klin
SYSTEM

RMT egg-crate return grilles

The **RMT** series grilles are designed for air return in HVAC facilities.

- Mounting on walls, ceilings or false ceilings.
- Fixed lattice lames.

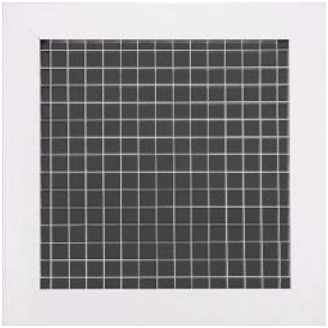
Product Advantages:

- Design to maximize the free area.
- MOD version for greater integration and faster assembly in technical ceilings.
- KLIN version for easy maintenance.
- MOD and KLIN versions available with fixed lattice at 45º to prevent the vision through the grille.

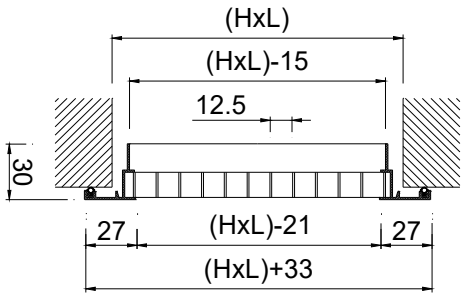
Models:
RMT-A
RMT-MOD
RMT-KLIN

- ❑ Residential
- ❑ Hotels
- ❑ Commercial premises and offices

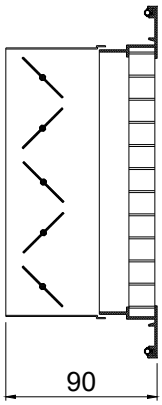
RMT-A



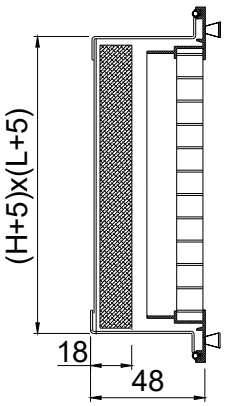
RMT-A



RMT-A+SP



RMT-A+PFT



RMT-A

CLASSIFICATION

RMT-A Egg-crate return grilles of 13x13 mm lattice core.

MATERIAL

Extruded aluminium frame and lattice from laminate aluminium.
All grilles are provided with a seal on the back of the frame in order that the perimeter in contact with walls, ceiling, ducts, etc...is airtight.

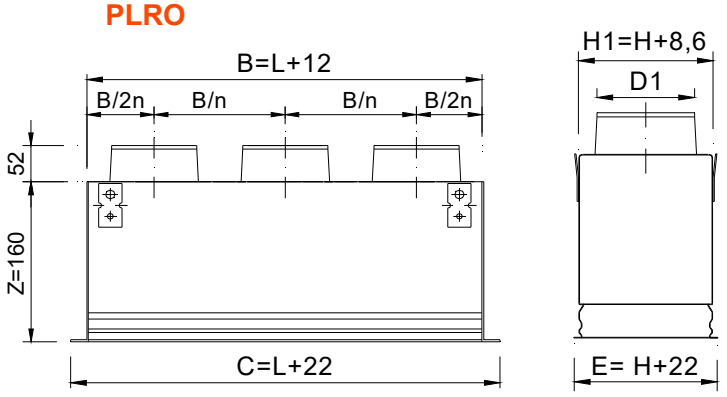
ACCESSORIES

SP Opposed blades damper to regulate the air flow. The damper is operated by an easily accessible key inside the grille. Constructed from zinc plated steel in black colour.

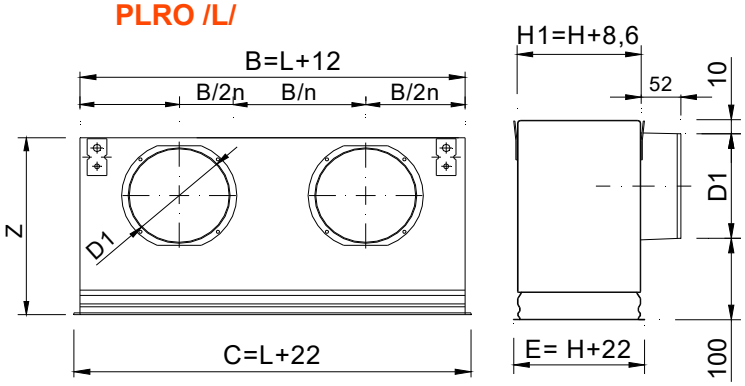
PFT Filter box made in galvanized steel and K/8 efficiency EN 779 G3 filter included. The grille is held in place by threaded knobs. The opening dimension LxH must be increased by 5 mm.

CM Mounting frame constructed from galvanized steel. It is delivered in 4 linear elements to assemble. The opening dimension LxH must be increased by 8 mm.

PLRO



PLRO /L/



ACCESSORIES – PLENUM BOX

PLRO Plenum box with upper circular connection, made from galvanized steel. Suitable for both wall and ceiling mounting.
…-R Damper in the spigot.
…/L/ Lateral circular connection.
…/AIS/ Thermal insulation inside. Foam density: 30 kg/m3 ISO 845. Thermal conductivity: 20º C_0,040 W/mºK ISO 3386/1.
Classified reaction to fire B-s2, d0 EN 13501-1.

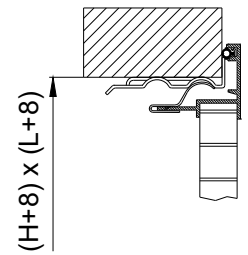
PLRO (D1)

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

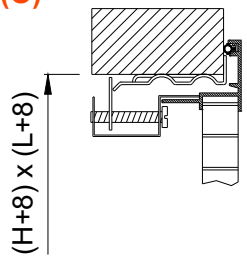
PLRO/L/ (D1)

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

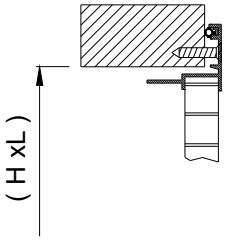
(S)



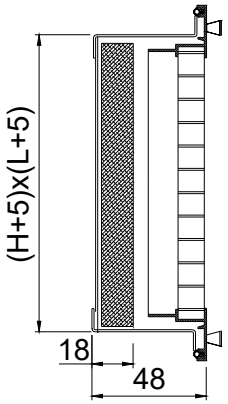
(O)



(T)



RMT-A+PFT



FIXING SYSTEMS

(S) The grille is fixed in place with clips. Suitable only for wall mounting. It requires CM mounting frame or PLRO plenum box.

(O) The grille is fixed in place by a hidden screw. Advisable for ceiling mounting. It requires CM mounting frame or PLRO plenum box.

(T) The grille is fixed in place with visible screws.

1) The filter box is fixed in place with screws or sidepieces. The grille is held to the PFT by threaded knobs. The opening dimension LxH must be increased by 5 mm

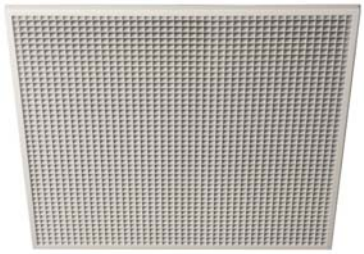
FINISHES

AA Matt silver anodized.
R9016S Painted in white RAL 9016 semi-matt (60-70% gloss)
R9010S Painted in white RAL 9010 semi-matt (60-70% gloss)
RAL... Painted in other RAL colours.

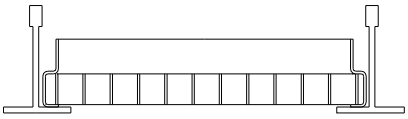
SPECIFICATION TEXT

Supply and mounting of egg-crate grille for air return series **RMT-A+SP+CM (S) AA** dim. LxH, constructed from aluminium and anodised in matt silver AA finish with opposed blades volume damper from zinc plated steel in black colour SP, invisible fixing by clips (S) and mounting frame CM. Manufacturer **MADEL**.

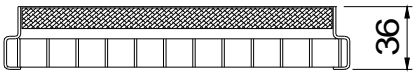
RMT-MOD



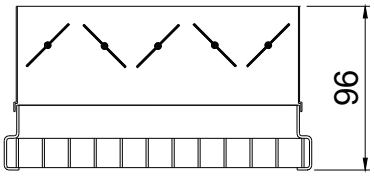
RMT-MOD



RMT-MOD-PFT



RMT-MOD+SP



1)

CLASSIFICATION

RMT-MOD Modular egg-crate return grilles of 13x13 mm lattice core, designed to replace a false ceiling plate.
RMT-45-MOD RMT-MOD grilles with lattice at 45º.
…-MOD-PFT Grilles with filter type K/8 efficiency EN 779 G3.

MATERIAL

Grilles constructed from extruded aluminium and galvanized steel.

ACCESSORIES

SP Opposed blades damper to regulate the air flow. The damper is operated by an easily accessible key inside the grille. Constructed from zinc plated steel in black colour.

FIXING SYSTEMS

1) Suspended at the false ceiling. Replacing a false ceiling plate.

FINISHES

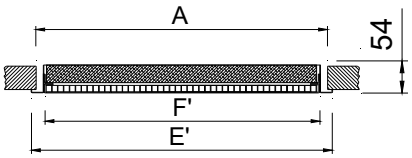
AA Matt silver anodized.
R9016S Painted in white RAL 9016 semi-matt (60-70% gloss)
R9010S Painted in white RAL 9010 semi-matt (60-70% gloss)
RAL... Painted in other RAL colours.

SPECIFICATION TEXT

Supply and mounting of egg-crate grille for air return series **RMT-MOD+PFT AA** dim. LxH, with filter type K/8 efficiency EN 779 G3, designed to replace false ceiling tile, constructed from aluminium and galvanized steel and anodised in matt silver colour AA. Manufacturer **MADEL**.

RMT-KLIN

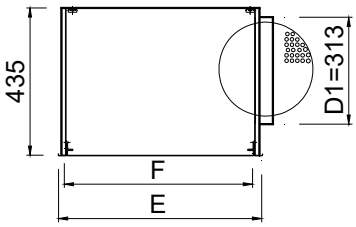
RMT-KLIN /RMT-KLIN +PFT



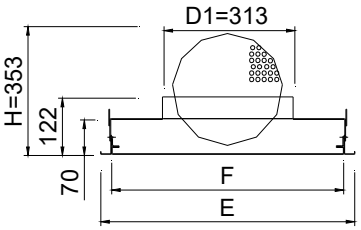
L x H	E	A	F
600	595	569	545
625	620	594	570
675	670	644	620

L x H	E	A	F
600 x 300	595 x 295	569 x 269	545 x 245

PLFZ/L/…-R



PLFZ…-R



	E	F	D1
600	595	545	313
625	620	570	313
675	670	620	313

L x H	E	F	D1
600 x 300	595 x 295	569 x 269	248

RMT-KLIN

CLASSIFICATION

RMT-KLIN Accessible egg-crate return grilles of 13x13 mm lattice core, hinged removable core without tools, by pressing on the invisible PUSH fasteners. If necessary, the core can be easily removed for its maintenance, which conforms with the regulations required for maintenance of HVAC facilities.

RMT-45-KLIN RMT-KLIN grilles with lattice at 45º

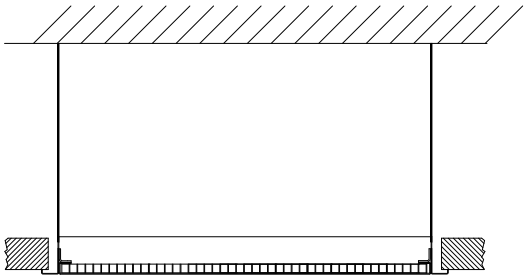
MATERIAL

Grilles constructed from extruded aluminium and galvanized steel.

ACCESSORIES

PFT K/8 class EN 779 G3 filter incorporated into the grille.
PLFZ Plenum box fixed to the grille with an upper connection, made in galvanized steel.
…-R Damper in the spigot.
…/L/ Lateral circular connection.
…/AIS/ Thermal insulation inside. Foam density: 30 kg/m3 ISO 845. Thermal conductivity: 20º C_0,040 W/mºK ISO 3386/1.
Classified reaction to fire B-s2, d0 EN 13501-1.
.

(1)



FIXING SYSTEMS

1) Supports to hang the assembly from the ceiling with drops rods.

FINISHES

R9016S Painted in white RAL 9016 semi-matt (60-70% gloss)
R9010S Painted in white RAL 9010 semi-matt (60-70% gloss)
RAL... Painted in other RAL colours.

SPECIFICATION TEXT

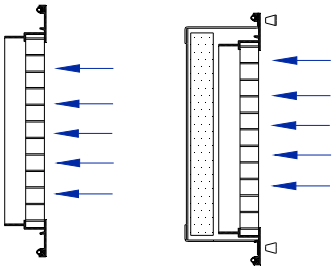
Supply and mounting of egg-crate grille for air return with hinged removable core without tools, by pressing on the invisible PUSH fasteners series **RMT-KLIN+PFT R9016S** dim. LxH, with filter type K/8 efficiency EN 779 G3, constructed from aluminium paint in white RAL 9016S. Manufacturer **MADEL**.

RMT-A

FREE FACE AREA m2.

H \ L	150	200	250	300	350	400	450	500	600	700	800	900	1000
100	0,009	0,013	0,017	0,021	0,025	0,028	0,032	0,036	0,043	0,05	0,056	0,064	0,072
150	0,016	0,022	0,028	0,034	0,040	0,046	0,052	0,058	0,070	0,08	0,092	0,104	0,116
200	0,022	0,030	0,038	0,047	0,055	0,064	0,072	0,080	0,097	0,11	0,128	0,144	0,160
250	0,028	0,038	0,049	0,06	0,071	0,081	0,092	0,103	0,124	0,142	0,162	0,184	0,206
300	0,034	0,047	0,060	0,073	0,086	0,099	0,112	0,125	0,151	0,172	0,198	0,224	0,250
350	0,040	0,055	0,071	0,086	0,101	0,117	0,132	0,147	0,178	0,202	0,234	0,264	0,294
400	0,046	0,064	0,081	0,099	0,117	0,134	0,152	0,169	0,205	0,234	0,268	0,304	0,338
450	0,052	0,072	0,092	0,112	0,132	0,152	0,172	0,192	0,232	0,264	0,304	0,344	0,384
500	0,058	0,080	0,103	0,125	0,147	0,169	0,192	0,214	0,258	0,294	0,294	0,384	0,428
600	0,070	0,097	0,124	0,151	0,178	0,205	0,231	0,258	0,312	0,356	0,410	0,462	0,516

RMT-A RMT-A+PFT



RECOMMENDED VELOCITY.

Vmin m/s	Vmax m/s
1,5	3

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

Q (l/s) = Vfmed (m/s) * Afree (m2) * 1000
Q (m3/h) = Vfmed (m/s) * Afree (m2) * 3600

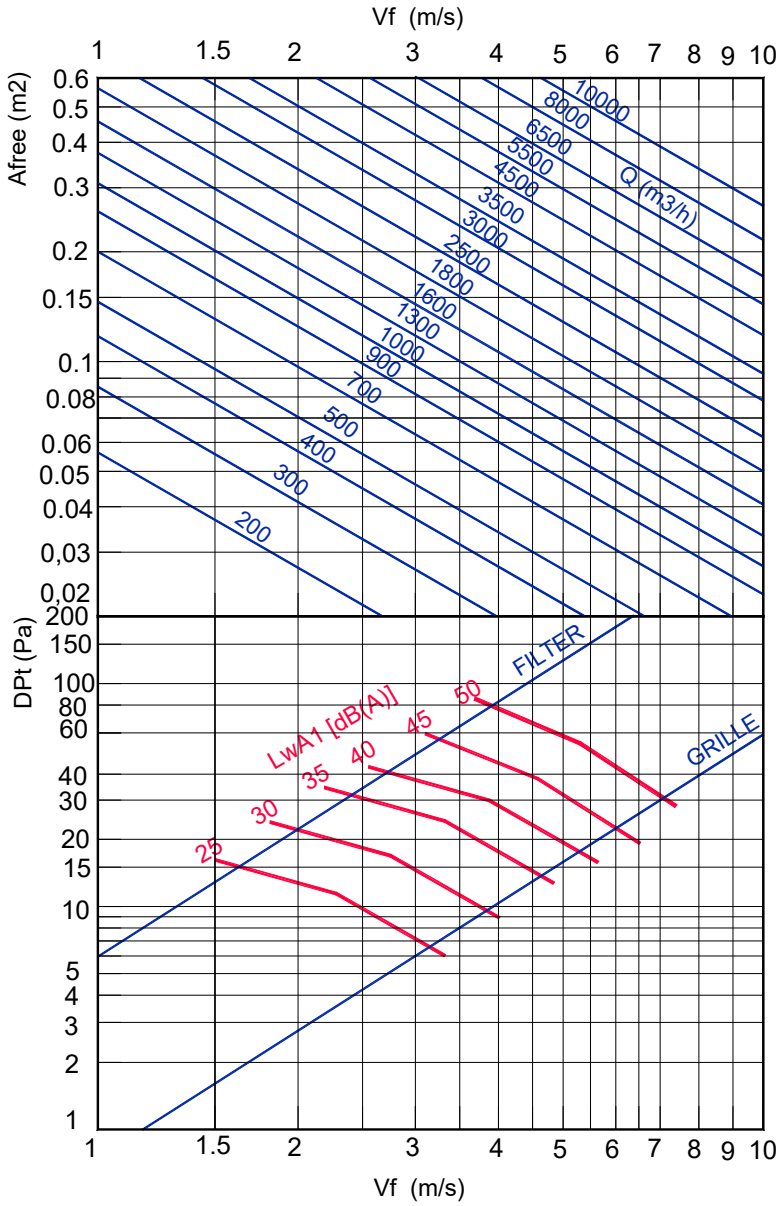
CORRECTION FACTOR FOR Lwa1.

Afree m2	0,01	0,02	0,05	0,1	0,2	0,4
Lwa1(kf)	-9	-6	-3	-	+4	+7

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

Lwa = Lwa1 + Kf

FREE VELOCITY, PRESSURE LOSS AND SOUND POWER LEVEL.

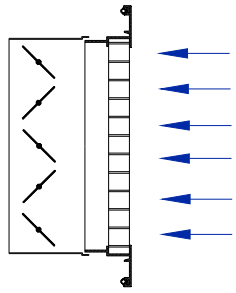


RMT-A

FREE FACE AREA m2.

H \ L	150	200	250	300	350	400	450	500	600	700	800	900	1000
100	0,009	0,013	0,017	0,021	0,025	0,028	0,032	0,036	0,043	0,05	0,056	0,064	0,072
150	0,016	0,022	0,028	0,034	0,040	0,046	0,052	0,058	0,070	0,08	0,092	0,104	0,116
200	0,022	0,030	0,038	0,047	0,055	0,064	0,072	0,080	0,097	0,11	0,128	0,144	0,160
250	0,028	0,038	0,049	0,06	0,071	0,081	0,092	0,103	0,124	0,142	0,162	0,184	0,206
300	0,034	0,047	0,060	0,073	0,086	0,099	0,112	0,125	0,151	0,172	0,198	0,224	0,250
350	0,040	0,055	0,071	0,086	0,101	0,117	0,132	0,147	0,178	0,202	0,234	0,264	0,294
400	0,046	0,064	0,081	0,099	0,117	0,134	0,152	0,169	0,205	0,234	0,268	0,304	0,338
450	0,052	0,072	0,092	0,112	0,132	0,152	0,172	0,192	0,232	0,264	0,304	0,344	0,384
500	0,058	0,080	0,103	0,125	0,147	0,169	0,192	0,214	0,258	0,294	0,294	0,384	0,428
600	0,070	0,097	0,124	0,151	0,178	0,205	0,231	0,258	0,312	0,356	0,410	0,462	0,516

RMT-A+SP



RECOMMENDED VELOCITY.

Vmin m/s	Vmax m/s
1,5	3

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

Q (l/s) = Vfmed (m/s) * Afree (m2) * 1000
Q (m3/h) = Vfmed (m/s) * Afree (m2) * 3600

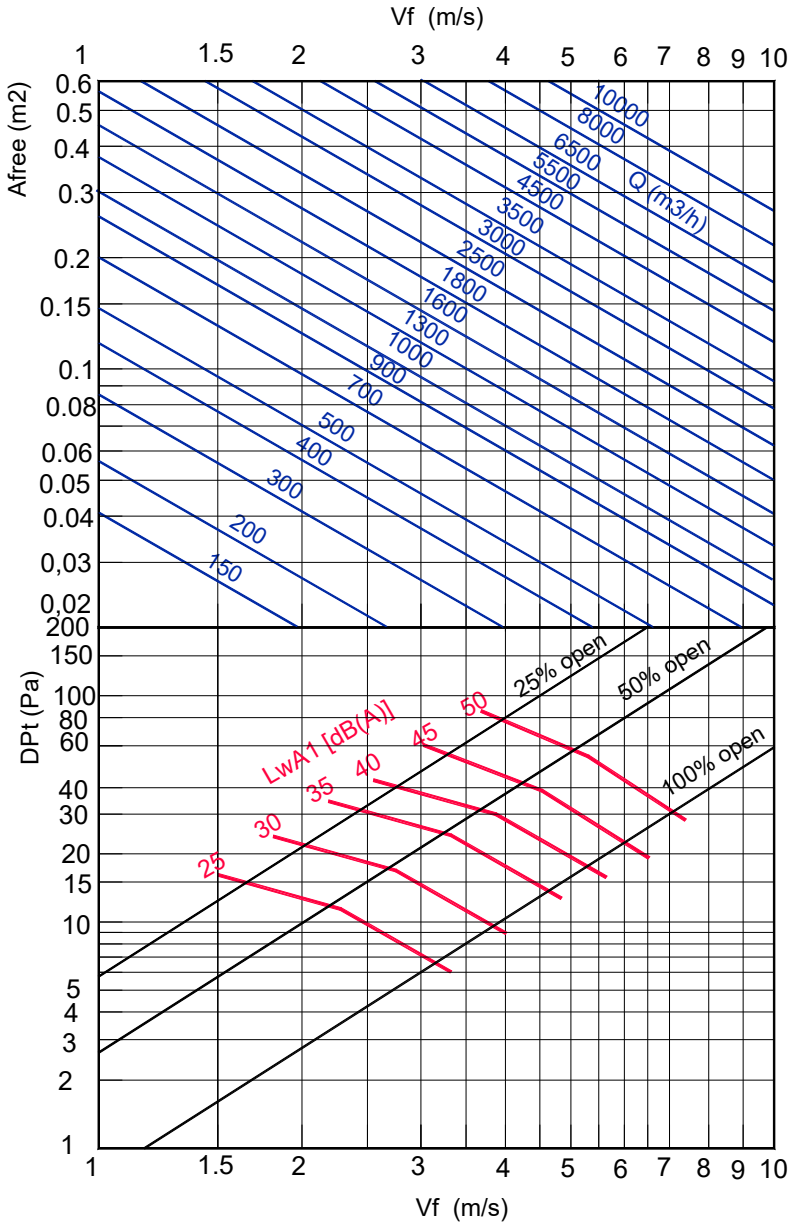
CORRECTION FACTOR FOR Lwa1.

Afree m2	0,01	0,02	0,05	0,1	0,2	0,4
Lwa1(kf)	-9	-6	-3	-	+4	+7

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

Lwa = Lwa1 + Kf

FREE VELOCITY, PRESSURE LOSS AND SOUND POWER LEVEL.



RMT-MOD

FREE FACE AREA m2.

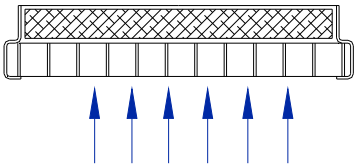
RMT-MOD

L x H	
595x295	0,150
595x595	0,300
620x620	0,156

RMT-45-MOD

L x H	
595x595	0,300

RMT-MOD + PFT



RECOMMENDED VELOCITY.

Vmin m/s	Vmax m/s
1,5	3

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

Q (l/s) = Vfmed (m/s) * Afree (m2) * 1000
Q (m3/h) = Vfmed (m/s) * Afree (m2) * 3600

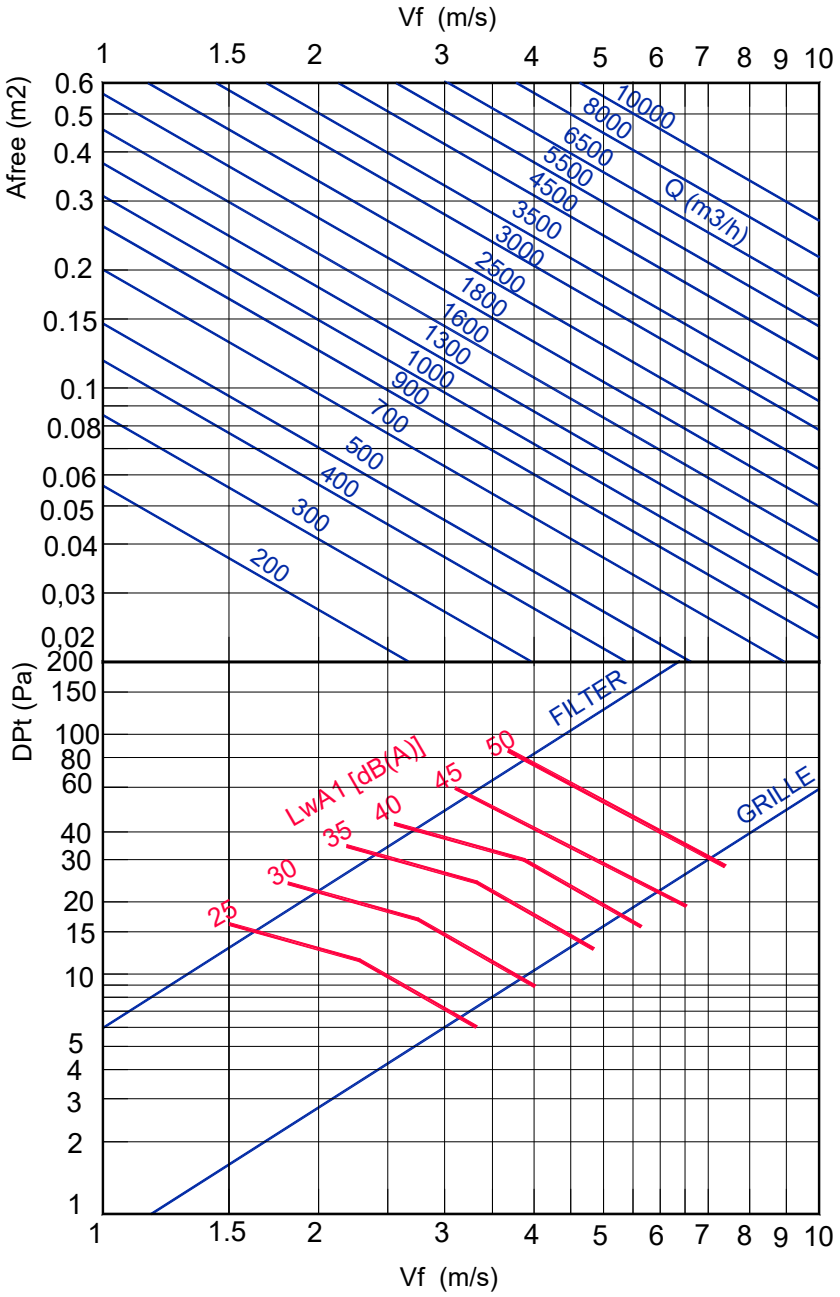
CORRECTION FACTOR FOR Lwa1.

Afree m2	0,01	0,02	0,05	0,1	0,2	0,4
Lwa1(kf)	-9	-6	-3	-	+4	+7

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

Lwa = Lwa1 + Kf

FREE VELOCITY, PRESSURE LOSS AND SOUND POWER LEVEL.



RMT-MOD

FREE FACE AREA m2.

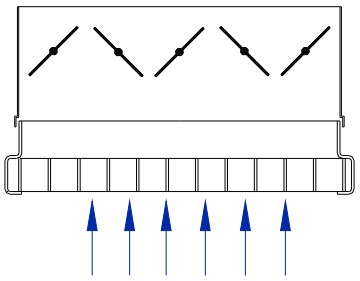
RMT-MOD

L x H	
595x295	0,150
595x595	0,300
620x620	0,156

RMT-45-MOD

L x H	
595x595	0,300

RMT-MOD +SP



RECOMMENDED VELOCITY.

Vmin m/s	Vmax m/s
1,5	3

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

Q (l/s) = Vfmed (m/s) * Afree (m2) * 1000
Q (m3/h) = Vfmed (m/s) * Afree (m2) * 3600

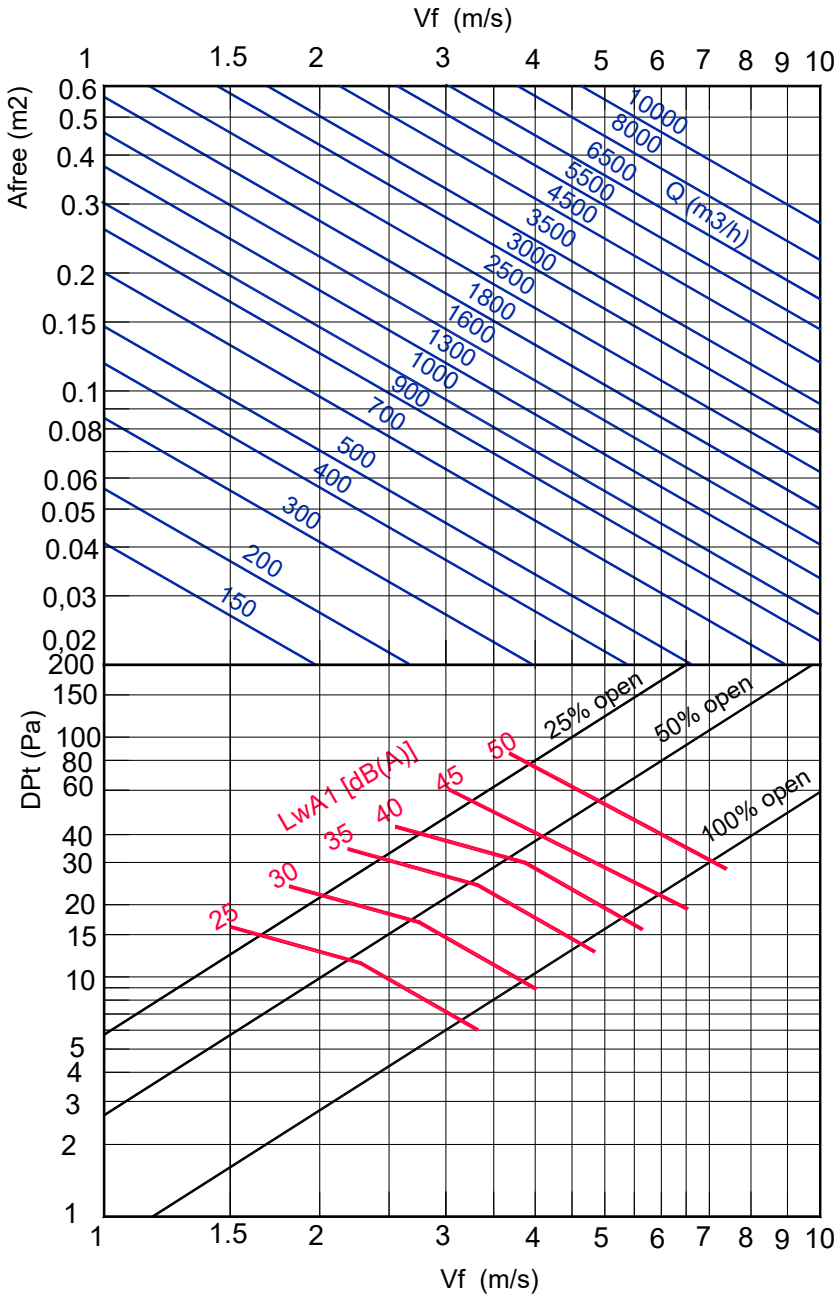
CORRECTION FACTOR FOR Lwa1.

Afree m2	0,01	0,02	0,05	0,1	0,2	0,4
Lwa1(kf)	-9	-6	-3	-	+4	+7

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

Lwa = Lwa1 + Kf

FREE VELOCITY, PRESSURE LOSS AND SOUND POWER LEVEL.



RMT-KLIN

FREE FACE AREA m2.

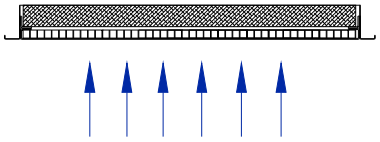
RMT-KLIN

L x H	
600x600	0,290
625x625	0,302
675x675	0,326

RMT-45-KLIN

L x H	
600x600	0,290
625x625	0,302

RMT-KLIN + PFT



RECOMMENDED VELOCITY.

Vmin m/s	Vmax m/s
1,5	3

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

Q (l/s) = Vfmed (m/s) * Afree (m2) * 1000
Q (m3/h) = Vfmed (m/s) * Afree (m2) * 3600

CORRECTION FACTOR FOR Lwa1.

Afree m2	0,01	0,02	0,05	0,1	0,2	0,4
Lwa1(kf)	-9	-6	-3	-	+4	+7

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

Lwa = Lwa1 + Kf

FREE VELOCITY, PRESSURE LOSS AND SOUND POWER LEVEL.