

FLR-FLEX

Heat recovery unit
WITH ENTHALPY ROTARY
RECOVERY UNIT
from 3,000 to 23,000 m³/h

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

Fitted with high efficiency enthalpy rotary heat recovery unit and fans with EC motors, on frame with **thermal break profiles and mineral wool insulation**.

The series is divided into four sizes, for air flows ranging from 3,000 to 23,000 m³/h.



HOSPITALS



THEATERS



OFFICES

COMPLIANT
ERP 2018

ROTARY



EFFICIENCY

FANS
EC

PLUG&PLAY

INDOOR
INSTALLATIONOUTDOOR
INSTALLATION

ADVANTAGES

FLR-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 that makes it ideal for installation inside technical compartments, especially where a building renovation is required.

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

TECHNICAL SPECIFICATIONS AND ACCESSORIES

- Supporting frame in extruded thermal break **aluminium profiles**.
- 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**.
- Enthalpy rotor type high efficiency heat recuperator unit with aluminium exchanger and galvanised steel frame. Transmission to the electric motor by means of an adjustable tension belt. Dual central and circumferential seal for the reduction of air leaks.
- 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
- Recessed type electrical panel with electronic adjustment and remote user interface for complete control of all the key functions and specifically:
 - manual control of the EC fans
 - automatic control of the EC fans (for pressure or air quality)
 - water valve control
 - electric heater management
 - recovery unit defrosting management
 - free-cooling management (by stopping the rotor)
 - mixing/exhaust chamber management
 - post-ventilation
 - weekly programming
 - alarm management
 - remote on/off
 - Remote summer/Winter
 - timed activation via presence sensor
 - fan management via fire alarm digital input
 - BMS via Modbus protocol and RS485 connection

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
Internal water heating coil	SKW V33
External water cooling module	CCS 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 / CFA B
Rain covers	TPR / TPRs / TPRc / TPRm



Extensive inspectibility of all components



High efficiency enthalpy recovery unit



Water dehumidification external section

MODELS AND TECHNICAL DATA

FLR-FLEX		50	92	144	205
Nominal airflow	m³/h	4800	9000	13500	18000
Useful static pressure (1)	Pa	350			
Sound pressure level	dB(A)	84	88	86	90
Max. absorbed power	W	5000	10100	10200	19800
Maximum absorbed current	A	7,9	15,7	16,2	30,0
Power supply	V-ph-Hz	400-3+N-50			
Recovery efficiency Erp 2018	%	80,2	78,9	78,3	78,8
Power recovered	kW	55,6	102,1	151,1	204,2
Conformity range ErP 2018	m³/h	≤ 5250	≤ 9600	≤ 14700	≤ 19950
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			
HEATING WATER INTERNAL COIL ACCESSORY - SKW					
Heating capacity delivered (2)	kW	51,23	91,78	144,08	199,79
OUTDOOR SECTION ACCESSORY WITH COOLING/HEATING WATER COIL - CCS					
Cooling power delivered (3)	kW	35,0	65,27	103,98	147,92
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

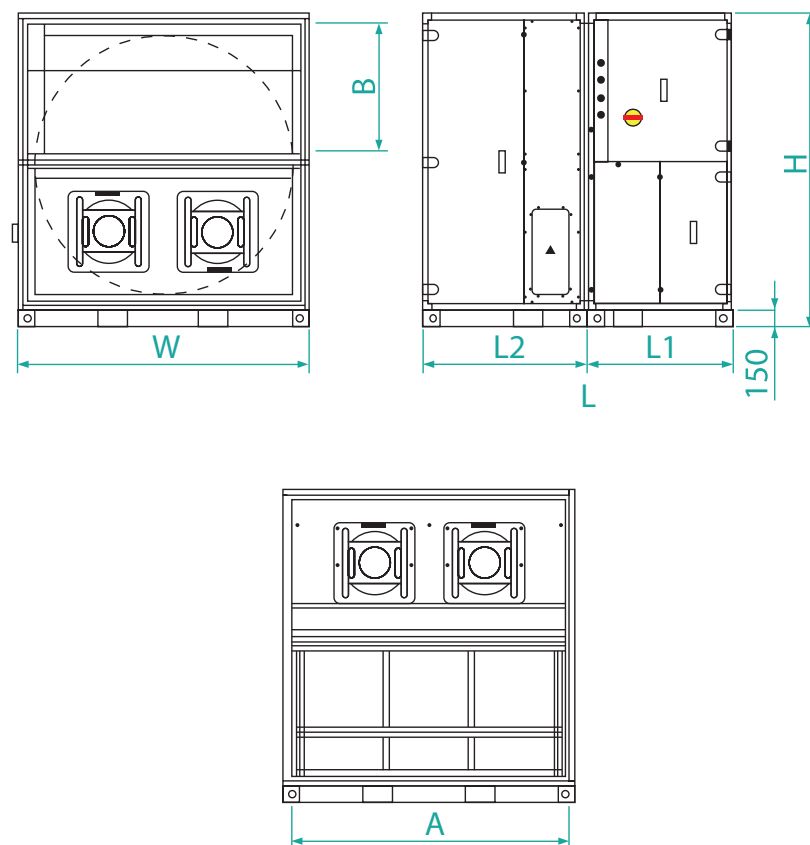
(1) outdoor air/inlet circuit

(2) at nominal airflow, inlet air temperature 15°, in/out water temperature 70/60°C

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

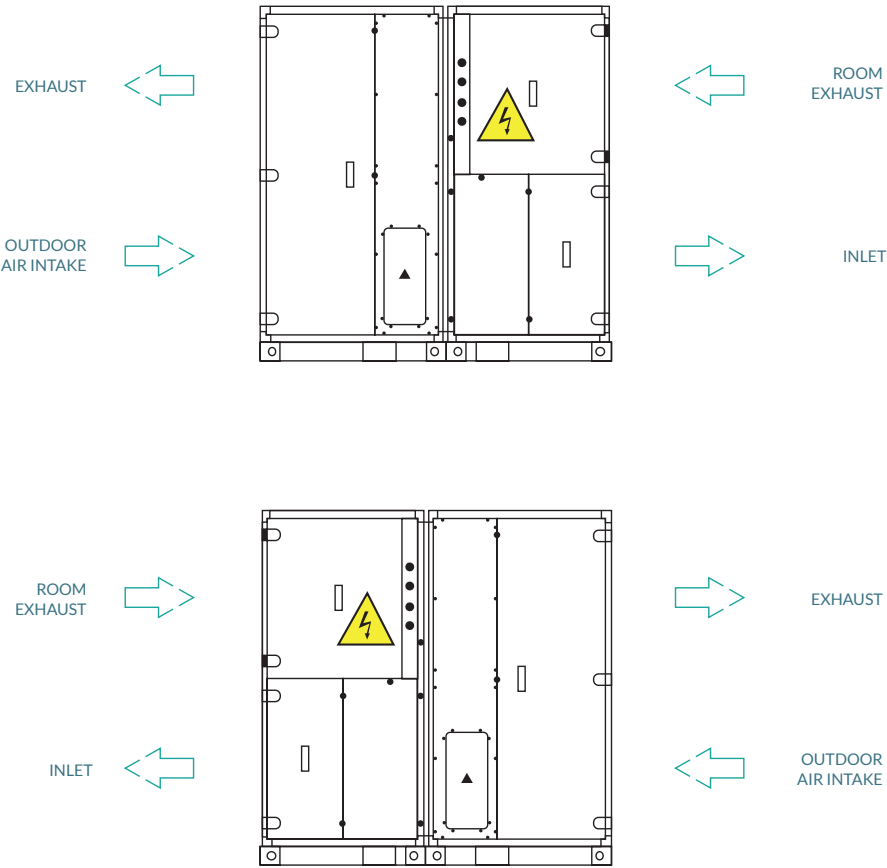
(4) air inlet 29°C 65% RH, in/out cold water temperature 7/12°C, in/out

DIMENSIONS AND WEIGHTS

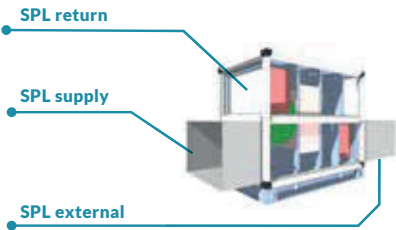


MODEL		50	92	144	205
L	mm	1955	2155	2155	2155
L1	mm	-	1020	1160	1020
L2	mm	-	1135	1135	1135
W	mm	1360	1690	2020	2350
H	mm	1560	1880	2210	2540
Peso (L1+L2)	Kg	750	400+550	500+750	650+1000
Aeraulic connection					
A x B	mm	1350 x 680	1680 x 845	2010 x 1010	2340 x 1175

CONFIGURATIONS AND NOISE LEVELS



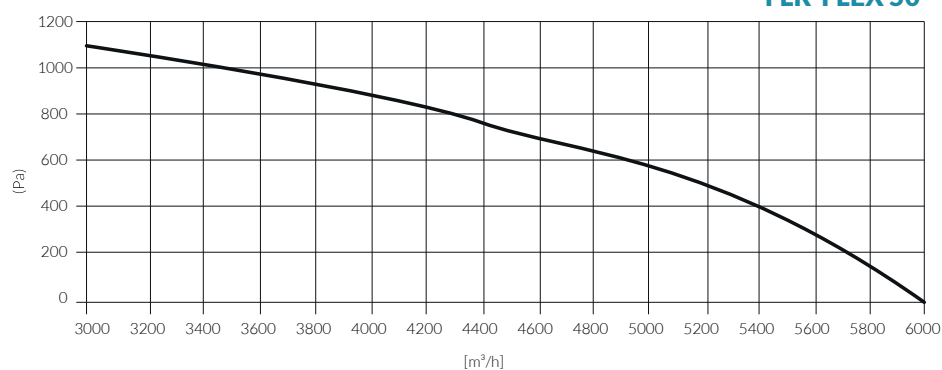
With reference to the nominal operating conditions, the following table shows the sound power values (SWL) in octave and total bands. The sound pressure levels (SPL) at 1m, 5m and 10m in supply, return and outside the unit are indicated.



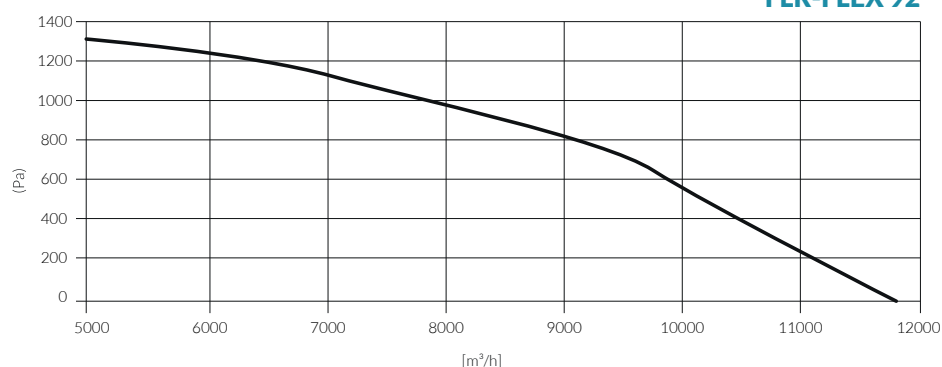
FLR-FLEX	SWL [dB] IN OCTAVE BAND [HZ]								SWL	SPL SUPPLY			SPL RETURN			SPL EXTERNAL		
										1 m	5 m	10 m	1 m	5 m	10 m	1 m	5 m	10 m
	63	125	250	500	1000	2000	4000	8000	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
50	70	70	80	77	80	77	73	73	84	76	62	56	70	56	50	56	42	36
92	82	85	85	84	81	82	78	77	88	80	66	60	74	60	54	60	46	40
144	79	81	86	84	82	77	74	76	86	78	64	58	72	58	52	58	44	38
205	84	87	87	86	83	84	80	79	90	82	68	62	76	62	56	62	48	42

AERAULIC PERFORMANCE

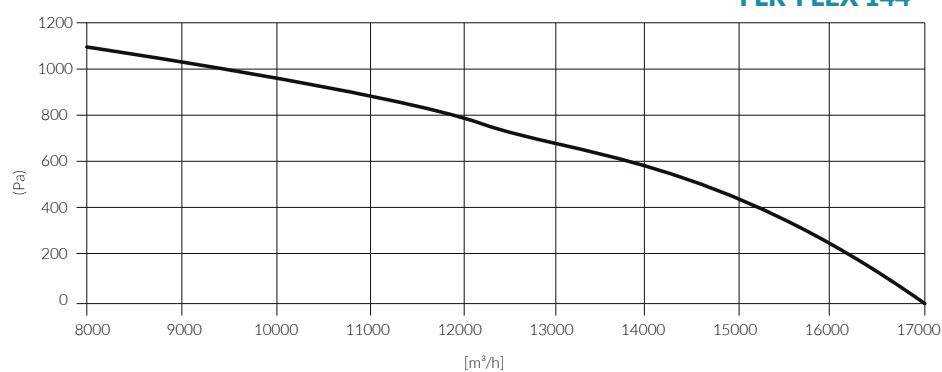
FLR-FLEX 50



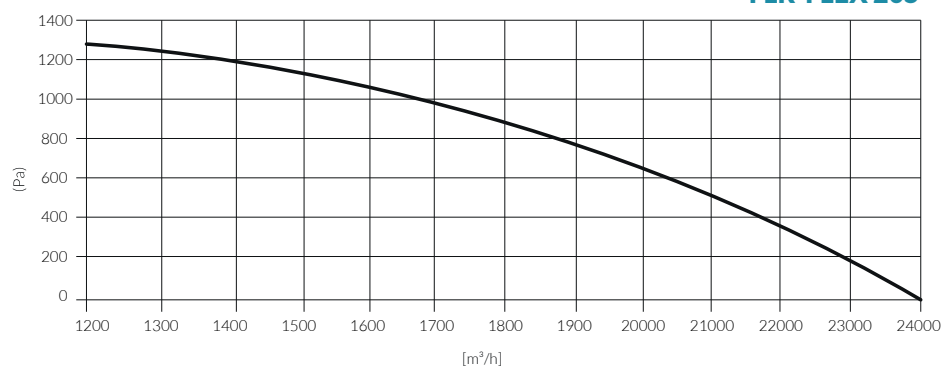
FLR-FLEX 92



FLR-FLEX 144



FLR-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.