

STATIONARY AIR FILTRATION SYSTEMS FOR PAINTING CHAMBERS “FILTAIR-PR” SERIES

Air filtration system with filter is an integral and essential element of any painting chamber. **FILTAIR-PR series stationary air filtration systems for painting chambers** enable to clean the air fed from the outside, and directly inside the painting chamber. In addition, it helps to precipitate and withdraw the mist forming in the process of painting. If the chamber does not have a good ventilation system, the quality of painting works is significantly reduced. It is important that the painting chamber has an extractor fan installed, complying with the requirements of the production conditions.

This filtration technology enables to maintain certain climate conditions of the environment throughout the process of painting work and drying process, whereas no dew is formed on the product and most favourable conditions for coating application and drying are provided.

Media to be filtered – only paint and paint dust.

FILTAIR-PR series stationary air filtration system for painting chambers consist of:

- a ventilation unit
- a system of ventilation ducts
- a set of supply and exhaust boxes
- a set of supply and exhaust air filters
- a control panel



The ventilation units can operate on light liquid fuel, natural gas (G20 methane, G30 butane, G31 propane). In accordance with the EU Gas Directive, the generators are exclusively equipped with a CE-certified burners with a relevant certificate issued by an official certification body.

The main technical parameters of the ventilation units are listed in the table below, the system of ventilation ducts, the supply and exhaust boxes and a control panel are selected individually based on the customer's production requirements.

Basis set	FILTAIR-100.1	FILTAIR-100.2	FILTAIR-200.1	FILTAIR-200.2	FILTAIR-200.3	FILTAIR-200.4	FILTAIR-210.1	FILTAIR-210.2	FILTAIR-330.1	FILTAIR-330.2	FILTAIR-330.3	FILTAIR-480.1	FILTAIR-480.2	FILTAIR-480.3	FILTAIR-600.1	FILTAIR-600.2	FILTAIR-600.3
Min. and max. thermal power (kW)	87.2-116	110.4-116	116-232	116-232	116-232	116-232	174.4-290	220.9-290	190-380	232.2-380	278.9-380	275-550	345.6-550	418.6-550	372.2-700	465.1-700	558.1-700
Electric power (kW)	1x4 kW	1x5.5 kW	1x4 kW	1x5.5 kW	1x7.5 kW	1x9.2 kW	2x4 kW	2x5.5 kW	2x4 kW	2x5.5 kW	2x7.5 kW	3x4 kW	3x5.5 kW	3x7.5 kW	3x4 kW	4x5.5 kW	4x7.5 kW
Power supply (V / ph / Hz)	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Min. air flow (m ³ /hr)	12500	16000	12500	16000	18000	21000	25000	32000	28000	34000	38000	42000	51000	57000	56000	68000	76000
Max. useful static pressure. Max (Pa)	400	500	400	500	600	600	400	500	400	500	600	400	500	600	400	500	600
Max. air flow (m ³ /hr)	15000	19000	15000	19000	23000	26000	30000	38000	32000	40000	48000	48000	60000	72000	64000	80000	96000
Min useful static pressure. Max (Pa)	150	200	150	200	250	250	150	200	150	200	100	100	150	100	150	100	100
Air temp. min-max (for min. volume)	15°C-18°C	15°C-17.8°C	20°C-23.8°C	15.8°C-18.7°C	15°C-19.2°C	15°C-18.6°C	15°C-18°C	15°C-17.8°C	15.3°C-17.5°C	15°C-17.6°C	15°C-18.9°C	14.8°C-16.9°C	14.9°C-17.5°C	15°C-18.9°C	15°C-17.1°C	15°C-17.6°C	15°C-18.9°C
Air temp. min-max (for max. volume)	20.2°C-24.2°C	15.9°C-16.9°C	40.3°C-48.4°C	31.9°C-37.8°C	26.3°C-33.6°C	23.3°C-26.6°C	24.9°C-29.9°C	18.7°C-23.4°C	30.6°C-35°C	24.5°C-28.8°C	20.4°C-25.6°C	29.6°C-33.8°C	23.7°C-27.8°C	19.7°C-24.9°C	28.2°C-32.3°C	22.6°C-26.6°C	18.8°C-23.8°C

Modes of operation of industrial painting chambers

Painting-drying chambers allow achieving high-quality paintwork in minimum time period. For this purpose the chamber has several modes of operation that can be selected depending on the stage of paintwork.

Air, polluted with the painting dust, is drawn out from the painting chamber by the ventilators through a set of filters. Filters are designed so that they prevent the direct entering of dust into the air channel and fan volute. For the operator's security reasons, the ventilation system performs a total air replacement during the "Paint" mode and is equipped with heat exchanger for heat energy saving. Mode "Drying" involves only a partial air replacement, which provides even greater savings in heat energy. The ventilation system is equipped with valves to provide a low pressure in the painting chamber, which eliminates leakage of solvent vapors from the working area.

