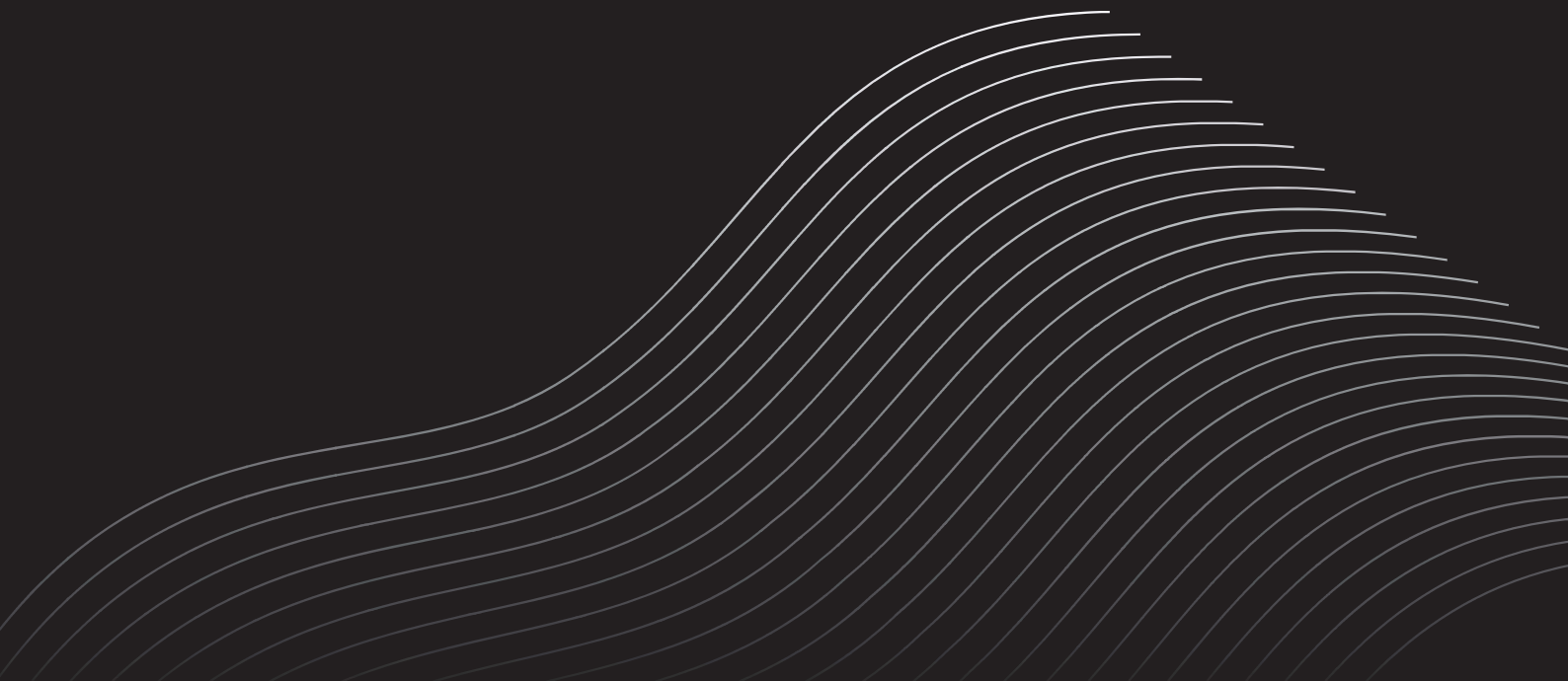


URSA AIR®



Insulation and construction of systems
for air-conditioning and ventilation ducts

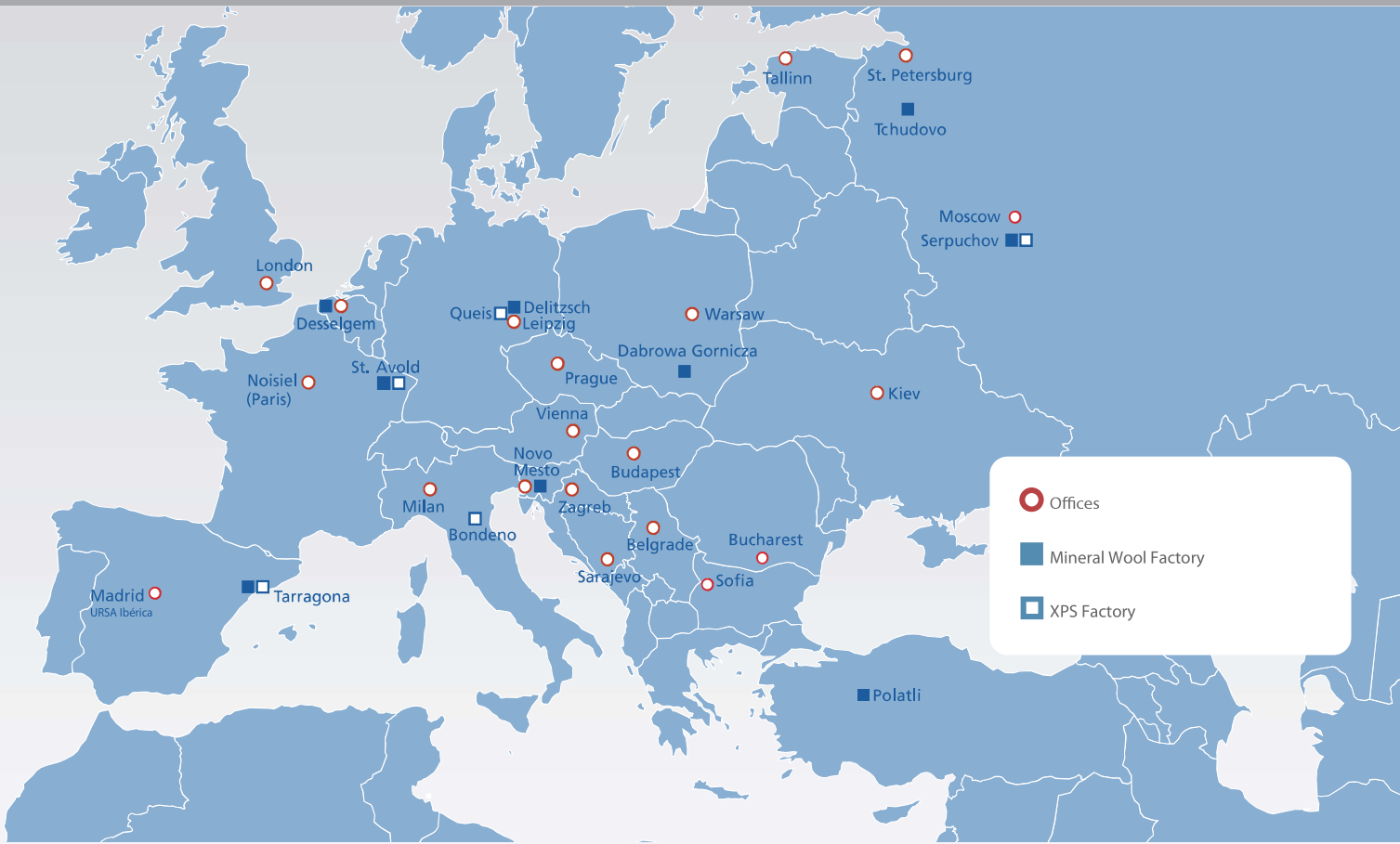


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URSA AIR AI-AI	✓✓	✓	✓✓	13
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URSA AIR AI-TECH2	✓✓	✓	✓✓✓	15
Rolls for external insulation of metallic ducts				
URSA AIR Aluminum roll	✓✓✓		✓✓	16
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Rolls for internal insulation of metallic ducts				
URSA AIR ZERO IN	✓✓	✓✓✓	✓✓✓	18

Optimum - ✓✓✓✓
 Very good - ✓✓✓
 Good - ✓



■ URSA, THE COMPANY

URSA, a leader company in insulation products in Europe.

URSA is a manufacturer of two different types of insulation products. Extruded polystyrene **URSA XPS** is an excellent thermal insulation product with high mechanical performance. Mineral wool products as **URSA GLASSWOOL** and **URSA TERRA** are optimum thermal and acoustic insulation products, used in many different applications for insulation of buildings. The range **URSA AIR** includes mineral wool panels for construction of air conditioning ducts and mineral wool rolls for insulation of metallic ducts.

■ QUALITY MARKS

Quality certified



Healthiness certified



Quality tested



Associations

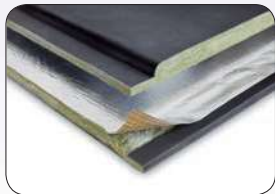


URSA AIR, the products



URSA AIR is the solution by URSA for air conditioning ducts installations. URSA AIR mineral wool provides excellent thermal and acoustical insulation levels, together with the non – combustibility of the product itself.

URSA AIR range of products includes:



- **URSA AIR panels:** Mineral wool panels for construction of ventilation and air conditioning ducts. The rigidity and facings of the panels allow the air to flow at high velocity with less pressure losses and high acoustical attenuations.



- **URSA AIR rolls:** Mineral wool rolls used in external thermal insulation of metallic ducts.



- **URSA AIR Zero In:** Mineral wool rolls faced with an acoustic fabric that can be used for insulation of metallic ducts from inside, securing also reduced propagation of noise through the ducts.



- **URSA AIR tools:** Range of tools used for cutting and construction of ducts from URSA AIR panels. New **EASY TOOL** blades ensure a more precise and softer cutting.



Minimum thermal losses, maximum energy efficiency. Excellent thermal resistance of **URSA AIR** products. New thermal conductivity values depending on temperature, in accordance with **EN 14.303**.



Excellent acoustical absorption, minimum sound propagation. The excellent acoustical absorption of **URSA AIR Zero, URSA AIR Zero A2** and **URSA AIR Zero In** allows to reduce the noise propagated through the duct.



Excellent fire performance, NON-combustibility. **URSA AIR** reaction to fire class is **B s1 d0**. **URSA** offers also a range of incombustible products, with reaction to fire class of **A2 s1 d0 (EN 14.303)**, thanks to their fireproof facings and the incombustible nature of the inorganic mineral origin raw material (**URSA AIR AI-TECH2, URSA AIR Zero A2, URSA AIR Zero In, URSA AIR M3603**).



Indoor air quality. Facings of **URSA AIR** products reduce the dirt accumulated inside ducts to a minimum level, and allows the cleaning of the duct. **URSA AIR** mineral wool is not a nutritive element for proliferation of neither fungus nor bacteria. Antimicrobial treatment of inner surface of the product also inhibits the growth of bacteria colonies by deposition of organic particles.



Excellent cutting and installation performance. The new range of tools with **EASY TOOL** blades ensures a more precise and softer cutting. **URSA AIR's** facings have been developed to optimize cutting performance and all of them have the male shiplap edge edged with inner facing.

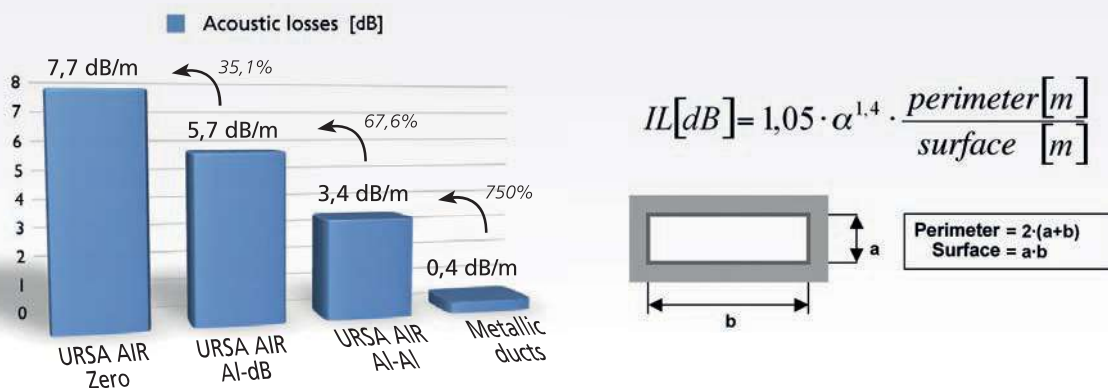
Excellent acoustical absorption



URSA presents a range of products that can reduce the noise propagated through ducts. It is the perfect solution to reduce and dampen the noises that normally occurs due to air flow that originates from the air conditioning equipment or from other rooms where air is supplied by the same duct.

- **URSA AIR Zero** and **URSA AIR Zero A2** are mineral wool panels for construction of ducts faced with a special acoustic inner fabric, called **Zero** with excellent acoustical absorption properties, $\alpha_w = 0,80$. Both of them are absorbent products of type B according to **EN 11.654** standard. Type B represents the maximum level of acoustical absorption that is reached in the market by similar products and this acoustic performance is even the best at high frequencies.
- **URSA AIR AI-dB** panel is a mineral wool panel for construction of ducts covered from inside with a pure aluminum micro-holes facing. This facing provides **URSA AIR AI-dB** with a very good acoustical absorption ($\alpha_w = 0,65$) and has a very competitive price.
- **URSA AIR Zero In** is the solution for insulation of metallic ducts from inside. The black acoustic inner facing of the product ensures that **URSA AIR Zero In** contributes in reduction of the noise propagated through the duct. ($\alpha_w = 0,55H$).

Reduction of noises propagated through ducts is proportional to the acoustic absorption. The formulas to calculate the level of acoustic power loss per each meter of duct is:



It is possible to calculate the reduction of noise of ducts depending of the size through this formula and using the results of acoustic absorption of **URSA AIR Zero**:

Acoustical performance of URSA AIR Zero:						
Frequency (Hz)	125	250	500	1000	2000	
Acoustic absorption coefficient α	0,35	0,60	0,70	1,00	1,00	
Acoustic reduction in a straight duct [dB/m]						
Size	200x200	4,83	10,27	12,75	21,00	21,00
	300x400	2,82	5,99	7,43	12,25	12,25
	400x500	2,17	4,62	5,74	9,45	9,45
	400x700	1,90	4,04	5,01	8,25	8,25
	500x1000	1,45	3,08	3,82	6,30	6,30



Tested its both sides, URSA AIR products have a reaction to fire equal or better than B s1 d0.



Protection of people in a building in the case of a fire and measures to avoid fires are and have been always one of the most important aspects in design and construction of buildings. Reaction to fire property gives specific information on the performance of products in case of a fire.

According to Euroclasses, products can represent a behavior classified from F (highly combustible products) to A (incombustible products). URSA AIR panels for construction of ducts shows a reaction to fire behavior of B s1 d0.

- **Class B** specifies that the energetic contribution due to the combustion of aluminum kraft facing is minimum, whereas the mineral wool core is completely incombustible.
- **S1 class** specifies that facings (and the product) do not produce smoke during burning.
- **D0 class** specifies that the product does not spread drops of flame. URSA AIR panels are classified as B s1 d0 in terms of reaction to fire that is also declared in the **CE Certificate** and in the **Voluntary Quality Certificate (AENOR)**.

One of the novelties in the EN 13.403 standard is the possibility of testing products by both surfaces. This is useful in case of products that might have different performance depending on the face tested. In case of URSA AIR panels, facings of the two sides are different, and they can assume different fire performances. That is why URSA has tested the products by both sides and all results are B s1 d0 (Except in the incombustible panels URSA AIR AI-TECH2 and URSA AIR Zero A2, in which case reaction to fire by both sides is better, A2 s1 d0).

For those installations where an incombustible reaction to fire classification is needed, URSA proposes its A2 s1 d0 range of products.



Lawyers College of Barcelona.
Ducts were done with URSA AIR AI-TECH2.

- ✓ **URSA AIR P8058 AI-TECH2 Panel:** Mineral wool panel with an aluminum fabric as the external facing, with an esthetical appearance (suitable for ducts that are not hidden by ceiling). Inner facing is a reinforced pure aluminum. Reaction to fire **A2 s1 d0**, incombustible.
- ✓ **URSA AIR Zero A2:** Mineral wool panel with an aluminum fabric as the external facing, with an esthetical appearance (suitable for ducts that are not hidden by ceiling). Inner facing is the Zero fabric that allows to have an excellent acoustical absorption. Reaction to fire **A2 s1 d0**, incombustible.
- ✓ **URSA AIR Pure incombustible aluminum M3063:** Mineral wool roll for insulation of metallic ducts by outside, with a pure aluminum facing. Reaction to fire **A2 s1 d0**, incombustible.
- ✓ **URSA AIR Zero In:** Mineral wool roll for insulation of metallic ducts by inside. It allows to reduce the propagation of noises through duct and insulate metallic ducts that will be sight (not hidden by ceilings). Reaction to fire **A2 s1 d0**, incombustible.

Healthiness of the installations



The quality of the air distributed inside the places through a network of air conditioning ducts must always be excellent. It is very important that the potential contaminants are reduced to a minimum. With URSA AIR products, the maximum indoor air quality levels are reached easily.



✓ URSA GLASSWOOL, URSA TERRA and URSA AIR mineral wool is certified by EUCEB, that accurately confirms the conformity to NOTA Q and European Directive 97/69/CE that shows that URSA products are **neither classified** as carcinogenic in accordance with the criteria of the same directive nor according to the criteria of the **International Agency of Cancer (IARC)**.



✓ Besides, according to the tests of EN 13.403, the levels of particles' dragging are completely ignorable, being much lower than the results obtained with other products in the market and **100 times lower than the limits set for the market by the same norm** (the measurements are between 0.012% and 0.1% of the limits). The test for erosion and emission of the particles is realized by creating a system of ducts where air circulates with a velocity of 18,6 m/s throughout the interior of the same (from 2 to 3 times more the regular air-velocity in the duct installations).

✓ Male shiplap edge of the panels of all URSA AIR panels is re-bordered by its interior covering.

✓ The accumulation of the dirt in the inner coverings of the URSA AIR products is at minimum levels. Besides, the **special acoustic fabric of ZERO** is a lot denser than similar products in the market that hinders the accumulation of the dirt inside of the duct.



✓ All air-conditioning ducts constructed with URSA AIR are easy to clean simply by usual processes without the interiors to erode or wear out. This is also demonstrated in the URSA AIR AMBIENTCARE report for URSA AIR Zero or in the document of Hygiene Group of Air-rooms Networks (GHR) of Scientific Committee and Acclimatization Industry Technicians (COSTIC) for the URSA AIR AI-AI and AI-dB panels.



✓ The mineral wool panels of URSA AIR do not provide nutritive environment for proliferation of any type of fungus or bacteria thanks to its inorganic mineral nature. Moreover, as a result of the anti-microbiological treatment applied to their internal facings, the formation of the bacterial colonies by the presence of organic particles on the surface is inhibited. This property has also been confirmed by different tests (AATCC100, ASTM E2149, JIS Z2801, ISO 20743, EN 13403) realized by AITEX for the products with the ZERO fabric. Different varieties of the bacteria that the tests were conducted are: **Estaphylococcus aureus y Escherichia Coli (E.COLI)**.



Oviedo Central University Hospital (Asturias/ SPAIN)
The air conditioning ducts are constructed with URSA AIR:
M2021 Aluminum Roll.

Distinguished Quality in the building sites

To ensure quality indoor air is one of the most important objectives of URSA AIR Products, that is already proven by the high number of healthcare centers that have been insulated by or that have duct systems constructed with URSA AIR products.



Examples of healthcare centers that have metal ducts system insulated by URSA AIR Roll are:



Torrejón de Ardoz Hospital

Location: Torrejón de Ardoz (Madrid / SPAIN)
Developer: COMUNIDAD DE MADRID
Building firm: FCC
Product: URSA AIR M2021 Aluminum Roll



Vinalopó Hospital

Location: Elche (Alicante / SPAIN)
Developer: SERVASA
Building firm: GRUPO CÍVICA
Product: URSA AIR M2021 Aluminum Roll



Asturias Central University Hospital

Location: Oviedo (Asturias / SPAIN)
Developer: PRINCIPADO DE ASTURIAS
Building firm: SAN JOSÉ
Product: URSA AIR M2021 Aluminum Roll



Reference projects of Healthcare centers with duct systems made of URSA AIR mineral wool panel:



Healthcare Center 'La Mejostilla'

Location: Cáceres (Extremadura / SPAIN)
Developer: SERVICIO EXTREMEÑO DE SALUD
Building firm: LUNTEC, S.L.
Product: URSA AIR P5858 AI-AI Panel



Private Hospital Torrellano

Location: Elche (Alicante / SPAIN)
Developer: GRUPO CÍVICA (IMED)
Building firm: ORTÍZ E HIJOS (COSNT. MOLDAVITA)
Product: URSA AIR Zero + URSA AIR P5858 AI-AI Panel



Lardero Hospital for Mental Diseases

Location: La Rioja (La Rioja / SPAIN)
Developer: CONSEJERÍA DE SALUD
Building firm: JOSE MARTÍN
Product: URSA AIR P5858 AI-AI Panel

Other examples of building sites of Hospitals are Healthcare Center HUESCAR (GRANADA) or the Healthcare Center Mairena (Sevilla), built using URSA AIR P5858 AI-AI Panel; Healthcare center Las Letanías (Sevilla) built using URSA AIR Zero, or Figueres Hospital built with URSA AIR P6058 AI-dB.

Other reference objects, where installations have been built with URSA AIR products:



TECNOCAMPUS Mataró

Location: Mataró (Barcelona / SPAIN)
Developer: MATARÓ CITY HALL
Building firm: COPCISA
Product: URSA AIR P6058 AI-dB Panel



AQUILA School

Location: Parla (Madrid / SPAIN)
Developer: AQUILA SDAD COOP. MADRILEÑA
Building firm: UTE RUBAU-VELASCO
Product: URSA AIR M2021 Aluminum Roll



Gran Plaza Norte II Mall

Location: Las Rozas (Madrid / SPAIN)
Developer: CHAPMAN TAYLOR, S.A.
Building firm: ALDESA, SA
Product: URSA AIR Zero + URSA AIR P5858 AI-AI Panel

Conformity to the EN 13.403 standard

The mineral wool panels of **URSA AIR** are tested according to the EN 14.403 standard (as it is mandatory in some countries regulations) and the reports are fully public. The results of the tests show that the ducts constructed using **URSA AIR** panels offer high added value.



- **Resistance to pressure:**

The resistance to pressure of the ducts constructed with **URSA AIR** mineral wool panels is measured as 2000 Pa. If a security coefficient of 2.5 is considered, it can be confirmed that the ducts constructed with **URSA AIR** panels can stand pressures up to 800 Pa. This limit of pressure is enough for low outlines equipments (80 Pa) as well as for acclimatizers of large size. This level of pressure can only be exceeded in case of the ATU's (air treatment units) with high potential fans.

- **Dragging of particles:**

With a high velocity air circulation (18.6 m/s) through the installation, the erosion and dragging of particles can be measured by segmenting them per size. The results of the particles obtained by **URSA AIR** panels are of a quantity which is completely negligible and quite lower than the results obtained by other products in the market. **They are even 100 times below the limits set by the norms.**

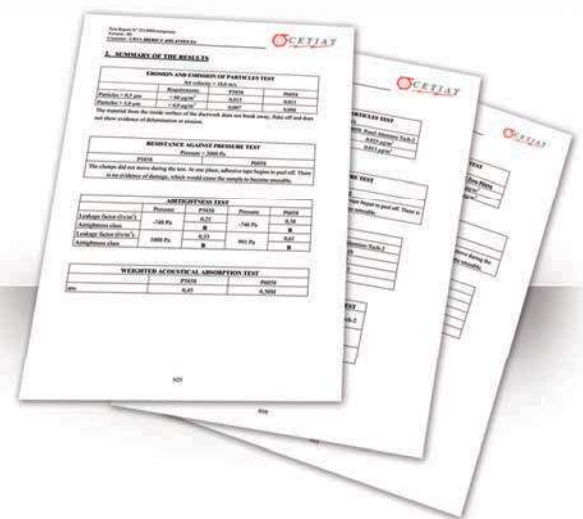
	URSA AIR Zero	URSA AIR AI-AI	URSA AIR AI-dB	URSA AIR AI-TECH2	Maximum limits set by EN 13.403
Particles > 0,5 µm	0,007 µg/m ³	0,015 µg/m ³	0,011 µg/m ³	0,023 µg/m ³	< 60 µg/m ³
Particles > 5 µm	0,004 µg/m ³	0,007 µg/m ³	0,006 µg/m ³	0,013 µg/m ³	< 4 µg/m ³

- **Airtightness:**

URSA AIR panels ducts systems can reach level C of airtightness, which represents the maximum possible in accordance with the normative of **EN 150**.

- **Acoustic absorption:**

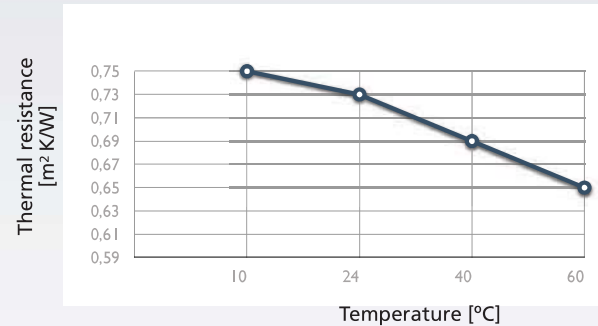
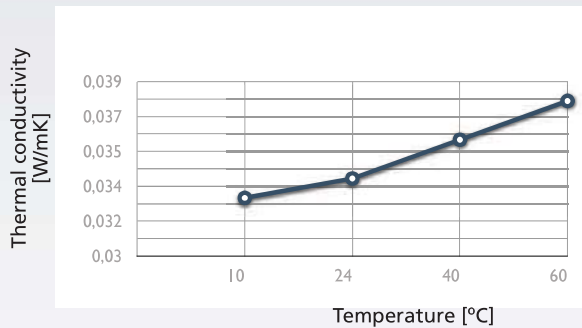
Acoustic absorption of **URSA AIR** mineral wool panels is excellent reaching B level in accordance with **UNE EN ISO 11654** (maximum level reached by similar mineral wool panels).



* URSA publishes all the test reports of URSA AIR products. They can be downloaded from www.ursa.es or www.ursa-air-seleccion.com

Thermal insulation of air-conditioning ducts is very important to reduce the energy losses and to improve the energy efficiency of the system. Regulations mandatory in different countries set minimum thermal insulation of duct walls for saving energy and not allowing condensation of water.

With a mindset to produce products that comply with the newest regulations, **URSA Iberica** has tested its mineral wool **URSA AIR** panels according to the **EN 14.303 standard**. That is why the thermal conductivity level of panels do not offer just one average value, but a curve of values for every temperature. **Remember, the less thermal conductivity (better thermal resistance) the better insulation.**



URSA AIR mineral wool panels allow the flow of both cold and hot air throughout the places.



Another novelty that the new **EN 14.303 standard** brings about is the necessity to test the reaction to fire of both sides of the products that are used for the insulation of air-conditioning ducts.

The reaction to fire classification of **URSA AIR** products is **B s1 d0** for the standard ones and **A2 s1 d0** for the incombustible range.

URSA AIR Panels, construction of duct

URSA AIR Mineral wool for construction of ducts.

- The best option for construction of ducts.
- Complete range of products with panels with acoustical absorption, incombustible panels and even a combination of both.
- All panels have a male-female shiplap edge system for junctions between ducts.
- All panels have the male shiplap edge covered by the inner facing.

	URSA AIR P5858 AI-AI panel	URSA AIR P6058 AI-dB panel	URSA AIR Zero	URSA AIR P8058 AI-TECH2 Panel	URSA AIR Zero A2
Dimensions (mm)	3.000x1.200x25 (2.400 x 1.200 x 25 XS format)				
Thermal insulation	EXCELLENT Thermal resistance 0,75 m ² K/W. Curve depending on temperature available.				
Acoustical absorption*	Good type D	Very Good type C	Excellent type B	Good type D	Excellent type B
Reaction to fire (inner side)	Very good B s1 d0	Very good B s1 d0	Very good B s1 d0	Incombustible A2 s1 d0	Incombustible A2 s1 d0
Reaction to fire (outer side)	Very good B s1 d0	Very good B s1 d0	Very good B s1 d0	Incombustible A2 s1 d0	Incombustible A2 s1 d0
Inner facing	Aluminum Kraft covering	Microperforated reinforced aluminum facing	Zero black fabric	Reinforced pure aluminum facing	Zero black fabric
Outter facing	Reinforced Aluminum Kraft covering	Reinforced Aluminum Kraft covering	Reinforced Aluminum Kraft covering	A2 Aluminum fabric	A2 Aluminum fabric

*Acoustical absorption products classified according EN ISO 11.654 – "Acoustical absorption products used in buildings. Evaluation of acoustical absorption."

URSA offers its products in different formats adapted to different necessities of the market:

Format	Description	Products
Standard URSA AIR Panels	Carton boxes with 6 panels of 3x1,20 m	Whole range of URSA AIR Panels
URSA AIR XL Panel	Palet with 46 panels of 3x1,20 m. Plastic film for protection	✓ URSA AIR AI-AI ✓ URSA AIR Zero
URSA AIR XS Panel	Palet with 46 panels of 2,40x1,20 m. Special format for RENOVATION sites	✓ URSA AIR AI-AI ✓ URSA AIR Zero



URSA AIR Panels, Construction of ducts



■ URSA AIR XS PANEL

URSA AIR XS Panel format provides several advantages for the renovation works thanks to its shorter length:

- ✓ Can be transported inside vehicles. By this way, the necessary material can be transported in bulk for small renovations.
- ✓ Can be transported in elevators. There is no need to pre-cut panels or bear to carry them through the stairs.
- ✓ Can be transported through the corridors and narrow places. The distribution of dwellings or offices sometimes makes transportation of panels very difficult. This problem is solved with **XS Panels**.
- ✓ Can be handled and cut in small places. The size of cutting table is reduced and it can be placed in smaller spaces.



URSA AIR Al-Al Panel

P5858

URSA AIR mineral wool panels for construction of air conditioning ducts, according **EN 14.303** standard, faced by a reinforced aluminum kraft layer in their outer side and by an aluminum kraft layer in their inner side.



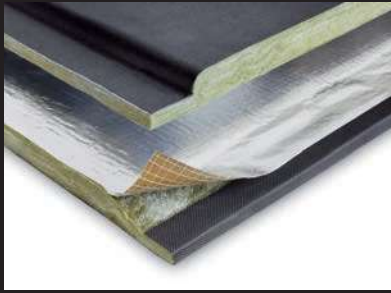
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Dimensions and Characteristics		Standard	Unit	Box Format / XL Format	XS Format
Dimensions	(H) Thickness (d)	EN 823	mm	25	25
	Length (l)	EN 822	m	3,00	2,40
	Width (b)	EN 822	m	1,20	1,20
Fire Resistance	(F) Fire Resistance internal face	EN 13501-1	(---)	B s1 d0	B s1 d0
	Fire Resistance external face	EN 13501-1	(---)	B s1 d0	B s1 d0
Thermal Insulation	(T) Thermal Conductivity at 10° C	EN 12667 / EN 12939	W/m·K	0,033	0,033
	Thermal Conductivity at 24° C	EN 12667 / EN 12939	W/m·K	0,034	0,034
	Thermal Conductivity at 40° C	EN 12667 / EN 12939	W/m·K	0,036	0,036
	Thermal Conductivity at 60° C	EN 12667 / EN 12939	W/m·K	0,038	0,038
Tolerances	(T) Thickness Tolerances (Dd)	EN 823	% ; mm	-1; +3	-1; +3
	Squared (S _b)	EN 824	mm/m	5	5
	Flatness (S _{max})	EN 825	mm	6	6
Stability	(S) Dimensional stability (23 °C y 90%) (De)	EN 1604	%	1	1
Strength Behavior	(R) Tensile Strength Parallel to Faces (s _t)	EN 1608	kPa	(---)	(---)
	Compressive Strength (s _m)	EN 826	kPa	5	5
	Compressibility (d _t -d _b)	EN 12431	mm	(---)	(---)
Vapor Behavior	(V) Water Vapor Resistance (Z)	EN 12087	m ² ·h·Pa/mg	100	100
	Resistance to Water Vapor Diffusion (μ)	EN 12087	(---)	1	1
Acoustic Performance	(A) Dynamic Stiffness (s')	EN 29052	MN/m ³	<10	<10
	Air Flow Resistance (r _s)	EN 29053	kPa·s/m ²	20	20
	Flow Resistance (R _f)	EN 29013	kPa·s/m	0,5	0,5

URSA AIR Panels, construction of duct



URSA AIR Zero

P8858

URSA AIR mineral wool panels for construction of air conditioning ducts, according EN 14.303 standard, faced by a reinforced aluminum kraft layer in their outer side and by Zero fabric in their inner side.



0099/CPD/A43/0295

Acoustic
Absorption
 $\alpha_w = 0,80$

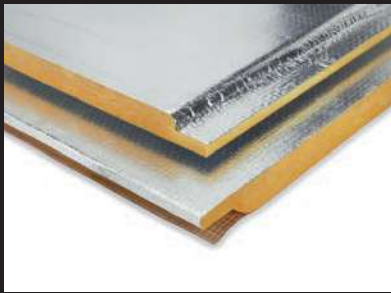


020/003342

Dimensions and Characteristics		Standard	Unit	Box Format / XL Format	XS Format	
Dimensions	(H)	Thickness (d)	EN 823	mm	25	25
		Length (l)	EN 822	m	3,00	2,40
		Width (b)	EN 822	m	1,20	1,20
Fire Resistance	(F)	Fire Resistance internal face	EN 13501-1	(---)	B s1 d0	B s1 d0
		Fire Resistance external face	EN 13501-1	(---)	B s1 d0	B s1 d0
Thermal Insulation	(T)	Thermal Conductivity at 10° C	EN 12667 / EN 12939	W/m-K	0,033	0,033
		Thermal Conductivity at 24° C	EN 12667 / EN 12939	W/m-K	0,034	0,034
		Thermal Conductivity at 40° C	EN 12667 / EN 12939	W/m-K	0,036	0,036
		Thermal Conductivity at 60° C	EN 12667 / EN 12939	W/m-K	0,038	0,038
Tolerances	(T)	Thickness Tolerances (Dd)	EN 823	% ; mm	-1; +3	-1; +3
		Squared (S _b)	EN 824	mm/m	5	5
		Flatness (S _{max})	EN 825	mm	6	6
Stability	(S)	Dimensional stability (23 °C y 90%) (De)	EN 1604	%	1	1
Strength Behavior	(S)	Tensile Strength Parallel to Faces (s _t)	EN 1608	kPa	(---)	(---)
		Compressive Strength (s _m)	EN 826	kPa	5	5
		Compressibility (d _i -d _p)	EN 12431	mm	(---)	(---)
Vapor Behavior	(V)	Water Vapor Resistance (Z)	EN 12087	m ² ·h·Pa/mg	100	100
		Resistance to Water Vapor Diffusion (μ)	EN 12087	(---)	1	1
Acoustic Performance	(A)	Dynamic Stiffness (s')	EN 29052	MN/m ³	<10	<10
		Air Flow Resistance (r _f)	EN 29053	kPa·s/m ²	20	20
		Flow Resistance (R _f)	EN 29013	kPa·s/m	0,5	0,5

DESIGNATION CODE CE

T5



URSA AIR Al-dB Panel

P6058

URSA AIR mineral wool panels for construction of air conditioning ducts, according EN 14.303 standard, faced by a reinforced aluminum kraft layer in their outer side and by a microperforated reinforced pure aluminum layer in their inner side.



0099/CPD/A43/0296

Acoustic
Absorption
 $\alpha_w = 0,65$



020/003343

Dimensions and Characteristics		Standard	Unit	Box Format / XL Format	XS Format
Dimensions	(H)	Thickness (d)	EN 823	mm	25
		Length (l)	EN 822	m	3,00
		Width (b)	EN 822	m	1,20
Fire Resistance	(F)	Fire Resistance internal face	EN 13501-1	(---)	B s1 d0
		Fire Resistance external face	EN 13501-1	(---)	B s1 d0
Thermal Insulation	(T)	Thermal Conductivity at 10° C	EN 12667 / EN 12939	W/m-K	0,033
		Thermal Conductivity at 24° C	EN 12667 / EN 12939	W/m-K	0,034
		Thermal Conductivity at 40° C	EN 12667 / EN 12939	W/m-K	0,036
		Thermal Conductivity at 60° C	EN 12667 / EN 12939	W/m-K	0,038
Tolerances	(T)	Thickness Tolerances (Dd)	EN 823	% ; mm	-1; +3
		Squared (S _b)	EN 824	mm/m	5
		Flatness (S _{max})	EN 825	mm	6
Stability	(S)	Dimensional stability (23 °C y 90%) (De)	EN 1604	%	1
Strength Behavior	(S)	Tensile Strength Parallel to Faces (s _t)	EN 1608	kPa	(---)
		Compressive Strength (s _m)	EN 826	kPa	5
		Compressibility (d _i -d _p)	EN 12431	mm	(---)
Vapor Behavior	(V)	Water Vapor Resistance (Z)	EN 12087	m ² ·h·Pa/mg	100
		Resistance to Water Vapor Diffusion (μ)	EN 12087	(---)	1
Acoustic Performance	(A)	Dynamic Stiffness (s')	EN 29052	MN/m ³	<10
		Air Flow Resistance (r _f)	EN 29053	kPa·s/m ²	20
		Flow Resistance (R _f)	EN 29013	kPa·s/m	0,5

DESIGNATION CODE CE

T5

URSA AIR Panels, Construction of ducts



URSA AIR Zero A2

URSA AIR mineral wool panels for construction of air conditioning ducts, faced by an aluminum A2 fabric in their outer side and by acoustic **Zero fabric** in their inner side.



0099/CPD/A43/0282

Acoustic
Absorption
 $\alpha_w = 0,80$

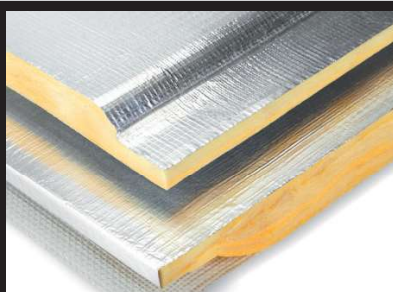


020/003332

Dimensions and Characteristics		Standard	Unit	
Dimensions	(H) Thickness (d)	EN 823	mm	25
	Length (l)	EN 822	m	3,00
	Width (b)	EN 822	m	1,20
Fire Resistance	(F) Fire Resistance	EN 13501-1	(---)	A2 s1 d0
Thermal Insulation	(*) Thermal Conductivity (l90/90)	EN 12667 / EN 12939	W/m·K	0,033
	Thermal Resistance (R _p)	EN 12667 / EN 12939	m ² ·K/W	0,75
Tolerances	(H) Thickness Tolerances (Dd)	EN 823	% ; mm	-1; +3
	Squared (S _b)	EN 824	mm/m	5
	Flatness (S _{max})	EN 825	mm	6
Stability	(D)(D) Dimensional stability (23 °C y 90%) (De)	EN 1604	%	1
Strength Behavior	(*) Tensile Strength Parallel to Faces (s _t)	EN 1608	kPa	(---)
	Compressive Strength (s _m)	EN 826	kPa	5
	Compressibility (d _t -d _b)	EN 12431	mm	(---)
Vapor Behavior	(::) Water Vapor Resistance (Z)	EN 12087	m ² ·h·Pa/mg	100
	Resistance to Water Vapor Diffusion (μ)	EN 12087	(---)	1
Acoustic Performance	(J) Dynamic Stiffness (s')	EN 29052	MN/m ³	<10
	Air Flow Resistance (r _f)	EN 29053	kPa·s/m ²	20
	Flow Resistance (R _f)	EN 29013	kPa·s/m	0,5

DESIGNATION CODE CE

T5 – CS(10)5 – Z100 – SD10



Panel ALUMINIO Tech-2 P8058

URSA AIR mineral wool panels for construction of air conditioning ducts, faced by an aluminum A2 fabric in their outer side and by a reinforced pure aluminum layer in their inner side.



0099/CPD/A43/0205



020/002746

Dimensions and Characteristics		Standard	Unit	
Dimensions	(H) Thickness (d)	EN 823	mm	25
	Length (l)	EN 822	m	3,00
	Width (b)	EN 822	m	1,20
Fire Resistance	(F) Fire Resistance	EN 13501-1	(---)	A2 s1 d0
Thermal Insulation	(*) Thermal Conductivity (l90/90)	EN 12667 / EN 12939	W/m·K	0,033
	Thermal Resistance (R _p)	EN 12667 / EN 12939	m ² ·K/W	0,75
Tolerances	(H) Thickness Tolerances (Dd)	EN 823	% ; mm	-1; +3
	Squared (S _b)	EN 824	mm/m	5
	Flatness (S _{max})	EN 825	mm	6
Stability	(D)(D) Dimensional stability (23 °C y 90%) (De)	EN 1604	%	1
Strength Behavior	(*) Tensile Strength Parallel to Faces (s _t)	EN 1608	kPa	(---)
	Compressive Strength (s _m)	EN 826	kPa	5
	Compressibility (d _t -d _b)	EN 12431	mm	(---)
Vapor Behavior	(::) Water Vapor Resistance (Z)	EN 12087	m ² ·h·Pa/mg	100
	Resistance to Water Vapor Diffusion (μ)	EN 12087	(---)	1
Acoustic Performance	(J) Dynamic Stiffness (s')	EN 29052	MN/m ³	<10
	Air Flow Resistance (r _f)	EN 29053	kPa·s/m ²	20
	Flow Resistance (R _f)	EN 29013	kPa·s/m	0,5

DESIGNATION CODE CE

T5-CS(10)5-Z100-SD10