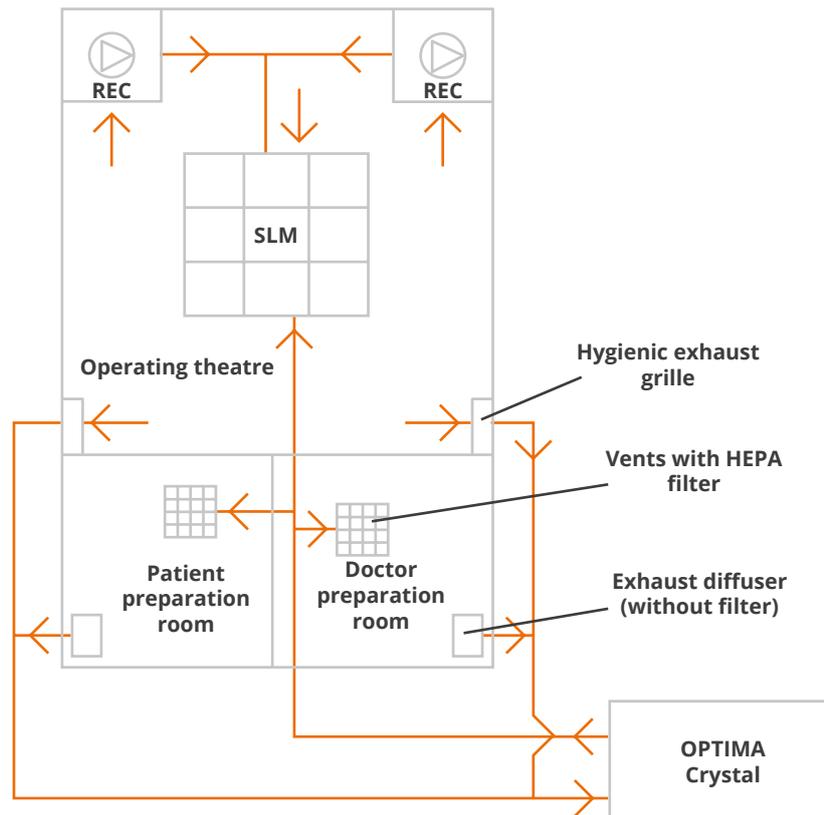




Offer for **hospitals and rooms** with high hygiene requirements.

Layout of operating theatre



Optima Crystal

OPTIMA CRYSTAL unit (hygienic) is designed and intended for buildings with the requirements for „clean rooms”, i.e. hospitals, laboratories, advanced technology production plants, buildings of the pharmaceutical industry, food industry and others...

These devices are characterized with well-designed design solutions, guaranteeing ultra-clean air in an air supply area, free from all kinds of dirt and dust, odorous substances, fungi, mould and micro-organisms.

Functions	Series of types	Recovery type
Ventilation Heating Cooling Humidifying Draining	Efficiency: 1 000 ÷ 65 000 m ³ /h (0,27 ÷ 18,05 m ³ /s)* 11 size types - with individual suitable modifications Supply, exhaust, supply and exhaust units, channel-less units, units of Rooftop type	Cross-flow exchanger Cross-flow counter-current exchanger Rotary exchanger Exchangers with transfer medium Heat pipe Heat pump/refrigerating unit Mixing chamber A combination of these types of recovery

* At the request of the customer, we offer units with higher efficiency.

It is possible to set dimensions, size and functions in such a way to adjust the units to the individual requirements of each building and room, which require ventilation and air conditioning system.

The materials used in the unit are resistant to commonly used disinfectants.

OPTIMA CRYSTAL structure and sealing are suitable for use under varying conditions (climate, adverse) and in increased pressure.

Optima Crystal



Laminar ceiling

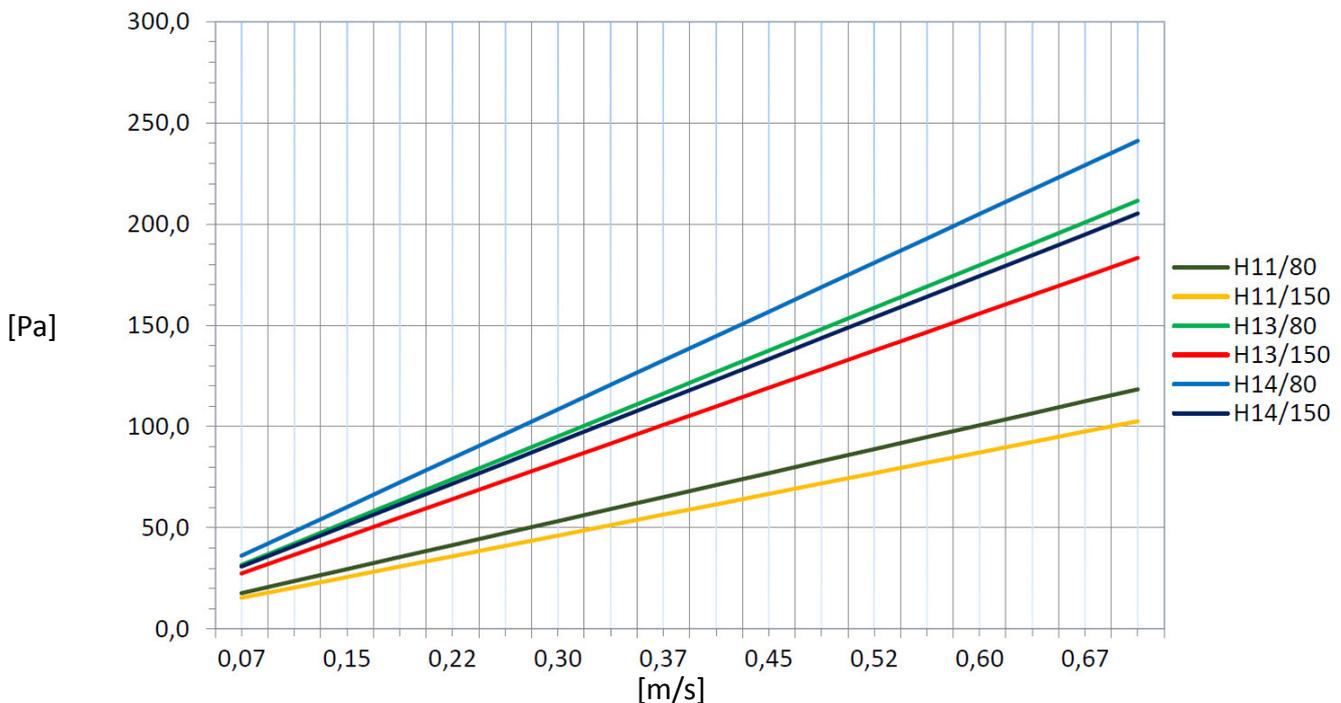
Laminar ceiling air supply (SLM) is a special, suspended ceiling device to ensure proper cleanliness and filtration of air supplied to an operating theatre.

The devices are equipped with absolute filters (HEPA) with a high class of filtration (ensured with the certificate of the producer).

Proper selection of a ceiling size ensures stable, laminar air supply to an operating theatre at 0.15 to 0.3 m/s.

The whole structure is made of stainless steel (304), including outlet, perforated „ceiling tiles” (screen), visible from an operating theatre.

Chart of air flow resistance through the SLM module.

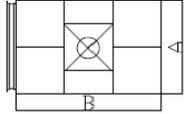
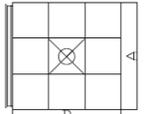
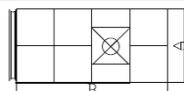
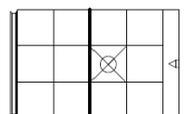
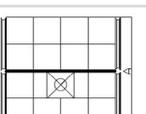
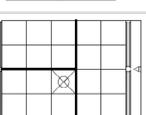
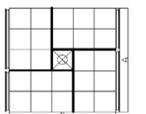


Approximate initial air flow resistance [Pa] (+/- 10%) for H11, H13, H14 filter with thickness of 80 mm and 150 mm, at a relevant air flow rate through the SLM module.

In case of increased resistance by more than 80% of the values shown in the chart, it is recommended to replace them.

Laminar ceiling

Technical characteristics of diffusers of SLM series

Vent size type	Functional layout and dimensions	Air efficiency [m ³ /h]	Total air resistance [Pa]	Weight [kg]	Number of filters [pcs.]	Laminar flow speed [m/s]
			with filter 80/150 [mm]			
SLM-2/3		1340 - 3000	120/75	140/180	4 x (610x610) 2 x (610x305)	0,15 – 0,30
SLM-3/3		2150 - 4780	100/70	141/182	8 x (610x610)	
SLM-2/4		1870 - 4180	120/75	199/255	6 x (610 x 610) 2 x (610 x 305)	
SLM-3/4		2960 - 6570	100/70	274/350	11 x (610 x 610)	
SLM-4/4		4040 - 9000	120/75	353/450	14 x (610 x 610) 2 x (610 x 305)	
SLM-4/5		5140 - 11 380	120/75	353/450	19 x (610 x 610)	
SLM-5/5		6470 - 14 380	120/75	442/563	24 x (610 x 610)	

1.  Location of a theatre operating lamp
2. Provided flow resistance for H 13 in clean state, at Varea = 0.24m/s. At max. dirty filters - increase by 100%.
3. Ability of noise attenuation by vent: 10 -15 dB (A).
4. Total weight with frame: h = 400mm with filters of thickness of 150mm, h = 300 mm with filters of thickness of 80mm

Notes:

- * Vents can be made in various configurations, including without fields for a shadowless lamp for verification.
- * Filters dimensions in the table refer to 650mm „ceiling tile”.

