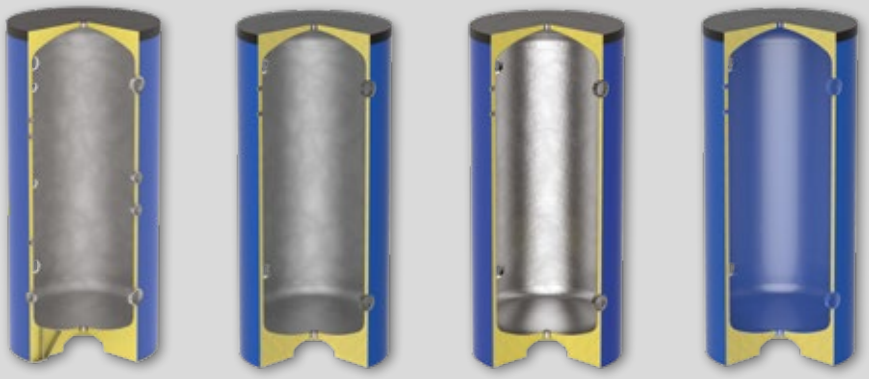
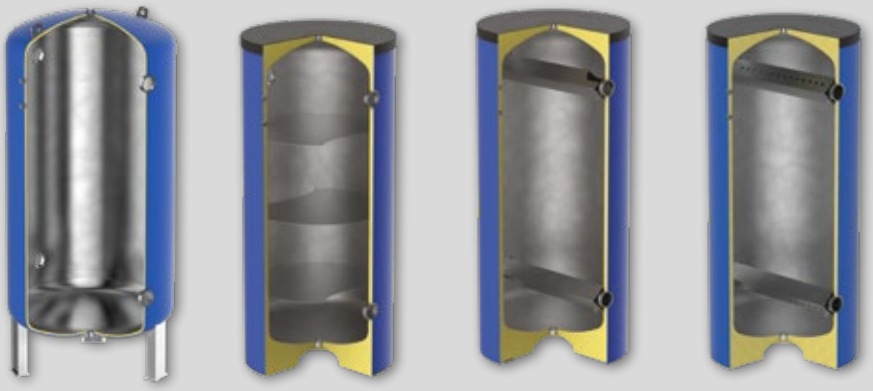
Inertial Tanks

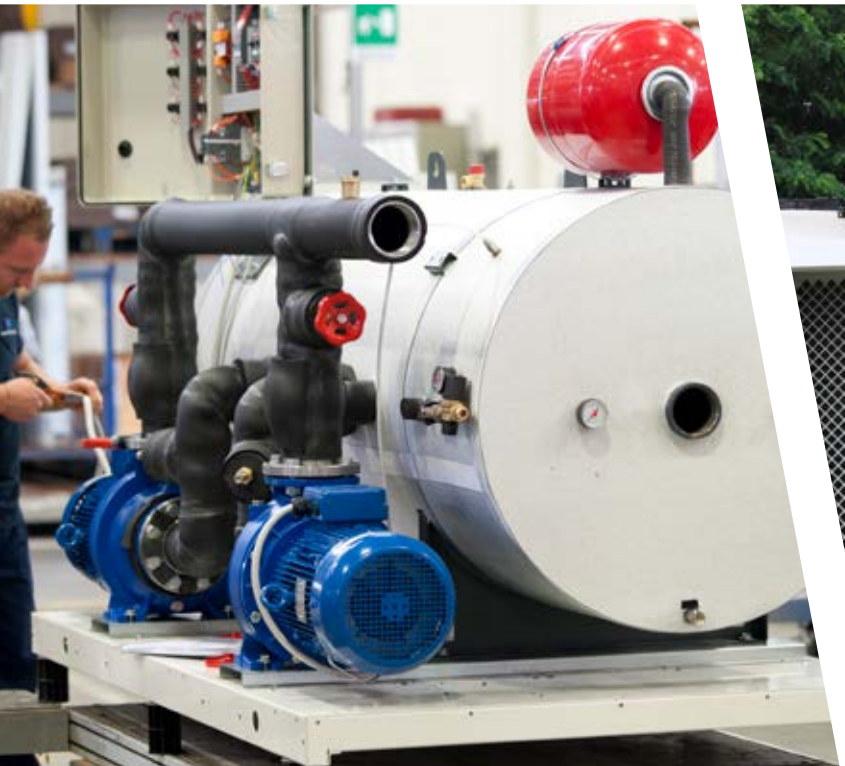






inerti


fiorini
fiorini
fiorini



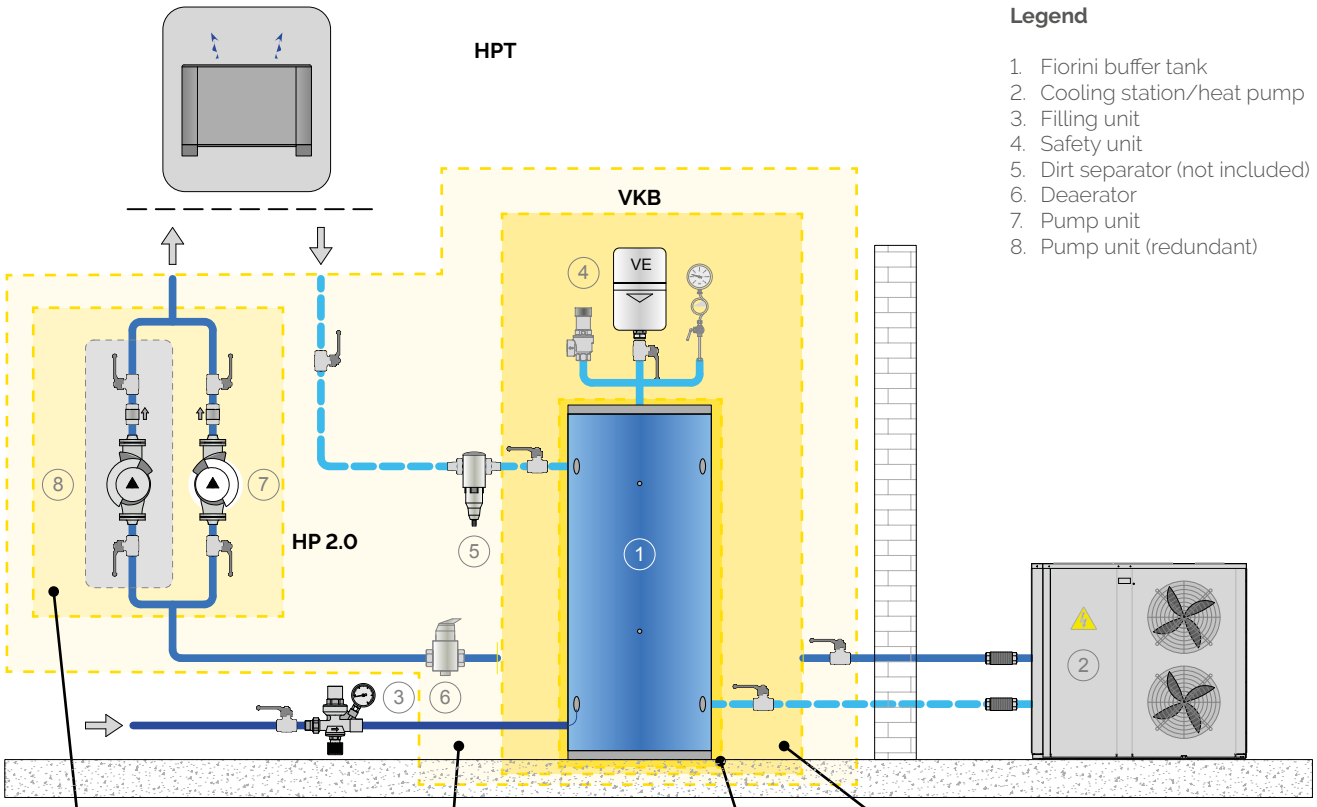

fiorini

Refrigeration and Heat Pumps Integrated Solutions

Efficiency and High-Performance: our goal

Our line of refrigeration systems contains buffer tanks and hydronic kits, which are designed to improve the functioning and performance of even the most evolutionary air-conditioning systems. We have a broad range of buffer tanks, both horizontal and vertical, and hydraulic stations which can be combined with many pumps and storage tanks. All our products are manufactured, on request, with special and customized details.

Below represented our solutions and a common installation plant. Fiorini can provide either the buffer tank or a complex hydronic kit, which contains a tank, pumps, electric board and accessories.



Legend

1. Fiorini buffer tank
2. Cooling station/heat pump
3. Filling unit
4. Safety unit
5. Dirt separator (not included)
6. Deaerator
7. Pump unit
8. Pump unit (redundant)


HP 2.0


HPT


Cold water storage tanks


VKB

Inertial tanks for hot/cold



MINI18 - MINI45 - MINI85
Carbon steel
External anti-rust painting
Anti-condensate insulation
Can contain hot and chilled water as well in heating or cooling devices equipped with a heat pump.



VKX-HC MINI
Stainless steel
Painted galvanized sheet metal
Anti-condensation insulation
Designed to contain both hot and chilled water in heat pump powered heating and cooling systems.



VKG-HC (coloured PVC) - VKGE-HC
(embossed aluminium sheet)
Carbon steel
External anti-rust painting
Anti-condensate insulation
Can contain hot and chilled water as well in heating or cooling devices equipped with a heat pump. To be used in Layout 1 or Layout 2 (single and double loop) installations. Embossed aluminium sheet for outdoor installations.

Inertial tanks for hot water



PFA - PFB - PFC
Carbon steel
Anti-rust paint
Suitable for heating systems intended for the storage of hot technical water for systems powered by a discontinuous energy source.



COMBI PLUS
Carbon steel
Stainless steel DHW exchnager
Internal enamelling
Suitable for systems that use discontinuous energy sources such as, for example, solar, biomass and wood systems

Inertial tanks for cold water



VKG (coloured PVC) - VKGE (embossed aluminium sheet)
Carbon steel
External anti-rust painting
Anti-condensate insulation
For devices which do not need internal protection against corrosion. Single or double loop installations. To be used in Layout 1 or Layout 2 (single and double loop) installations. Embossed aluminium sheet for outdoor installations.



VK (coloured PVC) - VKE (embossed aluminium sheet)
Carbon steel
Hot-dip galvanizing
Anti-condensate insulation
For devices which need protection against corrosion. To be used in Layout 1 or Layout 2 (single and double loop) installations. Embossed aluminium sheet for external installations.



VKT
Carbon steel
Internal enamelling
Anti-condensate insulation
For devices which need anti-corrosive protection and which are also compatible with most antifreeze liquids. To be used in Layout 1 or Layout 2 (single and double loop) installations.



VKX
Stainless steel
Anti-condensate insulation
For devices which need stainless steel in case of contact with the fluid. To be used in Layout 1 or Layout 2 (single and double loop) installations.



VKS
Carbon steel
External anti-rust painting
Anti-condensate insulation
With internal baffles which prevent preferential flow. To be used with Layout 2 (double loop) installations, also with a high flow and multi-circuited.



VKR
Carbon steel
External anti-rust painting
Anti-condensate insulation
Suitable for installation in Layout 2 (double loop). Conveyor pipes favor the flow of chilled water from primary to secondary circuit, recommended for medium / high flow rates.



VKD
Carbon steel
External anti-rust painting
Anti-condensate insulation
Suitable for installation in Layout 2 (double loop). The diffuser tubes evens the temperature inside the tank.

Cold Water Storage Tanks
MINI-HC Serie (Hot & Cold wall-mounted)

The MINI-HC series includes heat sink tanks for "Hot & Cold" plants suitable for use with heat pumps, perform hydraulic circuit breaker functions (making the flows of the two circuits independent) and the thermal flywheel (to minimize the heat pump starts). The MINI-HC. 45/85 l versions, has two additional connections dedicated to a supplementary source. It is possible to order in multipacks, receiving the tanks on a pallet. The 18 l version can be installed horizontally.

Material: carbon steel
External covering: 45/85 l painted galvanized metal sheet
18 l polyethylene
Insulation
Operational limits

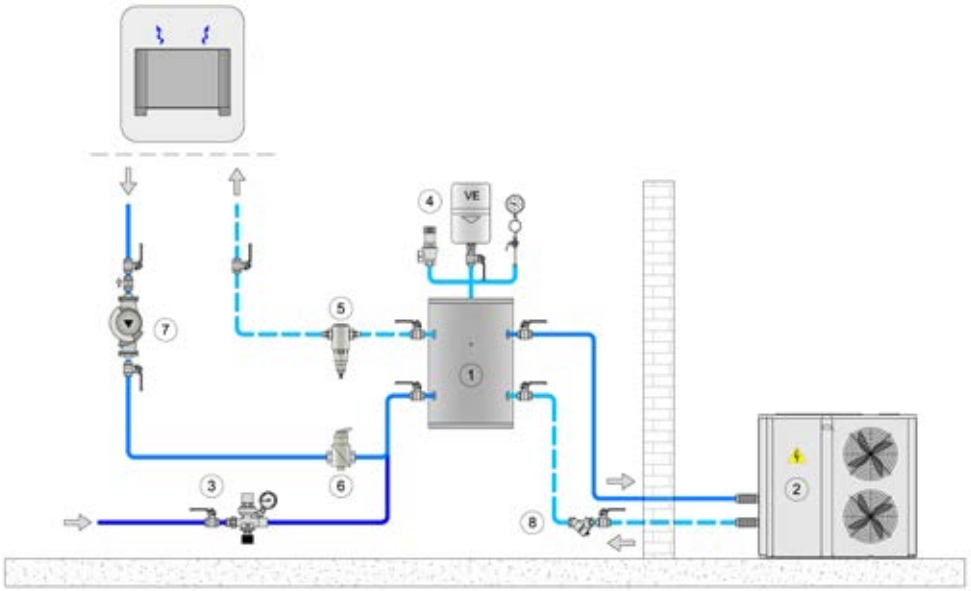
Capacity (l)	Type
18	Closed cell polyethylene foam
45, 85	High density rigid polyurethane foam

Min. temperature	Max. temperature	Max. pressure
-10 °C	90 °C	6 bar

	MINI wall-mounted			Single packaging		Multipacks* packaging		
Cap. l	Code	Price each	Energy label	Dim. cm	Weight kg	Pieces	Dim. cm	Weight kg
18	817010283X		C	55x29x31	10	24	120x100x134	250
45	817010323X		C	41x41x80	19	12	120x80x180	225
85	817010324X		C	49x49x87	25	8	105x105x184	210

***to purchase with multiple packaging, it is necessary to order quantities equal to or multiple of the standard packaging**

Standard Accessories: see pag. 102









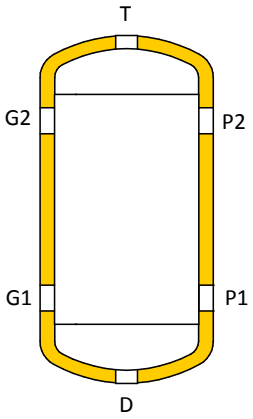
TESTED

Legend

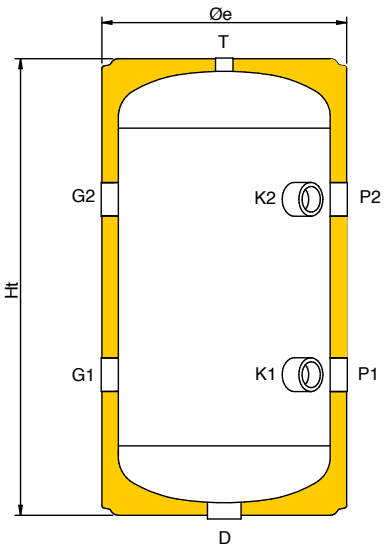
1. Fiorini buffer tank
2. Cooling station/heat pump
3. Filling unit
4. Safety unit
5. Dirt separator (not included)
6. Deaerator
7. Pump unit
8. "Y" filter to protect the PDC

Cold Water Storage Tanks: Dimensions MINI-HC series

cap. = 18



cap. = 45, 85



Couplings legend

D	Drain
G1	From plant
G2	To plant
K1	Auxiliary
K2	Auxiliary
P1	To energy source
P2	From energy source
T	Vent

Couplings chart

Capacity l	D inch	G1 inch	G2 inch	K1 inch	K2 inch	P1 inch	P2 inch	T inch
18	3/4"	1"	1"	-	-	1"	1"	3/4"
45	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4	1/2"
85	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4	1/2"

Size chart

Capacity l	Øe mm	Ht mm	R* mm	G1 mm	G2 mm	K1 mm	K2 mm	P1 mm	P2 mm
18	260	530	590	130	400	-	-	130	400
45	370	700	770	220	485	220	485	220	485
85	460	780	905	185	535	185	535	185	535

R*: Reversal quota

Cold Water Storage Tanks
VKX-HC MINI Serie
(Hot & Cold wall-mounted)

The VKX-HC MINI series consists of hanging tanks made of stainless steel for "hot-cold" systems. They are also suitable for use with heat pumps, they perform the functions of hydraulic separator (making the flow rates of the two circuits independent), and that of thermal flywheel (aimed at minimizing the start-ups of the heat pump). The VKX-HC MINI is available in the 45 and 75l versions and have two additional connections for a supplementary source. Plus: stainless steel, which preserves the cleanliness of the system and guarantees minimum heat loss. It is possible to order in multiple packages, receiving the tanks on a pallet.



TESTED

Material: AISI 304 stainless steel
External coating: painted galvanized metal sheet
Insulation

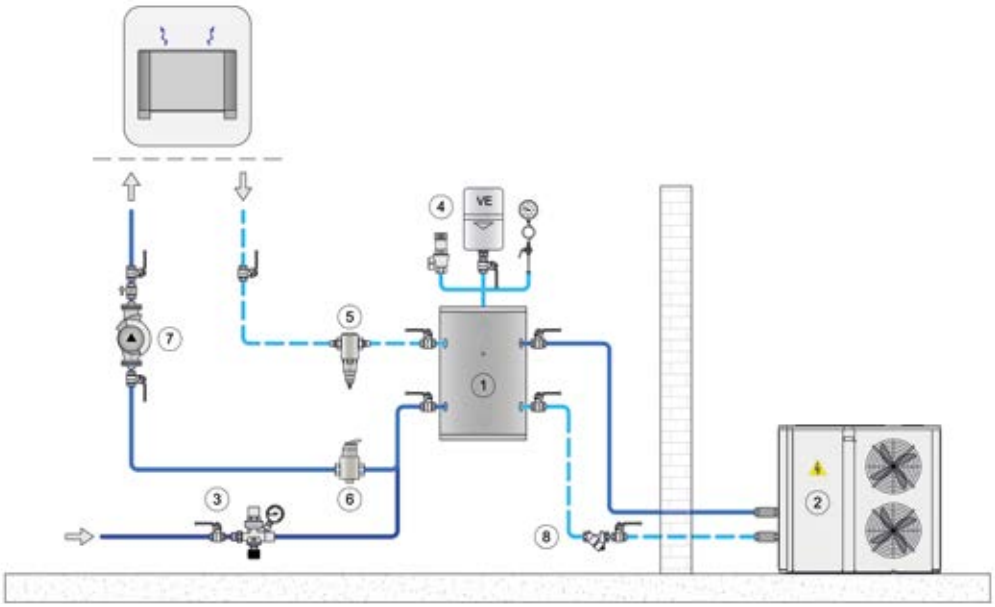
Capacity (l)	Type
45, 75	High density rigid polyurethane foam

Operational limits

Min. temperature	Max. temperature	Max. pressure
-10 °C	90 °C	8 bar

	VKX-HC MINI wall-mounted			Single packaging	Multipacks* packaging	
Cap. l	Code	Price each	Energy label	Dim. cm	Pieces	Dim. cm
45	817040219X		A	60x60x138	15	130x90x220
75	817040220X		A	60x90x155	10	110x105x220

***to purchase with multiple packaging, it is necessary to order quantities equal to or multiple of the standard packaging**

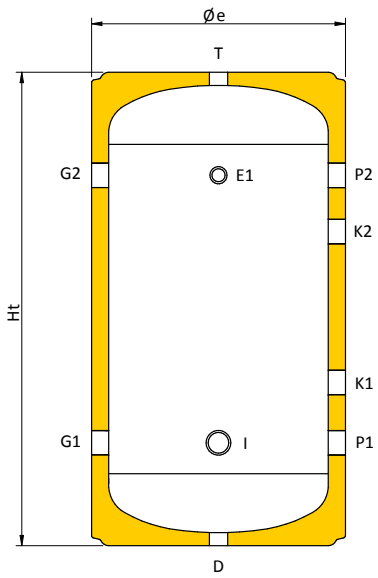


Legend

1. Fiorini VKX-HC MINI
2. Cooling station/heat pump
3. Filling unit
4. Safety unit
5. Dirt separator (not included)
6. Deaerator
7. Pump unit
8. "Y" filter to protect the PDC

Cold Water Storage Tanks: Dimensions
VKX-HC MINI Serie - (Hot & Cold wall-mounted)

cap. = 45, 75 l



Couplings legend

D	Drain
E1	Probe/Thermometer
G1	From plant
G2	To plant
I	Heating element
K1	Auxiliary
K2	Auxiliary
P1	To energy source
P2	From energy source
T	Vent

Couplings chart

Capacity l	D inch	E1 inch	G1 inch	G2 inch	I inch	K1 inch	K2 inch	P1 inch	P2 inch	T inch
45	1"1/4	1/2"	1"1/4	1"1/4	1"1/2	1"1/4	1"1/4	1"1/4	1"1/4	1/2"
75	1"1/4	1/2"	1"1/4	1"1/4	1"1/2	1"1/4	1"1/4	1"1/4	1"1/4	1/2"

Size chart

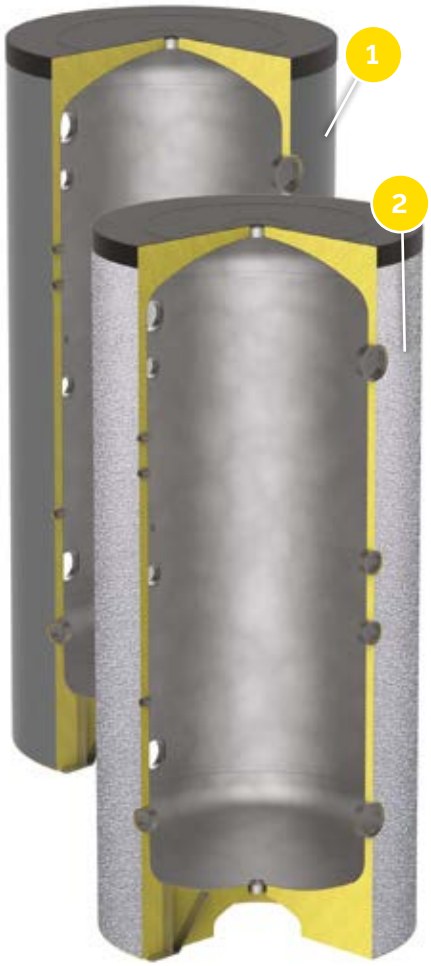
Capacity l	Øe mm	Ht mm	R* mm	E1 mm	G1 mm	G2 mm	I mm	K1 mm	K2 mm	P1 mm	P2 mm
45	380	700	910	550	150	550	150	250	450	150	550
75	470	780	800	595	185	595	185	295	485	185	595

R*: Reversal quota

Cold Water Storage Tanks
VKG-HC, VKGE-HC series (Hot & Cold)

The VKG-HC series contains insulated tanks for "HOT & COLD" applications, which are usually used to increase thermal inertia of the device. Suitable for heat pumps to avoid compressor/generator restarts. VKG-HC have two additional couplings dedicated for an optional additional source.

Material: carbon steel



TESTED

External covering

Model	Type	Usage	
VKG-HC	coloured PVC	indoor	1
VKGE-HC	embossed aluminium sheet	outdoor	2

Insulation

Capacity (l)	Type
from 100 to 1000	High density rigid polyurethane foam
from 1.500	Closed cell polyethylene foam + Polyester Fiber

Operational limits

Min temperature	Max temperature	Max pressure
-10 °C	90 °C	6 bar

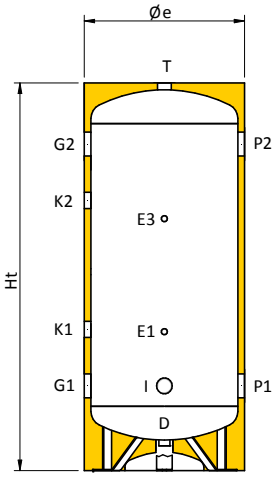
Standard Accessories: see pag. 102

Special versions: see pag. 105

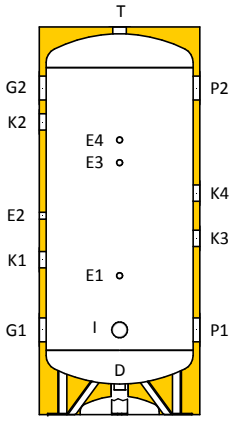
	VKG-HC vertical, coloured PVC		VKGE-HC vertical, embossed al. sheet			Vertical Packaging	
Capacity l	Code	Price	Code	Price	Energy label	Dimensions cm	Weight kg
100	817010285X		817010293H8X		B	49x49x107	35
200	817010286X		817010294H8X		C	54x54x146	40
300	817010287X		817010295H8X		B	64x64x180	60
500	817010288X		817010296H8X		C	74x74x184	95
750	817010289X		817010297H8X		C	95x95x178	120
1000	817010290X		817010298H8X		C	105x105x209	140
1500	817010291X				C	130X130X238	222
2000	817010292X				C	140X140X270	314
2500	817010336X					150X150X249	331
3000	817010337X					150X150X299	389
4000	817010338X					170X170X306	557
5000	817010339X					190X190X310	645

Cold Water Storage Tanks: Dimensions VKG-HC, VKGE-HC series

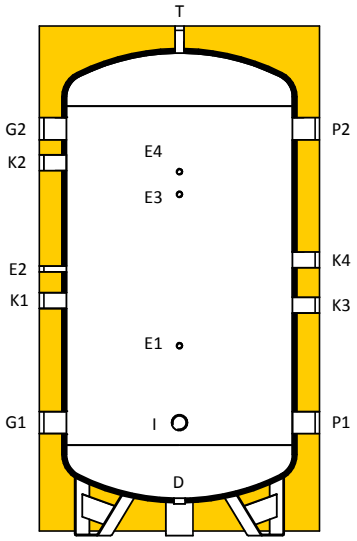
100 ≤ cap. ≤ 200



300 ≤ cap. ≤ 1000



1.500 ≤ cap. ≤ 5.000



Couplings legend

D	Drain
E1	Probe / Thermometer
E2	Probe / Thermometer
E3	Probe / Thermometer
E4	Probe / Thermometer
G1	From plant
G2	To plant
I	Electrical resistor
K1	Auxiliary
K2	Auxiliary
K3	Auxiliary
K4	Auxiliary
P1	To energy source
P2	From energy source
T	Vent

Couplings chart

Cap. l	D inch	E1 inch	E2 inch	E3 inch	E4 inch	G1 inch	G2 inch	I inch	K1 inch	K2 inch	K3 inch	K4 inch	P1 inch	P2 inch	T inch
100	1"1/4	1/2"	-	1/2"	-	1"1/2	1"1/2	2"	1"1/2	1"1/2	-	-	1"1/2	1"1/2	1"1/4
200	1"1/4	1/2"	-	1/2"	-	1"1/2	1"1/2	2"	1"1/2	1"1/2	-	-	1"1/2	1"1/2	1"1/4
300	1"1/4	1/2"	1/2"	1/2"	1/2"	2"	2"	2"	1"1/2	1"1/2	1"1/2	1"1/2	2"	2"	1"1/4
500	1"1/4	1/2"	1/2"	1/2"	1/2"	3"	3"	2"	2"	2"	2"	2"	3"	3"	1"1/4
750	1"1/2	1/2"	1/2"	1/2"	1/2"	3"	3"	2"	2"	2"	2"	2"	3"	3"	1"1/2
1000	1"1/2	1/2"	1/2"	1/2"	1/2"	3"	3"	2"	2"	2"	2"	2"	3"	3"	1"1/2
1500	2"	1/2"	1/2"	1/2"	1/2"	3"	3"	2"	2"	2"	2"	2"	3"	3"	2"
2000	2"	1/2"	1/2"	1/2"	1/2"	3"	3"	2"	2"	2"	2"	2"	3"	3"	2"
2500	2"	1/2"	1/2"	1/2"	1/2"	4"	4"	2"	2"	2"	2"	2"	4"	4"	2"
3000	2"	1/2"	1/2"	1/2"	1/2"	4"	4"	2"	2"	2"	2"	2"	4"	4"	2"
4000	2"	1/2"	1/2"	1/2"	1/2"	4"	4"	2"	2"	2"	2"	2"	4"	4"	2"
5000	2"	1/2"	1/2"	1/2"	1/2"	4"	4"	2"	2"	2"	2"	2"	4"	4"	2"

Size chart

Cap. l	Øe mm	Ht mm	R* mm	D mm	E1 mm	E2 mm	E3 mm	E4 mm	G1 mm	G2 mm	I mm	K1 mm	K2 mm	K3 mm	K4 mm	P1 mm	P2 mm
100	460	950	1060	125	395	-	655	-	285	765	285	445	605	-	-	285	765
200	510	1335	1430	125	520	-	920	-	320	1120	320	580	850	-	-	320	1120
300	610	1680	1790	130	555	895	1055	1155	355	1405	355	645	1255	780	980	355	1405
500	760	1735	1895	140	620	885	1120	1220	380	1450	380	690	1300	785	985	380	1450
750	910	1765	1990	125	685	885	1145	1245	395	1445	395	685	1295	820	1020	395	1445
1000	1010	2075	2310	125	755	1095	1405	1505	415	1715	415	955	1565	955	1155	415	1715
1500	1220	2245	2560	165	840	1180	1510	1610	500	1800	500	1040	1650	1020	1220	500	1800
2000	1320	2565	2885	155	885	1450	1815	1915	505	2105	505	1345	1955	1180	1380	505	2105
2500	1470	2360	2785	180	1015	1255	1515	1665	565	1865	565	1005	1615	1115	1315	565	1865
3000	1470	2860	3220	180	1315	1755	1815	1965	565	2365	565	1505	2115	1365	1565	565	2365
4000	1620	2930	3350	160	1340	1780	1840	1990	590	2390	590	1530	2140	1390	1590	590	2390
5000	1820	2970	3485	140	1350	1790	1850	2000	600	2400	600	1540	2150	1400	1600	600	2400

R*: Reversal quota

Cold Water Storage Tanks
VKG, VKGE series (carbon steel)

The VKG series includes insulated tanks for chilled water, normally used to increase the thermal inertia of the conditioning system.



Material: carbon steel

External covering

Model	Type	Usage
VKG	coloured PVC	indoor
VKGE	embossed aluminium sheet	outdoor

1
2

Insulation

Capacity (l)	Type	Thick. (mm)
from 100 to 1000	High density rigid polyurethane foam	30
from 1500 + horizontal versions	Closed cell polyethylene foam	20

Operational limits

Min temperature	Max temperature	Max pressure
-10 °C	60 °C	6 bar

Standard Accessories: see pag. 102

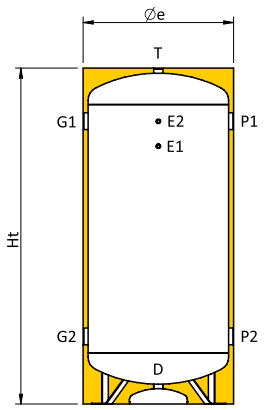
Special versions: see pag. 105

	VKG vertical, PVC coloured		VKGE vertical, embossed al. sheet		Vertical Packaging		VKG horizontal, PVC coloured	
Capacity l	Code	Price	Code	Price	Dimensions cm	Weight kg	Code	Price
100	816010130		816011275H8X		49x49x107	24	816010142	
200	816010131		816011276H8X		54x54x146	36	816010143	
300	816010132		816011277H8X		64x64x155	46	816010144	
500	816010133		816011278H8X		74x74x184	78	816010145	
800	816010134		816011279H8X		88x88x186	105	816010146	
1000	816010135		816011280H8X		94x94x215	129	816010147	
1500	816010136				107x107x228	182	816010148	
2000	816010137				117x117x260	250	816010149	
2500	816010138				132x132x240	267	816010150	
3000	816010139				132x132x290	314	816010151	
4000	816010140				147x147x297	470	816010152	
5000	816010141				167x167x301	557	816010153	
6000	816011186X				282x204x204	647		
8000	816011187X				352x204x204*	782		
10000	816011188X				427x204x204*	927		

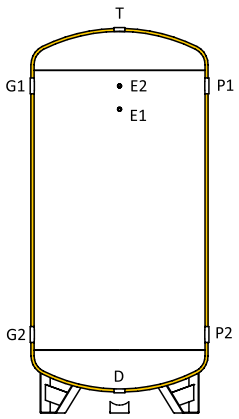
*Shipping by container requires open top containers

Cold Water Storage Tanks: Dimensions VKG VKGE

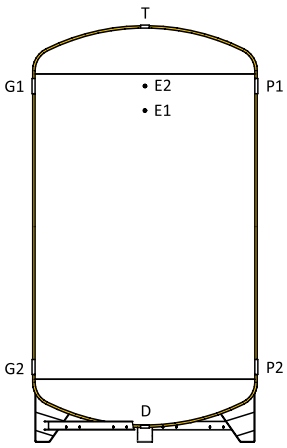
100 ≤ cap. ≤ 1000



1500 ≤ cap. ≤ 5.000



6000 ≤ cap. ≤ 10.000

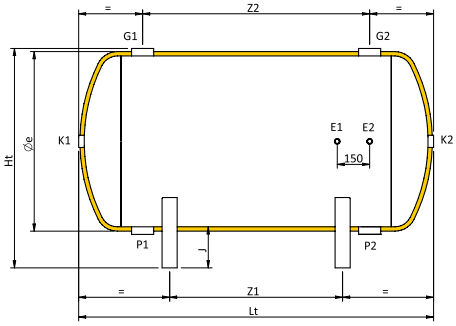


Couplings legend

D	Drain
E1	Probe / Thermometer
E2	Probe / Thermometer
G1	From plant
G2	To plant
P1	To energy source
P2	From energy source
T	Vent

Size and couplings chart for vertical version

Cap. l	Øe mm	Ht mm	R* mm	D mm	E1 mm	E2 mm	G1 mm	G2 mm	P1 mm	P2 mm	D inch	E1 inch	E2 inch	G1 inch	G2 inch	P1 inch	P2 inch	T inch
100	460	950	1060	125	610	760	760	290	760	290	1"1/4	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/4
200	510	1335	1430	120	990	1140	1140	290	1140	290	1"1/4	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/4
300	610	1425	1550	130	1015	1165	1165	365	1165	365	1"1/4	1/2"	1/2"	2"	2"	2"	2"	1"1/4
500	710	1710	1855	135	1285	1435	1435	385	1435	385	1"1/4	1/2"	1/2"	3"	3"	3"	3"	1"1/4
800	850	1740	1940	125	1295	1445	1445	395	1445	395	1"1/2	1/2"	1/2"	3"	3"	3"	3"	1"1/2
1000	910	2025	2220	120	1560	1710	1710	410	1710	410	1"1/2	1/2"	1/2"	3"	3"	3"	3"	1"1/2
1500	1040	2160	2400	165	1650	1800	1800	500	1800	500	2"	1/2"	1/2"	3"	3"	3"	3"	2"
2000	1140	2480	2730	155	1955	2105	2105	505	2105	505	2"	1/2"	1/2"	3"	3"	3"	3"	2"
2500	1290	2275	2620	180	1715	1865	1865	565	1865	565	2"	1/2"	1/2"	4"	4"	4"	4"	2"
3000	1290	2775	3060	180	2215	2365	2365	565	2365	565	2"	1/2"	1/2"	4"	4"	4"	4"	2"
4000	1440	2845	3190	160	2240	2390	2390	590	2390	590	2"	1/2"	1/2"	4"	4"	4"	4"	2"
5000	1640	2885	3320	140	2250	2400	2400	600	2400	600	2"	1/2"	1/2"	4"	4"	4"	4"	2"
6000	1840	2715	3280	140	2015	2215	2215	615	2215	615	2"	1/2"	1/2"	4"	4"	4"	4"	2"
8000	1840	3415	3880	140	2715	2915	2915	615	2915	615	2"	1/2"	1/2"	4"	4"	4"	4"	2"
10000	1840	4165	4555	140	3465	3665	3665	615	3665	615	2"	1/2"	1/2"	4"	4"	4"	4"	2"



Couplings legend

E1	Probe / Thermometer
E2	Probe / Thermometer
G1	From plant
G2	To plant
K1	Auxiliary
K2	Auxiliary
P1	To energy source
P2	From energy source

Size and couplings chart for horizontal version

Cap. l	Øe mm	Lt mm	Ht mm	J mm	Z1 mm	Z2 mm	E1 inch	E2 inch	G1 inch	G2 inch	K1 inch	K2 inch	P1 inch	P2 inch
100	440	850	545	120	310	470	1/2"	1/2"	1"1/2	1"1/2	1"1/4	1"1/4	1"1/2	1"1/2
200	490	1240	595	120	700	850	1/2"	1/2"	1"1/2	1"1/2	1"1/4	1"1/4	1"1/2	1"1/2
300	590	1320	715	140	600	800	1/2"	1/2"	2"	2"	1"1/4	1"1/4	2"	2"
500	690	1600	865	190	900	1050	1/2"	1/2"	3"	3"	1"1/4	1"1/4	3"	3"
800	830	1640	1005	190	900	1050	1/2"	1/2"	3"	3"	1"1/2	1"1/2	3"	3"
1000	890	1930	1065	190	1130	1300	1/2"	1/2"	3"	3"	1"1/2	1"1/2	3"	3"
1500	1040	2020	1215	190	950	1300	1/2"	1/2"	3"	3"	2"	2"	3"	3"
2000	1140	2350	1325	200	1320	1600	1/2"	1/2"	3"	3"	2"	2"	3"	3"
2500	1290	2120	1500	225	1020	1300	1/2"	1/2"	4"	4"	2"	2"	4"	4"
3000	1290	2620	1500	225	1390	1800	1/2"	1/2"	4"	4"	2"	2"	4"	4"
4000	1440	2710	1650	225	1380	1800	1/2"	1/2"	4"	4"	2"	2"	4"	4"
5000	1640	2770	1850	225	1380	1800	1/2"	1/2"	4"	4"	2"	2"	4"	4"

R*: Reversal quota

Cold Water Storage Tanks
VK, VKE series (galvanized)

The VK, VKE series has galvanized and insulated tanks for chilled water, which are usually used to increase the thermal inertia of the conditioning device. The galvanization offers protection against corrosion..



Material: carbon steel
Treatment: internal and external hot-dip galvanization

External covering

Model	Type	Usage	
VK	coloured PVC	indoor	1
VKE	embossed aluminium sheet	outdoor	2

Insulation

Capacity (l)	Type	Thick. (mm)
from 100 to 1000	High density rigid polyurethane foam	30
from 1500 + horizontal versions	Closed cell polyethylene foam	20

Operational limits

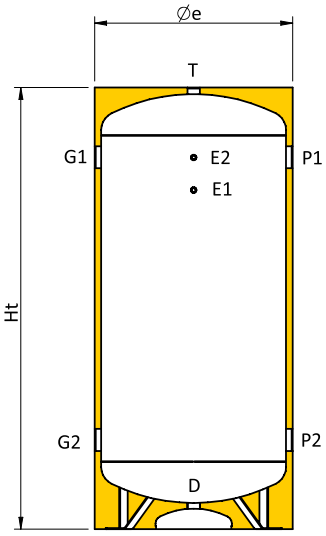
Min temperature	Max temperature	Max pressure
-10 °C	60 °C	6 bar

Standard Accessories: see pag. 102
Special versions: see pag. 105

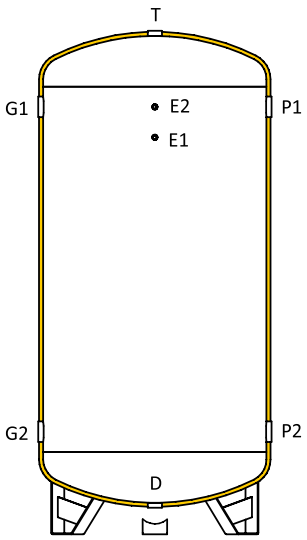
	VK vertical, PVC coloured		VKE vertical, embossed al. sheet		Vertical Packaging		VK horizontal, PVC coloured	
Capacity l	Code	Price	Code	Price	Dimensions cm	Weight kg	Code	Price
100	816020064		816020040H8X		49x49x107	25	816020076	
200	816020065		816020041H8X		54x54x146	37	816020077	
300	816020066		816020042H8X		64x64x155	48	816020078	
500	816020067		816020043H8X		74x74x184	81	816020079	
800	816020068		816020044H8X		88x88x186	110	816020080	
1000	816020069		816020045H8X		94x94x215	135	816020081	
1500	816020070				107x107x228	192	816020082	
2000	816020071				117x117x260	264	816020083	
2500	816020072				132x132x240	281	816020084	
3000	816020073				132x132x290	331	816020085	
4000	816020074				147x147x297	496	816020086	
5000	816020075				167x167x301	587	816020087	

Cold Water Storage Tanks: Dimensions VK VKE

100 ≤ cap. ≤ 1.000



1.500 ≤ cap. ≤ 5.000

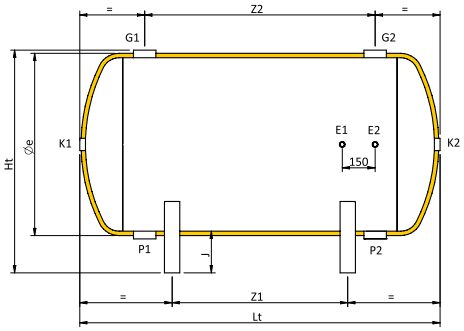


Couplings legend

D	Drain
E1	Probe / Thermometer
E2	Probe / Thermometer
G1	From plant
G2	To plant
P1	To energy source
P2	From energy source
T	Vent

Size and couplings chart for vertical version

Cap. l	Øe mm	Ht mm	R* mm	D mm	E1 mm	E2 mm	G1 mm	G2 mm	P1 mm	P2 mm	D inch	E1 inch	E2 inch	G1 inch	G2 inch	P1 inch	P2 inch	T inch
100	460	950	1060	125	610	760	760	290	760	290	1"1/4	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/4
200	510	1335	1430	120	990	1140	1140	290	1140	290	1"1/4	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/4
300	610	1425	1555	130	1015	1165	1165	365	1165	365	1"1/4	1/2"	1/2"	2"	2"	2"	2"	1"1/4
500	710	1710	1855	135	1285	1435	1435	385	1435	385	1"1/4	1/2"	1/2"	3"	3"	3"	3"	1"1/4
800	850	1740	1940	125	1295	1445	1445	395	1445	395	1"1/2	1/2"	1/2"	3"	3"	3"	3"	1"1/2
1000	910	2025	2225	120	1560	1710	1710	410	1710	410	1"1/2	1/2"	1/2"	3"	3"	3"	3"	1"1/2
1500	1040	2160	2400	165	1650	1800	1800	500	1800	500	2"	1/2"	1/2"	3"	3"	3"	3"	2"
2000	1140	2480	2730	155	1955	2105	2105	505	2105	505	2"	1/2"	1/2"	3"	3"	3"	3"	2"
2500	1290	2275	2620	180	1715	1865	1865	565	1865	565	2"	1/2"	1/2"	4"	4"	4"	4"	2"
3000	1290	2775	3060	180	2215	2365	2365	565	2365	565	2"	1/2"	1/2"	4"	4"	4"	4"	2"
4000	1440	2845	3190	160	2240	2390	2390	590	2390	590	2"	1/2"	1/2"	4"	4"	4"	4"	2"
5000	1640	2885	3320	140	2250	2400	2400	600	2400	600	2"	1/2"	1/2"	4"	4"	4"	4"	2"



Couplings legend

E1	Probe / Thermometer
E2	Probe / Thermometer
G1	From plant
G2	To plant
K1	Auxiliary
K2	Auxiliary
P1	To energy source
P2	From energy source

Size and couplings chart for horizontal version

Cap. l	Øe mm	Lt mm	Ht mm	J mm	Z1 mm	Z2 mm	E1 inch	E2 inch	G1 inch	G2 inch	K1 inch	K2 inch	P1 inch	P2 inch
100	440	850	545	120	310	470	1/2"	1/2"	1"1/2	1"1/2	1"1/4	1"1/4	1"1/2	1"1/2
200	490	1240	595	120	700	850	1/2"	1/2"	1"1/2	1"1/2	1"1/4	1"1/4	1"1/2	1"1/2
300	590	1320	715	140	600	800	1/2"	1/2"	2"	2"	1"1/4	1"1/4	2"	2"
500	690	1600	865	190	900	1050	1/2"	1/2"	3"	3"	1"1/4	1"1/4	3"	3"
800	830	1640	1005	190	900	1050	1/2"	1/2"	3"	3"	1"1/2	1"1/2	3"	3"
1000	890	1930	1065	190	1130	1300	1/2"	1/2"	3"	3"	1"1/2	1"1/2	3"	3"
1500	1040	2020	1215	190	950	1300	1/2"	1/2"	3"	3"	2"	2"	3"	3"
2000	1140	2350	1325	200	13320	1600	1/2"	1/2"	3"	3"	2"	2"	3"	3"
2500	1290	2120	1500	225	1020	1300	1/2"	1/2"	4"	4"	2"	2"	4"	4"
3000	1290	2620	1500	225	1390	1800	1/2"	1/2"	4"	4"	2"	2"	4"	4"
4000	1440	2710	1650	225	1380	1800	1/2"	1/2"	4"	4"	2"	2"	4"	4"
5000	1640	2770	1850	225	1380	1800	1/2"	1/2"	4"	4"	2"	2"	4"	4"

R*: Reversal quota

Cold Water Storage Tanks VKT series (enamelled)

The tanks in the VKT series, which are internally enamelled and insulated for use with chilled water, are usually used to increase thermal inertia in Layout 2 plants. The internal enamelling ensures protection against corrosion.



Material: carbon steel
Treatment: Bluetech internal enamelling with thermosetting resins

WRAS APPROVED MATERIAL

External covering

Model	Type	Usage
VKT	coloured PVC	indoor

Operational limits

Capacity (l)	Type	Thick. (mm)
from 100 to 1000	High density rigid polyurethane foam	30
from 1500	Closed cell polyethylene foam	20

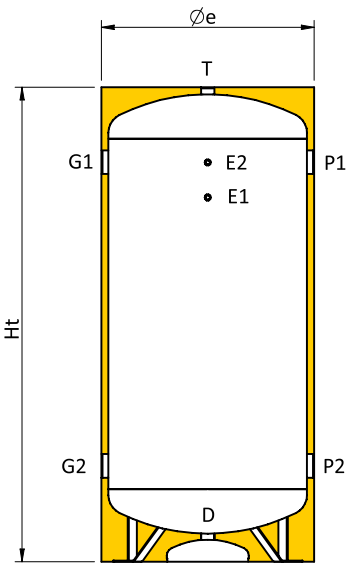
Min temperature	Max temperature	Max pressure
-10 °C	60 °C	6 bar

Standard Accessories: see pag. 102
Special versions: see pag. 105

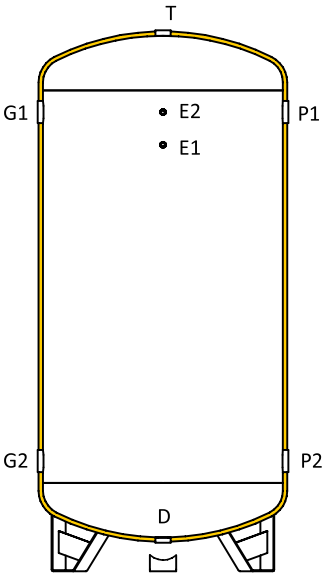
	VKT		Vertical Packaging	
Capacity l	Code	Price	Dimensions cm	Weight kg
100	816080001X		49x49x107	24
200	816080002X		54x54x146	36
300	816080003X		64x64x155	46
500	816080004X		74x74x184	78
800	816080005X		88x88x186	105
1000	816080006X		94x94x215	129
1500	816080007X		107x107x228	182
2000	816080008X		117x117x260	250
2500	816080009X		132x132x240	267
3000	816080010X		132x132x290	314
4000	816080011X		147x147x297	470
5000	816080012X		167x167x301	557

Cold Water Storage Tanks: Dimensions VKT series

100 ≤ cap. ≤ 1.000



1.500 ≤ cap. ≤ 5.000



Couplings legend

D	Drain
E1	Probe / Thermometer
E2	Probe / Thermometer
G1	From plant
G2	To plant
P1	To energy source
P2	From energy source
T	Vent

Couplings chart

Capacity l	D inch	E1 inch	E2 inch	G1 inch	G2 inch	P1 inch	P2 inch	T inch
100	1"1/4	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/4
200	1"1/4	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/4
300	1"1/4	1/2"	1/2"	2"	2"	2"	2"	1"1/4
500	1"1/4	1/2"	1/2"	3"	3"	3"	3"	1"1/4
800	1"1/2	1/2"	1/2"	3"	3"	3"	3"	1"1/2
1000	1"1/2	1/2"	1/2"	3"	3"	3"	3"	1"1/2
1500	2"	1/2"	1/2"	3"	3"	3"	3"	2"
2000	2"	1/2"	1/2"	3"	3"	3"	3"	2"
2500	2"	1/2"	1/2"	4"	4"	4"	4"	2"
3000	2"	1/2"	1/2"	4"	4"	4"	4"	2"
4000	2"	1/2"	1/2"	4"	4"	4"	4"	2"
5000	2"	1/2"	1/2"	4"	4"	4"	4"	2"

Size chart

Capacity l	Øe mm	Ht mm	R* mm	D mm	E1 mm	E2 mm	G1 mm	G2 mm	P1 mm	P2 mm
100	460	950	1060	125	610	760	760	290	760	290
200	510	1335	1430	120	990	1140	1140	290	1140	290
300	610	1425	1555	130	1015	1165	1165	365	1165	365
500	710	1710	1855	135	1285	1435	1435	385	1435	385
800	850	1740	1940	125	1295	1445	1445	395	1445	395
1000	910	2025	2225	120	1560	1710	1710	410	1710	410
1500	1040	2160	2400	165	1650	1800	1800	500	1800	500
2000	1140	2480	2730	155	1955	2105	2105	505	2105	505
2500	1290	2275	2620	180	1715	1865	1865	565	1865	565
3000	1290	2775	3060	180	2215	2365	2365	565	2365	565
4000	1440	2845	3190	160	2240	2390	2390	590	2390	590
5000	1640	2885	3320	140	2250	2400	2400	600	2400	600

R*: Reversal quota

Cold Water Storage Tanks
VKX series (stainless steel)

The VKX series includes insulated AISI 304 stainless steel tanks for chilled water, which are usually used to increase thermal inertia in single or double loop plants. The stainless steel protects the device against corrosion and makes it possible to use the tank in aggressive environments and in industrial settings.



Material: stainless steel AISI 304

External covering

Model	Type	Usage
VKX	coloured PVC	indoor

Insulation

Capacity (l)	Type	Thick. (mm)
from 100 to 5000	Closed cell polyethylene foam	20

Operational limits

Min temperature	Max temperature	Max pressure
-10 °C	60 °C	6 bar

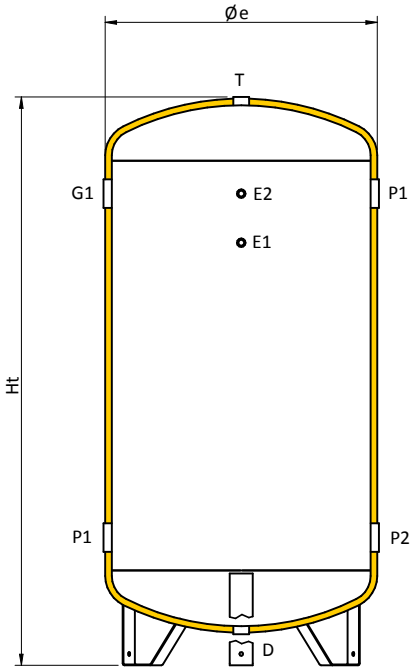
Standard Accessories: see pag. 102

Special versions: see pag. 105

TESTED

	VKX AISI 304		With packaging
Capacity l	Code	Price	Dimensions cm
100	816040265X		47x47x105
200	816040266X		52x52x152
300	816040267X		62x62x155
500	816040268X		67x67x200
800	816040269X		86x86x197
1000	816040270X		87x87x224
1500	816040271X		107x107x225
2000	816040272X		127x127x233
2500	816040273X		127x127x258
3000	816040274X		132x132x285
4000	816040275X		147x147x293
5000	816040276X		167x167x296

Cold Water Storage Tanks: Dimensions VKX series



Couplings legend

D	Drain
E1	Probe / Thermometer
E2	Probe / Thermometer
G1	From plant
G2	To plant
P1	To energy source
P2	From energy source
T	Vent

Couplings chart

Capacity l	D inch	E1 inch	E2 inch	G1 inch	G2 inch	P1 inch	P2 inch	T inch
100	1"1/4	1/2"	1/2"	2"	2"	2"	2"	1"1/4
200	1"1/4	1/2"	1/2"	2"	2"	2"	2"	1"1/4
300	1"1/4	1/2"	1/2"	2"	2"	2"	2"	1"1/4
500	1"1/4	1/2"	1/2"	2"1/2	2"1/2	2"1/2	2"1/2	1"1/4
800	1"1/4	1/2"	1/2"	2"1/2	2"1/2	2"1/2	2"1/2	1"1/4
1000	1"1/4	1/2"	1/2"	3"	3"	3"	3"	1"1/4
1500	1"1/2	1/2"	1/2"	3"	3"	3"	3"	1"1/2
2000	1"1/2	1/2"	1/2"	3"	3"	3"	3"	1"1/2
2500	1"1/2	1/2"	1/2"	3"	3"	3"	3"	1"1/2
3000	2"	1/2"	1/2"	4"	4"	4"	4"	2"
4000	2"	1/2"	1/2"	4"	4"	4"	4"	2"
5000	2"	1/2"	1/2"	4"	4"	4"	4"	2"

Size chart

Capacity l	Øe mm	Ht mm	R* mm	E1 mm	E2 mm	G1 mm	G2 mm	P1 mm	P2 mm
100	440	950	1050	615	765	765	280	765	280
200	490	1330	1420	970	1130	1130	290	1130	290
300	590	1415	1535	1020	1170	1170	320	1170	320
500	690	1695	1835	1270	1420	1420	370	1420	370
800	830	1735	1925	1290	1440	1440	390	1440	390
1000	890	2025	2215	1560	1710	1710	410	1710	410
1500	1040	2125	2365	1615	1765	1765	465	1765	465
2000	1240	2215	2540	1660	1810	1810	510	1810	510
2500	1240	2465	2760	1910	2060	2060	510	2060	510
3000	1290	2735	3025	2175	2325	2325	525	2325	525
4000	1440	2825	3170	2220	2370	2370	570	2370	570
5000	1640	2885	3320	2250	2400	2400	600	2400	600

R*: Reversal quota

Cold Water Storage Tanks
VKS series (internal baffles)

The VKS series includes insulated tanks for chilled water, which are usually used to increase thermal inertia in Layout 2 cooling devices. They are equipped with internal baffles which prevent preferential flow in the tank by creating perfect conditions for temperature distribution. They are especially used with medium and high flows and with special versions in which the tank is to be connected with more than two circuits.



TESTED

Material: carbon steel

External covering

Model	Type	Usage
VKS	coloured PVC	indoor

Insulation

Capacity (l)	Type	Thick. (mm)
from 100 to 1000	High density rigid polyurethane foam	30
from 1500	Closed cell polyethylene foam	20

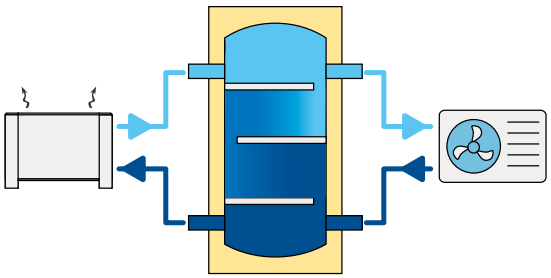
Operational limits

Min temperature	Max temperature	Max pressure
-10 °C	60 °C	6 bar

Standard Accessories: see pag. 102

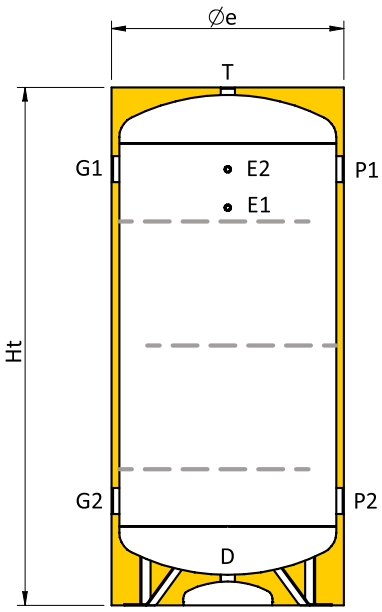
Special versions: see pag. 105

	VKS		Vertical Packaging	
Capacity l	Code	Price	Dimensions cm	Weight kg
100	816010166		49x49x107	26
200	816010167		54x54x146	37
300	816010168		64x64x155	50
500	816010169		74x74x184	85
800	816010170		88x88x186	113
1000	816010171		94x94x215	137
1500	816010172		107x107x228	193
2000	816010173		117x117x260	262
2500	816010174		132x132x240	283
3000	816010175		132x132x290	330
4000	816010176		147x147x297	487
5000	816010177		167x167x301	577

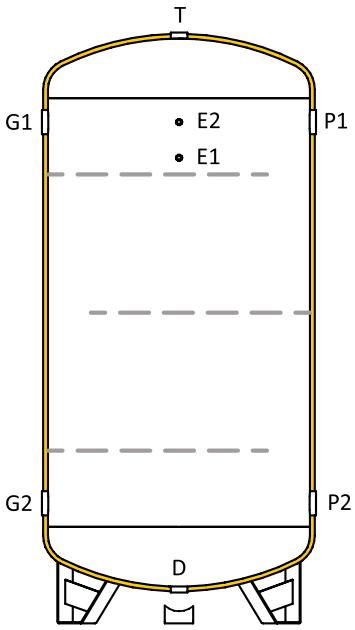


Cold Water Storage Tanks: Dimensions VKS series

100 ≤ cap. ≤ 1.000



1.500 ≤ cap. ≤ 5.000



Couplings legend

D	Drain
E1	Probe / Thermometer
E2	Probe / Thermometer
G1	From plant
G2	To plant
P1	To energy source
P2	From energy source
T	Vent

Couplings chart

Capacity l	D inch	E1 inch	E2 inch	G1 inch	G2 inch	P1 inch	P2 inch	T inch
100	1"1/4	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/4
200	1"1/4	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/4
300	1"1/4	1/2"	1/2"	2"	2"	2"	2"	1"1/4
500	1"1/4	1/2"	1/2"	3"	3"	3"	3"	1"1/4
800	1"1/2	1/2"	1/2"	3"	3"	3"	3"	1"1/2
1000	1"1/2	1/2"	1/2"	3"	3"	3"	3"	1"1/2
1500	2"	1/2"	1/2"	3"	3"	3"	3"	2"
2000	2"	1/2"	1/2"	3"	3"	3"	3"	2"
2500	2"	1/2"	1/2"	4"	4"	4"	4"	2"
3000	2"	1/2"	1/2"	4"	4"	4"	4"	2"
4000	2"	1/2"	1/2"	4"	4"	4"	4"	2"
5000	2"	1/2"	1/2"	4"	4"	4"	4"	2"

Size chart

Capacity l	Øe mm	Ht mm	R* mm	D mm	E1 mm	E2 mm	G1 mm	G2 mm	P1 mm	P2 mm
100	460	950	1060	125	610	760	760	290	760	290
200	510	1335	1430	120	990	1140	1140	290	1140	290
300	610	1425	1555	130	1015	1165	1165	365	1165	365
500	710	1710	1855	135	1285	1435	1435	385	1435	385
800	850	1740	1940	125	1295	1445	1445	395	1445	395
1000	910	2025	2225	120	1560	1710	1710	410	1710	410
1500	1040	2160	2400	165	1650	1800	1800	500	1800	500
2000	1140	2480	2730	155	1955	2105	2105	505	2105	505
2500	1290	2275	2620	180	1715	1865	1865	565	1865	565
3000	1290	2775	3060	180	2215	2365	2365	565	2365	565
4000	1440	2845	3190	160	2240	2390	2390	590	2390	590
5000	1640	2885	3320	140	2250	2400	2400	600	2400	600

R*: Reversal quota

Cold Water Storage Tanks
VKR series (conveyor pipes)

The insulated VKR tanks for chilled water are usually used to increase the thermal inertia of the Layout 2 conditioning device with a medium or high flow. They are equipped with the double loop cooling device which create a preferential circuit inside the tank.



TESTED

Material: carbon steel

External covering

Model	Type	Usage
VKR	coloured PVC	indoor

Insulation

Capacity (l)	Type	Thick. (mm)
from 100 to 1000	High density rigid polyurethane foam	30
from 1500	Closed cell polyethylene foam	20

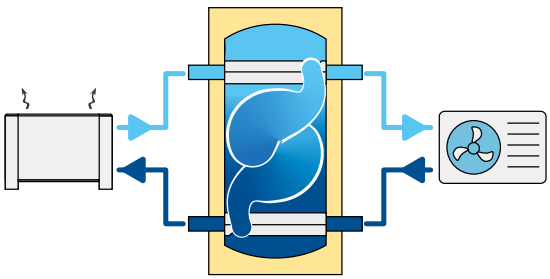
Operational limits

Min temperature	Max temperature	Max pressure
-10 °C	60 °C	6 bar

Standard Accessories: see pag. 102

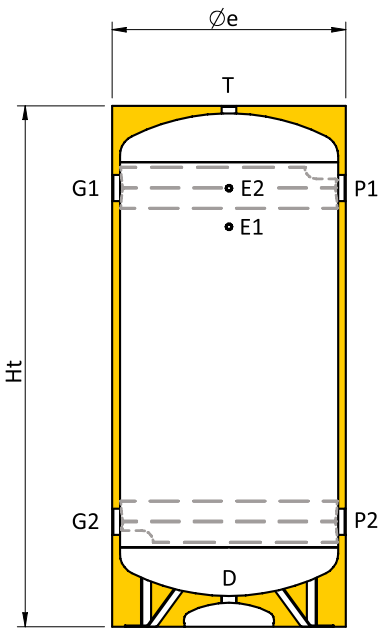
Special versions: see pag. 105

	VKR		Vertical Packaging	
Capacity l	Code	Price	Dimensions cm	Weight kg
100	816010154		49x49x107	26
200	816010155		54x54x146	37
300	816010156		64x64x155	50
500	816010157		74x74x184	85
800	816010158		88x88x186	113
1000	816010159		94x94x215	137
1500	816010160		107x107x228	193
2000	816010161		117x117x260	262
2500	816010162		132x132x240	283
3000	816010163		132x132x290	330
4000	816010164		147x147x297	487
5000	816010165		167x167x301	577

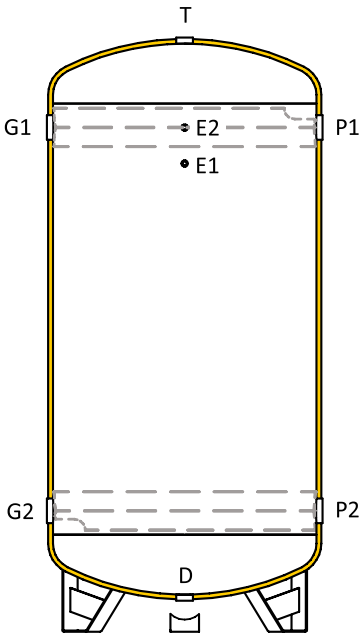


Cold Water Storage Tanks: Dimensions VKR series

100 ≤ cap. ≤ 1.000



1.500 ≤ cap. ≤ 5.000



Couplings legend

D	Drain
E1	Probe / Thermometer
E2	Probe / Thermometer
G1	From plant
G2	To plant
P1	To energy source
P2	From energy source
T	Vent

Couplings chart

Capacity l	D inch	E1 inch	E2 inch	G1 inch	G2 inch	P1 inch	P2 inch	T inch
100	1"1/4	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/4
200	1"1/4	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/4
300	1"1/4	1/2"	1/2"	2"	2"	2"	2"	1"1/4
500	1"1/4	1/2"	1/2"	3"	3"	3"	3"	1"1/4
800	1"1/2	1/2"	1/2"	3"	3"	3"	3"	1"1/2
1000	1"1/2	1/2"	1/2"	3"	3"	3"	3"	1"1/2
1500	2"	1/2"	1/2"	3"	3"	3"	3"	2"
2000	2"	1/2"	1/2"	3"	3"	3"	3"	2"
2500	2"	1/2"	1/2"	4"	4"	4"	4"	2"
3000	2"	1/2"	1/2"	4"	4"	4"	4"	2"
4000	2"	1/2"	1/2"	4"	4"	4"	4"	2"
5000	2"	1/2"	1/2"	4"	4"	4"	4"	2"

Size chart

Capacity l	Øe mm	Ht mm	R* mm	D mm	E1 mm	E2 mm	G1 mm	G2 mm	P1 mm	P2 mm
100	460	950	1060	125	610	760	760	290	760	290
200	510	1335	1430	120	990	1140	1140	290	1140	290
300	610	1425	1555	130	1015	1165	1165	365	1165	365
500	710	1710	1855	135	1285	1435	1435	385	1435	385
800	850	1740	1940	125	1295	1445	1445	395	1445	395
1000	910	2025	2225	120	1560	1710	1710	410	1710	410
1500	1040	2160	2400	165	1650	1800	1800	500	1800	500
2000	1140	2480	2730	155	1955	2105	2105	505	2105	505
2500	1290	2275	2620	180	1715	1865	1865	565	1865	565
3000	1290	2775	3060	180	2215	2365	2365	565	2365	565
4000	1440	2845	3190	160	2240	2390	2390	590	2390	590
5000	1640	2885	3320	140	2250	2400	2400	600	2400	600

R*: Reversal quota

Cold Water Storage Tanks
VKD series (diffusing pipes)

The insulated VKD tanks for chilled water are usually used to increase thermal inertia of the Layout 2 conditioning device. They are equipped with diffuser pipes which connect the two circuits linked to the tank. Energy is supplied or subtracted through the diffuser's circumferential probes. In this way the mixing of fluids is significantly reduced.



Material: carbon steel

External covering

Model	Type	Usage
VKD	coloured PVC	indoor

Insulation

Capacity (l)	Type	Thick. (mm)
from 100 to 1000	High density rigid polyurethane foam	30
from 1500	Closed cell polyethylene foam	20

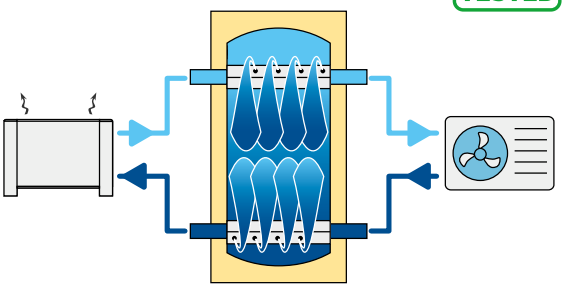
Operational limits

Min temperature	Max temperature	Max pressure
-10 °C	60 °C	6 bar

Standard Accessories: see pag. 102

Special versions: see pag. 105

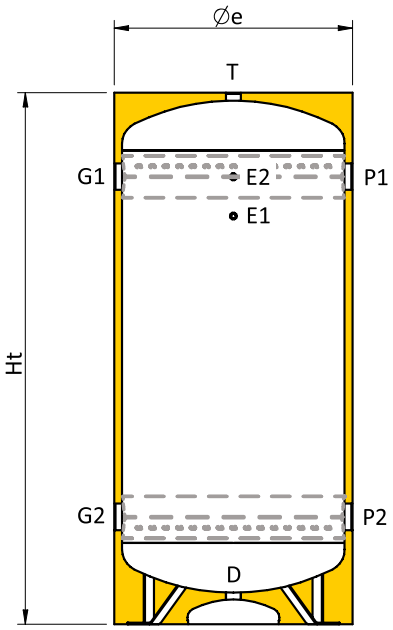
TESTED



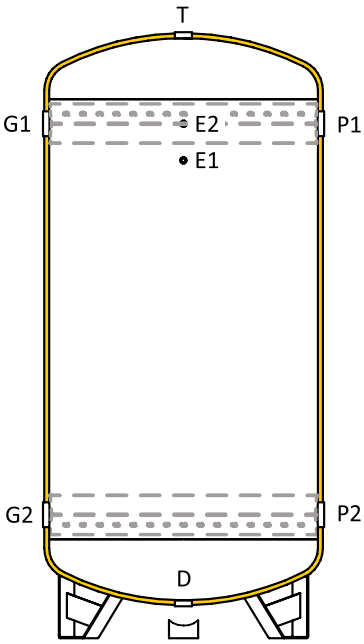
	VKD		Vertical Packaging	
Capacity l	Code	Price	Dimensions cm	Weight kg
100	816010417		49x49x107	26
200	816010418		54x54x146	37
300	816010419		64x64x155	50
500	816010420		74x74x184	85
800	816010421		88x88x186	113
1000	816010422		94x94x215	138
1500	816010423		107x107x228	193
2000	816010424		117x117x260	262
2500	816010425		132x132x240	283
3000	816010426		132x132x290	330
4000	816010427		147x147x297	487
5000	816010428		167x167x301	577

Cold Water Storage Tanks: Dimensions VKD series

100 ≤ cap. ≤ 1.000



1.500 ≤ cap. ≤ 5.000



Couplings legend

D	Drain
E1	Probe / Thermometer
E2	Probe / Thermometer
G1	From plant
G2	To plant
P1	To energy source
P2	From energy source
T	Vent

Couplings chart

Capacity l	D inch	E1 inch	E2 inch	G1 inch	G2 inch	P1 inch	P2 inch	T inch
100	1"1/4	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/4
200	1"1/4	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/4
300	1"1/4	1/2"	1/2"	2"	2"	2"	2"	1"1/4
500	1"1/4	1/2"	1/2"	3"	3"	3"	3"	1"1/4
800	1"1/2	1/2"	1/2"	3"	3"	3"	3"	1"1/2
1000	1"1/2	1/2"	1/2"	3"	3"	3"	3"	1"1/2
1500	2"	1/2"	1/2"	3"	3"	3"	3"	2"
2000	2"	1/2"	1/2"	3"	3"	3"	3"	2"
2500	2"	1/2"	1/2"	4"	4"	4"	4"	2"
3000	2"	1/2"	1/2"	4"	4"	4"	4"	2"
4000	2"	1/2"	1/2"	4"	4"	4"	4"	2"
5000	2"	1/2"	1/2"	4"	4"	4"	4"	2"

Size chart

Capacity l	Øe mm	Ht mm	R* mm	D mm	E1 mm	E2 mm	G1 mm	G2 mm	P1 mm	P2 mm
100	460	950	1060	125	610	760	760	290	760	290
200	510	1335	1430	120	990	1140	1140	290	1140	290
300	610	1425	1555	130	1015	1165	1165	365	1165	365
500	710	1710	1855	135	1285	1435	1435	385	1435	385
800	850	1740	1940	125	1295	1445	1445	395	1445	395
1000	910	2025	2225	120	1560	1710	1710	410	1710	410
1500	1040	2160	2400	165	1650	1800	1800	500	1800	500
2000	1140	2480	2730	155	1955	2105	2105	505	2105	505
2500	1290	2275	2620	180	1715	1865	1865	565	1865	565
3000	1290	2775	3060	180	2215	2365	2365	565	2365	565
4000	1440	2845	3190	160	2240	2390	2390	590	2390	590
5000	1640	2885	3320	140	2250	2400	2400	600	2400	600

R*: Reversal quota

PUFFER
Hot Water storage tanks

The Puffer tanks are inertial tanks for heating installations which store non-domestic hot water. They are used in all devices powered by discontinuous power sources (e.g. solar panels, wood burners, boiler stoves, etc.) or wherever the volume of water stored in the device must be increased (e.g. devices with heat pumps, combined heat and power units, biomass burners, etc.). Several versions are available, to be used with one or more energy sources:

PFA Regular storage tank
PFB Storage tank fitted with smooth tube heat exchanger to add an additional power source (e.g. solar).
PFC Storage tank fitted with two smooth tube heat exchangers to add two additional power sources (e.g. solar and boiler stove).



TESTED

Materials
All storage tanks are made of carbon steel sheets, externally varnished

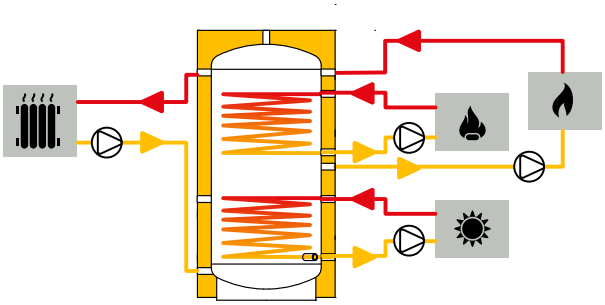
Insulation

Capacity (l)	Type
from 300 to 1000	Highly rigid polyurethane foam
from 1500 to 5000	Polyester Fiber
from 6000	Flexible polyurethane foam

Operational limits

Model	Storage tank		S1 Coil Circuit		S2 Coil Circuit	
	max. temperature	max. pressure	max. temperature	max. pressure	max. temperature	max. pressure
PFA	95°C	6 bar	-	-	-	-
PFB	95°C	6 bar	99°C	9 bar	-	-
PFC	95°C	6 bar	99°C	9 bar	99°C	9 bar

Standard Accessories: see pag 102
Special versions: see pag 105



PUFFER
Product code

PFA series

capacity l	code	price	energy label	packed dimensions cm	packed weight kg
300	817010119X		B	64x64x180	55
500	817010120X		C	77x77x184	77
750	817010216X		C	95x95x178	109
1000	817010002		C	129x129x216	125
1500	817010003		C	125x125x229	194
2000	817010004		C	136x136x261	263
2500	817010101X			147x147x234	296
3000	817010102X			147x147x284	346
4000	817010103X			163x163x293	492
5000	817010104X			183x183x299	582
6000	817010129X			282x203x217,5	684
8000	817010130X			352x203x217,5*	823
10000	817010131X			427x203x217,5*	973

*Shipping by container requires open top containers

PFB series

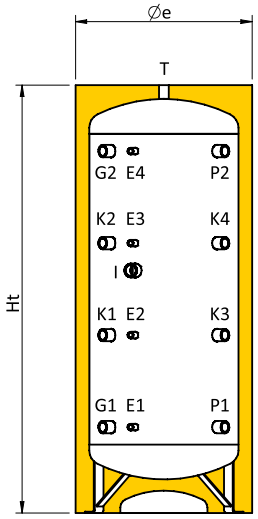
capacity l	code	price	energy label	packed dimensions cm	packed weight kg
300	819010129X		B	64x64x180	65
500	819010130X		C	77x77x184	98
750	819010202X		C	95x95x178	137
1000	819010003		C	129x129x216	153
1500	819010004		C	125x125x229	237
2000	819010005		C	136x136x261	315
2500	819010135X			147x147x234	352
3000	819010136X			147x147x284	413
4000	819010137X			163x163x293	571
5000	819010138X			183x183x299	672

PFC series

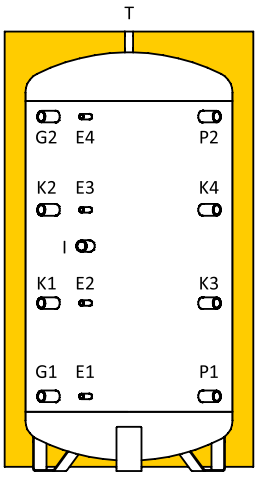
capacity l	code	price	energy label	packed dimensions cm	packed weight kg
300	819010149X		B	64x64x180	77
500	819010150X		C	77x77x184	111
750	819010203X		C	95x95x178	154
1000	819010006		C	129x129x216	181
1500	819010007		C	125x125x229	268
2000	819010008		C	136x136x261	346
2500	819010155X			147x147x234	383
3000	819010156X			147x147x284	460
4000	819010157X			163x163x293	628
5000	819010158X			183x183x299	730

PUFFER
Size PFA

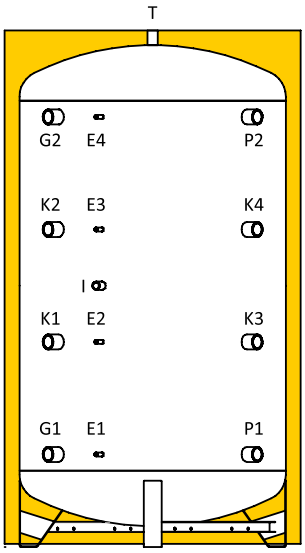
300 ≤ cap. ≤ 1.000



1.500 ≤ cap. ≤ 5.000



6.00 ≤ cap. ≤ 10.000



Couplings legend

E1	Probe / Thermometer
E2	Probe / Thermometer
E3	Probe / Thermometer
E4	Probe / Thermometer
G1	From plant
G2	To plant
I	Electrical resistor
K1	Auxiliary
K2	Auxiliary
K3	Auxiliary
K4	Auxiliary
P1	To energy source
P2	From energy source
T	Vent

Couplings chart

Cap. l	E1 inch	E2 inch	E3 inch	E4 inch	G1 inch	G2 inch	I inch	K1 inch	K2 inch	K3 inch	K4 inch	P1 inch	P2 inch	T inch
300	1/2"	1/2"	1/2"	1/2"	1"1/4	1"1/4	1"1/2	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4
500	1/2"	1/2"	1/2"	1/2"	1"1/4	1"1/4	1"1/2	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4
750	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2
1000	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2
1500	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"
2000	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"
2500	1/2"	1/2"	1/2"	1/2"	2"	2"	1"1/2	2"	2"	2"	2"	2"	2"	1"
3000	1/2"	1/2"	1/2"	1/2"	2"	2"	1"1/2	2"	2"	2"	2"	2"	2"	1"
4000	1/2"	1/2"	1/2"	1/2"	2"	2"	1"1/2	2"	2"	2"	2"	2"	2"	1"
5000	1/2"	1/2"	1/2"	1/2"	2"	2"	1"1/2	2"	2"	2"	2"	2"	2"	1"
6000	1/2"	1/2"	1/2"	1/2"	3"	3"	1"1/2	3"	3"	3"	3"	3"	3"	2"
8000	1/2"	1/2"	1/2"	1/2"	3"	3"	1"1/2	3"	3"	3"	3"	3"	3"	2"
10000	1/2"	1/2"	1/2"	1/2"	3"	3"	1"1/2	3"	3"	3"	3"	3"	3"	2"

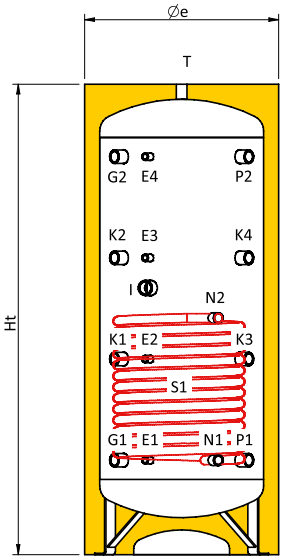
Size chart

Cap. l	Øe mm	Ht mm	R* mm	E1 mm	E2 mm	E3 mm	E4 mm	G1 mm	G2 mm	I mm	K1 mm	K2 mm	K3 mm	K4 mm	P1 mm	P2 mm
300	610	1680	1790	325	695	1065	1435	325	1435	880	695	1065	695	1065	325	1435
500	760	1735	1895	355	725	1095	1465	355	1465	985	725	1095	725	1095	355	1465
750	910	1765	1990	395	745	1095	1445	395	1445	920	745	1095	745	1095	395	1445
1000	1010	2000	2245	330	770	1210	1650	330	1650	990	770	1210	770	1210	330	1650
1500	1250	2145	2475	360	810	1260	1710	360	1710	1085	810	1260	810	1260	360	1710
2000	1350	2475	2815	390	930	1470	2010	390	2010	1200	930	1470	930	1470	390	2010
2500	1450	2220	2655	425	865	1305	1745	425	1745	1145	865	1305	865	1305	425	1745
3000	1450	2720	3085	435	1035	1635	2235	435	2235	1435	1035	1635	1035	1635	435	2235
4000	1600	2810	3235	480	1080	1680	2280	480	2280	1430	1080	1680	1080	1680	480	2280
5000	1800	2870	3390	510	1110	1710	2310	510	2310	1510	1110	1710	1110	1710	510	2310
6000	2000	2790	3435	635	1155	1675	2195	635	2195	1415	1155	1675	1155	1675	635	2195
8000	2000	3490	4025	625	1385	2145	2905	625	2905	1615	1385	2145	1385	2145	625	2905
10000	2000	4240	4690	625	1635	2645	3655	625	3655	2365	1635	2645	1635	2645	625	3655

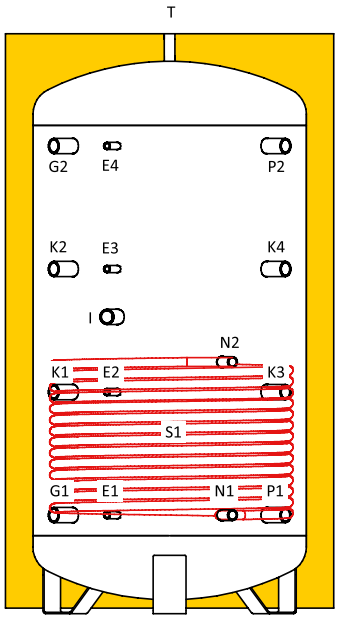
R*: reversal quota

PUFFER
Size PFB

300 ≤ cap. ≤ 1.000



1.500 ≤ cap. ≤ 5.000



Couplings legend

E1	Probe / Thermometer
E2	Probe / Thermometer
E3	Probe / Thermometer
E4	Probe / Thermometer
G1	Ingresso da impianto
G2	To plant
I	Electrical resistor
K1	Auxiliary
K2	Auxiliary
K3	Auxiliary
K4	Auxiliary
N1	Lower exchanger outlet
N2	Lower exchanger inlet
P1	To energy source
P2	Ingresso da fonte energetica
S1	From energy source
T	Vent

Couplings chart

Cap. l	E1 inch	E2 inch	E3 inch	E4 inch	G1 inch	G2 inch	I inch	K1 inch	K2 inch	K3 inch	K4 inch	N1 inch	N2 inch	P1 inch	P2 inch	T inch
300	1/2"	1/2"	1/2"	1/2"	1"1/4	1"1/4	1"1/2	1"1/4	1"1/4	1"1/4	1"1/4	1"	1"	1"1/4	1"1/4	1"1/4
500	1/2"	1/2"	1/2"	1/2"	1"1/4	1"1/4	1"1/2	1"1/4	1"1/4	1"1/4	1"1/4	1"	1"	1"1/4	1"1/4	1"1/4
750	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"1/2	1"1/2	1"1/2
1000	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"1/2	1"1/2	1"1/2
1500	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"1/2	1"1/2	1"
2000	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"1/2	1"1/2	1"
2500	1/2"	1/2"	1/2"	1/2"	2"	2"	1"1/2	2"	2"	2"	2"	1"	1"	2"	2"	1"
3000	1/2"	1/2"	1/2"	1/2"	2"	2"	1"1/2	2"	2"	2"	2"	1"	1"	2"	2"	1"
4000	1/2"	1/2"	1/2"	1/2"	2"	2"	1"1/2	2"	2"	2"	2"	1"	1"	2"	2"	1"
5000	1/2"	1/2"	1/2"	1/2"	2"	2"	1"1/2	2"	2"	2"	2"	1"	1"	2"	2"	1"

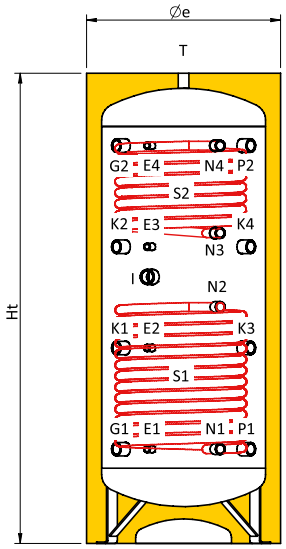
Size chart

Cap. l	Øe mm	Ht mm	R* mm	E1 mm	E2 mm	E3 mm	E4 mm	G1 mm	G2 mm	I mm	K1 mm	K2 mm	K3 mm	K4 mm	N1 mm	N2 mm	P1 mm	P2 mm	S1 m²
300	610	1680	1790	325	695	1065	1435	325	1435	880	695	1065	695	1065	325	685	325	1435	1
500	760	1735	1895	355	725	1095	1465	355	1465	985	725	1095	725	1095	355	875	355	1465	1,9
750	910	1765	1990	395	745	1095	1445	395	1445	920	745	1095	745	1095	395	875	395	1445	2,5
1000	1010	2000	2245	330	770	1210	1650	330	1650	990	770	1210	770	1210	330	890	330	1650	3,1
1500	1250	2145	2475	360	810	1260	1710	360	1710	1085	810	1260	810	1260	360	920	360	1710	3,8
2000	1350	2475	2815	390	930	1470	2010	390	2010	1200	930	1470	930	1470	390	990	390	2010	4,6
2500	1450	2220	2655	425	865	1305	1745	425	1745	1145	865	1305	865	1305	425	985	425	1745	5
3000	1450	2720	3085	435	1035	1635	2235	435	2235	1435	1035	1635	1035	1635	435	1115	435	2235	6
4000	1600	2810	3235	480	1080	1680	2280	480	2280	1430	1080	1680	1080	1680	480	1160	480	2280	7
5000	1800	2870	3390	510	1110	1710	2310	510	2310	1510	1110	1710	1110	1710	510	1190	510	2310	8

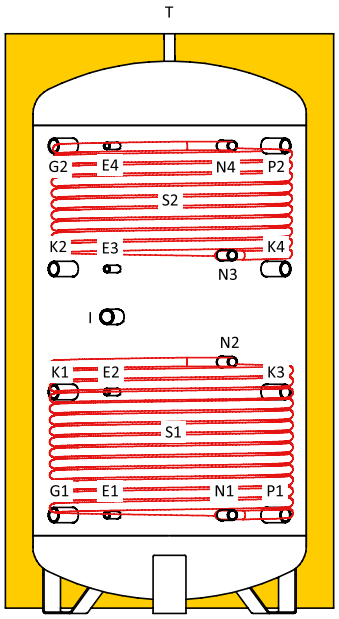
R*: reversal quota

PUFFER
Size PFC

300 ≤ cap. ≤ 1.000



1.500 ≤ cap. ≤ 5.000



Couplings legend

E1	Probe / Thermometer
E2	Probe / Thermometer
E3	Probe / Thermometer
E4	Probe / Thermometer
G1	From plant
G2	To plant
I	Electrical resistor
K1	Auxiliary
K2	Auxiliary
K3	Auxiliary
K4	Auxiliary
N1	Lower exchanger outlet
N2	Lower exchanger inlet
N3	Upper exchanger outlet
N4	Upper exchanger inlet
P1	To energy source
P2	From energy source
S1	Lower exchanger
S2	Upper exchanger
T	Vent

Couplings chart

Cap. l	E1 inch	E2 inch	E3 inch	E4 inch	G1 inch	G2 inch	I inch	K1 inch	K2 inch	K3 inch	K4 inch	N1 inch	N2 inch	N3 inch	N4 inch	P1 inch	P2 inch	T inch
300	1/2"	1/2"	1/2"	1/2"	1"1/4	1"1/4	1"1/2	1"1/4	1"1/4	1"1/4	1"1/4	1"	1"	1"	1"	1"1/4	1"1/4	1"1/4
500	1/2"	1/2"	1/2"	1/2"	1"1/4	1"1/4	1"1/2	1"1/4	1"1/4	1"1/4	1"1/4	1"	1"	1"	1"	1"1/4	1"1/4	1"1/4
750	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"	1"	1"1/2	1"1/2	1"1/2
1000	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"	1"	1"1/2	1"1/2	1"1/2
1500	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"	1"	1"1/2	1"1/2	1"
2000	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"	1"	1"1/2	1"1/2	1"
2500	1/2"	1/2"	1/2"	1/2"	2"	2"	1"1/2	2"	2"	2"	2"	1"	1"	1"	1"	2"	2"	1"
3000	1/2"	1/2"	1/2"	1/2"	2"	2"	1"1/2	2"	2"	2"	2"	1"	1"	1"	1"	2"	2"	1"
4000	1/2"	1/2"	1/2"	1/2"	2"	2"	1"1/2	2"	2"	2"	2"	1"	1"	1"	1"	2"	2"	1"
5000	1/2"	1/2"	1/2"	1/2"	2"	2"	1"1/2	2"	2"	2"	2"	1"	1"	1"	1"	2"	2"	1"

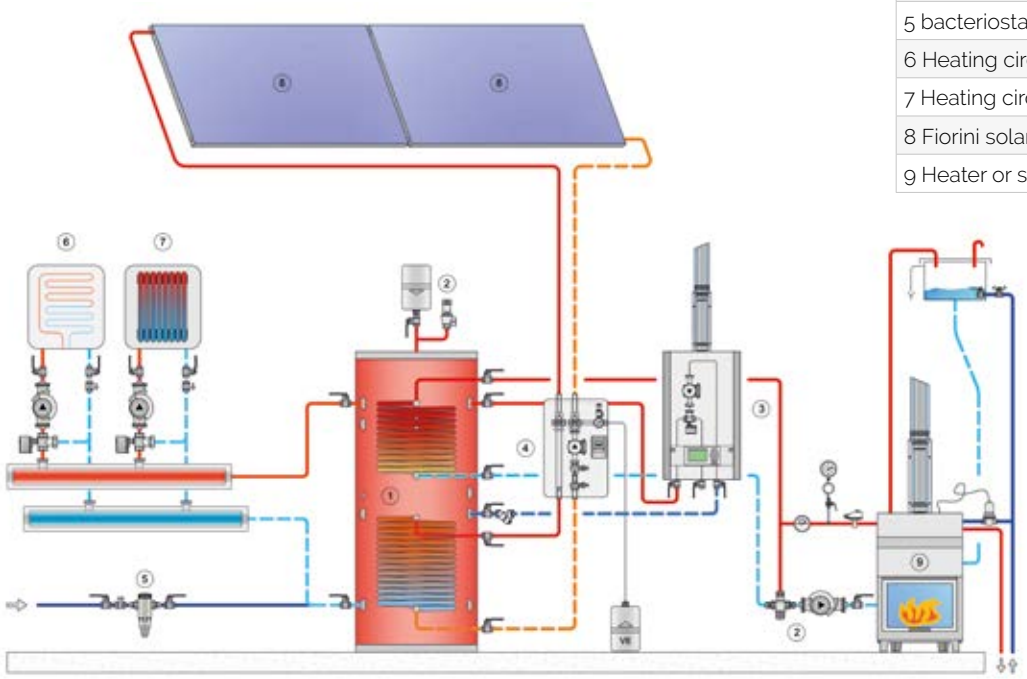
Size chart

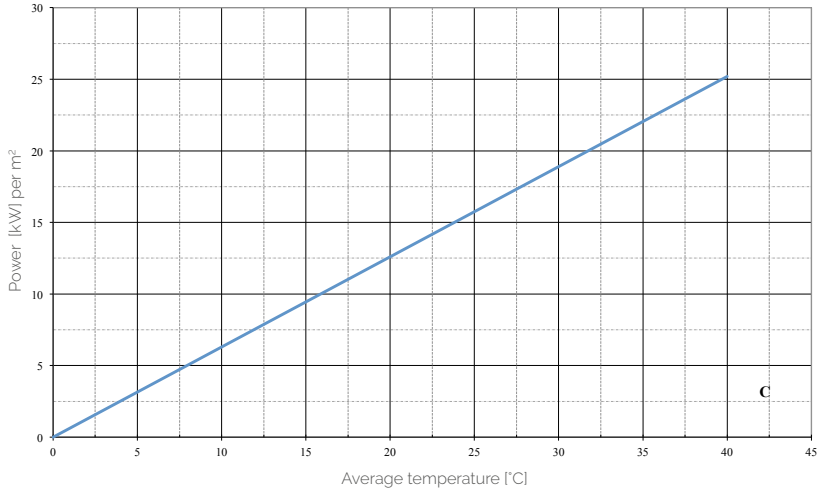
Cap. l	Øe mm	Ht mm	R* mm	E1 mm	E2 mm	E3 mm	E4 mm	G1 mm	G2 mm	I mm	K1 mm	K2 mm	K3 mm	K4 mm	N1 mm	N2 mm	N3 mm	N4 mm	P1 mm	P2 mm	S1 m²	S2 m²
300	610	1680	1790	325	695	1065	1435	325	1435	880	695	1065	695	1065	325	685	685	1075	325	1435	1	1
500	760	1735	1895	355	725	1095	1465	355	1465	985	725	1095	725	1095	355	875	1145	1465	355	1465	1,9	1,2
750	910	1765	1990	395	745	1095	1445	395	1445	920	745	1095	745	1095	395	875	1165	1445	395	1445	2,5	1,5
1000	1010	2000	2245	330	770	1210	1650	330	1650	990	770	1210	770	1210	330	890	1210	1650	330	1650	3,1	2,5
1500	1240	2140	2475	360	810	1260	1710	360	1710	1085	810	1260	810	1260	360	920	920	1310	360	1710	3,8	2,8
2000	1340	2470	2815	390	930	1470	2010	390	2010	1200	930	1470	930	1470	390	990	990	1650	390	2010	4,6	2,8
2500	1450	2220	2655	425	865	1305	1745	425	1745	1145	865	1305	865	1305	425	985	985	1305	425	1745	5	4
3000	1450	2720	3085	435	1035	1635	2235	435	2235	1435	1035	1635	1035	1635	435	1115	1115	1755	435	2235	6	4,2
4000	1600	2810	3235	480	1080	1680	2280	480	2280	1430	1080	1680	1080	1680	480	1160	1160	1800	480	2280	7	5
5000	1800	2870	3390	510	1110	1710	2310	510	2310	1510	1110	1710	1110	1710	510	1190	1190	1910	510	2310	8	5

R*: reversal quota

PUFFER
Installation chart

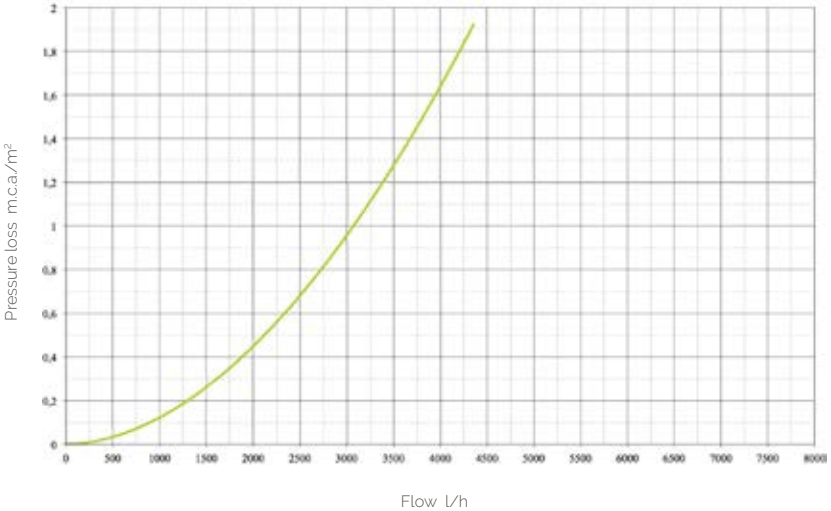
List of components
1 PFC Fiorini Puffer
2 Safety unit
3 Heating by alternative source
4 solar thermal return unit
5 bacteriostatic cold water filter
6 Heating circuit 1
7 Heating circuit 2
8 Fiorini solar collectors
9 Heater or stove with open vessel





Fixed coil power

The chart indicates maximum exchanged power by the fix internal coil depending on the temperature difference between water into the coil and water into the tank.



Pressure loss in the fixed coil

The pressure loss indicated in the chart refers to a surface area of 1 m2 of the coil. Multiply this value with the exchange surface in order to come to the total pressure loss.

COMBI PLUS
Combi storage tank

The COMBI PLUS range consists of inertial tanks for installations which use discontinuous energy sources, such as solar power systems, biomass systems and wood burning systems. Thanks to the internal exchanger with a stainless steel corrugated tube with a large surface, the instantaneous DHW production is guaranteed. There are three versions of which several capacities are available, from 500 to 2000 litres.



TESTED

COMBI PLUS A: equipped with n°1 internal fixed exchanger with a stainless steel corrugated tube for instantaneous DHW production

COMBI PLUS B: equipped with n°2 internal fixed heat exchangers, one with a stainless steel corrugated tube for instantaneous DHW production and another for coupling to an additional heat source.

COMBI PLUS C: equipped with n°3 internal fixed heat exchangers, one with a stainless steel corrugated tube for instantaneous DHW production and two in carbon steel for coupling to other additional heat sources

Materials

The inertial tanks are made of high quality material, in particular:
Coil for domestic use: AISI 316L stainless steel
Tank and integration coil: S 235 JR carbon steel

External protective treatment: enamelling with industrial varnish

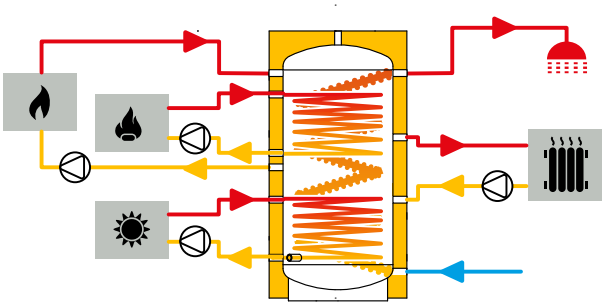
Insulation

Capacity (l)	Type
500	Highly rigid polyurethane foam
from 600 to 2000	Polyester Fiber

Operational limits

Storage tank		S1-S2-S3 Coil Circuit	
max. temperature	max. pressure	max. temperature	max. pressure
95°C	3 bar	110°C	10 bar

Standard accessories: see pag 102
Special versions: see pag 105



COMBI PLUS
Combi storage tank

COMBI PLUS A

capacity l	code	price	energy label	packed dimensions cm	packed weight kg
500	842020184X		C	100X100X178	125
600	842020185X		C	100X100X185	135
750	842020186X		C	100X100X191	160
1000	842020187X		C	100X100X224	190
1250	842020188X		C	120X120X221	225
1500	842020189X		C	120X120X235	250
2000	842020190X		C	140X140X257	350

COMBI PLUS B

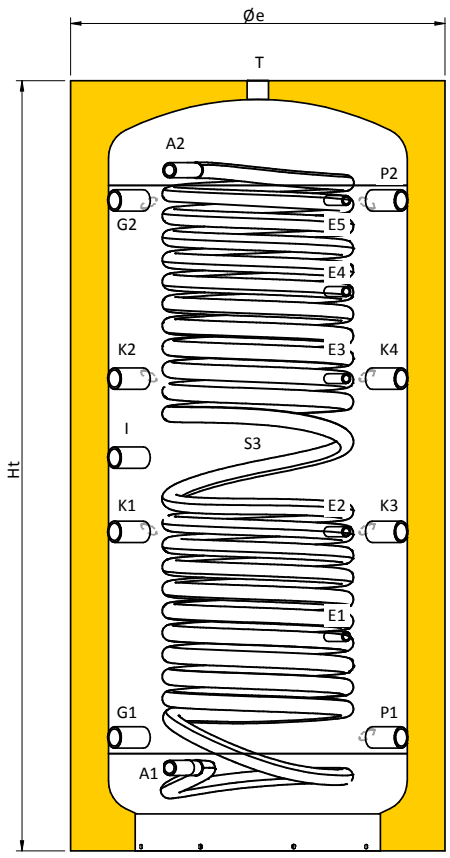
capacity l	code	price	energy label	packed dimensions cm	packed weight kg
500	842020191X		C	100X100X178	150
600	842020192X		C	100X100X185	165
750	842020193X		C	100X100X191	190
1000	842020194X		C	100X100X224	230
1250	842020195X		C	120X120X221	265
1500	842020196X		C	120X120X235	300
2000	842020197X		C	140X140X257	410

COMBI PLUS C

capacity l	code	price	energy label	packed dimensions cm	packed weight kg
500	842020198X		C	100X100X178	165
600	842020199X		C	100X100X185	180
750	842020200X		C	100X100X191	215
1000	842020201X		C	100X100X224	265
1250	842020202X		C	120X120X221	295
1500	842020203X		C	120X120X235	335
2000	842020204X		C	140X140X257	455

COMBI PLUS A
Dimensions

500 ≤ cap. ≤ 2.000



Couplings legend

A1	DHW inlet
A2	DHW outlet
E1	Probe / Thermometer
E2	Probe / Thermometer
E3	Probe / Thermometer
E4	Probe / Thermometer
E5	Probe / Thermometer
G1	From plant
G2	To plant
I	Electrical resistor
K1	Auxiliary
K2	Auxiliary
K3	Auxiliary
K4	Auxiliary
P1	To energy source
P2	From energy source
S3	DHW exchanger
T	Vent

Couplings chart

Cap. l	A1 inch	A2 inch	E1 inch	E2 inch	E3 inch	E4 inch	E5 inch	G1 inch	G2 inch	I inch	K1 inch	K2 inch	K3 inch	K4 inch	P1 inch	P2 inch	T inch
500	1"M	1"M	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2
600	1"M	1"M	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2
750	1"M	1"M	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2
1000	1"M	1"M	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2
1250	1"M	1"M	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2
1500	1"M	1"M	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2
2000	1"M	1"M	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2

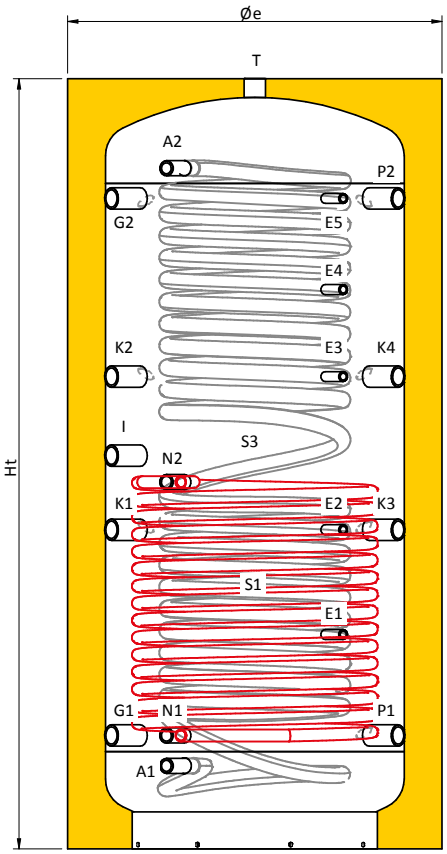
Size chart

Cap. l	Øe mm	Ht mm	R* mm	A1 mm	A2 mm	E1 mm	E2 mm	E3 mm	E4 mm	E5 mm	G1 mm	G2 mm	I mm	K1 mm	K2 mm	K3 mm	K4 mm	P1 mm	P2 mm	S3 m²
500	750	1630	1795	135	1455	420	650	970	1190	1380	210	1380	820	650	970	650	970	210	1380	4
600	900	1700	1925	150	1470	405	595	995	1215	1395	225	1395	805	595	995	595	995	225	1395	4
750	990	1760	2020	180	1500	440	625	1025	1225	1425	255	1425	865	625	1025	625	1025	255	1425	6
1000	990	2090	2315	220	1800	570	845	1250	1480	1720	300	1720	1040	845	1250	845	1250	300	1720	7,5
1250	1150	2060	2360	210	1790	550	785	1240	1470	1700	300	1700	1085	785	1240	785	1240	300	1700	7,5
1500	1200	2200	2510	260	1840	610	900	1285	1525	1750	350	1750	1130	900	1285	900	1285	350	1750	10
2000	1350	2420	2750	235	2115	645	960	1490	1780	2025	325	2025	1215	960	1490	960	1490	325	2025	10

R*: reversal quota

COMBI PLUS B
Dimensions

500 ≤ cap. ≤ 2.000



Couplings legend

A1	DHW inlet
A2	DHW outlet
E1	Probe / Thermometer
E2	Probe / Thermometer
E3	Probe / Thermometer
E4	Probe / Thermometer
E5	Probe / Thermometer
G1	From plant
G2	To plant
I	Electrical resistor
K1	Auxiliary
K2	Auxiliary
K3	Auxiliary
K4	Auxiliary
N1	Lower exchanger outlet
N2	Lower exchanger inlet
P1	To energy source
P2	From energy source
S1	Lower exchanger
S3	DHW exchanger
T	Vent

Couplings chart

Cap. l	A1 inch	A2 inch	E1 inch	E2 inch	E3 inch	E4 inch	E5 inch	G1 inch	G2 inch	I inch	K1 inch	K2 inch	K3 inch	K4 inch	N1 inch	N2 inch	P1 inch	P2 inch	T inch
500	1"M	1"M	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"1/2	1"1/2	1"1/2
600	1"M	1"M	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"1/2	1"1/2	1"1/2
750	1"M	1"M	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"1/2	1"1/2	1"1/2
1000	1"M	1"M	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"1/2	1"1/2	1"1/2
1250	1"M	1"M	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"1/2	1"1/2	1"1/2
1500	1"M	1"M	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"1/2	1"1/2	1"1/2
2000	1"M	1"M	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"1/2	1"1/2	1"1/2

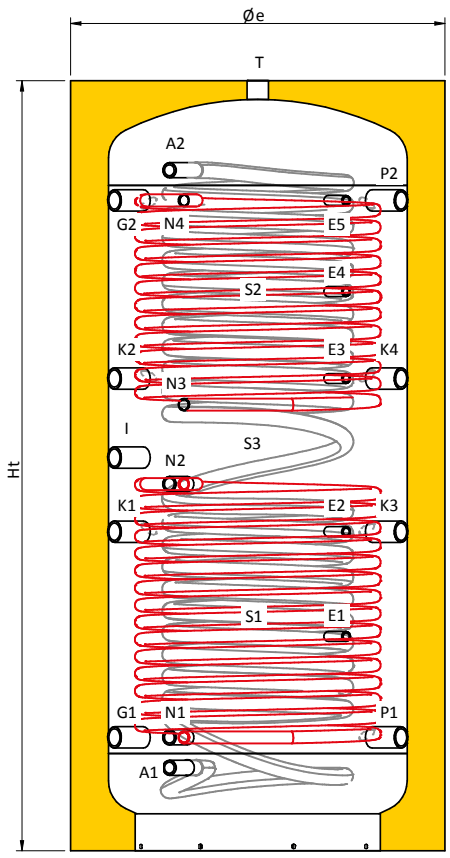
Size chart

Cap. l	Øe mm	Ht mm	R* mm	A1 mm	A2 mm	E1 mm	E2 mm	E3 mm	E4 mm	E5 mm	G1 mm	G2 mm	I mm	K1 mm	K2 mm	K3 mm	K4 mm	N1 mm	N2 mm	P1 mm	P2 mm	S1 m²	S3 m²
500	750	1630	1795	135	1455	420	650	970	1190	1380	210	1380	820	650	970	650	970	210	720	210	1380	1,8	4
600	900	1700	1925	150	1470	405	595	995	1215	1395	225	1395	805	595	995	595	995	225	725	225	1395	1,8	4
750	990	1760	2020	180	1500	440	625	1025	1225	1425	255	1425	865	625	1025	625	1025	255	800	255	1425	2,4	6
1000	990	2090	2315	220	1800	570	845	1250	1480	1720	300	1720	1040	845	1250	845	1250	300	970	300	1720	3	7,5
1250	1150	2060	2360	210	1790	550	785	1240	1470	1700	300	1700	1085	785	1240	785	1240	300	970	300	1700	3	7,5
1500	1200	2200	2510	260	1840	610	900	1285	1525	1750	350	1750	1130	900	1285	900	1285	350	1000	350	1750	3,6	10
2000	1350	2420	2750	235	2115	645	960	1490	1780	2025	325	2025	1215	960	1490	960	1490	325	1105	325	2025	4,2	10

R*: reversal quota

COMBI PLUS C
Dimensions

500 ≤ cap. ≤ 2.000



Couplings legend

A1	DHW inlet
A2	DHW outlet
E1	Probe / Thermometer
E2	Probe / Thermometer
E3	Probe / Thermometer
E4	Probe / Thermometer
E5	Probe / Thermometer
G1	From plant
G2	To plant
I	Electrical resistor
K1	Auxiliary
K2	Auxiliary
K3	Auxiliary
K4	Auxiliary
N1	Lower exchanger outlet
N2	Lower exchanger inlet
N3	Upper exchanger outlet
N4	Upper exchanger inlet
P1	To energy source
P2	From energy source
S1	Lower exchanger
S2	Upper exchanger
S3	DHW exchanger
T	Vent

Couplings chart

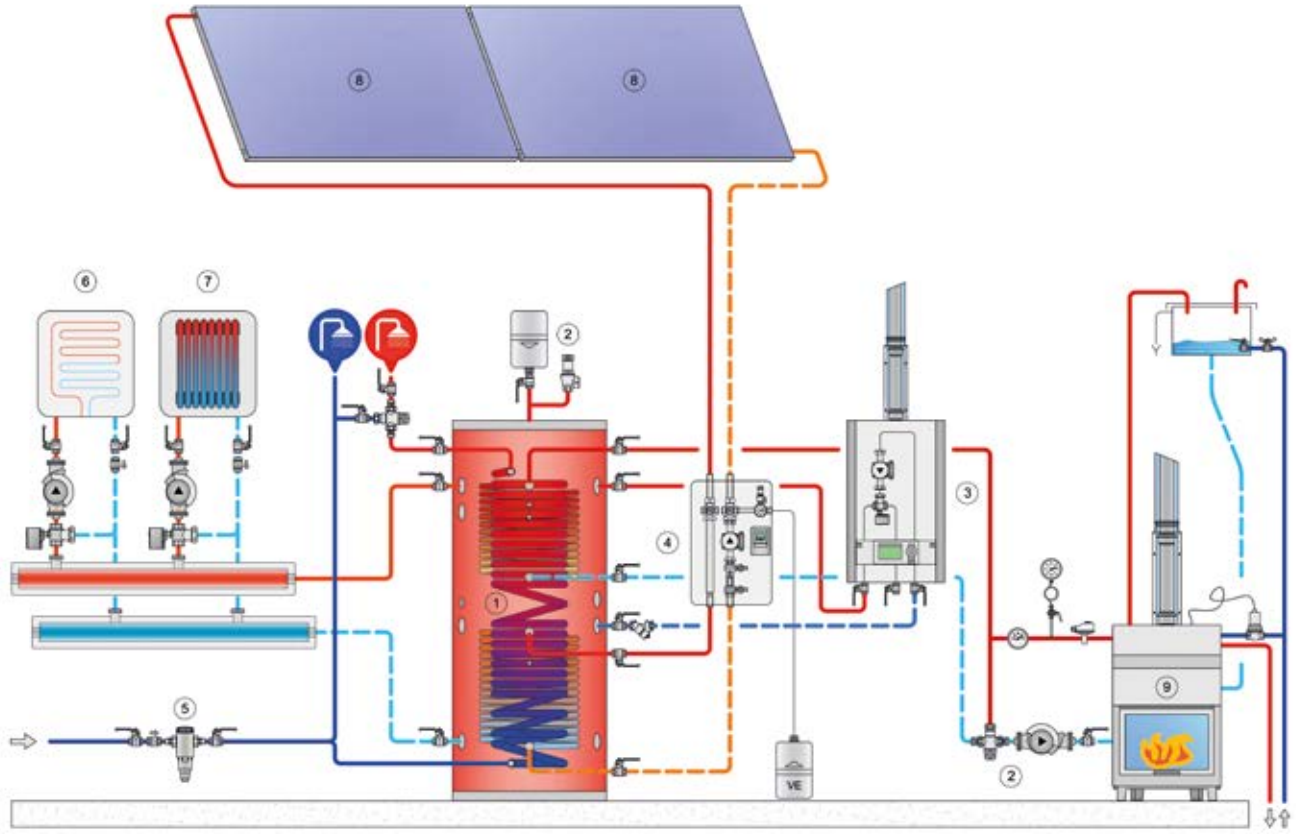
Cap. l	A1 inch	A2 inch	E1 inch	E2 inch	E3 inch	E4 inch	E5 inch	G1 inch	G2 inch	I inch	K1 inch	K2 inch	K3 inch	K4 inch	N1 inch	N2 inch	N3 inch	N4 inch	P1 inch	P2 inch	T inch
500	1"M	1"M	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"	1"	1"1/2	1"1/2	1"1/2
600	1"M	1"M	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"	1"	1"1/2	1"1/2	1"1/2
750	1"M	1"M	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"	1"	1"1/2	1"1/2	1"1/2
1000	1"M	1"M	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"	1"	1"1/2	1"1/2	1"1/2
1250	1"M	1"M	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"	1"	1"1/2	1"1/2	1"1/2
1500	1"M	1"M	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"	1"	1"1/2	1"1/2	1"1/2
2000	1"M	1"M	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"1/2	1"	1"	1"	1"	1"1/2	1"1/2	1"1/2

Size chart

Cap. l	Øe mm	Ht mm	R* mm	A1 mm	A2 mm	E1 mm	E2 mm	E3 mm	E4 mm	E5 mm	G1 mm	G2 mm	I mm	K1 mm	K2 mm	K3 mm	K4 mm	N1 mm	N2 mm	N3 mm	N4 mm	P1 mm	P2 mm	S1 m²	S2 m²	S3 m²
500	750	1630	1795	135	1455	420	650	970	1190	1380	210	1380	820	650	970	650	970	210	720	980	1380	210	1380	1,8	1,2	4
600	900	1700	1925	150	1470	405	595	995	1215	1395	225	1395	805	595	995	595	995	225	725	995	1345	225	1395	1,8	1,2	4
750	990	1760	2020	180	1500	440	625	1025	1225	1425	255	1425	865	625	1025	625	1025	255	800	1025	1385	255	1425	2,4	1,8	6
1000	990	2090	2315	220	1800	570	845	1250	1480	1720	300	1720	1040	845	1250	845	1250	300	970	1180	1720	300	1720	3	2,4	7,5
1250	1150	2060	2360	210	1790	550	785	1240	1470	1700	300	1700	1085	785	1240	785	1240	300	970	1160	1700	300	1700	3	2,4	7,5
1500	1200	2200	2510	260	1840	610	900	1285	1525	1750	350	1750	1130	900	1285	900	1285	350	1000	1240	1750	350	1750	3,6	2,4	10
2000	1350	2420	2750	235	2115	645	960	1490	1780	2025	325	2025	1215	960	1490	960	1490	325	1105	1475	2025	325	2025	4,2	3	10

R*: reversal quota

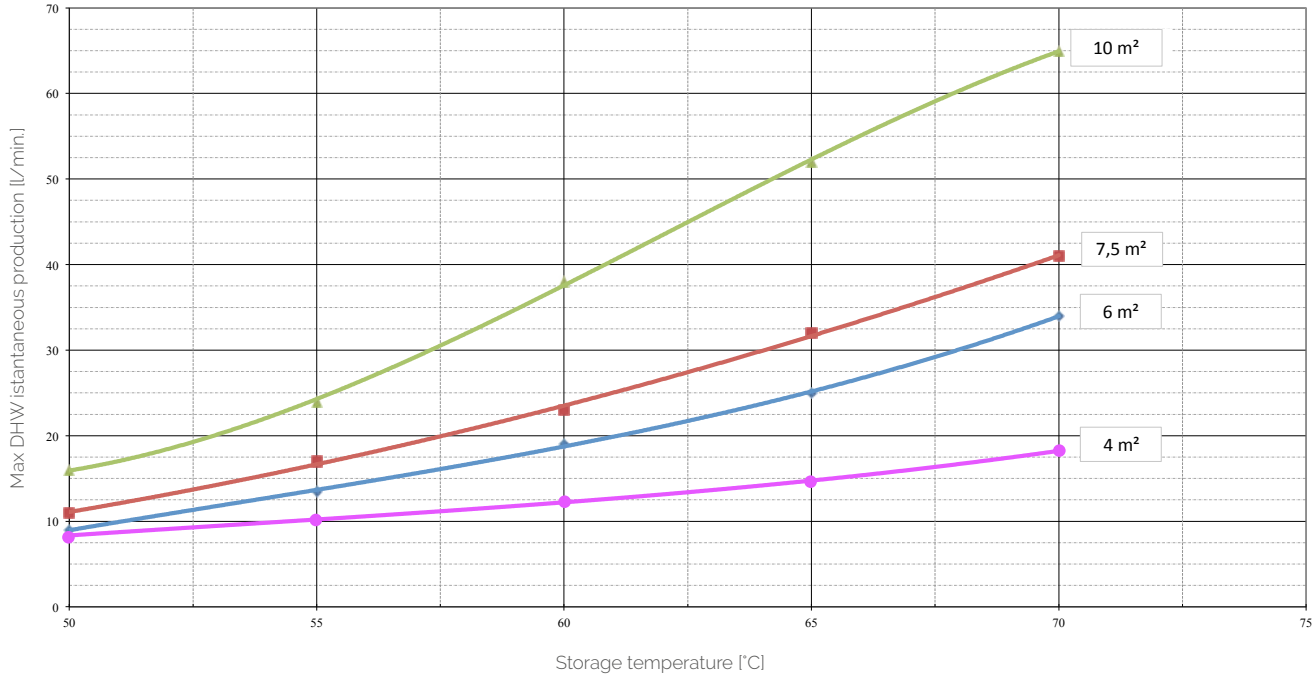
COMBI PLUS
Installation chart



List of components
1 PFC Fiorini Puffer
2 Safety unit
3 Heating by alternative source
4 solar thermal return unit
5 bacteriostatic cold water filter
6 Heating circuit 1
7 Heating circuit 2
8 Fiorini solar collectors
9 Heater or stove with open vessel

COMBI PLUS
Performace

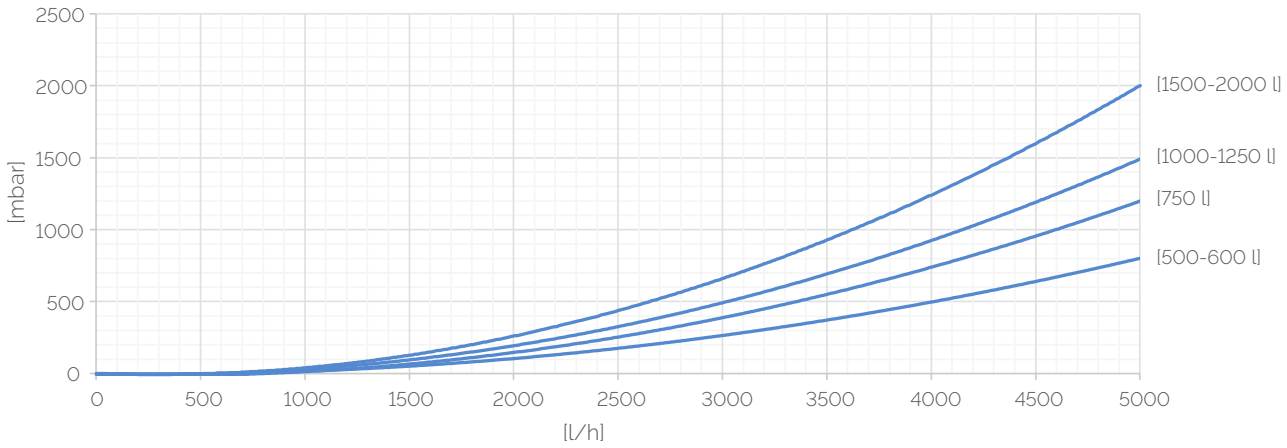
Performance of DHW exchanger



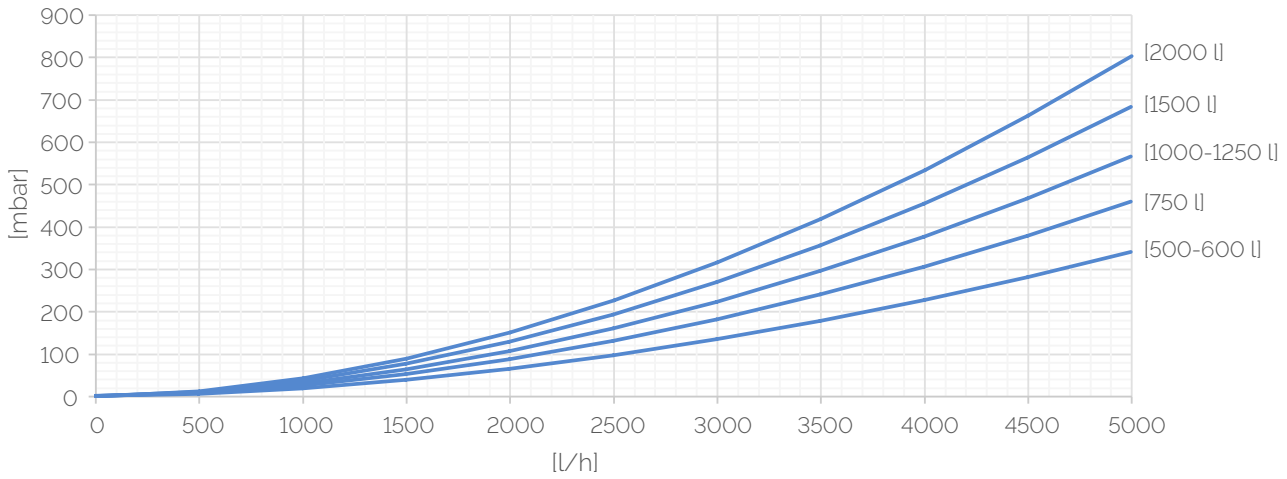
The graph shows the maximum instantaneous production of DHW (10-45 ° C) through the stainless steel coil as a function of the water storage temperature.

COMBI PLUS
Pressure loss

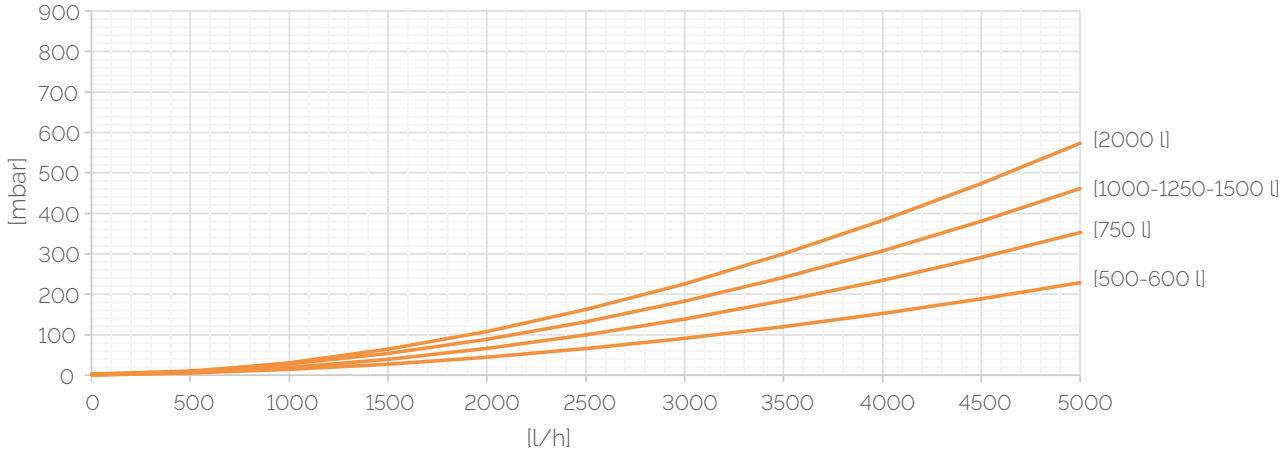
Pressure loss of DHW exchanger



Pressure loss of lower exchanger



Pressure loss of upper exchanger



Standard Accessories for Inertial Tanks

Anode replacement



Capacity	Description	Code	Price
200-300l	ISOLATED ANODE 22X400 + PLUG	R22100012	
500-3000l	ISOLATED ANODE 33X500 + PLUG	R22100013	
6000-10000 l	ISOLATED ANODE 33X500 + PLUG	R22100013	

Anode replacement with simpletest

Capacity	Description	Code	Price
200-300l	ANODE SIMPLETEST 22X400 T<"1/4	R22100006	
500-3000l	ANODE SIMPLETEST 33X500 T 1"1/4	R22100008	
6000-10000 l	ANODE SIMPLETEST 33X500 T 1"1/4	R22100008	

Spare parts compatible with all standard tanks and water heaters from the Flexy, Smart, and Boil families, both enamelled and stainless steel.

Current impressed cathodic protection (2021 version)





Description	Length (mm)	Code	Price
Up to 1000 litres	450	822100014	
From 1500 to 5000 litres	750	822100015	

New 2021 version:

- Separate components (Power supply and cable)
- Working time indicator
- "Anti Hydrogen" protection system
- Alarm signals: Anode Disconnected; Short circuit; Anomalies Protection (possibility of remote control of alarms via dedicated port).

Thermometer



Description	Code	Price
thermometer for hot water	C22050001	
thermometer for cold water	C22050004	

Thermostats





Description	Temperature range	Safety range	Code	Price
Thermostat	0 ÷ 90 °C	-	C22010004	
Contact thermostat	30 ÷ 90 °C	-	822010050	
Bithermostat	0 ÷ 90 °C	fix 100 °C	C22010006	
Antifreeze Bithermostat	-30 ÷ 30 °C	0 ÷ 90 °C	C22010007	

Standard Accessories for Inertial Tanks

Single-phase electrical heaters that can be integrated with the boilers, copper heating elements, safety thermostat (manual reset), electric cable and Schuko plug 16A/250V



Code	Price	Power W	Length L mm	Connection GAS M	Temperature safety thermostat °C	Tension V	Max. sleeve length mm	Protection class	Regulating thermostat °C
C24100166		1200	290	1"1/2	95	220-240 V SINGLE PHASE	55	IP44	20-70
C24100167		2000	295	1"1/2	95			IP54	20-65
C24100168		3000	345	1"1/2	95			IP54	20-65
C24100178		3000	413	1"1/4	85			IP44	20-70

Three-phase electrical heaters that can be integrated with the boilers, copper heating elements, supplied with regulation thermostat, safety thermostat (manual reset), electric cable and no plug.



Code	Price	Power W	Length L mm	Connection GAS M	Temperature safety thermostat °C	Tension V	Max. sleeve length mm	Protection class	Regulating thermostat °C
C24100169		2000	290	1"1/2	96	400 V THREE PHASE	90	IP44	30-75
C24100170		3000	290	1"1/2	96			IP44	30-75
C24100171		4500	430	1"1/2	96			IP54	30-65
C24100172		6000	430	1"1/2	96			IP54	30-65
C24100173		9000	660	1"1/2	96			IP54	30-65
C24100317		12000	840	1"1/2	95		840	IP54	30-65
C24100318		15000	900	1"1/2	95		900	IP54	30-65
C24100319		18000	1050	1"1/2	95		1050	IP54	30-65

Heads





Diam. mm	Enamelled Code	Enamelled Price	Stainless steel Code	Stainless steel Price
Ø300	843030018X		843040019X	
Ø380	843030019X		843040020X	
Ø430	843030020X		843040021X	

They are supplied with nuts, bolts and gaskets.

Tube heat exchanger and exchanger with copper spiral see pag. 204-206





Gaskets with or without crossbeam

Diameter mm	Asbestos free Without crossbeam Code	Asbestos free Without crossbeam Price	Asbestos free With crossbeam Code	Asbestos free With crossbeam Price	Asbestos free steam Without crossbeam Code	Asbestos free steam Without crossbeam Price	Asbestos free steam With crossbeam Code	Asbestos free steam With crossbeam Price
Ø300	R08020036		R08020037		R08060026		R08060001	
Ø380	R08020038		R08020039		R08060027		R08060002	
Ø430	R08020040		R08020041		R08060028		R08060003	

The copper coils have a gasket without cross-beam with the same diameter as the assembly plate.
The tube heat exchangers have two gaskets: one with and one without a cross-beam. Both have the same diameter as the closing head.
The blind closing heads have one gasket without cross-beam with the same diameter as the assembly plate.

Standard Accessories for Inertial Tanks

Galvanized Connections Adapters from threaded to flanged type

The codes and prices below are for single item.
The adapter must be screwed onto the existing connection.
The adapter is not welded on the ferrule, for special executions ask for a quote.



Original connection	Transformed connection uni-en pn 16	Code	Price
1"1/2	DN 40	838081200X	
	DN 50	838081201X	
2"	DN 50	838081202X	
	DN 65	838081203X	
2"1/2	DN 65	838081204X	
	DN 80	838081205X	
3"	DN 80	838081206X	
	DN 100	838081207X	
4"	DN 100	838081208X	
	DN 125	838081209X	

Galvanized Connections Adapters from threaded to Grooved type

The codes and prices below are for single item.
The adapter must be screwed onto the existing connection.
The adapter is not welded on the ferrule, for special executions ask for a quote.



Original connection	Transformed connection	Code	Price
1"1/2	1"1/2	838081211X	
	2"	838081212X	
2"	2"	838081213X	
	2"1/2	838081214X	
2"1/2	2"1/2	838081215X	
	3"	838081216X	
3"	3"	838081217X	
	4"	838081218X	
4"	4"	838081219X	
	5"	838081220X	

Electric single-phase resistors with built-in thermostat

No IP protection with visible contacts



Power W	Voltage V	Element number	Connection Diameter inch	Length mm	Code	Price
1200	230	1	1" 1/4	220	C24100003	
1500	230	1	1" 1/4	290	C24100004	
2000	230	1	1" 1/4	330	C24100005	

Electric single-phase resistors

IP 55 protection.



Power W	Voltage V	Element number	Connection Diameter inch	Length mm	Code	Price
200	230	1	1/2"	300	C24100001	

Electric resistors

IP 65 protection.



Power W	Voltage V	Element number	Connection Diameter inch	Length mm	Code	Price
1300	230/380	3	2"	220	C24100008	
2000	230/380	3	2"	290	C24100009	
2000	230/380	3	1" 1/4	300	C24100053	
3000	230/380	3	2"	340	C24100010	
3000	230/380	3	1" 1/4	300	C24100011	
4000	230/380	3	2"	390	C24100012	
4000	230/380	3	1" 1/4	400	C24100072	
5000	230/380	3	2"	500	C24100013	
5000	230/380	3	1" 1/4	450	C24100073	
6000	230/380	3	2"	600	C24100014	
7000	230/380	3	2"	580	C24100015	
8000	230/380	3	2"	620	C24100016	
10000	230/380	3	2"	770	C24100017	

Thermometers



Description	Code	Price
Thermometer for cold water	C22050004	
Thermometer for hot water	C22050001	

Temperature controls



Description	Temperature range	Safety range	Code	Price
Thermostat	0 ÷ 90 °C	-	C22010004	
Bithermostat	0 ÷ 90 °C	fix 100 °C	C22010006	
Antifreeze Bithermostat	-30 ÷ 30 °C	0 ÷ 90 °C	C22010007	

Accessories Compatible with: MINI-HC, VKG-HC(E), VKG(E), VK(E), VKT, VKX, VKS, VKR, VKD (pag. 68)

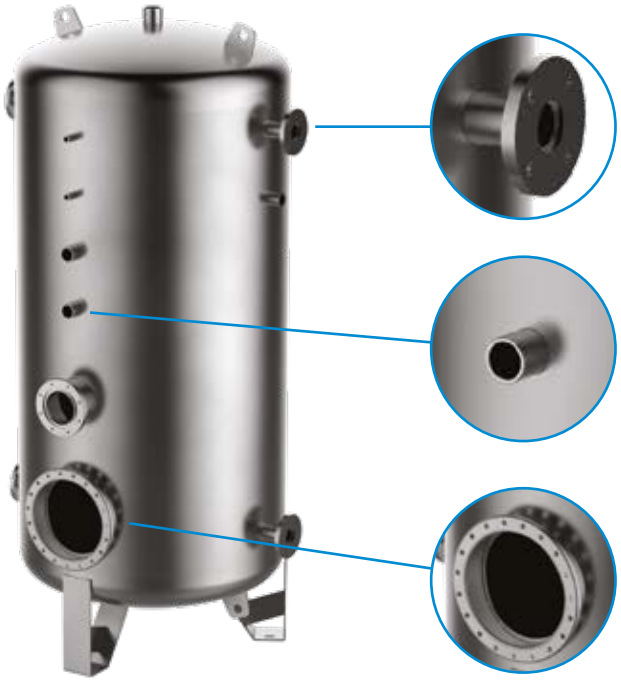
NOTE: Be sure to install the accessories according to the size and availability of the tank connections.

Special versions for Inertial Tanks

Special versions change the conformation of the products and hence the sales code will be different depending on the customisation required. Fiorini is able to provide any tailored solution quickly, providing the customer with the support they need to guide them to the solution that best suits their needs.
Here are some examples of special versions:

- Flanged (in different materials)
- Grooved (in different materials)
- Larger size
- Customised on request





ALUMINIUM cladding

Accessory for outdoor installation.
It is mandatory to provide a wooden cage for transportation.



Packed in wooden cage

Guarantees greater product protection during transport

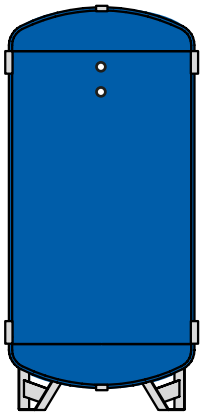


Accessories Compatible with: VKG-HC(E), VKG(E), VK(E), VKT, VKX, VKS, VKR, VKD (pag. 68)

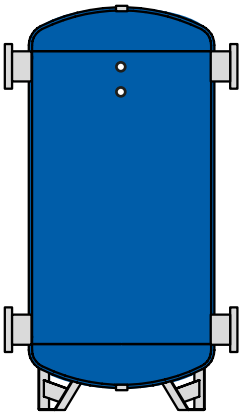
Tank Layout

This page guides you in choosing the couplings geometry/position of a chilled water tank. When requesting a quote, please specify the chosen layout and any changes.

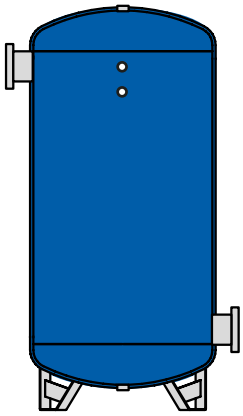
STANDARD



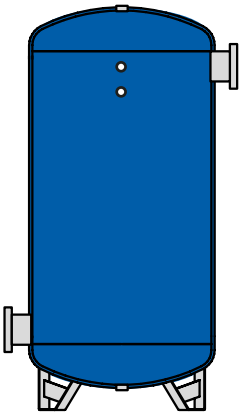
TL1
4 standard couplings



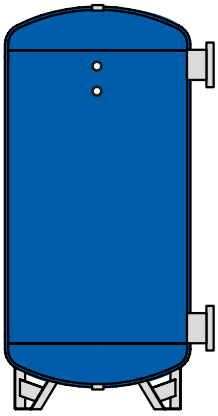
TL2
4 special couplings



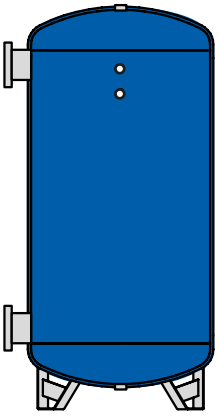
TL3
2 special couplings,top left and bottom right



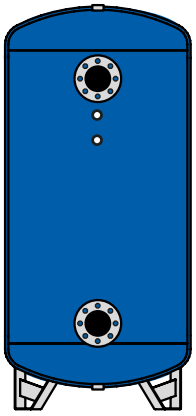
TL4
2 special couplings, top right and bottom left



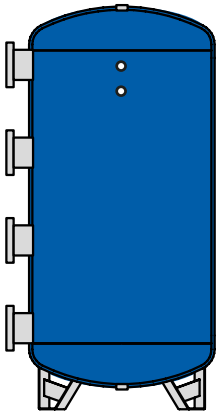
TL5
2 special couplings right



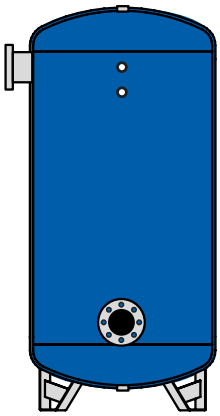
TL6
2 special couplings left



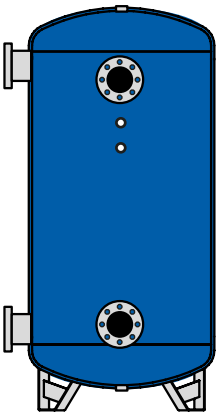
TL7
2 special couplings front



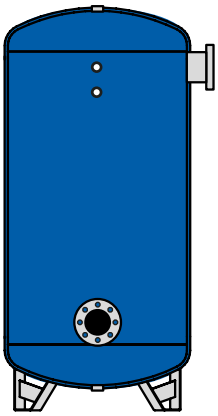
TL8
4 special couplings left



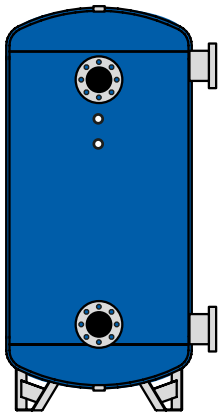
TL9
2 special couplings, top left and bottom front



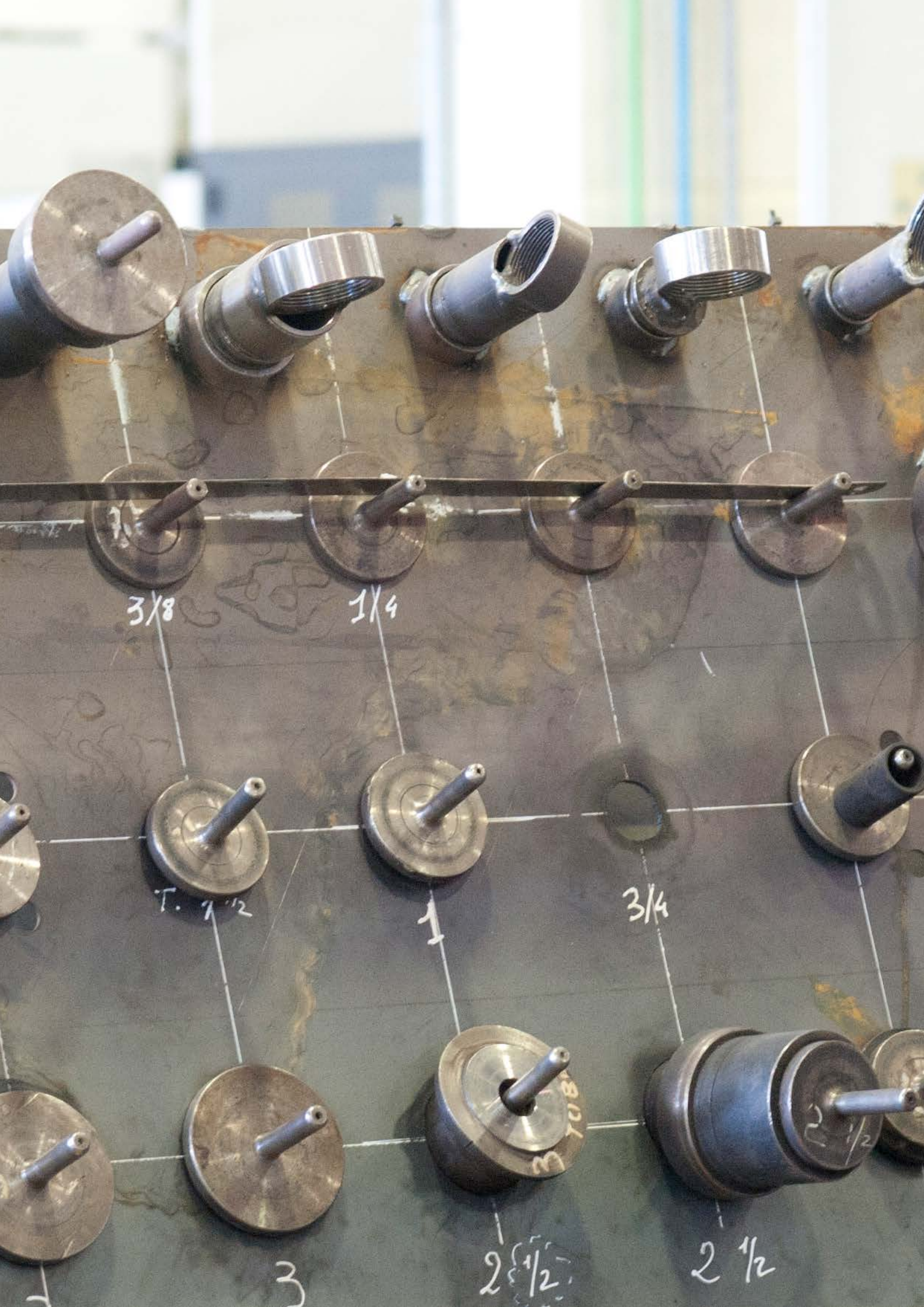
TL10
4 special couplings left and front



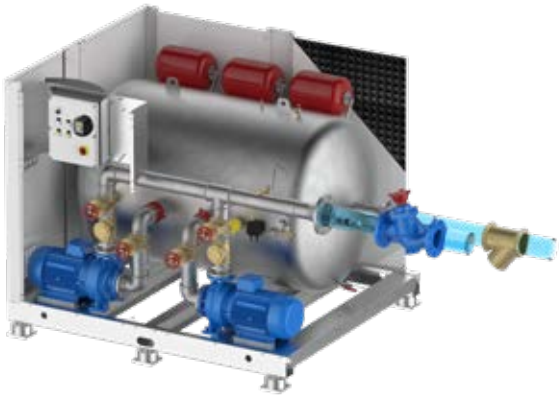
TL11
2 special couplings top right and bottom front



TL12
4 special couplings right and front


3/8
1/4
T. 1 1/2
1
3/4
3
2 1/2
2 1/2

HYDRONIC KITS CONFIGURATOR



An advanced tool for sizing and accessorizing Fiorini hydronic kits

The hydronic kit configurator is a web application that allows you to select and accessorize the standard Fiorini HP, HPT and VKB products starting from your project conditions.

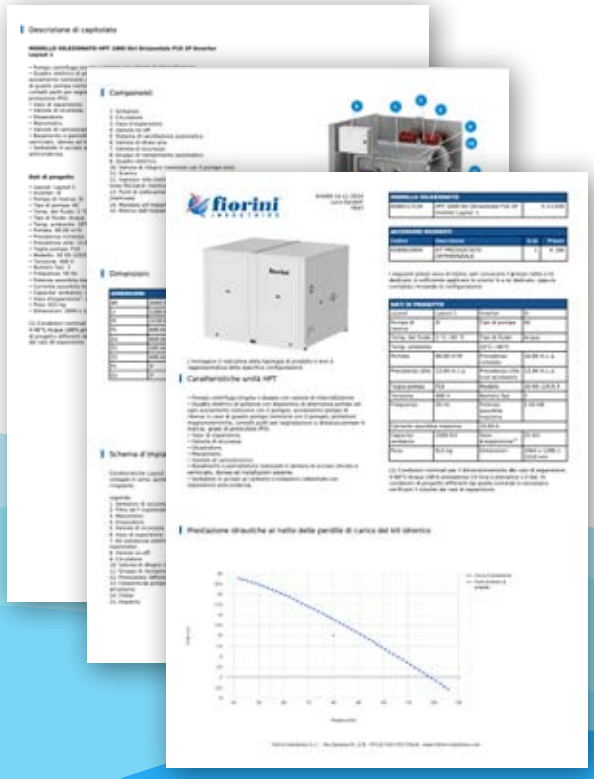


Advantages

- ✔ Simple and intuitive wizard
- ✔ Wide range of application scenarios
- ✔ Solution sized to your project
- ✔ Get the technical data sheet and specification description in PDF immediately
- ✔ Match the accessories correctly
- ✔ Codes and prices are always up to date
- ✔ Available in 6 languages
- ✔ No software installation required

Access the configurator now
from the reserved area of Fiorini Industries

go.fiorinigroup.it/ita/login



Hydronic Kits

Contents

Hydronic Kits pag. 110



HPT
pag. 111



HP 2.0
pag. 130



VKB 2.0
pag. 144

Accessories pag. 148

Hydronic kit

The VKB 2.0, HPT and HP 2.0 units are meant to optimize the performance of heating and cooling installations and to reduce the installation time.

The units have an integrated system, which contains all the needed components for an efficient functioning of the hydraulic circuit (or for the distribution of chilled water).

They are designed, pre-assembled and every unit is tested in our factory. In this way we guarantee quality in our products and a fast and simple installation. The kits are available with a broad range of Pump/ Tank combinations which can be used with any kind of cooling device or heat pump.

The units are made of materials and finished in a certain way which makes it possible to install outdoor. They can be customized according to the client's specific requirements.

Advantages

- ✔ Easy installation
- ✔ All units are tested
- ✔ Pre-assembled system
- ✔ Fast installation
- ✔ Excellent dimensions
- ✔ Low energy consumption



HPT
Unit with tank, pump
and accessories



VKB 2.0
Unit with tank
and accessories



HP 2.0
Unit with pump
and accessories





The units are in accordance with the directives emitted by the European Union and labelled with the CE mark.



In accordance with the ErP directive
Efficient usage of energy



Pre-assembled accessories and tested for a fast and secure installation

Tank units for chilled water Hydronic systems: HPT

The HPT units are hydraulic units with buffer tanks designed to reduce the production time of conditioning and cooling systems. They can be equipped with all different kinds of water coolers.

Standard equipment

Capacity: from 100 to 2.500 l
Tank material: carbon steel
Fluid types:
- water
- Ethylene glycol up to 40%
- Propylene glycol up to 40%

Insulation: anti-condensate elastomer
Pumps: 1 or 2
Execution: Layout 1 or 2
Inverter: with or without



Standard equipment usage limit

Fluid temperature	Environment temp.	Max. pressure
5°C / +60°C	10°C / +40°C	3 bar

Special equipment usage limit available on configurator (see page 108)

Fluid temperature	Environment temp.	Max. pressure
-20°C / +60°C	-20 / +40°C	3 bar

The HPT units are made of:

- carbon steel tank and tubes insulated with anti-condensate elastomer
- Centrifugal single or double pump with a shut-off valve
- Expansion vessel
- Safety valve
- Deaerator
- Manometer
- Fill-up/drain valve
- Base and self-supporting panels made of galvanized and coated steel sheets, suitable for outdoor installations
- Switchboard (standard or with inverter)

Accessories: For the accessories list see pag. 128

Start-up: the first start-up is recommended. See page 361

Upon request, it is possible to produce versions with special equipment to operate at temperatures and pressures outside the standard usage limits. These equipments include, for example, increased insulation, antifreeze kits, pumps for low temperature operation, stainless steel connections and tank.

Standard switchboard

Switchboard with possibility to alternate pumps with every start-up (2 pumps verision), to start-up the backup pump in case of breakdown (2 pumps version), magnetothermic protection, free contacts to detect alarms and turned-on pumps, free contact to control remotely on/off pumps, protection category IP55.
Electric data: 400V/3/50Hz

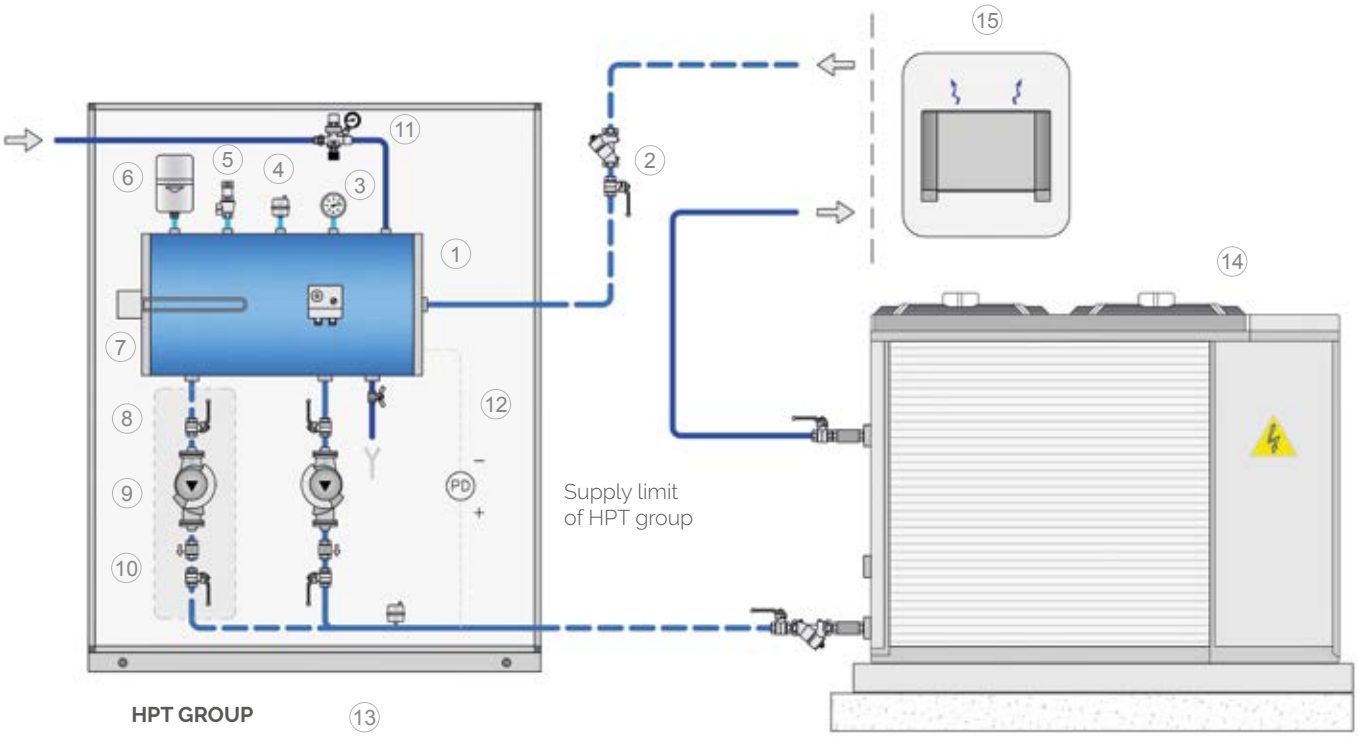
Switchboard with inverter

Each pump can be managed by an inverter. Units equipped with inverters have a pressure transducer which communicates with the inverter through a 4-20 mA signal. All adjustment parameters are pre-loaded during the test run at the company. The user must choose only the desired pressure value set point.
It is possible to remotely control pump 1 and 2. Free contacts available used to verify pumps status.

HPT hydronic systems
Layout 1 - STANDARD

Layout 1 Features: Hydronic kit, chiller and system connected in series, hence the water flow is constant throughout the plant.

NOTE: All HPT Fiorini standard kit kits are Layout 1
NOTE: Layout 1 is available as standard with and without inverter



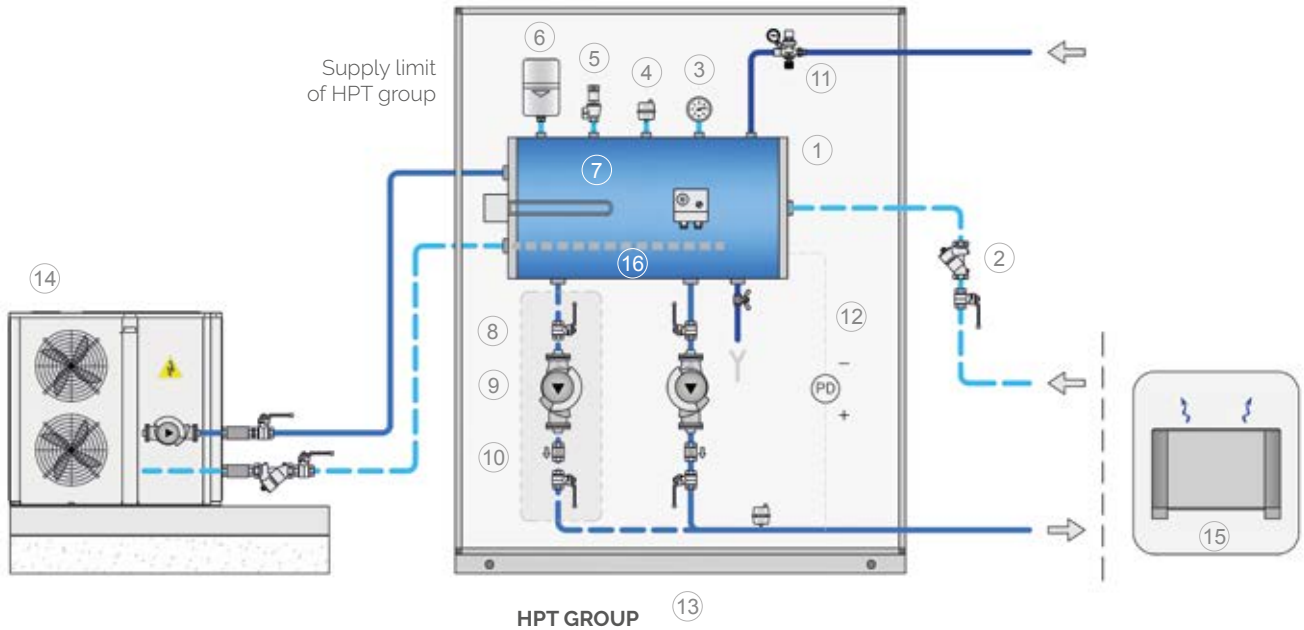
Legend

1. Storage tank
2. Y filter. Optional, supplied non-assembled
3. Manometer
4. Deaerator
5. Safety valve
6. Expansion vessel
7. Kit with electric anti-freeze resistance and anti-freeze thermostat (optional)
8. On-off valve
9. Circulator
10. Check valve (only version with 2 pumps)
11. Automatic filling unit
12. Differential pressure switch (optional)
13. Self-supporting sturdy structure for outside placement
14. Chiller
15. Device

HPT hydronic system
Layout 2 - SPECIAL VERSION

Layout 2 Features: Hydronic Kit and Chiller create the primary circuit, Hydronic Kit and Plant create the secondary circuit. Hence, the two circuits have independent flow rates.

NOTE: Pump unit supplied only on one of the two circuits.
NOTE: Layout 2 is available as standard with and without inverter



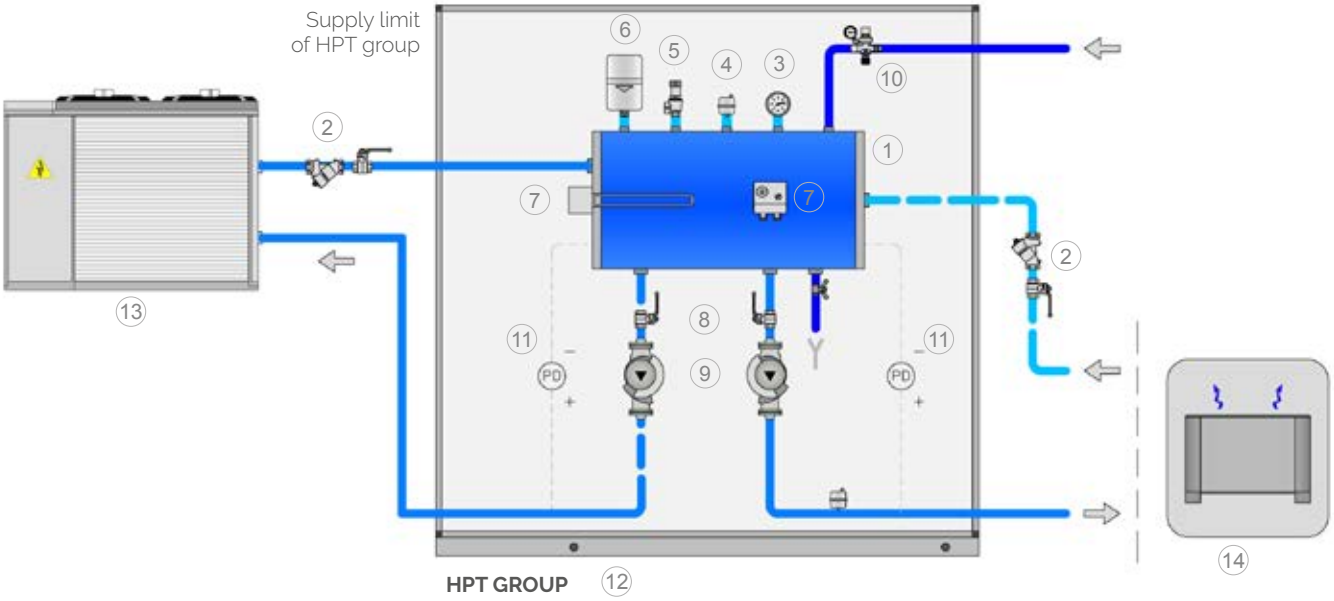
Legend

1. Storage tank
2. Y filter. Optional, supplied non-assembled
3. Manometer
4. Deaerator
5. Safety valve
6. Expansion vessel
7. Kit with electric anti-freeze resistance and anti-freeze thermostat (optional)
8. On-off valve
9. Circulator
10. Check valve (only version with 2 pumps)
11. Automatic filling unit
12. Differential pressure switch (optional)
13. Self-supporting sturdy structure for outdoor placement
14. Chiller
15. Device

HPT hydronic system
Layout 3 - SPECIAL VERSION

Layout 3 features: Hydronic Kit and Chiller create the primary circuit, Hydronic Kit and the system create the independent secondary circuit. Then the two circuits have independent flow rates.

NOTE: Pump assembly supplied on both circuits.

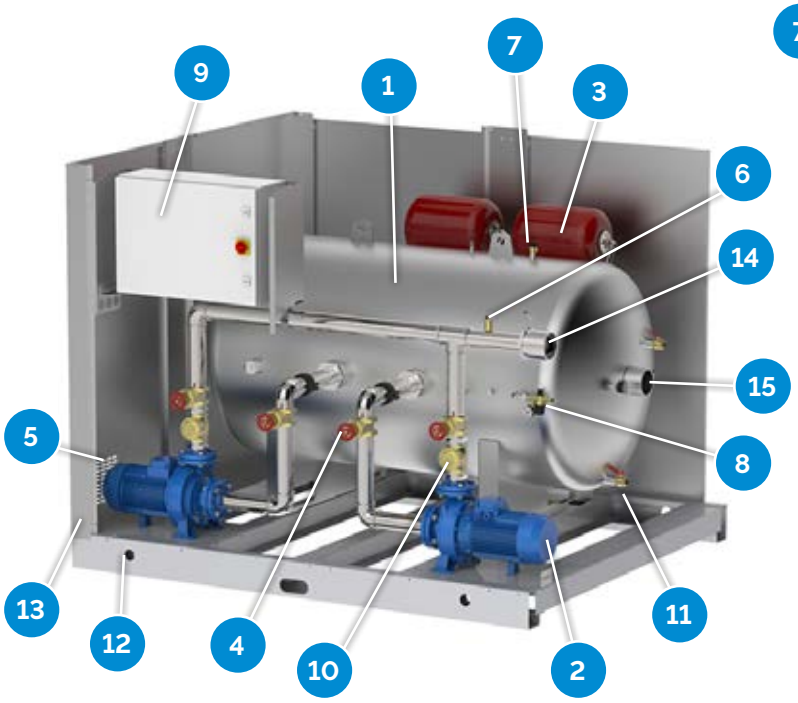


Legend

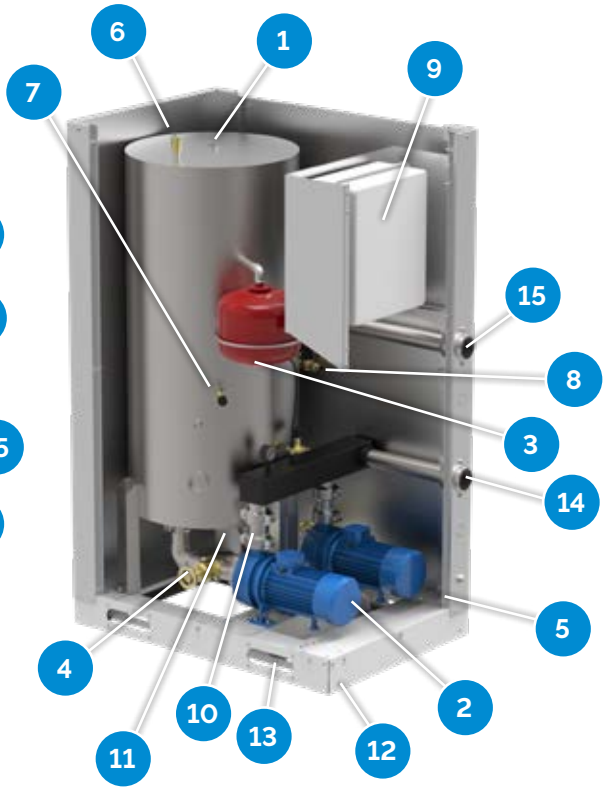
1. Storage tank
2. Y filter. Optional, supplied non-assembled
3. Manometer
4. Deaerator
5. Safety valve
6. Expansion vessel
7. Kit with electric anti-freeze resistance and anti-freeze thermostat (optional)
8. On-off valve
9. Circulator
10. Automatic filling unit
11. Differential pressure switch (optional)
12. Self-supporting sturdy structure for outside placement
13. Chiller
14. Device

Hydronic systems
HPT: components

Horizontal HPT



Vertical HPT

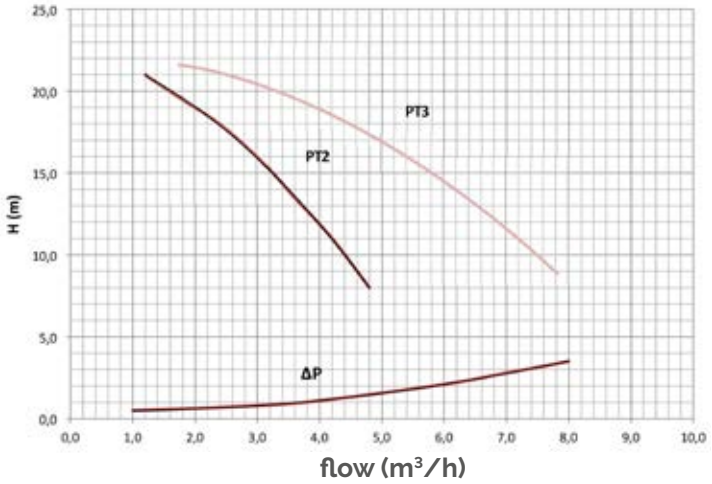


	Components
1	Tank
2	Circulator
3	Expansion vessel
4	On-off valve
5	Automatic ventilation system
6	Pressure relief valve
7	Safety valve
8	Automatic filling unit
9	Switchboard
10	Control valve (version with 2 pumps)
11	Drain
12	Anchoring point (4-6 holes m12/ ø14)
13	Inlet power grid
14	Water outlet
15	Water inlet

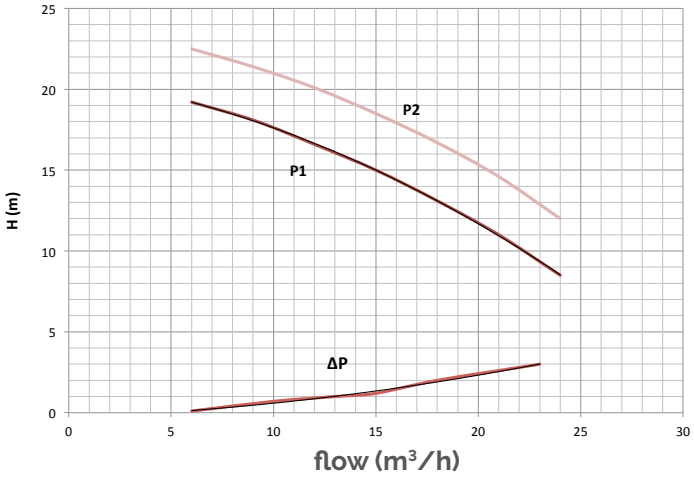
	Components
1	Tank
2	Circulator
3	Expansion vessel
4	On-off valve
5	Automatic ventilation system
6	Pressure relief valve
7	Safety valve
8	Automatic filling unit
9	Switchboard
10	Control valve (version with 2 pumps)
11	Drain
12	Inlet power grid
13	Jacking points
14	Water outlet
15	Water inlet

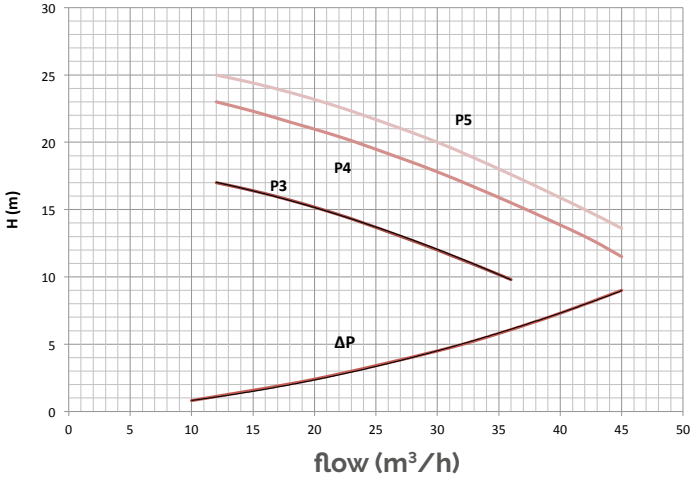
HPT hydronic systems
Prevalence and pressure loss curve

HPT-V 100-200



HPT 300-500

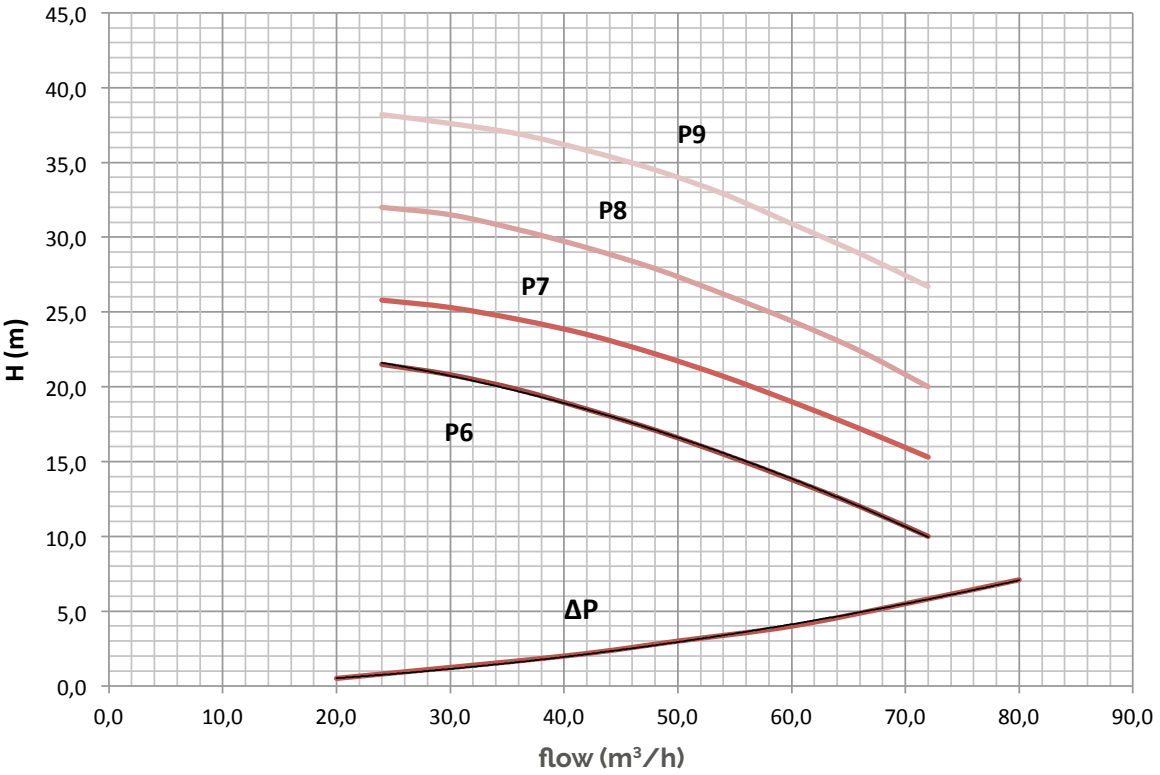


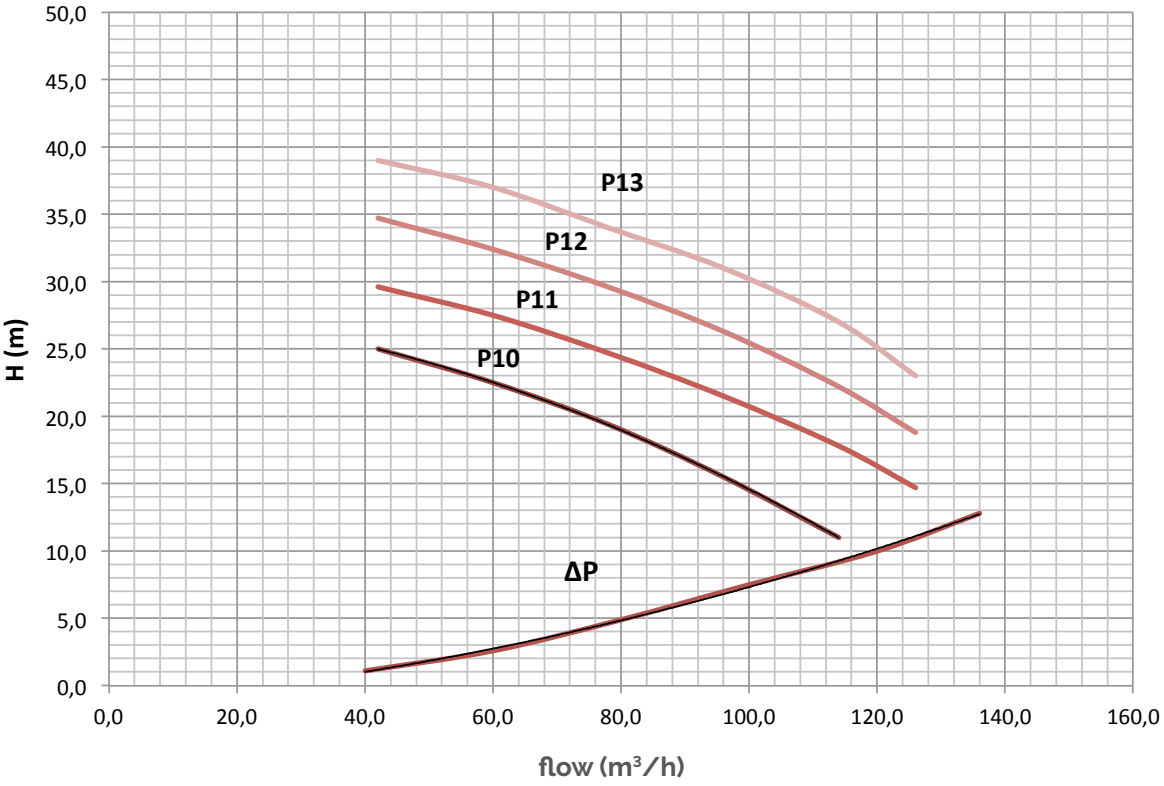


ΔP: pressure loss of the HPT unit

HPT hydronic systems
Prevalence and pressure loss curve

HPT 750-1000

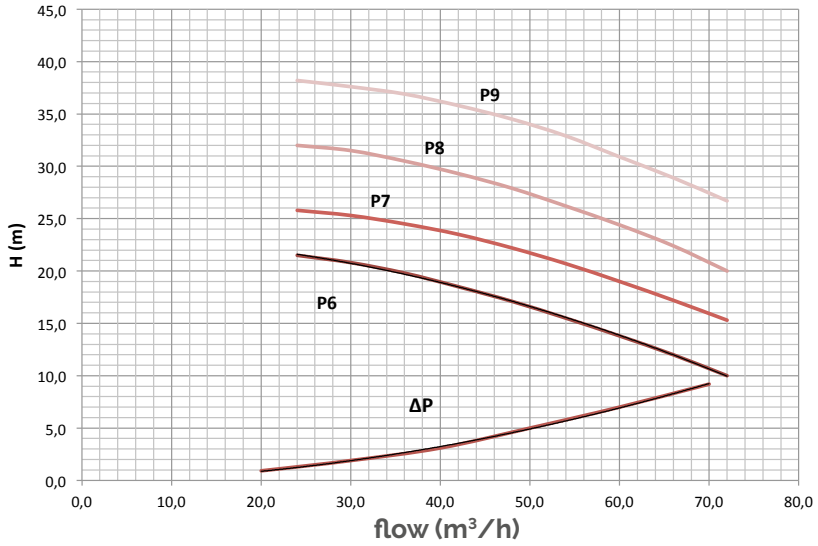


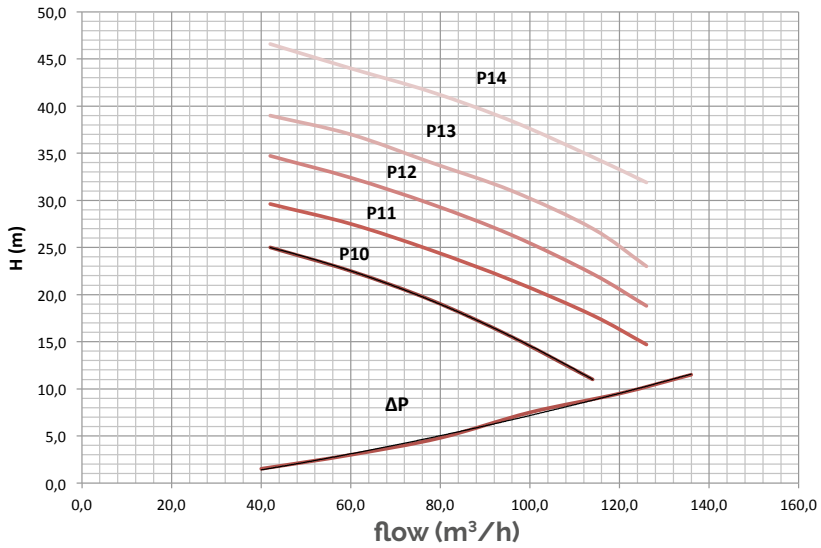


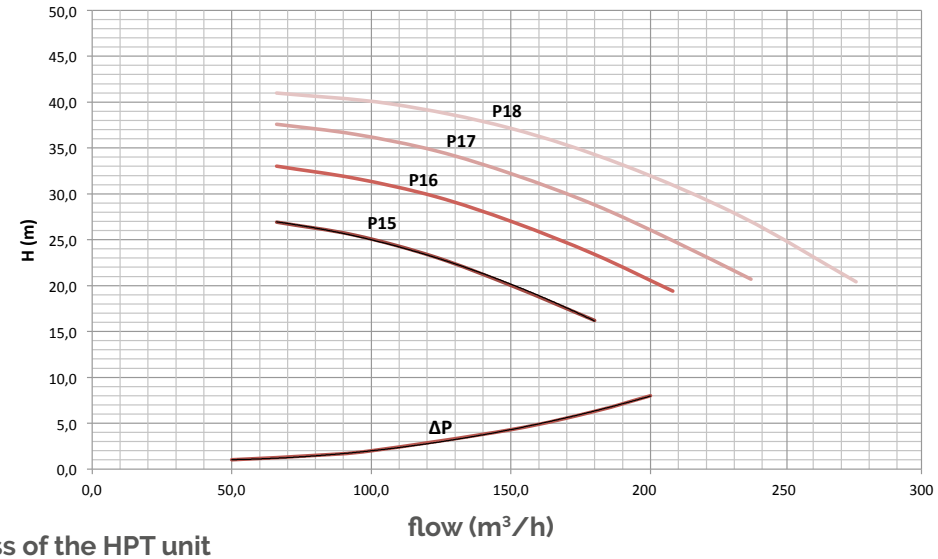
ΔP: pressure loss of the HPT unit

HPT hydronic systems
Prevalence and pressure loss curve

HPT 1500-2500



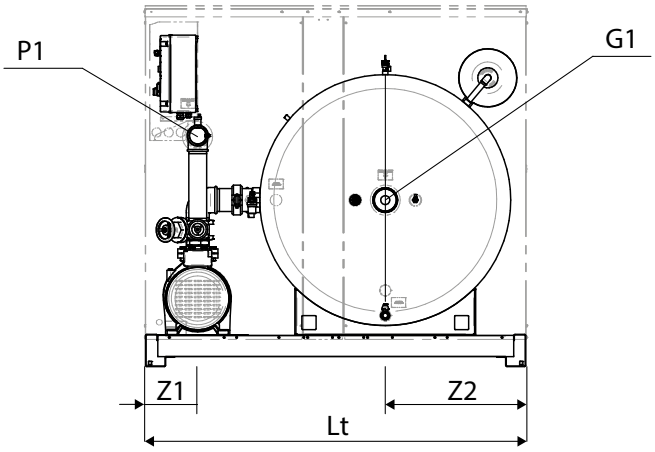


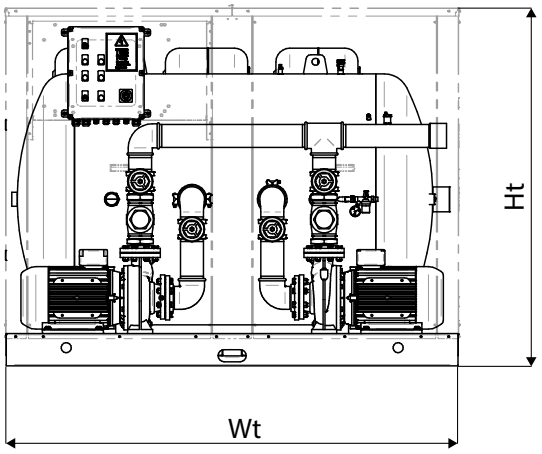


ΔP: pressure loss of the HPT unit

Hydronic systems
HPT: dimensions and connections

Horizontal version





Horizontal HPT dimensions

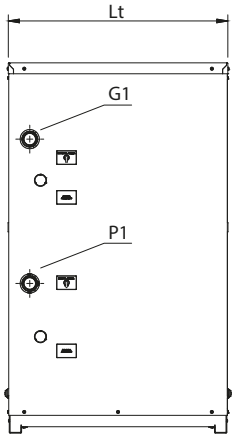
Capacity l	Wt mm	Lt mm	Ht mm	P1 mm	G1 mm	Z1 mm	Z2 mm	G1 inch	P1 inch
300	1504	1120	1265	738	490	212	388	2"1/2	2"1/2
500	1504	1120	1265	738	490	212	388	2"1/2	2"1/2
750	2044	1200	1510	940	604	185	440	3"	3"
1000	2044	1200	1510	940	604	185	440	3"	3"
1500	2260	1900	1782	1145	829	262	703	4"	4"
2500	2260	1900	1782	1145	829	262	703	4"	4"

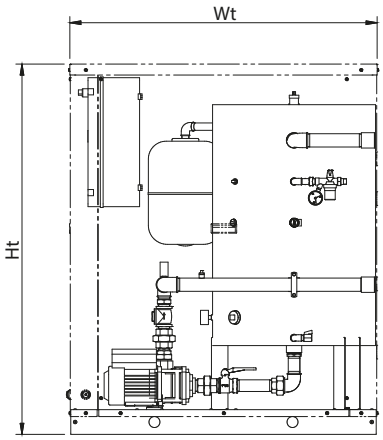
Couplings legend

G1	From plant threaded connection
P1	To energy source threaded connection

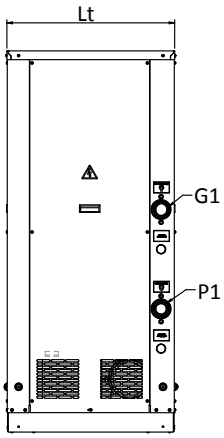
Vertical version

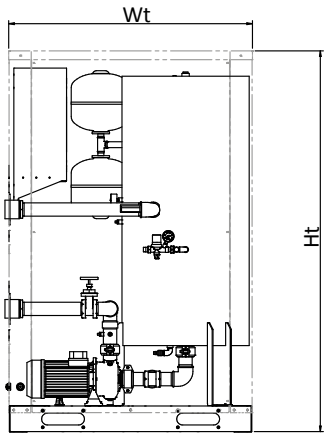
HPT 100-200





HPT 300





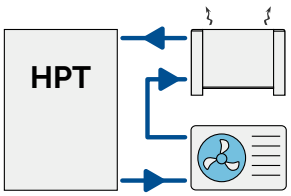
Vertical HPT dimensions

Capacity l	Wt mm	Lt mm	Ht mm	P1 mm	G1 mm	P1 inch	G1 inch
100	1120	800	1350	546	1002	1" 1/2	1" 1/2
200	1120	800	1350	546	1072	1" 1/2	1" 1/2
300	1100	760	1726	558	1008	2" 1/2	2" 1/2

Couplings legend

G1	From plant threaded connection
P1	To energy source threaded connection

HPT Layout 1 without Inverter



HPT	1 pump				2 pumps (1 redundant)				F.L.I kW	F.L.A. (400/3/50) A	Ve l
Capacity	Model	Code	Price	Weight kg	Model	Code	Price	Weight kg			
100 vertical	PT2*	838011493X		171	PT2*	838011494X		176	0,45	1,3	18
	PT3*	838011495X		172	PT3*	838011496X		176	0,45	1,3	18
200 vertical	PT2*	838011497X		193	PT2*	838011498X		198	0,45	1,3	18
	PT3*	838011499X		194	PT3*	838011500X		198	0,45	1,3	18
300 vertical	P1	838010891X		231	P1	838010896X		251	1,1	3,3	25
	P2	838010892X		233	P2	838010897X		254	1,5	3,8	25
	P3	838010893X		233	P3	838010898X		255	1,5	3,8	25
	P4	838010894X		237	P4	838010899X		262	2,2	4,7	25
	P5	838010895X		239	P5	838010900X		266	3	6,4	25
300 horizontal	P1	838010349		260	P1	838010354		305	1,1	3,3	25
	P2	838010350		262	P2	838010355		308	1,5	3,8	25
	P3	838010351		262	P3	838010356		309	1,5	3,4	25
	P4	838010352		266	P4	838010357		316	2,2	4,7	25
	P5	838010353		297	P5	838010358		320	3	6,4	25
500 horizontal	P1	838010359		283	P1	838010364		318	1,1	3,3	25
	P2	838010360		285	P2	838010365		321	1,5	3,8	25
	P3	838010361		285	P3	838010366		322	1,5	3,8	25
	P4	838010362		289	P4	838010367		330	2,2	4,7	25
	P5	838010363		320	P5	838010368		334	3	6,4	25
	P6	838010879X		313	P6	838011056X		369	3	6,1	25
750 horizontal	P6	838010374		425	P6	838010379		476	3	6,1	25
	P7	838011384X		428	P7	838011385X		481	4	8,7	25
	P8	838010375		442	P8	838010380		542	5,5	10,4	25
	P9	838011392X		446	P9	838011393X		550	7,5	13,6	25
	P10	838010376		460	P10	838010381		559	5,5	10,4	25
	P11	838010377		464	P11	838010382		568	7,5	13,6	25
	P12	838011400X		477	P12	838011401X		605	9,2	17,2	25
	P13	838010378		477	P13	838010383		605	11	21,3	25
1000 horizontal	P6	838010384		445	P6	838010389		531	3	6,1	25
	P7	838011386X		447	P7	838011387X		536	4	8,7	25
	P8	838010385		461	P8	838010390		598	5,5	10,4	25
	P9	838011394X		465	P9	838011395X		606	7,5	13,6	25
	P10	838010386		479	P10	838010391		615	5,5	10,4	25
	P11	838010387		484	P11	838010392		624	7,5	13,6	25
	P12	838011402X		496	P12	838011403X		661	9,2	17,2	25
	P13	838010388		496	P13	838010393		661	11	21,3	25

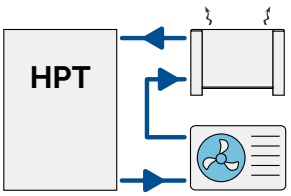
Pve (bar) 1,5 Ps (bar) 3 T min (°C) 0
Nominal conditions for the sizing of the expansion vessels: 4-40°C 100% water head 10 mwc and pre-charge 1.5 bar. In design conditions different from the nominal ones it is necessary to check the volume of the expansion vessels.
*** PT2 and PT3 available in single-phase version on request**

NOTE - Layout 1 is the standard execution unless otherwise stated in the order. Layout 2 and Layout 3 on request.

Legend

F.L.I. Maximum absorbed power
F.L.A. Maximum current absorbed
Ve Expansion vessel capacity
Pve Expansion vessel pre-charge
Ps Maximum operating pressure
T min Minimum liquid temperature

HPT Layout 1 without Inverter



HPT	1 pump				2 pumps (1 redundant)						
Capacity	Model	Code	Price	Weight kg	Model	Code	Price	Weight kg	F.L.I kW	F.L.A. (400/3/50) A	Ve l
1500 horizontal	P6	838010705		653	P6	838010458		716	3	6,1	2x25
	P7	838011388X		656	P7	838011389X		721	4	8,7	2x25
	P8	838010704		670	P8	838010630		783	5,5	10,4	2x25
	P9	838011396X		674	P9	838011397X		791	7,5	13,6	2x25
	P10	838010703		688	P10	838010696		803	5,5	10,4	2x25
	P11	838010702		692	P11	838010695		812	7,5	13,6	2x25
	P12	838011404X		705	P12	838011405X		846	9,2	17,2	2x25
	P13	838010701		705	P13	838010694		849	11	21,3	2x25
	P14	838010700		749	P14	838010693		939	15	27,7	2x25
	P15	838011380X		739	P15	838011381X		921	11	20,2	2x25
	P16	838010699		776	P16	838010692		995	15	27,5	2x25
	P17	838010698		786	P17	838010691		1015	18,5	33	2x25
	P18	838010697		795	P18	838010690		1033	22	40,9	2x25
2500 horizontal	P6	838010689		706	P6	838010682		763	3	6,1	3x25
	P7	838011390X		708	P7	838011391X		768	4	8,7	3x25
	P8	838010688		722	P8	838010681		830	5,5	10,4	3x25
	P9	838011398X		726	P9	838011399X		838	7,5	13,6	3x25
	P10	838010687		740	P10	838010680		843	5,5	10,4	3x25
	P11	838010686		745	P11	838010679		852	7,5	13,6	3x25
	P12	838011406X		757	P12	838011407X		889	9,2	17,2	3x25
	P13	838010685		757	P13	838010678		889	11	21,3	3x25
	P14	838010684		801	P14	838010677		980	15	27,7	3x25
	P15	838011382X		791	P15	838011383X		967	11	20,2	3x25
	P16	838010707		828	P16	838010459		1041	15	27,5	3x25
	P17	838010683		838	P17	838010676		1061	18,5	33	3x25
	P18	838010706		847	P18	838010633		1079	22	40,9	3x25

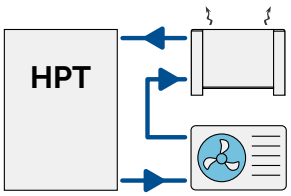
Pve (bar) 1,5 Ps (bar) 3 T min (°C) 0
Nominal conditions for the sizing of the expansion vessels: 4-40°C 100% water head 10 mwc and pre-charge 1.5 bar. In design conditions different from the nominal ones it is necessary to check the volume of the expansion vessels.
*** PT2 and PT3 available in single-phase version on request**

NOTE - Layout 1 is the standard execution unless otherwise stated in the order. Layout 2 and Layout 3 on request.

Legend

F.L.I. Maximum absorbed power
F.L.A. Maximum current absorbed
Ve Expansion vessel capacity
Pve Expansion vessel pre-charge
Ps Maximum operating pressure
T min Minimum liquid temperature

HPT Layout 1 with Inverter



HPT	1 pump				2 pumps (1 redundant)				F.L.I kW	F.L.A. (400/3/50) A	Ve l
Capacity	Model	Code	Price	Weight kg	Model	Code	Price	Weight kg			
100 vertical	PT2*	838011747X		171	PT2*	838011740X		176	0,45	1,3	18
	PT3*	838011748X		172	PT3*	838011741X		176	0,45	1,3	18
200 vertical	PT2*	838011749X		193	PT2*	838011742X		198	0,45	1,3	18
	PT3*	838011750X		194	PT3*	838011636X		198	0,45	1,3	18
300 vertical	P1	838011751X		231	P1	838011743X		251	1,1	2,5	25
	P2	838011752X		233	P2	838011744X		254	1,5	3,2	25
	P3	838011753X		233	P3	838011745X		255	1,5	3,4	25
	P4	838011754X		237	P4	838011746X		262	2,2	4,8	25
	P5	838011755X		239	P5	838011578X		266	3	5,6	25
300 horizontal	P1	838011666X		260	P1	83801A677X		305	1,1	2,5	25
	P2	838011667X		262	P2	838011709X		308	1,5	3,2	25
	P3	838011668X		262	P3	838011710X		309	1,5	3,4	25
	P4	838011669X		266	P4	838011711X		316	2,2	4,8	25
	P5	838011670X		297	P5	83801A573X		320	3	5,6	25
500 horizontal	P1	838011671X		283	P1	838011712X		318	1,1	2,5	25
	P2	838011672X		285	P2	838011713X		321	1,5	3,2	25
	P3	838011491X		285	P3	838011366X		322	1,5	3,4	25
	P4	838011673X		289	P4	838011714X		330	2,2	4,8	25
	P5	838011674X		320	P5	838011715X		334	3	5,6	25
	P6	838011996X		357	P6	838011469X		408	3	6,4	25
750 horizontal	P6	838011675X		425	P6	83801A603X		476	3	6,4	25
	P7	838011676X		428	P7	838011716X		481	4	8,7	25
	P8	838011677X		442	P8	838011717X		542	5,5	10,6	25
	P9	838011678X		446	P9	838011718X		550	7,5	13,6	25
	P10	838011679X		460	P10	838011719X		559	5,5	10,6	25
	P11	838011680X		464	P11	838011720X		568	7,5	13,6	25
	P12	838011681X		477	P12	838011721X		605	9,2	17,2	25
	P13	838011682X		477	P13	838011612X		605	11	21,3	25
1000 horizontal	P6	838011683X		445	P6	838011577X		531	3	6,4	25
	P7	838011573X		447	P7	838011722X		536	4	8,7	25
	P8	838011684X		461	P8	838011336X		598	5,5	10,6	25
	P9	838011685X		465	P9	838011656X		606	7,5	13,6	25
	P10	838011686X		479	P10	838011723X		615	5,5	10,6	25
	P11	838011687X		484	P11	838011724X		624	7,5	13,6	25
	P12	838011688X		496	P12	83801A809X		661	9,2	17,2	25
	P13	838011689X		496	P13	838011988X		661	11	21,3	25

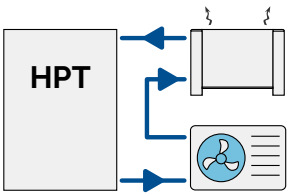
Pve (bar) 1,5 Ps (bar) 3 T min (°C) 0
Nominal conditions for the sizing of the expansion vessels: 4-40°C 100% water head 10 mwc and pre-charge 1.5 bar. In design conditions different from the nominal ones it is necessary to check the volume of the expansion vessels.
*** PT2 and PT3 available in single-phase version on request**

NOTE - Layout 1 is the standard execution unless otherwise stated in the order. Layout 2 and Layout 3 on request.

Legend

F.L.I. Maximum absorbed power
F.L.A. Maximum current absorbed
Ve Expansion vessel capacity
Pve Expansion vessel pre-charge
Ps Maximum operating pressure
T min Minimum liquid temperature

HPT Layout 1 with Inverter



HPT	1 pump				2 pumps (1 redundant)				F.L.I kW	F.L.A. (400/3/50) A	Ve l
Capacity	Model	Code	Price	Weight kg	Model	Code	Price	Weight kg			
1500 horizontal	P6	838011690X		653	P6	838011725X		716	3	6,4	2x25
	P7	838011691X		656	P7	838011628X		721	4	8,7	2x25
	P8	838011413X		670	P8	838011367X		783	5,5	10,6	2x25
	P9	838011457X		674	P9	838011726X		791	7,5	13,6	2x25
	P10	838011417X		688	P10	838011727X		803	5,5	10,6	2x25
	P11	838011586X		692	P11	838011562X		812	7,5	13,6	2x25
	P12	838011692X		705	P12	83801A802X		846	9,2	17,2	2x25
	P13	838011453X		705	P13	838011616X		849	11	21,3	2x25
	P14	838011693X		749	P14	838011728X		939	15	27,7	2x25
	P15	838011694X		739	P15	838011729X		921	11	20,2	2x25
	P16	838011695X		776	P16	838011730X		995	15	26,6	2x25
	P17	838011696X		786	P17	838011731X		1015	18,5	33	2x25
	P18	838011697X		795	P18	83801A801X		1033	22	40,4	2x25
2500 horizontal	P6	838011698X		706	P6	838011526X		763	3	6,4	3x25
	P7	838011699X		708	P7	838011732X		768	4	8,7	3x25
	P8	838011583X		722	P8	838011733X		830	5,5	10,6	3x25
	P9	838011700X		726	P9	838011734X		838	7,5	13,6	3x25
	P10	838011701X		740	P10	838011735X		843	5,5	10,6	3x25
	P11	83801A308X		745	P11	83801A550X		852	7,5	13,6	3x25
	P12	838011702X		757	P12	838011736X		889	9,2	17,2	3x25
	P13	838011703X		757	P13	838011737X		889	11	21,3	3x25
	P14	838011704X		801	P14	838011632X		980	15	27,7	3x25
	P15	838011705X		791	P15	838011738X		967	11	20,2	3x25
	P16	838011706X		828	P16	83801A657X		1041	15	26,6	3x25
	P17	838011707X		838	P17	83801B008X		1061	18,5	33	3x25
	P18	838011708X		847	P18	838011739X		1079	22	40,4	3x25

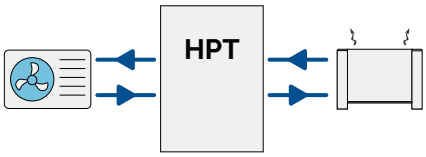
Pve (bar) 1,5 Ps (bar) 3 T min (°C) 0
Nominal conditions for the sizing of the expansion vessels: 4-40°C 100% water head 10 mwc and pre-charge 1.5 bar. In design conditions different from the nominal ones it is necessary to check the volume of the expansion vessels.
*** PT2 and PT3 available in single-phase version on request**

NOTE - Layout 1 is the standard execution unless otherwise stated in the order. Layout 2 and Layout 3 on request.

Legend

F.L.I. Maximum absorbed power
F.L.A. Maximum current absorbed
Ve Expansion vessel capacity
Pve Expansion vessel pre-charge
Ps Maximum operating pressure
T min Minimum liquid temperature

HPT Layout 2 without Inverter



HPT	1 pump				2 pumps (1 redundant)				F.L.I kW	F.L.A. (400/3/50) A	Ve l
Capacity	Model	Code	Price	Weight kg	Model	Code	Price	Weight kg			
100 vertical	PT2*	838011800X		171	PT2*	838011846X		176	0,45	1,3	18
	PT3*	838011801X		172	PT3*	83801A908X		176	0,45	1,3	18
200 vertical	PT2*	838011802X		193	PT2*	838011847X		198	0,45	1,3	18
	PT3*	838011803X		194	PT3*	838011848X		198	0,45	1,3	18
300 vertical	P1	838011646X		231	P1	838011849X		251	1,1	2,5	25
	P2	838011538X		233	P2	838011850X		254	1,5	3,2	25
	P3	838011537X		233	P3	838011851X		255	1,5	3,4	25
	P4	838011804X		237	P4	838011852X		262	2,2	4,8	25
	P5	838011805X		239	P5	838011853X		266	3	5,6	25
300 horizontal	P1	83801A580X		260	P1	838011806X		305	1,1	2,5	25
	P2	83801A211X		262	P2	838011807X		308	1,5	3,2	25
	P3	83801A810X		262	P3	83801A561X		309	1,5	3,4	25
	P4	838011756X		266	P4	838011808X		316	2,2	4,8	25
	P5	838011757X		297	P5	83801A699X		320	3	5,6	25
500 horizontal	P1	83801A777X		283	P1	83801A271X		318	1,1	2,5	25
	P2	83801A445X		285	P2	83801A244X		321	1,5	3,2	25
	P3	838011758X		285	P3	83801A671X		322	1,5	3,4	25
	P4	83801A512X		289	P4	838011809X		330	2,2	4,8	25
	P5	838011759X		320	P5	838011810X		334	3	5,6	25
	P6	838011994X		357	P6	838011995X		408	3	6,4	25
750 horizontal	P6	838011760X		425	P6	838011811X		476	3	6,4	25
	P7	838011761X		428	P7	838011812X		481	4	8,7	25
	P8	838011762X		442	P8	838011813X		542	5,5	10,6	25
	P9	838011763X		446	P9	838011814X		550	7,5	13,6	25
	P10	838011764X		460	P10	838011815X		559	5,5	10,6	25
	P11	838011765X		464	P11	838011816X		568	7,5	13,6	25
	P12	838011766X		477	P12	838011817X		605	9,2	17,2	25
	P13	838011767X		477	P13	838011818X		605	11	21,3	25
1000 horizontal	P6	838011768X		445	P6	838011819X		531	3	6,4	25
	P7	838011769X		447	P7	83801A304X		536	4	8,7	25
	P8	838011770X		461	P8	838011820X		598	5,5	10,6	25
	P9	838011771X		465	P9	838011821X		606	7,5	13,6	25
	P10	838011772X		479	P10	838011822X		615	5,5	10,6	25
	P11	838011773X		484	P11	838011550X		624	7,5	13,6	25
	P12	838011774X		496	P12	838011823X		661	9,2	17,2	25
	P13	838011775X		496	P13	83801A192		661	11	21,3	25

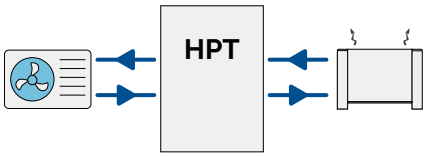
Pve (bar) 1,5 Ps (bar) 3 T min (°C) 0
Nominal conditions for the sizing of the expansion vessels: 4-40°C 100% water head 10 mwc and pre-charge 1.5 bar. In design conditions different from the nominal ones it is necessary to check the volume of the expansion vessels.
*** PT2 and PT3 available in single-phase version on request**

NOTE - Layout 1 is the standard execution unless otherwise stated in the order. Layout 2 and Layout 3 on request.

Legend

F.L.I. Maximum absorbed power
F.L.A. Maximum current absorbed
Ve Expansion vessel capacity
Pve Expansion vessel pre-charge
Ps Maximum operating pressure
T min Minimum liquid temperature

HPT Layout 2 without Inverter



HPT	1 pump				2 pumps (1 redundant)				F.L.I kW	F.L.A. (400/3/50) A	Ve l
Capacity	Model	Code	Price	Weight kg	Model	Code	Price	Weight kg			
1500 horizontal	P6	838011248X		653	P6	83801A305X		716	3	6,4	2x25
	P7	838011776X		656	P7	838011824X		721	4	8,7	2x25
	P8	838011415X		670	P8	838011825X		783	5,5	10,6	2x25
	P9	838011777X		674	P9	838011595X		791	7,5	13,6	2x25
	P10	838011778X		688	P10	838011826X		803	5,5	10,6	2x25
	P11	838011779X		692	P11	838011827X		812	7,5	13,6	2x25
	P12	838011780X		705	P12	838011828X		846	9,2	17,2	2x25
	P13	838011781X		705	P13	838011829X		849	11	21,3	2x25
	P14	838011782X		749	P14	838011830X		939	15	27,7	2x25
	P15	838011783X		739	P15	838011831X		921	11	20,2	2x25
	P16	838011784X		776	P16	838011832X		995	15	26,6	2x25
	P17	838011785X		786	P17	838011833X		1015	18,5	33	2x25
	P18	838011786X		795	P18	838011834X		1033	22	40,4	2x25
2500 horizontal	P6	838011787X		706	P6	838011835X		763	3	6,4	3x25
	P7	838011788X		708	P7	838011836X		768	4	8,7	3x25
	P8	838011789X		722	P8	838011837X		830	5,5	10,6	3x25
	P9	838011790X		726	P9	838011838X		838	7,5	13,6	3x25
	P10	838011791X		740	P10	838011839X		843	5,5	10,6	3x25
	P11	838011792X		745	P11	83801A303X		852	7,5	13,6	3x25
	P12	838011793X		757	P12	838011840X		889	9,2	17,2	3x25
	P13	838011794X		757	P13	838011841X		889	11	21,3	3x25
	P14	838011795X		801	P14	838011842X		980	15	27,7	3x25
	P15	838011796X		791	P15	838011553X		967	11	20,2	3x25
	P16	838011797X		828	P16	838011843X		1041	15	26,6	3x25
	P17	838011798X		838	P17	838011844X		1061	18,5	33	3x25
	P18	838011799X		847	P18	838011845X		1079	22	40,4	3x25

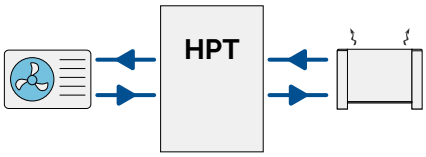
Pve (bar) 1,5 Ps (bar) 3 T min (°C) 0
Nominal conditions for the sizing of the expansion vessels: 4-40°C 100% water head 10 mwc and pre-charge 1.5 bar. In design conditions different from the nominal ones it is necessary to check the volume of the expansion vessels.
*** PT2 and PT3 available in single-phase version on request**

NOTE - Layout 1 is the standard execution unless otherwise stated in the order. Layout 2 and Layout 3 on request.

Legend

F.L.I. Maximum absorbed power
F.L.A. Maximum current absorbed
Ve Expansion vessel capacity
Pve Expansion vessel pre-charge
Ps Maximum operating pressure
T min Minimum liquid temperature

HPT Layout 2 with Inverter



HPT	1 pump				2 pumps (1 redundant)				F.L.I kW	F.L.A. (400/3/50) A	Ve l
Capacity	Model	Code	Price	Weight kg	Model	Code	Price	Weight kg			
100 vertical	PT2*	838011903X		171	PT2*	838011949X		176	0,45	1,3	18
	PT3*	838011904X		172	PT3*	838011950X		176	0,45	1,3	18
200 vertical	PT2*	838011905X		193	PT2*	838011951X		198	0,45	1,3	18
	PT3*	838011906X		194	PT3*	838011952X		198	0,45	1,3	18
300 vertical	P1	838011907X		231	P1	838011953X		251	1,1	2,5	25
	P2	838011908X		233	P2	838011954X		254	1,5	3,2	25
	P3	838011909X		233	P3	838011955X		255	1,5	3,4	25
	P4	838011910X		237	P4	838011956X		262	2,2	4,8	25
	P5	838011911X		239	P5	838011957X		266	3	5,6	25
300 horizontal	P1	838011854X		260	P1	838011912X		305	1,1	2,5	25
	P2	838011855X		262	P2	838011913X		308	1,5	3,2	25
	P3	838011856X		262	P3	838011914X		309	1,5	3,4	25
	P4	838011857X		266	P4	838011915X		316	2,2	4,8	25
	P5	838011858X		297	P5	838011916X		320	3	5,6	25
500 horizontal	P1	838011664X		283	P1	838011917X		318	1,1	2,5	25
	P2	838011859X		285	P2	838011643X		321	1,5	3,2	25
	P3	83801A307X		285	P3	838011918X		322	1,5	3,4	25
	P4	838011860X		289	P4	838011919X		330	2,2	4,8	25
	P5	838011861X		320	P5	838011920X		334	3	5,6	25
	P6	838011992X		357	P6	838011993X		408	3	6,4	25
750 horizontal	P6	838011862X		425	P6	83801A612X		476	3	6,4	25
	P7	838011863X		428	P7	838011605X		481	4	8,7	25
	P8	838011864X		442	P8	838011921X		542	5,5	10,6	25
	P9	838011865X		446	P9	838011922X		550	7,5	13,6	25
	P10	838011866X		460	P10	838011923X		559	5,5	10,6	25
	P11	838011867X		464	P11	838011924X		568	7,5	13,6	25
	P12	838011868X		477	P12	838011925X		605	9,2	17,2	25
	P13	838011869X		477	P13	838011926X		605	11	21,3	25
1000 horizontal	P6	838011870X		445	P6	83801A715X		531	3	6,4	25
	P7	838011871X		447	P7	838011551X		536	4	8,7	25
	P8	838011872X		461	P8	838011927X		598	5,5	10,6	25
	P9	838011525X		465	P9	838011928X		606	7,5	13,6	25
	P10	838011873X		479	P10	838011929X		615	5,5	10,6	25
	P11	838011874X		484	P11	838011930X		624	7,5	13,6	25
	P12	838011875X		496	P12	83801A788X		661	9,2	17,2	25
	P13	838011876X		496	P13	838011558X		661	11	21,3	25

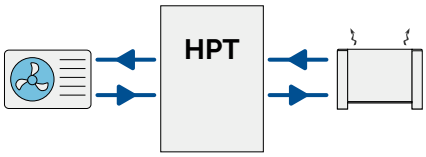
Pve (bar) 1,5 Ps (bar) 3 T min (°C) 0
Nominal conditions for the sizing of the expansion vessels: 4-40°C 100% water head 10 mwc and pre-charge 1.5 bar. In design conditions different from the nominal ones it is necessary to check the volume of the expansion vessels.
*** PT2 and PT3 available in single-phase version on request**

NOTE - Layout 1 is the standard execution unless otherwise stated in the order. Layout 2 and Layout 3 on request.

Legend

F.L.I. Maximum absorbed power
F.L.A. Maximum current absorbed
Ve Expansion vessel capacity
Pve Expansion vessel pre-charge
Ps Maximum operating pressure
T min Minimum liquid temperature

HPT Layout 2 with Inverter



HPT	1 pump				2 pumps (1 redundant)				F.L.I kW	F.L.A. (400/3/50) A	Ve l
Capacity	Model	Code	Price	Weight kg	Model	Code	Price	Weight kg			
1500 horizontal	P6	838011877X		653	P6	838011931X		716	3	6,4	2x25
	P7	838011878X		656	P7	838011590X		721	4	8,7	2x25
	P8	838011879X		670	P8	838011661X		783	5,5	10,6	2x25
	P9	838011880X		674	P9	838011932X		791	7,5	13,6	2x25
	P10	838011881X		688	P10	838011933X		803	5,5	10,6	2x25
	P11	838011882X		692	P11	838011934X		812	7,5	13,6	2x25
	P12	838011883X		705	P12	838011935X		846	9,2	17,2	2x25
	P13	838011884X		705	P13	838011936X		849	11	21,3	2x25
	P14	838011885X		749	P14	838011937X		939	15	27,7	2x25
	P15	838011886X		739	P15	838011938X		921	11	20,2	2x25
	P16	838011887X		776	P16	838011939X		995	15	26,6	2x25
	P17	838011888X		786	P17	838011940X		1015	18,5	33	2x25
	P18	838011889X		795	P18	838011941X		1033	22	40,4	2x25
2500 horizontal	P6	838011890X		706	P6	838011527X		763	3	6,4	3x25
	P7	838011891X		708	P7	838011531X		768	4	8,7	3x25
	P8	838011892X		722	P8	838011530X		830	5,5	10,6	3x25
	P9	838011893X		726	P9	838011942X		838	7,5	13,6	3x25
	P10	838011894X		740	P10	838011943X		843	5,5	10,6	3x25
	P11	838011895X		745	P11	838011532X		852	7,5	13,6	3x25
	P12	838011896X		757	P12	838011512X		889	9,2	17,2	3x25
	P13	838011897X		757	P13	838011944X		889	11	21,3	3x25
	P14	838011898X		801	P14	838011945X		980	15	27,7	3x25
	P15	838011899X		791	P15	838011946X		967	11	20,2	3x25
	P16	838011900X		828	P16	838011533X		1041	15	26,6	3x25
	P17	838011901X		838	P17	838011947X		1061	18,5	33	3x25
	P18	838011902X		847	P18	838011948X		1079	22	40,4	3x25

Pve (bar) 1,5 Ps (bar) 3 T min (°C) 0
Nominal conditions for the sizing of the expansion vessels: 4-40°C 100% water head 10 mwc and pre-charge 1.5 bar. In design conditions different from the nominal ones it is necessary to check the volume of the expansion vessels.
*** PT2 and PT3 available in single-phase version on request**

NOTE - Layout 1 is the standard execution unless otherwise stated in the order. Layout 2 and Layout 3 on request.

Legend

F.L.I. Maximum absorbed power
F.L.A. Maximum current absorbed
Ve Expansion vessel capacity
Pve Expansion vessel pre-charge
Ps Maximum operating pressure
T min Minimum liquid temperature

Hydronic systems
HPT accessories

1 **Programmable timer for alternating pumps**
In the dual pump configuration, the timer can be used to handle alternating pump operation at specified time intervals. Without the timer, the alternating pump operation occurs at each startup of the group. Default alternation every 48 hours programmable.

*** WARNING:** If the system operates 24 hours a day, 7 days a week, the pump alternation is not guaranteed by the standard group. In this case, we recommend the use of this accessory.

Code	Description	Price
838081104X	TIMER OPTION 48H	

2 **Differential pressure switch**
Security device that allows you to verify that there is flow inside the system. The device generates an alarm signal but does not automatically stop the machine.

Code	Description	Price
838081000X	DIFFERENTIAL PRESSURE SWITCH	

3 **Anti-vibrating feet**
Set of anti-vibrating feet to be placed on the machine's support points. The feet are supplied disassembled.

Code	Description	Price
838080917X	ANTIVIBRATION FOR HPT 300/500	
838080936X	ANTIVIBRATION FOR HPT 750/1000	
838080938X	ANTIVIBRATION FOR HPT 1500/2500L	

4 **Antifreeze electric resistance kit (special version)**
This specification is aimed at ensuring the operation of the machine under severe temperature conditions (from +4°C to -20°C), preventing the formation of ice, especially during start-up and shutdown phases. **see page: 150**

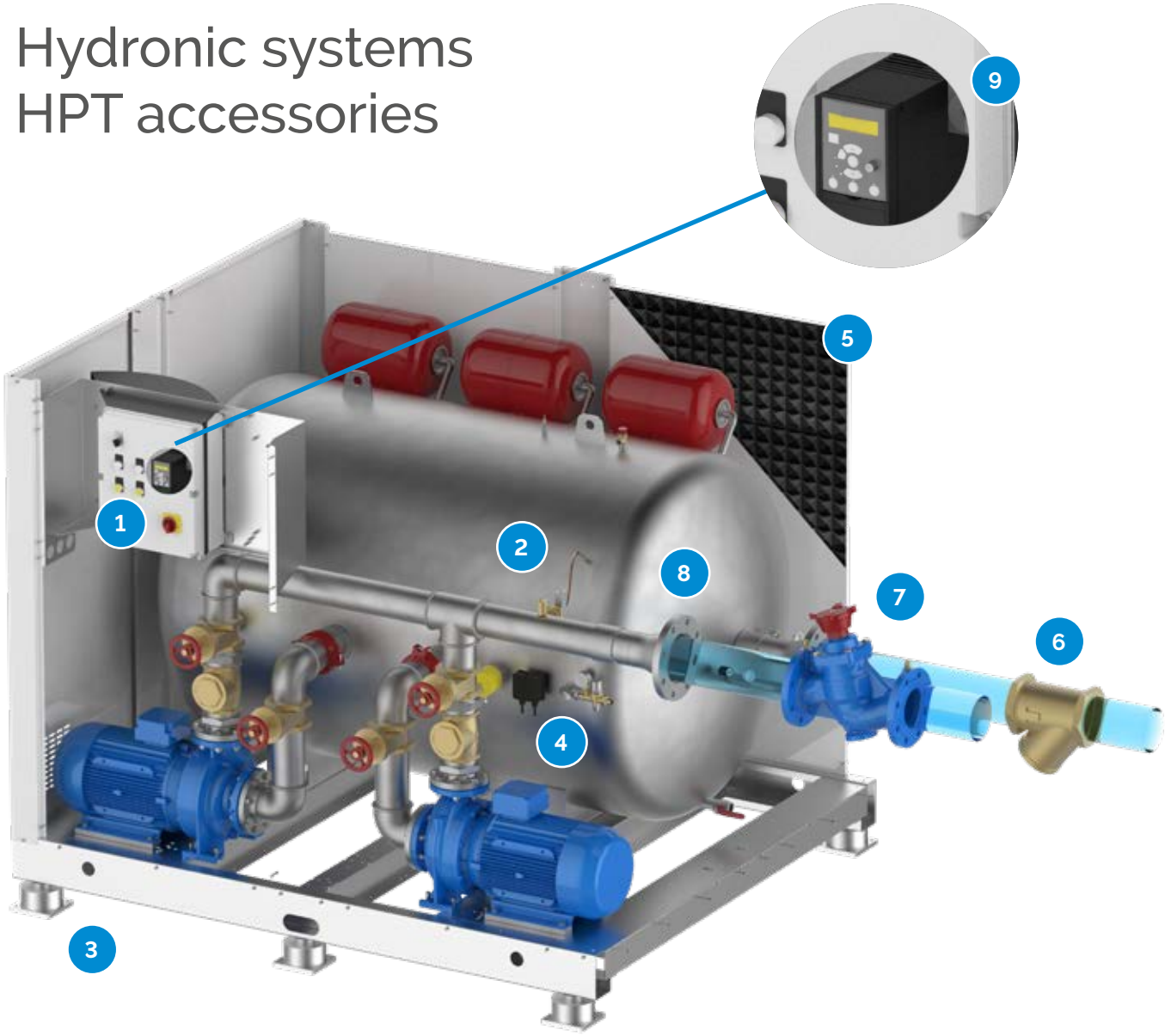
5 **Soundproof coating (special version)**
Soundproofing cladding for the framework is available, which significantly reduces the noise emission level of the machine.
see page: 150

6 **Filter (special version)**
Mesh filter, with 1000 micron holes, can be placed outside the unit to protect the pumps from any impurities in the equipment.
see page: 150

7 **Balancing valves (special version)**
Valve can be connected externally to balance the flow within the circuit.
see page: 150

8 **Tailored connections**
From Threaded to Flanged/Grooved Standard **see page: 148**
Special version for larger size, flanged grooved in various materials **see page: 150**

Hydronic systems
HPT accessories



9 **Standard switchboard with BMS**
Integration of BMS module to control remotely pumps and availability to check pump status remotely (pump on and/or alarms). In the case of application with an inverter, it is also possible to vary the pressure set point. Communication protocol Modbus through serial port RS-485.

Stainless steel execution
In projects where the fluid temperature is between -11°C and -20°C, the hydronic kits are produced in a special configuration by replacing the standard hydraulic components with components suitable for working at low temperatures by exploiting the characteristics of the stainless steel material.
see page: 150

Wooden box packing (special version)
Extra protective packing suitable for risky and long-distance transport.
see page: 150

Increased insulation
This increased insulation compared to the standard allows the use of the kit in particularly harsh temperature conditions (from +4°C to -20°C), avoiding the formation of ice or condensation.
see page: 150

Low temperature pump
In projects where the fluid temperature is between -11°C and -20°C, the standard pump is replaced with a special pump suitable for working in the aforementioned conditions.
see page: 150

HP 2.0
Hydronic system

The HP 2.0 units are hydraulic stations meant to reduce the set-up time of the conditioning and cooling devices. They can be linked to any kind of water cooler.

Standard equipment

Fluid types:
- water
- Ethylene glycol up to 40%
- Propylene glycol up to 40%

Insulation: anti-condensate elastomer
Pumps: 1 or 2
Execution: Layout 1
Inverter: with or without

Standard equipment usage limit

Fluid temperature	Environment temp.	Max. pressure
5°C / +60°C	10°C / +40°C	3 bar

Special equipment usage limit available on configurator (see page 108)

Fluid temperature	Environment temp.	Max. pressure
-20°C / +60°C	-20 / +40°C	3 bar

The HP unit has:

- piping insulated with anti-condensate elastomere
- Single or double centrifugal pump with shut-off valve
- Safety valve
- Deaerator
- Fill-up/drain valve
- Base and self-supporting panels made of galvanized and coated steel sheets, suitable for outdoor installations
- Panels that can be quickly and easily removed
- Easy and quick access to the switchboard
- Switchboard (standard or with inverter)

The broad range of combinations offers a solution for every single type of installation.
Expansion vessel available on request.

Accessories: See pag. 140 for the list of available accessories

Start-up: the first start-up is recommended. See page 361



Upon request, it is possible to produce versions with special equipment to operate at temperatures and pressures outside the standard usage limits. These equipments include, for example, increased insulation, antifreeze kits, pumps for low temperature operation, stainless steel connections.

Standard switchboard

Switchboard with possibility to alternate pumps with every start-up (2 pumps version), to start-up the backup pump in case of breakdown (2 pumps version), magnetothermic protection, free contacts to detect alarms and turned-on pumps, free contact to control remotely on/off pumps, protection category IP55.
Electric data: 400V/3/50Hz

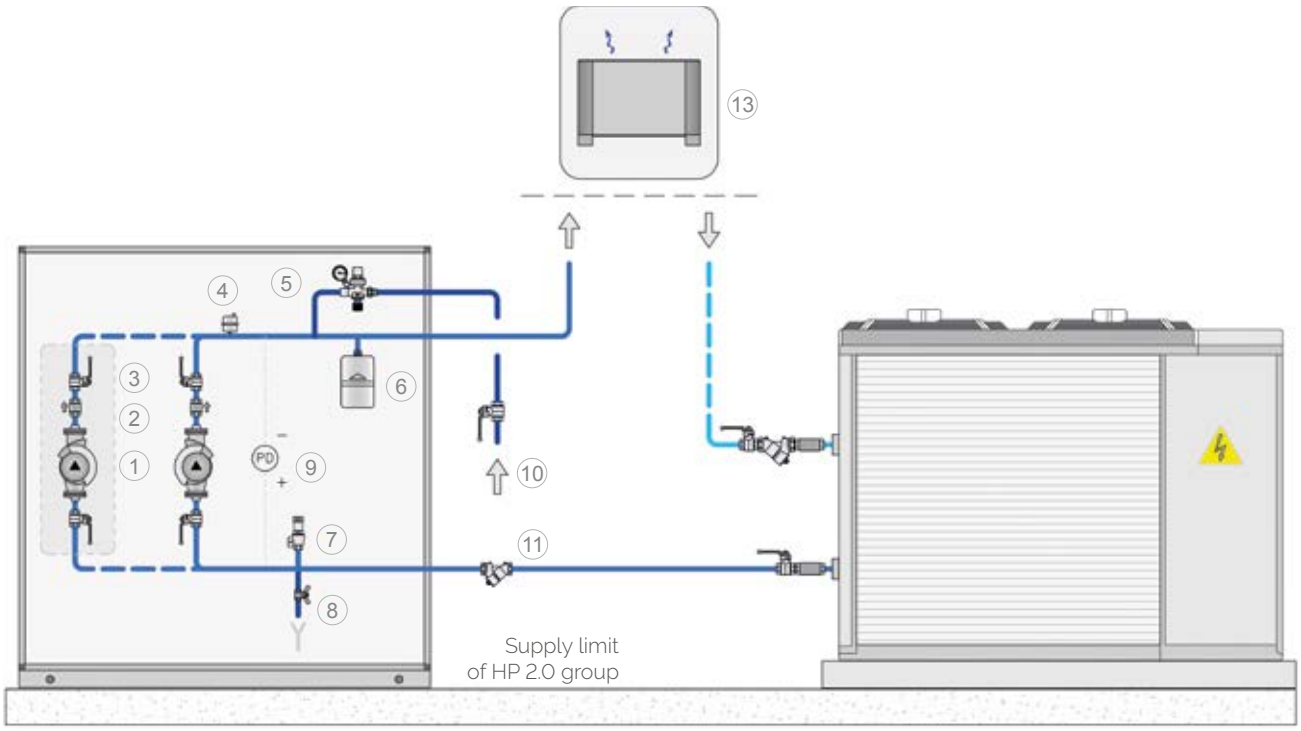
Standard switchboard with inverter

Each pump can be managed by an inverter. Units equipped with inverters have a pressure transducer which communicates with the inverter through a 4-20 mA signal. All adjustment parameters are pre-loaded during the test run at the company. The user must choose only the desired pressure value set point.
It is possible to remotely control pump 1 and 2. Free contacts available used to verify pumps status.

HP 2.0 hydronic systems: hydraulic chart

Features: Hydronic kit, chiller and plant connected in series, hence the water flow is constant throughout the plant.

NOTE: All HPT Fiorini standard kit kits are designed according to the following chart.

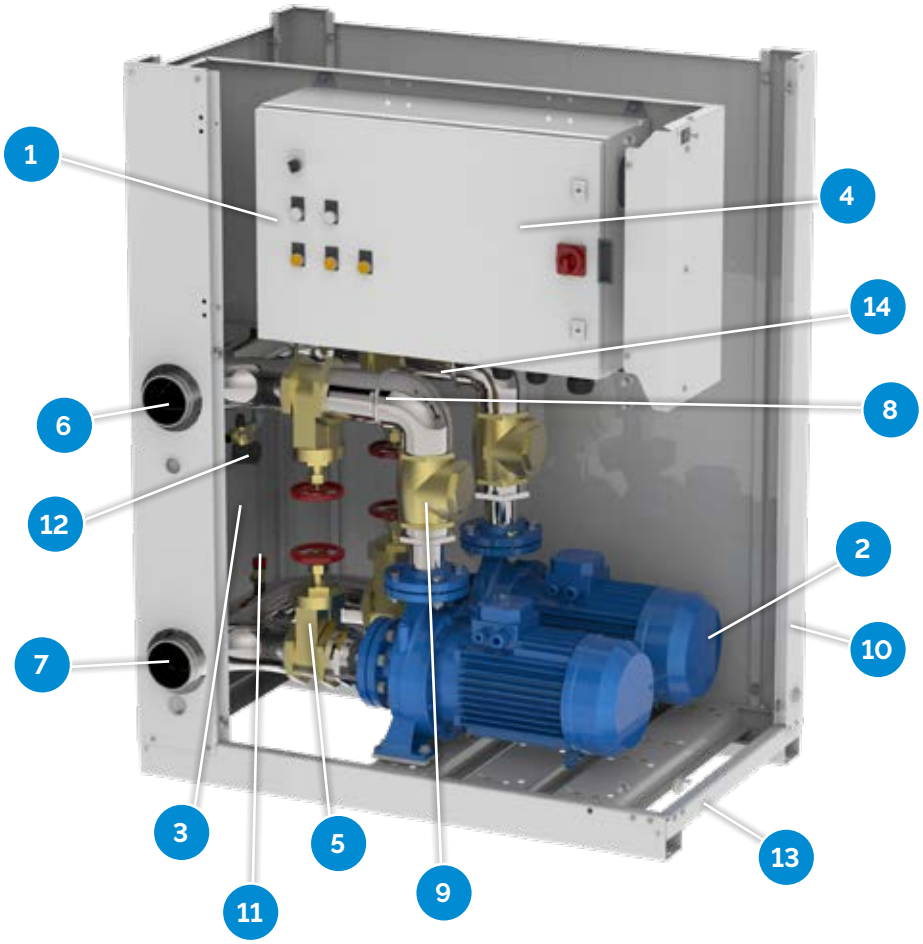


HP 2.0 Group

Legend

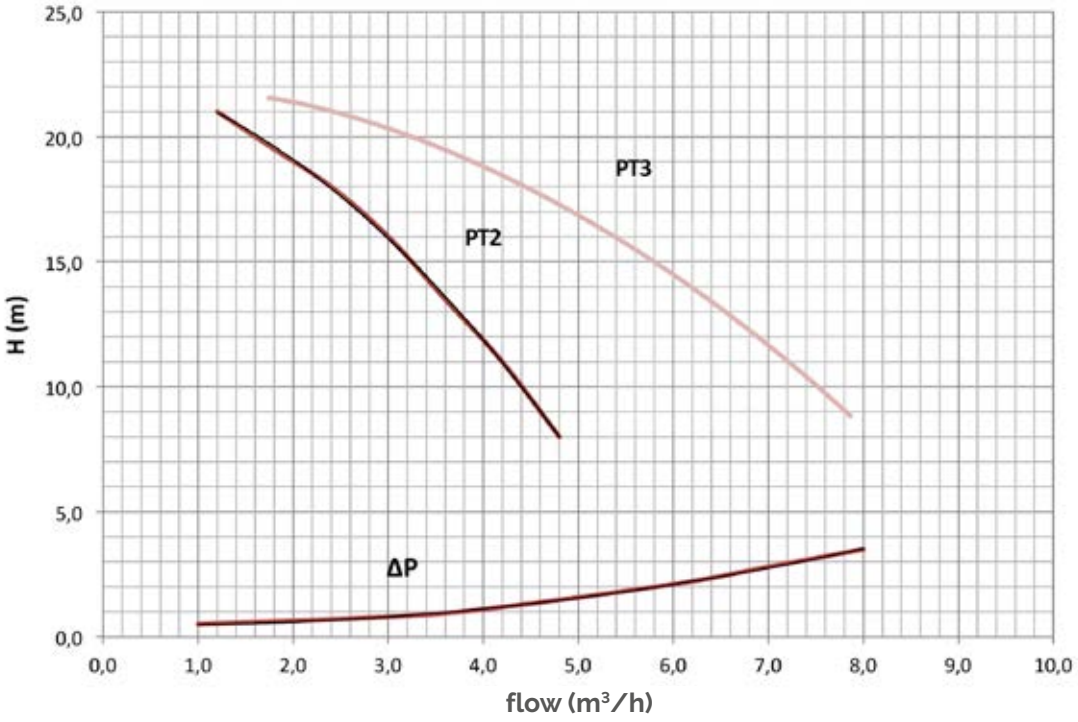
1. Circulator
2. Shut-off valve (only version with 2 pumps)
3. On-off valve
4. Deaerator
5. Automatic filling unit
6. Expansion vessel (optional)
7. Safety valve
8. Drain
9. Differential pressure switch (optional)
10. Inlet returning fluid
11. Y filter. Optional, supplied non-assembled
12. Chiller
13. Device

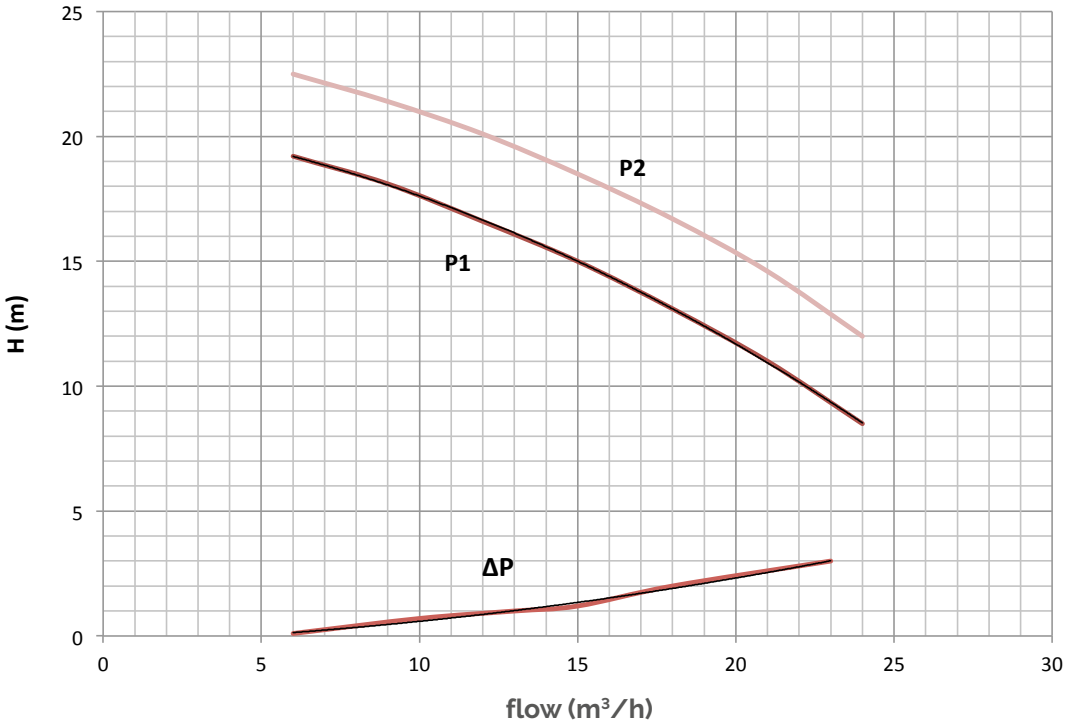
HP 2.0 hydronic system: components



Components	
1	Switchboard
2	Circulation pump (version with double pump, optional)
3	Removable bolted panel
4	Hinged panel
5	Shut-off valve
6	Water outlet
7	Water inlet
8	Pressure transmitter (only version with inverter)
9	Check valve (only version with double pump)
10	Ventilation grid
11	Safety valve
12	Automatic filling unit
13	Base
14	Deaerator

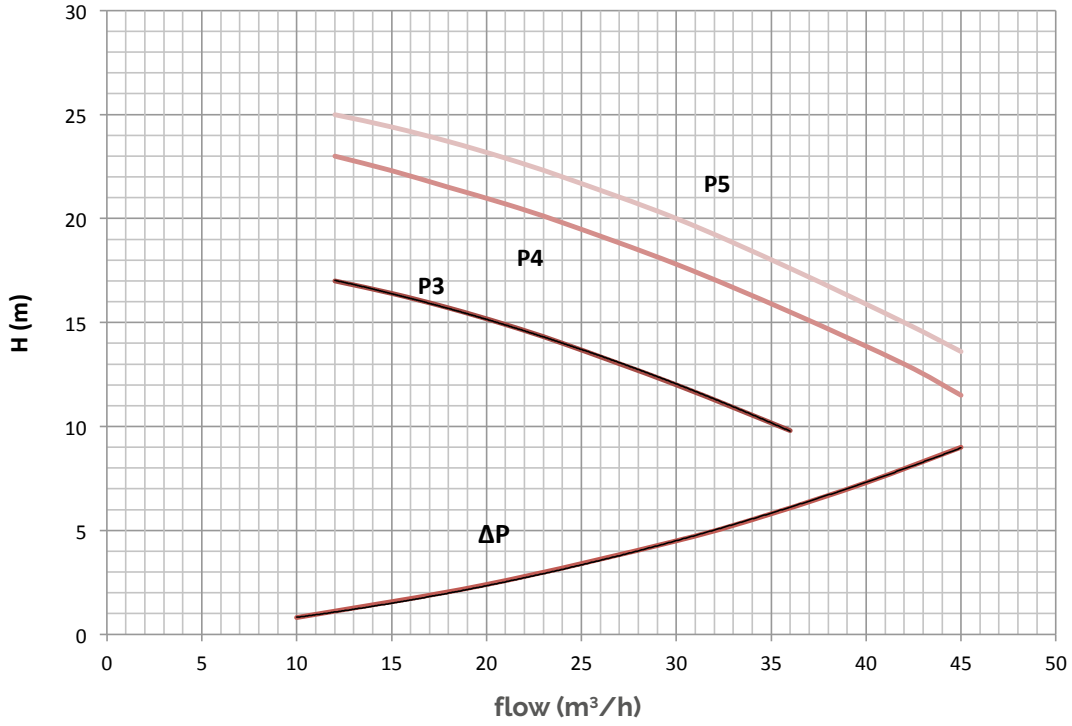
HP 2.0 Hydronic systems
Prevalence and pressure loss curve

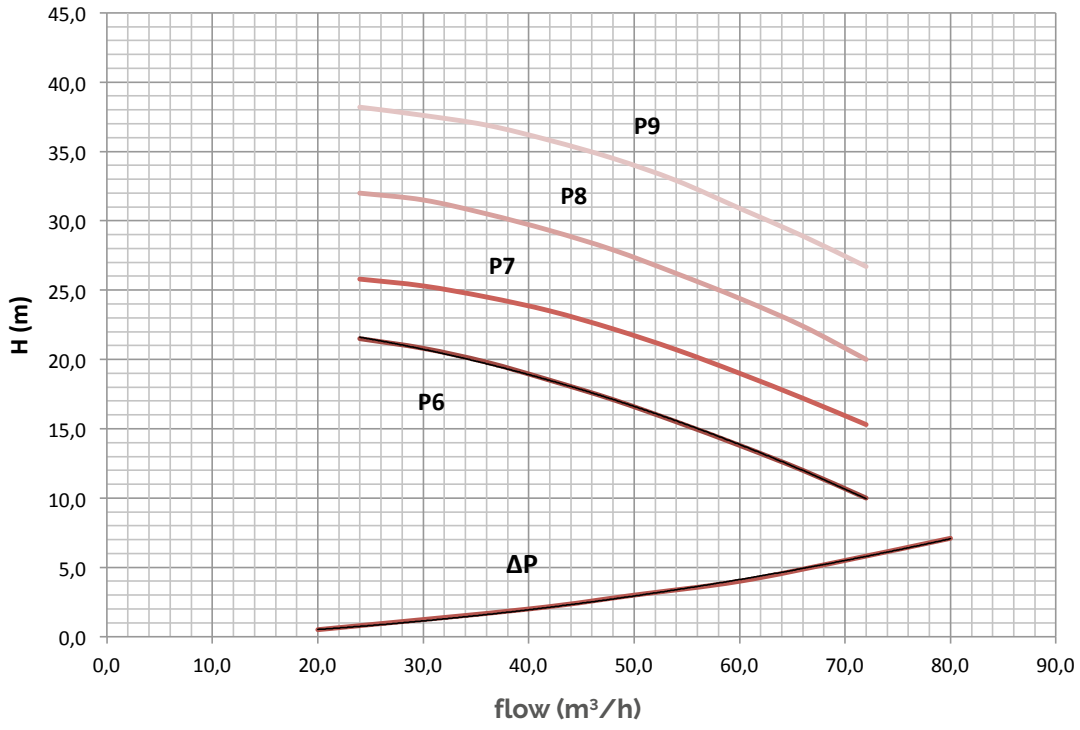




ΔP: Pressure drop HP unit

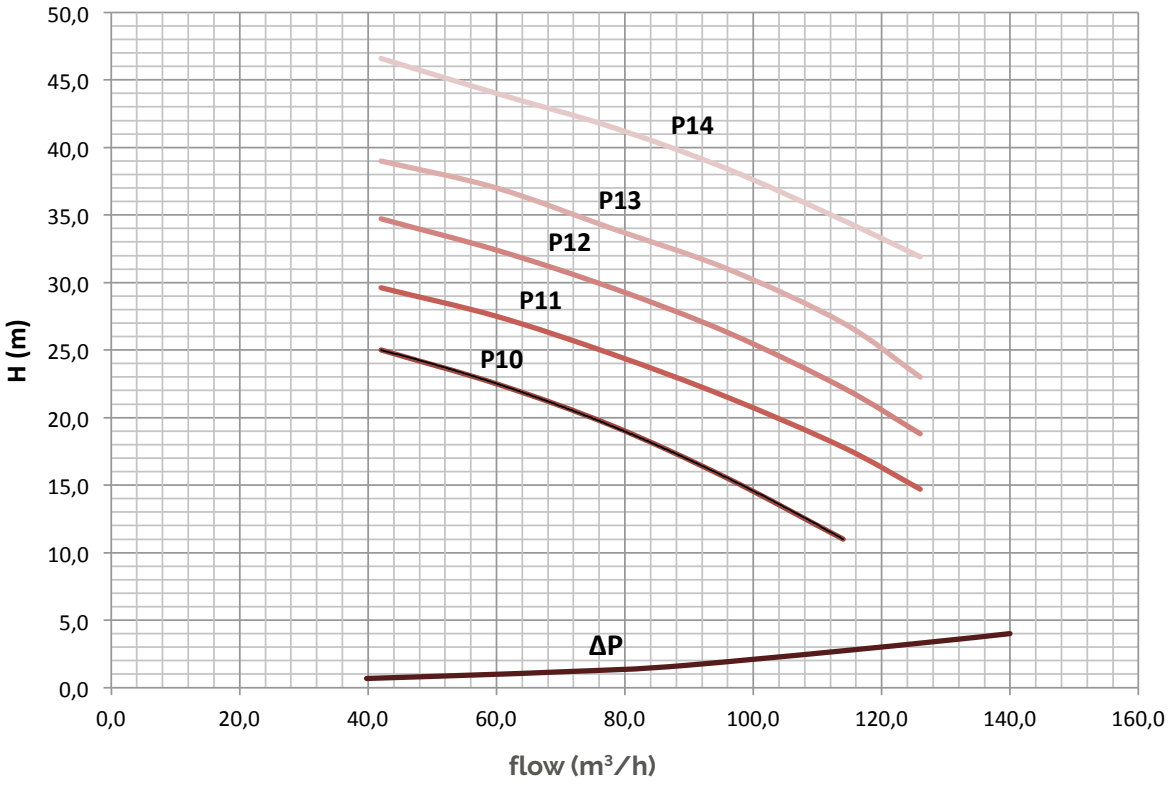
HP 2.0 Hydronic systems
Prevalence and pressure loss curve

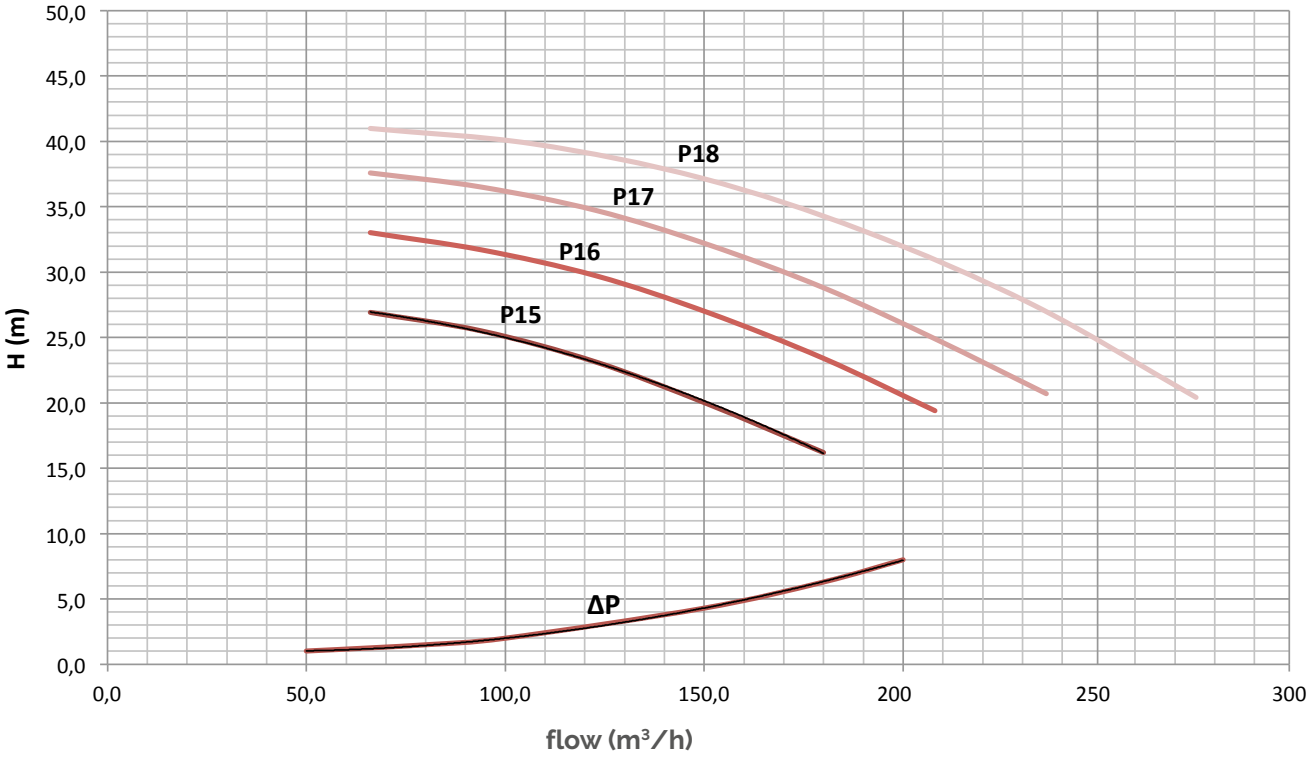




ΔP: Pressure drop HP unit

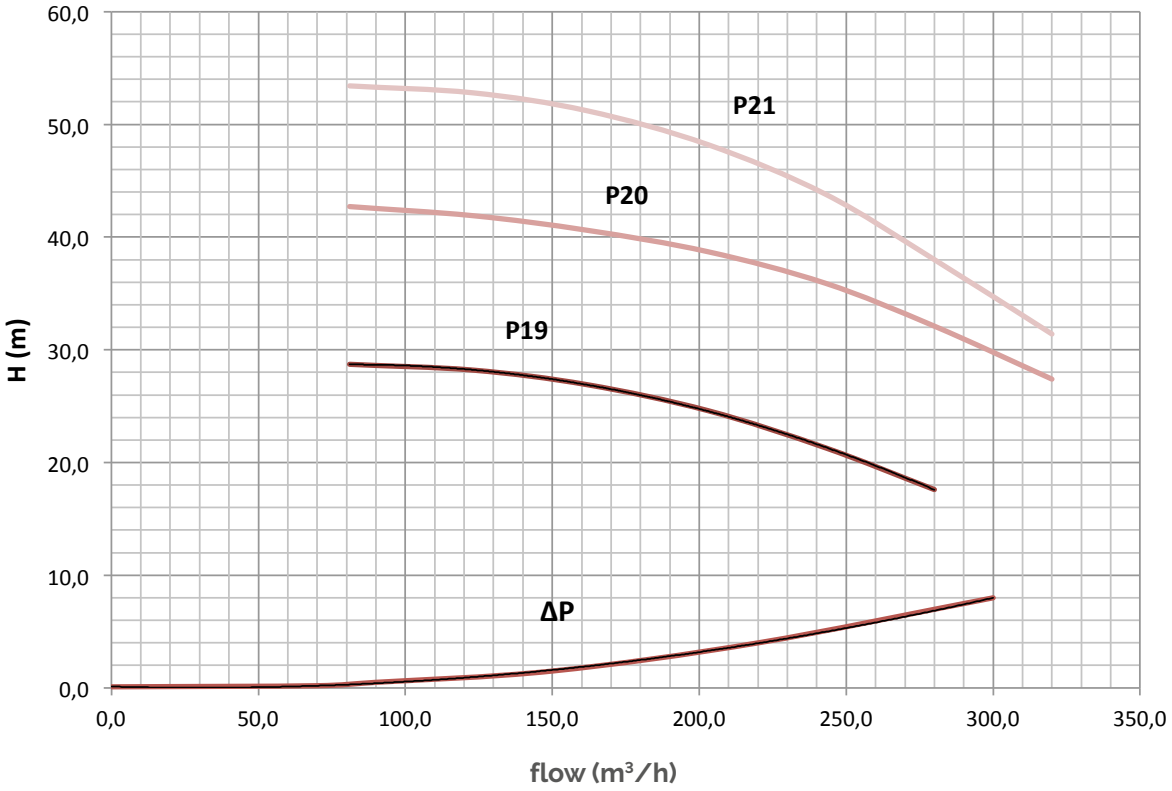
HP 2.0 Hydronic systems
Prevalence and pressure loss curve





ΔP: Pressure drop HP unit

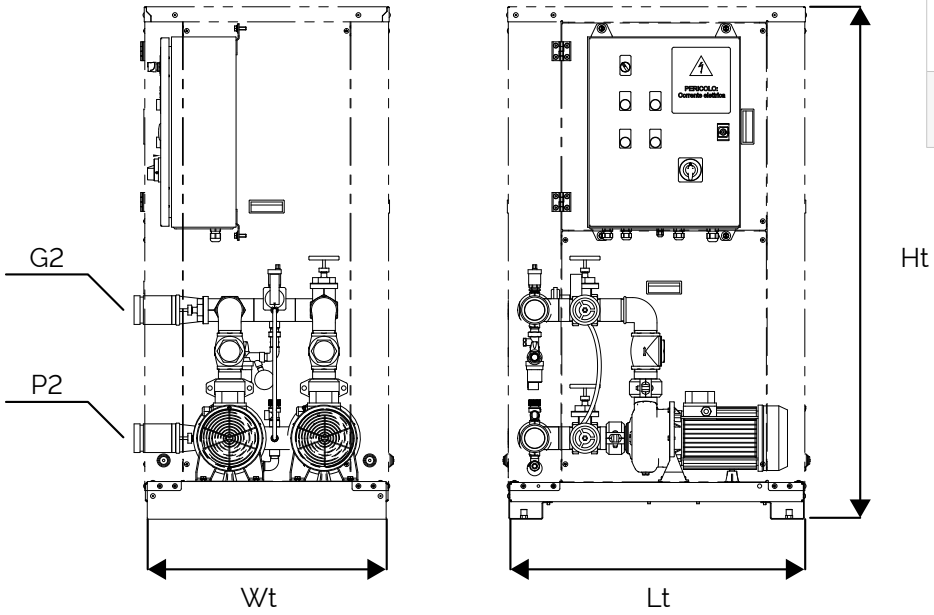
HP 2.0 Hydronic systems
Prevalence and pressure loss curve



ΔP: Pressure drop HP unit

HP 2.0 hydronic system: dimensions

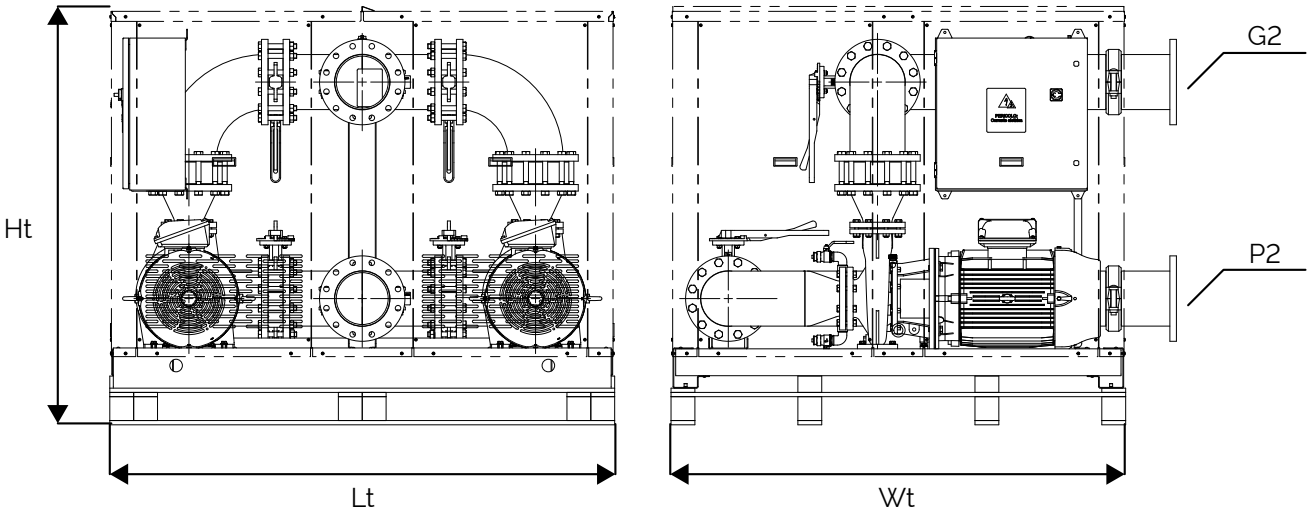
Layout of pump models PT2, PT3, from P1 to P18



Couplings legend

G2	To plant Grooved connection
P2	From energy source Grooved connection

Layout of pump models from P19 to P21



	1 pump Dimensions			2 pumps (1 redundant) Dimensions				
Pump model	**Lt mm**	**Wt mm**	**Ht mm**	**Lt mm**	**Wt mm**	**Ht mm**	**G2 inch**	**P2 inch**
PT2-PT3	790	650	1360	790	650	1360	1"1/2	1"1/2
P1-P2-P3-P4-P5	790	650	1360	790	650	1360	2"1/2	2"1/2
P6-P7-P8-P9	1200	790	1360	1200	790	1360	3"	3"
P10-P11-P12-P13-P14-P15-P16-P17-P18	1280	790	1360	1280	790	1600	4"	4"
P19-P20-P21	1300	1800	1560	2000	1800	1575	DN 200 UNI PN16	DN 200 UNI PN16

HP 2.0 hydronic systems: technical information

			1 pump			2 pumps (1 redundant)		
Pump model	F.L.I kW	F.L.A. (400/3/50) A	Code	Price	Weight kg	Code	Price	Weight kg
PT2*	0,45	1,3	838060261X		100	838060262X		114
PT3*	0,45	1,3	838060263X		100	838060264X		114
P1	1,1	3,3	838060129X		129	838060119X		150
P2	1,5	3,8	838060130X		130	838060120X		151
P3	1,5	3,8	838060131X		131	838060121X		153
P4	2,2	4,7	838060132X		135	838060122X		157
P5	3	6,4	838060133X		137	838060123X		163
P6	3	6,1	838060107X		183	838060193X		256
P7	4	8,7	838060108X		190	838060194X		272
P8	5,5	10,4	838060109X		208	838060195X		311
P9	7,5	13,6	838060110X		224	838060196X		343
P10	5,5	10,4	838060111X		215	838060197X		323
P11	7,5	13,6	838060112X		231	838060198X		355
P12	9,2	17,2	838060235X		284	838060236X		407
P13	11	21,3	838060183X		284	838060217X		412
P14	15	27,7	838060184X		309	838060218X		503
P15	11	20,2	838060227X		279	838060228X		460
P16	15	26,6	838060185X		316	838060219X		549
P17	18,5	33	838060186X		319	838060220X		569
P18	22	40,4	838060187X		340	838060221X		587
P19	18,5	33	838060229X		903	838060230X		1265
P20	30	53,5	838060231X		1030	838060232X		1519
P21	37	65,6	838060233X		1055	838060234X		1557

Pve (bar) 1,5 Ps (bar) 3 T min (°C) 0
Nominal conditions for the sizing of the expansion vessels: 4-40°C 100% water head 10 mwc and pre-charge 1.5 bar. In design conditions different from the nominal ones it is necessary to check the volume of the expansion vessels.
*** PT2 and PT3 available in single-phase version on request**

Legend

F.L.I. Max absorbed power
F.L.A. Max absorbed current
Pve Preload of expansion vessel
Ps Max operating pressure
Tmin Min temperature of the liquid

HP 2.0 hydronic systems: technical information

			1 pump			2 pumps (1 redundant)		
Pump model	F.L.I kW	F.L.A. (400/3/50) A	Code	Price	Weight kg	Code	Price	Weight kg
PT2*	0,45	1,3	838060290X		100	838060291X		114
PT3*	0,45	1,3	838060269X		100	838060278X		114
P1	1,1	3,3	838060161X		129	838060095X		150
P2	1,5	3,8	838060162X		130	838060096X		151
P3	1,5	3,8	838060163X		131	838060097X		153
P4	2,2	4,7	838060164X		135	838060099X		157
P5	3	6,4	838060165X		137	838060100X		163
P6	3	6,1	838060171X		183	838060205X		256
P7	4	8,7	838060172X		190	838060206X		272
P8	5,5	10,4	838060173X		208	838060207X		311
P9	7,5	13,6	838060174X		224	838060208X		343
P10	5,5	10,4	838060175X		215	838060209X		323
P11	7,5	13,6	838060176X		231	838060210X		355
P12	9,2	17,2	838060250X		284	838060254X		407
P13	11	21,3	838060141X		284	838060151X		412
P14	15	27,7	838060142X		309	838060152X		503
P15	11	20,2	838060251X		279	838060255X		460
P16	15	26,6	838060143X		316	838060153X		549
P17	18,5	33	838060144X		319	838060154X		569
P18	22	40,4	838060145X		340	838060155X		587
P19	18,5	33	838060292X		903	838060296X		1265
P20	30	53,5	838060293X		1030	838060297X		1519
P21	37	65,6	838060295X		1055	838060299X		1557

Pve (bar) 1,5 Ps (bar) 3 T min (°C) 0
Nominal conditions for the sizing of the expansion vessels: 4-40°C 100% water head 10 mwc and pre-charge 1.5 bar. In design conditions different from the nominal ones it is necessary to check the volume of the expansion vessels.
*** PT2 and PT3 available in single-phase version on request**

Legend

F.L.I. Max absorbed power
F.L.A. Max absorbed current
Pve Preload of expansion vessel
Ps Max operating pressure
Tmin Min temperature of the liquid

Hydronic systems
HP 2.0: accessories

1 Programmable timer for alternating pumps

In the dual pump configuration, the timer can be used to handle alternating pump operation at specified time intervals. Without the timer, the alternating pump operation occurs at each startup of the group. Default alternation every 48 hours programmable.

* **WARNING:** If the system operates 24 hours a day, 7 days a week, the pump alternation is not guaranteed by the standard group. In this case, we recommend the use of this accessory.

Code	Description	Price
838081104X	TIMER OPTION 48H	

2 Differential pressure switch

Security device that allows you to verify that there is flow inside the system. The device generates an alarm signal but does not automatically stop the machine.

Code	Description	Price
838081000X	DIFFERENTIAL PRESSURE SWITCH	

3 Anti-vibrating feet

Set of anti-vibrating feet to be placed on the machine's support points. The feet are supplied disassembled.

Code	Description	Price
838080861X	ANTI-VIBRATING FOR HP PT2/PT3 AND FOR P1 A P18	
838081286X	ANTI-VIBRATING FOR HP P19/P20/P21	

4 Expansion vessel kit

Code	Description	Compatible with	Price
838081187X	EXPANSION VESSEL 12L INNER	HP 2.0 UP TO P18	
838081195X	EXPANSION VESSEL 25L INNER	HP 2.0 UP TO P18	
838081480X	EXPANSION VESSEL 2x25L INNER	HP 2.0 UP TO P18	
838081616X	EXPANSION VESSEL 3x25L INNER	HP 2.0 UP TO P18	
838081234X	EXPANSION VESSEL 2x25L INNER	HP 2.0 FOR P19/P20/P21 VERSIONS	

5 Manometer kit

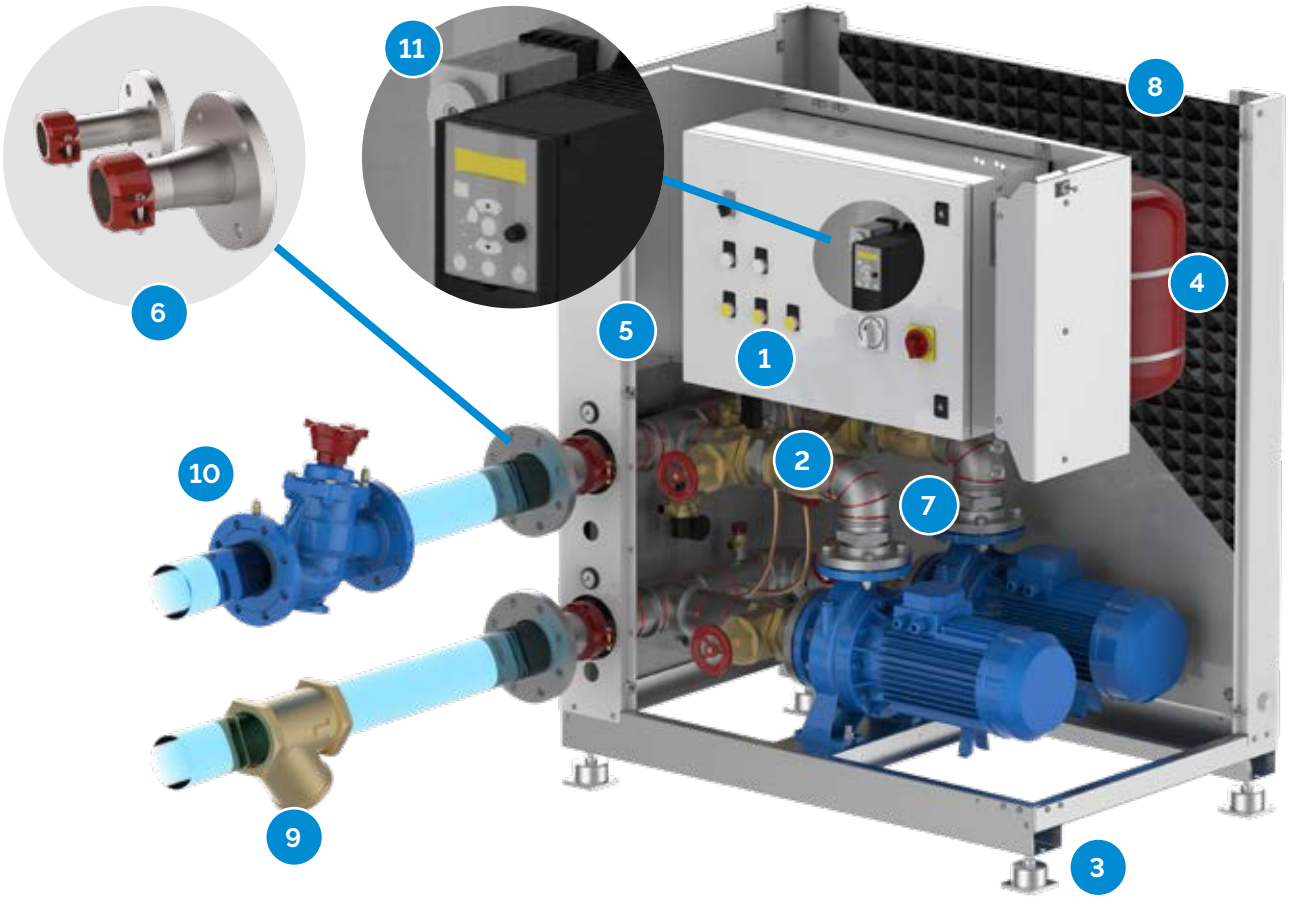
Code	Description	Price
838081583X	MANOMETER KIT	

6 Transformation of painted grooved connections

They transform the grooved connections into UNI-EN PN 16 flanged connections. A version with the same diameter and one with a larger diameter is available. The codes and prices below are for single piece.

Original conncetion Grooved (Victaulic)	Transformed connection UNI-EN PN 16	Code	Price
1"1/2	DN40	838081247X	
	DN50	838081248X	
2"	DN50	838081249X	
	DN65	838081250X	
2"1/2	DN65	838081251X	
	DN80	838081252X	
3"	DN80	838081253X	
	DN100	838081254X	
4"	DN100	838081255X	
	DN125	838081256X	





7 **Antifreeze kit (special version)** The kit provides protection against freezing by means of a heating cable wound around piping. The kit also includes a bi-thermostatic antifreeze adjustment (-35 / + 35 ° C) and is supplied assembled, wired and tested.
see page: 150

8 **Soundproof coating (special version)**
The soundproofing is available, which attenuates the sound level of the machine significantly.
see page: 150

9 **Filter (special version)**
Mesh filter, with 1000 micron holes, can be placed outside the unit to protect the pumps from any impurities in the equipment.
see page: 150

10 **Balancing valves (special version)**
Valve can be connected externally to balance the flow within the circuit.
see page: 150

11 **Standard switchboard with BMS**
Integration of BMS module to control remotely pumps and availability to check pump status remotely (pump on and/or alarms). In the case of application with an inverter, it is also possible to vary the pressure set point. Communication protocol Modbus through serial port RS-485.

Wooden box packing (special version)
Extra protective packing suitable for risky and long-distance transport.
see page: 150

Stainless steel execution
In projects where the fluid temperature is between -11°C and -20°C, the hydronic kits are produced in a special configuration by replacing the standard hydraulic components with components suitable for working at low temperatures by exploiting the characteristics of the stainless steel material.
see page: 150

Increased insulation
This increased insulation compared to the standard allows the use of the kit in particularly harsh temperature conditions (from +4°C to -20°C), avoiding the formation of ice or condensation.
see page: 150

Low temperature pump
In projects where the fluid temperature is between -11°C and -20°C, the standard pump is replaced with a special pump suitable for working in the aforementioned conditions.
see page: 150

Hydronic systems
VKB 2.0

The VKB 2.0 units are buffer storage tanks with accessories (without circulation pump) designed in order to significantly reduce the set-up time for the conditioning and cooling devices.

Standard equipment

Capacity: from 250 to 1.500 l
Tank material: carbon steel
Fluid types:
- water
- Ethylene glycol up to 40%
- Propylene glycol up to 40%

Insulation: anti-condensate elastomer
Execution: Layout 1

Standard equipment usage limit

Fluid temperature	Environment temp.	Max. pressure
5°C / +60°C	10°C / +40°C	3 bar

Complete with all hydraulic components which are indispensable for the correct functioning of the hydraulic circuit for the distribution of chilled water, the components can be coupled with all kind of water coolers. The units consist of an insulated buffer tank, an expansion vessel, a safety valve, a deaerator, a fill/drain valve and a manometer.

The VKB 2.0 units are enveloped in a supporting structure in a galvanized steel and powder coated panels and base. They are designed to guarantee an easy inspection and maintenance of the components. The tank, which is hydraulically inserted between the cooling station and the fan-coils, makes the water content in the entire installation increase, by increasing the pause between the shutdown of the compressor and the next start-up. In this way, the number of start-ups is significantly reduced, which improves the life span and performance of the compressor. The broad range of storage tanks makes it possible to meet every requirement. Every unit is assembled in our factory and tested to guarantee our trustworthiness.

Accessories: See pag. 146 for the list of available accessories



Special equipment usage limit available on configurator (see page 108)

Fluid temperature	Environment temp.	Max. pressure
-20°C / +60°C	-20 / +40°C	3 bar

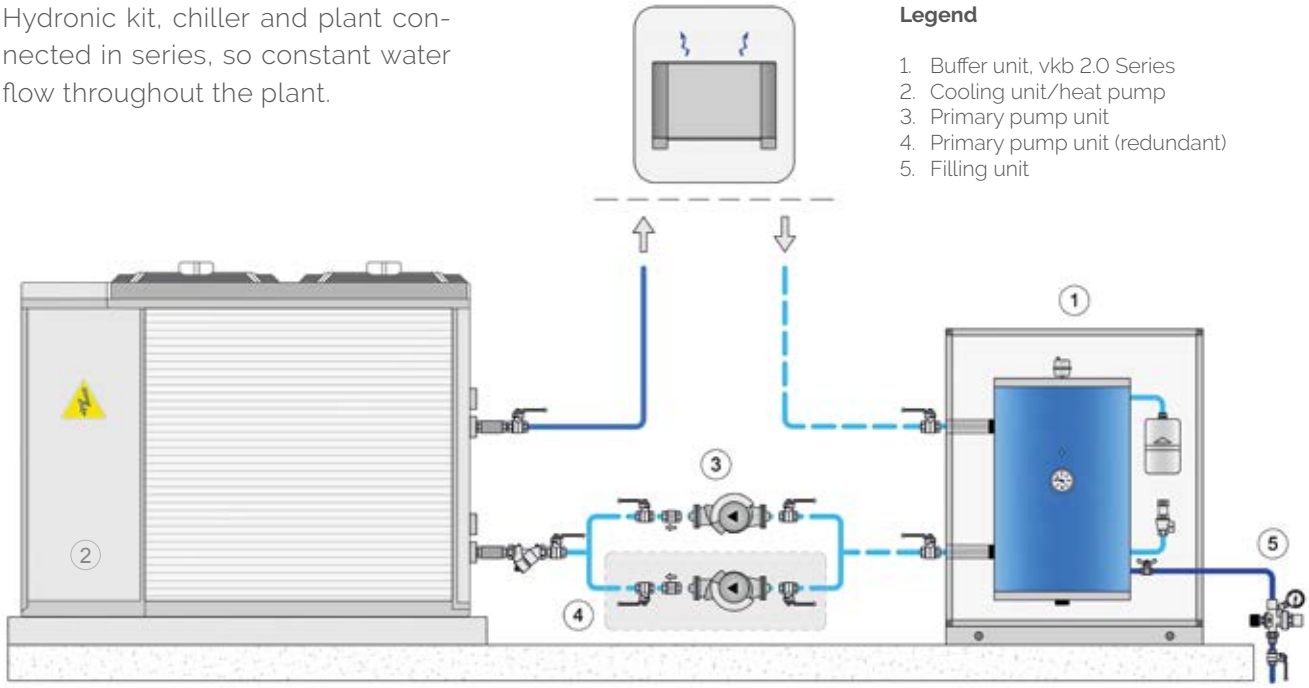
Upon request, it is possible to produce versions with special equipment to operate at temperatures and pressures outside the standard usage limits. These equipments include, for example, increased insulation, antifreeze kits, stainless steel connections and tank.

Hydronic systems
VKB 2.0 Layout 1 STANDARD

Hydronic kit, chiller and plant connected in series, so constant water flow throughout the plant.

Legend

1. Buffer unit, vkb 2.0 Series
2. Cooling unit/heat pump
3. Primary pump unit
4. Primary pump unit (redundant)
5. Filling unit

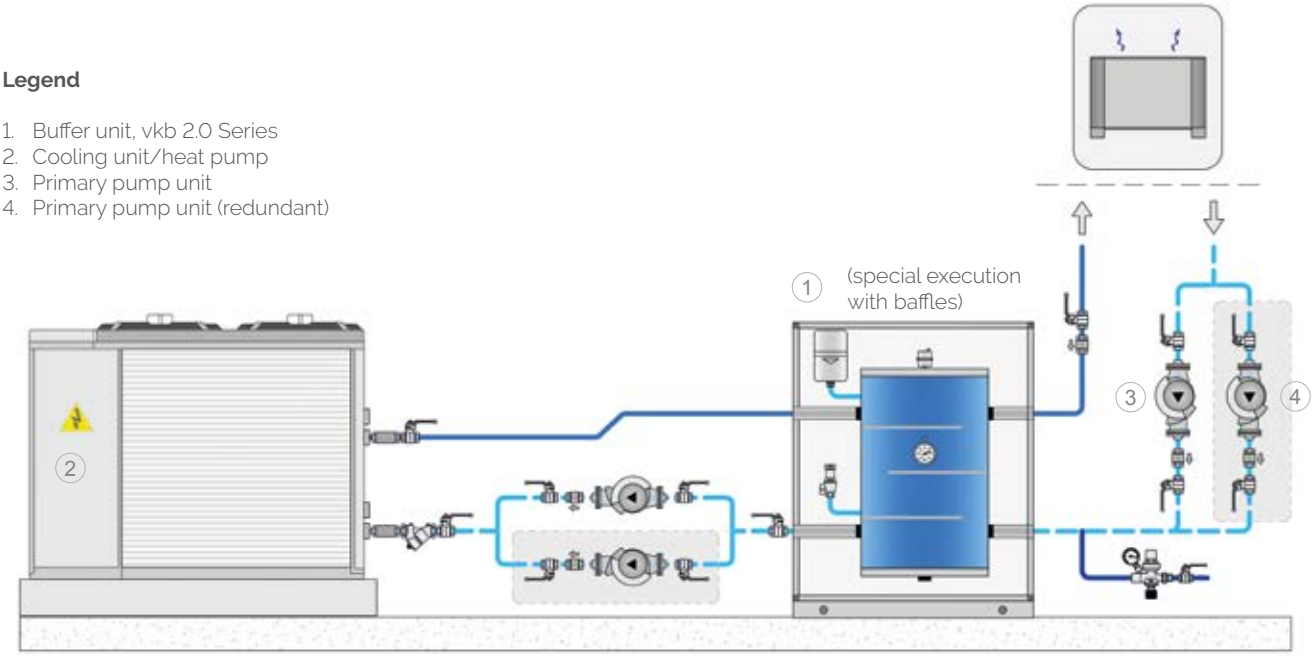


Hydronic systems
VKB 2.0 Layout 2 SPECIAL VERSION

Hydronic Kit and Chiller create the primary circuit, Hydronic Kit and Plant create the secondary circuit. Hence, the two circuits have independent flow rates. The VKB shown below is a special execution with baffles.

Legend

1. Buffer unit, vkb 2.0 Series
2. Cooling unit/heat pump
3. Primary pump unit
4. Primary pump unit (redundant)

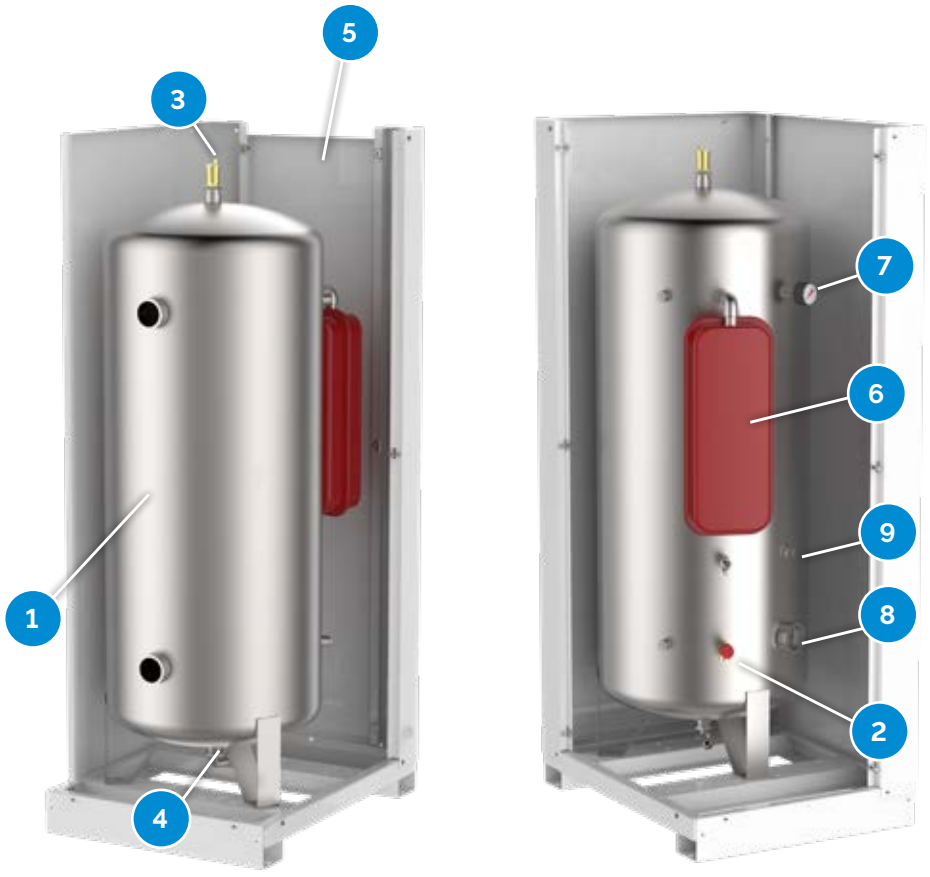


Hydronic systems
VKB 2.0

VKB 2.0 Description of the main components

- **Storage tank**
  The storage tank is made of varnished carbon steel plates and is insulated with closed cell elastomer . This type of insulation, guarantees an excellent resistance to condensate formation.
- **Fill up valve**
  This valve refills the hydraulic circuit in the demand peak phase as well as during normal functioning.
- **Safety valve**
  Calibrated at 6 bar and with canalised drain. It protects the unit from possible overpressure.
- **Automatic valve for air drain**
  Placed on the upper part of the unit, it drains air from the unit.
- **Drain valve**
  It drains air from the lowest point of the tank to make drainage possible.
- **Supporting structure**
  The base is made of thick steel plates varnished. The basement and panels are made in galvanized steel and powder coated which are resistant to atmospheric agents. All this makes it possible for the VKB 2.0 to be installed in non-technical spaces and in places exposed to atmospheric agents.
- **Expansion vessel**
  Supplied with a membrane, preloaded nitrogen and with dimensions that can absorb varying volumes of liquid derived from the various temperatures.
- **Manometer**
  This device is placed on the tank and indicates the internal pressure.

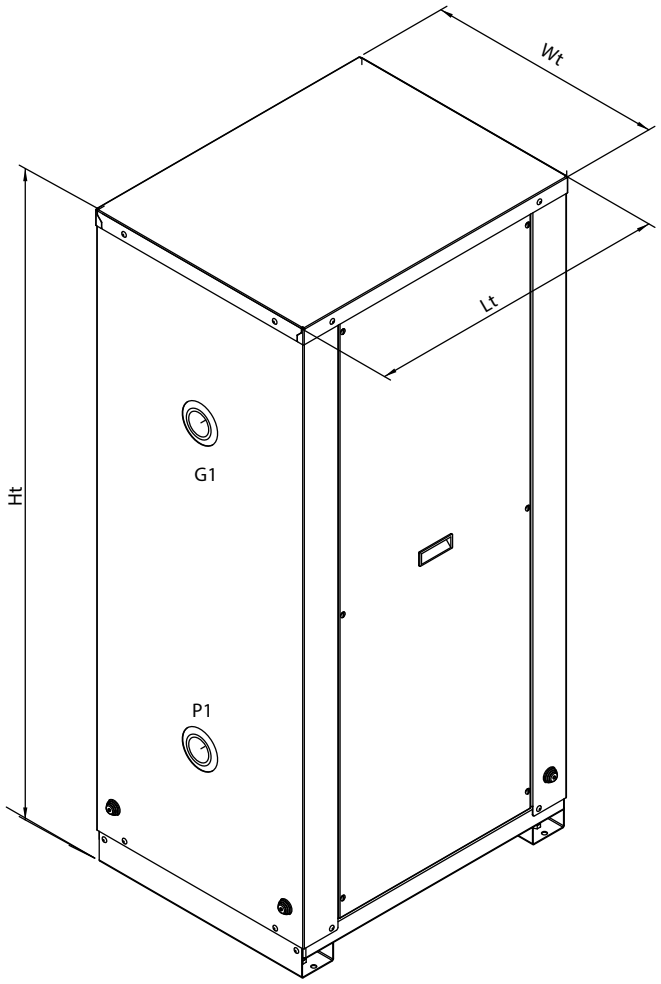
Components	
1	Storage tank
2	Safety valve
3	Automatic safety valve
4	Drain
5	Supporting structure
6	Expansion vessel
7	Manometer
8	Predisposition for electrical resistance
9	Predisposition for thermostat



Hydronic systems
VKB 2.0

Capacity l	Vessel l	Vessel calibration bar	Safety valve bar	Couplings inch	Wt mm	Lt mm	Ht mm	P1 mm	G1 mm
250	12	1	6	2"	590	750	1600	420	1220
500	18	1,5	6	3"	750	1000	1850	420	1470
1000	25	1,5	6	4"	1100	1100	1850	610	1410
1500	2x25	1,5	6	4"	1200	1200	1950	650	1450

Capacity l	Code	Price	Dimensions with packaging mm	Weight kg
250	838050090X		625x785x1670	95
500	838050091X		800x1050x1920	155
1000	838050092X		1150x1150x1920	255
1500	838050016		1250X1250X2020	313



Couplings legend

G1	From plant Threaded connection
P1	To energy source Threaded connection

Hydronic systems
VKB 2.0 accessories

1 From threaded to flanged galvanized connections

The codes and prices below are for single item. The adapter must be screwed onto the existing connection. The adapter is not welded on the ferrule, for special executions ask for a quote.



Original connection	Transformed connection uni-en pn 16	Code	Price
1"1/2	DN 40	838081200X	
	DN 50	838081201X	
2"	DN 50	838081202X	
	DN 65	838081203X	
2"1/2	DN 65	838081204X	
	DN 80	838081205X	
3"	DN 80	838081206X	
	DN 100	838081207X	
4"	DN 100	838081208X	
	DN 125	838081209X	

2 From threaded to Grooved galvanized connections

The codes and prices below are for single item.
The adapter must be screwed onto the existing connection. The adapter is not welded on the ferrule, for special executions ask for a quote.



Original connection	Transformed connection	Code	Price
1"1/2	1"1/2	838081211X	
	2"	838081212X	
2"	2"	838081213X	
	2"1/2	838081214X	
2"1/2	2"1/2	838081215X	
	3"	838081216X	
3"	3"	838081217X	
	4"	838081218X	
4"	4"	838081219X	
	5"	838081220X	

3 Electrical resistor

IP 65 Protection



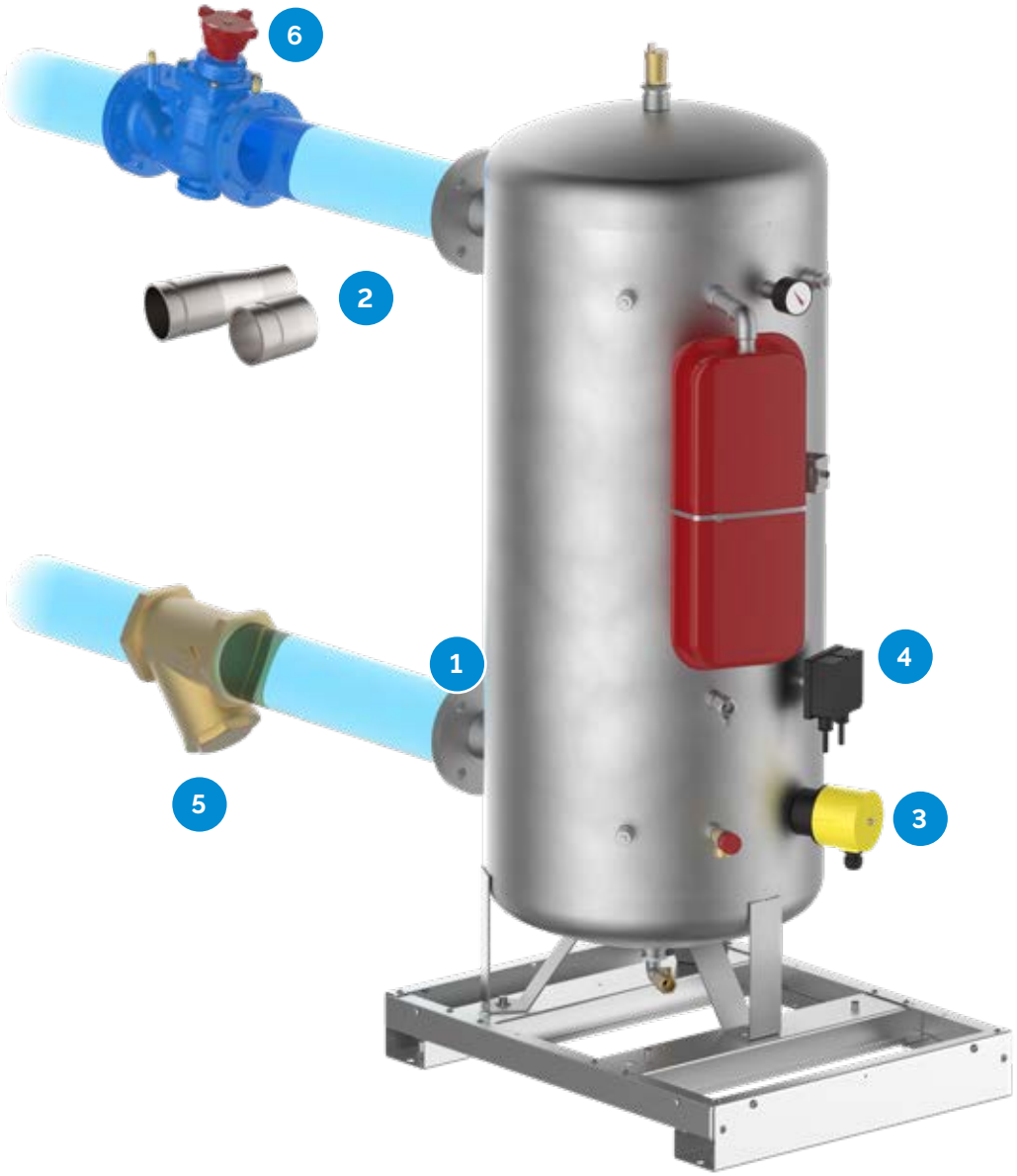
Power W	Voltage V	Element number	Connection diameter inch	Length mm	Code	Price
1300	230/380	3	2"	220	C24100008	
2000	230/380	3	2"	290	C24100009	
3000	230/380	3	2"	340	C24100010	
4000	230/380	3	2"	390	C24100012	

4 Temperature controls



Description	Temperature range	Safety range	Code	Price
Thermostat	0 ÷ 90 °C	-	C22010004	
Bithermostat	0 ÷ 90 °C	fix 100 °C	C22010006	
Antifreeze Bithermostat	-30 ÷ 30 °C	0 ÷ 90 °C	C22010007	

Hydronic systems
VKB 2.0 accessories



5 **Filter (special version)**
Mesh filter, with 1000 micron holes, can be placed outside the unit to protect the pumps from any impurities in the equipment.
see page: 133

6 **Balancing valves (special version)**
Valve can be connected externally to balance the flow within the circuit.
see page: 133

Tailored connections (special version)
Flangiate (in various materials), Grooved (in various materials), Larger
see page: 133

Stainless steel execution
In projects where the fluid temperature is between -11°C and -20°C, the hydronic kits are produced in a special configuration by replacing the standard hydraulic components with components suitable for working at low temperatures by exploiting the characteristics of the stainless steel material.
see page: 133

Increased insulation
This increased insulation compared to the standard allows the use of the kit in particularly harsh temperature conditions (from +4°C to -20°C), avoiding the formation of ice or condensation.
see page: 133

Standard Accessories for Hydronic kits HPT and HP

Accessories for HPT kit

Code	Description	Price
838081000X	DIFFERENTIAL PRESSURE SWITCH	
838081104X	TIMER OPTION 48H*	
838080917X	ANTIVIBRATING FEET FOR HPT 300/500L	
838080936X	ANTIVIBRATING FEET FOR HPT 750/1000L	
838080938X	ANTIVIBRATING FEET FOR HPT 1500/2500L	

* WARNING If the system operates 24 hours a day, 7 days a week, the pump alternation is not guaranteed by the standard group. In this case, we recommend the use of this accessory

Compatible with HPT kit see pag. 128



Accessories for HP 2.0 kit

Code	Description	Price
838081000X	DIFFERENTIAL PRESSURE SWITCH	
838081104X	TIMER OPTION 48H*	
838081583X	MANOMETER KIT	
838080861X	ANTIVIBRATING FEET UP TO P18	
838081286X	ANTIVIBRATING FEET FOR P19, P20, P21	
838081187X	EXPANSION VESSEL 12L UP TO P18	
838081195X	EXPANSION VESSEL 25L UP TO P18	
838081480X	EXPANSION VESSEL 2x25L UP TO P18	
838081234X	EXPANSION VESSEL 2x25L FOR P19, P20, P21	

* WARNING If the system operates 24 hours a day, 7 days a week, the pump alternation is not guaranteed by the standard group. In this case, we recommend the use of this accessory

Compatible with HP kit see pag. 140



Transformation in flange connection for HP 2.0 kit

The codes and prices below are for single item.



Original connection Grooved (Victaulic)	Transformed connection UNI-EN PN 16	Code	Price
1"1/2	DN40	838081247X	
	DN50	838081248X	
2"	DN50	838081249X	
	DN65	838081250X	
2"1/2	DN65	838081251X	
	DN80	838081252X	
3"	DN80	838081253X	
	DN100	838081254X	
4"	DN100	838081255X	
	DN125	838081256X	

Compatible with HP kit see pag. 140

Standard Accessories for Hydronic kits VKB

Galvanized Connections Adapters from threaded to flanged type

The codes and prices below are for single item.
The adapter must be screwed onto the existing connection.
The adapter is not welded on the ferrule, for special executions ask for a quote.



Original connection	Transformed connection uni-en pn 16	Code	Price
1"1/2	DN 40	838081200X	
	DN 50	838081201X	
2"	DN 50	838081202X	
	DN 65	838081203X	
2"1/2	DN 65	838081204X	
	DN 80	838081205X	
3"	DN 80	838081206X	
	DN 100	838081207X	
4"	DN 100	838081208X	
	DN 125	838081209X	



Galvanized Connection Transformation from threaded to Grooved (Victaulic)

The codes and prices below are for single item.
The adapter must be screwed onto the existing connection.
The adapter is not welded on the ferrule, for special executions ask for a quote.



Original connection	Transformed connection	Code	Price
1"1/2	1"1/2	838081211X	
	2"	838081212X	
2"	2"	838081213X	
	2"1/2	838081214X	
2"1/2	2"1/2	838081215X	
	3"	838081216X	
3"	3"	838081217X	
	4"	838081218X	
4"	4"	838081219X	
	5"	838081220X	

Electrical resistors for VKB 2.0 kit

IP 65 Protection



Power W	Voltage V	Element number	Connection Diameter inch	Length mm	Code	Price
1300	230/380	3	2"	220	C24100008	
2000	230/380	3	2"	290	C24100009	
3000	230/380	3	2"	340	C24100010	
4000	230/380	3	2"	390	C24100012	

Temperature controls for VKB 2.0 kit



Description	Temperature range	Safety range	Code	Price
Thermostat	0 ÷ 90 °C	-	C22010004	
Bithermostat	0 ÷ 90 °C	fix 100 °C	C22010006	
Antifreeze Bithermostat	-30 ÷ 30 °C	0 ÷ 90 °C	C22010007	

Compatible with VKB kit see pag. 146

Special versions for Hydronic kits

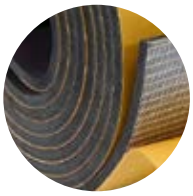
Special versions change the conformation of the products and hence the sales code will be different depending on the customisation required. Fiorini is able to provide any tailored solution quickly, providing the customer with the support they need to guide them to the solution that best suits their needs.
Here are some examples of special executions:



Antifreeze Kit
This specification is aimed at the operation of the machine in severe temperature conditions (from +4°C to -20 °C) avoiding the formation of ice especially during the starting and stopping phases of the machine. The resistors and the cable heating are activated via the fluid side bit-thermostat, while the heater is managed by the electrical panel, via a room thermostat, already included in the supply of the electrical panel.
The antifreeze kit is composed as follows:
• **For HPT from 100 to 1000 L**: 1.3kW electric resistance complete with antifreeze bit-thermostat (-35+35°C) wired to the electrical panel; heating cables wrapped around pipes, wired to the electrical panel; Heater in the electrical panel.
• **For HPT from 1500 to 2500 L**: 2x 1.3kW electric heaters complete with anti-freeze bit-thermostat (-35+35°C) wired to the electrical panel; heating cables wrapped around pipes, wired to the electrical panel; Heater in the electrical panel
• **For HP:** Heating cables wrapped around the pipes, wired to the electrical panel; anti-freeze bit-thermostat (-30+35°C); Heater in the electrical panel.



Stainless steel execution
In projects where the fluid temperature is between -11°C and -20°C, the hydronic kits are produced in a special configuration by replacing the standard hydraulic components with components suitable for working at low temperatures by exploiting the characteristics of the stainless steel material.
In particular, in cases of particularly severe fluid and ambient temperatures, the hydronic kit will be supplied as follows:
• Pipes and fittings in AISI304 stainless steel (HP and HPT);
• AISI304 stainless steel tank (HPT and VKB);
• Expansion tank(s) in AISI304 stainless steel
• AISI304 stainless steel valves



Increased insulation
This increased insulation compared to the standard allows the use of the kit in particularly harsh temperature conditions (from +4°C to -20°C), avoiding the formation of ice or condensation.
The majority insulation option includes:
• Double layer of anti-condensation insulation applied on the tank (for HPT and VKB);
• Double layer of anti-condensation insulation applied on the pipes and fittings (for HP and HPT);
• Insulation applied to each accessory included in the kit: expansion tanks, valves, vent, drain, brackets, tank feet;



Low temperature pump
In projects where the fluid temperature is between -11°C and -20°C, the standard pump is replaced with a special pump suitable for working in the aforementioned conditions.



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