

# ELFOEnergy Edge EVO Hybrid

## WSAN-YMi + GAS BOILER 21÷81

NEW

Air-to-water packaged monobloc hybrid heat pump for heating, cooling and domestic hot water production

### ENERGY SAVING



Solar integration (optional - DHW tank)



Smart Grid ready

### COMFORT



Heating Cooling



DHW



Silent



High temperature

### RELIABILITY



Eurovent

### HEALTH



Eco-friendly refrigerant

### CONVENIENCE



Weekly schedule



Contemporaneity



Instant DHW

### MANAGEMENT AND CONNECTIVITY



Potential-free contact



User interface / thermostat



Modbus port



Wi-fi Control



ELFOControl management



Clivet Eye monitoring



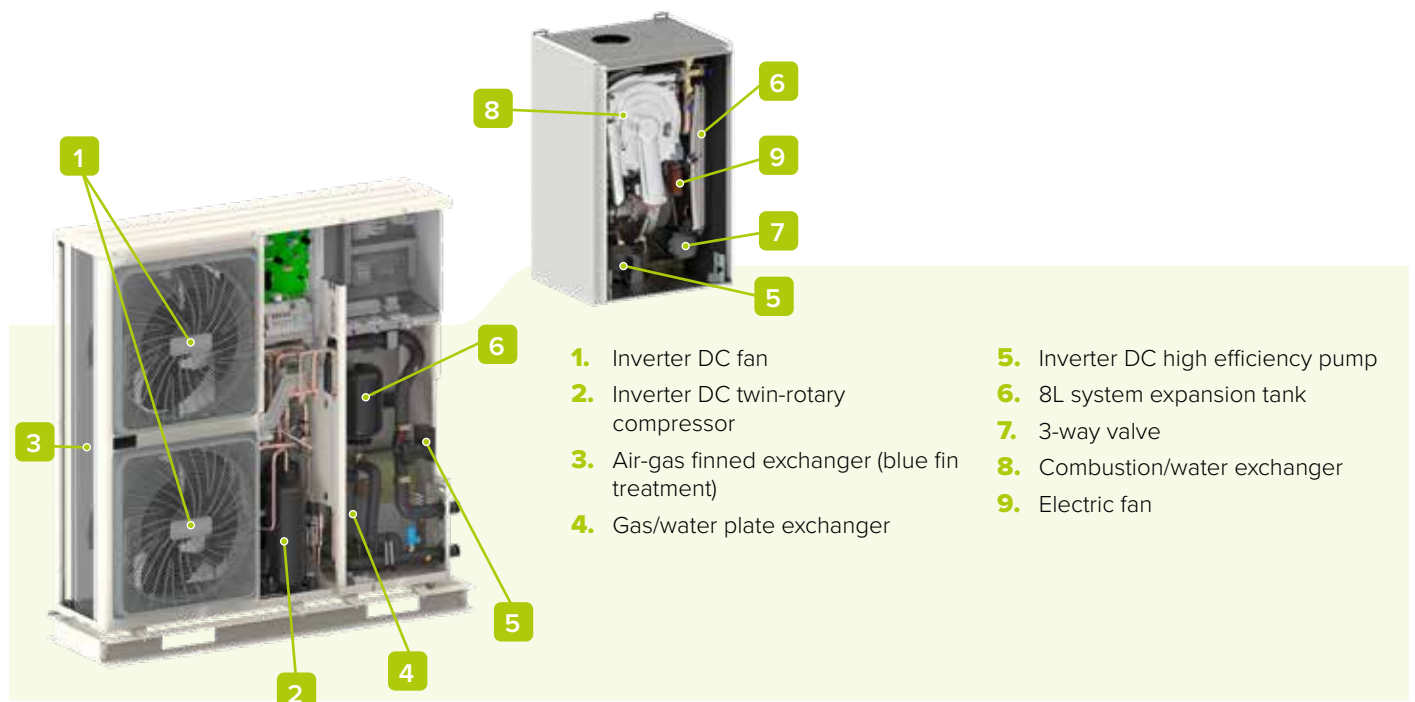
HEAT PUMPS



- ✓ Ideal for replacing old systems while keeping existing radiators
- ✓ Simultaneous production of DHW and cooling/heating
- ✓ It does not need to be coupled to a tank if DHW is produced by the boiler
- ✓ It uses renewable solar thermal energy by coupling to ELFOSun (can be connected to the boiler)
- ✓ Advanced connectivity: management via the dedicated MSmartLife App or via the Modbus port with ELFOControl<sup>3</sup> EVO included as standard

## Without a thought

ELFOEnergy Edge EVO Hybrid is the solution designed for upgrading old generators without having to alter the system. The system is in fact extremely versatile and able to adapt to whatever already exists: it simply replaces the generator that produces Heating and Domestic Hot Water, improving comfort and efficiency, but without much thought.




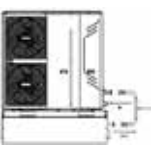

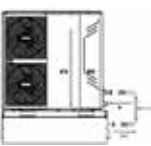

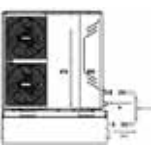


















## configurations

UNIT POWER SUPPLY (size 61÷81):

- 230M** Power supply 230/1/50  
**400TN** Power supply 400/3/50+N

## accessories

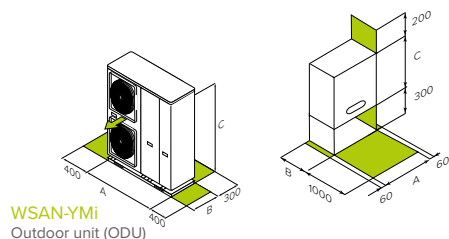
	<b>KTFLX</b>	Hose kit for connection to the chiller/heat pump		<b>T1BX</b>	Probe for auxiliary heating source T1B
	<b>ACS200X</b>	200-litre domestic hot water storage tank		<b>TANKX</b>	Buffer tank
	<b>ACS300X</b>	300-litre domestic hot water storage tank		<b>KTCAMX</b>	Piping kit for the connection to the buffer tank on supply water side
	<b>ACS500X</b>	500-litre domestic hot water storage tank		<b>KTCARX</b>	Piping kit for the connection to the buffer tank on return water side
	<b>ACS2SX</b>	200-litre domestic hot water storage tank with solar coil		<b>KSDFX</b>	Splitter for boiler smoke discharge
	<b>ACS3SX</b>	300-litre domestic hot water storage tank with solar coil		<b>KAS80X</b>	Smoke intake and discharge fittings, 80 mm diameter
	<b>ACS5SX</b>	500-litre domestic hot water storage tank with solar coil		<b>KCSAFX</b>	Coaxial fitting for smoke discharge and intake
	<b>QERAX</b>	Connection electrical panel of the DHW storage heater		<b>KTCGPLX</b>	Kit to convert boiler from methane to LPG
	<b>3DHWX</b>	Three-way valve for domestic hot water		<b>HID-TCXB</b>	White soft touch chronothermostat, with temperature control and management via App / Voice control <sup>NEW</sup>
	<b>KCSX</b>	Secondary circuit kit (1-litre circuit breaker + pump) <sup>NEW</sup>		<b>HID-TCXN</b>	Black soft touch chronothermostat, with temperature control and management via App / Voice control <sup>NEW</sup>
	<b>DIX</b>	1-litre circuit breaker <sup>NEW</sup>		<b>SWCX</b>	Switch IoT to be combined with HID-TConnect, for managing the heat pump mode or switching the terminal units/radiant systems ON/OFF <sup>NEW</sup>
	<b>DI50X</b>	50-litre circuit breaker <sup>NEW</sup>			
	<b>KSAX</b>	100-litre circuit breaker			

## technical data

Size (230M)				21	31	41	61	71	81	
Heating (Heat pump)	Capacity	Water 35/30°C - Outdoor air 7°C	Nominal / Maximum	kW	<b>4,7 / 6,7</b>	<b>6,7 / 8,7</b>	<b>8,6 / 10,6</b>	<b>12,3 / 14,3</b>	<b>14,1 / 16,5</b>	<b>16,3 / 18,1</b>
	COP		Nominal	-	5,00	4,94	4,60	4,81	4,60	4,45
	Capacity	Water 35/30°C - Outdoor air -7°C	Nominal / Maximum	kW	3,4 / 4,8	4,8 / 6,3	6,2 / 7,8	8,9 / 10,4	10,2 / 12,3	11,8 / 13,6
	COP		Nominal	-	4,06	4,00	3,72	3,90	3,73	3,60
Boiler 23.4	Capacity	Water 45/40°C - Outdoor air 7°C	Nominal / Maximum	kW	4,8 / 6,9	6,7 / 8,8	8,6 / 10,5	12,4 / 14,3	14,1 / 16,4	16,2 / 18,0
	COP		Nominal	-	3,60	3,57	3,44	3,53	3,47	3,43
	Nominal heating capacity (LHV)	Water 80/60°C	Nominal	kW	<b>22,70</b>				-	
	Performance		Nominal	%	96,60				-	
DWH power			Minimum / Maximum	kW	<b>2,90 / 23,50</b>				-	
DWH specific flow rate	Water with $\Delta T=30^{\circ}\text{C}$ in 10 minutes			l/min	11,50				-	
Boiler 34.4	Nominal heating capacity (LHV)	Water 80/60°C	Nominal	kW	<b>33,35</b>				-	
	Performance		Nominal	%	98,08				-	
	DWH power		Minimum / Maximum	kW	<b>4,10 / 34,00</b>				-	
	DWH specific flow rate	Water with $\Delta T=30^{\circ}\text{C}$ in 10 minutes			l/min	16				-
Cooling	Capacity	Water 18/23°C - Outdoor air 35°C	Nominal / Maximum	kW	<b>4,6 / 6,3</b>	<b>6,5 / 8,1</b>	<b>8,0 / 9,8</b>	12,2 / 14,5	14,0 / 16,1	15,5 / 17,6
	EER		Nominal	-	4,82	4,65	4,16	4,78	4,52	4,26
	Capacity	Water 7/12°C - Outdoor air 35°C	Nominal / Maximum	kW	4,9 / 6,4	6,3 / 8,1	8,0 / 9,1	10,9 / 13,2	12,9 / 14,8	13,8 / 15,5
	EER		Nominal	-	2,98	2,77	2,53	2,92	2,78	2,65
Electrical power for meter sizing				kW	3,50	3,50	3,50	6,50	6,50	6,50
Seasonal efficiency Medium climate	Heating 55°C	Energy class		-	<b>A++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>
		Annual energy consumption	kWh/year	4.203	4.203	4.770	8.164	8.724	9.216	
		SCOP	-	3,23	3,24	3,22	3,23	3,26	3,27	
		$\eta_s$ (seasonal output)	%	127%	127%	126%	126%	128%	128%	
	Heating 35°C	Energy class		-	<b>A+++</b>	<b>A+++</b>	<b>A+++</b>	<b>A++</b>	<b>A++</b>	<b>A++</b>
		Annual energy consumption	kWh/year	3.071	3.071	3.844	5.726	6.819	7.687	
		SCOP	-	4,48	4,49	4,51	4,30	4,35	4,30	
		$\eta_s$ (seasonal output)	%	176%	176%	177%	169%	168%	169%	
DHW (Boiler)	Energy class		-	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	
	DHW profile		-	XL	XL	XL	XL	XL	XL	
<b>Boiler</b>										
Power supply	Voltage/Frequency/Phases			V/Hz/n°	230/50/1					
Power input				W	78					
Sound power				dB(A)	52					
<b>Outdoor unit</b>					<b>21</b>	<b>31</b>	<b>41</b>	<b>61</b>	<b>71</b>	<b>81</b>
Power supply	Voltage/Frequency/Phases			V/Hz/n°	230/50/1					
Water flow-rate		Nominal	l/s	0,22	0,31	0,38	0,58	0,67	0,74	
Available pressure pump		Nominal	kPa	61	50	38	41	30	20	
Minimum system water content			l	20	20	20	40	40	40	
Expansion tank capacity			l	2	2	2	5	5	5	
Sound power			dB(A)	59 / 61	60 / 64	62 / 67	63 / 68	63 / 71	65 / 71	
Sound pressure @1m			dB(A)	46 / 49	49 / 52	50 / 55	49 / 54	47 / 55	50 / 56	
<b>Operating range</b>										
Water supply temperature	Heating	Heat pump	Minimum / Maximum	°C	30 / 60	30 / 60	30 / 60	30 / 60	30 / 60	30 / 60
	Cooling	Boiler	Minimum / Maximum	°C	12 / 60	12 / 60	12 / 60	12 / 60	12 / 60	12 / 60
Operating range (Outdoor air)	Heating	Heat pump	Minimum / Maximum	°C	5 / 25	5 / 25	5 / 25	5 / 25	5 / 25	5 / 25
		Boiler	Minimum / Maximum	°C	-25 / 35	-25 / 35	-25 / 35	-25 / 35	-25 / 35	-25 / 35
	Cooling	Heat pump	Minimum / Maximum	°C	-25 / 35	-25 / 35	-25 / 35	-25 / 35	-25 / 35	-25 / 35
		Boiler	Minimum / Maximum	°C	-25 / 35	-25 / 35	-25 / 35	-25 / 35	-25 / 35	-25 / 35
	DHW	Heat pump	Minimum / Maximum	°C	-5 / 43	-5 / 43	-5 / 43	-5 / 46	-5 / 46	-5 / 46
		Boiler	Minimum / Maximum	°C	-25 / 43	-25 / 43	-25 / 43	-25 / 43	-25 / 43	-25 / 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).

## dimensions and connections



**GAS BOILER**  
Boiler

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

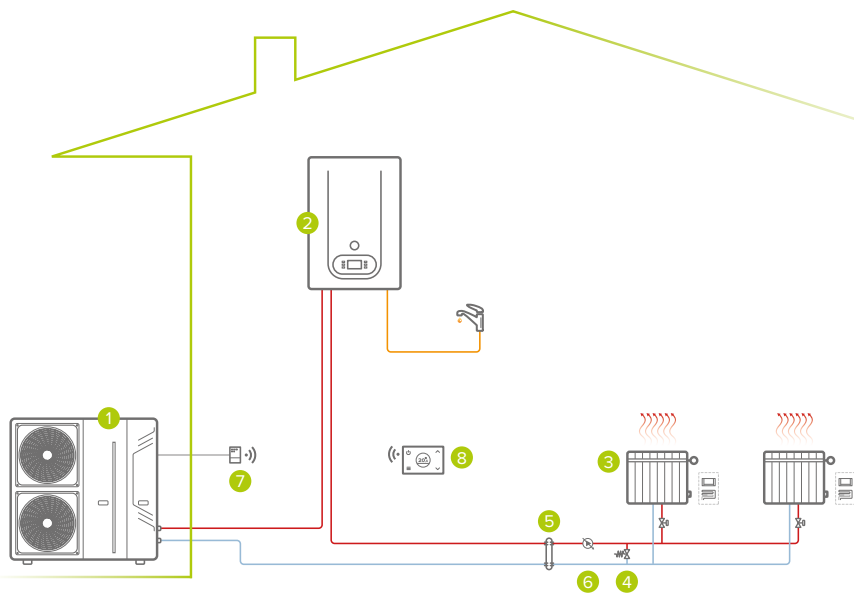
Size (230M)				21	31	41	61	71	81
Dimensions	Heat pump	Length(A) x Height(C) x Depth(B)	mm	1.210x945x402				1.404x1.414x405	
	Boiler	Length(A) x Height(C) x Depth(B)	mm	410x642x307 (24.4) / 410x642x330 (34.4)					
Weight	Heat pump		kg	99				178	
	Boiler		kg	35 (24.4) / 44 (34.4)					
Refrigerant precharge			type/GWP	R-32 / 675					
			kg	2				2,8	
			CO <sub>2</sub> tons	1,4				1,9	
External diameters	Heat pump	Water	inch	1"				1 1/4"	
		Water (DHW)	inch	1/2"					
	Boiler	Gas	inch	3/4"					
		Intake air	mm	100					
		Exhaust gas	mm	60					

Size (400TN)				61	71	81	
Heating (Heat pump)	Capacity	Water 35/30°C - Outdoor air 7°C	Nominal / Maximum	kW	12,3 / 14,3	14,1 / 16,5	16,3 / 18,1
	COP		Nominal	-	4,84	4,63	4,49
	Capacity	Water 35/30°C - Outdoor air -7°C	Nominal / Maximum	kW	8,9 / 10,4	10,2 / 12,3	11,8 / 13,6
	COP		Nominal	-	3,90	3,73	3,60
Boiler 23.4	Capacity	Water 45/40°C - Outdoor air 7°C	Nominal / Maximum	kW	12,4 / 14,3	14,1 / 16,4	16,2 / 18,0
	COP		Nominal	-	3,59	3,54	3,45
	Nominal heating capacity (LHV)	Water 80/60°C	Nominal	kW	-	-	-
	Performance		Nominal	%	-	-	-
DWH power	Water with $\Delta T=30^{\circ}\text{C}$ in 10 minutes	Minimum / Maximum	kW	-	-	-	
DWH specific flow rate		-	l/min	-	-	-	
Boiler 34.4	Nominal heating capacity (LHV)	Water 80/60°C	Nominal	kW	-	33,35	-
	Performance		Nominal	%	-	98,08	-
	DWH power	Water with $\Delta T=30^{\circ}\text{C}$ in 10 minutes	Minimum / Maximum	kW	-	4,10 / 34,00	-
	DWH specific flow rate		-	l/min	-	16	-
Cooling	Capacity	Water 18/23°C - Outdoor air 35°C	Nominal / Maximum	kW	12,2 / 14,5	14,0 / 16,1	15,5 / 17,6
	EER		Nominal	-	4,83	4,50	4,27
	Capacity	Water 7/12°C - Outdoor air 35°C	Nominal / Maximum	kW	10,9 / 13,2	12,9 / 14,8	13,8 / 15,5
	EER		Nominal	-	2,93	2,90	2,66
Electrical power for meter sizing				kW	6,50	6,50	6,50
Seasonal efficiency Medium climate	Heating 55°C	Energy class	-	-	A++	A++	A++
		Annual energy consumption	kWh/year	8.164	8.724	9.216	
		SCOP	-	3,23	3,26	3,27	
	Heating 35°C	$\eta_s$ (seasonal output)	%	126%	128%	128%	
		Energy class	-	A++	A++	A++	
		Annual energy consumption	kWh/year	5.726	6.819	7.687	
	DHW (Boiler)	SCOP	-	4,30	4,35	4,30	
		$\eta_s$ (seasonal output)	%	169%	168%	169%	
		Energy class	-	A	A	A	
	DHW profile	-	-	XL	XL	XL	
<b>Boiler</b>							
Power supply	Voltage/Frequency/Phases			V/Hz/n°	230/50/1		
Power input				W	78		
Sound power				dB(A)	52		
<b>Outdoor unit</b>					<b>61</b>	<b>71</b>	<b>81</b>
Power supply	Voltage/Frequency/Phases			V/Hz/n°	400/50/3+N		
Water flow-rate	Nominal			l/s	0,58	0,67	0,74
Available pressure pump	Nominal			kPa	41	30	20
Minimum system water content				l	40	40	40
Expansion tank capacity				l	5	5	5
Sound power				dB(A)	63 / 68	65 / 71	66 / 71
Sound pressure @1m				dB(A)	49 / 54	50 / 56	51 / 56
<b>Operating range</b>							
Water supply temperature	Heating	Heat pump	Minimum / Maximum	°C	30 / 60	30 / 60	30 / 60
	Boiler	-	Minimum / Maximum	°C	12 / 60	12 / 60	12 / 60
Operating range (Outdoor air)	Heating	Heat pump	Minimum / Maximum	°C	5 / 25	5 / 25	5 / 25
	Boiler	-	Minimum / Maximum	°C	-25 / 35	-25 / 35	-25 / 35
Cooling	Heat pump	-	Minimum / Maximum	°C	-25 / 35	-25 / 35	-25 / 35
	Boiler	-	Minimum	°C	-25 / 35	-25 / 35	-25 / 35
DHW	Heat pump	-	Minimum / Maximum	°C	-5 / 46	-5 / 46	-5 / 46
	Boiler	-	Minimum / Maximum	°C	-25 / 43	-25 / 43	-25 / 43
External diameters	Heat pump	Water	inch		1 1/4"		
	Boiler	Water (DHW)	inch		1/2"		
Refrigerant precharge	Heat pump	Gas	inch		3/4"		
	Boiler	Intake air	mm		100		
Dimensions	Heat pump	Exhaust gas	mm		60		
	Boiler	Length(A) x Height(C) x Depth(B)	mm		1.404x1.414x405		
Weight	Heat pump	Length(A) x Height(C) x Depth(B)	mm		410x642x330		
	Boiler		kg		172		
Refrigerant precharge	Heat pump		kg		44		
	Boiler		type/GWP		R-32 / 675		
External diameters	Heat pump		kg		2,8		
	Boiler		CO <sub>2</sub> tons		1,9		
Refrigerant precharge	Heat pump		inch		1 1/4"		
	Boiler		inch		1/2"		
External diameters	Heat pump		inch		3/4"		
	Boiler		mm		100		
Refrigerant precharge	Heat pump		mm		60		
	Boiler		mm		60		

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).

Size (400TN)				61	71	81
Dimensions	Heat pump	Length(A) x Height(C) x Depth(B)	mm	1.404x1.414x405		
	Boiler	Length(A) x Height(C) x Depth(B)	mm	410x642x330		
Weight	Heat pump		kg	172		
	Boiler		kg	44		
Refrigerant precharge			type/GWP	R-32 / 675		
			kg	2,8		
External diameters			CO <sub>2</sub> tons	1,9		
	Heat pump	Water	inch	1 1/4"		
External diameters		Water (DHW)	inch	1/2"		
	Boiler	Gas	inch	3/4"		
Refrigerant precharge		Intake air	mm	100		
		Exhaust gas	mm	60		

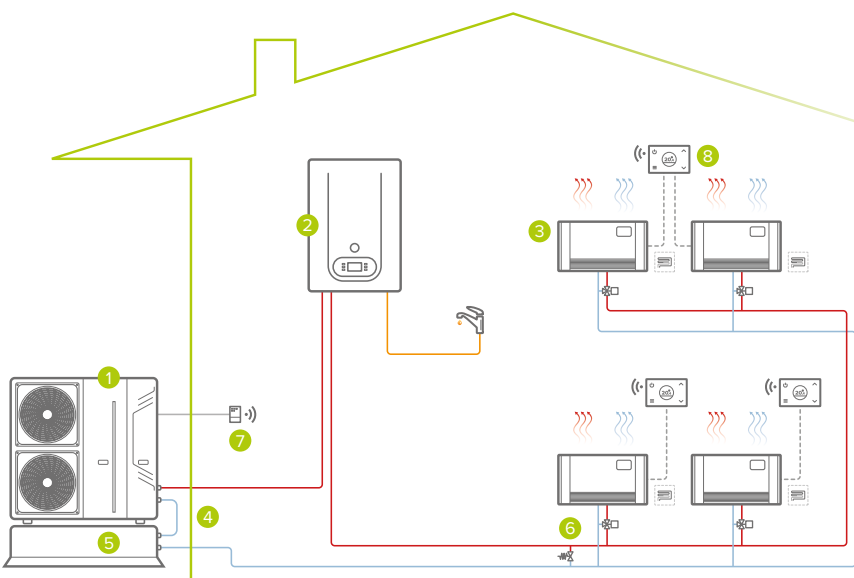
HEAT PUMPS



**Single area system:  
heating/DHW**

- 1 outdoor unit
- 2 boiler
- 3 heating area (radiator / fan coils / radiant)
- 4 bypass\*
- 5 hydraulic separator (optional)
- 6 secondary circuit pump\*
- 7 SwitchConnect Wi-Fi receiver (optional)
- 8 HID-TConnect Wi-Fi chronothermostat (optional)

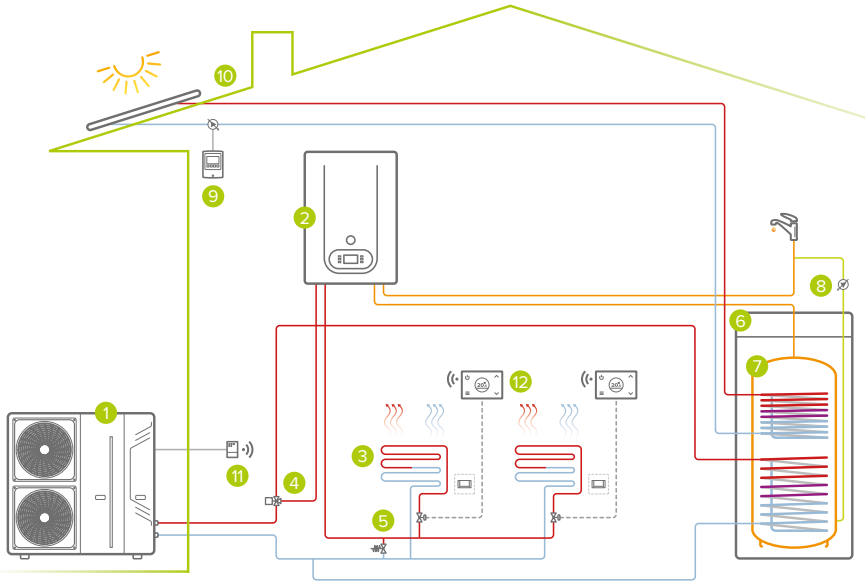
\*from external supply



**Single area system:  
heating/cooling/DHW**

- 1 outdoor unit
- 2 boiler
- 3 heating/cooling area (fan coils / radiant)
- 4 system inertial storage connection kit (optional)
- 5 system inertial storage (optional)
- 6 bypass\*
- 7 SwitchConnect Wi-Fi receiver (optional)
- 8 HID-TConnect Wi-Fi chronothermostat (optional)

\*from external supply



**Single area system:  
heating/cooling/DHW**

- 1 outdoor unit
- 2 boiler
- 3 heating / cooling area (fan coils / radiant)
- 4 3-way switching valve (optional)
- 5 bypass\*
- 6 boiler connection kit QERAX (optional)
- 7 DHW heat pump with solar predisposition (optional)
- 8 DHW recirculation pump\*
- 9 solar circulation kit (optional)
- 10 ELFSun solar thermal (optional)
- 11 SwitchConnect Wi-Fi receiver (optional)
- 12 HID-TConnect Wi-Fi chronothermostat (optional)

\*from external supply