

FLS-FLEX

Heat recovery unit
WITH VERY HIGH EFFICIENCY
HEAT RECOVERY,
from 2,000 to 19,000 m³/h

Ventilation unit designed and built for non-residential applications, enables to combine the need for air renewal with energy savings.

Equipped with very high efficiency aluminium plate heat recovery unit, fans with EC motors and integrated motorised by-pass system for free-cooling operation, on frame with **thermal break profiles and mineral wool insulation**.

The series is divided into four sizes, for air flows ranging from 2,000 to 19,000 m³/h.



ERP 2018
COMPLIANT



PLATES



EFFICIENCY



FANS
EC



PLUG&PLAY



INDOOR
INSTALLATION



OUTDOOR
INSTALLATION

ADVANTAGES

FLS-FLEX range units are now fitted with a frame with thermal break profiles and mineral wool insulation, for better thermal performance. The range complies with ErP 2018 requirements, in a compact structure and able to guarantee a very high energy recovery thanks to the counter-current plate recovery unit, also making start-up easier thanks to the integrated regulation and tested before shipment.

The FLS-FLEX range is now equipped with an external module for summer dehumidification (DHS).

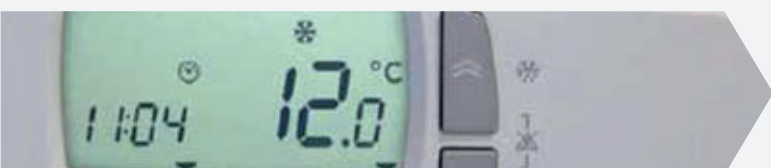
TECHNICAL SPECIFICATIONS AND ACCESSORIES

- Supporting frame in extruded aluminium profiles **with thermal break**
- Sandwich panels th. 42 mm in internally galvanised sheet and pre-painted externally in RAL 9002 finish.
- Non-flammable **thermal and acoustic insulation in high insulation mineral wool**
- Static heat recovery unit with very high efficiency of the counter flow air-to-air type with aluminium exchange plates fitted with additional sealing, integrated with an already motorised by-pass system. Aluminium condensate collection tank with 1" dual side drain.
- Rigid pocket filters with polystyrene frame with polyurethane seal and medium water-repellent fiberglass. Efficiency class ePM10 70% on room return and ePM1 50% on outdoor air intake.
- Centrifugal fans with free-running impeller with backward blades directly coupled to EC technology electric motors.
- Electrical panel complete with remote display and microprocessor to manage the thermoregulation at a fixed point in supply, based on operating logics designed to maximise energy savings and room comfort, by means of airflow modulation guaranteed by inverter technology. The unit is designed for connection via RS485 to supervision systems based on the Modbus RTU protocol.

Summer water dehumidification external section	DHS V33
Sanitation modules with plasma technology and anti-virus filter	KVir-P
Internal electric pre-heater	SKEp
Internal electric post-heater	SKEr
Water heating / cooling module	CSS V33
3 motorised dampers section	MS3
Pair of external motorised dampers	SKR2
External flexible connection	GAT
Pair of silencers	SILm / SILf
Pressure transducer	DPSa / DPSp
CO2 sensor	AQS
Pre-filter	PF
High efficiency filter	FT9
External cap with mesh	CFA A / CFA B
Rain covers	TPR / TPRs / TPRc / TPRm



Very high efficiency heat recovery unit with integrated by-pass



Standard remote control panel



Water dehumidification external section

MODELS AND TECHNICAL DATA

FLS-FLEX		50	92	144	205
Nominal airflow	m³/h	4200	7500	11000	14000
Useful static pressure (1)	Pa	350			
Sound pressure level	dB(A)	82	84	84	86
Max. absorbed power	W	4700	9500	9700	18800
Maximum absorbed current	A	7,5	14,8	15,0	28,5
Power supply	V-ph-Hz	400-3+N-50			
Efficiency ErP 2018	%	79,5	81,8	81,3	80,2
Power recovered	kW	41,4	76,2	109,2	120,6
Conformity range ErP 2018	m³/h	≤ 4400	≤ 8700	≤ 13800	≤ 16000
Operating temperature limit	°C	- 20 ÷ 40			
INTERNAL PRE/POST HEATING ELECTRIC HEATING ELEMENT ACCESSORY - SKE					
Power	kW	16,0	24,0	32,0	40,0
Current	A	23,1	34,7	46,2	57,8
ΔT	°C	11,2	9,4	8,6	8,4
Power supply	V-ph-Hz	400-3-50			
OUTDOOR SECTION ACCESSORY WITH COOLING/HEATING WATER COIL - CCS					
Cooling power delivered (2)	kW	32,53	59,32	92,55	127,48
Heating capacity delivered (3)	kW	40,31	72,49	108,86	140,24
SUMMER WATER DEHUMIDIFICATION EXTERNAL SECTION DHS					
Airflow rate	m³/h	4500	8000	12000	17000
Off air temperature (4)	°C	25,5	25,0	25,6	25,7
Off air relative humidity (4)	%	47	48	46	46

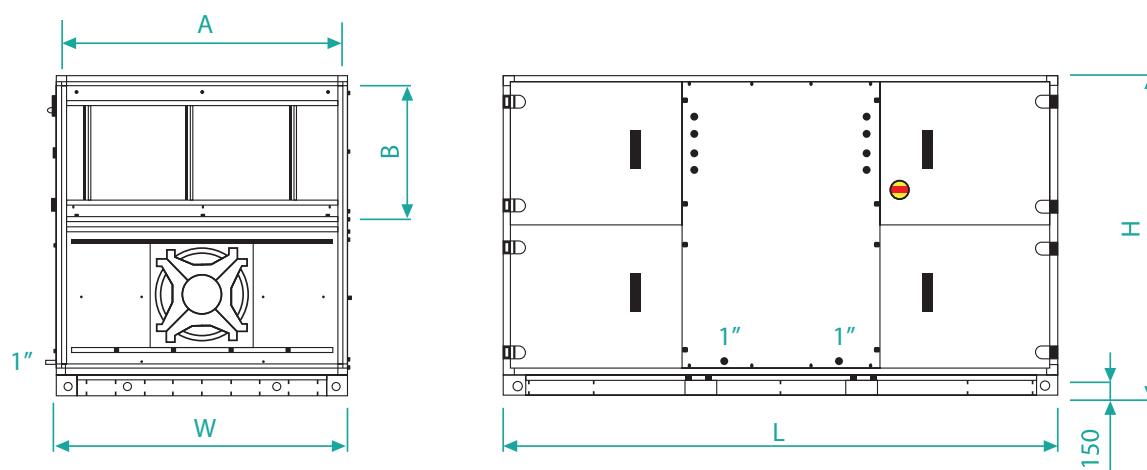
(1) outdoor air/inlet circuit

(2) at nominal airflow, inlet air 28°C 60% RH, in/out water temperature 7/12°C

(3) at nominal airflow, inlet air 15°C, in/out water temperature 50/44°C

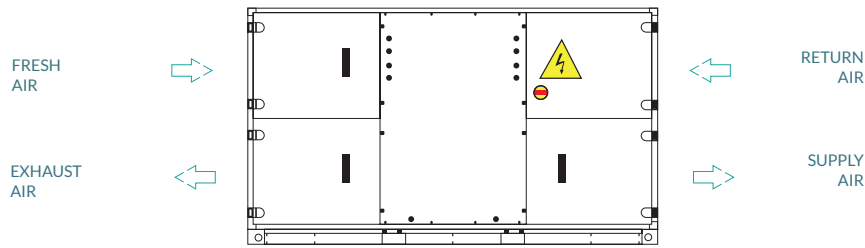
(4) air inlet 29°C 65% RH, in/out cold water temperature 7/12°C, in/out reheating water temperature 40/30°C

DIMENSIONS AND WEIGHTS

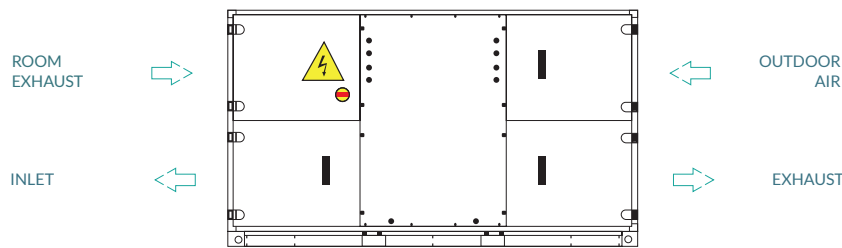


MODEL		50	92	144	205
L	mm	2845	3175	3505	3505
W	mm	1360	1690	2020	2350
H	mm	1550	1880	2210	2540
Weight	kg	800	1000	1250	1600
Aeraulic connection					
A x B	mm	1350 x 680	1680 x 845	2010 x 1010	2340 x 1175

CONFIGURATIONS AND NOISE LEVELS

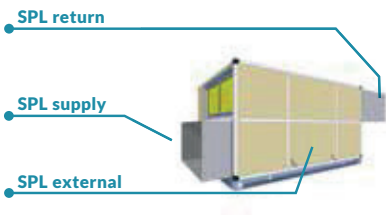


Two air flow configurations are available, a “right” and a “left” one, both referring to the view of the electrical panel and taking into account that the inlet circuit is always located at the lower level:
with the first, the inlet fan is to the right of the electrical panel. The other three aeraulic connections are automatically uniquely defined



with the second, the inlet fan is to the left of the electrical panel. The other three aeraulic connections are automatically uniquely defined

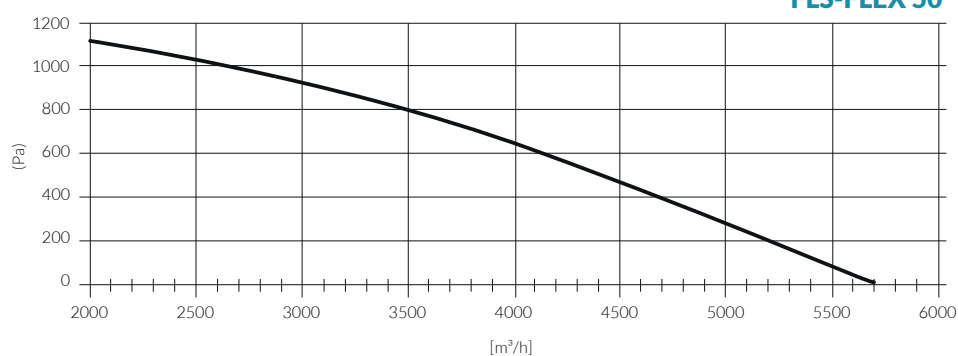
The table shows the sound power values (SWL) in octave and total bands. The sound pressure levels (SPL) at 1m, 5m and 10m in supply, return and outside the unit are also indicated.
All values refer to the operation of the ducted unit at **MAXIMUM** speed and nominal flow rate.



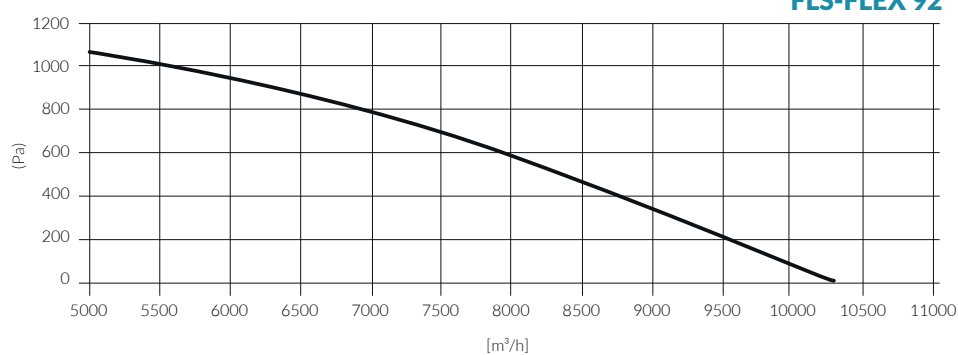
FLS-FLEX	SWL [dB] IN OCTAVE BAND [HZ]								SWL	SPL SUPPLY			SPL RETURN			SPL EXTERNAL		
										1 m	5 m	10 m	1 m	5 m	10 m	1 m	5 m	10 m
	63	125	250	500	1000	2000	4000	8000	dB(A)	dB(A)			dB(A)			dB(A)		
50	68	68	77	75	78	75	71	69	82	74	60	54	68	54	48	54	40	34
92	77	83	79	80	78	78	75	71	84	76	62	56	70	56	50	56	42	36
144	75	83	80	82	79	75	70	69	84	76	62	56	70	56	50	56	42	36
205	78	85	81	82	80	80	77	72	86	78	64	58	72	58	52	58	44	38

AERAULIC PERFORMANCE

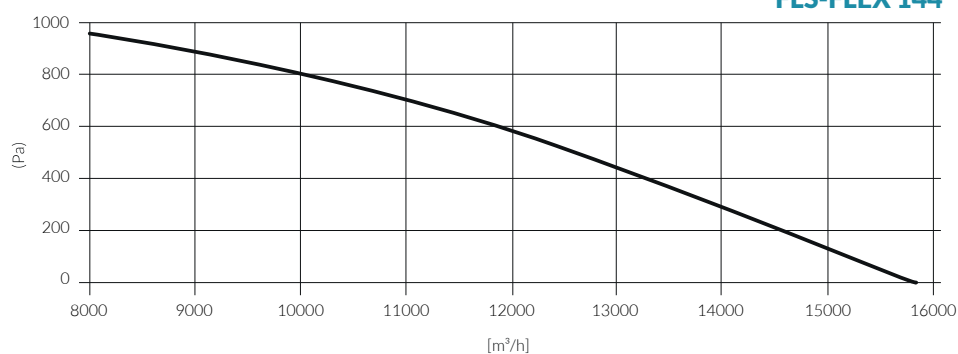
FLS-FLEX 50



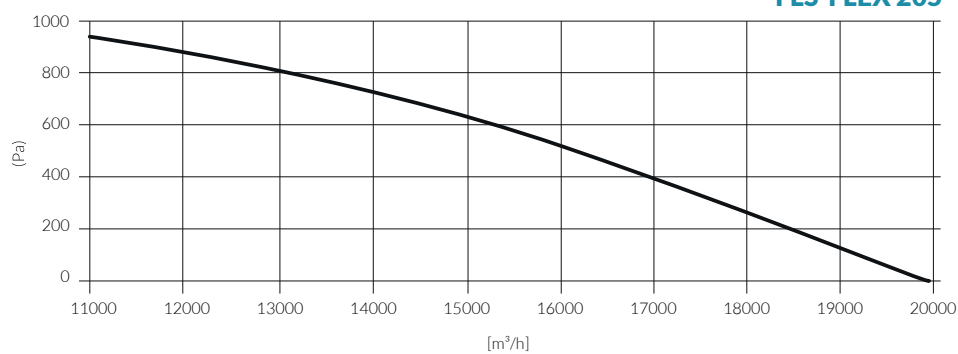
FLS-FLEX 92



FLS-FLEX 144



FLS-FLEX 205



The graphs provide an indication of the useful static pressure (Pa) as the airflow [m³/h] supplied by the base inlet unit varies. Consult the technical bulletin to check the specific data of the unit's aerodynamic performance.