Fixed Exchangers
Water Heaters
SMART 1 HP



Glass lined water heater with a fixed heat exchanger for Heat pumps – SMART HP

The HP range consists of water heaters for the production of domestic hot water with a double spiral single heat exchanger with a large surface, to be connected with a heat pump. The heaters are available in several capacities, from 300 to 1000 l and are insulated with very thick high density rigid polyurethane, externally covered with PVC and provided with a magnesium anode to protect against galvanic currents and an inspection flange for easy access during the inspection and maintenance phase.



TESTED

Material: S 235 JR carbon steel

Treatment for internal protection: Food grade inorganic glass lining according to DIN 4753.3

Insulation

Capacity (l)	Type
from 300 to 1000	Highly rigid polyurethane foam

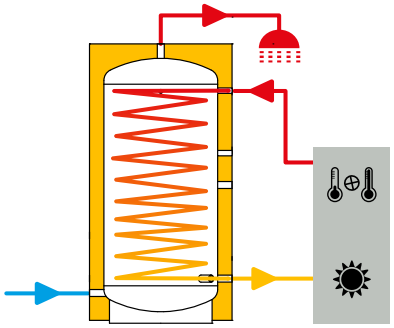
Operational limits

	Storage		Primary circuit	
Cap. l	max. temperature	max. pressure	max. temperature	max. pressure
from 300 to 1000	95°C	10 bar	110°C	12 bar

Supplied accessories: Safety valve and thermometer, magnesium sacrificial anode.

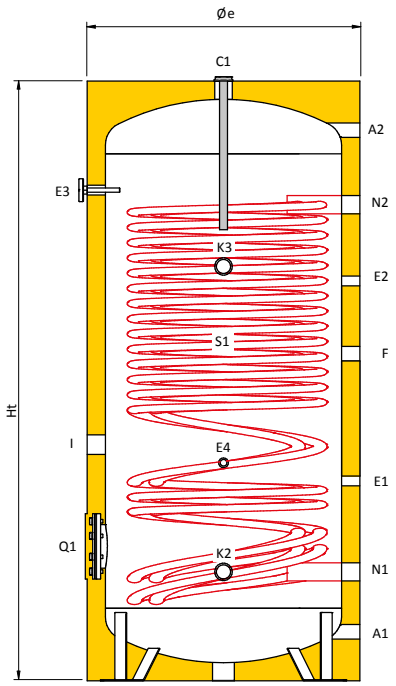
Standard accessories: see pag 284

Capacity l	Code	Price	Energy label	Vertical Packaging Dimensions cm	Vertical Packaging Weight kg
300	819060303X		B	70X70X155	128
500	819060304X		C	80x80x180	179
750	819060305X		C	95x95x185	252
1000	819060306X		C	105X105X210	291

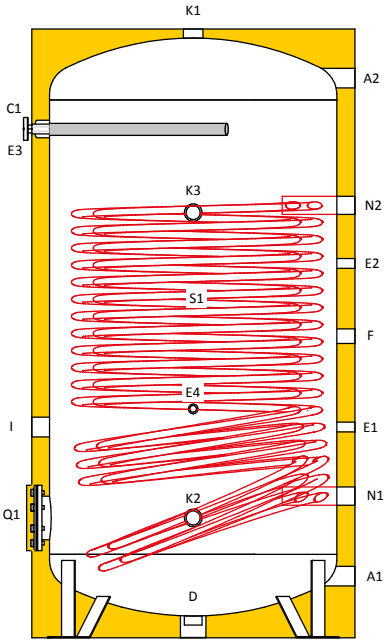


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300 ≤ cap. ≤ 500



750 ≤ cap. ≤ 1.000



Couplings legend

A1	DHW inlet
A2	DHW outlet
C1	Anode
E1	Probe / Thermometer
E2	Probe / Thermometer
E3	Probe / Thermometer
E4	Probe / Thermometer
F	Recirculation
I	Electrical resistor
K1	Auxiliary
K2	Auxiliary
K3	Auxiliary
N1	Lower exchanger outlet
N2	Lower exchanger inlet
Q1	Inspection hole
S1	Lower exchanger

Couplings chart

Cap. l	A1 inch	A2 inch	C1 mm	E1 inch	E2 mm	E3 inch	E4 mm	F inch	I inch	K1 inch	K2 mm	K3 inch	N1 inch	N2 inch	Q1 (Øext/Øint) mm
300	1"	1"	1"1/4	1/2"	1/2"	1/2"	1/2"	1"	1"1/2	-	1"1/4	1"1/4	1"1/4	1"1/4	Ø180/Ø120
500	1"	1"	1"1/4	1/2"	1/2"	1/2"	1/2"	1"	1"1/2	-	1"1/4	1"1/4	1"1/4	1"1/4	Ø180/Ø120
750	1"1/2	1"1/2	1"1/4	1/2"	1/2"	1/2"	1/2"	1"	1"1/2	1"1/2	1"1/4	1"1/4	1"1/4	1"1/4	Ø180/Ø120
1000	1"1/2	1"1/2	1"1/4	1/2"	1/2"	1/2"	1/2"	1"	1"1/2	1"1/2	1"1/4	1"1/4	1"1/4	1"1/4	Ø180/Ø120

Size chart

Cap. l	Øe mm	Ht mm	R* mm	A1 mm	A2 mm	C1 mm	E1 mm	E2 mm	E3 mm	E4 mm	F mm	I mm	K1 mm	K2 mm	K3 mm	N1 mm	N2 mm	Q1** mm
300	660	1380	1530	130	1260	1380	375	965	1145	545	795	545	-	245	1085	245	1145	335
500	760	1650	1820	135	1515	1650	550	1100	1350	600	900	650	-	300	1140	300	1310	370
750	910	1675	1910	170	1540	1400	580	1030	1400	630	830	580	1675	330	1170	390	1190	330
1000	1010	1965	2210	190	1810	1670	580	1000	1670	650	800	590	1965	350	1190	400	1150	350

R*: reversal quota

Q1**: Height from inspection hole center to the ground

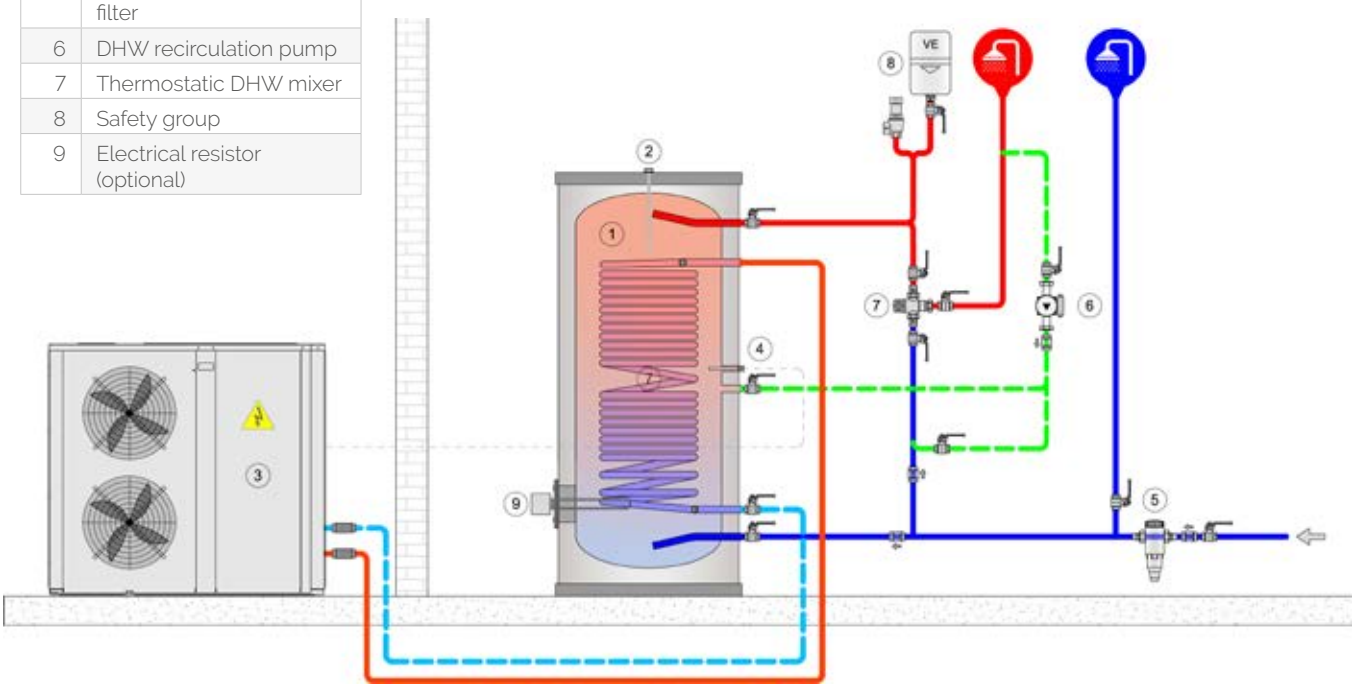
Technical information for SMART HP series

		DHW production TiDHW = 10°C			Exchanger	
Capacity	Ti	TuDHW= 45°C		Ta = 50°C TuDHW = 45°C	Surface area	Nominal flow
l	°C	l/h (a)	kW (b)	l/10 min. (e)	m²	mc/h
300	50	688	28	433	3,65	4,0
	80	2236	91	691		
500	50	958	39	691	5,2	4,0
	80	2432	99	937		
750	50	982	40	961	6	4,0
	80	3390	138	1362		
1000	50	982	40	1227	6	4,0
	80	3390	138	1628		

- a continuous DHW flow with TuDHW= 45°C
- b power of the exchanger with TuACS=45°C
- e amount of DHW at 45°C in the first 10 min. with a storage temperature of 50°C
- Exchanger capacity: 7.10 Lt/mq

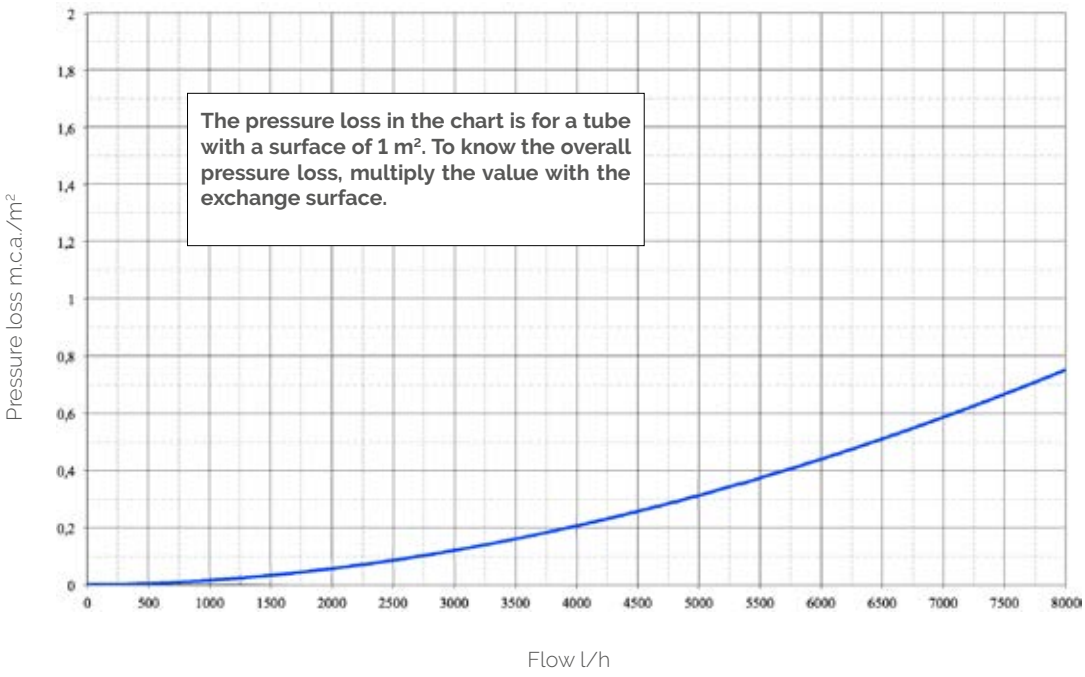
Legend

1	Fiorini DHW storage tank
2	Magnesium anode
3	Heat pump / additional source
4	DHW temperature probe
5	Cold water bacteriostatic filter
6	DHW recirculation pump
7	Thermostatic DHW mixer
8	Safety group
9	Electrical resistor (optional)



Technical information for SMART HP series

Pressure loss fixed heat exchanger





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