SABIANA
ENVIRONMENTAL COMFORT

SkyStar Cassette Fan Coil Units

Innovative and fascinating design, seven different models, high control flexibility, ease of maintenance: the new ***SKYSTAR water cassette*** is the result of significant technical and design research focused on providing an avant-garde product in terms of performance, low noise and control flexibility.

The air diffuser has a very pleasant design, is very innovative and can guarantee excellent air distribution performance, based on extended computer studies and laboratory tests.

The dimensions of the first 4 sizes are designed to fit into 600x600 mm false-ceiling modules, while the larger sizes, measuring 800x800 mm, stand out for their low noise and the excellent price-performance ratio.

Each model can be supplied with a single coil (two pipe system) and electric heater, or with two coils (four pipe system). The fresh air can be mixed with the ambient air and distributed into separate rooms. All the sizes have 6 speed fans, with 3 speeds connected electrically, so as to extend operating flexibility even during the commissioning of the installation.

The condensate drain pump is very silent and has a maximum discharge head of 650 mm.

As well as the traditional temperature and speed control systems, the fan speed can be varied automatically, multiple units can be managed from just one control panel, and the control board for each unit can be installed in a remote position as to simplify service operations. In addition, each unit can be managed by remote control. The units can also be controlled by the most common building management and supervision systems. Finally, various types of valves are available (two and three way, 24 V, modulating 0-10 V).

Main components:

- 7 models with one heat exchanger (2 pipe units), 11 models with two heat exchangers (4 pipe units), 6 models with one cooling heat exchanger and one electric heat exchanger, either with control panel or remote infra-red control.
- Intake grills, frame and adjustable air distribution louvers on each side, made from ABS RAL 9003 (white colour), or on demand, other colours.
- Casing made of galvanized steel with inside thermal insulation (closed cell polyethelene 10 mm thick) and outside anti-condensate lining.
- Control panel made of an external box with the control electronic board with an easily accessible terminal board.
- The fan assembly mounted on anti-vibrating supports is extremely quiet. The single air inlet radial fan is connected to a 6 speed electric motor with single phase 230V/50Hz supply, class B insulation and integrated Klixon thermal contact for motor protection. The units are supplied with 3 standard speeds connected and it is possible to change them on site if necessary.
- Heat exchanger made of copper tubes and aluminium fins bonded onto the tubes for maximum transfer contact. The batteries are with 2 or 3 rows for the 2 pipe models (2 rows for SK 12 and SK 42; 3 rows for SK 22, SK 32, SK 52, SK 62) and 2+1 rows for the 4 pipe models (the heating row is on the inside of the battery).
- High density ABS polystyrene foam condensate collection tray, shaped in order to optimize the air diffusion, fire retardant rating B2 to DIN 4102.
- Synthetic washable air filter, easily removable.
- Float switch centrifugal pump with 650 mm of maximum head, integral with the unit and wired to the control panel on the outside of the casing.
- Two or three way valves for ON/OFF operation, with pipe mounting kit and thermostatic actuator.

Certifications

EUROVENT CERTIFIED PERFORMANCE

2 pipe units

The following standard rating conditions are used:

COOLING

Entering air temperature: +27°C dry bulb +19°C wet bulb
Water temperature: +7/12°C

HEATING

Entering air temperature: +20°C
Water temperature: +50°C
water flow rate as for the cooling conditions

MODEL		SK 02			SK 12			SK 22			SK 32		
Speed		1	2	3	1	2	3	1	2	3	1	2	3
Air flow	m³/h	310	420	610	310	420	520	320	500	710	430	610	880
Cooling total emission	kW	1,27	1,63	1,98	1,84	2,34	2,68	2,25	3,34	4,33	2,94	3,88	5,02
Cooling sensible emission	kW	1,01	1,32	1,64	1,35	1,75	2,04	1,57	2,39	3,18	2,08	2,81	3,74
Heating	kW	1,62	2,12	2,64	2,22	2,90	3,35	2,56	3,93	5,23	3,43	4,63	6,17
Water flow	l/h	219	280	340	316	402	461	387	574	745	506	667	863
Δp Cooling	kPa	4,5	7,0	10,0	4,9	7,6	9,7	4,6	9,4	15,1	7,5	12,4	19,7
Δp Heating	kPa	4,0	6,0	9,0	4,1	6,3	8,2	3,5	7,3	11,4	6,7	11,2	17,7
Sound power	dB(A)	33	40	49	33	40	45	33	45	53	41	49	59
Sound pressure	dB(A)	24	31	40	24	31	36	24	36	44	32	40	50
Fan	W	25	32	57	25	32	44	25	44	68	32	57	90
	A	0,11	0,15	0,27	0,11	0,15	0,20	0,11	0,20	0,32	0,15	0,27	0,45
Water content	l	0,8			1,4			2,1			2,1		
Dimensions	mm	575 x 575 x 275											

MODEL		SK 42			SK 52			SK 62		
Speed		1	2	3	1	2	3	1	2	3
Air flow	m³/h	630	820	1140	710	970	1500	710	1280	1820
Cooling total emission	kW	4,21	4,91	6,16	5,31	6,78	9,51	5,31	8,45	11,1
Cooling sensible emission	kW	3,03	3,58	4,59	3,46	4,48	6,48	3,71	6,09	8,25
Heating	kW	5,12	6,03	7,77	5,61	7,34	10,71	6,13	10,30	14,00
Water flow	l/h	724	845	1060	913	1166	1636	913	1453	1909
Δp Cooling	kPa	10,9	14,3	21,6	9,4	14,7	26,9	9,4	21,8	35,6
Δp Heating	kPa	6,7	9,9	15,1	7,9	12,4	23,0	7,9	18,6	30,6
Sound power	dB(A)	33	40	48	34	40	53	34	48	58
Sound pressure	dB(A)	24	31	39	25	31	44	25	39	49
Fan	W	33	48	77	42	63	120	42	95	170
	A	0,15	0,23	0,36	0,18	0,28	0,53	0,18	0,42	0,74
Water content	l	3,0			4,0			4,0		
Dimensions	mm	820 x 820 x 303								

The sound pressure levels
apply to the reverberant field of 100m³ room and a reverberation time of 0.5 sec.

Certifications

EUROVENT CERTIFIED PERFORMANCE

4 pipe units

The following standard rating conditions are used:

COOLING

Entering air temperature: +27°C dry bulb +19°C wet bulb
Water temperature: +7/12°C

HEATING

Entering air temperature: +20°C
Water temperature: +70/60°C

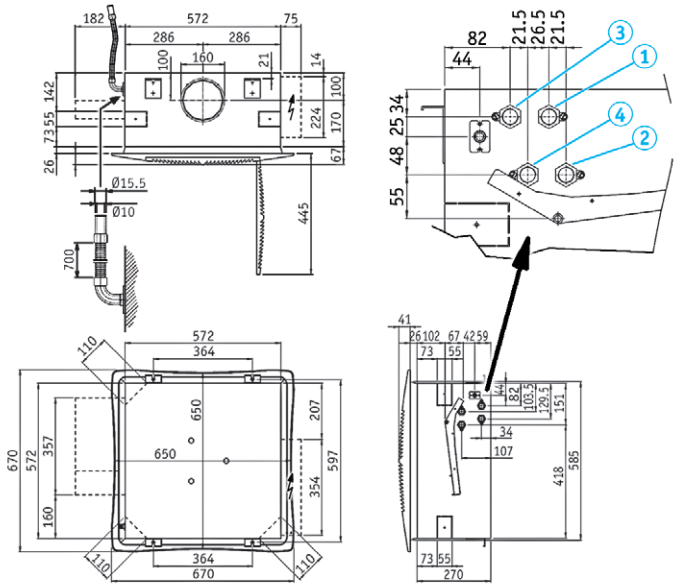
MODEL		SK 04			SK 14			SK 24			SK 26			SK 34			SK 36		
Speed		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Air flow	m³/h	310	420	610	310	420	520	320	500	710	320	500	710	430	610	880	430	610	880
Cooling total emission	kW	1,51	1,96	2,33	1,85	2,36	2,70	1,85	2,65	3,34	2,09	3,06	3,93	2,36	3,02	3,81	2,72	3,53	4,53
Cooling sensible emission	kW	1,15	1,55	1,90	1,34	1,71	1,98	1,34	1,98	2,56	1,49	2,24	2,95	1,75	2,29	2,97	1,97	2,62	3,46
Water flow	l/h	260	337	401	318	406	464	318	456	574	359	526	676	406	519	655	468	607	779
Δp Cooling	kPa	6,0	10,0	13,5	4,6	6,9	8,8	4,6	8,8	13,4	4,0	7,0	10,5	7,2	11,2	17,0	6,0	9,0	14,0
Heating	kW	1,96	2,54	3,03	2,43	3,02	3,46	2,43	3,46	4,40	1,98	2,71	3,35	3,10	3,97	4,95	2,46	3,06	3,79
Water flow	l/h	169	219	261	209	260	298	209	298	378	170	233	288	267	341	426	212	263	326
Δp Heating	kPa	6,5	10,5	14,5	5,7	8,5	10,8	5,7	10,8	16,6	3,6	6,0	9,0	8,8	13,8	20,5	5,0	7,8	11,0
Sound power	dB(A)	33	40	50	33	40	45	33	45	53	33	45	53	41	49	59	41	49	59
Sound pressure	dB(A)	24	31	41	24	31	36	24	36	44	24	36	44	32	40	50	32	40	50
Fan	W	25	32	57	25	32	44	25	44	68	25	44	68	32	57	90	32	57	90
	A	0,11	0,15	0,27	0,11	0,15	0,20	0,11	0,20	0,32	0,11	0,20	0,32	0,15	0,27	0,45	0,15	0,27	0,45
Cooling water content	l		1,0			1,4			1,4			1,7			1,4			1,7	
Heating water content	l		0,6			0,7			0,7			0,5			0,7			0,5	
Dimensioni	mm	575 x 575 x 275																	

MODEL		SK 44			SK 54			SK 56			SK 64			SK 66		
Speed		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Air flow	m³/h	630	820	1140	710	970	1500	710	970	1500	710	1280	1820	710	1280	1820
Cooling total emission	kW	4,14	5,03	6,34	4,52	5,66	7,71	4,99	6,33	8,77	4,52	6,93	8,89	4,99	7,84	10,20
Cooling sensible emission	kW	2,96	3,65	4,69	3,25	4,15	5,83	3,53	4,55	6,49	3,25	5,18	6,84	3,53	5,73	7,68
Water flow	l/h	712	865	1090	777	974	1326	858	1089	1508	777	1192	1529	858	1348	1754
Δp Cooling	kPa	8,8	12,5	18,9	10,3	15,4	26,9	9,0	14,0	25,0	10,3	22,1	34,7	9,0	20,0	32,0
Heating	kW	5,91	7,19	9,10	6,45	8,10	11,00	5,23	6,42	8,56	6,45	9,98	12,70	5,23	7,74	9,80
Water flow	l/h	508	618	783	555	697	946	450	552	736	555	858	1092	450	666	843
Δp Heating	kPa	9,8	14,0	21,4	11,5	17,4	29,9	6,5	9,2	15,3	11,5	25,3	38,8	6,5	13,0	19,5
Sound power	dB(A)	33	40	48	34	40	53	34	40	53	34	48	58	34	48	58
Sound pressure	dB(A)	24	31	39	25	31	44	25	31	44	25	39	49	25	39	49
Fan	W	33	48	77	42	63	120	42	63	120	42	95	170	42	95	170
	A	0,15	0,23	0,36	0,18	0,28	0,53	0,18	0,28	0,53	0,18	0,42	0,74	0,18	0,42	0,74
Cooling water content	l		3,0			3,0			3,6			3,0			3,6	
Heating water content	l		1,4			1,4			1,1			1,4			1,1	
Dimensioni	mm	820 x 820 x 303														

The sound pressure levels apply to the reverberant field of 100m³ room and a reverberation time of 0.5 sec.

Dimensions and weights

SK 02-04 / SK 12-14 / SK 22-24-26 / SK 32-34-36
(Version 600 x 600)



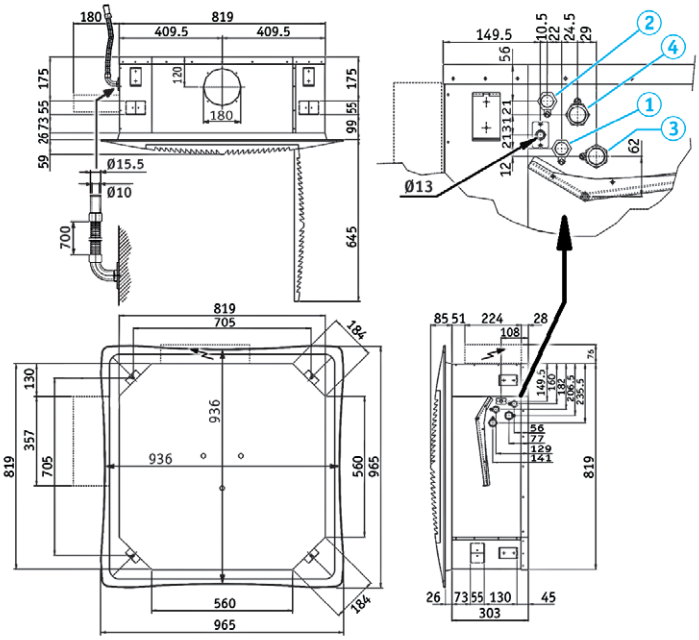
2 PIPE UNITS

- **3.** Flow, heating/cooling 1/2"
- **4.** Return, heating/cooling 1/2"

4 PIPE UNITS

- **1.** Flow, heating 1/2"
- **2.** Return, heating 1/2"
- **3.** Flow, cooling 1/2"
- **4.** Return, cooling 1/2"

SK 42-44 / SK 52-54-56 / SK 62-64-66
(Version 800 x 800)



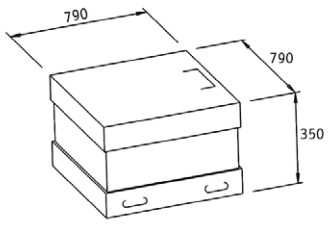
2 PIPE UNITS

- **3.** Flow, heating/cooling 3/4"
- **4.** Return, heating/cooling 3/4"

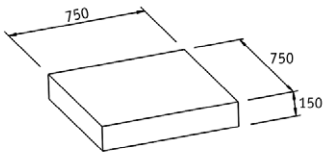
4 PIPE UNITS

- **1.** Flow, heating 1/2"
- **2.** Return, heating 1/2"
- **3.** Flow, cooling 3/4"
- **4.** Return, cooling 3/4"

APPLIANCE



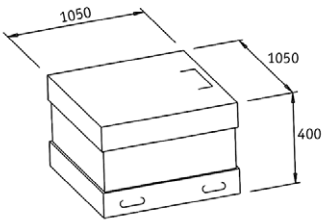
DIFFUSER



MODEL	APPLIANCE Weights packed unit	APPLIANCE Weights unpacked unit
SK 02 - 12	28 kg	22 kg
SK 04 - 14		
SK 22 - 24 - 26	30 kg	24 kg
SK 32 - 34 - 36		

MODEL	DIFFUSER Weights packed unit	DIFFUSER Weights unpacked unit
SK 02 - 12		
SK 04 - 14		
SK 22 - 24 - 26	6 kg	3 kg
SK 32 - 34 - 36		

APPLIANCE



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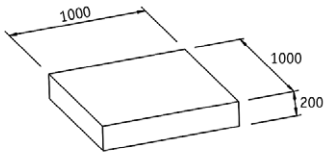


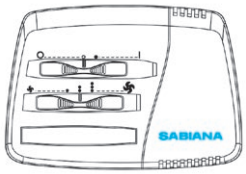
MODEL	APPLIANCE Weights packed unit	APPLIANCE Weights unpacked unit
SK 42	44 kg	36 kg
SK 44		
SK 52 - 54 - 56	47 kg	39 kg
SK 62 - 64 - 66		

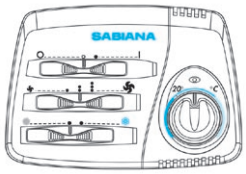
MODEL	DIFFUSER Weights packed unit	DIFFUSER Weights unpacked unit
SK 42		
SK 44		
SK 52 - 54 - 56	10 kg	6 kg
SK 62 - 64 - 66		

Main controls

M0 - 3V

ON-OFF switch
and 3 speed switch
without thermostatic control.



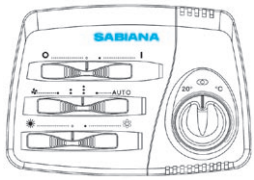


TM0 - T

ON-OFF switch, 3 speed switch and
summer / winter switch.
Electronic room thermostat
for fan or valves control (ON-OFF).

TM0 - T - AU

LCD technology.
ON-OFF switch, 3 speed switch or automatic
speed selection and summer / winter switch.
Electronic room thermostat
for fan or valves control (ON-OFF).



TM0 - DI

LCD technology.
ON-OFF switch, 3 speed switch or automatic
speed selection and summer / winter switch.
Electronic room thermostat
for fan or valves control (ON-OFF).

Infra-red remote control

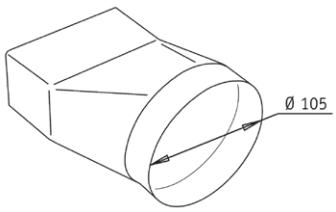
All the SkyStar cassettes can be supplied
with a micro-processor managing system operated
by an infra-red remote control
with liquid crystall display.

PCR-DI control panel

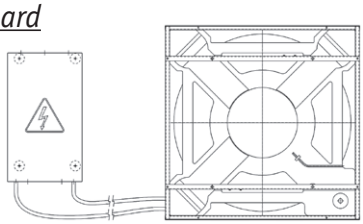
Used to manage a series of cassettes,
(up to a maximum of 60)
from one single control point.
The PCR-DI control communicates
via a serial line with all the units connected,
with the possibility of controlling them
all together or individually.

Main accessories

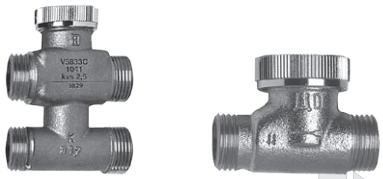
Fresh air connection



Units with remote electronic board



ON-OFF valves with thermoelectric actuator



SkyStar versione MCT

The MCT version has been designed for all environments
where false ceilings are not featured or cannot be constructed.
The cover cabinet fits perfectly to the air intake and outlet diffuser,
maintaining the appealing design that defines the SkyStar series.
The water fittings can be turned to point upwards.
The MCT series includes 6 models, with an installation height of up to 5 m,
thanks to the highly flexible adjustment of the air distribution louvers.
All the technical specifications described on the previous pages remain the same,
while keeping in mind that the MCT series features one heat exchange coil only (two-pipe systems),
without the possibility of primary air or additional electric heater coil.
The MCT version features a special casing delivered in separate packaging; this must only be fitted
after having installed the SkyStar unit and completed the water and electrical connections.

Sabiana s.p.a. via Piave, 53 • 20011 Corbetta • Milano • Italy
phone +39.02.97203.1 r.a. / +39.02.97270429 / +39.02.97270576
fax +39.02.9777282 / +39.02.9772820
www.sabiana.it • info@sabiana.it

SKYSTAR
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