Institut de Tecnologia de la Construcció de Catalunya

Wellington 19
EN-08018 Barcelona
Tel. +34 93 309 34 04
qualprod@itec.cat
itec.cat

Designated according to Article 29 of Regulation (EU) No 305/2011

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European Technical Assessment

ETA 22/0024
of 05.10.2022

General part

Technical Assessment Body issuing the ETA: ITeC ITeC has been designated according to Article 29 of Regulation (EU) No 305/2011 and is member of EOTA (European Organisation for Technical Assessment).	
Trade name of the construction product	**URSA AIR duct system**
Product area to which the construction product belongs	Ventilation system made of mineral wood with facings on outside and inside.
Manufacturer	**URSA IBÉRICA AISLANTES, S.A.** Carretera Vilarodona, km 6,7 43810 El Pla de Santa Maria, Tarragona Spain
Manufacturing plant(s)	Carretera Vilarodona, km 6,7 43810 El Pla de Santa Maria, Tarragona Spain
This European Technical Assessment contains	9 pages, including 1 annex which forms an integral part of this assessment
This European Technical Assessment is issued in accordance with Regulation (EU) 305/2011, on the basis of	European Assessment Document EAD 360001-01-0803.
This version replaces	ETA 22/0024, issued on 26.07.2022

General Comments

Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document.

Communication of this European Technical Assessment, including transmission by electronic means, shall be in full (excepted the confidential Annex(es)).

Specific parts of the European Technical Assessment

1 Technical description of the product

Rectangular ventilation, heat and air conditioning ductwork system made from rigid mineral wool panels URSA AIR with facings on outside and inside according to table 1. URSA AIR panels are CE marked in accordance with EN 14303[1]. Duct joints are sealed with aluminum self-adhesive tape and staples.

Table 1: Characteristics of URSA AIR panels.

Product variant	Thickness (mm)	Facing	
		External	Internal
URSA AIR Alu-Alu / P5858	25,0 (+3,0 / -1,0)	(1)	(3)
URSA AIR Zero / P8858	25,0 (+3,0 / -1,0)		(4)
URSA AIR Tech2 / P8058	25,0 (+3,0 / -1,0)	(2)	(5)
URSA AIR Zero A2 25	25,0 (+3,0 / -1,0)		(4)
URSA AIR Zero A2 40	40,0 (+3,0 / -1,0)		

Facing description:
(1) Kraft paper, glass mesh and aluminium foil.
(2) Fibreglass fabric and aluminium foil.
(3) Kraft paper reinforced aluminium foil.
(4) Black reinforced glass fabric.
(5) Glass mesh reinforced aluminium foil.

The description of the installation procedure is given in Annex A and shall be in accordance with manufacturer's instructions.

2 Specification of the intended use(s) in accordance with the applicable EAD

Self-supporting ductwork made from faced mineral wool panels for the distribution of air in ventilation, heating and cooling systems used inside buildings[2].

The provisions made in this ETA are based on a working life of URSA AIR of at least 25 years, provided that the conditions laid down in the manufacturer's instructions for the installation, use and maintenance are met. These provisions are based upon the current state of the art and the available knowledge and experience.

The indications given as to the working life of the product cannot be interpreted as a guarantee but are regarded only as a means for choosing the appropriate products in relation to the expected economically reasonable working life of the works.

[1] EN 14303 Thermal insulation products for building equipment and industrial installations. Factory made mineral wool (MW) products. Specification.

[2] The use of the ventilation systems in outdoor conditions is not considered in the scope of EAD 360001-01-0803 and, therefore, it is not assessed in this ETA. The ventilation systems can be installed in outdoor conditions according to the manufacturer's instructions under his responsibility.

3 Performance of the product and reference to the methods used for its assessment

3.1 Performance of the product

The assessment of URSA AIR duct system has been performed in accordance with EAD 360001-01-0803 for *Ventilation system made of mineral wool with facings on outside and inside*.

Table 2: Performance of the product.

Product: URSA AIR duct system.

Basic requirement	Essential characteristic	Performance
BWR 2 Safety in case of fire	Reaction to fire	See table 3
	Propensity to undergo continuous smouldering	NPA
BWR 3 Hygiene, health and the environment	Erosion	No damage (1)
	Emission	See table 4 (2)
	Microbiological growth	None (3)
	Bulging and/or caving	NPA
	Resistance against pressure	No damage
	Tightness	See table 5 (4)
	Water vapour resistance Z (m^2·h· Pa/mg)	> 130 (5)
BWR 5 Protection against noise	Acoustical absorption (insertion loss)	NPA
	Acoustical absorption (absorption coefficient)	See table 6
BWR 6 Energy economy and heat retention	Thermal conductivity	See table 7

(1) The material of the internal surface of the ductwork does not flake off, break away, nor does it show evidence of delamination or erosion.

(2) All URSA AIR variants fulfil the requirements of clause 7.2 of EN 13403.

(3) No sign of deterioration in the wall structure, no mould spread beyond the inoculated area and no significant growth of mould.

(4) All URSA AIR variants are class D according to EN 1507.

(5) All URSA AIR variants are class MV1 according to EN 14303.

Table 3: Reaction to fire.

Product variant	Exposure side	Class
URSA AIR Alu-Alu / P5858	Duct external face	B-s1,d0
URSA AIR Zero / P8858		B-s1,d0
URSA AIR Tech2 / P8058		A2-s1,d0
URSA AIR Zero A2 25		A2-s1,d0
URSA AIR Zero A2 40		A2-s1,d0

Table 4: Emission.

Product variant	Particles bigger than 0,5 µm (µg/m³)	Particles bigger than 5,0 µm (µg/m³)
URSA AIR Alu-Alu / P5858	0,015	0,007
URSA AIR Zero / P8858	0,007	0,004
URSA AIR Tech2 / P8058	0,023	0,013
URSA AIR Zero A2 25	0,007	0,004
URSA AIR Zero A2 40	0,180	0,129

Note: All URSA AIR variants fulfil the requirements of clause 7.2 of EN 13403.

Table 5: Tightness.

Product variant	Leakage factor ((l/s)/m²)	
	- 750 Pa	1000 Pa
URSA AIR Alu-Alu / P5858	0,010	0,016
URSA AIR Zero / P8858	0,010	0,020
URSA AIR Tech2 / P8058	0,040	0,062
URSA AIR Zero A2 25	0,050	0,049
URSA AIR Zero A2 40	0,043	0,053

Note: All URSA AIR variants are class D according to EN 1507.

Note: All URSA AIR variants are class ATC 2 according to the Spanish national regulation, except URSA AIR Alu-Alu / P5858 and URSA AIR Zero / P8858, which are class ATC 1.

Table 6: Absorption coefficient.

Product variant	α_v
URSA AIR Alu-Alu / P5858	0,45
URSA AIR Zero / P8858	0,80
URSA AIR Tech2 / P8058	0,45
URSA AIR Zero A2 25	0,80
URSA AIR Zero A2 40	0,95

Note: All URSA AIR variants were tested with a 37 cm wide airspace behind them.

Table 7: Thermal conductivity.

Product variant	Thermal conductivity (W/m·K)			
	at 10 ºC	at 24 ºC	at 40 ºC	at 60 ºC
URSA AIR Alu-Alu / P5858	0,032	0,034	0,036	0,038
URSA AIR Zero / P8858	0,032	0,034	0,036	0,038
URSA AIR Tech2 / P8058	0,032	0,034	0,036	0,038
URSA AIR Zero A2 25	0,032	0,034	0,036	0,038
URSA AIR Zero A2 40	0,032	0,034	0,036	0,038

3.2 Methods used for the assessment

3.2.1 Reaction to fire

URSA AIR duct system has been tested according to EN 13823 [3] and EN ISO 11925-2 [4] (Alu-Alu and Zero), and EN 13823 and EN ISO 1716 [5] (Tech2, Zero A2 25 and Zero A2 40), in accordance with EN 13501-1 [6] for the products classification in accordance with Regulation (EU) 2016/364. The products have been mounted and fixed following the provisions of EN 15715 [7], tables A.1 and A.2.

3.2.2 Erosion

URSA AIR duct system has been tested according to clause 7.2 of EN 13403 [8].

3.2.3 Emission

URSA AIR duct system has been tested according to clause 7.2 of EN 13403.

3.2.4 Microbiological growth

URSA AIR duct system has been tested according to clause 7.4 of EN 13403.

3.2.5 Resistance against pressure

URSA AIR duct system has been tested at 2000 Pa according to clause 7.3 of EN 13403.

3.2.6 Tightness

URSA AIR duct system has been tested at -750 Pa and 1000 Pa according to EN 1507 [9].

3.2.7 Water vapour resistance

URSA AIR panels have been tested according to EN 12086 [10] at 23 ºC and at 50 % R.H.

3.2.8 Sound absorption (absorption coefficient)

URSA AIR panels have been tested according to EN ISO 354 [11].

3.2.9 Thermal conductivity

URSA AIR panels have been tested according to EN 12667 [12].

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[3] EN 13823 Reaction to fire tests for building products. Building products excluding floorings exposed to the thermal attack by a single burning item.

[4] EN ISO 11925-2 Reaction to fire tests. Ignitability of products subjected to direct impingement of flame. Part 2: Single-flame source test.

[5] EN ISO 1716 Reaction to fire tests for products. Determination of the gross heat of combustion.

[6] EN 13501-1 Fire classification of construction products and building elements. Part 1: Classification using data from reaction to fire tests.

[7] EN 15715 Thermal insulation products. Instructions for mounting and fixing for reaction to fire testing. Factory made products.

[8] EN 13403 Ventilation for buildings. Non-metallic ducts. Ductwork made from insulation ductboards.

[9] EN 1507 Ventilation for buildings. Sheet metal air ducts with rectangular section. Requirements for strength and leakage.

[10] EN 12086 Thermal insulating products for building applications. Determination of water vapour transmission properties

[11] EN ISO 354 Acoustics – Measurement of sound absorption in a reverberation room.

[12] EN 12667 Thermal performance of building materials and products. Determination of thermal resistance by means of guarded hot plate and heat flow meter methods. Products of high and medium thermal resistance.

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

According to the Decision 1999/91/EC of the European Commission, as amended by Decision 2001/596/EC, the system of AVCP (see EC delegated Regulation (EU) No 568/2014 amending Annex V to Regulation (EU) 305/2011) given in the following table applies.

Table 8: AVCP system.

Product(s)	Intended use(s)	System
Thermal insulating products	Any	3

Regarding reaction to fire, according to the Decision 1999/91/EC as amended by Decision 2001/596/EC, the system of AVCP given in the following table applies.

Table 9: Reaction to fire AVCP system.

Product(s)	Intended use(s)	System
Thermal insulating products	For uses subject to regulations on reaction to fire	1

5 Technical details necessary for the implementation of the AVCP system, as foreseen in the applicable EAD

All the necessary technical details for the implementation of the AVCP system are laid down in the Control Plan deposited with the ITeC and agreed in accordance with EAD 360001-01-0803, section 3.

The Control Plan is a confidential part of the ETA and only handed over to the notified product certification body involved in the assessment and verification of constancy of performance.

The factory production control operated by the manufacturer shall be in accordance with the above-mentioned Control Plan.

Issued in Barcelona 5th October 2022

by the Catalonia Institute of Construction Technology.

ITeC
Institut de Tecnologia de la Construcció de Catalunya

Ferran Bermejo Nualart

Technical Director, ITeC

ANNEX A: Description of the installation procedure (informative)

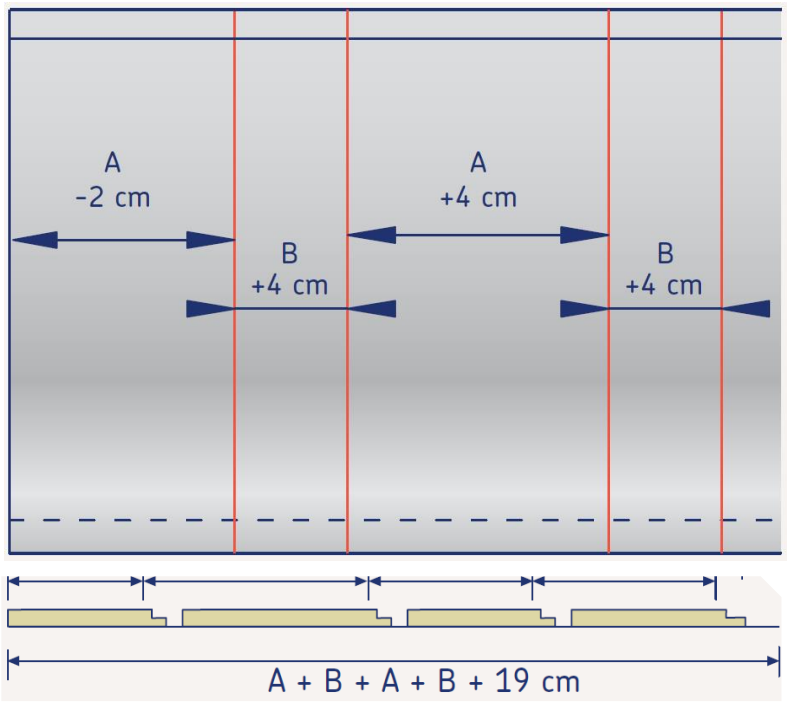
A.1 General

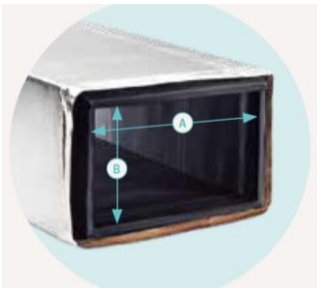
This informative annex provides a general description of the product installation for a better understanding of URSA AIR duct system's installation. The design and installation of the ventilation system shall be carried out in accordance with the manufacturer's instructions.

A.2 Installation description

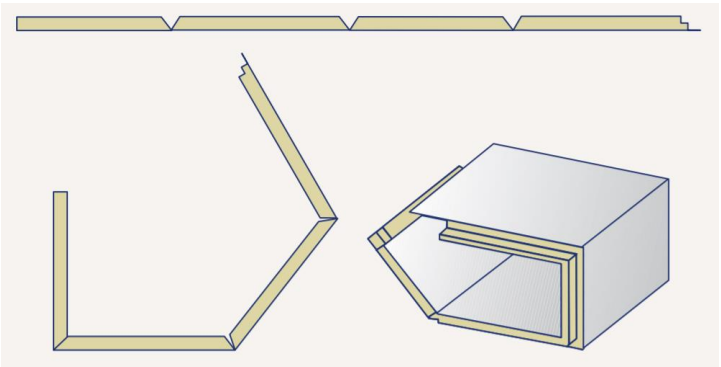
URSA AIR duct system is made from mineral wool panels faced on both sides as shown in the next figures, which are cut, folded, assembled and fixed with staples and adhesive tape to build duct segments.

Figure A.1: Cutting and assembly instructions to form a straight duct from one panel.



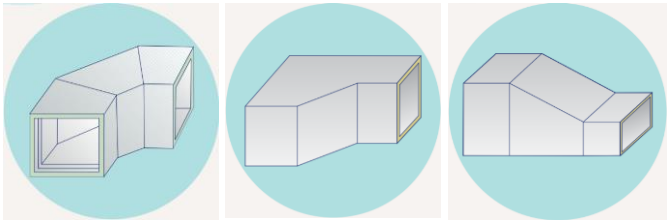


Drawing of the lines to be cut on the panel and cutting shape of the panel with URSA tools.



Folding and final assembly of a straight duct.

Figure A.2: Other duct details assembled through cutting and folding.



Connection between duct segments is made with leaning shiplaps of the panels, fixing the panels' flap to the adjacent segment with staples and covering the overlapped joint with self-adhesive aluminium tape.

All ancillary products and tools used for the installation of URSA AIR duct system shall be in accordance with the manufacturer's instructions.

The duct is suspended horizontally with hangers at a maximum distance depending on the dimension of the duct section largest side, as shown in the next table.

Table A.1: Duct suspension elements.

Largest side dimension (mm)	Maximum distance between hangers (m)
< 900	2,4
900 ≤ L ≤ 1.500	1,8
> 1.500	1,2

For vertical ducts, the maximum distance between hangers is 3 m.

Mechanical reinforcements of the duct and connections between the duct and ancillary components (such as air handling units, fire dampers and diffusors) shall be in accordance with the manufacturer's instructions.

Inspection hatches for access and cleaning shall be installed on the duct at a maximum distance between hatches of 10 m.