



## VENTILATION GRILLES

UM  
SERIES

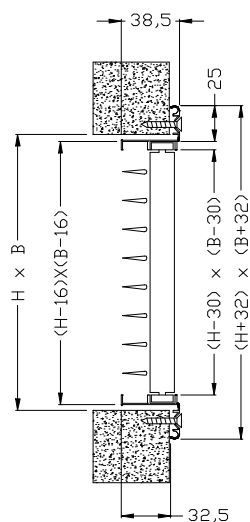
### OVERVIEW AND TECHNICAL DATA

#### CHARACTERISTICS :

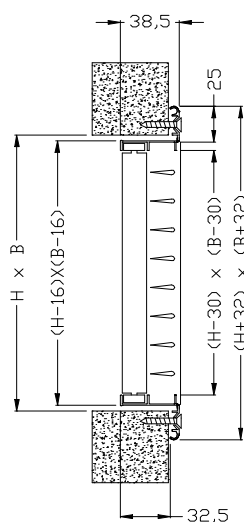
UM series ventilation grilles are completely adjustable air terminal devices with swinging blades which can be regulated one by one. These grilles can mount one or two lines of straight blades.

**Frame:** extruded aluminium, length 25 mm, rounded corners; it's constituted from 4 assembled parts. **Blades:** extruded aluminium with 20 mm as distance between the centres; the blades are pivoted on a self-locking nylon support fixed on the frame. **Transversal reinforcement:** foreseen only for grilles with size upper than 600 mm. **Damper:** galvanized sheet steel, contrast blade motion. **Mounting frame:** galvanized sheet steel suitable for installation with screws on frontal side or with clips. **Installation on wall:** by screws, by clips and mounting frame (without screws), with screws directly on the duct or on the wall, by clips or screws directly on the plenum. **Finishing:** anodized aluminium or painted aluminium with colour white RAL 9010 (epoxy powder treatment).

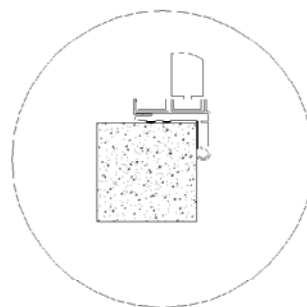
UM2V



UM2H

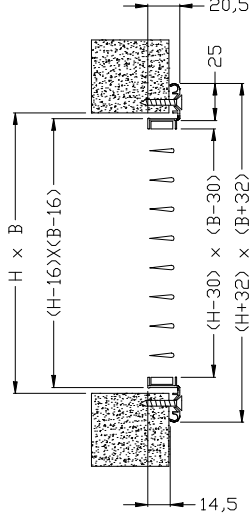


Mounting system by clips.

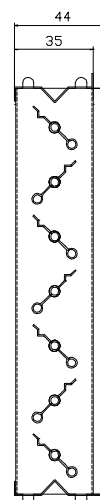
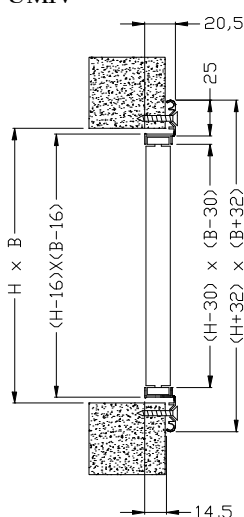


Contrast calibration damper.

UMIH



UMIV

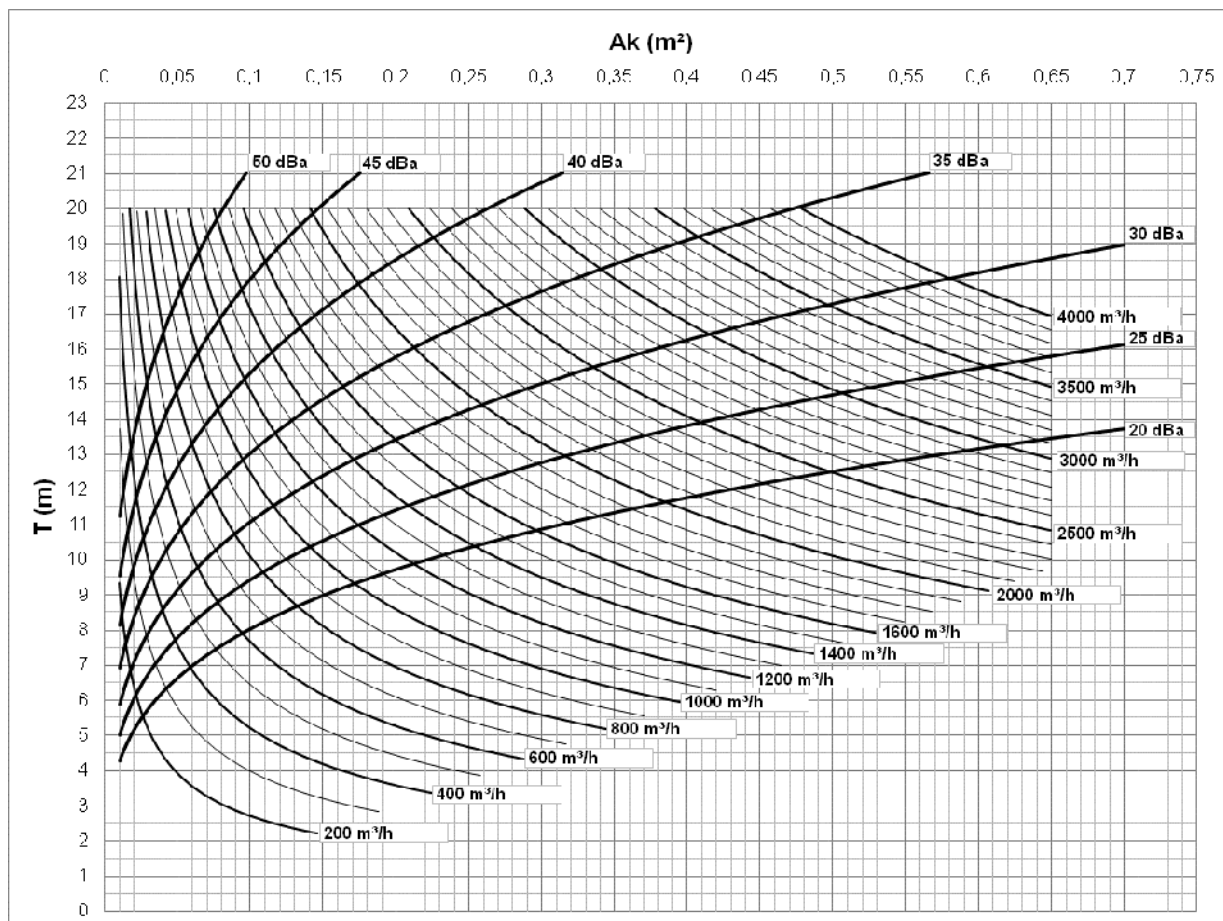




# VENTILATION GRILLES

UM  
SERIES

## PERFORMANCE



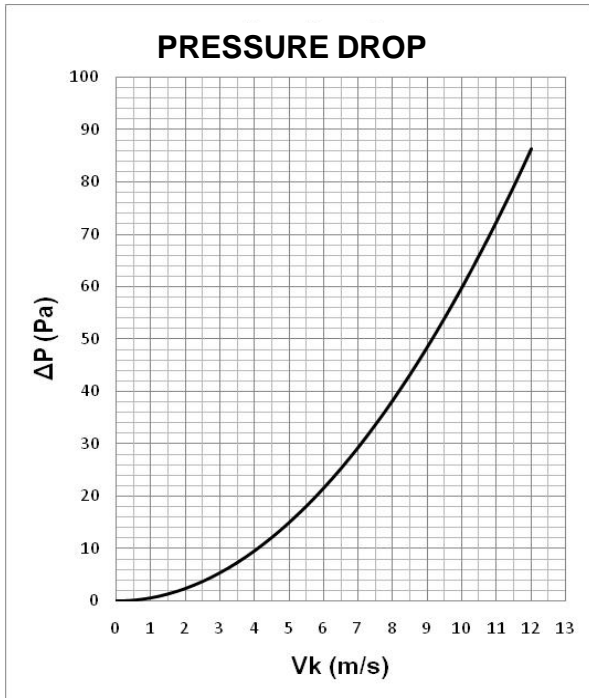
AIR PASSAGE SECTION $A_k$ (m <sup>2</sup> )											
HEIGHT	BASE										
	100	150	200	300	400	500	600	700	800	900	1000
100	0,0048	0,0082	0,0116	0,0185	0,0253	0,0322	0,0390	0,0459	0,0527	0,0596	0,0664
150	0,0082	0,0141	0,0200	0,0317	0,0434	0,0552	0,0669	0,0786	0,0904	0,1021	0,1138
200	0,0116	0,0200	0,0283	0,0449	0,0615	0,0781	0,0948	0,1114	0,1280	0,1446	0,1613
250	0,0151	0,0258	0,0366	0,0581	0,0796	0,1011	0,1226	0,1442	0,1657	0,1872	0,2087
300	0,0185	0,0317	0,0449	0,0713	0,0977	0,1241	0,1505	0,1769	0,2033	0,2297	0,2561
350	0,0219	0,0376	0,0532	0,0845	0,1158	0,1471	0,1784	0,2097	0,2410	0,2723	0,3036
400	0,0253	0,0434	0,0615	0,0977	0,1339	0,1701	0,2063	0,2424	0,2786	0,3148	0,3510
450	0,0288	0,0493	0,0698	0,1109	0,1520	0,1931	0,2341	0,2752	0,3163	0,3574	0,3984
500	0,0322	0,0552	0,0781	0,1241	0,1701	0,2160	0,2620	0,3080	0,3539	0,3999	0,4459
550	0,0356	0,0610	0,0865	0,1373	0,1882	0,2390	0,2899	0,3407	0,3916	0,4424	0,4933
600	0,0390	0,0669	0,0948	0,1505	0,2063	0,2620	0,3178	0,3735	0,4292	0,4850	0,5407



## VENTILATION GRILLES

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### PERFORMANCE



Aerodynamic data measured in isothermic conditions in accordance with international standards:

ISO 5219 1984: *Air distribution and air diffusion - Laboratory. Aerodynamic testing and rating of air terminal devices.*

Measured data with blades perpendicular and without damper. For other conditions apply the corrections specified in the table

Data measured in reverberation chamber in accordance with international standards:

ISO 3741 1999: *Acoustic - determination of sound power levels of noise sources using sound pressure - Precision methods for reverberation rooms*

ISO 5135 1997: *Acoustic - determination of sound power levels of noise from air-terminal devices ; air terminal units; dampers and valves by measurement in a reverberation room.*

The data presented does not consider the attenuation given by the area of installation. This attenuation is normally between 6 and 10 dBA and is determined by the room size, the shape of the environment and the interior features.

Vk= air velocity in the air section Ak

Vk= air flow (m<sup>3</sup>/h)/3600/Ak (m<sup>2</sup>)

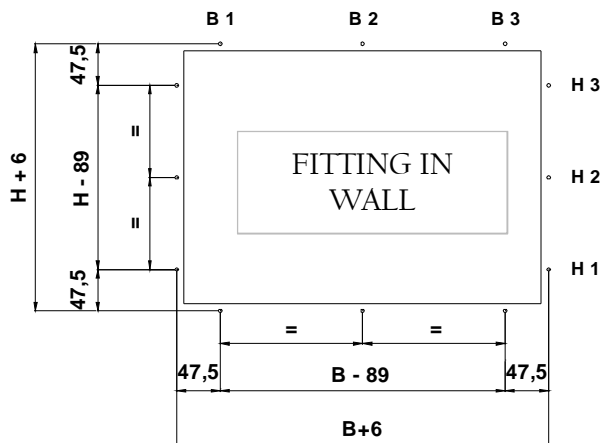
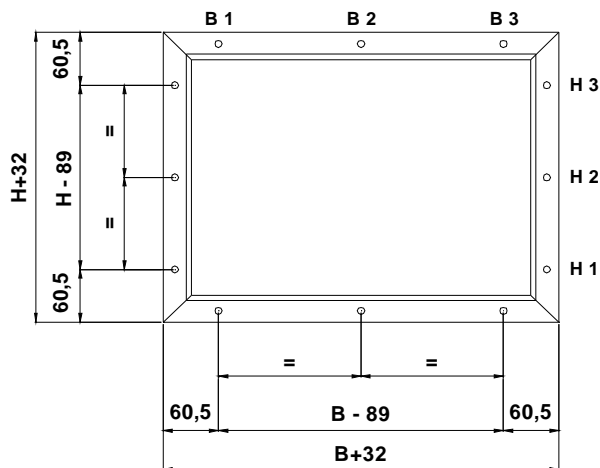
deflection		
Angle	T	Lw
20	x 0,94	+ 3dBa
40	x 0,77	+ 6dBa
55	x 0,57	+ 7dBa



# VENTILATION GRILLES

UM  
SERIES

## TECHNICAL CHARACTERISTICS



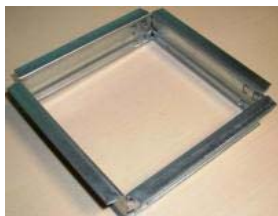
### REFERENCE TO NOMINAL SIZES OF GRILLE

B=BASE

H= HEIGHT

NECESSARY HOLES							
B	B1	B2	B3	H	H1	H2	H3
100				100		X	
200				200		X	
300				300		X	
400				400	X		X
				500	X		X
				600	X		X
				700	X		X
				800	X	X	X
				900	X	X	X
				1000	X	X	X
				1100	X	X	X
				1200	X	X	X
				1300	X	X	X
				1400	X	X	X

NECESSARY HOLES							
B	B1	B2	B3	H	H1	H2	H3
500	X		X	100			
600	X		X	200			
700	X		X	300			
800	X	X	X	400			
900	X	X	X	500			
1000	X	X	X	600		X	
1100	X	X	X	700		X	
1200	X	X	X	800		X	
1300	X	X	X	900		X	
1400	X	X	X	1000	X	X	X
1500	X	X	X	1100	X	X	X
				1200	X	X	X
				1300	X	X	X
				1400	X	X	X
				1500	X	X	X



## COUNTERFRAMES FOR SUPPLY AND RETURN GRILLES

UTC  
SERIES

### OVERVIEW

#### OVERVIEW

The UTC series counterframes used for supply and return grilles are a strong frame on which the fixing clips can rest. They are required if the grilles need to be frequently removed for cleaning, inspection, filter changing and other similar jobs. The UTC counterframes can be installed both next to steel ducts and on masonry walls.

Bendable parts are placed inside the fixing agent of the wall and a frame that will be completely hidden from the frame of the grille itself, for fixing by means of screws or rivets to the duct wall.

The use of the counterframe on the side of the steel duct allows the use of grilles with fixing clips rather than with screws, therefore allowing to undertake jobs that require removing and reinstalling the grille with the up most simplicity without the need of tools.

The use of the counterframe on masonry walls allows for an almost unlimited number of removals and replacements of the grille without ever damaging or wearing-out the border of the hole made in the wall. The position of the grille can therefore be maintained, precise and secure.

#### TECHNICAL CHARACTERISTICS

The UTC Series counterframes are made of four separate parts, of galvanized carbon steel sheet, fixable to each other without the need of tools. The parts are completely interchangeable as the particular system of connection eliminated the need to distinguish between horizontal and vertical parts and with between left and right parts.

As shown in the illustration, the necessary space for the counterframe needs to be 5mm more than the nominal size of the grille.

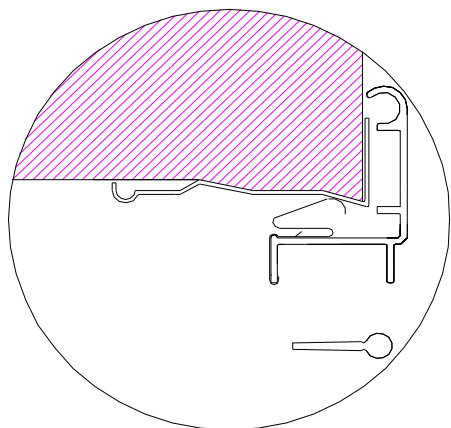
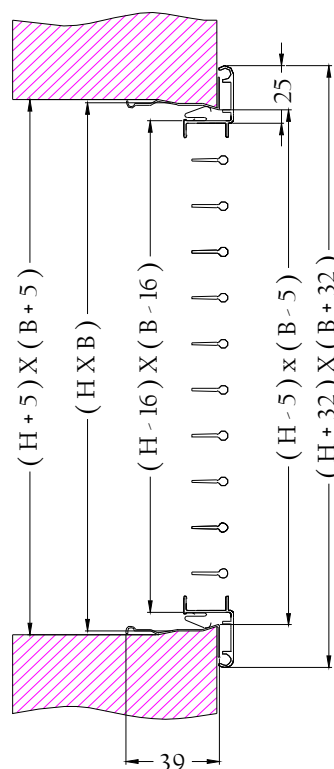
The parts are supplied unassembled, the complete interchangeability helps to easily manage the parts kept in stock.

#### AVAILABLE SIZES

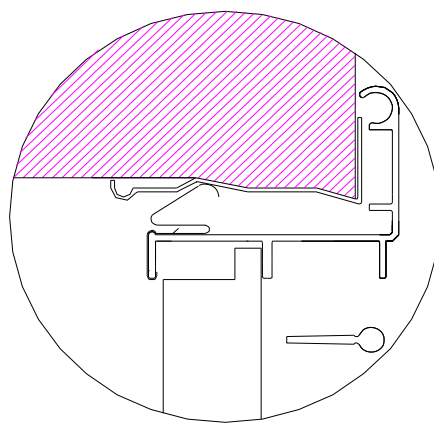
The available sizes for each part range from 100mm up to a maximum of 1400mm, in multiples of 50mm.

Special sizes are also available on request.

By composing the various sizes, all the necessary sizes are achievable.



Mounting with single deflection grille



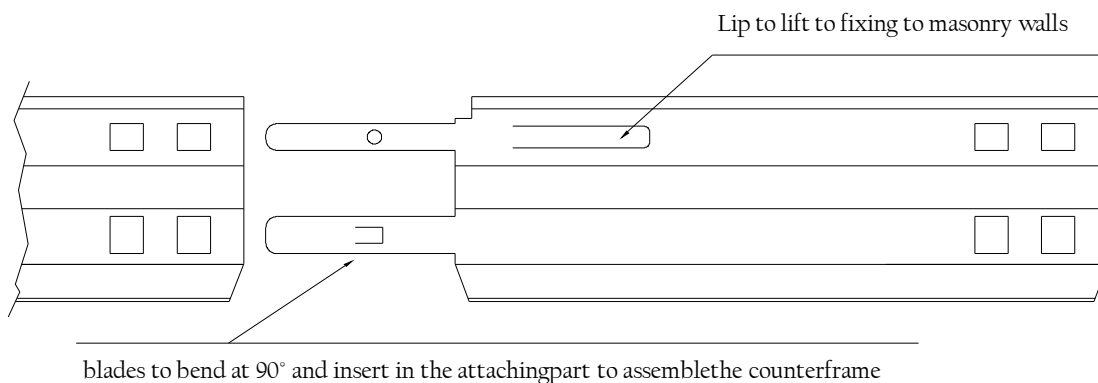
Mounting with double deflection grille



## COUNTERFRAMES FOR SUPPLY AND RETURN GRILLES

UTC  
SERIES

### OVERVIEW



#### Detail of the fixing method between parts

This system allows to quickly assemble the counterframe, even during the construction phase.

CODES	
UTC	XXX
part counterframe	length (mm)

#### Example:

To order a counterframe for a 400x200mm grille, request:

UTC-400 - 2 pieces

UTC-200 - 2 pieces

To order a counterframe for a 300x300 grille, request:

UTC-300 - 4 pieces

COUNTERFRAME SIZES WITH AVAILABLE PARTS KEPT IN STOCK															
1000															
900															
800															
700															
600															
563															
500															
450															
400															
350															
300															
250															
200															
150															
100															
	100	150	200	250	300	350	400	450	500	563	600	700	800	900	1000

BASE B

The 563x563 size is for grilles with a 595x595mm outside frame measurement, used for modular counterceilings.



# PLENUM FOR VENTILATION GRILLES

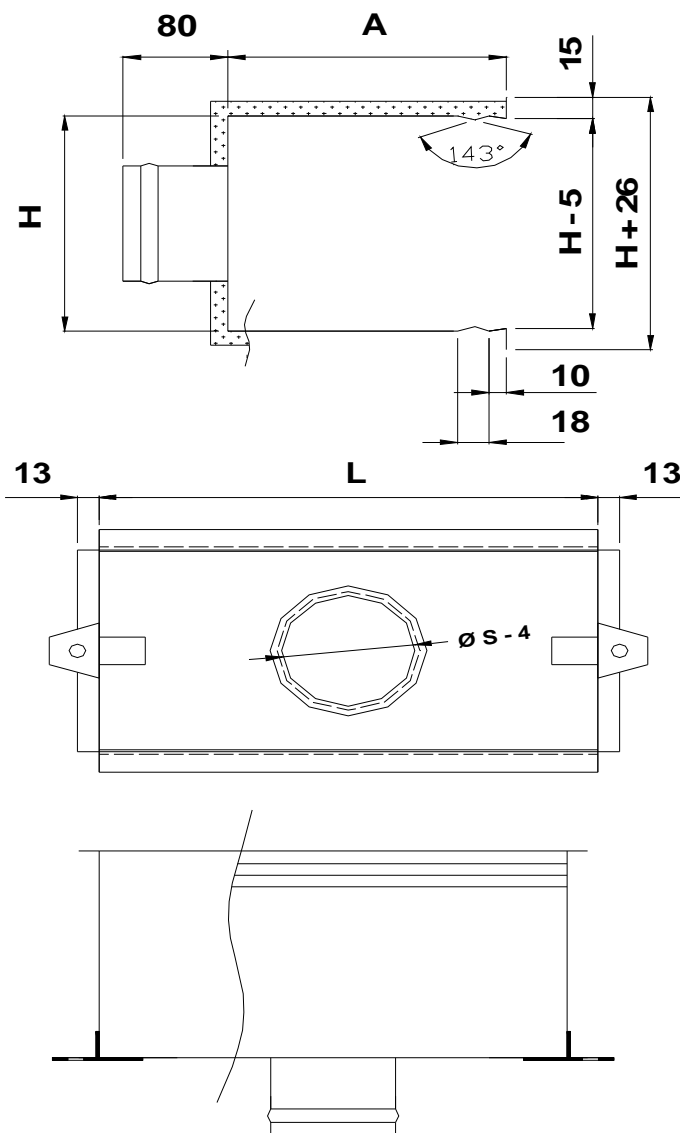
PP 30  
SERIES

## TECHNICAL CHARACTERISTICS

PP 30				
L	H	A	N°	S
200	100	140	1	80
300		140	1	80
400		140	1	80
500		140	2	80
600		140	2	80
700		140	2	80
800		140	2	80
1000		140	2	80
200	150	180	1	127
300		180	1	127
400		180	1	127
500		180	2	127
600		180	2	127
700		180	2	127
800		180	2	127
900		180	2	127
1000		180	2	127
200		200	220	1
300	220		1	150
400	220		1	180
500	220		1	180
600	220		2	150
700	220		2	150
800	220		2	150
900	220		2	180
1000	220		2	180
200	250		220	1
300		220	1	200
400		220	1	200
500		220	1	200
600		220	2	150
700		220	2	150
800		220	2	150
900		220	2	180
1000		220	2	180
300		300	260	1
400	260		1	250
500	260		1	250
600	260		2	160
700	260		2	160
800	260		2	160
900	260		2	200
1000	260		2	200

400		260	1	350
500		260	1	350
600		260	2	160
700	400	260	2	160
800		260	2	160
900		260	2	200
1000		260	2	200
515	515	150	1	250
563*	563	270	1	350

\*Plenum for grilles with external frame dimensions 595x595





# PLENUM FOR VENTILATION GRILLES

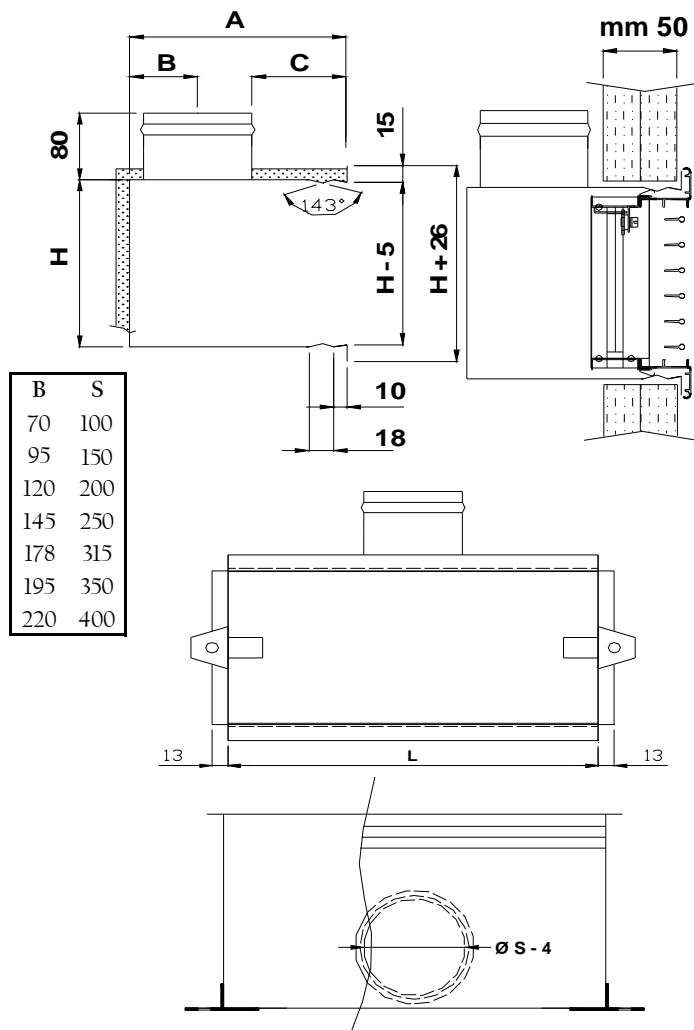
PP 40  
SERIES

## TECHNICAL CHARACTERISTICS

PP 40						
L	H	A	B	C	N°	S
200	100	200	70	80	1	100
300		250	95	80	1	150
400		250	95	80	1	150
500		300	120	80	1	200
600		300	120	80	1	200
700		350	145	80	1	250
800		350	145	80	1	250
1000		450	195	80	1	350
200	150	250	95	80	1	150
300		300	120	80	1	200
400		300	120	80	1	200
500		350	145	80	1	250
600		350	145	80	1	250
700		350	145	80	1	250
800		415	178	80	1	315
900		415	178	80	1	315
1000	415	178	80	1	315	
200	200	250	95	80	1	150
300		250	95	80	1	150
400		350	145	80	1	250
500		350	145	80	1	250
600		415	178	80	1	315
700		415	178	80	1	315
800		415	178	80	1	315
900		450	195	80	1	350
1000	450	195	80	1	350	
200	250	300	120	80	1	200
300		300	120	80	1	200
400		350	145	80	1	250
500		350	145	80	1	250
600		415	178	80	1	315
700		415	178	80	1	315
800		415	178	80	1	315
900		450	195	80	1	350
1000	450	195	80	1	350	
300	300	350	145	80	1	250
400		415	178	80	1	315
500		450	195	80	1	350
600		450	195	80	1	350
700		450	195	80	1	350
800		450	195	80	1	350
900		500	220	80	1	400
1000		500	220	80	1	400

400		450	195	80	1	350
500		450	195	80	1	350
600		450	195	80	1	350
700	400	450	195	80	1	350
800		450	195	80	1	350
900		500	220	80	1	400
1000		500	220	80	1	400
515	515	320	145	50	1	250
563*	563	450	195	80	1	350

\*Plenum for grilles with external frame dimensions 595x595





## VENTILATION GRILLES IN ABS

TE-BA  
SERIES

MATERIALS  
ASSEMBLY DIMENSIONS

### Overview :

The TE-BA grille is a double layer of adjustable blades. Each layer can be positioned separately (horizontally or vertically) and adjusted according to specific project requirements. Built specifically for both wall and ducts installations, recognisable from the single structure of the body of the grille made entirely in ABS class V0 RAL 9010. The drip design of the blades with a 20mm pitch are also made from ABS class V0 RAL 9010 and are very easily adjustable simultaneously.

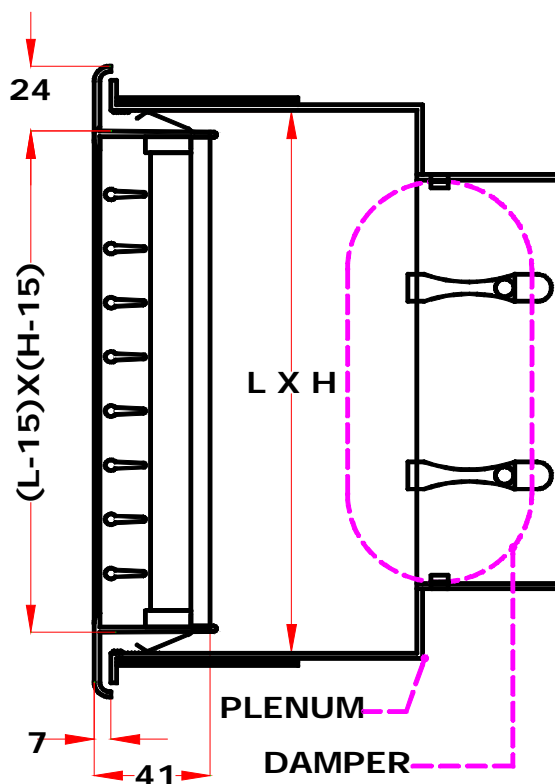
Studied to be used in conjunction with the PAaxb plenum, fixed by clips but can also be fitted to a standard steel plenum.

### Accessories :

Plenum in ABS complete with damper (refer to table TE-PA for details).

### Installation :

Fixing to duct using clips. Wall mounting using clips on plenum TE-PA.





## VENTILATION GRILLES IN ABS

TE-BA  
SERIES

### PERFORMANCE

$L \times H$ (mm)		Air Flow	Throw T (m)	$\Delta ps$ (Pa)	Lp dB(A)	Front section (m <sup>2</sup> )
200	100	100	2,6	1,6	<20	0,012
300	100		2,2	0,6	<20	0,018
200	100	200	5,2	6,4	30	0,012
300	100		4,3	2,5	<20	0,018
400	100		3,8	1,6	<20	0,024
300	150		3,6	0,9	<20	0,032
300	100	300	6,5	5,7	30	0,018
400	100		5,7	3,5	24	0,024
300	150		5,4	2,0	<20	0,032
400	150		4,8	1,2	<20	0,041
400	100	400	7,6	6,2	33	0,024
300	150		7,2	3,5	25	0,032
400	150		6,4	2,1	<20	0,041
500	150		5,8	1,2	<20	0,053
400	200		5,6	1,0	<20	0,059
300	150		500	9,0	5,4	32
400	150	8,0		3,2	25	0,041
500	150	7,2		1,9	<20	0,053
600	150	6,7		1,3	<20	0,064
400	200	8,4		1,6	<20	0,059
500	200	6,4		1,0	<20	0,076
400	150	600	9,5	4,6	30	0,041
500	150		8,7	2,8	24	0,053
600	150		8,0	1,9	20	0,064
400	200		8,4	2,3	22	0,059
500	200		7,6	1,4	<20	0,076
600	200		7,0	0,9	<20	0,093

The data in the above table refer to the following conditions:

Terminal velocity  $V_t=0,25$  m/s,  $\Delta T= -10^\circ\text{C}$ , distance from ceiling 300mm,

indicated pressure: static pressure  $\Delta ps$  (Pa) with 100% opened damper.

Sound: Sound pressure level Lp dB(A) with absorption equal to 10dB of the chamber

The throws indicated for a blade angel of  $\alpha^\circ=0$ . For installation distances between 400mm and 600mm, the blades must be angled at  $\alpha^\circ=15^\circ$  towards the ceiling.

Correction coefficient for the throw :

With  $\Delta T 0^\circ\text{C}$  isothermal condition, multiply the throw by 1,1;

With  $\Delta T +10^\circ\text{C}$  isothermal condition, multiply the throw by 1,2.

The throws change in relation to the diffusion angle on the blades.

For angles different to  $0^\circ$ , multiply the throw by the value for k in the table.

$\alpha$	k
15	0,97
45	0,71
60	0,50



## VENTILATION GRILLES IN ABS

TE-BA  
SERIES

### PERFORMANCE

$L \times H$ (mm)		Portata (m <sup>3</sup> /h)	Lancio T (m)	$\Delta ps$ (Pa)	Lp dB(A)	Sezione (m <sup>2</sup> )
400	150	700	11,1	6,3	35	0,041
500	150		10,1	3,8	29	0,053
600	150		9,3	8,1	24	0,064
400	200		9,8	3,1	26	0,059
500	200		8,9	1,9	20	0,076
600	200		8,2	1,2	<20	0,093
500	150	800	11,5	5,0	33	0,053
600	150		9,3	3,4	28	0,064
400	200		11,2	4,0	30	0,059
500	200		10,2	2,4	24	0,076
600	200		9,4	1,6	<20	0,093
600	150	900	12,0	4,3	31	0,064
400	200		12,6	5,1	33	0,059
500	200		11,4	3,1	27	0,076
600	200		10,6	2,0	22	0,093
600	150	1000	13,3	5,3	34	0,064
400	200		14,0	6,3	37	0,059
500	200		12,7	3,8	30	0,076
600	200		11,7	2,5	25	0,093
500	200	1100	14,0	4,6	33	0,059
600	200		11,7	3,0	28	0,076
500	200	1200	15,2	5,5	36	0,076
600	200		14,1	3,6	30	0,093
500	200	1300	16,5	6,4	38	0,076
600	200		15,2	4,2	33	0,093
500	200	1400	17,8	7,5	41	0,076
600	200		16,4	4,9	35	0,093

The data in the above table refer to the following conditions:

Terminal velocity  $V_t=0,25$  m/s,  $\Delta T=-10^\circ\text{C}$ , distance from ceiling 300mm,

indicated pressure: static pressure  $\Delta ps$  (Pa) with 100% opened damper.

Sound: Sound pressure level Lp dB(A) with absorption equal to 10dB of the chamber

The throws indicated for a blade angel of  $\alpha^\circ=0$ . For installation distances between 400mm and 600mm, the blades must be angled at  $\alpha^\circ=15^\circ$  towards the ceiling.

Correction coefficient for the throw :

With  $\Delta T 0^\circ\text{C}$  isothermal condition, multiply the throw by 1,1;

With  $\Delta T +10^\circ\text{C}$  isothermal condition, multiply the throw by 1,2.

The throws change in relation to the diffusion angle on the blades.

For angles different to  $0^\circ$ , multiply the throw by the value for k in the table.

$\alpha$	k
15	0,97
45	0,71
60	0,50



## VENTILATION GRILLES IN ABS

TE-BA  
SERIES

### CODES

L x H (mm)		CODE
200	100	TE-BAA600100
300	100	TE-BAA300100
400	100	TE-BAA400100
300	150	TE-BAA300150
400	150	TE-BAA400150
500	150	TE-BAA500150
600	150	TE-BAA600150
400	200	TE-BAA400200
500	200	TE-BAA500200
600	200	TE-BAA600200



## INSULATED PLENUM IN ABS WITH ADJUSTABLE CONNECTOR

TE-PAB  
SEIRES

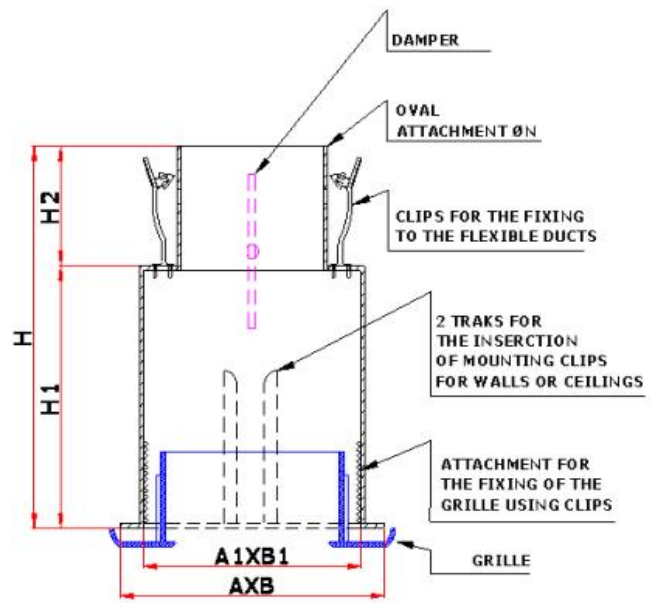
MATERIALS  
MANUFACTURING DIMENSIONS



The insulated TE-PAB series plenum is a special patented model in ABS class V0, with quick connector for flexible ducts, adjustable in height and complete of regulation damper. Its particular design, allows to rapidly fit with a simple action the flexible ducts of different diameters blocking them with special clips. The TE-PAB plenum is an alternative to the traditional ones in galvanized steel sheets and thanks to the regulation of the connector, enables the use of one single type of plenum for grille size. The plenum disposes of a butterfly damper so as to easy adapt to the size of the connector previously chosen. The presence of guides for the use of clips for fitting to walls or ceilings and its reduced weight, make the TE-PAB an ideal product for every type of installation.

### Materials

Standard Plenum TE-PAB: In ABS. Regulation damper: In abs.



Connector regulation system



Adaptable damper

Model	Ø N	AXB	A1XB1	H	H1	H2
TE-PAB-200100	125	125x223	102x201	160	110	50
TE-PAB-300100	160-200	125x323	102x301	160	110	50
TE-PAB-400100	160-200	125x423	102x401	160	110	50
TE-PAB-300150	160-200	175x323	152x301	160	110	50
TE-PAB-400150	160-200-250	175x423	152x401	160	110	50
TE-PAB-500150	160-200-250	175x523	152x501	160	110	50
TE-PAB-600150	160-200-250	175x623	152x601	160	110	50
TE-PAB-400200	200-250	225x423	202x401	160	110	50
TE-PAB-500200	200-250	225x523	202x501	160	110	50
TE-PAB-600200	200-250	225x623	202x601	160	110	50



## CONTROL DAMPERS

SC  
SERIES

### OVERVIEW TECHNICAL CHARACTERISTICS

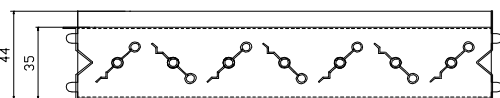
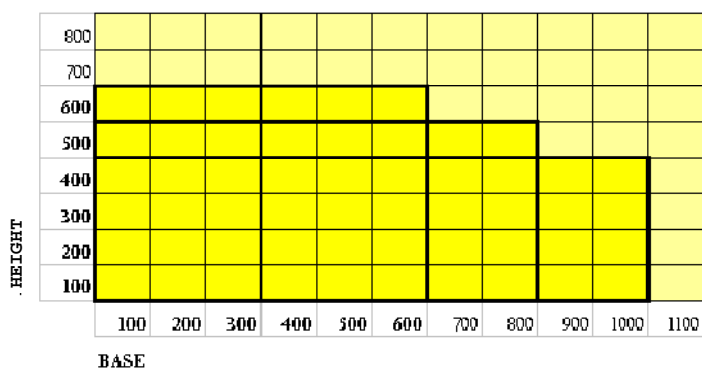
#### OVERVIEW AND CHARACTERISTICS :

The contrast control dampers of SC series can be fitted to UM series inlet grilles, UP series outlet grilles, and GI series industrial grilles. They are held in place by special patented clips, designed both for fitting the damper to the grille and for fitting it on a false frame.

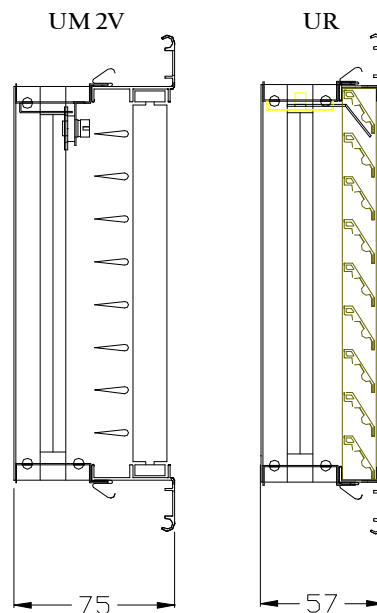
The SC series dampers are made entirely of galvanised steel and have a mechanism for moving and closing all the blades simultaneously.

This mechanism is a simple longitudinal plate that links all the blades, and can be removed by unscrewing a nut using a screwdriver. The careful design, precise assembly, and the quality of the materials used, make this an economical, practical, and efficient component.

Contrast control damper- dimensions that can be created in a single solution

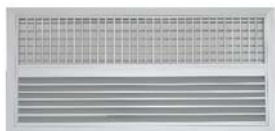


Contrast control damper - overall dimensions for UM2V and UR



Contrast control damper -detail of patented fixing clips





## VENTILATION GRILLE COMBINED WITH EXTRACT GRILLE

UMR  
SERIES

### OVERVIEW TECHNICAL CHARACTERISTICS

#### OVERVIEW AND CHARACTERISTICS :

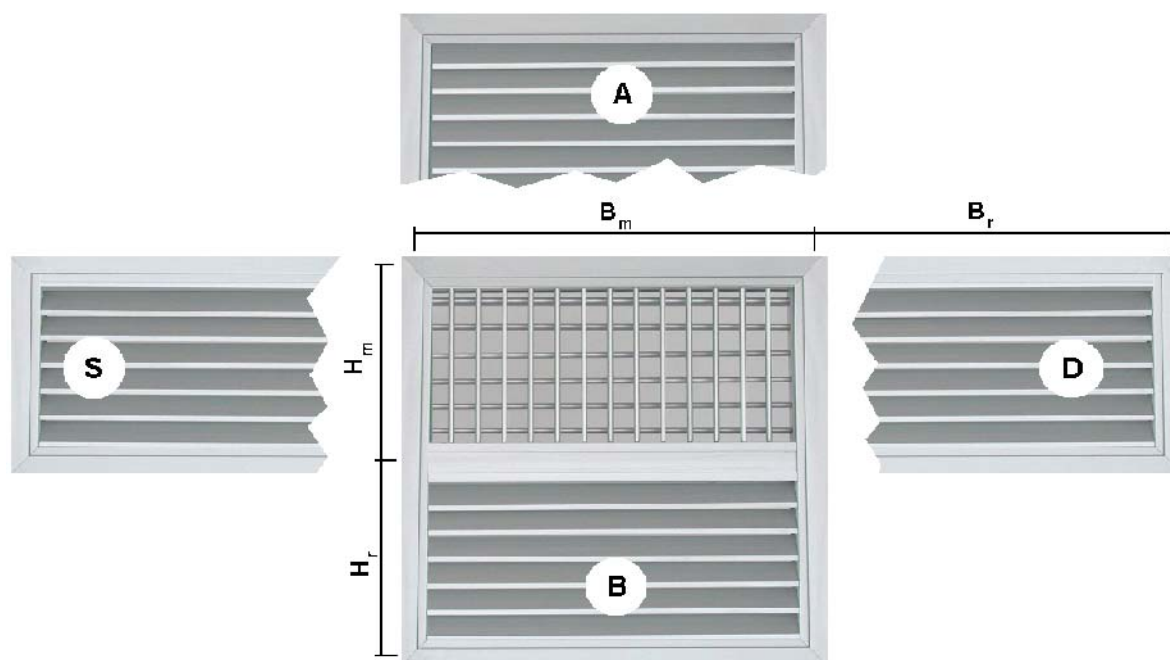
Also the grilles UMR belong to the series UM. These units are composed by a double or single deflection grille with adjustable blades and an extract grille with fixed blades mounted on the same frame.

The grilles UMR are used in those applications, in which the supply and in-take actions are converged on the same opening. Using the type of grilles series UMR can help to avoid difficulties, waste of time and additional work during the installation. The construction modality allows to meet all construction and size requirements of the customers.

For the characteristics please see pages of this catalogue referred to UM ventilation grilles and UR extract grilles.

#### CONSTRUCTIONS :

The possibilities of the construction make refer to all the various models of UM (double or single deflection with horizontal or vertical frontal line) and the position of the extract grille UR (high A, down B, right D, left S) on the ventilation grille. The dimensions of the two units (base x height / bases x height) give more detailed information which could be necessary for the construction.



UM	Ventilation grille
1 / 2	1 / 2 blades line
V / H	Vertical / horizontal frontal line
R	Extract grille
A / B / D / S	Position of the extract grille
$B_m \times (H_m + H_r)$	Sizes for constructions A / B
$(B_m + B_r) \times H_m$	Sizes for constructions D / S

Example: UM 2V RD (300+500)x200  
Double deflection grille- vertical frontal line- with extract grille on the right side. Nominal sizes of the ventilation grille 300x200, of the extract

