

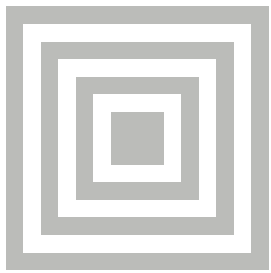
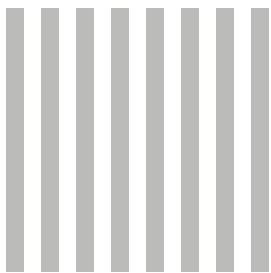
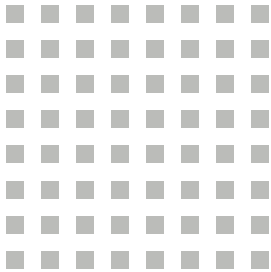
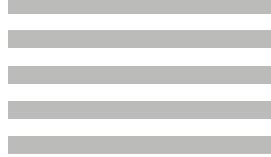


CATALOGUE
PRICE LIST

ENG
10.25

we shape the air

M A D E L



GENERAL TERMS AND SALE CONDITIONS

1. Generalities.

The prices of MADEL price-list are always intended as "ex-factory", without taxes and with MADEL standard packing.

The delivery of a purchase order implies the acceptance on the part of the customer of MADEL applicable price list at the moment.

MADEL reserves the right to modify, add or exclude the products included in the price list or general catalogue at any time.

2. Order acceptance.

All purchase order shall be in EURO, in writing and with its correspondent purchase order number.

3. Order cancellation or modification.

Once the purchase order is placed, the CUSTOMER will not be allowed to make any cancellation or modification, unless MADEL has expressly accepted it in writing.

The cancellation of purchase orders, which have not been accepted by MADEL, entitles MADEL to invoice them to the CUSTOMER with all the expenses and damages incurred because of this cancellation.

4. Terms of delivery and claims.

4.1 MADEL will not accept any claim from the CUSTOMER when one (1) month has passed since the date of delivery of the material.

After this period, MADEL will only accept the claims of material with manufacturing defects. The material can be returned only when the claim has been done within the warranty period and MADEL has accepted such defects by means of a writing statement.

4.2 Upon acceptance of the purchase order, MADEL shall in a timely manner provide to the CUSTOMER a written statement, informing the delivery date. MADEL shall not under any circumstance be liable to compensate or pay any penalties due to delays in the delivery of purchase orders.

5. Warranty.

MADEL warrants its products against manufacturing defects for a period of two (2) years, from the date of delivery of the goods to the CUSTOMER.

The warranty shall only cover the replacement of defective products, not including workmanship, trips, replacement of other damaged products, etc., or any other disbursements, charges or different damage, and under no circumstance claims for damages for loss of profit that the CUSTOMER or third parties may claim. The warranty of MADEL will not be effective in following circumstances:

- When the product has been incorporated or applied by the CUSTOMER or third parties to other products or plant, without observing the technical and installation methods arranged by MADEL.
- When the installation of selection of products had been inaccurately or wrongly made.
- When the product has been manipulated or applied to different purposes than those for which it was originally conceived or in any other way different that the provisions included in MADEL technical guide.
- When the products has been damaged due to manipulations or repairs subsequent to their first installation.

6. Payment.

MADEL is entitled to demand the prepayment of new supplies, or according to its judgement, a warranty high enough for the payment of such products, when the risk to collect the CUSTOMER debt before the maturity date is equal or higher to the highest sum of the credit settled by the Insurance Company with which MADEL has insured the CUSTOMER trade operations. If such insurance does not exist, MADEL is equally entitled to unilaterally settle the limit amount for the operations that may be supplied on credit, being able to demand the prepayment or a warranty high enough according to its judgement for the supplies that exceed such limit.

Payments must comply with Spanish Law 15/2010, of July 5, amending Law 3/2004, of December 29, which regulates payment terms in commercial operations at 60 days.

Likewise, the indicated legal text establishes that the indicated payment period will be calculated from the delivery of the goods or the provision of services, without in any case exceeding the established 60 days and without the possibility of an agreement between the parties that modifies the indicated maximum terms.

7. Jurisdiction.

For the interpretation, application, resolution and execution of this terms and conditions of sale, only the Tribunals and Courts of the city of Barcelona (Spain) shall be authorised.



BMC



AMT

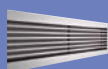


CTM

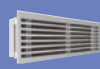


AMT-AC

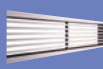
PAG 13
Air supply
grilles



LMT



LMT-MISS



LMT-MINI



LMT-SW

PAG 24
Linear
grilles



TRH



DMT



DMT-FY



DMT-MOD



DMT-KLIN



RMT



RMT-MOD



RMT-KLIN

PAG 35
Air return
grilles



CXT



DMT-X



DXT



DXL



SCV



BWC

PAG 48
External & Ventilation
grilles



DRIM



DCN



DSO



DBQ



DBQ-MOD



DIMO

PAG 58
Radial
diffusers



AXP



NEX-S



NEX-KLIN



NEX-C



OTO-S



OTO-C



RXO-S



RXO-KLIN



RXO-C

PAG 69
Swirl
diffusers



REX-S



REX-C



DOT-S-KLIN



DOT-R-KLIN



AXO-C



AXO-S



AXO-KLIN



AXO-R



AXO-TWIN



PLAY-C



PLAY-R



PLAY-S



PLAY-KLIN

PAG 92
Adjustable swirl
diffusers



DFZ



DFR

PAG 106
Perforated face
diffusers



AX6



DCG

PAG 110
Variable geom.
diffusers



KIN



KAM



KOO



KAP



KOB



LINK

PAG 115
**Jet
nozzles**



LSD



LNG



LSD&LNG-MOD



KIS



LRT



LESS



LOOK



LOOK-CURVED



LAV 15



LAV-24



LAV-24-FIN

PAG 129
Linear
diffusers



WAAB 300 WAAB 600 WAAB 4-WAY WAAB SUITE WAAB-ROOM

PAG 7
**Active chilled
beams**

PAG 13
**Air supply
grilles**

PAG 58
Diffusers



TAU LMT-SHD LMT-S

PAG 152
**Floor
diffusers**



SCC SQR SVA-C SVA-CXL SVA-R SKP SKC-C SKC-R SMS

PAG 157
**Air volume
control**



UFA DIF DEC TAS DIF-O.T.

PAG 174
**Air
filtration**



CM & K PLRO ZP-A DP INC

PAG 178
Accessories



FMC FOC-120-180 FBK-E1 FOK-120 FLX FOK-180 FSC FWC FTR FBOSS

PAG 186
**Fire
protection**

INDEX

The nominal size of the grilles (L x H) indicates the opening sizes for their installation.

When the installation is planned with CM mounting frames, the opening size would be 8 mm bigger (L+8 x H+8) according Sizes of the catalogue in mm. General tolerances to norm ISO 2768-1.

RAL finishes (www.ral.de)

RAL...B Shiny RAL, 85-95% gloss

RAL...S Semi-matt RAL, 60-70% gloss.

RAL...M Matt RAL, 20-30% gloss.

RAL colors of fixed supplement per color 165,07 € + 6% per painted unit

All the colors of the 7000 and 9000 series of the RAL CLASSIC chart in RAL finish ... S (semi-matt color with 60-70% gloss)

Colors 7048, 9022, 9023 and 9007 are excluded.

The following colors are also included in this fixed supplement: 9010B, 9010M, 9016B, 9016M, 9003B, 9003M, 9005M and 9006M.

Other RAL colors: Fixed supplement per color to CONSULT + 6% per painted unit.

Exceptions on unit %

AMT, CTM, POX: % on each painted unit to CONSULT.

LMT-DD, LMT-MISS-DD, TRH: 25% on each painted unit.

Series DMT, DMT-X, DXT, DXL, RMT-A: 12% on each painted unit.

DCN, DCN-MOD, DCG, DCG-MOD, DSO, DSO-MOD: 8% on each painted unit.

Symbols

Q (m³/h) = Air flow.

dB(A) = L_{wA1} = dB(A) = Sound power level.

Ak (m²) = Area of the duct (Diameter of the duct)

Vk (m/s) = Velocity of the air in Ak.

P (Pa) = Pressure in Pascals.

Formulas to calculate

Velocity for grilles and diffusers: $V \text{ (m/s)} = Q \text{ (m}^3/\text{h)} / A \text{ (m}^2) \times 3600$

Maximum velocity for dampers: $V_{k \text{ max.}} = 7 \text{ m/s.}$

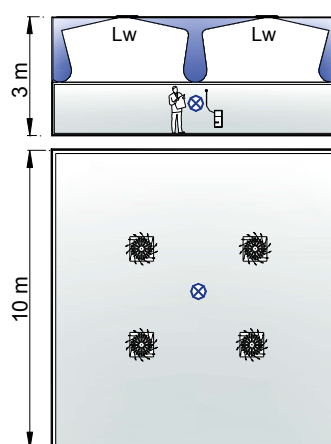
Comfort conditions

- A)** A higher air temperature in the summer and a lower one in the winter concerning the mean radiant temperature.
- B)** A maximum average velocity of the air of 0,15 m/s in an air conditioned room. In case of $T > 26^\circ$, the velocity can be increased.
- C)** Relative humidity of the air: 20% - 60%
- D)** A maximum difference of 3°C between the zone occupied by the feet and the head.
- E)** Floor temperature: Max 26°C, Min 17°C.
- F)** A max. of 5°C for the asymmetric radiant temperature on the vertical plane and 10°C for the horizontal plane.
- G)** Max. 0,1% of carbon dioxide in the air.
- H)** A maximum sound pressure level of 35 dB[A] and 80 dB[A], depending on what activity the place is for.

Quick selection chart considering NC curves and the Lw data in dB (A) from this price-list.

Level of sonorous power (*)		
Premises	Lw dB (A)	NC
Libraries	40	35
Halls	45	40
Laboratories	45	40
Museums	40	35
Banks	45	40
Restaurants	45	40
Snack bars	50	45
Supermarkets	50	45
Gymnasia	45	40
Swimming pools	50	45
Hotels	40	35
Offices	45	40
Rooms	35	30
Cinemas	40	35
Theatres	35	30

ROOM TYPE



*Calculate realized according to room TYPE (10x10x3) m³ Point of measurement of sonorous pressure LP (dB (A)) Sound pressure.

1) Technical catalogues, online calculation programs and BIM files at www.madel.com

2) Sales conditions available at www.madel.com

3) **MADEL** reserves the right to modify the characteristics and sizes of the products in this catalog without prior notice.

Active chilled beams

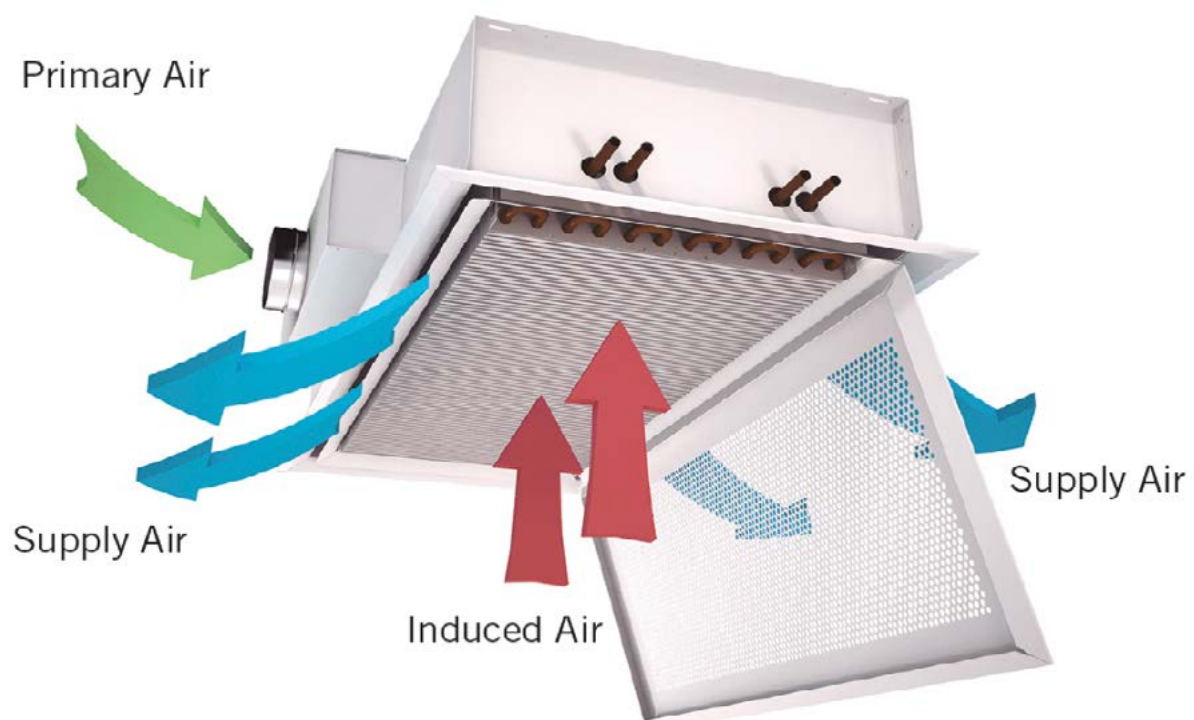
Maximum comfort, minimum consumption

High energy efficiency, high energy savings

High acoustic confort, high thermal confort, adjustable air flow

Reduced maintenance. No refrigerant gases in the facility

No need for fan, no need for air filter, no need for condensation tray



INDEX

WAAB-300 active chilled beams – width 300

WAAB-600 active chilled beams – width 600

WAAB-4 WAY 4-Way active chilled beams

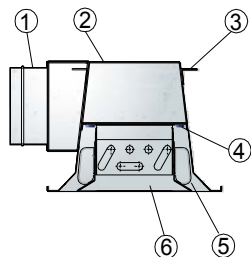
WAAB-SUITE active chilled beams - 1 way diffusion

WAAB-ROOM active chilled beams for rooms

Active chilled beams – width 300



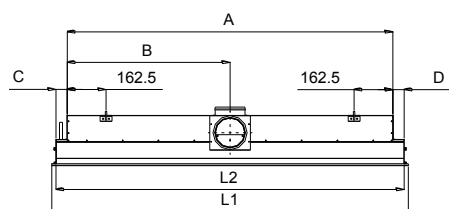
Technical data



- 1.- Primary air inlet
- 2.- Plenum box
- 3.- Supports to hang
- 4.- Nozzles
- 5.- Adjustable deflector
- 6.- Accessible diffuser

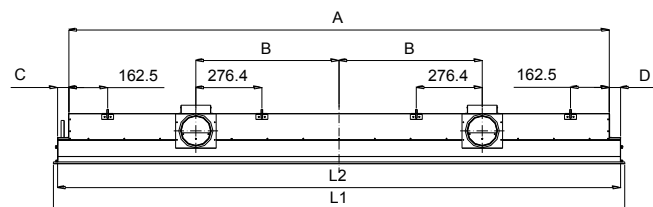
Configuration LI, LD, S

LN = 900, 1200, 1500 y 1800 mm



Configuration LI, LD, S

LN = 2100, 2400 y 2700 mm



Specification text

Supply and installation of active chilled beam for supply air and return air, with 4-tube battery, right side connection plenum, pre-set medium nozzles, circular perforated front panel, type **LD**, with deflection blades, **WAAB-300 / 4T / LD / KM / FC / 1200 / DEF** Made in lacquered white galvanised steel **R9010S**. Brand **MADEL**.

Description

The **WAAB-300** chilled beam is an air/water induction terminal unit that simultaneously provides the supply, thermal treatment and diffusion of supply air, to set internal conditions at the desired comfort levels. Chilled beams take advantage of the excellent thermal properties of water to guarantee optimal comfort levels, with minimal power consumption.

WAAB-300 Beam for supply air.

- .../2T/ 2-tube battery.
- .../4T/ 4-tube battery.
- .../LD/ Right side connection.
- .../LI/ Left side connection.
- .../S/ Top connection.
- .../ / Standard support.
- .../T15/ Support for dropped panel, 15-mm profile modular ceilings.
- .../T24/ Support for dropped panel, 24-mm profile modular ceilings.
- .../KS/ Small discharge nozzles.
- .../KM/ Medium discharge nozzles.
- .../KL/ Large discharge nozzles.
- .../FC/ Front panel with circular perforations.
- .../FQ/ Front panel with square perforations.
- .../FL/ Front panel with lineal aluminium grill.
- .../TY/ Consult the PDF at www.madel.com for different typologies.

Accessories

DEF Deflection blades.

Fixing

(D) Angle bracket for suspending from ceiling.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

Typology and sizes

For other typologies, concerning supply and return air, it is necessary to indicate the total length of the Beam and the coil length.

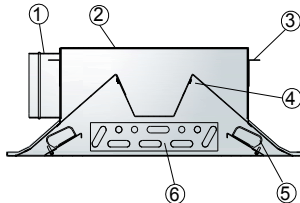
(Consult the PDF at www.madel.com for different configurations)

LI, LD, S											
L ₁ (mm)		L _N (mm)	W (mm)	L ₂ (mm)		A (mm)	B (mm)	C (mm)	D (mm)		Ø (mm)
min	max			min	max				min	max	
895	2995	900	295	860	2960	765,5	382,8	47,3	47,3	2147,2	1-125
1195	2995	1200	295	1160	2960	1065,5	532,8	47,3	47,3	1847,2	1-125
1495	2995	1500	295	1460	2960	1365,5	682,8	47,3	47,3	1547,2	1-125
1795	2995	1800	295	1760	2960	1665,5	832,8	47,3	47,3	1247,2	1-125
2095	2995	2100	295	2060	2960	1965,5	450	47,3	47,3	947,2	2-125
2395	2995	2400	295	2360	2960	2265,5	600	47,3	47,3	647,2	2-125
2695	2995	2700	295	2660	2960	2565,5	750	47,3	47,3	47,3	2-125
2995	2995	3000	295	2960	2960	2865,5	900	47,3	47,3	47,3	2-125

Active chilled beams – width 600



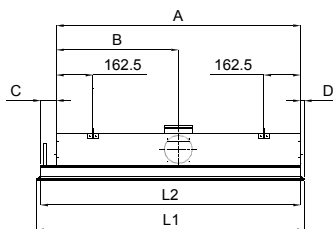
Technical data



- 1.- Primary air inlet
- 2.- Plenum box
- 3.- Supports to hang
- 4.- Nozzles
- 5.- Adjustable deflector
- 6.- Accessible diffuser

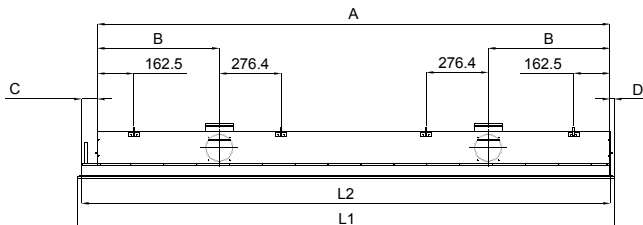
Configuration LI, LD, S

LN = 900, 1200, 1500, 1800



Configuration LI, LD, S

LN = 1800, 2100, 2400



For other typologies, concerning supply and return air, it is necessary to indicate the total length of the Beam and the coil length.

(Consult the PDF at www.madel.com for different configurations)

Specification text

Fourniture et installation de poutre froide pour soufflage et reprise, avec batterie à 4 tuyaux, plénum de connexion latérale droite, buses moyennes préfixées, plaque frontale perforée et circulaire, typologie **LD**, avec ailettes déflectrices, **WAAB-600 / 4T / LD / KM / FC / 1200 / DEF**, construite en acier galvanisé laqué couleur blanche **R9010S**.

Marque **MADEL**.



Description

The **WAAB-600** chilled beam is an air/water induction terminal unit that simultaneously provides the supply, thermal treatment and diffusion of supply air, to set internal conditions at the desired comfort levels. Chilled beams take advantage of the excellent thermal properties of water to guarantee optimal comfort levels, with minimal power consumption.

WAAB-600 Beam for supply air.

.../2T/ 2-tube battery.

.../4T/ 4-tube battery.

.../LD/ Right side connection.

.../LI/ Left side connection.

.../S/ Top connection.

.../ / Standard support.

.../T15/ Support for dropped panel, 15-mm profile modular ceilings.

.../T24/ Support for dropped panel, 24-mm profile modular ceilings.

.../KS/ Small discharge nozzles.

.../KM/ Medium discharge nozzles.

.../KL/ Large discharge nozzles.

.../FC/ Front panel with circular perforations.

.../FQ/ Front panel with square perforations.

.../FL/ Front panel with lineal aluminium grill.

.../TY/ Consult the PDF at www.madel.com for different typologies.

Accessories

DEF Deflection blades.

Fixing

(D) Angle bracket for suspending from ceiling.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

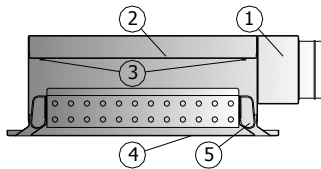
Typology and sizes

LI, LD, S											
L ₁ (mm)		L _N (mm)	W (mm)	L ₂ (mm)		A (mm)	B (mm)	D (mm)	C (mm)		Ø (mm)
min	max			min	max				min	max	
895	2995	900	595	860	2960	788	394	18,5	71	2171	1-125
1195	2995	1200	595	1160	2960	1088	544	18,5	71	1871	1-125
1495	2995	1500	595	1460	2960	1388	694	18,5	71	1571	1-125
1795	2995	1800	595	1760	2960	1688	844	18,5	71	1271	1-125
2095	2995	2100	595	2060	2960	1988	450	18,5	71	971	2-125
2395	2995	2400	595	2360	2960	2288	600	18,5	71	671	2-125
2695	2995	2700	595	2660	2960	2588	750	18,5	71	371	2-125
2995	2995	3000	595	2960	2960	2888	900	18,5	71	71	2-125

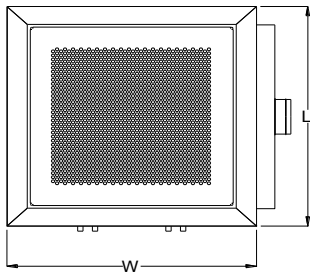
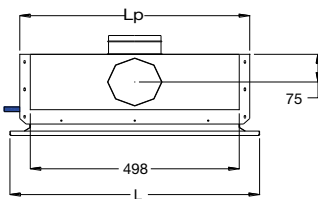
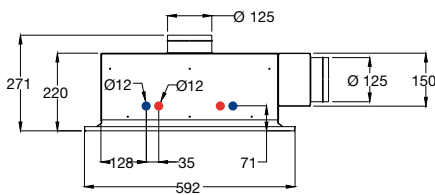
4-Way active chilled beams



Technical data



- 1.- Primary air inlet
- 2.- Plenum box
- 3.- Nozzles
- 4.- Accessible diffuser
- 5.- Adjustable deflector



mm	W	L	Lp
600x600	592	592	547
625x625	620	620	547
675x675	670	670	547
600x1200	592	1192	1147
625x1250	620	1245	1147
675x1350	670	1345	1147



Description

The **WAAB 4-WAY** is an air/water induction terminal unit that simultaneously provides the supply, thermal treatment and diffusion of supply air, to set internal conditions at the desired comfort levels. Chilled beams take advantage of the excellent thermal properties of water to guarantee optimal comfort levels, with minimal power consumption.

WAAB 4-WAY Beam for air supply in 4 directions.

- .../2T/ 2-tube battery
- .../4T/ 4-tube battery.
- .../LD/ Right side connection.
- .../LI/ Left side connection.
- .../S/ Top connection.
- .../ / Standard support
- .../T15/ Support for dropped panel, 15-mm profile modular ceilings.
- .../T24/ Support for dropped panel, 24-mm profile modular ceilings.
- .../KS/ Small discharge nozzles.
- .../KM/ Medium discharge nozzles.
- .../KL/ Large discharge nozzles.
- .../FC/ Front panel with circular perforations.
- .../FQ/ Front panel with square perforations.
- .../FL/ Front panel with lineal aluminium grill.
- .../TY/ Type (see types pages)

Accessories

DEF Deflection blades.

Fixing

(D) Angle bracket for suspending from ceiling.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

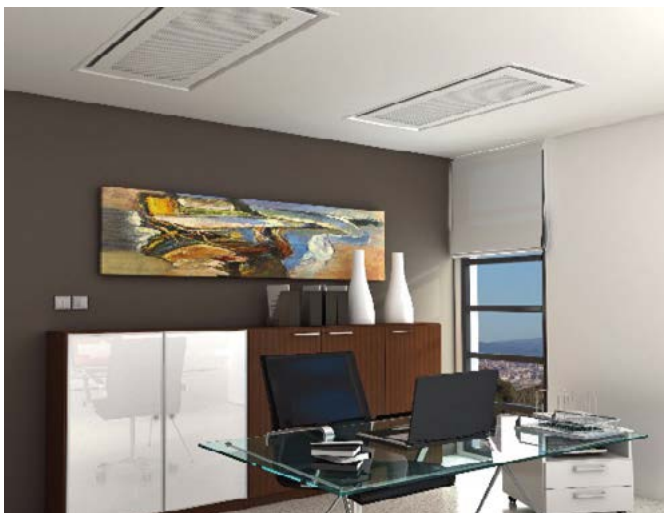
R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification text

Supply and installation of active chilled beam for supply air and return air, with 4-tube battery, right side connection plenum, pre-set medium nozzles, circular perforated front panel, type **LDR1**, with deflection blades, **WAAB 4-WAY / 4T / LD / KM / FC / 600x600 / DEF**.

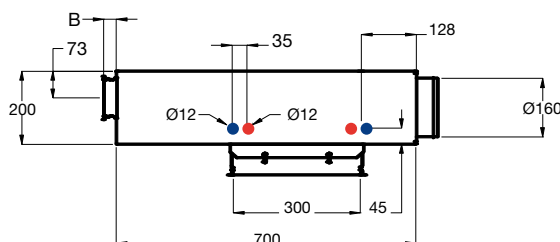
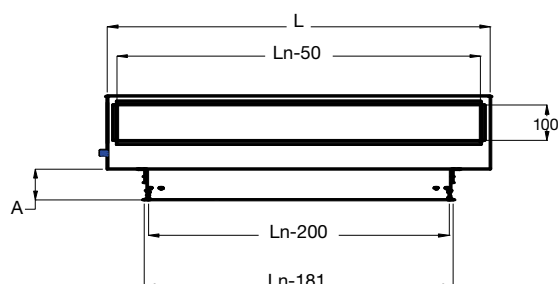
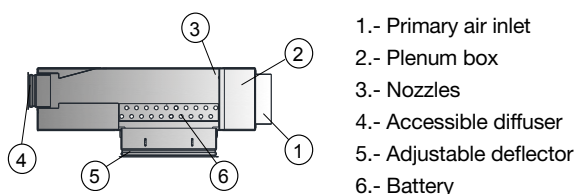
Made in lacquered white galvanised steel **R9010S**. Brand **MADEL**.



Active chilled beams – 1 way diffusion



Technical data


AMT

LMT

LMT-15


Description

The **WAAB-SUITE** is an air/water induction terminal unit that simultaneously provides the supply, thermal treatment and diffusion of supply air, to set internal conditions at the desired comfort levels. Chilled beams take advantage of the excellent thermal properties of water to guarantee optimal comfort levels, with minimal power consumption.

WAAB-SUITE air impulsion chilled beam in 1 direction. Designed for a room installation.

- .../2T/ 2-tube battery
- .../4T/ 4-tube battery
- .../LD/ Right side connection
- .../LI/ Left side connection
- .../KS/ Small discharge nozzles
- .../KM/ Medium discharge nozzles.
- .../KL/ Large discharge nozzles.
- .../AMT/ Simple deflection grille.
- .../LMT/ Supply through lineal grille.
- .../LMT-15/ Supply through lineal 15° grille.
- .../LN/ Nominal length 900, 1200 or 1500.

Fixing

(D) Angle bracket for suspending from ceiling.

Finishes

- AA** Matt silver anodised.
- R9016S** Painted white RAL 9016 semi-matt (60-70% gloss)
- R9010S** Painted white RAL 9010 semi-matt (60-70% gloss)
- RAL...** Painted in other RAL colours : see INFO page.

Specification text

Supply and installation of active chilled beam for supply air and return air, with 4-tube battery, right side connection plenum, pre-set medium nozzles, **WAAB-SUITE /4T/LD/KM/LMT AA /1200** made in matt silver anodised **AA**. Brand **MADEL**.

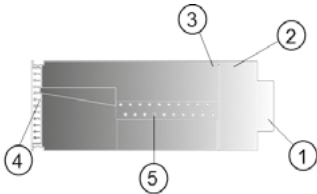


mm	L	A	B
900	895	65-85	59-40
1200	1195		
1500	1495		

Active chilled beams for rooms



Technical data



- 1.- Primary air inlet
- 2.- Plenum
- 3.- Nozzles
- 4.- Removable supply-return grille (S)
- 5.- Battery



Description

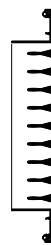
The **WAAB-ROOM** chilled beam is an air-water induction terminal unit that simultaneously allows the supply, heat treatment and diffusion of supply air, in order to maintain indoor conditions at the desired level of comfort. The chilled beams take advantage of water's excellent thermal properties guarantee an optimum level of comfort with minimum energy consumption. WAAB-ROOM is specially designed to be installed on a false ceiling where the return grille cannot be placed at the bottom, using a single grille for supply and return.

WAAB-ROOM Horizontal active chilled beams with front supply / return grille.

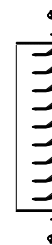
AMT



LMT



LMT-15



- .../2T/ Two-pipe battery.
- .../4T/ Four-pipe battery.
- .../LD/ Right side connection.
- .../LI/ Left side connection.
- .../KS/ Small supply nozzles.
- .../KM/ Medium supply nozzles.
- .../KL/ Large supply nozzles.
- .../AMT/ AMT single deflection grille.
- .../LMT/ LMT linear grille.
- .../LMT-15/ LMT-15 linear grille.
- .../LN/ Nominal length (1200 and 1500)

Fixing

(D) Slots on the plenum for securing to ceiling.

Finishes

- AA...** Matt silver anodised (only for LMT grilles)
- R9016S** Painted white RAL 9016 semi-matt (60-70% gloss)
- R9010S** Painted white RAL 9010 semi-matt (60-70% gloss)
- RAL...** Painted in other RAL colours : see INFO page.

Prescription text

Supply and installation of Horizontal active chilled beams with front supply / return grille, with 4-pipe battery, plenum with right side connection, prefixed medium nozzles **WAAB-ROOM / 4T / LD / KM / LMT / 1200** with fixed bars **LMT** linear grille in matt silver anodised **AA. MADEL** trademark.



Air supply grilles

Premium air supply grilles

AMT & CTM with nylon bearings for optimal control of blades

Gasket around the perimeter to seal the wall or ceiling

INDEX

BMC circular duct grilles

AMT single deflection grilles

CTM double deflection grilles

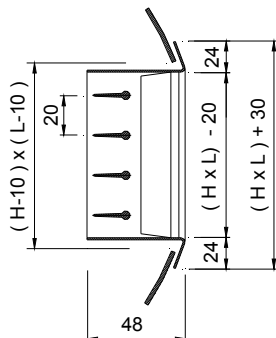
AMT-AC curved blades ceiling grilles

Circular duct grilles

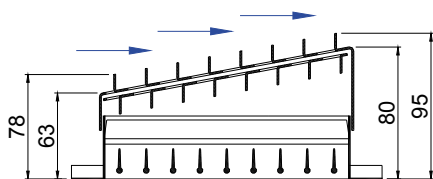


Technical data

CMC



CMC+SD



Description

Grilles in galvanised steel to be placed in circular ducts. Individually adjustable blades parallels to the shortest side (H size)

BMC Single deflection grille.

CMC Double deflection grille.

Accessories

SD Sliding damper from galvanised steel.

Fixing

(T) Visible screws.

Finishes

R9006M Painted aluminum color RAL 9006 matt (20-30% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of double deflection grille for circular ducts with individually adjustable blades and 1st line parallels to the shortest side series **CMC+SD (T) R9006M dim. LxH**, constructed from galvanised steel paint in aluminium color RAL 9006 Mat with sliding damper from steel, visible fixing by screws. Manufacturer **MADEL**.

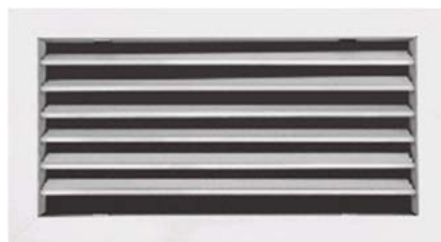
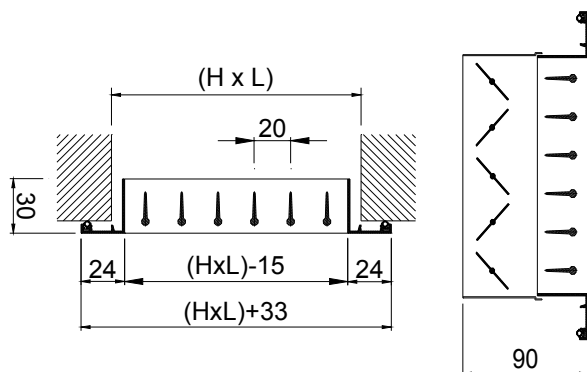
L x H	BMC	CMC	BMC+SD	CMC+SD	duct Ø	Lwa1 < 35 dB(A) without SD	Lwa1 = 45 dB(A) without SD
mm	eur	eur	eur	eur	mm	m³/h	m³/h
300x75	15,59	24,83	30,60	39,82	200 - 400	108-150	195
400x75	19,69	28,97	38,20	47,46	200 - 400	145-205	260
500x75	23,79	33,10	45,81	55,10	200 - 400	180-250	325
600x75	27,84	38,36	51,32	61,86	200 - 400	225-315	405
700x75	32,88	46,96	68,75	82,81	200 - 400	260-370	475
800x75	36,56	51,41	77,26	92,14	200 - 400	290-410	530
900x75	39,81	55,40	84,30	99,91	200 - 400	325-460	595
1000x75	43,10	59,38	92,55	108,82	200 - 400	350-500	645
1200x75	51,71	71,23	111,07	130,57	200 - 400	420-600	774
300x125	18,62	27,79	37,05	46,24	300 - 900	210-290	375
400x125	22,55	32,78	43,86	54,12	300 - 900	280-390	500
500x125	26,49	37,81	50,72	61,99	300 - 900	350-490	630
600x125	31,02	43,87	59,99	72,88	300 - 900	425-590	760
700x125	36,70	53,72	76,44	93,47	300 - 900	490-700	900
800x125	40,99	59,09	85,62	103,73	300 - 900	550-785	1010
900x125	44,66	63,71	93,93	113,00	300 - 900	630-895	1160
1000x125	48,49	68,58	102,55	122,63	300 - 900	720-1010	1300
1200x125	58,19	82,30	123,09	147,17	300 - 900	865-1200	1560
300x225	21,88	34,52	42,49	55,24	600 - 1600	410-570	730
400x225	26,93	41,12	56,97	71,19	600 - 1600	545-760	975
500x225	31,95	47,70	71,40	87,13	600 - 1600	685-960	1230
600x225	37,74	55,00	81,91	99,20	600 - 1600	785-1094	1410
700x225	44,19	68,94	96,64	121,42	600 - 1600	900-1280	1640
800x225	49,66	76,02	113,47	139,85	600 - 1600	1035-1470	1880
900x225	54,54	82,37	126,45	154,29	600 - 1600	1170-1660	2130
1000x225	59,29	88,65	139,71	169,11	600 - 1600	1300-1830	2360
1200x225	71,14	106,40	167,65	202,93	600 - 1600	1560-2195	2830

Single deflection grilles

Technical data

AMT

AMT+SP



Description

Single deflection grilles for air supply. Individually adjustable blades. Made from aluminium.

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

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

Accessories

SP Opposed blades volume damper from zinc plated steel, in black colour.

CM Mounting frame from galvanised steel (delivered separately in 4 linear elements)

PLRO Connection plenum: see Accessories.

Fixing

(S) Clips. It requires mounting frame CM.

(O) Hidden screw. It requires mounting frame CM (supplement *)

(T) Visible screws (supplement *)

Finishes

AA Matt silver anodised.

M9016 Pre-lacquered in white similar to RAL 9016. (85-95% gloss)

R9010S Pre-lacquered in white RAL 9010 semi-matt (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

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

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



L x H	AMT-AN M9016	AMT-AN+SP M9016	AMT-AN R9010S	AMT-AN+SP R9010S	AMT-AN AA	AMT-AN+SP AA	SP	CM	Lwa1 < 35 dB(A)	Lwa1 45 dB(A)
mm	eur	eur	eur	eur	eur	eur	eur	eur	m³/h	m³/h
200x100	10,31	17,51	10,53	17,72	10,41	17,62	7,20	2,59	120-175	200
250x100	11,39	19,59	11,62	19,81	11,52	19,71	8,19	2,80	155-215	275
300x100	12,57	22,23	12,81	22,49	12,70	22,38	9,67	2,96	180-250	325
350x100	14,80	25,84	15,11	26,14	14,94	25,99	11,04	3,10	215-300	390
400x100	15,25	27,40	15,56	27,72	15,42	27,54	12,15	3,27	245-340	435
450x100	17,80	31,25	18,15	31,61	17,96	31,43	13,46	3,44	280-390	500
500x100	18,30	32,88	18,66	33,26	18,46	33,08	14,59	3,55	305-430	550
600x100	22,52	39,33	22,98	39,78	22,76	39,54	16,80	4,04	370-515	665
700x100	26,25	47,94	26,76	48,47	26,50	48,20	21,71	4,78	440-615	795
800x100	29,22	53,08	29,80	53,66	29,51	53,37	23,87	5,15	500-700	910
900x100	32,30	58,74	32,94	59,41	32,62	59,07	26,47	5,55	560-790	1020
1000x100	34,59	63,31	35,29	64,02	34,94	63,66	28,73	6,19	630-880	1135
200x150	12,64	20,50	12,89	20,76	12,77	20,63	7,87	2,76	190-265	340
250x150	13,45	22,53	13,71	22,80	13,58	22,66	9,09	2,91	235-330	420
300x150	14,82	25,42	15,13	25,72	14,98	25,57	10,60	3,10	290-405	520
350x150	17,43	29,20	17,78	29,55	17,61	29,40	11,78	3,22	335-465	600
400x150	17,98	30,97	18,33	31,32	18,16	31,16	13,00	3,42	385-540	695
450x150	20,99	35,19	21,41	35,60	21,21	35,41	14,20	3,55	440-615	795
500x150	21,40	37,03	21,82	37,45	21,60	37,24	15,63	3,72	485-680	875
600x150	25,56	43,53	26,07	44,03	25,81	43,78	17,98	4,17	595-830	1070
700x150	31,25	54,39	31,88	55,00	31,57	54,68	23,13	4,90	690-970	1250
800x150	34,19	59,76	34,88	60,45	34,53	60,11	25,57	5,26	790-1110	1425
900x150	38,21	66,10	38,98	66,87	38,60	66,48	27,88	5,71	890-1245	1610
1000x150	40,91	71,55	41,73	72,35	41,31	71,94	30,64	6,29	990-1380	1780
200x200	15,33	24,01	15,63	24,31	15,48	24,16	8,68	2,88	245-340	435
250x200	17,05	26,96	17,38	27,29	17,22	27,11	9,89	3,08	315-440	565
300x200	18,75	30,06	19,11	30,45	18,93	30,27	11,34	3,24	380-530	680
350x200	21,41	34,00	21,83	34,41	21,61	34,19	12,58	3,38	450-630	810
400x200	22,24	36,09	22,68	36,54	22,48	36,32	13,84	3,55	515-720	925
450x200	25,87	41,04	26,38	41,55	26,13	41,30	15,17	3,74	575-805	1035
500x200	26,62	43,31	27,14	43,84	26,88	43,57	16,69	3,87	650-905	1165
600x200	30,99	50,31	31,62	50,94	31,31	50,64	19,32	4,32	785-1095	1410
700x200	38,61	63,29	39,38	64,06	38,99	63,68	24,68	5,04	915-1280	1650
800x200	41,91	69,19	42,76	70,04	42,33	69,61	27,27	5,41	1045-1450	1880
900x200	47,34	77,10	48,29	78,04	47,82	77,57	29,77	5,88	1170-1645	2120
1000x200	50,97	83,75	51,99	84,77	51,48	84,26	32,78	6,44	1310-1830	2365
250x250	19,32	30,16	19,71	30,53	19,52	30,34	10,83	3,24	395-555	715
300x250	21,36	33,34	21,78	33,76	21,57	33,54	11,98	3,44	485-680	875
400x250	26,12	40,89	26,65	41,42	26,38	41,15	14,76	3,77	655-920	1185
500x250	32,09	49,87	32,73	50,51	32,42	50,20	17,78	4,04	830-1160	1490
600x250	36,99	57,62	37,74	58,36	37,37	57,99	20,61	4,51	1000-1400	1800
700x250	42,44	67,23	43,27	68,07	42,85	67,65	24,82	5,04	1165-1630	2095
800x250	47,85	76,83	48,81	77,79	48,33	77,33	28,99	5,61	1340-1870	2410
900x250	52,98	84,94	54,06	86,01	53,52	85,49	31,96	6,05	1505-2105	2710
1000x250	58,14	93,10	59,29	94,26	58,71	93,69	34,97	6,64	1700-2375	3070
300x300	24,89	37,77	25,39	38,28	25,13	38,03	12,90	3,63	575-805	1035
400x300	30,51	46,39	31,12	47,02	30,82	46,69	15,88	3,96	785-1095	1410
500x300	37,34	56,54	38,08	57,28	37,70	56,90	19,20	4,23	980-1375	1765
600x300	43,07	65,25	43,95	66,13	43,51	65,70	22,19	4,72	1190-1665	2140
700x300	49,30	75,98	50,29	76,99	49,78	76,49	26,69	5,43	1385-1940	2495
800x300	55,49	86,67	56,60	87,78	56,04	87,23	31,19	5,82	1600-2240	2880
900x300	62,49	96,93	63,74	98,20	63,11	97,57	34,47	6,24	1800-2520	3240
1000x300	69,52	107,24	70,88	108,61	70,18	107,92	37,72	6,83	2000-2800	3610
400x400	38,58	56,67	39,34	57,43	38,96	57,05	18,10	4,26	1050-1470	1895
500x400	45,86	67,86	46,77	68,76	46,32	68,31	21,99	4,53	1325-1850	2381
600x400	53,05	78,59	54,11	79,65	53,58	79,12	25,55	5,01	1600-2240	2880
700x400	61,48	92,08	62,72	93,31	62,09	92,69	30,60	5,74	1865-2610	3355
800x400	69,93	105,56	71,33	106,97	70,62	106,26	35,63	6,10	2140-2990	3860
900x400	77,77	117,20	79,30	118,74	78,54	117,97	39,42	6,54	2405-3365	3860
1000x400	85,61	129,60	87,32	131,31	86,47	130,46	43,99	7,16	2675-3735	4850

(*)	eur
(O)	3,23
(T)	1,20

L x H mm	BMT-AN M9016 eur	BMT-AN+SP M9016 eur	BMT-AN R9010S eur	BMT-AN+SP R9010S eur	BMT-AN AA eur	BMT-AN+SP AA eur	SP eur	CM eur	Lwa1 < 35 dB(A) m³/h	Lwa1 45 dB(A) m³/h
200x100	13,13	20,34	13,39	20,59	13,27	20,47	7,20	2,59	120-175	200
250x100	14,40	22,58	14,69	22,88	14,53	22,73	8,19	2,80	155-215	275
300x100	16,77	26,43	17,11	26,76	16,93	26,61	9,67	2,96	180-250	325
350x100	18,39	29,44	18,77	29,81	18,57	29,62	11,04	3,10	215-300	390
400x100	20,62	32,77	21,04	33,17	20,83	32,97	12,15	3,27	245-340	435
450x100	22,28	35,76	22,74	36,20	22,52	35,98	13,46	3,44	280-390	500
500x100	24,54	39,12	25,03	39,63	24,77	39,37	14,59	3,55	305-430	550
600x100	28,65	45,44	29,23	46,02	28,94	45,74	16,80	4,04	370-515	665
700x100	32,72	54,43	33,37	55,08	33,05	54,76	21,71	4,78	440-615	795
800x100	37,77	61,64	38,52	62,39	38,15	62,02	23,87	5,15	500-700	910
900x100	41,57	68,04	42,42	68,88	41,98	68,44	26,47	5,55	560-790	1020
1000x100	45,39	74,12	46,30	75,01	45,85	74,57	28,73	6,19	630-880	1135
200x150	13,71	21,58	13,99	21,85	13,85	21,73	7,87	2,76	190-265	340
250x150	15,59	24,67	15,90	24,98	15,74	24,84	9,09	2,91	235-330	420
300x150	18,06	28,66	18,42	29,02	18,26	28,84	10,60	3,10	290-405	520
350x150	19,79	31,58	20,19	31,97	20,00	31,79	11,78	3,22	335-465	600
400x150	22,17	35,17	22,62	35,60	22,41	35,39	13,00	3,42	385-540	695
450x150	23,93	38,13	24,41	38,61	24,17	38,37	14,20	3,55	440-615	795
500x150	26,17	41,81	26,71	42,33	26,43	42,08	15,63	3,72	485-680	875
600x150	30,66	48,63	31,27	49,25	30,96	48,94	17,98	4,17	595-830	1070
700x150	34,90	58,04	35,59	58,72	35,25	58,38	23,13	4,90	690-970	1250
800x150	40,24	65,81	41,05	66,61	40,63	66,20	25,57	5,26	790-1110	1425
900x150	44,35	72,23	45,24	73,13	44,78	72,68	27,88	5,71	890-1245	1610
1000x150	48,28	78,90	49,23	79,86	48,75	79,38	30,64	6,29	990-1380	1780
200x200	15,33	24,01	15,63	24,31	15,48	24,16	8,68	2,88	245-340	435
250x200	17,43	27,33	17,78	27,68	17,61	27,50	9,89	3,08	315-440	565
300x200	20,30	31,62	20,69	32,02	20,48	31,82	11,34	3,24	380-530	680
350x200	22,31	34,89	22,77	35,33	22,54	35,13	12,58	3,38	450-630	810
400x200	25,05	38,90	25,55	39,39	25,30	39,13	13,84	3,55	515-720	925
450x200	27,02	42,19	27,56	42,72	27,30	42,47	15,17	3,74	575-805	1035
500x200	29,75	46,42	30,34	47,04	30,03	46,72	16,69	3,87	650-905	1165
600x200	34,55	53,87	35,26	54,58	34,90	54,22	19,32	4,32	785-1095	1410
700x200	39,95	64,66	40,76	65,45	40,36	65,05	24,68	5,04	915-1280	1650
800x200	45,14	72,42	46,05	73,31	45,60	72,87	27,27	5,41	1045-1450	1880
900x200	50,01	79,78	51,01	80,78	50,51	80,27	29,77	5,88	1170-1645	2120
1000x200	54,60	87,38	55,69	88,47	55,15	87,93	32,78	6,44	1310-1830	2365
250x250	19,32	30,16	19,71	30,53	19,52	30,34	10,83	3,24	395-555	715
300x250	22,51	34,49	22,97	34,94	22,74	34,73	11,98	3,44	485-680	875
400x250	27,75	42,51	28,29	43,06	28,02	42,79	14,76	3,77	655-920	1185
500x250	33,57	51,33	34,24	52,01	33,89	51,67	17,78	4,04	830-1160	1490
600x250	38,92	59,53	39,69	60,31	39,31	59,92	20,61	4,51	1000-1400	1800
700x250	44,70	69,52	45,60	70,40	45,14	69,95	24,82	5,04	1165-1630	2095
800x250	50,46	79,45	51,48	80,46	50,97	79,95	28,99	5,61	1340-1870	2410
900x250	55,65	87,62	56,76	88,72	56,22	88,18	31,96	6,05	1505-2105	2710
1000x250	60,85	95,82	62,06	97,05	61,46	96,42	34,97	6,64	1700-2375	3070
300x300	24,89	37,77	25,39	38,28	25,13	38,03	12,90	3,63	575-805	1035
400x300	30,60	46,46	31,21	47,09	30,90	46,78	15,88	3,96	785-1095	1410
500x300	36,95	56,15	37,69	56,89	37,32	56,53	19,20	4,23	980-1375	1765
600x300	42,93	65,10	43,77	65,96	43,35	65,54	22,19	4,72	1190-1665	2140
700x300	49,15	75,85	50,15	76,83	49,64	76,34	26,69	5,43	1385-1940	2495
800x300	55,39	86,58	56,52	87,70	55,97	87,16	31,19	5,82	1600-2240	2880
900x300	61,78	96,23	63,01	97,46	62,38	96,84	34,47	6,24	1800-2520	3240
1000x300	68,14	105,86	69,52	107,24	68,82	106,54	37,72	6,83	2000-2800	3610
400x400	38,58	56,67	39,34	57,43	38,96	57,05	18,10	4,26	1050-1470	1895
500x400	45,51	67,51	46,43	68,42	45,98	67,97	21,99	4,53	1325-1850	2381
600x400	53,10	78,63	54,14	79,68	53,61	79,16	25,55	5,01	1600-2240	2880
700x400	61,61	92,21	62,84	93,45	62,24	92,82	30,60	5,74	1865-2610	3355
800x400	70,12	105,77	71,55	107,18	70,84	106,49	35,63	6,10	2140-2990	3860
900x400	77,46	116,88	79,02	118,44	78,24	117,66	39,42	6,54	2405-3365	3860
1000x400	84,77	128,76	86,47	130,46	85,62	129,61	43,99	7,16	2675-3735	4850

(*)	eur
(O)	3,23
(T)	1,20

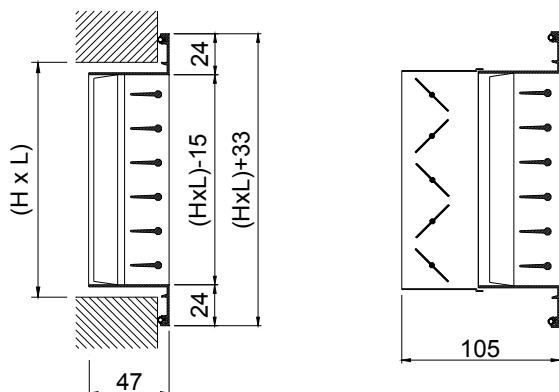
Double deflection grilles



Technical data

CTM

CTM+SP



Description

Double deflection grilles for air supply. Individually adjustable blades. Made from aluminium.

CTM-AN Grille with front blades parallels to the largest side (L size)

CMT-AN Grille with front blades parallels to the shortest side (H size)

Accessories

SP Opposed blades volume damper from zinc plated steel, in black colour.

CM Mounting frame from galvanised steel (delivered separately in 4 linear elements)

PLRO Connection plenum: see Accessories.

Fixing

(S) Clips. It requires mounting frame CM.

(O) Hidden screw. It requires mounting frame CM (supplement *)

(T) Visible screws (supplement *)

Finishes CTM-AN

SLAA Matt silver anodised. Rear blades in black colour.

SL16 Pre-lacquered in white similar to RAL 9016 (85-95% gloss)
Rear blades in black colour.

SL10 Pre-lacquered in white RAL 9010 semi-matt (60-70% gloss)
Rear blades in black colour.

RAL... Painted in other RAL colours: see INFO page.

Finishes CMT-AN

AA Matt silver anodised.

M9016 Pre-lacquered in white similar to RAL 9016 (85-95% gloss)

R9010S Pre-lacquered in white RAL 9010 semi-matt (60-70% gloss)

RAL... Painted in other RAL colours: see INFO page.

Specification Text

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

CTM-AN+SP+CM (S) SL16 dim. LxH, constructed from aluminium paint in white similar to R9016 (85-90% gloss), rear blades in black colour, with opposed blades volume damper in black colour, fixing by clips and mounting frame. Manufacturer **MADEL**.



L x H mm	CTM-AN SL16 eur	CTM-AN+SP SL16 eur	CTM-AN SL10 eur	CTM-AN+SP SL10 eur	CTM-AN SLAA eur	CTM-AN+SP SLAA eur	CM eur	Lwa1 < 35 dB(A) m³/h	Lwa1 45 dB(A) m³/h
200x100	15,59	22,79	15,89	23,10	16,03	23,23	2,59	110-160	200
250x100	17,56	25,75	17,91	26,10	18,07	26,26	2,80	140-180	250
300x100	19,85	29,53	20,26	29,93	20,44	30,10	2,96	175-240	300
350x100	22,94	34,00	23,41	34,45	23,63	34,67	3,10	200-290	380
400x100	24,17	36,31	24,65	36,80	24,89	37,03	3,27	225-325	410
450x100	27,14	40,61	27,71	41,15	27,95	41,41	3,44	275-375	490
500x100	28,23	42,82	28,78	43,38	29,05	43,63	3,55	290-400	500
600x100	35,12	51,92	35,82	52,63	36,14	52,94	4,04	350-500	600
700x100	41,93	63,63	42,78	64,47	43,14	64,85	4,78	390-560	715
800x100	47,73	71,59	48,70	72,55	49,13	73,00	5,15	450-640	830
900x100	51,87	78,33	52,91	79,38	53,40	79,87	5,55	510-720	925
1000x100	55,92	84,65	57,04	85,77	57,56	86,29	6,19	660-790	1020
200x150	18,85	26,72	19,24	27,10	19,40	27,28	2,76	180-250	310
250x150	20,47	29,55	20,88	29,97	21,07	30,17	2,91	220-320	400
300x150	23,22	33,80	23,68	34,28	23,89	34,49	3,10	280-380	500
350x150	27,11	38,90	27,64	39,42	27,91	39,69	3,22	300-440	560
400x150	28,69	41,67	29,25	42,24	29,52	42,52	3,42	350-500	600
450x150	32,32	46,50	32,96	47,16	33,26	47,46	3,55	410-580	700
500x150	33,89	49,53	34,57	50,23	34,88	50,51	3,72	450-610	800
600x150	39,88	57,86	40,68	58,67	41,05	59,03	4,17	550-800	950
700x150	50,01	73,14	51,00	74,14	51,48	74,61	4,90	630-880	1135
800x150	56,82	82,39	57,95	83,52	58,47	84,04	5,26	705-1005	1300
900x150	62,04	89,93	63,29	91,17	63,85	91,73	5,71	810-1130	1460
1000x150	67,00	97,64	68,36	98,98	68,97	99,61	6,29	900-1270	1640
200x200	22,03	30,70	22,48	31,16	22,66	31,34	2,88	230-330	420
250x200	25,04	34,93	25,54	35,43	25,75	35,64	3,08	290-430	550
300x200	28,47	39,80	29,04	40,37	29,29	40,63	3,24	380-500	650
350x200	32,37	44,96	33,03	45,61	33,32	45,90	3,38	425-600	750
400x200	34,37	48,22	35,06	48,89	35,37	49,21	3,55	500-700	880
450x200	38,79	53,95	39,58	54,75	39,92	55,09	3,74	560-810	960
500x200	40,44	57,12	41,25	57,93	41,63	58,31	3,87	600-880	1100
600x200	47,47	66,79	48,42	67,73	48,86	68,18	4,32	800-1100	1350
700x200	60,95	85,63	62,17	86,85	62,73	87,41	5,04	860-1210	1555
800x200	67,92	95,18	69,29	96,56	69,91	97,17	5,41	990-1385	1785
900x200	74,53	104,29	76,03	105,79	76,71	106,48	5,88	1115-1560	2010
1000x200	80,80	113,58	82,40	115,19	83,15	115,93	6,44	1240-1735	2240
250x250	28,29	39,12	28,85	39,68	29,14	39,98	3,24	390-550	700
300x250	32,17	44,15	32,82	44,78	33,11	45,09	3,44	460-645	825
400x250	40,57	55,34	41,39	56,15	41,77	56,53	3,77	595-830	1070
500x250	48,79	66,54	49,74	67,52	50,20	67,99	4,04	775-1085	1395
600x250	57,01	77,62	58,15	78,76	58,68	79,29	4,51	935-1310	1685
700x250	67,49	92,29	68,84	93,64	69,45	94,27	5,04	1090-1525	1965
800x250	77,98	106,97	79,54	108,53	80,26	109,24	5,61	1260-1760	2270
900x250	85,31	117,27	87,02	118,98	87,81	119,77	6,05	1515-1980	2555
1000x250	92,64	127,61	94,49	129,47	95,36	130,33	6,64	1575-2200	2835
300x300	36,67	49,58	37,41	50,31	37,74	50,65	3,63	560-780	1005
400x300	46,40	62,28	47,31	63,20	47,74	63,62	3,96	750-1045	1345
500x300	55,79	74,98	56,90	76,10	57,41	76,61	4,23	945-1325	1700
600x300	64,94	87,13	66,24	88,43	66,84	89,03	4,72	1135-1585	2050
700x300	77,00	103,69	78,53	105,22	79,25	105,94	5,43	1325-1845	2390
800x300	89,06	120,24	90,84	122,03	91,66	122,85	5,82	1520-2125	2740
900x300	98,44	132,90	100,41	134,87	101,31	135,78	6,24	1710-2390	3085
1000x300	107,83	145,56	109,99	147,71	110,99	148,71	6,83	1910-2680	3450
400x400	60,40	78,50	61,61	79,71	62,17	80,27	4,26	1000-1410	1815
500x400	71,46	93,46	72,89	94,88	73,54	95,53	4,53	1270-1785	2300
600x400	87,03	112,58	88,77	114,32	89,59	115,14	5,01	1530-2150	2770
700x400	101,58	132,18	103,62	134,21	104,56	135,16	5,74	1785-2505	3115
800x400	116,10	151,74	118,43	154,07	119,50	155,13	6,10	2060-2880	3710
900x400	127,40	166,83	129,95	169,38	131,12	170,54	6,54	2310-3240	4175
1000x400	138,64	182,63	141,41	185,40	142,69	186,68	7,16	2600-3640	4680

(*)	eur
(O)	3,23
(T)	1,20

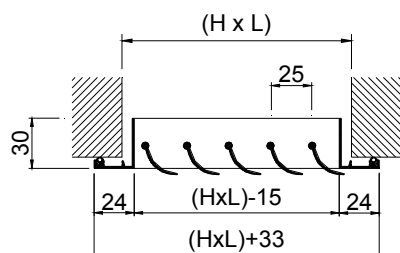
L x H mm	CMT-AN M9016 eur	CMT-AN+SP M9016 eur	CMT-AN R9010S eur	CMT-AN+SP R9010S eur	CMT-AN AA eur	CMT-AN+SP AA eur	CM eur	Lwa1 < 35 dB(A) m³/h	Lwa1 45 dB(A) m³/h
200x100	15,90	23,11	16,22	23,42	16,06	23,26	2,59	110-160	200
250x100	17,92	26,11	18,28	26,47	18,10	26,30	2,80	140-180	250
300x100	20,28	29,94	20,68	30,34	20,47	30,15	2,96	175-240	300
350x100	23,42	34,47	23,89	34,93	23,66	34,71	3,10	200-290	380
400x100	24,66	36,81	25,15	37,30	24,92	37,05	3,27	225-325	410
450x100	27,72	41,16	28,26	41,73	27,99	41,45	3,44	275-375	490
500x100	28,80	43,40	29,38	43,97	29,08	43,69	3,55	290-400	500
600x100	35,82	52,63	36,55	53,35	36,19	52,98	4,04	350-500	600
700x100	42,79	64,48	43,64	65,34	43,21	64,91	4,78	390-560	715
800x100	48,71	72,57	49,69	73,54	49,20	73,05	5,15	450-640	830
900x100	52,92	79,40	53,98	80,45	53,45	79,92	5,55	510-720	925
1000x100	57,06	85,79	58,20	86,93	57,65	86,35	6,19	660-790	1020
200x150	19,24	27,10	19,62	27,49	19,42	27,30	2,76	180-250	310
250x150	20,88	29,97	21,32	30,40	21,09	30,19	2,91	220-320	400
300x150	23,68	34,28	24,17	34,77	23,92	34,52	3,10	280-380	500
350x150	27,68	39,45	28,22	40,01	27,95	39,73	3,22	300-440	560
400x150	29,26	42,25	29,85	42,83	29,55	42,55	3,42	350-500	600
450x150	32,97	47,17	33,64	47,84	33,30	47,51	3,55	410-580	700
500x150	34,57	50,23	35,28	50,92	34,93	50,56	3,72	450-610	800
600x150	40,69	58,68	41,52	59,49	41,10	59,09	4,17	550-800	950
700x150	51,02	74,16	52,04	75,17	51,53	74,66	4,90	630-880	1135
800x150	57,99	83,55	59,14	84,71	58,55	84,12	5,26	705-1005	1300
900x150	63,31	91,19	64,59	92,48	63,95	91,83	5,71	810-1130	1460
1000x150	68,38	99,00	69,74	100,37	69,06	99,70	6,29	900-1270	1640
200x200	22,48	31,16	22,93	31,61	22,71	31,38	2,88	230-330	420
250x200	25,55	35,44	26,06	35,95	25,80	35,69	3,08	290-430	550
300x200	29,05	40,39	29,63	40,96	29,33	40,67	3,24	380-500	650
350x200	33,04	45,62	33,70	46,29	33,36	45,94	3,38	425-600	750
400x200	35,07	48,91	35,77	49,61	35,42	49,26	3,55	500-700	880
450x200	39,60	54,76	40,39	55,54	39,99	55,15	3,74	560-810	960
500x200	41,27	57,95	42,09	58,77	41,67	58,36	3,87	600-880	1100
600x200	48,44	67,76	49,39	68,72	48,92	68,24	4,32	800-1100	1350
700x200	62,19	86,89	63,44	88,12	62,80	87,49	5,04	860-1210	1555
800x200	69,31	96,58	70,70	97,96	70,00	97,27	5,41	990-1385	1785
900x200	76,06	105,82	77,57	107,33	76,81	106,57	5,88	1115-1560	2010
1000x200	82,44	115,22	84,09	116,87	83,27	116,05	6,44	1240-1735	2240
250x250	28,88	39,71	29,45	40,27	29,17	40,01	3,24	390-550	700
300x250	32,83	44,79	33,49	45,46	33,15	45,13	3,44	460-645	825
400x250	41,41	56,17	42,23	57,00	41,82	56,59	3,77	595-830	1070
500x250	49,76	67,55	50,76	68,54	50,27	68,04	4,04	775-1085	1395
600x250	58,17	78,78	59,34	79,94	58,74	79,37	4,51	935-1310	1685
700x250	68,87	93,67	70,24	95,04	69,56	94,35	5,04	1090-1525	1965
800x250	79,56	108,55	81,17	110,15	80,37	109,36	5,61	1260-1760	2270
900x250	87,05	119,02	88,79	120,76	87,93	119,89	6,05	1515-1980	2555
1000x250	94,53	129,50	96,42	131,39	95,48	130,45	6,64	1575-2200	2835
300x300	37,42	50,33	38,17	51,07	37,79	50,71	3,63	560-780	1005
400x300	47,34	63,22	48,29	64,17	47,82	63,69	3,96	750-1045	1345
500x300	56,93	76,12	58,06	77,26	57,49	76,69	4,23	945-1325	1700
600x300	66,26	88,45	67,60	89,78	66,92	89,11	4,72	1135-1585	2050
700x300	78,56	105,26	80,14	106,83	79,35	106,04	5,43	1325-1845	2390
800x300	90,87	122,06	92,69	123,88	91,79	122,97	5,82	1520-2125	2740
900x300	100,45	134,90	102,46	136,93	101,44	135,90	6,24	1710-2390	3085
1000x300	110,04	147,76	112,24	149,97	111,14	148,86	6,83	1910-2680	3450
400x400	61,63	79,75	62,87	80,96	62,26	80,35	4,26	1000-1410	1815
500x400	72,92	94,92	74,37	96,37	73,65	95,64	4,53	1270-1785	2300
600x400	88,82	114,35	90,58	116,13	89,69	115,23	5,01	1530-2150	2770
700x400	103,67	134,26	105,74	136,33	104,70	135,29	5,74	1785-2505	3115
800x400	118,48	154,11	120,84	156,49	119,66	155,30	6,10	2060-2880	3710
900x400	130,00	169,42	132,60	172,03	131,29	170,71	6,54	2310-3240	4175
1000x400	141,46	185,45	144,30	188,29	142,87	186,88	7,16	2600-3640	4680

(*)	eur
(O)	3,23
(T)	1,20

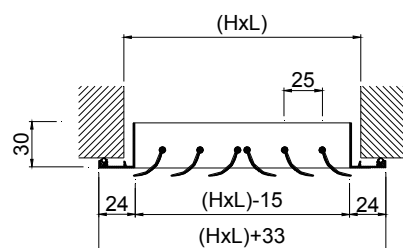
Curved blades ceiling grilles

Technical data

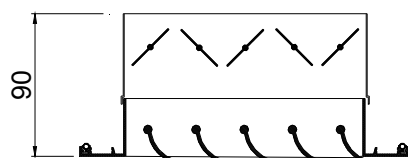
AMT-AC



AMT-ACO



AMT-AC+SP



Description

Grilles with individually adjustable curved blades to be used in premises from 2,6 metres high. Constructed from aluminium.

AMT-AC One-Way grille with blades parallels to the largest side (L size)

AMT-ACO Two-Way grille with blades parallels to the largest side.

BMT-AC One-Way grille with blades parallels to the shortest side (H size)

BMT-ACO Two-Way grille with blades parallels to the shortest side.

Accessories

SP Opposed blades volume damper from zinc plated steel, in black colour.

CM Mounting frame from galvanised steel (delivered separately in 4 linear elements)

PLRO Connection plenum: see Accessories.

Fixing

(T) Visible screws.

(O) Hidden screw. It requires mounting frame CM (supplement *)

Finishes

AA Matt silver anodised.

M9016 Pre-lacquered in white similar to RAL 9016. (85-95% gloss)

Specification Text

Supply and mounting of grille in One-Way for air supply with individually adjustable curved blades parallels to the largest side series **AMT-AC+SP+CM (O) M9016 dim. LxH**, constructed from aluminium paint in white **M9016** with opposed blades volume damper from electro-zinc steel in black colour **SP**, hidden screw



L x H mm	AMT-AC M9016 eur	AMT-AC+SP M9016	AMT-ACO M9016 eur	AMT-ACO+SP M9016	AMT-AC AA eur	AMT-AC+SP AA eur	AMT-ACO AA eur	AMT-ACO+SP AA eur	CM eur	Lwa1 < 35 dB(A) m³/h	Lwa1 45 dB(A) m³/h
200x100	12,73	19,93	14,66	21,84	13,09	20,06	14,79	21,99	2,59	54-80	100
250x100	14,06	22,25	16,18	24,37	14,47	22,41	16,34	24,54	2,80	75-105	130
300x100	15,69	25,35	18,01	27,68	16,14	25,52	18,18	27,85	2,96	90-125	165
350x100	17,04	28,09	19,56	30,60	17,54	28,25	19,74	30,78	3,10	108-150	200
400x100	18,39	30,53	21,10	33,26	18,93	30,71	21,32	33,46	3,27	120-165	210
450x100	19,66	33,12	22,62	36,08	20,22	33,32	22,86	36,31	3,44	135-190	245
500x100	21,45	36,04	24,64	39,23	22,09	36,26	24,89	39,47	3,55	155-215	275
600x100	26,38	43,19	30,28	47,08	27,15	43,45	30,59	47,39	4,04	180-255	325
700x100	29,81	51,51	34,30	56,01	30,68	51,80	34,63	56,34	4,78	220-305	390
800x100	33,36	57,24	38,35	62,20	34,35	57,56	38,72	62,60	5,15	235-330	425
900x100	36,37	62,83	41,82	68,29	37,43	63,20	42,24	68,70	5,55	270-380	490
1000x100	39,36	68,07	45,28	74,01	40,51	68,48	45,74	74,46	6,19	310-430	555
200x150	15,14	23,00	17,39	25,28	15,59	23,17	17,57	25,43	2,76	90-125	165
250x150	16,80	25,88	19,34	28,43	17,28	26,06	19,55	28,62	2,91	120-165	210
300x150	18,78	29,38	21,59	32,19	19,33	29,56	21,81	32,40	3,10	145-205	260
350x150	20,47	32,25	23,53	35,31	21,07	32,45	23,77	35,55	3,22	175-240	310
400x150	22,14	35,13	25,47	38,47	22,79	35,33	25,74	38,72	3,42	190-270	340
450x150	23,74	37,95	27,32	41,51	24,44	38,19	27,58	41,79	3,55	220-305	390
500x150	26,19	41,83	30,12	45,75	26,97	42,10	30,41	46,05	3,72	245-345	440
600x150	32,22	50,20	37,04	55,02	33,16	50,52	37,42	55,39	4,17	290-405	520
700x150	36,40	59,51	41,85	64,99	37,45	59,88	42,28	65,42	4,90	345-480	620
800x150	40,86	66,42	47,04	72,59	42,05	66,84	47,51	73,06	5,26	380-530	680
900x150	44,67	72,55	51,38	79,26	45,98	73,00	51,90	79,79	5,71	435-605	780
1000x150	48,53	79,16	55,79	86,43	49,95	79,64	56,34	86,97	6,29	490-680	875
200x200	17,94	26,62	20,63	29,30	18,46	26,80	20,84	29,52	2,88	125-180	230
250x200	19,98	29,88	22,97	32,86	20,56	30,06	23,20	33,10	3,08	165-230	295
300x200	22,28	33,63	25,58	36,92	22,93	33,85	25,83	37,18	3,24	200-280	360
350x200	24,32	36,91	27,94	40,52	25,03	37,16	28,22	40,80	3,38	225-315	405
400x200	26,38	40,24	30,28	44,13	27,15	40,51	30,59	44,42	3,55	265-365	470
450x200	28,35	43,51	32,60	47,77	29,17	43,78	32,91	48,08	3,74	300-415	535
500x200	31,25	47,94	35,95	52,64	32,17	48,26	36,31	52,99	3,87	335-470	600
600x200	38,40	57,72	44,15	63,47	39,52	58,10	44,61	63,93	4,32	395-555	715
700x200	43,42	68,11	49,94	74,62	44,68	68,54	50,42	75,10	5,04	360-630	810
800x200	48,81	76,08	56,14	83,40	50,24	76,57	56,69	83,97	5,41	525-735	940
900x200	53,55	83,31	61,51	91,27	55,10	83,83	62,13	91,88	5,88	595-835	1070
1000x200	58,17	90,94	66,89	99,66	59,86	91,53	67,56	100,34	6,44	665-935	1200
250x250	23,09	33,90	26,56	37,38	23,76	34,13	26,82	37,65	3,24	210-290	375
300x250	25,75	37,72	29,62	41,58	26,50	37,98	29,92	41,89	3,44	245-340	440
400x250	30,58	45,35	35,14	49,91	31,46	45,64	35,50	50,26	3,77	335-470	600
500x250	36,32	54,10	41,78	59,54	37,38	54,46	42,20	59,96	4,04	425-595	765
600x250	44,58	65,19	51,26	71,86	45,88	65,64	51,76	72,39	4,51	490-680	875
800x250	56,85	85,82	65,37	94,35	58,51	86,41	66,02	95,01	5,61	670-935	1200
1000x250	67,97	102,94	78,18	113,15	69,96	103,61	78,97	113,93	6,64	850-1185	1525
300x300	29,43	42,32	33,85	46,75	30,28	42,61	34,17	47,09	3,63	300-415	535
400x300	34,85	50,73	40,04	55,90	35,88	51,07	40,43	56,30	3,96	405-565	730
500x300	41,54	60,74	47,79	66,97	42,74	61,15	48,26	67,47	4,23	535-745	960
600x300	50,84	73,03	58,45	80,64	52,34	73,53	59,03	81,21	4,72	595-835	1070
800x300	64,89	96,07	74,63	105,82	66,79	96,72	75,38	106,56	5,82	810-1135	1460
1000x300	77,62	115,34	89,26	126,98	79,89	116,12	90,15	127,87	6,83	1065-1490	1915
400x400	43,27	61,37	49,76	67,88	44,54	61,81	50,27	68,37	4,26	550-770	990
500x400	51,73	73,72	59,51	81,51	53,24	74,24	60,12	82,10	4,53	795-970	1250
600x400	63,39	88,94	72,91	98,45	65,23	89,55	73,64	99,18	5,01	810-1135	1460
800x400	80,96	116,60	93,10	128,74	83,34	117,41	94,02	129,66	6,10	10100-1535	1980
1000x400	97,13	141,12	111,66	155,66	99,96	142,09	112,78	156,78	7,16	1385-1940	2495

(*)	eur
(O)	3,23

L x H mm	BMT-AC M9016 eur	BMT-AC+SP M9016	BMT-ACO M9016 eur	BMT-ACO+SP M9016	BMT-AC AA eur	BMT-AC+SP AA eur	BMT-ACO AA eur	BMT-ACO+SP AA eur	CM eur	Lwa1 < 35 dB(A) m³/h	Lwa1 45 dB(A) m³/h
200x100	13,61	20,82	15,70	22,90	14,02	20,96	15,86	23,04	2,59	54-80	100
250x100	15,62	23,82	17,90	26,09	16,08	23,96	18,06	26,26	2,80	75-105	130
300x100	17,89	27,54	20,56	30,23	18,40	27,73	20,77	30,43	2,96	90-125	165
350x100	19,77	30,82	22,73	33,77	20,36	31,02	22,94	34,00	3,10	108-150	200
400x100	21,90	34,05	25,19	37,34	22,54	34,27	25,43	37,59	3,27	120-165	210
450x100	25,27	38,71	29,02	42,49	25,99	38,97	29,30	42,78	3,44	135-190	245
500x100	27,70	42,28	31,83	46,42	28,50	42,56	32,13	46,73	3,55	155-215	275
600x100	31,93	48,72	36,71	53,49	32,86	49,05	37,06	53,86	4,04	180-255	325
700x100	36,97	58,68	42,54	64,24	38,06	59,05	42,96	64,67	4,78	220-305	390
800x100	41,93	65,79	48,19	72,05	43,16	66,22	48,67	72,53	5,15	235-330	425
900x100	48,41	74,88	55,64	82,10	49,83	75,35	56,21	82,66	5,55	270-380	490
1000x100	52,89	81,61	60,82	89,53	54,44	82,13	61,42	90,14	6,19	310-430	555
200x150	15,73	23,61	18,06	25,93	16,20	23,76	18,26	26,11	2,76	90-125	165
250x150	18,02	27,10	20,74	29,82	18,54	27,29	20,95	30,02	2,91	120-165	210
300x150	20,64	31,24	23,74	34,35	21,25	31,45	23,99	34,57	3,10	145-205	260
350x150	22,91	34,70	26,36	38,14	23,58	34,92	26,62	38,40	3,22	175-240	310
400x150	25,32	38,31	29,08	42,08	26,06	38,57	29,38	42,35	3,42	190-270	340
450x150	28,99	43,19	33,33	47,53	29,84	43,48	33,66	47,86	3,55	220-305	390
500x150	32,07	47,70	36,84	52,47	33,02	48,04	37,22	52,85	3,72	245-345	440
600x150	37,12	55,10	42,69	60,66	38,21	55,48	43,10	61,10	4,17	290-405	520
700x150	42,79	65,92	49,22	72,34	44,02	66,35	49,71	72,84	4,90	345-480	620
800x150	48,72	74,28	56,04	81,61	50,13	74,76	56,60	82,16	5,26	380-530	680
900x150	55,89	83,78	64,30	92,18	57,52	84,35	64,94	92,82	5,71	435-605	780
1000x150	61,26	91,89	70,43	101,05	63,05	92,52	71,12	101,76	6,29	490-680	875
200x200	17,94	26,62	20,63	29,30	18,46	26,80	20,84	29,52	2,88	125-180	230
250x200	20,51	30,41	23,61	33,50	21,12	30,62	23,84	33,74	3,08	165-230	295
300x200	23,51	34,85	27,03	38,37	24,21	35,09	27,32	38,64	3,24	200-280	360
350x200	26,05	38,62	29,99	42,57	26,80	38,88	30,28	42,86	3,38	225-315	405
400x200	28,84	42,69	33,17	47,04	29,67	42,97	33,52	47,37	3,55	265-365	470
450x200	32,88	48,06	37,87	53,03	33,85	48,37	38,24	53,41	3,74	300-415	535
500x200	36,50	53,19	42,01	58,70	37,58	53,56	42,45	59,12	3,87	335-470	600
600x200	42,20	61,52	48,53	67,86	43,42	61,92	49,01	68,33	4,32	395-555	715
700x200	48,71	73,40	56,04	80,72	50,12	73,88	56,60	81,28	5,04	360-630	810
800x200	55,60	82,86	63,89	91,15	57,22	83,41	64,52	91,80	5,41	525-735	940
900x200	63,50	93,25	73,04	102,80	65,36	93,90	73,77	103,53	5,88	595-835	1070
1000x200	69,59	102,38	80,07	112,86	71,63	103,07	80,88	113,65	6,44	665-935	1200
250x250	23,09	33,90	26,56	37,38	23,76	34,13	26,82	37,65	3,24	210-290	375
300x250	26,47	38,44	30,41	42,37	27,23	38,70	30,71	42,69	3,44	245-340	440
400x250	32,38	47,15	37,25	52,02	33,32	47,46	37,62	52,39	3,77	335-470	600
500x250	40,87	58,65	47,05	64,81	42,07	59,05	47,51	65,26	4,04	425-595	765
600x250	47,44	68,05	54,58	75,19	48,83	68,53	55,12	75,73	4,51	490-680	875
800x250	62,39	91,39	71,82	100,80	64,22	92,01	72,53	101,52	5,61	670-935	1200
1000x250	78,02	113,00	89,71	124,67	80,29	113,76	90,60	125,57	6,64	850-1185	1525
300x300	29,43	42,32	33,85	46,75	30,28	42,61	34,17	47,09	3,63	300-415	535
400x300	35,95	51,81	41,36	57,25	36,99	52,18	41,78	57,66	3,96	405-565	730
500x300	45,36	64,54	52,14	71,34	46,68	65,01	52,66	71,85	4,23	535-745	960
600x300	52,59	74,77	60,49	82,68	54,14	75,32	61,10	83,28	4,72	595-835	1070
800x300	69,40	100,59	79,79	110,97	71,43	101,28	80,58	111,78	5,82	810-1135	1460
1000x300	86,55	124,27	99,55	137,27	89,08	125,15	100,53	138,25	6,83	1065-1490	1915
400x400	43,27	61,37	49,76	67,88	44,54	61,81	50,27	68,37	4,26	550-770	990
500x400	54,29	76,29	62,48	84,47	55,88	76,82	63,09	85,09	4,53	795-970	1250
600x400	63,14	88,69	72,62	98,16	64,99	89,33	73,35	98,88	5,01	810-1135	1460
800x400	83,27	118,90	95,76	131,39	85,70	119,72	96,72	132,36	6,10	10100-1535	1980
1000x400	103,65	147,64	119,12	163,12	106,66	148,67	120,30	164,30	7,16	1385-1940	2495

(*)	eur
(O)	3,23

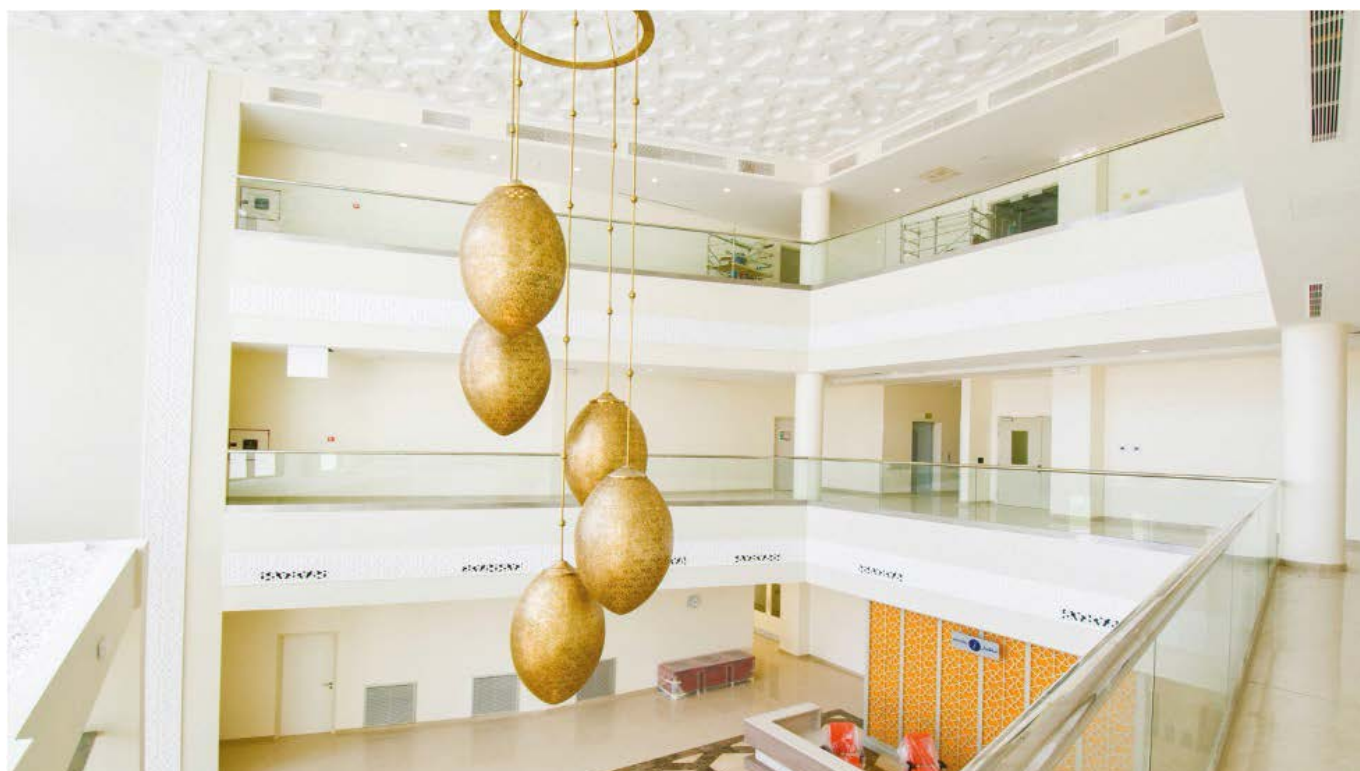
Linear grilles

Architectural integration

LMT-MISS reduced frame grille

LMT-MINI Linear grilles for laminated plaster board mounting

LMT-SW model for leveled mounting



INDEX

LMT linear grilles: frame 24 mm

LMT-MISS linear grilles: frame 15 mm

LMT-MINI linear grilles for laminated plaster board mounting

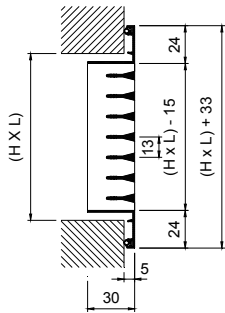
LMT-SW linear grilles for leveled mounting

Linear grilles: frame 24 mm

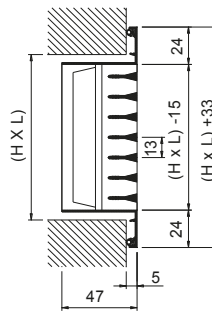


Technical data

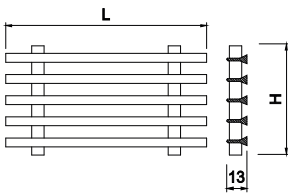
LMT



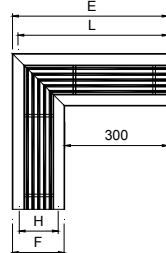
LMT-DD



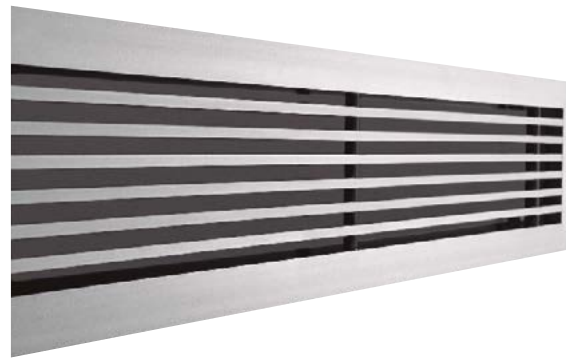
EMP



A90/LMT



H	E	L	F
75	408	391,5	108
100	433	416,5	133
125	458	441,5	158
150	483	466,5	183
200	533	516,5	233
250	583	566,5	283
300	633	616,5	333



Description

Linear grilles in aluminium for supply or air return, with fixed bars parallels to the largest side (L size)

LMT Grille with end borders and fixed bars at 0°. Suitable for lengths ≤ 2 m.

LMT-15 Grille LMT with fixed bars at 15°.

...-DD LMT grille with individually adjustable rear blades, parallels to the shortest side, in black colour.

...-ARI Grille with an end border on the left side, required to form lines > 2 m.

...-ARD Grille with an end border on the right side, required to form lines > 2 m.

...-INT Grille without end borders, required to form lines > 4 m.

EMP Linear core grille.

Accessories

SP Opposed blades volume damper from zinc plated steel, in black colour.

CM Mounting frame from galvanised steel (delivered separately in 4 linear elements)

PLRO Connection plenum: see Accessories.

A90/LMT Inactive grille without end borders, making a 90° angle.

Fixing

(S) Clips. It requires mounting frame CM.

(O) Hidden screw. It requires mounting frame CM (supplement *)

(T) Visible screws (supplement *)

Finishes

AA Matt silver anodised.

M9016 Pre-lacquered in white similar to RAL 9016 (85-95% gloss)

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of linear grille with fixed bars at 0° parallels to the largest side series **LMT+SP+CM (S) M9016 dim. LxH**, constructed from aluminium paint in white **M9016** with opposed blades volume damper from electro-zinc steel in black colour **SP**, invisible fixing by clips **(S)** and mounting frame **CM**. Manufacturer **MADEL**.



L x H	LMT M9016	LMT+SP M9016	LMT R9010S R9016S	LMT+SP R9010S R9016S	LMT AA	LMT+SP AA	EMP	SP	CM	Lwa1< 25 dB(A)	Lwa1< 40 dB(A)
mm	eur	eur	eur	eur	eur	eur	eur	eur	eur	m³/h	m³/h
200x75	14,44	21,65	15,31	22,51	14,58	21,78	8,18	7,20	2,53	44	108
250x75	16,11	24,30	17,09	25,28	16,26	24,45	9,51	8,19	2,76	50	114
300x75	16,62	26,29	17,62	27,29	16,78	26,45	9,53	9,67	2,91	65	131
400x75	18,53	30,67	19,64	31,79	18,70	30,85	10,54	12,15	3,22	85	195
500x75	22,31	36,92	23,66	38,25	22,53	37,14	13,40	14,59	3,51	110	239
600x75	25,24	42,04	26,75	43,55	25,49	42,29	14,92	16,80	3,98	135	289
700x75	27,86	48,20	29,53	49,87	28,14	48,48	16,69	20,34	4,74	155	316
800x75	30,47	54,34	32,31	56,16	30,77	54,63	18,43	23,87	5,06	180	379
900x75	33,83	60,13	35,84	62,16	34,15	60,46	20,56	26,31	5,50	205	408
1000x75	37,19	65,90	39,41	68,14	37,56	66,27	22,73	28,73	6,10	230	455
200x100	16,27	23,48	17,25	24,45	16,44	23,64	9,92	7,20	2,59	58	143
250x100	17,53	25,71	18,57	26,76	17,69	25,90	10,76	8,19	2,80	72	174
300x100	18,90	28,56	20,04	29,69	19,09	28,76	11,77	9,67	2,96	95	185
400x100	21,25	33,39	22,53	34,69	21,47	33,62	13,26	12,15	3,27	120	245
500x100	23,66	38,25	25,07	39,67	23,90	38,49	14,84	14,59	3,55	160	315
600x100	29,20	46,00	30,96	47,77	29,50	46,30	19,00	16,80	4,04	195	385
700x100	32,27	53,96	34,19	55,89	32,60	54,29	21,23	21,71	4,78	228	450
800x100	35,32	59,19	37,44	61,32	35,68	59,54	23,49	23,87	5,15	260	515
900x100	39,49	65,96	41,86	68,33	39,89	66,37	26,55	26,47	5,55	300	590
1000x100	43,73	72,46	46,36	75,07	44,16	72,89	29,58	28,73	6,19	325	650
200x125	17,92	25,79	19,00	26,86	18,10	25,96	11,43	7,87	2,74	85	173
250x125	19,36	28,46	20,53	29,62	19,57	28,65	12,53	9,09	2,88	110	215
300x125	21,01	31,61	22,26	32,86	21,22	31,82	13,77	10,60	3,08	140	280
400x125	23,77	36,75	25,19	38,19	24,01	36,99	15,74	13,00	2,33	180	370
500x125	29,22	44,85	30,97	46,61	29,51	45,14	19,95	15,63	3,66	235	470
600x125	33,28	51,26	35,27	53,24	33,62	51,61	23,19	17,98	4,13	285	580
700x125	36,81	58,58	39,01	60,81	37,18	58,96	25,94	21,78	4,87	340	670
800x125	40,32	65,89	42,73	68,31	40,73	66,28	28,69	25,57	5,23	390	770
900x125	45,29	73,41	48,02	76,12	45,75	73,86	32,58	28,11	5,66	435	875
1000x125	50,30	80,93	53,33	83,96	50,80	81,44	36,46	30,64	6,27	445	875
200x150	19,86	27,75	21,07	28,94	20,07	27,94	13,30	7,87	2,76	100	207
250x150	21,57	30,66	22,87	31,95	21,78	30,87	14,66	9,09	2,91	130	260
300x150	23,38	33,99	24,78	35,38	23,62	34,21	16,12	10,60	3,10	165	330
400x150	26,62	39,62	28,22	41,21	26,88	39,87	18,58	13,00	3,42	215	430
500x150	29,95	45,60	31,74	47,40	30,26	45,89	21,17	15,63	3,72	275	540
600x150	37,55	55,52	39,79	57,77	37,93	55,89	27,54	17,98	4,17	330	660
700x150	41,51	64,63	43,99	67,13	41,91	65,05	30,69	23,13	4,90	385	785
800x150	45,46	71,02	48,19	73,76	45,91	71,48	33,85	25,57	5,26	445	900
900x150	51,23	79,11	54,29	82,18	51,73	79,61	38,51	27,88	5,71	500	1000
1000x150	57,00	87,63	60,42	91,05	57,56	88,20	43,19	30,64	6,29	560	1125
200x200	23,42	32,09	24,83	33,50	23,65	32,33	16,71	8,68	2,88	135	270
250x200	25,59	35,50	27,12	37,02	25,84	35,75	18,54	9,89	3,08	180	360
300x200	28,17	39,49	29,87	41,18	28,44	39,78	20,77	11,34	3,24	225	445
400x200	32,25	46,10	34,17	48,04	32,58	46,42	24,17	13,84	3,55	295	590
500x200	36,52	53,20	38,70	55,38	36,88	53,57	27,73	16,69	3,87	375	750
600x200	45,96	65,29	48,72	68,04	46,42	65,74	36,17	19,32	4,32	455	900
700x200	50,84	75,54	53,88	78,58	51,36	76,04	40,18	24,68	5,04	530	1050
800x200	55,73	82,99	59,07	86,34	56,28	83,55	44,22	27,27	5,41	605	1200
900x200	63,04	92,80	66,83	96,58	63,66	93,44	50,64	29,77	5,88	680	1350
1000x200	70,36	103,15	74,58	107,36	71,06	103,84	57,06	32,78	6,44	765	1530
250x250	30,00	40,83	31,81	42,62	30,30	41,13	22,82	10,83	3,24	215	450
300x250	32,78	44,75	34,76	46,72	33,11	45,09	25,30	11,98	3,44	280	555
400x250	38,05	52,82	40,33	55,10	38,43	53,19	29,94	14,76	3,77	375	755
500x250	44,13	61,90	46,78	64,54	44,58	62,35	35,50	17,78	4,04	470	930
600x250	55,62	76,23	58,96	79,56	56,17	76,79	46,17	20,61	4,51	570	1150
700x250	61,07	85,85	64,72	89,51	61,66	86,48	50,83	24,82	5,28	665	1330
800x250	66,49	95,48	70,48	99,48	67,16	96,15	55,45	28,99	5,61	765	1510
900x250	75,68	107,64	80,22	112,18	76,43	108,40	63,90	31,96	6,05	860	1730
1000x250	84,85	119,81	89,93	124,91	85,70	120,66	72,33	34,97	6,64	930	1900
300x300	37,55	50,45	39,79	52,70	37,93	50,81	29,91	12,90	3,63	288	670
400x300	43,84	59,72	46,46	62,35	44,27	60,15	35,70	15,88	3,96	455	900
500x300	50,86	70,06	53,92	73,12	51,37	70,57	42,13	19,20	4,23	570	1125
600x300	64,35	86,54	68,22	90,41	65,00	87,19	54,99	22,19	4,72	685	1350
700x300	70,73	97,42	74,96	101,66	71,44	98,12	60,72	26,69	5,43	800	1600
800x300	77,08	108,27	81,70	112,89	77,85	109,04	66,44	31,19	5,82	918	1850
900x300	87,87	122,33	93,13	127,60	88,74	123,22	76,65	34,47	6,24	985	2100
1000x300	98,67	136,40	104,59	142,31	99,65	137,39	86,89	37,72	6,83	1105	2300

	H	75	100	125	150	200	250	300
A90/LMT	M9016	51,29	54,43	67,21	68,87	84,00	101,49	116,92
A90/LMT	R9010S /R9016S	54,38	57,69	71,24	72,99	89,02	107,57	123,94
A90/LMT	AA	51,79	54,96	67,89	69,56	84,83	102,50	118,11

L x H	LMT-DD M9016	LMT-DD+SP M9016	LMT-DD R9010S R9016S	LMT-DD+SP R9010S R9016S	LMT-DD AA	LMT-DD+SP AA	SP	CM	Lwa1< 25 dB(A)	Lwa1< 40 dB(A)
mm	eur	eur	eur	eur	eur	eur	eur	eur	m³/h	m³/h
200x75	19,38	26,59	20,54	27,75	19,58	26,77	7,20	2,53	44	108
250x75	21,95	30,15	23,26	31,45	22,16	30,35	8,19	2,76	50	114
300x75	23,62	33,28	25,03	34,70	23,86	33,52	9,67	2,91	65	131
400x75	27,11	39,26	28,75	40,89	27,38	39,52	12,15	3,22	85	195
500x75	30,70	45,29	32,54	47,14	31,00	45,61	14,59	3,51	110	239
600x75	37,62	54,42	39,87	56,67	37,99	54,79	16,80	3,98	135	289
700x75	42,29	62,63	44,83	65,17	42,71	63,05	20,34	4,74	155	316
800x75	46,91	70,79	49,73	73,61	47,40	71,25	23,87	5,06	180	379
900x75	52,06	78,37	55,20	81,50	52,58	78,88	26,31	5,50	205	408
1000x75	57,20	85,92	60,62	89,35	57,76	86,48	28,73	6,10	230	455
200x100	21,81	29,01	23,12	30,31	22,03	29,23	7,20	2,59	58	143
250x100	23,94	32,13	25,39	33,58	24,19	32,38	8,19	2,80	72	174
300x100	26,69	36,35	28,29	37,97	26,97	36,62	9,67	2,96	95	185
400x100	30,91	43,05	32,76	44,91	31,22	43,36	12,15	3,27	120	245
500x100	35,20	49,78	37,31	51,92	35,55	50,15	14,59	3,55	160	315
600x100	43,20	59,98	45,80	62,60	43,63	60,43	16,80	4,04	195	385
700x100	48,68	70,38	51,62	73,30	49,16	70,86	21,71	4,78	228	450
800x100	54,19	78,05	57,44	81,30	54,75	78,60	23,87	5,15	260	515
900x100	60,30	86,77	63,91	90,37	60,90	87,36	26,47	5,55	300	590
1000x100	66,40	95,12	70,38	99,11	67,08	95,78	28,73	6,19	325	650
200x125	24,00	31,87	25,43	33,30	24,24	32,10	7,87	2,74	85	173
250x125	26,41	35,51	28,00	37,07	26,68	35,77	9,09	2,88	110	215
300x125	29,51	40,11	31,28	41,88	29,80	40,40	10,60	3,08	140	280
400x125	34,45	47,44	36,52	49,51	34,80	47,80	13,00	2,33	180	370
500x125	39,45	55,09	41,82	57,45	39,85	55,49	15,63	3,66	235	470
600x125	48,81	66,78	51,73	69,70	49,28	67,26	17,98	4,13	285	580
700x125	55,03	76,82	58,33	80,13	55,60	77,38	21,78	4,87	340	670
800x125	61,27	86,84	64,95	90,52	61,89	87,46	25,57	5,23	390	770
900x125	68,44	96,56	72,55	100,67	69,14	97,24	28,11	5,66	435	875
1000x125	75,65	106,27	80,19	110,82	76,40	107,03	30,64	6,27	445	875
200x150	26,49	34,36	28,09	35,95	26,75	34,61	7,87	2,76	100	207
250x150	29,24	38,34	30,99	40,08	29,53	38,62	9,09	2,91	130	260
300x150	32,72	43,32	34,69	45,27	33,05	43,64	10,60	3,10	165	330
400x150	38,32	51,30	40,61	53,60	38,70	51,69	13,00	3,42	215	430
500x150	44,03	59,69	46,69	62,32	44,47	60,12	15,63	3,72	275	540
600x150	54,66	72,64	57,94	75,92	55,21	73,19	17,98	4,17	330	660
700x150	61,59	84,73	65,29	88,41	62,20	85,32	23,13	4,90	385	785
800x150	68,49	94,05	72,59	98,16	69,18	94,74	25,57	5,26	445	900
900x150	76,69	104,58	81,29	109,18	77,46	105,34	27,88	5,71	500	1000
1000x150	84,88	115,51	89,98	120,61	85,74	116,37	30,64	6,29	560	1125
200x200	31,08	39,76	32,94	41,60	31,40	40,07	8,68	2,88	135	270
250x200	34,54	44,44	36,62	46,52	34,89	44,78	9,89	3,08	180	360
300x200	39,05	50,39	41,40	52,73	39,43	50,77	11,34	3,24	225	445
400x200	46,04	59,88	48,81	62,65	46,49	60,34	13,84	3,55	295	590
500x200	53,17	69,84	56,35	73,04	53,70	70,38	16,69	3,87	375	750
600x200	66,20	85,53	70,17	89,49	66,87	86,19	19,32	4,32	455	900
700x200	74,57	99,25	79,04	103,72	75,32	100,00	24,68	5,04	530	1050
800x200	82,90	110,18	87,88	115,16	83,74	111,00	27,27	5,41	605	1200
900x200	93,23	123,00	98,83	128,59	94,17	123,92	29,77	5,88	680	1350
1000x200	103,53	136,30	109,74	142,53	104,57	137,34	32,78	6,44	765	1530
250x250	40,22	51,05	42,63	53,46	40,62	51,44	10,83	3,24	215	450
300x250	45,23	57,21	47,94	59,92	45,67	57,66	11,98	3,44	280	555
400x250	53,90	68,66	57,13	71,90	54,45	69,21	14,76	3,77	375	755
500x250	63,45	81,22	67,25	85,03	64,08	81,87	17,78	4,04	470	930
600x250	79,06	99,66	83,80	104,43	79,84	100,46	20,61	4,51	570	1150
700x250	88,48	113,29	93,80	118,60	89,37	114,16	24,82	5,28	665	1330
800x250	97,91	126,90	103,78	132,76	98,88	127,87	28,99	5,61	765	1510
900x250	110,64	142,60	117,27	149,24	111,76	143,72	31,96	6,05	860	1730
1000x250	123,36	158,32	130,77	165,73	124,59	159,55	34,97	6,64	930	1900
300x300	51,54	64,45	54,63	67,55	52,06	64,97	12,90	3,63	288	670
400x300	61,79	77,65	65,49	81,36	62,39	78,27	15,88	3,96	455	900
500x300	72,76	91,96	77,12	96,33	73,49	92,69	19,20	4,23	570	1125
600x300	91,02	113,19	96,46	118,65	91,91	114,09	22,19	4,72	685	1350
700x300	101,86	128,55	107,97	134,66	102,88	129,56	26,69	5,43	800	1600
800x300	112,67	143,86	119,43	150,62	113,80	144,99	31,19	5,82	918	1850
900x300	127,56	162,01	135,22	169,67	128,84	163,30	34,47	6,24	985	2100
1000x300	142,44	180,17	150,99	188,71	143,87	181,59	37,72	6,83	1105	2300

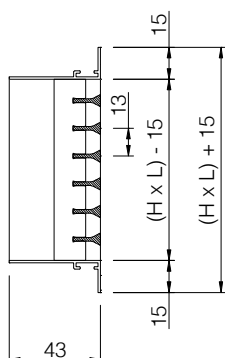
(*)	eur
(O)	3,23
(T)	1,20

Linear grilles: frame 15 mm

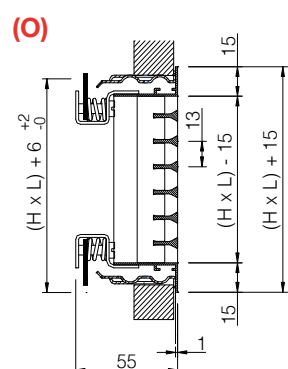
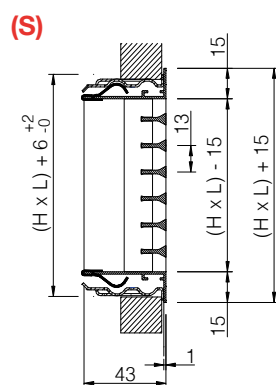
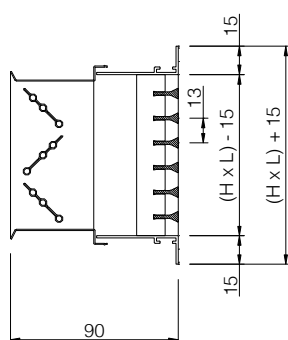


Technical data

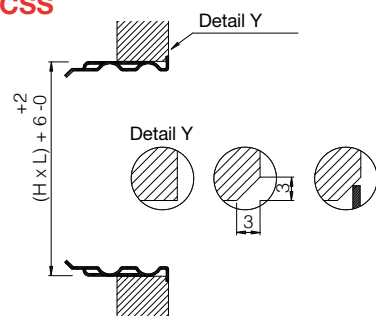
LMT-MISS



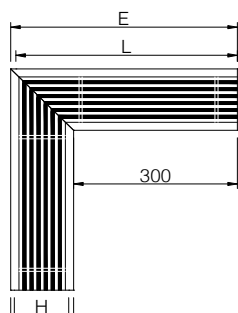
LMT-MISS+SP



CSS



A90/LMT-MISS



H	E	L	F
75	390	383	90
100	415	408	115
125	440	433	140
150	465	458	165
200	515	508	215
250	565	558	265
300	615	608	315



Description

Linear grilles in aluminium for supply or air return, with fixed bars parallels to the largest side (L size). Reduced frame linear grilles at 15 mm which makes adaptable the integration.

LMT-MISS Grille with end borders and fixed bars at 0°. Suitable for lengths ≤ 2 m.

LMT-MISS-15 Grille LMT-MISS with bars at 15°.

...-DD grille with individually adjustable rear blades, parallels to the shortest side, in black colour.

...-ARI Grille with an end border on the left side, required to form lines > 2 m.

...-ARD Grille with an end border on the right side, required to form lines > 2 m.

...-INT Grille without end borders, required to form lines > 4 m.

Accessories

SP Opposed blades volume damper from zinc plated steel, in black colour.

CSS Mounting frame from galvanised steel (delivered separately in 4 linear elements)

PMIS Connection plenum: see Accessories.

A90/LMT-MISS Inactive grille without end borders, making a 90° angle.

Fixing

(S) Clips. It requires mounting frame CSS.

(O) Hidden screw. It requires mounting frame CSS (supplement *)

Finishes

AA Matt silver anodised.

M9016 Pre-lacquered in white similar to RAL 9016 (85-95% gloss)

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of linear grille with fixed bars at 0° parallels to the largest side series **LMT-MISS+SP(S)AA dim. LxH**, constructed from aluminium matt silver anodised **AA** with opposed blades volume damper from electro-zinc steel in black colour **SP**, invisible fixing by clips **(S)** and mounting frame **CSS**. Manufacturer **MADEL**.

L x H	MISS M9016	MISS +SP M9016	MISS R9010S R9016S	MISS +SP R9010S R9016S	MISS AA	MISS+SP AA	SP	CSS	Lwa1< 25 dB(A)	Lwa1< 40 dB(A)
mm	eur	eur	eur	eur	eur	eur	eur	eur	m³/h	m³/h
200x75	16,45	23,65	17,44	24,64	16,62	23,82	7,20	2,53	44	108
250x75	17,02	25,22	18,05	26,25	17,19	25,39	8,19	2,76	50	114
300x75	17,45	27,11	18,51	28,17	17,62	27,29	9,67	2,91	65	131
400x75	19,67	31,82	20,85	33,01	19,85	32,00	12,15	3,22	85	195
500x75	23,02	37,63	24,41	39,00	23,26	37,86	14,59	3,51	110	239
600x75	25,79	42,58	27,34	44,13	26,05	42,83	16,80	3,98	135	289
700x75	28,10	48,43	29,79	50,11	28,37	48,71	20,34	4,74	155	316
800x75	30,59	54,45	32,42	56,28	30,89	54,76	23,87	5,06	180	379
900x75	33,58	59,88	35,59	61,90	33,91	60,22	26,31	5,50	205	408
1000x75	36,71	65,44	38,91	67,63	37,06	65,79	28,73	6,10	230	455
200x100	17,51	24,70	18,56	25,77	17,67	24,89	7,20	2,59	58	143
250x100	18,52	26,71	19,62	27,82	18,69	26,88	8,19	2,80	72	174
300x100	19,73	29,41	20,92	30,59	19,93	29,58	9,67	2,96	95	185
400x100	22,31	34,47	23,66	35,80	22,53	34,69	12,15	3,27	120	245
500x100	24,41	39,00	25,87	40,46	24,65	39,25	14,59	3,55	160	315
600x100	29,50	46,30	31,25	48,06	29,79	46,58	16,80	4,04	195	385
700x100	32,21	53,90	34,13	55,84	32,52	54,22	21,71	4,78	228	450
800x100	35,08	58,94	37,19	61,04	35,43	59,29	23,87	5,15	260	515
900x100	38,80	65,25	41,13	67,60	39,18	65,65	26,47	5,55	300	590
1000x100	42,70	71,43	45,26	73,98	43,12	71,84	28,73	6,19	325	650
200x125	18,88	26,74	20,02	27,87	19,07	26,94	7,87	2,74	85	173
250x125	20,16	29,25	21,37	30,46	20,37	29,46	9,09	2,88	110	215
300x125	21,60	32,21	22,90	33,50	21,82	32,42	10,60	3,08	140	280
400x125	24,55	37,53	26,01	39,00	24,78	37,76	13,00	2,33	180	370
500x125	29,40	45,02	31,16	46,79	29,67	45,32	15,63	3,66	235	470
600x125	33,15	51,14	35,15	53,14	33,49	51,46	17,98	4,13	285	580
700x125	36,27	58,06	38,45	60,23	36,64	58,43	21,78	4,87	340	670
800x125	39,53	65,10	41,90	67,48	39,92	65,50	25,57	5,23	390	770
900x125	43,97	72,08	46,61	74,70	44,40	72,51	28,11	5,66	435	875
1000x125	48,60	79,23	51,51	82,13	49,08	79,71	30,64	6,27	445	875
200x150	20,61	28,48	21,84	29,70	20,82	28,69	7,87	2,76	100	207
250x150	22,10	31,19	23,43	32,51	22,31	31,41	9,09	2,91	130	260
300x150	23,68	34,28	25,10	35,70	23,92	34,52	10,60	3,10	165	330
400x150	27,08	40,07	28,70	41,69	27,35	40,33	13,00	3,42	215	430
500x150	30,00	45,64	31,81	47,44	30,30	45,94	15,63	3,72	275	540
600x150	36,93	54,90	39,13	57,11	37,30	55,28	17,98	4,17	330	660
700x150	40,45	63,58	42,88	66,01	40,86	63,98	23,13	4,90	385	785
800x150	44,15	69,72	46,80	72,37	44,61	70,16	25,57	5,26	445	900
900x150	49,28	77,17	52,24	80,14	49,77	77,66	27,88	5,71	500	1000
1000x150	54,60	85,24	57,88	88,50	55,15	85,78	30,64	6,29	560	1125
200x200	23,76	32,43	25,18	33,86	24,00	32,68	8,68	2,88	135	270
250x200	25,69	35,58	27,23	37,14	25,94	35,83	9,89	3,08	180	360
300x200	27,99	39,33	29,66	41,01	28,26	39,61	11,34	3,24	225	445
400x200	32,10	45,95	34,03	47,87	32,43	46,29	13,84	3,55	295	590
500x200	35,90	52,57	38,03	54,71	36,25	52,93	16,69	3,87	375	750
600x200	44,50	63,82	47,17	66,49	44,96	64,28	19,32	4,32	455	900
700x200	48,83	73,51	51,75	76,43	49,31	73,99	24,68	5,04	530	1050
800x200	53,37	80,65	56,57	83,85	53,90	81,18	27,27	5,41	605	1200
900x200	59,87	89,64	63,46	93,22	60,48	90,23	29,77	5,88	680	1350
1000x200	66,59	99,36	70,59	103,37	67,25	100,03	32,78	6,44	765	1530
250x250	29,96	40,80	31,75	42,59	30,27	41,09	10,83	3,24	215	450
300x250	32,43	44,40	34,38	46,36	32,76	44,73	11,98	3,44	280	555
400x250	37,28	52,04	39,51	54,28	37,65	52,42	14,76	3,77	375	755
500x250	42,72	60,50	45,28	63,06	43,16	60,92	17,78	4,04	470	930
600x250	53,16	73,77	56,34	76,96	53,69	74,29	20,61	4,51	570	1150
700x250	58,02	82,82	61,49	86,29	58,58	83,39	24,82	5,28	665	1330
800x250	63,02	92,00	66,79	95,78	63,64	92,62	28,99	5,61	765	1510
900x250	71,23	103,19	75,50	107,47	71,94	103,90	31,96	6,05	860	1730
1000x250	79,60	114,57	84,38	119,34	80,40	115,36	34,97	6,64	930	1900
300x300	36,61	49,52	38,82	51,71	36,97	49,88	12,90	3,63	288	670
400x300	42,48	58,34	45,02	60,90	42,91	58,77	15,88	3,96	455	900
500x300	48,72	67,92	51,65	70,84	49,21	68,40	19,20	4,23	570	1125
600x300	61,00	83,19	64,68	86,85	61,61	83,79	22,19	4,72	685	1350
700x300	66,70	93,37	70,69	97,39	67,35	94,03	26,69	5,43	800	1600
800x300	72,52	103,71	76,86	108,06	73,25	104,44	31,19	5,82	918	1850
900x300	82,18	116,63	87,10	121,57	82,99	117,47	34,47	6,24	985	2100
1000x300	92,01	129,74	97,54	135,26	92,94	130,66	37,72	6,83	1105	2300

	H	75	100	125	150	200	250	300
A90/MISS	M9016	53,94	57,24	70,67	72,42	88,30	106,71	122,95
A90/MISS	R9010S / R9016S	57,17	60,65	74,92	76,76	93,59	113,11	130,32
A90/MISS	AA	54,48	57,79	71,37	73,14	89,19	107,77	124,18

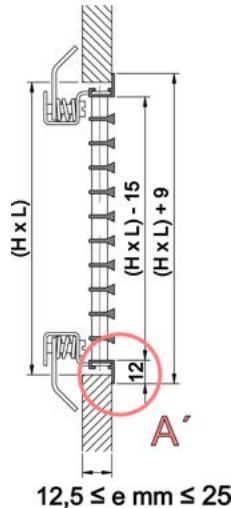
L x H	MISS-DD M9016	MISS-DD +SP M9016	MISS-DD R9010S R9016S	MISS-DD +SP R9010S R9016S	MISS-DD AA	MISS-DD+SP AA	SP	CSS	Lwa1< 25 dB(A)	Lwa1< 40 dB(A)
mm	eur	eur	eur	eur	eur	eur	eur	eur	m³/h	m³/h
200x75	21,83	29,04	23,14	30,34	22,05	29,25	7,20	2,53	44	108
250x75	23,28	31,47	24,68	32,87	23,51	31,70	8,19	2,76	50	114
300x75	24,85	34,51	26,33	36,00	25,09	34,77	9,67	2,91	65	131
400x75	28,57	40,73	30,29	42,45	28,86	41,02	12,15	3,22	85	195
500x75	31,82	46,41	33,73	48,32	32,12	46,72	14,59	3,51	110	239
600x75	38,59	55,37	40,90	57,70	38,97	55,76	16,80	3,98	135	289
700x75	42,93	63,26	45,49	65,83	43,35	63,69	20,34	4,74	155	316
800x75	47,44	71,31	50,29	74,16	47,91	71,77	23,87	5,06	180	379
900x75	52,21	78,53	55,35	81,66	52,74	79,05	26,31	5,50	205	408
1000x75	57,20	85,92	60,62	89,35	57,76	86,48	28,73	6,10	230	455
200x100	23,51	30,71	24,93	32,12	23,74	30,94	7,20	2,59	58	143
250x100	25,39	33,58	26,90	35,11	25,65	33,84	8,19	2,80	72	174
300x100	27,98	37,64	29,65	39,33	28,25	37,93	9,67	2,96	95	185
400x100	32,42	44,56	34,37	46,50	32,75	44,90	12,15	3,27	120	245
500x100	36,35	50,96	38,56	53,15	36,72	51,31	14,59	3,55	160	315
600x100	44,08	60,87	46,72	63,53	44,51	61,32	16,80	4,04	195	385
700x100	49,21	70,89	52,15	73,86	49,70	71,39	21,71	4,78	228	450
800x100	54,58	78,45	57,84	81,71	55,12	78,99	23,87	5,15	260	515
900x100	60,25	86,72	63,88	90,34	60,86	87,32	26,47	5,55	300	590
1000x100	66,13	94,86	70,09	98,82	66,79	95,51	28,73	6,19	325	650
200x125	25,46	33,34	27,00	34,86	25,72	33,59	7,87	2,74	85	173
250x125	27,73	36,81	29,40	38,47	28,00	37,07	9,09	2,88	110	215
300x125	30,62	41,22	32,45	43,05	30,92	41,52	10,60	3,08	140	280
400x125	35,77	48,76	37,93	50,91	36,14	49,12	13,00	2,33	180	370
500x125	40,32	55,97	42,73	58,38	40,73	56,35	15,63	3,66	235	470
600x125	49,44	67,41	52,40	70,37	49,94	67,91	17,98	4,13	285	580
700x125	55,28	77,07	58,61	80,39	55,84	77,62	21,78	4,87	340	670
800x125	61,34	86,91	65,03	90,58	61,94	87,51	25,57	5,23	390	770
900x125	68,06	96,17	72,15	100,26	68,74	96,84	28,11	5,66	435	875
1000x125	74,97	105,61	79,48	110,11	75,72	106,35	30,64	6,27	445	875
200x150	27,78	35,65	29,45	37,31	28,05	35,93	7,87	2,76	100	207
250x150	30,35	39,43	32,17	41,27	30,66	39,74	9,09	2,91	130	260
300x150	33,64	44,24	35,66	46,25	33,99	44,58	10,60	3,10	165	330
400x150	39,42	52,42	41,80	54,79	39,82	52,82	13,00	3,42	215	430
500x150	44,76	60,40	47,45	63,08	45,21	60,85	15,63	3,72	275	540
600x150	54,99	72,97	58,29	76,28	55,54	73,52	17,98	4,17	330	660
700x150	61,52	84,64	65,20	88,33	62,14	85,26	23,13	4,90	385	785
800x150	68,24	93,82	72,34	97,91	68,92	94,49	25,57	5,26	445	900
900x150	75,94	103,83	80,50	108,39	76,70	104,59	27,88	5,71	500	1000
1000x150	83,83	114,46	88,87	119,48	84,67	115,30	30,64	6,29	560	1125
200x200	32,10	40,78	34,03	42,70	32,43	41,10	8,68	2,88	135	270
250x200	35,34	45,25	37,48	47,39	35,70	45,61	9,89	3,08	180	360
300x200	39,63	50,96	42,00	53,34	40,03	51,36	11,34	3,24	225	445
400x200	46,77	60,61	49,57	63,41	47,22	61,09	13,84	3,55	295	590
500x200	53,48	70,17	56,71	73,40	54,04	70,71	16,69	3,87	375	750
600x200	66,02	85,33	69,99	89,31	66,70	86,01	19,32	4,32	455	900
700x200	73,95	98,64	78,39	103,08	74,69	99,37	24,68	5,04	530	1050
800x200	82,03	109,31	86,95	114,23	82,85	110,13	27,27	5,41	605	1200
900x200	91,81	121,57	97,32	127,08	92,72	122,49	29,77	5,88	680	1350
1000x200	101,70	134,49	107,80	140,60	102,72	135,51	32,78	6,44	765	1530
250x250	41,06	51,89	43,52	54,35	41,47	52,30	10,83	3,24	215	450
300x250	45,83	57,80	48,59	60,57	46,30	58,27	11,98	3,44	280	555
400x250	54,20	68,96	57,45	72,22	54,76	69,53	14,76	3,77	375	755
500x250	63,28	81,05	67,09	84,85	63,91	81,68	17,78	4,04	470	930
600x250	78,29	98,91	82,99	103,61	79,08	99,70	20,61	4,51	570	1150
700x250	87,24	112,04	92,48	117,27	88,11	112,91	24,82	5,28	665	1330
800x250	96,39	125,38	102,17	131,17	97,35	126,34	28,99	5,61	765	1510
900x250	108,47	140,43	114,98	146,94	109,55	141,52	31,96	6,05	860	1730
1000x250	120,73	155,70	127,99	162,94	121,95	156,91	34,97	6,64	930	1900
300x300	51,71	64,62	54,83	67,72	52,23	65,14	12,90	3,63	288	670
400x300	61,73	77,61	65,45	81,32	62,35	78,23	15,88	3,96	455	900
500x300	72,15	91,35	76,47	95,67	72,88	92,08	19,20	4,23	570	1125
600x300	89,73	111,91	95,12	117,29	90,63	112,81	22,19	4,72	685	1350
700x300	100,04	126,73	106,05	132,74	101,04	127,75	26,69	5,43	800	1600
800x300	110,55	141,75	117,18	148,37	111,64	142,83	31,19	5,82	918	1850
900x300	124,67	159,14	132,16	166,60	125,92	160,38	34,47	6,24	985	2100
1000x300	139,01	176,73	147,35	185,07	140,40	178,12	37,72	6,83	1105	2300

(*)	eur
(O)	3,23

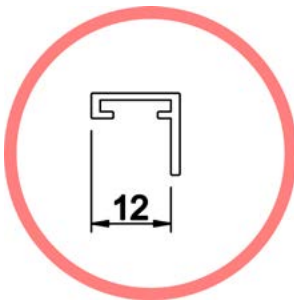
Linear grilles for laminated plaster board mounting

Technical data

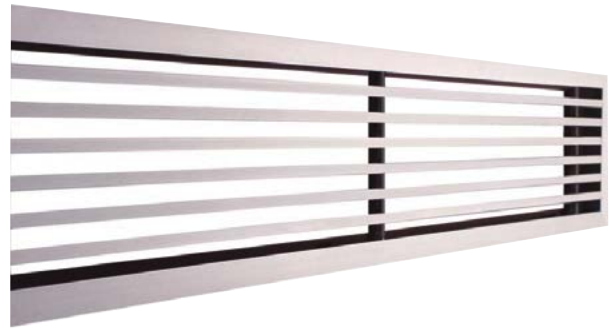
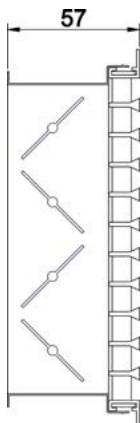
LMT-MINI (O)



DETAIL A' (LMT-MINI frame)



LMT-MINI + SP



Description

Linear grilles in aluminium for supply or air return, with fixed bars parallels to the largest side (L size). Reduced frame linear grilles at 12 mm which makes adaptable the integration.

LMT-MINI Grille with end borders and fixed bars at 0° . Suitable for lengths ≤ 2 m.

LMT-MINI-15 Grille with bars at 15° .

...-ARI Grille with an end border on the left side, required to form lines > 2 m.

...-ARD Grille with an end border on the right side, required to form lines > 2 m.

...-INT Grille without end borders, required to form lines > 4 m.

Accessories

SP Opposed blades volume damper from zinc plated steel, in black colour.

Fixing

(O) Hidden screw.

Finishes

AA Matt silver anodised.

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

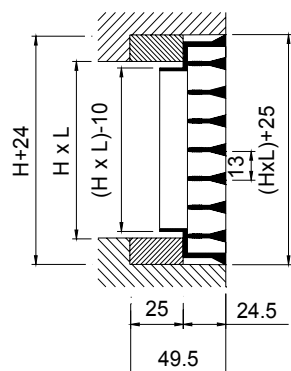
Supply and mounting of reduced frame linear grille at 12 mm with fixed bars at 0° parallels to the largest side series **LMT-MINI+SP (O) AA dim. LxH**, constructed from aluminium and anodised in matt silver **AA** with opposed blades volume damper from electro-zinc steel in black colour **SP**, fixing hidden screws **(O)** Manufacturer **MADEL**.

L x H	LMT-MINI R9016B / RAL9016S R9010S	LMT-MINI+SP R9016B / RAL9016S R9010S	LMT-MINI AA	LMT-MINI+SP AA	SP	Lwa1< 25 dB(A)	Lwa1< 40 dB(A)
mm	eur	eur	eur	eur	eur	m³/h	m³/h
200x75	18,82	26,04	18,99	26,18	7,20	44	108
250x75	20,61	28,80	20,79	28,98	8,19	50	114
300x75	21,15	30,82	21,33	30,99	9,67	65	131
400x75	23,20	35,33	23,41	35,55	12,15	85	195
500x75	27,32	41,90	27,54	42,15	14,59	110	239
600x75	30,45	47,25	30,72	47,53	16,80	135	289
700x75	33,29	53,62	33,59	53,93	20,34	155	316
800x75	36,09	59,95	36,43	60,27	23,87	180	379
900x75	39,71	66,01	40,07	66,38	26,31	205	408
1000x75	43,33	72,05	43,73	72,46	28,73	230	455
200x100	20,80	28,00	20,98	28,18	7,20	58	143
250x100	22,13	30,31	22,31	30,51	8,19	72	174
300x100	23,66	33,33	23,87	33,53	9,67	95	185
400x100	26,16	38,31	26,38	38,52	12,15	120	245
500x100	28,76	43,35	29,01	43,60	14,59	160	315
600x100	34,75	51,53	35,06	51,85	16,80	195	385
700x100	38,02	59,73	38,38	60,09	21,71	228	450
800x100	41,32	65,19	41,72	65,57	23,87	260	515
900x100	45,86	72,32	46,29	72,74	26,47	300	590
1000x100	50,40	79,12	50,88	79,58	28,73	325	650
200x125	22,55	30,42	22,76	30,62	7,87	85	173
250x125	24,16	33,24	24,36	33,45	9,09	110	215
300x125	25,90	36,49	26,12	36,72	10,60	140	280
400x125	28,86	41,85	29,13	42,11	13,00	180	370
500x125	34,76	50,39	35,07	50,71	15,63	235	470
600x125	39,13	57,11	39,49	57,48	17,98	285	580
700x125	42,96	64,74	43,35	65,14	21,78	340	670
800x125	46,72	72,28	47,16	72,73	25,57	390	770
900x125	52,12	80,22	52,59	80,70	28,11	435	875
1000x125	57,46	88,10	58,02	88,64	30,64	445	875
200x150	24,67	32,54	24,90	32,76	7,87	100	207
250x150	26,49	35,57	26,72	35,80	9,09	130	260
300x150	28,48	39,08	28,74	39,34	10,60	165	330
400x150	31,93	44,92	32,22	45,20	13,00	215	430
500x150	35,54	51,17	35,85	51,50	15,63	275	540
600x150	43,71	61,67	44,11	62,08	17,98	330	660
700x150	47,99	71,11	48,44	71,57	23,13	385	785
800x150	52,26	77,83	52,76	78,33	25,57	445	900
900x150	58,48	86,36	59,04	86,93	27,88	500	1000
1000x150	64,70	95,31	65,31	95,94	30,64	560	1125
200x200	28,52	37,20	28,77	37,44	8,68	135	270
250x200	30,84	40,74	31,11	41,02	9,89	180	360
300x200	33,63	44,97	33,92	45,26	11,34	225	445
400x200	38,03	51,89	38,39	52,23	13,84	295	590
500x200	42,60	59,29	43,00	59,70	16,69	375	750
600x200	52,81	72,12	53,30	72,62	19,32	455	900
700x200	58,07	82,75	58,62	83,31	24,68	530	1050
800x200	63,35	90,63	63,96	91,24	27,27	605	1200
900x200	71,23	100,99	71,90	101,67	29,77	680	1350
1000x200	79,11	111,89	79,88	112,65	32,78	765	1530
250x250	35,59	46,42	35,93	46,75	10,83	215	450
300x250	38,60	50,56	38,95	50,92	11,98	280	555
400x250	44,27	59,04	44,68	59,45	14,76	375	755
500x250	50,83	68,61	51,30	69,07	17,78	470	930
600x250	63,21	83,82	63,81	84,42	20,61	570	1150
700x250	69,07	93,89	69,73	94,54	24,82	665	1330
800x250	74,96	103,95	75,68	104,66	28,99	765	1510
900x250	84,85	116,81	85,67	117,63	31,96	860	1730
1000x250	94,74	129,71	95,66	130,64	34,97	930	1900
300x300	43,71	56,61	44,11	57,01	12,90	288	670
400x300	50,53	66,41	51,00	66,88	15,88	455	900
500x300	58,07	77,27	58,62	77,82	19,20	570	1125
600x300	72,62	94,79	73,30	95,49	22,19	685	1350
700x300	79,50	106,18	80,26	106,95	26,69	800	1600
800x300	86,36	117,55	87,21	118,39	31,19	918	1850
900x300	98,02	132,46	98,94	133,40	34,47	985	2100
1000x300	109,66	147,38	110,72	148,44	37,72	1105	2300

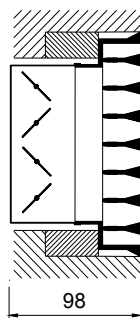
Linear grilles for leveled mounting in masonry wall

Technical data

LMT-SW+CW



LMT-SW+SP+CW



Description

Linear grilles in aluminium for supply or air return, with fixed bars parallels to the largest side (L size)

LMT-SW Linear grille with fixed bars at 0° for lengths ≤ 2 m, for levelled mounting on masonry wall.

LMT-SW-15 Grille with fixed bars at 15°.

...-ARI Grille with an end border on the left side, required to form lines > 2 m.

...-ARD Grille with an end border on the right side, required to form lines > 2 m.

...-INT Grille without end borders, required to form lines > 4 m.

Accessories

SP Opposed blades volume damper from zinc plated steel, in black colour.

CW Wooden mounting frame.

Fixing

1) LMT-SW are supplied with a special screws for fixing the grille to CW frame.

Finishes

AA Matt silver anodised.

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of linear grille for levelled mounting with fixed bars at 0° parallels to the largest side series **LMT-SW+CWAA dim.** **LxH**, constructed from aluminium and anodised in matt silver **AA**, fixing by screws and mounting frame **CW**. Manufacturer **MADEL**.

L x H	LMT-SW R9016B / RAL9016S R9010S	LMT-SW+SP R9016B / RAL9016S R9010S	LMT-SW AA	LMT-SW+SP AA	SP	CW	Lwa1 < 35 dB(A)	Lwa1 = 45 dB(A)
mm	eur	eur	eur	eur	eur	eur	m³/h	m³/h
200x75	28,02	35,22	26,43	33,64	7,20	43,73	45-75	110
250x75	31,21	39,40	29,45	37,64	8,19	43,73	50-90	125
300x75	32,45	42,12	30,62	40,28	9,67	43,73	65-115	160
400x75	36,71	48,85	34,62	46,78	12,15	43,73	85-150	215
500x75	41,13	55,73	38,80	53,40	14,59	46,79	110-190	270
600x75	50,81	67,62	47,94	64,74	16,80	46,79	135-240	340
800x75	60,76	84,62	57,32	81,19	23,87	49,86	180-315	450
1000x75	73,05	101,77	68,92	97,64	28,73	52,90	230-405	575
200x100	30,99	38,20	29,24	36,45	7,20	43,73	60-100	145
250x100	33,63	41,82	31,71	39,90	8,19	43,73	70-125	180
300x100	36,21	45,88	34,15	43,83	9,67	43,73	95-165	235
400x100	41,28	53,42	38,95	51,09	12,15	43,73	120-215	305
500x100	46,55	61,14	43,91	58,51	14,59	46,79	160-275	395
600x100	58,22	75,02	54,93	71,73	16,80	46,79	195-340	485
800x100	69,81	93,69	65,87	89,73	23,87	49,86	260-455	650
1000x100	84,51	113,24	79,73	108,45	28,73	52,90	325-565	810
200x125	33,91	41,79	31,99	39,86	7,87	43,73	70-130	180
250x125	36,97	46,06	34,88	43,97	9,09	43,73	90-165	240
300x125	40,35	50,94	38,07	48,66	10,60	43,73	110-210	290
400x125	45,90	58,90	43,31	56,29	13,00	46,79	140-255	365
500x125	51,96	67,60	49,02	64,67	15,63	46,79	200-355	505
600x125	65,96	83,94	62,24	80,21	17,98	46,79	240-430	615
800x125	79,13	104,70	74,65	100,22	25,57	49,86	320-570	815
1000x125	96,00	126,63	90,56	121,20	30,64	52,90	400-710	1010
200x150	36,67	44,54	34,59	42,47	7,87	43,73	100-175	250
250x150	40,17	49,26	37,90	46,99	9,09	43,73	130-225	325
300x150	43,52	54,12	41,06	51,66	10,60	43,73	165-290	415
400x150	50,29	63,28	47,44	60,43	13,00	46,79	215-380	540
500x150	57,17	72,81	53,94	69,58	15,63	46,79	275-480	685
600x150	78,78	96,76	74,32	92,30	17,98	46,79	330-580	830
800x150	88,00	113,57	83,03	108,59	25,57	49,86	445-780	1115
1000x150	107,61	138,24	101,52	132,16	30,64	52,90	560-985	1405
200x200	42,39	51,07	40,01	48,67	8,68	43,73	135-240	340
250x200	46,71	56,61	44,06	53,96	9,89	43,73	180-315	450
300x200	51,27	62,61	48,36	59,71	11,34	43,73	225-390	560
400x200	59,60	73,45	56,24	70,08	13,84	46,79	295-515	740
500x200	68,18	84,87	64,33	81,02	16,69	46,79	375-655	935
600x200	88,28	107,61	83,29	102,62	19,32	49,86	455-795	1135
800x200	106,50	133,76	100,46	127,74	27,27	49,86	605-1060	1510
1000x200	130,97	163,76	123,55	156,34	32,78	52,90	765-1335	1910
250x250	54,86	65,69	51,75	62,58	10,83	43,73	225-390	560
300x250	60,08	72,04	56,67	68,64	11,98	46,79	280-490	700
400x250	70,85	85,62	66,85	81,61	14,76	46,79	375-655	935
500x250	82,77	100,54	78,08	95,86	17,78	46,79	470-820	1170
600x250	107,78	128,39	101,68	122,28	20,61	49,86	570-995	1420
800x250	129,26	158,26	121,95	150,93	28,99	52,90	765-1335	1910
1000x250	159,96	194,93	150,90	185,87	34,97	52,90	960-1675	2395
300x300	67,65	80,55	63,82	76,73	12,90	46,79	340-590	845
400x300	80,25	96,12	75,70	91,57	15,88	46,79	455-795	1135
500x300	93,85	113,05	88,53	107,74	19,20	49,86	570-995	1420
600x300	123,42	145,61	116,44	138,62	22,19	49,86	685-1195	1710
800x300	148,16	179,35	139,77	170,96	31,19	52,90	920-1615	2305
1000x300	183,92	221,64	173,50	211,22	37,72	55,98	1160-2030	2900

Air return grilles

Designed for easy maintenance

MOD models to replace a false ceiling tile

Grilles with filter DMT-FY with easy open by hidden levers

Hinged removable core without tools KLIN models



INDEX

TRH transfer grilles

DMT fixed blades grilles

DMT-FY fixed blades grilles with filter

DMT-MOD modular fixed blades grilles

DMT-KLIN accessible fixed blades grilles

RMT egg-crate grilles

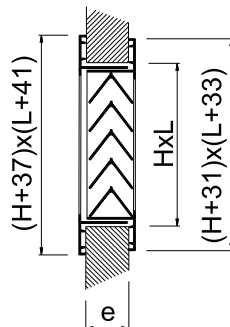
RMT-MOD modular egg-crate grilles

RMT-KLIN accessible egg-crate grilles

Transfer grilles

Technical data

TRH-A



Description

Grilles in aluminium with telescopic frame and "V" shaped blades for air transfer.

TRH-A Grille with blades parallels to the largest side to use on thickness 30-55 mm.

TRV-... Blades parallels to the shortest side.

...-B Grille to use on thickness 47-72 mm.

Fixing

(T) Visible screws.

Finishes

AA Matt silver anodised.

M9016 Pre-lacquered in white similar to RAL 9016 (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

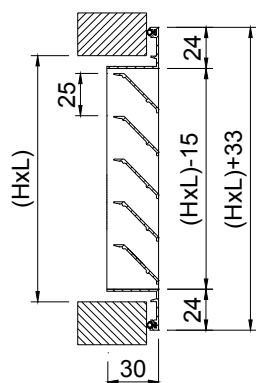
Supply and mounting of air transfer grille with telescopic frame and "V" shaped blades parallels to the largest side series **TRH-A (T) AA** dim. LxH, constructed from aluminium and anodised in matt silver **AA**, visible fixing by screws **(T)**. Manufacturer **MADEL**.

L x H mm	TRH-A M9016 eur	TRH-B M9016 eur	TRV-A M9016 eur	TRV-B M9016 eur	TRH-A AA eur	TRH-B AA eur	TRV-A AA eur	TRV-B AA eur	Q min/max m³/h	A free m²
200x100	21,66	22,77	25,90	27,74	21,87	22,99	26,14	28,01	15-25	0,005
260x100	24,89	26,14	30,97	33,15	25,13	26,41	31,28	33,49	20-30	0,007
300x100	27,54	28,91	35,03	37,53	27,83	29,19	35,38	37,90	20-35	0,008
400x100	33,24	34,89	42,31	45,27	33,58	35,25	42,73	45,73	30-50	0,011
500x100	38,62	40,51	50,10	53,71	39,00	40,91	50,60	54,23	40-70	0,015
600x100	44,79	47,04	57,91	62,03	45,25	47,51	58,48	62,65	50-80	0,018
200x160	26,35	27,70	27,25	29,24	26,62	27,96	27,53	29,53	30-50	0,011
260x160	30,20	31,69	31,93	34,19	30,50	32,00	32,24	34,53	40-65	0,014
300x160	33,50	35,21	36,17	38,72	33,84	35,56	36,53	39,11	45-75	0,017
400x160	40,49	42,53	44,16	47,30	40,89	42,95	44,62	47,79	60-105	0,023
500x160	47,08	49,47	52,33	56,04	47,55	49,96	52,84	56,60	80-130	0,029
600x160	53,70	56,36	60,49	64,77	54,22	56,94	61,10	65,43	90-150	0,036
200x200	31,04	32,60	31,04	33,23	31,35	32,91	31,35	33,57	40-65	0,014
260x200	35,54	37,31	36,27	38,85	35,90	37,69	36,64	39,23	50-85	0,019
300x200	39,47	41,48	41,02	43,87	39,87	41,89	41,42	44,29	60-105	0,023
400x200	47,77	50,11	50,37	53,94	48,24	50,61	50,89	54,48	85-140	0,031
500x200	55,62	58,40	59,75	63,97	56,17	58,98	60,34	64,61	105-175	0,039
600x200	63,51	66,72	69,10	74,05	64,14	67,37	69,79	74,80	125-210	0,047
300x300	51,25	53,82	51,25	54,89	51,75	54,36	51,75	55,44	100-165	0,037
400x300	62,24	65,33	63,71	68,30	62,86	65,99	64,35	68,97	135-225	0,050
500x300	72,65	76,30	75,66	81,02	73,39	77,06	76,41	81,84	175-290	0,064
600x300	83,11	87,23	87,61	93,80	83,94	88,10	88,48	94,73	210-345	0,077
400x400	76,71	80,55	76,71	82,16	77,48	81,36	77,48	82,98	190-320	0,070
500x400	89,68	94,19	91,20	97,69	90,57	95,12	92,12	98,67	240-400	0,089
600x400	102,64	107,80	105,69	113,16	103,67	108,89	106,74	114,30	290-490	0,107
500x500	106,72	112,05	106,72	114,31	107,78	113,18	107,78	115,46	310-515	0,114
600x500	122,19	128,37	122,06	130,67	123,41	129,65	123,27	131,97	370-620	0,137
600x600	141,82	148,90	141,82	151,87	143,23	150,38	143,23	153,40	470-780	0,173

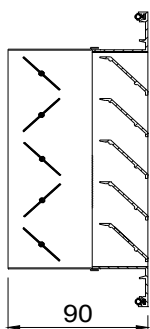
Fixed blades return grilles

Technical data

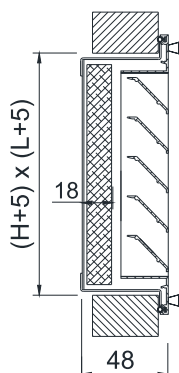
DMT-AR



DMT-AR+SP



DMT-AR+PFT



Description

Air return grilles with fixed blades at 45° constructed from aluminium.

DMT-AR Grille with blades parallels to the largest side (L size)

DMT-AR Grille with blades parallels to the shortest side (H size)

Accessories

SP Opposed blades volume damper from zinc plated steel in black colour.

PFT Filter box constructed from galvanised steel with filter K/8 class EN 779 G3. The opening size LxH must be increased by 5 mm.

MLL Galvanised mesh of 13x13 mm.

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

PLRO Connection plenum: see Accessories.

Fixing

(S) Clips. It requires mounting frame CM or plenum box PLRO.

(O) Hidden screw. It requires mounting frame CM or plenum PLRO (supplement *)

(T) Visible screws (supplement *)

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 anodised.

M9016 Pre-lacquered in white similar to RAL 9016 (85-95% gloss)

R9010S Painted in white RAL 9010 semi-matt (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of air return grille with fixed blades at 45° parallels to the largest side series **DMT-AR+SP+CM (S) M9016 dim. LxH**, constructed from aluminium paint in white M9016 with opposed blades volume damper from zinc plated steel in black colour **SP**, invisible fixing by clips **(S)** and mounting frame **CM**. Manufacturer **MADEL**.



L x H	DMT-AR M9016	DMT-AR R9010S	DMT-AR AA	SP	PFT	MLL	CM	Lwa1 < 35 dB(A)	Lwa1 < 45 dB(A)
mm	eur	eur	eur	eur	eur	eur	eur	m³/h	m³/h
200x100	11,54	11,78	11,65	7,20	12,70	11,01	2,59	55-120	160
250x100	13,21	13,47	13,34	8,19	12,97	11,24	2,79	70-140	190
300x100	14,07	14,35	14,22	9,67	13,18	11,46	2,96	80-185	230
350x100	15,84	16,14	15,98	11,04	13,44	11,67	3,10	90-200	260
400x100	16,98	17,33	17,16	12,15	13,72	11,91	3,29	110-230	310
450x100	18,27	18,62	18,43	13,46	13,96	12,16	3,44	125-260	350
500x100	19,57	19,96	19,76	14,59	14,27	12,36	3,55	140-300	390
600x100	24,64	25,13	24,89	16,80	14,73	12,81	4,04	165-350	460
700x100	27,72	28,25	27,99	21,71	15,38	13,33	4,78	195-400	540
800x100	31,07	31,69	31,38	23,87	15,89	13,76	5,15	225-465	620
200x150	14,10	14,40	14,27	7,87	13,20	11,46	2,75	85-175	230
250x150	15,69	15,99	15,85	9,09	13,57	11,76	2,91	110-220	300
300x150	16,75	17,09	16,91	10,60	13,95	12,10	3,10	130-270	360
350x150	19,01	19,38	19,20	11,78	14,29	12,39	3,22	150-315	420
400x150	19,64	20,03	19,82	13,00	14,64	12,69	3,42	170-360	475
450x150	22,02	22,46	22,23	14,20	15,02	13,06	3,55	195-410	550
500x150	22,81	23,26	23,03	15,63	15,38	13,33	3,72	225-455	605
600x150	28,62	29,20	28,92	17,98	16,13	13,96	4,17	260-545	730
700x150	33,57	34,24	33,90	23,13	16,78	14,52	4,89	300-640	850
800x150	37,73	38,49	38,11	25,57	17,53	15,22	5,26	350-735	980
200x200	16,75	17,09	16,91	8,68	13,72	11,91	2,88	115-240	320
250x200	18,67	19,05	18,85	9,89	14,20	12,31	3,08	145-300	405
300x200	19,96	20,36	20,15	11,34	14,64	12,69	3,26	175-365	490
350x200	22,81	23,26	23,03	12,58	15,14	13,13	3,39	210-430	580
400x200	23,66	24,15	23,90	13,84	15,63	13,53	3,55	235-500	660
450x200	26,58	27,10	26,83	15,17	16,03	13,93	3,74	270-560	750
500x200	27,70	28,23	27,96	16,69	16,46	14,34	3,87	300-620	830
600x200	35,59	36,31	35,95	19,32	17,38	15,13	4,32	360-750	1010
700x200	40,77	41,58	41,17	24,68	18,27	15,82	5,04	425-880	1170
800x200	45,08	45,98	45,51	27,27	19,20	16,66	5,42	485-1005	1340
1000x200	56,35	57,48	56,93	32,75	23,99	20,80	6,44	595-1185	1585
250x250	21,34	21,77	21,56	10,83	14,75	12,82	3,26	185-385	510
300x250	22,86	23,29	23,09	11,98	15,38	13,33	3,44	225-465	620
400x250	28,26	28,82	28,54	14,76	16,46	14,34	3,77	300-625	835
500x250	32,48	33,13	32,82	17,78	17,64	15,28	4,04	380-790	1050
600x250	39,86	40,65	40,26	20,57	18,72	16,25	4,51	460-950	1270
800x250	52,42	53,46	52,93	28,99	20,81	18,05	5,61	620-1275	1700
1000x250	65,52	66,84	66,18	34,97	26,01	22,60	6,62	760-1500	2015
300x300	27,27	27,83	27,54	12,90	16,13	13,96	3,62	270-565	750
400x300	32,37	33,02	32,70	15,88	17,38	15,13	3,96	360-760	1010
500x300	38,72	39,48	39,11	19,20	18,72	16,25	4,23	460-960	1275
600x300	47,74	48,70	48,23	22,19	20,03	17,39	4,72	560-1160	1540
800x300	60,57	61,78	61,16	31,19	22,49	19,51	5,81	750-1550	2065
1000x300	75,70	77,21	76,45	37,72	28,14	24,40	6,83	965-1935	2575
350x350	33,36	34,04	33,70	15,42	17,55	15,25	3,91	375-780	1035
400x350	36,55	37,29	36,92	16,98	17,93	15,63	4,07	448-896	1195
500x350	43,07	43,95	43,51	20,61	19,46	16,92	4,34	561-1123	1497
600x350	53,18	54,22	53,71	23,86	21,01	18,26	4,84	675-1350	1800
800x350	67,37	68,71	68,05	33,40	23,64	20,53	5,93	907-1814	2419
1000x350	84,22	85,90	85,06	41,78	29,56	25,66	6,96	1135-2275	3035
400x400	40,87	41,69	41,28	18,10	19,23	16,71	4,26	495-1025	1370
500x400	48,06	49,02	48,54	21,99	21,02	18,26	4,53	625-1290	1725
600x400	59,05	60,23	59,63	25,55	22,77	19,76	5,01	755-1560	2080
800x400	75,72	77,23	76,49	35,63	25,80	22,41	6,10	1010-2090	2790
1000x400	94,66	96,54	95,61	44,56	32,26	28,02	7,16	1295-2595	3455
500x500	58,45	59,61	59,03	24,83	23,29	20,20	4,84	785-1625	2170
600x500	73,27	74,72	74,01	28,80	24,91	21,59	5,29	982-1965	2620
800x500	91,08	92,89	91,98	43,21	28,50	24,70	6,39	1317-2630	3513
1000x500	113,88	116,15	115,01	54,01	35,64	30,93	7,42	1645-3295	4395
600x600	80,67	82,27	81,48	32,12	28,07	24,34	5,75	1145-2370	3160
800x600	105,02	107,12	106,08	50,23	32,37	28,14	6,87	1580-3180	4240
1000x600	131,28	133,90	132,60	62,79	40,49	35,20	7,90	1985-3975	5300

(*)	eur
(O)	3,23
(T)	1,20

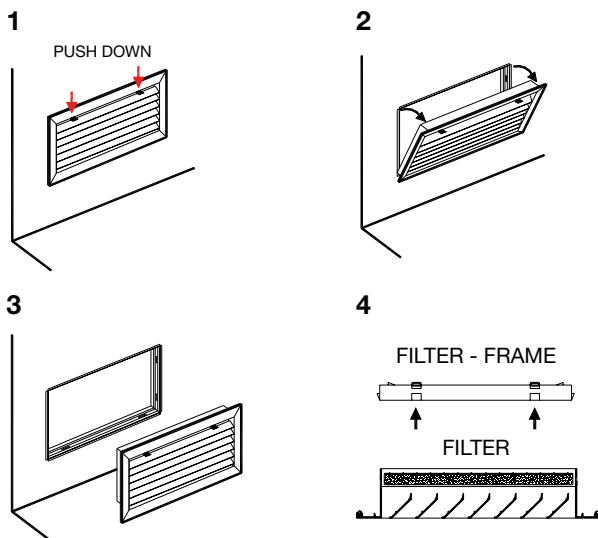
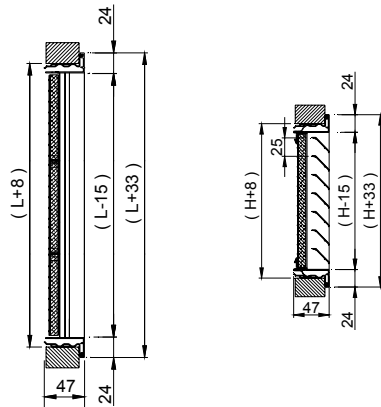
L x H	EMT-AR M9016	EMT-AR R9010S	EMT-AR AA	SP	PFT	MLL	CM	Lwa1 < 35 dB(A)	Lwa1 < 45 dB(A)
mm	eur	eur	eur	eur	eur	eur	eur	m³/h	m³/h
200x100	13,00	13,25	13,12	7,20	12,70	11,01	2,59	55-120	160
250x100	14,46	14,75	14,60	8,19	12,97	11,24	2,79	70-140	190
300x100	16,66	16,98	16,84	9,67	13,18	11,46	2,96	80-185	230
350x100	18,21	18,58	18,40	11,04	13,44	11,67	3,10	90-200	260
400x100	20,21	20,61	20,43	12,15	13,72	11,91	3,29	110-230	310
450x100	22,37	22,81	22,58	13,46	13,96	12,16	3,44	125-260	350
500x100	24,63	25,11	24,87	14,59	14,27	12,36	3,55	140-300	390
600x100	27,87	28,43	28,16	16,80	14,73	12,81	4,04	165-350	460
700x100	32,50	33,14	32,83	21,71	15,38	13,33	4,78	195-400	540
800x100	36,47	37,20	36,83	23,87	15,89	13,76	5,15	225-465	620
200x150	14,87	15,17	15,02	7,87	13,20	11,46	2,75	85-175	230
250x150	16,77	17,11	16,93	9,09	13,57	11,76	2,91	110-220	300
300x150	19,28	19,66	19,46	10,60	13,95	12,10	3,10	130-270	360
350x150	21,15	21,58	21,36	11,78	14,29	12,39	3,22	150-315	420
400x150	23,49	23,96	23,71	13,00	14,64	12,69	3,42	170-360	475
450x150	25,99	26,52	26,26	14,20	15,02	13,06	3,55	195-410	550
500x150	28,62	29,20	28,92	15,63	15,38	13,33	3,72	225-455	605
600x150	32,75	33,39	33,08	17,98	16,13	13,96	4,17	260-545	730
700x150	38,00	38,76	38,38	23,13	16,78	14,52	4,89	300-640	850
800x150	42,86	43,72	43,28	25,57	17,53	15,22	5,26	350-735	980
200x200	16,75	17,09	16,91	8,68	13,72	11,91	2,88	115-240	320
250x200	19,09	19,46	19,29	9,89	14,20	12,31	3,08	145-300	405
300x200	21,90	22,33	22,13	11,34	14,64	12,69	3,26	175-365	490
350x200	24,29	24,77	24,54	12,58	15,14	13,13	3,39	210-430	580
400x200	27,00	27,53	27,25	13,84	15,63	13,53	3,55	235-500	660
450x200	29,87	30,46	30,17	15,17	16,03	13,93	3,74	270-560	750
500x200	33,03	33,68	33,35	16,69	16,46	14,34	3,87	300-620	830
600x200	37,57	38,32	37,95	19,32	17,38	15,13	4,32	360-750	1010
700x200	44,29	45,18	44,74	24,68	18,27	15,82	5,04	425-880	1170
800x200	49,19	50,17	49,68	27,27	19,20	16,66	5,42	485-1005	1340
1000x200	61,47	62,69	62,08	32,75	23,99	20,80	6,44	595-1185	1585
250x250	21,34	21,77	21,56	10,83	14,75	12,82	3,26	185-385	510
300x250	24,62	25,10	24,86	11,98	15,38	13,33	3,44	225-465	620
400x250	30,26	30,86	30,56	14,76	16,46	14,34	3,77	300-625	835
500x250	37,72	38,48	38,10	17,78	17,64	15,28	4,04	380-790	1050
600x250	43,03	43,90	43,47	20,57	18,72	16,25	4,51	460-950	1270
800x250	56,05	57,17	56,61	28,99	20,81	18,05	5,61	620-1275	1700
1000x250	70,06	71,47	70,76	34,97	26,01	22,60	6,62	760-1500	2015
300x300	27,27	27,83	27,54	12,90	16,13	13,96	3,62	270-565	750
400x300	33,73	34,39	34,06	15,88	17,38	15,13	3,96	360-760	1010
500x300	41,95	42,80	42,36	19,20	18,72	16,25	4,23	460-960	1275
600x300	48,02	48,98	48,50	22,19	20,03	17,39	4,72	560-1160	1540
800x300	62,48	63,71	63,09	31,19	22,49	19,51	5,81	750-1550	2065
1000x300	78,12	79,67	78,90	37,72	28,14	24,40	6,83	965-1935	2575
350x350	33,36	34,04	33,70	15,42	17,55	15,25	3,91	375-780	1035
400x350	37,61	38,36	37,98	16,98	17,93	15,63	4,07	448-896	1195
500x350	46,08	47,03	46,55	20,61	19,46	16,92	4,34	561-1123	1497
600x350	53,03	54,10	53,57	23,86	21,01	18,26	4,84	675-1350	1800
800x350	68,85	70,24	69,55	33,40	23,64	20,53	5,93	907-1814	2419
1000x350	86,06	87,76	86,92	41,78	29,56	25,66	6,96	1135-2275	3035
400x400	40,87	41,69	41,28	18,10	19,23	16,71	4,26	495-1025	1370
500x400	50,29	51,29	50,79	21,99	21,02	18,26	4,53	625-1290	1725
600x400	57,97	59,12	58,55	25,55	22,77	19,76	5,01	755-1560	2080
800x400	76,59	78,12	77,35	35,63	25,80	22,41	6,10	1010-2090	2790
1000x400	95,74	97,66	96,69	44,56	32,26	28,02	7,16	1295-2595	3455
500x500	58,45	59,61	59,03	24,83	23,29	20,20	4,84	785-1625	2170
600x500	69,92	71,32	70,61	28,80	24,91	21,59	5,29	982-1965	2620
800x500	89,62	91,41	90,51	43,21	28,50	24,70	6,39	1317-2630	3513
1000x500	111,99	114,26	113,12	54,01	35,64	30,93	7,42	1645-3295	4395
600x600	80,67	82,27	81,48	32,12	28,07	24,34	5,75	1145-2370	3160
800x600	123,29	125,76	124,53	50,23	32,37	28,14	6,87	1580-3180	4240
1000x600	154,12	157,22	155,66	62,79	40,49	35,20	7,90	1985-3975	5300

(*)	eur
(O)	3,23
(T)	1,20

Fixed blades return grilles with filter

Technical data

DMT-FY



Description

Air return grilles with fixed blades at 45°, constructed from aluminium, with incorporated filter (F1 fire rated according to the norm DIN 53438) By pressing on two semi-hidden levers, the grille can be easily removed from its mounting frame or plenum box, for washing or filter replacement in compliance with the regulations required for maintenance of HVAC installations. The FY system means so much an economy of time in installation like in the later maintenances, as well as an aesthetic evolution.

DMT-FY Grille with blades fixed at 45°, parallels to the longer side (size L) with filter G3 class according to the norm EN 779.

EMT-FY Grille with blades fixed at 45°, parallels to the shorter side (size H) with filter G3 class according to the norm EN 779.

Accessories

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

PLRO Connection plenum: see Accessories.

Fixing

(S) Clips. For wall mounting. It requires CM mounting frame or PLRO plenum box.

(O) Hidden screw. For ceiling mounting. It requires mounting frame CM or plenum PLRO (supplement *)

Finishes

AA Matt silver anodised.

M9016 Pre-lacquered in white similar to RAL 9016 (85-95% gloss)

R9010S Pre-lacquered in white RAL 9010 semi-matt (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of air return grille with fixed blades at 45° with filter G3 class included, with hinged removable core by pressing on two semi-hidden levers, series **DMT-FY+CM (S) M9016 dim. LxH**, constructed from aluminium paint in white M9016, invisible fixing by clips **(S)** and mounting frame **CM**. Manufacturer **MADEL**.



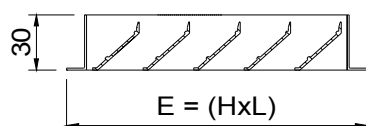
L x H mm	DMT-FY M9016 eur	DMT-FY R9010S eur	DMT-FY AA eur	EMT-FY M9016 eur	EMT-FY R9010S eur	EMT-FY AA eur	CM eur	Lwa1 < 35 dB(A) m³/h	Lwa1 < 45 dB(A) m³/h
200x100	23,47	23,93	23,69	24,93	25,41	25,15	2,59	60-105	148
250x100	25,37	25,88	25,63	26,62	27,16	26,89	2,79	70-122	174
300x100	26,43	26,97	26,71	29,02	29,60	29,34	2,96	85-151	214
350x100	28,46	29,04	28,75	30,84	31,48	31,17	3,10	100-169	241
400x100	29,87	30,46	30,17	33,10	33,74	33,44	3,29	115-175	258
450x100	31,30	31,92	31,61	35,40	36,10	35,76	3,44	130-200	270
500x100	32,92	33,59	33,26	37,99	38,75	38,37	3,55	145-230	310
600x100	38,47	39,23	38,86	41,70	42,53	42,13	4,04	175-270	380
700x100	42,12	42,96	42,55	46,90	47,85	47,39	4,78	195-310	420
800x100	45,99	46,89	46,44	51,39	52,40	51,90	5,15	225-360	490
200x150	26,50	27,02	26,76	27,27	27,79	27,51	2,75	85-151	214
250x150	28,42	29,00	28,72	29,50	30,11	29,81	2,91	115-175	258
300x150	29,81	30,41	30,12	32,34	32,98	32,68	3,10	135-210	280
350x150	32,38	33,03	32,71	34,51	35,22	34,87	3,22	160-260	370
400x150	33,38	34,06	33,73	37,24	38,00	37,62	3,42	180-300	410
450x150	36,10	36,82	36,47	40,08	40,88	40,50	3,55	210-350	480
500x150	37,23	37,97	37,61	43,04	43,91	43,49	3,72	225-360	490
600x150	43,76	44,65	44,21	47,89	48,84	48,37	4,17	270-430	580
700x150	49,26	50,26	49,75	53,69	54,78	54,23	4,89	310-550	660
800x150	54,19	55,28	54,75	59,32	60,51	59,91	5,26	360-630	770
200x200	29,61	30,21	29,91	29,61	32,23	29,91	2,88	120-200	250
250x200	31,98	32,63	32,31	32,42	35,26	32,75	3,08	150-250	360
300x200	33,70	34,37	34,04	35,62	38,76	35,97	3,26	180-300	410
350x200	36,95	37,70	37,32	38,46	41,84	38,85	3,39	210-350	480
400x200	38,31	39,08	38,69	41,64	45,31	42,05	3,55	240-400	520
450x200	41,60	42,46	42,03	44,93	48,88	45,38	3,74	280-440	590
500x200	43,08	43,96	43,52	48,49	52,76	48,97	3,87	310-480	650
600x200	51,94	52,95	52,45	53,87	58,62	54,43	4,32	380-590	800
700x200	57,84	59,02	58,44	61,39	66,80	62,01	5,04	430-690	900
800x200	63,08	64,34	63,71	67,21	73,12	67,89	5,42	500-780	1100
1000x200	80,34	81,48	80,91	85,45	86,67	86,08	6,44	650-950	1250
250x250	35,20	35,91	35,55	35,20	38,30	35,55	3,26	190-310	420
300x250	37,26	38,00	37,64	39,03	42,47	39,41	3,44	230-365	485
400x250	43,73	44,62	44,16	45,69	49,72	46,16	3,77	320-490	660
500x250	49,01	49,99	49,51	54,26	59,05	54,82	4,04	400-660	870
600x250	57,43	58,57	58,02	60,63	65,96	61,23	4,51	480-760	1080
800x250	71,93	73,38	72,65	75,57	82,22	76,33	5,61	630-950	1250
1000x250	91,53	92,85	92,20	96,07	97,49	96,77	6,62	800-1050	1450
300x300	42,39	43,23	42,82	42,39	46,11	42,82	3,62	280-440	590
400x300	48,66	49,63	49,14	50,02	54,44	50,52	3,96	380-590	800
500x300	56,29	57,42	56,87	59,55	64,80	60,15	4,23	480-760	1080
600x300	66,51	67,86	67,18	66,78	72,64	67,45	4,72	560-840	1160
800x300	81,66	83,29	82,47	83,61	90,95	84,43	5,81	750-1000	1350
1000x300	103,83	105,35	104,59	106,25	107,81	107,04	6,83	1000-1450	1900
350x350	49,85	50,84	50,34	49,85	54,23	50,34	3,91	400-660	870
400x350	53,39	54,45	53,92	54,44	59,20	54,98	4,07	460-720	930
500x350	61,36	62,60	61,97	64,33	69,99	64,97	4,34	560-840	1160
600x350	72,89	74,33	73,62	72,75	79,15	73,48	4,84	690-1000	1300
800x350	89,51	91,33	90,42	91,02	99,00	91,91	5,93	900-1600	1700
1000x350	113,79	115,46	114,63	115,62	117,32	116,48	6,96	1100-1650	2100
400x400	58,93	60,12	59,51	58,93	64,11	59,51	4,26	500-790	1100
500x400	67,76	69,12	68,43	70,00	76,17	70,70	4,53	640-920	1200
600x400	80,35	81,96	81,17	79,29	86,27	80,09	5,01	750-1000	1400
800x400	99,91	101,93	100,92	100,78	109,65	101,78	6,10	1050-1500	2000
1000x400	126,92	128,80	127,86	127,99	129,91	128,93	7,16	1300-1850	2300
500x500	80,27	81,88	81,06	80,27	87,33	81,06	4,84	800-1050	1450
600x500	96,63	98,55	97,58	93,21	101,41	94,15	5,29	1000-1450	1900
800x500	117,79	120,14	118,96	116,34	126,59	117,50	6,39	1300-1850	2300
1000x500	149,52	151,79	150,64	147,64	149,90	148,77	7,42	1600-2000	2700
600x600	106,95	109,07	108,02	106,95	116,35	108,02	5,75	1200-1750	2200
800x600	135,38	138,08	136,74	153,68	167,20	155,21	6,87	1600-2000	2700
1000x600	171,77	174,39	173,09	194,61	197,71	196,14	7,90	2000-2500	3200

(*)	eur
(O)	3,23

Modular fixed blades return grilles

Technical data

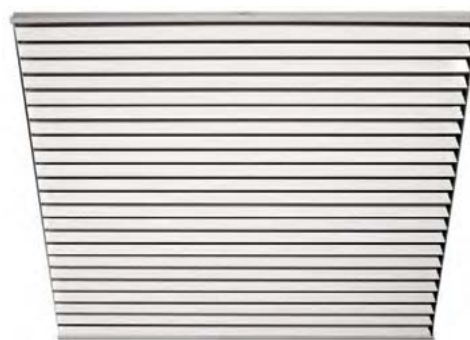
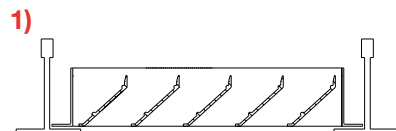
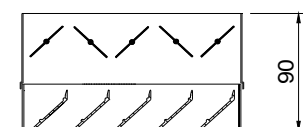
DMT-MOD



DMT-MOD-PFT



DMT-MOD+SP



Description

Air return grilles with fixed blades at 45° designed to replace a false ceiling plate. Constructed from aluminium.

DMT-MOD Grille with blades parallels to the largest side (L size)

EMT-MOD Grille with blades parallels to the shortest side (H size)

...-MOD-PFT Grille with filter type K/8 class EN 779 G3.

Accessories

SP Opposed blades volume damper from zinc plated steel in black colour.

Fixing

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

Finishes

AA Matt silver anodised.

M9016 Pre-lacquered in white similar to RAL 9016 (85-95% gloss)

R9010S Painted in white RAL 9010 semi-matt (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of air return grille with fixed blades at 45° parallels to the largest side series **DMT-AR-MOD+PFT M9016 dim. 595x595**, with filter box **PFT** and filter type K/8 efficiency EN 779 G3, designed to replace false ceiling tile, constructed from aluminium paint in white **M9016**. Manufacturer **MADEL**.



L x H	DMT-MOD M9016 / R9010S	DMT-MOD-PFT M9016 / R9010S	DMT-MOD AA	DMT-MOD-PFT AA	SP	Lwa1 < 35 dB(A)	Lwa1 < 45 dB(A)
mm	eur	eur	eur	eur	eur	m³/h	m³/h
595x295	47,74	67,76	48,23	68,24	22,19	560-1160	1540
1195x295	90,82	124,57	91,73	125,48	44,37	1120-2320	3080
595x595	80,67	108,69	81,48	109,49	32,12	1180-1975	2760
1195x595	157,53	213,63	159,09	215,19	64,29	2310-3960	5540
620x620	87,51	117,98	88,39	118,86	40,10	1280-2140	2995
670x670	102,08	137,61	103,10	138,63	46,78	1495-2500	3500

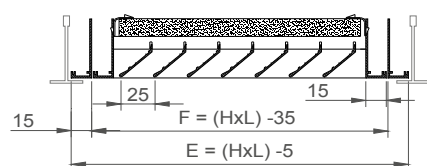
L x H	EMT-MOD M9016 / R9010S	EMT-MOD-PFT M9016 / R9010S	EMT-MOD AA	EMT-MOD-PFT AA	SP	Lwa1 < 35 dB(A)	Lwa1 < 45 dB(A)
mm	eur	eur	eur	eur	eur	m³/h	m³/h
595x295	48,02	68,03	48,50	68,52	22,19	560-1160	1540
1195x295	93,73	127,48	94,67	128,42	44,37	1120-2320	3080
1195x595	161,32	217,42	162,93	219,03	64,29	2310-3960	5540

Accessible fixed blades return grilles

klin
SYSTEM

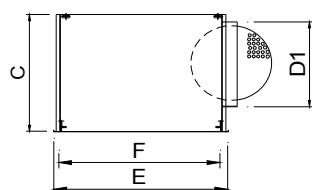
Technical data

DMT-KLIN / DMT-KLIN+PFT

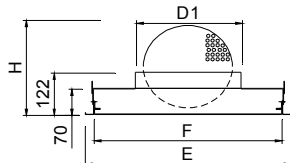


L x H	E	F
600 x 300	595 x 295	565 x 265
625 x 313	620 x 308	605 x 278
675 x 338	670 x 333	640 x 300
600 x 600	595 x 595	565 x 565
625 x 625	620 x 620	605 x 605
675 x 675	670 x 670	640 x 640

PLK/L/...-R



PLK...-R



H ÷ L (nominal)	E	F	D1	H	C
600 x 300	595 x 295	565 x 265	198	353	320
625 x 313	620 x 308	605 x 278	198	353	320
675 x 338	670 x 333	640 x 303	198	353	320
600 x 600	595 x 595	565 x 565	313	353	435
625 x 625	620 x 620	590 x 590	313	353	435
675 x 675	670 x 670	640 x 640	313	353	435



Description

Air return grilles with fixed blades at 45°, with hinged removable core without tools, by pressing on the invisible PUSH fasteners. KLIN system allows for the easy access to the grille that conforms with the regulations required for maintenance of HVAC installations. Constructed from aluminium.

DMT-KLIN Air return grille with fixed blades.

Accessories

PFT Filter type K/8 class EN 779 G3.

PLK Plenum box with an upper connection.

...-R Air flow damper in the spigot.

.../L/ Lateral connection.

.../AIS/ Thermal insulation inside.

Fixing

1) Support brackets to hang from the ceiling.

Finishes

M9016 Painted in white similar to RAL 9016 (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of air return grille with fixed blades with hinged removable core without tools, by pressing on the invisible PUSH fasteners series **DMT-KLIN+PFT M9016 dim. LxH**, with filter type K/8 efficiency EN 779 G3, constructed from aluminium paint in white **M9016**. Manufacturer **MADEL**.

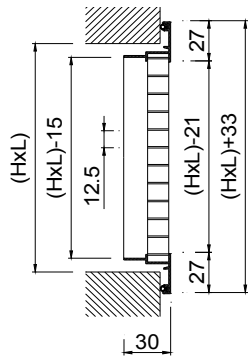
L x H mm	DMT-KLIN eur	DMT-KLIN+PLK eur	PFT eur	Lwa1 < 35 dB(A) m³/h	Lwa1 < 45 dB(A) m³/h
600x600	101,19	152,77	28,07	1100-2300	3145
625x625	107,87	160,31	30,43	1200-2500	3400
675x675	122,48	177,95	35,26	1400-2900	3900
600x300	68,28	112,12	20,03	560-1150	1500
625x313	72,23	117,97	21,77	620-1250	1700
675x338	80,98	127,96	25,39	700-1450	1900

L x H mm	PLK eur	PLK-R eur	PLK/L/ eur	PLK/L/-R eur	PLK /AIS/ eur	PLK-R /AIS/ eur	PLK/L/-AIS/ eur	PLK/L/-R/-AIS/ eur
600x600	51,58	71,34	70,12	87,32	69,63	89,39	94,66	114,42
625x625	52,44	72,25	71,35	88,60	70,80	90,61	96,32	116,11
675x675	55,47	72,68	74,71	91,92	74,89	92,09	100,87	118,08
600x300	43,85	61,02	63,35	80,54	59,18	76,37	85,52	102,69
625x313	45,74	62,94	65,25	82,30	61,74	78,95	88,10	105,32
675x338	46,97	64,17	67,15	84,21	63,43	80,63	90,65	107,83

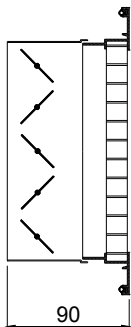
Egg-crate grilles

Technical data

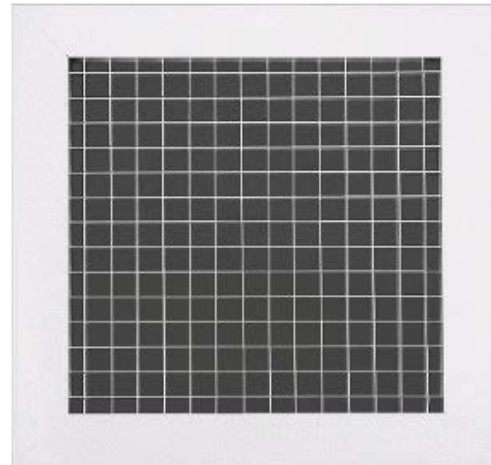
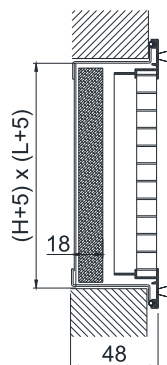
RMT-A



RMT-A+SP



RMT-A+PFT



Description

Egg-crate grilles for air return. Constructed from aluminium.

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

Accessories

SP Opposed blades volume damper from zinc plated steel in black colour.

PFT Filter box constructed from galvanised steel with filter K/8 class EN 779 G3. The opening dimension LxH must be increased by 5 mm.

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

PLRO Connection plenum : see Accessories.

Fixing

(S) Clips. It requires CM mounting frame or PLRO plenum box.

(O) Hidden screw. It requires CM mounting frame or PLRO plenum box (supplement *)

(T) Visible screws (supplement *)

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 anodised.

R9016S Painted in white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted in white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

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** with opposed blades volume damper from electro-zinc steel in black colour **SP**, invisible fixing by clips **(S)** and mounting frame **CM**. Manufacturer **MADEL**.



L x H	RMT-A AA	RMT-A R9016B / R9010S R9010S	SP	PFT	CM	Lwa1 < 35 dB(A)	Lwa1 < 45 dB(A)
mm	eur	eur	eur	eur	eur	m³/h	m³/h
200x100	12,10	13,54	7,20	12,70	2,59	70-140	185
250x100	14,09	15,79	8,19	12,97	2,79	90-185	245
300x100	15,68	17,55	9,67	13,18	2,96	115-225	300
350x100	17,22	19,29	11,04	13,44	3,10	135-270	360
400x100	19,11	21,41	12,15	13,72	3,29	150-300	400
450x100	20,71	23,19	13,46	13,96	3,44	175-345	460
500x100	22,26	24,94	14,59	14,27	3,55	195-390	520
600x100	25,81	28,92	16,80	14,73	4,04	230-465	620
700x100	29,46	33,01	21,71	15,38	4,78	275-550	735
800x100	32,69	36,59	23,87	15,89	5,15	305-610	820
200x150	14,46	16,20	7,87	13,20	2,75	120-240	315
250x150	16,93	18,99	9,09	13,57	2,91	150-300	405
300x150	18,89	21,17	10,60	13,95	3,10	185-365	490
350x150	20,88	23,39	11,78	14,29	3,22	215-430	575
400x150	23,18	25,95	13,00	14,64	3,42	250-495	660
450x150	25,27	28,27	14,20	15,02	3,55	280-560	750
500x150	27,21	30,48	15,63	15,38	3,72	315-625	835
600x150	31,75	35,57	17,98	16,13	4,17	380-755	1010
700x150	36,29	40,63	23,13	16,78	4,89	440-885	1180
800x150	40,26	45,10	25,57	17,53	5,26	505-1015	1355
200x200	16,91	18,94	8,68	13,72	2,88	160-325	430
250x200	19,81	22,20	9,89	14,20	3,08	205-410	545
300x200	22,19	24,85	11,34	14,64	3,26	255-510	675
350x200	24,60	27,56	12,58	15,14	3,39	295-595	790
400x200	27,36	30,65	13,84	15,63	3,55	345-690	920
450x200	29,78	33,35	15,17	16,03	3,74	390-780	1035
500x200	32,21	36,08	16,69	16,46	3,87	430-865	1150
600x200	37,70	42,23	19,32	17,38	4,32	525-1050	1395
700x200	43,05	48,23	24,68	18,27	5,04	600-1200	1600
800x200	47,94	53,70	27,27	19,20	5,42	690-1380	1840
1000x200	59,91	67,11	32,78	23,99	6,44	860-1730	2300
250x250	22,62	25,33	10,83	14,75	3,26	265-530	705
300x250	25,41	28,46	11,98	15,38	3,44	325-650	865
400x250	31,40	35,17	14,76	16,46	3,77	435-875	1165
500x250	37,16	41,59	17,78	17,64	4,04	555-1110	1485
600x250	43,64	48,87	20,57	18,72	4,51	670-1340	1785
800x250	55,63	62,30	28,99	20,81	5,61	870-1740	2315
1000x250	69,55	77,88	34,97	26,01	6,62	1110-2220	2970
300x300	24,13	27,01	12,90	16,13	3,62	395-790	1050
400x300	35,51	39,77	15,88	17,38	3,96	535-1070	1425
500x300	42,09	47,15	19,20	18,72	4,23	675-1350	1800
600x300	49,59	55,54	22,19	20,03	4,72	815-1630	2175
800x300	63,29	70,87	31,19	22,49	5,81	1080-2160	2880
1000x300	79,13	88,63	37,72	28,14	6,83	1350-2700	3600
350x350	35,66	39,93	15,42	17,55	3,91	545-1090	1455
400x350	39,55	44,31	16,98	17,93	4,07	632-1263	1684
500x350	47,04	52,66	20,61	19,46	4,34	793-1587	2117
600x350	55,47	62,13	23,86	21,01	4,84	961-1922	2563
800x350	70,94	79,44	33,40	23,64	5,93	1274-2548	3398
1000x350	88,64	99,27	41,78	29,56	6,96	1585-3175	4235
400x400	43,83	49,08	18,10	19,23	4,26	725-1450	1930
500x400	52,02	58,26	21,99	21,02	4,53	910-1825	2435
600x400	61,45	68,82	25,55	22,77	5,01	1105-2215	2950
800x400	78,59	88,02	35,63	25,80	6,10	1460-2925	3900
1000x400	98,29	110,06	44,56	32,26	7,16	1820-3650	4870
500x500	62,14	69,59	24,83	23,29	4,84	1155-2310	3080
600x500	73,27	82,06	28,80	24,91	5,29	1393-2786	3715
800x500	93,91	105,18	43,21	28,50	6,39	1868-3736	4982
1000x500	117,39	131,48	54,01	35,64	7,42	2310-4620	6150
600x600	85,50	95,75	32,12	28,07	5,75	1680-3370	4490
800x600	109,24	122,35	50,23	32,37	6,87	2225-4450	5930
1000x600	136,56	152,95	62,79	40,49	7,90	2775-5544	7380

(*)	eur
(O)	3,23
(T)	1,20

Modular egg-crate grilles

Technical data

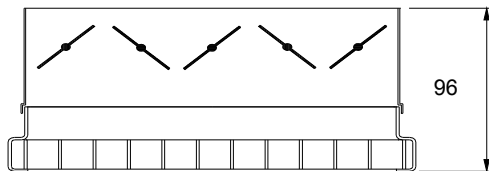
RMT-MOD



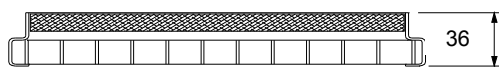
RMT-45-MOD



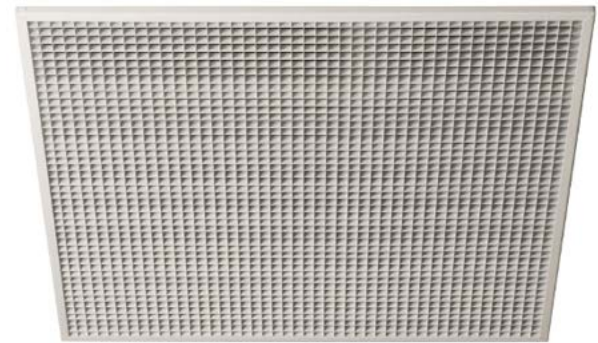
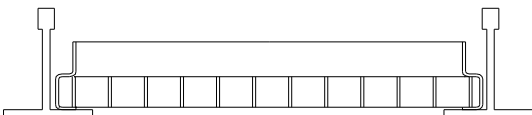
RMT-MOD+SP



RMT-MOD-PFT



1)



Description

Egg-crate grilles for air return specially designed to replace false ceiling tile. Constructed from aluminium and galvanised steel.

RMT-MOD Square netting grille of 13x13 mm.

RMT-45-MOD Square netting grille at 45° of 13x13 mm.

...-MOD-PFT Grille with filter type K/8 efficiency EN 779 G3.

Accessories

SP Opposed blades volume damper from zinc plated steel, in black colour. Not available for RMT-45.

Fixing

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

Finishes

AA Matt silver anodised.

R9016S Painted in white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted in white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of egg-crate grille for air return series **RMT-MOD+PFT AA** dim. **595x595**, with filter type K/8 efficiency EN 779 G3, designed to replace false ceiling tile, constructed from aluminium and anodised in matt silver **AA**. Manufacturer **MADEL**.

L x H	RMT-MOD R9016S / R9010S	RMT-MOD-PFT R9016S / R9010S	RMT-MOD AA	RMT-MOD-PFT AA	SP	Lwa1 < 35 dB(A)	Lwa1 < 45 dB(A)
mm	eur	eur	eur	eur	eur	m3/h	m3/h
595x295	55,54	75,57	49,59	69,62	22,80	815-1630	2175
595x595	82,99	111,07	74,11	102,17	32,53	1950-3240	4540
620x620	117,78	151,63	106,66	140,51	41,19	2115-3515	4925

L x H	RMT-45-MOD R9016S / R9010S	RMT-45-MOD-PFT R9016S / R9010S	RMT-45-MOD AA	RMT-45-MOD-PFT AA	Lwa1 < 35 dB(A)	Lwa1 < 45 dB(A)
mm	eur	eur	eur	eur	m3/h	m3/h
595x595	95,75	123,82	85,45	132,21	1950-3240	4540

Accessible egg-crate grilles



Technical data

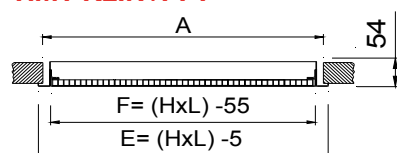
RMT-KLIN



RMT-45-KLIN



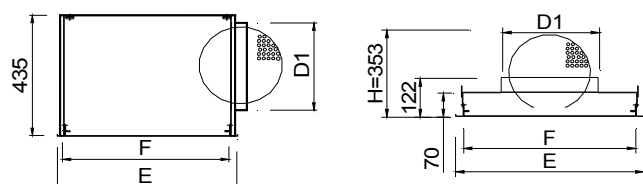
RMT-KLIN+PFT



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...-R



L x H	E	A	D1
600	595	545	313
625	620	570	313
675	670	620	313

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

Description

Egg-crate grilles for air return with hinged removable core without tools, by pressing on the invisible PUSH fasteners. KLIN system allows for the easy maintenance of HVAC installations. Constructed from aluminium and galvanised steel.

RMT-KLIN Square netting grille of 13x13 mm.

RMT-45-KLIN Square netting grille at 45° of 13x13 mm.

Accessories

PFT Filter type K/8 class EN 779 G3.

PLFZ Plenum con conexión superior.

...-R Air flow damper in the spigot.

.../L/ Lateral connection.

.../AIS/ Thermal insulation inside.

Fixing

1) Support brackets to hang from the ceiling.

Finishes

R9016S Painted in white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted in white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

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 **R9016S**. Manufacturer **MADEL**.

L x H	RMT-KLIN	RMT-45-KLIN	RMT-KLIN +PLFZ	RMT-45-KLIN +PLFZ	PFT	Lwa1< 35 dB(A)	Lwa1< 45 dB(A)
mm	eur	eur	eur	eur	eur	m3/h	m3/h
600x600	102,49	115,20	154,07	166,78	28,07	1500-3300	4400
625x625	126,28	-	178,72	-	30,43	1500-3370	4490
675x675	135,76	152,59	191,22	208,05	35,26	1500-3695	4900
600x300	73,28	-	136,76	-	20,03	815-1630	2175

L x H	PLFZ	PLFZ-R	PLFZ/L/	PLFZ/L/-R	PLFZ /AIS/	PLFZ-R /AIS/	PLFZ/L /AIS/	PLFZ/L/-R /AIS/
mm	eur	eur	eur	eur	eur	eur	eur	eur
600x600	51,58	71,34	70,12	87,32	69,63	89,39	94,66	114,42
625x625	52,44	72,25	71,35	88,60	70,80	90,61	96,32	116,11
675x675	55,47	72,68	74,71	91,92	74,89	92,09	100,87	118,08
600x300	63,47	87,03	63,35	86,93	85,70	109,24	85,52	109,08

External & Ventilation **grilles**

Fresh air grilles-profile anti-rain
Circular fresh air grilles



INDEX

CXT circular external grilles

DMT-X external grilles - 25 mm pitch

DXT external grilles - 50 mm pitch

DXL external grilles - 100 mm pitch

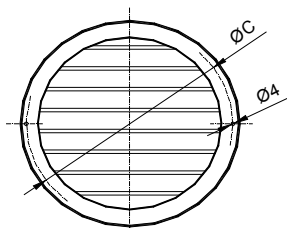
SCV pressed grilles

BWC ventilation valves

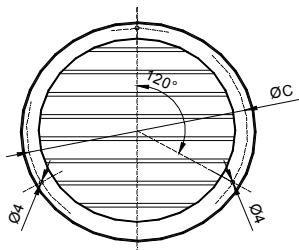
Circular external grilles

Technical data

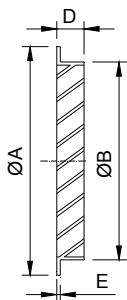
125 / 160 / 200 / 250



315 / 400



H	ØA	ØB	ØC	D	E
125	155	124	134	25	3
160	190	159	175	25	3
200	230	199	215	25	3
250	280	248	264	28	3
315	350	314	332	20	3
400	440	399	420	25	7



Description

External use circular grilles in aluminium with fixed blades for expel or air intake.

CXT Circular grille with mesh.

Fixing

(T) Visible screws.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

R9006M Painted aluminium colour RAL 9006 matt (20-30% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of external use circular grille with mesh series **CXT (T) R9016S dim. 400**, constructed from aluminium paint in white RAL 9016 (60-70% gloss) and visible fixing by screws. Manufacturer **MADEL**.

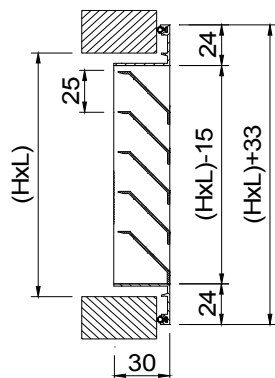


Ø mm	CXT eur	Lwa1= 45 dB(A) m³/h	A free m²
125	19,83	130	0,0123
160	24,15	215	0,0201
200	30,56	335	0,0314
250	46,58	530	0,0491
315	111,55	830	0,0779
400	231,72	1350	0,125

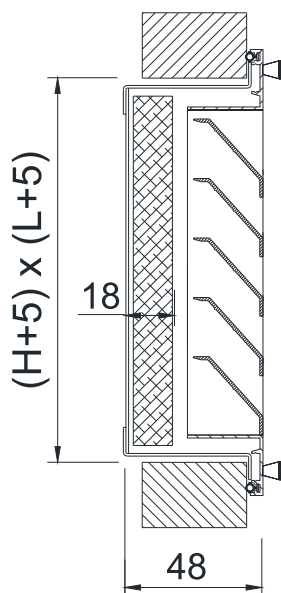
External grilles - 25 mm pitch

Technical data

DMT-X



DMT-X+PFT



Description

External use grilles in aluminium with fixed blades, 25 mm pitch, for expel or air intake.

DMT-X Grille with blades parallels to the largest side (L size)

EMT-X Grille with blades parallels to the shortest side (H size)

Accessories

PFT Filter box constructed from galvanised steel with filter K/8 class EN 779 G3. The opening size LxH must be increased by 5 mm.

MLL Galvanised mesh of 13x13 mm.

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

Fixing

(S) Clips. It requires mounting frame CM.

(T) Visible screws (supplement *)

(P) Sidepieces to fix in place (supplement *)

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 anodised.

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of external use grille with galvanised mesh of 13x13 mm. Fixed blades at 45° parallels to the largest side series **DMT-X+MLL AA dim. LxH**, constructed from aluminium and anodised in matt silver **AA**, visible fixing by screws **(T)**. Manufacturer **MADEL**.



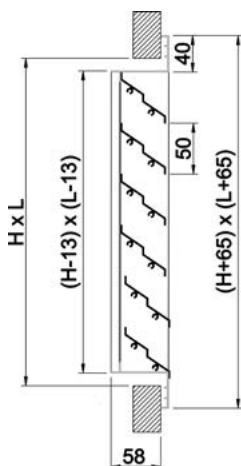
L x H	DMT-X AA	DMT-X R9016B/R9016S R9010S	EMT-X AA	EMT-X R9016B/R9016S R9010S	PFT	MLL	CM	Lwa1 45 dB(A)	A free
mm	eur	eur	eur	eur	eur	eur	eur	m³/h	m²
200x100	13,11	14,69	14,22	15,93	12,70	11,01	2,59	80	0,004
250x100	14,41	16,13	15,84	17,72	12,97	11,24	2,79	110	0,006
300x100	16,00	17,93	18,16	20,34	13,18	11,46	2,96	130	0,007
350x100	17,26	19,33	19,90	22,27	13,44	11,67	3,10	145	0,008
400x100	18,55	20,77	22,02	24,66	13,72	11,91	3,29	170	0,009
450x100	19,92	22,29	24,41	27,34	13,96	12,16	3,44	190	0,01
500x100	21,40	23,96	26,89	30,14	14,27	12,36	3,55	210	0,012
600x100	26,93	30,16	30,39	34,04	14,73	12,81	4,04	255	0,014
700x100	30,25	33,87	35,51	39,77	15,38	13,33	4,78	295	0,016
800x100	33,92	38,00	39,86	44,65	15,89	13,76	5,15	340	0,019
200x150	15,42	17,25	16,25	18,19	13,20	11,46	2,75	165	0,009
250x150	17,16	19,22	18,34	20,54	13,57	11,76	2,91	200	0,011
300x150	19,07	21,35	21,04	23,56	13,95	12,10	3,10	250	0,014
350x150	20,75	23,24	23,10	25,85	14,29	12,39	3,22	290	0,016
400x150	22,39	25,06	25,66	28,74	14,64	12,69	3,42	330	0,018
450x150	24,08	26,98	28,40	31,81	15,02	13,06	3,55	380	0,021
500x150	25,91	29,01	31,25	35,00	15,38	13,33	3,72	420	0,023
600x150	32,57	36,47	35,73	40,03	16,13	13,96	4,17	505	0,028
700x150	36,67	41,07	41,53	46,50	16,78	14,52	4,89	590	0,033
800x150	41,18	46,14	46,82	52,44	17,53	15,22	5,26	690	0,038
200x200	18,32	20,51	18,32	20,51	13,72	11,91	2,88	240	0,013
250x200	20,39	22,86	20,83	23,34	14,20	12,31	3,08	310	0,017
300x200	22,65	25,37	23,91	26,77	14,64	12,69	3,26	370	0,02
350x200	24,90	27,87	26,50	29,67	15,14	13,13	3,39	435	0,024
400x200	26,93	30,16	29,47	33,02	15,63	13,53	3,55	490	0,027
450x200	29,05	32,52	32,62	36,53	16,03	13,93	3,74	560	0,031
500x200	31,53	35,30	36,09	40,42	16,46	14,34	3,87	630	0,035
600x200	38,91	43,57	41,03	45,94	17,38	15,13	4,32	760	0,042
700x200	44,53	49,87	48,41	54,21	18,27	15,82	5,04	890	0,049
800x200	49,25	55,16	53,72	60,18	19,20	16,66	5,42	1010	0,056
1000x200	61,60	69,00	67,17	75,22	23,99	20,80	6,44	1260	0,07
250x250	23,26	26,06	23,26	26,06	14,75	12,82	3,26	420	0,023
300x250	25,95	29,07	26,89	30,14	15,38	13,33	3,44	495	0,027
400x250	30,90	34,60	33,09	37,05	16,46	14,34	3,77	670	0,037
500x250	36,94	41,38	41,18	46,14	17,64	15,28	4,04	835	0,046
600x250	45,37	50,79	47,05	52,69	18,72	16,25	4,51	1010	0,056
800x250	57,27	64,13	61,20	68,55	20,81	18,05	5,61	1350	0,075
1000x250	71,57	80,17	76,53	85,71	26,01	22,60	6,62	1695	0,094
300x300	29,77	33,34	29,77	33,34	16,13	13,96	3,62	615	0,034
400x300	35,31	39,55	36,81	41,23	17,38	15,13	3,96	830	0,046
500x300	42,23	47,29	45,86	51,36	18,72	16,25	4,23	1045	0,058
600x300	52,15	58,41	52,41	58,69	20,03	17,39	4,72	1260	0,07
800x300	66,13	74,07	68,24	76,43	22,49	19,51	5,81	1695	0,094
1000x300	82,69	92,60	85,28	95,51	28,14	24,40	6,83	2160	0,12
350x350	36,39	40,75	36,39	40,75	17,55	15,25	3,91	870	0,048
400x350	39,90	44,70	41,05	45,98	17,93	15,63	4,07	990	0,055
500x350	47,08	52,73	50,31	56,35	19,46	16,92	4,34	1242	0,069
600x350	58,09	65,07	57,90	64,83	21,01	18,26	4,84	1512	0,084
800x350	73,54	82,37	75,17	84,18	23,64	20,53	5,93	1980	0,11
1000x350	91,92	102,96	93,95	105,22	29,56	25,66	6,96	2520	0,14
400x400	44,64	49,99	44,64	49,99	19,23	16,71	4,26	1160	0,064
500x400	52,48	58,78	54,95	61,55	21,02	18,26	4,53	1460	0,081
600x400	64,49	72,24	63,29	70,88	22,77	19,76	5,01	1765	0,098
800x400	82,70	92,61	83,65	93,70	25,80	22,41	6,10	2370	0,131
1000x400	103,36	115,75	104,58	117,14	32,26	28,02	7,16	2880	0,16
500x500	63,83	71,49	63,83	71,49	23,29	20,20	4,84	1880	0,104
600x500	80,04	89,66	76,35	85,52	24,91	21,59	5,29	2340	0,13
800x500	89,10	99,79	87,10	97,56	28,50	24,70	6,39	3060	0,17
1000x500	111,39	124,74	108,87	121,94	35,64	30,93	7,42	3780	0,21
600x600	91,79	102,80	91,79	102,80	28,07	24,34	5,75	2900	0,161
800x600	114,69	128,45	134,65	150,81	32,37	28,14	6,87	3890	0,216
1000x600	143,34	160,55	168,32	188,52	40,49	35,20	7,90	4860	0,27

L x H	eur
(T)	1,20
(P)	2,84

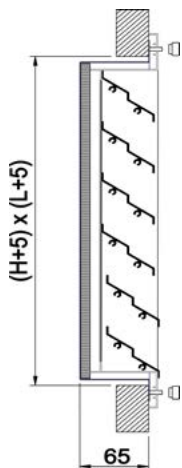
External grilles - 50 mm pitch

Technical data

DXT



DXT+PFX



Description

External use grilles in aluminium with fixed blades, 50 mm pitch, for expel or air intake.

DXT Grille with galvanised mesh and blades parallels to the largest side (L size)

EXT Grille with galvanised mesh and blades parallels to the shortest side (H size)

Accessories

PFX Filter box constructed from galvanised steel with filter K/8 class EN 779 G3.

CX Mounting frame in galvanised steel. It includes sidepieces to fix in place.

Fixing

(T) Visible screws. Mounting frame CX is recommended.

(P) Sidepieces to fix in place (supplement *)

Finishes

NAT Natural aluminium no anodised.

AA Matt silver anodised.

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of external use grille with galvanised mesh and blades parallels to the largest side series **DXT+PFX (T) AA dim. LxH**, with filter box **PFX** and filter type K/8 efficiency EN 779 G3, constructed from aluminium and anodised in matt silver **AA**, visible fixing by screws **(T)**. Manufacturer **MADEL**.



L x H	DXT NAT	DXT AA	DXT R9016B/R9016S R9010S	EXT NAT	EXT AA	EXT R9016B/R9016S R9010S	PFX	CX	Lwa1 45 dB(A)	Lwa1 < 65 dB(A)
mm	eur	eur	eur	eur	eur	eur	eur	eur	m³/h	m³/h
200x200	44,84	49,84	50,23	44,84	49,84	50,23	14,50	9,23	364	678
300x200	50,39	56,00	56,43	55,23	61,37	61,85	15,44	9,94	559	1041
400x200	58,13	64,56	65,09	65,21	72,45	73,04	16,39	10,61	754	1404
500x200	66,46	73,87	74,44	76,60	85,13	85,79	17,79	11,71	949	1767
600x200	71,06	78,98	79,58	87,62	97,32	98,12	18,66	12,40	1145	2130
800x200	82,35	91,52	92,23	108,66	120,72	121,70	20,60	13,81	1535	2856
1000x200	102,65	114,04	114,96	141,20	156,89	158,15	22,25	15,19	1477	3134
1250x200	128,30	142,57	143,69	176,53	196,12	197,70	27,82	18,98	1837	3926
1500x200	154,00	171,09	172,48	211,83	235,34	237,24	33,36	22,78	2233	4724
300x300	64,20	71,32	71,90	64,20	71,32	71,90	17,13	10,66	933	1736
400x300	72,84	80,93	81,58	76,60	85,13	85,79	18,49	11,33	1258	2341
500x300	81,32	90,35	91,08	89,80	99,78	100,58	20,51	12,45	1583	2945
600x300	87,69	97,42	98,21	101,57	112,83	113,76	21,57	13,14	1464	3106
800x300	104,66	116,32	117,22	128,25	142,52	143,63	24,44	14,54	1963	4165
1000x300	124,49	138,29	139,41	160,89	178,77	180,21	27,03	15,87	2462	5223
1250x300	155,61	172,91	174,27	201,14	223,48	225,27	33,78	19,84	3084	6543
1500x300	186,72	207,49	209,11	241,38	268,18	270,33	40,52	23,83	3044	6974
400x400	86,41	95,99	96,76	86,41	95,99	96,76	20,57	12,65	1352	2867
500x400	98,06	108,97	109,82	101,86	113,18	114,08	23,27	13,56	1701	3608
600x400	106,03	117,83	118,75	118,22	131,35	132,41	24,47	14,26	2050	4349
800x400	128,49	142,77	143,92	146,04	162,28	163,57	28,25	15,67	2749	5831
1000x400	156,56	173,94	175,35	181,48	201,62	203,26	31,06	17,02	2821	6477
1250x400	195,66	217,40	219,15	226,82	252,03	254,04	38,80	21,24	3533	8113
1500x400	234,80	260,91	262,97	272,16	302,41	304,81	46,58	25,50	4251	9763
1750x400	273,92	304,35	306,79	317,53	352,82	355,66	54,35	29,78	4965	11400
2000x400	313,06	347,83	350,62	362,89	403,26	406,44	62,10	34,00	5258	11567
500x500	115,54	128,38	129,40	115,54	128,38	129,40	25,96	14,26	2187	4639
600x500	125,11	138,97	140,12	131,34	145,93	147,10	27,38	14,93	2636	5592
800x500	148,10	164,56	165,87	165,96	184,37	185,86	32,07	16,34	2892	6640
1000x500	182,10	202,31	203,96	202,82	225,35	227,17	35,06	17,70	3626	8327
1250x500	227,62	252,89	254,94	253,54	281,72	283,98	43,85	22,14	4542	10432
1500x500	273,12	303,49	305,89	304,24	338,06	340,74	52,60	26,56	5061	11135
1750x500	318,63	354,05	356,86	354,94	394,38	397,53	61,37	30,98	5910	13003
2000x500	364,13	404,62	407,83	405,65	450,71	454,32	70,15	35,43	6760	14872
600x600	152,98	169,97	171,34	152,98	169,97	171,34	30,32	16,51	2636	6053
800x600	175,35	194,84	196,39	180,31	200,34	201,97	35,92	18,35	3534	8115
1000x600	212,40	236,00	237,87	225,12	250,12	252,12	40,46	19,71	4432	10178
1250x600	265,50	294,98	297,37	281,38	312,65	315,15	50,56	24,62	5141	11310
1500x600	318,58	354,00	356,82	337,68	375,16	378,20	60,66	29,52	6186	13609
1750x600	371,71	412,99	416,32	393,94	437,72	441,22	70,81	34,47	7223	15892
2000x600	424,80	471,98	475,78	450,20	500,22	504,24	80,90	39,40	8262	18176
700x700	184,98	205,55	207,17	184,98	205,55	207,17	32,51	18,69	3646	8372
800x700	197,81	219,78	221,56	204,97	227,74	229,58	35,67	20,31	4177	9591
1000x700	240,73	267,48	269,63	248,70	276,31	278,53	42,04	21,70	5238	12028
1250x700	300,94	334,36	337,06	310,85	345,38	348,16	52,58	27,12	6076	13366
1500x700	361,09	401,22	404,42	373,06	414,49	417,82	63,12	32,53	7311	16084
1750x700	421,28	468,09	471,83	435,22	483,55	487,43	73,65	37,95	8537	18782
2000x700	481,44	534,94	539,21	497,36	552,64	557,05	84,17	43,38	9764	21481
800x800	236,33	262,57	264,69	236,33	262,57	264,69	39,07	22,32	4819	11066
1000x800	265,15	294,61	296,97	273,41	303,80	306,22	46,31	23,72	5596	12312
1250x800	331,45	368,27	371,22	341,78	379,75	382,80	57,86	29,59	7010	15423
1500x800	397,71	441,92	445,44	410,14	455,70	459,36	69,42	35,55	8435	18558
1750x800	464,01	515,53	519,68	478,51	531,68	535,93	80,99	41,48	9850	21671
2000x800	530,30	589,23	593,96	546,87	607,63	612,49	92,57	47,38	11266	24786
900x900	274,54	305,03	307,49	274,54	305,03	307,49	46,33	25,04	5700	12540
1000x900	290,55	322,85	325,43	290,99	323,30	325,91	50,46	25,72	6342	13953
1250x900	363,22	403,56	406,80	363,75	404,16	407,40	63,06	32,14	7945	17573
1500x900	435,86	484,29	488,16	436,48	484,99	488,85	75,70	38,60	9560	21033
1750x900	508,50	565,01	569,52	509,22	565,82	570,32	-	45,03	11164	24561
2000x900	581,13	645,69	650,85	581,98	646,65	651,82	-	51,44	12768	28091
1000x1000	308,59	342,89	345,62	308,59	342,89	345,62	54,67	26,38	7089	15595
1250x1000	385,74	428,59	432,04	385,74	428,59	432,04	68,36	32,97	8880	19536
1500x1000	462,87	514,28	518,42	462,87	514,28	518,42	82,05	39,60	9560	23507
1750x1000	540,05	600,05	604,84	540,05	600,05	604,84	-	46,16	11164	27450
2000x1000	617,18	685,76	691,23	617,18	685,76	691,23	-	52,75	14271	31395

(*)

eur

(P)

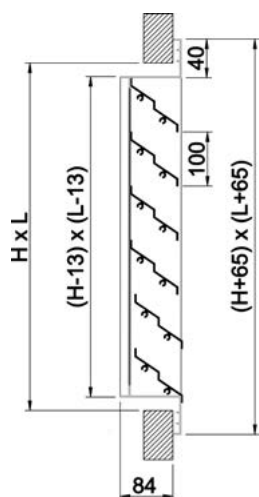
2,84

External grilles - 100 mm pitch

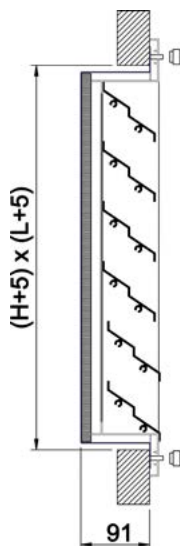


Technical data

DXL



DXL+PFXL



Description

External use grilles in aluminium with fixed blades, 100 mm pitch, for expel or air intake.

DXL Grille with galvanised mesh and blades parallels to the largest side (L size)

EXL Grille with galvanised mesh and blades parallels to the shortest side (H size)

Accessories

PFXL Filter box constructed from galvanised steel with filter K/8 class EN 779 G3.

CXL Mounting frame in galvanised steel. It includes sidepieces.

Fixing

(T) Visible screws. Mounting frame CXL is recommended.

(P) Sidepieces to fix in place (supplement *)

Finishes (painted available to 2000x1200)

NAT Natural aluminium no anodised.

AA Matt silver anodised.

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of external use grille with galvanised mesh and blades parallels to the largest side series **DXL+PFXL (T) NAT dim. LxH**, with filter box and filter type K/8 efficiency EN 779 G3, constructed from natural finish aluminium, visible fixing by screws. Manufacturer **MADEL**.



L x H	DXL	DXL	DXL	EXTL	EXL	EXL	PFXL	CXL	Lwa1	Lwa1
mm	NAT	AA	R9016B/R9016S M9010S	NAT	AA	R9016B/R9016S M9010S			45 dB(A)	< 65 dB(A)
mm	eur	eur	eur	eur	eur	eur	eur	eur	m³/h	m³/h
300x300	54,56	60,61	61,10	54,56	60,61	61,10	17,45	10,78	755	1405
400x300	61,89	68,81	69,32	65,13	72,35	72,95	18,84	11,43	1018	1895
500x300	69,12	76,79	77,40	76,34	84,80	85,51	20,92	12,59	1282	2384
600x300	74,52	82,81	83,46	86,33	95,93	96,69	21,98	13,28	1545	2874
800x300	88,97	98,87	99,64	109,03	121,13	122,11	24,92	14,70	1589	3372
1000x300	105,83	117,54	118,52	136,78	151,99	153,19	27,57	16,04	1993	4228
1250x300	132,26	146,94	148,14	170,96	189,96	191,48	34,44	20,07	2486	5296
1500x300	158,71	176,35	177,77	205,16	227,95	229,77	41,33	24,07	2458	5645
1750x300	185,17	205,75	207,39	239,35	265,89	268,09	48,22	28,07	2870	6592
2000x300	211,61	235,14	237,02	273,54	303,93	306,38	55,09	32,10	3283	7539
400x400	73,45	81,60	82,26	73,45	81,60	82,26	20,98	12,79	1528	2842
500x400	83,34	92,60	93,33	86,57	96,21	96,94	23,73	13,68	1475	3129
600x400	90,13	100,13	100,94	100,49	111,64	112,55	24,94	14,37	1778	3772
800x400	109,19	121,35	122,31	124,14	137,94	139,02	28,80	15,81	2384	5057
1000x400	133,09	147,86	149,07	154,22	171,37	172,75	31,68	17,18	2990	6342
1250x400	166,32	184,80	186,27	192,81	214,25	215,96	39,62	21,47	3064	7037
1500x400	199,60	221,79	223,54	231,33	257,08	259,09	47,49	25,75	3688	8468
1750x400	232,85	258,72	260,77	269,92	299,92	302,31	55,45	30,04	4305	9888
2000x400	266,09	295,65	298,02	308,46	342,75	345,49	63,35	34,36	4925	11309

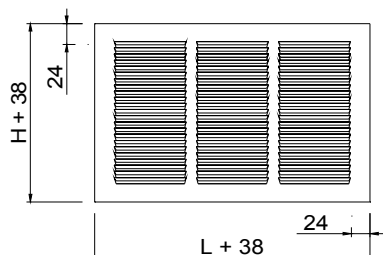
L x H	DXL NAT	DXL AA	DXL R9016B/R9016S M9010S	EXL NAT	EXL AA	EXL R9016B/R9016S M9010S	PFXL	CXL	Lwa1 45 dB(A)	Lwa1 < 65 dB(A)
mm	eur	eur	eur	eur	eur	eur	eur	eur	m³/h	m³/h
500x500	98,20	109,11	109,99	98,20	109,11	109,99	26,47	14,37	1967	4173
600x500	106,33	118,16	119,11	111,63	124,03	125,03	27,90	15,10	2371	5029
800x500	125,90	139,89	141,02	141,06	156,73	157,98	32,69	16,52	3179	6743
1000x500	154,80	172,00	173,36	172,39	191,55	193,09	35,77	17,88	3262	7490
1250x500	193,48	214,96	216,70	215,53	239,46	241,39	44,71	22,37	4086	9383
1500x500	232,16	257,93	260,02	258,62	287,35	289,64	53,69	26,81	4917	11290
1750x500	270,86	300,96	303,35	301,70	335,23	337,91	62,61	31,31	5316	11695
2000x500	309,53	343,92	346,64	344,81	383,12	386,16	71,55	35,78	6080	13376
600x600	130,04	144,48	145,64	130,04	144,48	145,64	30,94	16,65	2964	6287
800x600	149,02	165,60	166,90	153,27	170,30	171,65	36,61	18,55	3251	7465
1000x600	180,53	200,58	202,20	191,34	212,61	214,30	41,27	19,90	4077	9363
1250x600	225,67	250,73	252,75	239,19	265,77	267,89	51,58	24,87	5107	11729
1500x600	270,83	300,90	303,32	287,00	318,89	321,42	61,88	29,83	5690	12520
1750x600	315,94	351,06	353,84	334,86	372,06	375,04	72,22	34,81	6645	14620
2000x600	361,09	401,22	404,42	382,69	425,18	428,61	82,51	39,80	7600	16721
700x700	157,26	174,71	176,11	157,26	174,71	176,11	33,16	18,89	3406	7820
800x700	168,13	186,81	188,29	174,23	193,58	195,12	36,39	20,50	3901	8959
1000x700	204,62	227,35	229,17	211,39	234,85	236,76	42,91	21,91	4893	11235
1250x700	255,78	284,21	286,47	264,22	293,58	295,93	53,66	27,39	5675	12485
1500x700	306,91	341,01	343,74	317,08	352,31	355,13	64,37	32,87	6828	15024
1750x700	358,09	397,88	401,07	369,92	411,03	414,29	75,10	38,36	7974	17543
2000x700	409,22	454,70	458,35	422,74	469,74	473,48	85,83	43,82	9120	20065
800x800	200,89	223,21	224,99	200,89	223,21	224,99	39,84	22,55	4552	10452
1000x800	225,38	250,44	252,42	232,41	258,26	260,30	47,22	23,96	5285	11628
1250x800	281,73	313,04	315,55	290,50	322,80	325,37	59,00	29,90	6617	14566
1500x800	338,07	375,62	378,62	348,63	387,35	390,46	70,82	35,90	7966	17527
1750x800	394,41	438,22	441,73	406,72	451,92	455,52	82,62	41,87	9303	20468
2000x800	450,75	500,83	504,85	464,84	516,48	520,62	94,41	47,87	10640	23409
900x900	233,34	259,27	261,33	233,34	259,27	261,33	47,25	25,29	5428	11943
1000x900	246,96	274,41	276,61	247,36	274,81	277,03	51,48	26,00	6040	13289
1250x900	308,74	343,03	345,78	309,19	343,56	346,30	64,34	32,47	7566	16647
1500x900	370,48	411,63	414,93	371,02	412,23	415,56	77,19	38,96	9105	20031
1750x900	432,22	480,25	484,10	432,84	480,94	484,77	90,09	45,46	10632	23391
2000x900	493,97	548,84	553,23	494,68	549,65	554,03	102,96	51,97	12160	26753
1000x1000	262,29	291,44	293,79	262,29	291,44	293,79	55,76	26,62	6795	14950
1250x1000	327,87	364,32	367,21	327,87	364,32	367,21	69,72	33,31	8512	18728
1500x1000	393,44	437,15	440,65	393,44	437,15	440,65	83,67	39,99	10243	22535
1750x1000	459,02	510,01	514,11	459,02	510,01	514,11	97,64	46,64	11961	26316
2000x1000	524,62	582,91	587,55	524,62	582,91	587,55	111,61	53,29	13680	30097
1250x1100	347,02	385,55	388,66	346,55	385,09	388,15	75,10	34,09	9459	20809
1500x1100	416,41	462,69	466,39	415,85	462,07	465,75	90,15	40,97	11382	25039
1750x1100	485,84	539,81	544,14	485,22	539,11	543,43	105,20	47,80	13291	29239
2000x1100	555,26	616,96	621,89	554,53	616,14	621,07	120,26	54,62	13985	30401
1250x1200	366,15	406,85	410,08	365,25	405,81	409,07	80,48	34,09	10405	22890
1500x1200	439,38	488,18	492,09	438,29	486,99	490,88	96,65	40,97	12520	27543
1750x1200	512,62	569,59	574,13	511,37	568,21	572,73	105,20	47,80	13450	29239
2000x1200	585,89	651,00	656,21	584,43	649,37	654,57	128,90	54,62	15383	33441
1500x1300	462,35	513,72	-	460,71	511,90	-	103,09	40,97	12565	27315
1750x1300	539,44	599,35	-	537,54	597,27	-	112,76	47,80	14672	31897
2000x1300	616,56	685,07	-	614,35	682,63	-	137,57	54,62	16781	36481
1500x1400	485,32	539,23	-	483,14	536,79	-	109,57	40,97	13612	29592
1750x1400	566,23	629,18	-	563,74	626,37	-	120,32	47,80	15895	34555
2000x1400	647,22	719,12	-	644,27	715,87	-	146,19	54,62	18180	39521
1500x1500	508,26	564,75	-	508,26	564,75	-	116,03	40,97	14659	31869
1750x1500	593,04	658,92	-	589,91	655,44	-	127,89	47,80	17118	37214
2000x1500	677,84	753,19	-	674,19	749,13	-	154,84	54,62	19578	42562
1750x1600	619,85	688,71	-	616,08	684,55	-	135,45	47,80	18340	39872
2000x1600	708,51	787,26	-	701,38	779,34	-	163,50	54,62	20977	45602
1750x1700	646,65	718,49	-	642,25	713,64	-	143,02	47,80	19564	42530
2000x1700	739,18	821,31	-	734,02	815,60	-	172,13	54,62	21000	48642
2000x1800	769,85	855,38	-	763,95	848,85	-	180,80	55,94	21889	51200
2000x1900	800,47	889,43	-	793,85	882,09	-	189,45	57,27	22000	51439
2000x2000	831,13	923,49	-	831,13	923,49	-	198,09	58,62	23105	54296

(*)	eur
(P)	2,84

Pressed grilles

Technical data

SCV



Description

Printed grilles in galvanised steel for extraction or air supply.

SCV Grille with blades in One-Way, parallels to the largest side (L size)

CCV SC models incorporating volume damper with external key.

Accessories

JT Wind of 10 m of autoadhesive seal.

Fixing

(T) Visible screws.

Finishes

R9006M Painted aluminium colour RAL 9006 matt (20-30% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

S/PT Without finish.

Specification Text

Supply and mounting of printed grille for extraction and air supply with blades in One-Way series **SCV R9016S dim. LxH**, constructed from galvanised steel paint in white **R9016S**, visible fixing by screws **(T)**. Manufacturer **MADEL**.



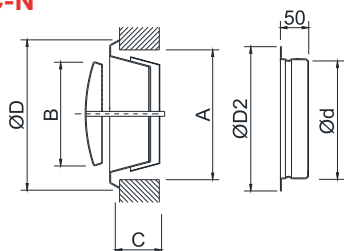
L x H	SCV	CCV	SCV	CCV	Lwa1 < 35 dB(A)	Lwa1 = 45 dB(A)
mm	eur	eur	S/PT eur	S/PT eur	m³/h	m³/h
100x100	3,57	11,41	3,41	10,84	65-90	115
200x100	5,29	14,15	5,00	13,44	125-175	225
300x100	6,93	16,38	6,59	15,56	190-265	340
400x100	8,58	19,05	8,15	18,10	260-365	470
500x100	10,19	21,89	9,69	20,82	325-455	585
600x100	11,85	24,61	11,25	23,38	405-565	730
150x150	5,99	15,02	5,68	14,27	155-215	275
200x150	7,05	16,75	6,70	15,90	205-285	370
300x150	9,07	20,22	8,61	19,22	295-415	535
400x150	11,19	23,69	10,63	22,50	395-555	715
500x150	13,23	27,23	12,58	25,88	495-695	890
600x150	15,31	30,70	14,54	29,16	630-880	1135
200x200	8,37	19,91	7,96	18,91	260-365	470
300x200	10,82	24,25	10,27	23,03	385-540	695
400x200	13,79	29,57	13,10	28,11	520-730	940
500x200	16,77	33,87	15,93	32,19	655-920	1185
600x200	19,74	38,26	18,76	36,34	855-1195	1540
300x300	14,65	31,23	13,91	29,66	585-820	1055
400x300	18,69	37,12	17,74	35,27	785-1095	1410
500x300	22,27	43,00	21,17	40,84	980-1375	1765
600x300	26,13	48,82	24,83	46,39	1315-1840	2365
400x400	27,38	54,44	26,01	51,73	1055-1475	1895

	eur
JT	3,59

Ventilation valves

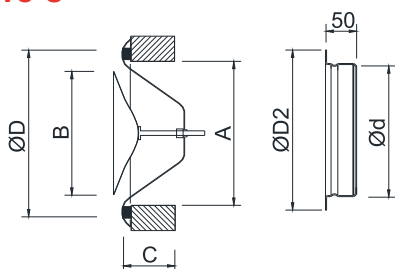
Technical data

BWC-N



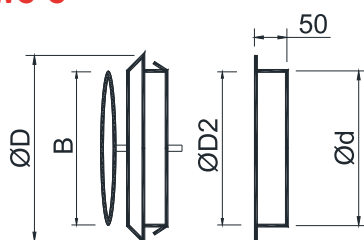
Ø	A	B	C	Ød	ØD2	ØD
BWC-N-100	104	75	40	99	123	138
BWC-N-125	129	100	46	124	148	164
BWC-N-160	169	130	54	159	184	211
BWC-N-200	209	158	63	199	227	248

BWC-S



Ø	A	B	C	Ød	ØD2	ØD
BWC-S-100	104	75	40	99	122	140
BWC-S-125	129	99	46	124	148	170
BWC-S-160	169	119	54	159	184	202
BWC-S-200	209	157	64	199	225	254

BWC-C



Ø	ØD	Ød	ØD2	B
BWC-C-100	148	100	80	86
BWC-C-125	168	125	100	106
BWC-C-150	186	150	120	130
BWC-C-200	240	200	170	178



Description

Ventilation valves with adjustable core for extract or air supply.

BWC-N Extract valve in galvanised steel, including mounting neck.

BWC-S Air supply valve in galvanised steel, including mounting neck.

BWC-C Extract and supply valve in white polypropylene, including mounting neck.

Fixing

1) Clips and mounting neck.

Finishes

R9010 Painted in white RAL 9010.

Specification Text

Supply and mounting of circular valve with adjustable core for extract or air supply with mounting neck series **BWC-N R9010 dim.**

100 constructed from galvanised steel paint in white **R9010**, invisible fixing by clips and mounting neck. Manufacturer **MADEL**.

Ø mm	BWC-N eur	BWC-S eur	BWC-C eur	Q min. m³/h	Q max. m³/h
100	7,70	19,12	8,12	10	150
125	8,93	20,66	8,58	20	220
150	-	-	12,02	20	250
160	11,00	25,37	-	20	280
200	13,43	30,57	12,89	30	440



Radial **diffusers**



Timeless classic design

MOD models to replace a false ceiling tile

Hinged removable core without tools KLIN models

DSO and DIMO diffusers, design with high capacity for integration

Supply and return in a single unit with diffusers
DRIM

INDEX

DRIM supply-return modular diffusers

DCN fixed cones diffusers

DSO central disc diffusers

DBQ four-way diffusers

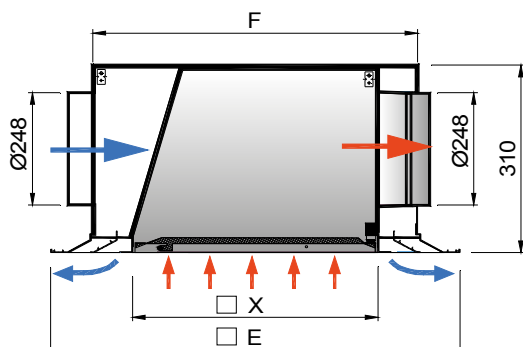
DBQ-MOD four-way diffusers

DIMO decorative core modular diffusers

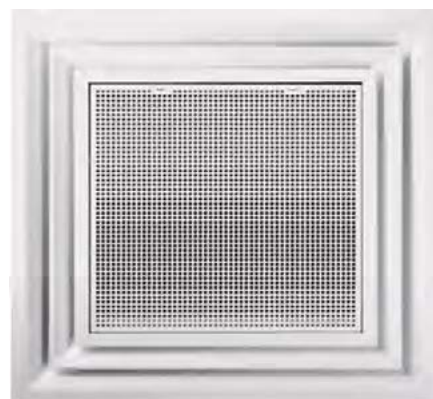
Supply-return modular diffusers

klin
SYSTEM

DRIM...-R



Dim.	E	F	X
1x600	595	473	438
2x600	595	473	374
1x625	620	498	465
2x625	620	498	399
1x675	670	548	513
2x675	670	548	449



Description

Modular diffusers to be used from 2,6 up to 4 metres high, with hinged removable core without tools. by PUSH fasteners. KLIN system allows for the easy access to the diffuser for maintenance. Constructed from aluminium and galvanised steel.

DRIM Four-Way diffuser for air supply with return core and connection plenum box incorporated.

Accessories

...-RR Plenum box with air flow damper in the spigot, as much of supply as of return.

PFT Filter K/8 class EN 779 G3 in the air return.

.../AIS/ Thermal insulation inside.

Fixing

1) Suspended at the false ceiling.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of Four-Way diffuser for air supply with return core and lateral circular connection plenum box incorporated series **DRIM R9016S dim. 2x600** constructed from aluminium and galvanised steel, paint in white RAL 9016 (60-70% gloss) Manufacturer **MADEL**.

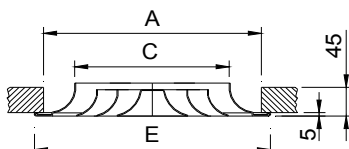
Dim.	DRIM	DRIM-RR	PFT	supply Lwa1<40 dB(A) m³/h	supply Lwa1=45 dB(A) m³/h	return Lwa1<40 dB(A) m³/h
mm	eur	eur	eur			
1x600	244,65	274,42	27,90	242-338	482	580
2x600	252,58	282,33	26,62	404-565	808	800
1x625	250,90	280,68	28,31	247-346	495	600
2x625	258,81	288,54	27,27	420-588	840	850
1x675	259,77	289,49	29,22	284-398	568	650
2x675	267,83	297,57	28,23	463-648	927	950

Dim.	DRIM /AIS/	DRIM-RR /AIS/	PFT	supply Lwa1<40 dB(A) m³/h	supply Lwa1=45 dB(A) m³/h	return Lwa1<40 dB(A) m³/h
mm	eur	eur	eur			
1x600	274,01	303,78	27,90	242-338	482	580
2x600	282,89	312,64	26,62	404-565	808	800
1x625	281,02	310,78	28,31	247-346	495	600
2x625	289,88	319,58	27,27	420-588	840	850
1x675	290,94	320,66	29,22	284-398	568	650
2x675	299,96	329,70	28,23	463-648	927	950

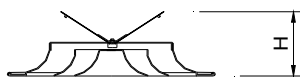
Fixed cones diffusers

Technical data

DCN

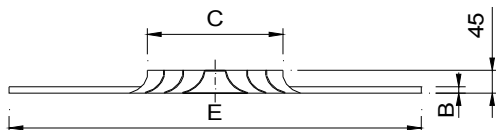


DCN+R3E



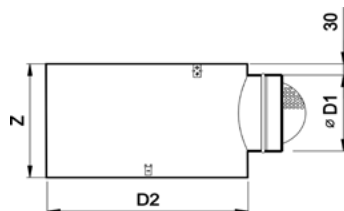
Dim.	E	A	C	H
160	263	223	154	122
200	303	263	194	145
250	353	313	244	170
315	418	378	309	200
355	458	418	349	220
400	503	463	394	248

DCN-MOD

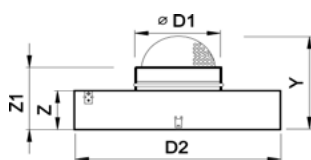


Dim.	MOD/600			MOD/625		MOD/675	
	C	B	E	B	E	B	E
160	154	12	595	12	620	15	670
200	194	12	595	12	620	15	670
250	244	12	595	12	620	15	670
315	309	12	595	12	620	15	670
355	349	12	595	12	620	15	670
400	394	12	595	12	620	15	670

POP/L/



POP/S/



POP	D2	D1	POP/L/	POP/S/		
			Z	Z	Z1	Y
160	170	123	225	130	163	212
200	210	158	260	145	178	244
250	260	198	300	170	203	289
315	325	248	350	190	223	334
355	365	313	415	225	258	402
400	410	313	415	225	258	402



Description

Circular diffusers in aluminium to be used in premises from 2,6 up to 4 metres high.

DCN Fixed cones circular diffuser.

DCN-MOD Diffuser specially designed for modular ceilings.

.../T15...24/ Panel with angled borders for ceiling profile 15 or 24 mm.

Accessories

R3E Flap damper, manually operated.

PMN Crossbar for mounting in false ceiling with rectangular duct.

PFLEX Neck-crossbar for mounting in false ceiling with flexible duct.

POP/L/ Cylindrical plenum box with a lateral circular connection.

Constructed from galvanized steel.

.../S/ Upper circular connection.

...-R Air flow damper in the spigot.

.../AIS/ Thermal insulation inside. Reaction to fire classification B-s1,d0 EN 13501-1.

.../RAL/ Plenum box painted RAL colours.

Fixing

- 1) Connection into the crossbar or to the plenum box by means of central screw.
- 2) MOD Suspended at the false ceiling, replacing a ceiling plate.

Finishes

AA Matt silver anodised.

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of fixed cones circular diffuser series

DCN+R3E+PFLEX R9016S dim. 160, constructed from aluminium paint in white RAL 9016 (60-70% gloss), With flap damper and neck-crossbar suitable for mounting in false ceiling with flexible duct. Manufacturer **MADEL**.

Ø	DCN R9016S / R9010S	DCN AA	R3E	PMN	PFLEX	Lwa1< 30 dB(A)	Lwa1= 35 dB(A)	Lwa1= 40 dB(A)
mm	eur	eur	eur	eur	eur	m³/h	m³/h	m³/h
160	18,78	20,48	7,83	3,25	5,21	144-205	250	300
200	22,53	24,82	8,75	3,37	5,68	180-270	340	425
250	28,53	32,65	9,39	3,58	7,29	295-385	475	595
315	36,18	41,01	10,11	3,75	7,69	415-520	655	835
355	44,05	51,16	12,37	3,85	9,25	490-555	735	970
400	51,79	62,26	13,43	4,00	9,48	625	810	1060

Ø	DCN-MOD/ 600 R9016S / R9010S	DCN-MOD/ 625 R9016S / R9010S	DCN-MOD/ 675 R9016S / R9010S	DCN-MOD/ T/ 600 R9016S / R9010S	DCN-MOD/ T/ 625 R9016S / R9010S	DCN-MOD/T/ 675 R9016S / R9010S
mm	eur	eur	eur	eur	eur	eur
160	49,76	58,15	66,52	59,38	68,39	78,12
200	51,73	60,15	68,52	61,37	70,38	80,12
250	55,58	63,93	72,32	65,19	74,16	83,90
315	60,37	68,74	77,13	69,99	79,00	88,74
355	65,00	73,42	81,78	74,63	83,65	93,37
400	70,58	78,99	87,34	80,22	89,22	98,93

Ø	POP/L/	POP/L-R	POP/L/AIS	POP/L-R/AIS	RAL supplement
mm	eur	eur	eur	eur	eur
160	54,30	67,37	68,08	81,15	15,40
200	58,44	72,00	74,91	88,47	16,50
250	63,68	77,99	83,71	98,02	18,08
315	71,18	86,81	96,30	111,93	20,56
355	75,35	92,60	103,27	120,52	21,77
400	80,25	97,50	111,47	128,72	23,28

Ø	POP/S/	POP/S-R	POP/S/AIS	POP/S-R/AIS	RAL supplement
mm	eur	eur	eur	eur	eur
160	36,58	49,65	49,21	62,28	13,93
200	40,03	53,59	54,99	68,55	14,29
250	42,18	56,49	60,1	74,40	14,77
315	46,34	61,97	68,28	83,91	15,5
355	48,79	66,04	73,09	90,34	15,88
400	51,52	68,77	78,53	95,78	16,34



POP/L/



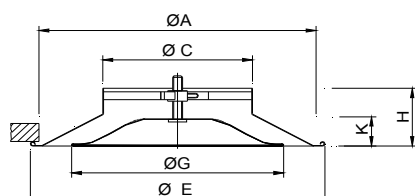
PFLEX



Central disc diffusers

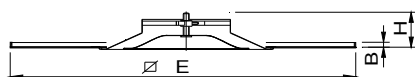
Technical data

DSO



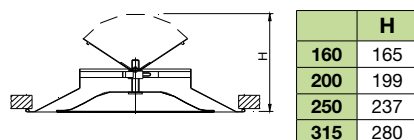
	E	A	G	H	K	C
160	325	300	206	101	44	157
200	425	398	325	115	58	197
250	510	487	380	128	72	248
315	575	550	435	137	80	313

DSO-MOD



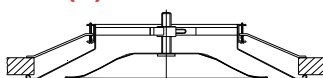
			MOD/600		MOD/625		MOD/675	
	H	C	B	E	B	E	B	E
160	101	157	12	595	12	620	15	670
200	115	197	12	595	12	620	15	670
250	114	247	12	595	12	620	15	670
315	137	13	12	595	12	620	15	670

DSO+R3G



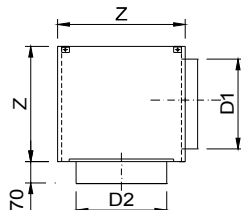
	H
160	165
200	199
250	237
315	280

DSO (O)



	D2	Z	D1
160	160	220	158
200	200	260	198
250	250	310	248
315	317	375	313

PLDG



Description

Central disc diffusers to be used in premises from 2,6 up to 4 metres high. Constructed from aluminium.

DSO Removable central disc diffuser.

DSO-MOD Diffuser specially designed for modular ceilings.

.../T15/ False ceiling panel 15 mm profile with angled borders.

.../T24/ False ceiling panel 24 mm profile with angled borders.

Accessories

R3G Flap damper, manually operated.

PMG Crossbar for mounting in false ceiling with rectangular duct.

PLDG Plenum box with a lateral connection.

...-R Air flow damper in the spigot.

.../S/ Upper connection.

.../AIS/ Thermal insulation inside.

Fixing

1) Connection into a circular metallic duct.

(P) Connection into the crossbar or plenum box by central screw.

Unsuitable for SPC.

(O) Hidden screws for false ceiling mounting with flexible duct.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of removable central disc diffuser series

DSO+R3G+PLDG R9016S 160 constructed from aluminium paint in white RAL 9016 (60-70% gloss), flap damper and lateral circular connection plenum box. Manufacturer **MADEL**.

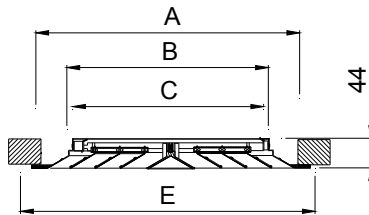
Ø	DSO	DSO (O)	DSO-MOD 600	DSO-MOD 625	DSO-MOD 675	Lwa1 < 30 dB(A) m³/h	Lwa1= 35 dB(A) m³/h	Lwa1= 40 dB(A) m³/h
mm	eur	eur	eur	eur	eur			
160	46,59	55,41	69,55	76,61	83,65	180-240	290	360
200	60,46	69,92	81,61	88,66	95,71	280-420	500	620
250	81,81	92,20	96,32	103,36	110,40	440-670	790	960
315	104,96	116,35	121,12	128,17	135,24	700-965	1150	1380

Ø	DSO-MOD/T 600	DSO-MOD/T 625	DSO-MOD/T 675	R3G	PMG	PLDG	PLDG-R	PLDG / AIS	PLDG-R / AIS
mm	eur	eur	eur	eur	eur	eur	eur	eur	eur
160	77,63	85,24	93,41	9,13	3,37	51,18	64,75	69,06	82,63
200	89,72	97,28	105,46	9,75	3,75	59,02	73,38	79,68	94,05
250	104,42	111,97	120,15	11,11	3,94	62,82	78,41	84,83	100,38
315	129,23	136,80	144,99	13,60	4,83	71,71	88,87	96,78	113,96

Four-way square diffusers

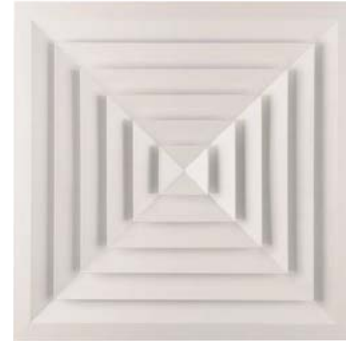
Technical data

DBQ



	E	A	C	B
150 x 150	259	219	138	148
225 x 225	332	292	212	223
300 x 300	407	367	287	298
375 x 375	482	442	362	373
450 x 450	557	517	437	448
525 x 525	632	592	511	523
600 x 600	707	667	587	598

	R3Q	SPQ	PLDQ	ADPQ
DBQ (D)	ok	ok	x	ok
DBQ (P)	ok	x	ok	x
DBQ (O)	x	x	x	x



Description

Four-Way diffusers in aluminium to be used in premises from 2,6 up to 4 metres high.

DBQ Four-Way square diffuser with removable core.

Accessories

R3Q Flap damper, manually operated. Compatible with (O) fixing.

SPQ Opposed blades volume damper from black electro-zinc steel. Compatible with (D) fixing.

PMQ Crossbar suitable for mounting in a false ceiling with rectangular duct.

CQ Mounting frame from galvanised steel (delivered separately in 4 linear elements)

PLDQ Plenum box with a lateral circular. Compatible with (P) fixing.

...-R Air flow damper in the spigot.

.../S/ Upper connection.

.../AIS/ Thermal insulation inside.

ADPQ Adapter to circular connection. Riveted directly to the diffuser. Compatible with (D) fixing.

...-R Air flow damper in the spigot.

.../L/ Lateral connection.

.../AIS/ Thermal insulation inside.

Fixing

(D) Direct fixing into a circular metallic duct.

(P) Connection into the crossbar or to the plenum box by means of central screw.

(O) Hidden screws (supplement *)

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

R9006M Painted aluminium colour RAL 9006 matt (20-30% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of four-way square diffuser with removable core series **DBQ+PLDQ-R R9016S 150x150**, constructed from aluminium paint in white RAL 9016 (60-70% gloss) with lateral circular connection plenum box and air flow damper in the spigot. Manufacturer **MADEL**.

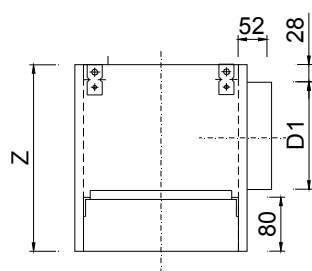


L x H	DBQ	R3Q	SPQ	PMQ	CQ	Lwa1 < 35 dB(A)	Lwa1= 40 dB(A)
mm	eur	eur	eur	eur	eur	m³/h	m³/h
150x150	26,09	10,15	7,88	3,31	4,32	125-175	225
225x225	37,20	12,10	10,69	3,55	4,82	250-350	450
300x300	48,75	13,92	13,92	3,79	5,64	435-610	785
375x375	62,69	15,75	18,27	4,07	6,09	625-875	1125
450x450	77,27	17,00	22,60	4,32	7,43	875-1225	1575
525x525	112,28	18,27	28,54	4,59	7,43	1165-1635	2100
600x600	133,32	19,70	33,85	5,06	8,30	1600-2100	2700

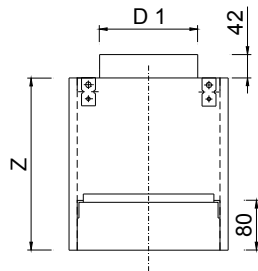
L x H	ADPQ	ADPQ-R	ADPQ /AIS/	ADPQ-R /AIS/	PLDQ	PLDQ-R	PLDQ /AIS/	PLDQ-R /AIS/
mm	eur	eur	eur	eur	eur	eur	eur	eur
150x150	40,51	54,09	54,68	68,27	43,83	57,39	59,16	72,73
225x225	45,01	58,55	60,76	74,30	48,55	62,09	65,55	79,10
300x300	53,35	67,67	72,03	86,35	57,13	71,46	77,13	91,46
375x375	58,85	74,42	79,45	95,02	62,91	78,48	84,92	100,50
450x450	69,54	86,72	93,87	111,07	73,86	91,05	99,70	116,89
525x525	80,31	97,54	108,41	125,65	84,89	102,13	114,61	131,85
600x600	86,65	103,87	116,97	134,21	91,72	108,95	123,82	141,05

(*)	eur
(O)	6,49

PLDQ

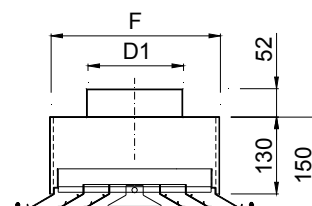


PLDQ/S

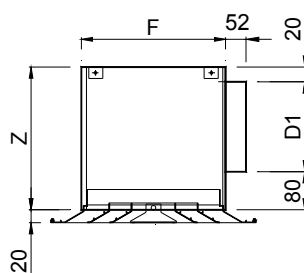


	F	Z	D1
150 x 150	256	275	125
225 x 225	332	300	158
300 x 300	406	375	198
375 x 375	480	375	248
450 x 450	555	450	313
525 x 525	630	490	313
600 x 600	705	490	313

DBQ+ADPQ



DBQ+ADPQ/L



DBQ+CQ (O)

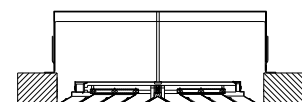


	F	D1
150 x 150	152	125
225 x 225	227	198
300 x 300	302	248
375 x 375	377	313
450 x 450	452	353
525 x 525	527	398
600 x 600	602	398

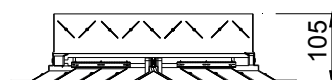
	F	Z	D1
150 x 150	152	225	125
225 x 225	227	260	158
300 x 300	302	300	198
375 x 375	377	350	248
450 x 450	452	415	315
525 x 525	527	455	355
600 x 600	602	455	355

L ó H	A
150	233
225	308
300	383
375	458
450	533
525	608
600	683

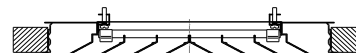
DBQ (P)+PMQ



DBQ+SPQ



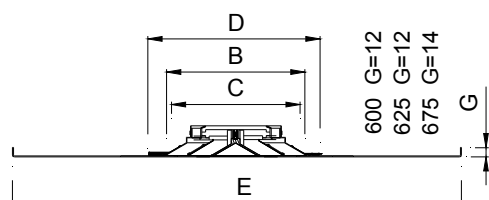
DBQ (O)



Modular four-way square diffusers

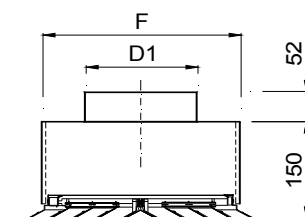
Technical data

DBQ-MOD



				600	625	675
	C	B	D	E	E	E
150 x 150	137	148	259	595	620	670
225 x 225	212	223	332	595	620	670
300 x 300	287	298	407	595	620	670
375 x 375	362	373	482	595	620	670
450 x 450	437	448	557	595	620	670

DBQ+ADPQ



	F	D1
150 x 150	152	125
225 x 225	227	198
300 x 300	302	248
375 x 375	377	313
450 x 450	452	353
525 x 525	527	398
600 x 600	602	398



Description

Four-Way diffusers in aluminium to be used in premises from 2,6 up to 4 metres high, specially designed to be mounted in modular ceilings.

DBQ-MOD Four-Way square diffuser with removable core.

.../T15/ False ceiling panel 15 mm profile with angled borders.

.../T24/ False ceiling panel 24 mm profile with angled borders.

Accessories

SPQ Opposed blades volume damper from black electro-zinc steel.

R3Q Flap damper, manually operated.

ADPQ Adapter to circular connection. Riveted to the diffuser.

...-R Air flow damper in the spigot.

.../L/ Lateral connection: see page DBQ series.

.../AIS/ Thermal insulation inside.

Fixing

1) Suspended at the false ceiling. To replace a false ceiling plate.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of fixed cones square diffuser series **DBQ-MOD R9016S dim. LxH**, designed to replace a false ceiling plate. Constructed from aluminium paint in white RAL 9016 (60-70% gloss) Manufacturer **MADEL**.

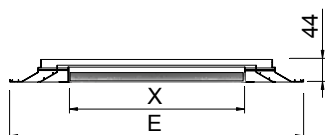
L x H	DBQ-MOD	DBQ-MOD	DBQ-MOD	DBQ-MOD	DBQ-MOD	DBQ-MOD	Lwa1	Lwa1
mm	600	625	675	/T/ 600	/T/ 625	/T/ 675	< 35 dB(A)	40 dB(A)
mm	eur	eur	eur	eur	eur	eur	m³/h	m³/h
150x150	55,20	60,24	69,79	64,73	70,38	81,28	125-175	225
225x225	64,24	69,26	78,81	73,76	79,40	90,29	250-350	450
300x300	74,18	79,19	88,79	83,72	89,34	100,26	435-610	785
375x375	84,75	89,78	99,35	94,27	99,91	110,83	625-875	1125
450x450	80,57	101,96	109,20	90,11	112,09	120,71	875-1225	1575

L x H	SPQ	R3Q	ADPQ	ADPQ-R	ADPQ	ADPQ-R
mm	eur	eur	eur	eur	AIS/ eur	AIS/ eur
150x150	7,88	10,15	40,51	54,09	54,68	68,27
225x225	10,69	12,10	45,01	58,55	60,76	74,30
300x300	13,92	13,92	53,35	67,67	72,03	86,35
375x375	18,27	15,75	58,85	74,42	79,45	95,02
450x450	22,60	17,00	69,54	86,72	93,87	111,07

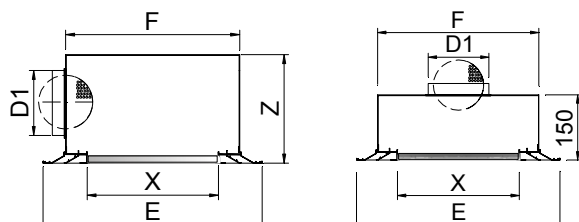
Decorative core modular diffusers

Technical data

DIMO



DIMO+PLMO...-R



	E	F	Z	X	D1
1 x 600	595	473	310	438	248
2 x 600	595	473	310	374	248
3 x 600	595	473	370	310	313
4 x 600	595	473	370	247	313
1 x 625	620	498	310	465	248
2 x 625	620	498	310	399	248
3 x 625	620	498	370	335	313
4 x 625	620	498	370	272	313
1 x 675	670	548	310	513	248
2 x 675	670	548	310	449	248
3 x 675	670	548	370	385	313
4 x 675	670	548	370	322	313



Description

Modular diffusers to be used from 2,6 up to 4 metres high. Diffuser with removable core to be replaced by a piece of false ceiling plate in order to integrate it to the maximum. Constructed from aluminium.

DIMO Four-Way diffuser for air supply.

Accessories

PLMO Plenum with an upper connection.

...-R Air flow damper in the spigot.

.../L/ Lateral connection.

.../AIS/ Thermal insulation inside.

Fixing

1) Suspended at the false ceiling.

P) Sidepieces to fix in ceiling.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of Four-Way modular diffuser for air supply with decorative core series **DIMO+PLMO/L/-R R9016S dim. 2x600** constructed from aluminium paint in white RAL 9016 (60-70% gloss) with lateral circular connection plenum box and air flow damper in the spigot. Manufacturer **MADEL**.



Dim.	DIMO	PLMO	PLMO-R	PLMO/L/	PLMO/L/-R	Lwa1 < 35 dB(A) m³/h	Lwa1= 45 dB(A) m³/h
mm	eur	eur	eur	eur	eur		
1x600	81,34	65,51	81,08	68,43	84,02	242-338	482
2x600	93,10	65,51	81,08	68,43	84,02	404-565	808
3x600	98,11	67,21	84,41	70,12	87,32	543-761	1087
4x600	109,08	67,21	84,41	70,12	87,32	660-922	1317
1x625	83,91	65,36	80,94	68,29	83,85	255-351	502
2x625	96,00	65,36	80,94	68,29	83,85	421-589	842
3x625	115,90	68,43	85,63	71,35	88,57	575-850	1150
4x625	127,19	68,43	85,63	71,35	88,57	685-960	1371
1x675	97,13	68,14	83,71	71,07	86,63	284-398	568
2x675	110,09	68,14	83,71	71,07	86,63	564-650	928
3x675	123,72	71,81	88,98	74,71	91,92	640-895	1280
4x675	135,75	71,81	88,98	74,71	91,92	770-1079	1542

Dim.	PLMO	PLMO-R	PLMO/L/	PLMO/L/-R
mm	/AIS/ eur	/AIS/ eur	/AIS/ eur	/AIS/ eur
1x600	88,44	104,01	92,40	107,96
2x600	88,44	104,01	92,40	107,96
3x600	90,73	107,93	94,66	111,88
4x600	90,73	107,93	94,66	111,88
1x625	88,24	103,82	92,18	107,76
2x625	88,24	103,82	92,18	107,76
3x625	92,40	109,58	96,33	113,53
4x625	92,40	109,58	96,33	113,53
1x675	91,97	107,55	95,94	111,51
2x675	91,97	107,55	95,94	111,51
3x675	96,93	114,10	100,87	118,04
4x675	96,93	114,10	100,87	118,04



Swirl diffusers

The diffusers NEX give color to the air

NEX diffusers designed by Lievore, Altherr & Molina at an affordable price

OTO diffuseurs. Superb organic design of Lievore, Altherr & Molina

Lievore,
Altherr
& Molina



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NEX-C circular concave elements swirl diffusers

OTO-S rectangular curved vents swirl diffusers

OTO-C circular curved vents swirl diffusers

RXO-S rectangular fixed vanes swirl diffusers

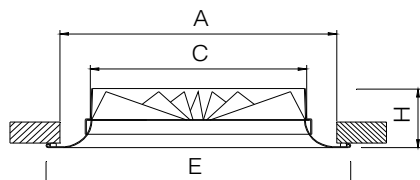
RXO-KLIN accessible RXO-S diffusers

RXO-C circular fixed vanes swirl diffusers

Fixed blades swirl diffusers

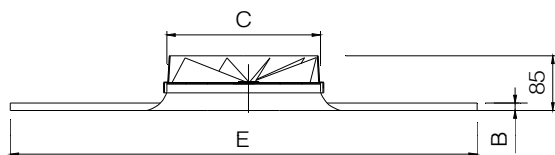
Technical data

AXP



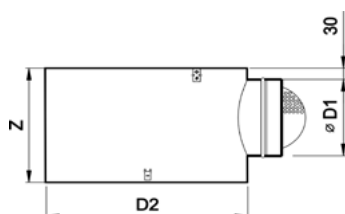
Ø	E	A	C	H
125	230	192	123	75
160	262	227	158	75
200	305	270	198	75
250	355	320	248	75
315	418	383	313	85

AXP-MOD

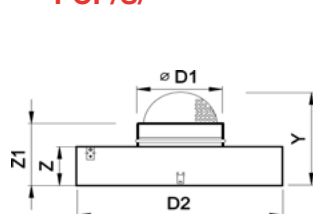


		MOD/600		MOD/625		MOD/675	
	C	E	B	E	B	E	B
125	123	595	12	620	12	670	15
160	158	595	12	620	12	670	15
200	198	595	12	620	12	670	15
250	248	595	12	620	12	670	15
315	313	595	12	620	12	670	15

POP/L/



POP/S/



POP	D2	D1	POP/L/	POP/S/		
			Z	Z	Z1	Y
125	135	98	200	120	153	189
160	170	123	225	130	163	212
200	210	158	260	145	178	244
250	260	198	300	170	203	289
315	325	248	350	190	223	334



Description

Circular swirl diffusers with fixed blades to be used from 2,6 up to 4 metres high. Constructed from aluminium.

AXP Circular swirl diffuser.

AXP-MOD Diffuser specially designed for modular ceilings.

.../T15...24/ Panel with angled borders for ceiling profile 15 or 24 mm.

Accessories

POP/L/ Cylindrical plenum box with a lateral circular connection.

Constructed from galvanized steel.

.../S/ Upper circular connection.

...-R Air flow damper in the spigot.

.../AIS/ Thermal insulation inside. Reaction to fire classification B-s1,d0 EN 13501-1.

.../RAL/ Plenum box painted RAL colours.

PMX Crossbar for mounting in false ceiling with rectangular duct.

Fixing

1) Connection into a circular metallic duct by means of rivets.

(P) Connection into the crossbar or to the plenum box by means of central screw.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9006M Painted aluminum color RAL 9006 matt (20-30% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of circular swirl diffuser with fixed blades series

AXP+POP/L/-R R9016S dim.125 constructed from aluminium paint in white RAL 9016 (60-70% gloss), cylindrical plenum box with a lateral circular connection with air flow damper. Manufacturer **MADEL**.

Ø	AXP	PMX	Lwa1 < 30 dB(A)	Lwa1 = 35 dB(A)	Lwa1 = 40 dB(A)
mm	eur	eur	m³/h	m³/h	m³/h
125	53,24	3,16	55-100	120	140
160	53,80	3,27	80-160	190	220
200	58,81	3,55	120-180	220	270
250	66,31	4,12	175-260	320	390
315	93,31	4,68	345-420	490	590

Ø	AXP-MOD 600	AXP-MOD 625	AXP-MOD 675	Lwa1 < 30 dB(A)	Lwa1 = 35 dB(A)	Lwa1 = 40 dB(A)
mm	eur	eur	eur	m³/h	m³/h	m³/h
125	79,27	84,78	86,42	55-100	120	140
160	79,84	85,32	86,95	80-160	190	220
200	83,52	89,14	90,63	120-180	220	270
250	85,85	91,42	92,97	175-260	320	390
315	111,09	115,00	118,17	345-420	490	590

Ø	AXP-MOD /T/ 600	AXP-MOD /T/ 625	AXP-MOD /T/ 675	Lwa1 < 30 dB(A)	Lwa1 = 35 dB(A)	Lwa1 = 40 dB(A)
mm	eur	eur	eur	m³/h	m³/h	m³/h
125	88,91	95,02	97,96	55-100	120	140
160	89,46	95,59	98,55	80-160	190	220
200	93,12	99,36	102,21	120-180	220	270
250	95,49	101,65	104,56	175-260	320	390
315	120,69	89,96	129,78	345-420	490	590

Ø mm	POP/L/ eur	POP/L-R eur	POP/L/AIS eur	POP/L-R/AIS eur	RAL supplement eur
125	53,56	66,63	67,33	80,40	14,65
160	54,30	67,37	68,08	81,15	15,40
200	58,44	72,00	74,91	88,47	16,50
250	63,68	77,99	83,71	98,02	18,08
315	71,18	86,81	96,30	111,93	20,56

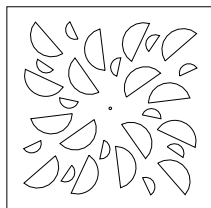
Ø mm	POP/S/ eur	POP/S-R eur	POP/S/AIS eur	POP/S-R/AIS eur	RAL supplement eur
125	35,83	48,90	48,46	61,53	13,18
160	36,58	49,65	49,21	62,28	13,93
200	40,03	53,59	54,99	68,55	14,29
250	42,18	56,49	60,10	74,40	14,77
315	46,34	61,97	68,28	83,91	15,50


POP/L/

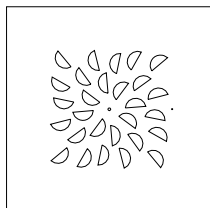

Concave elements swirl diffusers

Technical data

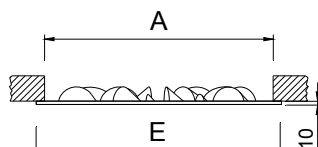
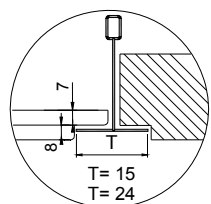
NEX-S



NEX-S.../SR/



NEX-S.../T/



	E	A
400	395	376
500	495	476
600	595	576
610	605	591
625	620	601
675	670	651



Description

Swirl diffusers with fixed concave elements to be used from 2,6 up to 4 metres high. Constructed from galvanised steel and diffusion elements in ABS plastic.

- NEX-S** Square diffuser with black ABS elements.
- .../SR/** Reduced supply area.
- .../T15/** False ceiling panel 15 mm profile with angled borders.
- .../T24/** False ceiling panel 24 mm profile with angled borders.

Accessories

- PMXO** Crossbar suitable for mounting in false ceiling with rectangular duct.
- BOXSTAR** Pyramidal plenum box with a lateral connection.
- ...-R** Air flow damper in the spigot.
- .../S/** Upper connection.
- .../AIS/** Thermal insulation inside.
- BOXTHERM** Plenum box thermo accoustically insulated with a lateral circular connection.
- ...-R** Plenum box with a flow damper in the spigot.

Fixing

- 1) Connection into the crossbar or to the plenum box by means of central screw.

Finishes

- R9016S** Painted white RAL 9016 semi-matt (60-70% gloss)
- R9010S** Painted white RAL 9010 semi-matt (60-70% gloss)
- R9016B** Painted white RAL 9016 glossy (85-95% gloss)
- RAL...** Painted in other RAL colours : see INFO page.
- .../EB/** ABS plastic elements in white.
- .../EL/** ABS plastic elements in lavanda blue.
- .../EV/** ABS plastic elements in pistachio green.
- .../ER/** ABS plastic elements in red.

Specification Text

Supply and mounting of square swirl diffuser with fixed concave elements in radial disposition series **NEX-S+BOXSTAR-R R9016S dim. 600** constructed from galvanised steel paint in white RAL 9016 (60-70% gloss) and diffusion elements in black ABS. With lateral circular connection pyramidal plenum box and air flow damper in the spigot. Manufacturer **MADEL**.



Dim. mm	NEX-S eur	NEX-S / T.../ eur	Lwa1 < 35 dB(A) m³/h	Lwa1 = 40 dB(A) m³/h	Lwa1 = 45 dB(A) m³/h
400	48,29	55,27	175-230	290	360
500	59,49	69,05	290-375	470	595
600	61,67	71,31	430-560	700	880
610	63,66	73,55	430-560	700	880
625	65,65	75,82	430-560	700	880
675	68,78	80,35	430-560	700	880
/SR/ 600-400	52,38	62,00	175-230	290	360
/SR/ 600-500	62,09	71,73	290-375	470	595
/SR/ 610-400	54,09	63,99	175-230	290	360
/SR/ 610-500	63,41	73,30	290-375	470	595
/SR/ 625-400	55,80	65,99	175-230	290	360
/SR/ 625-500	64,72	74,90	290-375	470	595
/SR/ 675-400	59,42	71,00	175-230	290	360
/SR/ 675-500	68,33	79,90	290-375	470	595

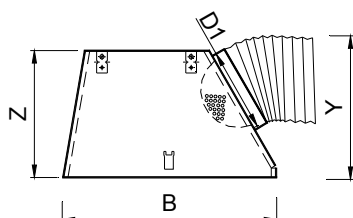
Dim. mm	BOXSTAR eur	BOXSTAR-R eur	BOXSTAR/AIS/ eur	BOXSTAR-R/AIS/ eur	PMXO eur
400	44,59	58,93	60,19	74,54	4,07
500	57,36	71,71	77,44	91,79	4,61
600 (D1:250)	68,01	83,59	91,82	107,39	5,07
600 (D1:200)	67,08	81,43	90,54	104,90	5,07
610 (D1:250)	68,75	84,32	92,81	108,38	5,25
610 (D1:200)	67,67	82,04	91,38	105,72	5,25
625 (D1:250)	69,46	85,03	93,80	109,35	5,39
625 (D1:200)	68,29	82,63	92,18	106,53	5,39
675 (D1:250)	80,02	97,21	108,04	125,22	17,40
675 (D1:200)	78,86	93,20	106,48	120,81	17,40

Dim. mm	BOXTHERM eur	BOXTHERM-R eur
600 (D1:250)	56,22	71,21
600 (D1:200)	54,81	68,60

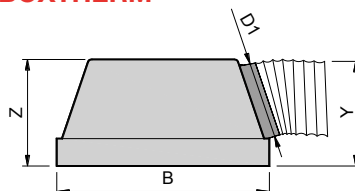
Nota: Difusores de 610 compatibles con BOXTHERM 600.

Note: Size 610 diffusers compatible with BOXTHERM 600.

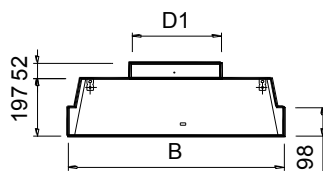
BOXSTAR



BOXTHERM



BOXSTAR/S



	Z	D1
BOXTHERM 600-DIAM250	350	248
BOXTHERM 600-DIAM200	300	198

	B	Z	Y	D1
400	390	300	325	198
500	490	300	325	198
600-D1:250	590	350	375	248
600-D1:200	590	300	325	198
610-D1:250	600	350	375	248
610-D1:200	600	300	325	198
625-D1:250	615	350	375	248
625-D1:200	615	300	325	198
675-D1:250	665	350	375	248
675-D1:200	665	300	325	198

Accessible concave elements swirl diffusers

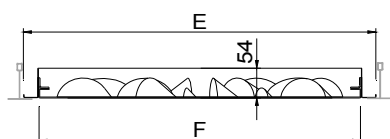
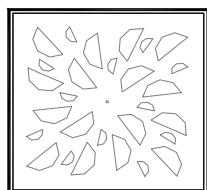


Lievore,
Altherr
& Molina



Technical data

NEX-S-KLIN



	E	A	F
400	395	369	345
500	495	469	445
600	595	569	545
610	605	579	555
625	620	594	570
675	670	644	620
600-400	595	569	545
600-500	595	569	545
610-400	605	579	555
610-500	605	579	555
625-400	620	594	570
625-500	620	594	570
675-400	670	644	620
675-500	670	644	620



Description

Swirl diffusers with fixed concave elements to be used from 2,6 up to 4 metres high, with hinged removable core without tools, by pressing on the invisible PUSH fasteners. KLIN system allows for the easy access to the diffuser that conforms with the regulations required for maintenance of HVAC systems. Constructed from galvanised steel and diffusion elements in ABS plastic.

NEX-S-KLIN Diffuser with black ABS elements.

.../SR/ Reduced supply area.

Accessories

PLK Plenum box with an upper connection.

...-R Air flow damper in the spigot.

.../L/ Lateral connection.

.../AIS/ Thermal insulation inside.

Fixing

1) Suspended at the false ceiling.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

.../EB/ ABS plastic elements in white.

.../EL/ ABS plastic elements in lavanda blue.

.../EV/ ABS plastic elements in pistachio green.

.../ER/ ABS plastic elements in red.

Specification Text

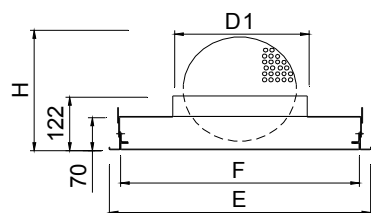
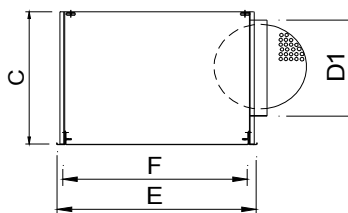
Supply and mounting of square swirl diffuser with fixed concave elements with hinged removable core without tools, by PUSH fasteners series **NEX-S-KLIN+PLK-R R9016S dim. (mm)** constructed from galvanised paint in white RAL 9016 (60-70% gloss) and diffusion elements in black ABS. With upper circular connection plenum box and air flow damper in the spigot. Manufacturer **MADEL**.



Dim.	NEX-S-KLIN	Lwa1< 35 dB(A)	Lwa1= 40 dB(A)	Lwa1= 45 dB(A)
mm	eur	m³/h	m³/h	m³/h
400	65,25	175-230	290	360
500	77,99	290-375	470	595
600	82,13	430-560	700	880
610	84,23	430-560	700	880
625	86,31	430-560	700	880
675	89,86	430-560	700	880
/SR/ 600-400	73,65	175-230	290	360
/SR/ 600-500	82,57	290-375	470	595
/SR/ 610-400	75,07	175-230	290	360
/SR/ 610-500	84,10	290-375	470	595
/SR/ 625-400	76,49	175-230	290	360
/SR/ 625-500	85,62	290-375	470	595
/SR/ 675-400	80,50	175-230	290	360
/SR/ 675-500	89,39	290-375	470	595

Dim.	PLK	PLK-R	PLK /AIS/	PLK-R /AIS/
mm	eur	eur	eur	eur
400	39,39	56,11	53,18	69,92
500	43,99	62,24	59,39	77,64
600	51,58	71,34	69,63	89,38
610	52,02	71,77	70,23	90,00
625	52,44	72,25	70,80	90,61
675	55,47	72,68	74,89	92,09

Dim.	PLK/L/	PLK/L/-R	PLK/L/AIS/	PLK/L/-R/AIS/
mm	eur	eur	eur	eur
400	55,53	69,82	74,97	89,27
500	58,85	74,42	79,45	95,02
600	70,12	87,32	94,66	111,86
610	70,74	87,95	95,49	112,69
625	71,35	88,60	96,32	113,56
675	74,71	91,92	100,87	118,06

NEX-S-KLIN+PLK...-R

NEX-S-KLIN+PLK/L/...-R


	E	F	D1	H	C
400	395	365	198	205	320
500	495	465	248	286	370
600	595	565	313	353	435
610	605	575	313	353	435
625	620	590	313	353	435
675	670	640	313	353	435

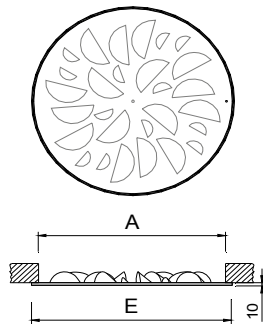
Concave elements swirl diffusers

Lievore,
Altherr
& Molina



Technical data

NEX-C



	E	A
400	400	376
500	500	476
625	625	601



Description

Circular swirl diffusers with fixed concave elements to be used from 2,6 up to 4 metres high. Constructed from galvanised steel and diffusion elements in ABS plastic.

NEX-C Circular diffuser with black ABS elements.

Accessories

POX/L/ Cylindrical plenum box with a lateral circular connection. Constructed from galvanized steel.

.../S/ Upper circular connection.

...-R Air flow damper in the spigot (COR required)

.../AIS/ Thermal insulation inside. Reaction to fire classification B-s1,d0 EN 13501-1.

.../RAL/ Plenum box painted RAL colours : see INFO page.

COR Cords to regulate the damper type-R from the face of the diffuser.

PMXO Crossbar for mounting in false ceiling with rectangular duct.

Fixing

1) Connection into the crossbar or to the plenum box by means of central screw.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

.../EB/ ABS plastic elements in white.

.../EL/ ABS plastic elements in lavanda blue.

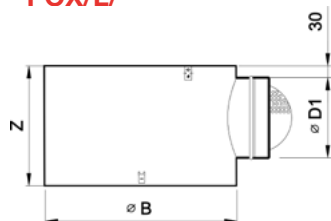
.../EV/ ABS plastic elements in pistachio green.

.../ER/ ABS plastic elements in red.

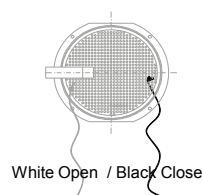
Specification Text

Supply and mounting of circular swirl diffuser with fixed concave elements in radial disposition series **NEX-C+POX/L/ R9016S** **dim. 625** constructed from galvanised steel paint in white RAL 9016 (60-70% gloss) and diffusion elements in black ABS. With lateral circular connection plenum box. Manufacturer **MADEL**.

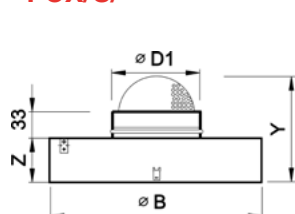
POX/L/



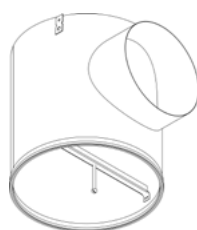
COR



POX/S/



POX/L/



POX/L	B	Z	D1
400	386	300	198
500	486	300	198
625	611	350	248

POX/S/	B	Y	Z	D1
400	386	258	140	198
500	486	258	140	198
625	611	343	200	248

Dim.	NEX-C	POX/L/	POX/L/-R	POX/L/ /AIS/	POX/L/-R /AIS/	POX/S/	POX/S/-R	POX/S/AIS/	POX/S/-R/AIS/	PMXO	Lwa1 < 35 dB(A)	Lwa1= 40 dB(A)	Lwa1= 45 dB(A)
mm	eur	eur	eur	eur	eur	eur	eur	eur	eur	eur	m³/h	m³/h	m³/h
400	56,21	66,78	81,11	93,33	107,66	42,97	57,3	65,18	79,51	4,07	175-230	290	360
500	67,16	72,83	87,16	106,35	120,68	47,57	61,9	75,75	90,08	4,61	290-375	470	595
625	78,36	84,45	100,04	128,98	144,57	55,16	70,75	91,43	107,02	5,39	430-560	700	880

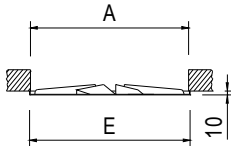
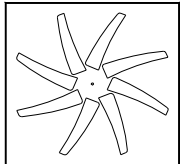
eur	
COR	5,09

Curved vents swirl diffusers for modular ceiling

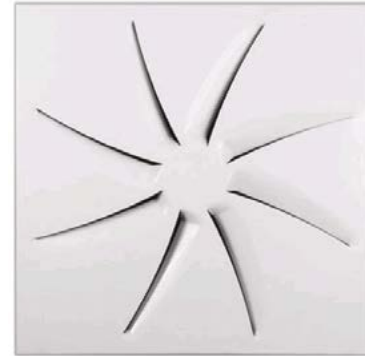
Lievore,
Altherr
& Molina

Technical data

OTO-S



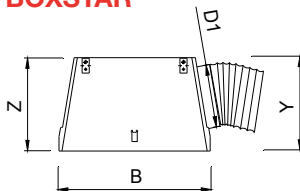
	E	A
600	595	569
610	605	579
625	620	594



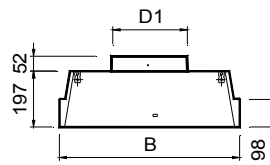
Description

Swirl diffusers with curved vents in radial configuration to be used from 2,6 up to 4 metres high. Constructed from galvanised steel.

BOXSTAR

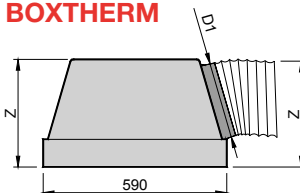


BOXSTAR/S



	B	Z	Y	D1
600-D1:250	590	350	375	248
600-D1:200	590	300	325	198
610-D1:250	600	350	375	248
610-D1:200	600	300	325	198
625-D1:250	615	350	375	248
625-D1:200	615	300	325	198

BOXTHERM



	Z	D1
BOXTHERM 600-DIAM250	350	248
BOXTHERM 600-DIAM200	300	198

Nota: Difusores de 610 compatibles con BOXTHERM 600.

Note: Size 610 diffusers compatible with BOXTHERM 600.

Accessories

BOXSTAR Pyramidal plenum box with a lateral connection.

...-R Air flow damper in the spigot (COR required)

.../S/ Upper connection.

.../AIS/ Thermal insulation inside.

BOXTHERM Plenum box thermo accoustically insulated with a lateral circular connection.

...-R Plenum box with a flow damper in the spigot.

COR Set of 2 cords to regulate the plenum damper type-R from the face of the diffuser.

Fixing

1) Connection to the plenum box by means of central screw.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of square swirl diffuser with curved vents in radial configuration series **OTO-S+BOXSTAR R9016S dim. mm** constructed from galvanised steel paint in white RAL 9016 (60-70% gloss) with lateral circular connection pyramidal plenum box. Manufacturer **MADEL**.

Dim. mm	OTO-S eur	OTO-S /T/ eur	COR eur	Lwa1 < 35 dB(A) m³/h	Lwa1 = 40 dB(A) m³/h	Lwa1 = 45 dB(A) m³/h
600	55,17	58,82	5,09	325-390	470	570
610	59,97	63,69	5,09	325-390	470	570
625	64,85	68,54	5,09	325-390	470	570

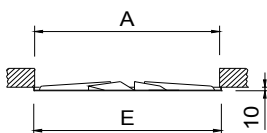
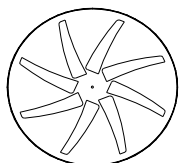
Dim. mm	BOXSTAR eur	BOXSTAR-R eur	BOXSTAR/AIS/ eur	BOXSTAR-R/AIS/ eur	BOXTHERM eur	BOXTHERM-R eur
600 (D1:250)	68,01	83,59	91,83	107,40	56,22	71,21
600 (D1:200)	67,08	81,43	90,54	104,90	54,81	68,60
610 (D1:250)	68,75	84,32	92,80	108,37	-	-
610 (D1:200)	67,67	82,04	91,38	105,72	-	-
625 (D1:250)	69,46	85,03	93,80	109,35	-	-
625 (D1:200)	68,29	93,20	92,19	106,54	-	-

Curved vents swirl diffusers for continuous ceiling

Lievore,
Altherr
& Molina

Technical data

OTO-C



	E	A
625	625	601



Description

Swirl diffusers with curved vents in radial configuration to be used from 2,6 up to 4 metres high. Constructed from galvanised steel.

OTO-C Circular diffuser. Designed for continuous ceiling mounting.

Accessories

POX/L/ Cylindrical plenum box with a lateral circular connection. Constructed from galvanized steel.

.../S/ Upper circular connection.

...-R Air flow damper in the spigot (COR required)

.../AIS/ Thermal insulation inside. Reaction to fire classification B-s1,d0 EN 13501-1.

.../RAL/ Plenum box painted RAL colours : see INFO page.

COR Cords to regulate the damper type-R from the face of the diffuser.

PMXO Crossbar for mounting in false ceiling with rectangular duct.

Fixing

1) Connection into the crossbar or to the plenum box by means of central screw.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

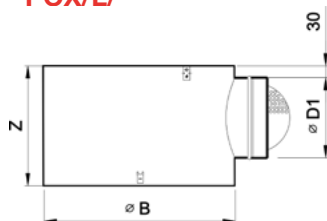
R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

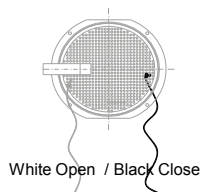
Specification Text

Supply and mounting of circular swirl diffuser with curved vents in radial configuration series **OTO-C+POX/L/ R9016S dim. 625** constructed from galvanised steel paint in white RAL 9016 (60-70% gloss) with lateral circular connection plenum box. Manufacturer **MADEL**.

POX/L/

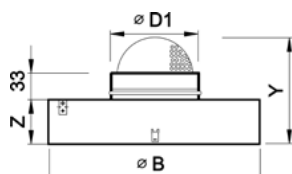


COR

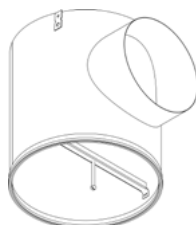


White Open / Black Close

POX/S/



POX/L/



POX/L/	B	Z	D1
625	611	350	248

POX/S/	B	Y	Z	D1
625	611	343	200	248

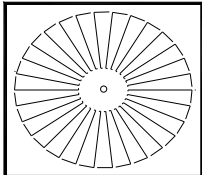
Dim.	OTO-C	Lwa1 < 35 dB(A)	Lwa1 = 40 dB(A)	Lwa1 = 45 dB(A)
mm	eur	m³/h	m³/h	m³/h
625	72,65	325-390	470	570

Diam.	POX/L/	POX/L/-R	POX/L/ /AIS/	POX/L/-R /AIS/	POX/S/	POX/S/-R	POX/S/AIS/	POX/S/-R/AIS/	PMXO	COR
mm	eur	eur	eur	eur	eur	eur	eur	eur	eur	eur
625	84,45	100,04	128,98	144,57	55,16	70,75	91,43	107,02	5,39	5,09

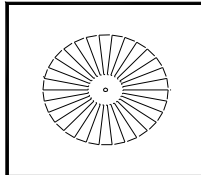
Fixed vanes swirl diffusers

Technical data

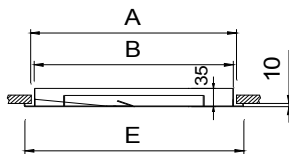
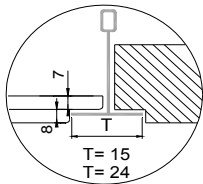
RXO-S



RXO-S/SR/



RXO-S.../T/



	E	A	B
400	395	370	340
500	495	470	440
600	595	568	538
610	605	568	538
625	620	568	538
675	670	568	538



Description

Square swirl diffuser with fixed blades to be used from 2,6 up to 4 metres high. Constructed from galvanised steel.

RXO-S Diffuser with radial vanes.

.../SR/ Reduced supply area.

.../T15/ False ceiling panel 15 mm profile with angled borders.

.../T24/ False ceiling panel 24 mm profile with angled borders.

Accessories

PMXO Crossbar suitable for mounting in false ceiling with rectangular duct.

BOXSTAR Pyramidal plenum box with a lateral connection.

...-R Air flow damper in the spigot.

.../S/ Upper connection.

.../AIS/ Thermal insulation inside.

BOXTHERM Plenum box thermo accoustically insulated with a lateral circular connection.

...-R Plenum box with a flow damper in the spigot.

Fixing

1) Connection into the crossbar or to the plenum box by means of central screw.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of square swirl diffuser with fixed blades with radial vanes series **RXO-S+BOXSTAR-R R9016S dim. mm** constructed from galvanised steel paint in white RAL 9016 (60-70% gloss) with lateral circular connection pyramidal plenum box and air flow damper in the spigot. Manufacturer **MADEL**.



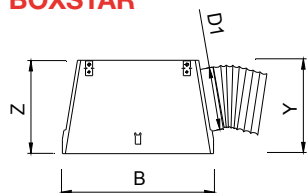
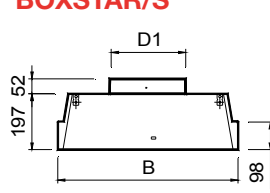
Dim. mm	RXO-S eur	RXO-S /T/ eur	Lwa1 < 35 dB(A) m³/h	Lwa1= 40 dB(A) m³/h	Lwa1= 45 dB(A) m³/h
400	61,54	68,84	150-280	340	410
500	76,59	84,88	300-405	490	600
600	83,40	92,83	450-585	695	820
610	85,46	94,99	450-585	695	820
625	87,51	97,13	450-585	695	820
675	90,52	102,12	450-585	695	820
/SR/ 600-400	79,49	88,94	150-280	340	410
/SR/ 600-500	85,06	94,49	300-405	490	600
/SR/ 610-400	80,39	89,89	150-280	340	410
/SR/ 610-500	85,84	95,37	300-405	490	600
/SR/ 625-400	81,29	90,86	150-280	340	410
/SR/ 625-500	86,64	96,23	300-405	490	600
/SR/ 675-400	86,58	98,16	150-280	340	410
/SR/ 675-500	92,16	103,74	300-405	490	600

Dim. mm	BOXTHERM eur	BOXTHERM-R eur
600 (D1:250)	56,22	71,21
600 (D1:200)	54,81	68,60

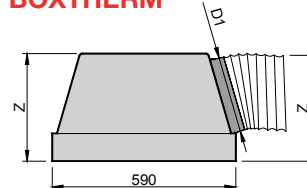
Nota: Difusores de 610 compatibles con BOXTHERM 600.

Note: Size 610 diffusers compatible with BOXTHERM 600.

Dim. mm	BOXSTAR eur	BOXSTAR-R eur	BOXSTAR/AIS/ eur	BOXSTAR-R/AIS/ eur	PMXO eur
400	44,59	58,93	60,19	74,54	4,07
500	57,36	71,71	77,44	91,79	4,61
600 (D1:250)	68,01	83,59	91,82	107,39	5,07
600 (D1:200)	67,08	81,43	90,54	104,90	5,07
610 (D1:250)	68,75	84,32	92,81	108,38	5,25
610 (D1:200)	67,67	82,04	91,38	105,72	5,25
625 (D1:250)	69,46	85,03	93,80	109,35	5,39
625 (D1:200)	68,29	82,63	92,18	106,53	5,39
675 (D1:250)	80,02	97,21	108,04	125,22	17,40
675 (D1:200)	78,86	93,20	106,48	120,81	17,40

BOXSTAR

BOXSTAR/S


	B	Z	Y	D1
400	390	300	325	198
500	490	300	325	198
600-D1:250	590	350	375	248
600-D1:200	590	300	325	198
610-D1:250	600	350	375	248
610-D1:200	600	300	325	198
625-D1:250	615	350	375	248
625-D1:200	615	300	325	198
675-D1:250	665	350	375	248
675-D1:200	665	300	325	198

BOXTHERM


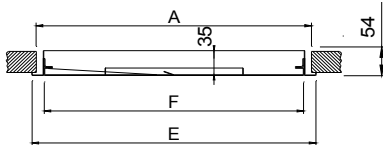
	Z	D1
BOXTHERM 600-DIAM250	350	248
BOXTHERM 600-DIAM200	300	198

Accessible fixed vanes swirl diffusers

klin
SYSTEM

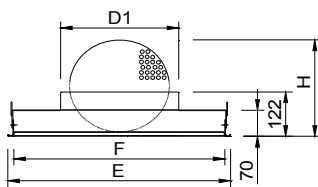
Technical data

RXO-S-KLIN



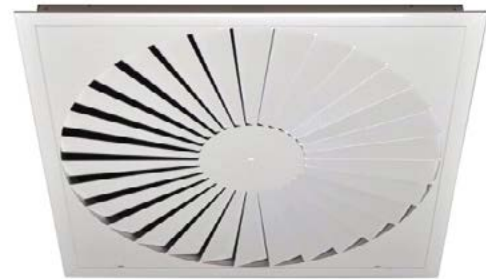
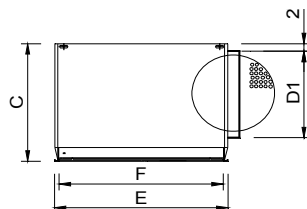
	E	A	F
400	395	369	345
500	495	469	445
600	595	569	545
610	605	579	555
625	620	594	570
675	670	644	620
600-400	595	569	545
600-500	595	569	545
610-400	605	579	555
610-500	605	579	555
625-400	620	594	570
625-500	620	594	570
675-400	670	644	620
675-500	670	644	620

RXO-KLIN+PLK...-R



	E	F	D1	H	C
400	395	365	198	205	320
500	495	465	248	286	370
600	595	565	313	353	435
610	605	575	313	353	435
625	620	590	313	353	435
675	670	640	313	353	435

RXO-KLIN+PLK/L/...-R



Description

Swirl diffuser with fixed blades to be used in premises from 2,6 up to 4 metres high, with hinged removable core without tools, by pressing on the invisible PUSH fasteners. KLIN system allows for the easy access to the diffuser that conforms with the regulations required for maintenance of HVAC systems. Constructed from galvanised steel.

RXO-S-KLIN Fixed blade diffuser.

Accessories

PLK Plenum with an upper connection.

...-R Air flow damper in the spigot.

.../L/ Lateral connection.

.../AIS/ Thermal insulation inside.

Fixing

1) Suspended at the false ceiling.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of square swirl diffuser with fixed blades with hinged removable core without tools, by pressing on the invisible PUSH fasteners series **RXO-S-KLIN+PLK-R R9016S dim. (mm)** constructed from galvanised steel paint in white RAL 9016 (60-70% gloss) with upper circular connection plenum box and air flow damper in the spigot. Manufacturer **MADEL**.

Dim. mm	RXO-S-KLIN eur	Lwa1 < 35 dB(A) m³/h	Lwa1= 40 dB(A) m³/h	Lwa1= 45 dB(A) m³/h
400	79,15	150-280	340	410
500	94,17	300-405	490	600
600	101,02	450-585	695	820
610	103,07	450-585	695	820
625	105,11	450-585	695	820
675	108,13	450-585	695	820
/SR/ 600-400	97,12	150-280	340	410
/SR/ 600-500	102,66	300-405	490	600
/SR/ 610-400	97,99	150-280	340	410
/SR/ 610-500	103,44	300-405	490	600
/SR/ 625-400	98,87	150-280	340	410
/SR/ 625-500	104,22	300-405	490	600
/SR/ 675-400	104,10	150-280	340	410
/SR/ 675-500	109,66	300-405	490	600

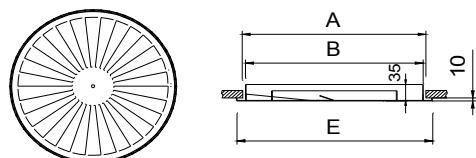
Dim. mm	PLK eur	PLK-R eur	PLK /AIS/ eur	PLK-R /AIS/ eur
400	39,39	56,11	53,18	69,92
500	43,99	62,24	59,39	77,64
600	51,58	71,34	69,63	89,38
610	52,02	71,77	70,23	90,00
625	52,44	72,25	70,80	90,61
675	55,47	72,68	74,89	92,09

Dim. mm	PLK/L/ eur	PLK/L/-R eur	PLK/L/AIS/ eur	PLK/L/-R/AIS/ eur
400	55,53	69,82	74,97	89,27
500	58,85	74,42	79,45	95,02
600	70,12	87,32	94,66	111,86
610	70,74	87,95	95,49	112,69
625	71,35	88,60	96,32	113,56
675	74,71	91,92	100,87	118,06

Fixed vanes swirl diffusers

Technical data

RXO-C



	E	A	B
400	400	370	340
500	500	470	440
625	625	568	538



Description

Circular swirl diffuser with fixed blades to be used from 2,6 up to 4 metres high. Constructed from galvanised steel.

RXO-C Diffuser with radial vanes.

Accessories

POX/L/ Cylindrical plenum box with a lateral circular connection. Constructed from galvanized steel.

.../S/ Upper circular connection.

...-R Air flow damper in the spigot (COR required)

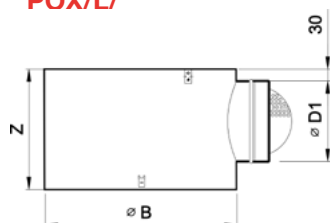
.../AIS/ Thermal insulation inside. Reaction to fire classification B-s1,d0 EN 13501-1.

.../RAL/ Plenum box painted RAL colours : see INFO page.

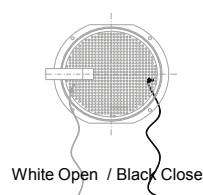
COR Cords to regulate the damper type-R from the face of the diffuser.

PMXO Crossbar for mounting in false ceiling with rectangular duct.

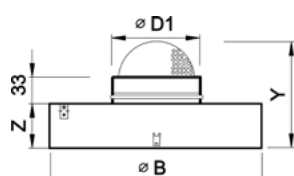
POX/L/



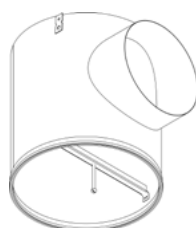
COR



POX/S/



POX/L/



POX/L	B	Z	D1
400	386	300	198
500	486	300	198
625	611	350	248

POX/S/	B	Y	Z	D1
400	386	258	140	198
500	486	258	140	198
625	611	343	200	248

Fixing

1) Connection into the crossbar or to the plenum box by means of central screw.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of circular swirl diffuser with fixed blades with radial vanes series **RXO-C+POX/L/-R R9016S dim. 625** constructed from galvanised steel paint in white RAL 9016 (60-70% gloss) with lateral circular connection plenum box and air flow damper in the spigot. Manufacturer **MADEL**.

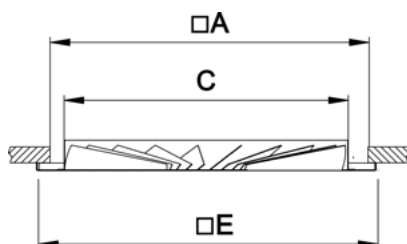
Dim.	RXO-C	POX/L/	POX/L/-R	POX/L/ /AIS/	POX/L/-R /AIS/	POX/S/	POX/S/-R	POX/S/AIS/	POX/S/-R/AIS/	PMXO	Lwa1< 35 dB(A)	Lwa1= 40 dB(A)	Lwa1= 45 dB(A)
mm	eur	eur	eur	eur	eur	eur	eur	eur	eur	eur	m³/h	m³/h	m³/h
400	63,59	66,78	81,11	93,33	107,66	42,97	57,3	65,18	79,51	4,07	150-280	340	410
500	76,45	72,83	87,16	106,35	120,68	47,57	61,9	75,75	90,08	4,61	300-405	490	600
625	87,13	84,45	100,04	128,98	144,57	55,16	70,75	91,43	107,02	5,39	450-585	695	820

COR	eur
	5,09

Fixed vanes swirl diffusers

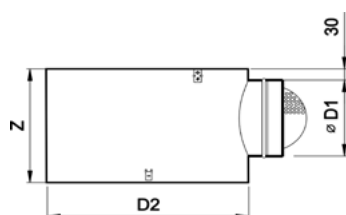
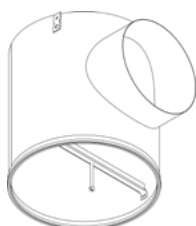
Technical data

REX-S

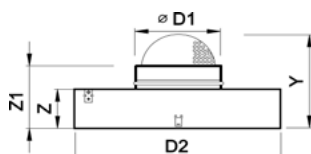


	C	E	A
300-160	156	295	280
300-200	196	295	280
400-250	246	395	280
400-315	311	395	376
500-355	351	495	376
500-400	396	495	476
600-160	156	595	576
600-200	196	595	576
600-250	246	595	576
600-315	311	595	576
600-355	351	595	576
600-400	396	595	576

POP/L/



POP/S/



POP	D2	D1	POP/L/	POP/S/		
			Z	Z	Z1	Y
160	170	123	225	130	163	212
200	210	158	260	145	178	244
250	260	198	300	170	203	289
315	325	248	350	190	223	334
355	365	313	415	225	258	402
400	410	313	415	225	258	402



Description

Swirl diffusers with circular connection neck and fixed, for ceiling mounting. Suitable to be used from 2,6 up to 4 meters high and at a temperature differential up to 12°C. Constructed from galvanized steel. Provided with a perimeter sealing gasket.

REX-S Square diffuser with fixed vanes in radial arrangement.

Accessories

POX/L/ Cylindrical plenum box with a lateral circular connection. Constructed from galvanized steel.

.../S/ Upper circular connection.

...-R Air flow damper in the spigot.

.../AIS/ Thermal insulation inside. Reaction to fire classification B-s1,d0 EN 13501-1.

.../RAL/ Plenum box painted RAL colours.

PMXO Crossbar for mounting in false ceiling without plenum box.

Fixing

1) Connection to the crossbar or plenum box via a central screw.

Finishes

R9010S Painted white RAL 9010 (60-70% gloss)

R9016S Painted white RAL 9016 (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of squarer swirl diffuser with circular connection neck and fixed vanes, series **REX-S+POP/L/-R R9010S dim. 600-400** constructed from galvanised steel paint in white RAL 9010 (60-70% gloss). Circular plenum box with a lateral connection and air flow damper in the spigot. Manufacturer **MADEL**.

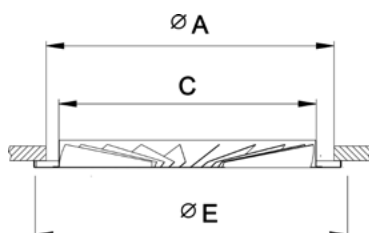
Diffuser size mm	Diffuser diameter mm	REX-S eur	PMXO eur	Lwa1 < 30 dB(A) m3/h	Lwa1 = 35 dB(A) m3/h	Lwa1 = 40 dB(A) m3/h
300	160	38,84	4,01	50-95	110	140
300	200	41,34	4,01	75-135	165	180
400	250	43,70	4,07	120-200	250	300
400	315	45,96	4,07	220-335	400	500
500	355	65,83	4,61	250-390	470	560
500	400	67,59	4,61	310-430	530	610
600	160	50,59	4,61	50-95	110	140
600	200	53,10	5,07	75-135	165	180
600	250	55,05	5,07	120-200	250	300
600	315	57,31	5,07	220-335	400	500
600	355	68,42	5,07	250-390	470	560
600	400	70,18	5,07	310-430	530	610

Diffuser diameter mm	POP/L/ eur	POP/L-R eur	POP/L/AIS eur	POP/L-R/AIS eur	RAL Supplement eur
160	54,30	67,37	68,08	81,15	15,40
200	58,44	72,00	74,91	88,47	16,50
250	63,68	77,99	83,71	98,02	18,08
315	71,18	86,81	96,30	111,93	20,56
355	75,35	92,60	103,27	120,52	21,77
400	80,24	97,49	111,46	128,71	23,27

Diffuser diameter mm	POP/S/ eur	POP/S-R eur	POP/S/AIS eur	POP/S-R/AIS eur	RAL Supplement eur
160	36,58	49,65	49,21	62,28	13,93
200	40,03	53,59	54,99	68,55	14,29
250	42,18	56,49	60,10	74,40	14,77
315	46,34	61,97	68,28	83,91	15,50
355	48,79	66,04	73,09	90,34	15,88
400	51,52	68,77	78,52	95,77	16,34

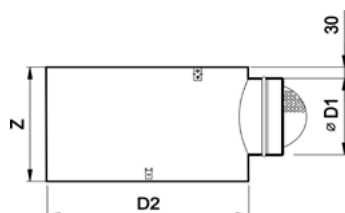
Fixed vanes swirl diffusers

Technical data

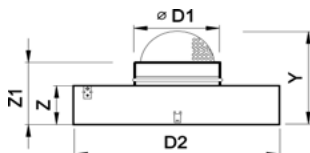


	C	E	A
160	156	196	170
200	196	240	210
250	246	294	264
315	311	365	330
355	351	409	379
400	396	458	428

POP/L/



POP/S/



POP	D2	D1	POP/L/	POP/S/		
			Z	Z	Z1	Y
160	170	123	225	130	163	212
200	210	158	260	145	178	244
250	260	198	300	170	203	289
315	325	248	350	190	223	334
355	365	313	415	225	258	402
400	410	313	415	225	258	402



Description

Swirl diffusers with circular connection neck and fixed, for ceiling mounting. Suitable to be used from 2,6 up to 4 meters high and at a temperature differential up to 12°C. Constructed from galvanized steel. Provided with a perimeter sealing gasket.

REX-C Circular diffuser with fixed vanes in radial arrangement.

Accessories

POP/L/ Cylindrical plenum box with a lateral circular connection. Constructed from galvanized steel.

.../S/ Upper circular connection.

...-R Air flow damper in the spigot.

.../AIS/ Thermal insulation inside. Reaction to fire classification B-s1,d0 EN 13501-1.

.../RAL/ Plenum box painted RAL colours.

PMXO Crossbar for mounting in false ceiling without plenum box.

Fixing

1) Connection to the crossbar or plenum box via a central screw.

Finishes

R9010S Painted white RAL 9010 (60-70% gloss)

R9016S Painted white RAL 9016 (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of circular swirl diffuser with circular connection neck and fixed vanes, series **REX-C+POP/L/-R R9010S dim. 315** constructed from galvanised steel paint in white RAL 9010 (60-70% gloss). Circular plenum box with a lateral connection and air flow damper in the spigot. Manufacturer **MADEL**.

Diffuser size mm	REX-C eur	PMXO eur	Lwa1< 30 dB(A) m3/h	Lwa1= 35 dB(A) m3/h	Lwa1= 40 dB(A) m3/h
160	48,52	4,01	50-95	110	140
200	51,03	4,01	75-135	165	180
250	52,98	4,07	120-200	250	300
315	55,46	4,07	220-335	400	500
355	79,96	4,61	250-390	470	560
400	88,37	4,61	310-430	530	610

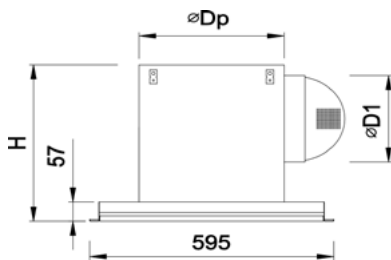
Diffuser diameter mm	POP/L/ eur	POP/L/-R eur	POP/L/AIS eur	POP/L/-R/AIS eur	RAL Supplement eur
160	54,30	67,37	68,08	81,15	15,40
200	58,44	72,00	74,91	88,47	16,50
250	63,68	77,99	83,71	98,02	18,08
315	71,18	86,81	96,30	111,93	20,56
355	75,35	92,60	103,27	120,52	21,77
400	80,24	97,49	111,46	128,71	23,27

Diffuser diameter mm	POP/S/ eur	POP/S/-R eur	POP/S/AIS eur	POP/S/-R/AIS eur	RAL Supplement eur
160	36,58	49,65	49,21	62,28	13,93
200	40,03	53,59	54,99	68,55	14,29
250	42,18	56,49	60,10	74,40	14,77
315	46,34	61,97	68,28	83,91	15,50
355	48,79	66,04	73,09	90,34	15,88
400	51,52	68,77	78,52	95,77	16,34

Swirl diffusers with perforated front plate

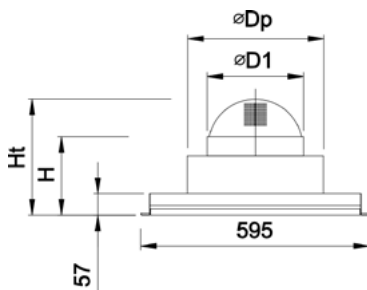
Technical data

DOT-SF-KLIN+POP/L/



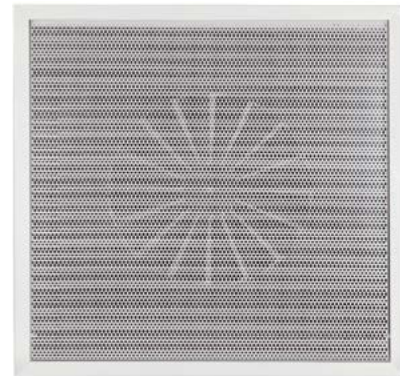
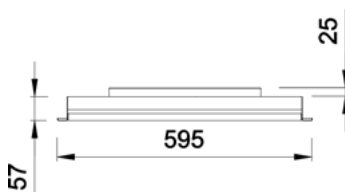
	H	Ø Dp	Ø D1
160	255	170	123
200	290	210	158
250	330	260	198
315	380	325	248
355	445	365	313
400	445	410	313

DOT-SF-KLIN+POP/S/



	H	Ht	Ø Dp	Ø D1
160	210	250	170	123
200	225	280	210	158
250	250	325	260	198
315	270	370	325	248
355	305	440	365	313
400	305	440	410	313

DOT-SR-KLIN



Description

Square swirl diffuser with fixed blades to be used in premises from 2,6 up to 4 metres high, with hinged removable core without tools, by pressing on the invisible PUSH fasteners. Constructed from galvanised steel.

DOT-SF-KLIN Supply swirl diffuser with fixed blades and perforated front plate, for installation with a plenum box.

DOT-SR-KLIN Return perforated front plate diffuser for installations without a plenum box. Includes brackets for ceiling suspension.

Accessories

POP/L/ Cylindrical plenum box with a lateral circular connection.

Constructed from galvanized steel.

.../S/ Upper circular connection.

...-R Air flow damper in the spigot.

.../AIS/ Thermal insulation inside. Reaction to fire classification B-s1,d0 EN 13501-1.

.../RAL/ Plenum box painted RAL colours.

COR Cords to regulate the damper type-R from the face of the diffuser.

Fixing systems

1) Fixing to the plenum box using a central screw and suspension of the assembly from the ceiling using brackets.

Finishes

R9016S Painted white RAL 9016 (60-70% gloss)

R9010S Painted white RAL 9010 (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification text

Supply and mounting of square swirl diffuser with fixed blades and perforated front plate, accessible without tools, by pressing on the invisible PUSH fasteners, **DOT-SF-KLIN+POP/L/-R R9016S** (mm) made of galvanized steel, paint in RAL 9016 white (60-70% gloss) with cylindrical plenum box with circular lateral connection, air flow damper in the spigot. **MADEL** brand.

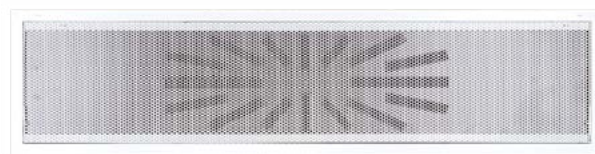
Diffuser size mm	Diffuser diameter mm	DOT-SF-KLIN eur	Lwa1 <35 dB(A) m3/h	Lwa1 40 dB(A) m3/h	Lwa1 45 dB(A) m3/h
600	160	124,99	50-102	120	140
600	200	127,50	75-173	202	236
600	250	129,45	120-249	296	351
600	315	131,71	220-331	393	467
600	355	142,82	250-400	475	564
600	400	144,58	310-473	562	667

Diffuser diameter mm	POP/L/ eur	POP/L/-R eur	POP/L/AIS eur	POP/L/-R/AIS eur	RAL Supplement eur	COR eur
160	54,30	67,37	68,08	81,15	15,40	5,09
200	58,44	72,00	74,91	88,47	16,50	5,09
250	63,68	77,99	83,71	98,02	18,08	5,09
315	71,18	86,81	96,30	111,93	20,56	5,09
355	75,35	92,60	103,27	120,52	21,77	5,09
400	80,24	97,49	111,46	128,71	23,27	5,09

Diffuser diameter mm	POP/S/ eur	POP/S/-R eur	POP/S/AIS eur	POP/S/-R/AIS eur	RAL Supplement eur	COR eur
160	36,58	49,65	49,21	62,28	13,93	5,09
200	40,03	53,59	54,99	68,55	14,29	5,09
250	42,18	56,49	60,10	74,40	14,77	5,09
315	46,34	61,97	68,28	83,91	15,50	5,09
355	48,79	66,04	73,09	90,34	15,88	5,09
400	51,52	68,77	78,52	95,77	16,34	5,09

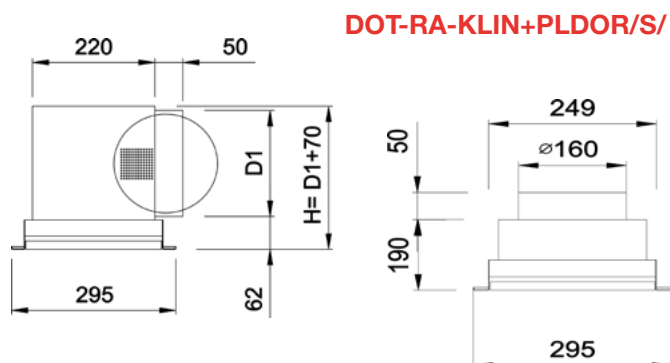
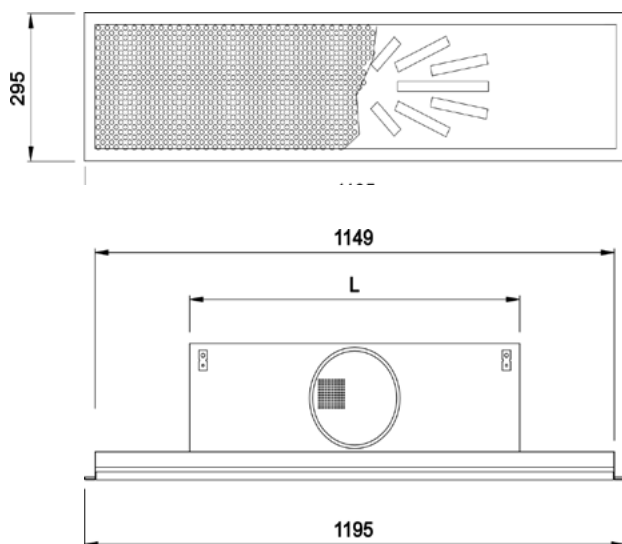
Diffuser size mm	DOT-SR-KLIN eur	Lwa1 <35 dB(A) m3/h	Lwa1 45 dB(A) m3/h
600	126,70	630-1050	1260

Swirl diffusers with perforated front plate



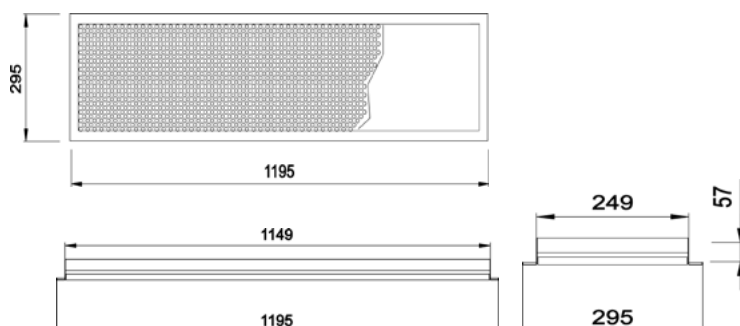
Technical data

DOT-SF-KLIN+POP/L/



	L	H	Ø D1
1200 x 300-12	730	230	160
1200 x 300-16	730	270	200
1200 x 300-20	930	270	200

DOT-RR-KLIN



Description

Rectangular swirl diffuser with fixed blades to be used in premises from 2,6 up to 4 metres high, with hinged removable core without tools, by pressing on the invisible PUSH fasteners. Constructed from galvanised steel.

DOT-RA-KLIN Supply rectangular swirl diffuser with fixed blades and perforated front plate, for installation with a plenum box.

DOT-RR-KLIN Return perforated front plate diffuser for installations without a plenum box. Includes brackets for ceiling suspension.

Accessories

PLDOR/L/ Rectangular plenum box with a lateral circular connection. Constructed from galvanized steel.

.../S/ Upper circular connection.

...-R Air flow damper in the spigot.

.../AIS/ Thermal insulation inside. Reaction to fire classification B-s1,d0 EN 13501-1.

COR Cords to regulate the damper type-R from the face of the diffuser.

Fixing systems

1) Fixing to the plenum box using a central screw and suspension of the assembly from the ceiling using brackets.

Finishes

R9016S Painted white RAL 9016 (60-70% gloss)

R9010S Painted white RAL 9010 (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification text

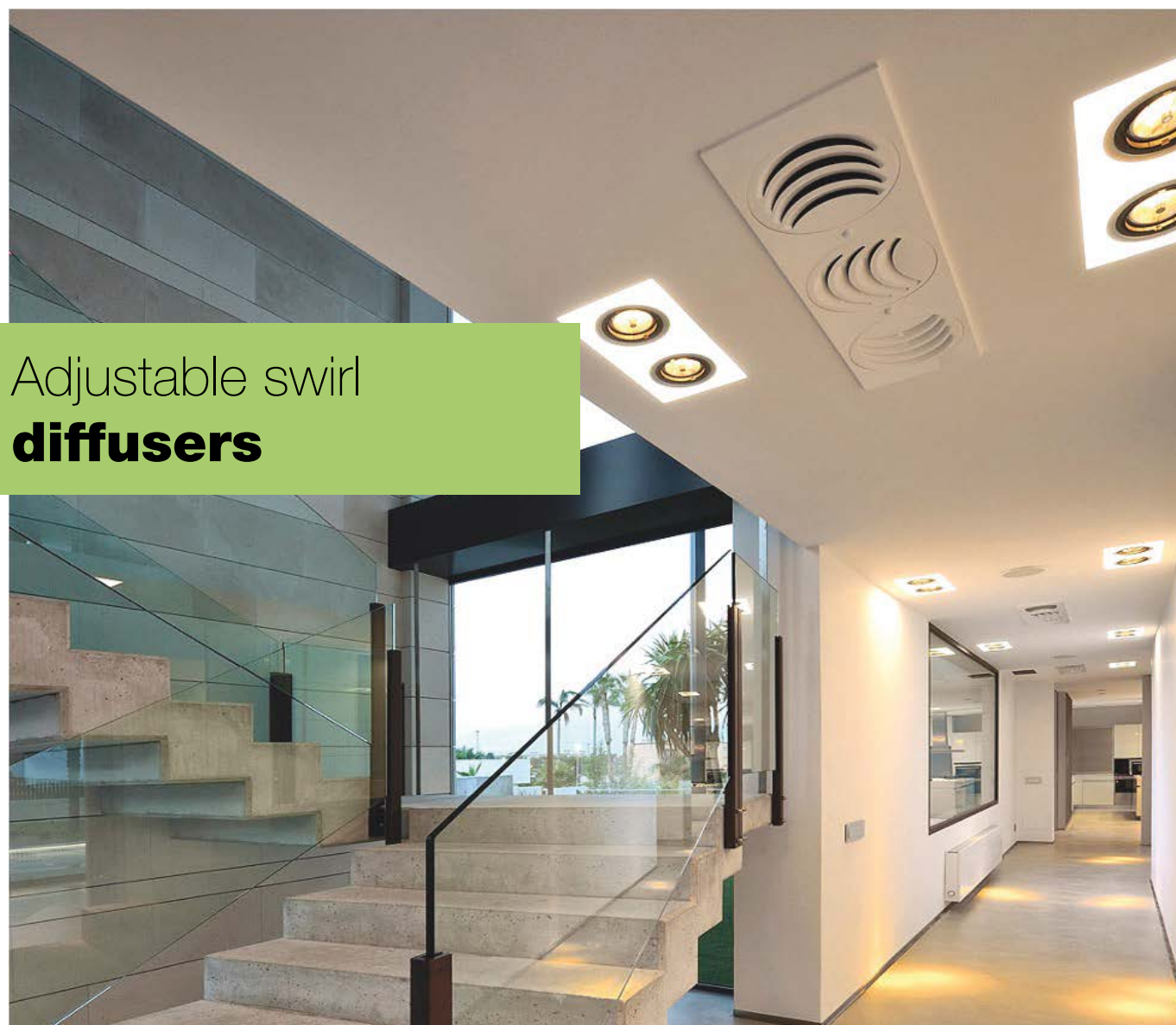
Supply and mounting of rectangular supply swirl diffuser with fixed blades and perforated front plate, accessible without tools, by pressing on the invisible PUSH fasteners,

DOT-RA-KLIN+PLDOR/L/-R R9016S (mm) made of galvanized steel, paint in RAL 9016 white (60-70% gloss) with rectangular plenum box with circular lateral connection, air flow damper in the spigot. **MADEL** brand.

Diffuser size mm	Slots No.	DOT-RA-KLIN eur	Lwa1 <35 dB(A) m3/h	Lwa1 = 40 dB(A) m3/h	Lwa1 = 45 dB(A) m3/h
1200x300	12	142,50	90-125	145	175
1200x300	16	147,70	200-250	300	360
1200x300	20	152,70	320-390	460	550

Plate size mm	Slots No.	PLDOR eur	PLDOR-R eur	PLDOR/AIS eur	PLDOR-R/AIS/ eur	COR eur
1200x300	12	60,75	76,78	82,01	103,66	5,09
1200x300	16	71,12	87,17	96,02	117,67	5,09
1200x300	20	77,33	93,37	104,39	126,04	5,09

Diffuser size mm	DOT-RR-KLIN eur	Lwa1 <35 dB(A) m3/h	Lwa1 = 40 dB(A) m3/h
1200x300	127,20	540-900	1500



Adjustable swirl **diffusers**

Diffusers at your convenience

PLAY series of Benedito Design,
maximum flexibility in the diffusion of air

PLAY modules manually adjustable by the
user

INDEX

AXO-C circular adjustable vanes swirl diffusers

AXO-S square adjustable vanes swirl diffusers

AXO-KLIN accessible AXO-S swirl diffusers

AXO-R rectangular adjustable vanes swirl diffusers

AXO-TWIN square diffusers with VAV plenum box

PLAY-C circular adjustable sectors diffuser

PLAY-R rectangular adjustable sectors diffuser

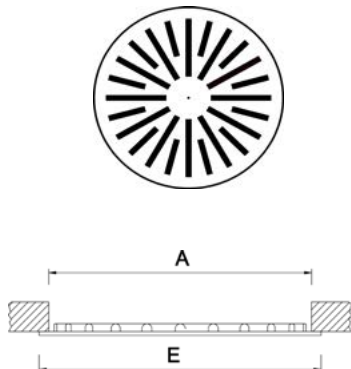
PLAY-S square adjustable sectors diffuser

PLAY-KLIN accessible adjustable sectors diffuser

Adjustable vanes swirl diffusers

Technical data

AXO-C



AXO-CY

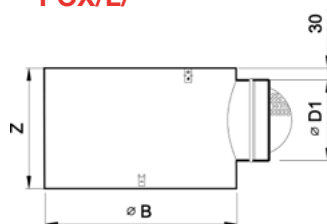


	E	A
300	300	284
400	400	376
500	500	476
625	625	601
825	825	801

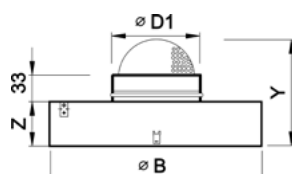
POX/L/



POX/L/



POX/S/



POX/L/	B	Z	D1
300	286	300	198
400	386	300	198
500	486	300	198
625	611	350	248
825	811	415	313

POX/S/	B	Y	Z	D1
300	286	258	140	198
400	386	258	140	198
500	486	258	140	198
625	611	343	200	248
825	811	376	200	313

Description

Swirl diffusers with individually adjustable vanes, for ceiling mounting. Suitable to be used from 2,6 up to 4 meters high and at a temperature differential up to 12°C. Constructed from galvanized steel and black aluminum vanes. Provided with a perimeter sealing gasket.

AXO-C Circular diffuser with vanes in radial arrangement.

...-CY Vanes in radial inclined arrangement.

Accessories

POX/L/ Cylindrical plenum box with a lateral circular connection.

Constructed from galvanized steel.

.../S/ Upper circular connection.

...-R Air flow damper in the spigot.

.../AIS/ Thermal insulation inside. Reaction to fire classification B-s1,d0 EN 13501-1.

.../RAL/ Plenum box painted RAL colours : see INFO page.

PMXO Crossbar for mounting in false ceiling without plenum box.

Fixing

1) Connection to the crossbar or plenum box via a central screw.

Finishes

R9010S Painted white RAL 9010 (60-70% gloss)

R9016S Painted white RAL 9016 (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

.../AB/ Diffuser and vanes painted R9016S.

Specification Text

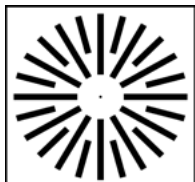
Supply and mounting of circular swirl diffuser with individually adjustable radial vanes series **AXO-C+POX/L/-R R9010S dim. 600-24** constructed from galvanised steel paint in white RAL 9010 (60-70% gloss) and black aluminium vanes. Circular plenum box with a lateral connection and air flow damper in the spigot. Manufacturer **MADEL**.

Diffuser	Slots	AXO-C AXO-CY	POX/L/	POX/L/-R	POX/L/ /AIS/	POX/L/-R /AIS/	POX/S/	POX/S/-R	POX/S/ /AIS/	POX/S/-R /AIS/	PMXO	Lwa1 < 35 dB(A)	Lwa1= 40 dB(A)	Lwa1= 45 dB(A)
Diam. mm	No	eur	eur	eur	eur	eur	eur	eur	eur	eur	eur	m³/h	m³/h	m³/h
300	12	59,58	60,83	75,16	81,12	95,76	38,03	52,36	51,58	65,91	4,01	90-182	215	253
400	16	63,83	66,78	81,11	93,33	107,66	42,97	57,30	65,18	79,51	4,07	170-307	363	430
500	20	81,54	72,83	87,16	106,35	120,68	47,57	61,90	75,75	90,08	4,61	260-435	516	610
625	24	91,93	84,45	100,04	128,98	144,57	55,16	70,75	91,43	107,02	5,39	410-592	701	831
625	36	103,66	84,45	100,04	128,98	144,57	55,16	70,75	91,43	107,02	5,39	500-678	799	942
825	48	147,04	112,94	130,19	178,59	195,83	73,13	90,37	125,48	142,72	19,90	950-1020	1160	1350

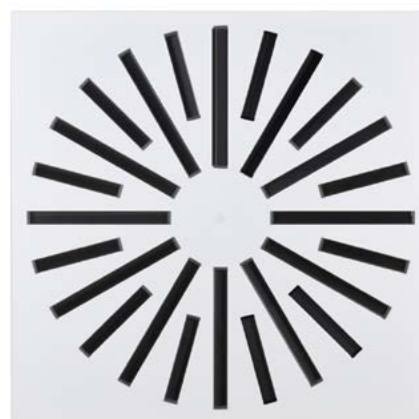
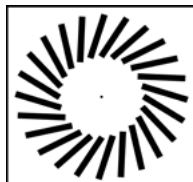
Adjustable vanes swirl diffusers

Technical data

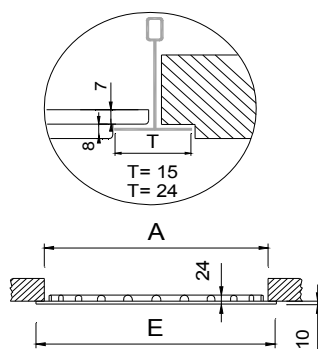
AXO-S



AXO-SY



AXO-S.../T/



	E	A
300	295	280
400	395	376
500	495	476
600	595	576
610	605	591
625	620	601
675	670	651
800	795	776

Description

Swirl diffusers with individually adjustable vanes, for ceiling mounting. Suitable to be used from 2,6 up to 4 meters high and at a temperature differential up to 12°C. Constructed from galvanized steel and black aluminum vanes. Provided with a perimeter sealing gasket.

AXO-S Square diffuser with vanes in radial arrangement.

...-SY Vanes in radial inclined arrangement.

.../T15...24/ Panel with angled borders for ceiling profile 15 or 24 mm.

Accessories

BOXSTAR Stackable pyramidal plenum box with a circular lateral connection, constructed from galvanised steel.

.../S/ Upper circular connection.

...-R Air flow damper in the spigot.

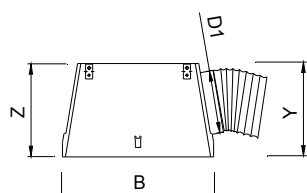
.../AIS/ Thermal insulation inside. Reaction to fire classification B-s1,d0 EN 13501-1.

BOXTHERM Stackable pyramidal plenum box with a circular lateral connection, constructed from expanded polystyrene (thermoacoustic insulating material)

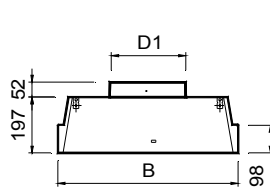
...-R Air flow damper in the spigot.

PMXO Crossbar for mounting in false ceiling without plenum box.

BOXSTAR

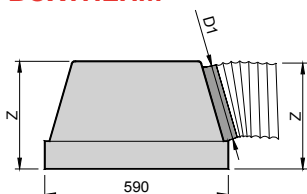


BOXSTAR/S



	B	Z	Y	D1
300	290	250	275	123
400	390	300	325	198
500	490	300	325	198
600-D1:250	590	350	375	248
600-D1:200	590	300	325	198
610-D1:250	600	350	375	248
610-D1:200	600	300	325	198
625-D1:250	615	350	375	248
625-D1:200	615	300	325	198
675-D1:250	665	350	375	248
675-D1:200	665	300	325	198
800	790	415	440	313

BOXTHERM



	Z	D1
600-D1: 250	350	248
600-D1: 200	300	198

Fixing

1) Connection into the crossbar or to the plenum box by means of central screw.

Finishes

R9010S Painted white RAL 9010 (60-70% gloss)

R9016S Painted white RAL 9016 (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

.../AB/ Diffuser and vanes painted R9016S.

Specification Text

Supply and mounting of square swirl diffuser with individually adjustable radial vanes series **AXO-S+BOXSTAR-R R9010S dim. 600-24** constructed from galvanised steel paint in white R9010S (60-70% gloss) and black aluminium vanes with pyramidal plenum box with a lateral connection, constructed from galvanised steel and air flow damper in the spigot. Manufacturer **MADEL**.

Dim.	Slots	AXO-S AXO-SY	AXO-S /T/ AXO-SY/T/	Lwa1< 35 dB(A)	Lwa1= 40 dB(A)	Lwa1= 45 dB(A)
mm	No	eur	eur	m³/h	m³/h	m³/h
300	12	49,90	56,18	90-182	215	253
400	16	54,33	61,52	170-307	363	430
500	20	67,40	77,23	260-435	516	610
600	12	61,65	71,57	90-182	215	253
600	16	65,67	75,58	170-307	363	430
600	20	70,00	79,91	260-435	516	610
600	24	73,74	83,65	410-592	701	831
600	32	80,94	90,85	500-678	799	942
610	12	62,77	72,67	90-182	215	253
610	16	66,64	76,54	170-307	363	430
610	20	70,95	80,85	260-435	516	610
610	24	75,24	85,14	410-592	701	831
610	32	82,96	93,41	500-678	799	942
625	12	70,47	80,91	90-182	215	253
625	16	74,43	84,87	170-307	363	430
625	20	78,59	89,03	260-435	516	610
625	24	82,49	92,94	410-592	701	831
625	36	94,22	105,78	570-692	817	964
675	12	69,18	80,78	90-182	215	253
675	16	73,83	85,43	170-307	363	430
675	20	78,28	89,88	260-435	516	610
675	24	82,81	94,41	410-592	701	831
675	40	98,24	109,78	675-720	850	1002
800	48	134,99	151,60	950-1020	1160	1350

Dim. mm	BOXSTAR eur	BOXSTAR-R eur	BOXSTAR/AIS/ eur	BOXSTAR-R/AIS/ eur	PMXO eur
300	42,70	55,72	57,65	70,66	4,01
310	42,70	57,14	57,65	72,09	4,01
400	44,59	58,93	60,19	74,54	4,07
500	57,36	71,71	77,43	91,79	4,61
600 (D1:250)	68,01	83,59	91,83	107,40	5,07
600 (D1:200)	67,08	81,43	90,54	104,90	5,07
610 (D1:250)	68,75	84,32	92,80	108,37	5,25
610 (D1:200)	67,67	82,04	91,38	105,72	5,25
625 (D1:250)	69,46	85,03	93,80	109,35	5,39
625 (D1:200)	68,29	82,63	92,19	106,54	5,39
675 (D1:250)	80,02	97,21	108,05	125,22	17,40
675 (D1:200)	78,86	93,20	106,47	120,80	17,40
800	80,02	97,21	108,05	125,22	18,66

Dim. mm	BOXTHERM eur	BOXTHERM-R eur
600 (D1:250)	56,22	71,21
600 (D1:200)	54,81	68,60

Nota: Difusores de 610 compatibles con BOXTHERM 600.

Note: Size 610 diffusers compatible with BOXTHERM 600.



Accessible adjustable vanes swirl diffusers

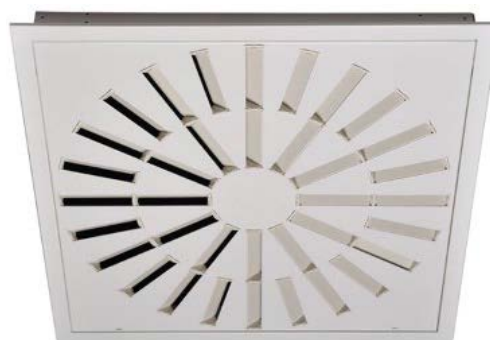


Technical data

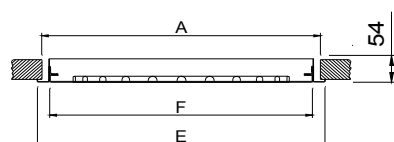
AXO-S-KLIN



AXO-SY-KLIN

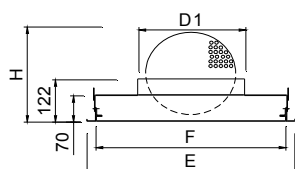


AXO-S-KLIN



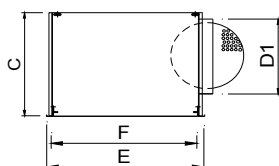
	E	A	F
400	395	369	345
500	495	469	445
600	595	569	545

AXO-S-KLIN +PLK-R



	E	F	D1	H	C
400	395	365	198	205	320
500	495	465	248	286	370
600	595	565	313	353	435

AXO-S-KLIN +PLK/L/-R



Description

Swirl diffusers with individually adjustable vanes, for ceiling mounting. Suitable to be used from 2,6 up to 4 meters high and at a temperature differential up to 12°C. Constructed from galvanized steel and black aluminum vanes. Provided with a perimeter sealing gasket. Diffusers with hinged removable core without tools, by pressing on the invisible PUSH fasteners. KLIN system allows for the easy access to the diffuser that conforms with the regulations required for maintenance of HVAC systems.

AXO-S-KLIN Square diffuser with vanes in radial arrangement.
...-SY-KLIN Vanes in radial inclined arrangement.

Accessories

PLK Plenum box with an upper circular connection, constructed from galvanised steel.
.../L/ Lateral circular connection.
...-R Air flow damper in the spigot.
.../AIS/ Thermal insulation inside. Reaction to fire classification B-s1,d0 EN 13501-1.

Fixing

1) Suspended at the false ceiling.

Finishes

R9010S Painted white RAL 9010 (60-70% gloss)
R9016S Painted white RAL 9016 (60-70% gloss)
RAL... Painted in other RAL colours : see INFO page.
.../AB/ Diffuser and vanes painted R9016S.

Specification Text

Supply and mounting of square swirl diffuser with adjustable vanes with hinged removable core without tools, by pressing on the invisible PUSH fasteners series **AXO-S-KLIN+PLK-R R9010S dim. (mm)** constructed from galvanised steel paint in white R9010S (60-70% gloss) and black aluminium vanes. With upper circular connection plenum box and air flow damper in the spigot. Manufacturer **MADEL**.

Dim.	Slots	AXO-S-KLIN AXO-SY-KLIN	Lwa1 < 35 dB(A)	Lwa1 = 40 dB(A)	Lwa1 = 45 dB(A)
mm	No	eur	m³/h	m³/h	m³/h
400	14	71,48	170-307	363	430
500	20	85,90	260-435	516	610
600	14	84,17	170-307	363	430
600	20	87,36	260-435	516	610
600	24	92,71	410-592	701	831
600	28	104,68	508-660	770	910

Dim.	PLK	PLK-R	PLK / AIS/	PLK-R / AIS/	PLK/L/	PLK/L/-R	PLK/L/AIS/	PLK/L/-R/AIS/
mm	eur	eur	eur	eur	eur	eur	eur	eur
400	39,39	56,11	53,18	69,92	55,53	69,82	74,97	89,27
500	43,99	62,24	59,39	77,64	58,85	74,42	79,45	95,02
600	51,58	71,34	69,63	89,38	70,12	87,32	94,66	111,86



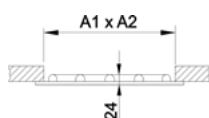
Adjustable vanes swirl diffusers

Technical data

AXO-R /GC/

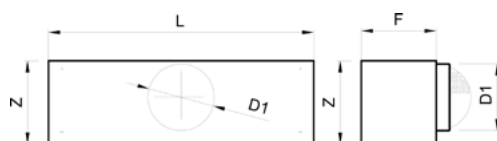


AXO-R /GR/



AXO-R	E1	E2	A1	A2
600x300 - GC12	595	295	576	276
600x300 - GR16	595	295	576	276
1200x300 - GC12	1195	295	1176	276
1200x300 - GR16	1195	295	1176	276
1200x300 - GR20	1195	295	1176	276
1200x300 - GR24	1195	295	1176	276

PLAR



PLAR	L	F	D1	Z
GC12	340	290	158	210
GR16	590	290	198	250
GR20	730	290	198	250
GR24	880	290	248	300



Description

Swirl diffusers with individually adjustable vanes, for ceiling mounting. Suitable to be used from 2,6 up to 4 meters high and at a temperature differential up to 12°C. Constructed from galvanized steel and black aluminum vanes. Provided with a perimeter sealing gasket.

AXO-R Rectangular diffuser with vanes in radial arrangement.

.../GC/ Vanes in circular radial arrangement.

.../GR/ Vanes in rectangular radial arrangement.

Accessories

PLAR/L/ Plenum box with a circular lateral connection, constructed from galvanized steel.

.../S/ Upper circular connection.

...-R Air flow damper in the spigot.

.../AIS/ Thermal insulation inside. Reaction to fire classification B-s1,d0 EN 13501-1.

PMXO-300 Crossbar for mounting in false ceiling with rectangular duct.

Fixing

1) Connection into the crossbar or to the plenum box by means of central screw.

Finishes

R9010S Painted white RAL 9010 (60-70% gloss)

R9016S Painted white RAL 9016 (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

.../AB/ Diffuser and vanes painted R9016S.

Specification Text

Supply and mounting of rectangular swirl diffuser with individually adjustable radial vanes series **AXO-R/GC12/+PLAR R9016S dim.**

600X300 constructed from galvanized steel paint in white R9016S (60-70% gloss) and black aluminium vanes. With lateral circular connection plenum box. Manufacturer **MADEL**.

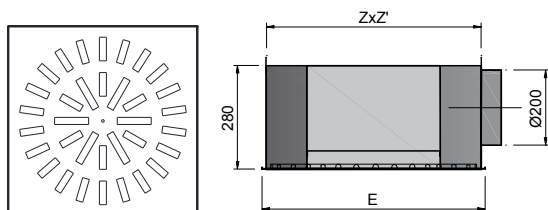
Diffuser	Slots	AXO-R	PLAR/L/ PLAR/S/	PLAR/L-R PLAR/S-R	PLAR/L-AIS PLAR/S-AIS	PLAR/L-R-AIS/ PLAR/S-R/	PMXO- 300	Lwa1 < 35 dB(A) m³/h	Lwa1= 45 dB(A) m³/h
Diam. mm	No	eur	eur	eur	eur		eur		
600x300	GC-12	54,89	60,75	76,78	82,01	103,66	4,01	90-150	225
600x300	GR-16	59,31	71,12	87,17	96,02	117,67	4,01	190-260	400
1200x300	GC-12	65,42	60,75	76,78	82,01	103,66	4,01	90-150	225
1200x300	GR-16	70,16	71,12	87,17	96,02	117,67	4,01	190-260	400
1200x300	GR-20	73,46	77,33	93,37	104,39	126,04	4,01	270-385	565
1200x300	GR-24	78,21	91,72	107,76	123,82	145,47	4,01	390-535	845

Swirl diffusers with VAV plenum box



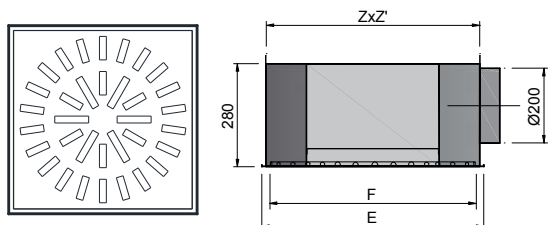
Technical data

AXO-TWIN

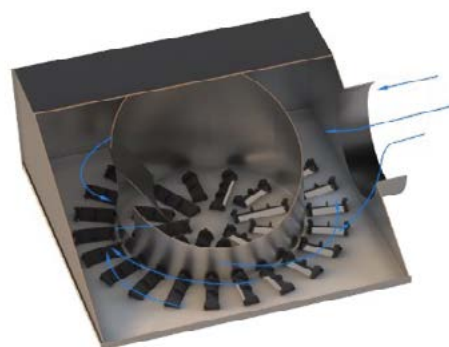


	E	Z x Z'
AXO-TWIN 600	595	566 x 558
AXO-TWIN 610	605	576 x 568
AXO-TWIN 625	620	591 x 583
AXO-TWIN 675	670	641 x 633

AXO-TWIN-KLIN



	E	F	Z x Z'
AXO-TWIN/KLIN 600	595	565	592 x 572
AXO-TWIN/KLIN 610	605	575	602 x 582
AXO-TWIN/KLIN 625	620	590	617 x 597
AXO-TWIN/KLIN 675	670	640	667 x 647



Description

Double chamber VAV Plenum and swirl diffuser assembly with lateral circular connection. Suitable to be used from 2,6 up to 4 meters high and at a temperature differential up to 15°C. Operating range of diffusers between 175-550 m³ / h. Diffusers made from galvanized steel and black aluminium vanes. Plenum box in galvanized steel with polymeric membrane.

AXO-TWIN Assembly of adjustable vanes swirl diffuser in radial arrangement and double chamber VAV plenum.

.../T15...24/ Panel with angled borders for ceiling profile 15 or 24 mm.

.../AIS/ Thermal insulation inside. Reaction to fire classification B-s1,d0 EN 13501-1.

AXO-TWIN-KLIN Assembly of adjustable vanes swirl diffuser in radial arrangement, with hinged removable core without tools, by pressing on the invisible PUSH fasteners. KLIN system allows for the easy access to the diffuser that conforms with the regulations required for maintenance of HVAC systems; and double chamber VAV plenum.

.../AIS/ Thermal insulation inside. Reaction to fire classification B-s1,d0 EN 13501-1.

Fixing

1) Diffuser attached to the plenum by means of a central screw. Plenum box with brackets for ceiling suspension.

1) KLIN model: Framed of the diffuser attached to plenum by rivets. Plenum box with suspension brackets the ceiling.

Finishes

R9010S Painted white RAL 9010 (60-70% gloss)

R9016S Painted white RAL 9016 (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

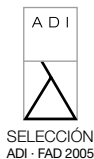
.../AB/ Diffuser and vanes painted R9016S.

Specification Text

Supp. and mount. of square swirl diffuser with individually adjustable radial vanes, with VAV plenum box series **AXO-TWIN R9010S dim.600** made from galvanized steel , polymeric membrane and black vanes, paint in white R9016S (60-70% gloss). Manufacturer **MADEL**.

Diam.	AXO-TWIN	AXO-TWIN /T.. /	AXO-TWIN /AIS/	AXO-TWIN /AIS/ /T.. /	AXO-TWIN KLIN	AXO-TWIN KLIN /AIS/	Lwa1< 15 dB(A)	Lwa1= 35 dB(A)	Lwa1= 45 dB(A)
mm	eur	eur	eur	eur	eur	eur	m³/h	m³/h	m³/h
600	178,77	188,40	201,12	210,74	195,85	214,98	175	370	550
610	183,58	193,19	206,12	215,74	200,74	220,05	175	370	550
625	188,37	198,00	211,12	220,73	205,62	225,09	175	370	550
675	191,45	201,07	215,25	224,86	213,48	233,87	175	370	550

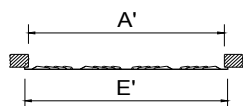
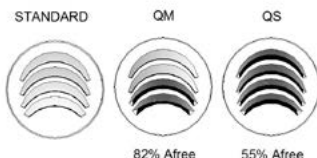
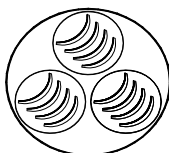
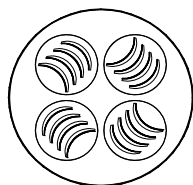
Adjustable sectors diffusers



Technical data

PLAY-C - 825

PLAY-C - 625



	E	A
625	625	601
825	825	801



Description

Multi-directional diffusers by manually adjustable sectors to be used from 2,6 up to 4 metres high. Constructed from galvanised steel.

PLAY-C Circular diffuser able to act like a 1, 2, 3, 4-way or swirl diffuser.

.../QM/ Diffuser with medium effective section. 82% free area compared to standard PLAY.

.../QS/ Diffuser with small effective section. 55% free area compared to standard PLAY.

Accessories

POX/L/ Cylindrical plenum box with a lateral circular connection. Constructed from galvanized steel.

.../S/ Upper circular connection.

...-R Air flow damper in the spigot (COR required)

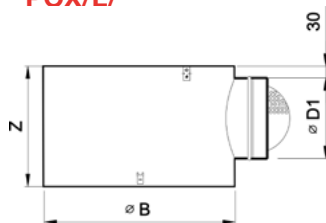
.../AIS/ Thermal insulation inside. Reaction to fire classification B-s1,d0 EN 13501-1.

.../RAL/ Plenum box painted RAL colours : see INFO page.

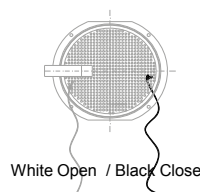
COR Cords to regulate the damper type-R from the face of the diffuser.

PMXO Crossbar for mounting in false ceiling with rectangular duct.

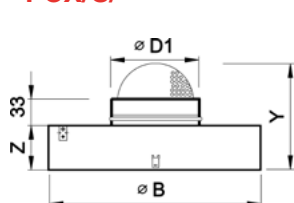
POX/L/



COR



POX/S/



POX/L/	B	Z	D1
625	611	350	248
825	811	415	313

POX/S/	B	Y	Z	D1
625	611	343	200	248
825	811	376	200	313

Diam.	PLAY-C	Lwa1 < 35 dB(A)	Lwa1 = 40 dB(A)	Lwa1 = 45 dB(A)
mm	eur	m³/h	m³/h	m³/h
625	108,05	270-375	445	530
825	139,49	360-470	565	680

Diam.	PLAY-C/QM	Lwa1 < 35 dB(A)	Lwa1 = 40 dB(A)	Lwa1 = 45 dB(A)
mm	eur	m³/h	m³/h	m³/h
625	114,61	224-311	369,00	439
825	148,24	298-390	468,00	564

Diam.	PLAY-C/QS	Lwa1 < 35 dB(A)	Lwa1 = 40 dB(A)	Lwa1 = 45 dB(A)
mm	eur	m³/h	m³/h	m³/h
625	127,90	148-205	244,00	291
825	165,98	198-258	310,00	374

Diam.	POX/L/	POX/L/-R	POX/L/ /AIS/	POX/L/-R /AIS/	POX/S/	POX/S/-R	POX/S/ /AIS/	POX/S/-R /AIS/	PMXO	COR
mm	eur	eur	eur	eur	eur	eur	eur	eur	eur	eur
625	84,45	100,04	128,98	144,57	55,16	70,75	91,43	107,02	5,39	5,09
825	112,94	130,19	178,59	195,83	73,13	90,37	125,48	142,72	19,9	5,09

Fixing

1) Connection into the crossbar or to the plenum box by means of central screw.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

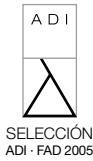
RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of circular multi-directional diffuser by adjustable sectors able to act like a 1, 2, 3, 4-way or swirl series **PLAY-C+POX/L/**

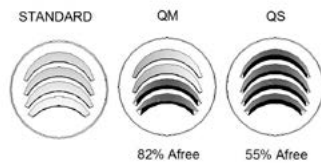
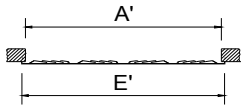
R9016S dim. 625 constructed from galvanised steel paint in white R9016S (60-70% gloss) with lateral circular connection plenum box. Manufacturer **MADEL**.

Adjustable sectors diffusers



Technical data

PLAY-R



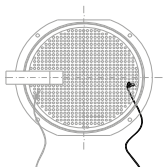
	E	A	F'	A'
1000 300	1000	981	295	276
1000 310	1000	981	308	289
1200 300	1195	1176	295	276
1250 310	1245	1226	308	289

PLXOR

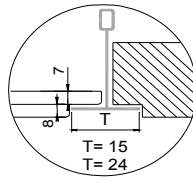


	L (mm)	Z	E	D1
1000 300	990	324	270	248
1000 310	990	324	285	248
1200 300	1190	324	270	248
1250 310	1240	324	285	248

COR



PLAY-R.../T/



Dim. mm	PLAY-R eur	PLAY-R /T/ eur	Lwa1 < 35 dB(A) m³/h	Lwa1 = 40 dB(A) m³/h	Lwa1 = 45 dB(A) m³/h
1000 x 300	100,34	-	270-375	445	530
1000 x 310	100,73	110,83	270-375	445	530
1200 x 300	114,69	-	360-470	565	680
1250 x 310	116,27	127,91	360-470	565	680

Dim. mm	PLAY-R/QM eur	PLAY-R/QM/T/ eur	Lwa1 < 35 dB(A) m³/h	Lwa1 = 40 dB(A) m³/h	Lwa1 = 45 dB(A) m³/h
1000 x 300	106,90	-	224-311	369,00	439
1000 x 310	107,29	117,39	224-311	369,00	439
1200 x 300	123,43	-	298-390	468,00	564
1250 x 310	125,01	136,65	298-390	468,00	564

Dim. mm	PLAY-R/QS eur	PLAY-R/QS/T/ eur	Lwa1 < 35 dB(A) m³/h	Lwa1 = 40 dB(A) m³/h	Lwa1 = 45 dB(A) m³/h	PLXOR eur	PLXOR-R eur	PLXOR /AIS/ eur	PLXOR-R /AIS/ eur	PMYR eur	COR eur
1000 x 300	126,75	-	148-206	244,00	291	76,69	92,23	103,54	119,06	16,09	5,09
1000 x 310	127,14	137,25	148-206	244,00	291	82,90	98,50	111,91	127,51	16,09	5,09
1200 x 300	149,91	-	198-258	310,00	374	84,67	100,23	114,30	129,87	16,09	5,09
1250 x 310	151,48	163,14	198-258	310,00	374	93,14	108,77	119,04	134,61	16,09	5,09



Description

Multi-directional diffusers by manually adjustable sectors to be used from 2,6 up to 4 metres high. Constructed from galvanised steel.

PLAY-R Rectangular diffuser able to act like a 1 or 2-way diffuser.

.../QM/ Diffuser with medium effective section. 82% free area compared to standard PLAY.

.../QS/ Diffuser with small effective section. 55% free area compared to standard PLAY.

.../T15/ False ceiling panel 15 mm profile with angled borders.

.../T24/ False ceiling panel 24 mm profile with angled borders.

Accessories

PMYR Crossbar suitable for mounting in false ceiling with rectangular duct.

PLXOR Plenum box with a lateral circular connection.

...-R Air flow damper in the spigot (COR required)

.../S/ Upper connection.

.../AIS/ Thermal insulation inside.

COR Set of 2 cords to regulate the plenum damper type-R from the face of the diffuser.

Fixing

1) Connection into the crossbar or to the plenum box by means of central screw.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

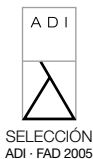
R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

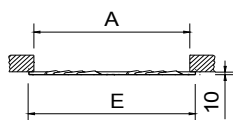
Supply and mounting of rectangular multi-directional diffuser by adjustable sectors able to act like a 1 or 2-way series **PLAY-R+PLXOR R9016S dim. 1000x300** constructed from galvanised steel paint in white R9016S (60-70% gloss) with lateral circular connection plenum box. Manufacturer **MADEL**.

Adjustable sectors diffusers

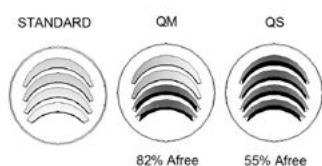


Technical data

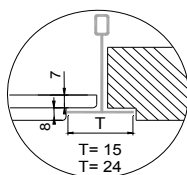
PLAY-S



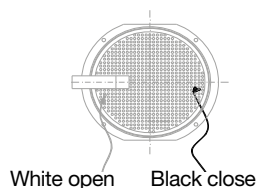
	E	A
600	595	576
610	605	586
625	620	601
675	670	651



PLAY-S.../T/



COR



Description

Multi-directional diffusers by manually adjustable sectors to be used from 2,6 up to 4 metres high. Constructed from galvanised steel.

PLAY-S Square diffuser able to act like a 1, 2, 3, 4-way or swirl diffuser.

.../QM/ Diffuser with medium effective section. 82% free area compared to standard PLAY.

.../QS/ Diffuser with small effective section. 55% free area compared to standard PLAY.

.../T15/ False ceiling panel 15 mm profile with angled borders.

.../T24/ False ceiling panel 24 mm profile with angled borders.

Accessories

PMXO Crossbar suitable for mounting in false ceiling with rectangular duct.

BOXSTAR Pyramidal plenum box with a lateral connection.

...-R Air flow damper in the spigot (COR required)

.../S/ Upper connection.

.../AIS/ Thermal insulation inside.

BOXTHERM Plenum box thermo acoustically insulated with a lateral circular connection.

...-R Plenum box with a flow damper in the spigot.

COR Set of 2 cords to regulate the plenum damper type-R from the face of the diffuser.

Fixing

1) Connection into the crossbar or to the plenum box by means of central screw.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of square multi-directional diffuser by 4 adjustable sectors able to act like a 1, 2, 3, 4-way or swirl series **PLAY-S+BOXSTAR R9016S dim. 600** constructed from galvanised steel paint in white R9016S (60-70% gloss) with lateral circular connection pyramidal plenum box. Manufacturer **MADEL**.



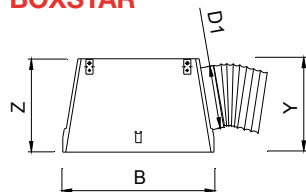
Dim.	PLAY-S	PLAY-S /T/	Lwa1 < 35 dB(A)	Lwa1= 40 dB(A)	Lwa1= 45 dB(A)
mm	eur	eur	m³/h	m³/h	m³/h
600	102,55	113,97	360-470	565	680
610	102,63	114,03	360-470	565	680
625	107,61	119,52	360-470	565	680
675	109,66	121,26	360-470	565	680

Dim.	PLAY-S/QM	PLAY-S /QM/T/	Lwa1 < 35 dB(A)	Lwa1= 40 dB(A)	Lwa1= 45 dB(A)
mm	eur	eur	m³/h	m³/h	m³/h
600	111,27	122,69	298-390	468,00	564
610	111,35	122,75	298-390	468,00	564
625	116,34	128,23	298-390	468,00	564
675	118,38	129,97	298-390	468,00	564

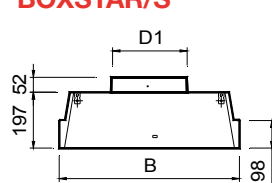
Dim.	PLAY-S/QS	PLAY-S /QS/T/	Lwa1 < 35 dB(A)	Lwa1= 40 dB(A)	Lwa1= 45 dB(A)
mm	eur	eur	m³/h	m³/h	m³/h
600	129,03	140,44	198-258	310,00	374
610	129,10	140,50	198-258	310,00	374
625	134,08	145,98	198-258	310,00	374
675	136,13	147,72	198-258	310,00	374

Dim.	BOXSTAR	BOXSTAR-R	BOXSTAR /AIS/	BOXSTAR-R /AIS/	BOXTHERM	BOXTHERM-R	PMXO
mm	eur	eur	eur	eur	eur	eur	eur
600 (D1:250)	68,01	83,59	91,83	107,40	56,22	71,21	5,07
600 (D1:200)	67,08	81,43	90,54	104,90	54,81	68,60	5,07
610 (D1:250)	68,75	84,32	92,80	108,37	-	-	5,25
610 (D1:200)	67,67	82,04	91,38	105,72	-	-	5,25
625 (D1:250)	69,46	85,03	93,80	109,35	-	-	5,39
625 (D1:200)	68,29	82,63	92,19	106,54	-	-	5,39
675 (D1:250)	80,02	97,21	108,05	125,22	-	-	17,40
675 (D1:200)	78,86	93,20	106,47	120,80	-	-	17,40

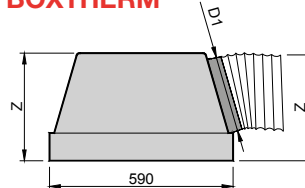
BOXSTAR



BOXSTAR/S



BOXTHERM



	B	Z	Y	D1
600-D1:250	590	350	375	248
600-D1:200	590	300	325	198
610-D1:250	600	350	375	248
610-D1:200	600	300	325	198
625-D1:250	615	350	375	248
625-D1:200	615	300	325	198
675-D1:250	665	350	375	248
675-D1:200	665	300	325	198

	Z	D1
BOXTHERM 600-DIAM250	350	248
BOXTHERM 600-DIAM200	300	198

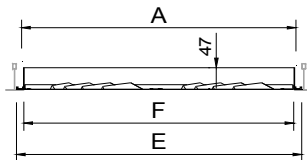
Nota: Difusores de 610 compatibles con BOXTHERM 600.
Note: Size 610 diffusers compatible with BOXTHERM 600.

Accessible adjustable sectors diffusers

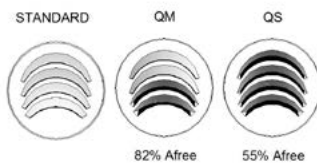


Technical data

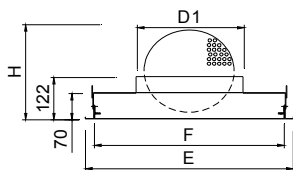
PLAY-S-KLIN



	E	F	A
600	595	565	569
610	605	575	579
625	620	590	594
675	670	640	544

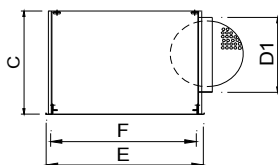


PLAY-S-KLIN+PLK...-R



	E	F	D1	H
600	595	563	313	353
610	605	573	313	353
625	620	588	313	353
675	670	638	313	353

PLAY-S-KLIN+PLK/L/...-R



	E	F	D1	C
600	595	563	313	435
610	605	573	313	435
625	620	588	313	435
675	670	638	313	435

Dim. mm	PLAY-KLIN eur	Lwa1 < 35 dB(A) m³/h	Lwa1 = 40 dB(A) m³/h	Lwa1 = 45 dB(A) m³/h
600	123,03	360-470	565	680
610	123,09	360-470	565	680
625	128,26	360-470	565	680
675	130,33	360-471	565	680

Dim. mm	PLAY-KLIN/QM eur	Lwa1 < 35 dB(A) m³/h	Lwa1 = 40 dB(A) m³/h	Lwa1 = 45 dB(A) m³/h
600	131,74	298-390	468,00	564
610	131,82	298-390	468,00	564
625	136,98	298-390	468,00	564
675	139,05	298-390	468,00	564

Dim. mm	PLAY-KLIN/QS eur	Lwa1 < 35 dB(A) m³/h	Lwa1 = 40 dB(A) m³/h	Lwa1 = 45 dB(A) m³/h
600	149,50	198-258	310,00	374
610	149,56	198-258	310,00	374
625	154,73	198-258	310,00	374
675	156,80	198-258	310,00	374

Dim. mm	PLK eur	PLK-R eur	PLK /AIS/ eur	PLK-R /AIS/ eur	PLK/L/ eur	PLK/L-R eur	PLK/L/AIS/ eur	PLK/L-R/AIS/ eur
600	51,58	71,34	69,63	89,38	70,12	87,32	94,66	111,86
610	52,02	71,77	70,23	90,00	70,74	87,95	95,49	112,69
625	52,44	72,25	70,80	90,61	71,35	88,60	96,32	113,56
675	55,47	72,68	74,89	92,09	74,71	91,92	100,87	118,06



Description

Multi-directional diffusers by manually adjustable sectors to be used from 2,6 up to 4 metres high, with hinged removable core without tools, by pressing on the invisible PUSH fasteners. KLIN system allows for the easy access to the diffuser that conforms with the regulations required for maintenance of HVAC systems. Constructed from galvanised steel.

PLAY-S-KLIN Square diffuser able to act like a 1, 2, 3, 4-way or swirl diffuser.

.../QM/ Diffuser with medium effective section. 82% free area compared to standard PLAY.

.../QS/ Diffuser with small effective section. 55% free area compared to standard PLAY.

Accessories

PLK Plenum box with an upper connection.

...-R Air flow damper in the spigot.

.../L/ Lateral connection.

.../AIS/ Thermal insulation inside.

Fixing

1) Suspended at the false ceiling.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of square multi-directional diffuser by 4 adjustable sectors able to act like a 1, 2, 3, 4-way or swirl, with hinged removable core without tools, by pressing on the invisible PUSH fasteners, series **PLAY-S-KLIN+PLK-R R9016S dim. (mm)** constructed from galvanised steel paint in white R9016S (60-70% gloss) with upper circular connection plenum box and air flow damper in the spigot. Manufacturer **MADEL**.





Perforated **face diffusers**

Maximum discretion

Hinged removable core without tools

DFR models to replace a false ceiling tile

INDEX

DFZ accessible perforated face diffusers

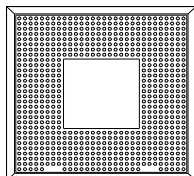
DFR modular air return perforated face diffusers

Accessible perforated face diffusers

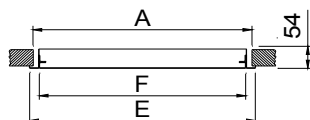
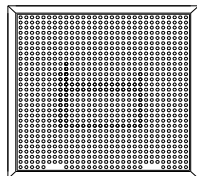


Technical data

DFZ-S4



DFZ-R



	E	A	F
300	295	269	265
400	395	369	365
500	495	469	465
600	595	569	565
625	620	594	590
675	670	644	640

L x H	E	F
600 x 300	595 x 295	565 x 265
675 x 338	670 x 333	640 x 303
1200 x 300	1195 x 295	1165 x 265
1200 x 600	1195 x 595	1165 x 565
1350 x 338	1345 x 333	1315 x 303
1350 x 675	1345 x 670	1315 x 640



Description

Square perforated face diffusers to be used in premises from 2,6 up to 4 m high, with hinged removable core without tools, by pressing on the invisible PUSH fasteners. KLIN system allows for the easy access to the diffuser that conform with the required regulations for maintenance of HVAC installations. Constructed from galvanised steel.

DFZ-S4 Four-Way diffuser.

DFZ-R Four-Way return diffuser.

Accessories

PLK Upper connection diffuser.

...-R Air flow damper in the spigot.

.../L/ Lateral connection.

.../AIS/ Thermal insulation inside.

PFT K/8 class EN 779 G3 filter for DFZ-R.

Fixing

1) Suspended at the false ceiling.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

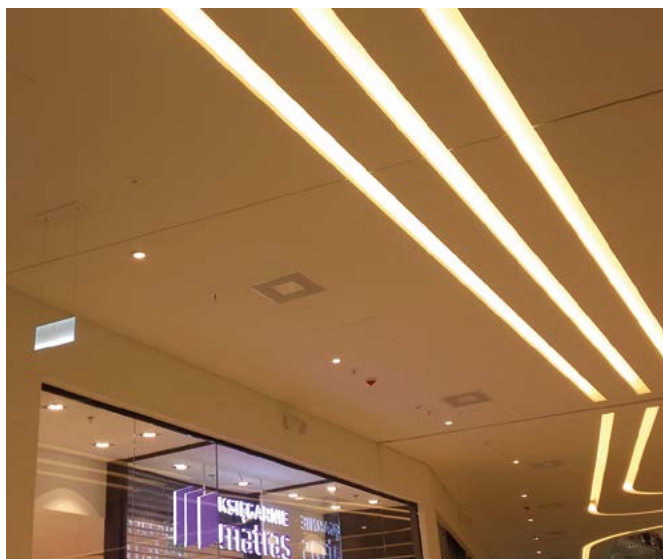
R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

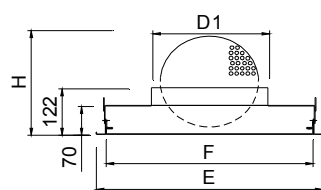
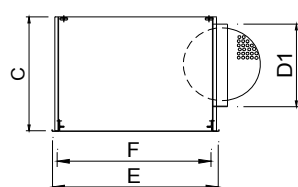
Supply and mounting of four-way square perforated face diffuser with hinged removable core without tools by pressing on the invisible PUSH fasteners, series **DFZ-S4+PLK-R/L/ R9016S dim. mm** constructed from galvanised steel paint in white RAL 9016 (60-70% gloss) with lateral circular connection plenum box and air flow damper in the spigot. Manufacturer **MADEL**.



L x H	DFZ-S4	Lwa1 < 35 dB(A)	Lwa1= 40 dB(A)	Lwa1= 45 dB(A)
mm	eur	m³/h	m³/h	m³/h
300	35,73	135-215	250	290
400	40,57	280-350	420	500
500	49,24	375-445	560	700
600	55,91	600-630	755	900
625	62,91	600-630	755	900
675	65,23	600-630	755	900

L x H	DFZ-R	DFZ-R-PFT	Lwa1 < 35 dB(A)	Lwa1= 45 dB(A)
mm	eur	eur	m³/h	m³/h
300	35,73	61,04	108-180	210
400	40,57	67,86	230-390	460
500	49,24	78,45	360-600	720
600	55,91	89,03	540-900	1080
625	62,91	97,01	540-900	1080
675	65,23	101,32	540-900	1080
600x300	46,65	66,65	270-450	540
675x338	49,54	74,92	270-450	540
1200x300	68,95	97,29	540-900	1080
1200x600	90,46	132,54	1080-1800	2160
1350x338	74,58	109,85	540-900	1080
1350x675	108,08	161,01	1080-1800	2160

L x H	PLK	PLK-R	PLK/L	PLK/L-R	PLK /AIS/	PLK-R /AIS/	PLK/L /AIS/	PLK/L-R /AIS/
mm	eur	eur	eur	eur	eur	eur	eur	eur
300	36,96	50,51	50,49	63,53	49,91	63,45	68,17	81,20
400	39,39	56,11	55,53	69,82	53,18	69,92	74,97	89,27
500	43,99	62,24	58,85	74,42	59,39	77,64	79,45	95,02
600	51,58	71,34	70,12	87,32	69,63	89,39	94,66	111,86
625	52,44	72,25	71,35	88,60	70,80	90,61	96,32	113,56
675	55,47	72,68	74,71	91,92	74,89	92,09	100,87	118,06
600x300	43,85	61,02	63,35	80,54	59,18	76,37	85,52	102,71
675x338	46,97	64,17	66,99	84,21	63,43	80,63	90,44	107,66
1200x300	51,58	71,34	70,12	87,32	69,63	89,39	94,66	111,86
1200x600	77,37	94,57	105,18	122,89	104,45	121,63	141,97	159,72
1350x338	55,47	72,68	74,71	91,92	74,89	92,09	100,87	118,06
1350x675	83,20	100,44	112,05	129,25	112,31	129,56	151,29	168,49

DFZ-R+PLK...-R

DFZ-R+PLK /L...-R


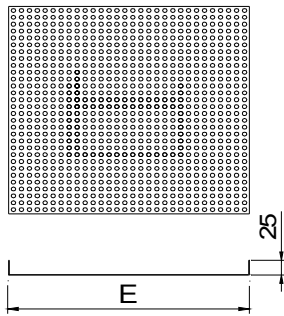
	E	F	D1	H	C
300	295	265	123	185	280
400	395	365	198	205	320
500	495	465	248	286	370
600	595	565	313	353	435
625	620	590	313	353	435
675	670	640	313	353	435

H o L (nominal)	E	F	D1	H	C
300 x 300	295 x 295	265 x 265	123	353	280
400 x 400	395 x 395	365 x 365	198	353	320
500 x 500	495 x 495	465 x 465	248	353	370
600 x 600	595 x 595	565 x 565	313	353	435
625 x 625	620 x 620	590 x 590	313	353	435
675 x 675	670 x 670	640 x 640	313	353	435
600 x 300	595 x 295	565 x 265	198	353	320
675 x 338	670 x 333	640 x 303	198	353	320
1200 x 300	1195 x 295	1165 x 265	2/198	353	320
1200 x 600	1195 x 595	1165 x 565	2/313	353	435
1350 x 338	1345 x 333	1315 x 303	2/198	353	320
1350 x 675	1345 x 670	1315 x 640	2/313	353	435

Modular air return perforated face diffusers

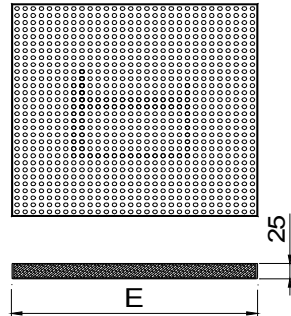
Technical data

DFR



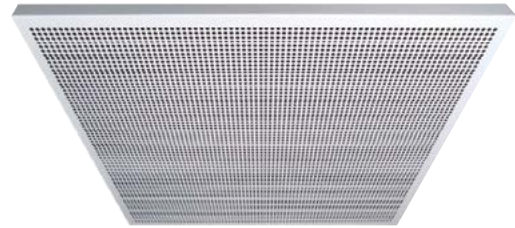
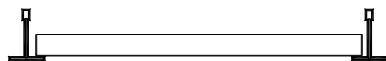
	E
300	295
400	395
500	495
600	595
625	620
675	670

DFR+PFT



L x H	E
600 x 300	595 x 295
675 x 338	670 x 333
1200 x 300	1195 x 295
1200 x 600	1195 x 595
1350 x 338	1345 x 333
1350 x 675	1345 x 670

1)



Description

Air return perforated face diffuser specially designed to replace a false ceiling tile. Constructed from galvanised steel.

DFR Square perforated face diffuser.

.../T15/ False ceiling panel 15 mm profile with angled borders.

.../T24/ False ceiling panel 24 mm profile with angled borders.

Accessories

PFT K/8 class EN 779 G3 filter.

Fixing

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

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of air return perforated face diffuser series

DFR+PFT R9016S dim. mm designed to replace a false ceiling plate.

Constructed from galvanised steel paint in white RAL 9016 (60-70% gloss) with filter. Manufacturer **MADEL**.

L x H	DFR	DFR / T.../	DFR+PFT	DFR / T.../+PFT	Lwa1 < 35 dB(A)	Lwa1 = 45 dB(A)
mm	eur	eur	eur	eur	m³/h	m³/h
300	26,80	33,91	52,12	59,22	125-210	245
400	39,98	47,11	56,81	63,96	270-455	540
500	45,18	54,95	70,18	79,94	550-800	1050
600	36,54	61,52	69,68	94,66	600-950	1200
625	53,32	63,67	87,42	97,79	630-1050	1260
675	57,58	69,28	94,41	106,12	630-950	1260
600x300	40,60	49,73	59,99	69,14	300-475	600
675x338	44,22	53,29	68,91	77,99	300-475	600
1200x300	54,12	63,12	81,31	90,31	600-950	1200
1200x600	81,17	99,29	122,00	140,12	1200-1900	2400
1350x338	61,35	70,83	95,68	105,18	600-950	1200
1350x675	94,13	114,86	147,03	167,76	1200-1900	2400



Variable geometry **diffusers**



INDEX

AX6 synchronically adjustable blades diffuser

DCG adjustables cones diffuser

High-rise solutions

Synchronically adjustable blades AX6 diffuser

DCG diffuser, a classic re-designed by Lievore, Altherr & Molina

ACTIF models, Thermo-adjustable diffusers independently

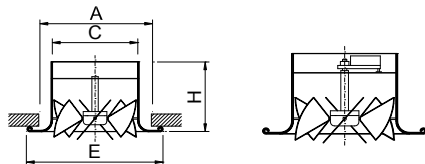
Synchronously adjustable blades diffuser



Technical data

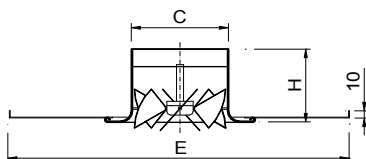
AX6-MA

AX6-MO+SERVO



	E	A	H	C
250	360	300	202	248
315	464	400	225	313
400	560	500	250	398
500	690	620	306	497
630	870	780	350	627

AX6-.../MOD



	E	H	C
AX6 - MOD 600/250	595	202	248
AX6 - MOD 600/315	595	225	313
AX6 - MOD 600/400	595	250	401
AX6 - MOD 625/250	620	202	248
AX6 - MOD 625/315	620	225	313
AX6 - MOD 625/400	620	250	401
AX6 - MOD 675/250	670	202	248
AX6 - MOD 675/315	670	225	313
AX6 - MOD 675/400	670	250	401



Description

Circular swirl diffusers with adjustable blades to be used in different premises from 2,6 metres high. Constructed from aluminium and galvanised steel.

AX6-MA Manually regulable diffuser.

AX6-MO Regulable diffuser by means of an actuator.

AX6-ACTIF Thermo-adjustable diffuser independently. To be used in different premises from 4 metres high. Time from 30° to 60°: 30 min.

AX6-.../MOD Diffusers specially designed for modular ceilings.

Accessories

GLB141.1E -24v Siemens On/Off actuator.

GLB341.1E -230v Siemens On/Off actuator.

GLB161.1E -24v Siemens proportional actuator.

GLB111.1E/MO -24v Siemens proportional actuator with Modbus.

NM24A Belimo On/Off actuator.

NM230A Belimo On/Off actuator.

NM24A-SR Belimo 24 Vac proportional actuator.

NM230A-SR Belimo 230 Vac proportional actuator.

NM24A-MOD Belimo proportional actuator with Modbus.

CH6 Protection grille suitable for sport installations.

PLX6 Plenum box with a lateral connection.

.../M/ Access door for servomotor.

.../S/ Upper connection.

.../AIS/ Thermal insulation inside.

Fixing

- 1) Connection into a circular metallic duct.
- 2) Connection into the plenum box by means of rivets to hang the whole from the ceiling.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

R9006M Painted aluminum color RAL 9006 matt (20-30% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of circular swirl diffuser with manually adjustable blades series **AX6-MA+PLX6 R9016S dim. mm** constructed from aluminium paint in white RAL 9016 (60-70% gloss) with lateral circular connection plenum box. Manufacturer **MADEL**.



Ø	AX6-MA	AX6-MO	AX6-ACTIF	Lwa1 < 40 dB(A)	Lwa1= 45 dB(A)	Lwa1= 50 dB(A)
mm	eur	eur	eur	m³/h	m³/h	m³/h
250	186,07	197,04	283,74	529-690	820	985
315	210,37	221,34	308,03	853-970	1115	1285
400	283,17	294,12	380,82	1360-1600	1900	2200
500	340,38	351,33	438,05	2000	2500	3000
630	434,04	445,00	-	3369-3510	4200	5005

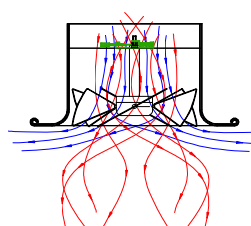
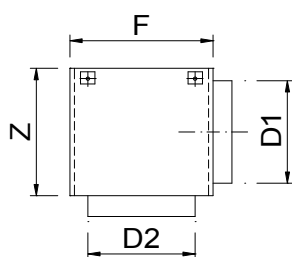
Ø	AX6-MA/MOD 600	AX6-MO/MOD 600	AX6-ACTIF/MOD 600	Lwa1 < 40 dB(A)	Lwa1= 45 dB(A)	Lwa1= 50 dB(A)
mm	eur	eur	eur	m³/h	m³/h	m³/h
250	214,20	225,17	311,88	529-690	820	985
315	235,87	246,88	333,56	853-970	1115	1285
400	304,66	315,61	402,30	1360-1600	1900	2200

Ø	AX6-MA/MOD 625 AX6-MA/MOD 675	AX6-MO/MOD 625 AX6-MO/MOD 675	AX6-ACTIF/MOD 625 AX6-ACTIF/MOD 675	Lwa1 < 40 dB(A)	Lwa1= 45 dB(A)	Lwa1= 50 dB(A)
mm	eur	eur	eur	m³/h	m³/h	m³/h
250	216,55	227,53	314,21	529-690	820	985
315	237,99	248,96	335,67	853-970	1115	1285
400	307,39	318,37	405,06	1360-1600	1900	2200

Ø	PLX6	PLX6 /AIS/	PLX6 /M/	PLX6 /M/ AIS/	CH6
mm	eur	eur	eur	eur	eur
250	55,73	75,22	76,41	103,16	60,30
315	71,71	96,79	92,35	124,68	71,09
400	82,82	111,81	103,49	139,73	88,22
500	95,40	128,79	119,41	161,21	102,29
630	108,30	146,20	135,36	182,73	130,46

Actuators		eur
GLB141.1E-24v	Siemens On/Off 10N	163,28
GLB341.1E-230v	Siemens On/Off 10N	163,28
GLB161.1E-24v	Siemens proportional 10N	258,00
GLB111.1E/MO-24v	Siemens proportional 10N	342,84
NM24A	Belimo On/Off 10N	171,69
NM230A	Belimo On/Off 10N	177,71
NM24A-SR	Belimo proportional 10N	263,06
NM230A-SR	Belimo proportional 10N	319,28
NM24A-MOD	Belimo proportional 10N	378,18

PLX6



Time from 30° to 60°: 30 min

	D2	F	Z	D1
250	243	320	308	248
315	308	385	373	313
400	396	500	450	313
500	492	600	500	448
630	622	730	558	498

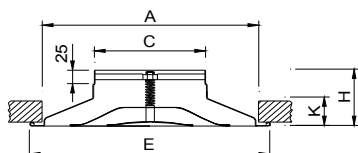
Adjustables cones diffuser

Lievore,
Altherr
& Molina

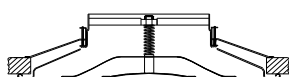
actif

Technical data

DCG

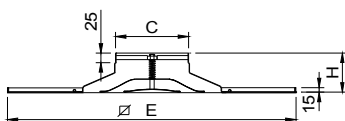


DCG (O)



	E	A	H	K	C
160	325	303	101	44	157
200	416	385	115	58	197
250	500	464	114	57	247
315	592	564	137	80	313
355	665	630	140	83	353
400	666	630	131	74	398
450	840	793	173	106	447
500	840	793	163	97	497

DCG-MOD



			MOD/600		MOD/625		MOD/675	
	H	C	B	E	B	E	B	E
160	101	157	12	595	12	620	15	670
200	115	197	12	595	12	620	15	670
250	114	247	12	595	12	620	15	670
315	137	313	12	595	12	620	15	670



Description

Adjustable cones diffusers to be used in different premises from 2,6 metres high. Constructed from aluminium.

DCG Manually adjustable diffuser.

DCG-ACTIF hermo-adjustable diffuser independently. To be used in different premises from 4 metres high.

DCG-MOD-... Diffusers specially designed for modular ceilings.

.../T15/ False ceiling panel 15 mm profile with angled borders.

.../T24/ False ceiling panel 24 mm profile with angled borders.

Accessories

PLDG Plenum box with a lateral connection.

.../S/ Upper circular connection.

...-R Damper in the spigot.

.../AIS/ Thermal insulation inside.

PMG Crossbar suitable for mounting in false ceiling with rectangular duct.

R3G Flap damper, manually operated.

R2G Flap damper operated by means of a screwdriver.

Fixing

1) Connection into a circular metallic duct.

(P) Connection into the crossbar or plenum box by 2 central screws. Incompatible with DCG-ACTIF and R2G dampers.

(O) Hidden screws for false ceiling mounting with flexible duct. Incompatible with DCG-ACTIF or R2G dampers.

Finishes

R9016S Painted white RAL 9016 (60-70% gloss)

R9010S Painted white RAL 9010 (60-70% gloss)

R9006M Painted aluminum color RAL 9006 (20-30% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

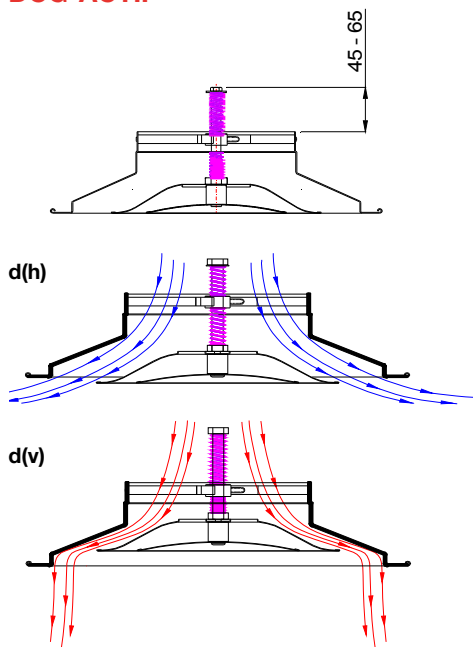
Supply and mounting of circular diffuser with adjustable blades series **DCG+PLDG R9016S dim. mm** constructed from aluminium paint in white RAL 9016 (60-70% gloss) with lateral circular connection plenum box made from galvanized steel. Manufacturer **MADEL**.



Ø	DCG	DCG-MOD /T/	DCG (O)	DCG-ACTIF	Lwa1 < 40 dB(A)	Lwa1= 45 dB(A)	Lwa1= 50 dB(A)
mm	eur	eur	eur	eur	m³/h	m³/h	m³/h
160	33,85	-	42,69	108,35	215-350	410	-
200	44,13	-	53,56	118,50	340-560	660	-
250	59,91	-	70,34	135,38	530-680	795	-
315	77,06	-	88,43	152,28	835-1040	1295	1615
355	117,75	-	130,53	-	1035-1485	1795	2175
400	118,18	-	130,93	-	1350-1970	2320	2730
450	143,32	-	157,38	-	1560-1860	2220	2655
500	147,69	-	162,12	-	1890	2450	3160
MOD/ 600 - 160	56,82	64,91	-	131,34	215-350	410	-
MOD/ 600 - 200	65,25	73,38	-	139,65	340-560	660	-
MOD/ 600 - 250	74,44	82,50	-	149,89	530-680	795	-
MOD/ 600 - 315	93,23	101,32	-	168,47	835-1040	1295	1615
MOD/ 625 - 160	63,90	72,52	-	138,40	215-350	410	-
MOD/ 625 - 200	72,32	80,94	-	146,70	340-560	660	-
MOD/ 625 - 250	81,48	90,10	-	156,91	530-680	795	-
MOD/ 625 - 315	100,27	108,89	-	175,51	835-1040	1295	1615
MOD/ 675 - 160	70,95	80,69	-	145,46	215-350	410	-
MOD/ 675 - 200	79,38	89,11	-	153,74	340-560	660	-
MOD/ 675 - 250	88,53	98,30	-	163,97	530-680	795	-
MOD/ 675 - 315	107,32	117,08	-	182,56	835-1040	1295	1615

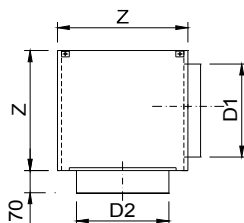
Ø	R3G	R2G	PMG	PLDG	PLDG-R	PLDG / AIS	PLDG-R / AIS
mm	eur	eur	eur	eur	eur	eur	eur
160	9,13	19,36	3,37	51,18	64,75	69,09	82,68
200	9,75	20,28	3,75	59,02	73,38	79,67	94,03
250	11,11	24,71	3,94	62,82	78,41	84,81	100,40
315	13,60	27,40	4,83	71,71	88,87	96,79	113,96
355	20,72	34,52	5,48	77,77	96,36	104,99	123,58
400	21,63	35,50	5,46	82,82	-	111,81	-
450	22,52	36,40	6,13	89,59	-	120,94	-
500	26,76	41,56	7,11	95,40	-	128,79	-

DCG-ACTIF



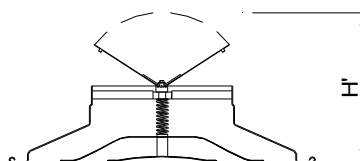
Time from 30° to 60°: 30 min

PLDG



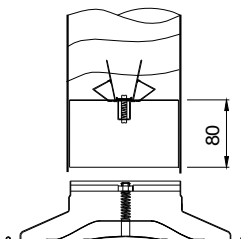
	D2	Z	D1
160	160	220	158
200	200	260	198
250	250	310	248
315	317	375	313
355	357	415	353
400	402	460	398
450	450	510	448
500	499	560	498

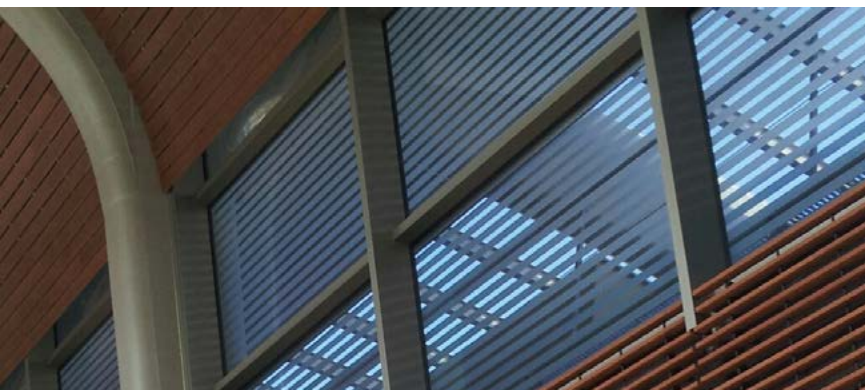
DCG + R3G



	H'
160	180
200	218
250	242
315	298
355	331
400	360
450	402
500	417

R2G





Jet nozzles



INDEX

- KIN** long throw mini jet nozzles
- KAM** long throw jet nozzles
- KOO** long throw multi-jet nozzles
- KAP** long throw jet nozzles panel
- KOBE** medium-long throw linear jet nozzles
- LINKIN** m-long throw hidden linear jet nozzles

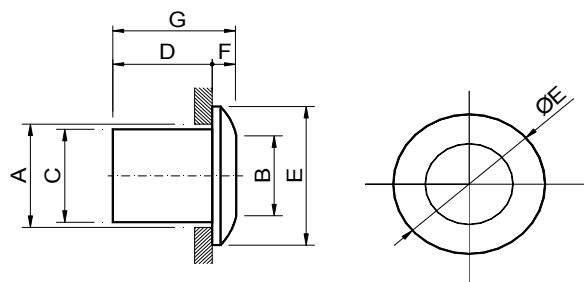
Long throw design

KAM Series of Benedito Design, only for the best interiors
Automated solutions for large areas

Long throw mini jet nozzles



Technical data



Ø	A	B	C	D	E	F	G
63	73	53	61	60	91	14,5	74,5
80	90	70	78	60,5	115,5	18	78,5

Description

Long throw mini jet nozzle for air diffusion. Nozzles constructed from aluminium.

KIN Non-orientable mini jet nozzle suitable for wall or ceiling mounting.

Fixing

1) Neck installation by means of screw and jet nozzle pressed into the neck.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of non-orientable long throw mini jet nozzle series **KIN R9016S diam. 80**, constructed from aluminium and paint in white RAL 9010 (60-70% gloss) or another defined by the D.F., pressing fixation and neck mounting included. Manufacturer **MADEL**.

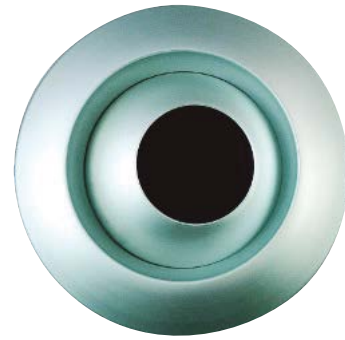
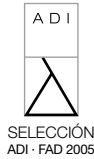


Ø	KIN	Lwa1 < 35 dB(A)	Lwa1 = 40 dB(A)	Lwa1 = 45 dB(A)
mm	eur	m³/h	m³/h	m³/h
63	26,32	20-80	95	125
80	29,44	35-135	165	215

Long throw jet nozzles

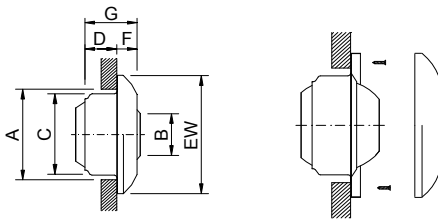
BENEDITO
Design

actif

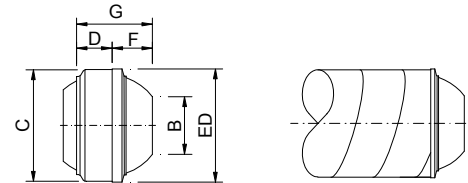


Technical data

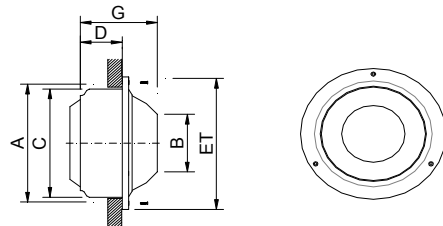
KAM-W



KAM-D



KAM-T



Ø	A	B	C	D	EW	ED	ET	F	G
125	135	61	123	55	181	126	165	27	85
160	170	80	158	55	231	162	205	34	92
200	210	102	198	74	289	203	252	40	122
250	260	130	248	99	359	253	304	48	158
315	325	166	313	126	423	320	390	44	171
400	410	212	398	162	503	404	490	62	224

Description

Long throw jet nozzles to provide air diffusion into large spaces. Constructed from aluminium and seal of rotation from immutable material.

KAM-W Manually adjustable jet nozzle, suitable for wall or ceiling mounting. Installation by means of hidden screws behind the ring.

KAM-D Manually adjustable jet nozzle, suitable for mounting into a visible duct. Connection into a circular metallic duct.

KAM-T Manually adjustable jet nozzle, suitable for wall or ceiling mounting. Installation by means of visible screws.

...-M5-24 / 230 Jet nozzle with air supply angle adjustable by means of an On / Off actuator.

...-ACTIF Autonomous thermo-adjustable jet nozzle by means of a thermo-reactive piston. Time from 30° to 60°: 30 min.

Accessories

IEH Pressed collar saddle for KAM-D mounting into a visible circular duct.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

R9006M Painted aluminum color RAL 9006 matt (20-30% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

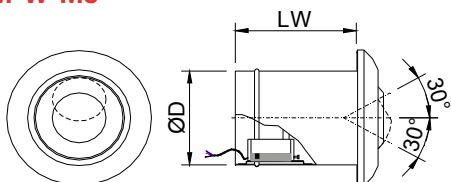
Supply and mounting of manually adjustable long throw jet nozzle for wall mounting series **KAM-W R9016S dim. 125** constructed from aluminium, with seal of rotation from immutable material classified M1 and paint in white RAL 9010 (60-70% gloss) with hidden screws behind ring. Manufacturer **MADEL**.



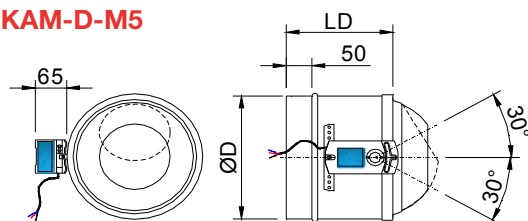
Ø	KAM-W	KAM-D	KAM-T	IEH	Lwa1 < 35 dB(A)	Lwa1 = 40 dB(A)	Lwa1 = 45 dB(A)
mm	eur	eur	eur	eur	m³/h	m³/h	m³/h
125	69,31	58,26	58,23	28,22	28-150	180	220
160	81,30	68,24	67,86	28,22	45-195	245	305
200	105,89	85,67	86,34	28,22	97-310	400	515
250	167,81	137,07	136,80	38,94	176-450	595	790
315	230,29	195,57	198,89	50,25	330-640	850	1130
400	322,85	276,77	277,46	58,16	550-1000	1350	1750

Ø	KAM-W-M5	KAM-D-M5	KAM-T-M5	KAM-W	KAM-D	KAM-T
mm	24 / 230 v eur	24 / 230 v eur	24 / 230 v eur	ACTIF	ACTIF eur	ACTIF eur
200	-	-	-	219,29	199,07	199,72
250	347,41	292,04	316,39	281,21	250,45	250,16
315	413,99	369,07	382,60	357,01	322,30	325,62
400	513,81	456,25	468,48	-	-	-

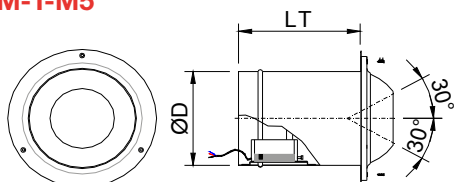
KAM-W-M5



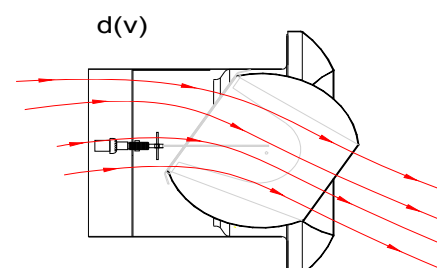
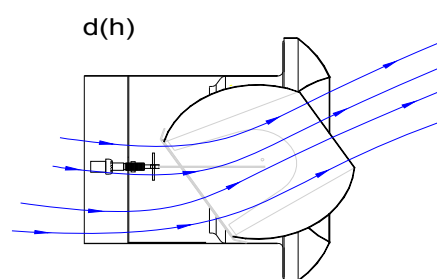
KAM-D-M5



KAM-T-M5

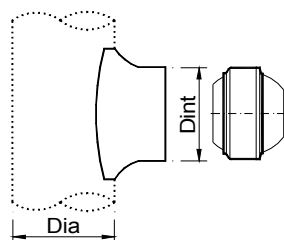


KAM-...ACTIF



Time from d(h) to d(v): 30 min

IEH



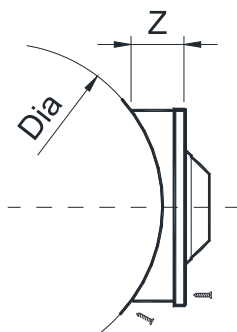
	D int	D min
IEH-KAM-D-125-Dia	125	160
IEH-KAM-D-160-Dia	160	200
IEH-KAM-D-200-Dia	200	250
IEH-KAM-D-250-Dia	250	315
IEH-KAM-D-315-Dia	315	400
IEH-KAM-D-400-Dia	400	500

Long throw multi-jet nozzles

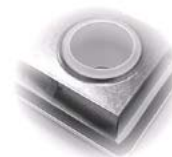


Technical data

IEK



IEK- Dia - L x H	Dia Conducto Dia Duct	Z
IEK- Dia - L x 100	200 - 1600	48
IEK- Dia - L x 150	250 - 1600	48
IEK- Dia - L x 200	315 - 1600	65
IEK- Dia - L x 300	400 - 1600	95



Description

Long throw multi-jet nozzle, giving complete flexibility of direction, suitable for wall mounting. Nozzles constructed from aluminium and panel from galvanised steel. Seal of rotation from immutable material.

KOO Manually adjustable multi-jet nozzle.

Accessories

CM Mounting frame from galvanised steel
(delivered separately in 4 linear elements)

PLRO Connection plenum: see page Accessories.

IEK Pressed collar saddle for mounting into a visible circular duct. (T) fixing required.

Fixing

(S) Clips. It requires mounting frame CM.

(T) Visible screws. Mandatory for ceiling mounting.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

R9006M Painted aluminum color RAL 9006 matt (20-30% gloss)

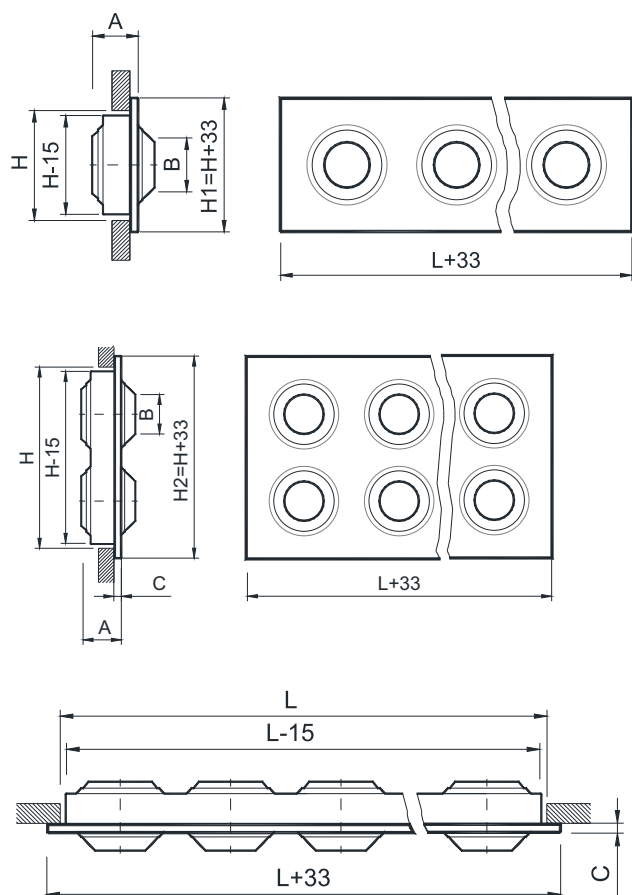
RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of long throw multi-jet nozzle manually adjustable in all directions **series KOO+CM (S) R9016S dim. LxH** constructed from aluminium and galvanised steel, paint in white RAL 9010 (60-70% gloss) or another defined by the D.F., invisible fixing by clips and mounting frame. Manufacturer **MADEL**.



L x H	KOO	CM	IEK	Lwa1 < 35 dB(A)	Lwa1 = 40 dB(A)	Lwa1 = 45 dB(A)
mm	eur	eur	eur	m³/h	m³/h	m³/h
200x100	65,69	2,59	33,47	95	115	140
300x100	85,05	2,96	35,39	145	175	210
400x100	101,72	3,27	38,64	180	220	270
500x100	119,85	3,55	44,56	210	265	330
600x100	133,43	4,04	47,77	240	300	375
700x100	156,22	4,78	51,01	270	340	420
800x100	168,13	5,15	56,93	300	375	465
900x100	184,51	5,55	60,14	325	410	510
1000x100	197,47	6,19	63,38	355	445	555
300x150	85,63	3,10	35,96	160	200	250
450x150	116,20	3,55	42,34	240	300	370
600x150	143,35	4,17	48,69	320	395	495
750x150	172,22	5,06	55,05	390	475	590
900x150	195,28	5,71	61,45	450	555	680
1050x150	219,24	6,81	67,82	520	630	770
1200x150	248,51	7,86	71,56	585	710	860
200x200	93,17	2,88	35,66	160	210	265
300x200	123,86	3,24	37,86	245	315	400
400x200	156,16	3,55	41,31	280	385	520
500x200	182,61	3,87	47,49	320	455	640
600x200	209,83	4,32	50,97	395	535	720
700x200	243,57	5,04	54,43	470	615	795
800x200	270,98	5,41	60,57	550	690	870
900x200	293,92	5,88	64,05	625	770	950
1000x200	326,03	6,44	67,59	700	850	1025
300x300	130,73	3,63	38,96	300	360	435
450x300	180,94	4,10	45,88	450	540	650
600x300	227,71	4,72	52,79	595	720	870
750x300	276,28	5,61	59,74	740	905	1105
900x300	324,08	6,24	66,67	890	1090	1340
1050x300	372,25	7,33	73,62	1035	1275	1575
1200x300	421,01	8,37	77,88	1180	1460	1810

KOO


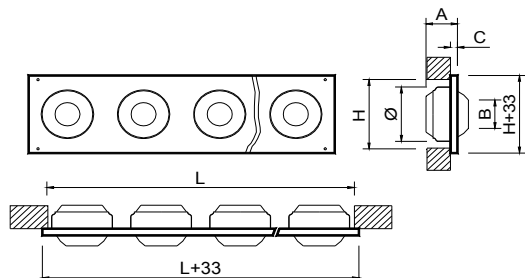
Lx100	n Jets	Lx200	n Jets
200x100	2	200x200	4
300x100	3	300x200	6
400x100	4	400x200	8
500x100	5	500x200	10
600x100	6	600x200	12
700x100	7	700x200	14
800x100	8	800x200	16
900x100	9	900x200	18
1000x100	10	1000x200	20

Lx150	n Jets	Lx300	n Jets
300x150	2	300x300	4
450x150	3	450x300	6
600x150	4	600x300	8
750x150	5	750x300	10
900x150	6	900x300	12
1050x150	7	1050x300	14
1200x150	8	1200x300	16

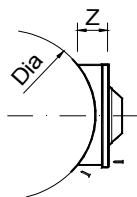
Ø	LxH	B	A	H1	H2	UN.	
80	Lx100	44	46	133	-	L/H	1 line
	Lx200	44	46	-	233	4x(L/H)	2 lines
125	Lx150	61	63	183	-	L/H	1 line
	Lx300	61	63	-	333	4x(L/H)	2 lines

Long throw jet nozzles panel

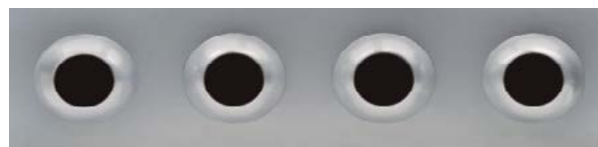
Technical data



LxH	n	Ø	A	B	C	Ø
500 x 200	2	160	90	80	10	158
800 x 200	4	160	90	80	10	158
1000 x 200	5	160	90	80	10	158
1500 x 200	7	160	90	80	10	158
2000 x 200	9	160	90	80	10	158
500 x 250	2	200	115	102	10	198
800 x 250	3	200	115	102	10	198
1000 x 250	4	200	115	102	10	198
1500 x 250	6	200	115	102	10	198
2000 x 250	7	200	115	102	10	198
800 x 300	2	250	125	130	15	248
1000 x 300	3	250	125	130	15	248
1500 x 300	4	250	125	130	15	248
2000 x 300	6	250	125	130	15	248
800 x 400	2	315	180	166	15	313
1000 x 400	2	315	180	166	15	313
1500 x 400	3	315	180	166	15	313
2000 x 400	4	315	180	166	15	313



IBK- Dia - L x H	Dia Conducto Dia Duct	Z
IBK- Dia - L x 200	315 - 1600	65
IBK- Dia - L x 250	400 - 1600	75
IBK- Dia - L x 300	500 - 1600	85
IBK- Dia - L x 400	630 - 1600	170



Description

Panel of long throw multi-jet nozzle, giving complete flexibility of direction suitable for wall mounting. Nozzles constructed from aluminium and panel from galvanised steel. Seal of rotation from immutable material.

KAP Manually adjustable multi-jet nozzle.

Accessories

IBK Pressed collar saddle for mounting into a visible circular duct.

Fixing

(T) Visible screws.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

R9006M Painted aluminum color RAL 9006 matt (20-30% gloss)

RAL... Painted in other RAL colours : see INFO pag.

Specification Text

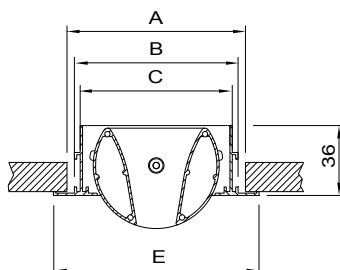
Supply and mounting of long throw multi-jet nozzle manually adjustable in all directions series **KAP (T) R9016S dim. LxH** constructed from aluminium and galvanised steel, paint in white RAL 9010 (60-70% gloss) or another defined by the D.F., fixing by visible screws. Manufacturer **MADEL**.

L x H	KAP	IBK	Lwa1 < 35 dB(A)	Lwa1 = 40 dB(A)	Lwa1 = 45 dB(A)
mm	eur	eur	m³/h	m³/h	m³/h
500x200	167,34	47,49	90-290	370	460
800x200	240,04	51,96	135-430	540	670
1000x200	381,02	67,59	225-720	910	1130
1500x200	525,02	72,09	315-960	1200	1500
2000x200	668,42	76,59	405-1170	1470	1830
500x250	202,65	57,07	194-500	640	824
800x250	293,05	62,29	291-682	880	1140
1000x250	383,77	67,57	388-930	1200	1550
1500x250	562,57	72,81	582-1333	1720	2220
2000x250	655,86	78,04	679-1519	1960	2530
800x300	319,09	66,67	352-720	952	1264
1000x300	465,09	77,88	528-1080	1430	1900
1500x300	615,12	83,89	704-1440	1900	2525
2000x300	903,71	89,87	1056-1980	2620	3480
800x400	428,30	81,33	660-1150	1530	2040
1000x400	434,71	89,62	660-1150	1530	2040
1500x400	639,71	97,85	990-1600	2125	2825
2000x400	843,60	106,11	1320-1985	2635	3500

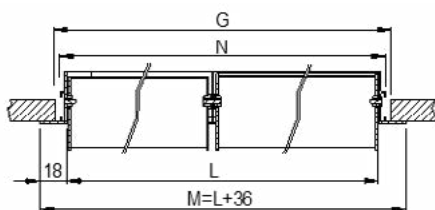
Mid-long throw linear jet nozzles

Technical data

KOBE

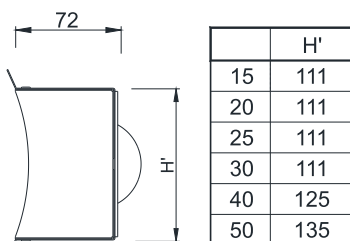


	A	B	C	E
15	93,5	84,5	78,5	106
20	93,5	84,5	78,5	106
25	93,5	84,5	78,5	106
30	93,5	84,5	78,5	106
40	107,5	84,5	92,5	120
50	118,5	109,2	103,5	131



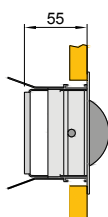
L	M	N	G
500	536	509	517
1000	1036	1009	1017
1500	1536	1509	1517
2000	2036	2009	2017

IOK

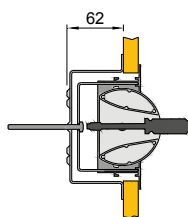


	H'
15	111
20	111
25	111
30	111
40	125
50	135

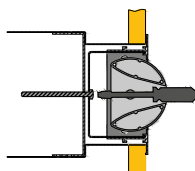
(D)



(PM)



(PL)



Description

KOBE mid-long throw linear jet nozzles have been designed to combine aesthetics with technical performance. Its mounting is carried out both on the wall and on the ceiling. With various slot sizes available and an adjustable supply angle of $\pm 30^\circ$, KOBE nozzles are suitable for all types of architectures. KOBE jet nozzles are ideal for installation in large spaces such as shopping centers, airports, stations, sports halls, etc. Due to their performance and linear aesthetics, along with airflow control, KOBE jet nozzles are also suitable for use in residential and commercial facilities. Diffusers made of aluminum with steel shafts and fastening elements. Length from 300 to 2000mm. Nozzle with a maximum length of 1000 mm. For longer lengths the diffuser incorporates two nozzles of equal size.

KOBE Mid-long throw linear jet nozzle.

Accessories

PLKB Plenum box with a lateral circular connection. It incorporates supports for wall and ceiling suspension. Made in galvanised steel.

...-R Plenum box with a flow damper in the spigot (available only for lateral connection)

.../S/ Plenum box with an upper elliptical connection.

.../AIS/ Thermally insulated plenum box with foam.

IOK Pressed collar saddle for mounting into a visible circular duct. (PM) fixing required.

Fixing systems

(PL) Nozzle to screw to plenum box and suspension of the assembly to the ceiling or wall.

(PM) Nozzle with crossbars to install in a false ceiling or wall. Fixing by screws.

(D) Nozzle with brackets for ceiling suspension using threaded rods.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9005M Painted black RAL 9005 matt (20-30% gloss)

RAL... Painted in other RAL colours : see INFO page.

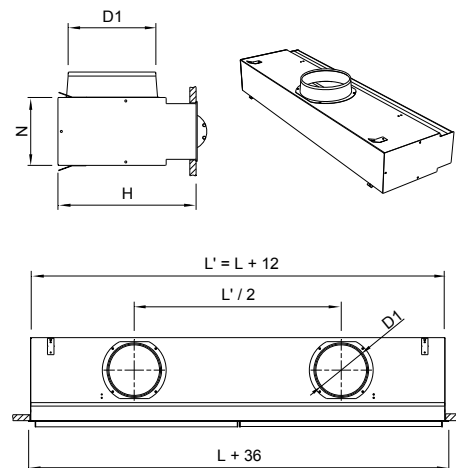
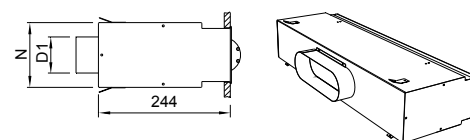
Specification text

Supply and mounting of medium-long throw adjustable linear nozzle

KOBE+PLKB-R R9010S (PL) 20x2000 made of aluminum and white lacquered finish RAL 9010 (60-70% gloss) with lateral circular connection plenum with damper in the spigot and elements necessary for assembly. Brand **MADEL**.

Dim.	KOBE	PLKB/L/	PLKB/L/-R	PLKB/S/	PLKB/L/	PLKB/L/-R	PLKB/S/	IOK	(PM)	Lwa1	Lwa1=	Lwa1=
mm	eur	eur	eur	eur	/AIS/	/AIS/	/AIS/	eur	eur	< 25 dB(A)	30 dB(A)	35 dB(A)
					eur	eur	eur			m³/h	m³/h	m³/h
15x300	65,21	47,41	59,43	54,76	63,99	76,02	73,91	43,06	9,51	40-105	130	160
15x400	67,68	48,75	60,77	56,10	65,82	77,84	75,74	46,31	9,51	50-120	170	200
15x500	70,71	50,09	62,13	57,45	67,63	79,65	77,56	52,22	9,51	60-170	205	250
15x600	75,19	51,44	63,47	58,81	69,45	81,49	79,40	55,43	9,51	75-190	250	300
15x700	78,63	52,81	64,83	60,15	71,30	83,32	81,20	58,68	9,51	90-230	280	340
15x800	81,25	54,16	66,18	61,51	73,12	85,15	83,03	64,60	9,51	100-250	320	380
15x900	84,56	55,50	67,53	62,86	74,93	86,95	84,86	67,80	9,51	115-280	350	410
15x1000	85,12	57,91	69,94	68,41	78,18	90,21	92,35	71,04	9,51	130-310	380	450
15x1100	138,90	61,66	73,69	72,17	83,26	95,28	97,44	74,28	9,51	145-340	410	475
15x1200	139,70	62,47	74,48	72,96	84,32	96,34	98,49	77,52	9,51	150-360	440	530
15x1300	146,28	68,93	80,95	79,44	93,05	105,08	107,24	80,76	17,79	155-390	480	570
15x1400	147,08	73,47	85,50	80,81	99,18	111,20	109,10	84,00	17,79	180-420	590	610
15x1500	147,86	74,79	98,84	89,49	100,97	125,02	120,82	87,24	17,79	195-450	540	650
15x1600	158,32	82,62	106,66	97,32	111,53	135,58	131,38	90,48	17,79	210-470	550	675
15x1700	159,10	84,21	108,27	98,92	113,69	137,73	133,53	93,72	17,79	225-500	600	710
15x1800	159,91	87,60	111,63	102,30	118,25	142,30	138,10	96,95	17,79	230-510	600	740
15x1900	160,71	87,74	111,80	102,45	118,46	142,52	138,31	100,19	17,79	250-550	650	770
15x2000	161,46	87,95	111,99	102,65	118,71	142,77	138,57	103,43	17,79	260-550	650	800
20x300	65,16	47,41	59,43	54,76	63,99	76,02	73,91	43,06	9,51	50-120	145	170
20x400	67,63	48,75	60,77	56,10	65,82	77,84	75,74	46,31	9,51	70-155	190	225
20x500	70,65	55,40	67,43	57,45	74,80	86,83	77,56	52,22	9,51	85-190	230	285
20x600	75,14	51,44	63,47	58,81	69,45	81,49	79,40	55,43	9,51	100-220	280	330
20x700	78,58	52,81	64,83	60,15	71,30	83,32	81,20	58,68	9,51	120-250	320	370
20x800	81,20	54,16	66,18	61,51	73,12	85,15	83,03	64,60	9,51	140-290	350	420
20x900	84,51	55,50	67,53	62,86	74,93	86,95	84,86	67,80	9,51	160-330	430	390
20x1000	85,05	61,08	85,12	75,77	82,44	106,49	102,30	71,04	9,51	175-350	410	490
20x1100	138,85	64,83	88,89	79,54	87,54	111,58	107,38	74,28	9,51	175-350	420	540
20x1200	139,64	65,61	89,67	80,32	88,59	112,64	108,43	77,52	9,51	200-410	490	590
20x1300	146,23	72,09	96,13	86,80	97,32	121,37	117,17	80,76	17,79	230-440	520	630
20x1400	147,02	73,47	97,52	88,18	99,18	123,23	119,02	84,00	17,79	240-470	560	470
20x1500	147,81	74,79	98,84	89,49	100,97	125,02	120,82	87,24	17,79	260-490	590	700
20x1600	158,27	82,62	106,66	97,32	111,53	135,58	131,38	90,48	17,79	280-520	620	750
20x1700	159,05	84,21	108,27	98,92	113,69	137,73	133,53	93,72	17,79	300-540	660	790
20x1800	159,84	87,60	111,63	102,30	118,25	142,30	138,10	96,95	17,79	310-560	690	820
20x1900	160,64	87,74	111,80	102,45	118,46	142,52	138,31	100,19	17,79	330-600	720	850
20x2000	161,40	87,95	111,99	102,65	118,71	142,77	138,57	103,43	17,79	350-620	750	900
25x300	65,21	47,41	59,43	54,76	63,99	76,02	73,91	43,06	9,51	65-130	160	190
25x400	67,68	48,75	60,77	56,10	65,82	77,84	75,74	46,31	9,51	90-170	210	250
25x500	70,71	55,40	67,43	57,45	74,80	86,83	77,56	52,22	9,51	110-210	260	300
25x600	75,19	51,44	63,47	58,81	69,45	81,49	79,40	55,43	9,51	130-250	300	360
25x700	78,63	52,81	64,83	60,15	71,30	83,32	81,20	58,68	9,51	150-280	340	410
25x800	81,25	54,16	66,18	61,51	73,12	85,15	83,03	64,60	9,51	175-320	390	460
25x900	84,56	55,50	67,53	62,86	74,93	86,95	84,86	67,80	9,51	195-340	420	500
25x1000	85,12	61,08	85,12	75,77	82,44	106,49	102,30	71,04	9,51	220-380	450	550
25x1100	138,90	64,83	88,89	79,54	87,54	111,58	107,38	74,28	9,51	240-410	500	600
25x1200	139,70	65,61	89,67	80,32	88,59	112,64	108,43	77,52	9,51	260-440	540	650
25x1300	146,28	72,09	96,13	86,80	97,32	121,37	117,17	80,76	17,79	280-480	580	700
25x1400	147,08	73,47	97,52	88,18	99,18	123,23	119,02	84,00	17,79	300-510	600	740
25x1500	147,86	74,79	98,84	89,49	100,97	125,02	120,82	87,24	17,79	330-550	650	780
25x1600	158,32	82,62	106,66	97,32	111,53	135,58	131,38	90,48	17,79	350-570	680	820
25x1700	159,10	84,21	108,27	98,92	113,69	137,73	133,53	93,72	17,79	370-600	720	860
25x1800	159,91	87,60	111,63	102,30	118,25	142,30	138,10	96,95	17,79	390-630	760	910
25x1900	160,71	87,74	111,80	102,45	118,46	142,52	138,31	100,19	17,79	420-650	800	940
25x2000	161,46	87,95	111,99	102,65	118,71	142,77	138,57	103,43	17,79	440-670	820	980
30x300	65,26	47,41	59,43	54,76	63,99	76,02	73,91	43,06	9,51	75-140	180	220
30x400	67,75	48,75	60,77	56,10	65,82	77,84	75,74	46,31	9,51	100-190	230	280
30x500	70,78	55,40	67,43	57,45	74,80	86,83	77,56	52,22	9,51	130-230	280	340
30x600	75,26	51,44	63,47	58,81	69,45	81,49	79,40	55,43	9,51	150-280	340	400
30x700	78,71	52,81	64,83	60,15	71,30	83,32	81,20	58,68	9,51	181-320	380	450
30x800	81,32	54,16	66,18	61,51	73,12	85,15	83,03	64,60	9,51	200-350	430	520
30x900	84,62	55,50	67,53	62,86	74,93	86,95	84,86	67,80	9,51	240-400	480	570
30x1000	85,17	61,08	85,12	75,77	82,44	106,49	102,30	71,04	9,51	260-430	500	605
30x1100	138,96	64,83	88,89	79,54	87,54	111,58	107,38	74,28	9,51	290-460	560	660
30x1200	139,75	65,61	89,67	80,32	88,59	112,64	108,43	77,52	9,51	320-500	600	720
30x1300	146,35	72,09	96,13	86,80	97,32	121,37	117,17	80,76	17,79	340-550	650	770
30x1400	147,14	73,47	97,52	88,18	99,18	123,23	119,02	84,00	17,79	370-570	700	820
30x1500	147,92	74,79	98,84	89,49	100,97	125,02	120,82	87,24	17,79	390-600	750	880
30x1600	158,38	82,62	106,66	97,32	111,53	135,58	131,38	90,48	17,79	425-650	780	920
30x1700	159,17	84,21	108,27	98,92	113,69	137,73	133,53	93,72	17,79	450-710	820	980
30x1800	159,97	87,60	111,63	102,30	118,25	142,30	138,10	96,95	17,79	480-720	840	1010
30x1900	160,76	87,74	111,80	102,45	118,46	142,52	138,31	100,19	17,79	500-750	880	1050
30x2000	161,51	87,95	111,99	102,65	118,71	142,77	138,57	103,43	17,79	530-790	900	1100

Dim.	KOBE	PLKB	PLKB-R	PLKB/S/	PLKB /AIS/	PLKB-R /AIS/	PLKB/S/ /AIS/	IOK	(PM)	Lwa1 < 25 dB(A)	Lwa1= 30 dB(A)	Lwa1= 35 dB(A)
mm	eur	eur	eur	eur	eur	eur	eur	eur	eur	m³/h	m³/h	m³/h
40x300	65,35	48,44	60,46	55,79	65,38	77,41	75,32	53,20	9,86	100-160	210	260
40x400	67,84	49,98	62,00	57,34	67,48	79,50	77,41	56,64	9,86	135-220	270	330
40x500	70,32	62,41	74,45	69,78	84,27	96,30	94,21	62,82	9,86	170-270	330	400
40x600	75,35	53,08	65,11	60,45	71,68	83,70	81,61	66,31	9,86	200-310	380	480
40x700	78,79	56,42	68,44	63,79	76,17	88,20	86,11	69,76	9,86	240-350	450	540
40x800	81,41	58,19	70,22	65,54	78,55	90,57	88,48	75,90	9,86	280-400	500	600
40x900	84,73	59,94	71,98	67,30	80,92	92,95	90,87	79,39	9,86	315-440	550	660
40x1000	85,26	64,51	88,57	79,22	87,08	111,14	106,94	82,92	9,86	350-480	600	710
40x1100	139,10	69,52	93,56	84,21	93,85	117,90	113,69	86,46	9,86	385-520	650	780
40x1200	139,90	70,43	94,47	85,14	95,06	119,12	114,93	90,00	9,86	420-550	670	840
40x1300	146,48	73,90	97,95	88,61	99,77	123,82	119,63	93,53	18,51	460-590	725	890
40x1400	147,28	75,59	99,64	90,30	102,05	126,10	121,89	97,07	18,51	490-630	770	950
40x1500	148,08	77,23	101,29	91,94	104,28	128,34	124,14	100,60	18,51	530-660	820	1000
40x1600	158,53	86,99	111,06	101,70	117,47	141,50	137,30	104,14	18,51	560-700	860	1060
40x1700	159,33	89,00	113,05	103,71	120,15	144,21	139,99	107,68	18,51	600-740	910	1100
40x1800	160,12	93,26	117,32	107,97	125,92	149,97	145,77	111,21	18,51	640-760	940	1150
40x1900	160,90	93,44	117,49	108,14	126,12	150,18	145,99	114,75	18,51	690-800	980	1210
40x2000	161,71	93,59	105,62	108,30	126,35	138,38	146,20	118,29	18,51	700-830	1010	1240
50x300	65,55	49,58	61,59	56,92	66,91	78,94	76,83	53,20	9,86	130-190	250	320
50x400	68,03	51,14	63,16	58,49	69,04	81,07	78,95	56,64	9,86	170-245	320	410
50x500	70,50	63,33	75,36	70,69	85,51	97,53	95,44	62,82	9,86	215-305	390	490
50x600	75,55	54,28	66,31	61,64	73,28	85,30	83,22	66,31	9,86	260-360	460	580
50x700	78,99	57,67	69,69	65,03	77,85	89,87	87,78	69,76	9,86	300-520	520	660
50x800	81,60	59,46	71,48	66,80	80,27	92,29	90,18	75,90	9,86	350-450	570	730
50x900	84,90	61,23	73,26	68,59	82,68	94,70	92,60	79,39	9,86	390-500	600	800
50x1000	85,45	66,35	90,39	81,06	89,54	113,60	109,43	82,92	9,86	440-530	700	870
50x1100	139,35	71,34	95,39	86,06	96,31	120,36	116,18	86,46	9,86	480-570	750	920
50x1200	140,14	72,25	96,31	86,97	97,54	121,60	117,41	90,00	9,86	525-630	800	970
50x1300	146,73	75,73	99,78	90,45	102,25	126,30	122,11	93,53	18,51	575-670	840	1070
50x1400	147,52	77,43	101,48	92,15	104,51	128,56	124,38	97,07	18,51	620-690	880	1100
50x1500	148,32	79,07	103,12	93,80	106,74	130,80	126,62	100,60	18,51	660-720	920	1160
50x1600	158,77	88,83	112,88	103,55	119,91	143,96	139,79	104,14	18,51	710-760	960	1250
50x1700	159,56	90,83	114,87	105,54	122,61	146,66	142,49	107,68	18,51	750-800	1000	1300
50x1800	160,37	95,10	119,16	109,83	128,39	152,44	148,25	111,21	18,51	790-850	1050	1370
50x1900	161,15	95,26	119,31	109,98	128,60	152,65	148,47	114,75	18,51	815-900	1100	1410
50x2000	161,95	95,42	119,46	110,15	128,81	152,87	148,70	118,29	18,51	880-930	1150	1450

PLKB /L/

PLKB /S/

PLKB/L/ PLKB/S/

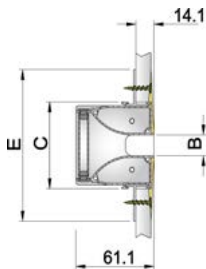
LxH	0,3 = L = 0,6			0,6 < L = 1			1 < L = 1,5			1,5 < L = 2		
	D1	H	N	D1	H	N	D1	H	N	D1	H	N
KOBE15	1/158	244	111	1/158	244	111	2/158	244	111	2/158	244	111
KOBE20	1/158	244	111	1/158	244	111	2/158	244	111	2/198	284*	111
KOBE25	1/158	244	111	1/198	284*	111	2/198	284*	111	2/198	284*	111
KOBE30	1/198	284*	111	1/198	284*	111	2/198	284*	111	2/198	284*	111
KOBE40	1/198	284*	125	1/198	284*	125	2/198	284*	125	2/248	334*	125
KOBE50	1/198	284*	135	1/198	284*	135	2/248	334*	135	2/248	334*	135

(*) H= 244 mm for PLKB /S/

Mid-long throw hidden linear jet nozzles

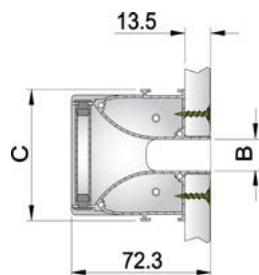
Technical data

LINKIN



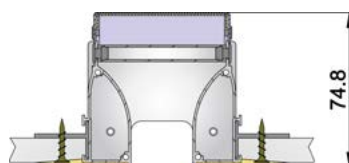
B	C	E
15	62.4	109
20	67.4	114
25	72.4	119
30	77.4	124
40	87.4	134
50	97.4	144

LINKIN-EZ

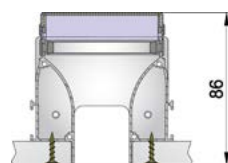


B	C
15	62.4
20	67.4
25	72.4
30	77.4
40	87.4
50	97.4

LINKIN+SDI



LINKIN-EZ+SDI



Description

Medium- and high-throw hidden linear jet nozzle, designed to combine aesthetics with technical performance. It can be mounted on a false ceiling or wall, with the frame concealed using mastic, leaving only the linear diffuser slot visible. The internal nozzle is fixed and does not allow orientation. Suitable for installation at heights between 2.6 and 6 m. Available in lengths from 500 to 2000 mm, with the option to create continuous lines by joining multiple diffuser sections. Made of aluminum.

LINKIN Hidden linear jet nozzle for installation in masonry or lightweight walls.

LINKIN-EZ Hidden linear jet nozzle for quick installation in lightweight walls with a thickness of 13 to 15 mm.

Accessories

SDI Sliding-type airflow control damper.

PLIN/L/ Plenum box with a lateral circular connection. It incorporates supports for wall and ceiling suspension. Made in galvanised steel.

.../S/ Plenum box with an upper elliptical connection.

...-R Plenum box with a flow damper in the spigot (available only for lateral connection)

.../AIS/ Thermally insulated plenum box with foam.

PLU Set union pieces to create lines >1 m. (supplement *)

LINKIN Fixing systems

(L) Brackets for false ceiling suspension of the diffuser, with or without plenum box. The front angle is fixed to the rear frame with screws, then anti-crack tape is applied, and it is covered with filler.

(T) Angle-frame set for front fixing of the diffuser, with or without plenum box, using non-visible screws. First, the angle-frame is inserted into the back of the ceiling, then the diffuser is inserted from below. Once the front guides are aligned with the rear frame, it is fixed with screws. Finally, anti-crack tape is applied, and it is covered with filler.

LINKIN-EZ fixing systems

1) Screw directly to the ceiling or wall panel. No anti-crack tape is required

Finishes

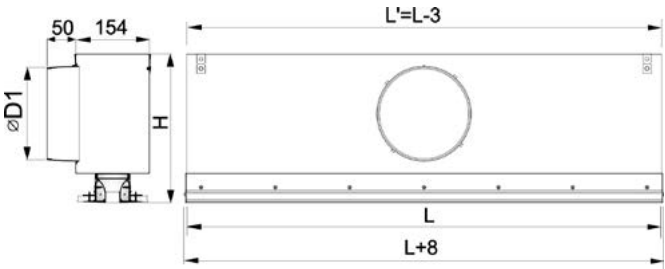
R9016S Painted white RAL 9016 (60-70% gloss)

R9010S Painted white RAL 9010 (60-70% gloss)

R9005M Painted black RAL 9005 (20-30% gloss)

RAL... Painted in other RAL colours : see INFO page.

LINKIN+PLIN/L/

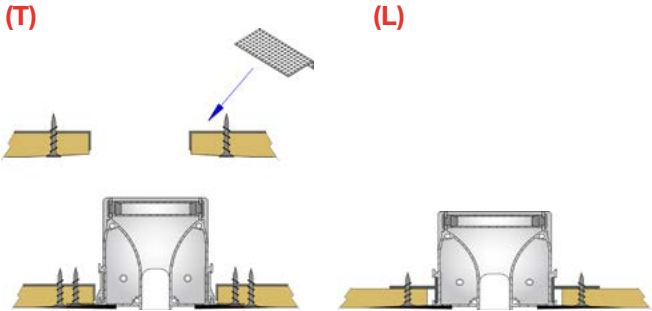


	0,5 < L ≤ 1			1 < L ≤ 1,5			1,5 < L ≤ 2		
	D1	H	N	D1	H	N	D1	H	N
15	1/158	270	154	2/158	270	154	2/158	270	154
20	1/158	270	154	2/158	270	154	2/198	310	154
25	1/198	310	154	2/198	310	154	2/198	310	154
30	1/198	310	154	2/198	310	154	2/198	310	154
40	1/198	310	154	2/198	310	154	2/248	360	154
50	1/198	310	154	2/248	360	154	2/248	360	154

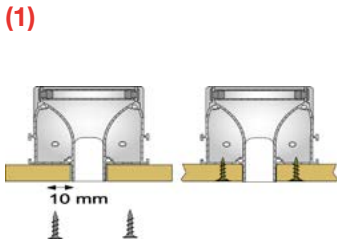
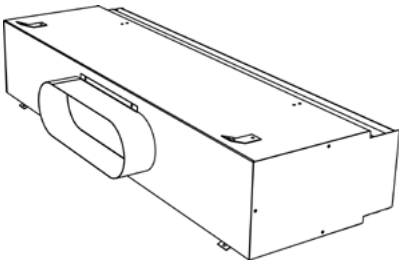
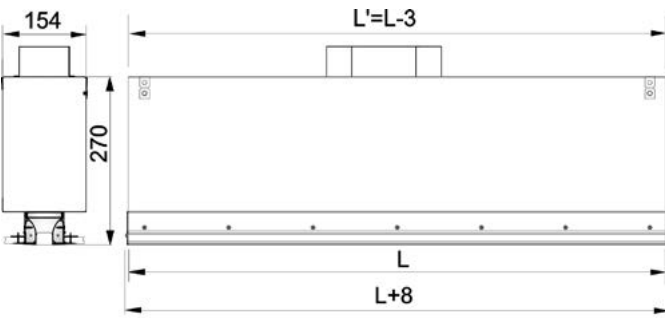
Specification text

Supply and mounting of medium-long throw hidden linear nozzle

LINKIN+PLIN/L/-R R9005M 20x2000 made of aluminum and painted in black RAL 9005 (20-30% gloss) with lateral circular connection plenum box with airflow damper in the spigot and elements necessary for assembly. Brand **MADEL**.



LINKIN+PLIN/S/



	0,5 < L ≤ 1			1 < L ≤ 1,5			1,5 < L ≤ 2		
	D1	H	N	D1	H	N	D1	H	N
15	1/158	270	154	2/158	270	154	2/158	270	154
20	1/158	270	154	2/158	270	154	2/198	270	154
25	1/198	270	154	2/198	270	154	2/198	270	154
30	1/198	270	154	2/198	270	154	2/198	270	154
40	1/198	270	154	2/198	270	154	2/248	270	154
50	1/198	270	154	2/248	270	154	2/248	270	154

Dim. mm	LINKIN (L) eur	LINKIN (T) eur	LINKIN-EZ	PLIN/L/ eur	PLIN/L/-R eur	PLIN/L/ /AIS/ eur	PLIN/L/-R /AIS/ eur	PLIN/S/ eur	PLIN/S/ /AIS/ eur	SDI eur	Lwa1 < 25 dB(A) m³/h	Lwa1 <30 dB(A) m³/h
15x500	37,69	44,32	38,08	50,09	62,13	67,63	79,65	57,45	77,56	33,01	52	104
15x600	39,98	46,61	40,46	51,44	63,47	69,45	81,49	58,81	79,40	34,50	63	125
15x700	42,30	48,93	42,85	52,81	64,83	71,30	83,32	60,15	81,20	36,07	73	146
15x800	44,55	51,18	45,18	54,16	66,18	73,12	85,15	61,51	83,03	37,57	84	167
15x900	46,86	53,49	47,58	55,50	67,53	74,93	86,95	62,86	84,86	39,14	94	188
15x1000	49,29	55,92	50,08	57,91	69,94	78,18	90,21	68,41	92,35	40,71	104	209
15x1100	52,45	59,08	53,32	61,66	73,69	83,26	95,28	72,17	97,44	67,50	115	230
15x1200	54,02	60,65	54,97	62,47	74,48	84,32	96,34	72,96	98,49	69,00	125	251
15x1300	55,19	61,82	56,22	68,93	80,95	93,05	105,08	79,44	107,24	70,57	136	271
15x1400	56,76	63,39	57,87	73,47	85,50	99,18	111,20	80,81	109,10	72,14	146	292
15x1500	58,33	68,27	59,53	74,79	98,84	100,97	125,02	89,49	120,82	73,64	157	313
15x1600	59,51	69,45	60,78	82,62	106,66	111,53	135,58	97,32	131,38	75,13	167	334
15x1700	61,08	71,02	62,43	84,21	108,27	113,69	137,73	98,92	133,53	76,71	177	355
15x1800	62,65	72,59	64,08	87,60	111,63	118,25	142,30	102,30	138,10	78,28	188	376
15x1900	64,22	74,16	65,73	87,74	111,80	118,46	142,52	102,45	138,31	79,85	198	397
15x2000	65,80	75,74	67,39	87,95	111,99	118,71	142,77	102,65	138,57	81,43	209	418
20x500	38,29	44,92	38,69	55,40	67,43	74,80	86,83	57,45	77,56	33,41	70	140
20x600	40,59	47,22	41,06	51,44	63,47	69,45	81,49	58,81	79,40	35,18	84	168
20x700	42,90	49,53	43,46	52,81	64,83	71,30	83,32	60,15	81,20	36,86	98	196
20x800	45,15	51,78	45,79	54,16	66,18	73,12	85,15	61,51	83,03	38,47	112	223
20x900	47,47	54,10	48,18	55,50	67,53	74,93	86,95	62,86	84,86	40,16	126	251
20x1000	49,89	56,52	50,69	61,08	85,12	82,44	106,49	75,77	102,30	41,77	140	279
20x1100	53,05	59,68	53,92	64,83	88,89	87,54	111,58	79,54	107,38	68,59	154	307
20x1200	54,62	61,25	55,58	65,61	89,67	88,59	112,64	80,32	108,43	70,36	168	335
20x1300	55,79	62,42	56,83	72,09	96,13	97,32	121,37	86,80	117,17	72,04	182	363
20x1400	57,37	64,00	58,48	73,47	97,52	99,18	123,23	88,18	119,02	73,73	196	391
20x1500	58,94	68,88	60,13	74,79	98,84	100,97	125,02	89,49	120,82	75,34	210	419
20x1600	60,11	70,05	61,38	82,62	106,66	111,53	135,58	97,32	131,38	76,94	223	447
20x1700	61,68	71,62	63,03	84,21	108,27	113,69	137,73	98,92	133,53	78,63	237	475
20x1800	63,26	73,20	64,69	87,60	111,63	118,25	142,30	102,30	138,10	80,32	251	503
20x1900	64,83	74,77	66,34	87,74	111,80	118,46	142,52	102,45	138,31	81,93	265	531
20x2000	66,40	76,34	67,99	87,95	111,99	118,71	142,77	102,65	138,57	83,53	279	559
25x500	38,41	45,04	38,81	55,40	67,43	74,80	86,83	57,45	77,56	33,98	87	174
25x600	40,70	47,33	41,17	51,44	63,47	69,45	81,49	58,81	79,40	35,78	105	209
25x700	43,01	49,64	43,57	52,81	64,83	71,30	83,32	60,15	81,20	37,50	122	244
25x800	45,26	51,89	45,90	54,16	66,18	73,12	85,15	61,51	83,03	39,22	139	279
25x900	47,58	54,21	48,29	55,50	67,53	74,93	86,95	62,86	84,86	41,02	157	314
25x1000	50,02	56,65	50,82	61,08	85,12	82,44	106,49	75,77	102,30	42,82	174	348
25x1100	53,18	59,81	54,05	64,83	88,89	87,54	111,58	79,54	107,38	69,76	192	383
25x1200	54,75	61,38	55,71	65,61	89,67	88,59	112,64	80,32	108,43	71,56	209	418
25x1300	55,92	62,55	56,96	72,09	96,13	97,32	121,37	86,80	117,17	73,28	227	453
25x1400	57,50	64,13	58,61	73,47	97,52	99,18	123,23	88,18	119,02	75,00	244	488
25x1500	59,07	69,01	60,26	74,79	98,84	100,97	125,02	89,49	120,82	76,72	261	523
25x1600	60,24	70,18	61,51	82,62	106,66	111,53	135,58	97,32	131,38	78,44	279	558
25x1700	61,81	71,75	63,16	84,21	108,27	113,69	137,73	98,92	133,53	80,24	296	592
25x1800	63,38	73,32	64,81	87,60	111,63	118,25	142,30	102,30	138,10	82,04	314	627
25x1900	64,96	74,90	66,47	87,74	111,80	118,46	142,52	102,45	138,31	83,84	331	662
25x2000	66,53	76,47	68,12	87,95	111,99	118,71	142,77	102,65	138,57	85,64	348	697

(*)	eur
PLU	0,98

Dim.	LINKIN (L)	LINKIN (T)	LINKIN-EZ	PLIN/L/ eur	PLIN/L/-R eur	PLIN/L/ /AIS/ eur	PLIN/L/-R /AIS/ eur	PLIN/S/ eur	PLIN/S/ /AIS/ eur	SDI eur	Lwa1 < 25 dB(A) m³/h	Lwa1 <30 dB(A) m³/h
mm	eur	eur										
30x500	37,89	44,52	38,29	55,40	67,43	74,80	86,83	57,45	77,56	34,39	105	210
30x600	40,17	46,80	40,65	51,44	63,47	69,45	81,49	58,81	79,40	36,30	126	251
30x700	42,49	49,12	43,04	52,81	64,83	71,30	83,32	60,15	81,20	38,13	147	293
30x800	44,74	51,37	45,38	54,16	66,18	73,12	85,15	61,51	83,03	40,05	168	335
30x900	47,06	53,69	47,77	55,50	67,53	74,93	86,95	62,86	84,86	41,96	189	377
30x1000	49,50	56,13	50,29	61,08	85,12	82,44	106,49	75,77	102,30	43,95	210	419
30x1100	52,66	59,29	53,53	64,83	88,89	87,54	111,58	79,54	107,38	70,68	230	461
30x1200	54,23	60,86	55,18	65,61	89,67	88,59	112,64	80,32	108,43	72,60	251	503
30x1300	55,40	62,03	56,43	72,09	96,13	97,32	121,37	86,80	117,17	74,43	272	545
30x1400	56,97	63,60	58,09	73,47	97,52	99,18	123,23	88,18	119,02	76,27	293	587
30x1500	58,55	68,49	59,74	74,79	98,84	100,97	125,02	89,49	120,82	78,18	314	629
30x1600	59,72	69,66	60,99	82,62	106,66	111,53	135,58	97,32	131,38	80,09	335	670
30x1700	61,29	71,23	62,64	84,21	108,27	113,69	137,73	98,92	133,53	82,01	356	712
30x1800	62,86	72,80	64,29	87,60	111,63	118,25	142,30	102,30	138,10	83,92	377	754
30x1900	64,44	74,38	65,94	87,74	111,80	118,46	142,52	102,45	138,31	85,91	398	796
30x2000	66,01	75,95	67,60	87,95	111,99	118,71	142,77	102,65	138,57	87,91	419	838
40x500	38,78	45,41	39,18	62,41	74,45	84,27	96,30	69,78	94,21	35,86	140	279
40x600	41,06	47,69	41,54	53,08	65,11	71,68	83,70	60,45	81,61	38,06	168	335
40x700	43,38	50,01	43,93	56,42	68,44	76,17	88,20	63,79	86,11	40,19	196	391
40x800	45,63	52,26	46,27	58,19	70,22	78,55	90,57	65,54	88,48	42,40	223	447
40x900	47,95	54,58	48,66	59,94	71,98	80,92	92,95	67,30	90,87	44,61	251	503
40x1000	50,39	57,02	51,18	64,51	88,57	87,08	111,14	79,22	106,94	46,82	279	559
40x1100	53,55	60,18	54,42	69,52	93,56	93,85	117,90	84,21	113,69	73,92	307	615
40x1200	55,12	61,75	56,07	70,43	94,47	95,06	119,12	85,14	114,93	76,13	335	670
40x1300	56,29	62,92	57,32	73,90	97,95	99,77	123,82	88,61	119,63	78,26	363	726
40x1400	57,86	64,49	58,98	75,59	99,64	102,05	126,10	90,30	121,89	80,39	391	782
40x1500	59,44	69,38	60,63	77,23	101,29	104,28	128,34	91,94	124,14	82,60	419	838
40x1600	60,61	70,55	61,88	86,99	111,06	117,47	141,50	101,70	137,30	84,80	447	894
40x1700	62,18	72,12	63,53	89,00	113,05	120,15	144,21	103,71	139,99	87,01	475	950
40x1800	63,75	73,69	65,18	93,26	117,32	125,92	149,97	107,97	145,77	89,22	503	1006
40x1900	65,33	75,27	66,83	93,44	117,49	126,12	150,18	108,14	145,99	91,43	531	1062
40x2000	66,90	76,84	68,49	93,59	105,62	126,35	138,38	108,30	146,20	93,64	559	1117
50x500	38,27	44,90	38,66	63,33	75,36	85,51	97,53	70,69	95,44	35,86	175	349
50x600	40,55	47,18	41,03	54,28	66,31	73,28	85,30	61,64	83,22	38,06	210	419
50x700	42,87	49,50	43,42	57,67	69,69	77,85	89,87	65,03	87,78	40,19	244	489
50x800	45,12	51,75	45,76	59,46	71,48	80,27	92,29	66,80	90,18	42,40	279	559
50x900	47,43	54,06	48,15	61,23	73,26	82,68	94,70	68,59	92,60	44,61	314	629
50x1000	49,88	56,51	50,67	66,35	90,39	89,54	113,60	81,06	109,43	46,82	349	698
50x1100	53,04	59,67	53,91	71,34	95,39	96,31	120,36	86,06	116,18	73,92	384	768
50x1200	54,61	61,24	55,56	72,25	96,31	97,54	121,60	86,97	117,41	76,13	419	838
50x1300	55,78	62,41	56,81	75,73	99,78	102,25	126,30	90,45	122,11	78,26	454	908
50x1400	57,35	63,98	58,46	77,43	101,48	104,51	128,56	92,15	124,38	80,39	489	978
50x1500	58,92	68,86	60,12	79,07	103,12	106,74	130,80	93,80	126,62	82,60	524	1048
50x1600	60,10	70,04	61,37	88,83	112,88	119,91	143,96	103,55	139,79	84,80	559	1117
50x1700	61,67	71,61	63,02	90,83	114,87	122,61	146,66	105,54	142,49	87,01	594	1187
50x1800	63,24	73,18	64,67	95,10	119,16	128,39	152,44	109,83	148,25	89,22	629	1257
50x1900	64,81	74,75	66,32	95,26	119,31	128,60	152,65	109,98	148,47	91,43	663	1327
50x2000	66,39	76,33	67,98	95,42	119,46	128,81	152,87	110,15	148,70	93,64	698	1397

(*)	eur
PLU	0,98

Linear diffusers



Continuous design

Diffusers suitable to create continuous lines

Plenum boxes with quick mounting clips

KIS diffuser, attractive design of Lievore,
Altherr & Molina

INDEX

LSD sectored slot linear diffusers

LNG linear slot diffusers

LSD&LNG-MOD modular linear diffusers

KIS micro-jet nozzles linear diffusers

LRT LNG linear diffusers for air return

LESS Supply-return linear slot diffusers

LOOK hidden linear diffusers

LOOK-CURVED hidden curved linear diffusers

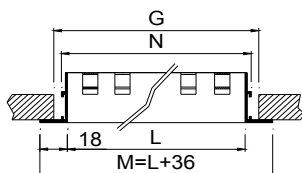
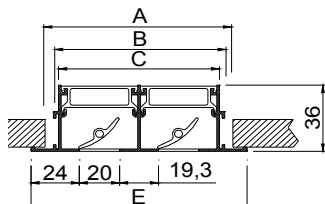
LAV-15 high induction linear slot diffusers

LAV 24 high air flow linear slot diffusers – Slot 24

LAV-24-FIN hidden high air flow linear slot
diffusers – Slot 24

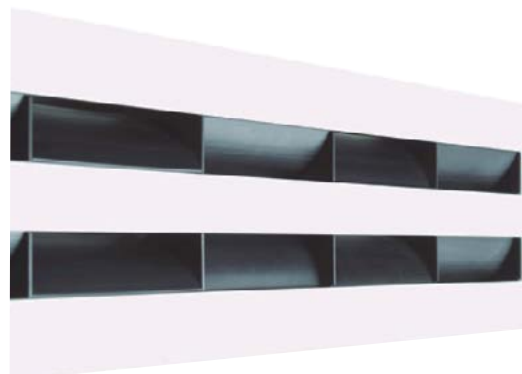
Sectored slot linear diffusers

Technical data



slots	E	A	B	C
1	68	55	47	40
2	107	95	86	80
3	147	134	125	119
4	186	173	165	159

L	M	N	G
500	536	507	516
1000	1036	1007	1016
1200	1236	1207	1216
1500	1536	1507	1516
2000	2036	2007	2016



Description

Linear slot diffuser with sectored adjustable vanes to be used from 2,6 up to 4 m high. Diffuser constructed from aluminium and deflection vanes from PVC in black colour.

LSD Diffuser with sectored vanes at 100 mm.

...-**AR** Diffuser with end borders included, for lengths ≤ 2 m.

...-**ARI** Diffuser with an end border on the left side, required to form lines > 2 m.

...-**ARD** Diffuser with an end border on the right side, required to form lines > 2 m.

...-**INT** Diffuser without end borders, required to form lines > 4 m. (in case of needing sections of equal length, it must be indicated)

Accessories

PLSD Plenum box with lateral connection with brackets for suspension to the ceiling.

...-**R** Air flow damper in the spigot.

.../**AIS**/ Thermal insulation inside.

A90/LSD Inactive angle at 90°.

Fixing

(**D**) Diffuser with brackets for ceiling suspension without plenum box.

(**PL**) Screws to join the diffuser to the plenum box and suspension of the assembly to the ceiling.

(**PM**) Crossbars for installation of the diffuser without plenum box in false ceiling (supplement *)

Finishes

AA Matt silver anodised.

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

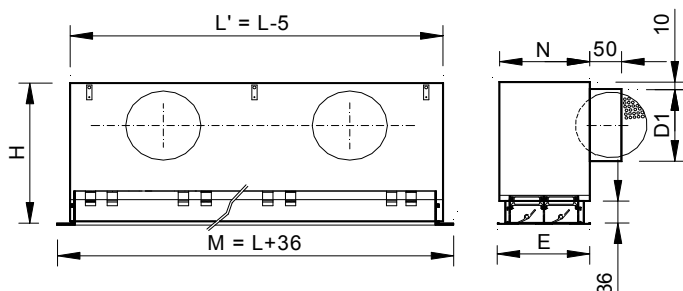
R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

.../**AB**/ ABS plastic vanes in white (supplement *)

Specification Text

Supply and mounting of linear slot diffuser with sectored adjustable vanes at 100 mm **LSD-AR+PLSD-R AA 1x558** constructed from aluminium and anodised in matt silver **AA**. With lateral circular connection plenum box and air flow damper in the spigot **PLSD-R**. Manufacturer **MADEL**.



slots	L ≤ 0,5		L ≤ 1		L ≤ 1,2		L ≤ 1,5		L ≤ 2		N	E
	H	D1	H	D1	H	D1	H	D1	H	D1		
1	256	1/158	256	1/158	256	1/158	256	1/158	256	2/158	69	68
2	256	1/158	256	1/158	256	1/158	256	2/158	256	2/158	108	107
3	296	1/198	296	1/198	296	2/198	296	2/198	296	2/198	147	147
4	296	1/198	296	1/198	296	2/198	296	2/198	296	2/198	186	186

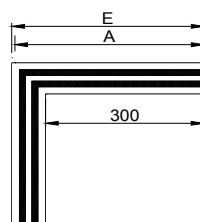


Dim. mm	LSD AR eur	LSD ARI/ARD eur	LSD INT eur	PLSD eur	PLSD-R eur	PLSD /AIS/ eur	PLSD-R /AIS/ eur	Lwa1 < 35 dB(A) m³/h	Lwa1 40 dB(A) m³/h	Lwa1 45 dB(A) m³/h
1x1000	38,50	34,47	30,40	57,13	69,29	77,12	89,29	105	127	154
1x1100	43,99	39,93	35,90	61,89	74,11	83,54	95,77	115	139	168
1x1200	44,46	40,41	36,35	62,68	74,89	84,61	96,80	124	150	181
1x1300	49,21	45,15	41,12	64,21	76,37	86,69	98,85	133	160	194
1x1400	49,69	45,63	41,57	65,58	77,74	88,53	100,67	141	171	206
1x1500	50,17	46,10	42,05	66,92	79,08	90,36	102,51	149	181	218
1x1600	60,11	56,04	52,01	78,43	102,77	105,89	130,21	158	191	230
1x1700	60,32	56,25	52,20	80,03	104,37	108,06	132,38	166	200	242
1x1800	60,59	56,54	52,47	83,47	107,79	112,68	136,98	173	210	253
1x1900	60,86	56,81	52,76	83,64	107,95	112,91	137,23	181	219	264
1x2000	61,12	57,05	52,99	83,76	108,08	113,08	137,40	188	228	275
2x1000	53,40	49,23	45,09	59,82	71,98	80,75	92,91	178	214	258
2x1100	59,23	55,10	50,96	63,62	75,79	85,88	98,05	194	233	281
2x1200	60,01	55,87	51,70	64,41	76,59	86,96	99,13	209	252	303
2x1300	67,05	62,90	58,73	70,96	95,25	95,79	120,08	224	270	325
2x1400	67,82	63,66	59,53	72,35	96,68	97,66	122,01	238	287	346
2x1500	68,57	64,43	60,27	73,68	97,97	99,47	123,77	253	304	367
2x1600	84,24	80,12	75,94	81,59	105,90	110,13	134,46	266	321	387
2x1700	84,74	80,58	76,42	83,20	107,54	112,31	136,65	280	337	407
2x1800	85,19	81,03	76,89	86,60	110,94	116,92	141,26	293	353	426
2x1900	85,68	81,53	77,36	86,78	111,09	117,14	141,46	306	369	444
2x2000	86,16	82,00	77,86	86,96	111,27	117,39	141,73	318	384	462
3x1000	69,19	64,93	60,69	63,29	76,13	85,45	98,30	213	261	319
3x1100	77,55	73,28	69,04	68,35	94,01	92,27	117,96	224	277	342
3x1200	78,59	74,36	70,10	69,27	95,02	93,51	119,26	241	298	369
3x1300	87,51	83,27	79,02	72,79	98,49	98,25	123,95	258	319	394
3x1400	89,64	85,37	81,14	74,48	100,20	100,55	126,28	274	339	419
3x1500	90,68	86,44	82,19	76,16	101,86	102,81	128,54	290	359	444
3x1600	109,68	105,42	101,17	86,01	111,70	116,10	141,80	305	378	467
3x1700	111,35	107,09	102,85	88,04	113,70	118,83	144,53	320	396	490
3x1800	112,03	107,78	103,53	92,34	118,04	124,67	150,37	335	414	512
3x1900	112,68	108,43	104,19	92,50	118,23	124,89	150,60	349	432	534
3x2000	113,39	109,14	104,92	92,67	118,36	125,11	150,79	363	449	555
4x1000	84,87	80,54	76,20	64,40	77,22	86,93	99,77	290	349	421
4x1100	95,16	90,83	86,52	69,67	95,38	94,03	119,76	317	381	458
4x1200	96,52	92,23	87,89	70,65	96,36	95,37	121,07	342	411	494
4x1300	108,79	104,49	100,14	77,65	103,34	104,84	130,52	366	440	530
4x1400	110,17	105,86	101,52	79,44	105,11	107,24	132,90	390	469	564
4x1500	111,55	107,24	102,89	81,16	106,86	109,55	135,25	413	497	598
4x1600	135,96	131,68	127,35	89,60	115,31	120,95	146,66	436	524	630
4x1700	136,91	132,60	128,25	91,59	117,29	123,66	149,36	458	551	662
4x1800	138,81	134,46	130,14	95,98	121,65	129,55	155,23	480	577	694
4x1900	139,67	135,34	131,02	96,17	121,87	129,84	155,52	501	602	724
4x2000	140,56	136,25	131,91	96,32	122,06	130,04	155,77	521	627	754
1x558 *	31,34	-	-	48,44	60,59	65,38	77,53	70	85	103
1x633 *	34,92	-	-	52,81	64,95	71,30	83,44	77	93	112
1x1158*	44,51	-	-	62,68	74,89	84,61	96,80	120	145	175
2x558 *	36,48	-	-	50,39	62,53	68,02	80,17	118	143	172
2x633 *	44,96	-	-	55,09	67,24	74,36	86,51	129	155	187
2x1158 *	60,01	-	-	64,40	76,58	86,93	99,11	203	244	294
3x558 *	47,46	-	-	51,63	64,46	69,69	82,51	144	176	217
3x633 *	58,30	-	-	57,46	70,28	77,58	90,39	155	191	234
3x1158 *	78,60	-	-	69,27	95,02	93,51	119,26	236	291	359
4x558 *	61,37	-	-	52,03	64,87	70,24	83,10	193	232	280
4x633 *	73,14	-	-	58,21	71,07	78,59	91,43	210	253	305
4x1158 *	96,51	-	-	70,65	96,34	95,37	121,06	331	399	480

(*) Diffusers with special lenght for modular border instalation. Sizes 600 675 or 1200.

A90/LSD

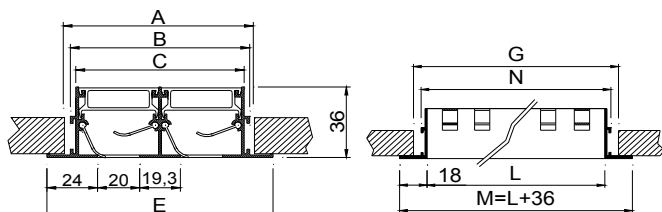
(*)	eur
A90/LSD-1	96,68
A90/LSD-2	121,26
A90/LSD-3	149,77
A90/LSD-4	180,51
/AB/	3%
(PM)	14,66



Nº VÍAS	E	A
1	368	358
2	407	397
3	447	437
4	486	476

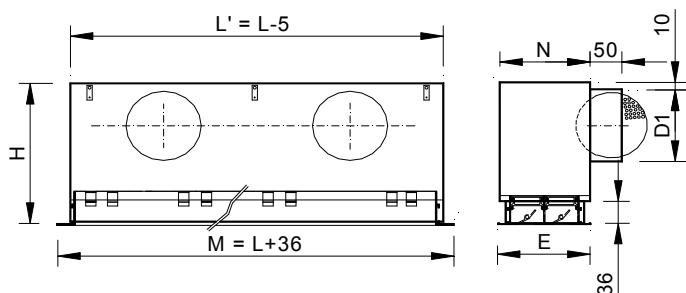
Linear slot diffusers

Technical data



N° VÍAS	E	A	B	C
1	68	55	47	40
2	107	95	86	80
3	147	134	125	119
4	186	173	165	159

L	M	N	G
500	536	507	516
1000	1036	1007	1016
1200	1236	1207	1216
1500	1536	1507	1516
2000	2036	2007	2016



slots	L ≤ 0,5		L ≤ 1		L ≤ 1,2		L ≤ 1,5		L ≤ 2		N	E
	H	D1	H	D1	H	D1	H	D1	H	D1		
1	256	1/158	256	1/158	256	1/158	256	1/158	256	2/158	69	68
2	256	1/158	256	1/158	256	1/158	256	2/158	256	2/158	108	107
3	296	1/198	296	1/198	296	2/198	296	2/198	296	2/198	147	147
4	296	1/198	296	1/198	296	2/198	296	2/198	296	2/198	186	186



Description

Linear slot diffuser with directional vanes to be used from 2,6 up to 4 metres high. Diffuser constructed from aluminium and vanes also from aluminium in black colour.

LNG-AR Diffuser with end borders included. Suitable for lengths ≤ 2 m.

...-ARI Diffuser with an end border on the left side, required to form lines > 2 m.

...-ARD Diffuser with an end border on the right side, required to form lines > 2 m.

...-INT Diffuser without end borders, required to form lines > 4 m. (in case of needing sections of equal length, it must be indicated)

Accessories

PLSD Plenum box with lateral connection with brackets for suspension to the ceiling.

...-R Air flow damper in the spigot.

.../AIS/ Thermal insulation inside.

A90/LNG Inactive angle at 90° .

Fixing

(D) Diffuser with brackets for ceiling suspension without plenum box.

(PL) Screws to join the diffuser to the plenum box and suspension of the assembly to the ceiling.

(PM) Crossbars for installation of the diffuser without plenum box in false ceiling (supplement *)

Finishes

AA Matt silver anodised.

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours : see INFO page.

.../AB/ Vanes in white (supplement *)

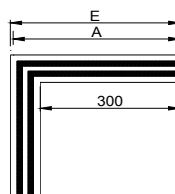
Specification Text

Supply and mounting of linear slot diffuser with directional vanes series **LNG-AR+PLSD-R AA 1x558** constructed from aluminium and anodised in matt silver **AA**. With lateral circular connection plenum box and air flow damper in the spigot **PLSD-R**. Manufacturer **MADEL**.

Dim. mm	LNG AR eur	LNG ARI/ARD eur	LNG INT eur	PLSD eur	PLSD-R eur	PLSD /AIS/ eur	PLSD-R /AIS/ eur	Lwa1 < 35 dB(A) m³/h	Lwa1 40 dB(A) m³/h	Lwa1 45 dB(A) m³/h
1x1000	46,90	42,97	39,01	57,13	69,29	77,12	89,29	105	127	154
1x1100	51,76	47,85	43,90	61,89	74,11	83,54	95,77	115	139	168
1x1200	52,59	48,63	44,70	62,68	74,89	84,61	96,80	124	150	181
1x1300	58,06	54,12	50,15	64,21	76,37	86,69	98,85	133	160	194
1x1400	58,85	54,89	50,96	65,58	77,74	88,53	100,67	141	171	206
1x1500	59,61	55,66	51,71	66,92	79,08	90,36	102,51	149	181	218
1x1600	71,64	67,65	63,74	78,43	102,77	105,89	130,21	158	191	230
1x1700	72,15	68,22	64,29	80,03	104,37	108,06	132,38	166	200	242
1x1800	72,66	68,69	64,77	83,47	107,79	112,68	136,98	173	210	253
1x1900	73,17	69,27	65,30	83,64	107,95	112,91	137,23	181	219	264
1x2000	73,69	69,77	65,83	83,76	108,08	113,08	137,40	188	228	275
2x1000	64,22	60,19	56,14	59,82	71,98	80,75	92,91	178	214	258
2x1100	71,57	67,51	63,49	63,62	75,79	85,88	98,05	194	233	281
2x1200	72,92	68,89	64,86	64,41	76,59	86,96	99,13	209	252	303
2x1300	84,82	80,82	76,74	70,96	95,25	95,79	120,08	224	270	325
2x1400	86,19	82,16	78,15	72,35	96,68	97,66	122,01	238	287	346
2x1500	87,57	83,53	79,50	73,68	97,97	99,47	123,77	253	304	367
2x1600	107,04	103,02	98,98	81,59	105,90	110,13	134,46	266	321	387
2x1700	108,05	104,01	99,99	83,20	107,54	112,31	136,65	280	337	407
2x1800	109,03	104,98	100,96	86,60	110,94	116,92	141,26	293	353	426
2x1900	110,02	105,97	101,97	86,78	111,09	117,14	141,46	306	369	444
2x2000	110,98	106,94	102,92	86,96	111,27	117,39	141,73	318	384	462
3x1000	88,30	84,16	80,07	63,29	76,13	85,45	98,30	213	261	319
3x1100	96,74	92,64	88,50	68,35	94,01	92,27	117,96	224	277	342
3x1200	96,91	92,82	88,72	69,27	95,02	93,51	119,26	241	298	369
3x1300	113,70	109,54	105,41	72,79	98,49	98,25	123,95	258	319	394
3x1400	115,64	111,51	107,38	74,48	100,20	100,55	126,28	274	339	419
3x1500	117,54	113,43	109,33	76,16	101,86	102,81	128,54	290	359	444
3x1600	142,52	138,40	134,26	86,01	111,70	116,10	141,80	305	378	467
3x1700	143,95	139,83	135,71	88,04	113,70	118,83	144,53	320	396	490
3x1800	145,39	141,26	137,10	92,34	118,04	124,67	150,37	335	414	512
3x1900	146,82	142,72	138,58	92,50	118,23	124,89	150,60	349	432	534
3x2000	148,31	144,20	140,05	92,67	118,36	125,11	150,79	363	449	555
4x1000	109,49	105,25	101,07	64,40	77,22	86,93	99,77	290	349	421
4x1100	117,64	113,43	109,24	69,67	95,38	94,03	119,76	317	381	458
4x1200	120,21	116,01	111,85	70,65	96,36	95,37	121,07	342	411	494
4x1300	141,00	136,81	132,56	77,65	103,34	104,84	130,52	366	440	530
4x1400	143,52	139,33	135,12	79,44	105,11	107,24	132,90	390	469	564
4x1500	146,04	141,88	137,66	81,16	106,86	109,55	135,25	413	497	598
4x1600	177,85	173,64	169,46	89,60	115,31	120,95	146,66	436	524	630
4x1700	179,73	175,55	171,33	91,59	117,29	123,66	149,36	458	551	662
4x1800	181,59	177,42	173,23	95,98	121,65	129,55	155,23	480	577	694
4x1900	183,52	179,34	175,15	96,17	121,87	129,84	155,52	501	602	724
4x2000	185,45	181,27	177,06	96,32	122,06	130,04	155,77	521	627	754
1x558 *	35,73	-	-	48,44	60,59	65,38	77,53	70	85	103
1x633 *	44,19	-	-	52,81	64,95	71,30	83,44	77	93	112
1x1158 *	52,59	-	-	62,68	74,89	84,61	96,80	120	145	175
2x558 *	46,16	-	-	50,39	62,53	68,02	80,17	118	143	172
2x633 *	59,55	-	-	55,09	67,24	74,36	86,51	129	155	187
2x1158 *	72,92	-	-	64,40	76,58	86,93	99,11	203	244	294
3x558 *	59,55	-	-	51,63	64,46	69,69	82,51	144	176	217
3x633 *	78,24	-	-	57,46	70,28	77,58	90,39	155	191	234
3x1158 *	96,91	-	-	69,27	95,02	93,51	119,26	236	291	359
4x558 *	72,87	-	-	52,03	64,87	70,24	83,10	193	232	280
4x633 *	96,54	-	-	58,21	71,07	78,59	91,43	210	253	305
4x1158 *	120,21	-	-	70,65	96,34	95,37	121,06	331	399	480

(*) Diffusers with special lenght for modular border instalation. Sizes 600 675 or 1200.

(*)	eur
A90/LNG-1	114,95
A90/LNG-2	146,00
A90/LNG-3	188,83
A90/LNG-4	230,15
/AB/	3%
(PM)	14,66

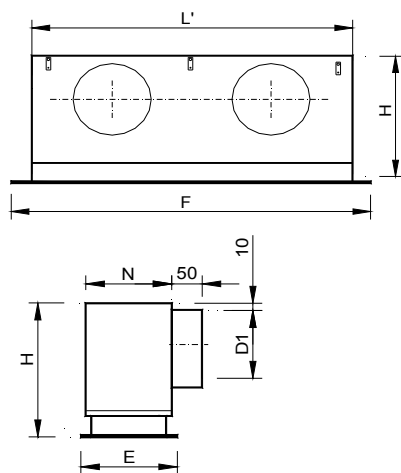


A90/LNG

Nº VÍAS	E	A
1	368	358
2	407	397
3	447	437
4	486	476

Modular linear diffusers

Technical data



MOD	SLOTS	F	E	L'	H	D1	N
1200x300	1	1195	295	1145	256	1/158	69
1200x300	2	1195	295	1145	256	1/158	108
1200x300	3	1195	295	1145	296	2/198	147
1200x300	4	1195	295	1145	296	2/198	186
1350x300	1	1345	295	1295	256	1/158	69
1350x300	2	1345	295	1295	256	1/158	108
1350x300	3	1345	295	1295	296	2/198	147
1350x300	4	1345	295	1295	296	2/198	186



Description

Linear diffusers LSD & LNG specially designed to be mounted in modular ceilings.

LSD-MOD Modular LSD linear diffuser.

LNG-MOD Modular LNG linear diffuser.

Accessories

PLSD Plenum box with lateral connection.

...-R Air flow damper in the spigot.

.../AIS/ Thermal insulation inside.

Fixing

(D) Support brackets to hang from the ceiling.

Finishes

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

RAL... Painted in other RAL colours : see INFO page.

.../AB/ Vanes in white (supplement *)

Specification Text

Supply and mounting of linear slot diffuser with sectoried vanes

LNG-MOD+PLSD-R R9010 1200x300 constructed from aluminium and painted white in RAL 9010 (60-70% gloss) with lateral circular plenum box and air flow damper in the spigot. Manufacturer **MADEL**.

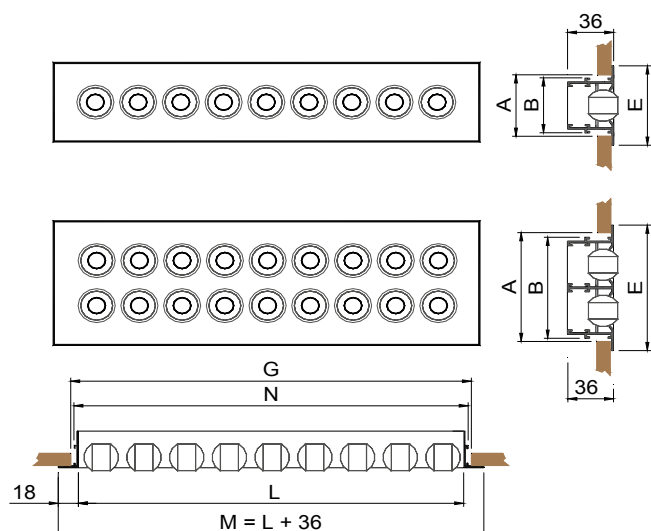
(*)	
/AB/	3%

Dim.	LSD-MOD	LNG-MOD	PLSD	PLSD-R	PLSD /AIS/ eur	PLSD-R /AIS/ eur	Lwa1 < 35 dB(A) m³/h	Lwa1= 40 dB(A) m³/h	Lwa1= 45 dB(A) m³/h
mm	eur	eur	eur	eur					
1-1200x300	83,52	91,64	57,13	69,29	77,12	89,29	119	144	174
2-1200x300	99,08	111,97	63,62	75,79	85,88	98,05	201	242	292
3-1200x300	117,64	135,96	63,29	76,13	85,45	98,30	234	289	356
4-1200x300	135,58	159,23	64,40	77,22	86,93	99,77	328	395	475
1-1350x300	84,77	92,88	62,68	74,89	84,61	96,80	131	159	192
2-1350x300	100,32	113,23	64,41	76,59	86,96	99,13	222	268	322
3-1350x300	118,89	137,21	69,27	95,02	93,51	119,26	257	317	392
4-1350x300	136,83	160,49	70,65	96,36	95,37	121,07	363	437	525

Micro-jet nozzles linear diffusers

Lievore,
Altherr
& Molina

Technical data



	E	A	B	C
KIS 1	68	55	47	40
KIS 2	107	95	86	80

L	M	N	G
500	536	507	516
1000	1036	1007	1016
1200	1236	1207	1216
1500	1536	1507	1516
2000	2036	2007	2016



Description

Micro-jet nozzles linear diffusers, giving complete flexibility of direction, suitable for wall or ceiling mounting. Diffuser constructed from aluminium and nozzles from PP.

KIS-AR Diffuser with end borders included. Suitable for lengths ≤ 2 m.

...-ARI Diffuser with an end border on the left side, required to form lines > 2 m.

...-ARD Diffuser with an end border on the right side, required to form lines > 2 m.

...-INT Diffuser without end borders, required to form lines > 4 m. (in case of needing sections of equal length, it must be indicated)

Accessories

PLSD Plenum box with lateral connection with brackets for suspension to the ceiling.

...-R Air flow damper in the spigot.

.../AIS/ Thermal insulation inside.

Fixing

(D) Diffuser with brackets for ceiling suspension without plenum box.

(PL) Screws to join the diffuser to the plenum box and suspension of the assembly to the ceiling.

(PM) Crossbars for installation of the diffuser without plenum box in false ceiling (supplement *)

Finishes (Indicate nozzle color: white or black)

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

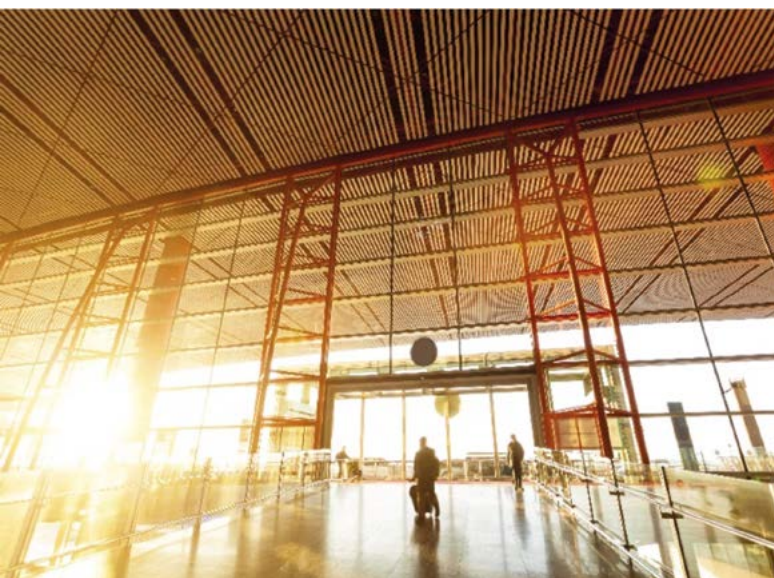
R9006M Painted aluminium colour RAL 9006 matt (20-30% gloss)

R9005M Painted in black RAL 9005 matt (20-30% gloss)

RAL... Painted in other RAL colours : see INFO page.

Specification Text

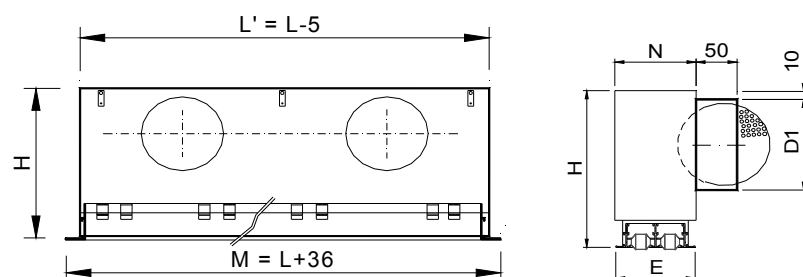
Supply and mounting of linear diffuser with micro-jet nozzles adjustable in all directions series **KIS-AR+PLSD-R R9016S 1x1000** constructed from aluminium paint in white RAL 9016 (60-70% gloss) with lateral connection plenum box and air flow damper in the spigot. Manufacturer **MADEL**.



Dim. mm	KIS AR eur	KIS ARI/ARD eur	KIS INT eur	PLSD eur	PLSD-R eur	PLSD /AIS/ eur	PLSD-R /AIS/ eur	Lwa1 < 35 dB(A) m³/h	Lwa1= 40 dB(A) m³/h	Lwa1= 45 dB(A) m³/h
1x500	38,57	36,84	35,19	47,05	59,18	63,51	75,66	20	45	55
1x558	39,85	38,14	36,47	48,44	60,59	65,38	77,53	25	48	60
1x600	41,65	39,95	38,25	50,17	62,34	67,75	79,91	27	57	67
1x700	44,74	43,04	41,38	51,90	64,09	70,06	82,26	30	65	80
1x800	47,85	46,15	44,46	53,66	65,83	72,43	84,60	35	75	90
1x900	50,94	49,25	47,56	55,39	67,57	74,77	86,96	40	85	100
1x1000	54,05	52,38	50,68	57,13	69,29	77,13	89,29	43	95	115
1x1100	57,12	55,45	53,75	61,89	74,11	83,55	95,77	48	105	125
1x1200	60,24	58,55	56,87	62,68	74,89	84,61	96,81	52	115	135
1x1300	64,27	62,57	60,87	64,21	76,37	86,68	98,85	56	125	150
1x1400	67,35	65,69	63,97	65,58	77,74	88,53	100,68	60	133	160
1x1500	70,45	68,76	67,09	66,92	79,08	90,36	102,51	65	143	170
1x1600	73,54	71,85	70,18	78,43	102,77	105,89	130,21	69	153	180
1x1700	76,64	74,95	73,27	80,03	104,37	108,06	132,38	74	162	190
1x1800	79,75	78,05	76,38	83,47	107,79	112,68	137,01	78	173	200
1x1900	82,83	81,15	79,48	83,64	107,95	112,90	137,23	82	182	215
1x2000	85,94	84,26	82,58	83,76	108,08	113,08	137,40	86	190	225
2x500	53,16	51,15	49,11	48,94	61,04	66,07	78,18	40	95	115
2x558	55,49	53,46	51,43	50,39	62,53	68,03	80,17	43	96	120
2x600	58,90	56,88	54,87	52,13	64,27	70,38	82,50	52	115	135
2x700	64,67	62,62	60,60	53,84	65,99	72,70	84,83	60	135	160
2x800	70,38	68,37	66,35	55,62	67,71	75,07	87,19	70	150	180
2x900	76,12	74,11	72,05	57,33	69,46	77,40	89,53	78	170	205
2x1000	81,86	79,81	77,80	59,82	71,98	80,75	92,91	86	190	225
2x1100	87,59	85,56	83,54	63,62	75,79	85,90	98,06	95	210	248
2x1200	93,32	91,31	89,27	64,41	76,59	86,95	99,13	104	230	270
2x1300	99,98	97,95	95,94	70,96	95,25	95,79	120,08	112	250	295
2x1400	105,71	103,71	101,66	72,35	96,68	97,67	122,01	122	266	315
2x1500	111,45	109,44	107,42	73,68	97,97	99,48	123,77	130	286	340
2x1600	117,21	115,18	113,15	81,59	105,90	110,15	134,47	139	306	360
2x1700	122,93	120,91	118,88	83,20	107,54	112,31	136,65	148	324	385
2x1800	128,67	126,63	124,62	86,60	110,94	116,92	141,25	157	346	405
2x1900	134,40	132,37	130,36	86,78	111,09	117,14	141,45	165	364	430
2x2000	140,15	138,12	136,12	86,96	111,27	117,39	141,71	174	380	452

(*)	eur
(PM)	14,66

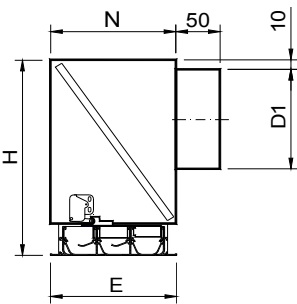
PLSD



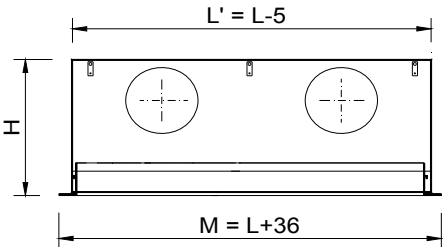
	0,5 < L < 1,2		1,3 < L < 1,5		1,6 < L < 2			
	H	D1	H	D1	H	D1	N	E
KIS 1	256	1/158	256	1/158	256	1/158	69	68
KIS 2	256	1/158	256	1/158	256	1/158	108	107

LNG linear diffusers for air return

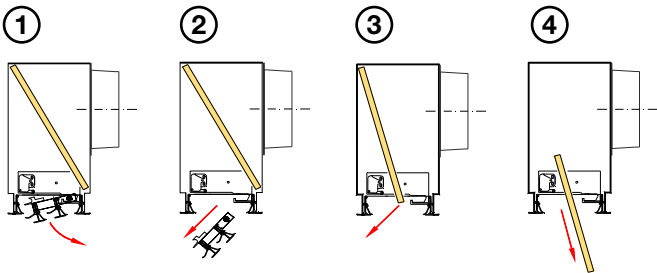
Technical data



	N	E
3	147	147
4	186	186



	L ≤ 0,5		L ≤ 1		L ≤ 1,2		L ≤ 1,5	
	H	D1	H	D1	H	D1	H	D1
3	296	1/198	296	1/198	296	2/198	296	2/198
4	296	1/198	296	1/198	296	2/198	296	2/198



Description

Linear slot diffuser with directional blades for air return, removable without tools by pressing on the invisible PUSH fastener.

- LRT** linear diffuser for air return with lateral conexión plenum Filter (K/8 clase EN 779 G3) included.
- ...-**AR** Diffuser with end borders included. Suitable for lengths ≤ 1,5 m.
- ...-**ARI** Diffuser with an end border on the left side, required to form lines > 1,5 m.
- ...-**ARD** Diffuser with an end border on the right side, required to form lines > 1,5 m.
- ...-**INT** Diffuser without end borders, required to form lines > 3 m. (in case of needing sections of equal length, it must be indicated)

Accessories

AIS Plenum box with thermal insulation inside.

Fixing

(D) Support brackets to hang LRT from the ceiling.

Finishes

- AA** Matt silver anodised.
- R9016S** Painted white RAL 9016 semi-matt (60-70% gloss)
- R9010S** Painted white RAL 9010 semi-matt (60-70% gloss)
- R9016B** Painted white RAL 9016 glossy (85-95% gloss)
- RAL...** Painted in other RAL colours : see INFO page.
- .../AB/ Vanes in white (supplement *)

Specification Text

Supply and mounting of linear slot diffuser with directional blades with plenum and filter, for air return, removable without tools by pressing PUSH fastener **LRT-AR R9016S 3x1000**, constructed from aluminium and painted white RAL 9016 (60-70% gloss) Manufacturer **MADEL**.

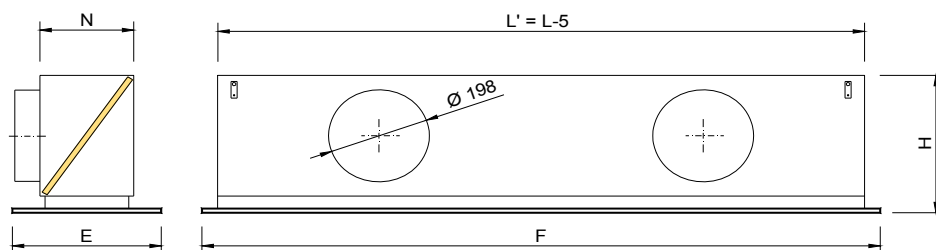


Dim.	LRT-AR	LRT-ARI LRT-ARD	LRT-INT	LRT-AR /AIS/	LRT-ARI /ARD /AIS/	LRT-INT /AIS/	Lwa1 <35 dB(A)	Lwa1= 40 dB(A)	Lwa1= 45 dB(A)
mm	eur	eur	eur	eur	eur	eur	m³/h	m³/h	m³/h
3x1000	238,73	234,60	230,48	259,48	255,36	251,26	235-330	425	490
3x1100	253,76	249,67	245,52	276,18	272,09	267,97	260-360	465	505
3x1200	256,51	252,43	248,30	279,25	275,14	271,03	280-395	510	580
3x1300	278,23	274,09	269,94	302,11	297,96	293,83	305-430	550	635
3x1400	283,44	279,35	275,21	307,90	303,78	299,65	330-460	590	690
3x1500	288,64	284,49	280,38	313,63	309,50	305,38	650-495	635	745
4x1000	261,60	257,39	253,19	282,73	278,52	274,34	315-440	565	610
4x1100	276,65	272,43	268,25	299,48	295,29	291,12	345-480	620	540
4x1200	281,86	277,69	273,49	305,06	300,88	296,68	375-525	680	755
4x1300	310,94	306,74	302,51	336,42	332,22	327,97	410-570	735	840
4x1400	316,85	312,66	308,44	342,91	338,73	334,51	440-615	790	925
4x1500	322,74	318,55	314,34	349,37	345,19	340,96	470-660	845	1010
3x558	193,44	-	-	210,35	-	-	130-185	235	280
3x633	217,74	-	-	236,58	-	-	150-210	265	285
3x1158	254,84	-	-	277,58	-	-	275-385	480	520
3x1308	281,78	-	-	306,22	-	-	305-430	550	635
4x558	207,61	-	-	224,67	-	-	175-245	315	355
4x633	237,24	-	-	256,33	-	-	200-275	355	380
4x1158	280,16	-	-	303,33	-	-	370-510	650	695
4x1308	315,10	-	-	341,19	-	-	410-570	735	840

Dim.	LRT MOD 1200x300	LRT /AIS/ MOD 1200x300	Lwa1 < 35 dB(A)	Lwa1= 40 dB(A)	Lwa1= 45 dB(A)
mm	eur	eur	m³/h	m³/h	m³/h
3	295,05	327,04	275-385	480	520
4	320,37	352,81	370-510	650	695

Dim.	LRT MOD 1350x300	LRT /AIS/ MOD 1350x300	Lwa1 < 35 dB(A)	Lwa1= 40 dB(A)	Lwa1= 45 dB(A)
mm	eur	eur	m³/h	m³/h	m³/h
3	322,31	357,81	305-430	550	635
4	354,99	392,10	410-570	735	840

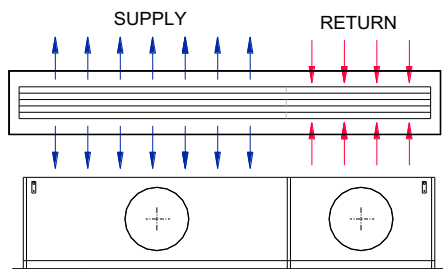
(°)
/AB/ 2%



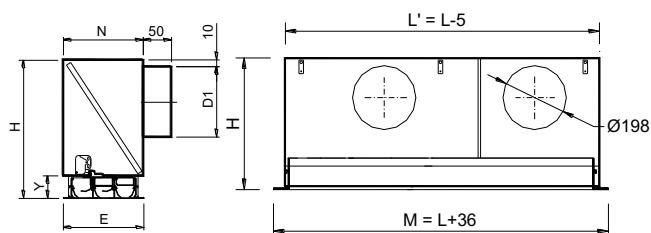
	slots	F	E	L'	H	D1	N
LRT MOD 1200x300	3	1195	295	1145	296	2/198	147
LRT MOD 1200x300	4	1195	295	1145	296	2/198	186
LRT MOD 1350x300	3	1345	295	1345	296	2/198	147
LRT MOD 1350x300	4	1345	295	1345	296	2/198	186

Supply-return linear slot diffusers

Technical data



LESS



slots	L	F	E	A	L'	H	Y	N	D1
3	1000	1036	147	135	995	296	66	147	198
4	1000	1036	186	174	995	296	66	186	198
5	1000	1036	225	213	995	296	66	225	198
6	1000	1036	264	252	995	296	66	264	198
3	1100	1136	147	135	1095	296	66	147	198
4	1100	1136	186	174	1095	296	66	186	198
5	1100	1136	225	213	1095	296	66	225	198
6	1100	1136	264	252	1095	296	66	264	198
3	1200	1236	147	135	1195	296	66	147	198
4	1200	1236	186	174	1195	315	50	186	248
5	1200	1236	225	213	1195	315	50	225	248
6	1200	1236	264	252	1195	315	50	264	248
3	1300	1336	147	135	1295	296	66	147	198
4	1300	1336	186	174	1295	315	50	186	248
5	1300	1336	225	213	1295	315	50	225	248
6	1300	1336	264	252	1295	315	50	264	248
3	1400	1436	147	135	1395	296	66	147	198
4	1400	1436	186	174	1395	315	50	186	248
5	1400	1436	225	213	1395	315	50	225	248
6	1400	1436	264	252	1395	315	50	264	248
3	1500	1536	147	135	1495	296	66	147	198
4	1500	1536	186	174	1495	315	50	186	248
5	1500	1536	225	213	1495	315	50	225	248
6	1500	1536	264	252	1495	315	50	264	248



Description

The linear diffusers of the LESS series have been designed to combine aesthetics and technical performance. It can be installed in a false ceiling or suspended from the ceiling. These diffusers allow the supply and return of air on the same unit, contributing to better architectural aesthetics and easy and quick installation, with a distribution of the diffuser of 60% supply and 40% return. LESS diffusers are suitable for CAV and VAV installations. These diffusers can be used from 2.6 up to 4 meters high and with a temperature differential up to 12° C. By adjusting the blades, you obtain a horizontal distribution of the air in one direction or another or in vertical projection without modifying the air volume. Diffusers accessible from the front without tools, by means of invisible PUSH system to access the return filter. from aluminium and deflection vanes from aluminium in black colour. Plenum box built in galvanized steel.

LESS Linear diffuser for air supply and air return with side connection plenum and filter (K / 8 class EN 779 G3) incorporated.

...-MOD Modular linear diffuser. Specially designed to replace a false ceiling tile.

Accessories

.../AIS/ Plenum box with thermal insulation inside.

Fixing

(D) Support brackets to hang from the ceiling.

Finishes

AA Matt silver anodised (not available for MOD version)

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

R9016B Painted white RAL 9016 glossy (85-95% gloss)

RAL... Painted in other RAL colours.

Specification text

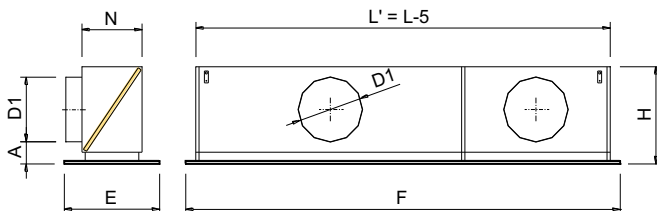
Supply and installation of linear diffuser for supply air return with side connection plenum and incorporated filter (K/8 class EN 779 G3), accessible from the front without tools, by means of invisible PUSH system, **LESS R9016S 3x1000**, series, made of aluminum and plenum galvanized steel; painted white color RAL 9016 (60-70% gloss) **MADEL** brand.

Dim.	LESS	LESS/AIS/	Lwa1	Lwa1=	Lwa1=
mm	eur	eur	<35 dB(A)	40 dB(A)	45 dB(A)
			m³/h	m³/h	m³/h
3x1000	227,73	251,01	186	226	254
3x1100	242,82	267,81	205	248	279
3x1200	239,27	264,56	223	271	304
3x1300	261,24	287,74	242	293	330
3x1400	266,19	293,26	260	316	355
3x1500	271,06	298,71	279	338	381
4x1000	251,73	275,41	248	301	338
4x1100	266,96	292,40	273	331	372
4x1200	265,97	291,75	298	361	406
4x1300	295,54	323,70	322	391	440
4x1400	301,21	329,36	347	421	474
4x1500	306,79	336,14	372	451	507
5x1000	276,16	300,19	310	376	423
5x1100	291,31	317,20	341	413	465
5x1200	292,84	319,10	372	451	507
5x1300	329,96	359,75	403	489	550
5x1400	332,05	361,28	434	526	592
5x1500	342,63	373,66	465	564	634
6x1000	300,55	324,97	372	451	507
6x1100	315,64	341,98	409	496	558
6x1200	319,73	346,44	446	541	609
6x1300	364,36	395,82	484	586	660
6x1400	362,87	393,17	521	631	710
6x1500	378,44	411,18	558	677	761

Dim.	LESS-MOD 1200x300	LESS-MOD/AIS/ 1200x300	Lwa1	Lwa1=	Lwa1=
mm	eur	eur	<35 dB(A)	40 dB(A)	45 dB(A)
			m³/h	m³/h	m³/h
3	279,08	304,37	213	258	290
4	305,74	331,52	284	344	387
5	333,09	359,33	355	430	484
6	360,42	387,14	426	516	581

Dim.	LESS-MOD 1350x300	LESS-MOD/AIS/ 1350x300	Lwa1	Lwa1=	Lwa1=
mm	eur	eur	<35 dB(A)	40 dB(A)	45 dB(A)
			m³/h	m³/h	m³/h
3	307,24	334,31	241	292	329
4	341,51	370,26	321	389	438
5	377,19	407,61	402	487	548
6	412,85	444,95	482	584	657

LESS-MOD

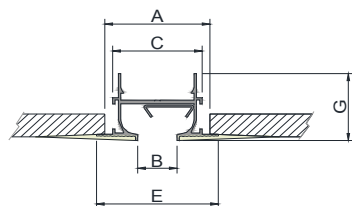


MOD	SLOTS	F	E	L'	H	D1	N	Y
1200x300	3	1195	295	1145	296	198	147	66
1200x300	4	1195	295	1145	315	248	186	50
1200x300	5	1195	295	1145	315	248	225	50
1200x300	6	1195	295	1145	315	248	264	50
1350x300	3	1345	295	1295	296	198	147	66
1350x300	4	1345	295	1295	315	248	186	50
1350x300	5	1345	295	1295	315	248	225	50
1350x300	6	1345	295	1295	315	248	264	50

Hidden linear diffusers

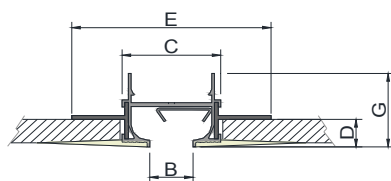
Technical data

LOOK-CM



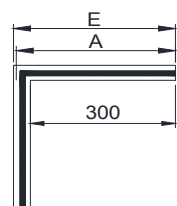
	A	B	C	D	E
20	55	20	47	38,2	63,5
30	84	30	76	45,2	97,3
40	94	40	86	45,2	107,3

LOOK-SM



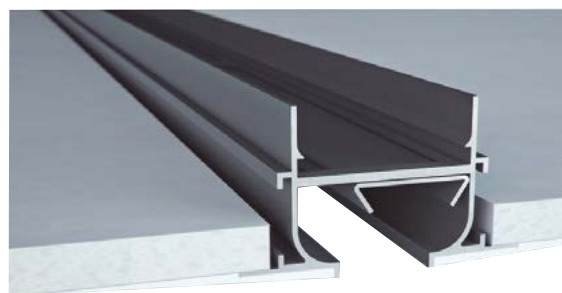
	B	C	D	G	E
20	20	47	14	38,2	94,3
30	30	76	14	45,2	123,5
40	40	86	14	45,2	133,5

A90/LOOK-...



LOOK-CM	E	A
20	364	359
30	397	391
40	407	401

LOOK-SM	E	A
20	347	347
30	376	376
40	386	386



Description

Linear slot diffuser with a directional vane to be used from 2,6 up to 4 metres high. Diffusers for ceiling mounting, hiding the frame with filler and leaving visible only the slot. Diffuser constructed from aluminium and vane from galvanised steel.

LOOK-CM Diffuser with large frame. Designed to be installed in premises where the false ceiling is already built.

LOOK-SM Diffuser with short frame. Designed to be installed in premises where the false ceiling is going to be built after mounting the diffusers.

...-AR Diffuser suitable for lengths ≤ 2 m.

...-ARI / ARD Diffuser with an end border on the left or right side, required to form lines > 2 m.

...-INT Diffuser without end borders, requires to form lines > 4 m. (in case of needing sections of equal length, it must be indicated)

Accessories

PLOK-CM Plenum box with lateral connection for LOOK-CM.

PLOK-SM Plenum box with lateral connection for LOOK-SM. Plenum box always riveted to the diffuser.

...-R Air flow damper in the spigot.

.../AIS/ Thermal insulation inside.

A90/LOOK Inactive angle at 90°.

Fixing

(D) Support brackets to hang the diffuser from the ceiling or the diffuser riveted to the plenum box.

(PM) Set of crossbars for installation of LOOK-CM in the false ceiling or for mounting into a plenum box PLOK-CM.

(L) Support brackets to hang the diffuser LOOK-SM from the ceiling or the diffuser riveted to the plenum LOOK-SM+PLOK-SM.

Finishes

R9005M Painted in black RAL 9005 matt (20-30% gloss)

R9016S Painted white RAL 9016 semi-matt (60-70% gloss)

R9010S Painted white RAL 9010 semi-matt (60-70% gloss)

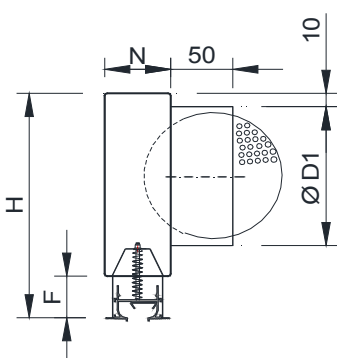
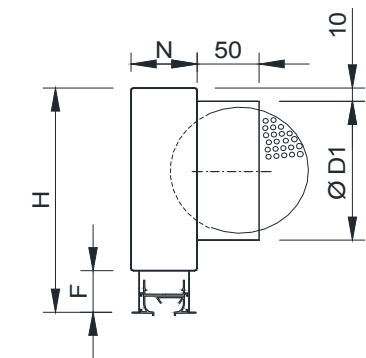
RAL... Painted in other RAL colours : see INFO page.

Specification Text

Supply and mounting of hidden linear slot diffuser with directional vane, series **LOOK-CM-AR+PLOK-CM-R R9005M 20x1000 (D)** constructed from aluminium and steel, paint in black RAL 9005 matt (20-30% gloss) with lateral circular connection plenum box and air flow damper in the spigot. Manufacturer **MADEL**.

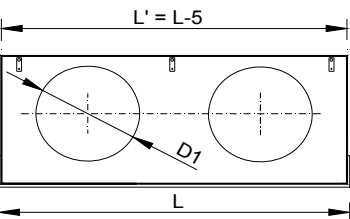
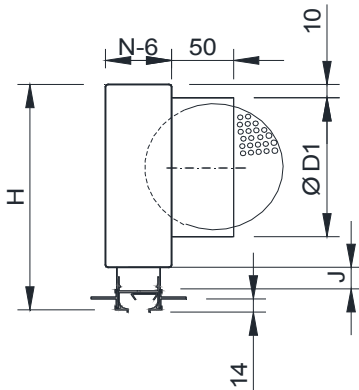
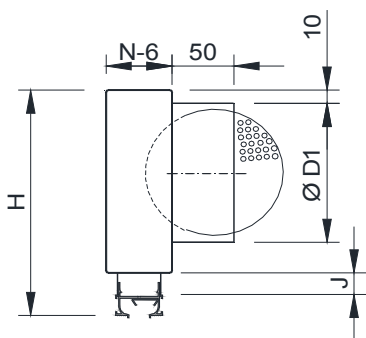
LOOK-CM (D) + PLOK-CM...-R

LOOK-CM (PM) + PLOK-CM...-R



LOOK-SM (D) + PLOK-SM...-R

LOOK-SM (L) + PLOK-SM...-R



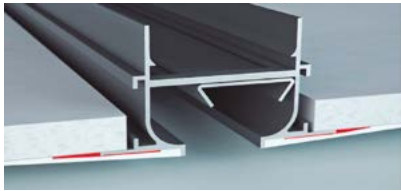
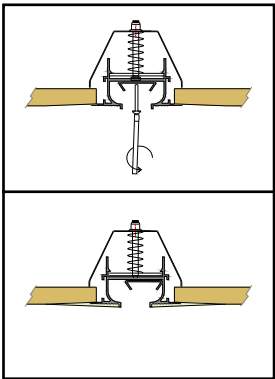
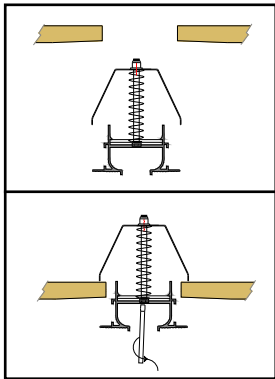
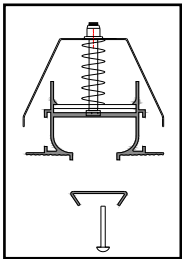
	L ≤ 0,5		L ≤ 1		L ≤ 1,2		L ≤ 1,5		L ≤ 2				
	H	D1	H	D1	H	D1	H	D1	H	D1	N	F	J
20	256	1/158	256	1/158	256	1/158	256	1/158	256	2/158	69	36	14,3
30	256	1/158	256	1/158	256	1/158	256	1/158	256	2/158	98	42	20,3
40	256	1/158	296	1/198	296	1/198	296	2/198	296	2/198	108	42	20,3

LOOK-CM (PM)

1) Remove deflector 2) Adjust Crossbar

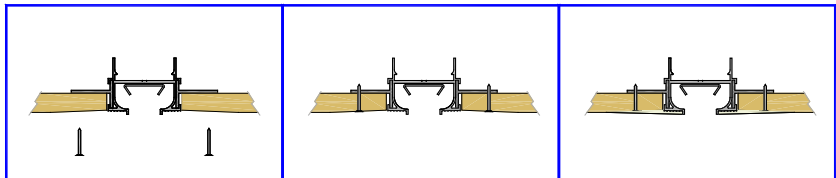
3) Put deflector

4) Protect with anti-cracks tape and cover with filler the frame.



LOOK-SM (L)

1) Adjust and screw L



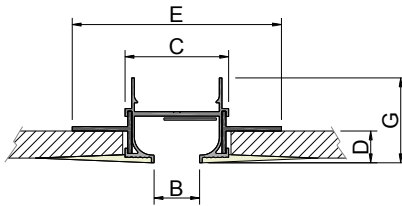
Dim.	LOOK-CM	LOOK-CM	LOOK-CM	PLOK-CM	PLOK-CM-R	PLOK-CM	PLOK-CM-R	(PM)	A90	Lwa1	Lwa1	Lwa1
mm	AR (D)	ARI / ARD (D)	INT (D)	eur	eur	/AIS/ eur	/AIS/ eur	eur	LOOK eur	< 35 dB(A)	40 dB(A)	45 dB(A)
										m³/h	m³/h	m³/h
20x1000	39,18	39,25	38,76	57,13	69,29	77,12	89,29	9,96	104,13	120-140	170	210
20x1100	47,73	47,79	47,29	61,89	74,11	83,54	95,77	9,96	104,13	130-160	185	225
20x1200	48,95	49,00	48,53	62,68	74,89	84,61	96,80	9,96	104,13	140-170	200	240
20x1300	52,21	52,29	51,77	64,21	76,37	86,69	98,85	9,96	104,13	160-185	215	255
20x1400	53,47	53,55	53,03	65,58	77,74	88,53	100,67	9,96	104,13	170-195	230	275
20x1500	56,82	56,88	56,40	66,92	79,08	90,36	102,51	14,93	104,13	180-205	245	290
20x1600	62,08	62,14	61,64	78,43	102,77	105,89	130,21	14,93	104,13	190-220	260	310
20x1700	63,84	63,90	63,42	80,03	104,37	108,06	132,38	14,93	104,13	205-230	270	325
20x1800	65,08	65,11	64,63	83,47	107,79	112,68	136,98	14,93	104,13	215-240	290	345
20x1900	66,46	66,51	66,01	83,64	107,95	112,91	137,23	14,93	104,13	230-250	300	360
20x2000	67,09	67,15	66,65	83,76	108,08	113,08	137,40	14,93	104,13	240-260	310	375
30x1000	46,43	46,49	46,00	58,47	70,63	78,94	91,09	12,10	111,36	170-200	240	290
30x1100	55,23	55,28	54,81	62,88	75,07	84,89	97,09	12,10	111,36	195-215	260	310
30x1200	58,18	58,26	57,76	63,76	75,94	86,06	98,25	12,10	111,36	215-230	275	335
30x1300	60,86	60,92	60,44	67,59	79,77	91,24	103,41	12,10	111,36	220-245	300	355
30x1400	62,24	62,30	61,81	68,97	81,10	93,13	105,26	12,10	111,36	240-260	315	375
30x1500	66,47	66,52	66,03	70,29	82,45	94,90	107,05	18,15	111,36	255-280	340	400
30x1600	70,85	70,89	70,43	80,00	104,31	108,01	132,33	18,15	111,36	265-295	350	420
30x1700	72,55	72,62	72,14	81,63	105,94	110,21	134,51	18,15	111,36	275-310	370	450
30x1800	73,94	73,99	73,50	85,06	109,38	114,83	139,15	18,15	111,36	280-325	390	470
30x1900	75,26	75,31	74,83	85,36	109,65	115,22	139,51	18,15	111,36	300-340	400	490
30x2000	76,60	76,64	76,16	85,57	109,85	115,53	139,80	18,15	111,36	315-355	420	510
40x1000	46,87	46,92	46,43	59,82	71,98	80,75	92,91	12,10	111,81	205-235	280	325
40x1100	55,77	55,84	55,32	63,84	76,06	86,20	98,42	12,10	111,81	220-250	300	345
40x1200	58,74	58,81	58,31	64,84	77,01	87,54	99,70	12,10	111,81	245-270	325	380
40x1300	61,46	61,51	61,00	70,96	83,12	95,79	107,95	12,10	111,81	250-285	345	400
40x1400	62,83	62,90	62,38	72,35	84,47	97,66	109,79	12,10	111,81	270-310	360	425
40x1500	67,13	67,17	66,66	73,68	85,83	99,47	111,62	18,15	111,81	285-325	380	455
40x1600	71,56	71,61	71,09	81,59	105,90	110,13	134,46	18,15	111,81	290-340	405	480
40x1700	73,28	73,35	72,83	83,20	107,50	112,31	136,61	18,15	111,81	305-355	425	510
40x1800	74,66	74,70	74,21	86,67	110,99	116,99	141,34	18,15	111,81	310-365	450	530
40x1900	75,98	76,06	75,55	87,02	111,36	117,49	141,81	18,15	111,81	330-385	475	550
40x2000	77,36	77,38	76,89	87,34	111,65	117,93	142,22	18,15	111,81	345-405	495	580

Dim.	LOOK-SM	LOOK-SM	LOOK-SM	PLOK-SM	PLOK-SM-R	PLOK-SM	PLOK-SM-R	(L)	A90	Lwa1	Lwa1=	Lwa1=
mm	AR (D)	ARI / ARD (D)	INT (D)	eur	eur	/AIS/ eur	/AIS/ eur	eur	LOOK eur	< 35 dB(A)	40 dB(A)	45 dB(A)
										m³/h	m³/h	m³/h
20x1000	38,38	38,43	37,96	57,13	69,29	77,12	89,29	0,79	104,13	120-140	170	210
20x1100	46,79	46,84	46,36	61,89	74,11	83,54	95,77	0,79	104,13	130-160	185	225
20x1200	47,97	48,02	47,54	62,68	74,89	84,61	96,80	0,79	104,13	140-170	200	240
20x1300	51,10	51,15	50,68	64,21	76,37	86,69	98,85	0,79	104,13	160-185	215	255
20x1400	52,30	52,37	51,88	65,58	77,74	88,53	100,67	0,79	104,13	170-195	230	275
20x1500	55,63	55,69	55,20	66,92	79,08	90,36	102,51	1,20	104,13	180-205	245	290
20x1600	60,61	60,69	60,19	78,43	102,77	105,89	130,21	1,20	104,13	190-220	260	310
20x1700	62,32	62,38	61,90	80,03	104,37	108,06	132,38	1,20	104,13	205-230	270	325
20x1800	63,53	63,58	63,08	83,47	107,79	112,68	136,98	1,20	104,13	215-240	290	345
20x1900	64,85	64,94	64,45	83,64	107,95	112,91	137,23	1,20	104,13	230-250	300	360
20x2000	65,47	65,52	65,03	83,76	108,08	113,08	137,40	1,20	104,13	240-260	310	375
30x1000	45,60	45,66	45,17	58,47	70,63	78,94	91,09	0,79	111,36	170-200	240	290
30x1100	54,29	54,36	53,87	62,88	75,07	84,89	97,09	0,79	111,36	195-215	260	310
30x1200	57,22	57,27	56,79	63,76	75,94	86,06	98,25	0,79	111,36	215-230	275	335
30x1300	59,73	59,79	59,31	67,59	79,77	91,24	103,41	0,79	111,36	220-245	300	355
30x1400	61,07	61,12	60,62	68,97	81,10	93,13	105,26	0,79	111,36	240-260	315	375
30x1500	65,24	65,32	64,82	70,29	82,45	94,90	107,05	1,20	111,36	255-280	340	400
30x1600	69,40	69,45	68,97	80,00	104,31	108,01	132,33	1,20	111,36	265-295	350	420
30x1700	71,06	71,11	70,65	81,63	105,94	110,21	134,51	1,20	111,36	275-310	370	450
30x1800	72,39	72,45	71,98	85,06	109,38	114,83	139,15	1,20	111,36	280-325	390	470
30x1900	73,66	73,72	73,25	85,36	109,65	115,22	139,51	1,20	111,36	300-340	400	490
30x2000	74,96	75,04	74,56	85,57	109,85	115,53	139,80	1,20	111,36	315-355	420	510
40x1000	46,07	46,13	45,61	59,82	71,98	80,75	92,91	0,79	111,81	205-235	280	325
40x1100	54,84	54,88	54,39	63,84	76,06	86,20	98,42	0,79	111,81	220-250	300	345
40x1200	57,78	57,82	57,32	64,84	77,01	87,54	99,70	0,79	111,81	245-270	325	380
40x1300	60,32	60,37	59,87	70,96	83,12	95,79	107,95	0,79	111,81	250-285	345	400
40x1400	61,67	61,72	61,21	72,35	84,47	97,66	109,79	0,79	111,81	270-310	360	425
40x1500	65,89	65,94	65,45	73,68	85,83	99,47	111,62	1,20	111,81	285-325	380	455
40x1600	70,09	70,14	69,65	81,59	105,90	110,13	134,46	1,20	111,81	290-340	405	480
40x1700	71,78	71,81	71,32	83,20	107,50	112,31	136,61	1,20	111,81	305-355	425	510
40x1800	73,11	73,16	72,66	86,67	110,99	116,99	141,34	1,20	111,81	310-365	450	530
40x1900	74,42	74,47	73,97	87,02	111,36	117,49	141,81	1,20	111,81	330-385	475	550
40x2000	75,72	75,77	75,29	87,34	111,65	117,93	142,22	1,20	111,81	345-405	495	580

Hidden curved linear diffusers

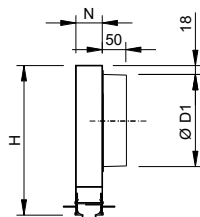
Technical data

LOOK-CURVED



LOOK	B	C	D	G	E
20	20	47	14	38,2	94,3
30	30	76	14	45,2	123,5
40	40	86	14	45,2	133,5

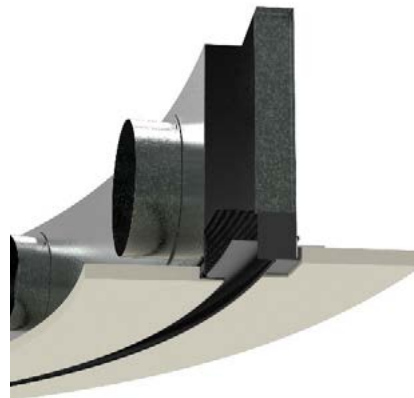
LOOK-CURVED+PLOK-CURVED



LOOK	L ≤ 0,5		L ≤ 1		L ≤ 1,2		L ≤ 1,5		L ≤ 2		N
	H	D1	H	D1	H	D1	H	D1	H	D1	
20	240	1/158	240	1/158	240	1/158	240	1/158	240	1/158	42,5
30	240	1/158	240	1/158	240	1/158	240	1/158	240	1/158	72
40	280	1/198	280	1/198	280	1/198	280	1/198	280	1/198	82

Finishes

- R9005M** Painted black RAL 9005 matt (20-30% gloss)
- R9016S** Painted white RAL 9016 semi-matt (60-70% gloss)
- R9010S** Painted white RAL 9010 semi-matt (60-70% gloss)
- RAL...** Painted other RAL colours.



Description

Concealed frame curved linear diffusers designed to combine aesthetics with technical performance. Its assembly is carried out suspended from the false ceiling, hiding the frame with filler and leaving only the slot visible.

Suitable for both supply and return.

Minimum diameters of 2500 mm.

Flow variation of 60% maintaining the stability of the air jet.

Suitable for heights from 2.6 to 4 meters and with a temperature differential of up to 12° C.

LOOK-CURVED Curved linear diffuser with short frame and brackets for suspended ceiling. Factory adjustable deflector for outward, inward or vertical discharge.

...-AR Diffuser with end angles at both ends for arc length ≤ 2m..

...-ARD Diffuser with an end angle on the right side, to form curves with an arc length > 2m..

...-ARI Diffuser with an end angle on the left side and connecting plates on the right side, to form curves with arc length > 2m.

...-IND Curved diffuser without finishing angles and with connecting plates on the right side, to form arch lengths greater than 4m.

...-INI Curved diffuser without finishing angles and with connecting plates on the left side, to form arch lengths greater than 4m.

Accessories

PLOK-CURVED Plenum box with connection to circular duct. Diffuser attached to plenum box with screws.

.../AIS/ Thermal insulation inside.

...-I Plenum box with connection on the concave side (inside)

...-O Plenum box with connection on the convex side (external)

...-DR Plenum position on the right side of the diffuser.

...-IZ Plenum position on the left side of the diffuser.

...-C/L1 Remote plenum position L1 from the left side.

Fixation

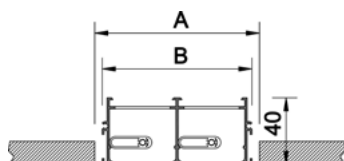
- 1) Suspension brackets in false ceiling for LOOK-CURVED with and without plenum box. The plenum box incorporates some pins for suspension by means of rods to the ceiling.



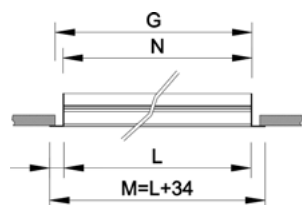
High induction linear slot diffusers

Technical data

LAV -15

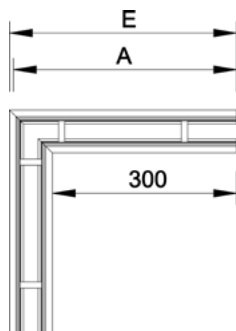


	E	A	B
1	49	43	34
2	76	70	61
3	103	97	88
4	130	124	115



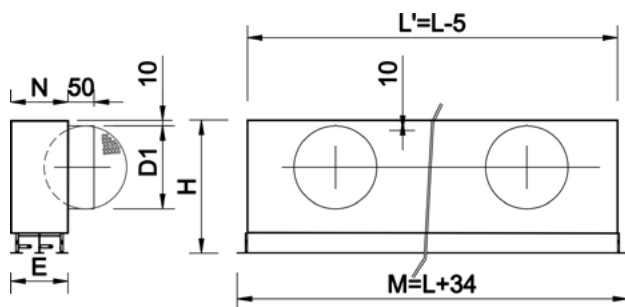
	M	N	G
500	534	502,4	521
1000	1034	1002,4	1021
1200	1234	1202,4	1221
1500	1534	1502,4	1521
2000	2034	2002,4	2021

A90-LAV-15

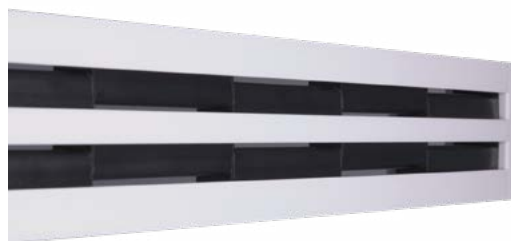


	E	A
1	349	342,5
2	376	369,5
3	403	396,5
4	430	423,5

PLAV-15/L/



	L ≤ 0,5		L ≤ 1		L < 1,5		L ≥ 1,5		L ≤ 2		N	E
	H'	D1	H'	D1	H'	D1	H'	D1	H'	D1		
1	256	1/158	256	1/158	256	1/158	256	2/158	256	2/158	69	49
2	256	1/158	256	1/158	256	1/158	256	2/158	256	2/158	108	76
3	246	1/198	256	1/198	256	1/198	256	2/198	256	2/198	108	103
4	296	1/198	296	1/198	296	1/198	296	2/198	296	2/198	147	130



Description

High induction linear slot diffusers. 15 mm slot. Diffusers with deflecting vanes sectorized every 100 mm. Wall or false ceiling mounting at a height between 2.6 and 4 m.

LAV-15 High induction linear slot diffuser. 15 mm slot.

...-AR Diffuser with end borders included. Suitable for lengths ≤ 2 m.

...-INT Diffuser without end borders, required to form lines > 2 m.

(In case of needing sections of equal length, it must be indicated)

Accessories

PLAV-15/L/ Plenum box with a lateral circular connection.

...-R Plenum box with an air flow damper in the spigot.

.../AIS/ Plenum box with thermal insulation inside.

ARV-15 End borders.

A90/LAV-15 90° angles diffuser without end borders.

Fixing systems

(PL) Diffuser to screw to plenum box and suspension of the assembly to the ceiling or wall.

(PM) Diffuser with crossbars to install in a false ceiling or wall. Fixing by screws.

(D) Diffuser with brackets for ceiling suspension using threaded rods.

Finishes

R9016S Painted white RAL 9016 (60-70% gloss)

R9010S Painted white RAL 9010 (60-70% gloss)

RAL... Painted other RAL.

.../AB/ Vanes in white colour.

Specification text

Supply and mounting of high induction linear slot diffuser, 15 mm slot, **LAV-15-AR+PLAV-15/L/-R R9016S 2x1000** series, made of aluminum and steel, painted white RAL 9016 (60-70% gloss) Plenum box with lateral circular connection, air flow damper in the spigot and necessary elements for assembly. Brand **MADEL**.

Dim. mm	LAV-15 AR (D) eur	LAV-15 INT (D) eur	LAV-15 AR (PL) eur	LAV-15 INT (PL) eur	LAV-15 AR (PM) eur	LAV-15 INT (PM) eur	PLAV-15 /L/ eur	PLAV-15 /L-R eur	PLAV-15 /L-AIS/ eur	PLAV-15 /L-R-AIS/ eur	Lwa1 <35 dB(A) m3/h	Lwa1 40 dB(A) m3/h	Lwa2 45 dB(A) m3/h
1x1000	38,96	36,09	38,82	35,95	41,77	38,91	57,13	69,29	77,12	89,29	58-131	157	-
1x1100	42,82	39,95	42,68	39,81	45,63	42,76	61,89	74,11	83,54	95,77	64-142	170	-
1x1200	45,42	42,57	45,28	42,43	48,23	45,39	62,68	74,89	84,61	96,80	70-154	184	-
1x1300	46,71	43,84	46,57	43,70	49,52	46,65	64,21	76,37	86,69	98,85	76-165	197	-
1x1400	48,19	45,32	48,05	45,18	51,00	48,14	65,58	77,74	88,53	100,67	82-175	210	-
1x1500	50,04	47,17	49,85	47,00	53,84	50,99	66,92	79,08	90,36	102,51	88-186	222	-
1x1600	57,00	54,16	56,84	53,97	60,83	57,96	78,43	102,77	105,89	130,21	94-196	234	-
1x1700	59,43	56,58	59,26	56,39	63,11	60,24	80,03	104,37	108,06	132,38	100-207	246	-
1x1800	59,82	56,96	59,63	56,77	63,48	60,62	83,47	107,79	112,68	136,98	105-217	258	-
1x1900	61,72	58,85	61,53	58,68	65,38	62,51	83,64	107,95	112,91	137,23	111-226	270	-
1x2000	61,09	58,24	60,92	58,05	64,77	61,90	83,76	108,08	113,08	137,40	117-235	281	-
2x1000	49,34	47,13	50,63	48,40	54,04	51,81	59,82	71,98	80,75	92,91	117-168	201	241
2x1100	54,71	52,48	56,01	53,77	59,40	57,16	63,62	75,79	85,88	98,05	129-182	219	262
2x1200	58,70	56,47	59,97	57,74	63,38	61,15	64,41	76,59	86,96	99,13	141-197	236	283
2x1300	60,73	58,50	62,00	59,77	65,41	63,18	70,96	95,25	95,79	120,08	153-211	253	303
2x1400	63,09	60,86	64,37	62,13	67,78	65,54	72,35	96,68	97,66	122,01	164-224	269	323
2x1500	65,32	63,09	67,13	64,89	71,92	69,69	73,68	97,97	99,47	123,77	176-238	285	342
2x1600	74,11	71,88	75,90	73,67	80,72	78,49	81,59	105,90	110,13	134,46	188-251	301	361
2x1700	77,47	75,24	79,42	77,19	83,93	81,70	83,20	107,54	112,31	136,65	200-264	317	380
2x1800	78,22	75,99	80,17	77,94	84,69	82,45	86,60	110,94	116,92	141,26	211-276	331	398
2x1900	80,52	78,29	82,45	80,21	86,98	84,75	86,78	111,09	117,14	141,46	223-289	346	415
2x2000	79,27	77,04	81,20	78,97	85,74	83,50	86,96	111,27	117,39	141,73	235-301	360	433
3x1000	57,90	55,93	59,47	57,48	62,79	60,82	60,31	73,14	81,24	94,07	176-270	322	384
3x1100	64,83	62,86	66,40	64,41	69,72	67,75	64,11	76,95	86,37	99,22	194-294	350	418
3x1200	70,31	68,34	71,89	69,90	75,21	73,24	64,90	77,75	87,45	100,29	211-317	378	451
3x1300	73,11	71,14	74,69	72,70	78,01	76,04	71,94	97,58	96,76	122,41	229-340	406	484
3x1400	76,34	74,37	77,92	75,95	81,24	79,27	73,33	99,01	98,64	124,33	247-362	432	515
3x1500	78,96	76,99	81,06	79,09	85,89	83,92	74,65	100,30	100,44	126,10	264-384	458	547
3x1600	88,74	86,77	90,83	88,86	95,68	93,69	82,56	108,23	111,10	136,79	282-405	483	576
3x1700	93,05	91,08	95,43	93,46	99,84	97,87	84,17	109,87	113,28	138,98	300-426	508	606
3x1800	94,20	92,21	96,58	94,61	100,99	99,02	87,58	113,26	117,90	143,58	316-446	533	635
3x1900	96,85	94,88	99,25	97,26	103,66	101,67	87,75	113,42	118,11	143,79	334-466	556	664
3x2000	95,00	93,03	97,38	95,41	101,78	99,81	87,94	113,60	118,37	144,05	352-486	579	691
4x1000	66,61	65,15	68,48	67,02	71,87	70,41	63,29	76,13	85,45	98,30	235-302	360	430
4x1100	75,02	73,58	76,88	75,45	80,27	78,84	68,35	94,01	92,27	117,96	258-329	392	468
4x1200	82,03	80,57	83,89	82,44	87,28	85,83	69,27	95,02	93,51	119,26	282-355	424	505
4x1300	85,55	84,12	87,42	85,98	90,81	89,37	72,79	98,49	98,25	123,95	306-380	454	541
4x1400	89,65	88,20	91,52	90,06	94,91	93,45	74,48	100,20	100,55	126,28	328-405	484	576
4x1500	92,65	91,20	95,03	93,59	100,12	98,68	76,16	101,86	102,81	128,54	352-430	513	612
4x1600	102,98	101,53	105,36	103,91	110,45	108,99	86,01	111,70	116,10	141,80	375-454	541	645
4x1700	108,90	107,44	111,70	110,27	116,22	114,76	88,04	113,70	118,83	144,53	399-477	569	679
4x1800	110,40	108,97	113,23	111,77	117,74	116,29	92,34	118,04	124,67	150,37	422-500	596	710
4x1900	113,45	111,99	116,28	114,82	120,77	119,34	92,50	118,23	124,89	150,60	446-521	622	743
4x2000	110,96	109,50	113,79	112,33	118,28	116,85	92,67	118,36	125,11	150,79	469-543	648	774
1x558 *	34,93	-	34,79	-	37,74	-	48,44	60,59	65,38	77,53	33-74	88	104
1x633 *	35,92	-	35,78	-	38,74	-	52,81	64,95	71,30	83,44	38-83	99	118
1x1158 *	45,42	-	45,28	-	48,23	-	62,68	74,89	84,61	96,80	68-152	181	216
2x558 *	45,69	-	46,98	-	50,38	-	50,39	62,53	68,02	80,17	66-94	112	134
2x633 *	46,53	-	47,80	-	51,21	-	55,09	67,24	74,36	86,51	75-107	127	153
2x1158 *	58,70	-	59,97	-	63,38	-	64,40	76,58	86,93	99,11	136-195	232	278
3x558 *	54,40	-	55,98	-	59,29	-	50,88	63,69	68,51	81,33	99-151	180	214
3x633 *	54,66	-	56,24	-	59,55	-	55,58	68,40	74,85	87,67	112-171	204	243
3x1158 *	70,31	-	71,89	-	75,21	-	64,89	77,74	87,42	100,27	204-312	372	444
4x558 *	62,97	-	64,84	-	68,23	-	51,63	64,46	69,69	82,51	132-169	201	240
4x633 *	63,27	-	64,72	-	68,11	-	57,46	70,28	77,58	90,39	150-192	228	272
4x1158 *	82,03	-	83,89	-	87,28	-	69,27	95,02	93,51	119,26	272-349	416	497

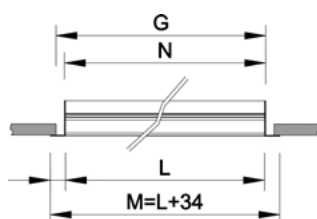
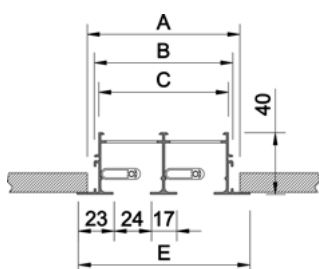
(*) Special for modular plates of 600, 675 and 1200.

(*)	eur
ARV-15	2,87
A90/LAV-15-1	94,32
A90/LAV-15-2	111,34
A90/LAV-15-3	125,87
A90/LAV-15-4	143,66
/AB/	3%

High air flow linear slot diffusers – Slot 24

Technical data

LAV-24



	E	A	B	C
1	70	57	48,2	42,2
2	111	98	89,2	83,2
3	152	139	130	124,2
4	193	180	171	167,2

	M	N	G
500	534	502,4	521
1000	1034	1002,4	1021
1200	1234	1202,4	1221
1500	1534	1502,4	1521
2000	2034	2002,4	2021



Description

High induction linear diffusers for high air flow rates. 24mm slot. Adjustable vanes every 100 mm. Wall or false ceiling mounting between 2.6 and 4 m high.

LAV-24 High air flow linear slot diffuser. 24 mm slot.

...-AR Diffuser with end borders included. Suitable for lengths ≤ 2 m.

...-INT Diffuser without end borders. Suitable for lines > 2 m.

(In case of needing sections of equal length, it must be indicated)

Accessories

PLAV-24/L/ Plenum box with a lateral circular connection.

...-R Plenum box with an air flow damper in the spigot.

.../AIS/ Plenum box with thermal insulation inside.

ARV-24 End borders.

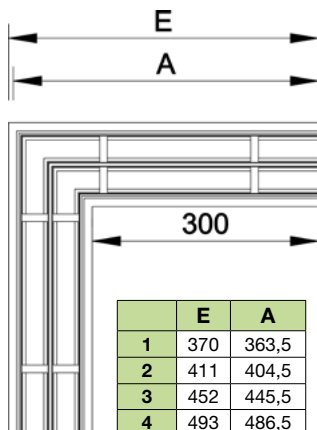
A90/LAV-24 Diffuser without end borders, forming a 90° angle.

A90/LAV-24

LAV-24-INT



LAV-24-AR



	E	A
1	370	363,5
2	411	404,5
3	452	445,5
4	493	486,5

Fixing

(PL) Diffuser to screw to plenum box and suspension of the assembly to the ceiling or wall.

(PM) Diffuser with crossbars to install in a false ceiling or wall. Fixing by screws.

(D) Diffuser with brackets for ceiling suspension using threaded rods.

Finishes

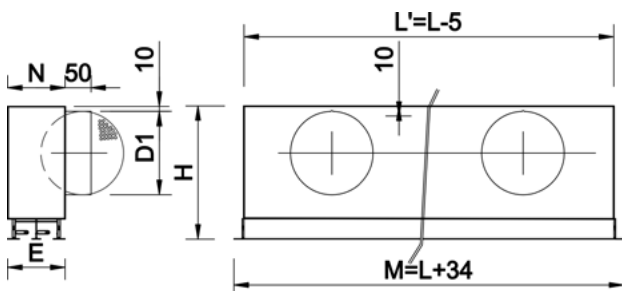
R9016S Painted white RAL 9016 (60-70% gloss)

R9010S Painted white RAL 9010 (60-70% gloss)

RAL... Painted other RAL.

.../AB/ Vanes in white colour.

PLAV-24



	L ≤ 0,5		L ≤ 1		L ≤ 1,2		L ≤ 1,6		L ≤ 2			
	H'	D1	H'	D1	H'	D1	H'	D1	H'	D1	N	E
1	256	1/158	256	1/158	256	1/158	256	2/158	256	2/158	68,5	70
2	256	1/198	256	1/198	256	1/198	256	2/198	256	2/198	107,5	111
3	297	1/198	297	1/198	297	1/198	297	2/198	297	2/198	147,9	152
4	297	1/198	297	1/198	297	1/198	297	2/198	297	2/198	186,9	193

Specification text

Supply and mounting of high induction linear diffuser for high air flow rates, 24 mm slot, **LAV-24-AR+PLAV-24/L/-R R9016S 2x1000** series, made of aluminum and steel, painted white RAL 9016 (60-70% gloss) Plenum box with lateral circular connection, air flow damper in the spigot and necessary elements for assembly. Brand **MADEL**.

Dim.	LAV-24-AR	LAV-24-INT	LAV-24-AR	LAV-24-INT	LAV-24-AR	LAV-24-INT	PLAV-24/L	PLAV-24/L-R	PLAV-24/L	PLAV-24/L-R	Lwa1	Lwa1
mm	(D) eur	(D) eur	(PL) eur	(PL) eur	(PM) eur	(PM) eur	eur	eur	/AIS/ eur	/AIS/ eur	< 35 dB(A) m3/h	45 dB(A) m3/h
1x1000	41,17	34,65	39,44	32,91	43,75	37,22	57,13	69,29	77,12	89,29	85-180	260
1x1100	45,88	39,34	44,15	37,62	48,45	41,92	61,89	74,11	83,54	95,77	95-195	285
1x1200	47,42	40,88	45,68	39,14	49,99	43,45	62,68	74,89	84,61	96,80	100-210	305
1x1300	51,81	45,28	50,09	43,55	54,40	47,86	64,21	76,37	86,69	98,85	110-225	330
1x1400	52,35	45,81	50,61	44,08	54,92	48,38	65,58	77,74	88,53	100,67	115-240	350
1x1500	54,46	47,93	52,35	45,81	57,64	51,11	66,92	79,08	90,36	102,51	130-255	370
1x1600	63,55	57,02	61,44	54,90	66,73	60,20	78,43	102,77	105,89	130,21	135-270	390
1x1700	65,60	59,06	63,03	56,50	68,18	61,64	80,03	104,37	108,06	132,38	145-285	410
1x1800	66,12	59,58	63,55	57,01	68,71	62,17	83,47	107,79	112,68	136,98	150-300	430
1x1900	68,34	61,81	65,77	59,23	70,93	64,39	83,64	107,95	112,91	137,23	160-310	450
1x2000	67,63	61,09	65,06	58,52	70,21	63,67	83,76	108,08	113,08	137,40	170-325	470
2x1000	53,10	46,35	52,04	45,29	56,29	49,54	59,82	71,98	80,75	92,91	170-250	355
2x1100	60,39	53,64	59,34	52,59	63,59	56,84	63,62	75,79	85,88	98,05	185-270	385
2x1200	62,45	55,70	61,40	54,64	65,65	58,90	64,41	76,59	86,96	99,13	200-290	415
2x1300	69,12	62,36	68,06	61,31	72,30	65,56	70,96	95,25	95,79	120,08	220-315	445
2x1400	70,16	63,41	69,11	62,35	73,35	66,60	72,35	96,68	97,66	122,01	240-335	475
2x1500	72,80	66,05	71,56	64,80	77,54	70,80	73,68	97,97	99,47	123,77	270-355	505
2x1600	85,26	78,52	84,02	77,26	90,01	83,25	81,59	105,90	110,13	134,46	275-375	535
2x1700	88,55	81,80	86,99	80,25	92,70	85,95	83,20	107,54	112,31	136,65	290-395	560
2x1800	89,59	82,84	88,04	81,28	93,75	86,99	86,60	110,94	116,92	141,26	310-410	590
2x1900	92,33	85,58	90,77	84,03	96,48	89,73	86,78	111,09	117,14	141,46	320-430	615
2x2000	90,91	84,15	89,35	82,60	95,06	88,31	86,96	111,27	117,39	141,73	340-450	640
3x1000	69,77	61,04	69,06	60,93	74,83	66,70	63,29	76,13	85,45	98,30	265-362	517
3x1100	79,19	71,06	78,47	70,34	84,24	76,11	68,35	94,01	92,27	117,96	280-411	588
3x1200	81,89	73,76	81,18	73,05	86,95	78,82	69,27	95,02	93,51	119,26	295-444	635
3x1300	91,28	83,15	90,57	82,44	96,34	88,21	72,79	98,49	98,25	123,95	318-476	680
3x1400	92,92	84,79	92,21	84,08	97,98	89,85	74,48	100,20	100,55	126,28	338-507	725
3x1500	96,27	88,14	95,34	87,22	102,80	94,67	76,16	101,86	102,81	128,54	379-537	767
3x1600	110,33	102,20	109,40	101,27	116,86	108,73	86,01	111,70	116,10	141,80	400-567	810
3x1700	115,07	106,94	114,03	105,90	121,03	112,90	88,04	113,70	118,83	144,53	422-596	851
3x1800	116,70	108,57	115,66	107,53	122,66	114,53	92,34	118,04	124,67	150,37	442-624	892
3x1900	119,60	111,47	118,56	110,43	125,56	117,43	92,50	118,23	124,89	150,60	470-652	932
3x2000	117,29	109,16	116,25	108,12	123,25	115,12	92,67	118,36	125,11	150,79	505-679	970
4x1000	84,17	75,67	83,75	75,26	89,54	81,05	64,40	77,22	86,93	99,77	338-433	622
4x1100	97,38	88,88	96,96	88,47	102,75	94,26	69,67	95,38	94,03	119,76	370-479	688
4x1200	101,46	92,97	101,05	92,55	106,83	98,34	70,65	96,36	95,37	121,07	410-517	742
4x1300	113,34	104,84	112,92	104,42	118,71	110,21	77,65	103,34	104,84	130,52	440-554	795
4x1400	115,64	107,14	115,23	106,73	121,01	112,52	79,44	105,11	107,24	132,90	470-590	847
4x1500	119,66	111,16	119,03	110,53	126,82	118,32	81,16	106,86	109,55	135,25	505-625	898
4x1600	138,08	129,58	137,45	128,96	145,24	136,75	89,60	115,31	120,95	146,66	540-660	947
4x1700	144,25	135,76	143,66	135,16	150,85	142,35	91,59	117,29	123,66	149,36	580-693	995
4x1800	146,54	138,05	145,95	137,45	153,14	144,64	95,98	121,65	129,55	155,23	610-726	1043
4x1900	150,82	142,32	150,23	141,73	157,42	148,92	96,17	121,87	129,84	155,52	640-758	1089
4x2000	147,86	139,36	147,27	138,77	154,46	145,96	96,32	122,06	130,04	155,77	680-789	1133
1x558 *	33,35	-	32,02	-	35,93	-	48,44	60,59	65,38	77,53	48-100	145
1x633 *	37,34	-	35,85	-	39,91	-	52,81	64,95	71,30	83,44	54-114	165
1x1158 *	47,46	-	45,56	-	50,03	-	62,68	74,89	84,61	96,80	95-202	295
2x558 *	36,10	-	35,38	-	39,30	-	50,39	62,53	68,02	80,17	95-139	198
2x633 *	44,60	-	43,71	-	47,80	-	55,09	67,24	74,36	86,51	112-158	244
2x1158 *	62,49	-	61,24	-	65,69	-	64,40	76,58	86,93	99,11	193-278	399
3x558 *	51,40	-	50,07	-	52,64	-	51,63	64,46	69,69	82,51	148-202	288
3x633 *	54,70	-	53,21	-	55,79	-	57,46	70,28	77,58	90,39	168-229	327
3x1158 *	81,50	-	79,60	-	82,18	-	69,27	95,02	93,51	119,26	285-428	613
4x558 *	60,95	-	60,23	-	63,43	-	52,03	64,87	70,24	83,10	282-379	541
4x633 *	65,19	-	64,30	-	67,50	-	58,21	71,07	78,59	91,43	214-274	394
4x1158 *	100,15	-	98,90	-	102,10	-	70,65	96,34	95,37	121,06	396-499	716

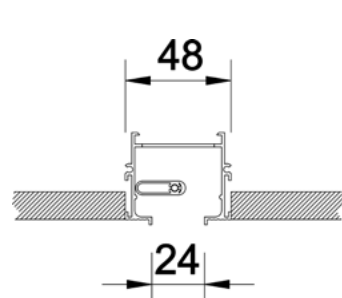
(*) Special length diffusers to be installed between the 600, 675 or 1200 modular ceiling profiles.

(*)	eur
ARV-24	6,75
A90/LAV-24-1	102,94
A90/LAV-24-2	120,53
A90/LAV-24-3	159,14
A90/LAV-24-4	191,84
/AB/	3%

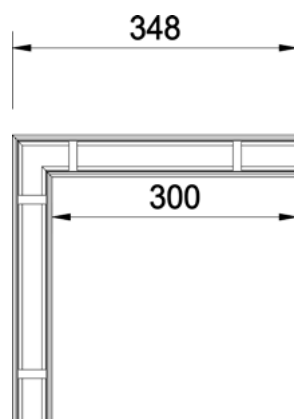
Hidden high air flow linear slot diffusers – Slot 24

Technical data

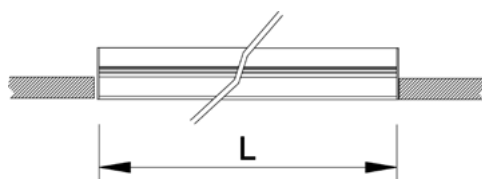
LAV-24-FIN



A90/LAV-24-FIN

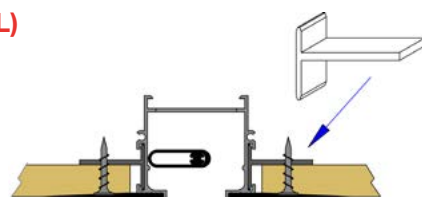


plav-24-FIN/L/

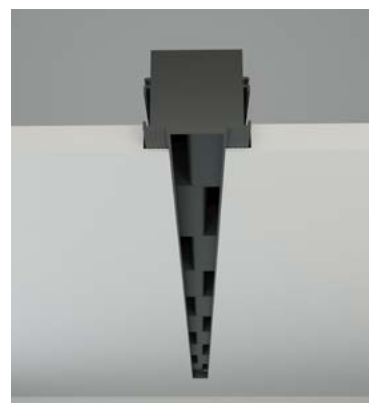
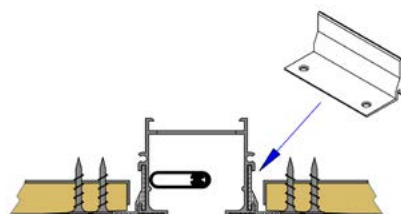
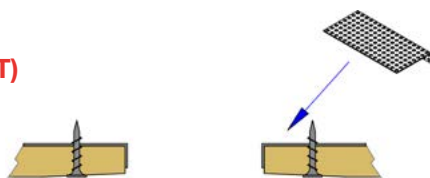


	L ≤ 0,5		L ≤ 1		L ≤ 1,2		L ≤ 1,6		L ≤ 2	
	H	D1	H	D1	H	D1	H	D1	H	D1
1	256	1/158	256	1/158	256	1/158	256	2/158	256	2/158

(L)



(T)



Description

Hidden high induction linear diffusers for high air flow rates. 24mm slot. Adjustable vanes every 100 mm. Wall or false ceiling mounting between 2.6 and 4 m high.

LAV-24-FIN Hidden high air flow linear slot diffuser. 24 mm slot.

...-AR Diffuser with end borders included. Suitable for lengths ≤ 2 m.

...-INT Diffuser without end borders, required to form lines > 2 m. (In case of needing sections of equal length, it must be indicated)

Accessories

PLAV-24-FIN/L/ Plenum box with lateral circular connection to be mounted behind the plasterboard. Fixing (L) required.

PLAV-24/L/ Plenum box with lateral circular connection to be mounted in front of the plasterboard or masonry wall. Fixing (T) required.

...-R Plenum box with an air flow damper in the spigot.

.../AIS/ Plenum box with thermal insulation inside.

ARF-24 End borders.

A90/LAV-24-FIN Diffuser without end borders, forming a 90° angle.

Fixing

(L) Brackets to hang from the ceiling the diffuser, with or without plenum box. Diffuser riveted to the plenum box.

1 - Screw the front corner to the rear corner. Protect with anti-crack tape and fill with plaster.

(T) Set of angles for front fixing of the diffuser, with or without plenum box, by means of hidden screws.

1 - Insert the perforated angle in the upper part of the false ceiling.

2 - Insert the diffuser through the bottom of the false ceiling. Align the front guides with the rear angle and screw. Protect with anti-crack tape and fill with plaster.

Finishes

R9005M Painted black RAL 9005 (20-30% gloss)

R9016S Painted white RAL 9016 (60-70% gloss)

R9010S Painted white RAL 9010 (60-70% gloss)

RAL... Painted other RAL.

.../AB/ Vanes in white colour.

Specification text

Supply and mounting of hidden high induction linear diffuser for high air flow rates, 24 mm slot, **LAV-24-FIN-AR+PLAV-FIN-24/L/-R R9005M 2x1000** series, made of aluminum and steel, painted black RAL 9005 (20-30% gloss) Plenum box with lateral circular connection, air flow damper in the spigot and necessary elements for assembly. Brand **MADEL**.

Dim. mm	LAV-24-FIN-AR (L) eur	LAV-24-FIN-INT (L) eur	LAV-24-FIN-AR (T) eur	LAV-24-FIN-INT (T) eur	Lwa1 < 35 dB(A) m3/h	Lwa1 40 dB(A) m3/h	Lwa1 45 dB(A) m3/h
1x1000	40,82	37,62	47,61	44,41	85-180	215	260
1x1100	45,32	42,12	52,11	48,90	95-195	235	285
1x1200	46,84	43,64	53,64	50,44	100-210	255	305
1x1300	50,94	47,73	57,74	54,53	110-225	275	330
1x1400	51,47	48,26	58,26	55,05	115-240	290	350
1x1500	54,55	51,34	64,74	61,54	130-255	310	370
1x1600	63,12	59,91	73,31	70,11	135-270	325	390
1x1700	64,56	61,37	74,76	71,56	145-285	340	410
1x1800	65,09	61,89	75,28	72,08	150-300	360	430
1x1900	67,31	64,10	77,50	74,30	160-310	375	450
1x2000	66,59	63,40	76,79	73,58	170-325	390	470

Dim. mm	PLAV-24-FIN/L/ eur	PLAV-24-FIN/L/-R eur	PLAV-24-FIN/L/ /AIS/ eur	PLAV-24-FIN/L/-R /AIS/ eur
1x1000	57,13	69,29	77,12	89,29
1x1100	61,89	74,11	83,54	95,77
1x1200	62,68	74,89	84,61	96,80
1x1300	64,21	76,37	86,69	98,85
1x1400	65,58	77,74	88,53	100,67
1x1500	66,92	79,08	90,36	102,51
1x1600	78,43	102,77	105,89	130,21
1x1700	80,03	104,37	108,06	132,38
1x1800	83,47	107,79	112,68	136,98
1x1900	83,64	107,95	112,91	137,23
1x2000	83,76	108,08	113,08	137,40

(*)	eur
ARF-24	6,75
A90/LAV-24-FIN	102,94
/AB/	3%



Floor **diffusers**

Quality diffusion and proven resistance

Floor diffusers with dust collector for an easy maintenance

Floor grilles tested and classified

INDEX

TAU aluminium floor diffusers

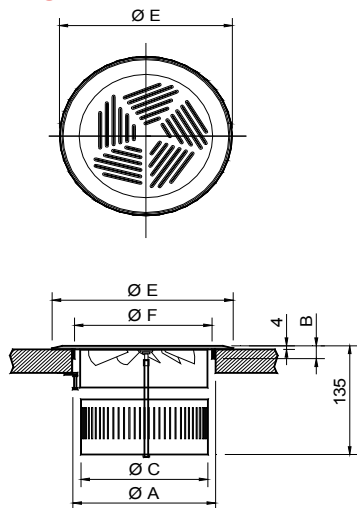
LMT-SHD linear floor grilles classified L15

LMT-S linear floor grilles classified H1.5

Aluminium floor diffusers

Technical data

TAU



	A	E	F	C	B
150	150	190	140	132	19
200	200	240	190	182	19



Description

Circular floor diffuser with sliding volume damper and dust collector. Designed for mounting either in the floor or under seat. Diffuser made from aluminium.

TAU Floor swirl diffuser made from aluminium for creating a turbulent vertical discharge, mixing the room air.

Fixing

1) Fixing by screws supplied with the diffuser.

Finishes

1) Natural aluminium.

RAL... Painted RAL colors, for non-passable areas: Consult.

Specification Text

Supply and mounting of floor circular swirl diffuser with sliding volume damper and dust collector series **TAU dim. 150** constructed from natural aluminium. Manufacturer **MADEL**.



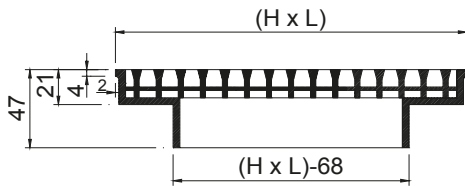
Dim.	TAU	Lwa1 < 25 dB(A)	Lwa1= 30 dB(A)	Lwa1= 35 dB(A)
mm	eur	m³/h	m³/h	m³/h
150	73,90	30-40	45	57
200	81,21	60-70	90	105

Linear floor grilles classified L15



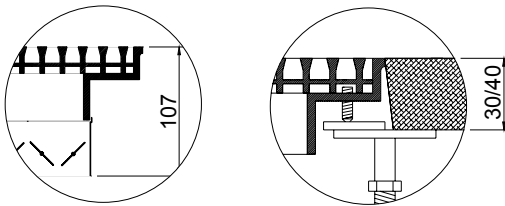
Technical data

LMT-SHD



LMT-SHD+SP-HD

1)



Description

Aluminium heavy-duty floor grilles with fixed bars for supply or air return. Suitable for mounting in raised access floors on any applications where heavy foot or equipment traffic is to be experienced.

L15 classification (installation in areas with traffic of light vehicles, excluded the forklift trucks, according to test carried out by a credited independent laboratory, in conformity with the standard EN 1253-2.

LMT-SHD Linear floor grille with fixed bars parallels to the largest side (L size)

Accessories

SP-HD Opposed blades volume damper from electro-zinc steel, in black colour.

Fixing

1) Brackets and screws to level the grille on the raised floor.

Finishes

1) Shadowline – linished finish.

Specification Text

Supply and mounting of linear floor grille with fixed bars parallels to the largest side series **LMT-SHD dim. LxH**, constructed from aluminium and shadowline – linished finish. L15 classification in conformity with the standard EN 1253-2. Manufacturer **MADEL**.

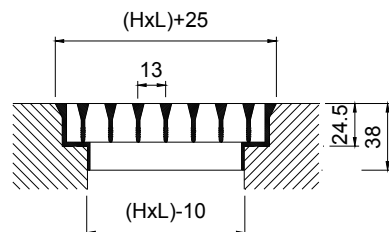
L x H mm	LMT-SHD eur	LMT-SHD+SP-HD eur	Vf= 0,5 m/s m³/h	Vf= 1,5 m/s m³/h	Vf= 3 m/s m³/h
600x145	133,28	150,24	36	108	216
600x210	159,73	179,54	67	200	400
600x275	186,07	208,59	99	297	594
600x340	213,63	238,23	130	389	777
600x405	239,54	267,01	160	481	961
600x470	266,44	300,18	191	572	1144
600x535	292,35	331,87	223	669	1339
600x600	340,78	375,12	254	761	1522
1000x145	207,75	242,88	63	189	378
1000x210	243,89	281,10	119	356	712
1000x275	277,76	318,12	173	518	1036
1000x340	315,10	364,34	238	712	1425
1000x405	354,78	403,87	283	847	1695
1000x470	396,78	448,76	337	1009	2020
1000x535	440,00	497,77	391	1171	2343
1000x600	490,19	548,01	484	1452	2905

Linear floor grilles classified H1.5

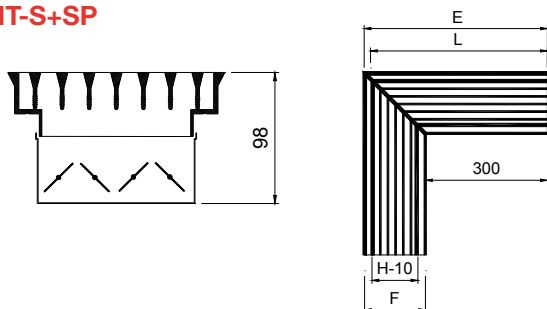


Technical data

LMT-S



LMT-S+SP



H	E	L	F
75	400	387.5	100
100	425	412.5	125
125	450	437.5	150
150	475	462.5	175
200	525	512.5	225
250	575	562.5	275
300	625	612.5	325



Description

Linear floor grilles in aluminium for supply or air return, with fixed bars parallels to the largest side (L size)

H1.5 classification (installation in perimeter areas, only walkable by people) according to test carried out by a credited independent laboratory, in conformity with the standard EN 1253-2.

LMT-S Linear floor grille with end borders and fixed bars at 0° for lengths ≤ 2 m.

LMT-S-15 Grille with fixed bars at 15°.

...-ARI Grille with an end border on the left side, required to form lines > 2 m.

...-ARD Grille with an end border on the right side, required to form lines > 2 m.

...-INT Grille without end borders, required to form lines > 4 m.

Accessories

SP Opposed blades volume damper from zinc plated steel, in black colour.

A90/LMT-S Inactive grille without end borders, making a 90° angle.

Fixing

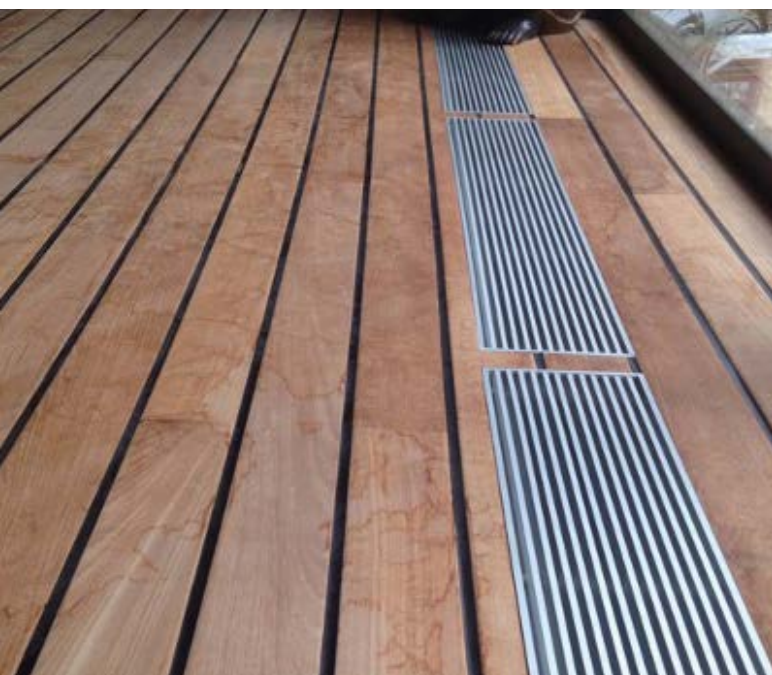
1) Hold on the floor.

Finishes

AA Matt silver anodised.

Specification Text

Supply and mounting of linear floor grille with fixed bars at 0° parallels to the largest side series **LMT-S AA dim. LxH**, constructed from aluminium and anodised in matt silver **AA**. H1,5 classification in conformity with the standard EN 1253-2. Manufacturer **MADEL**.



L x H	LMT-S	SP	Lwa1 < 35 dB(A)	Lwa1 = 45 dB(A)
mm	eur	eur	m³/h	m³/h
200x75	24,52	7,20	45-75	110
250x75	27,25	8,19	50-90	125
300x75	28,29	9,67	65-115	160
400x75	32,10	12,15	85-150	215
500x75	35,95	14,59	110-190	270
600x75	44,38	16,80	135-240	340
800x75	53,06	23,87	180-315	450
1000x75	63,82	28,73	230-405	575
A90/LMT-S-...x75	82,68	-	-	-
200x100	27,06	7,20	60-100	145
250x100	29,40	8,19	70-125	180
300x100	31,61	9,67	95-165	235
400x100	36,05	12,15	120-215	305
500x100	40,66	14,59	160-275	395
600x100	50,90	16,80	195-340	485
800x100	60,97	23,87	260-455	650
1000x100	73,80	28,73	325-565	810
A90/LMT-S-...x100	93,48	-	-	-
200x125	29,66	7,87	70-130	180
250x125	32,31	9,09	90-165	240
300x125	35,25	10,60	110-210	290
400x125	40,10	13,00	140-255	365
500x125	45,40	15,63	200-355	505
600x125	57,63	17,98	240-430	615
800x125	69,19	25,57	320-570	815
1000x125	83,86	30,64	400-710	1010
A90/LMT-S-...x125	104,40	-	-	-
200x150	32,02	7,87	100-175	250
250x150	35,09	9,09	130-225	325
300x150	38,03	10,60	165-290	415
400x150	43,94	13,00	215-380	540
500x150	49,96	15,63	275-480	685
600x150	68,82	17,98	330-580	830
800x150	76,91	25,57	445-780	1115
1000x150	93,99	30,64	560-985	1405
A90/LMT-S-...x150	114,86	-	-	-
200x200	37,04	8,68	135-240	340
250x200	40,82	9,89	180-315	450
300x200	44,79	11,34	225-390	560
400x200	52,11	13,84	295-515	740
500x200	59,54	16,69	375-655	935
600x200	77,11	19,32	455-795	1135
800x200	93,00	27,27	605-1060	1510
1000x200	114,41	32,78	765-1335	1910
A90/LMT-S-...x200	136,94	-	-	-
250x250	47,93	10,83	225-390	560
300x250	52,44	11,98	280-490	700
400x250	61,89	14,76	375-655	935
500x250	72,28	17,78	470-820	1170
600x250	94,22	20,61	570-995	1420
800x250	112,89	28,99	765-1335	1910
1000x250	139,74	34,97	960-1675	2395
A90/LMT-S-...x250	166,24	-	-	-
300x300	59,10	12,90	340-590	845
400x300	70,07	15,88	455-795	1135
500x300	81,96	19,20	570-995	1420
600x300	107,81	22,19	685-1195	1710
800x300	129,42	31,19	920-1615	2305
1000x300	160,68	37,72	1160-2030	2900
A90/LMT-S-...x300	188,51	-	-	-



Air volume **control**

The precise adjustment

SQR with cover gear to prevent the entry of dust

New constant air volume damper SKC

New variable air volume damper SVA

INDEX

SCC circular air volume dampers

SQR rectangular air volume dampers

SVA-C circular dampers

SVA-R rectangular dampers

SKP low pressure CAV dampers

SKC-C adjustable CAV rectangular dampers

SKC-R adjustable CAV circular dampers

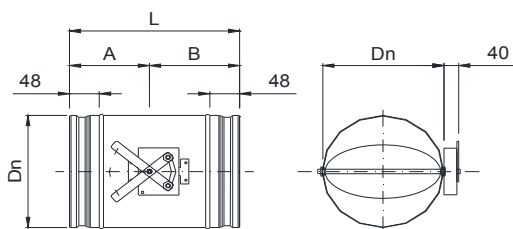
SMS pressure dampers

Circular air volume dampers

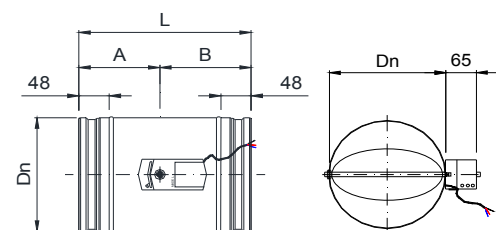


Technical data

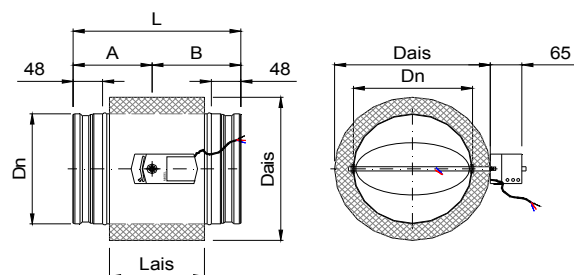
SCC-../MA/



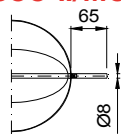
SCC-../+actuator



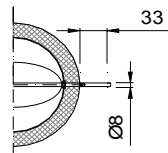
SCC-../+actuator/AIS/



SCC-../MO/



SCC-../MO/AIS/



D	Dn	Dais	L	Lais	A	B
100	98	178	265	150	105	160
125	123	203	265	150	105	160
150	148	228	265	150	105	160
160	158	238	265	150	105	160
200	198	278	295	180	130	165
250	248	328	335	220	145	190
315	313	393	345	230	155	190
355	353	433	400	285	180	220
400	398	478	420	305	190	230



Description

Dampers to control the air flow volume and the pressure rate in circular ducts. Constructed from galvanised steel and bearings from nylon.

SCC-R Circular control damper.

SCC-E Circular control damper with air tightness joint according to EN-1751 standard and rubber connection joints.

.../MA/ Manual control lever.

.../MO/ Special axle to motorise.

.../AIS/ Thermo-acoustical insulation

Accessories

See Volume control accessories page. Mounting included on actuators price.

Fixing

1) Connection into a circular metallic duct.

Specification Text

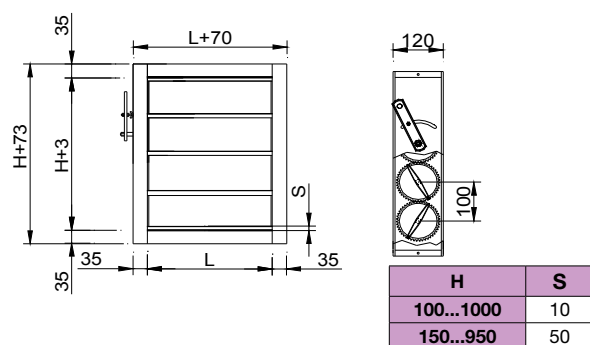
Supply and mounting of airtight damper to control the air flow volume in circular ducts with manual control lever series **SCC-MA dim. 100** constructed from galvanised steel bearings from nylon. Manufacturer **MADEL**.

Ø mm	actuator N	SCC-R eur	SCC-E eur	SCC-R /AIS/ eur	SCC-E /AIS/ eur	Ak m ²
100	2	32,70	38,10	65,82	71,21	0,0078
125	2	34,36	39,86	70,11	75,60	0,0123
150	2	35,90	41,64	78,56	84,31	0,0176
160	2	36,01	41,91	78,67	84,58	0,0201
200	2	37,63	43,77	87,78	93,93	0,0314
250	5	39,25	45,75	100,87	107,36	0,0491
315	5	42,57	49,48	121,57	128,46	0,0779
355	5	48,34	55,80	145,43	152,89	0,0989
400	5	54,48	62,88	168,56	176,97	0,1244

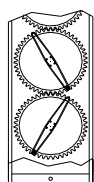
Rectangular air volume dampers

Technical data

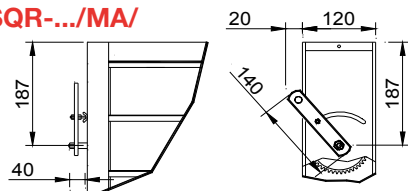
SQR-...



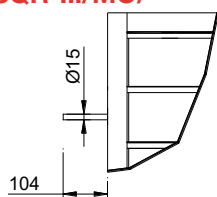
SQR-...



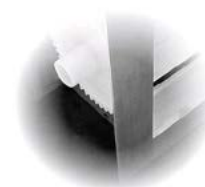
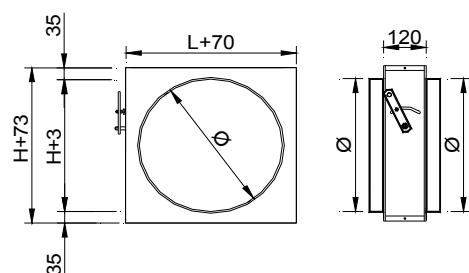
SQR-.../MA/



SQR-.../MO/



SQR-ECC



Description

Airtight dampers to control the air flow volume and the pressure rate in rectangular ducts. Dampers with blades of 100 mm, made from raw aluminium and gears from polyamide.

SQR-H Damper with rhomboidal profile blades, parallels to the largest side (L size)

SQR-V Damper with rhomboidal profile blades, parallels to the shortest side (H size)

SQR-CC Square damper with rhomboidal profile blades and circular connections.

.../MA/ Damper with manual control lever.

.../MO/ Damper with special axle to motorise.

Accessories

See Volume control Accessories page.

Mounting included on actuators price.

Fixing

1) Damper designed to be jointed in ducts.

(CR) Flat connection flange.

Specification Text

Supply and mounting of airtight damper to control the air flow volume in rectangular ducts with manual control lever series

SQR-H/MA/ LxH constructed from raw aluminium and gears from polyamide. Manufacturer **MADEL**.

mm	actuator N	SQR-H eur	SQR-H (CR) eur	SQR-V eur	SQR-V (CR) eur	L x H mm	actuator N	SQR-H eur	SQR-H (CR) eur	SQR-V eur	SQR-V (CR) eur
200x100	2 N	43,50	54,38	52,00	64,99	400x400	5 N	112,78	140,99	112,78	140,99
300x100	2 N	50,39	63,00	67,11	83,87	500x400	5 N	122,09	152,62	130,64	163,29
400x100	2 N	56,12	70,15	82,01	102,52	600x400	5 N	132,56	165,69	149,06	186,30
500x100	5 N	61,85	77,31	99,48	124,31	700x400	5 N	141,80	177,24	170,13	212,67
600x100	5 N	67,55	84,43	114,35	142,95	800x400	5 N	151,09	188,87	188,70	235,87
700x100	5 N	73,29	91,62	131,94	164,92	900x400	5 N	160,35	200,44	207,55	259,44
800x100	5 N	79,04	98,80	146,90	183,64	1000x400	5 N	170,79	213,48	225,72	282,16
900x100	5 N	84,69	105,87	162,24	202,80	1200x400	5 N	190,50	238,13	262,74	328,42
1000x100	5 N	88,11	110,14	176,87	221,08	1400x400	5 N	231,28	289,09	-	-
1200x100	5 N	101,95	127,43	206,78	258,49	1600x400	5 N	264,30	330,37	-	-
1400x100	5 N	143,24	179,06	-	-	1800x400	5 N	297,38	371,71	-	-
1600x100	5 N	162,80	203,50	-	-	2000x400	5 N	330,38	412,96	-	-
1800x100	5 N	184,15	230,19	-	-	500x500	5 N	143,49	179,35	143,49	179,35
2000x100	5 N	204,63	255,81	-	-	600x500	5 N	153,93	192,42	160,66	200,83
200x150	2 N	52,38	65,46	56,59	70,74	700x500	5 N	164,35	205,44	182,94	228,67
300x150	2 N	59,22	74,03	71,70	89,62	800x500	5 N	175,99	220,01	202,62	253,28
400x150	2 N	65,59	81,99	87,20	109,00	900x500	5 N	186,45	233,04	222,64	278,32
500x150	5 N	71,86	89,84	104,66	130,82	1000x500	5 N	198,02	247,52	242,00	302,51
600x150	5 N	78,22	97,77	120,10	150,14	1200x500	5 N	218,94	273,71	281,39	351,72
700x150	5 N	84,53	105,66	138,29	172,87	1400x500	5 N	275,32	344,15	-	-
800x150	5 N	90,84	113,56	153,87	192,35	1600x500	10 N	314,65	393,32	-	-
900x150	5 N	97,70	122,13	169,81	212,25	1800x500	10 N	354,00	442,49	-	-
1000x150	5 N	102,87	128,59	185,02	231,27	2000x500	10 N	393,33	491,66	-	-
1200x150	5 N	116,73	145,91	216,10	270,14	600x600	5 N	175,05	218,85	175,05	218,85
1400x150	5 N	167,41	209,27	-	-	700x600	5 N	186,68	233,35	195,66	244,59
1600x150	5 N	188,63	235,78	-	-	800x600	5 N	199,52	249,41	216,55	270,69
1800x150	5 N	208,56	260,70	-	-	900x600	5 N	211,12	263,90	237,81	297,26
2000x150	5 N	229,13	286,41	-	-	1000x600	5 N	223,90	279,88	258,31	322,88
200x200	2 N	61,22	76,55	61,22	76,55	1200x600	5 N	248,37	310,45	300,07	375,07
300x200	2 N	68,11	85,13	76,25	95,30	1400x600	10 N	319,39	399,22	-	-
400x200	2 N	75,04	93,81	92,39	115,48	1600x600	10 N	365,00	456,25	-	-
500x200	5 N	81,95	102,44	109,86	137,32	1800x600	10 N	410,65	513,32	-	-
600x200	5 N	88,89	111,11	125,93	157,41	2000x600	10 N	456,27	570,33	-	-
700x200	5 N	95,78	119,72	144,70	180,85	700x700	5 N	211,78	264,71	211,78	264,71
800x200	5 N	102,64	128,30	160,83	201,02	800x700	5 N	224,60	280,76	230,50	288,12
900x200	5 N	110,74	138,43	177,37	221,71	900x700	5 N	237,34	296,69	252,91	316,12
1000x200	5 N	117,67	147,10	193,13	241,42	1000x700	5 N	251,33	314,16	274,62	343,28
1200x200	5 N	131,46	164,31	225,46	281,81	1200x700	5 N	278,13	347,68	318,65	398,32
1400x200	5 N	187,20	233,99	-	-	1400x700	10 N	360,52	450,67	-	-
1600x200	5 N	213,96	267,46	-	-	1600x700	10 N	412,05	515,05	-	-
1800x200	5 N	240,71	300,89	-	-	1800x700	10 N	463,53	579,41	-	-
2000x200	5 N	267,47	334,34	-	-	2000x700	10 N	515,05	643,81	-	-
300x250	5 N	77,02	96,28	81,09	101,36	800x800	5 N	248,17	310,23	248,17	310,23
400x250	5 N	84,52	105,65	97,00	121,25	900x800	5 N	262,12	327,64	268,03	335,02
500x250	5 N	92,03	115,05	115,06	143,83	1000x800	10 N	277,28	346,60	290,91	363,63
600x250	5 N	99,51	124,37	131,72	164,66	1200x800	10 N	307,62	384,53	337,34	421,67
700x250	5 N	107,63	134,53	151,04	188,82	1400x800	10 N	407,38	509,20	-	-
800x250	5 N	115,11	143,89	167,78	209,74	1600x800	10 N	465,57	581,95	-	-
900x250	5 N	124,95	156,20	184,90	231,13	1800x800	15 N	523,72	654,66	-	-
1000x250	5 N	130,68	163,35	201,26	251,57	2000x800	15 N	581,94	727,42	-	-
1200x250	5 N	146,26	182,83	234,75	293,44	900x900	10 N	287,22	359,03	287,22	359,03
1400x250	5 N	187,20	233,99	-	-	1000x900	10 N	303,56	379,44	307,18	383,98
1600x250	5 N	192,57	240,71	-	-	1200x900	10 N	336,26	420,31	355,99	444,97
1800x250	5 N	240,71	300,89	-	-	1400x900	10 N	368,92	461,15	-	-
2000x250	5 N	267,47	334,34	-	-	1600x900	15 N	401,61	501,99	-	-
300x300	5 N	85,93	107,40	85,93	107,40	1800x900	15 N	434,29	542,86	-	-
400x300	5 N	94,00	117,51	101,58	126,98	2000x900	15 N	466,97	583,71	-	-
500x300	5 N	102,12	127,63	120,21	150,27	1000x1000	10 N	329,14	411,44	329,14	411,44
600x300	5 N	110,15	137,69	137,48	171,84	1200x1000	10 N	365,38	456,73	374,65	468,31
700x300	5 N	119,44	149,31	157,40	196,76	1400x1000	10 N	401,63	502,03	-	-
800x300	5 N	127,58	159,46	174,75	218,44	1600x1000	15 N	437,88	547,35	-	-
900x300	5 N	139,16	173,97	192,43	240,53	1800x1000	15 N	474,12	592,64	-	-
1000x300	5 N	143,72	179,63	209,43	261,77	2000x1000	15 N	510,28	637,83	-	-
1200x300	5 N	161,09	201,35	244,07	305,08	L x H mm	actuator N	SQR-CC eur			
1400x300	5 N	231,28	289,09	-	-	SQR-CC-400	5 N	149,75			
1600x300	5 N	264,30	330,37	-	-	SQR-CC-450	5 N	186,13			
1800x300	5 N	297,38	371,71	-	-	SQR-CC-500	5 N	192,16			
2000x300	5 N	330,38	412,96	-	-	SQR-CC-630	5 N	282,11			

Air volume control dampers accessories

On / Off actuators		eur
GSD141.1A-24v	Siemens On/Off 2N	112,45
GSD341.1A-230v	Siemens On/Off 2N	112,45
GDB141.1E-24v	Siemens On/Off 5N	132,33
GDB341.1E-230v	Siemens On/Off 5N	132,33
GLB141.1E-24v	Siemens On/Off 10N	172,29
GLB341.1E-230v	Siemens On/Off 10N	172,29
GEB141.1E-24v	Siemens On/Off 20N	226,54
GEB341.1E-230v	Siemens On/Off 20N	230,73
LM24A	Belimo On/Off 5N	148,93
LM230A	Belimo On/Off 230 VAC 5N	148,93
NM24A	Belimo On/Off 10N	178,04
NM230A	Belimo On/Off 10N	183,07

ON/OFF actuators - switches device		eur
GDB146.1E-24v	Siemens On/Off 5N, 2 FC	169,38
GDB346.1E-230v	Siemens On/Off 5N, 2 FC	169,38
GLB146.1E-24v	Siemens On/Off 10N, 2 FC	217,17
GLB346.1E-230v	Siemens On/Off 10N, 2 FC	216,77
GEB146.1E-24v	Siemens On/Off 15N 2 FC	274,54
GEB346.1E-230v	Siemens On/Off 15N 2 FC	280,15
LM24A-S	Belimo On/Off 5N, 1 FC (*)	166,10
LM230A-S	Belimo On/Off 5 N, 1 FC (*)	166,10
NM24A-S	Belimo On/Off 10N, 1 FC (*)	212,85
NM230A-S	Belimo On/Off 10N, 1 FC (*)	242,30

* Belimo actuator with end of course switch for 2 contacts.

ON/OFF actuators - spring return		eur
GPC121.1A-24v	Siemens On/Off 4N	235,31
GPC321.1A-230v	Siemens On/Off 4N	258,30
GMA121.1E-24v	Siemens On/Off 7N	288,06
GMA321.1E-230v	Siemens On/Off 7N	326,50
LF-24	Belimo On/Off 4N	261,42
LF-230	Belimo On/Off 4N	282,43
NFA	Belimo On/Off 24-230 VAC, 10N	387,86

ON/OFF actuators with spring return and with switches device		eur
GPC126.1A-24v	Siemens On/Off 4N	275,30
GPC326.1A-230v	Siemens On/Off 4N	289,09
GMA126.1E-24v	Siemens On/Off 7N	326,81
GMA326.1E-230v	Siemens On/Off 7N	366,66
LF-24-S	Belimo On/Off 4N	299,10
LF-230-S	Belimo On/Off 4N	318,88
NFA-S2	Belimo 24-230 VAC On/Off 10N	425,50

Proportional actuators		eur
GDB161.1E-24v	Siemens proportional 5N	195,82
GLB161.1E-24v	Siemens proportional 10N	264,56
GEB161.1E-24v	Siemens proporcional 15N	318,21
LM24A-SR	Belimo proportional 5N	205,15
LM230A-SR	Belimo proportional 5N	260,37
NM24A-SR	Belimo proportional 10N	269,75
NM230A-SR	Belimo proportional 10N	326,31

Proportional actuators MODBUS		eur
GDB111.1E/MO-24v	Siemens proportional 5N	303,82
GLB111.1E/MO-24v	Siemens proportional 10N	350,94
LM24A-MOD	Belimo proportional 5N	309,60
NM24A-MOD	Belimo proportional 10N	374,83

Temperature control		eur
TF	Termostat TF (Delta-dore: TYBOX 51)	72,43
RDG400	RDG 400 Controlador de temperatura ambiente proporcional Siemens	207,49
CO2-WP	Sonda CO2-WP (Belimo 22-RTM-18-1)	297,22
CO2-D	Sonda CO2-D (Sistema S154/T+CO2)	621,77
CO2-WR	Sonda CO2-WR (Sistema S151W)	544,69
CO2-WPD	Sonda CO2-WPD (Belimo P-RTM-1900D-1)	470,16

TF Thermostat with cables for temperature control of 1 zone, using On/Off actuator. Manual seasonal change over.

RDG 400 Proportional temperature controller ambiance 0..10Vcc power supply 24vac with backlit digital display, selector comfort eco/off; for proportional damper actuators.

CO2-WP Room sensor CO2 / Humidity / Temperature AC/DC Power supply. 0...5 V, 0...10 V, 2...10 V, MP-Bus outputs. Setting with NFC and Belimo App Display. Quality indicator by LED. Proportional actuator required.

CO2-D Duct mounting multiparametric sensor, T/HR/VOC and CO2. Power supply 230 V. 4 analogic outputs 0-10Vdc, Modbus RTU communication port. IP 66. ON/OFF or proportional actuators depending on the application.

CO2-WR Multiparametric Room controller, CO2/T. Power supply 230 VAC.

1 analogic output 0-10 Vdc and 2 configurable relay outputs (ON/OFF).

Modbus RTU communication port. IP54. LCD display. ON/OFF or proportional actuators depending on the application.

CO2-WPD Room sensor CO2 / Humidity / Temperature AC/DC Power supply. 0...5 V, 0...10 V, 2...10 V, MP-Bus outputs. Setting with NFC and Belimo App Display. Quality indicator by LED and e-ink screen. Proportional actuator required.

NOTE:

Ask for a technical specification related to configuration, cable connections and features of the accessories.

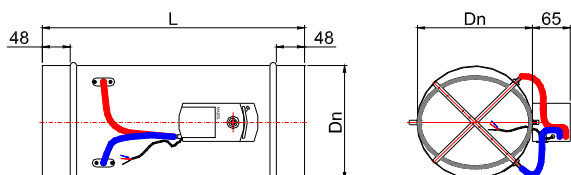

SIEMENS
BELIMO
Modbus

Variable air volume circular dampers (VAV)

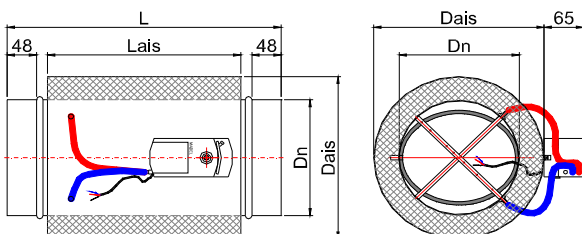


Technical data

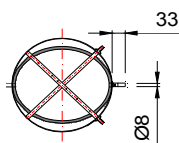
SVA-C



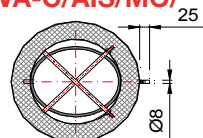
SVA-C/AIS/



SVA-C/MO/



SVA-C/AIS/MO/



D	Dn	Dais	L	Lais
100	98	178	350	250
125	123	203	350	250
160	158	238	400	300
200	198	278	400	300
250	248	328	450	350
315	313	393	500	400
355	353	433	550	450
400	398	478	600	500

Specification Text

Supply and mounting of circular VAV damper with cross differential pressure measurement for adjusting the air flow, series

SVA-C/MO+GDB181.1E/3/ Diam (mm) Vmin Vmax, mode of operation of the damper type Master and 0-10V proportional control. Galvanized steel housing, cross differential pressure from aluminum, ABS fittings, measuring tubes from silicone, damper foam seal from EPDM. Manufacturer **MADEL**.



Description

Circular air flow damper for VAV installations. They are used to adjust the air flow to a bypass or a room based on a 0-10v signal provided by a controller of temperature. The command signal sent by the controller position the actuator to control the flow of the need the enclosure. A foam seal inside the perimeter of the damper seals the air in case of total closure order according to EN-1751 standard. You can change a posteriori the flow Vmin & Vmax using a remote control. Galvanized steel housing, cross differential pressure measurement aluminum, connect in ABS and measuring tubes the actuator in red/blue silicone. Damper foam seal from EPDM.

SVA-C Variable air flow circular damper. Maximum air flow (Vmax) and minimum (Vmin) setting calibrated at the factory according to customer specifications. In case Vmin and Vmax it is not specified on customer's order dampers will be calibrated according to Operating Limits specified on price table.

The dampers will be configured for a parallel , 0-10 V connection.

In case of using of a Master/Slave, 2-10V, 3P or other control configuration must be indicated on the order.

.../MO/ Damper with special axle to motorise.

.../AIS/ Thermo-acoustical insulation.

Accessories

See page Accessories VAV. Mounting and calibration is included on the actuators price.

Fixing

1) Connection into a rectangular metallic duct.

Note

(*) Below the regulation Min flow, the VAV damper can be calibrated to Vmin=0

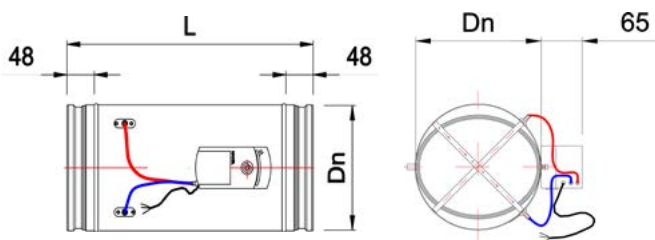
Ø	SVA-C /MO/	SVA-C /MO/ /AIS/	Standard operating Airflow m³/h	Min - Max (*) Operating Airflow m³/h	Actuator min torque N
mm	eur	eur			
100	65,16	96,45	60 - 212	43 - 340	4 N
125	69,32	103,12	116 - 331	66 - 532	4 N
160	71,39	111,71	197 - 543	109 - 871	4 N
200	74,21	121,58	290 - 848	170 - 1361	4 N
250	79,64	137,90	520 - 1325	266 - 2126	4 N
315	85,06	159,73	745 - 2104	422 - 3375	4 N
355	93,48	185,25	950 - 2672	536 - 4287	4 N
400	100,77	208,61	1050 - 3393	680 - 5443	4 N

VAV circular dampers - Large diameter

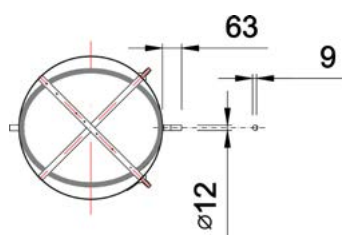


Technical data

SVA-CXL



SVA-CXL/MO/



D	Dn	L
450	448	690
500	498	740
560	558	800
630	628	870



Description

Circular air flow damper for VAV installations. They are used to adjust the air flow to a bypass or a room based on a 0-10V signal provided by a controller of temperature. The command signal sent by the controller position the actuator to control the flow of the need the enclosure. A foam seal inside the perimeter of the damper seals the air in case of total closure. You can change a posteriori the flow Vmin & Vmax using a remote control. Galvanized steel housing, cross differential pressure measurement aluminum, connect in ABS and measuring tubes the actuator in red/blue PVC.

SVA-CXL Variable air flow circular damper. Maximum air flow (Vmax) and minimum (Vmin) setting calibrated at the factory according to customer specifications. In case Vmin and Vmax it is not specified on customer's order dampers will be calibrated according to Operating Limits specified on price table.

The dampers will be configured for a parallel , 0-10 V connection. In case of using of a Master/Slave, 2-10V, 3P or other control configuration must be indicated on the order.

../MO/ Damper with special axle to motorise.

Accessories

See page Accessories VAV. Mounting and calibration is included on the actuators price.

Fixing

1) Connection into a rectangular metallic duct.

Note

(*) Below the regulation Min flow, the VAV damper can be calibrated to Vmin=0

Specification Text

Supply and mounting of circular VAV damper with cross differential pressure measurement for adjusting the air flow, series

SVA-CXL/MO+GLB181.1E/3/ Diam (mm) Vmin Vmax, mode of operation of the damper type Master and 0-10V proportional control. Galvanized steel housing, cross differential pressure from aluminum. Manufacturer **MADEL**.

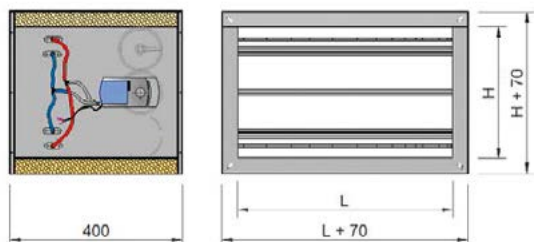
Ø	SVA-CXL	Standard Operating Airflow	Min - Max (*) Operating Airflow	Actuator min torque
mm	eur	m³/h	m³/h	N
450	239,93	1137-4318	864-6909	10 N
500	258,81	1439-5331	1066-8530	10 N
560	279,72	1777-6687	1337-10700	10 N
630	313,59	2821-8464	1693-13542	10 N

Variable air volume rectangular dampers (VAV)

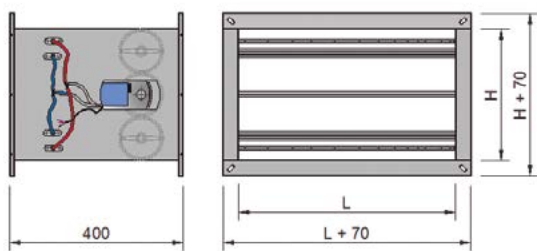


Technical data

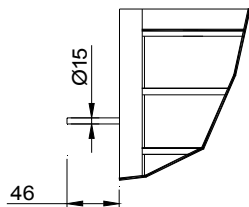
SVA-R/AIS/



SVA-R



SVA-R/.../MO/



Description

Rectangular air flow damper for VAV installations.

These dampers are used to adjust the air flow to a bypass or a room based on a 0-10 V signal provided by a controller of temperature. The command signal sent by the controller of the room, position the actuator to control the flow of the need the enclosure.

A foam seal inside the perimeter of the damper seals the air in case of total closure order. You can change a posteriori the flow V_{min} and V_{max} using a remote control.

Galvanized steel housing, cross differential pressure measurement aluminum, connect in ABS and measuring tubes the actuator in red / blue silicone. Damper foam seal from EPDM.

SVA-R Variable air volume rectangular damper. Maximum air flow (V_{max}) and minimum (V_{min}) setting calibrated at the factory according to customer specifications. In case V_{min} and V_{max} it is not specified on customer's order dampers will be calibrated according to OPERATING LIMITS specified on price table.

The dampers will be configured for a parallel , 0-10 V connection. In case of using of a Master/Slave, 2-10V, 3P or other control configuration must be indicated on the order.

.../MO/ Damper with special axle to motorise

.../AIS/ Thermo-acoustical insulation

Accessories

See page Accessories VAV. Mounting and calibration is included on the actuators price.

Fixing

1) Connection into a rectangular metallic duct.

Specification Text

Supply and mounting of rectangular VAV damper with cross differential pressure measurement for adjusting the air flow, series

SVA-R/MO+GDB181.1E/3/ LxH (mm) V_{min} V_{max} , mode of operation of the damper type Master and 0-10 V proportional contro. Galvanized steel housing, cross differential pressure measurement aluminum, connect in ABS and measuring tubes the actuator in red / blue silicone. Damper foam seal from EPDM. Manufacturer **MADEL**.



LxH	SVA-R/MO/	SVA-R/MO/ /AIS/	Standard operating Airflow m³/h	Min - Max (*) Operating Airflow m³/h	Actuator min torque N
mm	eur	eur			
200x100	112,40	141,62	144-540	108-720	4 N
200x150	119,03	147,90	216-810	162-1080	4 N
200x200	124,97	161,94	288-1080	216-1440	4 N
300x100	121,55	154,68	215-810	162-1080	4 N
300x150	124,87	161,45	325-1215	243-1620	4 N
300x200	135,42	176,26	435-1620	324-2160	4 N
300x250	138,72	183,03	540-2025	405-2700	4 N
300x300	161,89	211,26	648-2430	486-3240	4 N
400x100	125,72	164,33	288-1080	216-1440	4 N
400x150	129,52	171,64	430-1620	324-2160	4 N
400x200	140,55	187,01	575-2160	432-2880	4 N
400x250	144,37	194,30	720-2700	540-3600	4 N
400x300	168,56	223,77	864-3240	648-4320	4 N
400x400	187,66	251,60	1155-4320	864-5760	4 N
500x100	133,21	175,67	360-1350	270-1800	4 N
500x150	137,54	183,51	540-2025	405-2700	4 N
500x200	149,24	199,56	720-2700	540-3600	4 N
500x250	153,58	207,36	900-3375	675-4500	4 N
500x300	179,21	238,28	1080-4050	810-5400	4 N
500x400	199,66	267,83	1440-5400	1080-7200	4 N
500x500	224,61	300,23	1800-6750	1350-9000	4 N
600x100	138,25	186,25	432-1620	324-2160	4 N
600x150	143,10	194,62	648-2430	486-3240	4 N
600x200	155,25	211,22	865-3240	648-4320	4 N
600x250	160,09	219,56	1080-4050	810-4320	4 N
600x300	185,86	250,77	1295-4860	972-6480	4 N
600x400	207,33	281,16	1730-6480	1296-8640	4 N
600x500	233,82	315,59	2160-8100	1620-10800	4 N
600x600	250,82	340,55	2595-9720	1944-12960	4 N
700x100	142,38	195,96	504-1890	378-2520	4 N
700x150	147,75	204,81	755-2835	567-3780	4 N
700x200	160,36	221,99	1010-3780	756-5040	4 N
700x250	165,74	230,84	1260-4725	945-6300	4 N
700x300	192,57	263,30	1515-5670	1134-7560	4 N
700x400	214,99	294,87	2016-7560	1512-10080	4 N
700x500	243,05	330,95	2520-9450	1890-12600	4 N
700x600	261,04	356,97	3024-11340	2268-15120	4 N
800x200	169,05	236,29	1155-4320	864-5760	4 N
800x250	174,96	245,66	1440-5400	1080-7200	4 N
800x300	203,21	279,76	1730-6480	1296-8640	4 N
800x400	227,01	312,88	2305-8640	1728-11520	4 N
800x500	256,79	350,82	2880-10800	2160-14400	4 N
800x600	275,99	378,15	3456-12960	2592-17280	4 N
900x300	217,26	299,33	1944-7290	1458-9720	4 N
900x400	243,28	333,85	2592-9720	1944-12960	4 N
900x500	272,62	373,10	3240-12150	2430-16200	4 N
900x600	293,49	401,14	3888-14580	2916-19440	4 N
1000x300	228,23	318,13	2160-8100	1620-10800	4 N
1000x400	255,60	354,32	2880-10800	2160-14400	4 N
1000x500	286,59	395,54	3600-13500	2700-18000	4 N
1000x600	308,61	424,72	4320-16200	3240-21600	4 N

Variable air volume control accessories

Stand Alone actuators		eur
GDB181.1E/3	Siemens VAV 24 VAC 5N.	236,90
GLB181.1E/3	Siemens VAV 24 VAC 10N.	325,28
LMV-D3-MF	Belimo VAV 24 VAC/VDC, 5N.	257,73
NMV-D3-MF	Belimo VAV 24 VAC/VDC, 10N.	321,06
LMV-D3-MP	Belimo VAV 24 VAC/VDC 5N. MP-BUS & NFC	273,97
NMV-D3-MP	Belimo VAV 24 VAC/VDC 10N.MP-BUS & NFC	350,01

Communicating actuators		eur
GDB181.1E/MO	Siemens VAV MODBUS 5N.	366,64
GLB181.1E/MO	Siemens VAV MODBUS 10N.	407,68
GDB181.1E/KN	Siemens VAV KNX 5N.	403,36
GLB181.1E/KN	Siemens VAV KNX 10N.	430,26
GDB181.1E/BA	Siemens VAV BACNET 5N.	380,61
GLB181.1E/BA	Siemens VAV BACNET 10N.	421,76
LMV-D3-MOD	Belimo VAV MODBUS 5N.	306,43
NMV-D3-MOD	Belimo VAV MODBUS 10N.	418,73
LMV-D3-KNX	Belimo VAV KNX 5N.	416,88
NMV-D3-KNX	Belimo VAV KNX 10N.	473,00

Temperature control		eur
RDG400	Siemens RDG400 Room Thermostat	207,49
CO2-WP	Belimo 22-RTM-18-1 Room Sensor	297,22
CO2-D	Sistena S154/T+CO2 Duct Sensor	621,77
CO2-WR	Sistena S151W Room Controller	544,69
CO2-WPD	Belimo P-22RTM-1900D-1 Room Sensor	470,16

Calibration tools		eur
AST20	Service-tool for VAV Siemens compact controller	827,04
ZTH-EU	Service-tool for VAV Belimo compact controller	610,90

RDG 400 Proportional temperature controller ambiance 0..10Vcc power supply 24vac with backlit digital display, selector comfort eco/off; for proportional damper actuators.

CO2-WP Room sensor CO2 / Humidity / Temperature AC/DC Power supply. 0...5 V, 0...10 V, 2...10 V, MP-Bus outputs. Setting with NFC and Belimo App Display. Quality indicator by LED. Proportional actuator required.

CO2-D Duct mounting multiparametric sensor, T/HR/VOC and CO2. Power supply 230 V. 4 analogic outputs 0-10Vdc, Modbus RTU communication port. IP 66. Proportional actuator required.

CO2-WR Multiparametric Room controller, CO2/T. Power supply 230 VAC. 1 analogic output 0-10 Vdc and 2 configurable relay outputs (ON/OFF). Modbus RTU communication port. IP54. LCD display. ON/OFF or proportional actuators depending on the application.

CO2-WPD Room sensor CO2 / Humidity / Temperature AC/DC Power supply. 0...5 V, 0...10 V, 2...10 V, MP-Bus outputs. Setting with NFC and Belimo App Display. Quality indicator by LED and e-ink screen. Proportional actuator required.

AST20 Service-tool for VAV Siemens compact controller GDB/GLB 181.1E/3.

ZTH-EU Service-tool for VAV Belimo compact controller. Convecteur and connection cables included.

AST20



ZTH-EU



CO2-WP



CO2-D



RDG 400



CO2-WPD



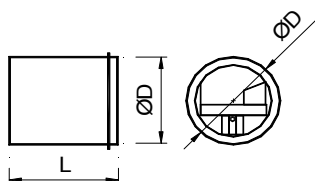
CO2-WR



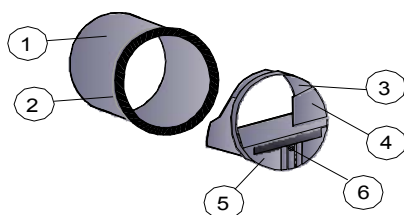
NOTE:
Ask for a technical specification related to configuration, cable connections and features of the accessories.

Low pressure dampers (CAV)

Technical data



DN	ØD	L
80	76	55
100	96	70
125	120	86
160	155	91
200	195	91
250	244	245



- 1.- Plastic case
- 2.- Joint
- 3.- Damper body
- 4.- Damper
- 5.- Cushioning piston
- 6.- Wedges of volume adjustment



Description

Constant air volume dampers for circular duct, which facilitates balancing of ventilation systems. Those dampers maintain the constant air volume within a zone of pressure between 50 and 250 Pa. SKP is a self-adjustable damper. The damper is operated by an opposed opening force from a spring on the blade. Housing and regulator blade are constructed from plastic and tightness joint from rubber.

SKP Self-adjustable constant air volume damper. Air flow adjustment on site before installation.

Fixing

- 1) Connection into a circular metallic duct.

Specification Text

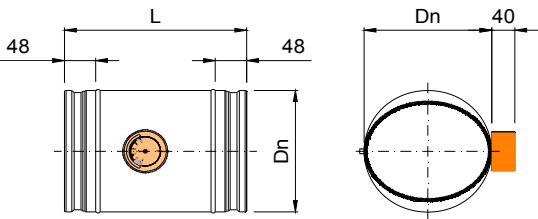
Supply and mounting of circular constant air volume damper and self-adjustable to facilitate balancing of ventilation systems series **SKP dim. 125-30**. Constructed from plastic and tightness joint from rubber. Manufacturer **MADEL**.

Diam - Q	SKP	Q	50 Pa	150 Pa	200 Pa	250 Pa
mm - m³/h	eur	m³/h	dB(A)	dB(A)	dB(A)	dB(A)
80-30	27,24	15-50	26	35	38	41
100-30	30,90	15-50	26	35	38	41
100-60	30,90	50-100	32	39	42	45
125-30	34,38	15-50	26	35	38	41
125-60	34,38	50-100	32	39	42	45
125-120	34,38	100-180	30	39	42	45
160-150	48,82	100-180	33	41	45	49
160-210	48,82	180-300	34	42	44	46
200-300	70,96	180-300	33	42	45	48
200-350	70,96	300-500	35	44	47	50
250-500	91,43	300-500	39	48	53	58
250-600	91,43	500-700	39	48	54	60

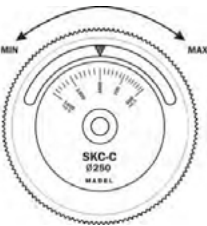
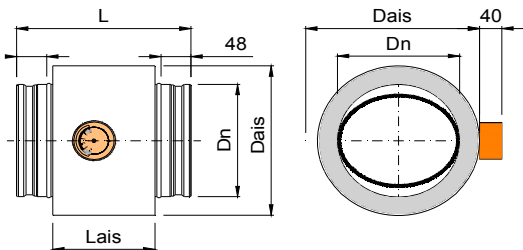
Adjustable constant air volume dampers (CAV)

Technical data

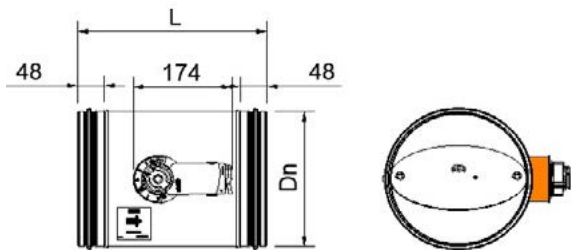
SKC-C /MA/



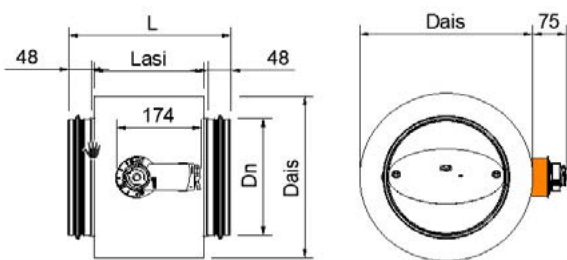
SKC-C /AIS/MA/



SKC-C /MK...



SKC-C /AIS/MK...



Description

Constant air volume dampers which facilitates balancing of ventilation systems. Those dampers maintain the constant air volume at varying pressures, caused by connection and disconnection of system parts, clogging of filters and ducts, wind effects, window opening etc. SKC is an automatic damper independent of external energy sources. The damper is operated by an opposed opening force from a spring on the blade. Housing and damper blade are constructed from galvanized steel.

SKC-C/MA Circular damper with manual device for setting of one flow and tightness joint from rubber.

SKC-C/MK/CM 24L...230L Damper with Belimo On / Off actuator at 24v or 230v 2N.

SKC-C/MK/CM 24-SX-L Damper with proportional Belimo actuator (2-10V) at 24v 2N.

.../AIS/ Thermal insulation with foam.

Fixing

1) Connection into a circular metallic duct.

Specification Text

Supply and mounting of circular constant air volume damper to facilitate balancing of ventilation systems series **SKC-C/MA** dim (mm)
Constructed from galvanized steel and tightness joint from rubber.
Manufacturer **MADEL**.

D	Dn	Dais	L	Lais
80	78	-	225	-
100	98	178	270	157
125	123	203	270	157
160	158	238	295	182
200	198	278	295	182
250	248	328	335	222
315	313	393	340	227
355	353	433	380	267
400	398	478	420	307

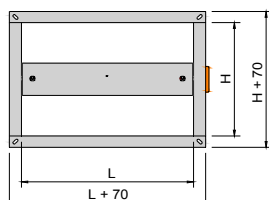
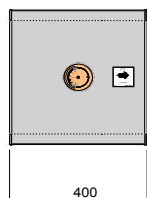
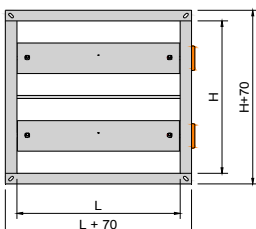
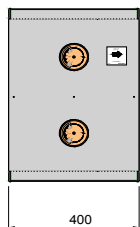
Ø	SKC-C /MA/	SKC-C /MK/CM24L	SKC-C /MK/CM230L	SKC-C/MK/CM 24-SX-L	P	Q
mm	eur	eur	eur	eur	Pa	m³/h
80	124,72	282,54	291,11	356,44	100-1000	60-136
100	77,01	234,83	243,40	308,73	100-1000	80-220
125	79,68	237,50	246,07	311,41	100-1000	130-360
160	80,47	238,29	246,86	312,19	100-1000	200-620
200	84,51	242,33	250,90	316,23	100-1000	300-1020
250	87,30	245,12	253,69	319,02	100-1000	450-1400
315	95,23	253,05	261,62	326,95	100-1000	700-2100
355	100,67	258,48	267,05	332,39	100-1000	1000-2550
400	108,61	266,43	275,00	340,33	100-1000	1000-2800

Ø	SKC-C /MA/ /AIS/	SKC-C /MK/CM24L /AIS/	SKC-C /MK/CM230L /AIS/	SKC-C/MK/CM 24-SX-L /AIS/	P	Q
mm	eur	eur	eur	eur	Pa	m³/h
100	133,47	291,28	299,85	365,19	100-1000	80-220
125	140,55	298,37	306,94	372,27	100-1000	130-360
160	156,61	314,43	323,00	388,33	100-1000	200-620
200	169,72	327,54	336,11	401,44	100-1000	300-1020
250	201,28	359,10	367,67	433,00	100-1000	450-1400
315	225,30	383,11	391,68	457,02	100-1000	700-2100
355	253,38	411,20	419,77	485,10	100-1000	1000-2550
400	274,01	431,83	440,40	505,74	100-1000	1000-2800

Adjustable constant air volume dampers (CAV)

Technical data

SKC-R/ MA

 $100 \leq H \leq 350$

 $400 \leq H \leq 600$


Description

Constant air volume dampers which facilitates balancing of ventilation systems. Those dampers maintain the constant air volume at varying pressures, caused by connection and disconnection of system parts, clogging of filters and ducts, wind effects, window opening etc. SKC is an automatic damper independent of external energy sources. The damper is operated by an opposed opening force from a spring on the blade. Housing and damper blade are constructed from galvanized steel and tightness joint from rubber.

SKC-R/MA Rectangular damper with manual device for setting of one flow (standard factory configuration)

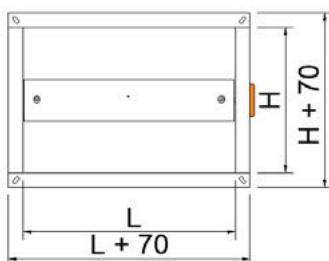
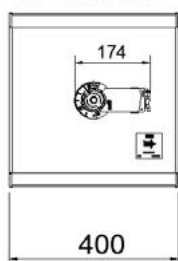
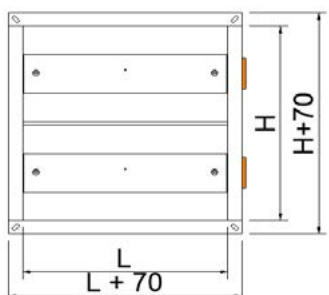
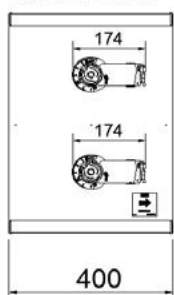
SKC-R/MK/CM 24L...230L Damper with Belimo On / Off actuator at 24v or 230v 2N.

SKC-C/MK/CM 24-SX-L Damper with proportional Belimo actuator (2-10V) at 24v 2N.

.../AIS/ Thermal insulation with foam. Check the dimensions in the PDF.

.../TAR/ Damper configured at the factory to customer's flow specifications (supplement *)

SKC-R//MK...

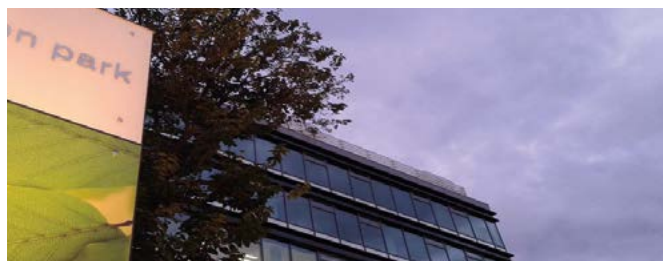
 $100 \leq H \leq 350$

 $400 \leq H \leq 600$


Fixing

- 1) Connection into a circular metallic duct.
- 1) Assembly of dampers vertically: Consult PDF

Specification Text

Supply and mounting of rectangular constant air volume damper to facilitate balancing of ventilation systems series **SKC-R/MA** dim (mm)
Constructed from galvanized steel and tightness joint from rubber.
Manufacturer **MADEL**.



/AIS/ models: check the dimensions in the PDF

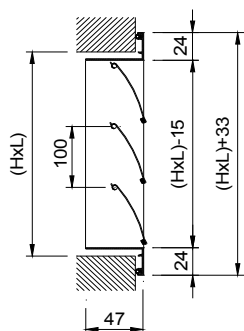
L x H	SKC-R /MA/	SKC-R /MK/CM24L	SKC-R /MK/CM230L	SKC-C/MK/CM 24-SX-L	P	Q
mm	eur	eur	eur	eur	Pa	m³/h
200x100	237,58	395,40	403,97	469,31	100-1000	200-470
300x100	238,11	395,93	404,50	469,83	100-1000	200-850
150x150	236,88	394,70	403,27	468,60	100-1000	300-520
200x150	239,38	397,20	405,77	471,10	100-1000	200-920
300x150	241,15	398,97	407,54	472,87	100-1000	300-1200
200x200	239,67	397,48	406,05	471,39	100-1000	300-980
250x200	242,93	400,74	409,31	474,65	100-1000	500-1300
300x200	248,04	405,86	414,43	479,76	100-1000	500-1400
350x200	255,19	413,01	421,58	486,92	100-1000	600-1800
400x200	261,89	419,71	428,28	493,61	100-1000	700-2100
450x200	265,86	423,68	432,25	497,59	100-1000	800-2500
500x200	267,63	425,45	434,02	499,35	100-1000	900-2100
250x250	257,55	415,37	423,94	489,27	100-1000	450-1500
300x250	255,92	413,74	422,31	487,64	100-1000	800-1650
350x250	257,69	415,50	424,07	489,41	100-1000	850-2000
400x250	270,84	428,66	437,22	502,56	100-1000	800-2500
450x250	269,41	427,23	435,80	501,13	100-1000	700-2700
500x250	274,40	432,22	440,79	506,12	100-1000	1200-3000
550x250	278,82	436,64	445,21	510,54	100-1000	1200-3500
600x250	281,95	439,77	448,34	513,67	100-1000	1600-3300
300x300	265,50	423,31	431,88	497,22	100-1000	900-2100
350x300	267,30	425,12	433,69	499,02	100-1000	900-2300
400x300	273,98	431,80	440,37	505,70	100-1000	1150-3000
450x300	271,73	429,55	438,12	503,45	100-1000	1400-3000
500x300	274,67	432,49	441,06	506,39	100-1000	1400-3300
600x300	284,25	442,07	450,64	515,97	100-1000	1900-3900
400x400	398,50	556,32	564,89	630,22	100-1000	1300-4900
500x400	406,64	564,46	573,03	638,36	100-1000	1600-5600
600x400	409,15	566,97	575,54	640,87	100-1000	3000-5150
500x500	420,36	578,18	586,75	652,08	100-1000	2700-5500
600x500	430,77	588,59	597,15	662,49	100-1000	3000-7400
600x600	449,36	607,18	615,75	681,08	100-1000	3700-8000

L x H	SKC-R /MA/ /AIS/ eur	SKC-R /MK/CM24L /AIS/ eur	SKC-R /MK/CM230L /AIS/ eur	SKC-C/MK/CM 24-SX-L /AIS/ eur	P	Q
mm	eur	eur	eur	eur	Pa	m³/h
200x100	331,51	489,32	497,89	563,23	100-1000	200-470
300x100	343,44	501,26	509,82	575,16	100-1000	200-850
150x150	345,63	503,45	512,02	577,35	100-1000	300-520
200x150	356,58	514,40	522,97	588,30	100-1000	200-920
300x150	371,20	529,02	537,59	602,93	100-1000	300-1200
200x200	363,43	521,25	529,82	595,16	100-1000	300-980
250x200	371,11	528,93	537,50	602,83	100-1000	500-1300
300x200	384,69	542,51	551,08	616,41	100-1000	500-1400
350x200	396,25	554,07	562,64	627,98	100-1000	600-1800
400x200	406,05	563,87	572,44	637,78	100-1000	700-2100
450x200	421,35	579,17	587,74	653,07	100-1000	800-2500
500x200	431,65	589,47	598,04	663,37	100-1000	900-2100
250x250	393,68	551,50	560,07	625,40	100-1000	450-1500
300x250	401,06	558,88	567,45	632,78	100-1000	800-1650
350x250	406,83	564,65	573,22	638,55	100-1000	850-2000
400x250	430,52	588,34	596,91	662,24	100-1000	800-2500
450x250	431,53	589,34	597,91	663,25	100-1000	700-2700
500x250	447,06	604,88	613,45	678,79	100-1000	1200-3000
550x250	452,21	610,03	618,60	683,93	100-1000	1200-3500
600x250	465,80	623,62	632,19	697,52	100-1000	1600-3300
300x300	413,29	571,11	579,68	645,01	100-1000	900-2100
350x300	421,53	579,35	587,92	653,25	100-1000	900-2300
400x300	434,66	592,48	601,05	666,38	100-1000	1150-3000
450x300	438,82	596,64	605,21	670,54	100-1000	1400-3000
500x300	450,24	608,06	616,63	681,96	100-1000	1400-3300
600x300	472,73	630,55	639,12	704,45	100-1000	1900-3900
400x400	582,70	740,52	749,09	814,42	100-1000	1300-4900
500x400	599,78	757,60	766,17	831,50	100-1000	1600-5600
600x400	615,16	772,98	781,55	846,89	100-1000	3000-5150
500x500	626,66	784,48	793,05	858,39	100-1000	2700-5500
600x500	653,93	811,75	820,32	885,65	100-1000	3000-7400
600x600	685,73	843,54	852,11	917,45	100-1000	3700-8000
(*)	eur					
/TAR/	122,00					

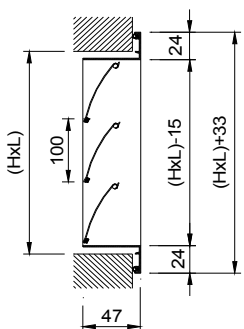
Pressure dampers

Technical data

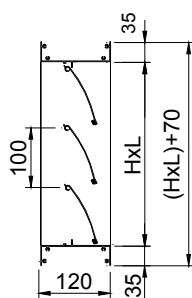
SMS



SMD



SMG



Description

Pressure dampers in raw aluminium with blades of 100 mm.

SMS Back pressure damper with blades parallel to the largest side (L size)

SVS Back pressure damper with blades parallel to the shortest side (H size)

...-D Front pressure dampers.

....-G Dampers suitable for mounting into a rectangular duct.

Fixing

1) Visible screws (for wall mounting)

Specification Text

Supply and mounting of pressure dampers with blades of 100 mm series **SMS (T) LxH** constructed from raw aluminium and visible fixing by screws **(T)**. Manufacturer **MADEL**.

L x H	SMS	SVS	SMS-G	SVS-G
mm	SMS-D	SVS-D		
	eur	eur	eur	eur
200x200	23,76	23,76	34,45	34,45
300x200	30,17	32,92	43,73	47,74
400x200	36,64	39,92	53,12	57,91
500x200	43,08	46,90	62,49	68,03
600x200	49,56	53,88	71,84	78,14
700x200	56,05	60,91	81,27	88,31
800x200	62,41	67,88	90,52	98,41
300x300	35,65	35,65	51,69	51,69
400x300	43,18	46,44	62,61	67,35
500x300	50,71	54,57	73,51	79,12
600x300	58,26	62,61	84,47	90,78
700x300	65,79	70,67	95,40	102,47
800x300	73,29	78,71	106,28	114,12
400x400	49,69	49,70	72,07	72,05
500x400	58,32	62,14	84,56	90,10
600x400	66,94	71,30	97,06	103,39
700x400	75,53	80,42	109,52	116,60
800x400	84,12	89,53	121,99	129,83
500x500	65,90	65,90	95,56	95,55
600x500	75,57	85,32	109,57	123,74
700x500	85,29	95,61	123,67	138,63
800x500	94,96	105,86	137,68	153,48
600x600	84,28	84,28	122,21	122,21
700x600	95,04	99,96	137,82	144,92
800x600	105,90	111,35	153,56	161,46
700x700	104,81	104,81	151,96	151,96
800x700	116,78	122,11	169,33	177,07
800x800	127,46	127,46	184,84	184,84



XXX



Air **filtration**

Efficiency for air quality

Products, solutions and systems to
ensure the best possible environment

INDEX

Guiding criteria for filters in terminal units

UFA terminal units with HEPA filter

DIF, DEC, TAS Extraction, filtering ceilings, etc...

XXX

1 – Guiding criteria for filters in terminal units

There are increasing applications in which it is necessary to control the quality conditions and airflow direction, as well as the over or under-pressure levels, to guarantee that the corresponding activities can take place and eliminate uncontrolled air infiltration.

To select the type of filter, diffuser and system that is best adapted to the requirements of the project, the project designer needs to be aware of the standard practices and regulations. The products must be easy to clean and maintain (filter replacement)

1.1 – Applications

Industrial: Clean rooms for industrial processes: food / chemical / pharmaceutical / microelectronic industries.

Hospital: Operating rooms, laboratories, infection isolation rooms, rooms for people with immunodepression.

1.2 – Airflow

To maintain optimal air quality conditions, the airflow, which in most cases exceeds the sum of the ventilation flow and airflow, needs to be filtered, to lower the thermal load which will be defined by the project designer in accordance with the required ISO classification.

1.3 – Pressurisation

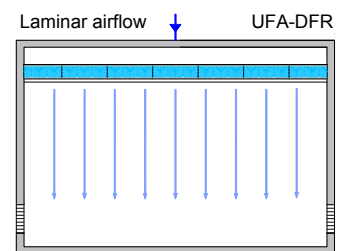
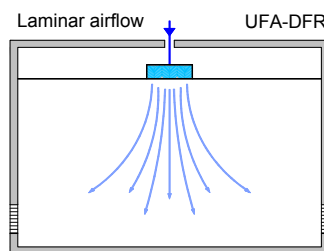
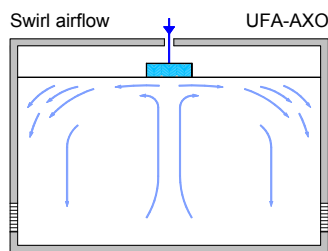
The most commonly used Pressure Differences are between +/- 8 Pa, +/- 20 Pa. Exceeding 50 Pa is not recommended as it will generate problems such as unwanted opening of doors, etc. There should be a small amount of air transfer between rooms. The pressure in the room that has to be controlled should be measured and compared against a room with stable pressure. To generate the +/- Pressure Difference, the most commonly used benchmark is 10% of the supply Flow Difference.

1.4 – Type of diffusion

Depending on the air flow and the type of flow required, the corresponding diffuser should be chosen:

Swirl airflow: For low flow rates; in this case the air quality is ensured through dissolution.

Laminar flow: For low and high flow rates; in this case the idea is to sweep the working areas with the primary flow.

**2 – Basic regulations on filtering in clean rooms**

SELECTION TABLE FOR CLEAN ROOMS									
ISO 14644	9	8	7	6	5	4	3	2	1
VDI 2083	7	6	5	4	3	2	1	0	
Fed-Std-209-D		100000	10000	1000	100	10	1	0,1	
Fed-Std-209-E		M 6,5	M 5,5	M 4,5	M 3,5	M 2,5	M 1,5		
Fresh Air p/h	> 20	20-40	30-60	50-150	300-600				
Filtartion Area %		5-10	10-20	30-70	>80	>90			
1 phase	G4 / M5 (F5)				M5 (F5) / F7		M6 (F6) / F7		
2 phase	F7				F9/H10		H11/H13	H13	
3 phase	H 10 / H 11	H 11 / H 13			H 14	U 15	U 16	U 17	
Flow shape	Turbulent flow				Unidirectional flow				
Terminal DIFFUSER	UFA-AXO	UFA-AXO	UFA-AXO	UFA-AXO					
	UFA-DFR	UFA-DFR	UFA-DFR	UFA-DFR	UFA-DFR				

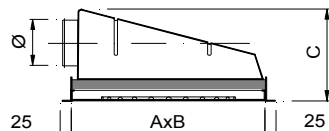
Classification according to ISO 14644-1						
Maximum values for particle concentration (particles per m3)						
Class	0,1 µm	0,2 µm	0,3 µm	0,5 µm	1 µm	5,0 µm
ISO 1	10	2	-	4	-	-
ISO 2	100	24	10	35	-	-
ISO 3	1.000	237	102	352	8	-
ISO 4	10.000	2.370	1.020	3.520	83	-
ISO 5	100.000	23.700	10.200	35.200	832	29
ISO 6	1.000.000	237.000	102.000	352.000	8.320	293
ISO 7	-	-	-	352.000	83.200	2.930
ISO 8	-	-	-	3.520.000	832.000	29.300
ISO 9	-	-	-	35.200.000	8.320.000	293.000

3 – Operating rooms/surgeries: Specific Standards EN-UNE 11425, DIN 1946, NF S 90-351, ASHRAE 170

In surgeries, the supply and extraction flows must be constant, maintaining a Flow difference to ensure the correct Pressure Difference. In surgeries, 100% of the flow will be ventilation.

Terminal units with HEPA filter

Technical data



UFA-AXO swirl air flow						
sizes				Q nominal		DPT
A	B	C	Ø(mm)	m³/h	l/s	Pa
330	330	345	173	150	42	150
482	482	345	173	400	111	150
538	538	365	198	500	138	150
635	635	415	248	650	180	150

UFA-DFR laminar air flow						
sizes				Q nominal		DPT
A	B	C	Ø(mm)	m³/h	l/s	Pa
330	330	345	173	150	42	130
330	635	345	173	300	84	130
482	482	345	173	350	97	130
538	538	365	198	500	135	130
635	635	415	248	600	167	130
635	940	445	313	900	250	135
635	1245	510	313	1200	333	135



Description

The terminal units of the series UFA have the dual function of filtering the air with high efficiency absolute filters, while making the air diffusion of air into the enclosure. It consists of a plenum box made from polystyrene with a lateral circular connection.

Can be equipped with swirl diffusers or perforated face diffusers for a laminar air flow. Incorporates a pressure connector to control the pressure drop of the filter.

UFA units are suitable for high purity air installations germ free such as clean rooms and pharmaceutical laboratories.

UFA-AXO Filtration terminal unit with swirl diffuser and H14 filter included.

UFA-DFR Filtration terminal unit with perforated face diffuser for a laminar air flow and H14 filter included.

Accessories

RH14 H14 filter for replacement in UFA units.

Finishes

S9010 Painted in white similar to RAL 9010.

Specification Text

Supply and mounting of swirl diffuser integrated in a polystyrene plenum box in white with lateral circular connection **UFA-AXO S9010 LxH**. Includes a HEPA filter H14 with a pressure connector to control the pressure drop of the filter. Painted in white similar to RAL 9010. Manufacturer **MADEL**.

Dim. mm	UFA-AXO S9010 eur	RH14 Replacement filter eur	Filter surface m2	DPT nominal Pa	DPT final Pa
330x330	667,08	140,42	2,5	150	400
482x482	727,64	215,36	5,5	150	400
538x538	798,93	256,10	7,0	150	400
635x635	885,31	291,42	10,0	150	400

Dim. mm	UFA-DFR S9010 eur	RH14 Replacement filter eur	Filter surface m2	DPT nominal Pa	DPT final Pa
330x330	653,13	140,42	2,5	130	400
330x635	697,84	198,15	5,0	130	400
482x482	705,00	215,36	5,5	130	400
538x538	764,94	256,10	7,0	130	400
635x635	866,66	291,42	10,0	130	400
635x940	1.145,97	405,06	12,0	135	400
635x1245	1.357,39	513,96	14,0	135	400

XXX

Steel terminal units

DIF.K Steel terminal unit painted white with HEPA filter (ask for price)

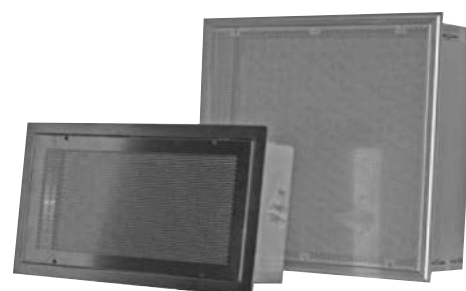
DIF.S Inox steel unit with HEPA filter (ask for price)



Extract grilles

DEC A Extract grille from aluminium with G4 and/or F9 filter (ask for price)

DEC S Extract grille from inox steel with G4 and/or F9 filter (ask for price)



Filtering ceilings for operating rooms with uniform flow

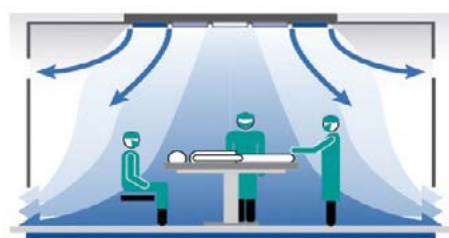
TAS-OP Filtering ceiling from inox steel for operating rooms with uniform unidirectional flow (ask for price)

TAS-FV Filtering ceiling from painted steel for operating rooms with uniform unidirectional flow (ask for price)



Filtering ceilings for operating rooms with controlled flow and air velocity

DIF-O.T. Filtering ceiling from inox steel for operating rooms with controlled flow and air velocity (ask for price)





Accessories

INDEX

CM & K mounting frames

PLRO plenum boxes for grilles & multi-jet nozzles

ZP-A motorised dampers for grilles

DP device for air flow measuring

INC circular silencers with acoustic mineral wool

Mounting frames

Technical data

L	CM
mm	eur
75	0,56
100	0,58
125	0,63
150	0,64
200	0,73
250	0,84
300	0,91
350	0,97
400	1,08
450	1,15
500	1,20
600	1,44
700	1,79
800	1,99
900	2,19
1000	2,50
1100	3,00
1200	3,27

	eur
(K)	6,49



Description

CM Linear elements to compose a CM mounting frame for grilles. Constructed from galvanised steel.

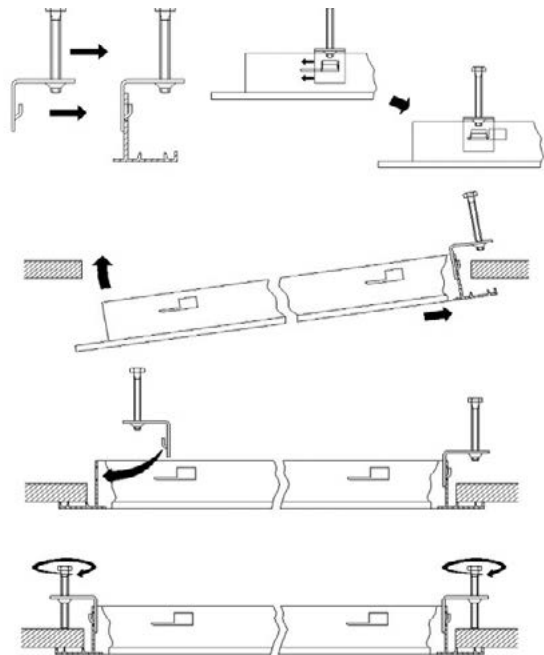
The nominal size of the grilles (L x H) indicates the opening sizes for their installation. When the installation is planned with CM mounting frames, the opening size would be 8 mm bigger (L+8 x H+8). Sizes of the catalogue in mm. General tolerances to norm ISO 2768-1.

K

Mounting frames



Technical data



Description

(K) This fixing system consists of 4 pieces in the form of an angle for mounting KLIN diffusers without plenum in continuous false ceiling.

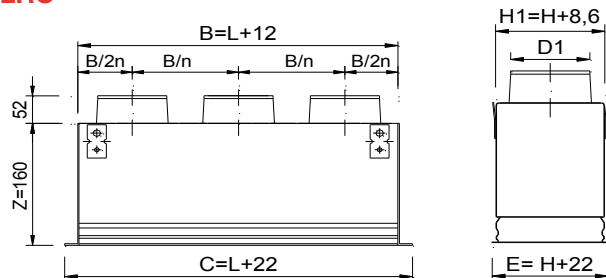
Not compatible with RMT-KLIN.

Plenum boxes for grilles



Technical data

PLRO



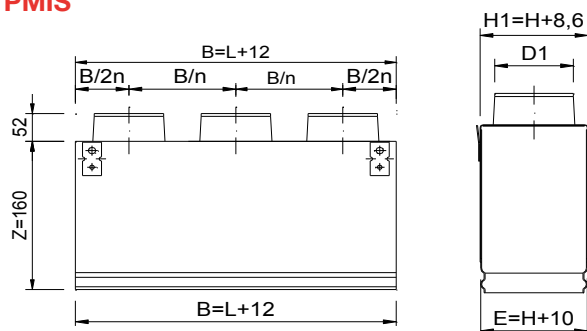
Description

Plenum box with circular connection, made from galvanised steel.

(*) PLRO, PMIS plenum boxes and their ARI, ARD or INT executions have the same price)

PLRO Plenum box with upper connection suitable for AMT, CTM, LMT, AMT-AC grilles, and KOO et jet-nozzles. Suitable for both wall and ceiling mounting (H=75 only available for LMT series)

PMIS



PMIS Plenum box with upper connection suitable for LMT-MISS grilles. Suitable for both wall and ceiling mounting.

.../L/ Lateral circular connection.

...-R Air flow damper in the spigot.

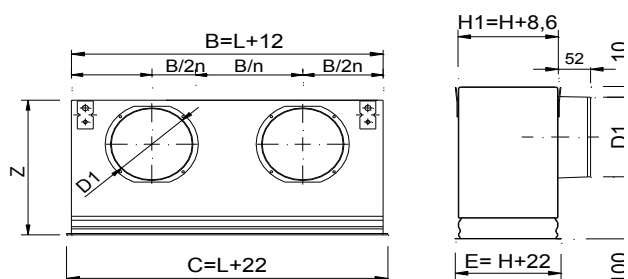
.../AIS/ Thermal insulation inside. Reaction to fire classification B-s1,d0 EN 13501-1.

...-ARI Left plenum box module for lines > 2 m (LMT and LMT-MISS series)

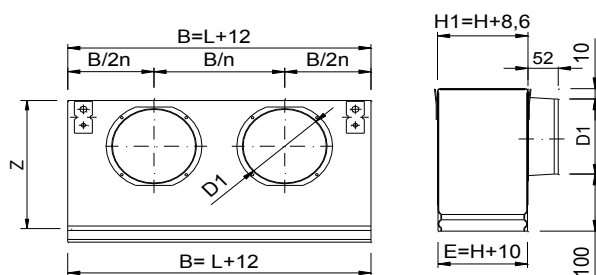
...-ARD Right plenum box module for lines > 2 m (LMT and LMT-MISS series)

...-INT Central plenum box module for lines > 4 m (LMT and LMT-MISS series)

PLRO/L/



PMIS/L/



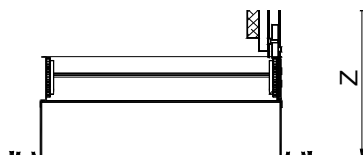
L x H	PLRO PMIS	PLRO-R PMIS-R	PLRO PMIS /AIS/ eur	PLRO-R PMIS-R /AIS/ eur	Vfree= Vk/3 Ø	PLRO/L/ PMIS/L/ eur	PLRO /L-R PMIS/L-R eur	PLRO /L/ PMIS/L/ /AIS/ eur	PLRO/L-R PMIS/L-R /AIS/ eur	Vfree= Vk Ø
mm	eur	eur								
200x75	33,11	44,19	44,70	55,76	1/61	33,78	44,80	45,61	56,63	1/98
250x75	34,39	45,41	46,42	57,44	1/61	36,40	47,72	49,13	60,46	1/123
300x75	36,45	58,55	49,21	71,32	2/61	38,12	49,51	51,46	62,84	1/123
400x75	38,69	60,78	52,23	74,32	2/61	41,05	52,39	55,41	66,75	1/123
500x75	40,91	62,99	55,23	77,32	2/61	45,67	57,50	61,65	73,49	1/158
600x75	52,99	75,08	71,55	93,63	2/61	48,95	60,76	66,08	77,88	1/158
700x75	54,66	87,76	73,79	106,90	3/61	52,12	75,75	70,36	93,99	2/158
800x75	58,03	91,14	78,34	111,46	3/61	63,68	87,34	85,96	109,63	2/158
900x75	59,25	92,36	79,99	113,11	3/61	66,94	90,58	90,37	114,03	2/158
1000x75	63,01	107,12	85,05	129,18	4/61	70,15	93,76	94,71	118,32	2/158
1200x75	65,86	110,01	88,92	133,08	4/61	86,60	120,07	116,92	150,38	3/158
1400x75	73,16	128,37	98,79	153,99	5/61	90,44	123,90	122,10	155,55	3/158
1600x75	79,28	145,50	107,04	173,25	6/61	94,27	127,73	127,26	160,72	3/158
1800x75	82,38	147,77	111,21	176,60	6/61	104,60	149,86	141,21	186,47	4/158
2000x75	83,79	150,03	113,13	179,38	6/61	108,41	153,68	146,37	191,62	4/158
200x100	33,11	44,20	44,70	55,77	1/98	34,78	46,11	46,93	58,29	1/123
250x100	34,66	45,73	46,79	57,84	1/98	36,40	47,72	49,13	60,46	1/123
300x100	36,34	47,37	49,07	60,09	1/98	39,51	51,30	53,35	65,12	1/158
350x100	37,52	48,56	50,66	61,68	1/98	40,77	52,58	55,02	66,85	1/158
400x100	39,10	50,16	52,80	63,84	1/98	42,51	54,34	57,38	69,21	1/158
450x100	40,56	51,64	54,76	65,83	1/98	45,03	57,54	60,79	73,29	1/198
500x100	42,00	53,14	56,71	67,84	1/98	46,65	59,11	62,97	75,44	1/198
600x100	53,26	75,39	71,88	94,01	2/98	49,95	62,47	67,42	79,93	1/198
700x100	56,16	78,31	75,81	97,96	2/98	53,19	78,17	71,81	96,78	2/198
800x100	59,19	81,32	79,92	102,05	2/98	64,84	89,80	87,55	112,50	2/198
900x100	62,24	84,39	84,02	106,16	2/98	68,14	93,16	91,97	116,99	2/198
1000x100	65,13	87,25	87,95	110,06	2/98	71,42	96,41	96,41	121,39	2/198
1200x100	69,56	102,67	93,89	127,02	3/98	86,16	121,57	116,33	151,73	3/198
1400x100	71,92	105,07	97,09	130,25	3/98	90,56	125,97	122,25	157,67	3/198
1600x100	78,17	122,34	105,53	149,70	4/98	94,96	130,34	128,17	163,57	3/198
1800x100	80,58	124,71	108,78	152,93	4/98	104,22	151,43	140,70	187,92	4/198
2000x100	82,98	127,14	112,01	156,18	4/98	108,67	155,83	146,70	193,86	4/198
200x125	34,43	45,77	46,48	57,81	1/123	36,13	47,49	48,77	60,14	1/123
250x125	36,02	47,36	48,63	59,95	1/123	37,77	49,16	51,00	62,38	1/158
300x125	37,73	49,07	50,94	62,28	1/123	41,05	52,85	55,41	67,23	1/158
400x125	40,63	51,95	54,87	66,17	1/123	45,09	57,57	60,86	73,35	1/198
500x125	43,62	54,98	58,90	70,25	1/123	49,31	61,80	66,57	79,06	1/198
600x125	55,00	77,70	74,26	96,94	2/123	52,83	65,32	71,33	83,80	1/198
700x125	58,03	80,70	78,34	101,02	2/123	56,22	81,23	75,91	100,92	2/198
800x125	61,22	83,89	82,66	105,33	2/123	68,11	93,10	91,93	116,92	2/198
900x125	64,32	87,00	86,83	109,53	2/123	71,57	96,57	96,64	121,63	2/198
1000x125	67,30	90,01	90,87	113,56	2/123	75,03	100,01	101,28	126,28	2/198
1200x125	77,43	111,39	104,51	138,47	3/123	87,49	122,88	118,12	153,50	3/198
1400x125	79,92	113,93	107,90	141,89	3/123	92,01	127,40	124,23	159,61	3/198
1600x125	82,45	116,45	111,29	145,30	3/123	96,53	131,92	130,32	165,71	3/198
1800x125	92,24	137,56	124,53	169,83	4/123	105,97	153,15	143,07	190,24	4/198
2000x125	94,81	140,10	128,00	173,28	4/123	110,45	157,68	149,12	196,35	4/198
200x150	34,43	45,77	46,48	57,81	1/123	37,42	49,25	50,52	62,34	1/158
250x150	36,02	47,36	48,63	59,95	1/123	40,68	53,18	54,91	67,42	1/198
300x150	37,73	49,07	50,94	62,28	1/123	42,66	55,17	57,59	70,10	1/198
350x150	38,96	50,29	52,58	63,93	1/123	44,01	56,50	59,42	71,88	1/198
400x150	40,63	51,95	54,87	66,17	1/123	45,89	58,40	61,96	74,46	1/198
450x150	42,13	53,47	56,89	68,22	1/123	47,61	60,12	64,30	76,77	1/198
500x150	43,62	54,98	58,90	70,25	1/123	49,31	61,80	66,57	79,06	1/198
600x150	55,00	77,70	74,26	96,94	2/123	54,10	66,58	73,03	85,52	1/198
700x150	58,03	80,70	78,34	101,02	2/123	57,64	82,60	77,79	102,78	2/198
750x150	59,62	82,30	80,51	103,16	2/123	63,59	88,58	85,84	110,83	2/198
800x150	61,22	83,89	82,66	105,33	2/123	69,56	94,53	93,89	118,88	2/198
900x150	64,32	87,00	86,83	109,53	2/123	73,11	98,09	98,69	123,68	2/198
1000x150	67,30	90,01	90,87	113,56	2/123	76,61	101,60	103,42	128,39	2/198
1050x150	72,89	101,22	98,40	126,72	2/123	82,71	112,89	111,65	141,84	2/198
1200x150	78,47	112,44	105,92	139,91	3/123	88,79	124,17	119,86	155,24	3/198
1400x150	81,14	115,08	109,53	143,48	3/123	93,46	128,84	126,18	161,54	3/198
1600x150	91,06	136,34	122,93	168,22	4/123	98,08	133,51	132,42	167,85	3/198
1800x150	93,74	139,01	126,56	171,83	4/123	107,65	154,82	145,32	192,48	4/198
2000x150	96,39	141,68	130,14	175,41	4/123	112,28	159,49	151,58	198,80	4/198

L x H	PLRO PMIS	PLRO-R PMIS-R	PLRO PMIS	PLRO-R PMIS-R	Vfree= Vk/3	PLRO/L/ PMIS/L	PLRO /L-R PMIS/L-R	PLRO /L/ PMIS/L	PLRO/L-R PMIS/L-R	Vfree= Vk
mm	eur	eur	/AIS/ eur	/AIS/ eur	Ø	eur	eur	/AIS/ eur	/AIS/ eur	Ø
200x200	36,09	48,57	48,72	61,21	1/198	40,78	53,28	55,05	67,55	1/198
250x200	37,73	50,26	50,94	63,46	1/198	42,66	55,17	57,59	70,10	1/198
300x200	39,54	52,02	53,40	65,86	1/198	44,67	57,14	60,30	72,79	1/198
350x200	40,78	53,28	55,05	67,55	1/198	48,36	60,89	65,31	77,83	1/198
400x200	42,51	55,00	57,38	69,89	1/198	50,38	63,94	68,01	81,57	1/248
450x200	44,03	56,59	59,46	72,00	1/198	52,23	65,84	70,53	84,12	1/248
500x200	45,66	58,17	61,64	74,15	1/198	54,09	67,65	73,01	86,58	1/248
600x200	57,01	82,33	77,43	102,44	2/198	57,90	71,50	78,16	91,77	1/248
700x200	60,18	85,46	81,66	106,66	2/198	60,23	85,19	81,31	106,28	2/198
750x200	61,77	87,10	88,06	108,77	2/198	66,27	91,21	89,47	114,42	2/198
800x200	63,35	88,60	85,90	110,88	2/198	72,29	97,28	97,61	122,59	2/198
900x200	66,77	91,74	90,13	115,11	2/198	77,63	104,77	104,81	131,94	2/248
1000x200	69,91	94,87	94,36	119,33	2/198	81,28	108,48	109,73	136,93	2/248
1050x200	70,97	95,24	95,8	120,07	2/198	87,99	119,30	118,79	150,08	2/248
1200x200	72,01	95,62	97,20	120,82	2/198	94,70	130,07	127,83	163,21	3/198
1400x200	74,96	98,56	101,20	124,80	2/198	96,31	131,70	130,00	165,41	3/198
1600x200	77,88	101,49	105,14	128,75	2/198	106,21	147,04	143,37	184,20	3/248
1800x200	85,70	121,12	115,69	151,12	3/198	116,56	171,01	157,36	211,82	4/248
2000x200	92,62	128,01	125,04	160,43	3/198	122,03	176,49	164,74	219,21	4/248
250x250	40,19	52,71	54,26	66,78	1/198	45,41	57,90	61,30	73,79	1/198
300x250	42,01	55,63	56,72	70,34	1/248	47,54	59,96	64,17	76,61	1/198
350x250	43,39	57,00	58,57	72,17	1/248	51,40	65,01	69,39	83,00	1/248
400x250	45,15	58,76	60,97	74,56	1/248	53,48	67,13	72,21	85,84	1/248
450x250	46,77	60,38	63,14	76,75	1/248	55,45	69,03	74,86	88,44	1/248
500x250	48,42	62,01	65,36	78,97	1/248	57,37	70,99	77,45	91,07	1/248
600x250	51,75	65,32	69,84	83,44	1/248	61,32	74,93	82,77	96,38	1/248
700x250	66,11	93,41	89,42	116,63	2/248	65,17	92,34	87,98	115,16	2/248
800x250	67,71	95,00	91,53	118,75	2/248	77,43	104,60	104,51	131,69	2/248
900x250	69,32	96,58	93,64	120,86	2/248	81,33	108,56	109,81	137,03	2/248
1000x250	70,93	98,16	95,76	122,97	2/248	81,28	108,48	109,73	136,93	2/248
1200x250	74,14	101,37	100,08	127,32	2/248	95,03	135,88	128,29	169,16	3/248
1400x250	77,35	104,58	104,42	131,65	2/248	100,76	141,59	136,03	176,87	3/248
1600x250	80,54	107,79	108,72	135,97	2/248	106,51	147,34	143,78	184,62	3/248
1800x250	83,74	110,99	113,05	140,30	2/248	117,11	171,60	158,09	212,56	4/248
2000x250	86,96	114,19	117,39	144,63	2/248	122,87	177,34	165,87	220,34	4/248
300x300	43,94	57,54	59,32	72,91	1/248	52,02	66,58	70,23	84,79	1/248
350x300	45,61	59,17	61,55	75,12	1/248	54,00	68,61	72,91	87,51	1/248
400x300	47,37	60,99	63,94	77,56	1/248	56,16	70,80	75,81	90,45	1/248
450x300	49,07	62,66	66,24	79,83	1/248	61,61	77,76	83,16	99,32	1/313
500x300	50,77	64,35	68,54	82,12	1/248	63,68	79,89	85,96	102,16	1/313
600x300	54,21	67,79	73,17	86,78	1/248	68,01	84,28	91,82	108,08	1/313
700x300	70,58	97,69	95,28	122,39	2/248	68,18	96,79	92,06	120,66	2/248
750x300	71,96	99,10	97,15	124,27	2/248	74,39	103,09	100,42	129,13	2/248
800x300	73,34	100,50	99,02	126,17	2/248	80,60	109,43	108,81	137,63	2/248
900x300	74,72	102,25	100,89	128,05	2/248	89,23	121,01	120,44	152,24	2/313
1000x300	76,11	103,31	102,76	129,94	2/248	93,44	125,30	126,12	157,99	2/313
1050x300	77,50	104,70	104,62	131,83	2/248	105,46	137,22	142,37	174,13	2/313
1200x300	78,87	106,12	106,49	133,72	2/248	117,47	164,91	158,57	206,01	3/313
1400x300	82,35	109,58	111,16	138,42	2/248	124,16	171,70	167,62	215,15	3/313
1600x300	85,82	113,07	115,87	143,11	2/248	130,85	178,49	176,67	224,29	3/313
1800x300	89,33	116,55	120,59	147,82	2/248	137,56	185,29	185,69	233,42	3/313
2000x300	97,67	138,53	131,86	172,71	3/248	154,67	214,65	208,79	268,78	4/313

Motorised dampers for grilles for uni-zone systems



Technical data



Z=197	Z=180
CTM	AMT
LMT-DD	LMT
	AMT-AC
	DMT
	RMT



Description

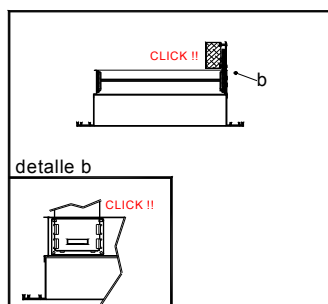
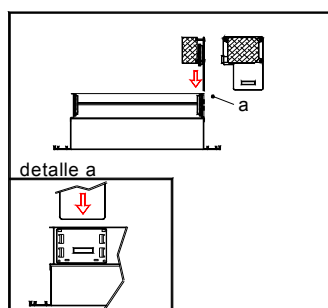
Motorised opposed blades volume damper for grilles. Blades incorporate a PVC airtight joint. Constructed from aluminium, galvanised steel and gears from polyamide. Incompatible fixing system (O) for grilles.

Classification

ZP-A230 Vac 230 motorised damper, On / Off type.

Accessories

TF Thermostat with cables for temperature control, using On / Off motorised dampers. Manual seasonal change over.



L xH	ZP-A
mm	eur
200x100	129,05
250x100	129,34
300x100	129,66
350x100	130,00
400x100	130,33
450x100	130,65
500x100	130,96
600x100	131,61
200x150	131,61
250x150	132,12
300x150	132,24
350x150	133,15
400x150	133,69
450x150	134,17
500x150	134,67
600x150	135,71
200x200	134,21
250x200	134,91
300x200	135,63
350x200	136,30
400x200	136,98
450x200	137,70
500x200	138,39
600x200	139,04
250x250	137,71
300x250	138,56
400x250	140,32
500x250	142,07
600x250	143,86

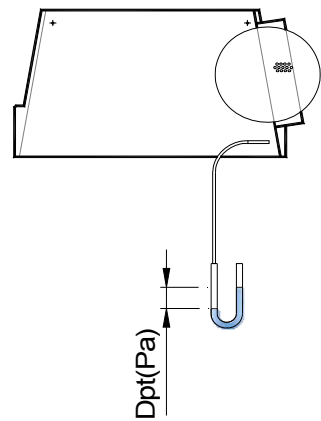
	eur
TF	71,15

TF

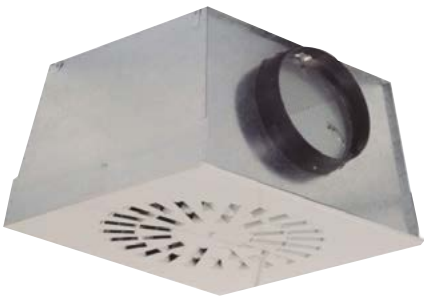


Device for air flow measuring

Technical data



$Q \text{ (m3/h)} = K \times \sqrt{DP \text{ (Pa)}}$



Description

Device incorporated in the plenum to facilitate the measurement of air flow. It is compatible with the families of diffusers with plenum:

- RADIAL DIFFUSERS
- FIXED SWIRL DIFFUSERS
- ADJUSTABLE SWIRL DIFFUSERS
- PERFORATED FACE DIFFUSERS

The factor K is a numerical constant, applied to a simple calculation It allows control of each diffuser / grille to work on the predefined flow in the project. This value reports flow and pressure. With the pressure connection for all diffuser-plenum, you can know the air flow. To change the pressure measured, you must adjust air flow damper in the spigot of the plenum box.

DP Device for air flow measuring.

Symbols

Q (m3 / h) = Air flow in the diffuser.
K = Is a constant value for each diffuser and plenum box.
This value is given in the DP or ask MADEL.
DP (Pa) = Value measured by a manometer.

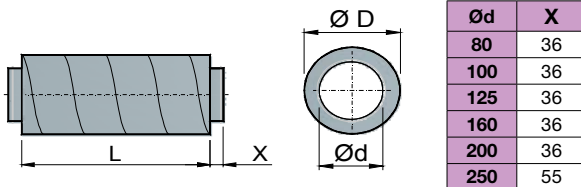
Specification Text

Supply and mounting of stackable pyramidal plenum box with a lateral circular connection and air flow damper in the spigot, equipped with a device for air flow measuring **BOXSTAR-R+DP**, including supports to hang from the ceiling. Made from galvanised steel. Manufacturer **MADEL**.

	eur
DP	18,55

Circular silencers with acoustic mineral wool

Technical data



Description

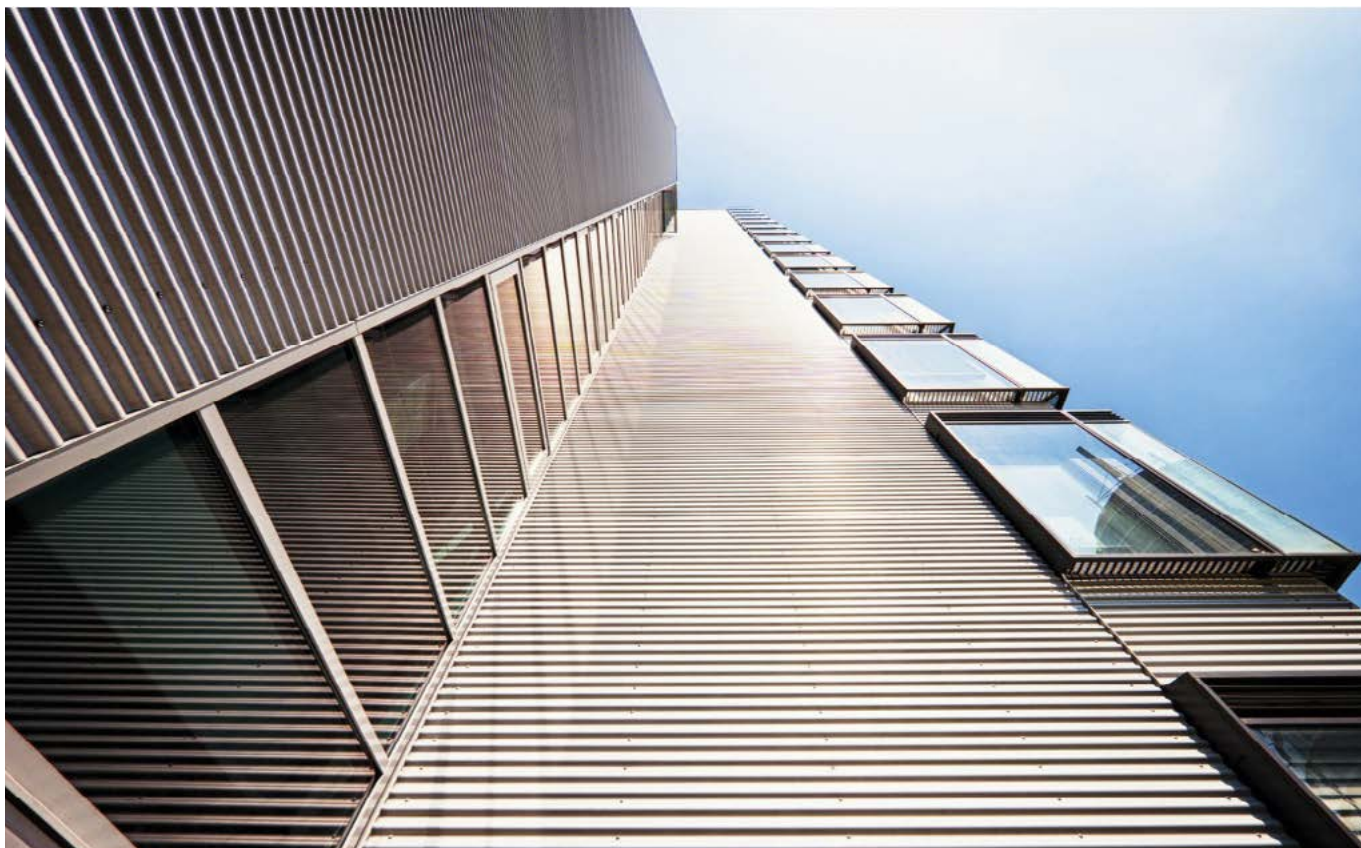
Circular silencers for circular ducts. Constructed with a helical outer tube and a perforated steel sheet inner tube, separated with acoustic mineral wool. There is a polyester tissue between the perforated steel sheet and the absorption material to avoid that the mineral wool is dragged by the air flow.

INC Circular silencer with acoustic mineral wool.

Specification Text

Supply and mounting of circular silencer with acoustic mineral wool to mitigate the acoustic pressure series INC dim x L (mm). Constructed from galvanized steel and tightness joint from rubber. Manufacturer MADEL.

Ø d	Ø D	L	INC	Losses by inserting dB in octave bands						Weight
mm	mm	mm	eur	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	Kg
80	180	300	57,75	5	11	15	25	28	23	2
80	180	600	84,20	7	18	26	29	29	24	3
80	180	900	111,17	9	26	38	33	30	26	5
80	180	1200	137,16	11	30	36	37	31	27	7
100	200	300	60,16	5	9	12	20	25	17	2
100	200	600	87,81	7	15	25	33	29	24	3
100	200	900	116,70	9	22	32	36	33	31	5
100	200	1200	144,34	11	25	36	39	37	38	7
125	224	300	65,92	3	7	14	19	16	19	3
125	224	600	97,68	5	13	21	37	37	31	4
125	224	900	130,65	7	16	28	38	38	35	7
125	224	1200	161,67	9	20	34	39	39	36	9
160	260	300	86,14	2	8	12	15	15	14	3
160	260	600	122,94	3	11	22	33	42	29	6
160	260	900	162,64	8	14	23	39	37	25	8
160	260	1200	202,10	11	19	35	38	47	41	10
200	315	300	99,61	2	4	8	15	18	13	4
200	315	600	142,20	4	8	15	31	28	20	7
200	315	900	189,58	8	9	20	32	35	23	10
200	315	1200	231,92	11	17	26	34	40	26	12
250	355	600	175,16	6	9	13	24	15	15	9
250	355	900	232,18	8	11	20	33	24	18	12
250	355	1200	287,04	10	13	25	38	29	24	15



Fire protection

Effective protection

Fire dampers with CE certification
according EN 15650 standard

INDEX

Selection table

FMC circular fire dampers EIS-90 / EIS-120 D. 100-315

FOC-120 circular fire dampers EIS-90 / EIS-120 D. 355-630

FOC-180 circular fire dampers EIS-180

FBK-E1 rectangular fire dampers EIS-120 LxH < 1000x600

FOK-120 rectangular fire dampers EIS-120 LxH > 1000x600

FLX rectangular fire dampers optimized for flexible wall

FOK-180 rectangular fire dampers EIS-180

FSC fire damper cartridges EIS-60 / EIS-120

FWC fire damper ventilation valves EIS-60 / EIS-120

FTR transfer expanding grilles EIS-60 / EIS-120

Fire dampers: Fire classification according to EN 13501-3



RECTANGULAR FIRE DAMPERS

Technical data	Dimensions (mm)	Test depression (Pa)	Vertical mounting (ve i↔o)			Horizontal mounting (ho i↔o)
			BRICK WALL	REINFORCED CONCRETE WALL	FLEXIBLE WALL	REINFORCED CONCRETE FLOOR
FBK-E1 	L: 100 to 1000 H: 100 to 600	500 Pa	≥ 105 mm EI 120 S	≥ 105 mm EI 120 S	≥ 98 mm ⁽¹⁾ EI 120 S	≥ 150 mm EI 120 S
FBK-E1-BP 	L: 100 to 1000 H: 100 to 600	500 Pa	≥ 105 mm EI 120 S	≥ 105 mm EI 120 S		≥ 150 mm EI 120 S
FLX-EIS-120 	L: 200 to 1000 H: 200 to 600	500 Pa	≥ 123 mm EI 120 S	≥ 123 mm EI 120 S	≥ 98 mm ⁽¹⁾ EI 120 S	≥ 200 mm EI 120 S
FOK-EIS-120 	L: 1000 to 1500 H: 600 to 800	300 Pa y 500 Pa	≥ 150 mm EI 120 S (500Pa)	≥ 150 mm EI 120 S (500Pa)		≥ 200 mm EI 120 S (300Pa)
FOK-EIS-180 	L: 200 to 1500 H: 200 to 800	300 Pa y 500 Pa	≥ 150 mm EI 180 S (500Pa)	≥ 150 mm EI 180 S (500Pa)		≥ 200 mm EI 180 S (300Pa)



CIRCULAR FIRE DAMPERS

Fire damper model	Dimensions (mm)	Test depression (Pa)	Vertical mounting (ve i↔o)			Horizontal mounting (ho i↔o)
			BRICK WALL	REINFORCED CONCRETE WALL	FLEXIBLE WALL	REINFORCED CONCRETE FLOOR
FMC-EIS-120 	Ø 100 a 315	500 Pa	≥ 110 mm EI 120 S	≥ 110 mm EI 120 S	≥ 98 mm ⁽¹⁾ Sealed with mortar EI 120 S Sealed with kit /ACF/ EI 90 S	≥ 150 mm EI 120 S
FOC-EIS-120 	Ø 355 a 630	500 Pa	≥ 110 mm EI 120 S	≥ 110 mm EI 120 S	≥ 98 mm ⁽²⁾ EI 90 S	
FOC-EIS-180 	Ø 100 ⁽³⁾ a 630	300 Pa	≥ 150 mm EI 180 S	≥ 150 mm EI 180 S		≥ 200 mm EI 180 S

(1) 98mm; Plasterboard type F (s/ EN 520), 12'5 x2 + 48(Mineral wool, 50 Kg/m³) + 12'5 x2, Modulation 600mm

(2) 98mm; Plasterboard tipo F (s/ EN 520), 12'5 x2 + 48(Mineral wool, 20 Kg/m³) + 12'5 x2, Modulation 400mm

(3) For diameters below 200 mm, Fire damper of diameter 200mm + reductions on both sides

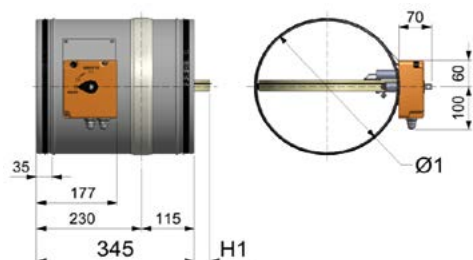
* For more installation details, check on each fire damper technical information

Circular fire dampers EIS-90 / EIS-120 (Ø 100-315)

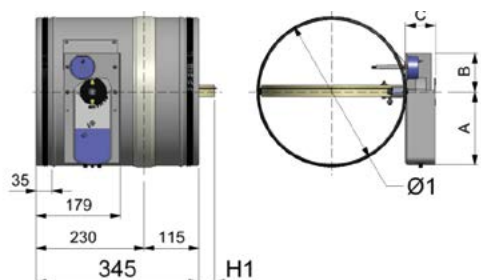


Technical data

FMC-EIS-120-MA

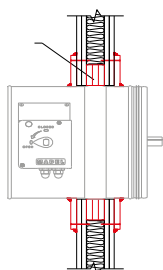


FMC-EIS-120-MF...



Dn	Ø1	H1
100	98	-
125	123	-
150	148	-
160	158	-
200	198	-
250	248	6
315	313	38

ACF



Description

Fire dampers for circular duct mounting.

EIS rated dampers (integrity, insulation and smoke leakage) according to EN 13501-3 standard.

Dampers with shutting mechanism by thermal fusible link at 72°C. An air-tightness joint prevents the propagation of smoke to low temperature, while the expanding joint is dilating to seal the damper. Dampers made from galvanised steel and non-combustible board.

FMC-EIS-120 Fire damper for the applications indicated in the Selection Table.

...-MA Manual resetting damper. Is not necessary to open the box device.

...-MFS Damper operated by SIEMENS actuator with switch off device.

...-MFB Damper operated by BELIMO actuator with switch off device.

(*) sizes A, B, C for dampers MF... see PDF at www.madel.com

(**) dampers operated by a solenoid: ask for price.

Accessories for -MA dampers

/PIF/ Open / closed switches device.

Fixing

1) Connection into a circular metallic duct.

ACF Square piece of plaster with a circular hole in the center for mounting on flexible wall (EIS 90)

Specification Text

Supply and mounting of fire damper for circular duct with minimal pressure drop; tested in accordance to the standard EN-13501-3 and classed EIS, **FMC-EIS-120-MFS-24 Diam.** Operated by means of an actuator with switch off device at 24V **MFS-24**. Dampers made from galvanised steel and non-combustible board. Thermal fusible link at 72°C. An air-tightness joint prevents the propagation of smoke to low temperature, while the expanding joint is dilating to seal the damper. Manufacturer **MADEL**.

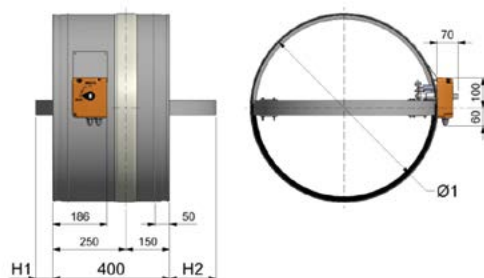
Ø mm	FMC-MA eur	FMC-MFS-24 eur	FMC-MFS-230 eur	FMC-MFB-24 eur	FMC-MFB-230 eur	ACF eur
100	100,62	322,76	343,65	432,45	456,71	45,91
125	102,77	324,90	345,79	434,59	458,85	45,91
150	103,67	325,81	346,70	435,49	459,75	45,91
160	104,65	326,79	347,68	436,48	460,74	45,91
200	110,55	332,68	353,57	442,37	466,63	45,91
250	117,28	339,42	360,31	449,10	473,37	48,54
315	131,34	353,48	374,37	463,17	487,43	52,46
	eur					
/PIF/	22,93					

Circular fire dampers EIS-90 / EIS-120 (Ø 355-630)

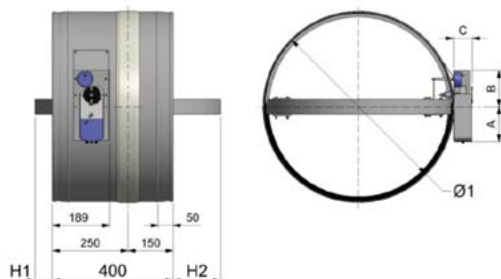


Technical data

FOC-EIS-120-MA

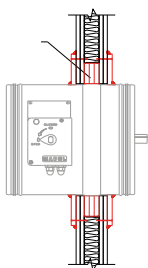


FOC-EIS-120-MF...



Dn	Ø1	H1	H2
355	353	-	25
400	398	-	50
450	448	-	70
500	498	-	100
560	558	-	125
630	628	60	160

ACF



Description

Fire dampers for circular duct mounting.

EIS rated dampers (integrity, insulation and smoke leakage) according to EN 13501-3 standard.

Dampers with shutting mechanism by thermal fusible link at 72°C. An air-tightness joint prevents the propagation of smoke to low temperature, while the expanding joint is dilating to seal the damper. Dampers made from galvanised steel and non-combustible board.

FOC-EIS-120 Fire damper for the applications indicated in the Selection Table.

...-MA Manual resetting damper. Is not necessary to open the box device.

...-MFS Damper operated by SIEMENS actuator with switch off device.

...-MFB Damper operated by BELIMO actuator with switch off device.

(*) sizes A, B, C for dampers MF... see PDF at www.madel.com

(**) dampers operated by a solenoid: ask for price.

Accessories for -MA dampers

/PIF/ Open / closed switches device.

Fixing

1) Connection into a circular metallic duct.

ACF Square piece of plaster with a circular hole in the center for mounting on flexible wall.

Specification Text

Supply and mounting of fire damper for circular duct classed EIS in accordance to the European standard EN-13501-3 series

FOC-EIS-120-MFS-24 Diam. Operated by means of a servomotor at 24v **MFS-24**, start and end of course switches. Dampers made from galvanised steel and non-combustible board. Thermal fusible link at 72°C. An air-tightness joint prevents the propagation of smoke to low temperature, while the expanding joint is dilating to seal the damper. Manufacturer **MADEL**.

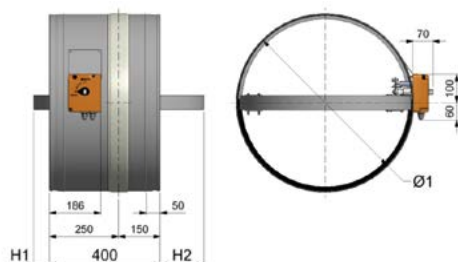
Ø mm	FOC-120-MA eur	FOC-120-MFS-24 eur	FOC-120-MFS-230 eur	FOC-120-MFB-24 eur	FOC-120-MFB-230 eur	ACF eur
355	212,23	434,36	455,25	544,05	568,31	55,16
400	229,74	451,88	472,77	561,57	585,83	58,46
450	247,03	502,77	517,06	578,85	603,11	62,61
500	264,30	520,04	534,33	596,12	620,38	66,75
560	292,95	548,69	562,98	624,77	649,03	74,79
630	319,53	575,28	589,57	651,36	675,62	82,83

Circular fire dampers EIS-180

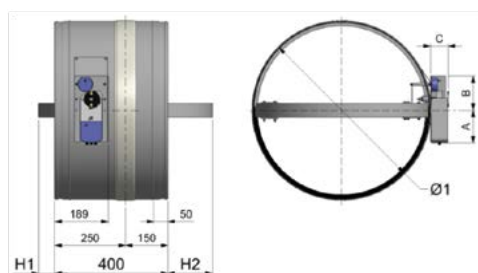


Technical data

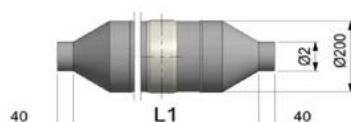
FOC-EIS-180-MA



FOC-EIS-180-MF...



Ø80...Ø160



Dn	Ø1	H1	H2
200	198	-	-
250	248	-	-
315	313	-	5
355	353	-	25
400	398	-	50
450	448	-	70
500	498	-	100
560	558	-	125
630	628	60	160

Dn	Ø2	L1
80	78	790
100	98	734
125	123	666
160	158	570

Description

Fire dampers for circular duct mounting.

EIS rated dampers (integrity, insulation and smoke leakage) according to EN 13501-3 standard.

Dampers with shutting mechanism by thermal fusible link at 72°C.

An air-tightness joint prevents the propagation of smoke to low temperature, while the expanding joint is dilating to seal the damper.

Dampers made from galvanised steel and non-combustible board.

FOC-EIS-180 Fire damper for the applications indicated in the Selection Table.

...-MA Manual resetting damper. Is not necessary to open the box device.

...-MFS Damper operated by SIEMENS actuator with switch off device.

(*) sizes A, B, C for dampers MF... see PDF at www.madel.com

Accessories for -MA dampers

/PIF/ Open / closed switches device.

Fixing

1) Connection into a circular metallic duct.

Specification Text

Supply and mounting of fire damper for circular duct classed EIS-180 in accordance to the European standard EN-13501-3 series

FOC-EIS-180-MFS-24 Diam. Operated by means of a servomotor at 24v **MFS-24**, start and end of course switches. Dampers made from galvanised steel and non-combustible board. Thermal fusible link at 72°C. An air-tightness joint prevents the propagation of smoke to low temperature, while the expanding joint is dilating to seal the damper. Manufacturer **MADEL**.

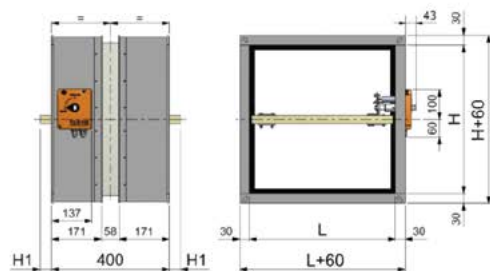
Ø mm	FOC-180-MA eur	FOC-180-MFS-24 eur	FOC-180-MFS-230 eur
80-160 (*reduction)	268,66	490,80	511,69
200	234,02	456,16	477,05
250	245,01	467,14	488,03
315	260,87	483,01	503,90
355	271,93	494,07	514,96
400	289,22	511,36	532,25
450	306,56	562,30	576,59
500	323,88	579,63	593,92
560	354,96	610,71	624,99
630	386,03	641,77	656,06
eur			
/PIF/	22,93		

Rectangular fire dampers EIS-120 (LxH <1000x600)

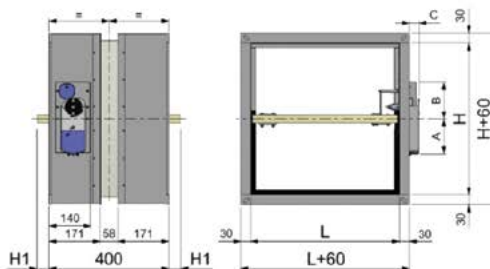


Technical data

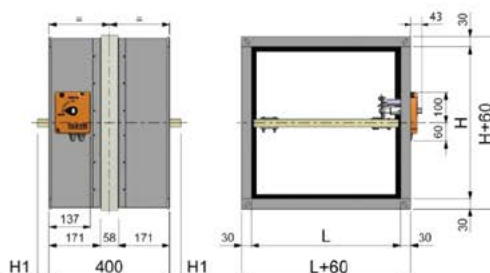
FBK-E1-MA



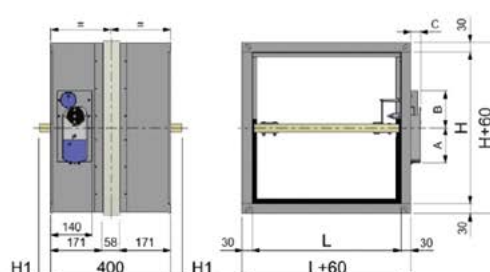
FBK-E1-MF...



FBK-E1-BP-MA



FBK-E1-BP-MF...



Description

Fire dampers for rectangular duct mounting.

EIS rated dampers (integrity, insulation and smoke leakage) according to EN 13501-3 standard.

Dampers with shutting mechanism by thermal fusible link at 72°C.

An air-tightness joint prevents the propagation of smoke to low temperature, while the expanding joint is dilating to seal the damper.

Dampers made from galvanised steel and non-combustible board.

FBK-E1 Fire damper for the applications indicated in the Selection Table.

...-**H** Damper with blade parallel to the large side.

...-**V** Damper with blade parallel to the short side.

(Maximum size 600x600)

...-**MA** Manual resetting damper. Is not necessary to open the box device.

...-**MFS** Damper operated by SIEMENS actuator with switch off device.

...-**MFB** Damper operated by BELIMO actuator with switch off device.

(*) sizes A, B, C for dampers MF... see PDF at www.madel.com

(**) dampers operated by a solenoid: ask for price.

Accessories for -MA dampers

/PIF/ Open / closed switches device.

Fixing

1) Connection into a circular metallic duct.

(**BP**) Fire damper with perimeter frame of non-combustible board to facilitate assembly (supplement on MA version*)

(**CR**) Flat connection flange (supplement on MA version*)

Specification Text

Supply and mounting of fire damper for rectangular duct classed EIS in accordance to the European standard EN-13501-3 series

FBK-E1-H-MFS-24 LxH. Operated by means of a servomotor at 24v **MFS-24**, start and end of course switches. Dampers made from galvanised steel and non-combustible board. Thermal fusible link at 72°C. An air-tightness joint prevents the propagation of smoke to low temperature, while the expanding joint is dilating to seal the damper. Manufacturer **MADEL**.

H	H1
100...400	-
450	25
500	50
550	75
600	100

H	H1
650	125
700	150
750	175
800	200

L x H	FBK-E1 MA	FBK-E1 MFS-24	FBK-E1 MFS-230	FBK-E1 MFB-24	FBK-E1 MFB-230	L x H	FBK-E1 MA	FBK-E1 MFS-24	FBK-E1 MFS-230	FBK-E1 MFB-24	FBK-E1 MFB-230
mm	eur	eur	eur	eur	eur	mm	eur	eur	eur	eur	eur
100x100	167,03	389,17	410,06	498,86	523,12	700x300	238,66	460,80	481,69	570,48	594,75
150x100	167,90	390,03	410,92	499,72	523,98	800x300	252,13	474,27	495,16	583,95	608,21
200x100	177,20	399,34	420,23	509,03	533,29	900x300	263,72	485,86	506,75	595,55	619,81
250x100	182,54	404,68	425,57	514,37	538,63	1000x300	276,01	498,15	519,04	607,84	632,10
300x100	186,58	408,72	429,61	518,40	542,67	350x350	202,57	424,71	445,60	534,39	558,66
350x100	191,41	413,55	434,44	523,23	547,49	400x350	208,34	430,48	451,37	540,16	564,43
400x100	195,53	417,67	438,56	527,35	551,61	450x350	213,41	435,54	456,43	545,23	569,49
450x100	199,62	421,76	442,65	531,44	555,70	500x350	220,46	442,60	463,48	552,28	576,54
500x100	204,97	427,11	448,00	536,79	561,05	550x350	226,36	448,50	469,39	558,18	582,45
550x100	209,14	431,28	452,17	540,96	565,23	600x350	232,18	454,32	475,21	564,01	588,27
600x100	212,68	434,82	455,70	544,50	568,76	700x350	246,81	468,95	489,84	578,63	602,89
700x100	222,82	444,96	465,85	554,65	578,91	800x350	261,13	483,27	504,16	592,95	617,21
800x100	233,98	456,11	477,00	565,80	590,06	900x350	272,82	528,57	542,86	604,65	628,91
150x150	170,77	392,90	413,79	502,59	526,85	1000x350	286,55	542,30	556,59	618,37	642,63
200x150	171,63	393,76	414,65	503,45	527,71	400x400	213,90	436,04	456,92	545,72	569,98
250x150	176,93	399,06	419,95	508,75	533,01	450x400	220,06	442,20	463,08	551,88	576,14
300x150	180,96	403,10	423,99	512,79	537,05	500x400	227,49	449,63	470,52	559,31	583,57
350x150	186,32	408,46	429,35	518,15	542,41	550x400	233,73	455,87	476,76	565,55	589,82
400x150	190,43	412,57	433,46	522,26	546,52	600x400	241,09	463,23	484,12	572,91	597,18
450x150	194,56	416,69	437,58	526,38	550,64	700x400	255,30	477,43	498,32	587,12	611,38
500x150	199,84	421,98	442,87	531,67	555,93	800x400	269,76	525,51	539,80	601,58	625,84
550x150	204,02	426,15	447,04	535,84	560,10	900x400	282,91	538,66	552,95	614,73	639,00
600x150	208,15	430,28	451,17	539,97	564,23	1000x400	299,80	555,55	569,84	631,63	655,89
700x150	218,19	440,33	461,22	550,02	574,28	450x450	229,00	451,13	472,02	560,82	585,08
800x150	229,21	451,35	472,24	561,03	585,30	500x450	236,75	458,89	479,78	568,58	592,84
200x200	168,90	391,04	411,93	500,72	524,98	550x450	244,54	466,68	487,57	576,37	600,63
250x200	174,84	396,98	417,87	506,67	530,93	600x450	251,07	473,21	494,10	582,90	607,16
300x200	179,50	401,64	422,53	511,32	535,58	700x450	265,50	521,24	535,53	597,32	621,58
350x200	185,53	407,66	428,55	517,35	541,61	800x450	281,34	537,09	551,38	613,17	637,43
400x200	190,25	412,39	433,28	522,07	546,34	900x450	295,25	551,00	565,29	627,07	651,34
450x200	194,96	417,09	437,98	526,78	551,04	1000x450	312,97	568,72	583,01	644,80	669,06
500x200	200,91	423,05	443,94	532,73	557,00	500x500	245,07	467,21	488,09	576,89	601,15
550x200	205,68	427,81	448,70	537,50	561,76	550x500	252,04	474,18	495,06	583,86	608,12
600x200	210,43	432,57	453,46	542,26	566,52	600x500	258,36	480,50	501,39	590,18	614,45
700x200	221,77	443,91	464,80	553,59	577,85	700x500	274,15	529,89	544,18	605,97	630,23
800x200	234,13	456,27	477,16	565,95	590,22	800x500	290,84	546,59	560,88	622,67	646,93
900x200	244,11	466,25	487,14	575,94	600,20	900x500	305,55	561,30	575,59	637,38	661,64
1000x200	255,47	477,61	498,50	587,29	611,56	1000x500	323,56	579,31	593,60	655,39	679,65
250x250	179,72	401,86	422,75	511,55	535,81	550x550	257,69	513,43	527,72	589,51	613,77
300x250	184,68	406,82	427,71	516,51	540,77	600x550	264,96	520,71	535,00	596,79	621,05
350x250	191,12	413,26	434,15	522,94	547,21	700x550	281,42	537,17	551,46	613,25	637,51
400x250	196,17	418,31	439,20	528,00	552,26	800x550	298,78	554,53	568,81	630,60	654,86
450x250	201,27	423,41	444,30	533,09	557,35	900x550	313,53	569,27	583,56	645,35	669,61
500x250	207,54	429,68	450,57	539,37	563,63	1000x550	332,86	588,61	602,89	664,68	688,94
550x250	212,71	434,85	455,74	544,53	568,79	600x600	271,82	527,57	541,86	603,64	627,90
600x250	217,06	439,20	460,09	548,89	573,15	700x600	288,98	544,73	559,01	620,80	645,06
700x250	229,13	451,27	472,16	560,95	585,21	800x600	306,38	562,13	576,42	638,21	662,47
800x250	243,02	465,16	486,04	574,84	599,10	900x600	322,43	578,18	592,47	654,26	678,52
900x250	253,77	475,91	496,80	585,59	609,85	1000x600	342,43	598,18	612,47	674,26	698,52
1000x250	265,89	488,02	508,91	597,71	621,97						
300x300	190,17	412,31	433,20	521,99	546,25						
350x300	196,94	419,08	439,97	528,77	553,03						
400x300	202,40	424,53	445,42	534,22	558,48						
450x300	207,79	429,93	450,82	539,61	563,87						
500x300	213,75	435,89	456,78	545,58	569,84						
550x300	219,27	441,41	462,30	551,09	575,35						
600x300	224,75	446,89	467,78	556,58	580,84						

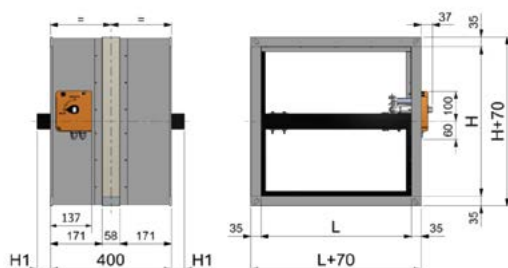
	eur
/PIF/	22,93
(BP)	15%
(CR)	7%

Rectangular fire dampers EIS-120 (LxH >1000x600)

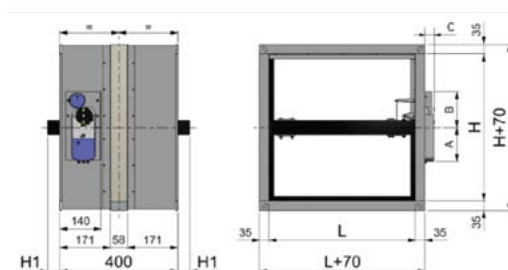


Technical data

FOK-EIS-120-MA

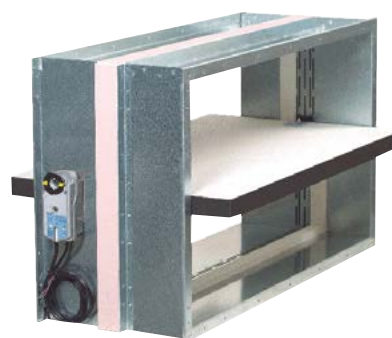


FOK-EIS-120-MF...



H	H1
200...400	-
450	25
500	50
550	75
600	100

H	H1
650	125
700	150
750	175
800	200



Description

Fire dampers for rectangular duct mounting.

EIS rated dampers (integrity, insulation and smoke leakage) according to EN 13501-3 standard.

Dampers with shutting mechanism by thermal fusible link at 72°C.

An air-tightness joint prevents the propagation of smoke to low temperature, while the expanding joint is dilating to seal the damper.

Dampers made from galvanised steel and non-combustible board.

FOK-EIS-120 Fire damper for the applications indicated in the Selection Table.

...-H Damper with blade parallel to the large side.

...-V Damper with blade parallel to the short side.

(Maximum size 800x800)

...-MA Manual resetting damper. Is not necessary to open the box device.

...-MFS Damper operated by SIEMENS actuator with switch off device.

...-MFB Damper operated by BELIMO actuator with switch off device.

(*) sizes A, B, C for dampers MF... see PDF at www.madel.com

(**) dampers operated by a solenoid: ask for price.

Accessories for -MA dampers

/PIF/ Open / closed switches device.

Fixing

1) Connection into a circular metallic duct.

(CR) Flat connection flange (supplement on MA version*)

Specification Text

Supply and mounting of fire damper for rectangular duct classed EIS in accordance to the European standard EN-13501-3 series **FOK-EIS-120-H-MFS-24 LxH**. Operated by means of a servomotor at 24v **MFS-24**, start and end of course switches. Dampers made from galvanised steel and non-combustible board. Thermal fusible link at 72°C. An air-tightness joint prevents the propagation of smoke to low temperature, while the expanding joint is dilating to seal the damper. Manufacturer **MADEL**.

L x H mm	FOK-120 MA eur	FOK-120 MFS-24 eur	FOK-120 MFS-230 eur	FOK-120 MFB-24 eur	FOK-120 MFB-230 eur
1100 x 200	353,64	575,77	596,66	685,46	709,72
1200 x 200	366,84	588,98	609,86	698,66	722,92
1300 x 200	380,06	602,20	623,09	711,88	736,14
1400 x 200	393,27	615,41	636,30	725,10	749,36
1500 x 200	416,03	638,17	659,05	747,85	772,11
1100 x 250	373,37	595,50	616,39	705,19	729,45
1200 x 250	397,60	619,74	640,63	729,42	753,68
1300 x 250	412,28	668,02	682,31	744,10	768,36
1400 x 250	426,95	682,70	696,99	758,78	783,04
1500 x 250	441,61	697,36	711,65	773,43	797,70
1100 x 300	402,64	658,39	672,68	734,46	758,73
1200 x 300	418,78	674,53	688,82	750,61	774,87
1300 x 300	434,91	690,66	704,94	766,73	790,99
1400 x 300	451,08	706,83	721,12	782,91	807,17
1500 x 300	467,18	722,93	737,22	799,01	823,27
1100 x 350	422,35	678,10	692,39	754,17	778,44
1200 x 350	439,97	695,72	710,01	771,79	796,06
1300 x 350	462,35	718,09	732,38	794,17	818,43
1400 x 350	479,95	735,69	749,98	811,77	836,03
1500 x 350	497,57	753,31	767,60	829,39	853,65
1100 x 400	442,04	697,79	712,08	773,86	798,13
1200 x 400	465,93	721,68	735,97	797,76	822,02
1300 x 400	484,97	740,72	755,00	816,79	841,05
1400 x 400	504,07	759,82	774,11	835,90	860,16
1500 x 400	523,15	778,90	793,19	854,97	879,23
1100 x 450	466,94	722,69	736,98	798,76	823,02
1200 x 450	487,46	743,21	757,50	819,28	843,54
1300 x 450	508,00	763,75	778,04	839,82	864,09
1400 x 450	528,55	784,30	798,59	860,37	884,64
1500 x 450	549,09	804,84	819,13	880,92	905,18
1100 x 500	486,65	742,40	756,69	818,47	842,73
1200 x 500	508,66	764,40	778,69	840,48	864,74
1300 x 500	530,67	786,42	800,71	862,50	886,76
1400 x 500	552,67	808,42	822,71	884,49	908,75
1500 x 500	574,69	830,43	844,72	906,51	930,77
1100 x 550	506,34	762,09	776,38	838,16	862,42
1200 x 550	529,82	785,57	799,86	861,65	885,91
1300 x 550	553,31	894,56	902,26	964,01	997,08
1400 x 550	576,81	918,06	925,76	987,52	1.020,58
1500 x 550	600,27	941,52	949,22	1.010,98	1.044,04
700x600	417,65	673,39	687,68	749,47	773,73
800x600	447,07	702,82	717,11	778,90	803,16
1100 x 600	-	781,89	796,18	857,97	882,23
1200 x 600	-	806,83	821,12	882,90	907,17
1300 x 600	-	916,24	923,94	985,69	1.018,76
1400 x 600	-	941,20	948,89	1.010,65	1.043,72
1500 x 600	-	966,13	973,83	1.035,59	1.068,65
700 x 700	454,71	710,46	724,75	786,53	810,80
800 x 700	482,58	738,33	752,62	814,40	838,67
900 x 700	510,46	766,21	780,50	842,28	866,55
1000 x 700	538,36	794,11	808,40	870,18	894,45
1100 x 700	-	821,65	835,94	897,73	921,99
1200 x 700	-	849,53	863,82	925,61	949,87
1300 x 700	-	961,90	969,60	1.031,36	1.064,42
1400 x 700	-	989,79	997,49	1.059,25	1.092,31
1500 x 700	-	1.017,67	1.025,37	1.087,13	1.120,19
800 x 800	513,55	769,29	783,58	845,37	869,63
900 x 800	544,39	800,14	814,42	876,21	900,47
1000 x 800	575,18	830,93	845,22	907,00	931,26
1100 x 800	-	861,44	875,73	937,52	961,78
1200 x 800	-	892,26	906,55	968,34	992,60
1300 x 800	-	1.007,56	1.015,26	1.077,02	1.110,09
1400 x 800	-	1.038,40	1.046,09	1.107,85	1.140,92
1500 x 800	-	1.069,22	1.076,92	1.138,67	1.171,74

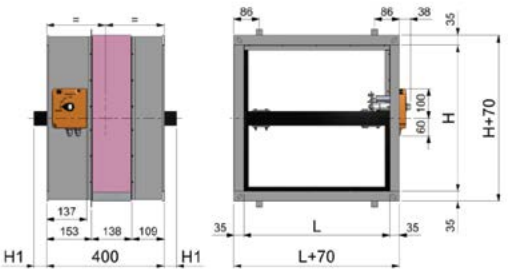
	eur
/PIF/	22,93
(CR)	7%

Rectangular fire dampers EIS-120 optimized for flexible wall

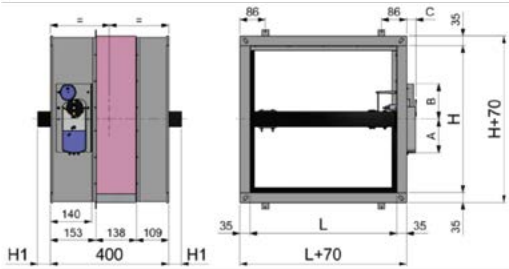


Technical data

FLX-EIS-120-MA



FLX-EIS-120-MF...



H	H1
200...400	-
450	25
500	50
550	75
600	100



Description

Fire dampers for rectangular duct mounting.
EIS rated dampers (integrity, insulation and smoke leakage) according to EN 13501-3 standard.
Dampers with shutting mechanism by thermal fusible link at 72°C.
An air-tightness joint prevents the propagation of smoke to low temperature, while the expanding joint is dilating to seal the damper.
Dampers made from galvanised steel and non-combustible board.

FLX-EIS-120 Fire damper for the applications indicated in the Selection Table.

- ...-H Damper with blade parallel to the large side.
- ...-V Damper with blade parallel to the short side.
(Maximum size 600x600)
- ...-MA Manual resetting damper. Is not necessary to open the box device.
- ...-MFS Damper operated by SIEMENS actuator with switch off device.
- ...-MFB Damper operated by BELIMO actuator with switch off device.
- (*) sizes A, B, C for dampers MF... see PDF at www.madel.com

Accessories for -MA dampers

/PIF/ Open / closed switches device.

Fixing

- 1) Connection into a circular metallic duct.
- (CR) Flat connection flange (supplement on MA version*)

Specification Text

Supply and mounting of fire damper for rectangular duct classed EIS-120 in accordance to the European standard EN-13501-3 series **FLX-120-MFS-24 LxH**. Operated by means of a servomotor at 24v **MFS-24**, start and end of course switches. Dampers made from galvanised steel and non-combustible board. Thermal fusible link at 72°C. An air-tightness joint prevents the propagation of smoke to low temperature, while the expanding joint is dilating to seal the damper. Manufacturer **MADEL**.

L x H	FLX MA	FLX MFS-24	FLX MFS-230	FLX MFB-24	FLX MFB-230	L x H	FLX MA	FLX MFS-24	FLX MFS-230	FLX MFB-24	FLX MFB-230
mm	eur	eur	eur	eur	eur	mm	eur	eur	eur	eur	eur
200x200	240,63	462,77	483,66	572,45	596,71	400x400	301,85	523,99	544,88	633,68	657,94
250x200	246,47	468,61	489,50	578,29	602,56	450x400	309,25	531,39	552,28	641,08	665,34
300x200	252,00	474,13	495,02	583,82	608,08	500x400	316,74	538,87	559,76	648,56	672,82
350x200	258,04	480,18	501,07	589,87	614,13	550x400	324,11	546,24	567,13	655,93	680,19
400x200	263,56	485,70	506,59	595,38	619,64	600x400	331,28	553,42	574,31	663,10	687,37
450x200	269,31	491,45	512,34	601,13	625,39	700x400	346,15	568,29	589,18	677,98	702,24
500x200	275,14	497,28	518,17	606,96	631,23	800x400	370,59	626,34	640,63	702,41	726,67
550x200	280,86	503,00	523,89	612,68	636,95	900x400	385,16	640,91	655,20	716,99	741,25
600x200	286,39	508,52	529,41	618,21	642,47	1000x400	400,04	655,78	670,07	731,86	756,12
700x200	297,96	520,10	540,98	629,78	654,04	450x450	317,21	539,34	560,23	649,03	673,29
800x200	319,07	541,21	562,10	650,90	675,16	500x450	325,10	547,24	568,13	656,92	681,18
900x200	330,36	552,50	573,39	662,18	686,44	550x450	332,91	555,05	575,94	664,73	688,99
1000x200	341,91	564,05	584,94	673,73	697,99	600x450	340,52	562,65	583,54	672,34	696,60
250x250	252,42	474,55	495,44	584,24	608,50	700x450	365,77	621,52	635,81	697,59	721,86
300x250	258,35	480,49	501,38	590,17	614,44	800x450	381,46	637,21	651,50	713,29	737,55
350x250	264,80	486,94	507,83	596,62	620,88	900x450	396,85	652,60	666,89	728,67	752,93
400x250	270,73	492,87	513,76	602,56	626,82	1000x450	412,55	668,30	682,59	744,38	768,64
450x250	276,88	499,02	519,91	608,71	632,97	500x500	333,71	555,85	576,74	665,53	689,79
500x250	283,14	505,27	526,16	614,96	639,22	550x500	341,91	564,05	584,94	673,73	697,99
550x250	289,28	511,41	532,30	621,10	645,36	600x500	359,52	581,66	602,55	691,34	715,60
600x250	304,79	526,93	547,82	636,62	660,88	700x500	376,00	631,75	646,04	707,82	732,09
700x250	317,19	539,32	560,21	649,01	673,27	800x500	392,53	648,28	662,57	724,36	748,62
800x250	329,58	551,72	572,61	661,40	685,66	900x500	408,76	664,51	678,80	740,58	764,84
900x250	341,65	563,79	584,68	673,48	697,74	1000x500	430,05	685,80	700,09	761,87	786,13
1000x250	354,05	576,18	597,07	685,87	710,13	550x550	359,90	615,65	629,93	691,72	715,98
300x300	264,71	486,84	507,73	596,53	620,79	600x550	368,32	624,07	638,36	700,15	724,41
350x300	271,57	493,71	514,60	603,40	627,66	700x550	385,68	641,42	655,71	717,50	741,76
400x300	277,94	500,08	520,97	609,76	634,02	800x550	403,03	658,78	673,07	734,85	759,12
450x300	284,48	506,62	527,51	616,30	640,56	900x550	424,86	680,61	694,90	756,69	780,95
500x300	300,69	522,83	543,72	632,52	656,78	1000x550	442,20	697,94	712,23	774,02	798,28
550x300	307,25	529,39	550,28	639,08	663,34	600x600	377,55	633,30	647,58	709,37	733,63
600x300	313,63	535,77	556,66	645,45	669,71	700x600	395,70	651,45	665,74	727,52	751,79
700x300	326,83	548,97	569,86	658,65	682,92	800x600	418,66	674,41	688,70	750,48	774,75
800x300	340,05	562,19	583,08	671,88	696,14	900x600	436,54	692,29	706,57	768,36	792,62
900x300	352,98	575,12	596,01	684,80	709,06	1000x600	454,73	710,48	724,77	786,55	810,82
1000x300	375,78	597,91	618,80	707,60	731,86						
350x350	278,33	500,47	521,36	610,15	634,41						
400x350	285,11	507,25	528,14	616,94	641,20						
450x350	301,63	523,76	544,65	633,45	657,71						
500x350	308,74	530,88	551,77	640,56	664,83						
550x350	315,68	537,82	558,71	647,50	671,76						
600x350	322,44	544,58	565,47	654,27	678,53						
700x350	336,52	558,66	579,55	668,34	692,60						
800x350	350,55	572,69	593,58	682,37	706,64						
900x350	373,85	629,60	643,88	705,67	729,93						
1000x350	387,89	643,64	657,93	719,71	743,98						

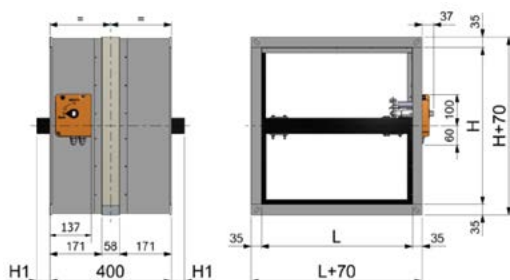
	eur
/PIF/	22,93
(CR)	7%

Rectangular fire dampers EIS-180

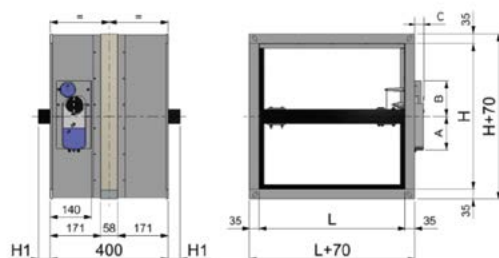


Technical data

FOK-EIS-180-MA



FOK-EIS-180-MF...



H	H1
200...400	-
450	25
500	50
550	75
600	100
650	125
700	150
750	175
800	200



Description

Fire dampers for rectangular duct mounting.

EIS rated dampers (integrity, insulation and smoke leakage) according to EN 13501-3 standard.

Dampers with shutting mechanism by thermal fusible link at 72°C.

An air-tightness joint prevents the propagation of smoke to low temperature, while the expanding joint is dilating to seal the damper.

Dampers made from galvanised steel and non-combustible board.

FOK-EIS-180 Fire damper for the applications indicated in the Selection Table.

...-H Damper with blade parallel to the large side.

...-V Damper with blade parallel to the short side.

(Maximum size 800x800)

...-MA Manual resetting damper. Is not necessary to open the box device.

...-MFS Damper operated by SIEMENS actuator with switch off device.

(*) sizes A, B, C for dampers MF... see PDF at www.madel.com

Accessories for -MA dampers

/PIF/ Open / closed switches device.

Fixing

1) Connection into a circular metallic duct.

(CR) Flat connection flange (supplement on MA version*)

Specification Text

Supply and mounting of fire damper for rectangular duct classed EIS-180 in accordance to the European standard EN-13501-3 series

FOK-180-MFS-24 LxH. Operated by means of a servomotor at 24v **MFS-24**, start and end of course switches. Dampers made from galvanised steel and non-combustible board. Thermal fusible link at 72°C. An air-tightness joint prevents the propagation of smoke to low temperature, while the expanding joint is dilating to seal the damper. Manufacturer **MADEL**.

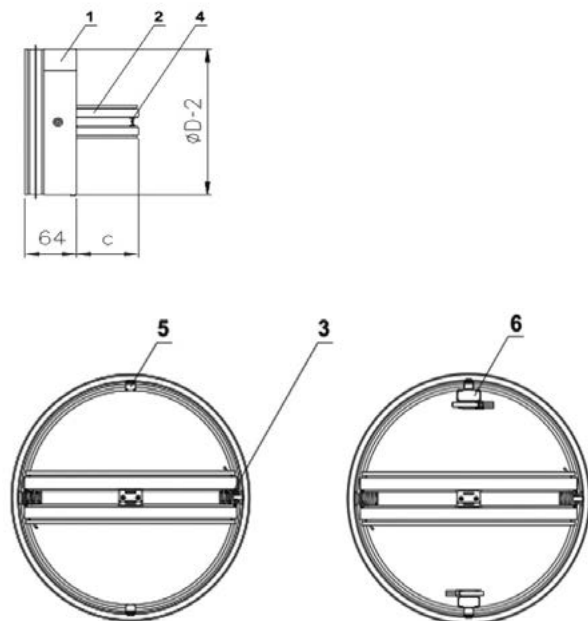
L x H	FOK-180 MA	FOK-180 MFS-24	FOK-180 MFS-230	L x H	FOK-180 MA	FOK-180 MFS-24	FOK-180 MFS-230
mm	eur	eur	eur	mm	eur	eur	eur
200x200	225,45	447,59	468,48	800x400	384,83	640,57	654,86
250x200	231,93	454,06	474,95	900x400	403,90	659,65	673,94
300x200	238,45	460,58	481,47	1000x400	423,00	678,74	693,03
350x200	245,15	467,29	488,18	1100x400	446,48	702,23	716,52
400x200	251,64	473,78	494,67	1200x400	470,57	726,32	740,60
450x200	258,36	480,50	501,39	1300x400	489,84	745,59	759,87
500x200	264,88	487,02	507,91	1400x400	509,13	764,88	779,16
550x200	271,56	493,70	514,59	1500x400	528,36	784,10	798,39
600x200	278,07	500,21	521,10	450x450	319,12	541,26	562,15
700x200	291,28	513,42	534,31	500x450	329,30	551,44	572,33
800x200	314,02	536,16	557,05	550x450	339,69	561,82	582,71
900x200	327,23	549,37	570,26	600x450	349,86	572,00	592,89
1000x200	340,44	562,58	583,47	700x450	379,94	635,68	649,97
1100x200	357,17	579,31	600,20	800x450	400,49	656,24	670,52
1200x200	370,53	592,67	613,55	900x450	421,05	676,80	691,09
1300x200	383,86	606,00	626,89	1000x450	441,60	697,35	711,64
1400x200	397,20	619,34	640,23	1100x450	471,60	727,35	741,64
1500x200	420,18	642,32	663,21	1200x450	492,35	748,10	762,38
250x250	239,18	461,32	482,21	1300x450	513,07	768,82	783,11
300x250	246,42	468,56	489,45	1400x450	533,83	789,58	803,87
350x250	253,81	475,95	496,84	1500x450	554,62	810,37	824,65
400x250	261,10	483,24	504,13	500x500	340,24	562,38	583,27
450x250	268,51	490,65	511,54	550x500	351,31	573,45	594,34
500x250	275,76	497,89	518,78	600x500	371,78	593,92	614,81
550x250	283,19	505,33	526,21	700x500	393,82	649,56	663,85
600x250	299,99	522,12	543,01	800x500	415,83	671,58	685,87
700x250	314,68	536,81	557,70	900x500	437,82	693,57	707,85
800x250	329,33	551,47	572,36	1000x500	464,63	720,38	734,67
900x250	344,01	566,15	587,04	1100x500	491,52	747,27	761,55
1000x250	358,67	580,81	601,70	1200x500	513,75	769,50	783,79
1100x250	377,10	599,24	620,13	1300x500	535,98	791,73	806,02
1200x250	401,57	623,71	644,60	1400 x 500	558,20	813,95	828,24
1300 x 250	416,40	672,14	686,43	1500x500	580,45	836,20	850,48
1400x250	431,20	686,94	701,23	550x550	372,53	628,27	642,56
1500x250	446,02	701,77	716,05	600x550	384,16	639,91	654,20
300x300	254,37	476,51	497,40	700x550	407,64	663,39	677,68
350x300	262,52	484,66	505,55	800x550	431,13	686,87	701,16
400x300	270,53	492,67	513,56	900x550	459,38	715,13	729,42
450x300	278,69	500,83	521,71	1000x550	482,86	738,60	752,89
500x300	296,24	518,37	539,26	1100x550	511,40	767,15	781,44
550x300	304,39	526,53	547,42	1200x550	535,14	790,89	805,18
600x300	312,38	534,52	555,41	1300x550	558,86	900,11	907,81
700x300	328,49	550,63	571,52	1400x550	582,55	923,80	931,50
800x300	344,64	566,77	587,66	1500x550	606,29	947,54	955,24
900x300	360,81	582,95	603,84	600x600	396,90	652,65	666,94
1000x300	386,50	608,63	629,52	700x600	421,87	677,62	691,91
1100x300	406,66	662,41	676,69	800x600	451,59	707,34	721,63
1200x300	422,99	678,73	693,02	900x600	476,56	732,31	746,60
1300x300	439,26	695,01	709,30	1000x600	501,49	757,24	771,53
1400x300	455,57	711,32	725,61	1100x600	-	761,85	776,14
1500x300	471,87	727,62	741,91	1200x600	-	785,85	800,14
350x350	271,23	493,36	514,25	700x700	459,23	714,98	729,27
400x350	279,94	502,08	522,97	800x700	487,42	743,17	757,45
450x350	298,43	520,57	541,46	900x700	515,56	771,31	785,60
500x350	307,13	529,27	550,16	1000x700	543,74	799,49	813,78
550x350	316,03	538,17	559,06	1100x700	-	800,09	814,38
600x350	324,73	546,87	567,76	1200x700	-	826,91	841,20
700x350	342,37	564,51	585,40	800x800	518,69	774,44	788,73
800x350	359,96	582,10	602,99	900x800	549,81	805,56	819,85
900x350	387,13	642,88	657,17	1000x800	580,96	836,71	851,00
1000x350	404,73	660,48	674,77	1100x800	-	838,39	852,68
1100x350	426,58	682,33	696,62	1200x800	-	868,01	882,30
1200x350	444,36	700,11	714,39	1300x600	-	894,34	902,04
1300x350	466,97	722,72	737,01	1400x600	-	918,35	926,05
1400x350	484,75	740,50	754,79	1500x600	-	942,34	950,04
1500x350	502,54	758,28	772,57	1300x700	-	938,26	945,96
400x400	298,94	521,08	541,97	1400x700	-	965,10	972,80
450x400	308,58	530,71	551,60	1500x700	-	991,92	999,62
500x400	318,04	540,18	561,06	1300x800	-	982,22	989,91
550x400	327,63	549,77	570,66	1400x800	-	1.011,86	1.019,56
600x400	337,12	559,26	580,15	1500x800	-	1.041,51	1.049,21
700x400	356,19	578,33	599,22				

	eur
/PIF/	22,93
(CR)	7%

Fire damper cartridges EIS-60 / EIS-120



Technical data



1. Casing
2. Sealing leaf
3. Actuating spring
4. Thermal fuse
5. Locking strip
6. CIF

Ø nominal	Kg	Aeff (m2)	C
100	0,3	0,003	17,5
125	0,4	0,006	30,2
160	0,55	0,0119	48
200	0,75	0,0209	68



Description

Fire damper cartridges for circular duct mounting.

Tested and classed EIS-60 or 120 (Integrity, Insulation and smoke leakage during 60 or 120 minutes) in accordance to the European standard EN-13501-3 at a constant pressure of 300Pa.

Fire damper cartridges with shutting mechanism by thermal fusible link at 72°C. An air-tightness joint prevents the propagation of smoke to low temperature, while the expanding joint is dilating to seal the fire damper cartridge.

These fire damper cartridges full fill the required conditions for the (S) symbol, air-tightness to cold smoke. In case of fire, poisoning by smoke is the main cause of death.

Made from galvanised steel and non-combustible board.

FSC-60 Fire damper cartridge classed EIS 60.

FSC-120 Fire damper cartridge classed EIS 120.

Accessories

/CIF/ Open / closed switches device on both blades.

Fixing

- 1) Mounting into the wall opening.

Specification Text

Supply and mounting of fire damper cartridge for circular duct classed EIS-60 in accordance to the European standard EN-13501-3 series **FSC-60 D.200**. Fire damper cartridge made from galvanised steel and non-combustible board. Thermal fusible link at 72°C.

An air-tightness joint prevents the propagation of smoke to low temperature, while the expanding joint is dilating to seal the damper.

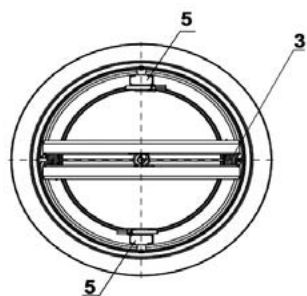
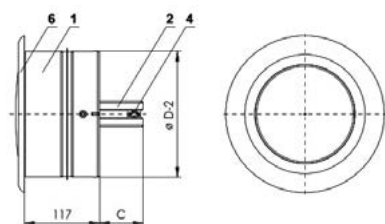
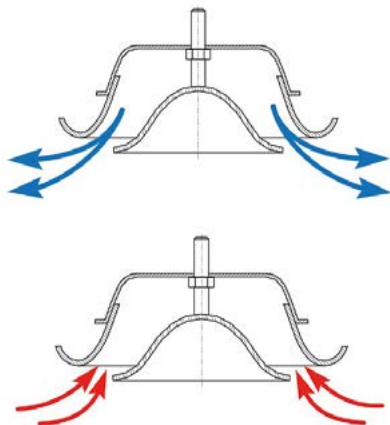
Manufacturer **MADEL**.

Diam. mm	FSC-60 eur	FSC-120 eur	FSC-60 /CIF/ eur	FSC-120 /CIF/ eur
100	49,25	68,55	92,48	111,78
125	52,14	75,19	95,37	118,42
160	57,90	87,47	101,13	130,70
200	64,01	101,70	107,24	144,92

Fire damper ventilation valves EIS-60 / EIS-120



Technical data



1. Casing
2. Sealing leaf
3. Actuating spring
4. Thermal fuse
5. CIF
6. Ventilation valve

Ø nominal	Kg	Aeff (m2)	C
100	0,64	0,003	17,5
125	0,85	0,006	30,2
160	1,2	0,0119	48
200	1,59	0,0209	68



Description

Fire damper cartridge equipped with a ventilation valve. They function as a separating element between two fire sectors and provide the same fire resistance as the structural elements of the compartments, limiting the risk of fire spreading inside the building. Fire damper cartridge closing through bimetallic fusible link 72°C. The assembly is to be installed on a constructive element (wall or slab), the ventilation valve must be placed at duct ends and the fire damper cartridge inside the ventilation duct, in the section of the structural element.

The closing blades are made of fiber plate and lined with intumescent material. The housing is entirely made of galvanized steel and welded together. Ventilation valve for supply / extract made of galvanized steel and painted in RAL9010.

FWC-EIS-60 Adjustable ventilation valve for supply / extract equipped with a cartridge EIS-60.

FWC-EIS-120 Adjustable ventilation valve for supply / extract equipped with a cartridge EIS-120.

Accessories

/CIF/ Open / closed switches device on both blades.

Fixing

- 1) Mounting into the wall opening.

Finish

R9010 Painted in white RAL 9010.

Specification Text

Supply and installation of a fire damper cartridge equipped with a ventilation valve, series **FWC-EIS-120 /CIF/ diam. 200** with spring driven automatic closing through bimetallic fusible link 72°C. To be mounted inside same diameter circular ventilation duct, with the ventilation valve to be mounted at duct ends. Tested and certified EIS 120 according to EN 13501-3 and with CE certification according to EN 15650. Damper casing made of galvanized steel and blades made of fire resistant asbestos free boards made of mineral fibers. Fusible link set for 72° C. With intumescent sealing in order to stop the propagation of fire. Include a ventilation valve for supply / exhaust and a double limit switch contacts. With all necessary elements for installation. Brand **MADEL**.

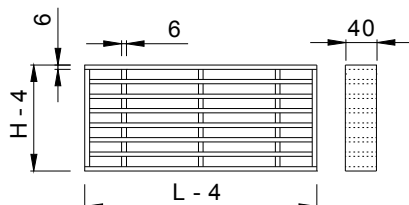
Diam. mm	FWC-60 eur	FWC-120 eur	FWC-60 /CIF/ eur	FWC-120 /CIF/ eur
100	69,43	93,32	112,66	136,54
125	80,42	103,48	123,65	146,71
160	92,82	122,41	136,05	165,63
200	111,52	149,21	154,74	192,43

Transfer expanding grilles EIS-60 / EIS-120

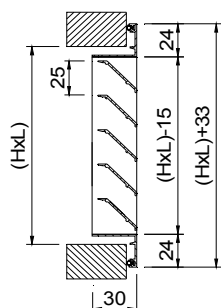


Technical data

FTR



DMT-AR (T)



Description

The intumescent FTR grilles allow natural ventilation through compartmentation elements. They expand at a temperature of 120°C, sealing the ventilation opening. Grille constructed from sodium silicate covered in PVC. Tested according to the general requirements of EN 1363-1, complying with the criteria of integrity against fire and thermal insulation for a time of 60/120 * minutes (EI 60 / EI 120) according to the test standard EN 1366-3.

FTR Rectangular expanding grille EI 60 or EI 120 according to the mounting system.

Accessories

TM Expanding filler tube of 310 ml.

DMT-AR (T) Return grille made from aluminium with fixed blades at 45°. Fixing by visible screws. More info at DMT series.

Fixing

- 1) **FTR** mounting into the wall opening for a resistance EI 60.
- 2) **FTR** + 2 un **DMT-AR (T)** mounting into the wall opening for a resistance EI 120

Specification text

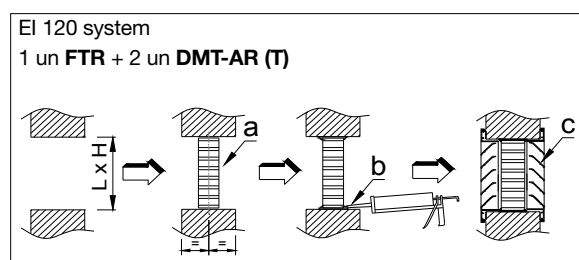
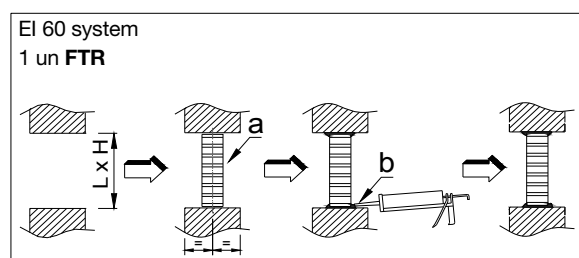
EI 60

Supply and mounting of expanding grille for ventilation through compartmentation elements EI 60 (integrity and insulation during 60 min) FTR series, dim. LxH, constructed from sodium silicate covered in PVC. **MADEL** brand.

EI 120

Supply and mounting of expanding grille for ventilation through compartmentation elements EI 120 (integrity and insulation during 120 min) FTR series + 2 units of **DMT-AR (T)** grilles, dim. LxH. FTR constructed from sodium silicate covered in PVC and DMT-AR series from aluminium. **MADEL** brand.

* Meets the criteria described by following the corresponding mounting system



- a- FTR grille.
b- Holes have to be plugged by expanding filler TM.
c- 2 units of DMT-AR (T) grilles.

L x H mm	FTR eur	A free m ²
100x100	44,95	0,006
200x100	61,40	0,012
150x150	66,08	0,014
300x150	90,66	0,028
200x200	89,18	0,025
400x200	137,27	0,050
300x300	149,95	0,056
600x300	241,09	0,112
400x400	224,75	0,100
500x500	320,37	0,156
600x600	438,02	0,224

(*)	eur
TM	21,05

Fire dampers monitoring and maintenance system

Technical data

FBOSS-LX



FBOSS-LT



POL895.11



Description

Fire damper monitoring and control system. Facilitates monitoring of damper status, thus enhancing facility safety. Simplifies maintenance operations recommended by EN 15650 (tests/inspections at regular intervals not exceeding 6 months).

The dampers are controlled via wired inputs or bus communications, with the ability to select one or more options simultaneously.

FBOSS-LX Controller (POL648.80/STD) with software for managing and maintaining up to 5 fire dampers. BACnet IP/MSTP, Modbus RTU/TCP communication, with integrated display.

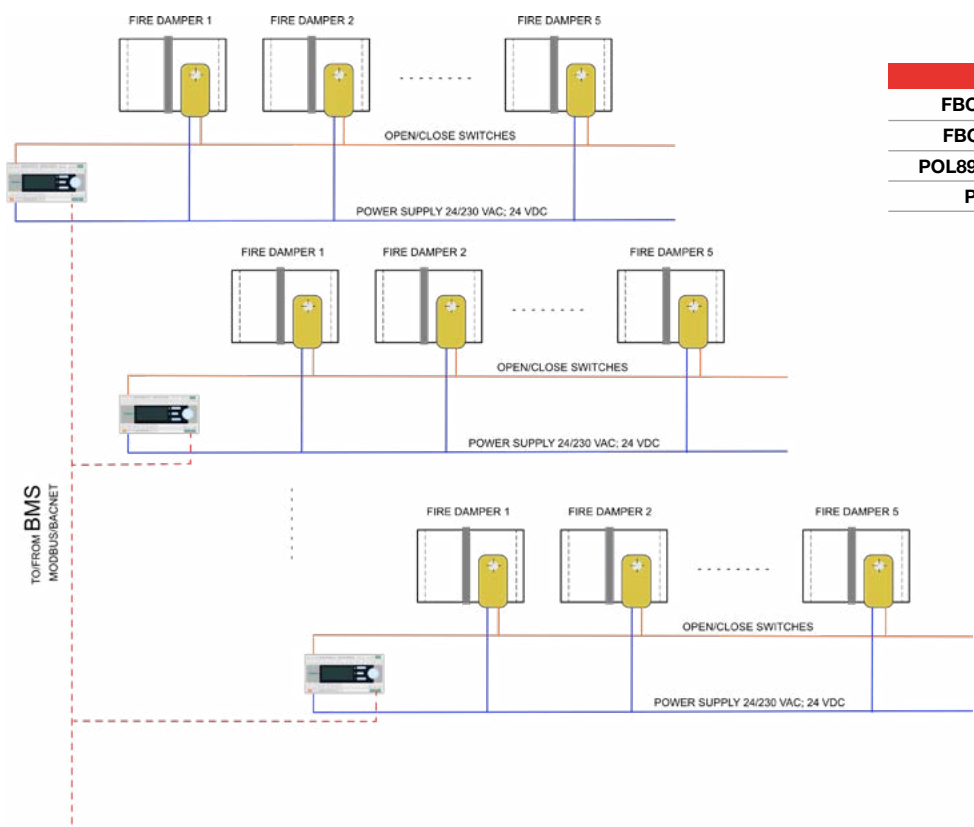
FBOSS-LT Controller (POL648.10/STD) with software for managing and maintaining up to 5 fire dampers. BACnet IP/MSTP, Modbus RTU/TCP communication, without integrated display.

Accessories

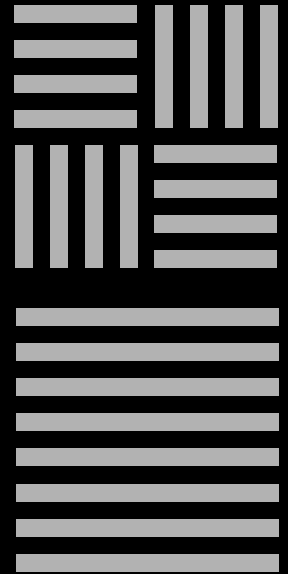
POL895.1/STD Remote control terminal/display. For use with FBOSS-LT.

PC63 Single-phase transformer, 230 VAC to 24 VAC. Powers the control unit and controls the dampers at 24 VAC.

FBOSS - TYPICAL INSTALLATION



	eur
FBOSS-LX	1080,00
FBOSS-LT	940,00
POL895.11/STD	391,00
PC63	88,00



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