

ECO COMBI 3 PDC

MULTI-HEAT ENERGY BUFFER FOR HEAT PUMP

WITH STAINLESS STEEL 316L DHW CORRUGATED COIL AND 2 FIXED HEAT EXCHANGERS



APPLICATION

Technical hot water storage and D.H.W. production.

MATERIAL

Mild steel painted on the outside. Buffer intended for closed circuit installation, so no anti-corrosion treatment is provided. Stainless steel 316L corrugated coil, suitable for D.H.W.

HEAT EXCHANGERS:

N° 2 mild steel fixed heat exchangers.

TECHNICAL DESCRIPTION

Designed for systems powered by heat pump heat source, with the possibility of integrating two additional heat generators (for example solar and boiler). ECO COMBI 3 PDC, at the typical temperatures of heat pumps, guarantees excellent DHW production thanks to the specially designed and dimensioned corrugated stainless steel 316L heat exchanger.

INSULATION

- HARD: High thermal insulation with ecological polyurethane hard foam. Model 800 available with di Dismountable hard foam insulation.
- SOFT: NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501. Grey PVC external lining.

WARRANTY

5 years (See general sales conditions and warranty)

ACCESSORIES AND SPARE PARTS

See Accessories section for the entire list.



316L STAINLESS STEEL DHW CORRUGATED COIL



ECO COMBI 3 PDC VB

Model	Art. Nr.	Heat pump max output [kW]	316L STAINLESS STEEL CORRUGATED COIL FOR D.H.W. PRODUCTION		UPPER HEAT EXCHANGER		LOWER HEAT EXCHANGER		ENERGY EFFICIENCY CLASS
			Volume [lt]	Surface [m²]	Volume [lt]	Surface [m²]	Volume [lt]	Surface [m²]	
HARD FOAM INSULATION									
300	3270162310202	26	26,6	4,5	4,4	0,7	7,9	1,2	B
500	3270162310203	26	31	5,3	7,7	1,2	14,5	2,2	C



DISMOUNTABLE HARD FOAM INSULATION

Model	Art. Nr.	Heat pump max output [kW]	Volume [lt]	Surface [m²]	Volume [lt]	Surface [m²]	Volume [lt]	Surface [m²]	ENERGY EFFICIENCY CLASS
800	3270162282287	35	45	7,7	11,3	1,7	16,9	2,6	B



ECO COMBI 3 PDC VC

Model	Art. Nr.	Heat pump max output [kW]	316L STAINLESS STEEL CORRUGATED COIL FOR D.H.W. PRODUCTION		UPPER HEAT EXCHANGER		LOWER HEAT EXCHANGER		ENERGY EFFICIENCY CLASS
			Volume [lt]	Surface [m²]	Volume [lt]	Surface [m²]	Volume [lt]	Surface [m²]	
DISMOUNTABLE SOFT FLEECE INSULATION									
800	3270162282288	35	45	7,7	11,3	1,7	16,9	2,6	B

ACCESSORIES

Thermometer

Art. Nr.	
5032240000107	
5 units box	

Recirculation kit (only for models ≥ 500)

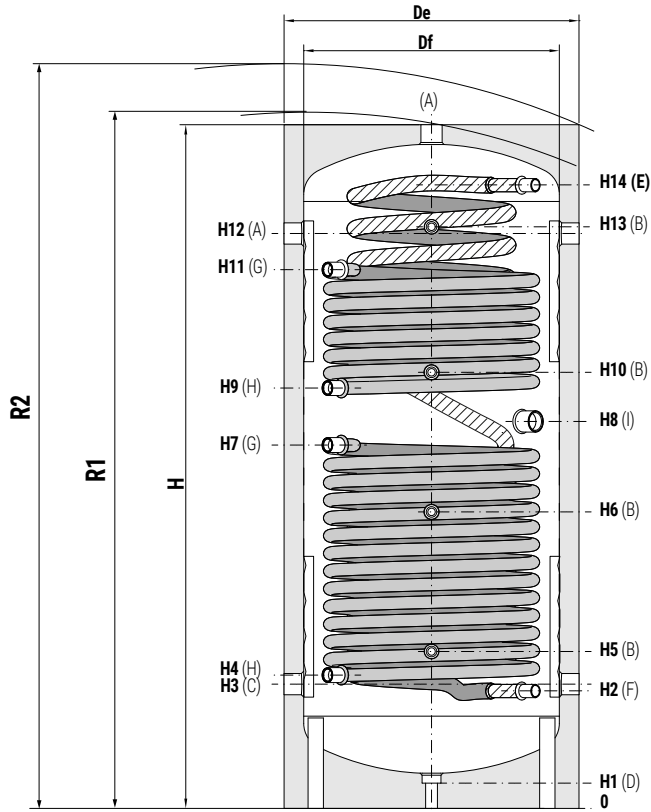
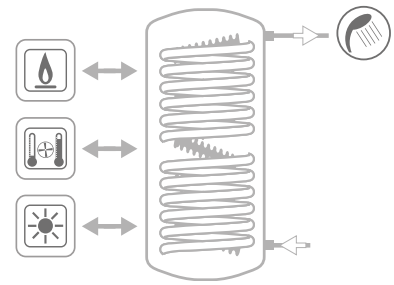
Art. Nr.	
5221000000019	
Connection 3/4"	

ECO COMBI 3 PDC

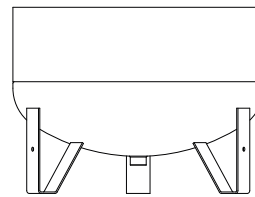
MULTI-HEAT ENERGY BUFFER FOR HEAT PUMP

WITH STAINLESS STEEL 316L DHW CORRUGATED COIL AND 2 FIXED HEAT EXCHANGERS

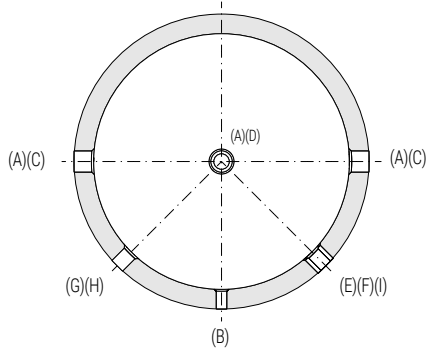
STORAGE		CORRUGATED DHW STAINLESS STEEL 316L COIL	FIXED HEAT EXCHANGER	
Pmax	Tmax	Pmax	Pmax	Tmax
3 bar	99 °C	6 bar	12 bar	110 °C



A	From the generator - Heating delivery 1"1/2 G F
B	Probe 1/2" G F
C	Heating return/to generator 1"1/2 G F
D	Drain 1"1/4 G F
E	Domestic hot water circuit outlet
F	Domestic water inlet
G	Fixed heat exchanger inlet 1" G F
H	Fixed heat exchanger outlet 1" G F
I	Electric immersion heater 1"1/2 G F



Only for model 800



ECO COMBI 3 PDC VB - HARD FOAM INSULATION

Model	Volume [lt]	Df	De	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13	H14	E-F
		[mm]																			Connections
300	291	-	650	1585	-	1713	70	297	330	330	390	745	870	970	1040	1100	1280	1280	1315	1415	1/2" F
500	454	-	750	1745	-	1899	70	305	322	345	405	760	930	990	1075	1115	1376	1468	1485	1585	1" M
800	748	790	940	1940	2030	2156	70	325	342	365	425	780	905	935	1065	1135	1409	1618	1635	1735	1" M

ECO COMBI 3 PDC VC - DISMOUNTABLE SOFT FLEECE INSULATION

Model	Volume [lt]	Df	De	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13	H14	E-F
		[mm]																			Connections
800	748	790	1010	1940	2030	2190	70	325	342	365	425	780	905	935	1065	1135	1409	1618	1635	1735	1" M

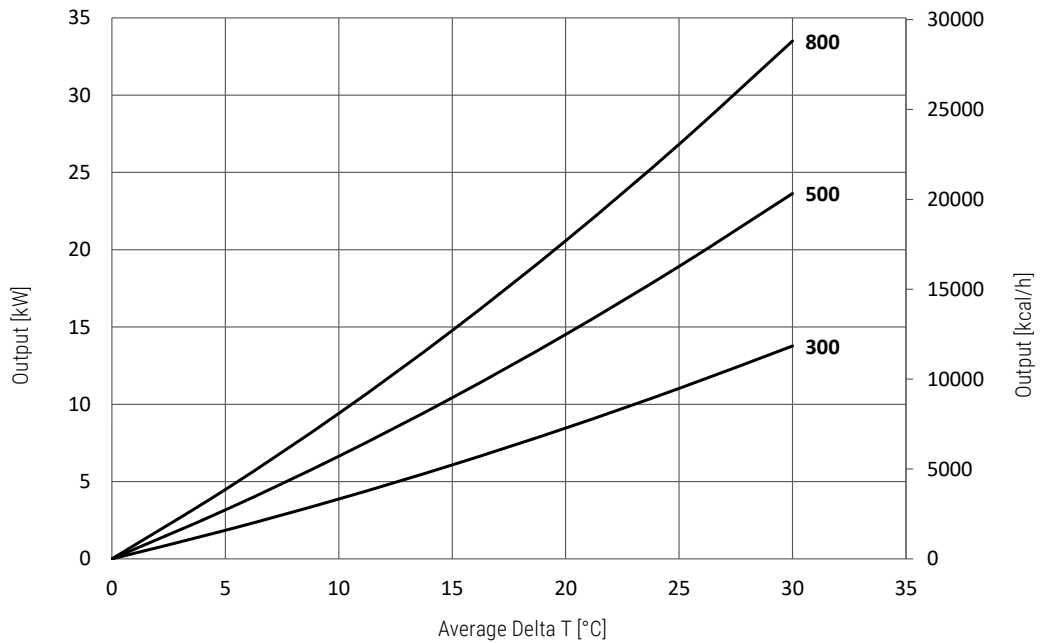
P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesign directive 2009/125/CE



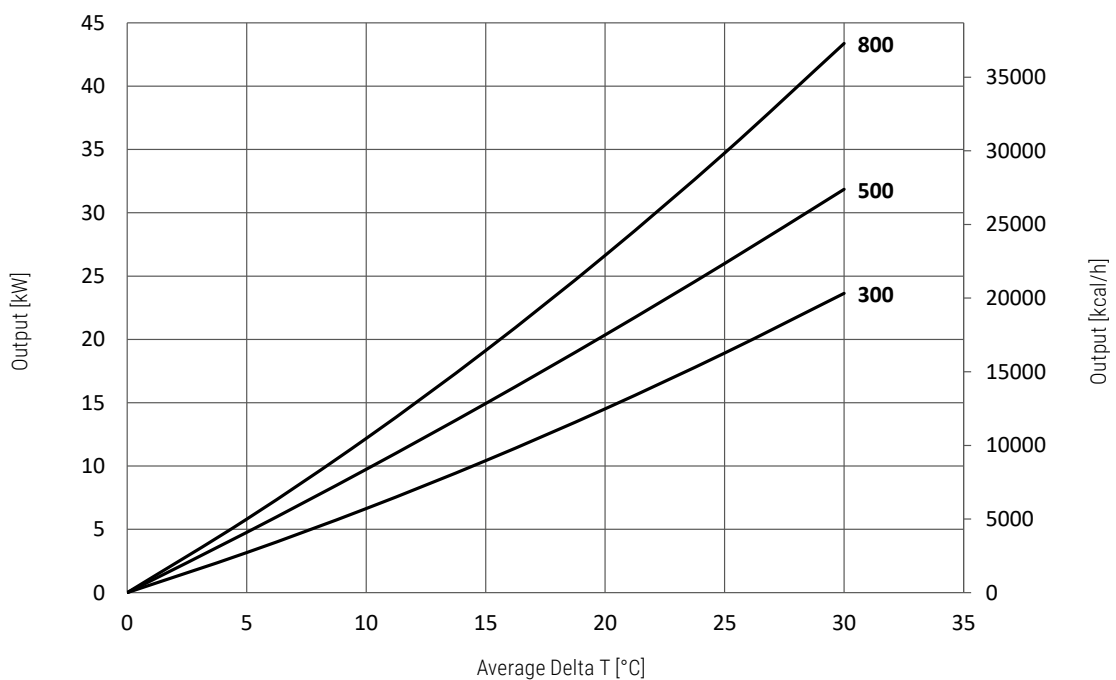
EcoCombi PDC exchanged power according to average Delta T between primary and storage (flow rate of 3 m³/h circulating in the exchanger)

Exchangeable thermal powers are expressed both in kW and Kcal/h according to the average temperature difference between primary and secondary, having a primary flow rate of 3 m³/h.

UPPER HEAT EXCHANGER



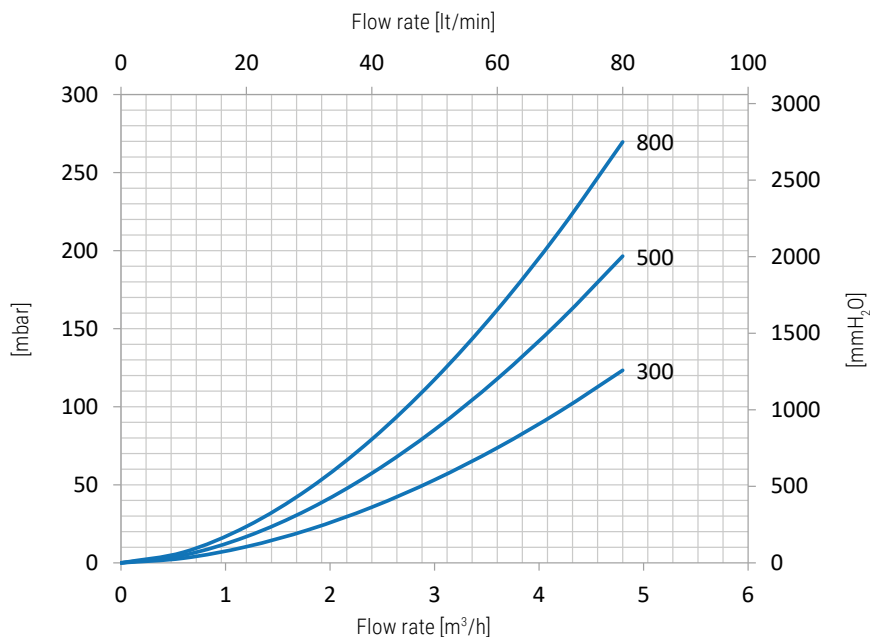
LOWER HEAT EXCHANGER





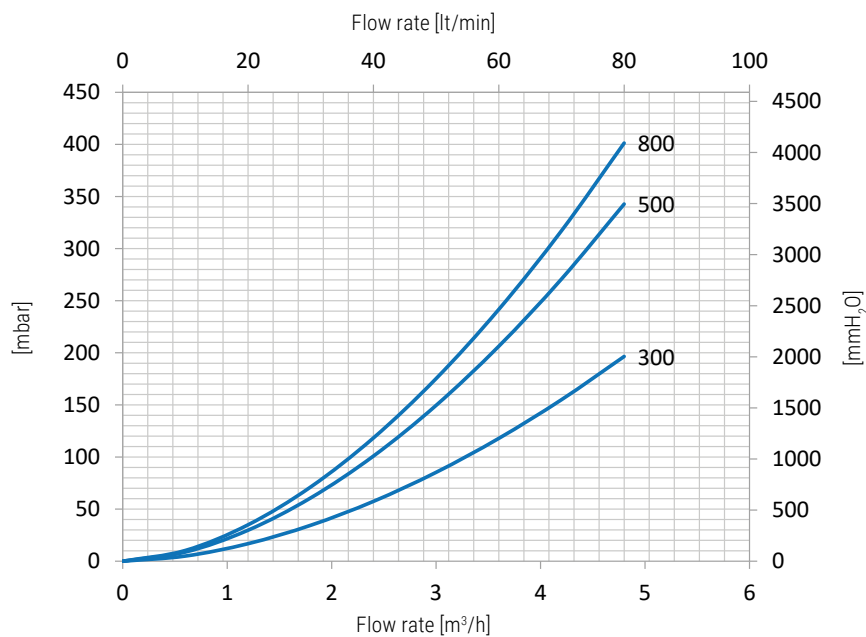
UPPER HEAT EXCHANGER

Upper heat exchangers surface [m ²]	
300	0,7
500	1,2
800	1,7



LOWER HEAT EXCHANGER

Lower heat exchangers surface [m ²]	
300	1,2
500	2,2
800	2,6



ECO COMBI PDC

PERFORMANCES DURING DHW PRODUCTION PHASE



DHW IN LITERS, WHICH CAN BE WITHDRAWN STARTING FROM HOT ACCUMULATION AT THE TEMPERATURE AND FLOW RATES CONDITIONS INDICATED BELOW

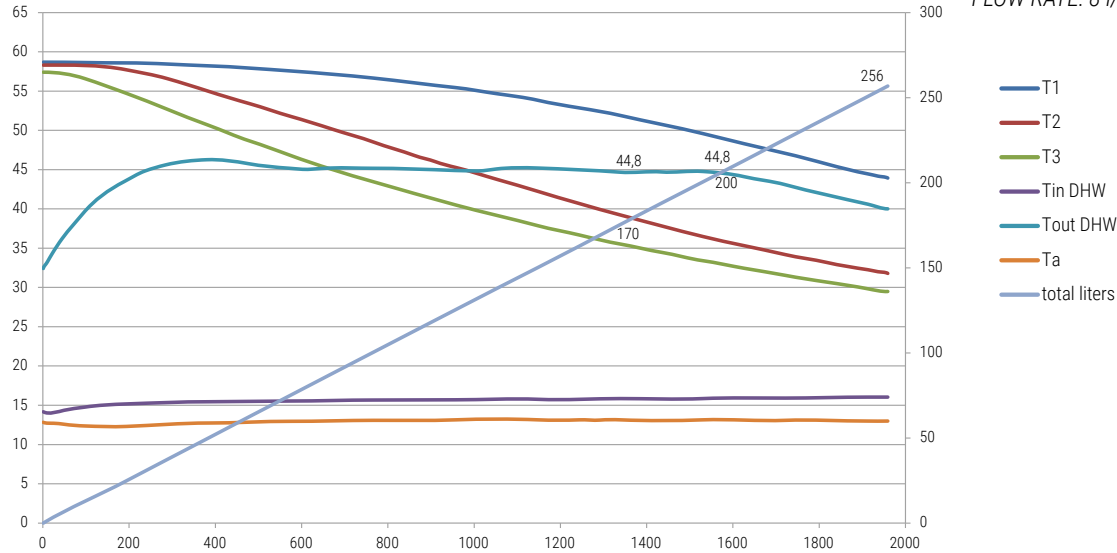
Model	Buffer storage 55 °C - DHW 10/45°C			Buffer storage 55 °C - Acs 15/42°C		
	DHW withdrawal flow rate [lt/min]			DHW withdrawal flow rate [lt/min]		
	8	16	24	8	16	24
300	125	77	//	193	131	//
500	216	151	128	331	246	217
800	357	249	212	546	405	358

**BELOW charts refer to the model
ECO COMBI 1 PDC - 300**

DHW WITHDRAWAL 256 lt T > 40 °C

58% of the accumulated energy

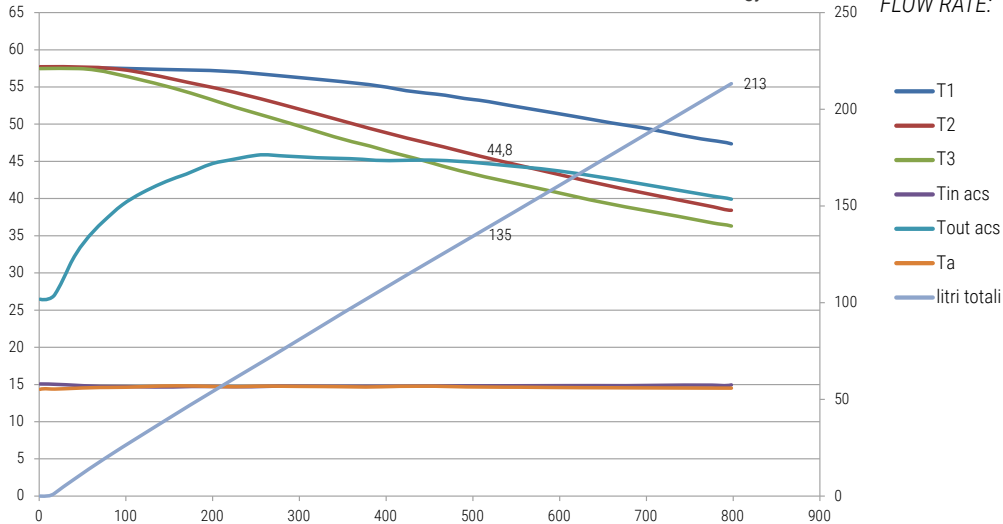
STORAGE: 58 °C
WITHDRAWAL: 45-40 °C
FLOW RATE: 8 l/min



DHW WITHDRAWAL 213 lt T > 40 °C

47% of the accumulated energy

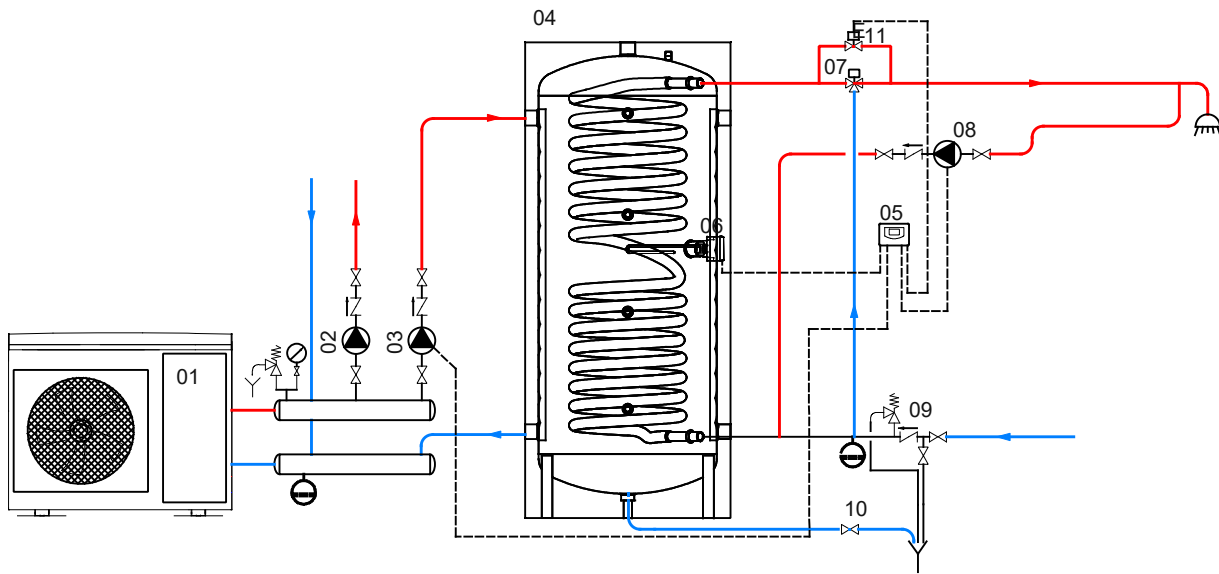
STORAGE: 57,5 °C
WITHDRAWAL: 45-40 °C
FLOW RATE: 16 l/min



ECO COMBI PDC

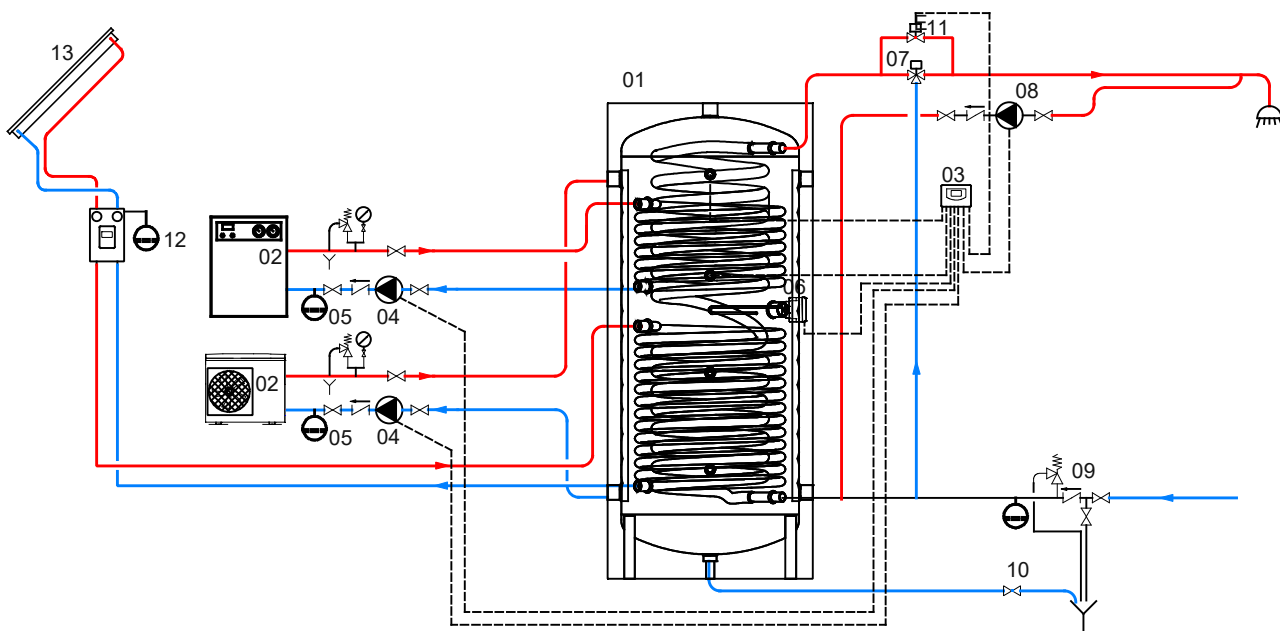


EXAMPLE OF INSTALLATION WITH ECO-COMBI 1 PDC



01 Generator (Heat pump)	04 Eco Combi 1 PDC	07 Thermostatic mixing valve	10 Blowdown valve
02 Heating system circulation group	05 Electronic Control/thermostat	08 D.H.W. recirculation group	11 By-pass solenoid valve
03 D.H.W. circulation group	06 Electric immersion heater (optional)	09 Hydraulic safety group	

EXAMPLE OF INSTALLATION WITH ECO-COMBI 3 PDC



01 Eco Combi 3 PDC	05 Expansion vessel	09 Hydraulic safety group	13 Solar panels
02 Generator	06 Electric immersion heater (optional)	10 Blowdown valve	
03 Electronic Control/thermostat	07 Thermostatic mixing valve	11 By-pass solenoid valve	
04 Circulation group	08 D.H.W. recirculation group	12 Solar system circulation group	

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.