

# Water heaters

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# 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.

**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

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

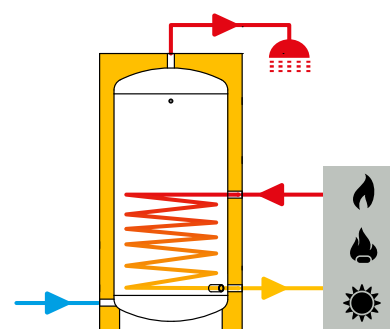
 **Supplied accessories:** Adjustable height feet for sizes up to 500 l, safety valve and thermometer for sizes up to 1000 l, magnesium sacrificial anode for all sizes.

 **Standard accessories:** see pag 274

 **Special versions:** see pag 277

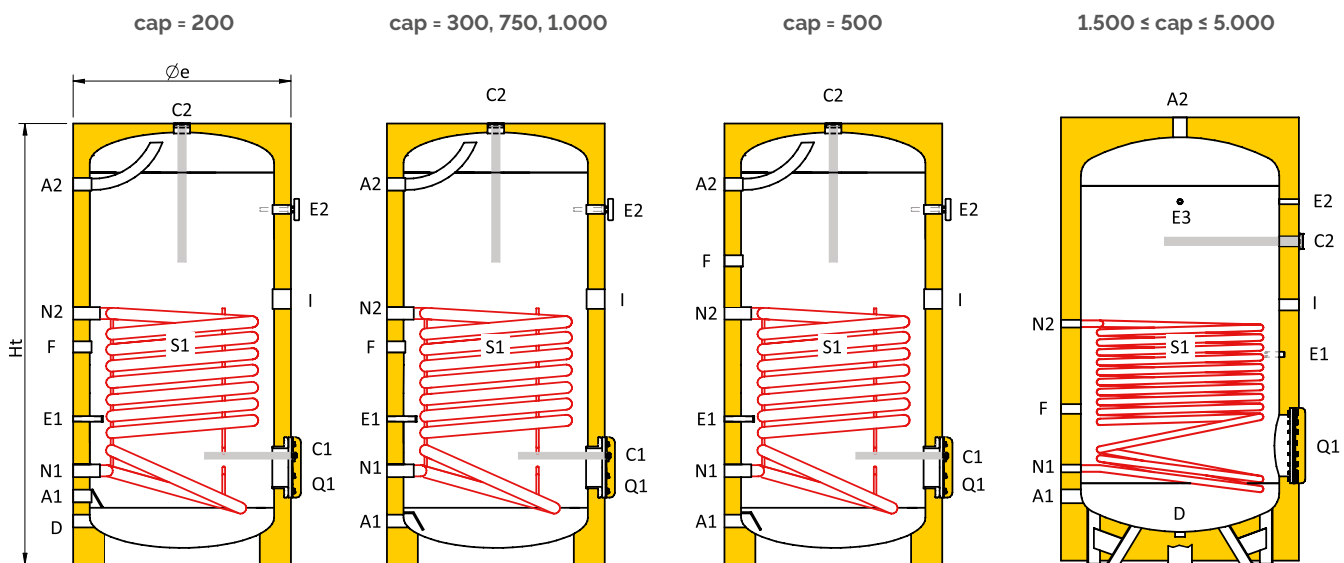


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Capacity l	Code	Price	Energy label	With vertical packaging	
				Dimensions cm	Weight kg
200	819060107X		B	75x75x120	84
300	819060108X		B	75x75x168	122
500	819060110X		C	75x75x204	195
750	819060111X		C	90x90x207	260
1000	819060112X		C	110x110x198	330
1500	819080001X		C	123x123x237,5	255
2000	819080002X		C	132x132x269,5	325
3000	819080005X			147x147x299	411

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



## Couplings legend

<b>A1</b>	DHW inlet	<b>E3</b>	Probe / Thermometer
<b>A2</b>	DHW outlet	<b>F</b>	Recirculation
<b>C1</b>	Anode	<b>I</b>	Electrical resistor
<b>C2</b>	Anode	<b>N1</b>	Exchanger outlet
<b>D</b>	Drain	<b>N2</b>	Exchanger inlet
<b>E1</b>	Probe / Thermometer	<b>Q1</b>	Inspection hole
<b>E2</b>	Probe / Thermometer	<b>S1</b>	Lower exchanger

## Couplings chart

Cap. l	A1 inch	A2 inch	C1 inch	C2 inch	D inch	E1 inch	E2 inch	E3 inch	F inch	I inch	N1 inch	N2 inch	Q (Øext/Øint) mm
200	1"	1"	M8	1 1/4"	1"	3/8"x90	1/2"	-	3/4"	1 1/2"	1"	1"	Ø180/Ø120
300	1"	1"	M8	1 1/4"	-	3/8"x90	1/2"	-	3/4"	1 1/2"	1"	1"	Ø180/Ø120
500	1"	1"	M8	1 1/4"	-	3/8"x125	1/2"	-	3/4"	1 1/2"	1"	1"	Ø180/Ø120
750	1 1/2"	1 1/2"	M8	2"	-	3/8"x140	1/2"	-	1 1/4"	1 1/2"	1"	1"	Ø280/Ø205
1000	1 1/2"	1 1/2"	M8	2"	-	3/8"x160	1/2"	-	1 1/4"	1 1/2"	1"	1"	Ø280/Ø205
1500	2"	2"	-	1 1/4"	1 1/4"	1/2"	1/2"	1/2"	1 1/4"	1 1/2"	1"	1"	Ø380/Ø300
2000	2"	2"	-	1 1/4"	1 1/4"	1/2"	1/2"	1/2"	1 1/4"	1 1/2"	1"	1"	Ø380/Ø300
3000	3"	3"	-	1 1/4"	1 1/4"	1/2"	1/2"	1/2"	1 1/4"	1 1/2"	1"	1"	Ø380/Ø300

## Size chart

Cap. l	Øe mm	Ht mm	R* mm	A1 mm	A2 mm	D mm	E1 mm	E2 mm	E3 mm	F mm	I mm	N1 mm	N2 mm	Q1** mm
200	670	1100	1290	210	865	130	445	795	-	680	540	290	790	290
300	670	1615	1750	130	1355	-	435	1295	-	650	805	280	750	290
500	750	1950	2090	180	1650	-	530	1570	-	1320	1030	320	970	330
750	855	2050	2225	215	1715	-	575	1725	-	925	1110	375	1045	445
1000	1055	1960	2230	247	1567	-	587	1577	-	577	1047	447	997	477
1500	1250	2280	2605	345	-	165	1060	1830	1830	785	1310	485	1215	600
2000	1350	2600	2930	345	-	155	1165	2150	2150	815	1495	490	1325	605
3000	1450	2870	3220	400	-	180	1375	2410	2410	875	1625	550	1540	665

R\*: reversal quote

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

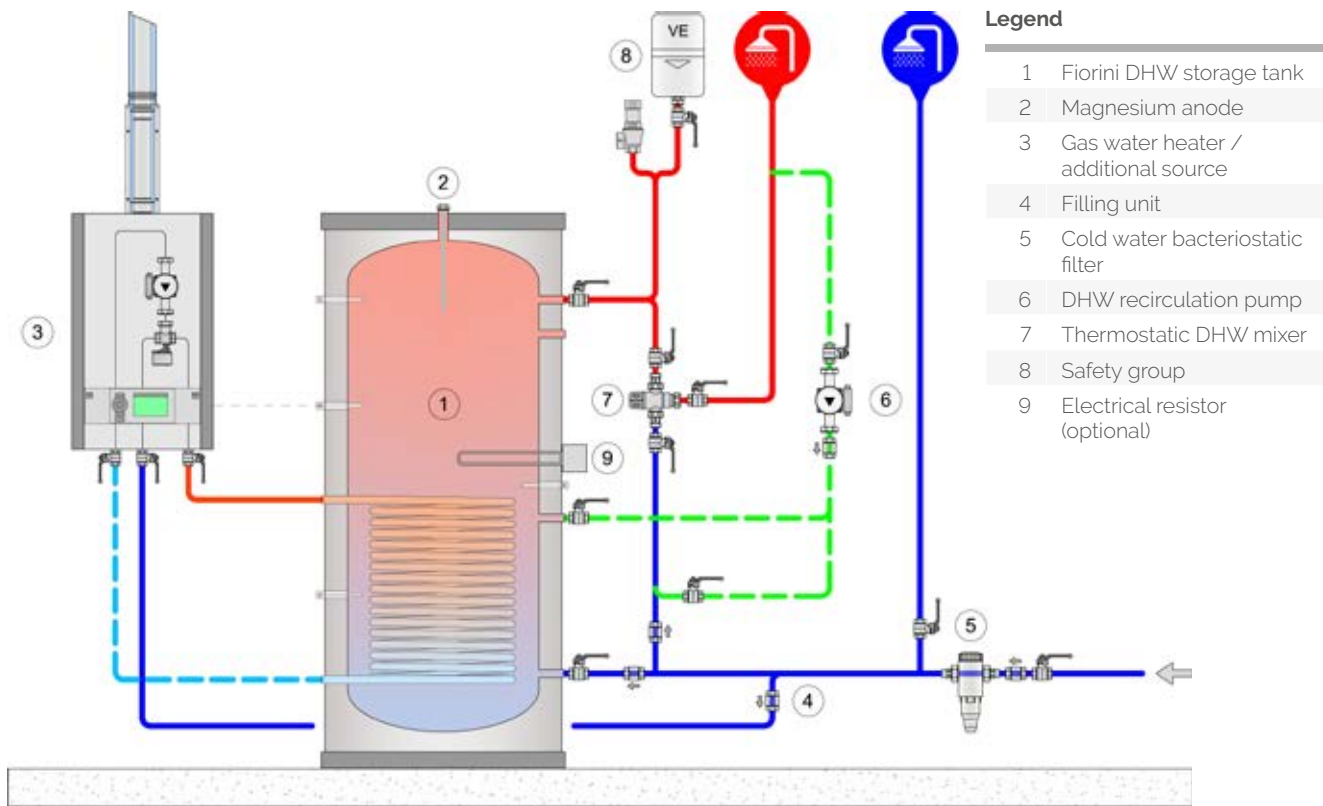
# Technical information for SMART 1 series

Capacity	Ti	DHW production TiACS = 10°C						Exchanger	
		TuACS= 45°C		TuACS = 60°C		Ta = 50°C TuACS = 45°C	Ta = 60°C TuACS = 45°C	Surface area	Nominal flow
		L/h (a)	kW (b)	L/h (c)	kW (d)	L/10 min. (e)	L/10 min. (f)		
L	°C						m <sup>2</sup>	mc/h	
200	70	810	33	395	23	347	390	1,4	3
	80	1081	44	602	35	392	435		
	90	1253	51	739	43	421	464		
300	70	810	33	395	23	454	517	1,4	3
	80	1081	44	602	35	499	563		
	90	1253	51	739	43	527	591		
500	70	1179	48	584	34	728	834	2	3
	80	1572	64	877	51	793	900		
	90	1842	75	1083	63	838	945		
750	70	1400	57	688	40	1031	1190	2,4	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		

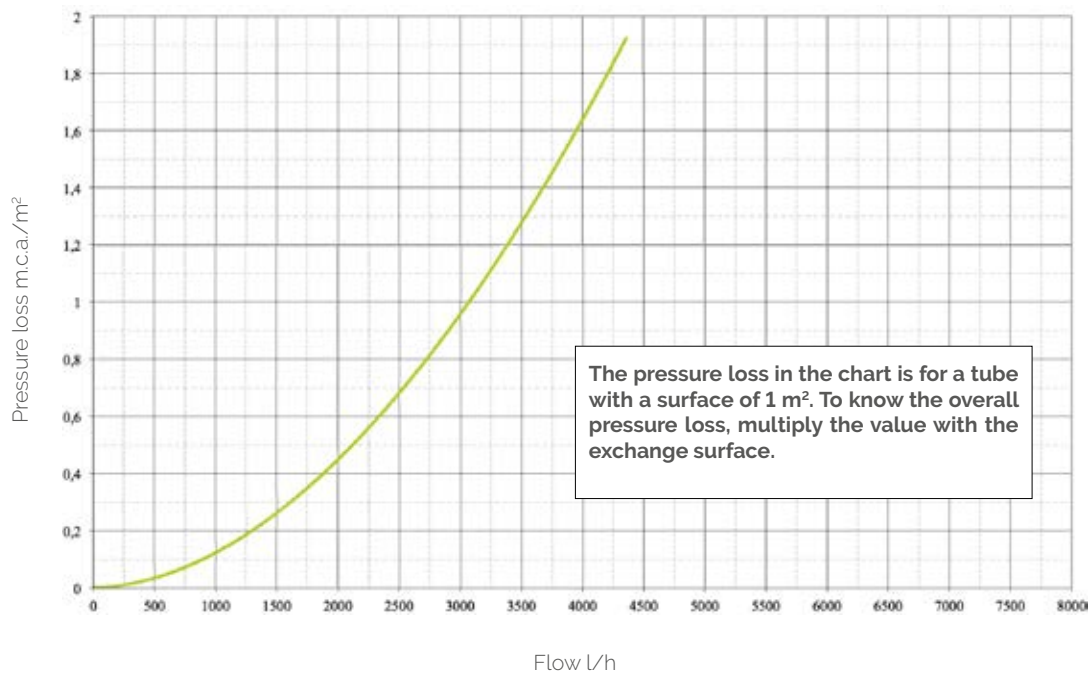
- a continuous DHW flow with TuACS= 45°C
- b power of the exchanger with TuACS=45°C
- c continuous DHW flow with TuACS= 60°C
- d power of the exchanger with TuACS=60°C
- e amount of DHW at 45°C in the first 20 min. with a storage temperature of 50°C
- f amount of DHW at 45°C in the first 10 min. with a storage temperature of 60°C
- Exchanger capacity: 7.10 Lt/mq



# Technical information for SMART 1 series



## 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.

## Insulation

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

## Operational limits

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

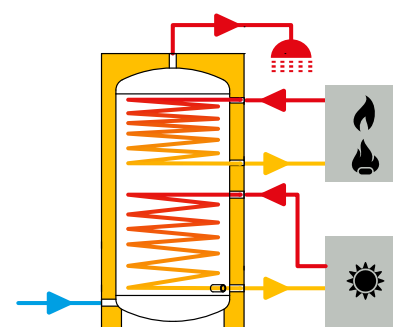
 **Supplied accessories:** Adjustable height feet for sizes up to 500 l, safety valve and thermometer for sizes up to 1000 l, magnesium sacrificial anode for all sizes.

 **Standard accessories:** see pag 274

 **Special versions:** see pag 277

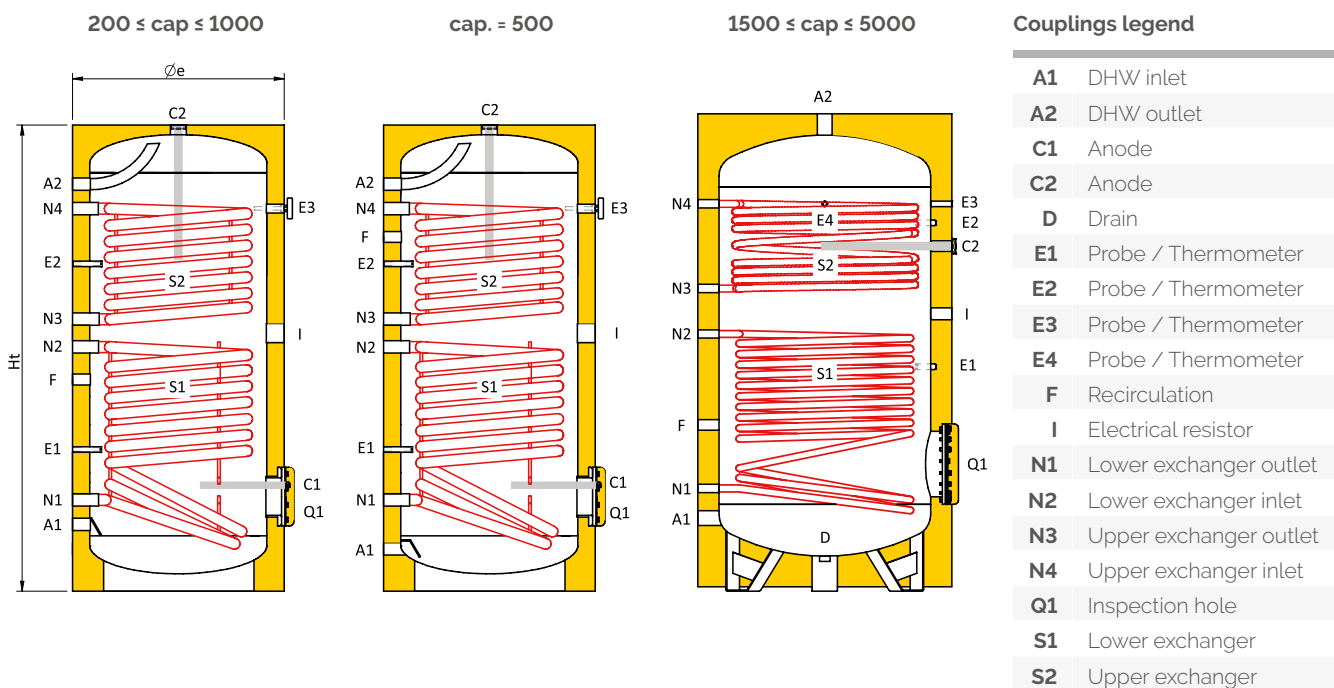


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Capacity l	Code	Price	Energy label	With vertical packaging	
				Dimensions cm	Weight kg
200	819060114X		<b>B</b>	75x75x120	98
300	819060115X		<b>B</b>	75x75x168	133
500	819060117X		<b>C</b>	75x75x204	215
750	819060118X		<b>C</b>	90x90x207	296
1000	819060119X		<b>C</b>	110x110x198	360
1500	819080003X		<b>C</b>	123x123x237,5	281
2000	819080004X		<b>C</b>	132x132x269,5	366
3000	819080006X			147x147x299	454

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



## Couplings chart

Cap. l	A1 inch	A2 inch	C1 inch	C2 inch	D inch	E1 inch	E2 inch	E3 inch	E4 inch	F inch	I inch	N1 inch	N2 inch	N3 inch	N4 inch	Q1 (Øext/Øint) mm
200	1'	1'	M8	1 1/4	-	3/8"x90	3/8"x90	1/2"	-	3/4"	1 1/2	1'	1'	1'	1'	Ø180/120
300	1'	1'	M8	1 1/4	-	3/8"x90	3/8"x90	1/2"	-	3/4"	1 1/2	1'	1'	1'	1'	Ø180/Ø120
500	1'	1'	M8	1 1/4	-	3/8"x125	3/8"x125	1/2"	-	3/4"	1 1/2	1'	1'	1'	1'	Ø180/Ø120
750	1 1/2	1 1/2	M8	2"	-	3/8"x140	3/8"x140	1/2"	-	1 1/4	1 1/2	1'	1'	1'	1'	Ø280/Ø205
1000	1 1/2	1 1/2	M8	2"	-	3/8"x160	3/8"x160	1/2"	-	1 1/4	1 1/2	1'	1'	1'	1'	Ø280/Ø205
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'	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'	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'	1'	1'	Ø380/Ø300

## Size chart

Cap. l	Øe mm	Ht mm	R' mm	A1 mm	A2 mm	D mm	E1 mm	E2 mm	E3 mm	F mm	I mm	N1 mm	N2 mm	N3 mm	N4 mm	Q1 mm
200	670	1130	1290	130	975	-	345	780	825	450	630	210	580	685	895	290
300	670	1615	1750	130	1355	-	435	1030	1295	650	805	280	750	860	1200	290
500	750	1950	2090	180	1650	-	530	1200	1570	1320	1030	320	970	1090	1439	329
750	855	2050	2225	215	1715	-	575	1365	1725	925	1110	375	1045	1175	1555	445
1000	1055	1960	2230	247	1567	-	587	1247	1577	877	1047	447	997	1097	1437	477
1500	1250	2280	2605	345	-	165	1060	1740	1830	785	1310	485	1215	1430	1830	600
2000	1350	2600	2930	345	-	155	1165	2065	2150	815	1495	480	1315	1690	2150	605
3000	1450	2870	3220	400	-	180	1375	2225	2410	875	1625	550	1540	1680	2410	665

R': reversal quota

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

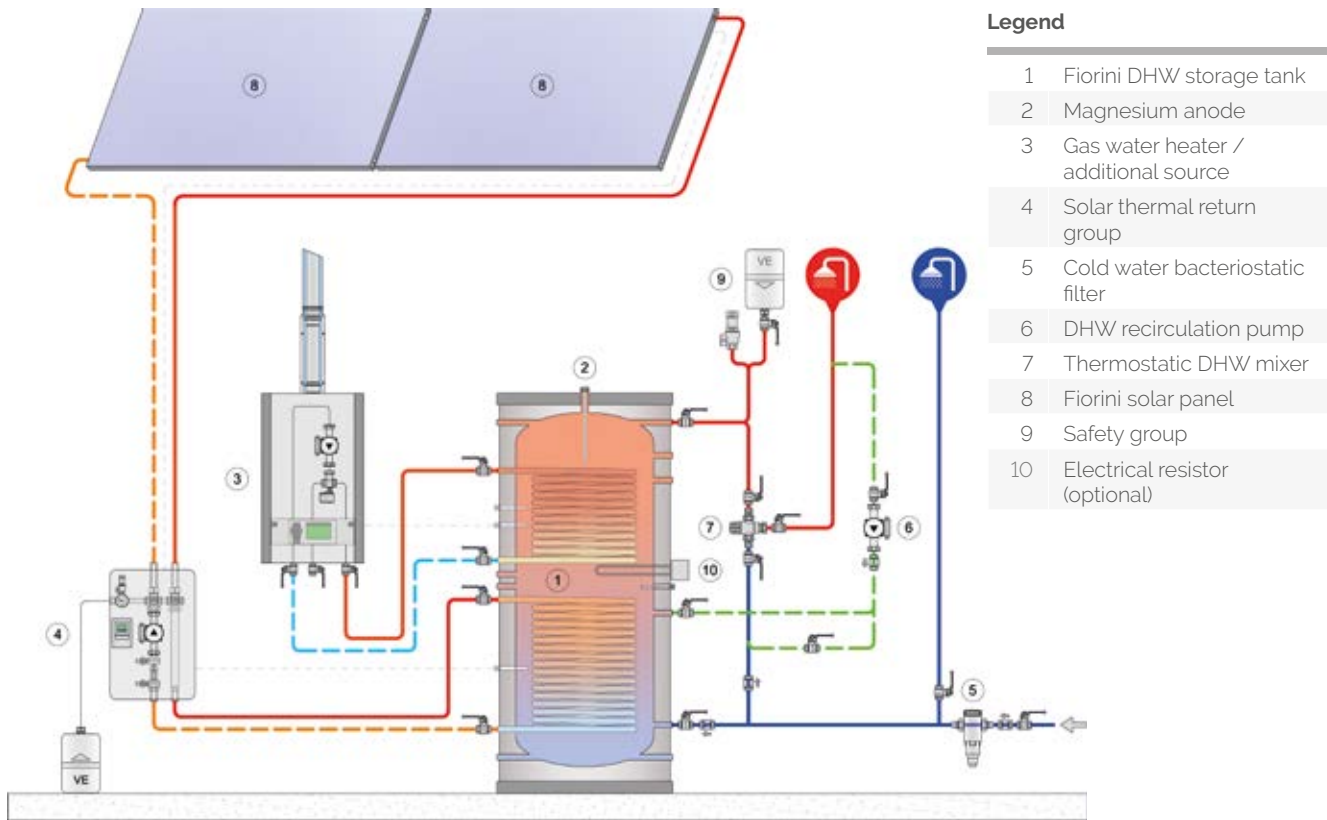


# Technical information for SMART 2 series

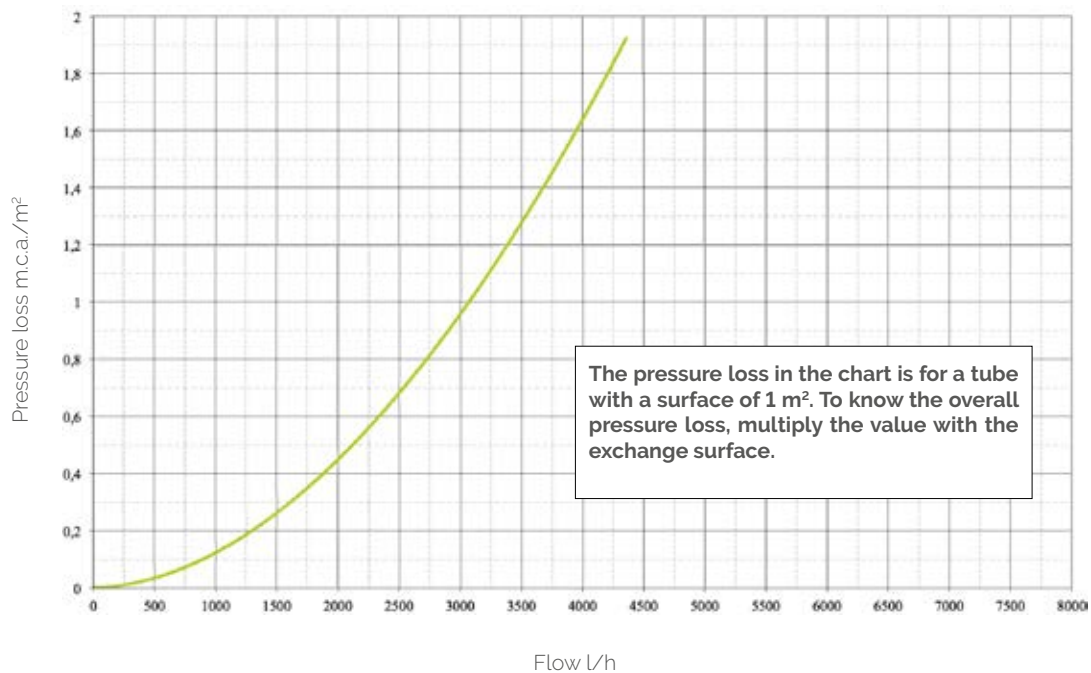
Capacity	Ti	DHW production TiACS = 10°C						Upper Exchanger	Lower Exchanger	Nominal flow
		TuACS= 45°C		TuACS = 60°C		Ta = 50°C TuACS = 45°C	Ta = 60°C TuACS = 45°C	Surface area	Surface area	
		L/h (a)	kW (b)	L/h (c)	kW (d)	L/10 min. (e)	L/10 min. (f)	m <sup>2</sup>	m <sup>2</sup>	
200	70	417	17	206	12	282	324	0,7	1	3
	80	540	22	292	17	302	345			
	90	614	25	361	21	315	357			
300	70	638	26	309	18	425	489	1,1	1,4	3
	80	860	35	481	28	462	526			
	90	1007	41	584	34	486	550			
400	70	638	26	309	18	531	616	1,1	1,8	3
	80	860	35	481	28	568	653			
	90	1007	41	584	34	593	678			
500	70	638	26	309	18	638	744	1,1	2	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	2,4	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: 710 Lt/mq

# Technical information for SMART 2 series



## Pressure loss fixed heat exchanger



# Glass lined water heater with a solar power station – SMART 2 SOLAR KIT

Water heater for the production of domestic hot water with a double fixed heat exchanger and a solar power station S2 SOLAR 30 - 25/6. The capacity is 300L. The water heater is equipped with very thick high-density rigid polyurethane insulation, external PVC coating, a magnesium anode for protection against galvanic currents, an inspection flange for easier 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


## Insulation

Capacity (l)	Type
300	Highly rigid polyurethane foam


## Operational limits

Storage		Primary circuit	
max. temperature	max. pressure	max. temperature	max. pressure
95°C	10 bar	110°C	12 bar

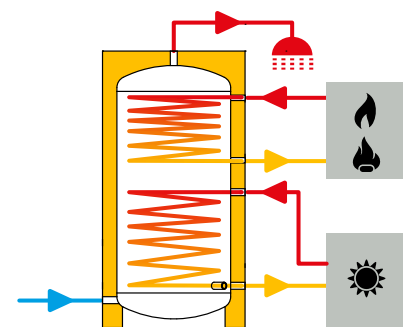


 **Supplied accessories:** Adjustable height feet, safety valve and thermometer, magnesium sacrificial anode.

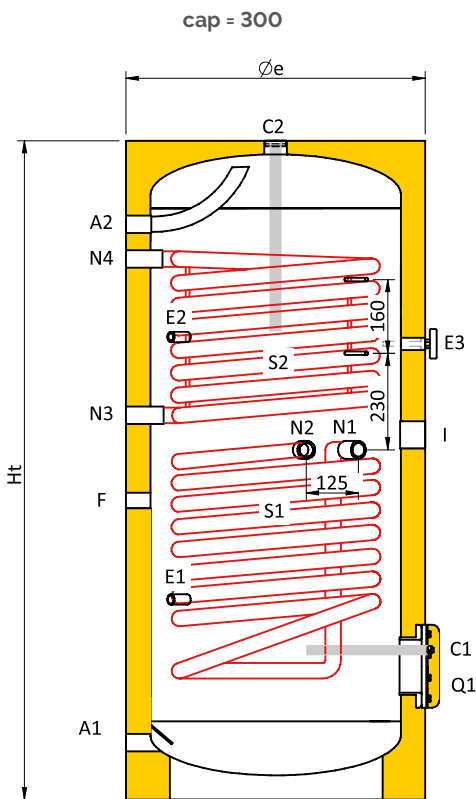
 **Standard accessories:** see pag 274

Capacity l	Code.	Price	Energy label
300	838110066X		

**TESTED**



# Glass lined water heater with a solar power station – SMART 2 SOLAR KIT



## Couplings legend

<b>A1</b>	DHW inlet
<b>A2</b>	DHW outlet
<b>C1</b>	Anode
<b>C2</b>	Anode
<b>E1</b>	Probe / Thermometer
<b>E2</b>	Probe / Thermometer
<b>E3</b>	Probe / Thermometer
<b>F</b>	Recirculation
<b>I</b>	Electrical resistor
<b>N1</b>	Lower exchanger outlet
<b>N2</b>	Lower exchanger inlet
<b>N3</b>	Upper exchanger outlet
<b>N4</b>	Upper exchanger inlet
<b>Q1</b>	Inspection hole
<b>S1</b>	Lower exchanger
<b>S2</b>	Upper exchanger

## Couplings chart

Cap. L	A1 inch	A2 inch	C1 inch	C2 inch	D inch	E1 inch	E2 inch	E3 inch	F inch	I inch	N1 inch	N2 inch	N3 inch	N4 inch	Q1 (Øext/Øint) mm
300	1'	1'	M8	1 1/4	1'	3/8"x150	3/8"x150	1/2'	3/4'	1 1/2	1'	1'	1'	1'	Ø180/Ø120

## Size chart

Cap. L	Øe mm	Ht mm	R' mm	A1 mm	A2 mm	D mm	E1 mm	E2 mm	E3 mm	F mm	I mm	N1 mm	N2 mm	N3 mm	N4 mm	Q1** mm
300	670	1615	1750	210	1365	130	385	1005	950	600	770	700	700	835	1175	290

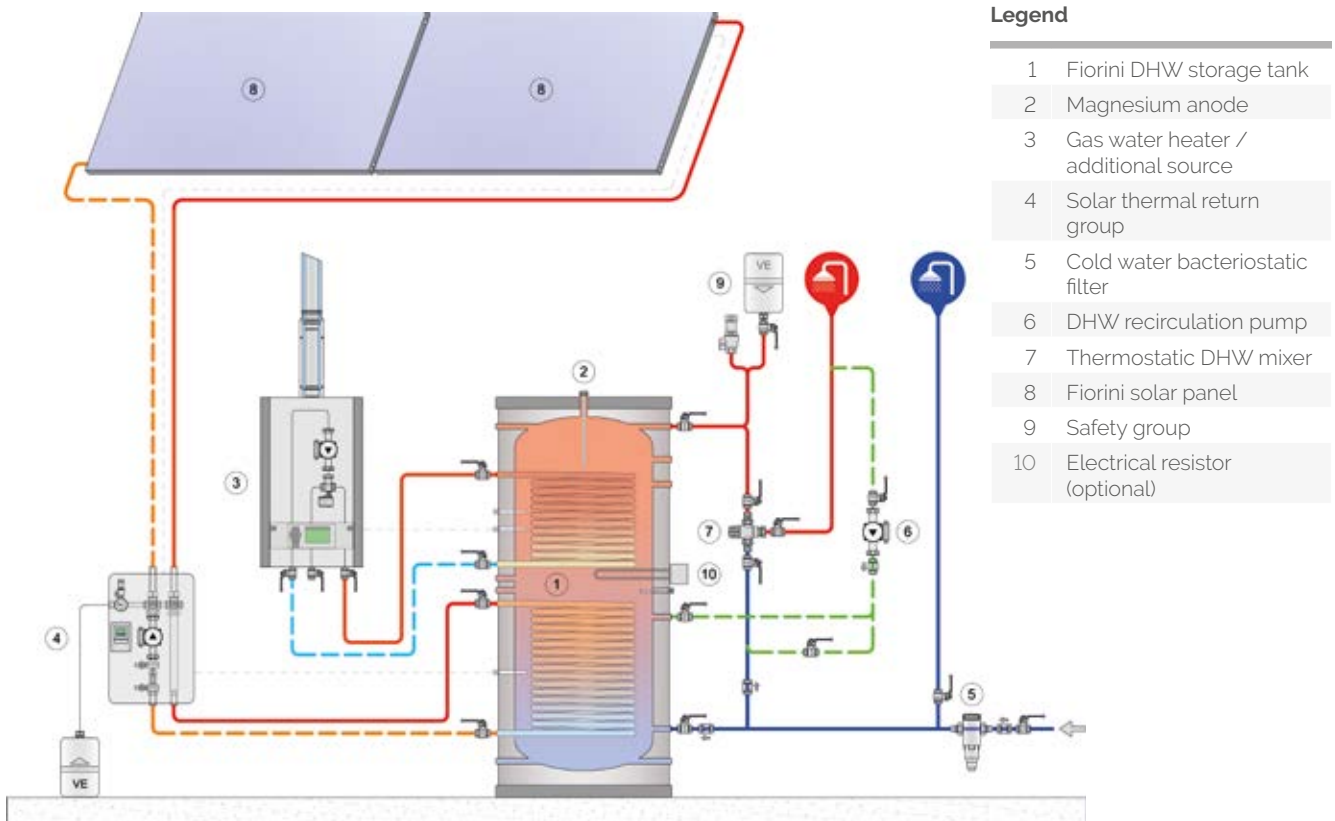
R': reversal quota

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

# Technical information for SMART 2 SOLAR KIT series

Capacity	Ti	DHW production TiACS = 10°C						Upper Exchanger	Lower Exchanger	Nominal flow
		TuACS= 45°C		TuACS = 60°C		Ta = 50°C	Ta = 60°C	Surface area	Surface area	
		L/h (a)	kW (b)	L/h (c)	kW (d)	TuACS = 45°C	TuACS = 45°C	m <sup>2</sup>	m <sup>2</sup>	
l	°C					L/10 min. (e)	L/10 min. (f)	m <sup>2</sup>	m <sup>2</sup>	mc/h
300	70	638	26	309	18	425	489	1,1	1,4	3
	80	860	35	481	28	462	526			
	90	1007	41	584	34	486	550			

- 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: 7.10 Lt/mq



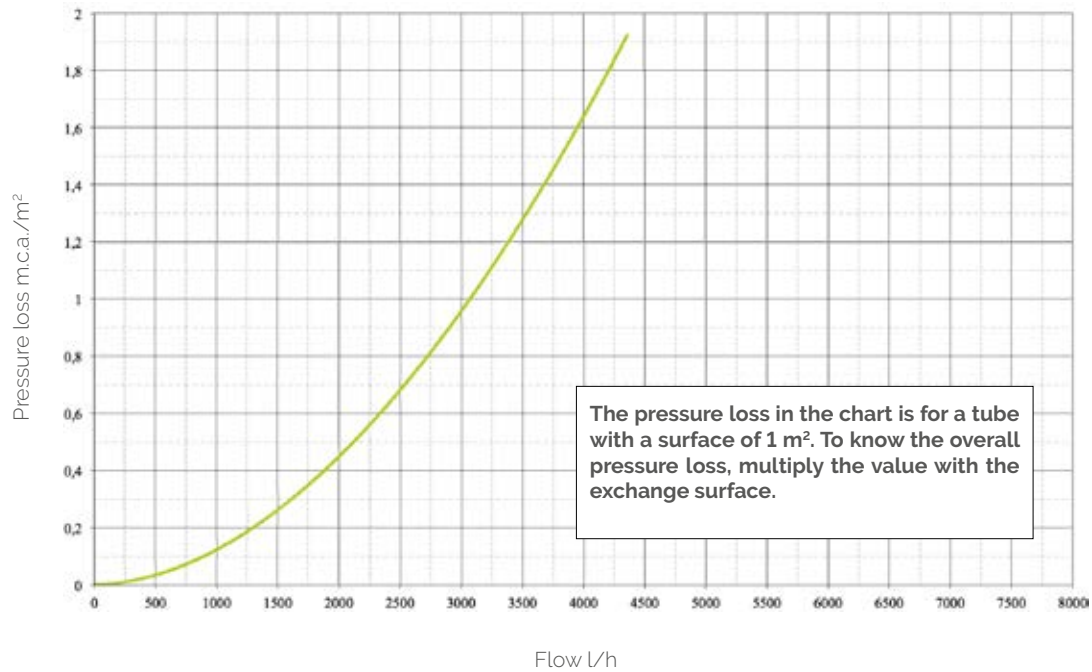
## Legend

- 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)



# Technical information for SMART 2 SOLAR KIT series

## Pressure loss fixed heat exchanger



### S2 SOLAR 30 solar unit

The S2 SOLAR 30 solar unit is the ideal option for small and medium-sized installations of which the components are tested and pre-assembled to guarantee the quality of the performance and the easy installation. The electronic control unit of the solar unit MTDC is an integral part of the kit and comes cabled and with a probe for measuring the temperature. The kit is insulated in polystyrene.

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# 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

## Insulation

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

## Operational limits

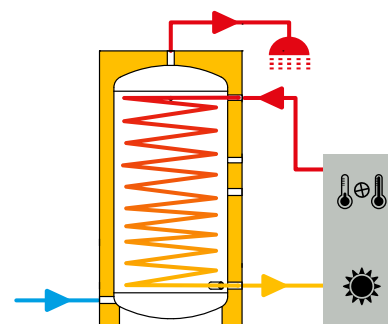
Storage		Primary circuit	
max. temperature	max. pressure	max. temperature	max. pressure
95°C	10 bar	110°C	12 bar

 **Supplied accessories:** Adjustable height feet, safety valve and thermometer, magnesium sacrificial anode.

 **Standard accessories:** see pag 274

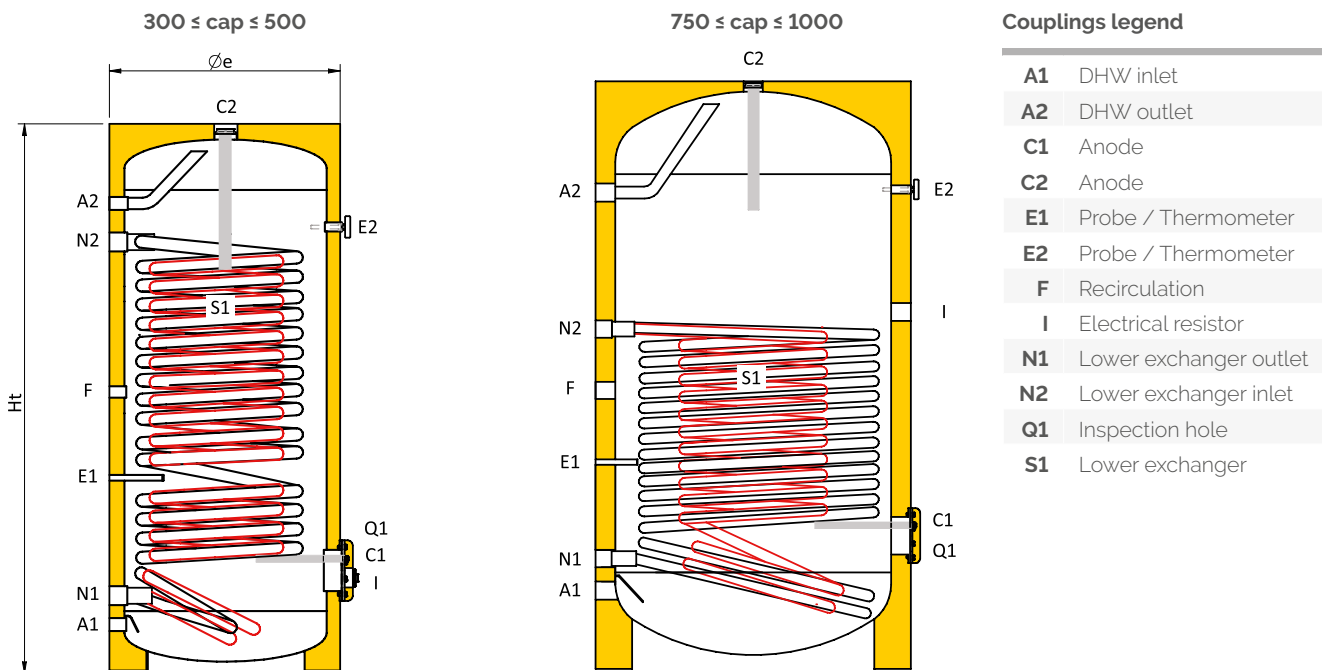


**TESTED**



Capacity l	Code	Price	Energy label	With vertical packaging	
				Dimensions cm	Weight kg
300	819060121X		<b>B</b>	75x75x168	177
500	819060123X		<b>C</b>	75x75x204	239
750	819060124X		<b>C</b>	90x90x207	318
1000	819060125X		<b>C</b>	110x110x198	409

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



## Couplings chart

Cap. l	A1 inch	A2 inch	C1 mm	C2 inch	E1 inch	E2 mm	F inch	I inch	N1 inch	N2 inch	Q1 (Øext/Øint) mm
300	1"	1"	M8	1 1/4	3/8"x90	1/2"	3/4"	1 1/2	1 1/4	1 1/4	Ø180/Ø120
500	1"	1"	M8	1 1/4	3/8"x120	1/2"	3/4"	1 1/2	1 1/4	1 1/4	Ø180/Ø120
750	1 1/2	1 1/2	M8	2"	3/8"x140	1/2"	1 1/4	1 1/2	1 1/4	1 1/4	Ø280/Ø205
1000	1 1/2	1 1/2	M8	2"	3/8"x160	1/2"	1 1/4	1 1/2	1 1/4	1 1/4	Ø280/Ø205

## Size chart

Cap. l	Øe mm	Ht mm	R* mm	A1 mm	A2 mm	E1 mm	E2 mm	F mm	I mm	N1 mm	N2 mm	Q1** mm
300	670	1615	1750	130	1355	550	1295	765	-	220	1035	290
500	750	1950	2090	180	1650	610	1580	870	-	265	1415	340
750	855	2050	2225	215	1715	755	1725	1175	1425	395	1355	445
1000	1055	1960	2230	247	1567	747	1577	1077	1277	447	1197	497

R\*: reversal quota

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

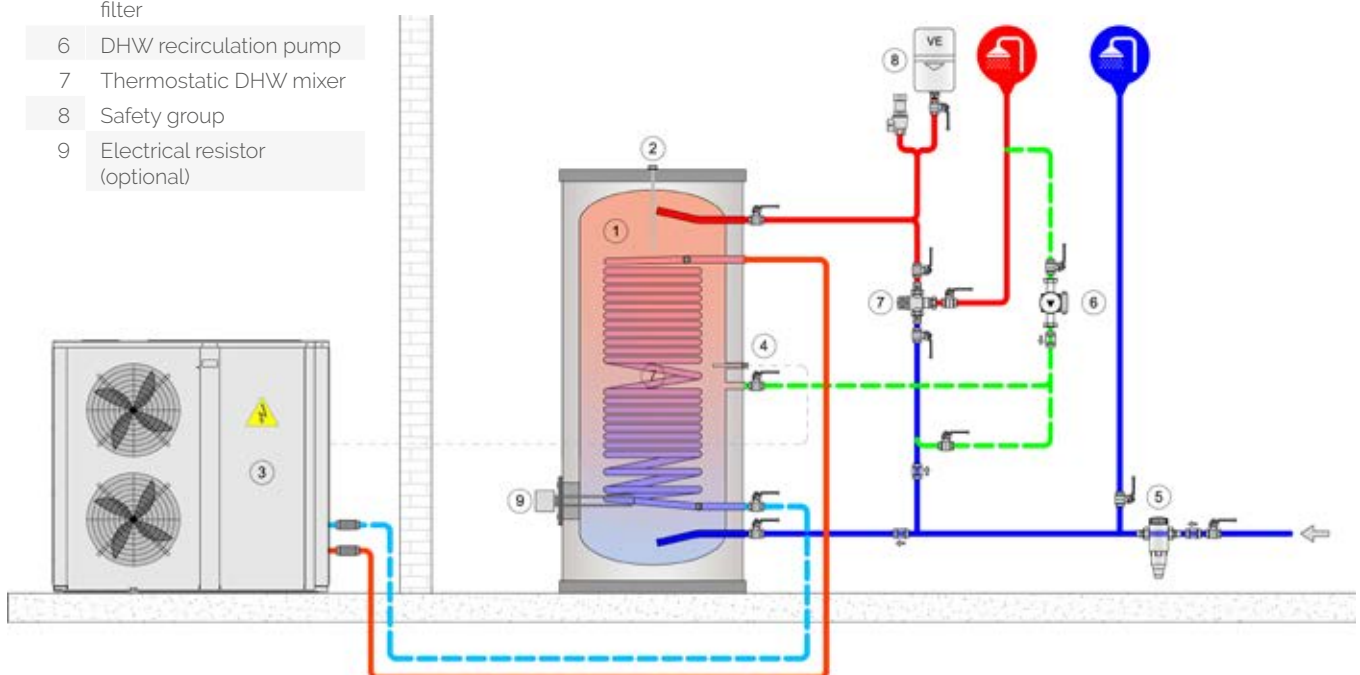
# Technical information for SMART HP series

Capacity	Ti	DHW production $T_{iDHW} = 10^{\circ}\text{C}$			Exchanger	
		$T_{uDHW} = 45^{\circ}\text{C}$		$T_a = 50^{\circ}\text{C}$ $T_{uDHW} = 45^{\circ}\text{C}$	Surface area	Nominal flow
		L/h (a)	kW (b)	L/10 min. (e)		
300	50	688	28	433	3,8	4,0
	80	2236	91	691		
500	50	958	39	691	6	4,0
	80	2432	99	937		
750	50	982	40	961	6,5	4,0
	80	3390	138	1362		
1000	50	982	40	1227	6,5	4,0
	80	3390	138	1628		

- a continuous DHW flow with  $T_{uDHW} = 45^{\circ}\text{C}$
- b power of the exchanger with  $T_{uACS} = 45^{\circ}\text{C}$
- e amount of DHW at  $45^{\circ}\text{C}$  in the first 10 min. with a storage temperature of  $50^{\circ}\text{C}$
- Exchanger capacity: 7.10 Lt/mq

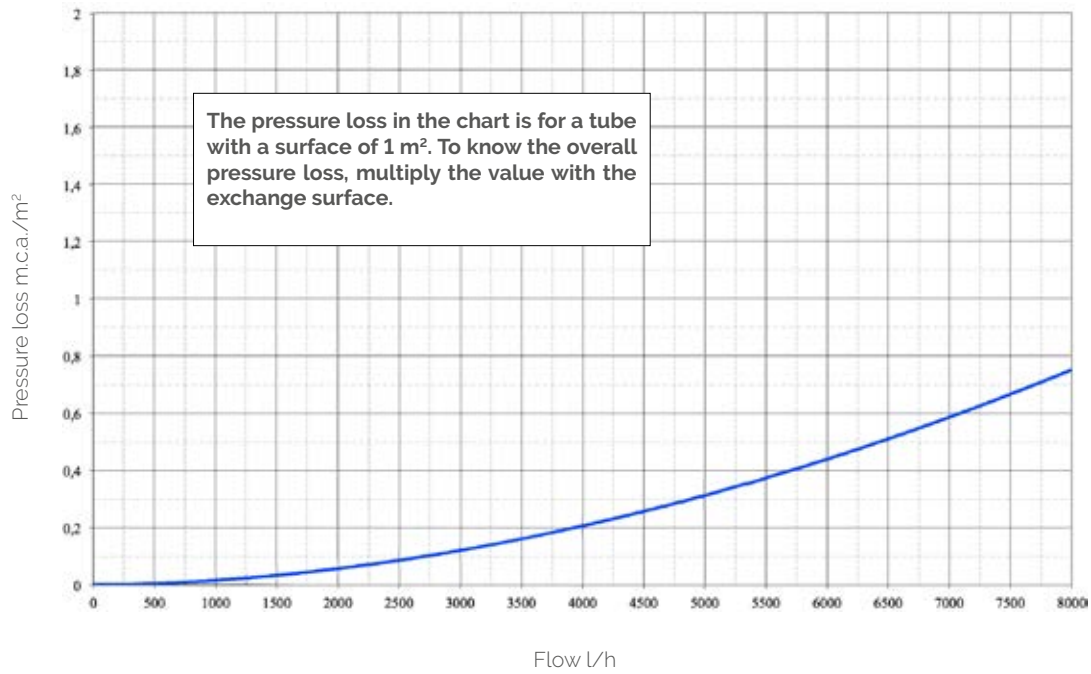
## Legend

- 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





# 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

## Insulation

Capacity (l)	Type
300, 500	Highly rigid polyurethane foam

## Operational limits



Storage		Primary circuit	
max. temperature	max. pressure	max. temperature	max. pressure
95°C	10 bar	110°C	12 bar

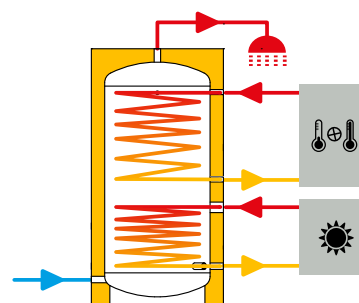
 **Supplied accessories:** Adjustable height feet, safety valve and thermometer, magnesium sacrificial anode.

 **Standard accessories:** see pag 274

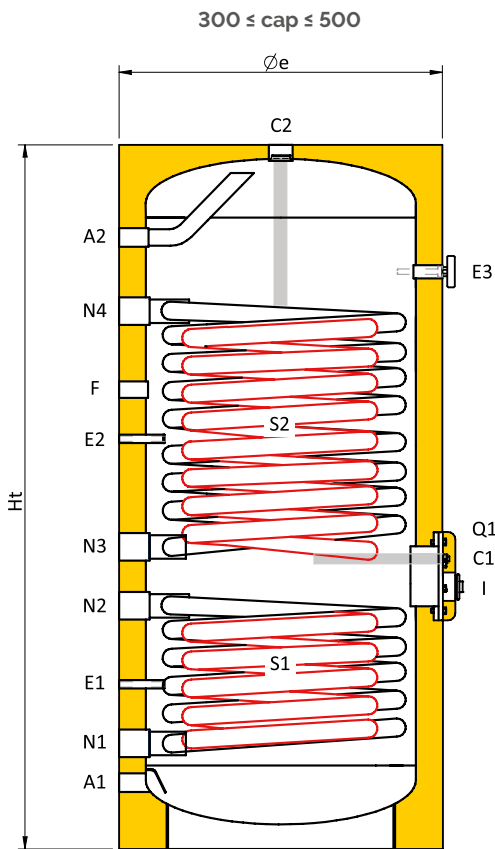


**TESTED**

Capacity l	Code	Price	Energy label	With vertical packaging	
				Dimensions cm	Weight kg
300	819060154X			75x75x168	160
500	819060156X			75x75x204	285



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



## Couplings legend

A1	DHW inlet
A2	DHW outlet
C1	Anode
C2	Anode
E1	Probe / Thermometer
E2	Probe / Thermometer
E3	Probe / Thermometer
F	Recirculation
I	Electrical resistor
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	C2 inch	E1 inch x mm	E2 inch x mm	E3 inch	F inch	I inch	N1 inch	N2 inch	N3 inch	N4 inch	Q1 (Øext/Øint) mm
300	1"	1"	M8	1 1/4	3/8"x90	3/8"x90	1/2"	3/4"	1 1/2	1 1/4	1 1/4	1 1/4	1 1/4	Ø180/Ø120
500	1"	1"	M8	1 1/4	3/8"x120	3/8"x120	1/2"	3/4"	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	E1 mm	E2 mm	E3 mm	F mm	N1 mm	N2 mm	N3 mm	N4 mm	Q1** mm
300	670	1615	1750	130	1355	335	835	1295	935	220	495	615	1095	555
500	750	1950	2090	180	1730	410	960	1600	1265	265	645	755	1645	700

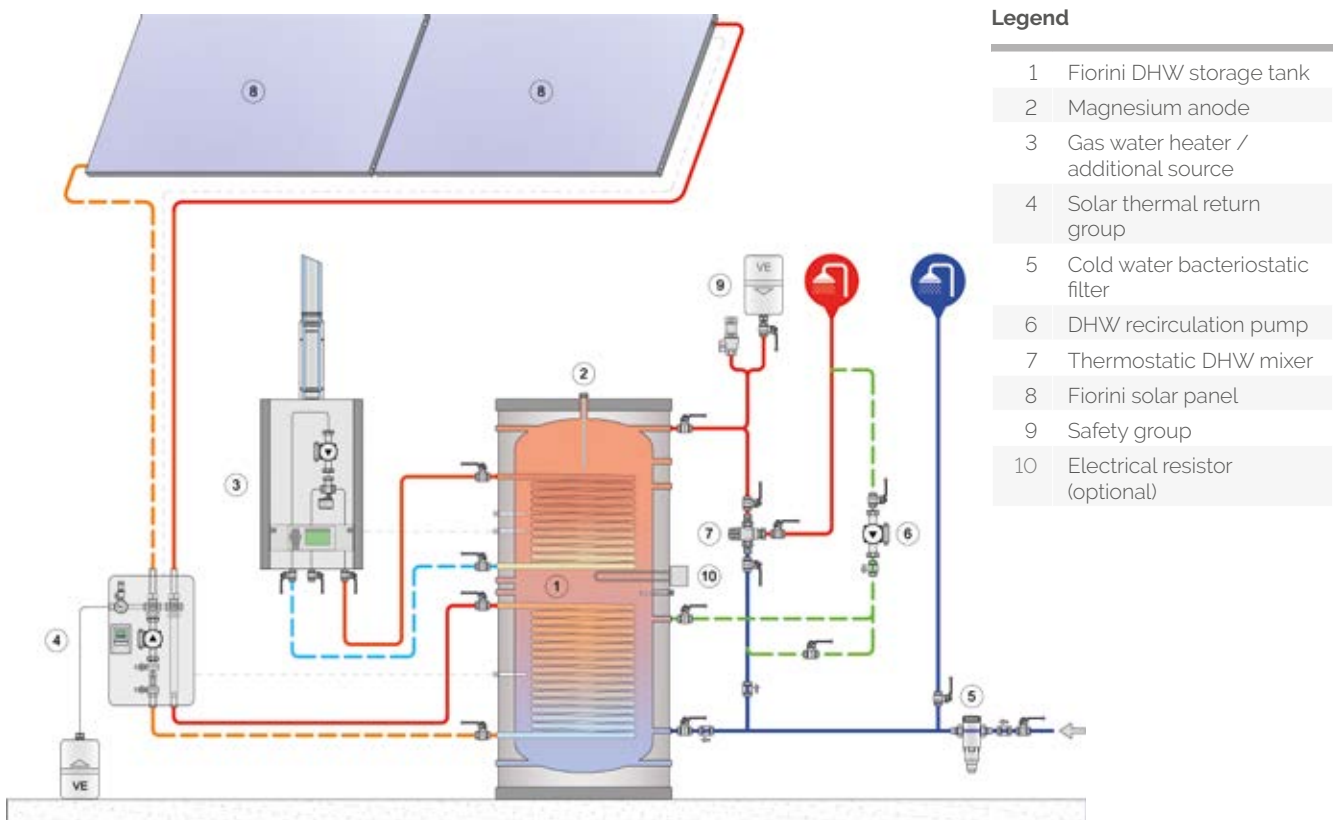
R\*: reversal quota

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

# Technical information for SMART HP 2 series

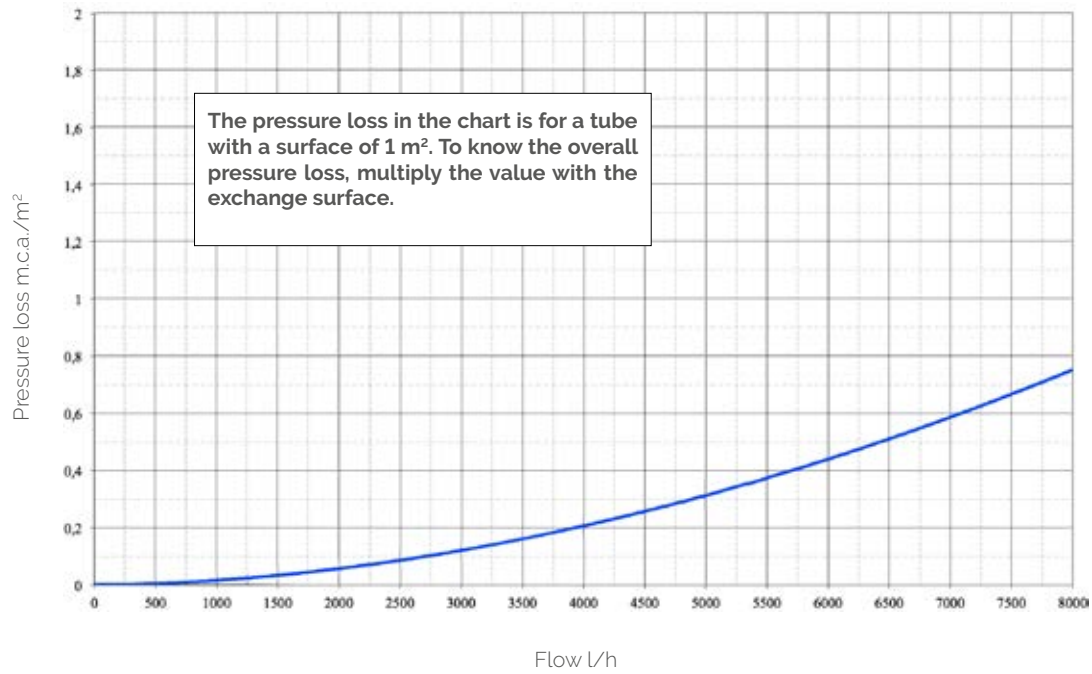
Capacity	DHW production $T_{iACS} = 10^{\circ}\text{C}$				Exchanger		Nominal flow
	$T_i$	$T_{uACS} = 45^{\circ}\text{C}$		$T_a = 50^{\circ}\text{C}$	Upper exchanger surface	Lower exchanger surface	
		$^{\circ}\text{C}$	L/h (a)	kW (b)	L/10 min. (e)	$\text{m}^2$	
300	50	553	22,5	435	2,2	1	1,0
	80	1501	61,1	593			2,6
500	50	860	35	715	4,8	1,8	1,5
	80	2334	95	960			4,1

- a continuous DHW flow with  $T_{uDHW} = 45^{\circ}\text{C}$
- e amount of DHW at  $45^{\circ}\text{C}$  in the first 10 min. with a storage temperature of  $50^{\circ}\text{C}$
- Exchanger capacity: 7.10 Lt/mq



# 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

## 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	95°C	16 bar

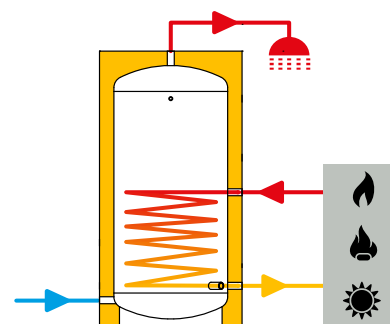
 **Supplied accessories:** Magnesium sacrificial anode for all sizes.

 **Standard accessories:** see pag 274

 **Special versions:** see pag 277



TESTED

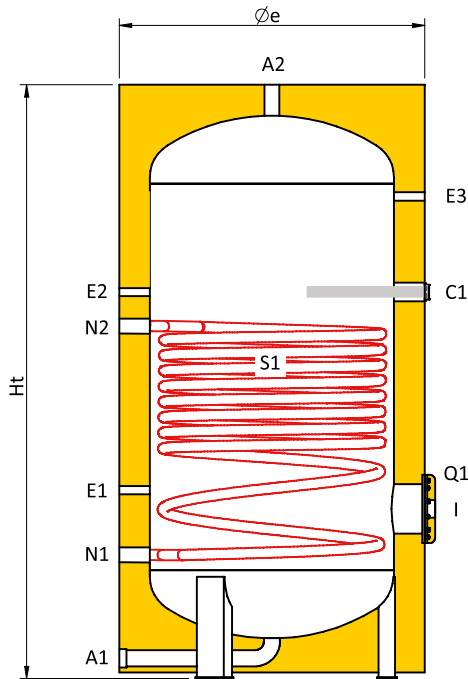


Capacity l	Code	Price	Energy label	With vertical packaging
				Dimensions cm
200	819040060X		B	70x70x165
300	819040061X		C	80x80x168
500	819040063X		C	90x90x210
800	819040064X		C	105x105x209
1000	819040065X		C	105x105x235
1500	819040066X		C	130x130x237
2000	819040067X		C	160x160x245
2500	819040089X			160x160x299
3000	819040090X			160x160x299



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

200 ≤ cap. ≤ 3.000



## Couplings legend

<b>A1</b>	DHW inlet
<b>A2</b>	DHW outlet
<b>C1</b>	Anode
<b>E1</b>	Probe / Thermometer
<b>E2</b>	Probe / Thermometer
<b>E3</b>	Probe / Thermometer
<b>I</b>	Electrical resistor
<b>N1</b>	Exchanger outlet
<b>N2</b>	Exchanger inlet
<b>Q1</b>	Inspection hole
<b>S1</b>	Lower exchanger (see pag. 166)

## Couplings chart

Cap. l	A1 inch	A2 inch	C1 inch	E1 inch	E2 inch	E3 inch	I inch	N1 inch	N2 inch	Q1 (Øext/Øint) mm
200	1"	1"	1 1/4"	1/2"	1/2"	1/2"	1 1/2"	3/4"	3/4"	Ø220/Ø130
300	1"	1"	1 1/4"	1/2"	1/2"	1/2"	1 1/2"	1"	1"	Ø220/Ø130
500	1"	1"	1 1/4"	1/2"	1/2"	1/2"	1 1/2"	1"	1"	Ø220/Ø130
800	1 1/4"	1 1/4"	1 1/4"	1/2"	1/2"	1/2"	1 1/2"	1 1/4"	1 1/4"	Ø220/Ø130
1000	1 1/4"	1 1/4"	1 1/4"	1/2"	1/2"	1/2"	1 1/2"	1 1/4"	1 1/4"	Ø220/Ø130
1500	1 1/2"	1 1/2"	1 1/4"	1/2"	1/2"	1/2"	1 1/2"	1 1/4"	1 1/4"	Ø300/Ø220
2000	1 1/2"	1 1/2"	1 1/4"	1/2"	1/2"	1/2"	1 1/2"	1 1/4"	1 1/4"	Ø300/Ø220
2500	1 1/2"	1 1/2"	1 1/4"	1/2"	1/2"	1/2"	1 1/2"	1 1/4"	1 1/4"	Ø300/Ø220
3000	1 1/2"	1 1/2"	1 1/4"	1/2"	1/2"	1/2"	1 1/2"	1 1/4"	1 1/4"	Ø300/Ø220

## Size chart

Cap. l	Øe mm	Ht mm	R* mm	C1 mm	E1 mm	E2 mm	E3 mm	I mm	N1 mm	N2 mm	Q1 mm
200	650	1470	1610	870	425	870	1195	385	265	770	385
300	750	1510	1690	965	445	965	1215	405	285	790	405
500	800	1950	2110	1060	420	1050	1685	380	260	885	380
800	990	1920	2165	1185	545	1185	1555	505	395	1005	505
1000	1000	2190	2410	1335	555	1335	1815	515	405	1155	515
1500	1250	2225	2555	1315	565	1295	1815	545	415	1115	545
2000	1450	2305	2725	1300	600	600	1850	580	450	1145	580
2500	1400	2530	2895	1450	600	600	2100	580	450	1300	580
3000	1450	2800	3155	1645	615	1345	2365	595	465	1265	595

R\*: reversal quota

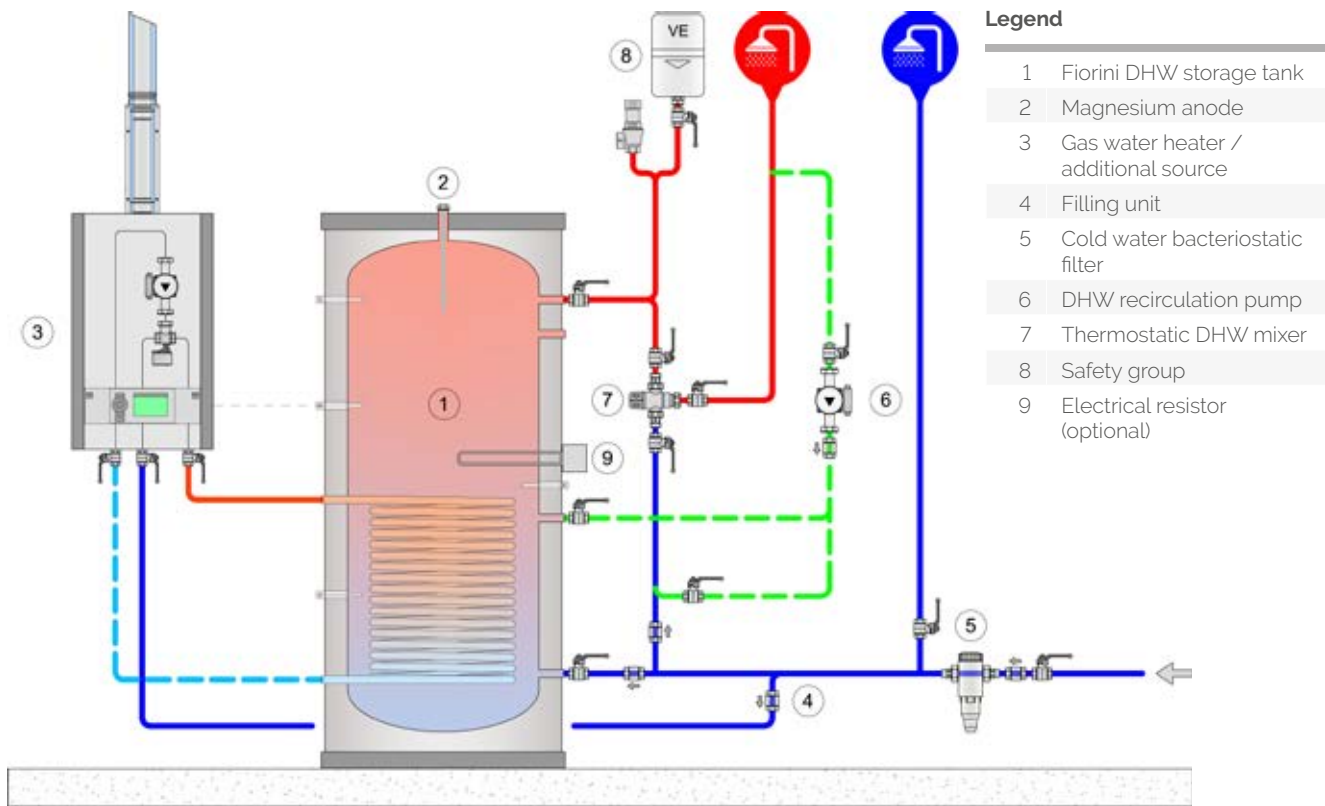
Q\*\*: Height from inspection hole center to the ground

# Technical information for SMART INOX 1 series

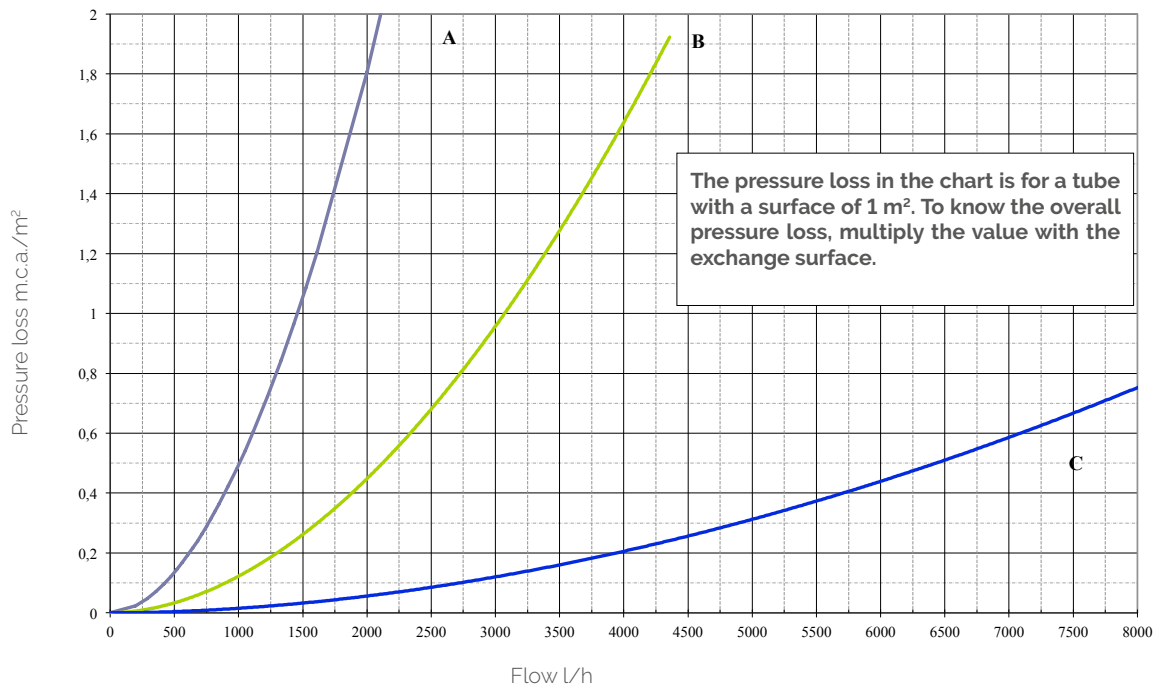
Capacity	Ti	DHW production TiDHW = 10°C						Exchanger	
		TuDHW= 45°C		TuDHW = 60°C		Ta = 50°C TuDHW = 45°C	Ta = 60°C TuDHW = 45°C	Surface area	Nominal flow
		L/h (a)	kW (b)	L/h (c)	kW (d)	L/10 min. (e)	L/10 min. (f)		
200	70	565	23	275	16	306	349	1,0	3,0
	80	761	31	430	25	339	382		
	90	884	36	516	30	360	402		
300	70	737	30	361	21	441	505	1,3	3,0
	80	982	40	550	32	482	546		
	90	1154	47	670	39	511	575		
500	70	1105	45	550	32	716	822	1,9	3,0
	80	1474	60	825	48	777	883		
	90	1744	71	1014	59	822	928		
600	70	1105	45	533	31	822	950	1,9	3,0
	80	1474	60	808	47	883	1011		
	90	1720	70	1014	59	924	1052		
800	70	1400	57	688	40	1084	1254	2,4	4,0
	80	1867	76	1032	60	1162	1332		
	90	2186	89	1290	75	1215	1385		
1000	70	1842	75	911	53	1370	1583	3,2	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: 7.10 Lt/mq

# Technical information for SMART INOX 1 series



## Pressure loss fixed heat exchanger



A) 200 l tank    B) 300 - 600 l tank    C) 800 - 3000 l tank

# Stainless steel water heater with 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

## 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	95°C	16 bar

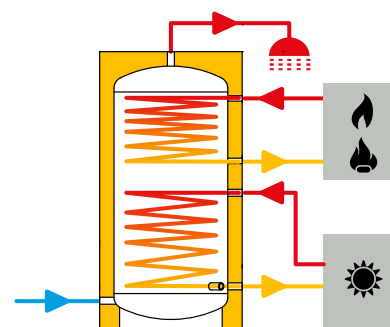
 **Supplied accessories:** Magnesium sacrificial anode for all sizes.

 **Standard accessories:** see pag 274

 **Special versions:** see pag 277



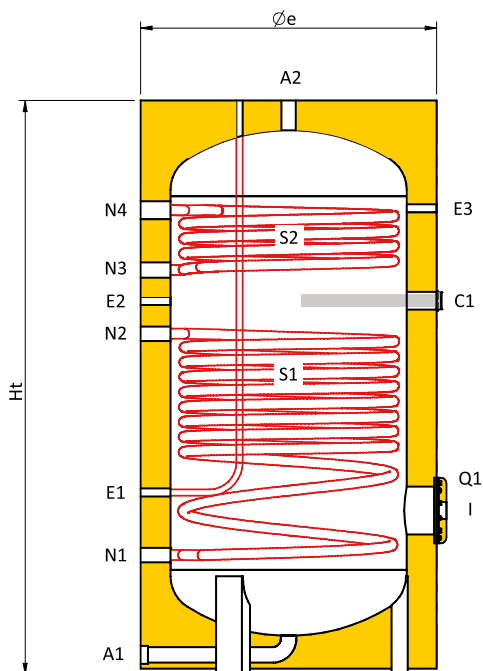
**TESTED**



Capacity l	Code	Price	Energy label	With vertical packaging
				Dimensions cm
200	819040068X		<b>B</b>	70x70x165
300	819040069X		<b>C</b>	80x80x168
500	819040071X		<b>C</b>	90x90x210
800	819040072X		<b>C</b>	105x105x209
1000	819040073X		<b>C</b>	105x105x235
1500	819040074X		<b>C</b>	130x130x237
2000	819040075X		<b>C</b>	160x160x245
2500	819040102X			160x160x299
3000	819040103X			160x160x299

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

200 ≤ cap. ≤ 3.000



## Couplings legend

<b>A1</b>	DHW inlet
<b>A2</b>	DHW outlet
<b>C1</b>	Anode
<b>E1</b>	Probe / Thermometer
<b>E2</b>	Probe / Thermometer
<b>E3</b>	Probe / Thermometer
<b>F</b>	Recirculation
<b>I</b>	Electrical resistor
<b>N1</b>	Lower exchanger outlet
<b>N2</b>	Lower exchanger inlet
<b>N3</b>	Upper exchanger outlet
<b>N4</b>	Upper exchanger inlet
<b>Q1</b>	Inspection hole
<b>S1</b>	Lower exchanger
<b>S2</b>	Upper exchanger

## Couplings chart

Cap. l	A1 inch	A2 inch	C1 inch	E1 mm	E2 inch	E3 inch	I inch	N1 inch	N2 inch	N3 inch	N4 inch	Q1 (Øext/Øint) mm
200	1"	1"	1 1/4"	Ø21,3	1/2"	1/2"	1 1/2"	3/4"	3/4"	3/4"	3/4"	Ø220/Ø130
300	1"	1"	1 1/4"	Ø21,3	1/2"	1/2"	1 1/2"	1"	1"	1"	1"	Ø220/Ø130
500	1"	1"	1 1/4"	Ø21,3	1/2"	1/2"	1 1/2"	1"	1"	1"	1"	Ø220/Ø130
800	1 1/4"	1 1/4"	1 1/4"	Ø21,3	1/2"	1/2"	1 1/2"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	Ø220/Ø130
1000	1 1/4"	1 1/4"	1 1/4"	Ø21,3	1/2"	1/2"	1 1/2"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	Ø220/Ø130
1500	1 1/2"	1 1/2"	1 1/4"	Ø21,3	1/2"	1/2"	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"	Ø21,3	1/2"	1/2"	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"	Ø21,3	1/2"	1/2"	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"	Ø21,3	1/2"	1/2"	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	C1 mm	E1 mm	E2 mm	E3 mm	I mm	N1 mm	N2 mm	N3 mm	N4 mm	Q1** mm
200	650	1470	1610	870	425	870	1195	385	265	770	990	1170	385
300	750	1510	1690	965	445	965	1215	405	285	790	1040	1190	405
500	800	1950	2110	1060	420	1050	1685	380	260	885	1445	1670	380
800	990	1940	2200	1185	545	1185	1555	505	395	1005	1360	1540	505
1000	1000	2210	2445	1335	555	1335	1815	515	405	1155	1560	1800	515
1500	1250	2225	2545	1315	565	1295	1815	545	415	1115	1505	1765	545
2000	1450	2305	2715	1300	600	1300	1850	580	450	1145	1560	1820	580
2500	1400	2530	2930	1450	600	1450	2100	580	450	1300	1750	2050	580
3000	1450	2800	3190	1645	615	1345	2365	595	465	1265	2060	2365	595

R': reversal quota

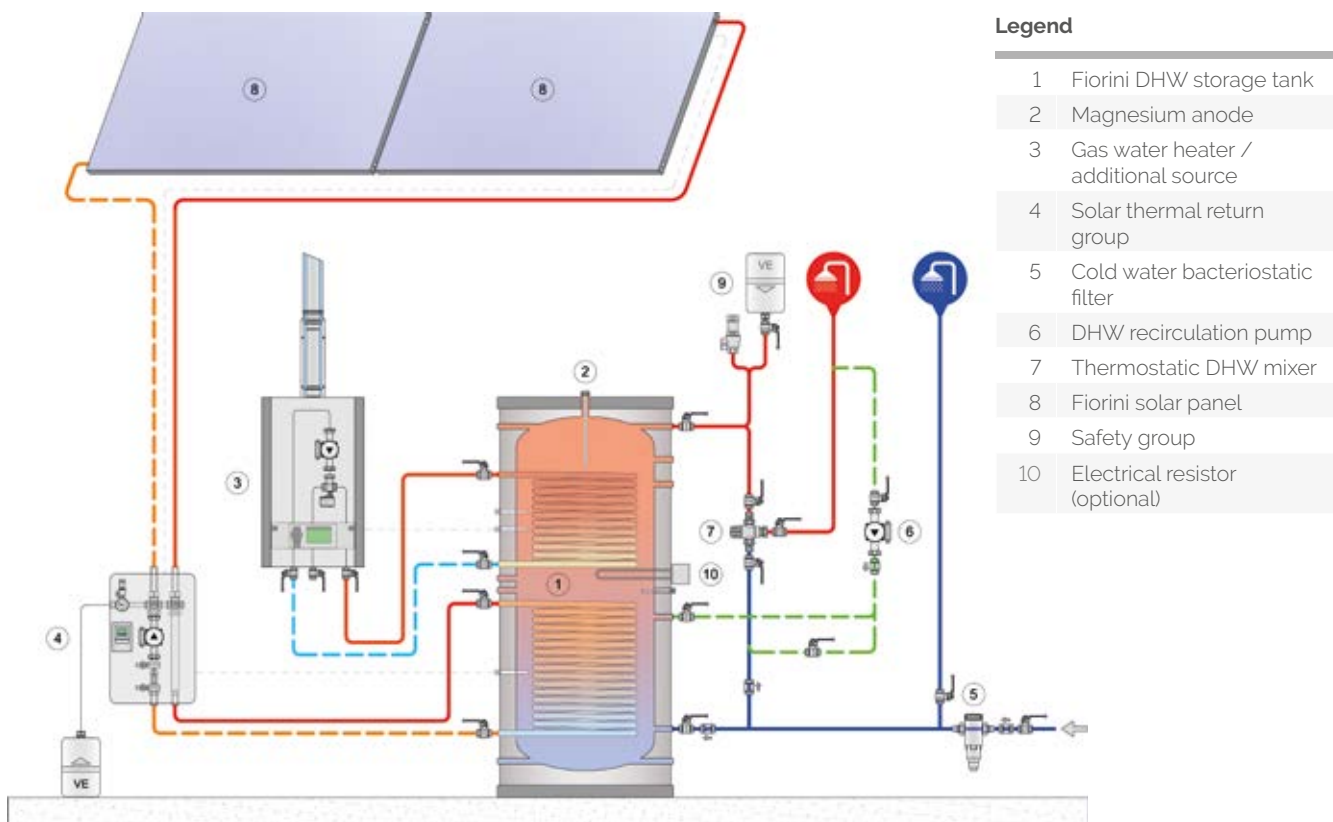
Q1\*\*: Height from inspection hole center to the ground

# Technical information for SMART INOX 2 series

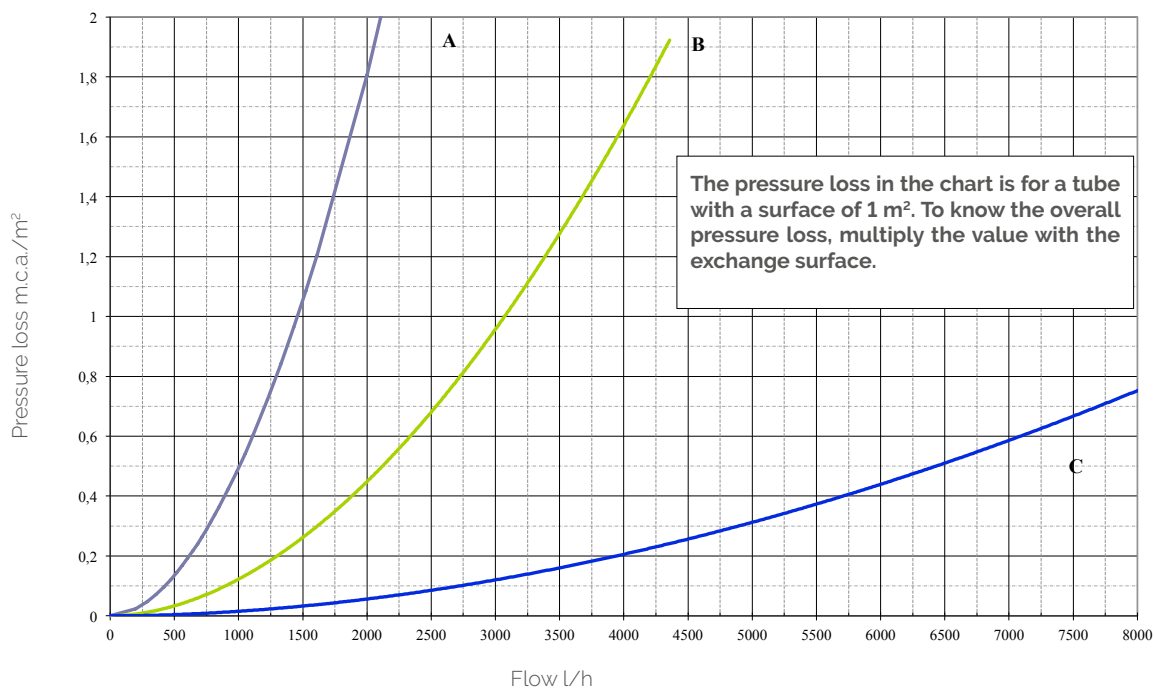
Capacity	Ti	DHW production $T_{iDHW} = 10^{\circ}\text{C}$						Upper	Lower	Nominal flow
		TuDHW = 45°C		TuDHW = 60°C		Ta = 50°C	Ta = 60°C	exchanger	exchanger	
		L/h (a)	kW (b)	L/h (c)	kW (d)	L/10 min. (e)	L/10 min. (f)	Surface area	Surface area	
l	°C						m <sup>2</sup>	m <sup>2</sup>	mc/h	
200	70	270	11	137	8	257	300	0,5	1,0	3,0
	80	368	15	206	12	274	316			
	90	442	18	258	15	286	328			
300	70	344	14	154	9	376	440	0,6	1,3	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	1,9	3,0
	80	786	32	430	25	662	769			
	90	909	37	533	31	683	789			
600	70	565	23	275	16	732	860	1,0	1,9	3,0
	80	761	31	430	25	765	892			
	90	909	37	533	31	789	917			
800	70	688	28	344	20	965	1135	1,2	2,4	4,0
	80	933	38	516	30	1006	1176			
	90	1081	44	636	37	1031	1201			
1000	70	688	28	344	20	1178	1391	1,2	3,2	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  $T_{uDHW} = 45^{\circ}\text{C}$
- b exchanger power with  $T_{uDHW} = 45^{\circ}\text{C}$
- c continuous DHW flow with  $T_{uDHW} = 60^{\circ}\text{C}$
- d exchanger power with  $T_{uDHW} = 60^{\circ}\text{C}$
- e amount of DHW at  $45^{\circ}\text{C}$  in the first 10 min. with a storage temperature of  $50^{\circ}\text{C}$
- f amount of DHW at  $45^{\circ}\text{C}$  in the first 10 min. with a storage temperature of  $60^{\circ}\text{C}$
- Exchanger capacity: 7.10 Lt/mq

# Technical information for SMART INOX 2 series



## Pressure loss fixed heat exchanger



A) 200 l tank    B) 300 - 600 l tank    C) 800 - 3000 l tank



# Enamelled interspace tanks

The interspace tanks are intended for the production of domestic hot water. The heat exchange takes place through the outer mantle of the tank to which a cavity adheres, in which water from the boiler flows. The high exchange area ensures:

- efficient operation,
- high power exchanged,
- uniform distribution of the temperature of the sanitary water,
- reduced heat dispersion from the sanitary water.

The tank can be installed on the wall in a horizontal or vertical position.



**Material:** S235 JR steel

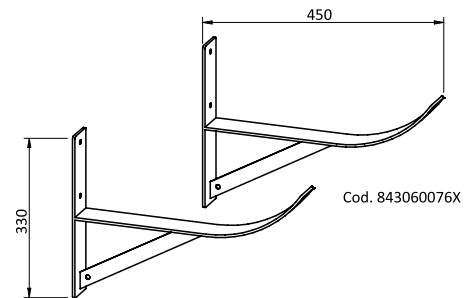
**Mounting brackets NOT included**

## Insulation

Capacity (l)	Type
100, 140	Highly rigid polyurethane foam

## Limite di utilizzo

Capacity l	Storage		Interspace	
	Temperature max.	Pressure max.	Temperature max.	Pressure max.
100	95°C	6 bar	99°C	2 bar
140	95°C	10 bar	99°C	2 bar

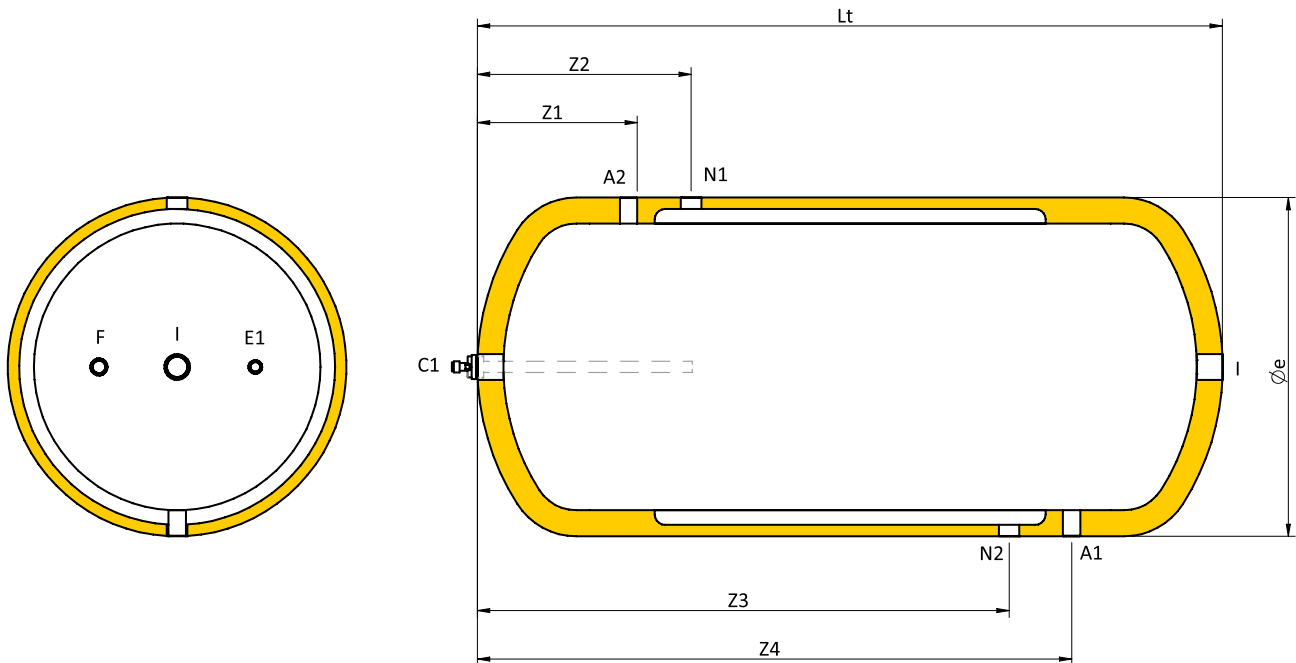


**Assembly brackets required**  
(NOT INCLUDED - to be ordered separately)

Cod.	Price
843090076X	

Cap. l	Cod.	Price	Energy class	Weight kg
100	836060001X			47
140	836060002X			65

# Enamelled interspace tanks



## Couplings legend

<b>A1</b>	DHW inlet
<b>A2</b>	DHW outlet
<b>C1</b>	Anode
<b>E1</b>	Probe / Thermometer
<b>F</b>	Recirculation
<b>I</b>	Electrical resistor
<b>N1</b>	Exchanger outlet
<b>N2</b>	Exchanger inlet

## Couplings chart

Cap. l	A1 inch	A2 inch	C1 inch	C2 mm	E1 inch	F inch	I inch	N1 inch	N2 inch
100	3/4"	3/4"	1 1/4"	1 1/4"	1/2"	3/4"	1 1/4"	1"	1"
140	3/4"	3/4"	1 1/4"	1 1/4"	1/2"	3/4"	1 1/4"	1"	1"

## Size chart

Cap. l	Øe mm	Lt mm	Z1 mm	Z2 mm	Z3 mm	Z4 mm
100	670	1100	170	265	710	815
140	670	1590	170	265	965	1070

# Water heater with tube heat exchanger – BOIL

The BOIL range consists of water heaters with a tube heat exchanger for the production of domestic hot water. There are several capacities, from 200 up to 5000 litres. They are equipped, depending on the capacity, insulation (see chart below), an external cover in PVC and a magnesium anode for the protection against galvanic currents.

## Materials

The boilers are made from high quality materials such as:

- Tank: carbon steel S 235 JR
- Tube heat exchanger: galvanized stainless steel AISI 304
- Exchanger head: galvanized carbon steel S 235 JR

## Internal protective treatment


- up to 1000 litres inorganic **glass lining**, according to DIN 4753.3
- from 1500 litres **Bluetech enamelling** with thermosetting resins, suitable for DHW

## Insulation

Capacity (l)	Type
200, 300	Highly rigid polyurethane foam
from 500 to 1000	Polystyrene Graphite + Polyester Fiber
from 1500	Polyester Fiber

## Operational limits

Capacity l	Storage		Primary circuit	
	max. temperature	max. pressure	max. temperature	max. pressure
up to 1000	95°C	10 bar	110°C	12 bar
from 1500	80°C	6 bar	110°C	12 bar

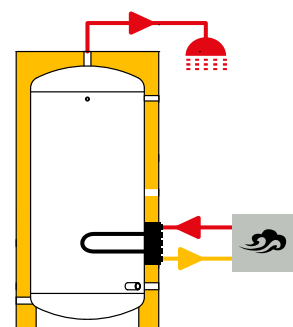
 **Supplied accessories:** Adjustable height feet for sizes up to 500 l, safety valve and thermometer for sizes up to 1000 l, magnesium sacrificial anode for all sizes.




 **Standard accessories:** see pag 274

 **Special versions:** see pag 277

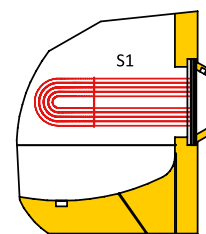


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Capacity l	Code	Price	Energy Label	With vertical packaging	
				Dimensions cm	Weight kg
200	818060068X			75x75x125	101
300	818060069X			75x75x150	113
500	818060070X			80x80x209	148
750	818060071X			99x99x199	283
1000	818060072X			99x99x230	322
1500	818080375X			123x123x240	262
2000	818080361X			132x132x275	324
2500	818080362X			147x147x277,5	368
3000	818080363X			147x147x299	409
4000	818080364X			163x163x306	582
5000	818080365X			183x183x310	687

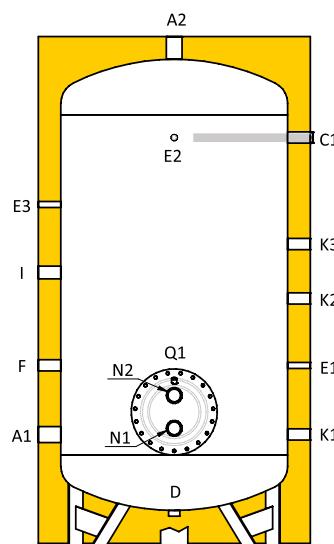
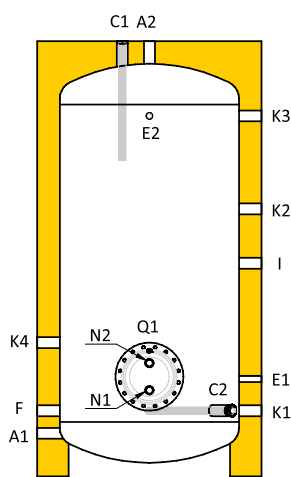
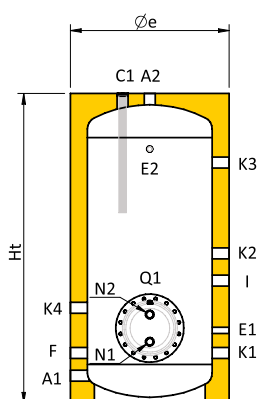
# Water heater with tube heat exchanger – BOIL



200 ≤ cap. ≤ 300

500 ≤ cap. ≤ 1.000

1.500 ≤ cap. ≤ 5.000



## Couplings legend

A1	DHW inlet
A2	DHW outlet
C1	Anode
C2	Anode
D	Drain
E1	Probe / Thermometer
E2	Probe / Thermometer
E3	Probe / Thermometer
F	Recirculation
I	Electrical resistor
K1	Auxiliary
K2	Auxiliary
K3	Auxiliary
K4	Auxiliary
N1	Lower exchanger outlet
N2	Lower exchanger inlet
Q1	Inspection hole
S1	Lower exchanger

## Couplings chart

Cap. l	A1 inch	A2 inch	C1 inch	C2 inch	D inch	E1 inch	E2 inch	E3 inch	F inch	I inch	K1 inch	K2 inch	K3 inch	K4 inch	N1 inch	N2 inch	Q1 (Øext/Øint) mm
200	1 1/4	1 1/4	1 1/4	-	-	1/2"	1/2"	-	1 1/4	1 1/2	1 1/4	1 1/4	1 1/4	1 1/4	1"	1"	Ø300/Ø220
300	1 1/4	1 1/4	1 1/4	-	-	1/2"	1/2"	-	1 1/4	1 1/2	1 1/4	1 1/4	1 1/4	1 1/4	1"	1"	Ø300/Ø220
500	1 1/4	1 1/4	1 1/4	1 1/4	-	1/2"	1/2"	-	1 1/4	1 1/2	1 1/4	1 1/4	1 1/4	1 1/4	1"	1"	Ø300/Ø220
750	1 1/4	1 1/4	1 1/4	1 1/4	-	1/2"	1/2"	-	1 1/4	1 1/2	1 1/4	1 1/4	1 1/4	1 1/4	2"	2"	Ø380/Ø300
1000	1 1/4	1 1/4	1 1/4	1 1/4	-	1/2"	1/2"	-	1 1/4	1 1/2	1 1/4	1 1/4	1 1/4	1 1/4	2"	2"	Ø380/Ø300
1500	2"	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	-	2"	2"	Ø380/Ø300
2000	2"	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	-	2"	2"	Ø430/Ø350
2500	2 1/2	2 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	-	2"	2"	Ø430/Ø350
3000	3"	3"	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	-	2"	2"	Ø430/Ø350
4000	3"	3"	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	-	2"	2"	Ø430/Ø350
5000	3"	3"	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	-	2"	2"	Ø430/Ø350

## Size chart

Cap. l	Øe mm	Ht mm	R* mm	A1 mm	C1 mm	C2 mm	D mm	E1 mm	E2 mm	E3 mm	F mm	I mm	K1 mm	K2 mm	K3 mm	K4 mm	N1 mm	N2 mm	Q1** mm
200	700	1100	1305	130	1100	-	-	320	855	-	220	540	130	660	970	420	270	390	330
300	700	1340	1515	130	1340	-	-	320	1120	-	220	540	220	660	1060	420	370	390	330
500	760	1920	2065	150	1920	250	-	380	1640	-	250	945	250	1090	1640	480	330	450	360
750	950	1970	2190	210	1970	310	-	460	1610	-	310	960	310	1150	1610	610	387,5	532,5	460
1000	950	2280	2470	210	2280	310	-	460	1910	-	310	915	310	1150	1910	610	387,5	532,5	460
1500	1250	2280	2600	500	1810	-	165	805	1810	1515	805	1215	500	1100	1340	-	527,5	672,5	600
2000	1350	2600	2930	505	2115	-	155	805	2115	1805	805	1505	505	1105	1345	-	525	715	620
2500	1400	2655	3000	565	2150	-	175	865	2150	1850	850	1550	565	1165	1405	-	585	775	680
3000	1450	2870	3215	575	2350	-	180	800	2350	2050	850	1750	575	1050	1415	-	595	785	690
4000	1600	2940	3350	600	2380	-	160	900	2380	2080	870	1780	600	1200	1440	-	620	810	715
5000	1800	2980	3480	610	2385	-	140	910	2385	2085	885	1785	610	1210	1450	-	630	820	725

R\*: reversal quota

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

# Water heater with tube heat exchanger

## BOIL INOX

The BOIL INOX range consists of water heaters with tube heat exchanger for the production of domestic hot water. They are available in several capacities, from 200 up to 5000 litres and equipped with different type of insulation (see chart below), external cover in PVC and a magnesium anode for protection against galvanic currents.

### Materials

The boilers are made from high quality materials such as:

- Tank: AISI 316 stainless steel
- Tube heat exchanger: AISI 316 stainless steel
- Exchanger head: galvanized carbon steel S235 JR

**Treatment for internal protection:** Pickling and passivation

### Insulation

Capacity (l)	Type
from 200 to 5000	Polyester Fiber

### Operational limits

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

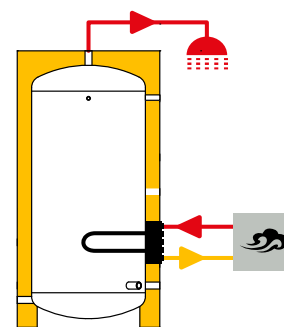









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 **Supplied accessories:** Magnesium sacrificial anode for all sizes.

 **Standard accessories:** see pag 274

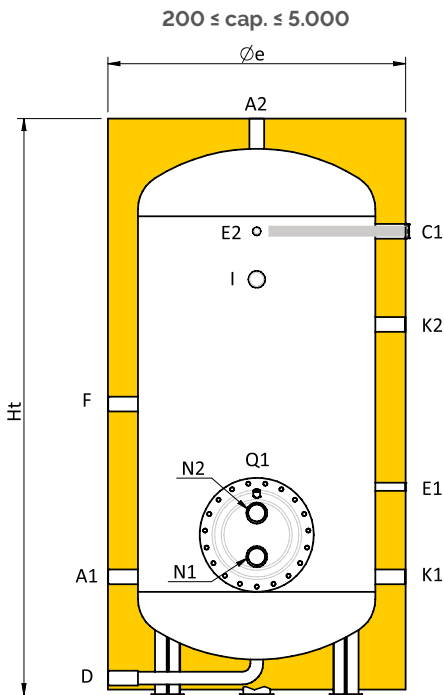
 **Special versions:** see pag 277



Capacity l	Code	Price	Energy label	With vertical packaging Dimensions cm
200	818040067X			68x68x159
300	818040068X			78x78x163
500	818040069X			83x83x207
800	818040070X			102x102x204
1000	818040071X			103x103x231
1500	818040072X			123x123x232
2000	818040073X			143x143x240
2500	818040074X			143x143x265
3000	818040075X			148x148x292
4000	818040076X			163x163x300
5000	818040077X			183x183x303

# Water heater with tube heat exchanger

## BOIL INOX



### Couplings legend

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

### Couplings chart

Cap. l	A1 inch	A2 inch	C1 inch	D inch	E1 inch	E2 inch	F inch	I inch	K1 inch	K2 inch	N1 inch	N2 inch	Q1 (Øext/Øint) mm
200	1"	1"	1 1/4"	1"	1/2"	1/2"	1"	1 1/2"	1 1/4"	1 1/4"	1"	1"	Ø300/Ø220
300	1"	1"	1 1/4"	1"	1/2"	1/2"	1"	1 1/2"	1 1/4"	1 1/4"	1"	1"	Ø300/Ø220
500	1"	1"	1 1/4"	1"	1/2"	1/2"	1"	1 1/2"	1 1/4"	1 1/4"	1"	1"	Ø300/Ø220
800	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1/2"	1/2"	1 1/4"	1 1/2"	1 1/4"	1 1/4"	2"	2"	Ø380/Ø300
1000	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1/2"	1/2"	1 1/4"	1 1/2"	1 1/4"	1 1/4"	2"	2"	Ø380/Ø300
1500	1 1/2"	1 1/2"	1 1/4"	1 1/2"	1/2"	1/2"	1 1/4"	1 1/2"	1 1/4"	1 1/4"	2"	2"	Ø380/Ø300
2000	2"	2"	1 1/4"	2"	1/2"	1/2"	1 1/4"	1 1/2"	1 1/4"	1 1/4"	2"	2"	Ø430/Ø350
2500	2"	2"	1 1/4"	2"	1/2"	1/2"	1 1/4"	1 1/2"	1 1/4"	1 1/4"	2"	2"	Ø430/Ø350
3000	2"	2"	1 1/4"	2"	1/2"	1/2"	1 1/4"	1 1/2"	1 1/4"	1 1/4"	2"	2"	Ø430/Ø350
4000	2 1/2"	2 1/2"	1 1/4"	2 1/2"	1/2"	1/2"	1 1/4"	1 1/2"	1 1/4"	1 1/4"	2"	2"	Ø430/Ø350
5000	2 1/2"	2 1/2"	1 1/4"	2 1/2"	1/2"	1/2"	1 1/4"	1 1/2"	1 1/4"	1 1/4"	2"	2"	Ø430/Ø350

### Size chart

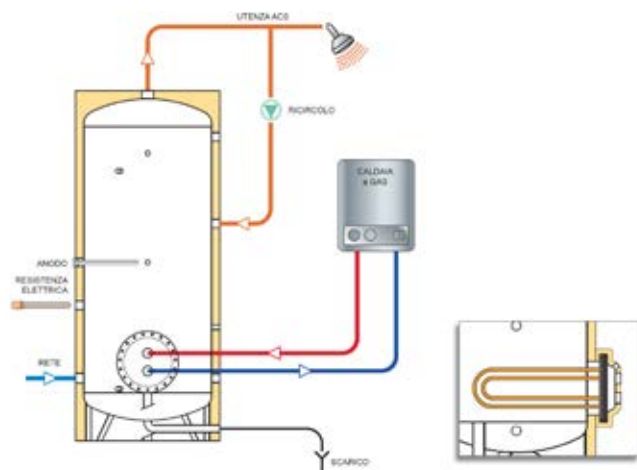
Cap. l	Øe mm	Ht mm	R' mm	A1 mm	C1 mm	E1 mm	E2 mm	F mm	I mm	K1 mm	K2 mm	N1 mm	N2 mm	Q1** mm
200	650	1470	1610	275	1115	575	1115	725	915	275	915	315	435	375
300	750	1510	1690	295	1135	595	1135	745	965	295	965	335	455	395
500	800	1950	2110	270	1670	570	1670	970	1410	270	1110	310	430	370
800	1030	1940	2200	395	1545	695	1545	970	1385	395	1235	462,5	607,5	535
1000	1040	2210	2445	405	1805	705	1805	1105	1445	405	1245	472,5	617,5	545
1500	1250	2225	2555	425	1815	725	1815	1115	1455	425	1265	482,5	627,5	555
2000	1450	2305	2725	460	1850	760	1850	1150	1490	460	1300	520	710	615
2500	1400	2530	2895	460	2100	760	2100	1275	1600	460	1300	520	710	615
3000	1450	2800	3155	475	2365	775	2365	1415	1645	475	1315	535	725	630
4000	1600	2880	3295	530	2400	830	2400	1450	1680	530	1370	570	760	665
5000	1800	2910	3425	530	2400	830	2400	1450	1680	530	1370	570	760	665

R': reversal quota

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

# Technical information for BOIL and BOIL INOX series

Capacity	DHW production $T_{iDHW} = 10^{\circ}\text{C}$							Exchanger		Nominal flow
	Ti	$T_{uDHW} = 45^{\circ}\text{C}$		$T_{uDHW} = 60^{\circ}\text{C}$		$T_a = 50^{\circ}\text{C}$	$T_a = 60^{\circ}\text{C}$	Surface area	Capacity	
	$^{\circ}\text{C}$	L/h (a)	kW (b)	L/h (c)	kW (d)	L/10 min. (e)	L/10 min. (f)			
l	$^{\circ}\text{C}$	L/h (a)	kW (b)	L/h (c)	kW (d)	L/10 min. (e)	L/10 min. (f)	$\text{m}^2$	l	mc/h
200	70	241	9,8	119	4,9	258	315	0,5	2	0,5
	80	300	12,2	169	6,9	266	323			0,6
	90	362	14,7	214	8,7	273	330			0,7
300	70	364	14,8	181	7,4	384	470	0,75	2,8	0,7
	80	453	18,4	252	10,3	395	480			0,8
	90	544	22,1	322	13,1	405	491			1
500	70	482	19,6	240	9,8	620	763	1	3,6	0,9
	80	602	24,5	336	13,7	632	775			1,1
	90	580	23,6	343	14	644	787			1,1
800	70	723	29,4	358	14,6	983	1212	1,5	5,9	1,3
	80	902	36,7	506	20,6	1001	1229			1,6
	90	1084	44,1	642	26,2	1018	1247			1,9
1000	70	964	39,2	480	19,6	1224	1510	2	7,2	1,7
	80	1204	49	675	27,5	1245	1531			2,2
	90	1445	58,8	857	34,9	1266	1552			2,6
1500	70	1445	58,8	728	29,7	1837	2266	3	10,9	2,6
	80	1806	73,5	1020	41,6	1869	2297			3,2
	90	2168	88,2	1292	52,6	1899	2328			3,8
2000	70	1927	78,4	976	39,8	2421	2992	4	14,7	3,4
	80	2408	98	1368	55,7	2454	3026			4,3
	90	2890	117,6	1731	70,5	2488	3059			5,1
2500	70	2408	98	1232	50,2	3014	3728	5	18,5	4,3
	80	3010	122,5	1722	70,1	3053	3767			5,3
	90	3612	147	2178	88,7	3091	3805			6,4
3000	70	2890	117,6	1478	60,2	3577	4434	6	22	5,1
	80	3612	147	2066	84,1	3614	4471			6,4
	90	4335	176,4	2613	106,4	3650	4507			7,6
4000	70	3853	156,8	2020	82,3	4775	5918	8	30,1	6,8
	80	4816	196	2802	114,1	4824	5967			8,5
	90	5780	235,2	3530	143,7	4872	6015			10,2
5000	70	4816	196	2978	121,2	5938	7366	10	36,4	8,5
	80	6020	245	4099	166,9	5990	7419			10,6
	90	7224	294	5138	209,2	6042	7470			12,7

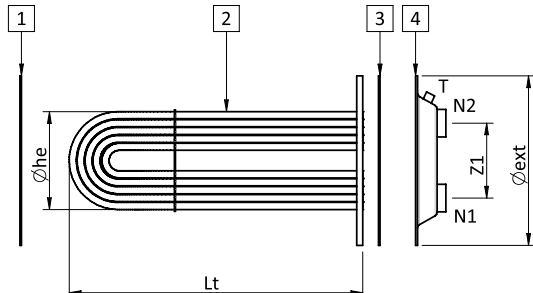


- a continuous DHW flow with  $T_{uDHW} = 45^{\circ}\text{C}$
- b exchanger power with  $T_{uDHW} = 45^{\circ}\text{C}$
- c continuous DHW flow with  $T_{uDHW} = 60^{\circ}\text{C}$
- d exchanger power with  $T_{uDHW} = 60^{\circ}\text{C}$
- e amount of DHW at  $45^{\circ}\text{C}$  in the first 10 min. with a storage temperature of  $50^{\circ}\text{C}$
- f amount of DHW at  $45^{\circ}\text{C}$  in the first 10 min. with a storage temperature of  $60^{\circ}\text{C}$
- Exchanger capacity: 710 Lt/mq

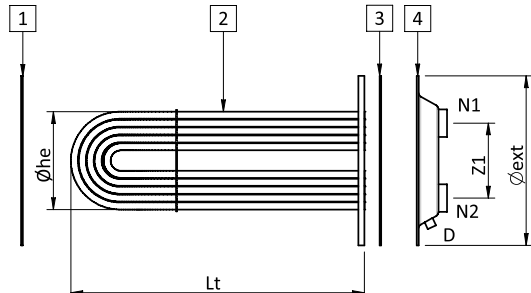


# Technical information for BOIL and BOIL INOX series

## Water only



## Steam only



### Couplings legend

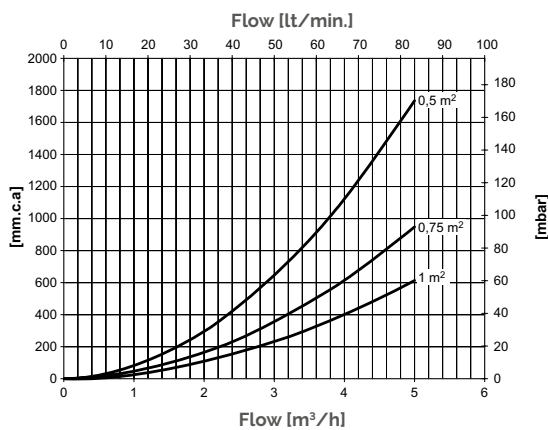
D	Drain
N1	Exchanger inlet/outlet
N2	Exchanger inlet/outlet
T	Vent
1	Gasket without cross-beam
2	Bundle tube heat exchangers
3	Gasket with cross-beam
4	Head

### Technical information tube heat exchanger

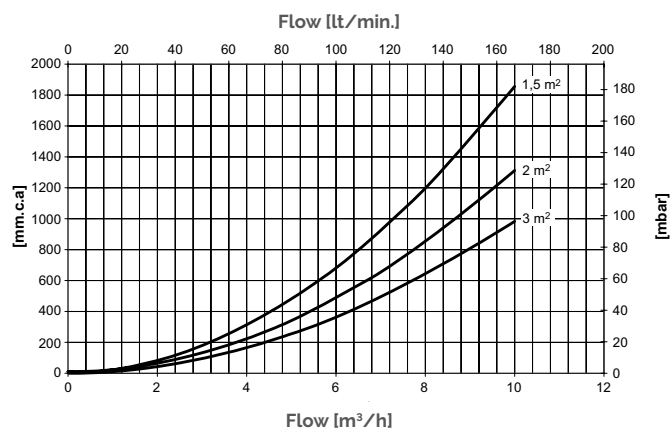
Surf. m <sup>2</sup>	Power* kW	Lt mm	Øext mm	Øhe mm	N1 inch	N2 inch	Z1 mm	Volume l	dp mca
0,5	12,2	460	300	166	1"	1"	120	1,84	0,65
0,75	18,4	445	300	202	1"	1"	120	2,44	0,65
1	24,5	475	300	202	1"	1"	120	3,23	0,7
1,5	36,7	600	380	270	2"	2"	145	5,36	0,75
2	49	600	380	270	2"	2"	145	6,51	0,8
3	73,5	720	380	278	2"	2"	145	9,8	0,9
4	98	750	430	316	2"	2"	190	13,2	1
5	122,5	780	430	324	2"	2"	190	16,68	1,1
6	147	895	430	324	2"	2"	190	19,2	1,2
8	196	1250	430	324	2"	2"	190	27	1,3
10	245	1510	430	324	2"	2"	190	32,7	1,4

### Pressure loss tube heat exchanger

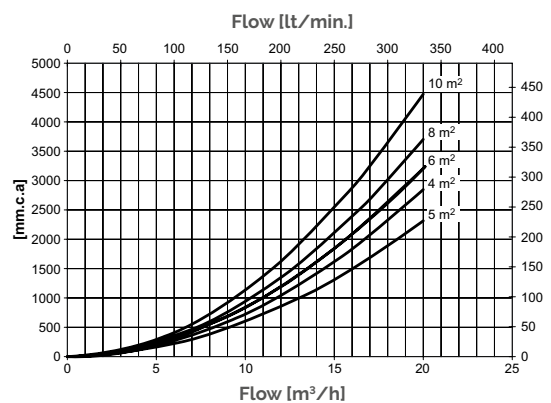
#### Exchanger surface 0,5 - 1 m<sup>2</sup>



#### Exchanger surface 1,5 - 3 m<sup>2</sup>

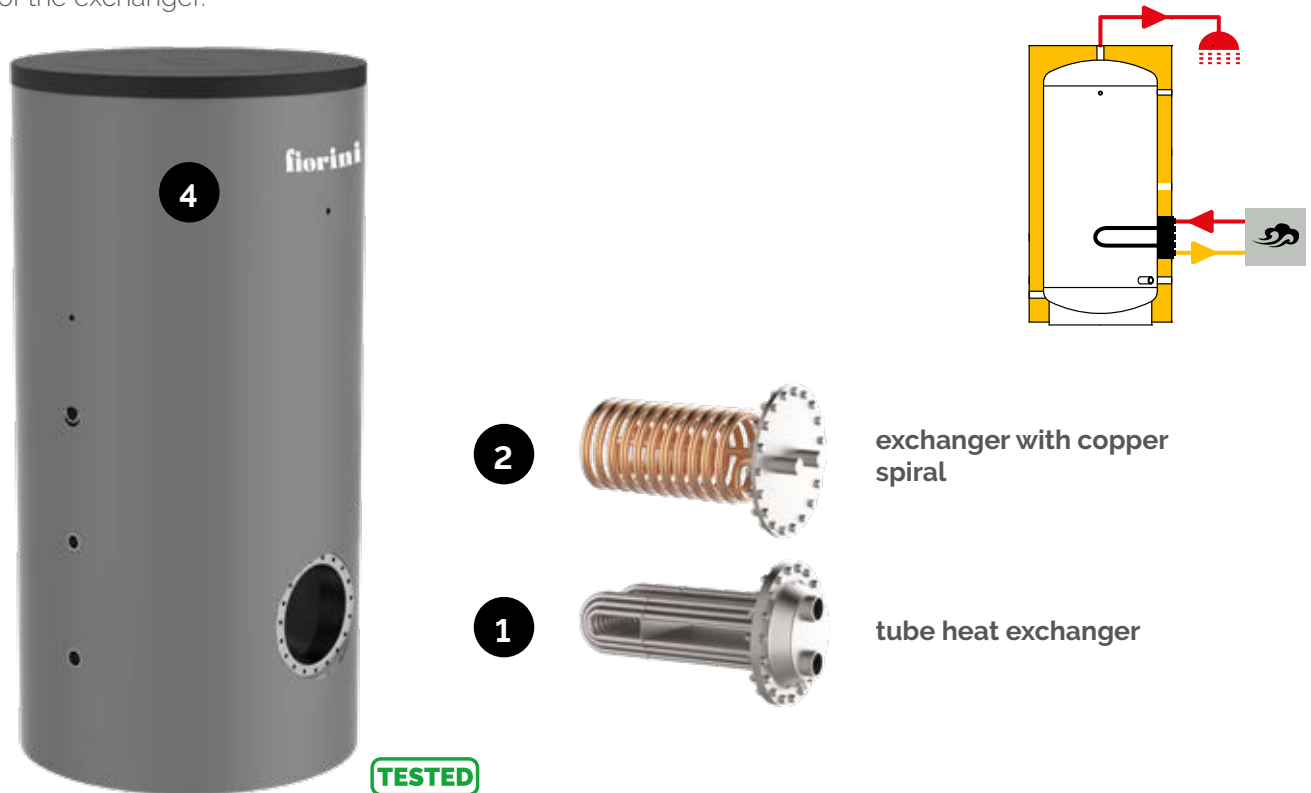


#### Exchanger surface 5 - 10 m<sup>2</sup>



# Customized water heater with removable exchanger

The concept of the Boil custom range has been introduced to give the user the possibility of composing their own system for domestic hot water production by coupling it with several types of storage tanks and exchangers. This enables the conception of flexible solutions for every type of storage tank, volume or power of the exchanger.



The option with one hole makes it possible to couple the storage tanks listed below with a tube heat exchanger or an exchanger with copper spiral. The following pages discuss the possible combinations.

## Storage tanks with one inspection hole.

### Available options:

FLEXY glass lined version (see pag. 138)

FLEXY INOX version in AISI 316 stainless steel (see pag. 140)



FLEXY



FLEXY INOX

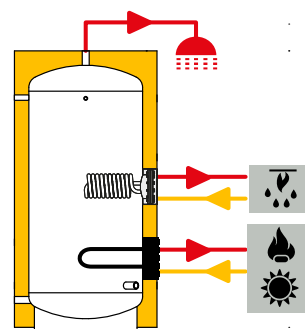
### ❖ how to compose a Boil custom

- 1) take the code of the Flexy storage tank with inspection hole
  2. Add the code of the exchanger
- You can choose between the following:
- Tube heat exchanger (see pag. 183)
  - Exchanger with copper spiral (see pag. 184)

BOIL CUSTOM CODE =  
Storage tank code +  
exchanger code

# Customized water heater with removable exchanger

The concept of the Boil custom range has been introduced to give the user the possibility of composing their own system for domestic hot water production by coupling it with several types of storage tanks and exchangers. This enables the conception of flexible solutions for every type of storage tank, volume or power of the exchanger.



**TESTED**

blind plate



exchanger with copper spiral



tube heat exchanger



## Features

**Material** S 235 JR carbon steel  
**Internal protective treatment:**

Bluetech enamelling with thermosetting resins, suited for domestic water

**Supplied accessories:** magnesium sacrificial anode for all sizes.

**Standard accessories:** see pag 274

**Special versions:** see pag 277

## Operational limits

max. temperature	max. pressure
80°C	6 bar

## Insulation

Capacity (l)	Type
from 200 to 5000	Polyester Fiber

The option with two inspection holes makes it possible to couple the storage tank with:

- ✓ Two tube heat exchangers
- ✓ Two exchangers with a copper spiral
- ✓ A tube heat exchanger and an exchanger with a copper spiral
- ✓ One of the two heat exchangers and a blind plate that guarantees an easy inspection.

## Codes and prices of the tanks with two inspection holes

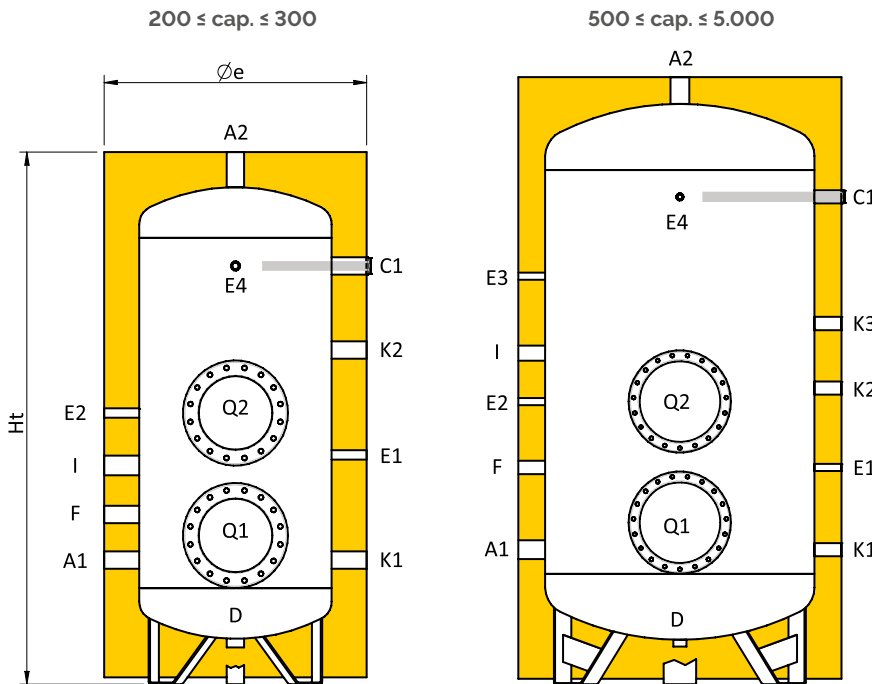
Capacity l	Code	Price	Energy label	With vertical packaging	
				Dimensions cm	Weight kg
200	817080134X		<b>B</b>	68x68x155,5	55
300	817080135X		<b>A</b>	78x78x164	80
500	817080136X		<b>B</b>	88x88x192,5	105
750	817080191X		<b>C</b>	99x99x199	160
1000	817080138X		<b>D</b>	99x99x230	180
1500	817080139X		<b>C</b>	123x123x237,5	230
2000	817080140X		<b>C</b>	132x132x269,5	280
2500	817080141X			147x147x277,5	315
3000	817080142X			147x147x299	350
4000	817080143X			163x163x306	505
5000	817080144X			183x183x310	595

### ❖ how to compose a Boil custom

- 1) take the code of the storage tank with two inspection holes
  - 2) add the code of the exchanger
- You can choose between
- tube heat exchanger (see pag. 183)
  - heat exchanger with a copper spiral (see pag. 184)

Boil custom 2 inspection holes code =  
 code of storage tank +  
 code of exchanger

# Customized water heater with removable exchanger – BOIL Custom – 2 inspection holes



## Couplings legend

<b>A1</b>	DHW inlet
<b>A2</b>	DHW outlet
<b>C1</b>	Anode
<b>D</b>	Drain
<b>E1</b>	Probe / Thermometer
<b>E2</b>	Probe / Thermometer
<b>E3</b>	Probe / Thermometer
<b>E4</b>	Probe / Thermometer
<b>F</b>	Recirculation
<b>I</b>	Electrical resistor
<b>K1</b>	Auxiliary
<b>K2</b>	Auxiliary
<b>K3</b>	Auxiliary
<b>Q1</b>	Inspection hole
<b>Q2</b>	Inspection hole

## 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	K3 inch	Q1 - Q2 (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	-	Ø300/Ø220
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	-	Ø300/Ø220
500	1 1/4	1 1/4	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 1/4	Ø300/Ø220
750	1 1/2	1 1/2	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 1/4	Ø380/Ø300
1000	1 1/2	1 1/2	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 1/4	Ø380/Ø300
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 1/4	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 1/4	Ø430/Ø350
2500	2 1/2	2 1/2	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 1/4	Ø430/Ø350
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 1/4	Ø430/Ø350
4000	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 1/4	Ø430/Ø350
5000	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 1/4	Ø430/Ø350

## Size chart

Cap. l	Øe mm	Ht mm	R' mm	A1 mm	C1 mm	D mm	E1 mm	E2 mm	E3 mm	E4 mm	F mm	I mm	K1 mm	K2 mm	K3 mm	Q1** mm	Q2** mm
200	650	1435	1580	310	1150	125	620	730	-	1150	440	555	310	930	-	380	730
300	750	1520	1695	355	1195	130	655	775	-	1195	485	625	355	955	-	425	775
500	850	1805	2000	375	1445	135	675	795	1145	1445	675	960	375	975	1215	445	795
750	990	1840	2090	390	1470	130	710	980	1360	1470	710	1160	390	1010	1230	500	980
1000	1050	2120	2370	415	1675	120	715	985	1445	1675	745	1175	415	1015	1255	515	985
1500	1250	2280	2605	500	1810	165	805	1050	1515	1810	805	1230	500	1100	1340	600	1050
2000	1350	2600	2930	505	2115	155	805	1150	1805	2115	805	1505	505	1105	1345	620	1150
2500	1400	2655	3005	565	2150	175	865	1210	1850	1850	850	1550	565	1165	1405	680	1210
3000	1450	2870	3220	575	2350	180	800	1220	2050	2050	850	1750	575	1050	1415	690	1220
4000	1600	2940	3350	600	2380	160	900	1245	2080	2080	870	1780	600	1200	1440	715	1245
5000	1800	2980	3485	610	2385	140	910	1255	2085	2085	885	1785	610	1210	1450	725	1255

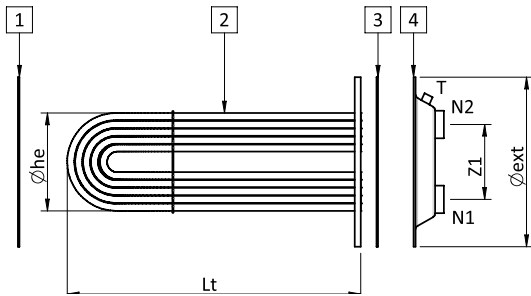
R': reversal quota

\*\* for the 200 and 300 L tanks, the anode is placed in the G2 coupling.

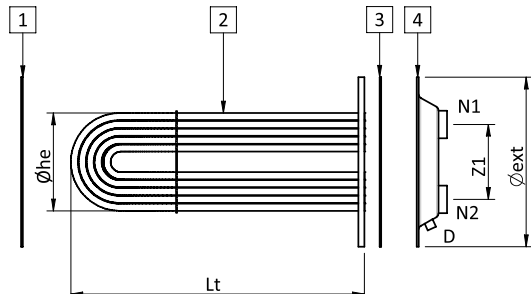
Q1 \*\*/Q2 \*\*: Height from inspection hole center to the ground

# Bundle tube heat exchanger

## Water only

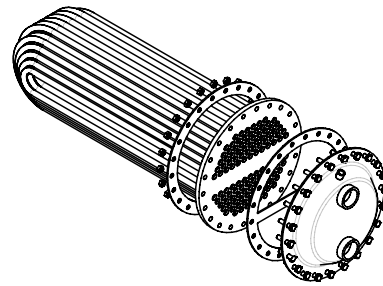


## Steam only



### Couplings legend

D	Drain
N1	Exchanger inlet/outlet
N2	Exchanger inlet/outlet
T	Vent
1	Gasket without cross-beam
2	Bundle tube heat exchangers
3	Gasket with cross-beam
4	Head



### Technical information tube heat exchanger

Surf. m <sup>2</sup>	Power* kW	Lt mm	Øext mm	Øhe mm	N1 inch	N2 inch	Z1 mm	Volume l	dp mca
0,5	12,2	460	300	166	1"	1"	120	1,84	0,65
0,75	18,4	445	300	202	1"	1"	120	2,44	0,65
1	24,5	475	300	202	1"	1"	120	3,23	0,7
1,5	36,7	600	380	270	2"	2"	145	5,36	0,75
2	49	600	380	270	2"	2"	145	6,51	0,8
3	73,5	720	380	278	2"	2"	145	9,8	0,9
4	98	750	430	316	2"	2"	190	13,2	1
5	122,5	780	430	324	2"	2"	190	16,68	1,1
6	147	895	430	324	2"	2"	190	19,2	1,2
8	196	1250	430	324	2"	2"	190	27	1,3
10	245	1510	430	324	2"	2"	190	32,7	1,4

### Compatibility between (1) the tube heat exchanger and (4) the storage tank

Cap. l	Surface m <sup>2</sup>										
	0,5	0,75	1	1,5	2	3	4	5	6	8	10
200	✓	✓	✓								
300	✓	✓	✓								
500	✓	✓	✓								
800				✓	✓	✓					
1000				✓	✓	✓					
1500				✓	✓	✓					
2000							✓	✓	✓		
2500							✓	✓	✓		
3000							✓	✓	✓	✓	
4000							✓	✓	✓	✓	
5000							✓	✓	✓	✓	✓

Performance calculated with primary 80°C and domestic water 10-45°C

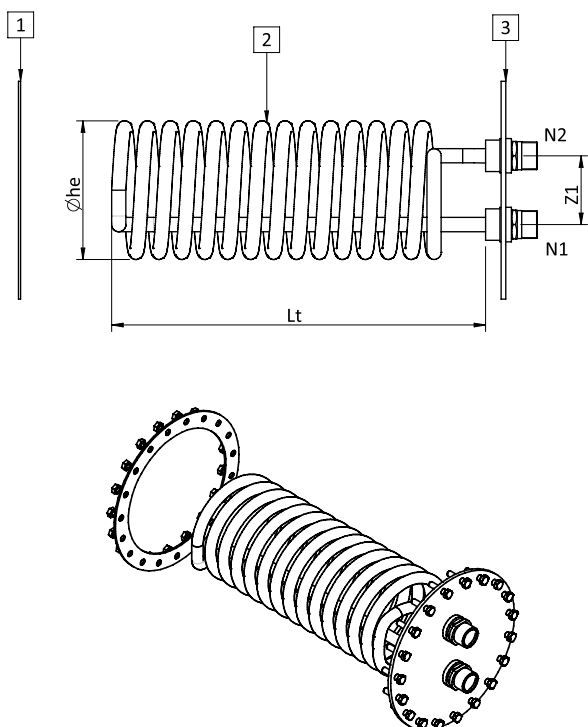
✓ Combination is possible

surf. m <sup>2</sup>	Version 1 Stainless steel AISI 304		Version 2 Stainless steel AISI 316		Version with steam P ≤ 6 bar			Version with steam P ≤ 12 bar		
	Code	Price	Code	Price	Code	Price	cat. P.E.D.	Code	Price	cat. P.E.D.
0,5	821030379X		821030393X		821030285X		Art.4 par.3	821030405X		Cat. I
0,75	821030380X		821030394X		821030286X		Art.4 par.3	821030406X		Cat. I
1	821030381X		821030395X		821030287X		Art.4 par.3	821030407X		Cat. I
1,5	821030382X		821030396X		821030288X		Cat. I	821030408X		Cat. I
2	821030383X		821030397X		821030289X		Cat. I	821030409X		Cat. I
3	821030385X		821030399X		821030291X		Cat. I	821030411X		Cat. I
4	821030386X		821030400X		821030292X		Cat. I	821030412X		Cat. II
5	821030387X		821030401X		821030293X		Cat. I	821030413X		Cat. II
6	821030388X		821030402X		821030294X		Cat. I	821030414X		Cat. II
8	821030389X		821030403X		821030296X		Cat. I	821030416X		Cat. II
10	821030390X		821030404X		821030418X		Cat. II	821030418X		Cat. II

Version 1: AISI 304 stainless steel tube heat exchanger, assembled on a varnished plate with galvanised head

Version 2 and version with steam: AISI 306 stainless steel tube heat exchanger on a AISI 304 steel plate and AISI 304 steel head

# Copper spiral coil



Compatibility chart for copper spiral coil and storage tank

Capacity l	Surface m <sup>2</sup>							
	0,82	1,38	1,53	2,27	3,1	4,54	5,26	6,34
200	✓	✓	✓					
300	✓	✓	✓					
500	✓	✓	✓	✓	✓			
800	✓	✓	✓	✓	✓	✓	✓	✓
1000	✓	✓	✓	✓	✓	✓	✓	✓
1500	✓	✓	✓	✓	✓	✓	✓	✓
2000	✓	✓	✓	✓	✓	✓	✓	✓
2500	✓	✓	✓	✓	✓	✓	✓	✓
3000	✓	✓	✓	✓	✓	✓	✓	✓
4000	✓	✓	✓	✓	✓	✓	✓	✓
5000	✓	✓	✓	✓	✓	✓	✓	✓

✓ Combination is possible

## Couplings legend

<b>N1</b>	Ingresso/uscita scambiatore
<b>N2</b>	Ingresso/uscita scambiatore
<b>1</b>	Guarnizione S/T (senza traverso)
<b>2</b>	Serpentino rame alettato
<b>3</b>	Piastra di montaggio

## Technical information copper spiral coil

Surf. m <sup>2</sup>	Lt mm	Øhe mm	Z1 mm	N1 inch	N2 inch	Type of coil	Internal volume l	Dp kPa	Thermal eff. (°) kW
0,82	380	160	75	3/4"	3/4"	Single coil	0,7	25	15
1,38	420	170	75	3/4"	3/4"	Single coil	1,2	30	21,6
1,53	450	170	75	3/4"	3/4"	Single coil	1,4	35	24
2,27	570	170	75	3/4"	3/4"	Single coil	2	35	27
3,1	550	180	90	1 1/4"	1 1/4"	Double coil	2,7	26	35
4,54	570	242	120	1 1/4"	1 1/4"	Double coil	3,9	35	55
5,26	660	242	120	1 1/4"	1 1/4"	Double coil	4,5	35	57,5
6,34	780	242	120	1 1/4"	1 1/4"	Double coil	5,5	35	61,5

\*Performance calculated with the following temperatures: primary 80°C and domestic water 10-45°C

Surface area m <sup>2</sup>	Assembled on a plate ø 300		Assembled on a plate ø 380		Assembled on a plate ø 430	
	Code	Price	Code	Price	Code	Price
0,82	821040017		821040254X		821040259X	
1,38	821040019		821040255X		821040260X	
1,53	821040020		821040256X		821040261X	
2,27	821040252X		821040021		821040262X	
3,1	821040253X		821040022		821040263X	
4,54	-		821040023		821040027	
5,26	-		821040257X		821040024	
6,34	-		821040258X		821040025	

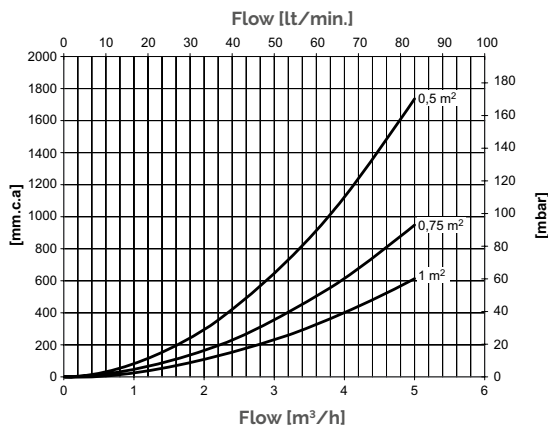
The copper coils are supplied with plates, bolts, nuts and gaskets

# Customized water heater with removable heat exchanger – BOIL custom

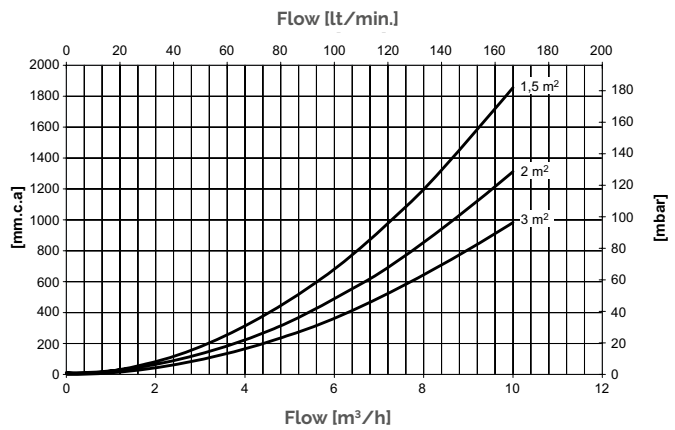
## Curve: pressure loss

### Pressure loss tube heat exchanger

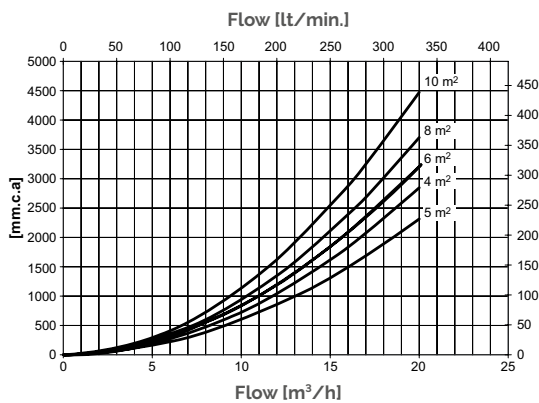
Exchanger surface 0,5 - 1 m<sup>2</sup>



Exchanger surface 1,5 - 3 m<sup>2</sup>



Exchanger surface 5 - 10 m<sup>2</sup>



### Pressure loss copper spiral coil

Pressure loss (mca)

