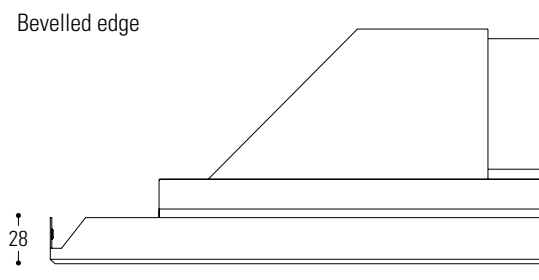




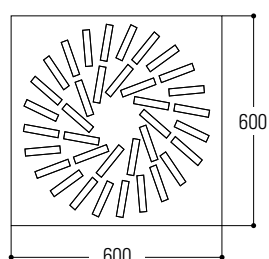
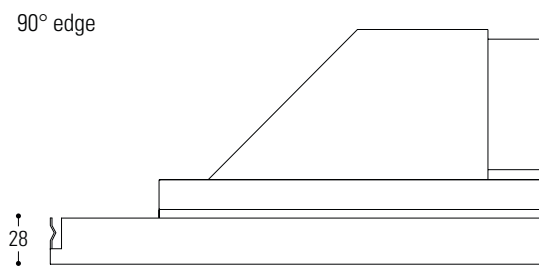
PLENUM

for **Vert Occulto** system - **bevelled / 90°**

Bevelled edge



90° edge



DESCRIPTION

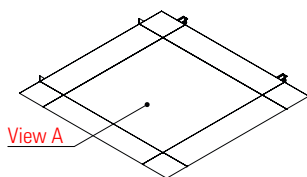
Plenum with a swirl diffuser featuring adjustable movable baffles arranged in a spiral pattern, offering a high induction ratio (mixing capacity) between supply air and ambient air. Consisting of a perforated panel, within which adjustable plastic deflectors are housed. The plenum offers aesthetic and performance characteristics identical to those of our tiles, ensuring an optimal result.

TECHNICAL SPECIFICATIONS

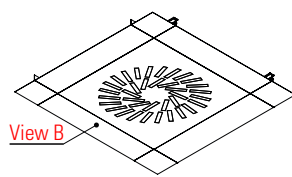
European Standard:	CE - EN 13964
Durability:	Class B
Fire resistance:	A1
Sound absorption:	EN ISO 354
Panel material:	Aluminium (Alloy 3000H46) Galvanised steel (DX51DZ)
Plenum material:	Aluminium (Alloy 3000H46) Galvanised steel (DX51DZ) Stainless steel 304
Fins material:	Thermoplastic – black
Plenum colour:	Pre-painted DONN-WHITE, Silver Mirror-finish aluminium Post-painted RAL - NCS – Sublimated
Tile thickness:	0,4 - 0,5 - 0,6 mm
Body thickness:	0,8 mm
Standard module:	600x600 mm – bevelled edge or 90°
Product weight:	4 kg

ADVANTAGES AND APPLICATIONS

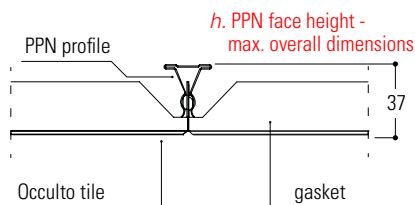
Vert Occulto System



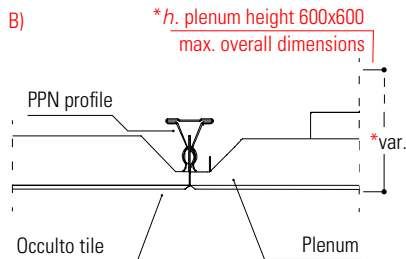
Vert Occulto System with plenum



A)



B)



DESCRIPTION

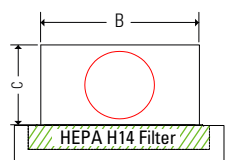
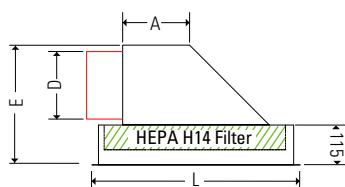
The **plenum** features characteristics that guarantee high quality performance, such as:

- Circular connection with adequate sealing resistant to high temperatures
- Slotted bars for ceiling installation
- Slot for complete integration of the diffuser panel. Furthermore, thanks to the strong inductive effect, the helical throw diffusers generate rapid mixing of the supply air and the ambient air, thus allowing for powerful air exchange without drafts, especially during the cooling phase, with a large difference between the supply air and ambient air temperatures. The entire system, including the plenum, can be accessed at any point using a suction cup provided.

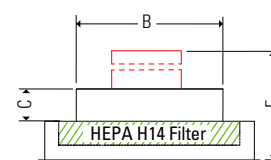
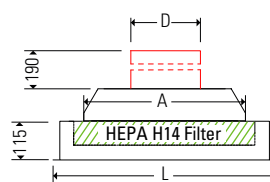
* See the "specifications" table below.

DIMENSIONS AND SPECIFICATIONS

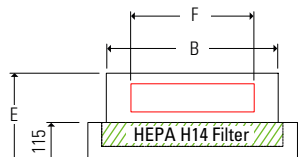
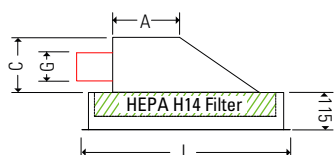
ROUND REAR CONNECTION



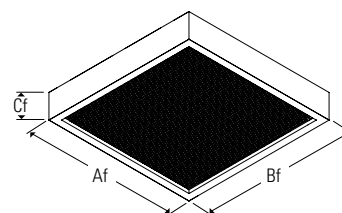
TOP CONNECTION



RECTANGULAR REAR CONNECTION



HEPA 14 FILTER

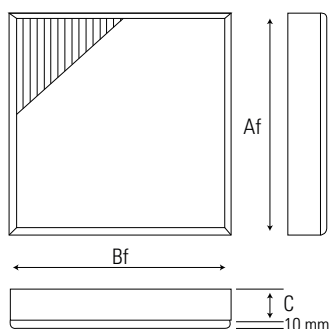


Model	Connection Type	Nominal dimension	PLENUM SPECIFICATIONS								HEPA / H14 FILTER SPECIFICATIONS						
			Dimensions (mm)								Filter dimensions (mm)			Nominal flow Q		filtering surface	Initial pressure drop
			A	B	C	D**	E	F**	G**	L	Af	Bf	Cf	m³/h	m³/s X 10 ^{-3*}	m²	Pa
VOCPSAL305	Side connection	600x600	176	254	243	198	358			595	305	305	68	150	42	2,5	120
VOCPSAL457			200	430	243								78	200	42	3,8	110
VOCPSAL513			210	489	310	250	425	513	513		68	340	95	5,5	120		
VOCPSAL610			210	489	310	250	425				78	450	95	8,5	110		
VOCPSAL762		900x900	262	736	360	315	475	895	762	610	68	750	209	12	120		
			762	762	68	940	261		15	120							
VOCPSAS305	Top connection	600x600	176	254	100	198	405			595	305	305	68	150	42	2,8	110
VOCPSAS457			200	430									78	200	42	3,8	110
VOCPSAS513			210	489	250	405	513	513	68		340	95	5,5	120			
VOCPSAS610			210	489					78		450	95	8,5	110			
VOCPSAS762		900x900	262	736	315			895	762	610	68	750	209	12	120		
			762	762					68	940	261	15	120				
VOCPSALR305	Rectangular rear connection	600x600	230	281	186	-	283	210	126	595	305	305	68	150	42	2,8	110
VOCPSALR457			230	281	186	-	283	210	126				78	200	42	3,8	110
			300	430	135	-	255	320	95		457	457	68	340	95	5,5	120
			300	430	135	-	255	320	95				78	450	95	8,5	110
VOCPSALR513			330	490	135	-	255	450	80		513	513	68	500	125	9,2	110
			330	490	135	-	255	450	80				78	550	125	10,35	110

*/ m3/s x 10-3 = 1/s / **For different connections, contact the technical department

*1 m³/s x 10³ = 1 l/s / **For different connections, contact the technical department

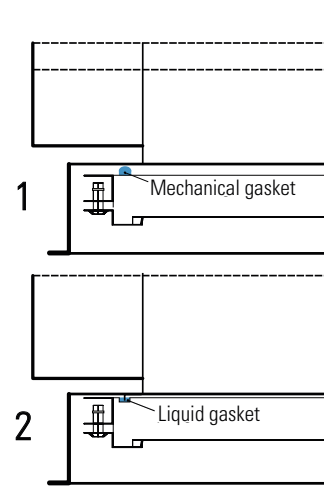
PLENUM FEATURES



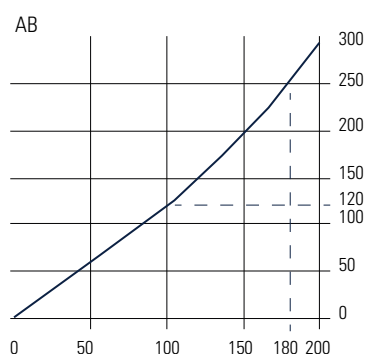
DESCRIPTION

The filter is made with an extruded anodized aluminum frame with a depth of 69 mm, equipped with a micro-expanded aluminum shield with white epoxy paint. The filter media is made of water-repellent and fire-retardant microfiberglass; the small pleats have continuous thermoplastic spacers, while the sealant is made of polyurethane elastomer. The filter seal to the plenum can be:

- Mechanical with a two-component gasket that presses onto the plenum (1).
- Liquid gasket (gel) inserted into a special cavity in the frame into which a rounded blade is inserted (2). The filters' low pressure drop limits the fan's energy consumption. The filter is tested and labeled based on performance; it is also anchored to the plenum to ensure a perfect seal between the filter and the plenum.



FILTER CHARACTERISTIC CURVE



If filters are used in turbulent flows at maximum face velocity, efficiency is reduced by one class.

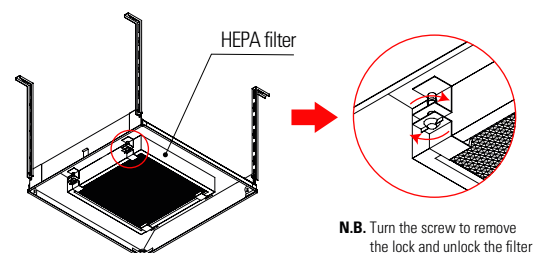
TECHNICAL DATA

MPPS efficiency	99,995%
EN 1822:2009 classification	H14
Recommended final pressure drop	600 Pa
Maximum pressure drop	600 Pa
Operating temperature	70/90°C
Maximum pressure drop	90%

OPTIONAL: MECHANICAL CONTROL VALVE AND FILTER VALVE

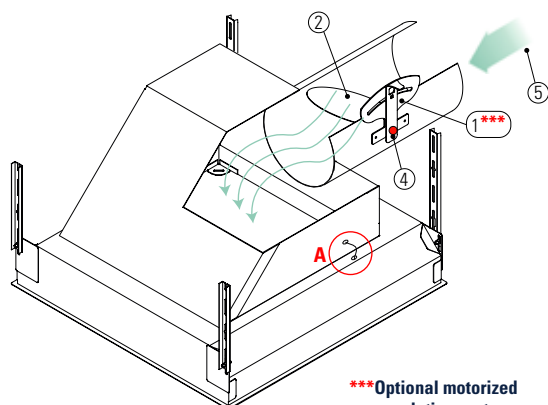
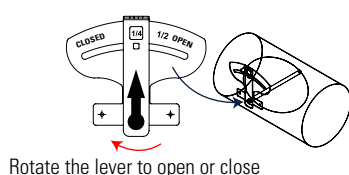
The plenums with mechanical shut-off allow for precise flow adjustment. The shut-off can be motorized upon request.

FILTER COUPLING SYSTEM

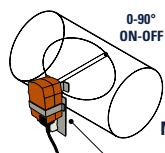


PLENUM WITH ROUND REAR CONNECTION

1. Regulation
2. Regulation damper
3. Regulated supply
4. Damper stop
5. Supply



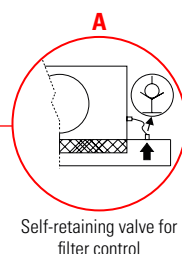
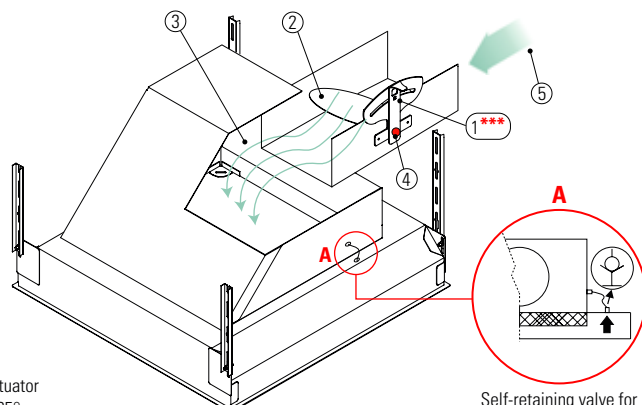
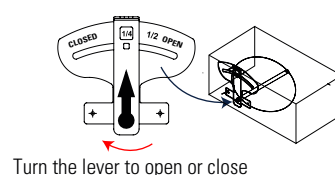
***Optional motorized regulation system



Motorized damper

PLENUM WITH RECTANGULAR REAR CONNECTION

1. Regulation
2. Regulation damper
3. Regulated supply
4. Damper stop
5. Supply

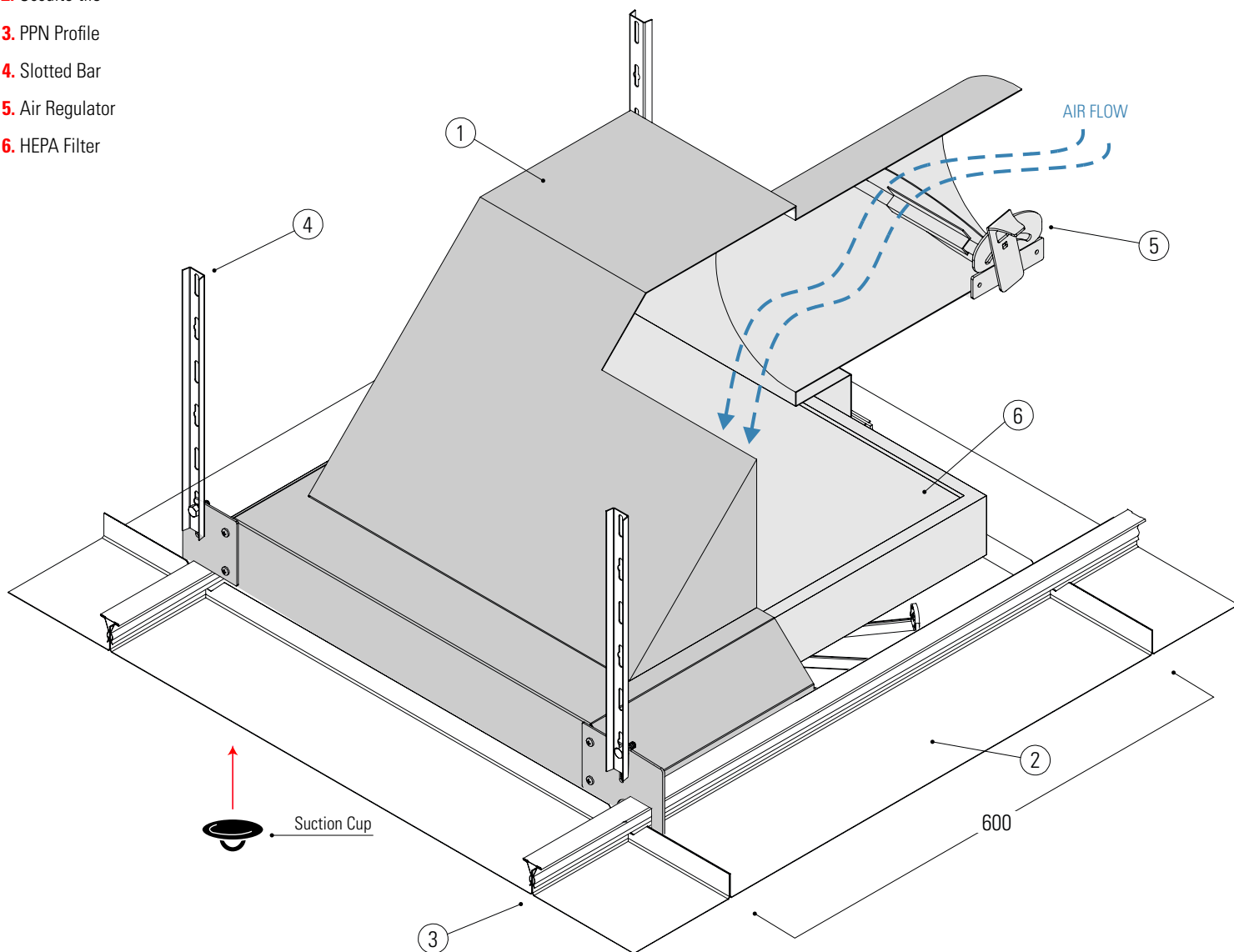


Self-retaining valve for filter control

- Spring return actuator
- 2.5 Nm, < 75 s, 95°
- AC 230 V, On-Off
- IP42
- Spring response time < 25 s
- On-Off control with 1-wire control
- 1 m PVC cable connection
- Pivot actuator: Universal clamp
- Reversible direction of rotation (R/L) with mechanical stop and position indicator

SYSTEM ELEMENTS

- 1. Plenum
- 2. Occulto tile
- 3. PPN Profile
- 4. Slotted Bar
- 5. Air Regulator
- 6. HEPA Filter

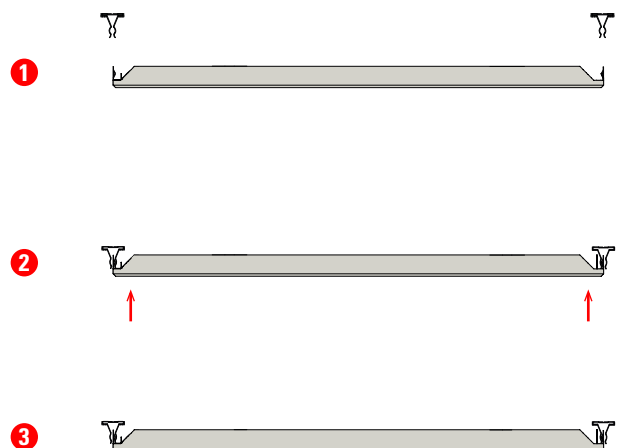


INSTALLATION DESCRIPTION

Installation is simple and intuitive:
Position the plenum in line with the structure under the slab, and secure it with screws using the slotted bars on the four sides of the plenum. Then proceed with tile installation:

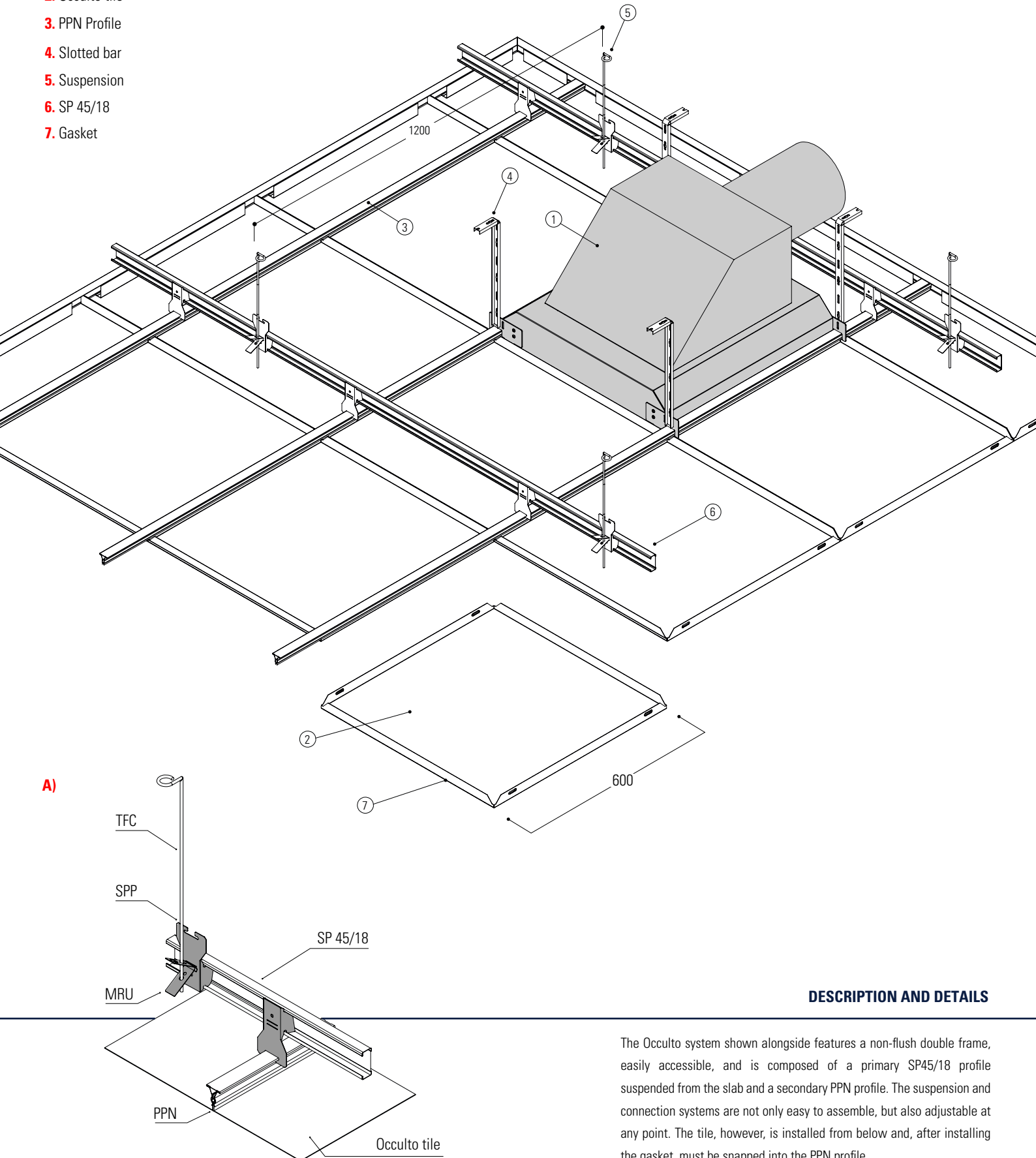
- 1. Position the tile (1) in line with the structure
- 2. Insert the tile, matching the sides where the grooves are inside the PPN profile (3)
- 3. Ensure the grooves snap into the PPN profile (3)

- To access the plenum, use the suction cup in the corner.



SYSTEM ELEMENTS

1. Plenum
2. Occulto tile
3. PPN Profile
4. Slotted bar
5. Suspension
6. SP 45/18
7. Gasket

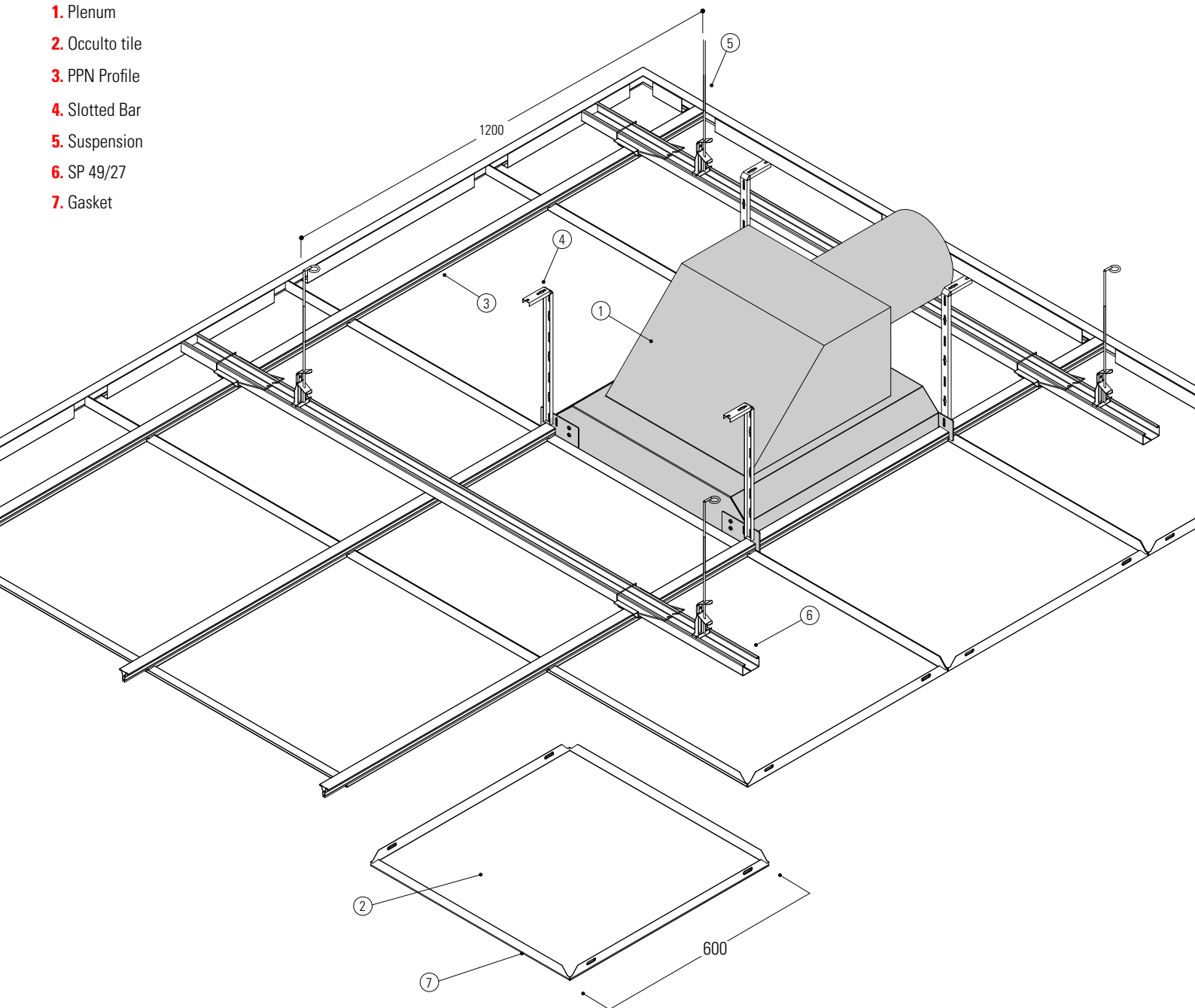


DESCRIPTION AND DETAILS

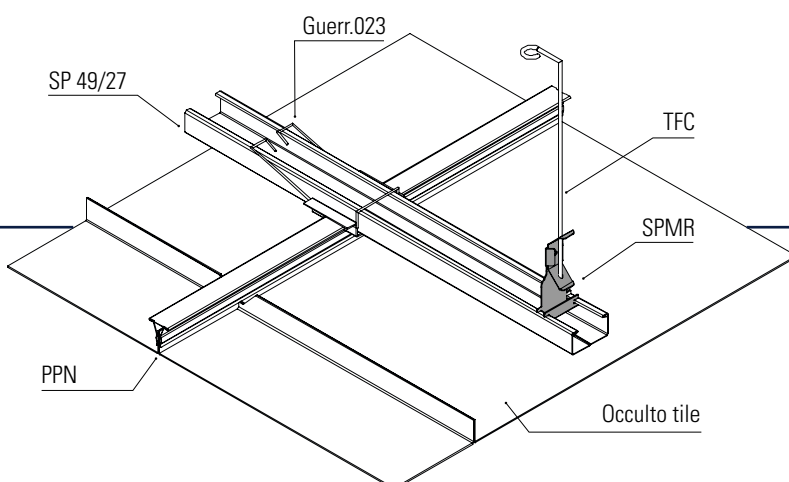
The Occulto system shown alongside features a non-flush double frame, easily accessible, and is composed of a primary SP45/18 profile suspended from the slab and a secondary PPN profile. The suspension and connection systems are not only easy to assemble, but also adjustable at any point. The tile, however, is installed from below and, after installing the gasket, must be snapped into the PPN profile.

SYSTEM ELEMENTS

1. Plenum
2. Occulto tile
3. PPN Profile
4. Slotted Bar
5. Suspension
6. SP 49/27
7. Gasket



B)



DESCRIPTION AND DETAILS

The Occulto system shown alongside features a non-flush double frame and is particularly suitable for solutions with limited space. The false ceiling can be accessed at any point. It is composed of a primary SPN 49/27 profile suspended from the slab and a secondary PPN profile. The suspension and connection systems are not only easy to install, but also adjustable at any point. The tile, on the other hand, is installed from below and, after installing the gasket, must be snapped into the PPN profile.

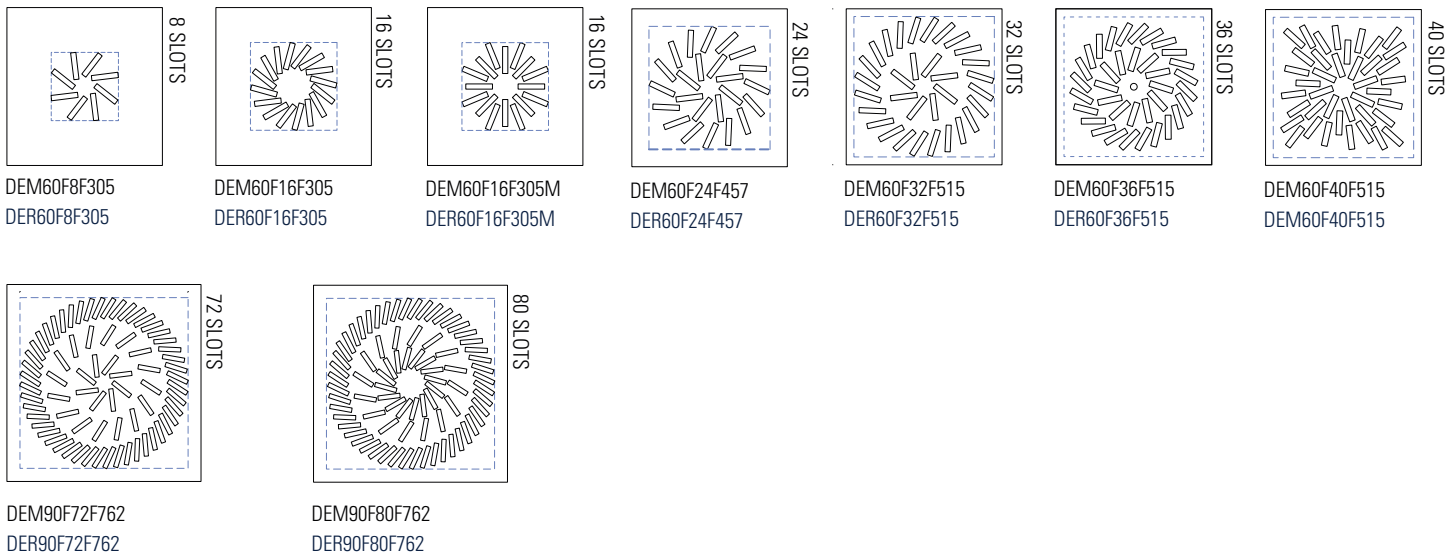
HELICAL FLOW DIFFUSERS

DESCRIPTION

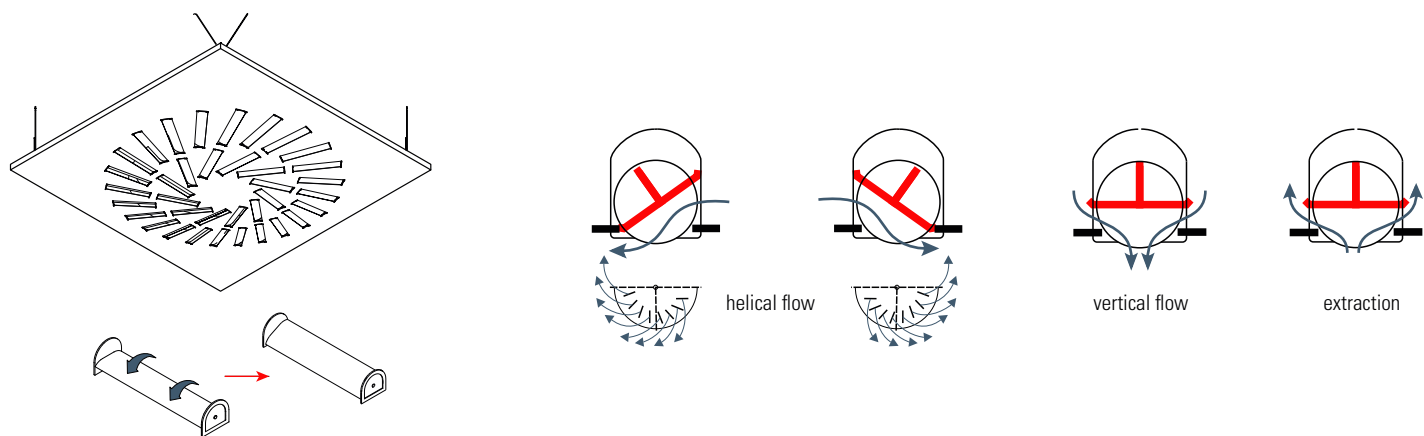
Air diffuser with or without adjustable slots (supply and exhaust), arranged in a daisy pattern, particularly suitable for helical flows. It is used for both cooling and heating, installed on medium-low ceilings (2.7-3.5 m). Unidirectional flow diffusers are available upon request.

SPECIFICATIONS DESCRIPTION

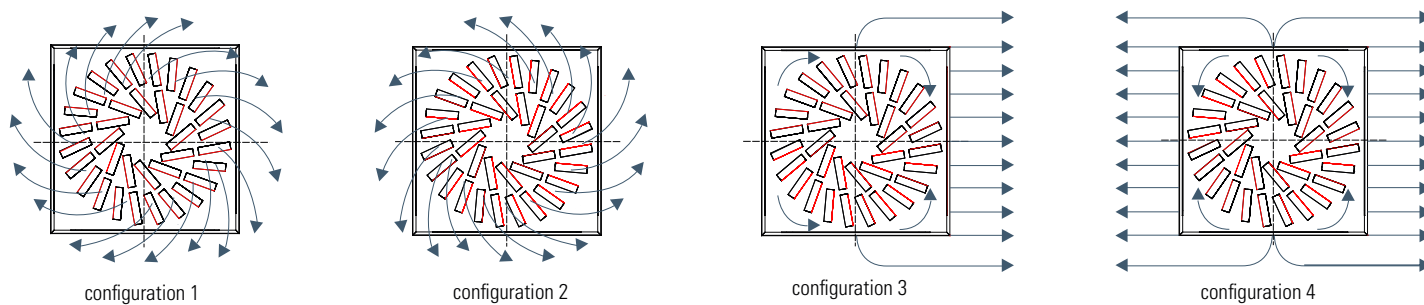
- Suitable for systems with variable flow rates between 100% and 40%.
- Suitable for installation in low and medium spaces.



FLOW BASED ON DEFLECTORS CONFIGURATION



INLET BASED ON DEFLECTORS CONFIGURATION



TECHNICAL AND GEOMETRIC INFORMATION

Plenum + Diffuser Supply Data Table / DEM60F32F515

Noise Level (NRdB)		<20	20	25	30	35	40	45	50	55
Churches and Libraries										
Hospitals										
Apartments and Offices										
Commercial Buildings										
Installation height (m)	min	2,6	2,7	2,8	2,9	3	3,1	3,2	3,4	3,4
	max	3,3	3,4	3,4	3,5	3,6	3,7	3,9	4	4,1
Exit Velocity	m/s	2	3	4	5	6	8	9	10	12
Pressure Drop	Pa	7	14	23	34	47	79	96	116	160
Flow Rate	mc/h	335	503	670	838	1005	1341	1508	1676	2011
Throw	mt	0,7	1,1	1,4	1,8	2,2	2,9	3,2	3,6	4,3

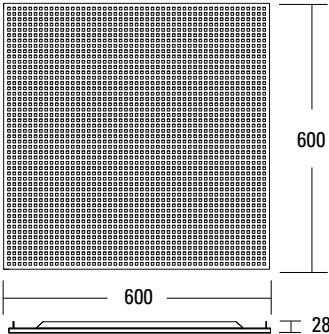
DIFFUSER AND RETURN TILES FOR VERTICAL THROW

DESCRIPTION

Perforated diffuser suitable for unidirectional flows. It is used for both cooling and heating when installed on low-to-medium ceilings (2.7-3.5 m).

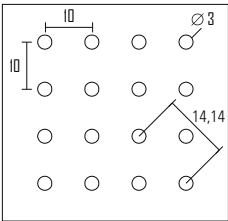
FEATURES

- Suitable for variable flow systems with ranges between 100% and 40%.
- Suitable for installation in low- and medium-height rooms.



Air return tiles 7 %

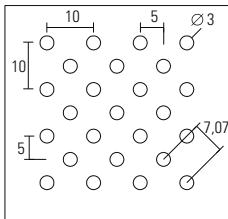
Data table: Supply plenum + circular perforated diffuser Ø 3



Noise Level (NRdB)		<20	20	25	30	35	40	45	50	55
Churches and libraries										
Hospitals										
Apartments and offices										
Commercial buildings										
Installation height (m)	min	2,6	2,7	2,8	2,9	3	3,1	3,2	3,4	3,4
	max	3,3	3,4	3,4	3,5	3,6	3,7	3,9	4	4,1
Exit velocity	m/s	2	3	4	5	6	8	9	10	12
Pressure drop	Pa	8	16	23	28	50	81	98	120	165
Flow rate	mc/h	170	290	290	480	590	800	901	980	1010
Throw	mt	0,7	0,9	1,1	1,3	2	2,3	2,8	3,1	3,6

Air Return Tiles 14 %

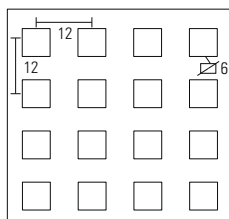
Data table: Supply plenum + circular perforated diffuser Ø 3



Noise Level (NRdB)		<20	20	25	30	35	40	45	50	55
Churches and libraries										
Hospitals										
Apartments and offices										
Commercial buildings										
Installation height (m)	min	2,6	2,7	2,8	2,9	3	3,1	3,2	3,4	3,4
	max	3,3	3,4	3,4	3,5	3,6	3,7	3,9	4	4,1
Exit velocity	m/s	2	3	4	5	6	8	9	10	12
Pressure drop	Pa	8	16	23	28	50	81	98	120	165
Flow rate	mc/h	190	290	400	504	608	810	900	950	1100
Throw	mt	0,7	0,9	1,1	1,3	2	2,3	2,8	3,1	3,6

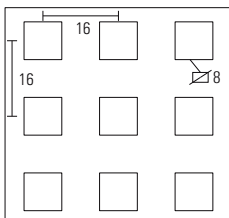
Air Return Tiles 25 %

Data Table: Plenum Supply + 6x6 Square Perforated Diffuser



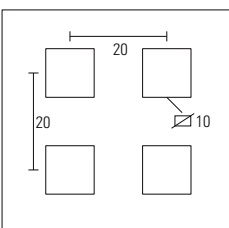
Noise Level (NRdB)		<20	20	25	30	35	40	45	50	55
Churches and Libraries										
Hospitals										
Apartments and Offices										
Commercial buildings										
Installation height (m)	min	2,6	2,7	2,8	2,9	3	3,1	3,2	3,4	3,4
	max	3,3	3,4	3,4	3,5	3,6	3,7	3,9	4	4,1
Exit velocity	m/s	2	3	4	5	6	8	9	10	12
Pressure Drop	Pa	8	16	23	28	50	81	98	120	165
Flow Rate	mc/h	210	315	420	525	630	840	945	1050	1260
Throw	mt	0,7	0,9	1,1	1,3	2	2,3	2,8	3,1	3,6

Data Table: Plenum Supply + 8x8 Square Perforated Diffuser



Noise Level (NRdB)		<20	20	25	30	35	40	45	50	55
Churches and Libraries										
Hospitals										
Apartments and Offices										
Commercial buildings										
Installation height (m)	min	2,6	2,7	2,8	2,9	3	3,1	3,2	3,4	3,4
	max	3,3	3,4	3,4	3,5	3,6	3,7	3,9	4	4,1
Exit velocity	m/s	2	3	4	5	6	8	9	10	12
Pressure Drop	Pa	6	7,3	19	22	45	72	78	113	140
Flow Rate	mc/h	220	335	442	558	659	875	971	1082	1310
Throw	mt	0,7	0,9	1,1	1,3	2	2,3	2,8	3,1	3,6

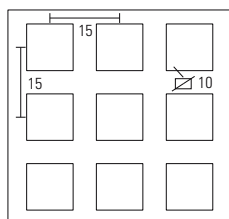
Data Table: Plenum Supply + 10x10 Square Perforated Diffuser



Noise Level (NRdB)		<20	20	25	30	35	40	45	50	55
Churches and Libraries										
Hospitals										
Apartments and Offices										
Commercial buildings										
Installation height (m)	min	2,6	2,7	2,8	2,9	3	3,1	3,2	3,4	3,4
	max	3,3	3,4	3,4	3,5	3,6	3,7	3,9	4	4,1
Exit velocity	m/s	2	3	4	5	6	8	9	10	12
Pressure Drop	Pa	6	7,3	19	22	45	72	78	113	140
Flow Rate	mc/h	228	342	450	560	670	890	990	1050	1320
Throw	mt	0,7	0,9	1,1	1,3	2	2,3	2,8	3,1	3,6

Air Return Tiles 45 %

Data Table: Plenum Supply + 10x10 Square Perforated Diffuser



Noise Level (NRdB)		<20	20	25	30	35	40	45	50	55
Churches and Libraries										
Hospitals										
Apartments and Offices										
Commercial buildings										
Installation height (m)	min	2,6	2,7	2,8	2,9	3	3,1	3,2	3,4	3,4
	max	3,3	3,4	3,4	3,5	3,6	3,7	3,9	4	4,1
Exit velocity	m/s	2	3	4	5	6	8	9	10	12
Pressure Drop	Pa	8,9	20	27	32	55	88	102	130	180
Flow Rate	mc/h	260	360	480	590	690	900	1001	1130	1390
Throw	mt	0,7	0,9	1,1	1,3	2	2,3	2,8	3,1	3,6

REGULATORY REFERENCES

- Air and dust tightness insulation tests carried out in collaboration with Istituto Giordano:

The object tightness was tested according to the method prescribed by the UNI EN 1026:2016 standard and achieved CLASS 2 permeability values according to the UNI EN 14351-1 standard (test report no. 356263 of November 8, 2018).

PRODUCT STORAGE

Store packages in covered areas with a relatively dry atmosphere and a temperature as constant as possible to avoid condensation, which can reduce the passivation protecting the galvanized surface. If storing the package outside (not recommended), use a cover that fully protects the material from adverse weather conditions (rain, fog, snow), taking care to place the packages at a slight angle. This cover must, however, allow adequate ventilation (without direct contact between the two surfaces) so that moisture does not accumulate and cause condensation.

LEED PROTOCOL

This certification is emerging as a new global standard for eco-friendly construction and promotes a sustainability-oriented approach. It includes integrated process assessments, energy performance optimization, construction and demolition waste management planning, interior lighting, and acoustic performance.

PACKAGING MATERIAL

The packaging is made of cardboard with a plastic bag containing the plenum, sealed externally with tape. The pallet is made of plastic strapping and wooden laths. The packages are appropriately sized to facilitate handling in warehouses and on construction sites.

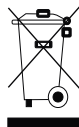
WARNINGS

General Warnings

- Please read the following warnings carefully as they are important instructions for safe installation, use and maintenance.
- After removing the product from its packaging, make sure that it is intact, otherwise contact the seller.
- Packaging elements (plastic bags etc.) must not be left within reach of children as they are potential sources of danger.
- Failure to comply with the above may compromise the safety of the product.
- The manufacturer cannot be held liable for any damage resulting from improper, incorrect and unreasonable use.

Important warnings

- The product must not be subject to modification; any modification voids the warranty and may render the product dangerous.
- Antonio Guerrasio s.r.l. shall not be held liable for any damage caused by its products not being installed in accordance with the instructions.
- The products must be installed in a workmanlike manner.
- The product is also intended to be installed on normally flammable surfaces.



Recycling

the crossed-out bin serves as a reminder to collect the product separately from other waste at the end of its life or to return it to the dealer when purchasing a new appliance of an equivalent type. This helps to preserve the environment from contamination and promotes the recycling of product components. Unauthorised disposal is subject to sanctions according to the law.

Features subject to change and improvement without notice