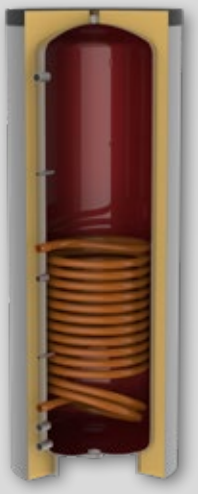
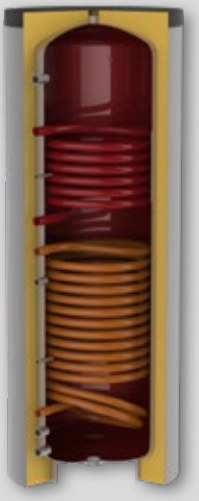
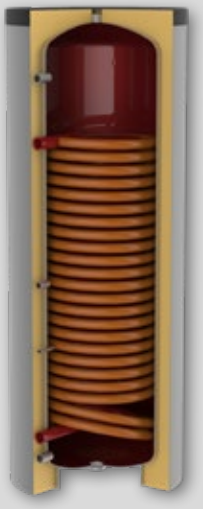
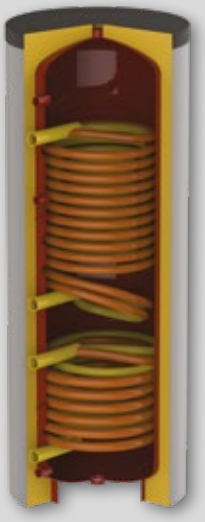
Fixed Exchangers
Water Heaters















fiorini

Glass lined water heater with fixed internal heat exchanger – SMART 1

The Smart 1 range consists of water heaters for the production of domestic hot water with a single fixed heat exchanger, available in several capacities, from 200 to 3000 litres. They are equipped with different type of insulation (see chart below), external PVC coating, a magnesium anode for protection against galvanic currents and an inspection flange to make access in the control and maintenance phase easier.



TESTED

Material: S 235 JR carbon steel

Treatment for internal protection: The boilers up to 1000l are treated with food grade inorganic glass lining in accordance with DIN 4753.3. The tanks with a capacity between 1500 and 3000 litres are varnished with Bluetech.

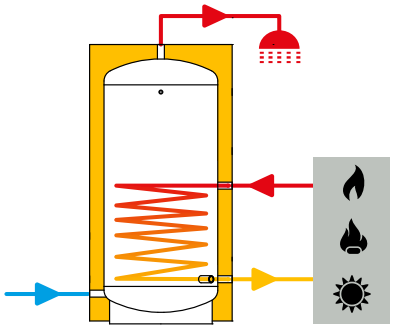
WRAS APPROVED MATERIAL

Insulation

Capacity (l)	Type
from 200 to 1000	Highly rigid polyurethane foam
from 1500	Polyester Fiber

Operational limits

	Storage		Primary circuit	
Capacity (l)	temp. max.	pressure max.	temp. max.	pressure max.
from 200 to 1000	95°C	10 bar	110°C	12 bar
from 1500 to 3000	80°C	6 bar	110°C	12 bar



Supplied accessories: Safety valve and thermometer for sizes up to 1000 l, magnesium sacrificial anode for all sizes.

Standard accessories: see pag 294

Special versions: see pag 296

Capacity l				Vertical Packaging	
	Code	Price	Energy label	Dimensions cm	Weight kg
200	819060318X		B	60X60X150	74
300	819060319X		B	70X70X150	103
500	819060320X		C	80X80X180	143
750	819060321X		C	95X95X185	213
1000	819060322X		C	110X110X210	251
1500	819080001X		C	130X130X240	295
2000	819080002X		C	140X140X275	380
3000	819080005X			150X150X300	469

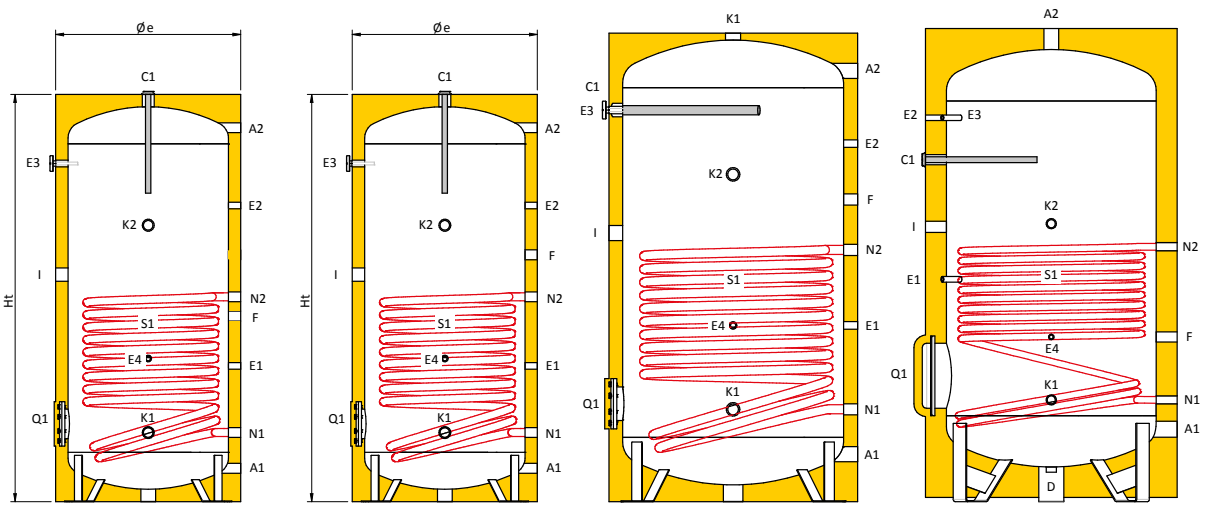


Integration with AQUAFAST

See page 212

Glass lined water heater with fixed internal heat exchanger – SMART 1

cap. = 200 | 200 ≤ cap. ≤ 500 | 750 ≤ cap. ≤ 1.000 | 1.500 ≤ cap. ≤ 3.000



Couplings legend

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

Couplings chart

Cap. l	A1 inch	A2 inch	C1 inch	D inch	E1 inch	E2 inch	E3 inch	E4 inch	F inch	I inch	K1 inch	K2 inch	N1 inch	N2 inch	Q (Øext/Øint) mm
200	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"	Ø180/Ø120
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"	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"	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"1/4	1"1/4	1"	1"	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"1/4	1"1/4	1"	1"	Ø180/Ø120
1500	2"	2"	1"1/4	1"1/4	1/2"	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	1"	1"	Ø380/Ø300
2000	2"	2"	1"1/4	1"1/4	1/2"	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	1"	1"	Ø380/Ø300
3000	3"	3"	1"1/4	1"1/4	1/2"	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	1"	1"	Ø380/Ø300

Size chart

Cap. l	Øe mm	Ht mm	R* mm	A1 mm	A2 mm	C1 mm	D mm	E1 mm	E2 mm	E3 mm	E4 mm	F mm	I mm	K1 mm	K2 mm	N1 mm	N2 mm	Q1** mm
200	560	1325	1440	120	1220	1325	-	385	970	1115	525	555	840	225	1065	225	705	270
300	660	1380	1530	130	1260	1380	-	500	1095	1145	555	925	855	255	1095	255	800	305
500	760	1650	1820	135	1515	1650	-	550	1200	1370	580	1000	920	280	1120	280	830	315
750	910	1675	1910	170	1540	1400	-	630	1280	1400	630	1080	960	330	1170	330	900	350
1000	1010	1965	2210	190	1810	1670	-	660	1300	1670	650	1100	980	350	1190	350	920	370
1500	1250	2280	2605	345	-	1630	165	1060	1830	1830	785	785	1310	485	1325	485	1215	600
2000	1350	2600	2930	345	-	1965	155	1165	2150	2150	780	815	1495	480	1320	490	1325	605
3000	1450	2870	3220	400	-	2120	180	1375	2410	2410	850	875	1625	550	1390	550	1540	665

R*: reversal quote

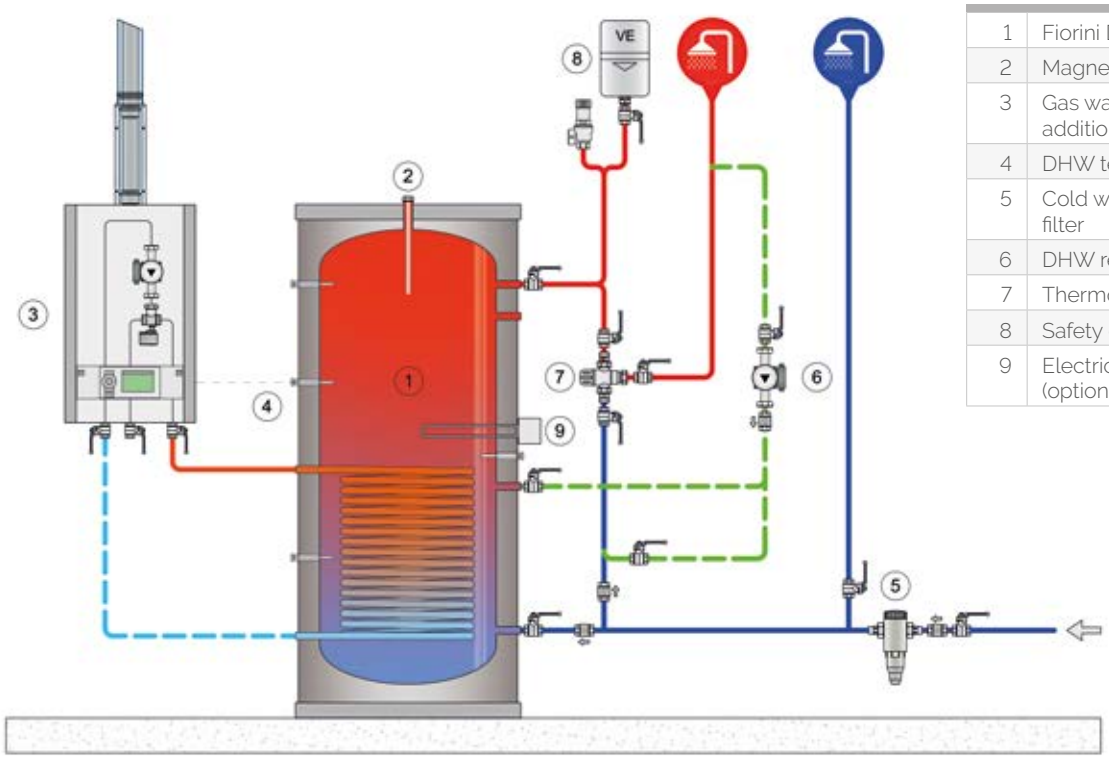
Q1**: Height from inspection hole center to the ground

Technical information for SMART 1 series

		DHW production TiACS = 10°C						Exchanger	
Capacity	Ti	TuACS= 45°C		TuACS = 60°C		Ta = 50°C TuACS = 45°C	Ta = 60°C TuACS = 45°C	Surface area	Nominal flow
l	°C	l/h (a)	kW (b)	l/h (c)	kW (d)	l/10 min. (e)	l/10 min. (f)	m²	mc/h
200	70	810	33	395	23	347	390	1	3
	80	1081	44	602	35	392	435		
	90	1253	51	739	43	421	464		
300	70	810	33	395	23	454	517	1,3	3
	80	1081	44	602	35	499	563		
	90	1253	51	739	43	527	591		
500	70	1179	48	584	34	728	834	1,8	3
	80	1572	64	877	51	793	900		
	90	1842	75	1083	63	838	945		
750	70	1400	57	688	40	1031	1190	2,5	3
	80	1867	76	1032	60	1109	1268		
	90	2186	89	1290	75	1162	1321		
1000	70	1572	64	774	45	1325	1538	2,7	3
	80	2113	86	1169	68	1415	1628		
	90	2481	101	1462	85	1477	1690		
1500	70	2137	87	1049	61	1951	2271	3,7	4
	80	2874	117	1599	93	2074	2393		
	90	3390	138	1995	116	2160	2479		
2000	70	2506	102	1221	71	2545	2970	4,3	4
	80	3341	136	1840	107	2684	3110		
	90	3931	160	2287	133	2782	3208		
3000	70	3022	123	1479	86	3695	4333	5,2	4
	80	4029	164	2236	130	3862	4501		
	90	4717	192	2786	162	3977	4615		

- a continuous DHW flow with TuACS= 45°C
- b power of the exchanger with TuACS=45°C
- c continuous DHW flow with TuACS= 60°C
- d power of the exchanger with TuACS=60°C
- e amount of DHW at 45°C in the first 20 min. with a storage temperature of 50°C
- f amount of DHW at 45°C in the first 10 min. with a storage temperature of 60°C
- Exchanger capacity: 6,40 L/m²

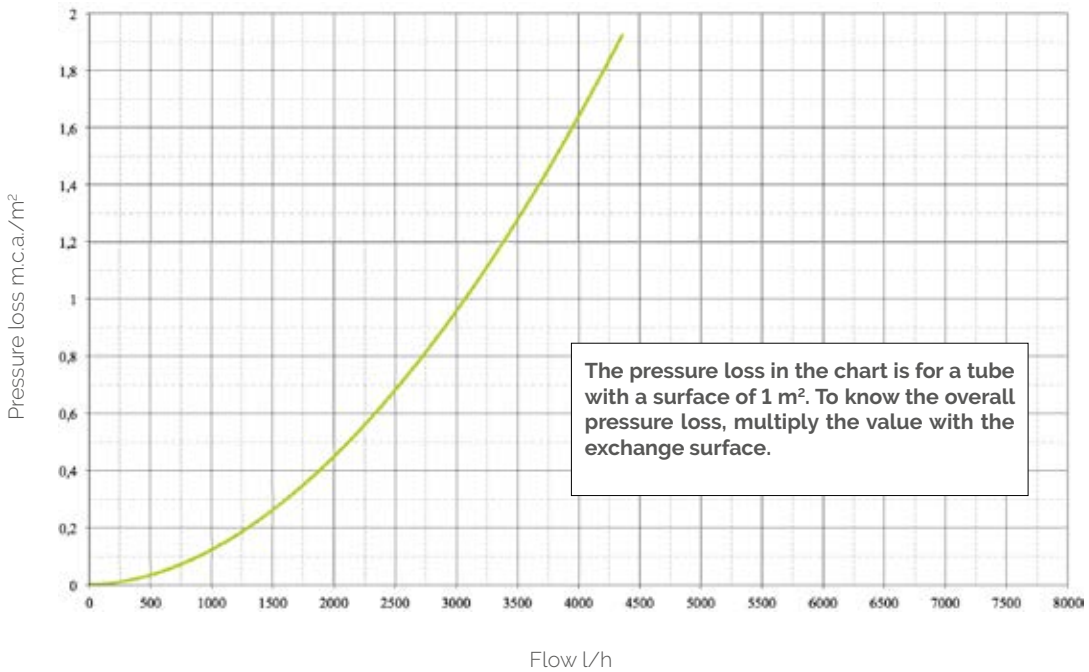
Technical information for SMART 1 series



Legend

1	Fiorini DHW storage tank
2	Magnesium anode
3	Gas water heater / 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)

Pressure loss fixed heat exchanger



Glass lined water heater with two fixed internal heat exchangers – SMART 2

The Smart 2 range consists of Water heaters for the production of domestic hot water with a double fixed heat exchanger, available in several capacities (from 200 up to 3000 litres). They are equipped with different type of insulation (see chart below), external PVC coating, a magnesium anode for protection against galvanic currents, an inspection flange for easy access during the control and maintenance phase.



Material: S 235 JR carbon steel

Treatment for internal protection: The boilers with a capacity of up to 1000 l are treated with food grade inorganic glass lining in accordance with DIN 4753.3, those with a capacity of 1500 to 3000 l with Bluetech.

WRAS APPROVED MATERIAL

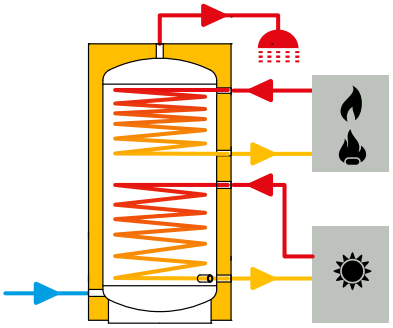
TESTED

Insulation

Capacity (l)	Type
from 200 to 1000	Highly rigid polyurethane foam
from 1500	Polyester Fiber

Operational limits

	Storage		Primary circuit	
Capacity (l)	temp. max.	pressure max.	temp. max.	pressure max.
from 200 to 1000	95°C	10 bar	110°C	12 bar
from 1500 to 3000	80°C	6 bar	110°C	12 bar



Supplied accessories: Safety valve and thermometer for sizes up to 1000 l, magnesium sacrificial anode for all sizes.

Standard accessories: see pag 294

Special versions: see pag 296

Capacity l	Code	Price	Energy label	Vertical Packaging Dimensions cm	Vertical Packaging Weight kg
200	819060323X		B	60x60x150	84
300	819060324X		B	70x70x155	119
500	819060325X		C	80x80x180	158
750	819060326X		C	95x95x185	229
1000	819060327X		C	110x110x210	270
1500	819080003X		C	130x130x245	320
2000	819080004X		C	140x140x275	417
3000	819080006X			150x150x300	504

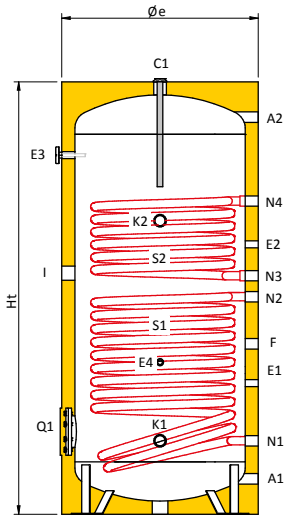


Integration with AQUAFAST

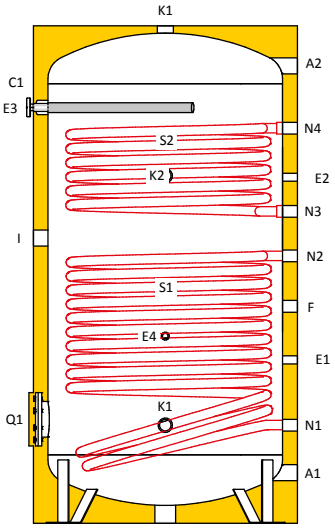
See page 212

Glass lined water heater with two fixed internal heat exchangers – SMART 2

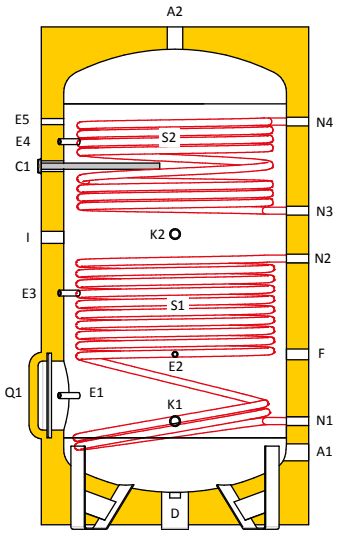
200 ≤ cap. ≤ 500



750 ≤ cap. ≤ 1.000



1.500 ≤ cap. ≤ 3.000



Couplings legend

A1	DHW inlet
A2	DHW outlet
C1	Anode
D	Drain
E1	Probe / Thermometer
E2	Probe / Thermometer
E3	Probe / Thermometer
E4	Probe / Thermometer
E5	Probe / Thermometer
F	Recirculation
I	Electrical resistor
K1	Auxiliary
K2	Auxiliary
N1	Lower exchanger outlet
N2	Lower exchanger inlet
N3	Upper exchanger outlet
N4	Upper exchanger inlet
Q1	Inspection hole
S1	Lower exchanger
S2	Upper exchanger

Couplings chart

Cap. l	A1 inch	A2 inch	C1 inch	D inch	E1 inch	E2 inch	E3 inch	E4 inch	E5 inch	F inch	I inch	K1 inch	K2 inch	N1 inch	N2 inch	N3 inch	N4 inch	Q1 (Øext/Øint) mm
200	1"	1"	1"1/4	-	1/2"	1/2"	1/2"	-	-	1"	1"1/2	1"1/4	1"1/4	1"	1"	1"	1"	Ø180/Ø120
300	1"	1"	1"1/4	-	1/2"	1/2"	1/2"	-	-	1"	1"1/2	1"1/4	1"1/4	1"	1"	1"	1"	Ø180/Ø120
500	1"	1"	1"1/4	-	1/2"	1/2"	1/2"	-	-	1"	1"1/2	1"1/4	1"1/4	1"	1"	1"	1"	Ø180/Ø120
750	1"1/2	1"1/2	1"1/4	-	1/2"	1/2"	1/2"	-	-	1"	1"1/2	1"1/4	1"1/4	1"	1"	1"	1"	Ø180/Ø120
1000	1"1/2	1"1/2	1"1/4	-	1/2"	1/2"	1/2"	-	-	1"	1"1/2	1"1/4	1"1/4	1"	1"	1"	1"	Ø180/Ø120
1500	2"	2"	1"1/4	1"1/4	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	1"	1"	1"	1"	Ø380/Ø300
2000	2"	2"	1"1/4	1"1/4	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	1"	1"	1"	1"	Ø380/Ø300
3000	3"	3"	1"1/4	1"1/4	1/2"	1/2"	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	1"	1"	1"	1"	Ø380/Ø300

Size chart

Cap. l	Øe mm	Ht mm	R* mm	A1 mm	A2 mm	C1 mm	D mm	E1 mm	E2 mm	E3 mm	E4 mm	E5 mm	F mm	I mm	K1 mm	K2 mm	N1 mm	N2 mm	N3 mm	N4 mm	Q1 mm
200	560	1325	1440	120	1220	1325	-	390	910	1115	-	-	520	755	230	1070	230	710	810	1045	280
300	660	1380	1530	130	1260	1380	-	415	985	1145	-	-	545	770	245	1085	245	720	820	1100	295
500	760	1650	1820	135	1515	1650	-	500	1030	1350	-	-	650	860	280	1120	280	810	910	1195	320
750	910	1675	1910	170	1540	1400	-	550	1165	1400	-	-	730	980	330	1170	330	900	1050	1330	350
1000	1010	1965	2210	190	1810	1670	-	570	1235	1670	-	-	730	970	350	1190	350	920	1070	1400	380
1500	1250	2280	2605	345	2280	1630	165	600	785	1060	1740	1830	785	1310	485	1325	485	1215	1430	1830	600
2000	1350	2600	2930	345	2600	1965	155	605	780	1165	2065	2150	815	1495	480	1320	480	1325	1690	2150	605
3000	1450	2870	3220	400	2870	2120	180	665	850	1375	2225	2410	875	1625	550	1390	550	1540	1680	2410	665

R*: reversal quota

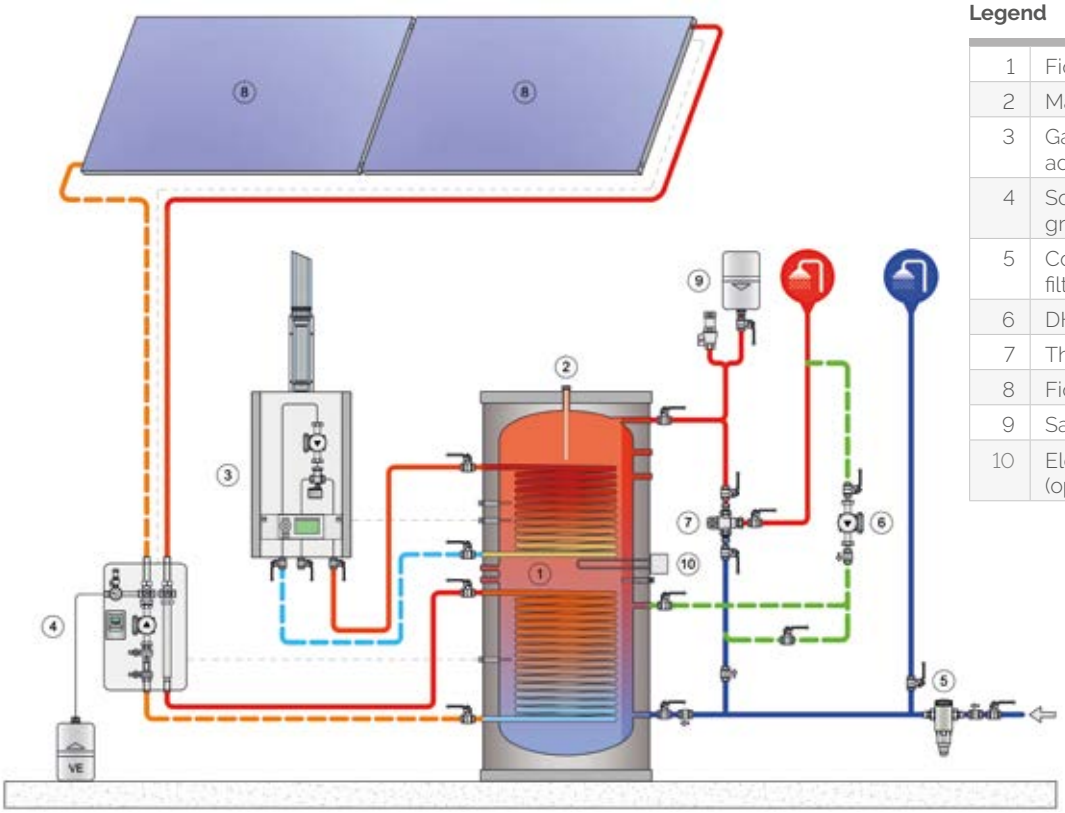
Q1**: Height from inspection hole center to the ground

Technical information for SMART 2 series

		DHW production TiACS = 10°C						Upper Exchanger	Lower Exchanger	
Capacity	Ti	TuACS= 45°C		TuACS = 60°C		Ta = 50°C TuACS = 45°C	Ta = 60°C TuACS = 45°C	Surface area	Surface area	Nominal flow
l	°C	l/h (a)	kW (b)	l/h (c)	kW (d)	l/10 min. (e)	l/10 min. (f)	m²	m²	mc/h
200	70	417	17	206	12	282	324	0,5	1	3
	80	540	22	292	17	302	345			
	90	614	25	361	21	315	357			
300	70	638	26	309	18	425	489	0,8	1,3	3
	80	860	35	481	28	462	526			
	90	1007	41	584	34	486	550			
500	70	638	26	309	18	638	744	1	1,8	3
	80	860	35	481	28	675	781			
	90	1007	41	584	34	699	806			
750	70	688	28	344	20	912	1072	1,2	2,5	3
	80	933	38	516	30	953	1112			
	90	1081	44	636	37	978	1137			
1000	70	884	36	430	25	1211	1423	1,5	2,7	3
	80	1179	48	653	38	1260	1473			
	90	1376	56	808	47	1293	1505			
1500	70	1326	54	653	38	1816	2135	2,3	3,7	6,0
	80	1793	73	980	57	1894	2213			
	90	2113	86	1238	72	1947	2267			
2000	70	1744	71	860	50	2418	2843	3	4,3	8,0
	80	2334	95	1290	75	2516	2942			
	90	2727	111	1599	93	2582	3007			
3000	70	2211	90	1083	63	3559	4198	3,8	5,2	8,0
	80	2948	120	1634	95	3682	4321			
	90	3440	140	2029	118	3764	4403			

- a continuous DHW flow with TuACS= 45°C
- b power of the exchanger with TuACS=45°C
- c continuous DHW flow with TuACS= 60°C
- d power of the exchanger with TuACS=60°C
- e amount of DHW at 45°C in the first 10 min. with a storage temperature of 50°C
- f amount of DHW at 45°C in the first 10 min. with a storage temperature of 60°C
- Exchanger capacity: 6,40 L/m²

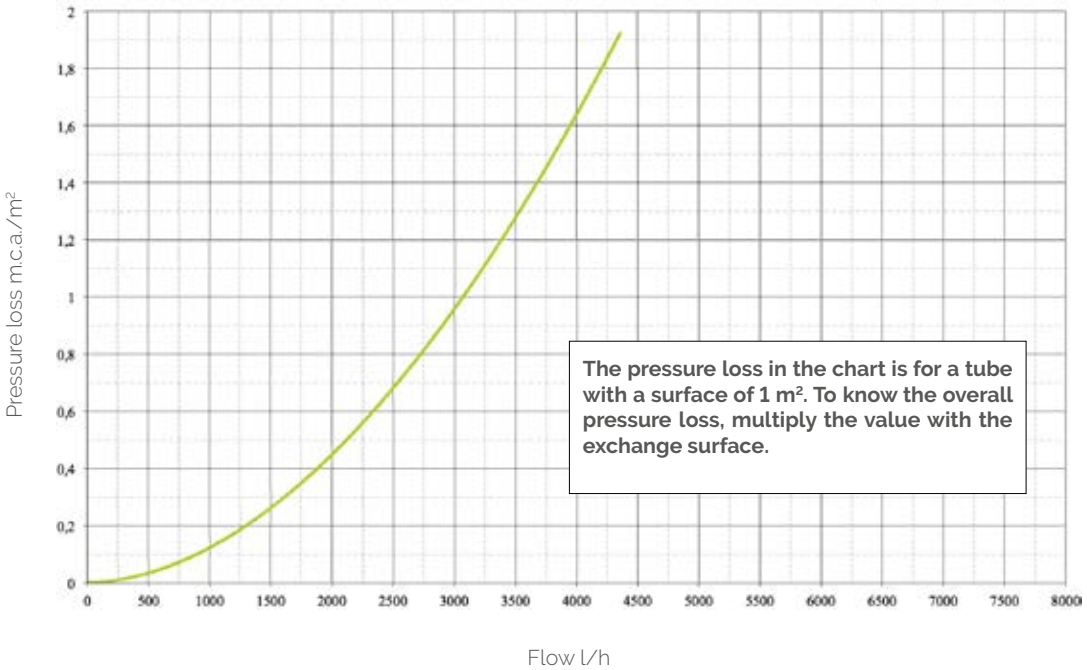
Technical information for SMART 2 series



Legend

1	Fiorini DHW storage tank
2	Magnesium anode
3	Gas water heater / additional source
4	Solar thermal return group
5	Cold water bacteriostatic filter
6	DHW recirculation pump
7	Thermostatic DHW mixer
8	Fiorini solar panel
9	Safety group
10	Electrical resistor (optional)

Pressure loss fixed heat exchanger



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.



Material: S 235 JR carbon steel

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

WRAS APPROVED MATERIAL

TESTED

Insulation

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

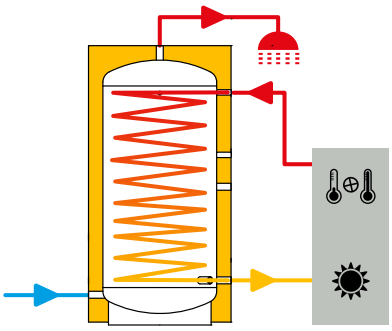
Operational limits

	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 294

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



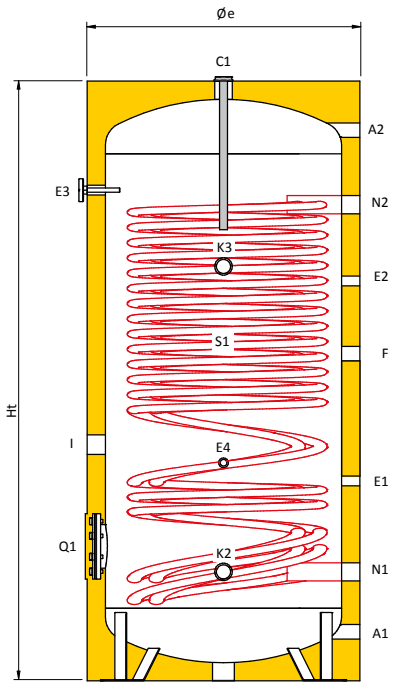


Integration with AQUAFAST

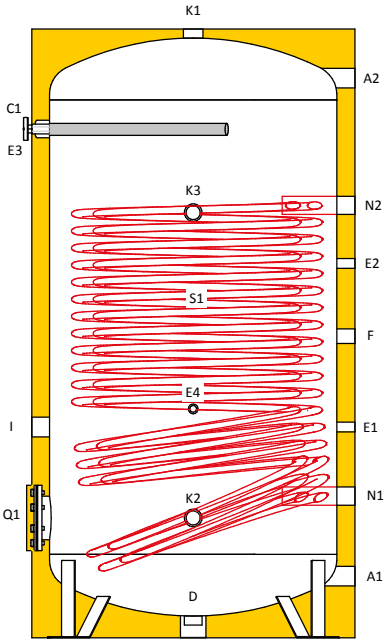
See page 212

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

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

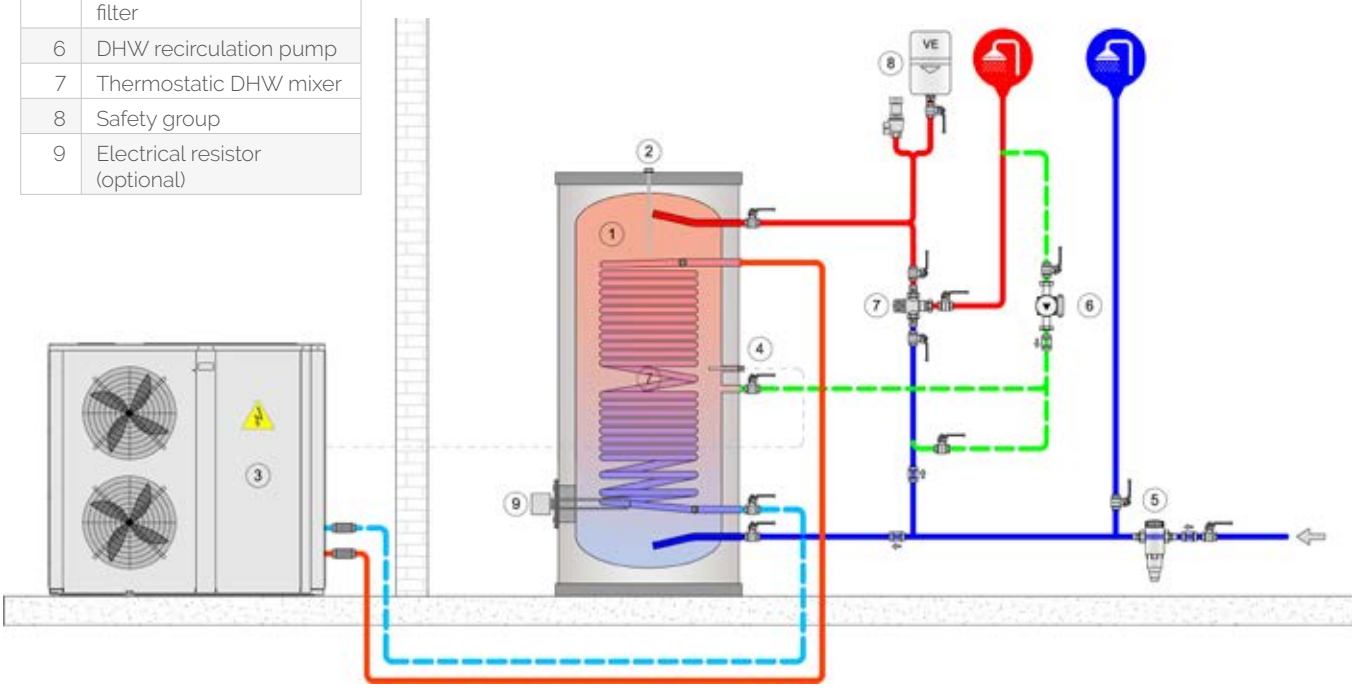
Technical information for SMART HP series

		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: 6,40 L/m²

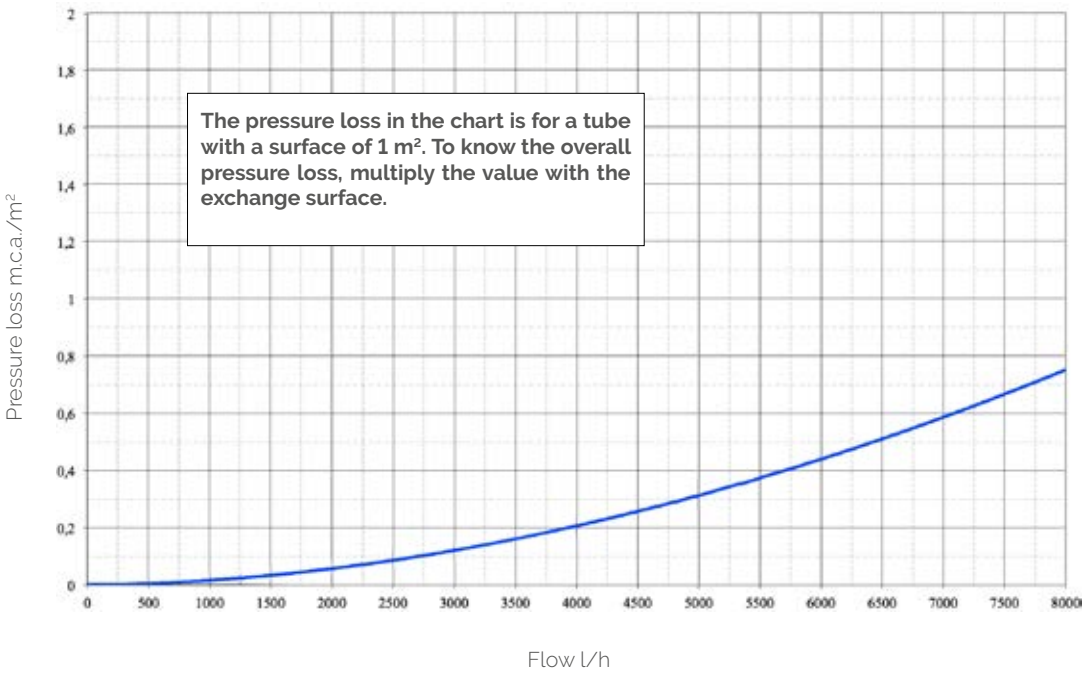
Legend

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



Glass lined water heater with fixed double heat exchanger for Heat pumps – SMART HP 2

The HP 2 range consists of water heaters for the production of domestic hot water with a double fixed heat exchangers, one simple and one with double spiral with a large surface, to be coupled with a heat pump together with additional sources (solar, gas water heater). The heaters are available in the capacities of 300 and 500 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.

Material: S 235 JR carbon steel

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

WRAS APPROVED MATERIAL

Insulation

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

Operational limits

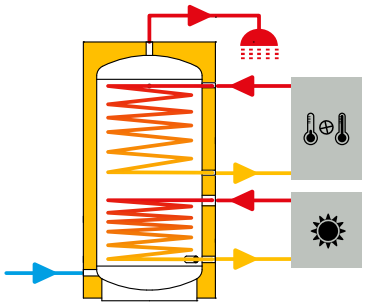
Cap. l	Storage		Primary circuit	
	max. temperature	max. pressure	max. temperature	max. pressure
from 300 to 1000	95°C	10 bar	110°C	12 bar

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

Standard accessories: see pag 294



TESTED



Capacity l	Code	Price	Energy label	Vertical Packaging	
				Dimensions cm	Weight kg
300	819060307X		B	70X70X155	129
500	819060308X		C	80X80X180	182
750	819060309X		C	95X95X185	264
1000	819060310X		C	105X105X210	314

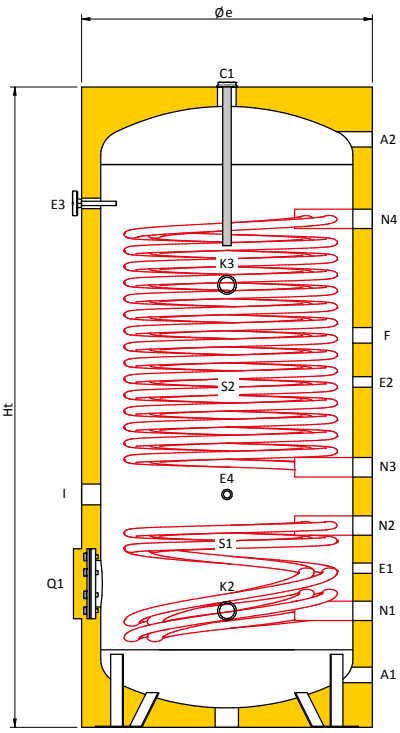


Integration with AQUAFAST

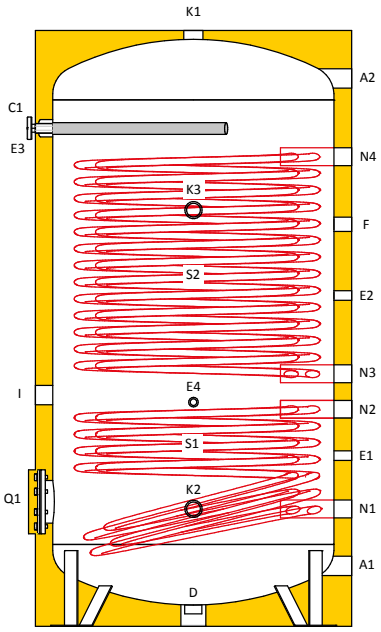
See page 212

Glass lined water heater with fixed double heat exchanger for Heat pumps – SMART HP 2

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
N3	Upper exchanger outlet
N4	Upper exchanger inlet
Q1	Inspection hole
S1	Lower exchanger
S2	Upper exchanger

Couplings chart

Cap. l	A1 inch	A2 inch	C1 inch	E1 inch	E2 inch	E3 inch	E4 inch	F inch	I inch	K1 inch	K2 inch	K3 inch	N1 inch	N2 inch	N3 inch	N4 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	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	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	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	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	N3 mm	N4 mm	Q1** mm
300	660	1380	1530	130	1260	1380	355	945	1145	545	795	530	-	245	1085	245	465	595	1145	345
500	760	1650	1820	135	1515	1650	410	890	1350	600	1010	600	-	300	1140	300	520	670	1310	370
750	910	1675	1910	170	1540	1400	480	930	1400	650	1130	650	1675	330	1170	330	610	710	1320	350
1000	1010	1965	2210	190	1810	1670	500	945	1670	630	1150	680	1965	350	1190	350	635	735	1390	360

R*: reversal quota

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

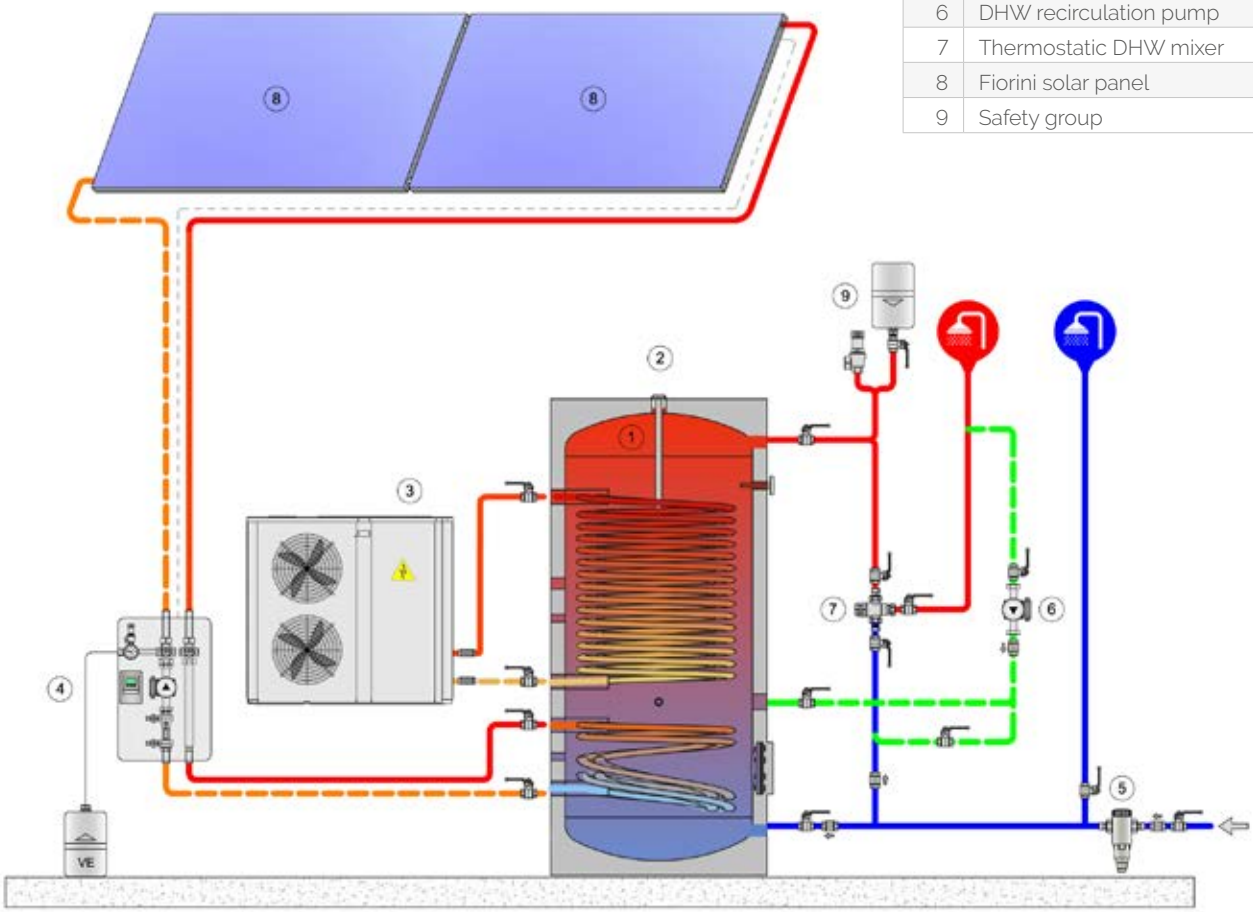
Technical information for SMART HP 2 series

		DHW production TiACS = 10°C			Exchanger		
Capacity	Ti	TuACS= 45°C		Ta = 50°C TuACS = 45°C	Upper exchanger surface	Lower exchanger surface	Nominal flow
l	°C	l/h (a)	kW (b)	l/10 min. (e)	m²	m²	mc/h
300	50	553	22,5	435	2,7	0,98	1,6
	80	1501	61,1	593			2,6
500	50	860	35	715	4,1	1,1	1,5
	80	2334	95	960			4,1
750	50	1380	52	920	4,9	2,2	3
	80	2800	115	1170			4,1
1000	50	1580	62	1080	5,5	2,5	3
	80	3000	135	1310			4,1

- a continuous DHW flow with TuDHW= 45°C
- e amount of DHW at 45°C in the first 10 min. with a storage temperature of 50°C
- Exchanger capacity: 6,40 L/m²

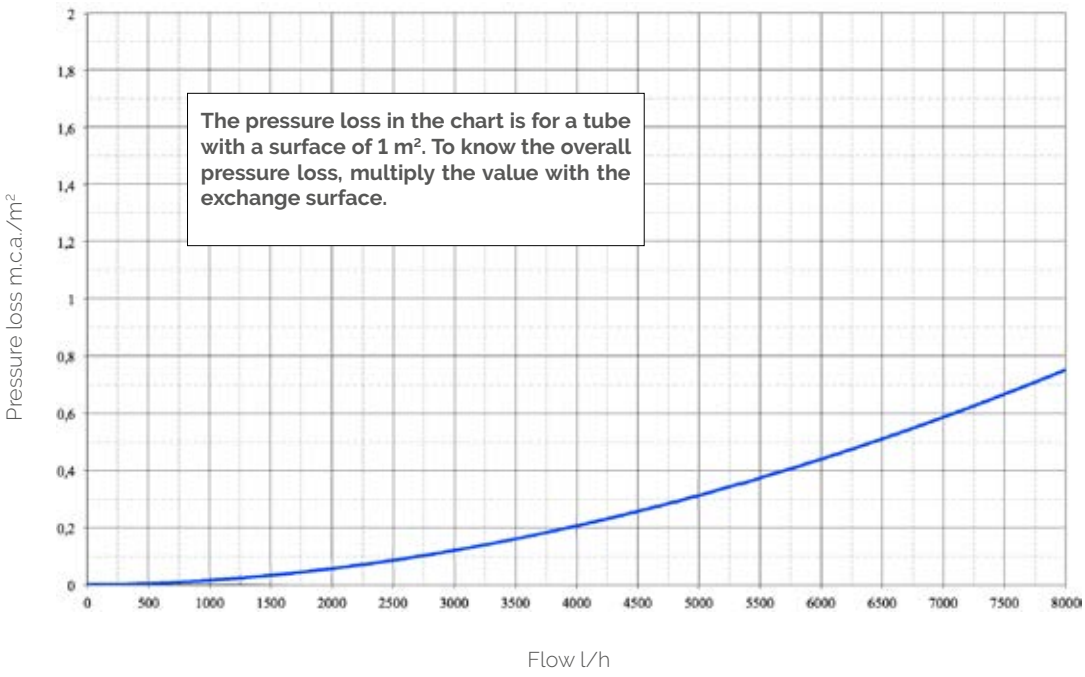
Key

1	Fiorini DHW storage tank
2	Magnesium anode
3	Heat pump
4	Solar thermal return group
5	Cold water bacteriostatic filter
6	DHW recirculation pump
7	Thermostatic DHW mixer
8	Fiorini solar panel
9	Safety group



Technical information for SMART HP 2 series

Pressure loss fixed heat exchanger



Stainless steel water heater with fixed heat exchanger - SMART INOX 1

The SMART INOX 1 range consists of water heaters for the production of sanitary hot water with a single fixed heat exchanger. They are available in several capacities, from 200 up to 3000 litres and have different insulation with respect to capacity (see chart below) and coated externally in PVC and equipped with a magnesium anode for the protection against galvanic currents, an inspection flange for the easy access during the inspection and maintenance phase.

Material: AISI 316 stainless steel

Treatment for internal protection: Pickling and passivation



Capacity (l)	Type
from 200 to 3.000	Polyester Fiber

Insulation

Storage		Primary circuit	
max. temperature	max. pressure	max. temperature	max. pressure
95°C	6 bar	110°C	12 bar

Operational limits

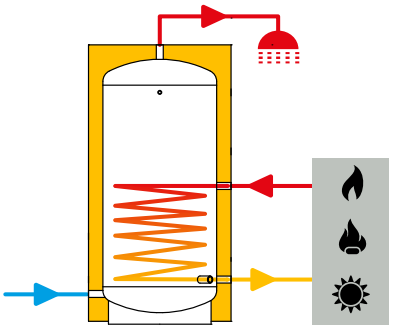
Supplied accessories: Magnesium sacrificial anode for all sizes.

Standard accessories: see pag 294

Special versions: see pag 296

Capacity l	Code	Price	Energy label	Vertical Packaging Dimensions cm
200	819040114X		B	70x70x165
300	819040115X		B	80x80x170
500	819040116X		C	90x90x190
750	819040117X		C	100x100x210
1000	819040118X		C	110x110x230
1500	819040119X		C	130x130x240
2000	819040120X		C	150x150x250
2500	819040121X			150x150x275
3000	819040122X			150x150x300

TESTED



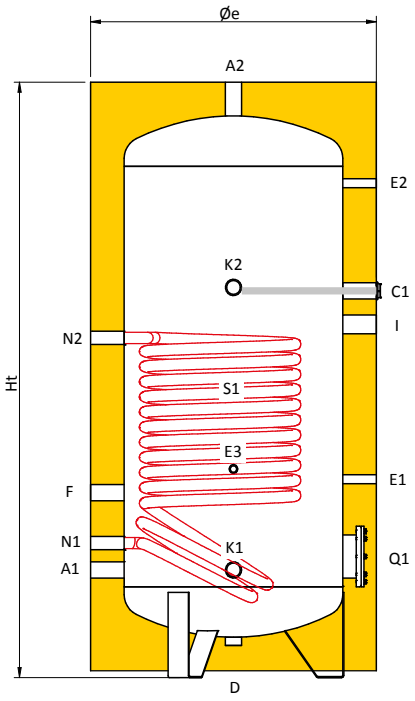


Integration with AQUAFAST

See page 212

Stainless steel water heater with fixed heat exchanger - SMART INOX 1

200 ≤ cap. ≤ 3.000



Couplings legend

A1	DHW inlet
A2	DHW outlet
C1	Anode
D	Drain
E1	Probe / Thermometer
E2	Probe / Thermometer
E3	Probe / Thermometer
F	Recirculation
I	Electrical resistor
K1	Auxiliary
K2	Auxiliary
N1	Exchanger outlet
N2	Exchanger inlet
Q1	Inspection hole
S1	Lower exchanger (see pag. 188)

Couplings chart

Cap. l	A1 inch	A2 inch	C1 inch	D inch	E1 inch	E2 inch	E3 inch	F inch	I inch	K1 inch	K2 inch	N1 inch	N2 inch	Q1 (Øext/Øint) mm
200	1"1/4	1"1/4	1"1/4	1"1/4	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	3/4"	3/4"	Ø180/Ø120
300	1"1/4	1"1/4	1"1/4	1"1/4	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	3/4"	3/4"	Ø180/Ø120
500	1"1/4	1"1/4	1"1/4	1"1/4	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	1"	1"	Ø180/Ø120
750	1"1/2	1"1/2	1"1/4	1"1/4	1/2"	1/2"	1/2"	1"1/4	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"1/4	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	1"1/4	1"1/4	Ø180/Ø120
1500	1"1/2	1"1/2	1"1/4	1"1/2	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	1"1/4	1"1/4	Ø300/Ø220
2000	1"1/2	1"1/2	1"1/4	2"	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	1"1/4	1"1/4	Ø300/Ø220
2500	1"1/2	1"1/2	1"1/4	2"	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	1"1/4	1"1/4	Ø300/Ø220
3000	1"1/2	1"1/2	1"1/4	2"	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	1"1/4	1"1/4	Ø300/Ø220

Size chart

Cap. l	Øe mm	Ht mm	R* mm	A1 mm	C1 mm	D mm	E1 mm	E2 mm	E3 mm	F mm	I mm	N1 mm	N2 mm	K1 mm	K2 mm	Q1 mm
200	650	1410	1535	265	880	120	535	1165	565	495	800	345	775	265	1105	305
300	750	1490	1650	305	920	120	575	1205	605	535	840	385	815	305	1145	345
500	850	1770	1945	320	1150	120	590	1470	620	550	1050	400	1010	320	1160	360
750	990	1810	2045	340	1090	120	610	1490	640	570	1010	420	970	340	1180	380
1000	1050	2100	2350	390	1320	120	630	1760	690	620	1220	470	1180	390	1230	400
1500	1250	2235	2560	480	1400	165	840	1850	780	710	1300	560	1210	480	1320	560
2000	1450	2315	2735	515	1455	155	875	1885	815	765	1355	615	1275	515	1355	595
2500	1400	2615	2970	515	1555	155	875	2155	815	765	1455	615	1385	515	1355	595
3000	1450	2850	3200	545	1715	180	905	2385	845	805	1615	655	1480	545	1385	625

R*: reversal quota

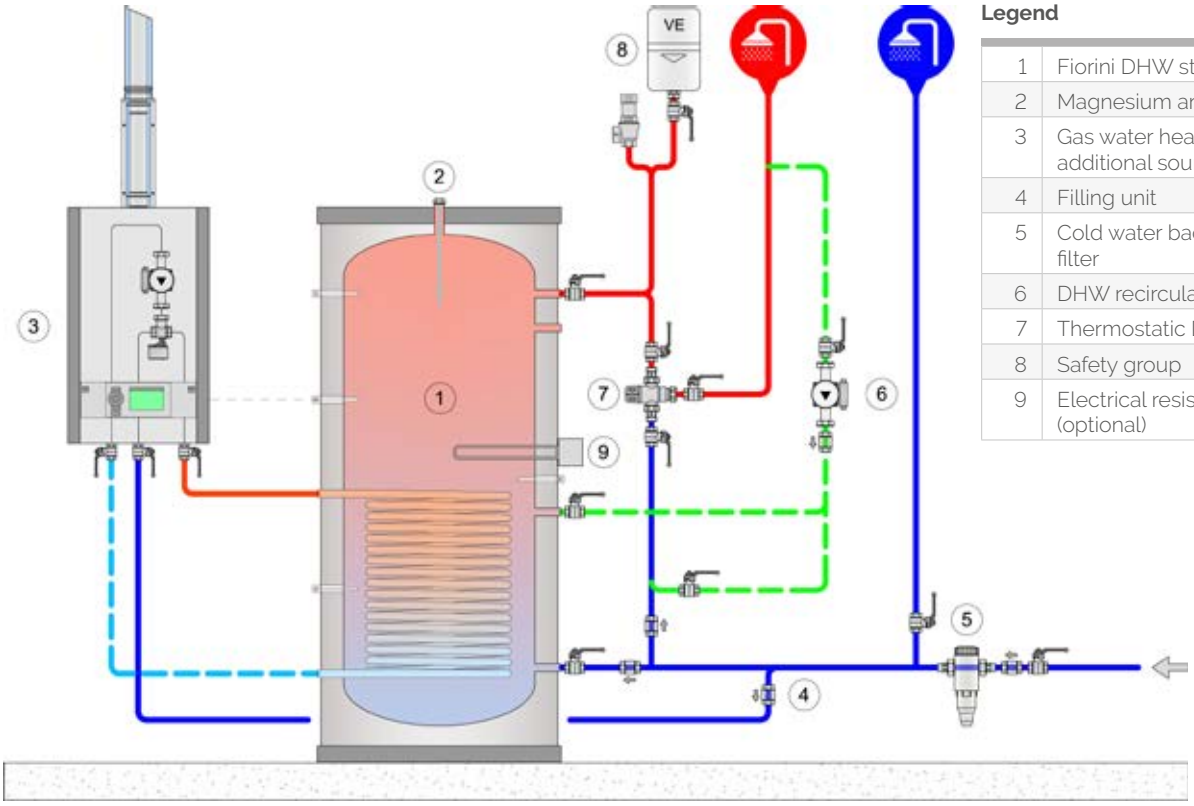
Q**: Height from inspection hole center to the ground

Technical information for SMART INOX 1 series

		DHW production TiDHW = 10°C						Exchanger	
Capacity	Ti	TuDHW= 45°C		TuDHW = 60°C		Ta = 50°C TuDHW = 45°C	Ta = 60°C TuDHW = 45°C	Surface area	Nominal flow
l	°C	l/h (a)	kW (b)	l/h (c)	kW (d)	l/10 min. (e)	l/10 min. (f)	m²	mc/h
200	70	565	23	275	16	306	349	0,8	3,0
	80	761	31	430	25	339	382		
	90	884	36	516	30	360	402		
300	70	737	30	361	21	441	505	1,2	3,0
	80	982	40	550	32	482	546		
	90	1154	47	670	39	511	575		
500	70	1105	45	550	32	716	822	1,8	3,0
	80	1474	60	825	48	777	883		
	90	1744	71	1014	59	822	928		
800	70	1400	57	688	40	1084	1254	2,7	4,0
	80	1867	76	1032	60	1162	1332		
	90	2186	89	1290	75	1215	1385		
1000	70	1842	75	911	53	1370	1583	3,5	6,0
	80	2481	101	1376	80	1477	1690		
	90	2924	119	1720	100	1551	1763		
1500	70	2309	94	1135	66	1980	2299	4,0	6,0
	80	3120	127	1720	100	2115	2434		
	90	3661	149	2150	125	2205	2525		
2000	70	2801	114	1376	80	2594	3020	4,8	8,0
	80	3734	152	2064	120	2749	3175		
	90	4373	178	2562	149	2856	3282		
2500	70	3292	134	1634	95	3208	3740	5,6	8,0
	80	4398	179	2442	142	3392	3924		
	90	5160	210	3027	176	3519	4051		
3000	70	3734	152	1823	106	3813	4452	6,4	8,0
	80	4963	202	2752	160	4018	4656		
	90	5823	237	3440	200	4161	4800		

- a continuous DHW flow with TuDHW= 45°C
- b exchanger power with TuDHW=45°C
- c continuous DHW flow with TuDHW= 60°C
- d exchanger power with TuDHW=60°C
- e amount of DHW at 45°C in the first 10 min. with a storage temperature of 50°C
- f amount of DHW at 45°C in the first 10 min. with a storage temperature of 60°C
- Exchanger capacity: 6,40 L/m²

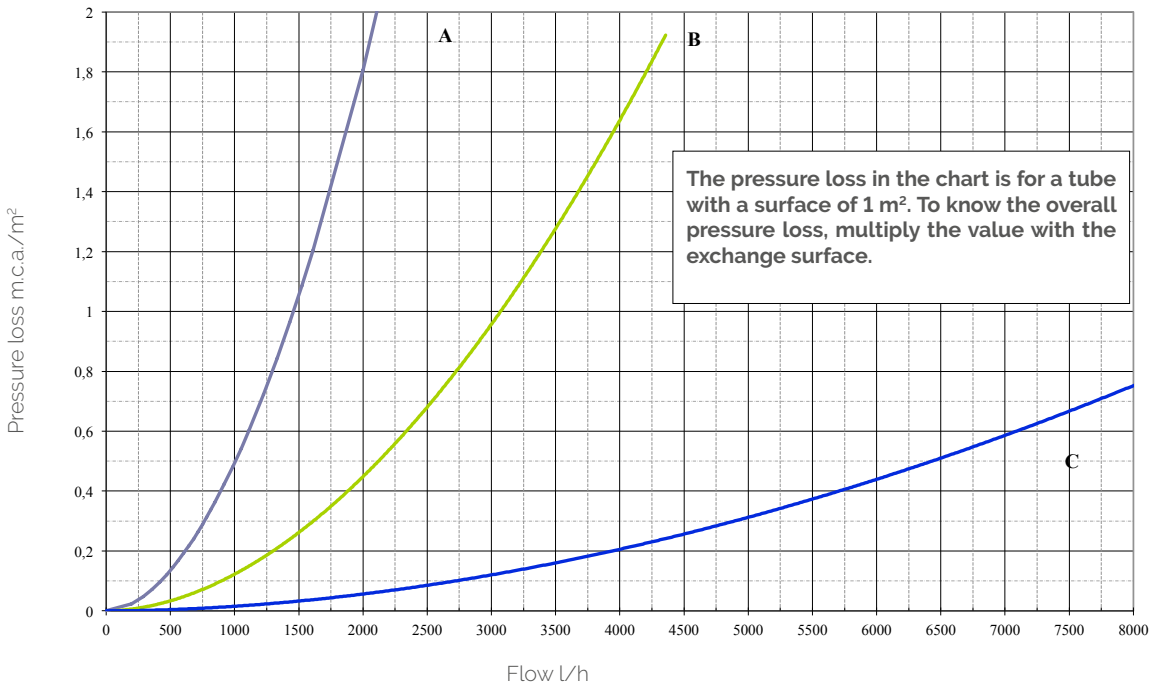
Technical information for SMART INOX 1 series



Legend

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

Pressure loss fixed heat exchanger



A) 200 l tank B) 300 - 500 l tank C) 800 - 3000 l tank

Stainless steel water heater with double fixed heat exchanger - SMART INOX 2

The SMART INOX 2 range consists of water heaters for the production of domestic hot water with a double fixed heat exchanger. They are available in several capacities, from 200 up to 3000 litres and have different insulation with respect to capacity (see chart below) and coated externally in PVC and equipped with a magnesium anode for the protection against galvanic currents, an inspection flange for the easy access during the inspection and maintenance phase.

Material: AISI 316 stainless steel

Treatment for internal protection: Pickling and passivation



TESTED

Insulation

Capacity (l)	Type
from 200 to 3.000	Polyester Fiber

Operational limits

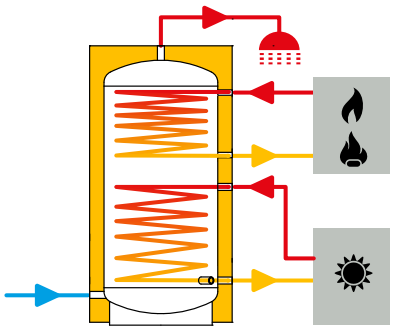
Storage		Primary circuit	
max. temperature	max. pressure	max. temperature	max. pressure
95°C	6 bar	110°C	12 bar

Supplied accessories: Magnesium sacrificial anode for all sizes.

Standard accessories: see pag 294

Special versions: see pag 296

Capacity l	Code	Price	Energy label	Vertical Packaging Dimensions cm
200	819040123X		B	70x70x160
300	819040124X		B	80x80x165
500	819040125X		C	90x90x195
750	819040126X		C	100x100x200
1000	819040127X		C	110x110x225
1500	819040128X		C	130x130x240
2000	819040129X		C	150x150x245
2500	819040130X			150x150x275
3000	819040131X			150x150x300



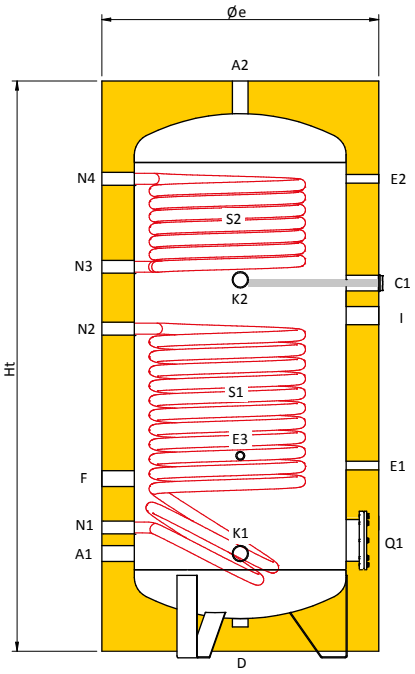


Integration with AQUAFAST

See page 212

Stainless steel water heater with double fixed heat exchanger - SMART INOX 2

200 ≤ cap. ≤ 3.000



Couplings legend

A1	DHW inlet
A2	DHW outlet
C1	Anode
D	Drain
E1	Probe / Thermometer
E2	Probe / Thermometer
E3	Probe / Thermometer
D	Drain
F	Recirculation
I	Electrical resistor
K1	Auxiliary
K2	Auxiliary
N1	Lower exchanger outlet
N2	Lower exchanger inlet
N3	Upper exchanger outlet
N4	Upper exchanger inlet
Q1	Inspection hole
S1	Lower exchanger
S2	Upper exchanger

Couplings chart

Cap. l	A1 inch	A2 inch	C1 inch	D inch	E1 inch	E2 inch	E3 inch	F inch	I inch	K1 inch	K2 inch	N1 inch	N2 inch	N3 inch	N4 inch	Q1 (Øext/Øint) mm
200	1"1/4	1"1/4	1"1/4	1"1/4	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	3/4"	3/4"	3/4"	3/4"	Ø180/Ø120
300	1"1/4	1"1/4	1"1/4	1"1/4	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	3/4"	3/4"	3/4"	3/4"	Ø180/Ø120
500	1"1/4	1"1/4	1"1/4	1"1/4	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	1"	1"	1"	1"	Ø180/Ø120
750	1"1/2	1"1/2	1"1/4	1"1/4	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	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"1/4	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4	Ø180/Ø120
1500	1"1/2	1"1/2	1"1/4	1"1/2	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4	Ø300/Ø220
2000	1"1/2	1"1/2	1"1/4	2"	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4	Ø300/Ø220
2500	1"1/2	1"1/2	1"1/4	2"	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4	Ø300/Ø220
3000	1"1/2	1"1/2	1"1/4	2"	1/2"	1/2"	1/2"	1"1/4	1"1/2	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4	1"1/4	Ø300/Ø220

Size chart

Cap. l	Øe mm	Ht mm	R* mm	A1 mm	C1 mm	D mm	E1 mm	E2 mm	E3 mm	F mm	I mm	K1 mm	K2 mm	N1 mm	N2 mm	N3 mm	N4 mm	Q1** mm
200	650	1410	1535	265	880	120	535	1165	565	495	800	265	1105	920	1165	265	1105	305
300	750	1490	1650	305	920	120	575	1205	605	535	840	305	1145	995	1205	305	1145	345
500	850	1770	1945	320	1150	120	590	1470	620	550	1050	320	1160	1200	1470	320	1160	360
750	990	1810	2045	340	1090	120	610	1490	640	570	1010	340	1180	1160	1490	340	1180	380
1000	1050	2100	2350	390	1320	120	630	1760	690	620	1220	390	1230	1430	1760	390	1230	400
1500	1250	2235	2560	480	1400	165	840	1850	780	710	1300	480	1320	1490	1820	480	1320	560
2000	1450	2315	2735	515	1455	155	875	1885	815	765	1355	515	1355	1585	1855	515	1355	595
2500	1400	2615	2970	515	1555	155	875	2155	815	765	1455	515	1355	1830	2155	515	1355	595
3000	1450	2850	3200	545	1715	180	905	2385	845	805	1615	655	1385	2040	2365	545	1385	625

R*: reversal quota

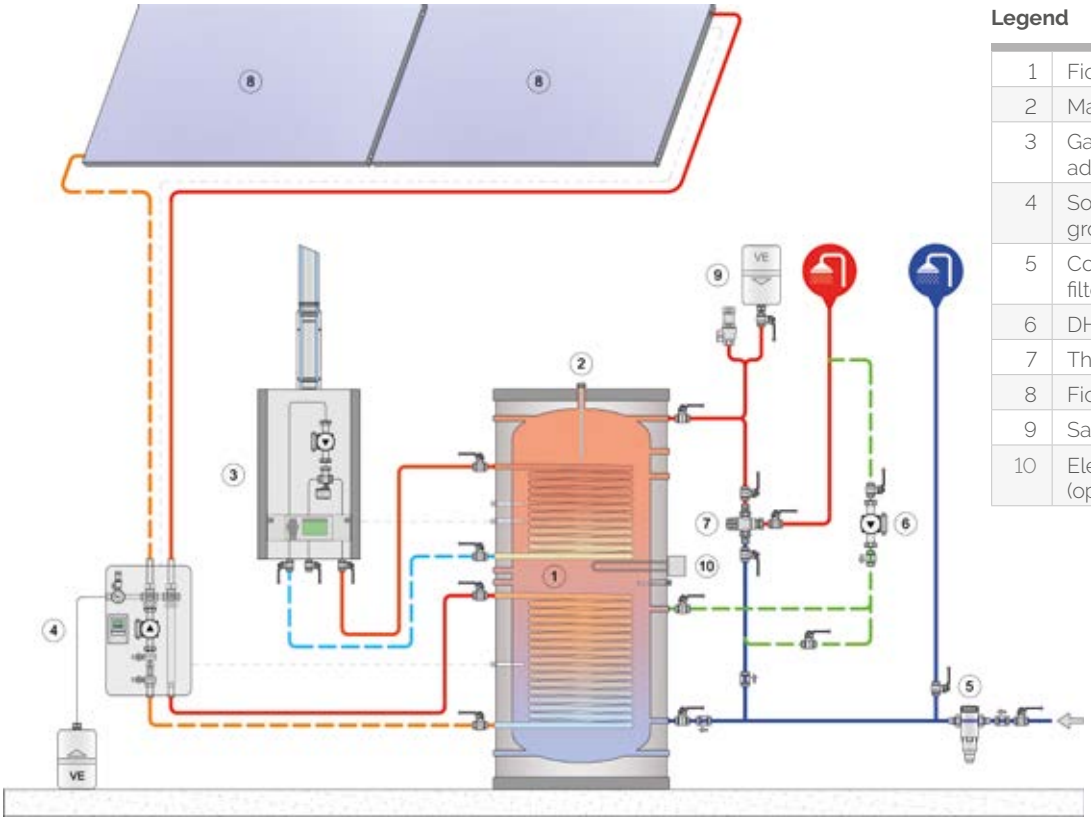
Q1**: Height from inspection hole center to the ground

Technical information for SMART INOX 2 series

		DHW production TiDHW = 10°C (upper exchanger)						Upper exchanger	Lower exchanger	
Capacity	Ti	TuDHW= 45°C		TuDHW = 60°C		Ta = 50°C TuDHW = 45°C	Ta = 60°C TuDHW = 45°C	Surface area	Surface area	Nominal flow
l	°C	l/h (a)	kW (b)	l/h (c)	kW (d)	l/10 min. (e)	l/10 min. (f)	m²	m²	mc/h
200	70	270	11	137	8	257	300	0,5	0,8	3,0
	80	368	15	206	12	274	316			
	90	442	18	258	15	286	328			
300	70	344	14	154	9	376	440	0,7	1,2	3,0
	80	442	18	258	15	392	456			
	90	516	21	309	18	405	468			
500	70	589	24	292	17	630	736	1,0	1,8	3,0
	80	786	32	430	25	662	769			
	90	909	37	533	31	683	789			
800	70	688	28	344	20	965	1135	1,6	2,7	4,0
	80	933	38	516	30	1006	1176			
	90	1081	44	636	37	1031	1201			
1000	70	688	28	344	20	1178	1391	1,8	3,5	6,0
	80	933	38	516	30	1219	1432			
	90	1081	44	636	37	1243	1456			
1500	70	909	37	447	26	1747	2066	1,6	4,0	6,0
	80	1228	50	688	40	1800	2119			
	90	1449	59	860	50	1837	2156			
2000	70	1154	47	567	33	2319	2745	2,0	4,8	8,0
	80	1548	63	860	50	2385	2811			
	90	1818	74	1066	62	2430	2856			
2500	70	1400	57	688	40	2892	3424	2,4	5,6	8,0
	80	1867	76	1049	61	2970	3502			
	90	2211	90	1290	75	3028	3559			
3000	70	1400	57	688	40	3424	4063	2,4	6,4	8,0
	80	1867	76	1032	60	3502	4140			
	90	2186	89	1290	75	3555	4194			

- a continuous DHW flow with TuDHW= 45°C
- b exchanger power with TuDHW=45°C
- c continuous DHW flow with TuDHW= 60°C
- d exchanger power with TuDHW=60°C
- e amount of DHW at 45°C in the first 10 min. with a storage temperature of 50°C
- f amount of DHW at 45°C in the first 10 min. with a storage temperature of 60°C
- Exchanger capacity: 6,40 L/m²

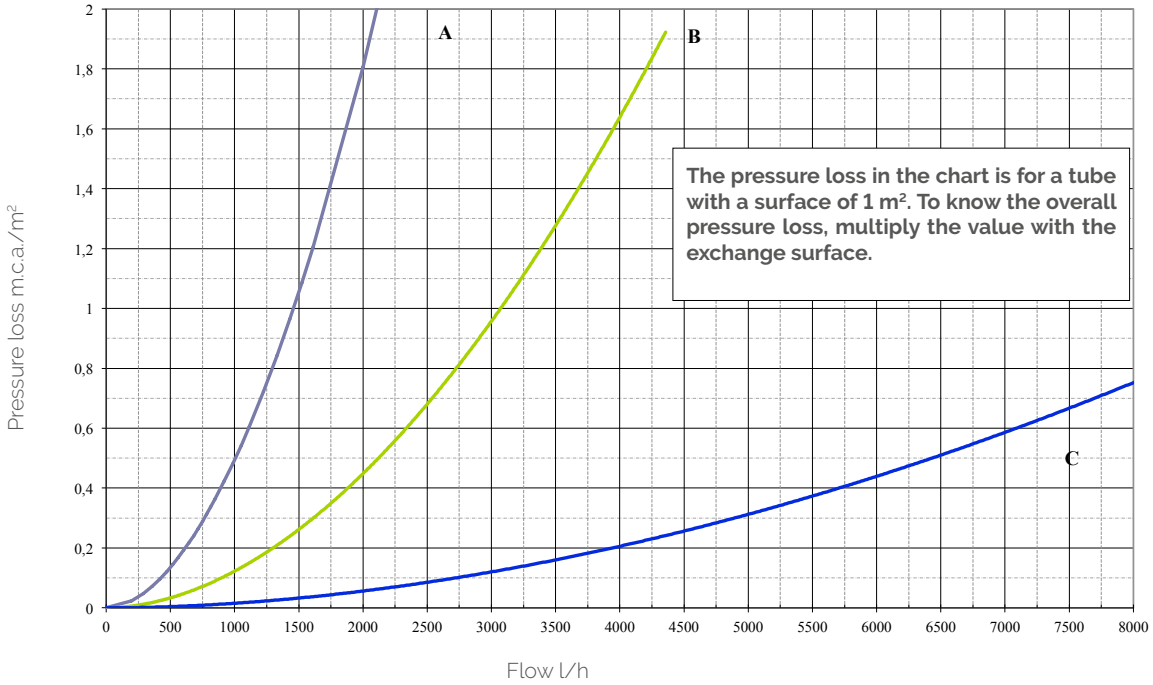
Technical information for SMART INOX 2 series



Legend

1	Fiorini DHW storage tank
2	Magnesium anode
3	Gas water heater / additional source
4	Solar thermal return group
5	Cold water bacteriostatic filter
6	DHW recirculation pump
7	Thermostatic DHW mixer
8	Fiorini solar panel
9	Safety group
10	Electrical resistor (optional)

Pressure loss fixed heat exchanger



A) 200 l tank B) 300 - 500 l tank C) 800 - 3000 l tank

Water heater with fixed heat exchanger
SMART UP

SMART UP is the fixed-coil water heater with a compact design, specifically created for under-boiler installation. Thanks to its dimensions, it easily fits into narrow niches, as all hydraulic connections are located on the top, offering convenient access during installation. The use of efficient rigid polyurethane foam insulation ensures long-term water temperature retention and economical operation. The porcelain-glass-coated boiler body provides accurate protection of the internal surface, while the replaceable magnesium anode offers additional corrosion protection. The external casing is made of white-painted metal sheet.



TESTED

Material: S 235 JR carbon steel
Treatment for internal protection: glass lining

Insulation

Capacity (l)	Type
from 100 to 200	Highly rigid polyurethane foam

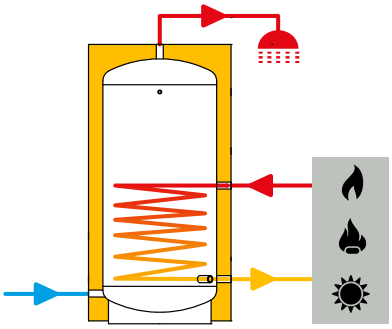
Operational limits

Storage		Primary circuit	
max. temperature	max. pressure	max. temperature	max. pressure
95°C	6 bar	110°C	12 bar

Supplied accessories: Sacrificial Magnesium Anode and Thermometer.

Standard accessories: see page 294

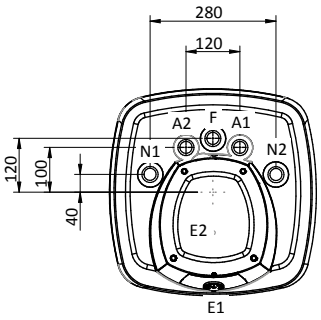
Special executions: see page 296

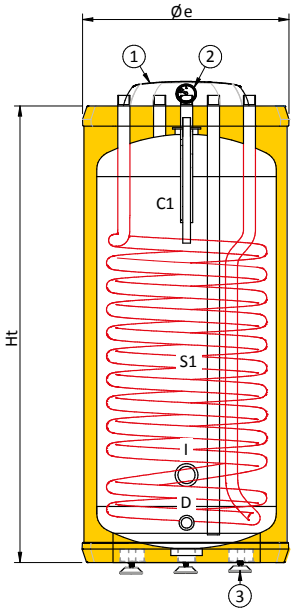


Capacity l	Code	Price	Energy label	Net weight kg
100	819060192X		C	57
120	819060193X		C	62
140	819060190X		C	67
200	819060191X		C	85

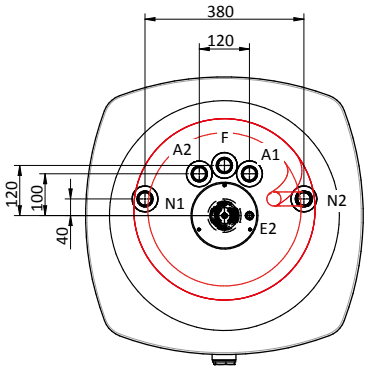
Water heater with fixed heat exchanger
SMART UP

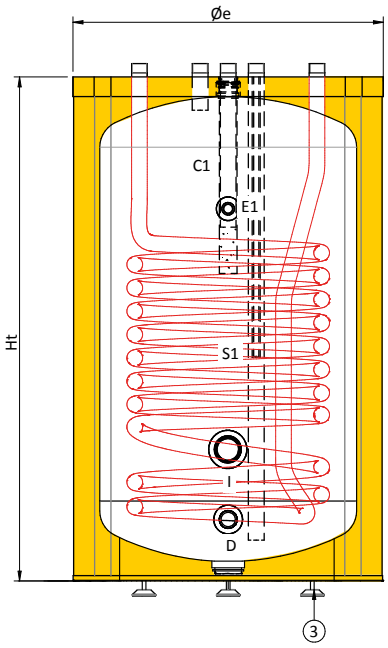
100 ≤ cap. ≤ 140





cap. = 200





Couplings legend

A1	DHW inlet
A2	DHW outlet
C1	Anode
D	Drain
E1	Thermometer
E2	Probe
F	Recirculation
I	Electrical resistor
N1	Exchanger outlet
N2	Exchanger inlet
S1	Exchanger
1	Flange Cover Cap
2	Thermometer
3	Adjustable feet

Couplings chart

Cap. l	A1 inches	A2 inches	C1 inches	D inches	E1 inches	E2 inches	F inches	I inches	N1 inches	N2 inches
100	3/4"	3/4"	1"1/4	3/4"	3/8"	3/8"	3/4"	1"1/4	3/4"	3/4"
120	3/4"	3/4"	1"1/4	3/4"	3/8"	3/8"	3/4"	1"1/4	3/4"	3/4"
140	3/4"	3/4"	1"1/4	3/4"	3/8"	3/8"	3/4"	1"1/4	3/4"	3/4"
200	1"	1"	1"1/4	1"	1/2"	3/8"	1"	1"1/2	1"	1"

Size chart

Cap. l	Øe mm	Ht mm	D mm	I mm	S1 m²
200	455	1030	90	195	1,2
300	455	1130	90	195	1,2
500	455	1280	90	195	1,2
750	650	1130	130	280	1,6



Download additional content

go.fiorinigroup.it/eng/content

fiorini

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