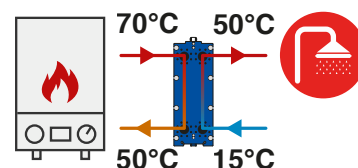
Alternative solution with brazed heat exchangers: see pag. 50

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 ₂ O
COLD side	Domestic Hot Water	15°C	50°C	10 bar	H ₂ O



Power	Hot side		Cold		Model*	Plates number*	Code	Price	Packaging	
	kW	L/h	kPa	L/h					kPa	Dimensions
									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	F010	17	821F010AN017-1HH03HL05N		77x33x47	106
270	11872	35	6688	12	F010	19	821F010AN019-1HH04HL05N		77x33x47	107
300	13191	34	7431	12	F010	21	821F010AN021-1HH04HL06N		77x33x47	108

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

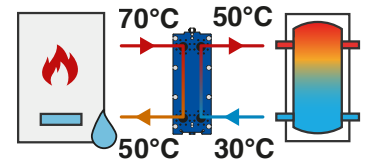
Alternative solution with brazed heat exchangers: see pag. 51

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 ₂ O
COLD side	Domestic Hot Water	30°C	50°C	10 bar	H ₂ O



Power kW	Hot side		Cold		Model*	Plates number*	Code	Price	Packaging	
	L/h	kPa	L/h	kPa					Dimensions cm	Weight 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	F010	17	821F010AN017-1HH04HLO4N		77x33x47	106
240	10055	27	10044	27	F010	21	821F010AN021-1HH06HLO4N		77x33x47	108
270	11930	27	11808	27	F010	21	821F010AN021-1HH06HLO4N		77x33x47	108
300	13190	30	13053	29	F010	25	821F010AN025-1HH07HLO5N		77x33x47	111

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

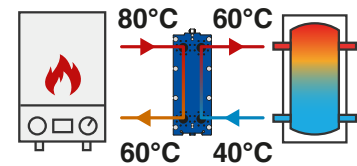
Alternative solution with brazed heat exchangers: see pag. 52

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 ₂ O
COLD side	Domestic Hot Water	40°C	60°C	10 bar	H ₂ O



Power	Hot side		Cold		Model*	Plates number*	Code	Price	Packaging	
	kW	L/h	kPa	L/h					kPa	Dimensions
									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	F010	19	821F010AN019-1HH04HL05N		77x33x47	107
270	11930	27	11808	27	F010	21	821F010AN021-1HH04HL06N		77x33x47	108
300	13255	30	13122	29	F010	23	821F010AN023-1HH05HL06N		77x33x47	109

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

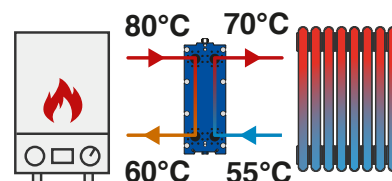
Alternative solution with brazed heat exchangers: see pag. 53

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 ₂ O
COLD side	Radiators	55°C	70°C	10 bar	H ₂ O

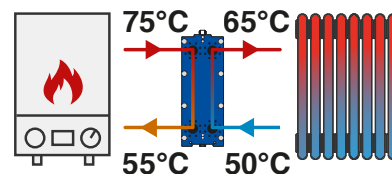


Power	Hot side		Cold		Model*	Plates number*	Code	Price	Packaging	
	kW	L/h	kPa	L/h					kPa	Dimensions
	L/h	kPa	L/h	kPa					cm	kg
15	663	1	880	1	K042	19	821K042AHNN019		50x25x45	35
25	1104	4	1467	7	K080	11	821K080AHNN011		77x27x42	79
35	1546	5	2054	9	K080	13	821K080AHNN013		77x27x42	80
50	2209	6	2934	11	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	F016	27	821F016AN027-1HH06HLO7N		97x33x75	144
200	8837	11	11736	19	F016	31	821F016AN031-1HH07HLO8N		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 ₂ O
COLD side	Radiators	50°C	65°C	10 bar	H ₂ O



Power	Hot side		Cold		Model*	Plates number*	Code	Price	Packaging	
	kW	L/h	kPa	L/h					kPa	Dimensions
	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	F016	27	821F016AN027-1HH10LL03N		97x33x75	144
200	8815	11	11706	19	F016	31	821F016AN031-1HH07HLO8N		97x33x75	150

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

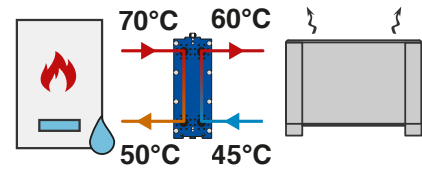
Alternative solution with brazed heat exchangers: see pag. 54

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 ₂ O
COLD side	Radiators / Fan Coil	45°C	60°C	10 bar	H ₂ O

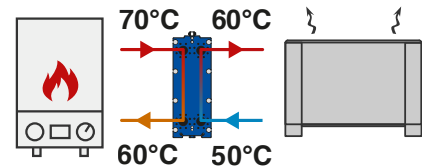


Power kW	Hot side		Cold		Model*	Plates number*	Code	Price	Packaging	
	L/h	kPa	L/h	kPa					Dimensions cm	Weight kg
15	660	1	876	1	K042	21	821K042AHNN021		50x25x45	36
25	1099	4	1460	7	K080	11	821K080AHNN011		77x27x42	79
35	1539	5	2044	10	K080	13	821K080AHNN013		77x27x42	80
50	2199	6	2920	11	K080	17	821K080AHNN017		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 ₂ O
COLD side	Radiators / Fan Coil	50°C	60°C	10 bar	H ₂ O



Power kW	Hot side		Cold		Model*	Plates number*	Code	Price	Packaging	
	L/h	kPa	L/h	kPa					Dimensions cm	Weight 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	F010	27	821F010AN027-1HH04HL09N		77x33x47	112
180	15868	20	15785	20	F010	31	821F010AN031-1HH03HL12N		77x33x71	118
200	17631	19	17539	19	F010	35	821F010AN035-1HH03HL14N		77x33x71	120

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

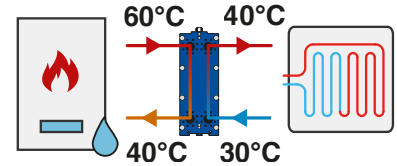
Alternative solution with brazed heat exchangers: see pag. 55

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 ₂ O
COLD side	Radiating floor / Fan Coil	30°C	40°C	10 bar	H ₂ O

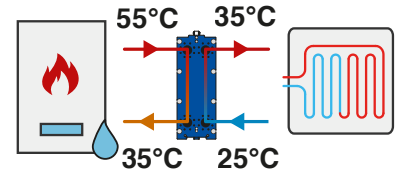


Power kW	Hot side		Cold		Model*	Plates number*	Code	Price	Packaging	
	L/h	kPa	L/h	kPa					Dimensions cm	Weight kg
15	656	3	1302	13	K042	9	821K042AHNN009		50x25x35	32
25	1093	4	2170	16	K042	13	821K042AHNN013		50x25x35	33
35	1531	5	3038	18	K042	17	821K042AHNN017		50x25x45	35
50	2187	5	4340	20	K042	23	821K042AHNN023		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	F010	19	821F010ANO19-1HH05LLO4N		77x33x47	107
130	5687	5	11285	18	F010	21	821F010ANO21-1HH05LLO5N		77x33x47	108
150	6563	6	13022	19	F010	25	821F010ANO25-1HH07LLO5N		77x33x47	111
180	7876	6	15626	19	F010	29	821F010ANO29-1HH07LLO7N		77x33x47	113
200	8751	6	17362	19	F010	33	821F010ANO33-1HH08LLO8N		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 ₂ O
COLD side	Radiating floor	25°C	35°C	10 bar	H ₂ O



Power kW	Hot side		Cold		Model*	Plates number*	Code	Price	Packaging	
	L/h	kPa	L/h	kPa					Dimensions cm	Weight 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	F010	19	821F010ANO19-1HH05LLO4N		77x33x47	107
130	5674	5	11257	20	F010	23	821F010ANO23-1HH03HLO8N		77x33x47	109
150	6547	6	12988	20	F010	25	821F010ANO25-1HH07LLO5N		77x33x47	111
180	7856	6	15586	19	F010	29	821F010ANO29-1HH07LLO7N		77x33x47	113
200	8729	6	17318	19	F010	33	821F010ANO33-1HH08LLO8N		77x33x71	119

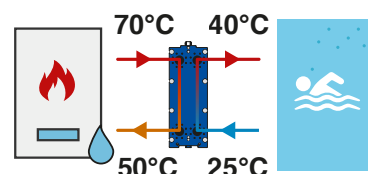
*Accessories see
pag. 37 (See Model
and plates number)

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 ₂ O
COLD side	Piscina Acqua Clorata	25°C	40°C	10 bar	H ₂ O+Cl



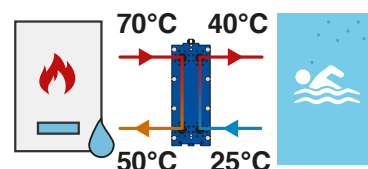
Power	Hot side		Cold		Model*	Plates number*	Code	Price	Packaging	
	kW	L/h	kPa	L/h					kPa	Dimensions
									cm	kg
20	880	4	1156	7	K042	11	821K042AHNN011		50x25x35	33
25	1099	6	1445	10	K042	11	821K042AHNN011		50x25x35	33
35	1539	8	2023	14	K042	13	821K042AHNN013		50x25x35	33
50	2199	8	2890	13	K042	19	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	F010	11	821F010AN011-1LL05XX00N		77x33x47	102
130	5716	9	7514	14	F010	13	821F010AN013-1HL03LL03N		77x33x47	103
150	6596	9	8670	14	F010	15	821F010AN015-1HL03LL04N		77x33x47	104
180	7915	8	10404	14	F010	17	821F010AN017-1LL08XX00N		77x33x47	106
200	8794	9	11560	15	F010	19	821F010AN025-1HH07LL05N		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 ₂ O
COLD side	Piscina Acqua Salata	25°C	40°C	10 bar	H ₂ O+NaCl



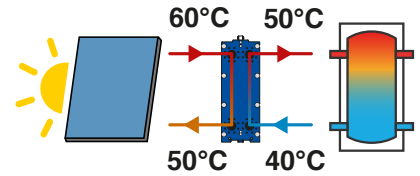
Power	Hot side		Cold		Model*	Plates number*	Code	Price	Packaging	
	kW	L/h	kPa	L/h					kPa	Dimensions
									cm	kg
20	879	6	1156	10	K042	9	821K042CHNP009		50x25x35	31
25	1099	6	1445	10	K042	11	821K042CHNP011		50x25x35	31
35	1539	8	2023	14	K080	7	821K080CVNP007		77x27x42	74
50	2198	6	2890	11	K080	11	821K080CVNP011		77x27x42	76
75	3297	7	4335	12	K080	15	821K080CVNP015		77x27x54	77
100	4396	6	5780	10	F010	11	821F010CN011-1LL05XX00N		77x33x47	100
115	5055	8	6647	13	F010	11	821F010CN011-1LL05XX00N		77x33x47	100
130	5714	9	7514	14	F010	13	821F010CN013-1HL03LL03N		77x33x47	100
150	6593	9	8670	14	F010	15	821F010CN015-1HL03LL04N		77x33x47	101
180	7912	8	10404	14	F010	17	821F010CN017-1LL08XX00N		77x33x47	102
200	8791	9	11560	15	F010	19	821F010CN019-1HL03LL06N		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 ₂ O



Power kW	Hot side		Cold		Model*	Plates number*	Code	Price	Packaging	
	L/h	kPa	L/h	kPa					Dimensions cm	Weight 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	F010	25	821F010AEO25-1HH05HL07N		77x33x47	111
*Accessories see pag. 37 (See Model and plates number)										

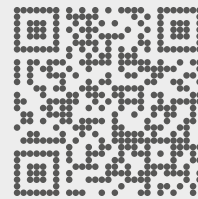
The solar thermal makes it roughly 0.8 kW/m².
Example 10 Fiorini collectors H2500 (pag. 280) is equal to 25m²= 20kW

Alternative solution with brazed heat exchangers: see pag. 57



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Fiorini Industries S.r.l.
Ph. +39 0543 723197 – Fax +39 0543 720413
Via Zampeschi 119 – 47122 Forlì (FC) – Italy
www.fiorini-industries.com