

# SPHERA EVO 2.0

## SQKN-YEE 1 TC + MiSAN-YEE 1 S 2.1÷8.1

Wall-mounted air-to-water split heat pump  
for heating, cooling and domestic hot water production

### ENERGY SAVING



Solar integration (optional)



Smart Grid ready



€-Switch

### COMFORT



Heating Cooling



DHW



Silent



High temperature

### RELIABILITY



Backup heater (optional)



Eurovent



Keymark

### HEALTH



Eco-friendly refrigerant



Renewable energy

### CONVENIENCE



Weekly schedule



Boiler integration



Integrated DHW tank

### MANAGEMENT AND CONNECTIVITY



Potential-free contact



Modbus port



Wi-fi Control



ELFOControl management



Clivet Eye monitoring



User interface / thermostat



HEAT PUMPS

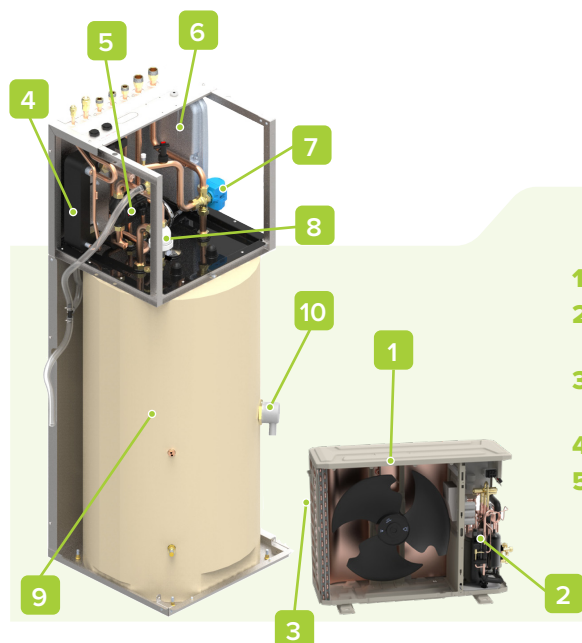


- ✓ System hot water production at 65°C with the outdoor air up to 5°C, at 60°C with the outdoor air down to -15°C
- ✓ Energy efficiency at the highest level
- ✓ Designed not to disturb, operating very quietly
- ✓ Suitable for every need, thanks to the dual version with 190-litre or 250-litre DHW storage tank
- ✓ Compact outdoor unit requiring very little installation space

## 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. 2kW DHW safety heater

## configurations






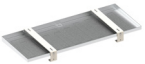













### DHW STORAGE:

<b>ACS190</b>	DHW storage 190L
<b>ACS250</b>	DHW storage 250L
OUTDOOR UNIT POWER SUPPLY (size 6.1÷8.1):	
<b>220M</b>	Power supply 230/1/50
<b>400TN</b>	Power supply 400/3/50+N

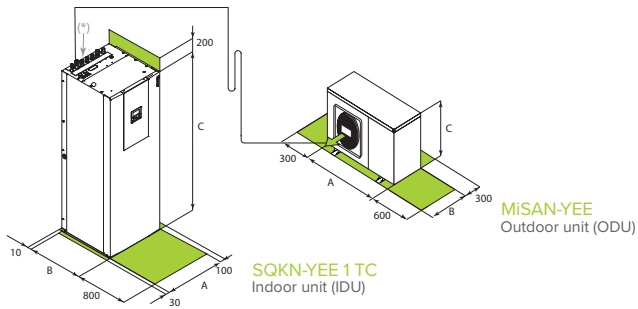
### AUXILIARY SYSTEM HEATER:

-	No heater
<b>EH24</b>	2 kW integration electric heater
<b>EH3</b>	3 kW integration electric heater
<b>EH6</b>	6 kW integration electric heater
<b>EH9</b>	9 kW integration electric heater

## accessories

	<b>ACS250X</b>	250L additional domestic hot water storage tank		<b>KCCEX</b>	External boiler connection kit
	<b>SOLX</b>	Drain-back solar integration for domestic hot water		<b>SFCSTX</b>	Additional probe for cascade function
	<b>KCSX</b>	Secondary circuit kit (1-litre circuit breaker + pump)		<b>DTX</b>	Auxiliary condensate collection tray
	<b>KIRE2HLX</b>	2 zones: external kit, high temperature + low temperature (mixed)		<b>APAVX</b>	Kit of antivibration mounts for floor installation
	<b>KIRE2HX</b>	2 zones: external kit, high temperature		<b>ASTFX</b>	Kit of antivibration mounts for wall bracket installation
	<b>DIX</b>	1-litre circuit breaker		<b>KSIPX</b>	Kit with wall fixing brackets
	<b>DI50X</b>	50-litre circuit breaker		<b>HID-TCBX</b>	Black soft touch chronothermostat, with temperature control and management via App / Voice control
	<b>ACI40X</b>	40L system inertial storage tank (s. 2.1÷5.1)		<b>HID-TCNX</b>	White soft touch chronothermostat, with temperature control and management via App / Voice control
	<b>ACI60X</b>	60-litre system inertial storage tank		<b>SWCX</b>	SwitchConnect radio receiver
	<b>COFX</b>	Casing sheets for the inertial storage cover			

## dimensions and connections



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

(\*) Water and gas connections

## technical data

Size (220M)				2.1		3.1		4.1		5.1		6.1		7.1		8.1	
				190L	250L	190L	250L	190L	250L	190L	250L	250L	250L	250L	250L		
Heating	Capacity	Water 35/30°C - Outdoor air 7°C	Nominal / Maximum	kW	4,32 / 6,26	6,18 / 7,41	8,30 / 9,11	10,09 / 10,3	12,13 / 14,60	14,51 / 15,5	16,01 / 16,80						
	COP		-	5,42	5,21	5,31	5,01	5,00	4,70	4,55							
	Capacity	Water 35/30°C - Outdoor air -7°C	Nominal / Maximum	kW	4,17 / 6,25	6,05 / 6,97	7,33 / 8,35	8,20 / 9,30	10,49 / 13,85	12,23 / 14,09	13,43 / 14,33						
	COP		-	3,16	3,00	3,23	3,07	3,13	2,82	2,74							
	Capacity	Water 45/40°C - Outdoor air 7°C	Nominal / Maximum	kW	4,16 / 5,96	6,03 / 7,13	8,22 / 8,98	10,01 / 10,30	12,30 / 14,50	14,00 / 15,70	16,01 / 16,60						
	COP		-	3,93	3,83	3,95	3,86	3,80	3,65	3,60							
Cooling	Capacity	Water 18/23°C - Outdoor air 35°C	Nominal / Maximum	kW	4,55 / 6,88	6,44 / 7,65	8,10 / 11,13	10,00 / 12,03	12,06 / 15,02	13,79 / 15,30	14,84 / 16,38						
	EER		-	6,08	5,24	5,12	4,77	4,02	3,70	3,65							
	Capacity	Water 7/12°C - Outdoor air 35°C	Nominal / Maximum	kW	4,26 / 6,14	6,25 / 6,39	7,46 / 7,94	8,67 / 9,10	11,16 / 11,80	11,72 / 12,86	12,88 / 14,20						
	EER		-	3,50	3,09	3,33	3,09	2,75	2,55	2,45							
DHW	Net tank capacity			l	190	250	190	250	190	250	250	250	250				
	Water mixed at 40°C (V40) <sup>1</sup>			l	204	269	204	269	204	269	269	269	269				
	Heating time			h:min	2:30	2:25	2:30	2:25	2:08	2:05	1:46	1:46	1:46				
Electrical power for meter sizing				kW	2,20	2,60	3,30	3,60	5,40	5,70	6,10						
Seasonal efficiency	Heating 55°C	Energy class		-	A++	A++	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						
	Medium climate	Heating 35°C	Energy class		-	A+++	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			5,13	5,15	5,32	5,27	5,00	4,91	4,89					
DHW	Energy class			-	A+	A+	A+	A+	A+	A+	A+	A+					
		DHW profile			L	XL	L	XL	L	XL	L	XL	L	XL			
<b>Indoor unit</b>					<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>B</b>	<b>B</b>	<b>B</b>						
Power supply	Voltage/Frequency/Phases			V/Hz/n°	230/50/1												
Water flow-rate		Nominal		l/s	0,21	0,30	0,41	0,49	0,57	0,67	0,75						
Pump available pressure		Nominal		kPa	31,2	36,5	33,1	31,0	25,7	31,7	22,6						
Expansion tank capacity				l	8												
Minimum system water content				l	40												
Sound power				dB(A)	41												
Sound pressure @1m				dB(A)	26												
<b>Outdoor unit</b>					<b>2.1</b>	<b>3.1</b>	<b>4.1</b>	<b>5.1</b>	<b>6.1</b>	<b>7.1</b>	<b>8.1</b>						
Power supply	Voltage/Frequency/Phases			V/Hz/n°	230/50/1												
Sound power				dB(A)	55	57	58	60	63	64	66						
Sound pressure @1m				dB(A)	42	44	45	47	50	51	53						
<b>Operating range</b>																	
Water supply temperature	Heating	Minimum / Maximum	°C	25 / 65													
	Cooling	Minimum / Maximum	°C	5 / 25													
Operating range (Outdoor air)	Heating	Minimum / Maximum	°C	-25 / 43													
	Cooling	Minimum / Maximum	°C	-5 / 43													
	DHW	Minimum / Maximum	°C	-25 / 43													

Size			2.1	3.1	4.1	5.1	6.1	7.1	8.1
Dimensions	Indoor unit	Length(A) x Height(C) x Depth(B)	600x1.774x615 (190L) / 600x2.084x615 (250L)				600x2.084x615		
	Outdoor unit	Length(A) x Height(C) x Depth(B)	986 x 712 x 426		1.104 x 866 x 523		1.104 x 866 x 523		
Weight	Indoor unit		359 (190L) / 419 (250L)				421		
	Outdoor unit		58		77		112		
Max / min equivalent length		L			30 / 2				
Max difference in level ODU / IDU		H			25				
Refrigerant precharge					R-32 / 675				
			kg/m		1,5 / 15		1,65 / 15		1,84 / 15
			CO <sub>2</sub> tons		1,05		1,11		1,24
Additional refrigerant charge <sup>1</sup>			g/m		20		38		
External diameters	Refrigerant pipe	Liquid	inch		1/4"		3/8"		
		Gas	inch				5/8"		
	Indoor unit	Water (system)	inch				1"		
		Water (DHW)	inch				3/4"		

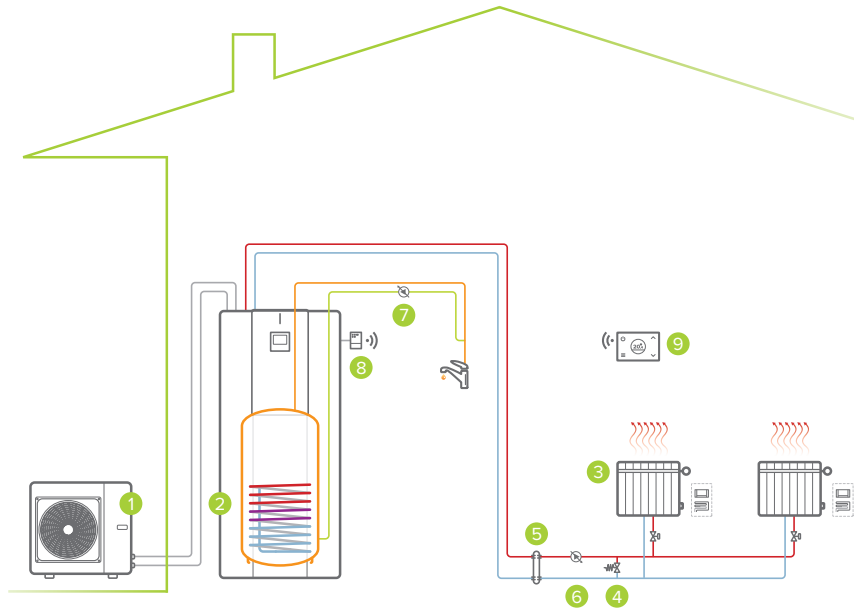
(1) Check in the manual if the indoor unit requires a minimum installation surface

Size (400TN)				6.1	7.1	8.1	
Heating	Capacity	Water 35/30°C - Outdoor air 7°C	Nominal / Maximum	kW	<b>12,13 / 14,60</b>	<b>14,51 / 15,5</b>	<b>16,01 / 16,80</b>
			Nominal	-	5,00	4,70	4,55
	COP	Water 35/30°C - Outdoor air -7°C	Nominal / Maximum	kW	10,49 / 13,85	12,23 / 14,09	13,43 / 14,33
			Nominal	-	5,00	4,70	4,55
Cooling	Capacity	Water 45/40°C - Outdoor air 7°C	Nominal / Maximum	kW	12,30 / 14,50	14,00 / 15,70	16,01 / 16,60
			Nominal	-	3,13	2,82	2,74
	EER	Water 18/23°C - Outdoor air 35°C	Nominal / Maximum	kW	<b>12,06 / 15,02</b>	<b>13,79 / 15,30</b>	<b>14,84 / 16,38</b>
			Nominal	-	4,02	3,70	3,65
DHW	Capacity	Water 7/12°C - Outdoor air 35°C	Nominal / Maximum	kW	11,16 / 11,80	11,72 / 12,86	12,88 / 14,20
			Nominal	-	2,75	2,55	2,45
	Net tank capacity		l	250	250	250	
	Water mixed at 40°C (V40) <sup>1</sup>		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	Heating	55°C	Energy class	-	<b>A++</b>	<b>A++</b>	<b>A++</b>
			Annual energy consumption	kWh/year	6.793	7.380	7.915
			SCOP	-	3,56	3,52	3,48
	Medium climate	35°C	η <sub>s</sub> (seasonal output)	%	139	138	136
			Energy class	-	<b>A+++</b>	<b>A+++</b>	<b>A+++</b>
			Annual energy consumption	kWh/year	6.793	7.380	7.915
DHW	DHW profile	SCOP	-	5,00	4,91	4,89	
		η <sub>s</sub> (seasonal output)	%	196	193	193	
		Energy class	-	<b>A+</b>	<b>A+</b>	<b>A+</b>	
				XL	XL	XL	
<b>Indoor unit</b>				<b>B</b>	<b>B</b>	<b>B</b>	
Power supply	Voltage/Frequency/Phases			V/Hz/n°	230/50/1		
Water flow-rate		Nominal	l/s	0,57	0,67	0,75	
Pump available pressure		Nominal	kPa	25,7	31,7	22,6	
Expansion tank capacity			l	8			
Minimum system water content			l	60			
Sound power				dB(A)			
Sound pressure @1m				dB(A)			
<b>Outdoor unit</b>				<b>6.1</b>	<b>7.1</b>	<b>8.1</b>	
Power supply	Voltage/Frequency/Phases			V/Hz/n°	400/50/3+N		
Sound power				dB(A)	63	64	
Sound pressure @1m				dB(A)	50	51	
<b>Operating range</b>							
Water supply temperature	Heating	Minimum / Maximum	°C	25 / 65			
	Cooling	Minimum / Maximum	°C	5 / 25			
Operating range (Outdoor air)	Heating	Minimum / Maximum	°C	-25 / 43			
	Cooling	Minimum / Maximum	°C	-5 / 43			
	DHW	Minimum / Maximum	°C	-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). Energy classes with ELFOControl<sup>3</sup> EVO system control

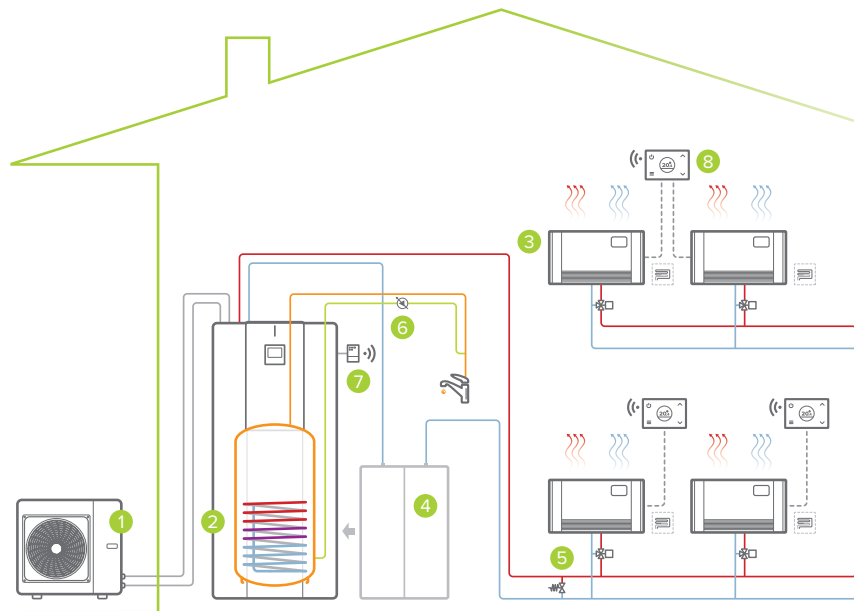
(1) Data according to EN 16147: amount of water at 40°C with the same enthalpy content as the water coming out of the Boiler at a temperature higher than 40°C



**Single area system:  
Heating/DHW**

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

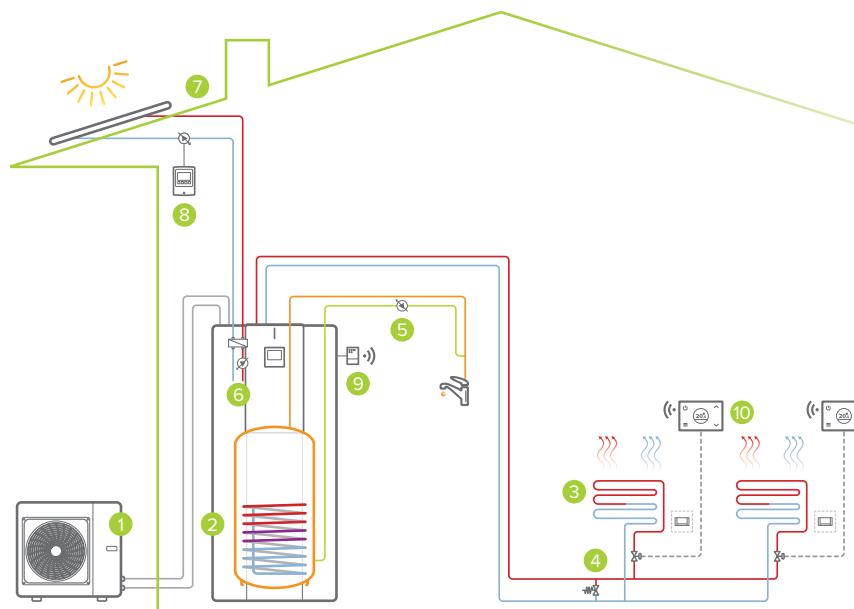
\*from external supply



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

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

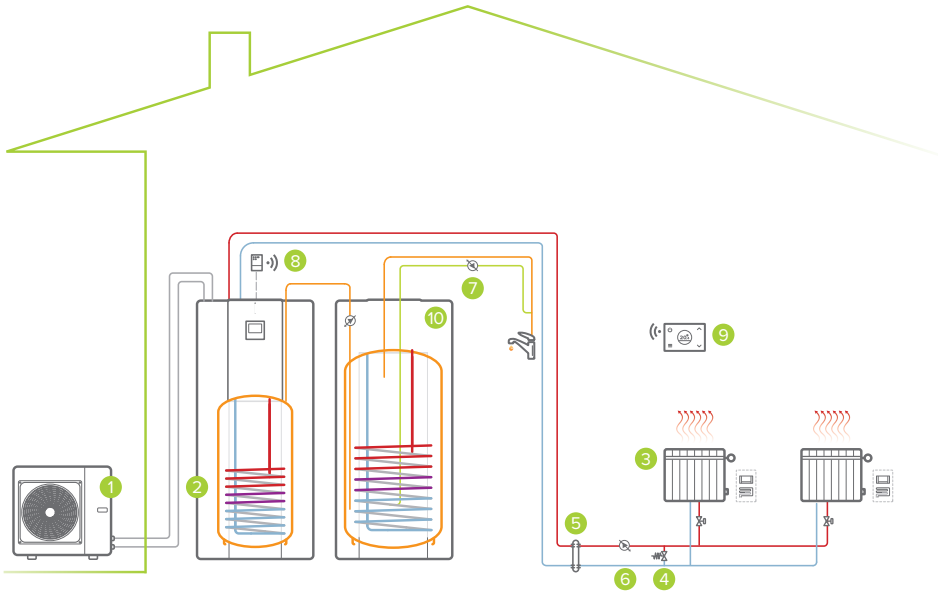
\*from external supply



**Single area system with solar thermal:  
heating/cooling/DHW**

- 1 outdoor unit
- 2 indoor unit
- 3 heating / cooling area (fan coils / radiant)
- 4 bypass\*
- 5 DHW recirculation pump\*
- 6 solar connection kit (optional)
- 7 ELFOSun solar thermal (optional)
- 8 solar circulation kit (optional)
- 9 SwitchConnect Wi-Fi receiver (optional)
- 10 HID-TConnect Wi-Fi chronothermostat (optional)

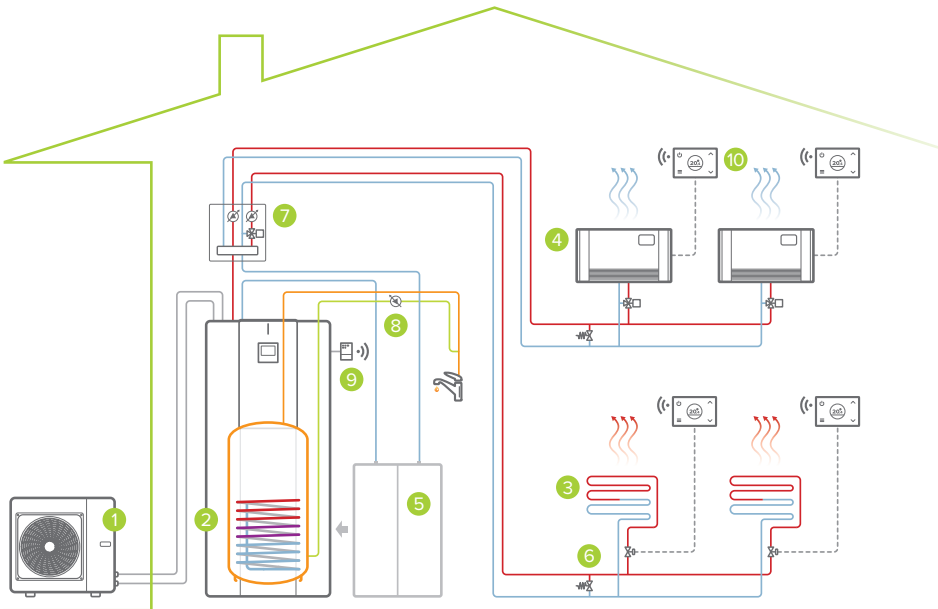
\*from external supply



**Single area system:  
Heating/DHW**

- 1 outdoor unit
- 2 indoor unit
- 3 heating area (radiators / fan coils / radiant)
- 4 bypass\*
- 5 hydraulic separator (optional)
- 6 secondary circuit pump\*
- 7 DHW recirculation pump\*
- 8 SwitchConnect Wi-Fi receiver (optional)
- 9 HID-TConnect Wi-Fi chronothermostat (optional)
- 10 250L system inertial storage tank (optional)

\*from external supply



**Two-area system:  
heating/cooling/DHW**

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

Note: solar connection kit and booster kit can coexist

\*from external supply