



## BMC GRILLES FOR CIRCULAR DUCT

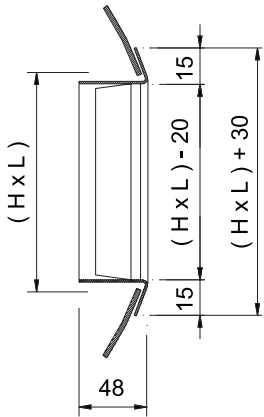
**MADEL®**

The **BMC** series grilles are designed to be used in air-conditioning, ventilation, and heating.

The grilles are placed directly in circular ducts.

The direction of the blades can be altered, making it possible to graduate the extent, the height and the width of the air stream.

## BMC



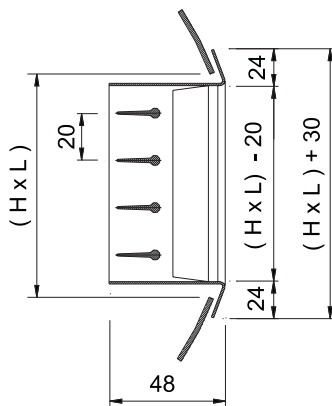
Dia conducto Dia Duct	H
150 - 400	75
300 - 900	125
600 -1600	225

## CLASSIFICATION

**BMC** Single deflection grilles with moveable blades parallel to the shorter side of the grille.

**CMC** Double deflection grilles with moveable blades parallel to the shorter side in front and parallel to the longer side rear.

## CMC



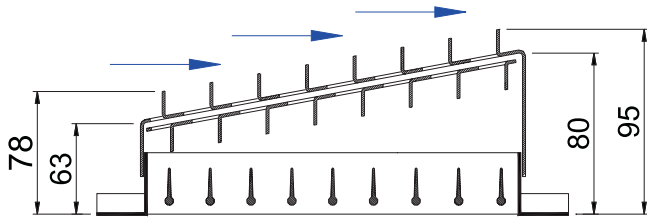
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## MATERIAL

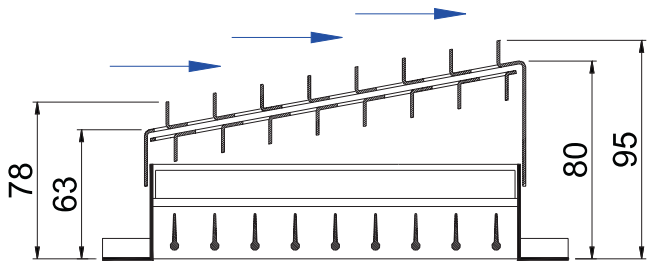
Grilles constructed in galvanised steel.

All the grilles are provided with a seal on the back of the frame in order that the perimeter in contact is airtight.

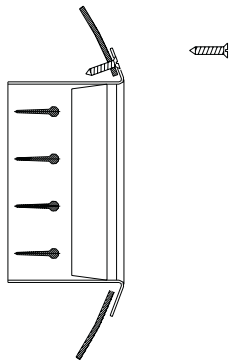
## BMC + SD



## CMC + SD



## (T)



## ADDITIONAL ACCESSORIES

**SD** Damper (angled slide cover) for the air flow. Operated by sliding plates with superimposed windows. The damper is held in place by “S” springs.

Constructed in galvanised steel.

## FIXING SYSTEMS

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

## FINISHES

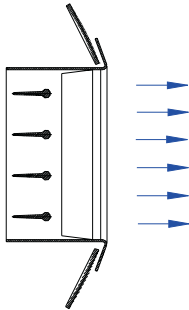
**M9006** Lacquer in metallic grey colour, similar to RAL 9006.

**R9010** Lacquer in white colour RAL 9010.

**M9016** Lacquer in white colour similar to RAL 9016.

**RAL...** Lacquer in other colours (RAL specifications).

## BMC SERIES



### RECOMMENDED VELOCITY.

Vmin m/s	Vmax m/s
2	4

Determination of air flow.  
Measuring the  $V_f$  in different points of the grille, we find the  $V_{fmed}$ .

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

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

### CORRECTION FACTOR FOR $L_{wa1}$ .

$A_{free}$ m <sup>2</sup>	0,01	0,02	0,05
$L_{wa1}(kf)$	-9	-6	-3

Weighted noise level related to  $A_{free} = 0,1\text{m}^2$ .

$$L_{wa} = L_{wa1} + K_f$$

### CORRECTION FACTOR OF PRESSURE LOSS FOR DIFFERENT BLADES POSITIONS.

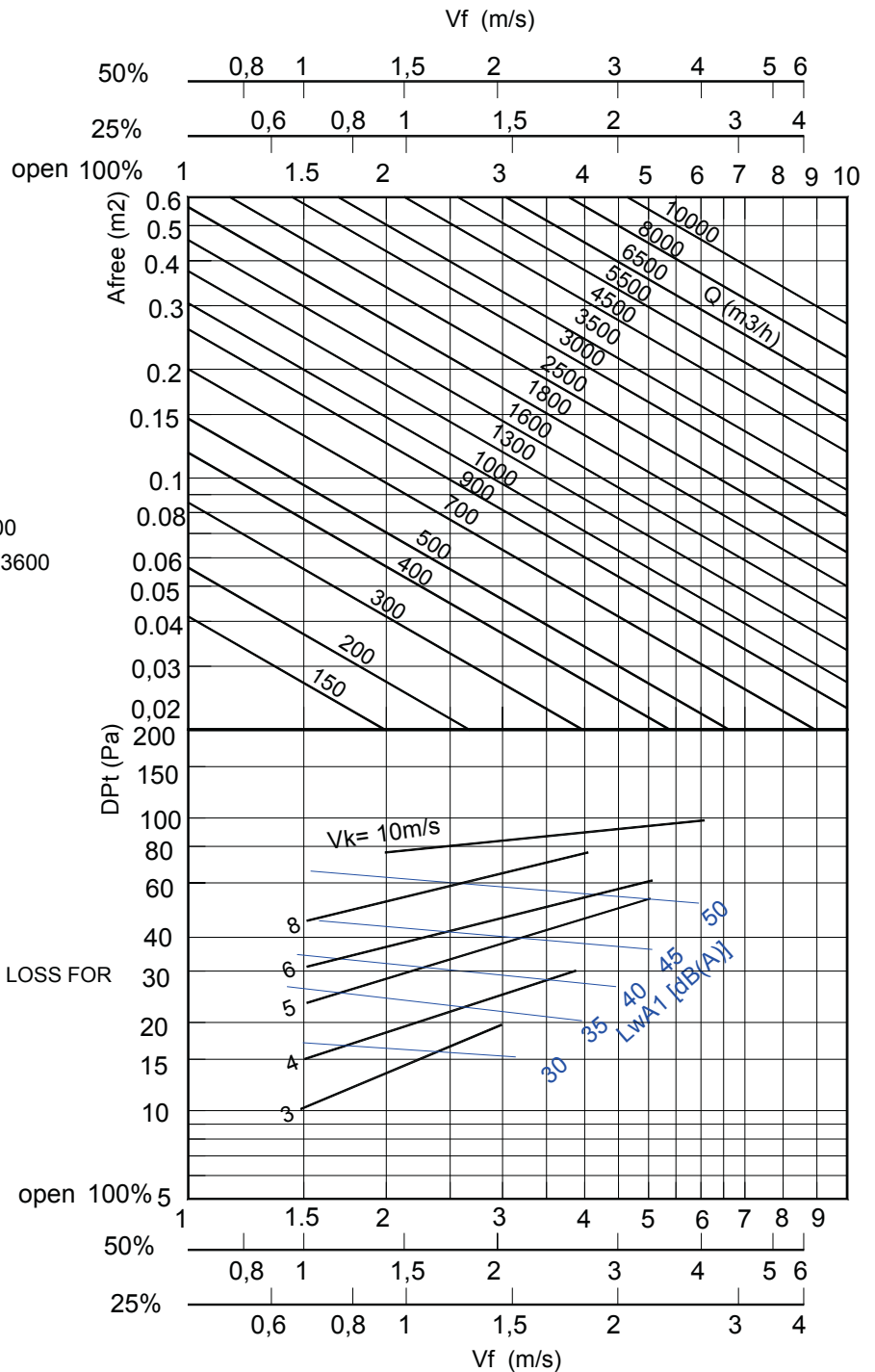
	0°	22°	45°
$K_p$	1	1,28	1,4

$$DpT' = DpT \cdot K_p$$

### FREE FACE AREA m<sup>2</sup>.

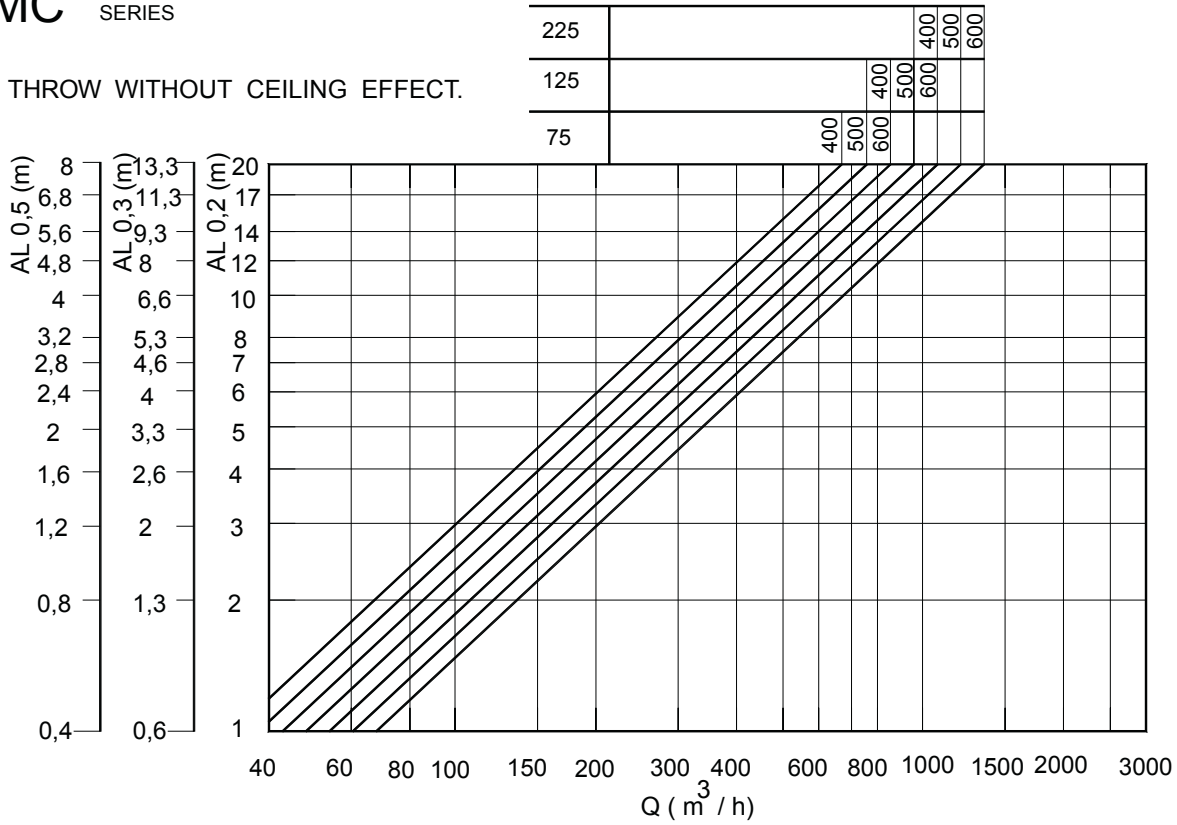
H \ L	400	500	600
75	0,016	0,020	0,025
125	0,031	0,039	0,047
225	0,060	0,076	0,087

### FREE VELOCITY, PRESSURE LOSS AND SOUND POWER LEVEL.



## BMC SERIES

THROW WITHOUT CEILING EFFECT.



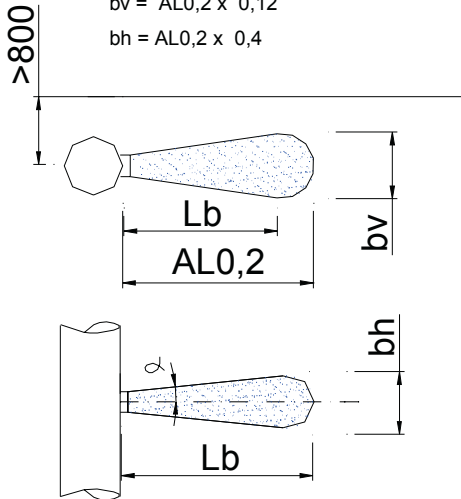
POSITION OF BLADES 0°  
WITHOUT CEILING EFFECT.

$$AL_{0,2}$$

$$L_b = AL_{0,2} \times 0,53$$

$$b_v = AL_{0,2} \times 0,12$$

$$b_h = AL_{0,2} \times 0,4$$



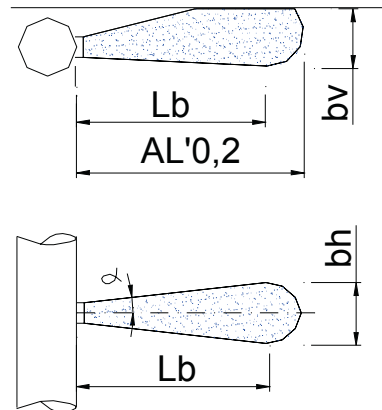
POSITION OF BLADES 0°  
WITH CEILING EFFECT.

$$AL'_{0,2} = AL_{0,2} \times 1,33$$

$$L_b = AL_{0,2} \times 0,7$$

$$b_v = AL_{0,2} \times 0,106$$

$$b_h = AL_{0,2} \times 0,53$$



CORRECTION FACTOR FOR POSITION OF BLADES.

$$AL_{0,2}(22^\circ) = AL_{0,2} \times 0,8$$

$$AL_{0,2}(45^\circ) = AL_{0,2} \times 0,5$$

$$L_b(22^\circ) = AL_{0,2} \times 0,53$$

$$L_b(45^\circ) = AL_{0,2} \times 0,33$$

$$b_v(22^\circ) = AL_{0,2} \times 0,096$$

$$b_v(45^\circ) = AL_{0,2} \times 0,06$$

$$b_h(22^\circ) = AL_{0,2} \times 0,48$$

$$b_h(45^\circ) = AL_{0,2} \times 0,6$$

CORRECTION FACTOR FOR POSITION OF BLADES.

$$AL_{0,2}(22^\circ) = AL_{0,2} \times 1,064$$

$$L_b(45^\circ) = AL_{0,2} \times 0,66$$

$$L_b(22^\circ) = AL_{0,2} \times 0,7$$

$$L_b(45^\circ) = AL_{0,2} \times 0,44$$

$$b_v(22^\circ) = AL_{0,2} \times 0,08$$

$$b_v(45^\circ) = AL_{0,2} \times 0,054$$

$$b_h(22^\circ) = AL_{0,2} \times 0,64$$

$$b_h(45^\circ) = AL_{0,2} \times 0,798$$