

SPHERA EVO 2.0

SQKN-YEE 1 TC + MiSAN-YEE 1 S 2.1÷8.1

Air-to-water Refrigerant-split heat pump with DHW tank for heating, cooling and domestic hot water production

ENERGY SAVING



Integration Heating/DHW



Cascade



Smart Grid ready



€-Switch

CONVENIENCE



Weekley Timer



Contemporaneity (Hybrid Version)



Instant DHW (Hybrid Version)



Integrated DHW tank

COMFORT



Hot Cold



DHW



Silent

MANAGEMENT AND CONNECTIVITY



Input ON/OFF



Port Modbus



Control via App



Control4 NRG



Clivet Eye monitoring



User interface / thermostat

RELIABILITY



Backup heater (optional)



Keymark 025



ProdottiQualità CasaClima

HEALTH



Renewable Energy (Full electric version)

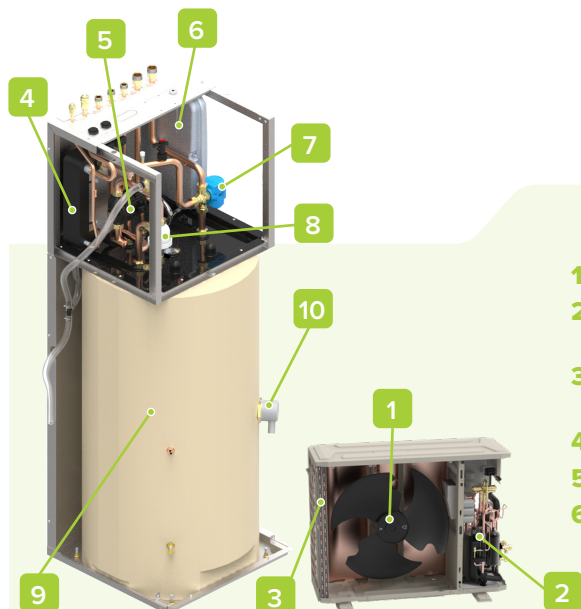


- ✓ Energy efficiency at the highest level
- ✓ Designed not to disturb, operating very quietly
- ✓ Suitable for every need, thanks to the dual version with 190-litre or 250-litre DHW storage tank
- ✓ Compact outdoor unit requiring very little installation space
- ✓ Simultaneous system and DHW operation (*Hybrid version*)

Everything under control

The discreet and effective warning LED on the front of the unit indicates the unit's operating status in real time.

If the LED is pulsing white the unit is in stand-by or operating normally, if the LED is orange with quick pulsing there is a fault.



1. Inverter DC fan
2. Inverter DC twin-rotary compressor
3. Air-gas finned exchanger (blue fin treatment)
4. Gas/water plate exchanger
5. Inverter DC high efficiency pump
6. 8L system expansion tank
7. 3-way valve
8. Magnetic dirt separator filter
9. 190L/250L DHW tank with coil
10. 2 kW DHW safety heater

configurations

DHW STORAGE TANK:

ACS190 190 liter DHW tank

ACS250 250 liter DHW tank

Note: there is no standard configuration

OUTDOOR UNIT POWER SUPPLY (size 6.1+8.1):

220M **Power supply 230/1/20 (standard)**

400TN Power supply 400/3/50+N

BACK-UP ELECTRIC HEATER (integrated in the unit):

- **No heater (standard)**








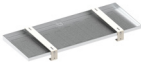













EH024 2/4 kW back-up heater

EH3 3 kW back-up heater

EH6 6 kW back-up heater

EH9 9 kW back-up heater

accessories

	ACS250X	250 liter DHW tank with aesthetic cabinet		T1BX	10m water temperature probe
	SOLX	Thermal solar management kit		T1B30X	30m water temperature probe
	KCSX	Kit for secondary circuit (1 liter circuit breaker + circulation pump)		VDACSX	Thermostated diverter valve for DHW
	KIRE2HLX	Two-zone distribution kit: direct + mixed		DTX	Drain pan with antifreeze electrical heater
	KIRE2HX	Double zone distribution unit: direct + direct		APAVX	Kit of antivibration mounts for floor installation
	DIX	1 liter hydraulic separator		ASTFX	Antivibration mounts kit for installation on the brackets for wall installation or drain pan
	ACI40X	40 liter system inertial storage tank		KSIPX	Kit with wall fixing brackets
	DI50-2X	50 liter hydraulic separator		HTC2WX	White HID-TConnect ² chronothermostat for temperature control
	COFX	Aesthetic cover for inertial storage tank		SWCX	Receiver / IoT switch SwitchConnect
	KCCEX	Kit for management of a 2-pipe boiler in heating and DHW mode			
	KCCE4X	Kit for management of an instantaneous boiler in heating and DHW mode			
	ANEDX	Electronic anode to protect DHW boiler			

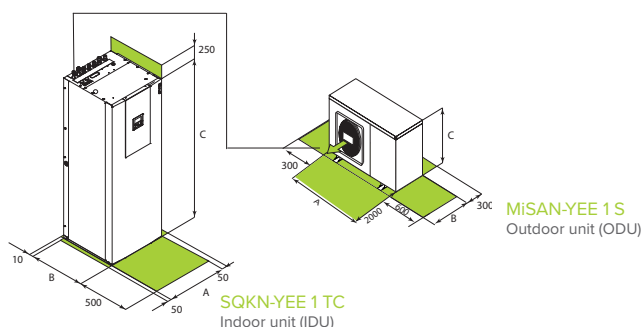
technical data

Size - Set				2.1		3.1		4.1		5.1		6.1		7.1		8.1												
				DHW tank																								
Heating	Capacity	Water 35/30 °C	Nominal / Maximum	kW	4,32 / 6,26	6,18 / 7,41	8,30 / 9,11	10,1 / 10,3	12,1 / 14,6	14,5 / 15,5	16,0 / 16,8																	
	COP	Outdoor air 7 °C	Nominal	-	5,42	5,21	5,31	5,01	5,00	4,70	4,55																	
	Capacity	Water 35/30 °C	Nominal / Maximum	kW	4,17 / 6,25	6,05 / 6,97	7,33 / 8,35	8,20 / 9,30	10,5 / 13,9	12,2 / 14,1	13,4 / 14,3																	
	COP	Outdoor air -7 °C	Nominal	-	3,16	3,00	3,23	3,07	3,13	2,82	2,74																	
Cooling	Capacity	Water 45/40 °C	Nominal / Maximum	kW	4,16 / 5,96	6,03 / 7,13	8,22 / 8,98	10,0 / 10,3	12,3 / 14,5	14,0 / 15,7	16,0 / 16,6																	
	COP	Outdoor air 7 °C	Nominal	-	3,93	3,83	3,95	3,86	3,80	3,65	3,60																	
	Capacity	Water 18/23 °C	Nominal / Maximum	kW	4,55 / 6,88	6,44 / 7,65	8,10 / 11,1	10,0 / 12,0	12,1 / 15,0	13,8 / 15,3	14,8 / 16,4																	
	EER	Outdoor air 35 °C	Nominal	-	6,08	5,24	5,12	4,77	4,02	3,70	3,65																	
DHW	Capacity	Water 7/12 °C	Nominal / Maximum	kW	4,26 / 6,14	6,25 / 6,39	7,46 / 7,94	9,10 / 9,10	11,8 / 11,8	12,9 / 12,9	14,2 / 14,2																	
	EER	Outdoor air 35 °C	Nominal	-	3,50	3,09	3,33	3,09	2,75	2,55	2,45																	
	Net tank capacity			l	190	250	190	250	190	250	190	250	250	250	250	250	250	250										
	Water mixed at 40 °C (V40) ¹			l	204	269	204	269	204	269	204	269	269	269	269	269	269	269										
Electrical power for meter sizing	Heating time			h:min	2:30	2:25	2:30	2:25	2:08	2:05	2:08	2:05	1:46	1:46	1:46	1:46	1:46											
	Power			kW	2,20	2,60	3,30	3,60	5,40	5,70	6,10																	
	Energy class			-	A++	A++	A++	A++	A++	A++	A++																	
	Annual energy consumption			-	2.542	3.283	3.824	4.749	6.793	7.380	7.915																	
	SCOP			-	3,32	3,54	3,72	3,73	3,56	3,52	3,48																	
	ηs (seasonal output)			%	130	138	146	146	139	138	136																	
	Energy class			-	A+++	A+++	A+++	A+++	A+++	A+++	A+++																	
	Annual energy consumption			-	2.161	2.502	3.141	3.747	4.994	5.868	6.602																	
	SCOP			-	5,13	5,15	5,32	5,27	5,00	4,91	4,89																	
	ηs (seasonal output)			%	202	203	210	208	196	193	193																	
Seasonal efficiency Medium climate	Energy class			-	A+	A+	A+	A+	A+	A+	A+	A+	A+	A+	A+	A+	A+											
	Withdrawal profile			-	L	XL	L	XL	L	XL	L	XL	XL	XL	XL	XL	XL											
Size - Indoor unit																												
Power supply	Voltage/Frequency/Phases			V/Hz/n°	A												B											
Water flow-rate	Water 35/30 °C	Nominal	l/s	0,21	0,30	0,41	0,49	0,57	0,67	0,75																		
Pump available pressure	Outdoor air 7 °C	Nominal	kPa	31,2	36,5	33,1	31,0	25,7	31,7	22,6																		
Minimum system water content			l	40																								
Expansion tank capacity			l	8																								
Sound power		Nominal	dB(A)	41																								
Sound pressure @1m		Nominal	dB(A)	26																								
Size - Outdoor unit																												
Power supply	Voltage/Frequency/Phases			V/Hz/n°	2.1												3.1		4.1		5.1		6.1		7.1		8.1	
Sound power		Minimum / Nominal	dB(A)	50 / 55	51 / 57	52 / 58	52 / 60	54 / 63	54 / 64	54 / 66																		
Sound pressure @1m		Minimum / Nominal	dB(A)	37 / 42	38 / 44	39 / 45	39 / 47	41 / 50	41 / 51	41 / 53																		
Operating range																												
Water supply temperature	Heating / DHW	Full electric	Minimum / Maximum	°C													25 / 65											
		Hybrid	Minimum / Maximum	°C													25 / 75											
Operating range (Outdoor air)	Cooling	-	Minimum / Maximum	°C													5 / 25											
		Heating	-	Minimum / Maximum	°C													-25 / 35										
Operating range (Outdoor air)	DHW	-	Minimum / Maximum	°C													-25 / 43											
		Cooling	-	Minimum / Maximum	°C													-5 / 43										

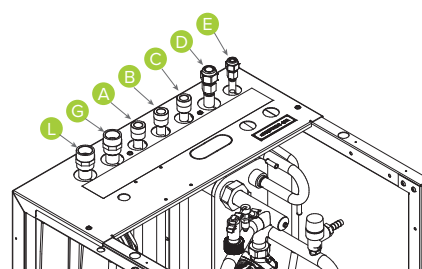
Data according to EN 14511:2018 and EN 14825:2016
 The Product complies with the European ErP Directive (EU Regulations 811/2013 - 813/2013 - 2016/2281). Energy classes with energy assistant for Clivet Smart Home

(1) Data according to EN 16147: amount of water at 40 °C with the same enthalpy content as the water coming out of the Boiler at a temperature higher than 40 °C

dimensions and connections



For trouble-free operation of the unit it is essential to maintain the safety distances indicated by the green areas.



- L. Refrigerant - liquid pipe
- G. Refrigerant - gas pipe
- A. Domestic hot water - hot water outlet
- B. Domestic hot water - circulation inlet
- C. Domestic hot water - cold water inlet
- D. System - water return
- E. System - water supply

Size - Set (400TN version)

				6.1	7.1	8.1	
				250L	250L	250L	
				DHW tank			
Heating	Capacity	Water 35/30 °C	Nominal / Maximum	kW	12,1 / 14,6	14,5 / 15,5	16,0 / 16,8
	COP	Outdoor air 7 °C	Nominal	-	5,00	4,70	4,55
	Capacity	Water 35/30 °C	Nominal / Maximum	kW	10,5 / 13,9	12,2 / 14,1	13,4 / 14,3
	COP	Outdoor air -7 °C	Nominal	-	3,13	2,82	2,74
	Capacity	Water 45/40 °C	Nominal / Maximum	kW	12,3 / 14,5	14,0 / 15,7	16,0 / 16,6
	COP	Outdoor air 7 °C	Nominal	-	3,80	3,65	3,60
Cooling	Capacity	Water 18/23 °C	Nominal / Maximum	kW	12,1 / 15,0	13,8 / 15,3	14,8 / 16,4
	EER	Outdoor air 35 °C	Nominal	-	4,02	3,70	3,65
	Capacity	Water 7/12 °C	Nominal / Maximum	kW	11,8 / 11,8	12,9 / 12,9	14,2 / 14,2
	EER	Outdoor air 35 °C	Nominal	-	2,75	2,55	2,45
DHW	Net tank capacity			l	250	250	250
	Water mixed at 40 °C (V40) ¹			l	269	269	269
	Heating time			h:min	1:46	1:46	1:46
Electrical power for meter sizing				kW	5,40	5,70	6,10
Seasonal efficiency Medium climate	Energy class			-	A++	A++	A++
	Heating	Annual energy consumption		-	6.793	7.380	7.915
	Water 55 °C	SCOP		-	3,56	3,52	3,48
		ηs (seasonal output)		%	139	138	136
	Energy class			-	A+++	A+++	A+++
	Heating	Annual energy consumption		-	4.994	5.868	6.602
	Water 35 °C	SCOP		-	5,00	4,91	4,89
		ηs (seasonal output)		%	196	193	193
	Energy class			-	A+	A+	A+
	DHW	Withdrawal profile		-	XL	XL	XL

Size - Indoor unit

				B
Power supply	Voltage/Frequency/Phases		V/Hz/n°	230/50/1
Water flow-rate	Water 35/30 °C	Nominal	l/s	0,57
Pump available pressure	Outdoor air 7 °C	Nominal	kPa	25,7
Minimum system water content			l	40
Expansion tank capacity			l	8
Sound power	Nominal		dB(A)	41
Sound pressure @1m	Nominal		dB(A)	26

Size - Outdoor unit

				6.1	7.1	8.1
Power supply	Voltage/Frequency/Phases		V/Hz/n°		400/50/3+N	
Sound power	Minimum / Nominal		dB(A)	54 / 63	54 / 64	54 / 66
Sound pressure @1m	Minimum / Nominal		dB(A)	41 / 50	41 / 51	41 / 53

Operating range

Water supply temperature	Heating / DHW	Full electric	Minimum / Maximum	°C	25 / 65
		Hybrid	Minimum / Maximum	°C	25 / 75
Operating range (Outdoor air)	Cooling	-	Minimum / Maximum	°C	5 / 25
		-	Minimum / Maximum	°C	-25 / 35
		-	Minimum / Maximum	°C	-25 / 43
-	-	Minimum / Maximum	°C	-5 / 43	

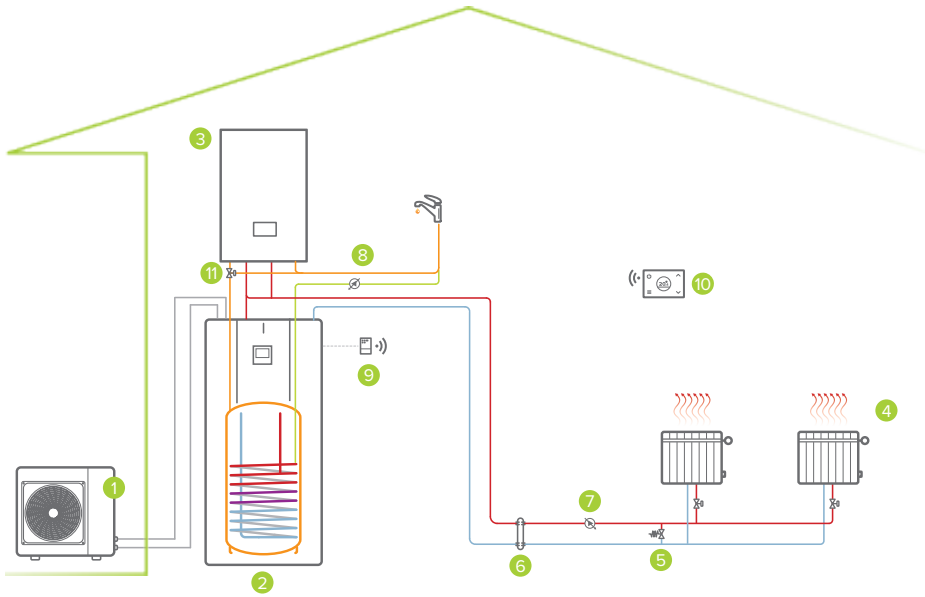
Data according to EN 14511:2018 and EN 14825:2016

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(1) Data according to EN 16147: amount of water at 40 °C with the same enthalpy content as the water coming out of the Boiler at a temperature higher than 40 °C

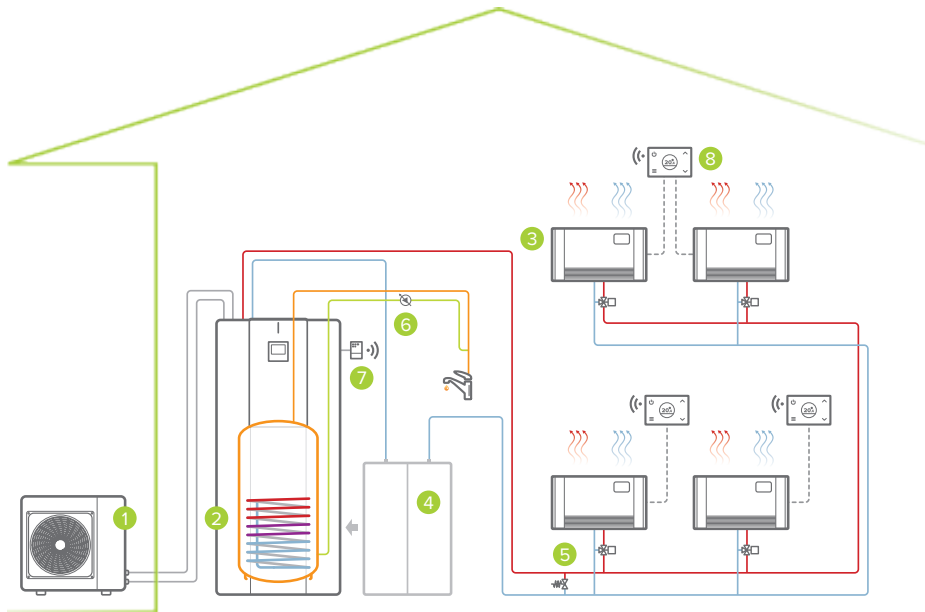
Size				2.1	3.1	4.1	5.1	6.1	7.1	8.1
Dimensions	Indoor unit ACS190	AxCxB	mm	600x1.694x615						
	Indoor unit ACS250	AxCxB	mm				600x2.004x615			
	Outdoor unit	AxCxB	mm	920x712x400				1.042x866x444		
Operating weight	Indoor unit ACS190		kg	359						
	Indoor unit ACS250		kg	419					421	
	Outdoor unit		kg	58		77			112	
Max / min equivalent length		L	m				30 / 2			
Max difference in level ODU / IDU		H	m				25			
Refrigerant precharge			type / GWP				R-32 / 675			
			kg	1,50		1,65		1,84		
			CO ² tons	1,05		1,10		1,24		
Equivalent pipe length with pre-charging only			m				15			
External diameters	Refrigerant piping	Liquid	inch	1/4"			3/8"			
		Gas	inch				5/8"			
	Indoor unit	Water (System)	inch				1"			
		Water (DHW)	inch				3/4"			

Check in the manual if the indoor unit requires a minimum installation surface



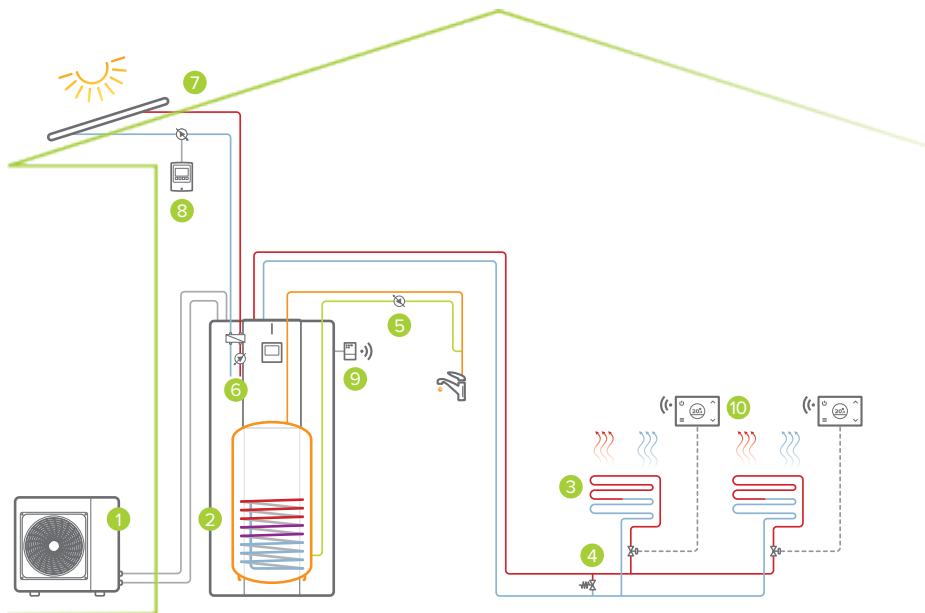
Hybrid single-zone system:
Heating / DHW

- 1 outdoor unit
- 2 indoor unit
- 3 instantaneous boiler (*Hybrid version*)
- 4 heating area
- 5 bypass*
- 6 hydraulic separator (optional)
- 7 secondary circuit pump*
- 8 DHW recirculation pump*
- 9 SwitchConnect Wi-Fi receiver (optional)
- 10 HID-TConnect2 Wi-Fi chronothermostat (optional)
- 11 Thermostated diverter valve for DHW (optional)



Full electric single-zone system:
Heating / Cooling / DHW

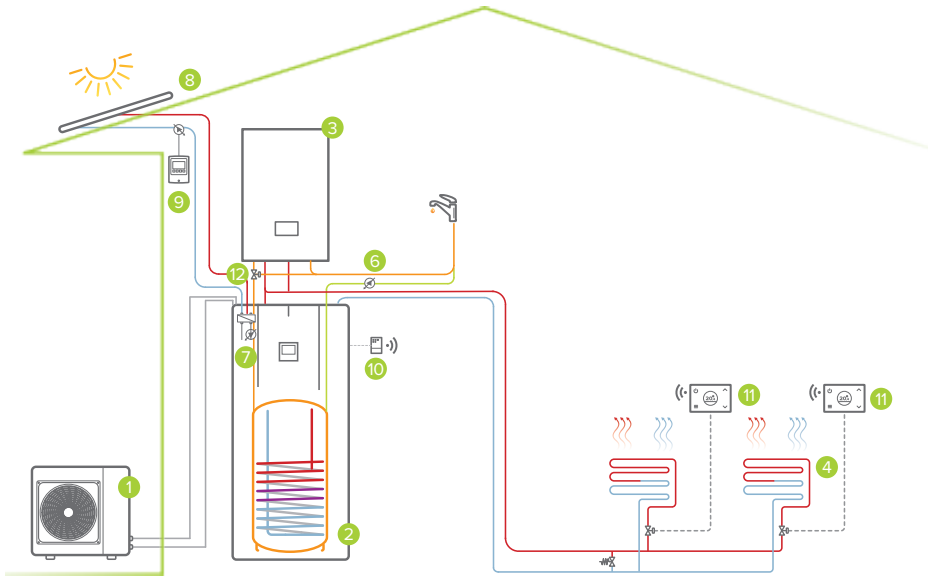
- 1 outdoor unit
- 2 indoor unit
- 3 heating/cooling zone
- 4 system inertial storage (optional)
- 5 bypass*
- 6 DHW recirculation pump*
- 7 SwitchConnect Wi-Fi receiver (optional)
- 8 HID-TConnect2 Wi-Fi chronothermostat (optional)



Full electric single-area system with thermal solar:
Heating / Cooling / DHW

- 1 outdoor unit
- 2 indoor unit
- 3 heating/cooling zone
- 4 bypass*
- 5 DHW recirculation pump*
- 6 solar connection kit (optional)
- 7 ELFOSun³ thermal solar (optional)
- 8 solar circulation kit (optional)
- 9 SwitchConnect Wi-Fi receiver (optional)
- 10 HID-TConnect2 Wi-Fi chronothermostat (optional)

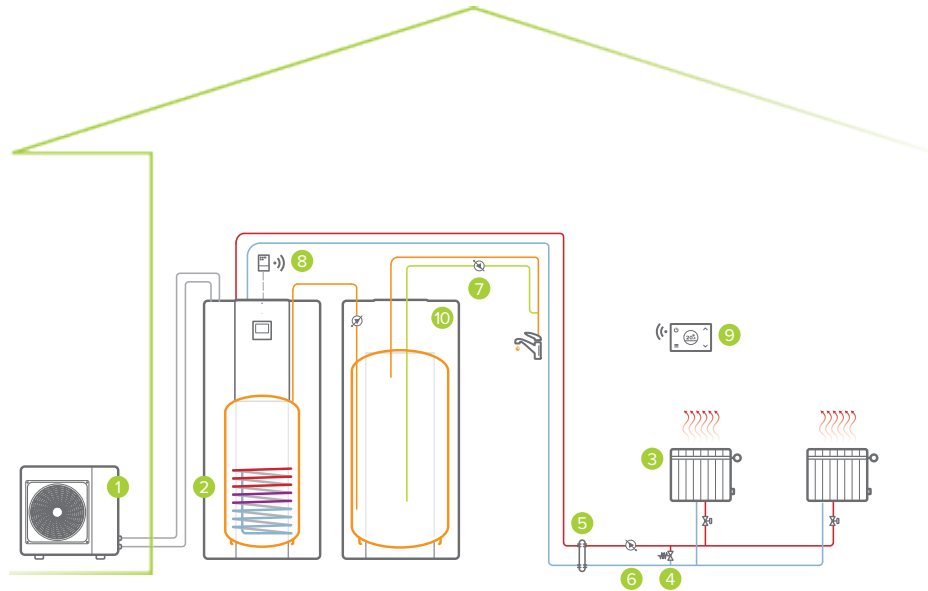
*from external supply



Hybrid single-area system with thermal solar:

Heating / Cooling / DHW

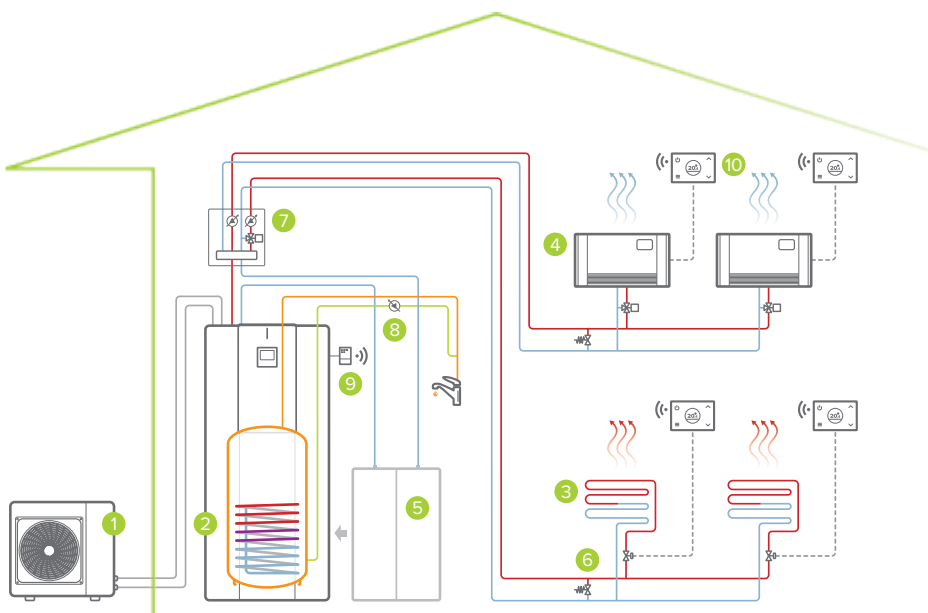
- 1 outdoor unit
- 2 indoor unit
- 3 instantaneous boiler (*Hybrid version*)
- 4 heating/cooling zone
- 5 bypass*
- 6 DHW recirculation pump (optional)
- 7 kit di collegamento solare (opzionale)
- 8 ELFOSun³ thermal solar (optional)
- 9 solar circulation kit (optional)
- 10 SwitchConnect Wi-Fi receiver (optional)
- 11 HID-TConnect2 Wi-Fi chronothermostat (optional)
- 12 Thermostated diverter valve for DHW (optional)



Full electric single-zone system with additional DHW boiler:

Heating / DHW

- 1 outdoor unit
- 2 indoor unit
- 3 heating/cooling zone
- 4 bypass*
- 5 hydraulic separator (optional)
- 6 secondary circuit pump*
- 7 DHW recirculation pump*
- 8 SwitchConnect Wi-Fi receiver (optional)
- 9 HID-TConnect2 Wi-Fi chronothermostat (optional)
- 10 Additional 250 liter DHW tank (optional)



Full electric two-zone system:

Heating / Cooling / DHW

- 1 outdoor unit
- 2 indoor unit
- 3 heating area
- 4 cooling zone
- 5 system inertial storage (optional)
- 6 bypass*
- 7 kit for managing 2 areas (optional)
- 8 DHW recirculation pump*
- 9 SwitchConnect Wi-Fi receiver (optional)
- 10 HID-TConnect2 Wi-Fi chronothermostat (optional)

Note: solar connection kit and booster kit can coexist

*from external supply