AFLO system

Technical Data Sheet Duct AFLO 0250B

Applications

AFLO System is a system composed of insulated polyurethane panels and accessories with which it is possible to build and build self-supporting ducts for the transport of air (supply, recovery, extraction, external air inlet) in air conditioning systems heating and ventilation outdoor and indoor.

AFLO System is the best solution for the construction of ducts of any size and operating temperature that are installed in contexts such as: airports, shopping centers, industries, hospitals, operating rooms, clean rooms, data centers, etc.

Benefits

- Duct weight 8 times lower than galvanized steel;
- No need for any insulation;
- Maximum Thermal insulation;
- Resistant to high air pressure (positive and negative);
- High mechanical rigidity;
- Significantly reduced construction and installation times;
- High energy saving due to sealing class C;
- High resistance to pressure;
- Maximum guarantee of product durability, thanks to the epoxy treatment that protects against atmospheric agents, UV rays and corrosion due to aggressive environments (salt, chlorine);
- Possibility of installation in any outdoor and indoor system;
- Absence of VOC;
- Easy access for maintenance;
- Easy cleaning (washing with water, brushing or sanitizing);
- Safe in case of earthquake;
- Complies with SMACNA guidelines.

Cleanliness and hygiene

The characteristics of the AFLO System ducts comply with the strictest standards of cleanliness and hygiene:

- UNI EN 15780:2011;
- EN 12097:2006 cleaning and maintenance of aeraulic networks;
- Guideline Italian Ministry of Health 03/11/2006 on predictive maintenance of plants;UNI EN 1186-1:2003,
- DM Health 06/04/04 n. 174 suitability for contact with foodstuffs.

Duct Technical characteristics

Parameter	Unit	Value	Standard
Operating temperature	°C	-30 +65	-
Operating pressure	Pa	2.000 5000 (for 1h) depression. - 2.000	EN:13403
Air tightness class*	Class	C	EN:1507 EN:14239
Air speed	m/s	Max 30	-
Fire Reaction	Euroclasse	B-s2,d0	EN 13501-1

* The achievement of sealing class C can be achieved by using the traditional flanging system. To obtain the sealing class C with the concealed flanging system, it will be necessary for operators to use the sealing of the flange perimeter with the appropriate silicone.

Acoustic test values- dB

According to UNI EN ISO 7235, the following are the attenuation values of the channel in octave bands:

	Dimension duct 200x200 1 mt	Dimension duct 400x400 1 mt	Dimension duct 600x600 1 mt
Frequencies Hz	dB	dB	dB
63	1,4	1,8	0,1
125	0,6	1,5	3,2
250	0,7	1,4	1,7
500	3,3	1,3	1,0
1.000	2,4	1,0	0,9
2.000	1,3	1,0	0,7
4.000	1,2	0,7	0,6
8.000	2,3	0,6	1,2

Construction and installation methods

The construction and installation methods of the AFLO System ducts are determined by the parent company and can be consulted on the technical manual of AFLO SRL, in addition, the same company trains all operators in the sector through training courses that can be organized on site or at the customer.

Installation guide
Consult the AFLO SRL Construction Manual
For more information

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AFLO Air Quality, Life Quality

AFLO system

Technical Data Sheet Panel AFLO 0250B

Description

Sandwich panel composed of a rigid foam in closed cell polyurethane foam (> 95%), produced with formulations free from cfc, hcfc, hfc, coated on both sides with a foil embossed, treated with epoxy paint that protects it from atmospheric agents, UV rays from corrosion and oxidation.
The insulating material consists of rigid polyurethane foam, physiologically and chemically inert, insoluble and not metabolizable.

AFLO System panels are used for the construction of self-supporting ducts for the transport of air (supply, recovery, extraction, external air inlet) in air conditioning systems heating and ventilation outdoor and indoor.

Panel technical characteristics

Parameter	Unit	Value	Standard
Outside aluminium thickness	um	60 embossed	-
Internal aluminium thickness	um	60 embossed black	-
Insulation thickness	mm	25 +/- 1	UNI EN 823
Density	Kg/m3	48 +/- 1	UNI EN 1602
Panel size	Lenght mm	4.000 +/- 5	UNI EN 822
	Width mm	1.200 +/- 3	
Squaring	mm	+/- 3	UNI EN 824
Thermal conductivity	λD [W/mK]	0,0206	UNI EN 13165
thermal resistance (R-Value)	RD = d/ λD - [m2 K/W]	1,21	-
Panel rigidity	N • mm	R5 > 500.000	EN:13403
Sound insulation	Rw [dB]	16	UNI EN ISO 140-3
Resistance to salt spray	-	No corrosive attack	ISO 9227
Evaluation of VOC emissions	Classe	A+	EN 16000-9 2006

Temperature stability

AFLO System panels can be used in a range of continuous temperatures normally between -30° C and +65° C. Long exposure to temperatures may cause deformation to foam or layers, but without causing sublimation or melting.

Packaging and storage

AFLO System panels are packed with a polyester film, in closed and labelled packaging.
Keep panels raised from the ground and in a closed, dry place.

Appearance of the panel

Prolonged exposure of polyurethane foam to UV rays can cause surface oxidation, which causes a darkening of the original color, this phenomenon does not affect the fundamental characteristics and performance of the panel.

The panels sold by AFLO SRL are divided into two classes and the subdivision criteria are as follows:

- 1°choice: panels that comply with the tolerances indicated in the technical data sheets with both planar and flat surfaces or with
- a maximum of 10% of the surface with aesthetic defects (damaged edges, surface lines, bubbles);
- 2°choice: panels that do not respect the tolerances indicated on the technical data sheets of the product with aesthetic defects (edges damaged, superficial lines, bubbles) higher than 10%.

The presence of small bubbles of different sizes, under the aluminum foil, which covers the panels themselves, originates from the process
of continuous production and cannot be linked, in any way, to negligence or neglect or inexperience. Such bubbles, however, do not
in any way affect the physical and mechanical performance of the material, as well as the use of panels for the construction of channels.

Installation guide
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For more information

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