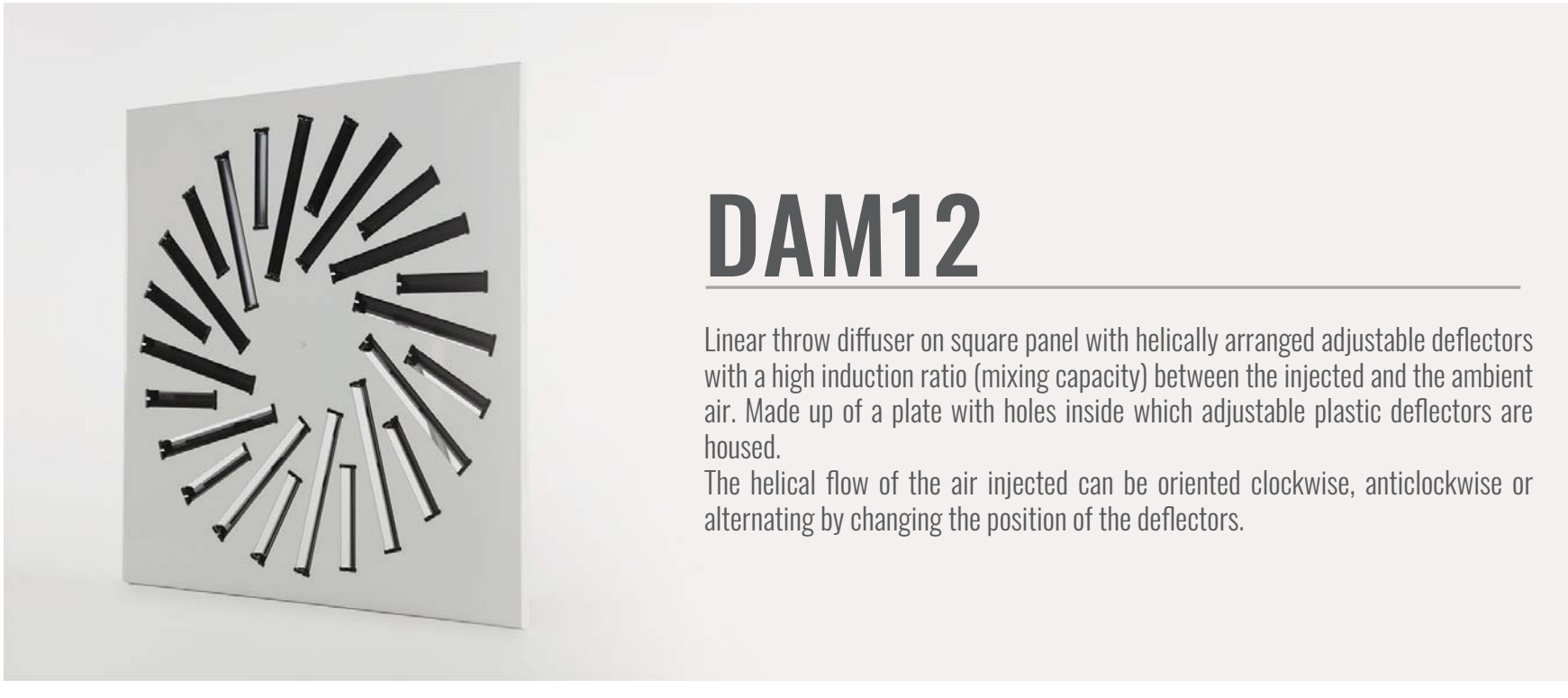
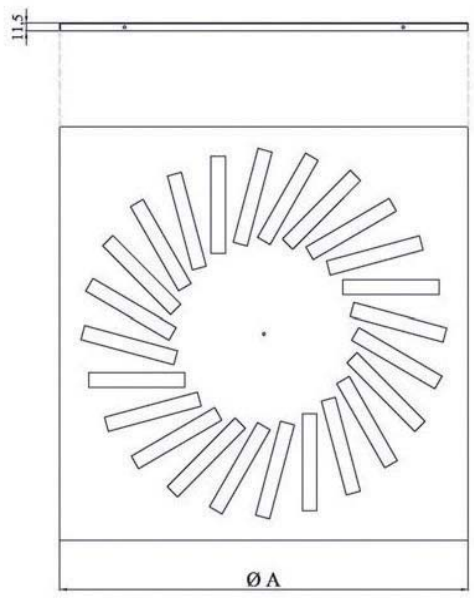


# DAM12

Linear throw diffuser on square panel with helically arranged adjustable deflectors with a high induction ratio (mixing capacity) between the injected and the ambient air. Made up of a plate with holes inside which adjustable plastic deflectors are housed.
The helical flow of the air injected can be oriented clockwise, anticlockwise or alternating by changing the position of the deflectors.

## TECHNICAL SPECIFICATION AND USAGE LIMIT

| INSTALLATION HEIGHT | APPLICATIONS | MATERIAL | SURFACE FINISH | COLOR | FASTENING |
|---|---|---|---|---|---|
| 2,5 to 4 m | The diffuser can also be used for air return; in this case it is supplied without deflecting fins. The deflectors can also be oriented after the diffuser has been installed in order to make adjustments to optimise airflow in the room once the system is running. | Painted steel panel, ABS supports and black PVC deflectors | Epoxy powder coating resistant to impact and abrasion | RAL 9010 white. On request, coating in non-standard RAL colors. | by means of side screws or a central screw |




## GREEN BUILDING

Thanks also to the support of GreenMap, products manufactured by Tecnica srl contribute to obtain the credits of the major international rating systems for suistainable buildings:

**LEED**
Contributes to credits:
IP, EA, MR

**WELL**
Contributes to credits:
MATERIALS, COMMUNITY

**BREEAM**
Contributes to credits:
MAN, WST

For further details about specific contributions to the credits indicated, contact Tecnica Srl

## TECHNICAL DATA

| Model | A [mm] | B [mm] |
|---|---|---|
| DAM12 400 | 395 | 395 |
| DAM12 500 | 495 | 495 |
| DAM12 600 | 595 | 595 |
| DAM12 625 | 625 | 625 |
| DAM12 800 | 795 | 795 |



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| APPLICATIONS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Residential | Easy Pack | Calculation Method | REACH Certificate | RoHS Certificate | Industry | Building | Air Conditioning | Interior design |

*on request

## Selection charts

Flow Rate / Pressure Drop
Air Otlet Speed / Noise Level / Horizontal Throw (Vt.: 0,25m/s)

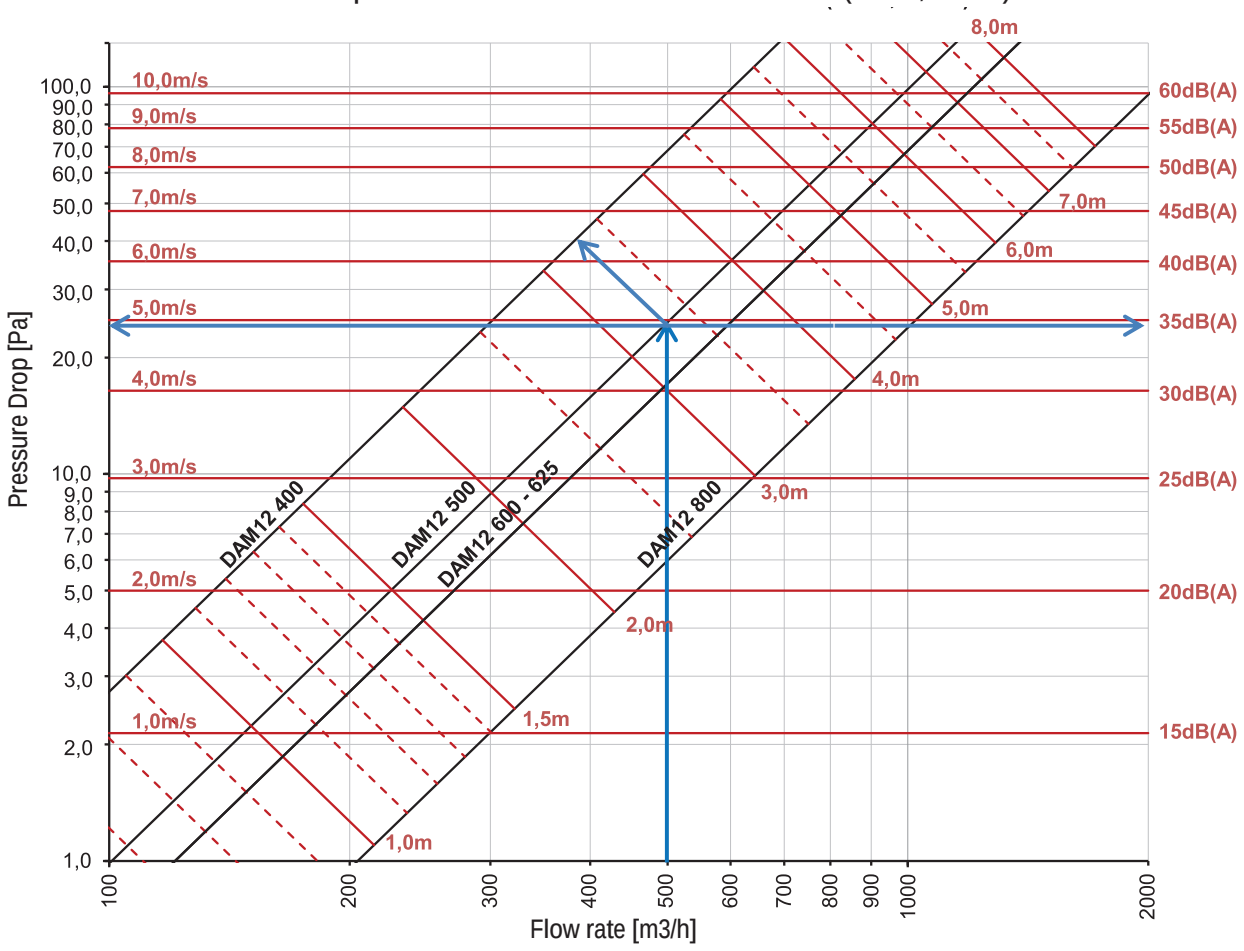


**Diagram 1**

The diagram shows the diffuser pressure drop based on the flow rate with relative indication of the noise level without environmental attenuation, air outlet speed and horizontal throw with terminal speed equal to 0.25m/s.

**Note:** Pressure drop data shown in the diagram refer to the diffuser with the damper fully open.

| CALCULATION (input data) | |
|---|---|
| Total Flow Rate | 5000 $m^3/h$ |
| Max Noise Level | 35dB(A) |
| Number of diffu-sers expected | 10pz. |
| Horizontal Isother-mal Throw | 3,3m |

| SELECTION | |
|---|---|
| Model | DAM12 500 |
| Flow Rate | 500 $m^3/h$ |
| Pressure Drop | +/- 26Pa |
| Noise Level | +/- 35dB(A) |
| Inlet Air Speed | Flow Rate/ (Ak * 3600) = 4,67m/s |
| Horizontal Isother-mal Throw | 3,3m |


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| MODEL | DESCRIPTION | U.M. | Vi (m/sec) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **DAM12 400** **Ak: 0,0178m2** | Flow Rate | m3/h | 64 | 129 | 193 | 257 | 321 | 386 | 450 | 514 | 578 | 643 |
| | Pressure Drop | Pa | 1 | 5 | 11 | 19 | 30 | 43 | 59 | 76 | 97 | 120 |
| | Horizontal Throw Vt 0,25m/s | mt | 0,6 | 1,1 | 1,7 | 2,2 | 2,8 | 3,3 | 3,9 | 4,4 | 5,0 | 5,5 |
| | Noise Level | dB(A) | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| **DAM12 500** **Ak: 0,0297m2** | Flow Rate | m3/h | 107 | 214 | 321 | 428 | 535 | 643 | 750 | 857 | 964 | 1071 |
| | Pressure Drop | Pa | 1 | 5 | 11 | 19 | 30 | 43 | 59 | 76 | 97 | 120 |
| | Horizontal Throw Vt 0,25m/s | mt | 0,7 | 1,4 | 2,1 | 2,8 | 3,6 | 4,3 | 5,0 | 5,7 | 6,4 | 7,1 |
| | Noise Level | dB(A) | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| **DAM12 600** **Ak: 0,0357m2** | Flow Rate | m3/h | 129 | 257 | 386 | 514 | 643 | 771 | 900 | 1028 | 1157 | 1285 |
| | Pressure Drop | Pa | 1 | 5 | 11 | 19 | 30 | 43 | 59 | 76 | 97 | 120 |
| | Horizontal Throw Vt 0,25m/s | mt | 0,8 | 1,6 | 2,3 | 3,1 | 3,9 | 4,7 | 5,5 | 6,2 | 7,0 | 7,8 |
| | Noise Level | dB(A) | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| **DAM12 625** **Ak: 0,0357m2** | Flow Rate | m3/h | 129 | 257 | 386 | 514 | 643 | 771 | 900 | 1028 | 1157 | 1285 |
| | Pressure Drop | Pa | 1 | 5 | 11 | 19 | 30 | 43 | 59 | 76 | 97 | 120 |
| | Horizontal Throw Vt 0,25m/s | mt | 0,8 | 1,6 | 2,3 | 3,1 | 3,9 | 4,7 | 5,5 | 6,2 | 7,0 | 7,8 |
| | Noise Level | dB(A) | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| **DAM12 800** **Ak: 0,0604m2** | Flow Rate | m3/h | 218 | 435 | 653 | 870 | 1088 | 1306 | 1523 | 1741 | 1958 | 2176 |
| | Pressure Drop | Pa | 1 | 5 | 11 | 19 | 30 | 43 | 59 | 76 | 97 | 120 |
| | Horizontal Throw Vt 0,25m/s | mt | 1,0 | 2,0 | 3,0 | 4,1 | 5,1 | 6,1 | 7,1 | 8,1 | 9,1 | 10,1 |
| | Noise Level | dB(A) | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |

Note: the data indicated refer to operation in isothermal conditions



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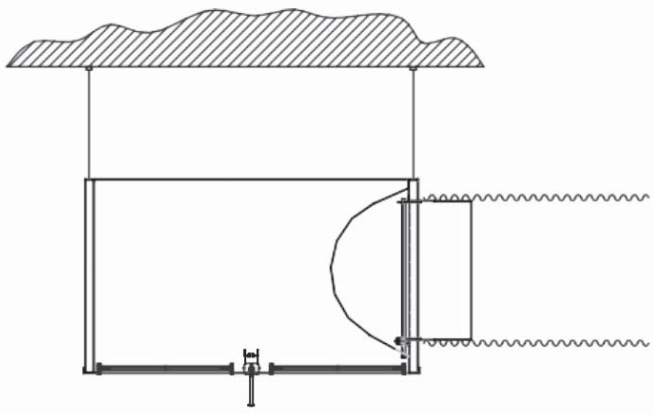


FIG. 1

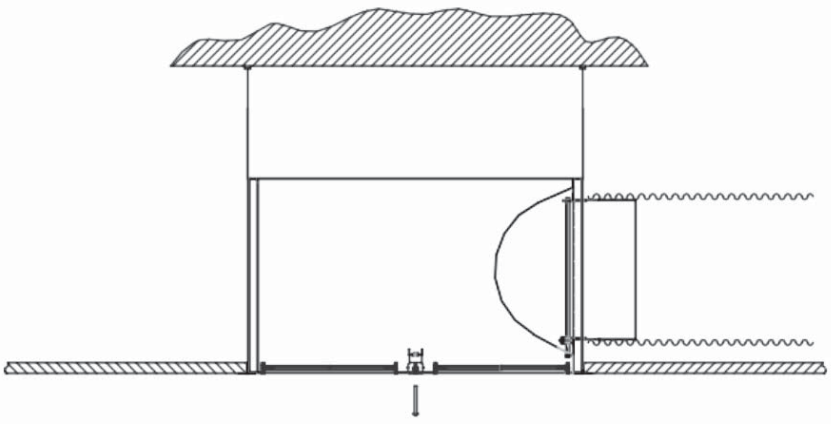
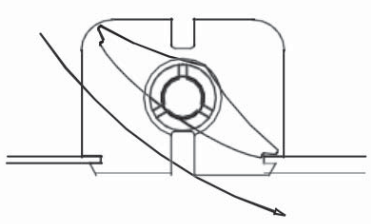
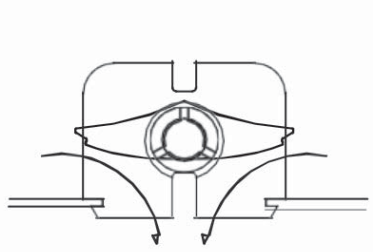


FIG. 2



Deflector in maximum horizontal throw position



Deflector in maximum vertical throw position

FIG. 3

Easy installation, adjustments and maintenance. The diffusers are fastened to the plenum by means of side screws or a central screw.

## Adjustment

The airflow distribution is manually adjusted by acting on the deflectors that are fitted with a snap positioning device so that they stay in position during operation.

## Fig. 1 Installation with plenum fastened on the ceiling

- Hang the plenum on the ceiling using brackets or chains fastened on the plenum whose outer edge can be drilled.
- Fit the flexible duct on the connecting sleeve and fasten it with a hose clamp.
- Make a preliminary adjustment to the damper by acting on the pin with Allen screw and tightening the hexagonal-head screw that fastens the pin.
- Fit the diffuser using either a central screw screwing it onto the plenum bridge (if provided) or 4 self-tapping side screws.

## Fig. 2 Installation on the false ceiling

- Hang the false ceiling elements on the ceiling.
- Make a preliminary adjustment to the damper by acting on the pin with Allen screw and tightening the hexagonalhead screw that fastens the pin.
- Fit the flexible duct on the connecting sleeve and fasten it with a hose clamp.
- Fit the diffuser using either a central screw screwing it onto the plenum bridge (if provided) or 4 self-tapping side screws.
- Rest the diffuser pre-fitted on the plenum on the square space of the false ceiling.

## Fig. 3 Movable deflector adjustment

- The movable deflectors can be adjusted from an angle of 0° (maximum vertical throw position used in heating) to a maximum angle (maximum horizontal throw position used in cooling).

The deflectors are fitted with a snap positioning device in order to guarantee accuracy and always correct positioning even with high flow rates and velocities.



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