

SPHERA EVO 2.0 Box

SQKN-YEE 1 BC + 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 - DHW tank)



Cascade



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

MANAGEMENT AND CONNECTIVITY



Potential-free
contact



Modbus
port



Wi-fi
Control



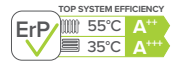
ELFOControl
management



Clivet Eye
monitoring



User interface /
thermostat



HEAT PUMPS

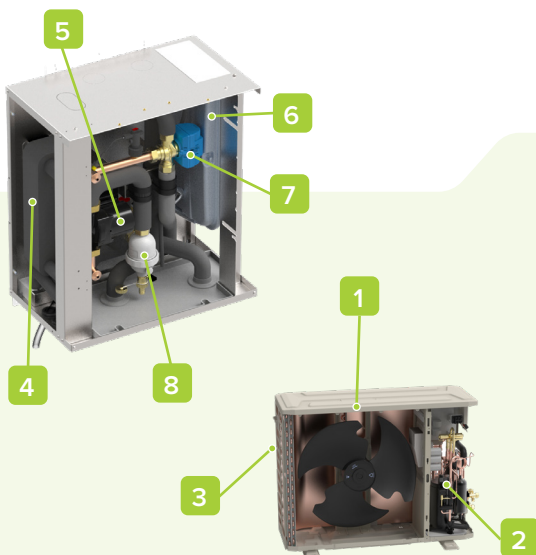


- ✓ Smaller size: can be installed in a stairwell, store cupboard, laundry room or inside a kitchen cabinet
- ✓ Energy efficiency at the highest level
- ✓ Designed not to disturb, operating very quietly
- ✓ Can be combined with DHW boilers of a volume suitable for the application in which it is to be installed
- ✓ Up to 6 units can be connected in cascade, for demands up to 100 kW

Ideal with AQUA PLUS

SPHERA EVO Box 2.0 is an excellent alternative for installations where it is not possible to install the tower or uncased version.

Combined with AQUA Plus, the heat pump for domestic hot water production, SPHERA EVO Box 2.0 offers the advantage of a system that provides simultaneous heating or cooling and domestic hot water production.



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

configurations




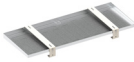













DHW STORAGE:

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

AUXILIARY SYSTEM HEATER:

-	No heater
EH24	2 kW integration electric heater
EH3	3 kW integration electric heater
EH6	6 kW integration electric heater
EH9	9 kW integration electric heater

accessories

	ACS200X	200-litre domestic hot water storage tank		KCCEX	External boiler connection kit
	ACS300X	300-litre domestic hot water storage tank		SFCSTX	Additional probe for cascade function
	ACS500X	500-litre domestic hot water storage tank		DTX	Auxiliary condensate collection tray
	SCS08X	0.8 m ² solar exchanger for flange installation		APAVX	Kit of antivibration mounts for floor installation
	SCS12X	1.2 m ² solar exchanger for flange installation		ASTFX	Kit of antivibration mounts for wall bracket installation
	KCSX	Secondary circuit kit (1-litre circuit breaker + pump)		KSIPX	Kit with wall fixing brackets
	KIRE2HLX	2 zones: external kit, high temperature + low temperature		HID-TCBX	Black soft touch chronothermostat, with temperature control and management via App / Voice control
	KIRE2HX	2 zones: external kit, high temperature		HID-TCNX	White soft touch chronothermostat, with temperature control and management via App / Voice control
	DIX	1-litre circuit breaker		SWCX	SwitchConnect radio receiver
	DI50X	50-litre circuit breaker			
	ACI40X	40L system inertial storage tank (s. 2.1÷5.1)			
	ACI60X	60-litre system inertial storage tank			

technical data

HEAT PUMPS

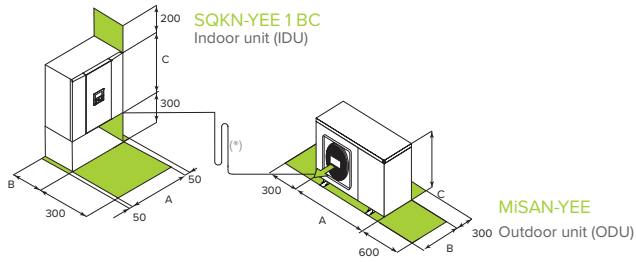
Size (220M)					2.1	3.1	4.1	5.1	6.1	7.1	8.1
Heating	Capacity	Water 35/30°C - Outdoor air 7°C	Nominal / Maximum	kW	4,32 / 6,26	6,18 / 7,41	8,30 / 9,11	10,09 / 10,3	12,13 / 14,60	14,51 / 15,5	16,01 / 16,80
	COP		Nominal	-	5,42	5,21	5,31	5,01	5,00	4,70	4,55
	Capacity	Water 35/30°C - Outdoor air -7°C	Nominal / 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		Nominal	-	3,16	3,00	3,23	3,07	3,13	2,82	2,74
Cooling	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		Nominal	-	3,93	3,83	3,95	3,86	3,80	3,65	3,60
	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		Nominal	-	6,08	5,24	5,12	4,77	4,02	3,70	3,65
Electrical power for meter sizing	Capacity	Water 7/12°C - Outdoor air 35°C	Nominal / Maximum	-	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		Nominal	-	3,50	3,09	3,33	3,09	2,75	2,55	2,45
Seasonal efficiency Medium climate	Heating 55°C	Energy class	-	A++	A++	A++	A++	A++	A++	A++	A++
		Annual energy consumption	kWh/year	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		
	Heating 35°C	Energy class	-	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++
		Annual energy consumption	kWh/year	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			
ηs (seasonal output)	%	202	203	210	208	196	193	193			
Indoor unit					A	A	A	A	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				60			
Sound power		Nominal	dB(A)	41							
Sound pressure @1m		Nominal	dB(A)	26							
Outdoor unit					2.1	3.1	4.1	5.1	6.1	7.1	8.1
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	
Operating range											
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 (400TN)					6.1	7.1	8.1				
Heating	Capacity	Water 35/30°C - Outdoor air 7°C	Nominal / Maximum	kW	12,13 / 14,60	14,51 / 15,5	16,01 / 16,80				
	COP		Nominal	-	5,00	4,70	4,55				
	Capacity	Water 35/30°C - Outdoor air -7°C	Nominal / Maximum	kW	10,49 / 13,85	12,23 / 14,09	13,43 / 14,33				
	COP		Nominal	-	3,13	2,82	2,74				
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				
	COP		Nominal	-	3,80	3,65	3,60				
	Capacity	Water 18/23°C - Outdoor air 35°C	Nominal / Maximum	kW	12,06 / 15,02	13,79 / 15,30	14,84 / 16,38				
	EER		Nominal	-	4,02	3,70	3,65				
Electrical power for meter sizing	Capacity	Water 7/12°C - Outdoor air 35°C	Nominal / Maximum	-	11,16 / 11,80	11,72 / 12,86	12,88 / 14,20				
	EER		Nominal	-	2,75	2,55	2,45				
Seasonal efficiency Medium climate	Heating 55°C	Energy class	-	A++	A++	A++					
		Annual energy consumption	kWh/year	6.793	7.380	7.915					
	SCOP	-	3,56	3,52	3,48						
	ηs (seasonal output)	%	139	138	136						
	Heating 35°C	Energy class	-	A+++	A+++	A+++					
		Annual energy consumption	kWh/year	6.793	7.380	7.915					
SCOP	-	5,00	4,91	4,89							
ηs (seasonal output)	%	196	193	193							
Indoor unit					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		Nominal	dB(A)	41							
Sound pressure @1m		Nominal	dB(A)	26							
Outdoor unit					6.1	7.1	8.1				
Power supply	Voltage/Frequency/Phases			V/Hz/n°	400/50/3+N						
Sound power			dB(A)	63	64	66					
Sound pressure @1m			dB(A)	50	51	53					
Operating range											
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 UE 811/2013 - 813/2013 - 2016/2281)



dimensions and connections



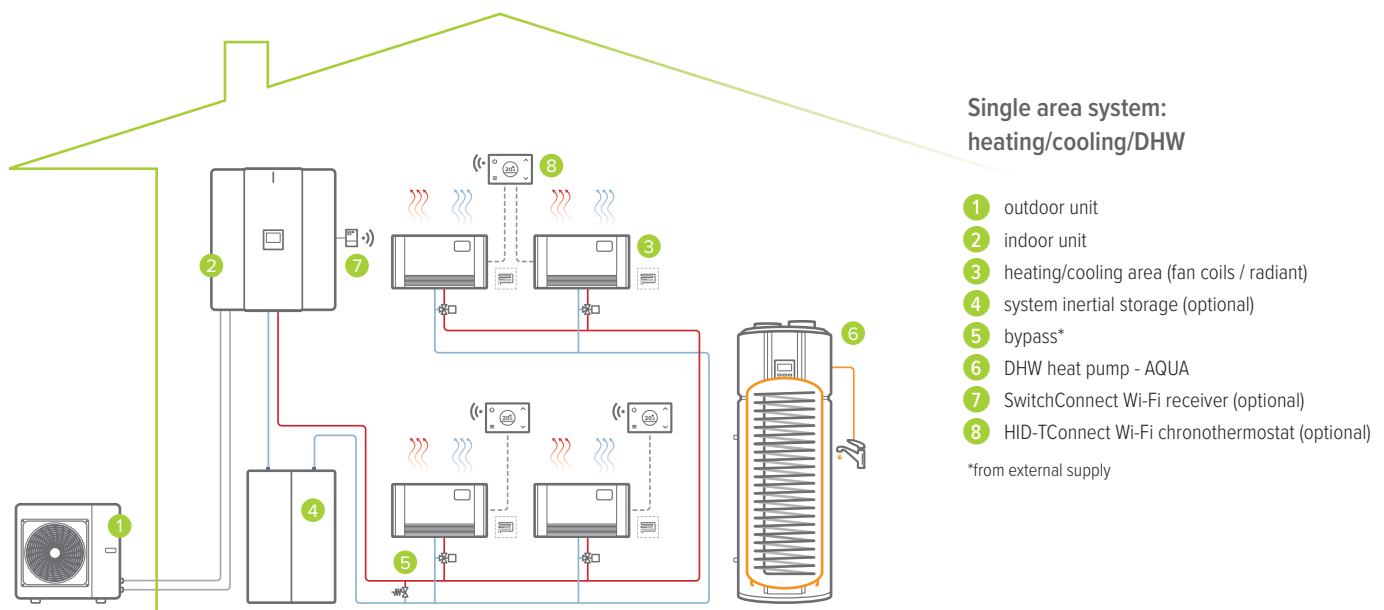
For trouble-free operation of the unit it is essential to maintain the safety distances indicated by the green areas.

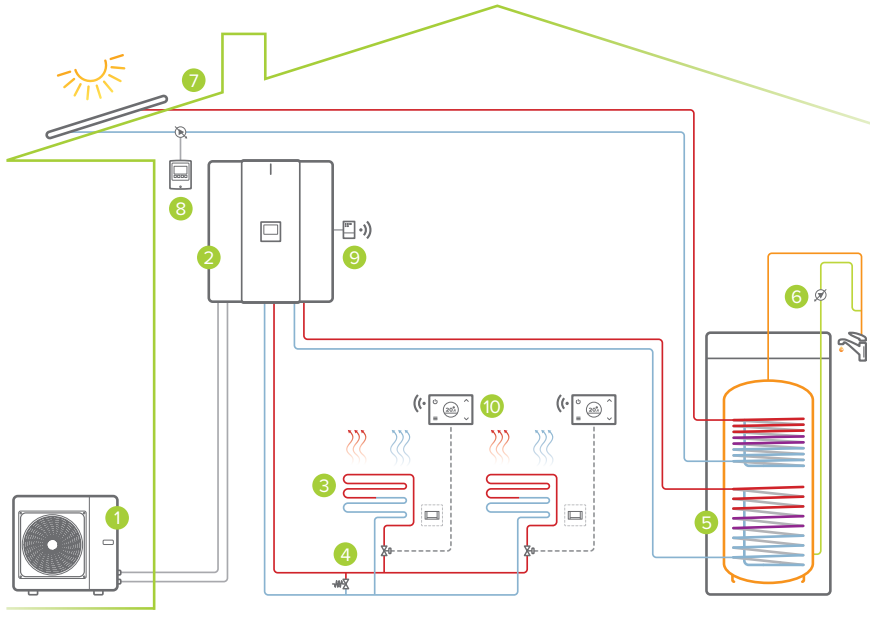
(*) Water and gas connections

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) 547x604x386						
	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	54						
	Outdoor unit	58 52 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 ₂ tons 1,05 1,11 1,24						
Additional refrigerant charge ²		g/m 20 38						
External diameters	Refrigerant pipe	Liquid	1/4"					
		Gas	5/8"					
	Indoor unit	Water (System)	1"					
		Water (DHW)	3/4"					

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

system diagrams

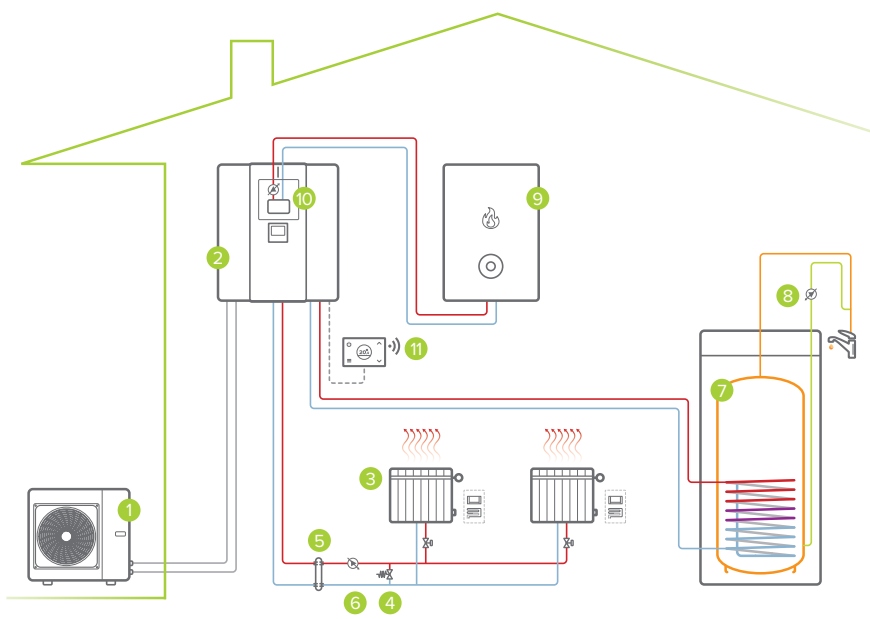




**Single area system with solar thermal:
heating/cooling/DHW**

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

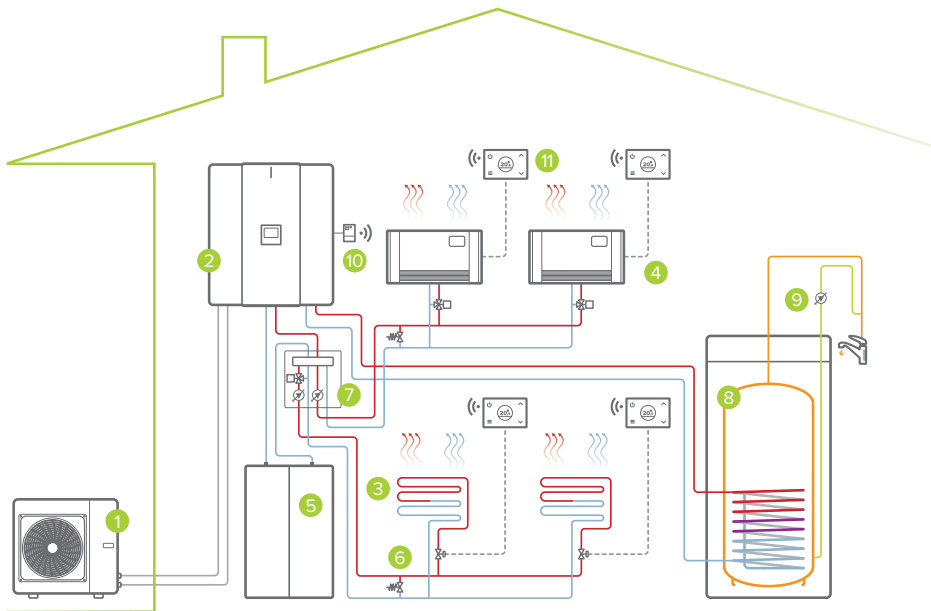
*from external supply



**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 tank (optional)
- 8 DHW recirculation pump*
- 9 2-pipe boiler
- 10 kit for external boiler management (optional)
- 11 HID-TConnect Wi-Fi chronothermostat (optional)

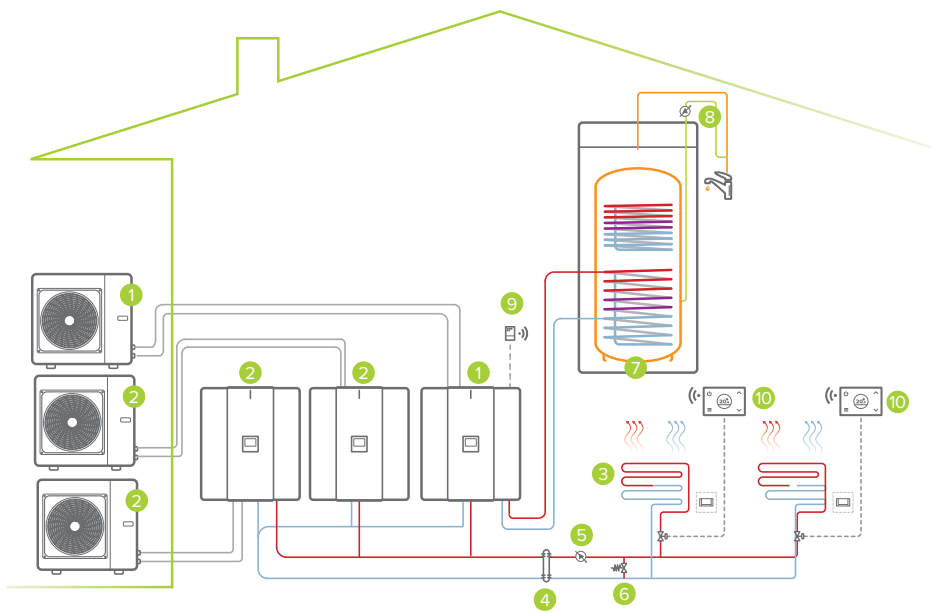
*from external supply



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

- 1 outdoor unit
- 2 indoor unit
- 3 low temperature heating/cooling area (radiant)
- 4 high temperature heating/cooling area (fancoil)
- 5 system inertial storage (optional)
- 6 bypass*
- 7 kit for managing 2 areas (optional)
- 8 DHW tank (optional)
- 9 DHW recirculation pump*
- 10 SwitchConnect Wi-Fi receiver (optional)
- 11 HID-TConnect Wi-Fi chronothermostat (optional)

Note: solar connection kit and booster kit can coexist
*from external supply



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

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

*from external supply