Weather resistant louvre

OZR1

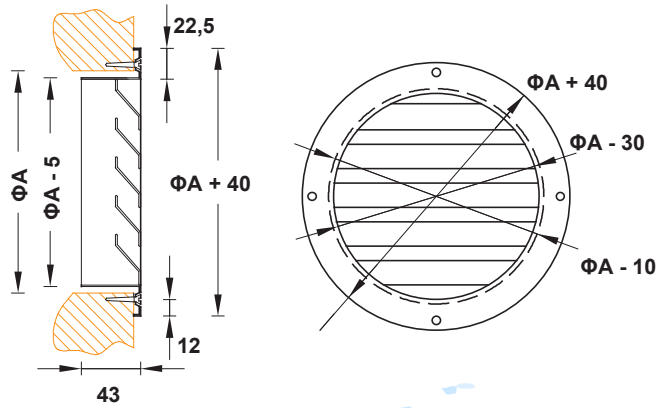
Weather resistant louvre OZR1

Weather resistant louvres **OZR1** have a special design with **circular frame** and 1 row of **fixed horizontal Z-shaped blades, 45º** inclined, which offers protection against rain and **protection grid 6 x 6.** They are suitable for use in air-conditioning and ventilation systems and outdoor wall or air-duct installation, for supplying fresh air or indoor air exhaust.

Weather louvres **OZR1** are manufactured from galvanized steel. Under request they can be manufactured from anodized aluminium, aluminium painted in RAL color, from stainless steel and copper:

OZR1... : Blades & frame from **galvanized steel or painted in RAL color**.
OZR1... | A : Blades & frame from **aluminium**.
OZR1... | C : Blades & frame from **copper**.
OZR1... | I : Blades & frame from **stainless steel**.

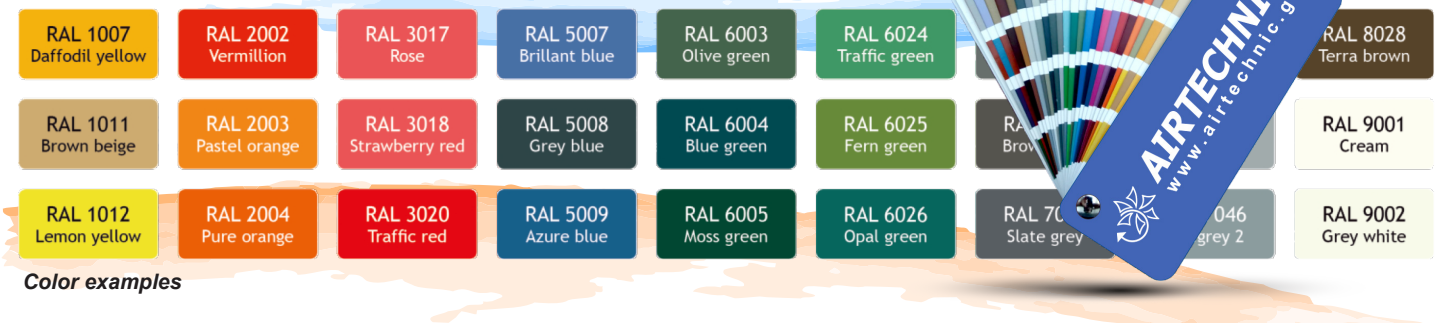
OZR1



WEATHER LOUVRE OZR1 TYPES

OZR1 **From galvanized steel.** 1 Row of fixed horizontal Z-shaped blades, 45º inclined. **With grid 6 x 6 from protection against birds and incects**.

All louvres can be powder painted in any RAL color, under request. For the full range of RAL colors please contact us.



Color examples

INSTALLATION METHODS

Weather louvres **OZR1** can be installed on air-ducts or on walls, as shown in the adjacent drawings and can be used in fresh air intake systems (air flow type **B**) or in indoor air exhaust systems (air flow type **A**).
Page (4) diagrams are suitable for calculating the pressure drop and produced noise, of weather louvres OZR1, for air flow type **B**.
Page (5) diagrams are suitable for calculating the pressure drop and produced noise, of weather louvres OZR1, for air flow type **A**.

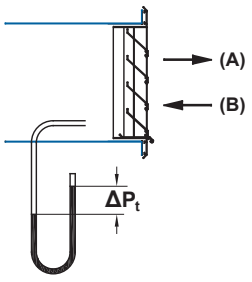
Weather louvres OZR1 can be installed with the following ways :

1. Visible installation with screws
For easy, quick and secure installation. The number of screws required is the same for all sizes of the louvre.

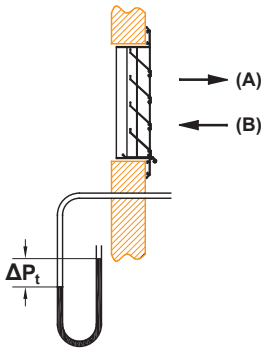
2. Concealed installation with springs
For situations that require an aesthetically better result. Laminas with special cavities, are placed inside the opening where the louvre is to be installed, while springs are placed on the louvre's frame. The support of the louvre is achieved when the springs are secured inside the special cavities of the laminas. This installation method is suitable only for wall installation and not for ceiling installation, for security reasons.

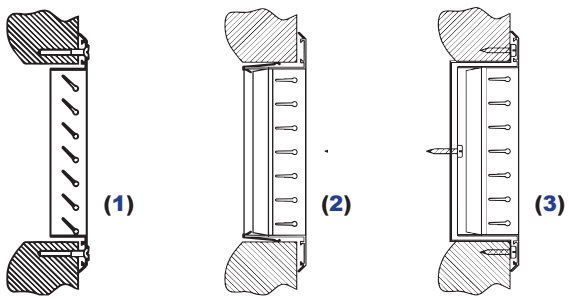
3. Concealed installation with Π-shaped support frame
For situations that require both an aesthetically better result and a secure installation. A Π-shaped frame is mounted in the hole in which the louvre is to be installed and supported by visible screws. The louvre is secured on the frame with internal screw located at the back of the louvre. This screw is accessible by screwdriver through the front face of the louvre.

Air duct installation



Wall installation

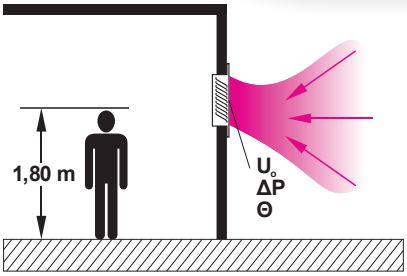


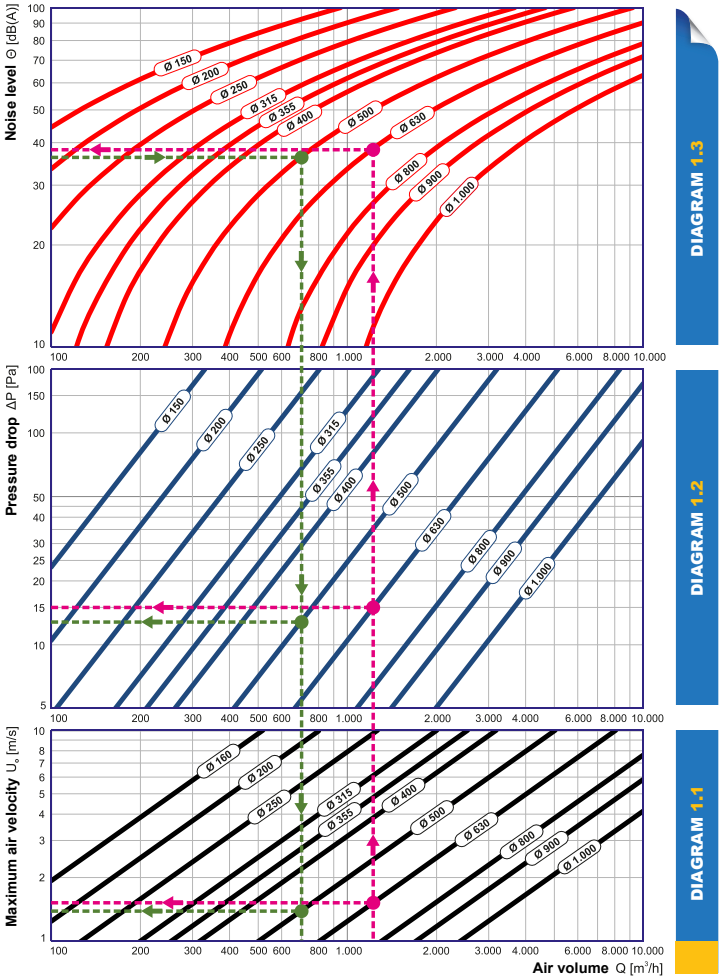


OZR1 - SIZE SELECTION

The selection of weather louvres **OZR1** will be made using the following diagrams and in accordance with the guideline **CR 1752:1998** (Ventilation for buildings - Design criteria for the indoor environment).
The technical specifications for weather louvres **OZR1** are the following :

Louvre diameter	**D**	[mm]
Pressure drop inside the louvre	**ΔP**	[Pa]
Maximum air velocity inside the louvre	**U_o**	[m/s]
Noise level	**Θ**	dB[A]





Selection example 1 :
Which is the diameter of a circular weather louvre OZR1 if the air flow is 700 m³/h, the installation is in a department store and the louvre is used for air intake (air flow type B)?

For air flow type of B, we use the diagrams from page (4). The louvre will be installed in a department store. From the normative document **CR 1752:1998** (types of spaces & permissible sound pressure levels) we establish that the maximum permissible noise level must be 40 dB(A). Therefore a produced noise level of 37 dB(A) is acceptable and from diagram 1.3, for airflow equal to 700 m³/h, we determine that the louvre's diameter must be Ø 500. The maximum air velocity inside the louvre Ø 500 is established, from diagram 1.1 for airflow of 700 m³/h and its equal to 1,45 m/s, while from diagram 1.2 we calculate that the pressure drop is equal to 13 Pa.

Selection example 2 :
Which is the pressure drop and the produced noise level in a circular weather louvre OZR1 Ø 630 in diameter, if the airflow is 1.300 m³/h and the louvre is used for air intake (air flow type B)?

For air flow type of B, we use the diagrams from page (4). From diagram 1.2 for airflow of 1.300 m³/h and louvre size Ø 630 we calculate that the pressure drop is 15 Pa. The maximum air velocity inside the louvre is calculated from diagram 1.1 for airflow of 1.300 m³/h and louvre size Ø 630 and its equal to 1,55 m/s. From diagram 1.3 we establish that the louvre's produced noise level, for airflow of 1.300 m³/h is equal to 38,5 dB(A).

The diagrams are an approximate selection method for OZR1 louvres. For more precise calculation, please use the AIRTECHNIC air louvres calculation software or contact us.

OZR1 - ORDER CODIFICATION

For the proper order of weather louvres **OZR1** please use the following codification :

OZR1 | **400** | **RAL, C, I, A**

RAL	= Blades & frame **painted in RAL color**
C	= Blades & frame from **copper**
I	= Blades & frame from **stainless steel**
A	= Blades & frame from **anodized aluminium**
Blank	= Blades & frame from **galvanized steel**

Louvre **diameter** [mm]

OZR1 = Standard construction

Examples

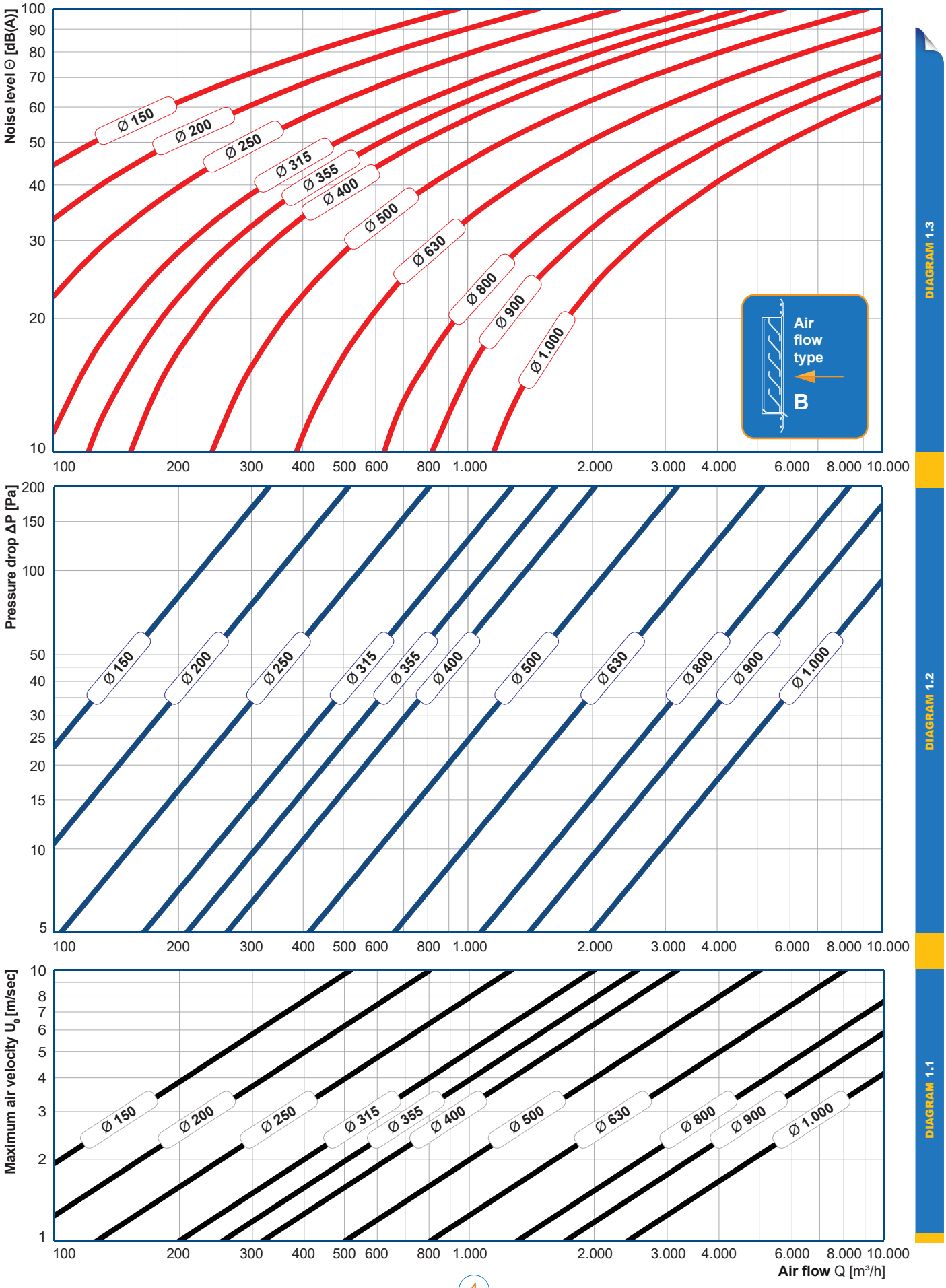
OZR1 315 | A = Circular weather louvre **OZR1**, size **Ø 315**, manufactured from **aluminium**.
OZR1 400 = Circular weather louvre **OZR1**, size **Ø 400**, manufactured from **galvanized steel**.

SPECIFICATION

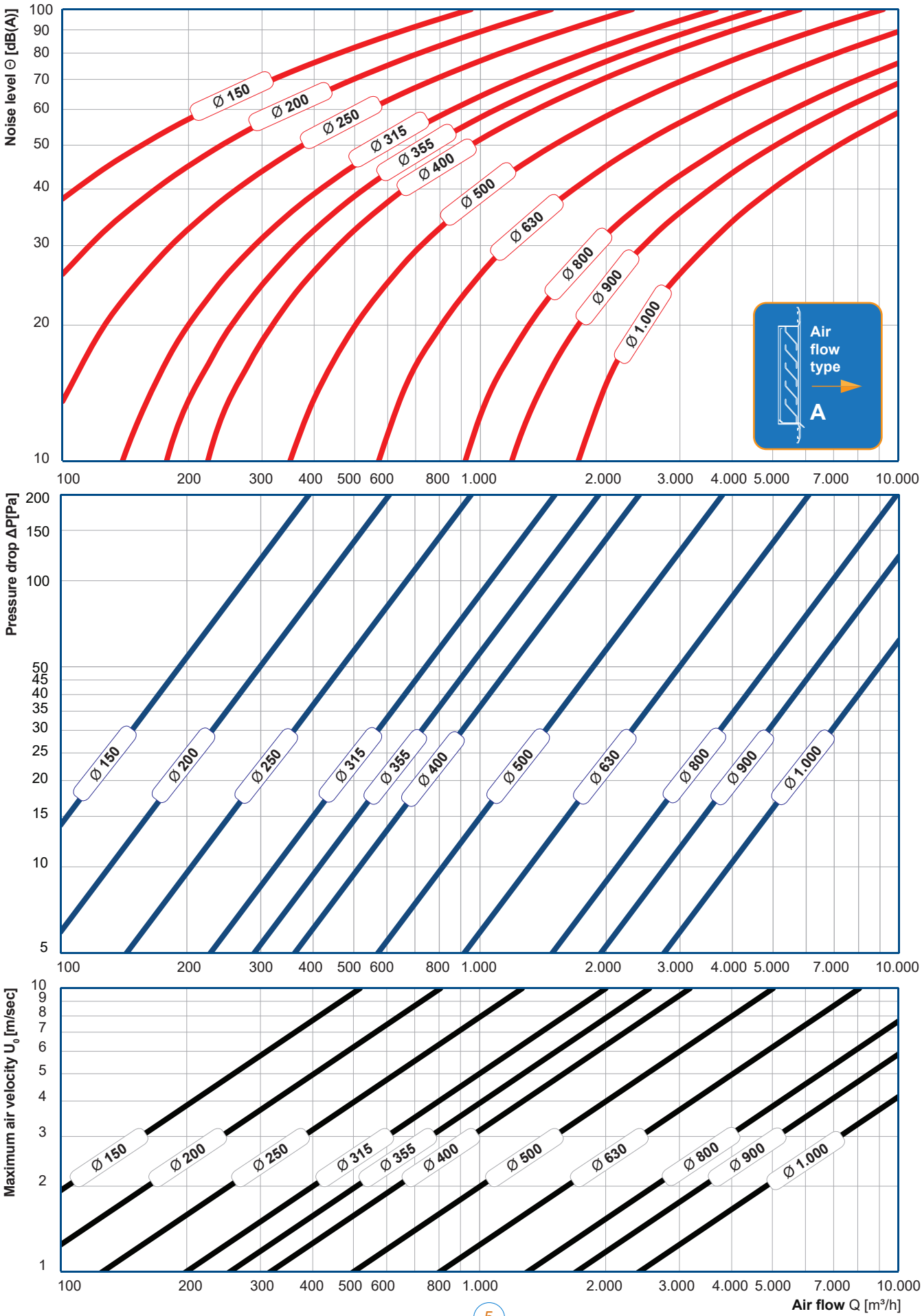
Circular weather grille, OZR1

Circular weather grille, indicative type **OZR1** by **AIRTECHNIC**, manufactured of anodized aluminum / aluminum painted in RAL… color / copper / galvanized steel / stainless steel, 1 row of fixed Z-shaped blades, 45° inclined, parallel to the 1st dimension, for rain-tightness and protection grid 6 x 6 mm. The manufacturer will have performed measurements of the technical characteristics of the grille, in an independent laboratory. It will be suitable for external wall or air duct placement, for fresh air intake or for indoor air exhaust and visible installation with screws / concealed installation with springs / concealed installation with Π-shaped subframe. The factory will be certified according to **ISO 9001:2015** (Quality Management Systems) and according to **ISO 14001:2015** (Environmental Management Systems).
It will be manufactured by **AIRTECHNIC** type **OZR1**

OZR1 - PRESSURE DROP & NOISE LEVEL CALCULATION for air flow type B



OZR1 - PRESSURE DROP & NOISE LEVEL CALCULATION for air flow type A



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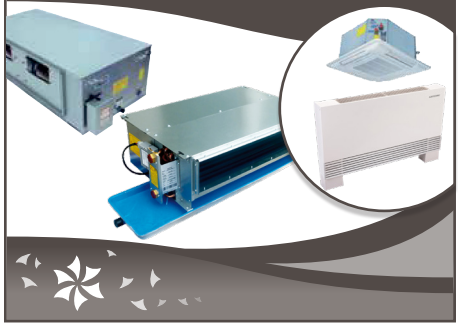

FANS & FAN SECTIONS

FIRE DAMPERS

AIR OUTLETS

STEAM HUMIDIFIERS - DEHUMIDIFIERS

CENTRAL VACUUM SYSTEMS

STAINLESS STEEL CHIMNEYS

AIR FILTERS

AIR CURTAINS

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