

REC PRO 80R

High efficiency Heat Recovery Units
Non residential applications



Comply with ErP Directive 125/2009/CE
and EU Regulation 1253/2014.

Classification: Non Residential Ventilation Unit (NRVU).
Bidirectional Ventilation Unit (BVU).

- 4 sizes
- Airflow from 5.700 to 23.500 m³/h
- Very high efficiency enthalpy rotor heat exchanger

DESCRIPTION

The heat recovery units of the **REC PRO 80 R** series are designed to match the need to equip the buildings with ventilation systems which can combine low energy consumption, high aerualic performance and high indoor air quality.

They can easily be integrated with conventional heating and air-conditioning systems and their construction is optimized for a ducted installation in false ceilings and for an all-seasons operation.

The series is available in 4 sizes with performances ranking from 5.700 to max 23.500 m³/h.

CONSTRUCTION

- Supporting structure in extruded aluminium profiles
- Curtain panels 42 mm thick of sandwich type with special sealing gaskets; exterior finish RAL 9002 and thermal acoustic mineral wool insulation class 0 and high density.
- Filtering sections of F7 efficiency class with soft bags on the outside air circuit and M5 on exhaust air circuit, removable from the side.
- Fan sections with single inlet backward-curved blades plug-fans directly coupled to EC brushless motors.
- High efficiency (>80%) air-to-air type heat recovery system with enthalpy rotor, EUROVENT certified, produced in aluminium alloy with hygroscopic treatment, complete with purge sector and drive belt engine designed for free-cooling management in on/off mode.
- Complete control panel with remote display and microprocessor for temperature control at fixed air flow, based on the operation logics designed to maximize energy savings and environmental comfort, thanks to the modulation of air flow guaranteed by the inverter technology. The unit is designer for RS485 connection to supervision systems based on Modbus RTU protocol.

A RICHIESTA

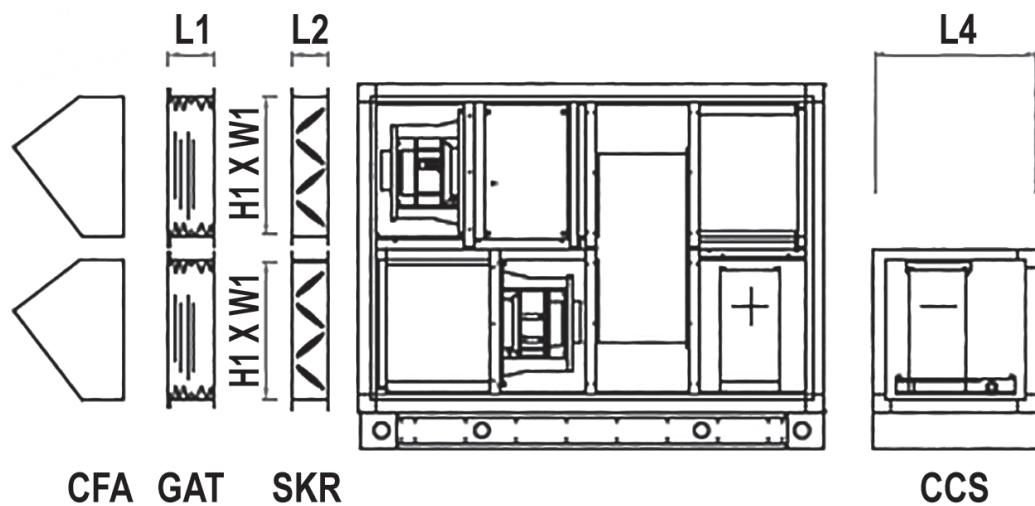
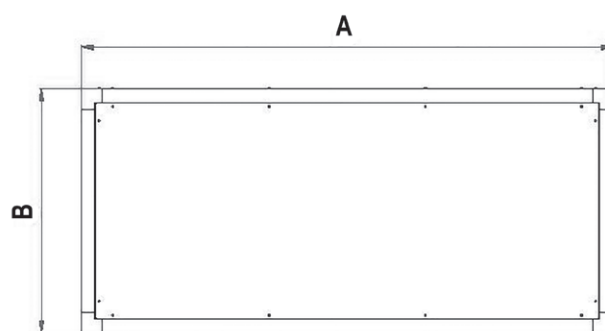
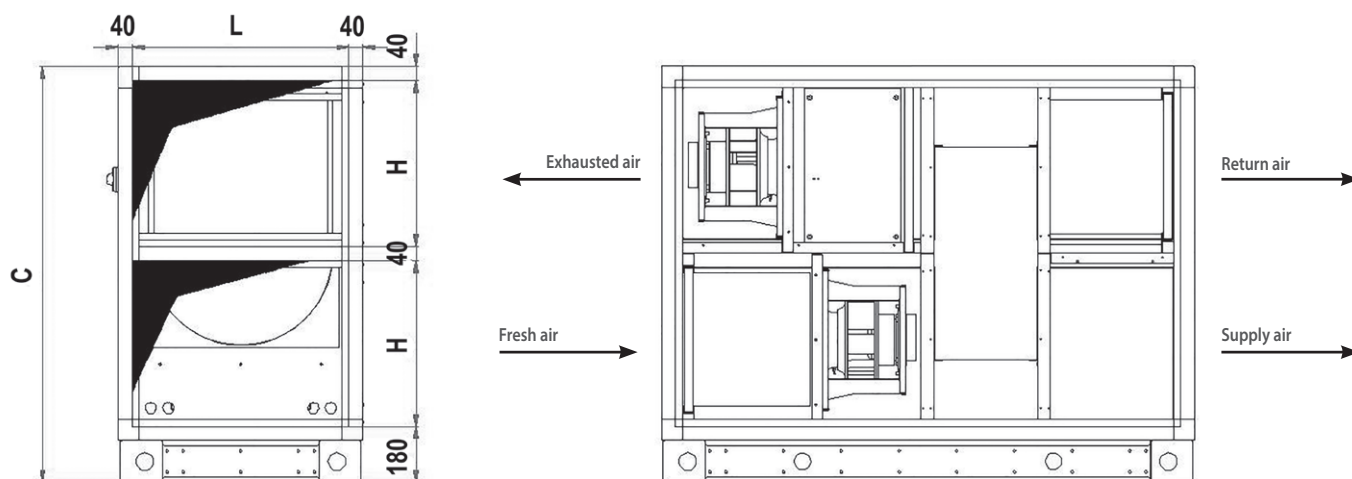
REC 80R can be supplied with the following function components, assembled and connected, to be requested in stage of order:

- **PSTD** - Filters differential pressure switch.
- **DPS** - Differential pressure sensor.
- **AQS** - Ductable CO₂ probe.

RANGE

CODE	MODEL
1RC8000	REC PRO 80 R 5.700
1RC8001	REC PRO 80 R 9.500
1RC8002	REC PRO 80 R 13.500
1RC8003	REC PRO 80 R 19.000

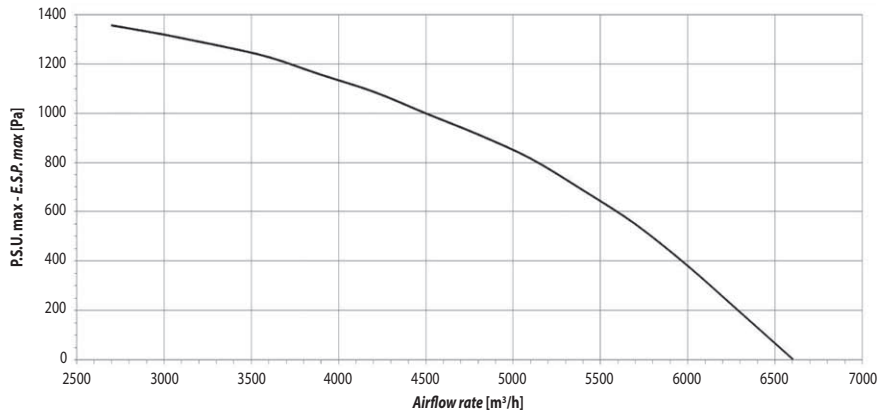
DIMENSIONS (mm)



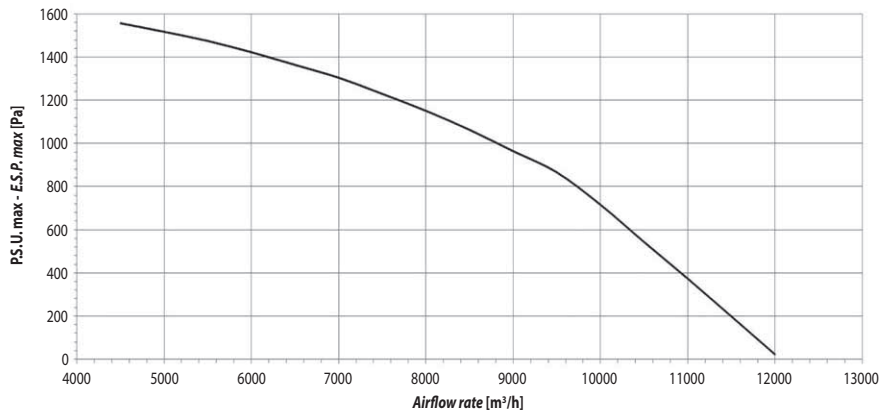
CODE	MODEL	A	B	C	L	H	L1	L2	L4	W1	H1
1RC8000	REC PRO 80 R - 5700	1855	1360	1520	1280	640	150	100	535	1280	620
1RC8001	REC PRO 80 R - 9500	1195+865	1690	1850	1610	805	150	100	535	1610	785
1RC8002	REC PRO 80 R - 13500	1195+865	2020	2180	1940	970	150	100	535	1940	950
1RC8003	REC PRO 80 R - 19000	1195+1030	2020	2510	1940	1135	150	100	535	1940	1115

PERFORMANCE

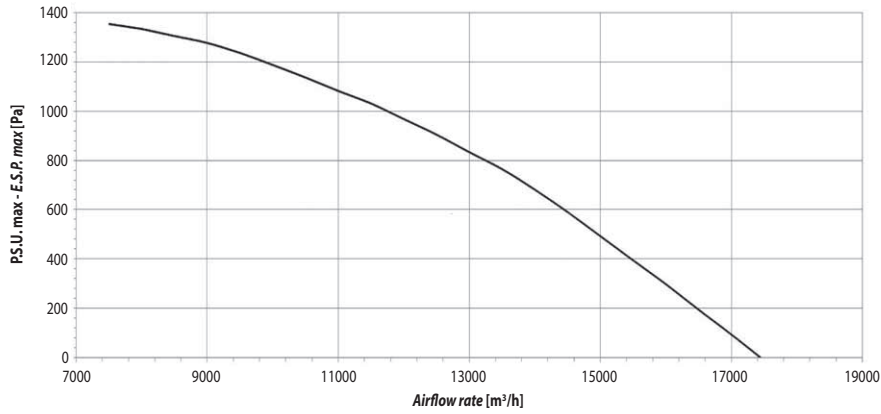
REC PRO 80R - 5700



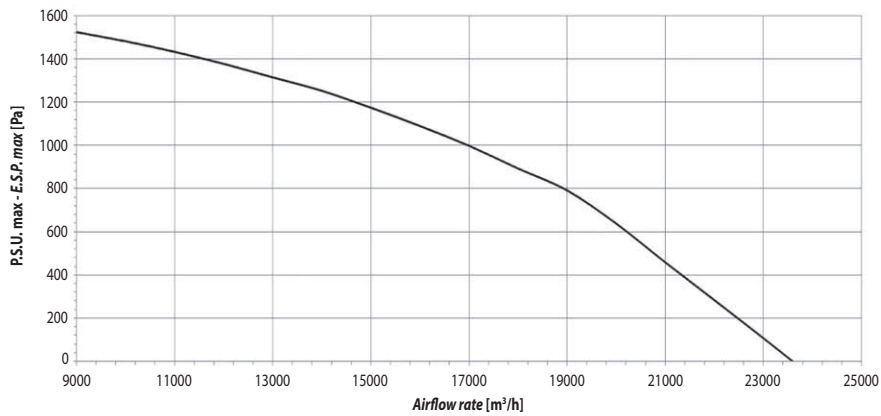
REC PRO 80R - 9500



REC PRO 80R - 13500



REC PRO 80R - 19000



PERFORMANCE AND ErP CONFORMITY

EU Regulation 1253/2014

VENTILAZIONE			50	92	144	205
Airflow rate	Nom	m ³ /h	5700	9500	13500	19000
	Max	m ³ /h	6600	12000	17500	23500
Static pressure	Nom	Pa	250			
	Max		548	868	767	794
Corrente max		A	7,6	16,0	20,5	31,9
Potenza max. assorbita		kW	5,0	10,4	13,2	20,8
Potenza specifica vent.	Nom	W/(m ³ /s)	1139	1099	1120	1326
	Max		1513	2014	1801	2014
Colnformity 2009/125/EC		-	2015			
Protection grade min.		-	IP 54			
Temperature class min.		-	F			
Power supply		V-Ph-Hz	400-3-50			
Recovery efficiency (1)		%	80,2	80,1	80,2	75,1
Recovery capacity (1)		kW	70,6	118	167	220
Supply temperature (1)		°C	15,7	15,6	15,7	14,0
Recovery efficiency (2)		%	80,6	80,6	80,7	76,0
Recovery capacity (2)		kW	14,6	24,3	34,5	45,9
Supply temperature (2)		°C	27,2	27,2	27,2	27,4

(1) External air -10°C 90% RH, ambient air +22°C 50% RH

(2) External air 32°C 50% RH, ambient air 26°C 50% RH

SOUND LEVELS

With reference to the nominal operating conditions, the following table reports the sound power values (SWL) in octave band and total; it also reports, for comparative purposes, the sound pressure level (SPL) at 1m, 5m and 10m in output, input and outside the unit, in conditions of ducted units.

MODEL	Hz	63	125	250	500	1000	2000	4000	8000	TOT	OUTPUT			INPUT			OUTSIDE		
											1 m	5 m	10 m	1 m	5 m	10 m	1 m	5 m	10 m
											dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
80 R - 5700	LwdB(A)	46	54	75	76	74	74	71	70	82	69	55	49	58	49	44	47	38	33
	LpdB(A) 6mt	19	27	48	49	47	47	44	43	55									
80 R - 9500	LwdB(A)	50	58	80	78	80	78	75	83	87	75	61	55	64	55	50	52	43	38
	LpdB(A) 6mt	23	31	53	51	53	51	48	56	61									
80 R - 13500	LwdB(A)	47	56	81	76	78	78	75	75	86	73	59	53	61	53	48	50	42	37
	LpdB(A) 6mt	20	29	54	49	51	51	48	48	59									
80 R - 19000	LwdB(A)	53	61	84	81	83	81	78	86	91	78	64	58	65	57	53	53	45	41
	LpdB(A) 6mt	26	34	57	54	56	54	51	59	64									

REC PRO 80R ACCESSORI

SKE	Electric heater
SKW V33	Water heater with 3-way valve
CCS V33	External module of heating/cooling with water coil and 3-way valve
TPR - TPR CCS	Roof cover - Roof cover for CCS
SKR SSE	Air damper with on/off actuator
MS3 SSE	Mix /discharge chamber
FC6	Additional filter Class M6 on the external air intake
FT7	Sleeve filter Class F7 on internal air intake
FT8	Sleeve filter Class F8 on the external air intake (to pair with FC6)
CFA	External cuff
GAT	Flexible connection
TPR	Roof cover
DPSa	Differential pressure sensor at constant flow
DPSp	Differential pressure sensor at constant pressure

Code	Model	SKE1 Pre	SKE1 Post	SKE2 Pre	SKE2 Post	SKW V33	CCS V33	TPR CCS	SKR SSE	MS3 SSE	MS3 SSE mod.	FC6	FT7	FT8	CFA high	CFA low	GAT	TPR	DPSa	DPSp
		high power	high power	low power	low power															
1RC9020	REC PRO 90 S 4.800	5BT0320	5BT0304	5BT0324	5BT0312	5BT0328	5BT0316	5TE0270	5SE0100	5PL0100	5PL0104	5FL4035	5FL4039	5FL4043	5SU0020	5SU0024	5SU0028	5TE0282	5SU0015	5SU0016
1RC9021	REC PRO 90 S 7.700	5BT0321	5BT0305	5BT0325	5BT0313	5BT0329	5BT0317	5TE0271	5SE0101	5PL0101	5PL0105	5FL4036	5FL4040	5FL4044	5SU0021	5SU0025	5SU0029	5TE0283	5SU0015	5SU0016
1RC9022	REC PRO 90 S 11.400	5BT0322	5BT0306	5BT0326	5BT0314	5BT0330	5BT0318	5TE0272	5SE0102	5PL0102	5PL0106	5FL4037	5FL4041	5FL4045	5SU0022	5SU0026	5SU0030	5TE0284	5SU0015	5SU0016
1RC9023	REC PRO 90 S 13.200	5BT0323	5BT0307	5BT0327	5BT0315	5BT0331	5BT0319	5TE0273	5SE0103	5PL0103	5PL0107	5FL4038	5FL4042	5FL4046	5SU0023	5SU0027	5SU0031	5TE0285	5SU0015	5SU0016

SKE - Electric heater

MODEL		5700	9500	13500	19000
Power	1	28	48	64	80
	2	14	24	32	40
Pressure loss air intake side (1)	1	< 25			
	2	< 17			
Power supply		V-ph-Hz 400 - 3 - 50			

SKE1 - PRE-HEATING - High Power

Code	Description
5BT0320	SKE 1 - pre-heating 80 R 5700
5BT0321	SKE 1 - pre-heating 80 R 9500
5BT0322	SKE 1 - pre-heating 80 R 13500
5BT0323	SKE 1 - pre-heating 80 R 19000

SKE1 - POST-HEATING - High Power

Code	Description
5BT0304	SKE 1 - post-heating 80 R 5700
5BT0305	SKE 1 - post-heating 80 R 9500
5BT0306	SKE 1 - post-heating 80 R 13500
5BT0307	SKE 1 - post-heating 80 R 19000

SKE2 - PRE-HEATING - Low Power

Code	Description
5BT0324	SKE 2 - pre-heating 90S 4800
5BT0325	SKE 2 - pre-heating 90S 7700
5BT0326	SKE 2 - pre-heating 90S 11400
5BT0327	SKE 2 - pre-heating 90S 13200

SKE2 - POST-HEATING - Low Power

Code	Description
5BT0312	SKE 2 - post-heating 90S 4800
5BT0313	SKE 2 - post-heating 90S 7700
5BT0314	SKE 2 - post-heating 90S 11400
5BT0315	SKE 2 - post-heating 90S 13200

REC PRO 80R ACCESSORIES

SKW V33 - Batteria di riscaldamento ad acqua

MODEL		SKW 5700	SKW 9500	SKW 13500	SKW 19000
CODE		5BT0328	5BT0329	5BT0330	5BT0331
Thermal power	kW	34	34	86,1	113,2
Water flow	l/h	5841	5841	14818	19470
Water pressure loss	kPa	39	39	27	28
Air pressure loss	Pa	69	69	51	67

CCS V33 - External module of heating/cooling with water coil and 3 way valve

External module that directly interfaces to the unit output section. It includes a 4-row water battery, suitable for both heating and cooling, a plastic drop separator, a 3-way valve with 3-point servomotor (supplied aside) and a side discharge of 1". For performance consult the following table, referring to the nominal airflow:

MODEL			SKW 5700	SKW 9500	SKW 13500	SKW 19000
CODE			5BT0316	5BT0317	5BT0318	5BT0319
Refrigeration power (1)	total	kW	45,9	80,2	120,1	155,2
	sensible		26,2	44,9	67,2	86,9
Thermal power (2)		kW	47,5	80,6	118,1	158,5
Water flow (1)		l/h	7891	13796	20666	26700
Pressure loss water intake side (1)		kPa	19	23	24	22
Pressure loss air intake side (1)		Pa	216	199	171	210

(1) Air intake 27,5°C 60% RH, water in/out 7/12°C

(2) Air intake 18°C, water in/out 45°/40°C

TPR / TPR/CCS / TPR/MS3 - Roof cover

TPR	Roof cover for REC 80 R
STE0282	Roof cover for REC 80 R 5700
STE0283	Roof cover for REC 80 R 9500
STE0284	Roof cover for REC 80 R 13500
STE0285	Roof cover for REC 80 R 19000

TPR CCS	Roof cover for CCS
STE0270	Roof cover for CCS - REC 80 R 5700
STE0271	Roof cover for CCS - REC 80 R 9500
STE0272	Roof cover for CCS - REC 80 R 13500
STE0273	Roof cover for CCS - REC 80 R 19000

REC PRO 80R ACCESSORIES

SKW V33 - Water heater

Code	Description
5BT0328	SKW V33 per REC PRO 80 R - 5700
5BT0329	SKW V33 per REC PRO 80 R - 9500
5BT0330	SKW V33 per REC PRO 80 R - 13500
5BT0331	SKW V33 per REC PRO 80 R - 19000

SKR SSE - Air damper

Code	Description
5SE0100	SKR SSE for REC 80 R 5700
5SE0101	SKR SSE for REC 80 R 9500
5SE0102	SKR SSE for REC 80 R 13500
5SE0103	SKR SSE for REC 80 R 19000

FT7 - Filter class F7

Code	Description
5FL4039	FT7 filter F7 for REC 80 R 5700
5FL4040	FT7 filter F7 for REC 80 R 9500
5FL4041	FT7 filter F7 for REC 80 R 13500
5FL4042	FT7 filter F7 for REC 80 R 19000

MS3 SSE - Mix / Discharge chamber

Code	Description
5PL0100	MS3 SSE 50
5PL0101	MS3 SSE 92
5PL0102	MS3 SSE 144
5PL0103	MS3 SSE 205
5PL0104	MS3 SSEmod 50
5PL0105	MS3 SSEmod 92
5PL0106	MS3 SSEmod 144
5PL0107	MS3 SSEmod 205

FC6 - Compact filter M6

MODEL		80R-5700	80R-9500	80R-13500	80R-19000
Additional pressure drop to the nominal one	Pa	99	104	87	89

Code	Description
5FL4035	FC6 80 R 5700
5FL4036	FC6 80 R 9500
5FL4037	FC6 80 R 13500
5FL4038	FC6 80 R 19000

FT8 - Filter class F8

MODEL		80R-5700	80R-9500	80R-13500	80R-19000
Perdita di carico	Pa	25	26	21	22

Code	Description
5FL4043	FT8 80 R 5700
5FL4044	FT8 80 R 9500
5FL4045	FT8 80 R 13500
5FL4046	FT8 80 R 19000

DPS - Differential pressure sensor

Code	Description
5SU0015	DPSa
5SU0016	DPSp

CFA - External cuff with met

CFA/A - High

Code	Description
5SU0020	CFA/A 80 R 5700
5SU0021	CFA/A 80 R 9500
5SU0022	CFA/A 80 R 13500
5SU0023	CFA/A 80 R 19000

CFA/B - Low

Code	Description
5SU0024	CFA/B 80 R 5700
5SU0025	CFA/B 80 R 9500
5SU0026	CFA/B 80 R 13500
5SU0027	CFA/B 80 R 19000

GAT - Flexible connexion

Code	Description
5SU0028	GAT 80 R 5700
5SU0029	GAT 80 R 9500
5SU0030	GAT 80 R 13500
5SU0031	GAT 80 R 19000