

AMT single deflection grilles for air supply

The **AMT** series grilles are designed for air supply in HVAC system.

- Single deflection grilles.
- Wall or false ceiling mounting.
- Individually adjustable blades to adjust the throw and the air pattern.

Product advantages:

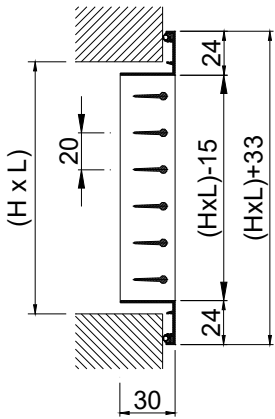
- Nylon bushings for optimal fit of the blades.
- Perimeter gasket for sealing with the wall or ceiling.
- Opposed blades damper in black color for better aesthetics.



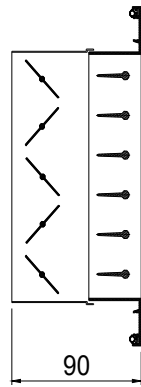
- Offices
- Hotels
- Residences



AMT-AN



AMT-AN + SP



CLASSIFICATION

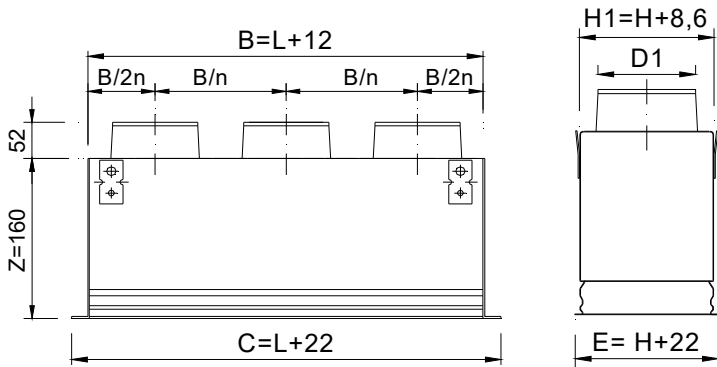
AMT-AN Grille with blades parallels to the largest side (L size).

BMT-AN Grille with blades parallels to the shortest side (H size).

MATERIAL

Aluminium grilles. The grilles are provided with a seal on the back of the frame in order that the perimeter in contact with ceilings or walls is airtight.

PLRO/S/

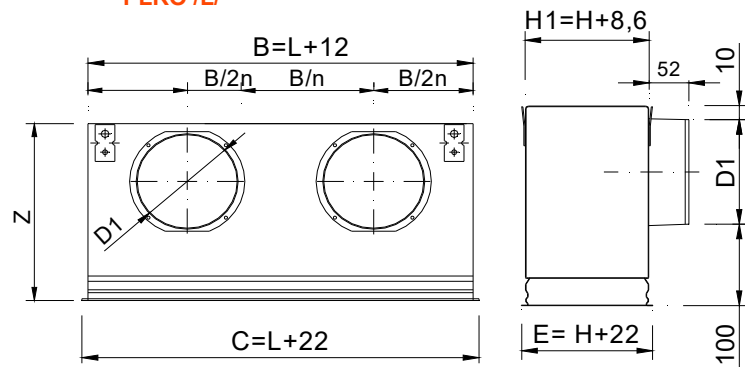


ACCESSORIES

CM Mounting frame from galvanised steel (delivered separately in 4 linear elements) The opening size LxH must be increased by 8 mm.

SP Opposed blades volume damper from galvanised steel, in black colour. The damper is operated by an easily accessible key inside the grille.

PLRO /L/



PLRO Plenum box with circular connection, made from galvanized steel. Suitable for both wall and ceiling mounting.

.../S/ Upper circular connection.

.../L/ Lateral circular connection.

...-R Damper in the spigot.

.../AIS/ Thermally insulated plenum box with foam. Density 30 kg / m³ ISO 845. Thermal conductivity 20° C 0,040 W / m²K ISO 3386/1.

Classified reaction to fire B-s2, d0 EN 13501-1.

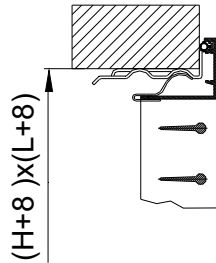
PLRO/S/ (D1)

LxH	100	150	200	250	300
200	1/98	1/123	1/198		
250	1/98	1/123	1/198	1/198	
300	1/98	1/123	1/198	1/248	1/248
350	1/98	1/123	1/198	1/248	1/248
400	1/98	1/123	1/198	1/248	1/248
450	1/98	1/123	1/198	1/248	1/248
500	1/98	1/123	1/198	1/248	1/248
600	2/98	2/123	1/198	1/248	1/248
700	2/98	2/123	1/198	1/248	1/248
800	2/98	2/123	1/198	1/248	1/248
900	2/98	2/123	2/198	1/248	1/248
1000	2/98	2/123	2/198	1/248	2/248

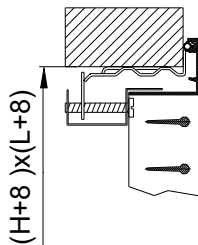
PLRO/L/ (D1)

LxH	100	150	200	250	300
200	1/123	1/158	1/198		
250	1/123	1/198	1/198	1/198	
300	1/158	1/198	1/198	1/198	1/248
350	1/158	1/198	1/198	1/248	1/248
400	1/158	1/198	1/248	1/248	1/248
450	1/198	1/198	1/248	1/248	1/313
500	1/198	1/198	1/248	1/248	1/313
600	1/198	2/198	1/248	1/248	1/313
700	2/198	2/198	2/198	2/248	2/248
800	2/198	2/198	2/198	2/248	2/248
900	2/198	2/198	2/248	2/248	2/313
1000	2/198	2/198	2/248	2/248	2/313

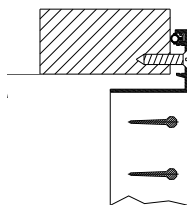
(S)



(O)



(T)



FIXING SYSTEMS

- (S) Clips. It requires mounting frame CM.
- (O) Hidden screw. It requires mounting frame CM.
- (T) Visible screws.

FINISHES

- AA Matt silver anodised.
- M9016 Pre-lacquered in white similar to RAL 9016 (85-95% gloss)
- R9010S Pre-lacquered in white RAL 9010 (60-70% gloss)
- RAL... Painted in other RAL colours.

SPECIFICATION TEXT

Supply and mounting of single deflection grille for air supply with individually adjustable blades parallels to the largest side, series

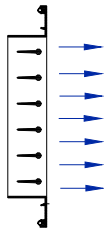
AMT-AN+SP+CM (S) M9016 dim. LxH, constructed from aluminium paint in white M9016 with opposed blades volume damper from galvanised steel in black colour SP, invisible fixing by clips (S) and mounting frame CM.

Manufacturer MADEL.



FREE FACE AREA m2.

H \ L	100	150	200	250	300	350	400	450	500	550	600	700	800	900	1000
100	0,006	0,009	0,013	0,017	0,020	0,024	0,027	0,031	0,034	0,038	0,041	0,049	0,056	0,063	0,070
150	0,009	0,015	0,021	0,026	0,032	0,037	0,043	0,049	0,054	0,060	0,066	0,077	0,088	0,099	0,110
200	0,012	0,020	0,027	0,035	0,042	0,050	0,057	0,064	0,072	0,079	0,087	0,102	0,116	0,131	0,146
250	0,016	0,025	0,035	0,044	0,054	0,063	0,073	0,082	0,092	0,101	0,111	0,130	0,149	0,168	0,187
300	0,019	0,030	0,042	0,053	0,064	0,076	0,087	0,098	0,109	0,121	0,132	0,155	0,178	0,200	0,223
350	0,023	0,036	0,049	0,063	0,076	0,089	0,103	0,116	0,129	0,143	0,156	0,183	0,210	0,236	0,263
400	0,026	0,041	0,056	0,071	0,086	0,101	0,117	0,132	0,147	0,162	0,178	0,208	0,238	0,269	0,299
450	0,029	0,046	0,064	0,081	0,098	0,115	0,132	0,150	0,167	0,184	0,202	0,236	0,271	0,305	0,340



RECOMMENDED VELOCITY.

Vmin m/s	Vmax m/s
2	3.5

Determination of air flow.
Measuring the Vf in different points of the grille, we find the Vfmed.

$$Q \text{ (l/s)} = V_{fmed} \text{ (m/s)} * A_{free} \text{ (m}^2) * 1000$$

$$Q \text{ (m}^3\text{/h)} = V_{fmed} \text{ (m/s)} * A_{free} \text{ (m}^2) * 3600$$

CORRECTION FACTOR FOR Lwa1.

Afree m2	0,01	0,02	0,05	0,1	0,2	0,4
Lwa1(kf)	-10	-8	-1	-	+6	+10

Weighted noise level related to
Afree = 0,1m2.

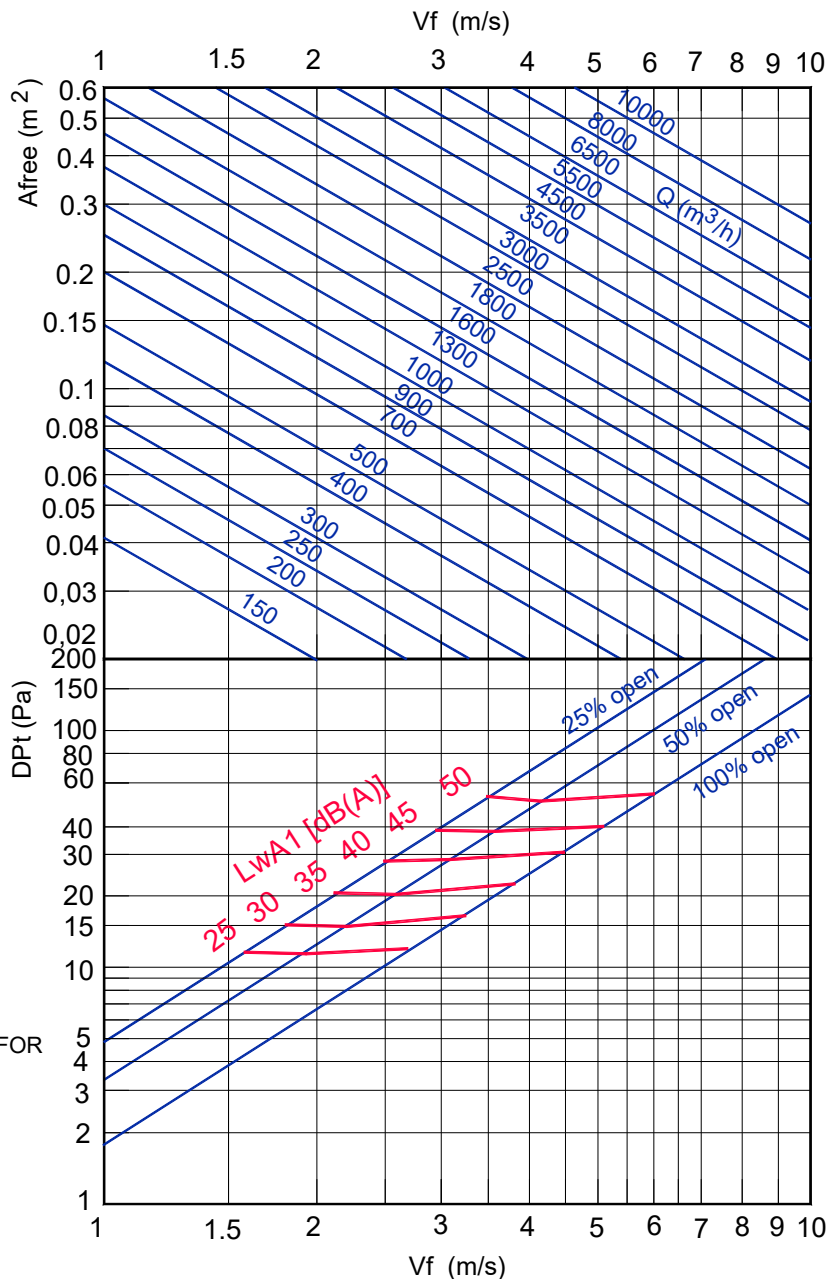
$$Lwa = Lwa1 + Kf$$

CORRECTION FACTOR OF PRESSURE LOSS FOR DIFFERENT BLADES POSITIONS.

	0°	22°	45°
Kp	1	1,28	1,5

$$Dpt' = Dpt * Kp$$

FREE VELOCITY, PRESSURE LOSS AND SOUND POWER LEVEL.



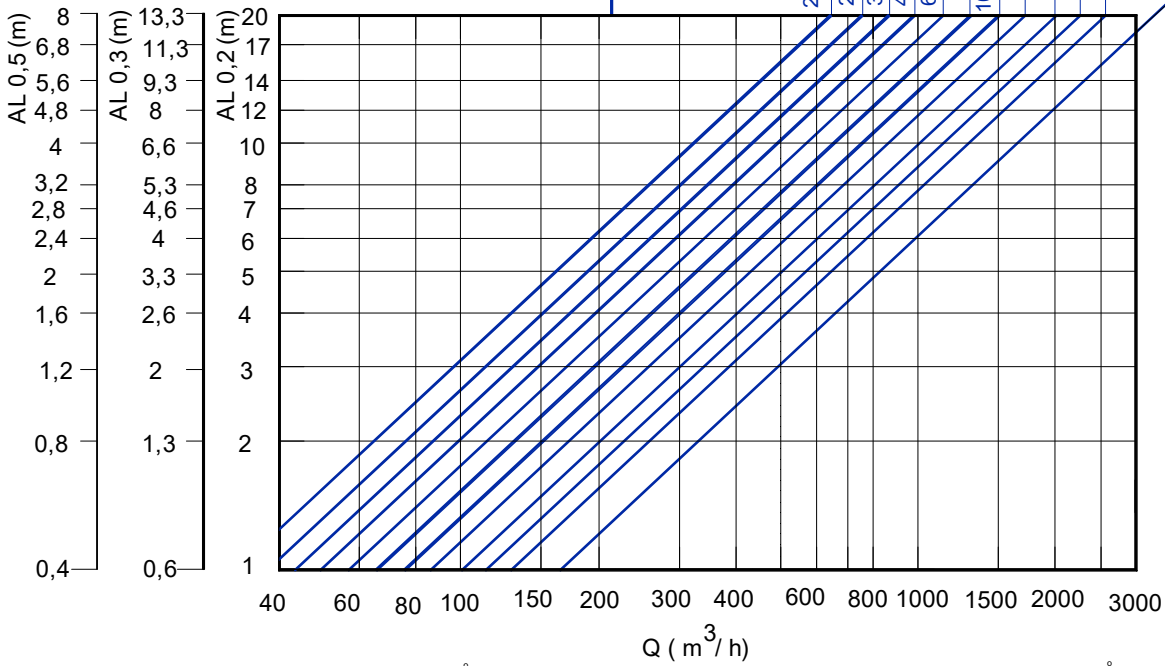
Note: In MadelMedia Octava band centre frequency in Hz.



AMT

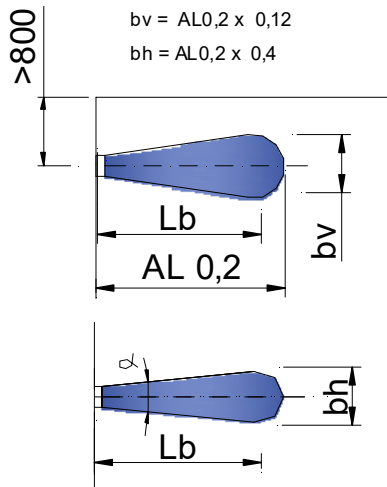
450																						
400																						
350													350									
300													300	450								
250													250	300	400	700						
200													200	300	400	600	900					
150													150	250	350	500	750					
100													100	200	300	450	700					

THROW WITHOUT CEILING EFFECT.



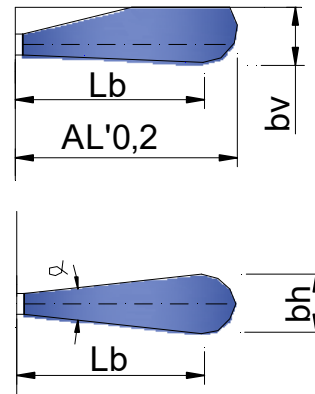
POSITION OF BLADES 0° WITHOUT CEILING EFFECT.

AL0,2
 $Lb = AL0,2 \times 0,53$
 $bv = AL0,2 \times 0,12$
 $bh = AL0,2 \times 0,4$



POSITION OF BLADES 0° WITH CEILING EFFECT.

AL'0,2 = AL0,2 x 1,33
 $Lb = AL0,2 \times 0,7$
 $bv = AI0,2 \times 0,106$
 $bh = AI0,2 \times 0,53$



CORRECTION FACTOR FOR POSITION OF BLADES.

$AL_{0,2}(22^\circ) = AI_{0,2} \times 0,8$ $AL_{0,2}(45^\circ) = AI_{0,2} \times 0,5$
 $Lb(22^\circ) = AL_{0,2} \times 0,53$ $Lb(45^\circ) = AL_{0,2} \times 0,33$
 $bv(22^\circ) = AI_{0,2} \times 0,096$ $bv(45^\circ) = AI_{0,2} \times 0,06$
 $bh(22^\circ) = AI_{0,2} \times 0,48$ $bh(45^\circ) = AI_{0,2} \times 0,6$

CORRECTION FACTOR FOR POSITION OF BLADES.

$AL'_{0,2}(22^\circ) = AI_{0,2} \times 1,064$ $Lb(45^\circ) = AI_{0,2} \times 0,66$
 $Lb(22^\circ) = AI_{0,2} \times 0,7$ $Lb(45^\circ) = AI_{0,2} \times 0,44$
 $bv(22^\circ) = AI_{0,2} \times 0,08$ $bv(45^\circ) = AI_{0,2} \times 0,054$
 $bh(22^\circ) = AI_{0,2} \times 0,64$ $bh(45^\circ) = AI_{0,2} \times 0,798$