

SPHERA EVO 2.0 Hybrid

SQKN-YEE 1 TC + MISAN-YEE 1 S +
GAS BOILER 2.1 - 8.1

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

ENERGY SAVING

Solar integration
(optional - DHW tank)

SG
Ready

Cascade

€-Switch

COMFORT

Heating
Cooling

DHW

Silent

High temperature

RELIABILITY

Eurovent

Keymark

HEALTH

R-32
Eco-friendly
refrigerant

CONVENIENCE

Weekly
schedule

Contemporaneity

Instant DHW

MANAGEMENT AND CONNECTIVITY

Potential-free
contact

MOD
Modbus
port

Wi-fi
Control

ELFOControl
management

Clivet Eye
monitoring

User interface/
thermostat

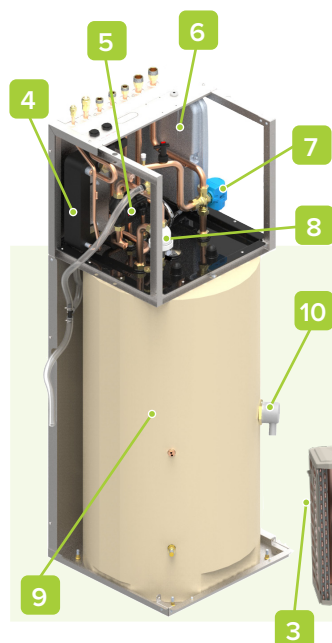
ErP
55°C
XL
A++
A



- ✓ Ideal combination of heat pump and boiler
- ✓ Hot water guaranteed with the utmost efficiency
- ✓ Designed not to disturb, operating very quietly
- ✓ Simultaneous operation and domestic hot water supply
- ✓ Wide series of accessories for a complete system

More and more renewables

Sphera EVO 2.0 Tower Hybrid can be used, in addition to traditional gas (Methane/LPG), with renewable sources such as air for heating and cooling and the sun for the production of domestic hot water.



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:

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

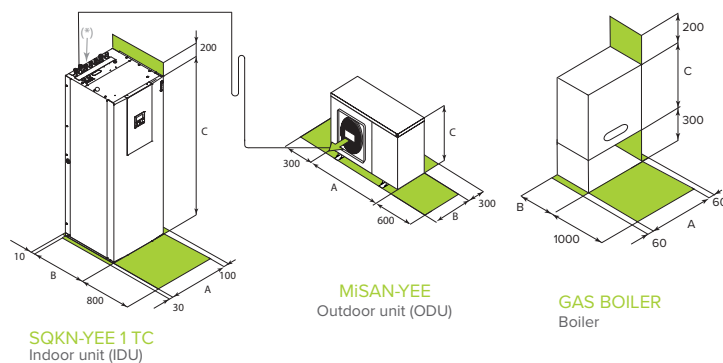
PUMP:

-	Standard pump
1PUM	Single pump with larger available head
4-PIPE BOILER	
HYS024	24kW boiler
HYS034	34kW boiler

accessories

	ACS250X	250L additional domestic hot water storage tank		KCSAFX	Coaxial fitting for smoke discharge and intake (ø60/100)
	SOLX	Drain-back solar integration for domestic hot water		KITKX	Coaxial system for adjustable smoke discharge and intake (ø 60/100)
	KCSX	Secondary circuit kit (1-litre circuit breaker + pump)		KITAK50X	Coaxial system for adjustable smoke discharge and intake (ø 80/125)
	KIRE2HLX	2 zones: external kit, high temperature + low temperature (mixed)		KAS80X	Smoke intake and discharge fittings, 80 mm diameter
	KIRE2HX	2 zones: external kit, high temperature		KTCGPLX	Kit to convert boiler from methane to LPG
	DIX	1-litre circuit breaker		DTX	Auxiliary condensate collection tray
	DI50X	50-litre circuit breaker		APAVX	Kit of antivibration mounts for floor installation
	ACI40X	40L system inertial storage tank (s. 2.1÷5.1)		ASTFX	Kit of antivibration mounts for wall bracket installation
	ACI60X	60-litre system inertial storage tank		KSIPX	Kit with wall fixing brackets
	COFX	Casing sheets for the inertial storage cover		HID-TCBX	Black soft touch chronothermostat, with temperature control and management via App / Voice control
	SFCSTX	Additional probe for cascade function		HID-TCNX	White soft touch chronothermostat, with temperature control and management via App / Voice control
	KSDFX	Splitter for boiler smoke discharge		SWCX	SwitchConnect radio receiver

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
Heating (Heat pump)	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
Heating (Boiler)	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
	Nominal heating capacity (LHV)	Water 80/60°C	Nominal	kW	22,94	22,94	22,94	22,94	33,35	33,35	33,35
	Performance		Nominal	%	97,60	97,60	97,60	97,60	98,08	98,08	98,08
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		Nominal	-	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		Nominal	-	3,50	3,09	3,33	3,09	2,75	2,55	2,45
DHW	Power	-	Minimum / Maximum	kW	2,90 / 23,50	2,90 / 23,50	2,90 / 23,50	2,90 / 23,50	4,10 / 34,00	4,10 / 34,00	4,10 / 34,00
	Specific flow rate	Water with ΔT=30°C in 10 minutes		l/min	11,5	11,5	11,5	11,5	16	16	16
Electrical power for meter sizing				kW	2,20	2,60	3,30	3,60	5,40	5,70	6,10
Seasonal efficiency Medium climate	Heating 55°C	Energy class	-	-	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+++
		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	
	DHW (Boiler)	Energy class	-	-	A	A	A	A	A	A	A
		DHW profile	-	-	XL	XL	XL	XL	XL	XL	XL
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						
Sound power				dB(A)	41						
Sound pressure @1m				dB(A)	26						
Boiler											
Power supply	Voltage/Frequency/Phases			V/Hz/n°	230/50/1						
Power input				W	38						
Sound power				dB(A)	52						
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	Heat pump	Minimum / Maximum	°C	25 / 65						
		Boiler	Minimum / Maximum	°C	25 / 80						
Operating range (outdoor air)	Cooling	-	Minimum / Maximum	°C	5 / 25						
		-	Minimum / Maximum	°C	-25 / 43						
	Heating	Heat pump	Minimum / Maximum	°C	-25 / 35						
		Boiler	Minimum / Maximum	°C	-5 / 43						
	Cooling	-	Minimum / Maximum	°C	-25 / 43						
		-	Minimum / Maximum	°C	-25 / 43						
DHW	Heat pump	Minimum / Maximum	°C	-25 / 43							
	Boiler	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)	mm	547x604x386				547x604x386		
	Outdoor unit	Length(A) x Height(C) x Depth(B)	mm	986x712x426		1.004x866x523		1.004x866x523		
	Boiler	Length(A) x Height(C) x Depth(B)	mm	410x642x307				410x642x330		
Weight	Indoor unit		kg	50				68		
	Outdoor unit		kg	58		77		112		
	Boiler		kg	35				44		
Max / min equivalent length		L	m	30 / 2						
Max difference in level ODU / IDU		H	m	25				20		
Refrigerant precharge ¹			type/GWP	R-32 / 675						
			kg / m	1,50 / 15		1,65 / 15		1.84 / 15		
			CO ₂ tons	1,05		1,1		1,24		
Additional refrigerant charge			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					1/2"		
	Boiler	Gas	inch					3/4"		
		Intake air	mm					100		
		Exhaust gas	mm					60		

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

Size (400TN)				6.1	7.1	8.1	
Heating (Heat pump)	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
	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
Heating (Boiler)	Nominal heating capacity (LHV)	Water 80/60°C	Nominal	kW	33,35	33,35	33,35
	Performance		Nominal	%	98,08	98,08	98,08
Cooling	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
	Capacity	Water 7/12°C - Outdoor air 35°C	Nominal / Maximum	kW	11,16 / 11,80	11,72 / 12,86	12,88 / 14,20
	EER		Nominal	-	2,75	2,55	2,45
DHW	Power	-	Minimum / Maximum	kW	4,10 / 34,00	4,10 / 34,00	4,10 / 34,00
	Specific flow rate	Water with ΔT=30°C in 10 minutes		l/min	16	16	16
Electrical power for meter sizing				kW	5,40	5,70	6,10
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	
		Energy class	-	A+++	A+++	A+++	
		Annual energy consumption	kWh/year	6.793	7.380	7.915	
	Heating 35°C	SCOP	-	5,00	4,91	4,89	
		ηs (seasonal output)	%	196	193	193	
		Energy class	-	A	A	A	
	DHW (Boiler)	DHW profile	-	XL	XL	XL	
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			dB(A)	41			
Sound pressure @1m			dB(A)	26			
Boiler							
Power supply	Voltage/Frequency/Phases		V/Hz/n°	230/50/1			
Power input			W	78			
Sound power			dB(A)	52			
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	Heat pump	Minimum / Maximum	°C			
	Boiler		Minimum / Maximum	°C			
Operating range (outdoor air)	Cooling	-	Minimum / Maximum	°C			
			Minimum / Maximum	°C			
	Heating	Heat pump	Minimum / Maximum	°C			
	Boiler		Minimum / Maximum	°C			
	Cooling	-	Minimum / Maximum	°C			
			Minimum / Maximum	°C			
	DHW	Heat pump	Minimum / Maximum	°C			
	Boiler		Minimum / Maximum	°C			

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 ELFOControl3 EVO system control

Single area system: heating/DHW

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

*from external supply

Single area system: heating/cooling/DHW

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

*from external supply