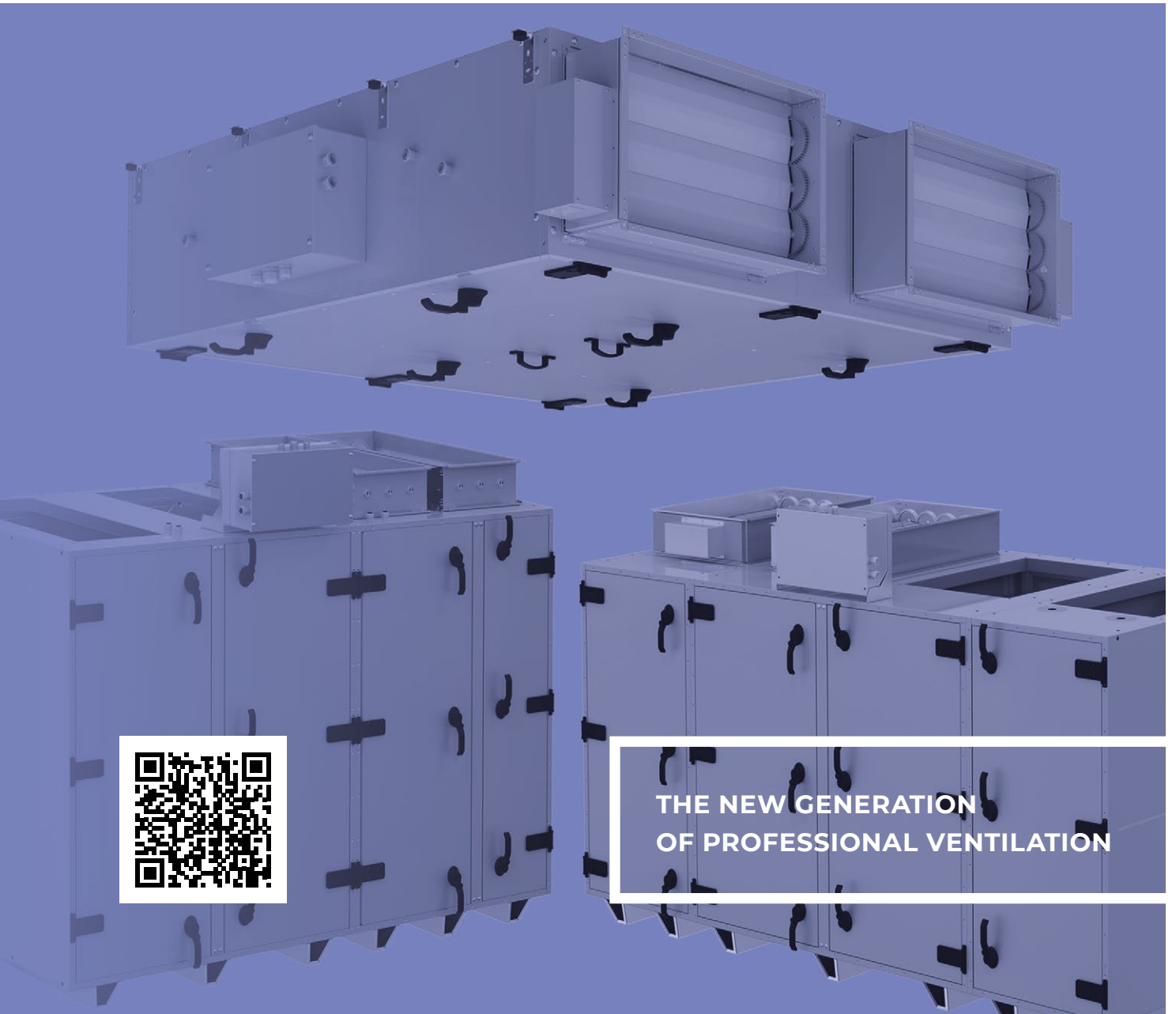


COMPACT UNITS

BLAUAIR BLS



THE NEW GENERATION
OF PROFESSIONAL VENTILATION

COMPACT UNITS

BLAUAIR BLS

THE NEW GENERATION OF COMPACT COMMERCIAL AIR HANDLING UNITS



800 – 9000 m³/h

The **BLS Compact** series of air handling units provides a cost-efficient and space-optimized solution, available in multiple sizes to accommodate a wide range of airflow requirements.

The suspended version enables easy integration into ceiling voids, even in confined spaces.

Vertical duct connection allows optimization of air duct arrangement.

The compact design, along with dividing larger units into sections, facilitates easy transportation to the installation site.

The Slim version is specifically designed for customers with unique installation depth needs, boasting a total unit depth of only 680 mm for these models.



FEATURES

Air flow capacity: 800 – 9000 m³/h.

Control box mounted on the casing, outside the unit.

Modular frameless casing design with a PVC profile minimizes heat loss and reduces the noise level.

Integrated water and electric heaters in vertical units.

Hygroscopic rotary heat exchanger as an option.

Compact height for ceiling-mounted units (from 400 mm) and optimized width (from 800 mm) for the vertical ones.

Optimized split-up system for units with the bigger capacity.

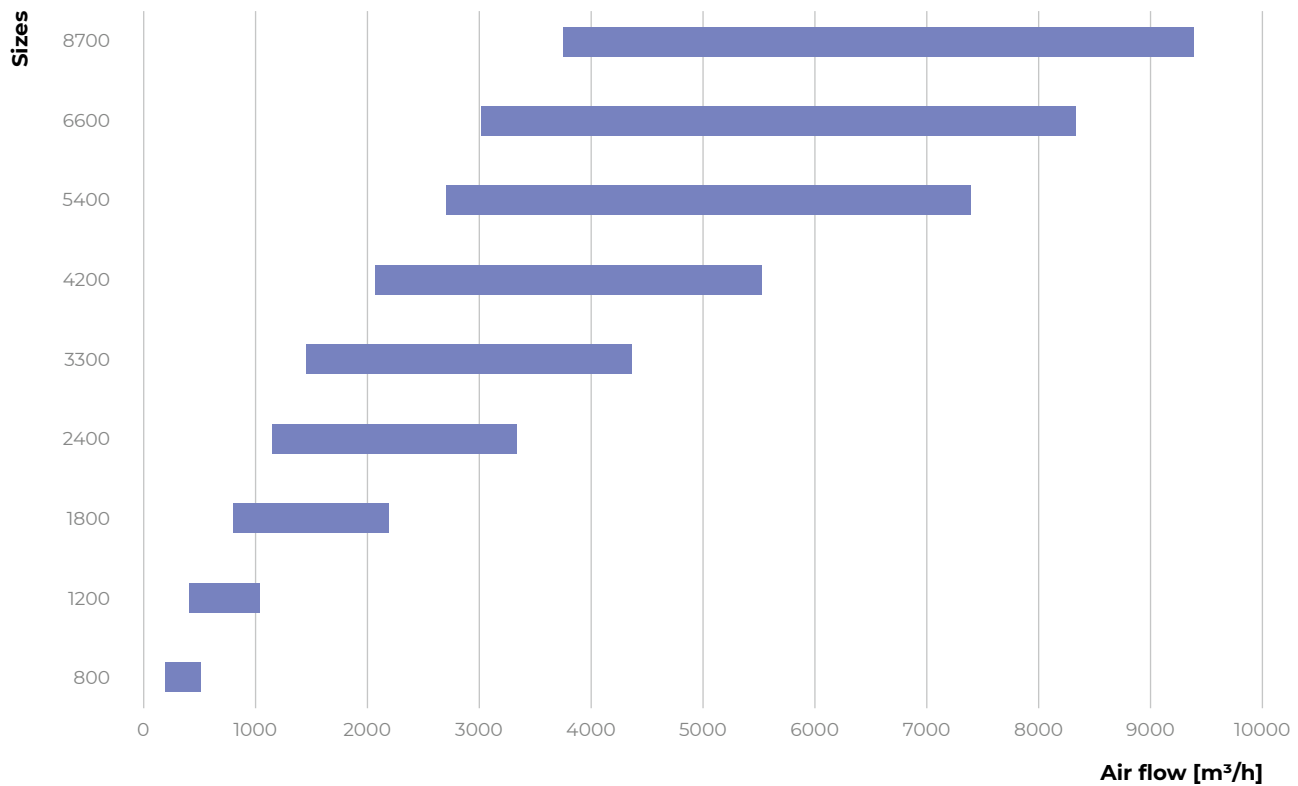
High performance with optimized costs T2 / TB2 / L1 / D1

Technical Specifications According to EN 1886:2009

	D1	D2		D3	
Mechanical Strength (mm × m³)	4	10		> 10	
Casing Air Leakage (l × s⁻¹ × m⁻²)	L1 (f400)	L2 (f400)		L3 (f400)	
	0.15	0.44		1.32	
	L1 (f700)	L2 (f700)		L3 (f700)	
	0.22	0.63		1.90	
Filter Bypass Leakage (k in %)	F9	F8	F7	M6	G1-M5
	0.5	1	2	4	6
Thermal Transmittance (W × m⁻² × K⁻¹)	T1	T2	T3	T4	T5
	U < 0.5	0.5 < U ≤ 1.0	1.0 < U ≤ 1.4	1.4 < U ≤ 2.0	2.0 < U
Thermal Bridging Factor	TB1	TB2	TB3	TB4	TB5
	0.75 < k _b < 1.00	0.60 ≤ k _b < 0.75	0.45 ≤ k _b < 0.60	0.30 ≤ k _b < 0.45	k _b < 0.3



Sizes and capacities of BLS Compact units



Heat exchangers

Heat exchanger efficiency up to 90 % – efficient in energy saving and reducing ventilation system costs.

Air handling units with a sorption rotor have high efficiency and keep comfortable humidity with low risk of frosting.

High-efficiency counter-flow heat exchangers with lower pressure losses. By default, the regenerators are equipped with a bypass damper.

Fans with ultra premium class motors and FanGrids

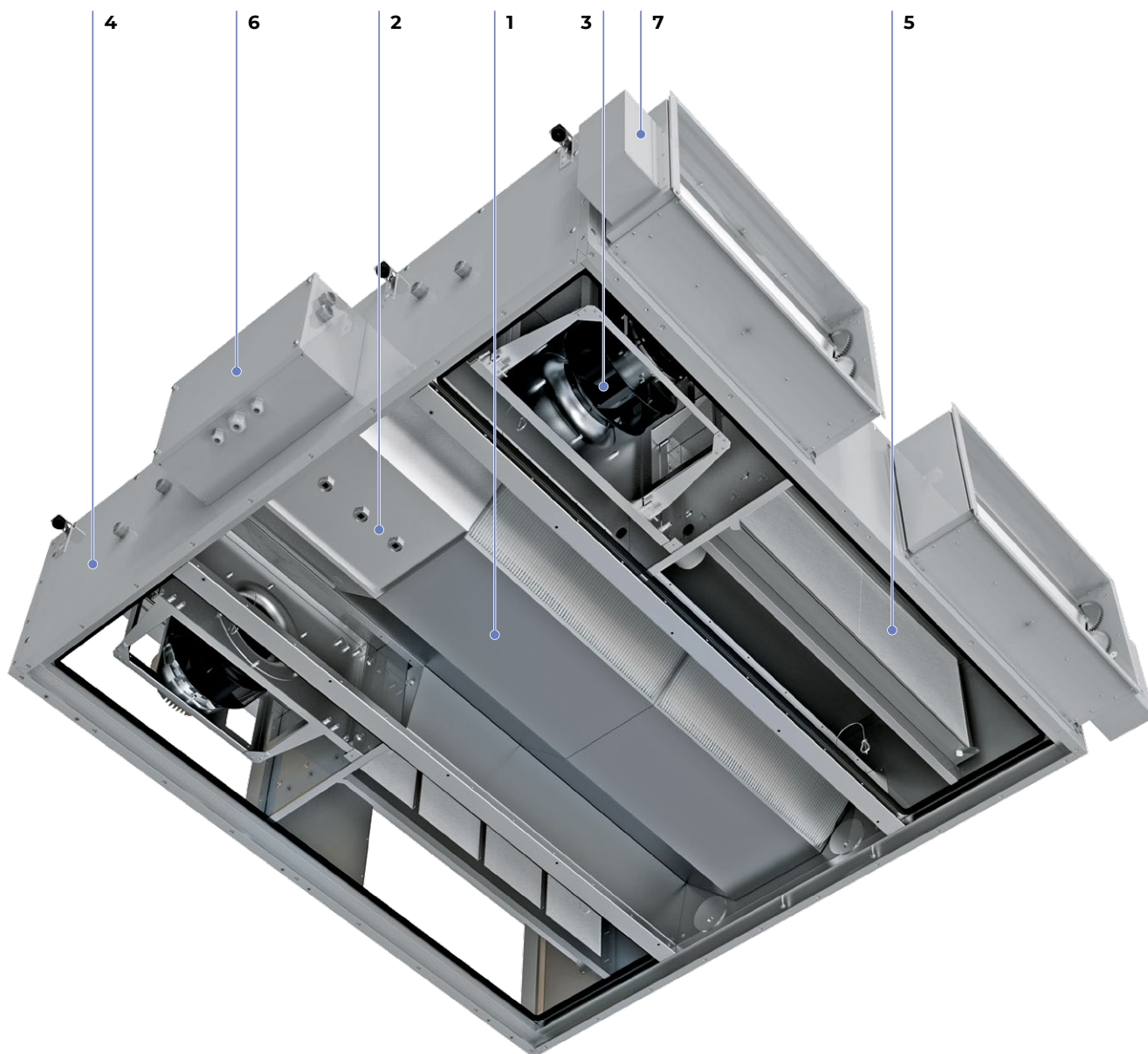
Electronically commutated direct current motors (EC motors) with an external rotor, which are equipped with a backward curved impeller, are used. Such motors with an IE5 class are the most progressive solution for energy saving.

In FanGrids, multiple small fans operate in parallel, rather than having one large fan. This provides redundancy, ensuring fail-safe operation.



Design

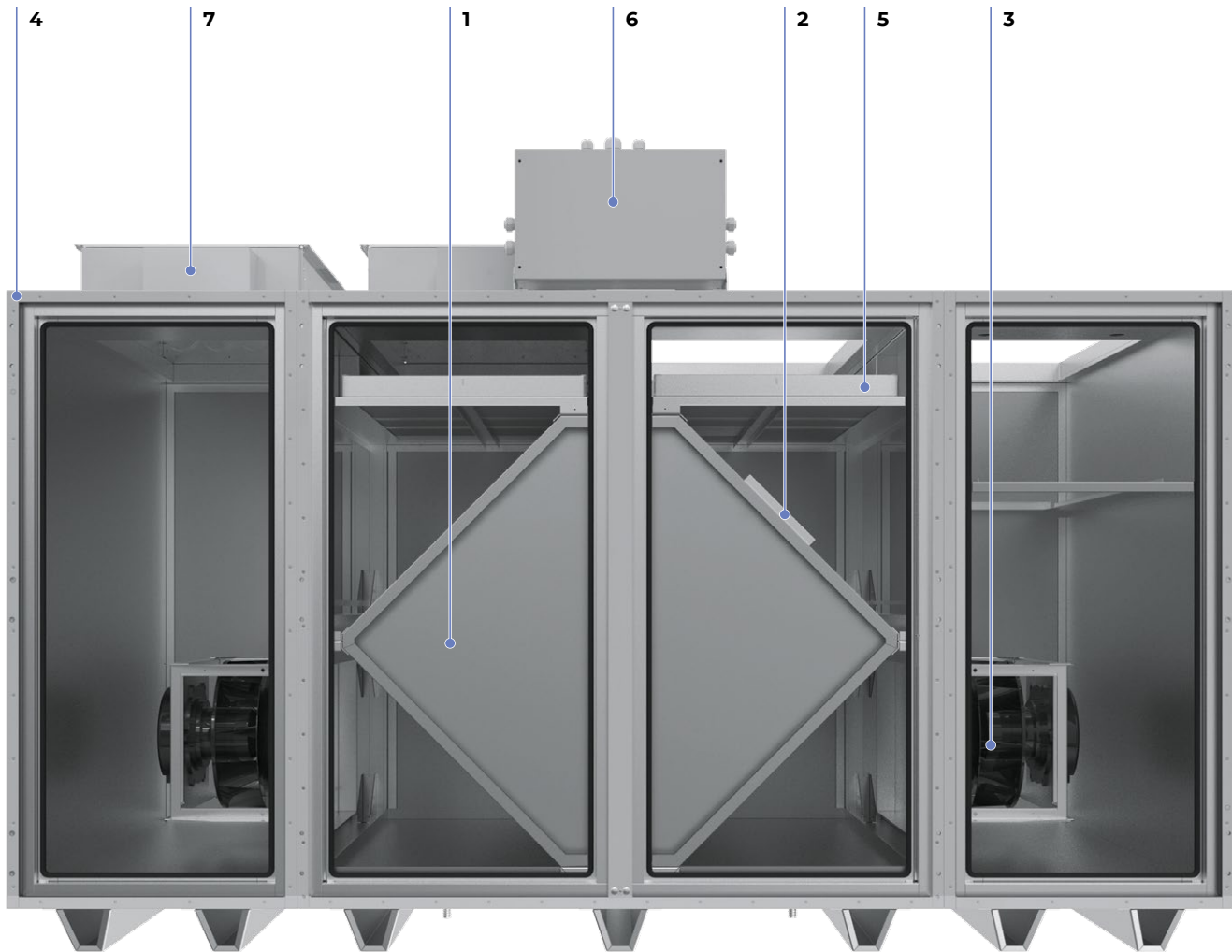
BLS CFP – suspended units



1. Condensing counter-flow heat exchanger.
2. Integrated bypass with Belimo drive.
3. EC type fans with plastic or metal impellers.
4. Casing with 50 mm mineral wool insulation and AlZn skins, optional galvanized coated.
Casing properties: D1(M), L1(M), F9(M), T2, TB2.

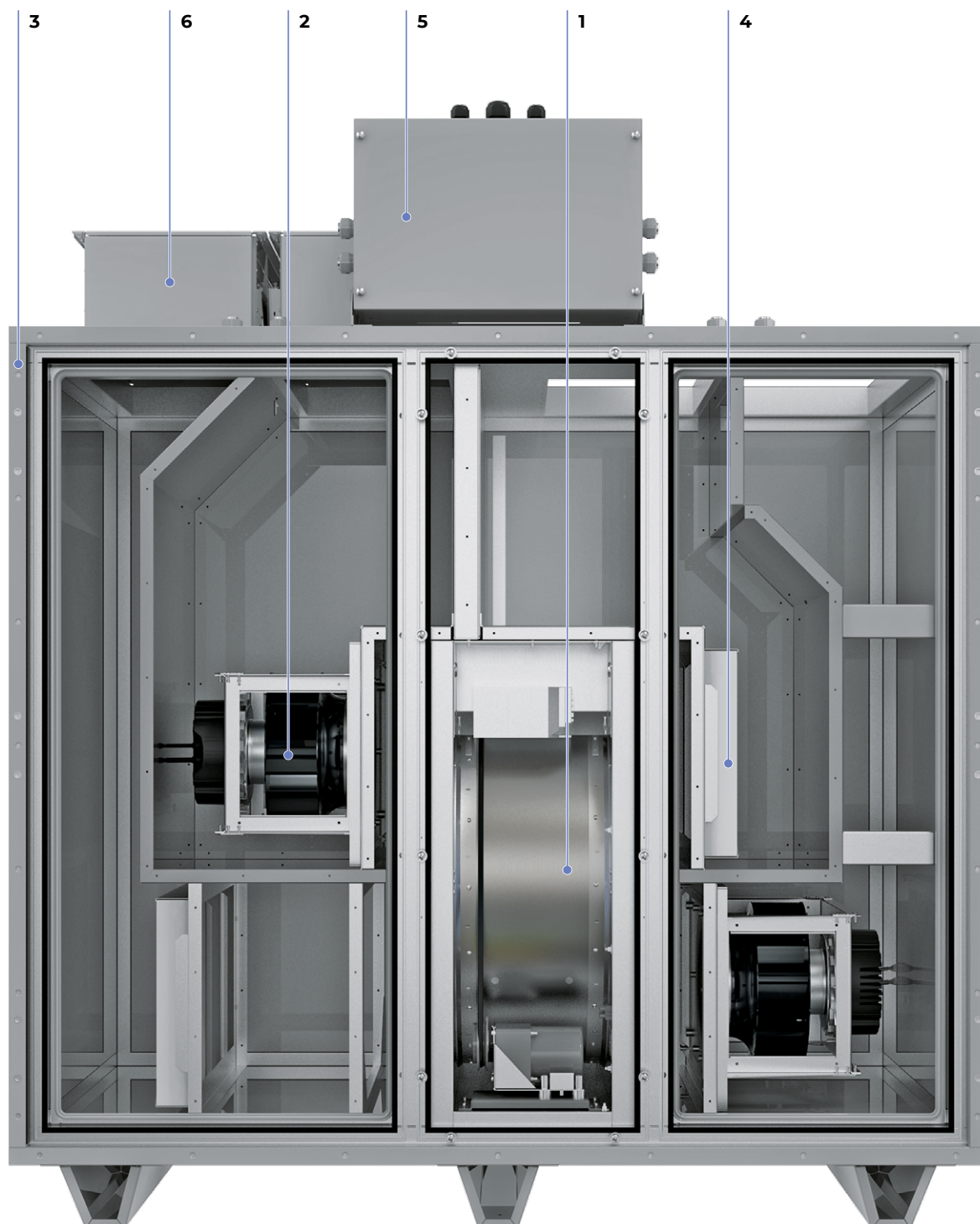
5. Panel filters with ePM2.5 70% F7/ePM10 55% M5 filtration classes.
6. External control cabinet with easy access.
7. Damper with Belimo drive.

BLS CFV – units with vertical connections



- | | |
|--|--|
| <ul style="list-style-type: none"> 1. Condensing counter-flow heat exchanger. 2. Integrated bypass with Belimo drive. 3. EC type fans with plastic or metal impellers. 4. Casing with 50 mm mineral wool insulation and AlZn skins, optional galvanized coated. Casing properites: D1(M), L1(M), F9(M), T2, TB2. | <ul style="list-style-type: none"> 5. Panel filters with ePM2.5 70% F7/ ePM10 55% M5 filtration classes. 6. External control cabinet with easy access. 7. Damper with Belimo drive. |
|--|--|

BLS RV – units with vertical connections



1. Rotary heat exchanger: condensation, sorption or enthalpy with rotation control.
2. EC type fans with plastic or metal impellers.
3. Casing with 50 mm mineral wool insulation and AlZn skins, optional galvanized coated. Casing properties: D1(M), L1(M), F9(M), T2, TB2.
4. Panel filters with ePM2.5 70% F7/ ePM10 55% M5 filtration classes.
5. External control cabinet with easy access.
6. Damper with Belimo drive.



Integrated control system

Plug-and-play unit: full electric wiring.

Additional option – full factory electric wiring includes:

Installation of air damper actuators. Routing the contacts from actuators to the terminal box.

Installation of differential pressure switches in filter sections. Installation of a relay actuation threshold to the necessary level (final pressure drop according to the selection).

Installation of frost protection thermostats in water heating coils sections.

Installation of the VFD in the rotary heat exchanger section.

Installation of bypass damper actuators in the plate heat exchanger section.

Routing all electric contacts in the electric heater sections.

Routing all electric contacts in the fan sections.

Installation and adjustment of all temperature and humidity sensors inside the unit.

All the electric contacts are routed to the junction box, which is mounted in one of the sections.

Plug-and-play option implies the possibility of shipment in separate blocks. In this case, joints and connection boxes are installed between the sections.

Building Management Systems

BlauAir BLS units control system can be easily integrated into building management systems (SCADA, BMS, "smart house").

All the information processed by a programmable logic controller, is easily accessible via standard communication protocols:

- MODBUS TCP;
- LON WORKS.

Any other protocol can be used according to customer's choice and project requirements.



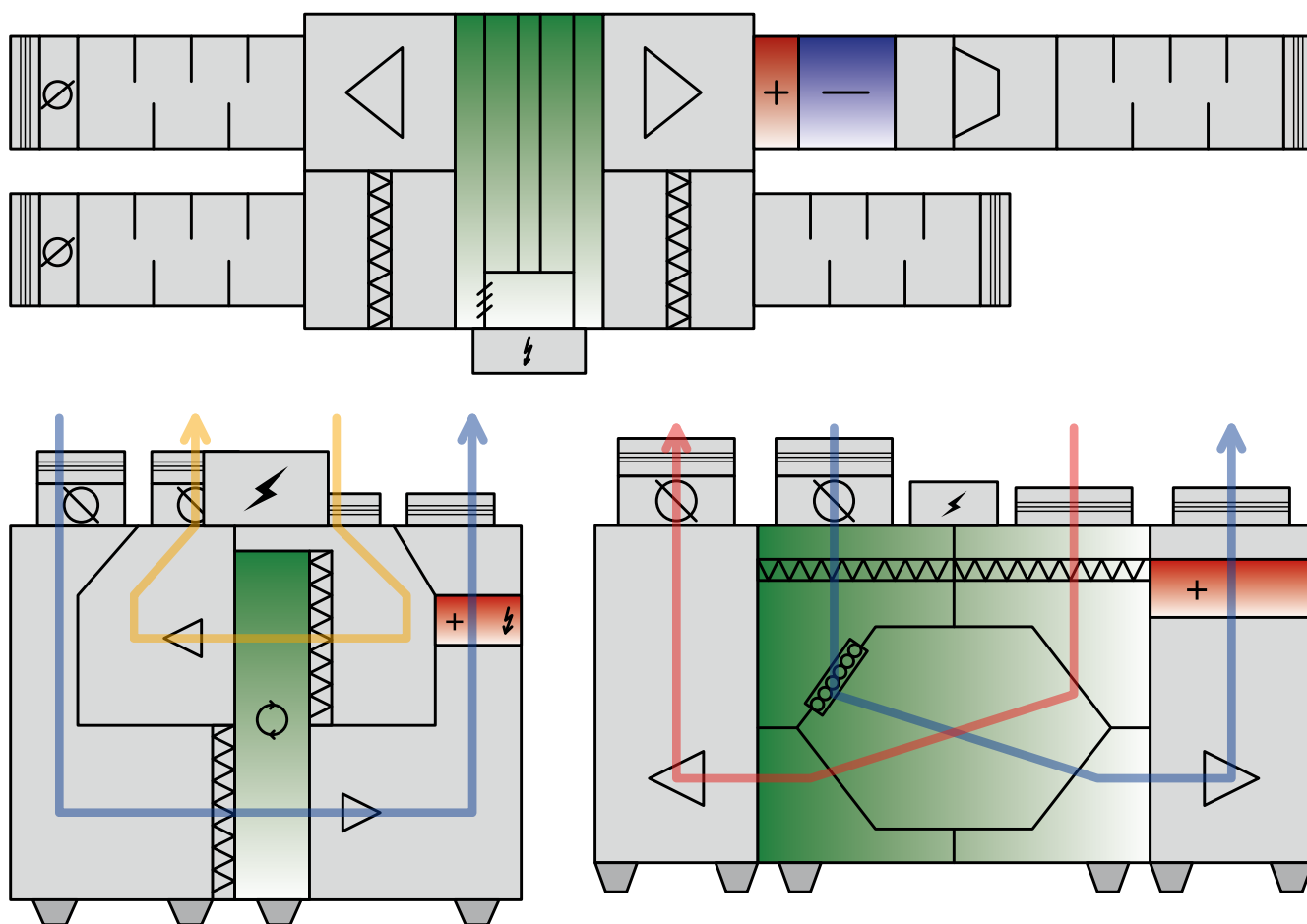
Selection program of BlauAir BLS

Easy selection in all browsers

Data export to PDF and Excel

All selections could be saved in the Dashboard

Share your project with your manager in a few steps



 **BLAUBERG**
SELECTOR 





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