

Customized water heater with extractible exchanger – BOIL Custom – 1 inspection hole



The concept of the Boil custom gamma was 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.

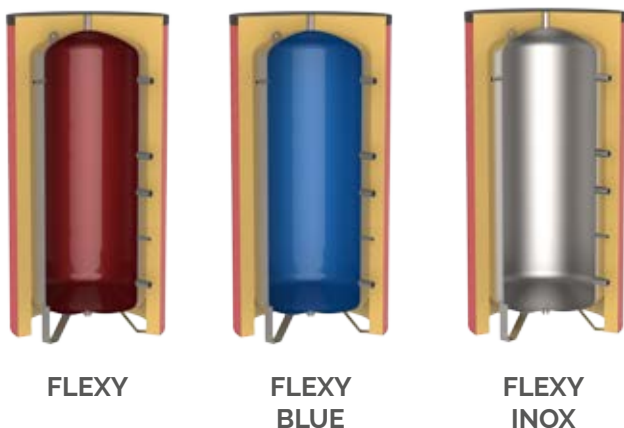
Storage tanks with one inspection hole.

Available options:

FLEXY glass lined version (see p. 108)

FLEXY BLUE (version with inspection hole): version with Bluetech enameling (see p. 110)

FLEXY INOX version in AISI 316 stainless steel (vedi p. 112)

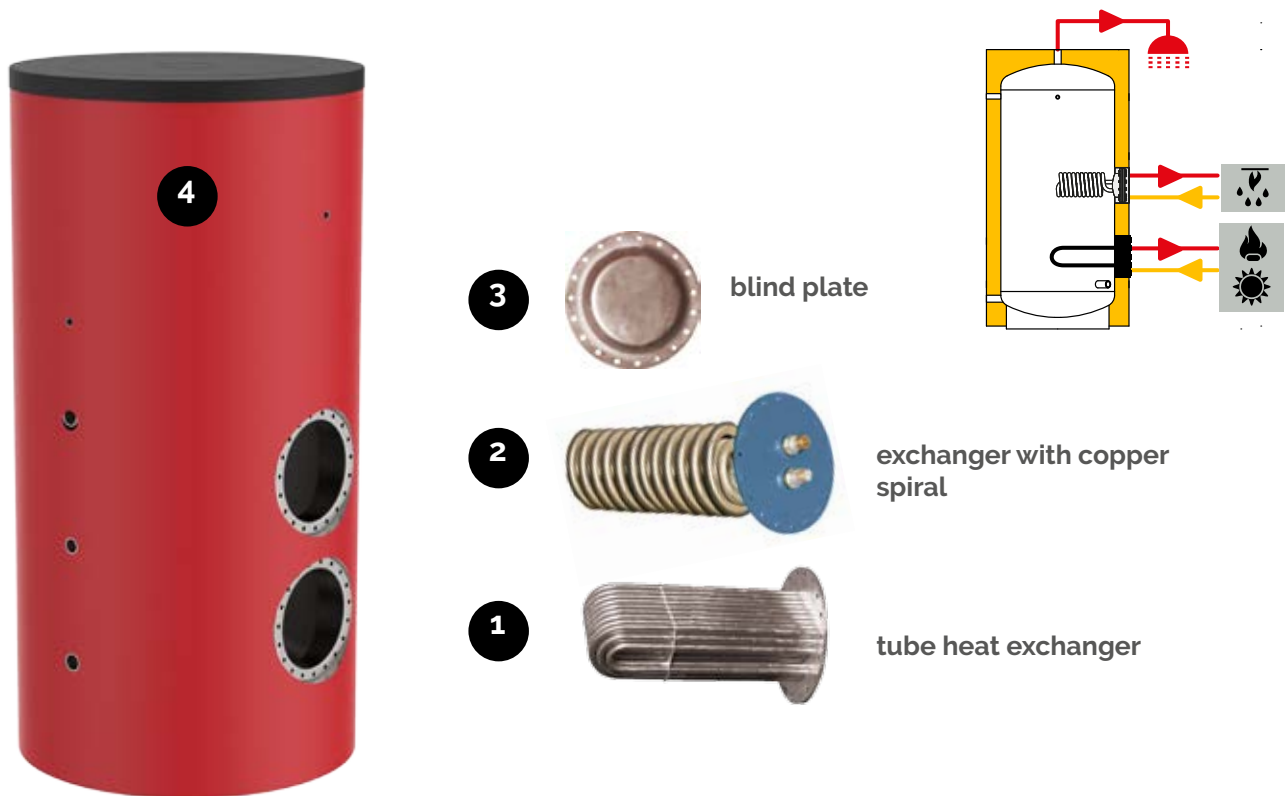


❖ how to compose a Boil custom installation

- 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 (p.149)
 - Exchanger with copper spiral (p.150)

BOIL CUSTOM CODE =
Storage tank code
exchanger code

Customized water heater with extractible exchanger – BOIL Custom – 2 inspection holes



The concept of the Boil custom gamma was 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 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.

❖ Come comporre il Boil Custom

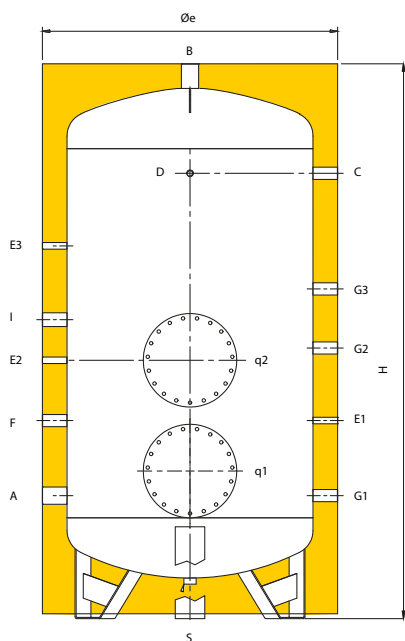
- 1) take the code of the storage tank with two inspection holes
 - 2) add the code of the exchanger
- You can choose between
- tube heat exchanger (see p. 149)
 - heat exchanger with a copper spiral (see p. 150)

Boil custom code =
code of storage tank +
code of exchanger

Codes and prices of the tanks with two inspection holes

capacity l	code	price	energy label	packed	
				dimensions cm	weight kg
200	817080134X		C	68x68x155,5	55
300	817080135X		C	78x78x164	80
500	817080136X		D	88x88x192,5	105
800	817080137X			102x102x221	160
1000	817080138X			107x107x224	180
1500	817080139X			123x123x237,5	230
2000	817080140X			132x132x269,5	280
2500	817080141X			147x147x277,5	315
3000	817080142X			147x147x299	350
4000	817080143X			163x163x306	505
5000	817080144X			183x183x310	595

Customized water heater with extractible exchanger – BOIL Custom – 2 inspection holes



Legend couplings

A	domestic water inlet
B	domestic water outlet
C	anode
D	thermometer
E 1	thermostat
E 2	thermostat
E 3	thermostat
F	recirculation
G1	auxiliary
G2	auxiliary
G3	auxiliary
I	electrical resistor
M	primary circuit inlet
N	primary circuit outlet
S	discharge
q1	inspection hole
q2	inspection hole

Features

✓ Material:

ST 235 JR carbon steel

✓ Internal protective treatment:

Bluetech enamelling with thermosetting resins, suited for domestic water

✓ Insulation:

All tanks are insulated with flexible polyurethane with a thickness of 100 mm. The insulation can be removed.

✓ Available accessories:

Thermometer, thermostat, current impressed electronic anode, safety valve, electrical resistance, external plate heat exchanger kit.

✓ Supplied accessories:

Sacrificial magnesium anode

Coupling chart

capacity l	A inch	B inch	C inch	D inch	E1 inch	E2 inch	E3 inch	F inch	G1 inch	G2 inch	G3 inch	I inch	M inch	N inch	S inch	q1 / q2
200	1 1/4	1 1/4	1 1/4	1/2"	1/2"	1/2"	1/2"	1 1/4	1 1/4	1 1/4	1 1/4	1 1/2	1"	1"	1 1/4	Ø 220/300
300	1 1/4	1 1/4	1 1/4	1/2"	1/2"	1/2"	1/2"	1 1/4	1 1/4	1 1/4	1 1/4	1 1/2	1"	1"	1 1/4	Ø 220/300
500	1 1/4	1 1/4	1 1/4	1/2"	1/2"	1/2"	1/2"	1 1/4	1 1/4	1 1/4	1 1/4	1 1/2	1"	1"	1 1/4	Ø 220/300
800	1 1/2	1 1/2	1 1/4	1/2"	1/2"	1/2"	1/2"	1 1/4	1 1/4	1 1/4	1 1/4	1 1/2	2"	2"	1 1/4	Ø 300/380
1000	1 1/2	1 1/2	1 1/4	1/2"	1/2"	1/2"	1/2"	1 1/4	1 1/4	1 1/4	1 1/4	1 1/2	2"	2"	1 1/4	Ø 300/380
1500	2"	2"	1 1/4	1/2"	1/2"	1/2"	1/2"	1 1/4	1 1/4	1 1/4	1 1/4	1 1/2	2"	2"	1 1/4	Ø 300/380
2000	2"	2"	1 1/4	1/2"	1/2"	1/2"	1/2"	1 1/4	1 1/4	1 1/4	1 1/4	1 1/2	2"	2"	1 1/4	Ø 350/430
2500	2 1/2	2 1/2	1 1/4	1/2"	1/2"	1/2"	1/2"	1 1/4	1 1/4	1 1/4	1 1/4	1 1/2	2"	2"	1 1/4	Ø 350/430
3000	3"	3"	1 1/4	1/2"	1/2"	1/2"	1/2"	1 1/4	1 1/4	1 1/4	1 1/4	1 1/2	2"	2"	1 1/4	Ø 350/430
4000	3"	3"	1 1/4	1/2"	1/2"	1/2"	1/2"	1 1/4	1 1/4	1 1/4	1 1/4	1 1/2	2"	2"	1 1/4	Ø 350/430
5000	3"	3"	1 1/4	1/2"	1/2"	1/2"	1/2"	1 1/4	1 1/4	1 1/4	1 1/4	1 1/2	2"	2"	1 1/4	Ø 350/430

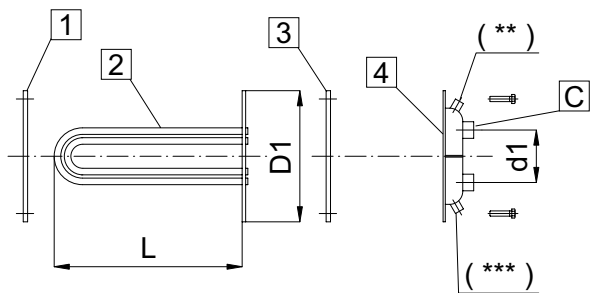
Height chart

capacity l	Øe mm	Ht mm	R* mm	A mm	C mm	D mm	E1 mm	E2 mm	E3 mm	F mm	G1 mm	G2 mm	G3 mm	I mm	q1 mm	q2 mm
200	650	1435	1576	310	**	1150	620	730	-	440	310	930	1150	555	380	730
300	750	1520	1695	355	**	1195	655	775	-	485	355	955	1195	625	425	775
500	850	1805	1996	375	1445	1445	675	795	1145	675	375	975	1215	960	445	795
800	950	2090	2296	390	1720	1720	710	980	1420	710	390	1010	1230	1160	500	980
1000	1050	2120	2366	400	1720	1720	700	960	1420	755	400	1000	1240	1140	510	960
1500	1200	2255	2555	500	1810	1810	805	1050	1515	805	500	1100	1340	1230	600	1050
2000	1300	2575	2885	505	2115	2115	805	1150	1805	805	505	1105	1345	1505	620	1150
2500	1400	2655	3002	565	2150	2150	865	1210	1850	850	565	1165	1405	1550	680	1210
3000	1450	2870	3216	575	2350	2350	800	1220	2050	850	575	1050	1415	1750	690	1220
4000	1600	2940	3348	600	2380	2380	900	1245	2080	870	600	1200	1440	1780	715	1245
5000	1800	2980	3482	610	2385	2385	910	1255	2085	885	610	1210	1450	1785	725	1255

R*: reversal quota

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

Customized water heater with extractible heat exchanger – BOIL custom – tube heat exchanger



Legend couplings

1	gasket without cross-beam
2	tube heat exchanger
3	gasket with cross-beam
4	head

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

Capacity l	Surface m ²										
	0,5	0,75	1	1,5	2	2,5	4	5	6	8	10
200	✓	✓	✓								
300	✓	✓	✓								
500	✓	✓	✓								
800				✓	✓	✓					
1000				✓	✓	✓					
1500				✓	✓	✓					
2000							✓	✓	✓		
2500							✓	✓	✓		
3000							✓	✓	✓	✓	
4000							✓	✓	✓	✓	✓
5000							✓	✓	✓	✓	✓

✓ Combination is possible

surf. m ²	Version 1 INOX AISI 304		Version 2 INOX 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.3 par.3	821030405X		Cat. I
0,75	821030380X		821030394X		821030286X		Art.3 par.3	821030406X		Cat. I
1	821030381X		821030395X		821030287X		Art.3 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		821030298X		Cat. II	821030418X		Cat. II

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

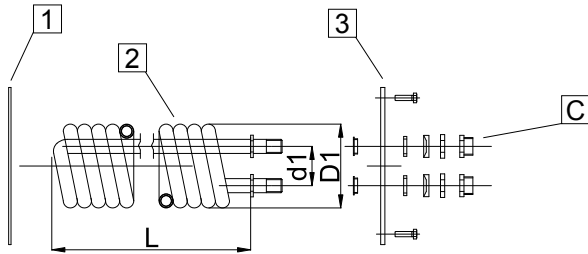
Version 2 and version with steam: AISI 306 stainless steel tube heat exchanger, assembled on a stainless steel plate

Technical information tube heat exchanger

Surface area m ²	Power kW	D1 mm	L mm	d1 mm	C inch	Volume l
0,5	12,2	300	400	120	1" F	3,15
0,75	18,4	300	430	120	1" F	4,15
1	24,5	300	430	120	1" F	5,15
1,5	36,7	380	590	150	2" F	8,43
2	49	380	590	150	2" F	10,43
3	73,5	380	720	150	2" F	13,43
4	98	430	750	200	2" F	18,1
5	122,5	430	780	200	2" F	21,6
6	147	430	1000	200	2" F	23,9
8	196	430	1250	200	2" F	33,1
10	245	430	1520	200	2" F	40,1

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

Customized water heater with extractible heat exchanger – BOIL custom with copper spiral coil



Legend couplings

- 1 gasket without cross-beam
- 2 copper spiral coil
- 3 assembly plate

Compatibility chart for (2) copper spiral coil and (4) storage tank

Capacity l	Surface area m ²							
	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	✓	✓	✓	✓	✓	✓	✓	✓

Copper spiral coil

✓ Combination is possible

Surface area m ²	Assembled on a plate ø 300 (D1)		Assembled on a plate ø 380 (D1)		Assembled on a plate ø 430 (D1)	
	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

Technical information copper spiral coil

Surface area m ²	Type of coil	D1 mm	d1 mm	L mm	C inch	Internal volume l	Thermal efficiency (*) kW	Dp kPa
0.82	SS	160	75	380	3/4"	0.7	15	25
1,38	SS	170	75	420	3/4"	1,2	21,6	30
1,53	SS	170	75	450	3/4"	1,4	24	35
2,27	SS	170	75	570	3/4"	2	27	35
3,1	SD	180	90	550	1"1/4	2,7	35	26
4,54	SD	242	120	570	1"1/4	3,9	55	35
5,26	SD	242	120	660	1"1/4	4,5	57,5	35
6,34	SD	242	120	780	1"1/4	5,5	61,5	35

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

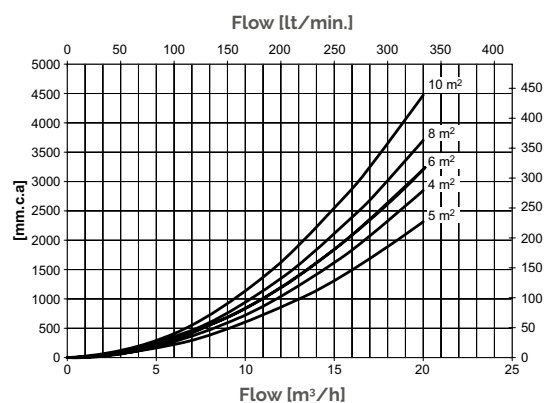
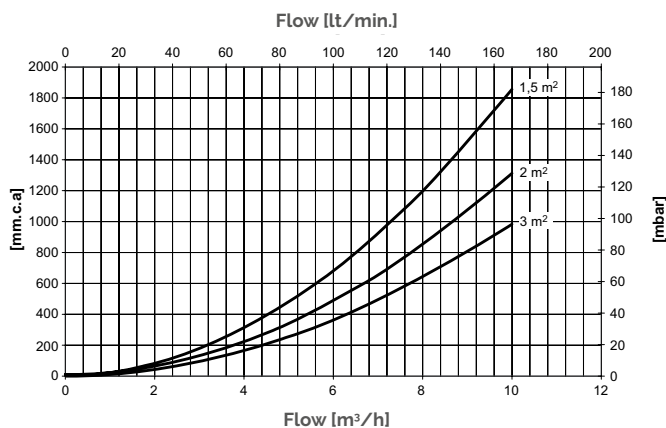
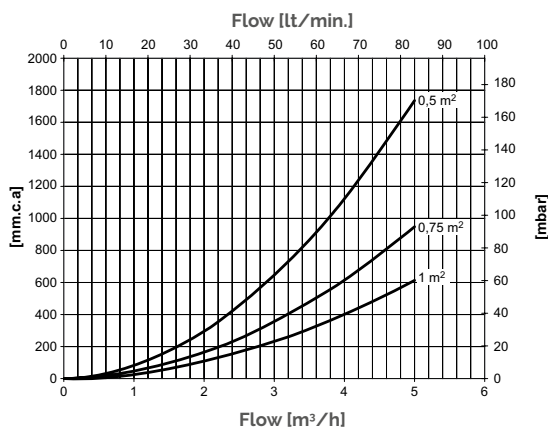
SS single coil with one tube

SD double coil with two tubes connected in parallel

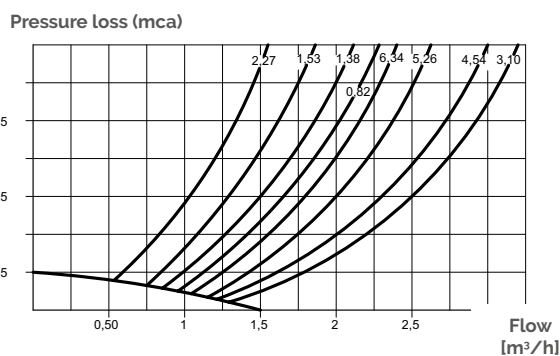
Customized water heater with extractible heat exchanger – BOIL custom

Curve: pressure loss

Pressure loss tube heat exchanger



Pressure loss copper spiral coil



Accessories



Diameter mm	Without crossbeam		With crossbeam	
	Code	Price	Code	Price
300	808020050		808020045	
380	808020051		808020046	
430	808020052		808020047	

The copper coils have a gasket without cross-beam with the same diameter as the assembly plate.

The tube heat exchangers have two gaskets: one with and one without a cross-beam. Both have the same diameter as the closing head.

The blind closing heads have one gasket without cross-beam with the same diameter as the assembly plate.



Diameter mm	Code	Price
300	843030018X	
380	843030019X	
430	843030020X	

The heads are made of carbon steel, varnished for alimentary use. They are supplied with nuts, bolts and gaskets.