Fixed Exchangers
Water Heaters
SMART 1



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.

Insulation

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

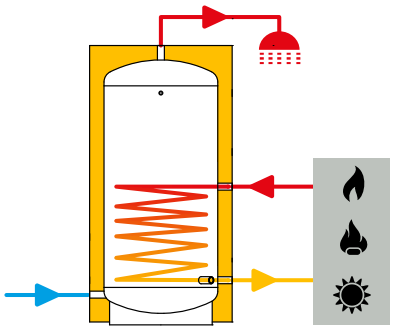
Operational limits

	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 284

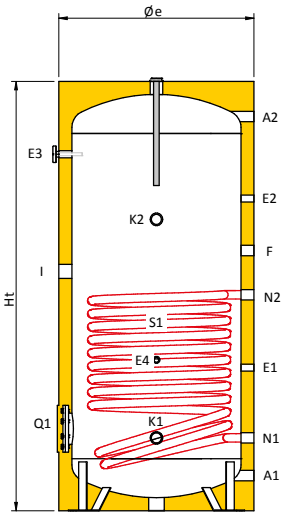
Special versions: see pag 286



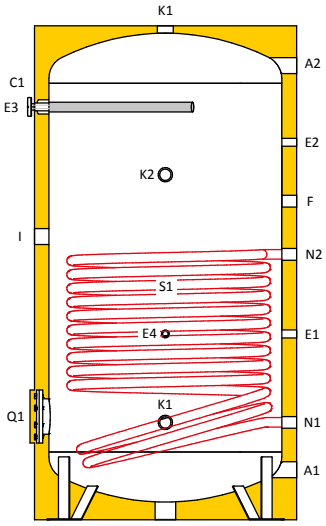
Capacity l	Code	Price	Energy label	Vertical Packaging Dimensions cm	Vertical Packaging Weight kg
200	819060318X		B	60X60X150	74
300	819060319X		B	70X70X150	103
500	819060320X		C	80X80X180	143
750	819060321X		C	95X95X185	213
1000	819060322X		C	110X110X210	251
1500	819080001X		C	130X130X240	295
2000	819080002X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

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

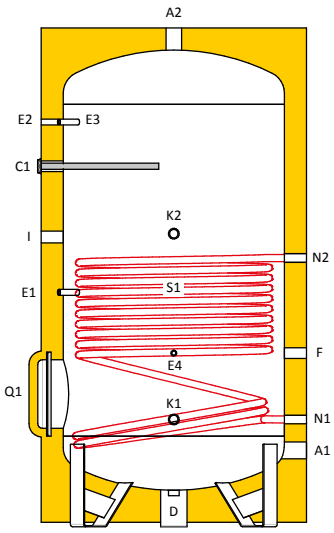
200 ≤ cap. ≤ 500



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
F	Recirculation
I	Electrical resistor
K1	Auxiliary
K2	Auxiliary
N1	Exchanger outlet
N2	Exchanger inlet
Q1	Inspection hole
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	490	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

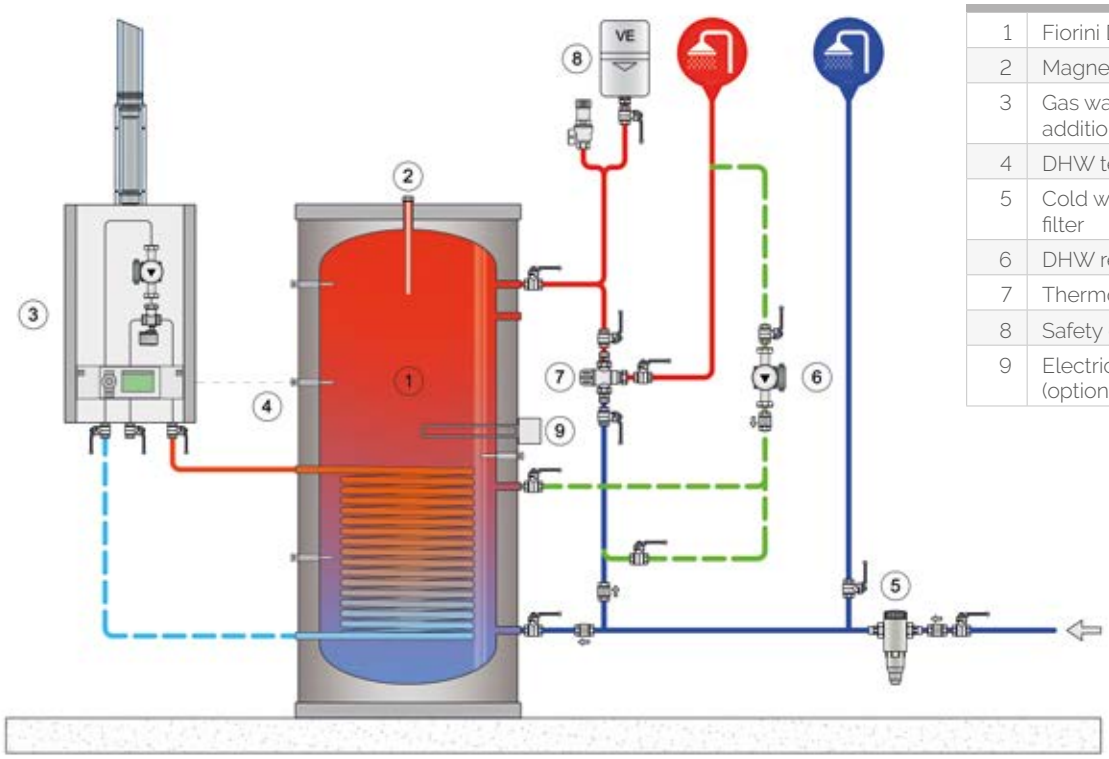
Q1**: Height from inspection hole center to the ground

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: 7.10 Lt/mq

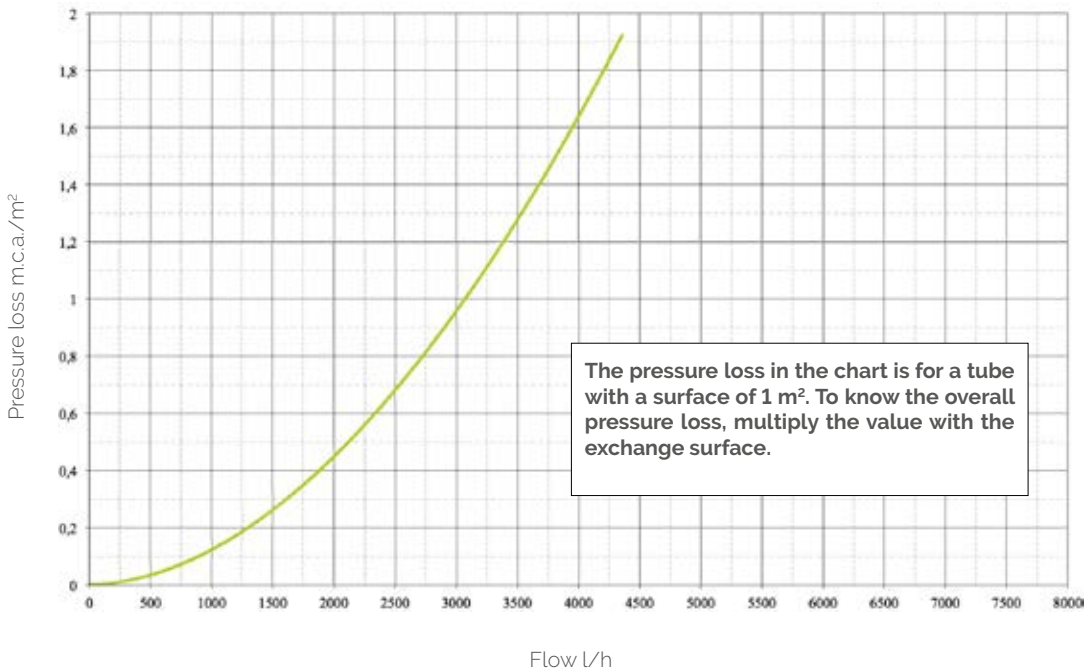
Technical information for SMART 1 series



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





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