

SRS

90% efficiency air to air
Heat recovery unit

from 1000 to 11500 m³/h



General features

The SRS units are designed and developed for civil, commercial or industrial buildings requiring the air renewal and very high heat recovery efficiency at the same time so that any re-heating system is unnecessary.

This type of unit meets the energy saving and pollution reduction laws and, contemporarily, makes the plants easier both for realization and management.

The series, normal version SRS and thermal break frame version SRS-H, consists of six sizes, to cover 1000 ÷ 11500 m³/h airflow range, with over 90% heat recovery efficiency.

Mechanical features

Unit frame made from double vane extruded aluminium profiles (thermal break type in H version), connected together by fibreglass-reinforced nylon joints.

Standard support base made from continuous closed aluminium profiles and aluminium corner joints endowed with hole for lifting.

Sandwich panels; RAL 9002 pre-painted external sheet metal and internal galvanized sheet metal; 42 mm nominal thickness.

Class 0 mineral wool thermal and acoustic insulation.

Synthetic cell filters, G4 efficiency class on return air intake, compact F7 efficiency class on fresh air intake, removable by side; F7 filter on return air intake also as an option.

Direct driven double inlet forward curved blade fans and electronic motors provided with frequency converter.

Heat recovery section composed of special crossflow and counterflow air-to-air recovery to provide very high efficiency; recovery device removable by side.

Accessories

- > Additional electric heater AEH
- > Water cooling/heating section CCS
- > Roof cover TPR
- > Return F7 compact filter FC7
- > External casing (fresh air side) CU-A
- > External casing (exhaust air side) CU-E
- > Intake damper SKR
- > Flexible connection (fresh air side) GA-A
- > Flexible connection (exhaust air side) GA-E
- > Circular connection (fresh air side) BC-A
- > Circular connection (exhaust air side) BC-E
- > By-pass device BPL
- > Air filter pressure switch PSTD

Control



THE INTERNAL BY-PASS DEVICE "BPL"



EXTREMELY EASY INTERNAL COMPONENTS ACCESS FOR MAINTENANCE



THE DOUBLE INLET FAN-MOTOR WITH FREQUENCY INVERTER



SRS Model		020	040	060	065	080	100
Rated airflow rate	m ³ /h	1800	3600	5400	5400	7200	9000
Airflow rate range	m ³ /h	1000 ÷ 2500	2000 ÷ 4300	3000 ÷ 6300	4000 ÷ 7000	5000 ÷ 8600	6000 ÷ 11500
Rated external static pressure	Pa	370	285	220	445	285	325
Outside noise level	dB(A)	51,0	51,0	53,0	54,0	53,0	55,0

Power supply	230 V – 1 ph – 50 Hz						
Motor power	kW	2 x 0,65	2 x 1,06	4 x 0,65	4 x 1,06	4 x 1,06	6 x 1,06
Max current	A	14,8	16,4	29,6	32,8	32,8	32,8
Motor Protection grade	IP	44	44	44	44	44	44
Inverter Protection grade	IP	55	55	55	55	55	55

Efficiency ⁽¹⁾	Rated	%	90	90	90	90	90	90
Saved power ⁽¹⁾	Rated	kW	14,8	29,6	44,4	44,4	59,2	74,0
Supply air temperature ⁽¹⁾	Rated	°C	17,3	17,3	17,3	17,3	17,3	17,3

⁽¹⁾ Performance valued at the following conditions: return air temperature (exhaust) 20°C ; external air temperature – 7°C

Additional electric heater AEH

Installed power	kW	6,0	12,0	18,0	18,0	24,0	30,0
Power supply	400V 3 ph 50Hz						
Air pressure drop	15 Pa						

Water cooling/heating section CCS

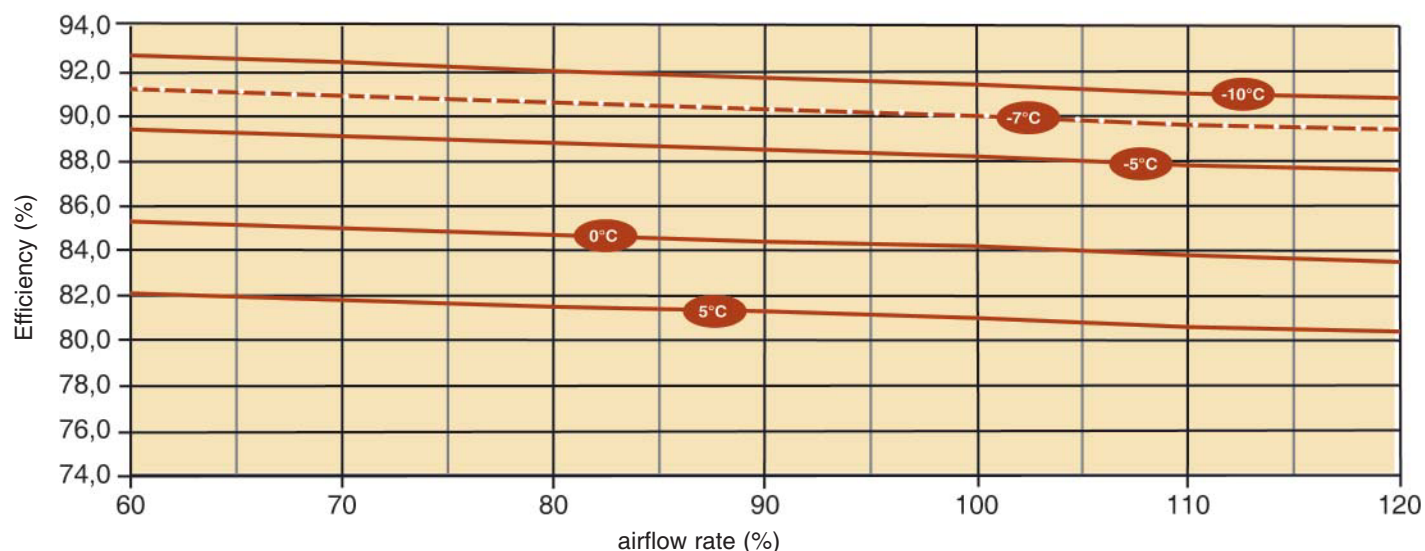
Total cooling capacity ⁽²⁾	kW	12,5	26,8	39,7	39,7	57,2	70,2
Sensible cooling capacity ⁽²⁾	kW	6,5	13,7	21,0	21,0	28,6	36,1
Air pressure drop ⁽²⁾	Pa	133	118	112	112	101	106
Water flow ⁽²⁾	m ³ /h	2,1	4,6	6,8	6,8	9,8	12,1

⁽²⁾ Performance valued at the following conditions: air inlet 27°C 65% RH; water in/out 7/12°C

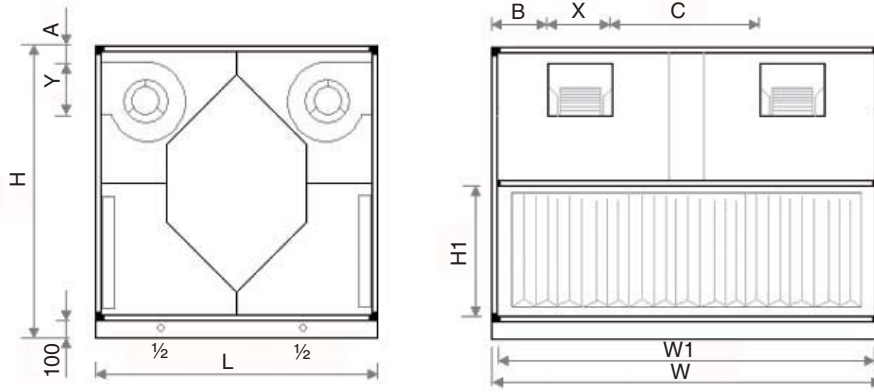
AIRFLOW / EFFICIENCY DIAGRAM

In the chart, there are the performances at different conditions of external air, at different air volume (in percentage in comparison to the nominal air flow)

Room 20°C 50% RH



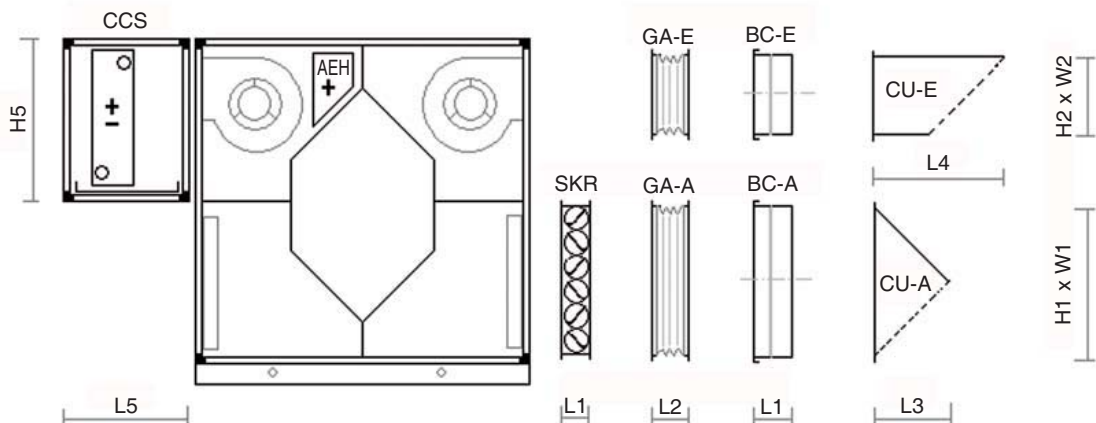
DIMENSIONS



Model		020	040	060	065	080	100
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L	mm	1460	1460	1460	1460	1460	1660
W	mm	640	1090	1590	1590	2196	2296
H	mm	1560	1560	1560	1560	1560	1760
W1	mm	560	1100	1510	1510	216	2216
H1	mm	670	670	670	670	670	770
X	mm	300	335	300	335	335	335
Y	mm	265	295	265	295	295	295
A	mm	120	105	120	105	105	105
B	mm	170	377	170	152	377	323
C	mm	-	-	650	615	771	423
Weight	kg	390	560	930	940	1070	1290

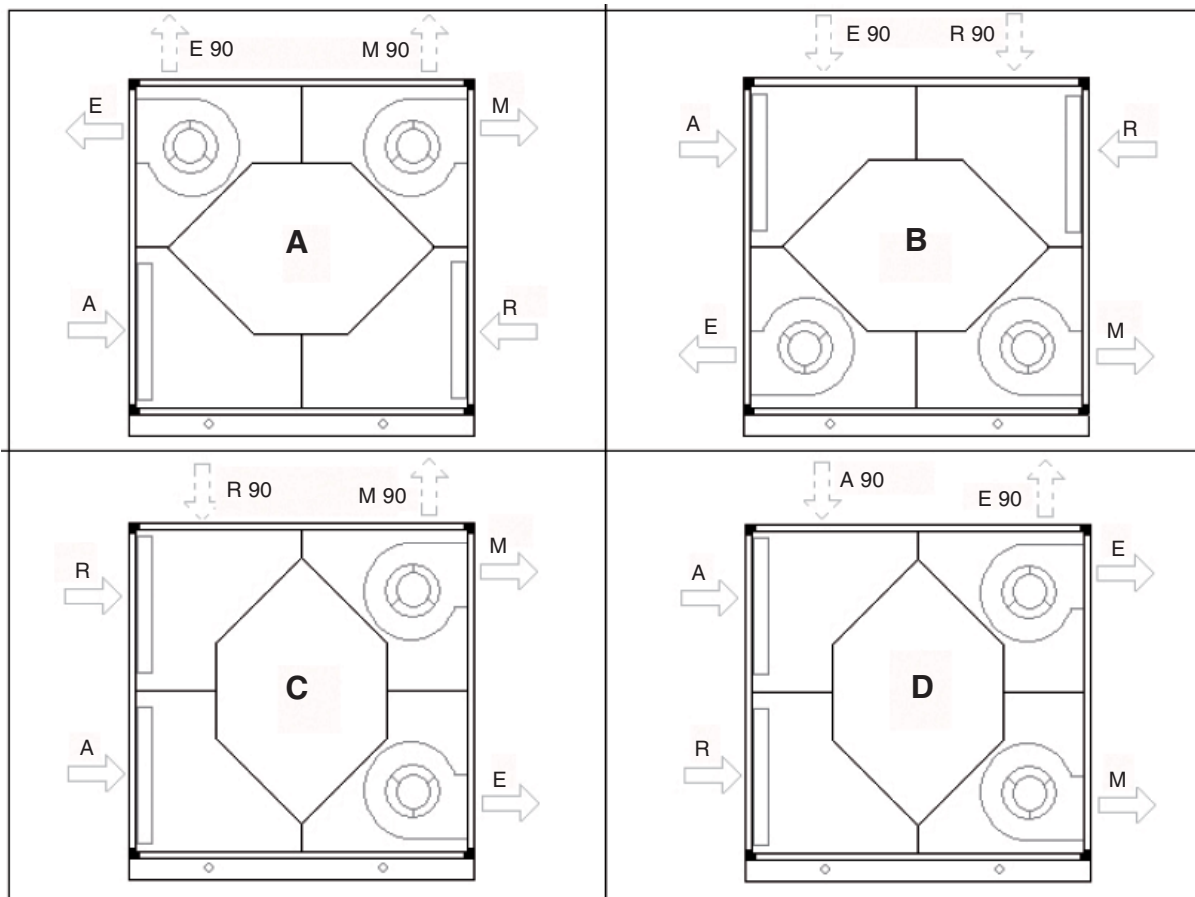
SKR	L1 x H1 x W1 n°	120x600x500 1	120x600x950 1	120x600x500 2	120x600x500 2	120x600x950 2	120x700x1000 2
GA-A	L2 x H1 x W1 n°	150x600x500 1	150x600x950 1	150x600x500 2	150x600x500 2	150x600x950 2	150x700x1000 2
GA-E	L2 x H2 x W2 n°	150x400x400 1	150x400x400 1	150x400x400 2	150x400x400 2	150x400x400 2	150x400x400 3
BC-A	L1 x Ø n°	120x500 1	120x400 2	120x500 2	120x500 2	120x400 4	120x600 3
BC-E	L1 x Ø n°	120x400 1	120x400 1	120x400 2	120x400 2	120x400 2	120x400 3
CU-A	L3 x H1 x W1 n°	425x600x500 1	425x600x950 1	425x600x500 2	425x600x500 2	425x600x950 2	495x700x1000 2
CU-E	L4 x H2 x W2 n°	500x400x400 1	500x400x400 1	500x400x400 2	500x400x400 2	500x400x400 2	500x400x400 3
CCS	L5 x H5	840 x 750	840 x 750	840 x 750	840 x 750	840 x 750	840 x 850



POSSIBLE AIRFLOW DIRECTIONS

Intake and outlet airflow directions can be set according to 4 possible unit configurations (A, B, C or D). For indoor installation also, a further rotation of 90° of fan sections and/or filter sections is possible.

M = supply air R = return air A = outside air E = exhaust air



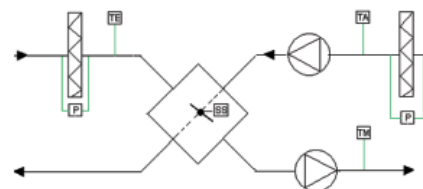
CONTROLS

RQU is the SRS electronic control; it works by two set-points, one for airflow and the other for (T^M) supply temperature; outside and inside air temperatures are always controlled by internal (T^E) and (T^A) temperature sensors.

SRS control modulates the control signal of the two fan sections, independently from each other.

In particular cases, it can allow free-cooling mode by recovery by-pass (as an accessory) or recovery defrost mode (return fan at max speed and supply fan off).

V3M: 3 way valve with electric servocontrol.



AIRFLOW CONTROL

AQS is the ductable CO₂ sensor, it must be connected to the RQU control

KAQ is the Air Quality control system; it includes:
ductable CO₂ sensor
modulating regulator
24V transformer

DPS is a sensor for constant pressure working mode

