AISI 316L Stainless steel calorifier with fixed coil Eco Line

ECO1 – With one heat exchanger

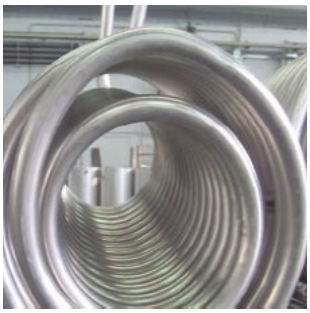
ECO2 – With two heat exchangers

ECO LINE series calorifiers are made of AISI 316L Stainless steel, designed for the production and storage of domestic hot water (DHW). They are equipped with one or two internal fixed coils of advanced design that can be fed by a solar system and/or a boiler.

Eco-Line is the best entry level solution for domestic use or small applications, thanks to their versatility and compactness.
Cylinders are also prepared to host a backup immersion heater (not supplied).

HEAT SOURCE

APPLICATION



TECHNICAL FEATURES

DHW cylinder	**Material**	AISI 316L Stainless steel (1.4404)
	Internal protective treatment	Pickling and passivation
	External protective treatment	Pickling and passivation
	Rating (P max. / T max.)	6 bar / 95°C
	Cathodic protection	Magnesium anode
Heat exchanger	**Material**	AISI 316L Stainless steel (1.4404)
	Internal protective treatment	Pickling and passivation
	External protective treatment	Pickling and passivation
	Type	Fixed coil
	Rating (P max. / T max.)	10 bar / 95°C
General features	**Capacity**	150 - 500 L
	Warranty	5 years
	Insulation	Rigid polyurethane foam + PVC: Fire retardant class B3 (DIN 4102)
	In compliance with	- Pressure Equipment Directive (PED) 2014/68/UE Art. 4 Para 3 - Italian MOH specifications (products suitable to contain potable water) - Energy related Products (Erp) Directive 2009/125/CE

ACCESSORIES
(page 218)

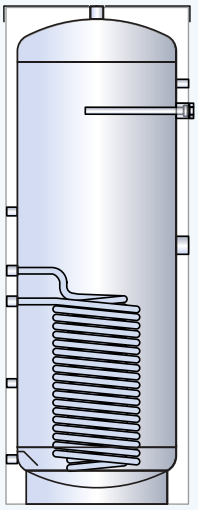
Impressed current electronic anode

Electronic control unit

Thermostat

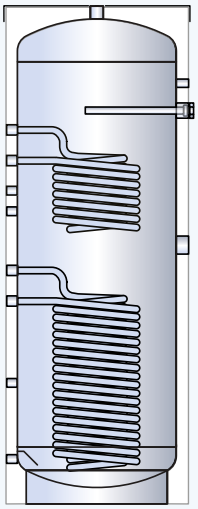
Thermometer

1"½ electric immersion heater



EC01 - Hard insulation with rigid polyurethane foam and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	REAL CAPACITY (L)	HEAT EXCHANGER (m^2) / (L) *
EC01 00150 R	50	B	46,9	148,0	0,80 / 7,8
EC01 00200 R	50	B	53,9	189,8	0,80 / 7,8
EC01 00300 R	50	B	65,5	290,3	1,20 / 11,8
EC01 00400 R	50	B	69,2	414,9	1,35 / 12,2
EC01 00500 R	50	B	77,8	500,3	1,70 / 16,7



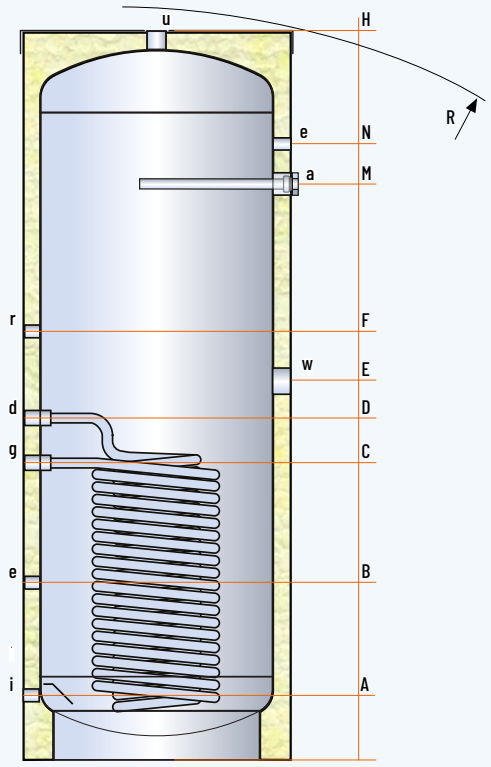
EC02 - Hard insulation with rigid polyurethane foam and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	REAL CAPACITY (L)	LOWER HEAT EXCHANGER (m^2) / (L) *	UPPER HEAT EXCHANGER (m^2) / (L) *
EC02 00150 R	50	B	46,9	148,0	0,80 / 7,8	0,50 / 4,9
EC02 00200 R	50	B	53,9	189,8	0,80 / 7,8	0,50 / 4,9
EC02 00300 R	50	B	65,5	290,3	1,20 / 11,8	0,80 / 7,8
EC02 00400 R	50	B	69,2	414,9	1,35 / 12,2	0,80 / 7,8
EC02 00500 R	50	B	77,8	500,3	1,70 / 16,7	1,00 / 9,8

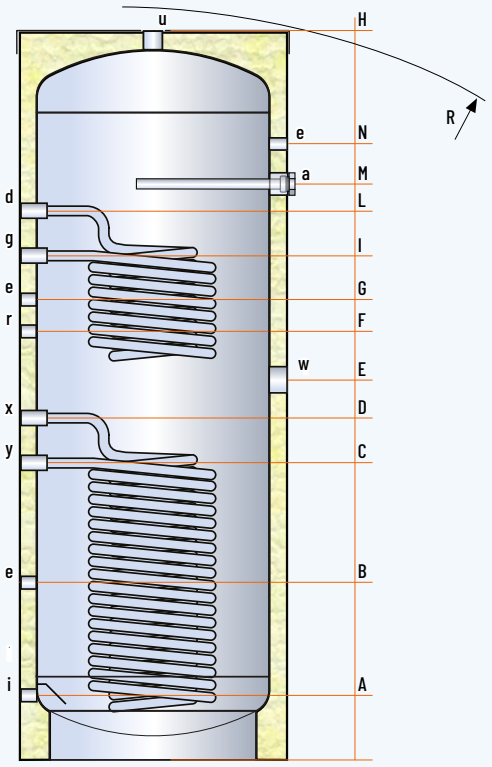
** Volume occupied by the heat exchanger and its support structure*

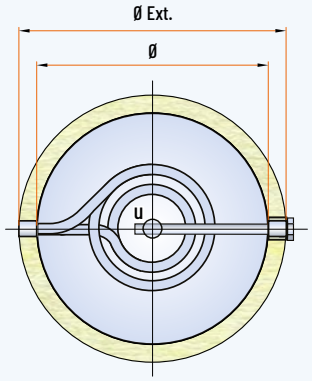
Dimensions and heights

ECO1



ECO2





LEGEND

- **a .** Magnesium anode
- **d .** Boiler flow
- **e .** Thermometer - Sensor
- **g.** Boiler return
- **i .** Domestic cold water inlet
- **w.** Opening for immersion heater
- **r .** Recirculation
- **u .** Domestic hot water outlet
- **x .** Solar system flow
- **y .** Solar system return

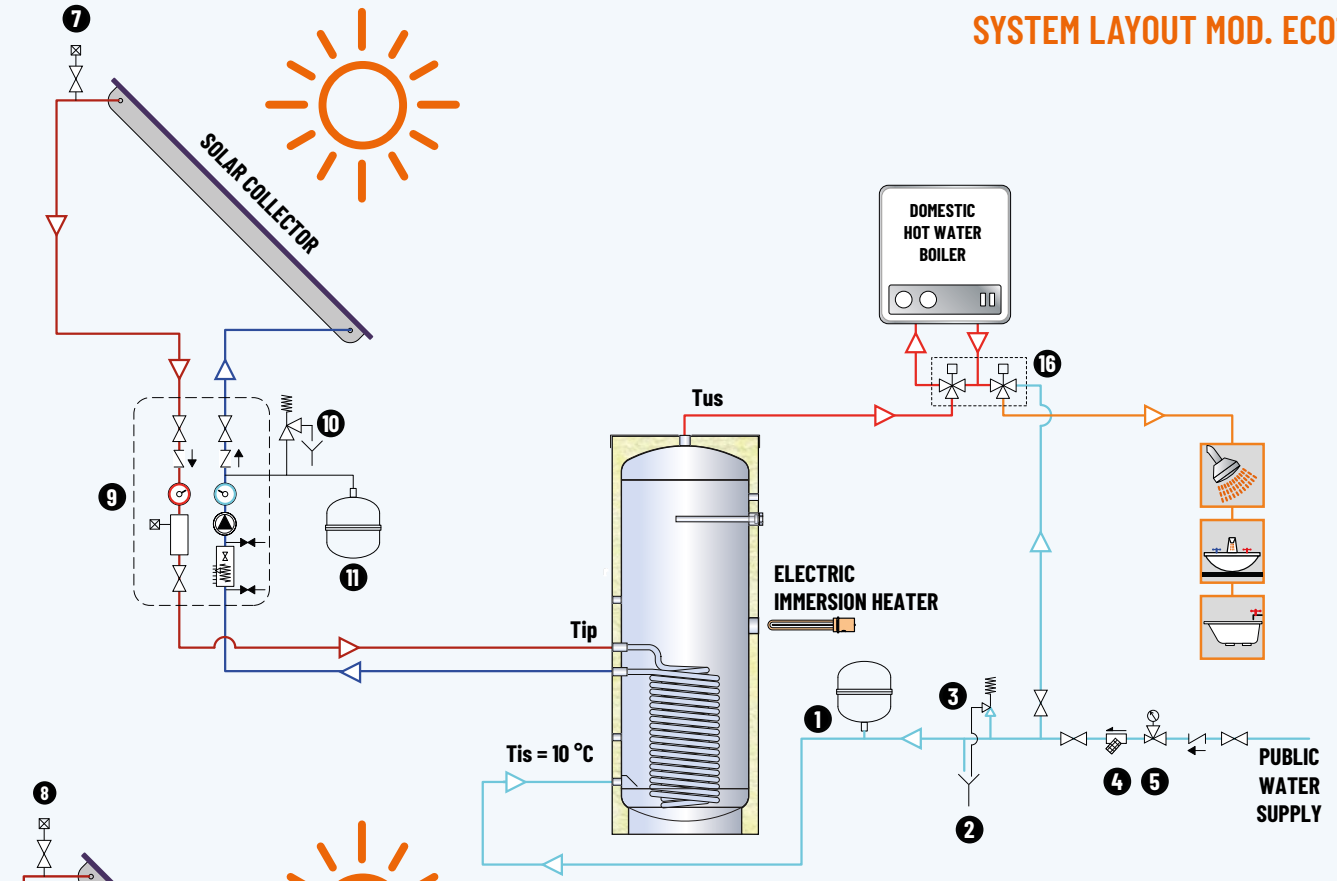
MODEL	DIMENSIONS (mm) Ø	H	Ø EXT	R *	LOWER HEAT EXCHANGER (m^2)	UPPER HEAT EXCHANGER (m^2)	WEIGHT ECO1 (kg)	WEIGHT ECO2 (kg)
ECO_ 00150 R	450	1050	550	1190	0,80	0,50	43	46
ECO_ 00200 R	450	1305	550	1430	0,80	0,50	49	52
ECO_ 00300 R	500	1595	600	1720	1,20	0,80	63	68
ECO_ 00400 R	650	1395	750	1600	1,35	0,80	72	77
ECO_ 00500 R	650	1645	750	1820	1,70	1,00	85	91

** The tilt height refers to the cylinder insulated. The insulation is not removable.*

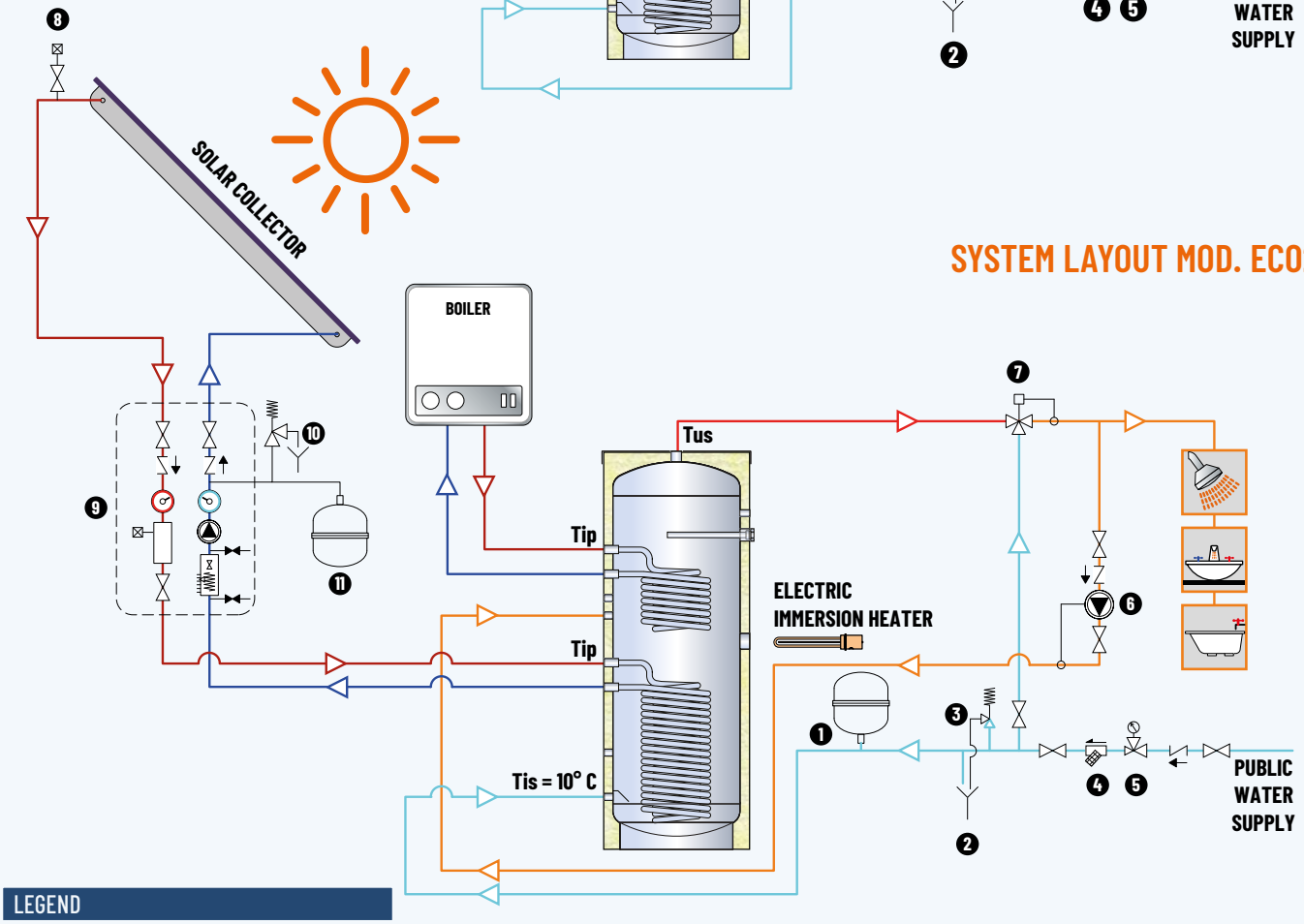
MODEL	HEIGHTS (mm) A	B	C	D	E	F	G	I	L	M	N	CONNECTIONS (GAS) a	e r	i u	d g x y	w
ECO_ 00150 R	110	260	345	445	495	540	635	730	830	750	850	1"¼	½"	1"	¾"	1"½
ECO_ 00200 R	110	280	385	485	570	610	715	830	930	980	1090	1"¼	½"	1"	¾"	1"½
ECO_ 00300 R	120	355	510	610	715	770	925	1085	1185	1240	1370	1"¼	½"	1"	¾"	1"½
ECO_ 00400 R	145	385	550	650	700	775	885	1030	1130	1050	1145	1"¼	½"	1"	¾"	1"½
ECO_ 00500 R	145	455	680	780	845	940	1095	1255	1355	1280	1395	1"¼	½"	1"	¾"	1"½

Disclaimer: *this layout is purely indicative. It does not replace consultant's design*

SYSTEM LAYOUT MOD. ECO1



SYSTEM LAYOUT MOD. ECO2



LEGEND

1 . Domestic water expansion vessel
2 . Domestic water drain
3 . Domestic water safety valve (6 bar)
4 . Strainer
5 . Pressure reducing valve
6 . DWH Recirculation pump
7 . DHW 3-way valve
8 . Vent with valve
9 . Solar system control unit
10 . Solar system safety kit (6 bar)
11 . Solar system expansion vessel
16 . Thermostatic valve boiler-calorifier

Data related to the lower heat exchanger

	MODEL	ECO_ 00150R				ECO_ 00200R				ECO_ 00300R			
	HEAT EXCHANGER (m^2) [L] [1]	0,8 [3,6]				0,8 [3,6]				1,2 [5,4]			
	PRIMARY FLOW (m^3/h)	1,8				1,8				1,8			
	PRIMARY TEMP. (°C)	50	60	70	80	50	60	70	80	50	60	70	80
DHW FROM 10 TO 45 °C	LITRES 10' (L/10') [2]	172	194	273	292	212	234	330	349	321	352	498	524
	LITRES FIRST HOUR [2]	329	460	636	747	368	499	693	804	549	735	1018	1176
	CONTINUOUS DRAW (L) [3]	198	336	458	575	198	336	458	575	287	484	657	823
	POWER (kW)	8	14	19	23	8	14	19	23	12	20	27	34
	PREHEATING [3] (min)	47	27	20	16	60	35	25	20	65	38	28	22
DHW FROM 10 TO 60 °C	LITRES 10' (L/10') [2]	-	-	177	192	-	-	216	231	-	-	328	349
	LITRES FIRST HOUR [2]	-	-	358	447	-	-	397	487	-	-	590	718
	CONTINUOUS DRAW (L) [3]	-	-	228	323	-	-	228	323	-	-	331	465
	POWER (kW)	-	-	13	19	-	-	13	19	-	-	19	27
	PREHEATING [3] (min)	-	-	40	28	-	-	52	36	-	-	56	39
	NL [4]	1,4				2				4			

	MODEL	ECO_ 00400R				ECO_ 00500R			
	HEAT EXCHANGER (m^2) [L] [1]	1,4 [6,1]				1,7 [7,7]			
	PRIMARY FLOW (m^3/h)	2,2				2,2			
	PRIMARY TEMP. (°C)	50	60	70	80	50	60	70	80
DHW FROM 10 TO 45 °C	LITRES 10' (L/10') [2]	446	481	681	711	539	582	823	860
	LITRES FIRST HOUR [2]	703	916	1273	1453	856	1114	1545	1763
	CONTINUOUS DRAW (L) [3]	326	550	747	936	401	673	912	1141
	POWER (kW)	13	22	30	38	16	27	37	46
	PREHEATING [3] (min)	82	47	35	27	82	47	34	27
DHW FROM 10 TO 60 °C	LITRES 10' (L/10') [2]	-	-	454	478	-	-	548	578
	LITRES FIRST HOUR [2]	-	-	751	896	-	-	913	1090
	CONTINUOUS DRAW (L) [3]	-	-	375	528	-	-	461	647
	POWER (kW)	-	-	22	31	-	-	27	38
	PREHEATING [3] (min)	-	-	70	49	-	-	70	49
	NL [4]	7				9			

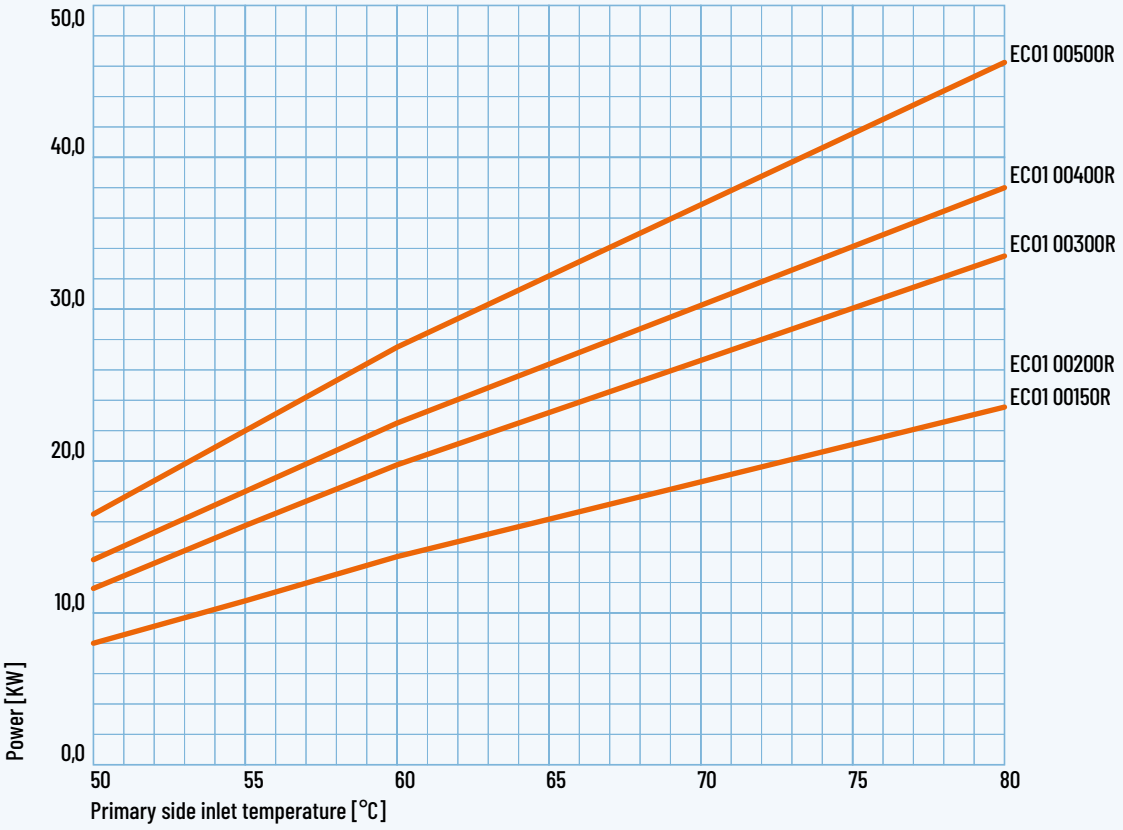
(1) Volume of fluid contained in the heat exchanger

(2) Obtainable with pre-heated cylinder (at 45 °C with primary side set at 50 or 60 °C and pre-heated at 60 °C in the other cases) and a running heat source

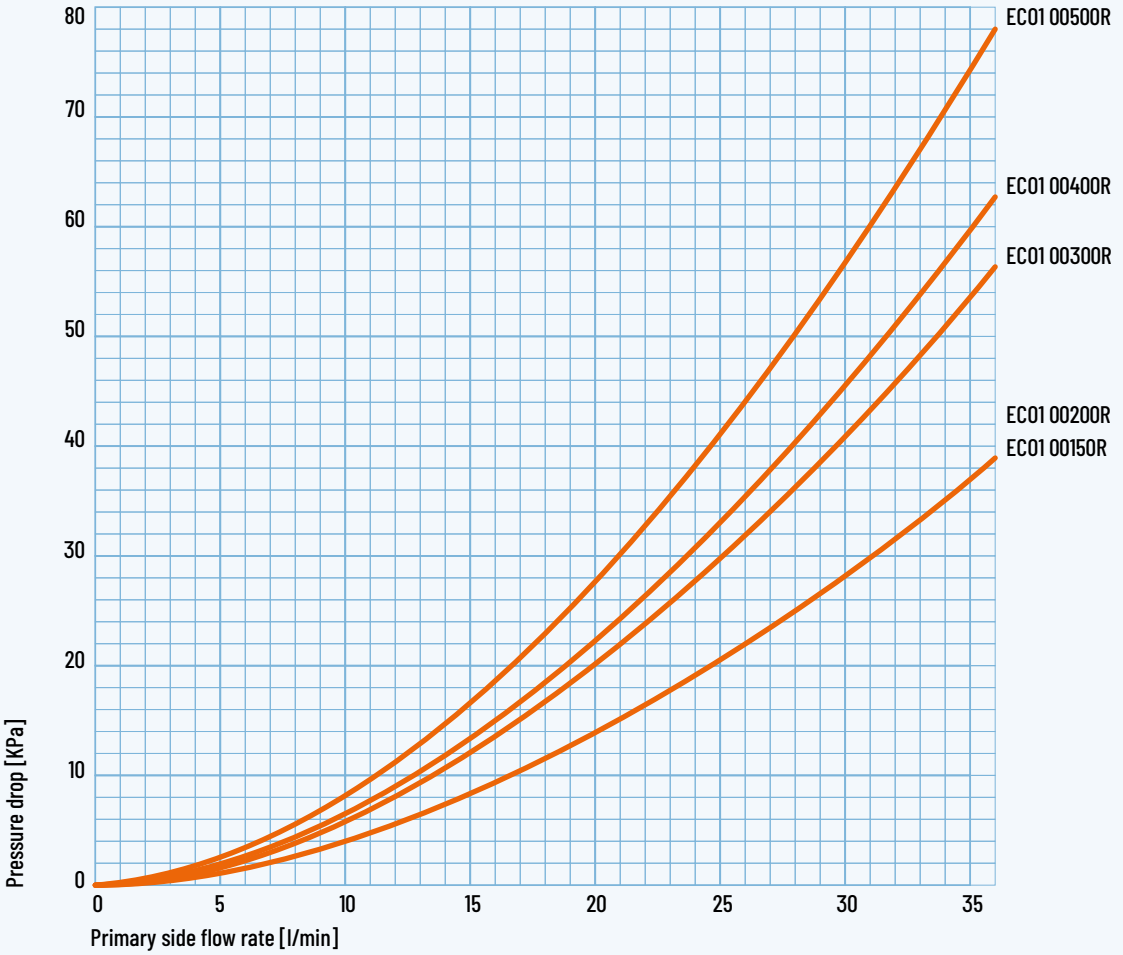
(3) With a proper power heat source generator

(4) Primary side 80 °C - Secondary side 10-45 °C

ECO - **Lower heat exchanger** powers with secondary side at 10/45 °C



ECO - **Lower heat exchanger** pressure drops



Data related to the upper heat exchanger

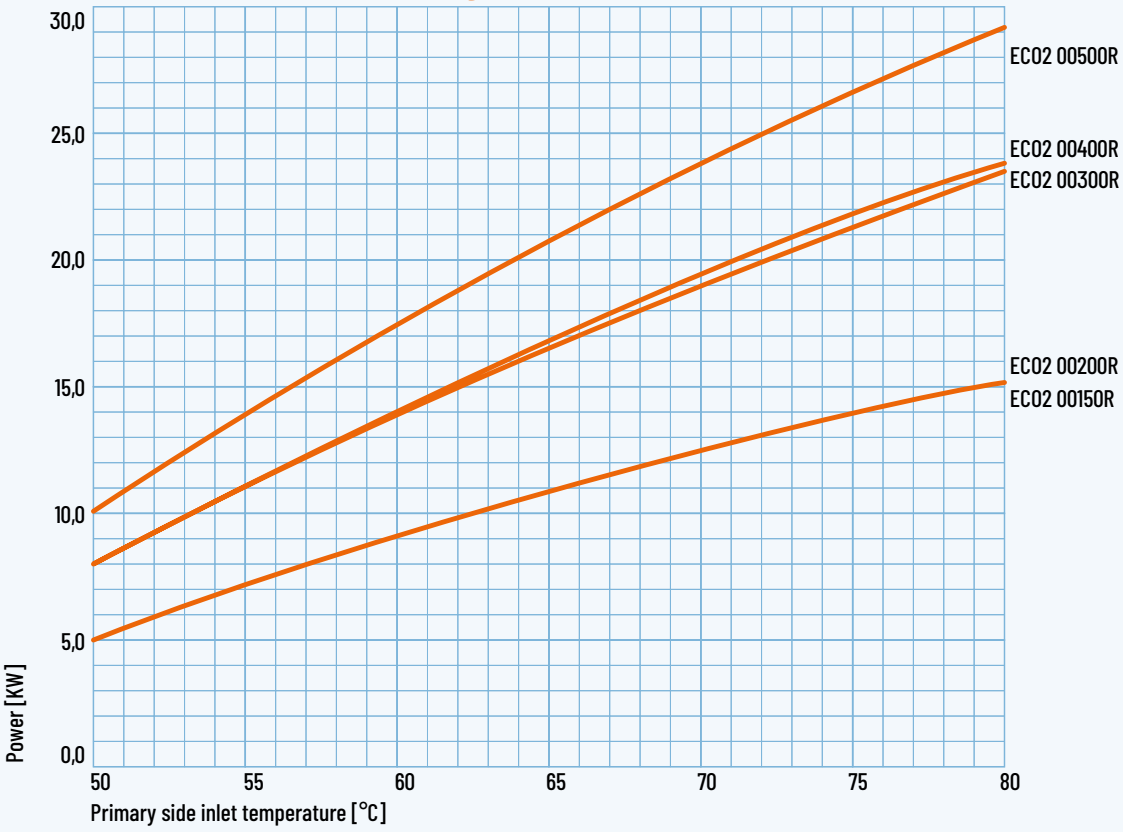
The performance values in the chart refer to the partial volume of water affected by the heat exchanger

	MODEL	ECO2 00150R				ECO2 00200R				ECO2 00300R			
	HEAT EXCHANGER (m^2) [L] [1]	0,5 [2,3]				0,5 [2,3]				0,8 [3,6]			
	PRIMARY FLOW (m^3/h)	1,8				1,8				1,8			
	PRIMARY TEMP. (°C)	50	60	70	80	50	60	70	80	50	60	70	80
DHW FROM 10 TO 45 °C	LITRES 10' (L/10') [2]	80	180	132	144	105	119	168	180	163	185	261	279
	LITRES FIRST HOUR [2]	94	265	367	439	205	291	403	475	320	451	624	735
	CONTINUOUS DRAW (L) [3]	127	217	296	373	127	217	296	373	198	336	458	575
	POWER (kW)	5	9	12	15	5	9	12	15	8	14	19	23
	PREHEATING [3] (min)	31	18	13	10	43	25	18	15	44	26	19	15
DHW FROM 10 TO 60 °C	LITRES 10' (L/10') [2]	-	-	83	93	-	-	108	118	-	-	168	183
	LITRES FIRST HOUR [2]	-	-	199	257	-	-	224	283	-	-	349	439
	CONTINUOUS DRAW (L) [3]	-	-	147	208	-	-	147	208	-	-	228	323
	POWER (kW)	-	-	9	12	-	-	9	12	-	-	13	19
	PREHEATING [3] (min)	-	-	26	18	-	-	37	26	-	-	38	27
	NL [4]	1				2				2			

	MODEL	ECO2 00400R				ECO2 00500R			
	HEAT EXCHANGER (m^2) [L] [1]	0,8 [3,6]				1,0 [4,5]			
	PRIMARY FLOW (m^3/h)	2,2				2,2			
	PRIMARY TEMP. (°C)	50	60	70	80	50	60	70	80
DHW FROM 10 TO 45 °C	LITRES 10' (L/10') [2]	205	228	322	341	279	306	433	456
	LITRES FIRST HOUR [2]	364	498	691	804	475	638	886	1025
	CONTINUOUS DRAW (L) [3]	200	341	466	585	247	419	571	718
	POWER (kW)	8	14	19	24	10	17	23	29
	PREHEATING [3] (min)	57	33	24	19	64	37	27	22
DHW FROM 10 TO 60 °C	LITRES 10' (L/10') [2]	-	-	210	226	-	-	285	304
	LITRES FIRST HOUR [2]	-	-	394	485	-	-	511	623
	CONTINUOUS DRAW (L) [3]	-	-	231	328	-	-	285	403
	POWER (kW)	-	-	13	19	-	-	17	23
	PREHEATING [3] (min)	-	-	49	34	-	-	55	39
	NL [4]	3				4			

(1) Volume of fluid contained in the heat exchanger
(2) Obtainable with pre-heated cylinder (at 45 °C with primary side set at 50 or 60 °C and pre-heated at 60 °C in the other cases) and a running heat source
(3) With a proper power heat source generator
(4) Primary side 80 °C - Secondary side 10-45 °C

ECO2 - **Upper heat exchanger** powers with secondary side at 10/45 °C



ECO2 - **Upper heat exchanger** pressure drops