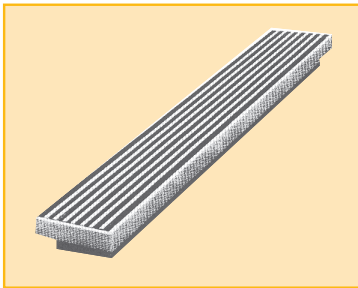


# BAR GRILLE

## TYPE: FLBG200 SERIES



### Floor Linear Bar Grilles

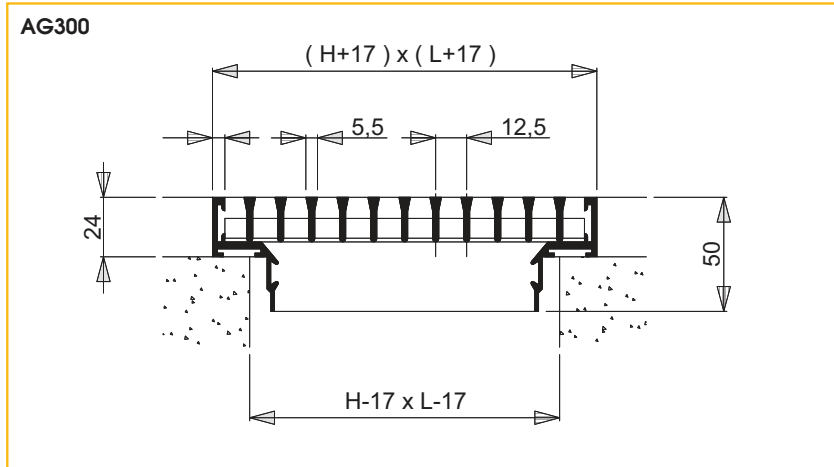
The Grille Type FLBG - Floor Linear Bar Grille, is used for supply and exhaust of cooled and heated air in comfort installations. The grille to be mounted in the floor to give a linear appearance.

### Technical Information Characteristics

- Straight bars or with 15° degree deflection bars on 12.5mm to centre
- Available in multiples of 1mm in length and 12.5mm in height
- Min L = 100mm, Max L = 150mm
- Min H = 50mm, Max H = 450mm
- GT007 only available in multiples of 25mm as well in length as in height.
- Linear grilles (= grilles consisting of intermediate and end pieces) Only available in heights 75, 100, 150, 200, 300mm
- The diffuser core can be removed and is fixed into the frame by special springs.

### Construction

- Flanges and bars out of extruded aluminium satin anodised.



SPECIFICATION OF ORDER: IOPcs B201 13  
W x H 600mm x 100mm

**B201**  
MODEL

**1**  
INSTALLATION

**3**  
ACCESSORIES

**W x H 600 x 100mm**  
WIDTH x HEIGHT

# BAR GRILLE

## INSTALLATION DIMENSIONS

**TYPE: FLBG200 SERIES**

### Specifications description

**Example:**

Aluminium floor grille with removable core and a special frame construction for floor mounting. Complete with damper.  
Standard construction, satin anodised.

**Type: FLBG207**  
nom. dim. (L x H) ... x ... mm

### Accessories

- **GT007:** damper with vertical opposed blades, galvanised steel sheet, painted black
- flow equalizer with aluminium sheet, satin anodised vanes

### Fixing

the grille is anchored in the floor by means of straps on the frame.

### Bar types

Deflection 0°



Deflection 15°



### Options

**FLBG201**

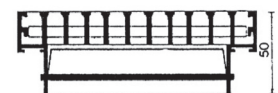
Grille with front bars.



Without Accessories

**FLBG211**

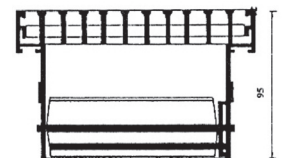
Grille with front bars and flow equalizer.



With adjustable Vanes

**FLBG207**

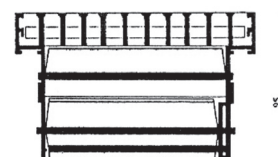
Grille with front bars and opposed blade damper.



With opposed blade damper

**FLBG217**

Grille with front bars, flow equalizer and opposed blade damper.

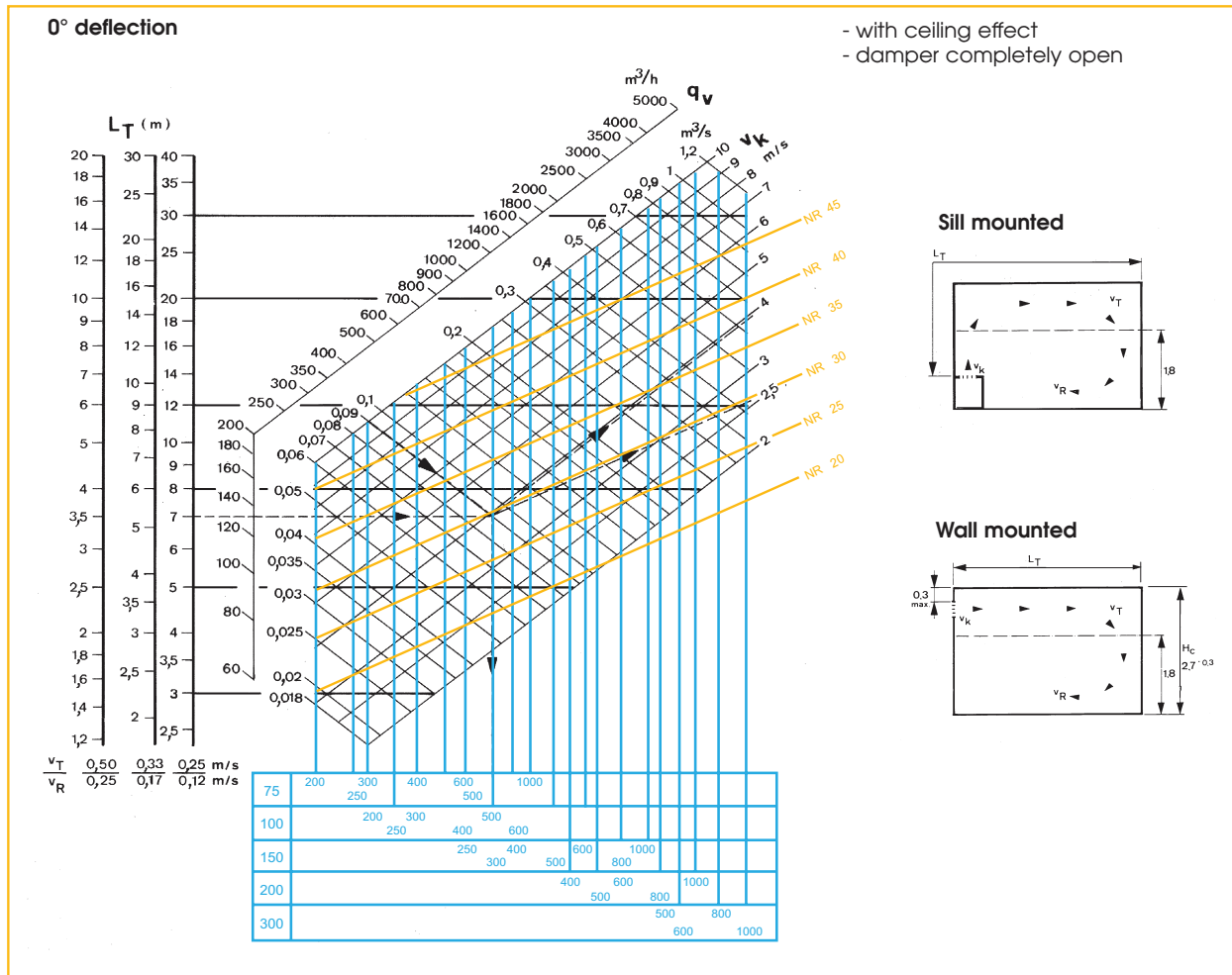


With adjustable vanes and opposed blade damper

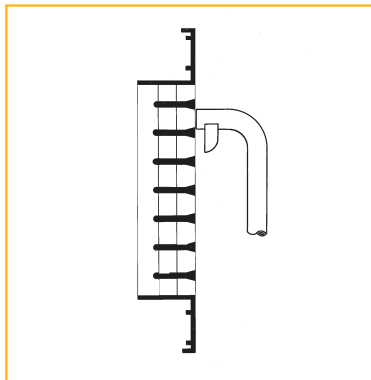
# BAR GRILLE

## TYPE: FLBG200 SERIES

### Selection diagram - supply



### Air flow rate measurement- supply



Velometer jet 2220 A or 6070

H (mm)	Ak-values (m²)							
	L (mm)							
	200	250	300	400	500	600	800	1000
75	0,006	0,008	0,009	0,013	0,016	0,019	0,027	0,031
100	0,009	0,011	0,013	0,019	0,023	0,027	0,038	0,047
150	—	0,019	0,023	0,031	0,038	0,047	0,063	0,078
200	—	—	—	0,042	0,053	0,063	0,084	0,108
300	—	—	—	—	0,084	0,099	0,133	0,167

#### Correction factors:

- Throw correction factor without ceiling effect

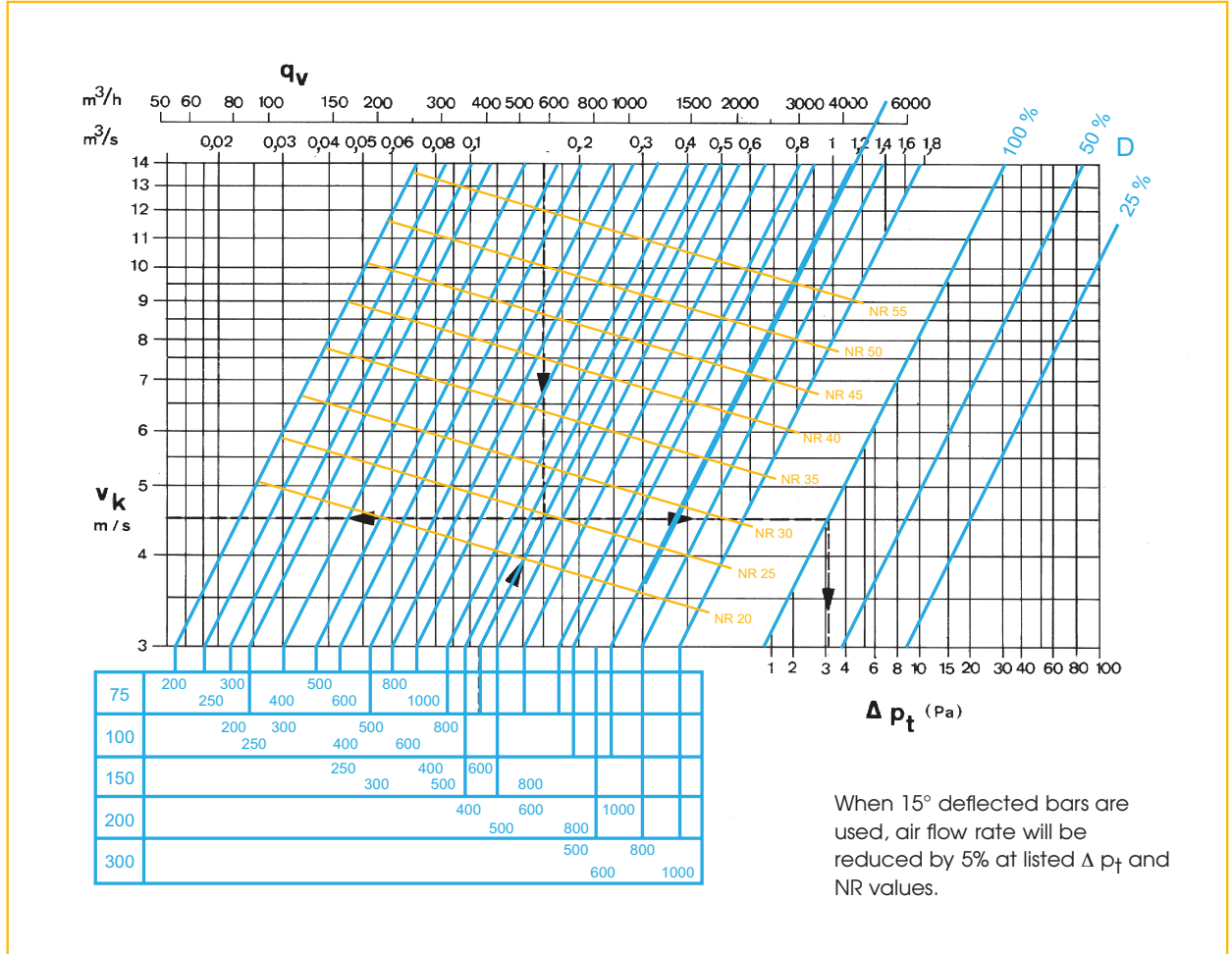
Distance between ceiling and supply grille	Correction
≥ 0,9 m	$L_T \times 0,75$

- Correction factors for vertical vane deflection of flow equalizer (see p. 1 231 verso)

# BAR GRILLE

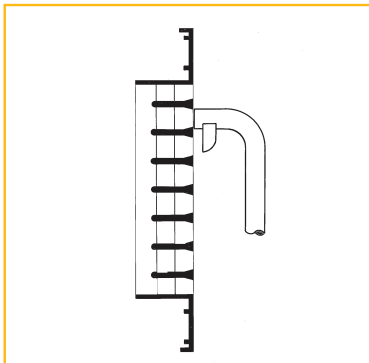
## TYPE: FLBG200 SERIES

### Selection diagram - exhaust



When 15° deflected bars are used, air flow rate will be reduced by 5% at listed  $\Delta p_t$  and NR values.

### Air flow rate measurement - exhaust



Velometer jet 2220 A or 6070

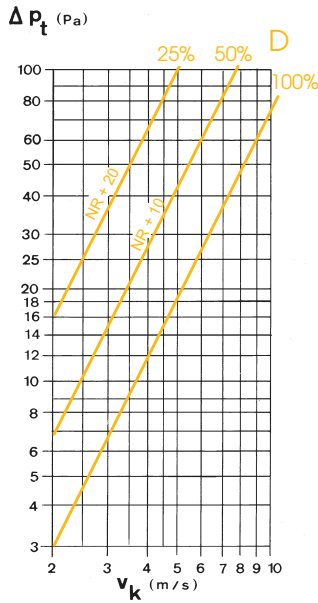
H (mm)	$A_k$ -values ( $m^2$ )							
	L (mm)							
	200	250	300	400	500	600	800	1000
75	0,005	0,006	0,007	0,010	0,012	0,014	0,020	0,023
100	0,007	0,008	0,008	0,014	0,017	0,020	0,028	0,035
150	—	0,014	0,017	0,023	0,028	0,035	0,047	0,058
200	—	—	—	0,031	0,039	0,047	0,063	0,080
300	—	—	—	—	0,063	0,074	0,099	0,125

# BAR GRILLE

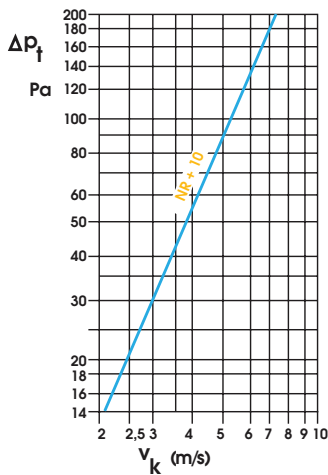
## TYPE: FLBG200 SERIES

### Pressure loss - supply

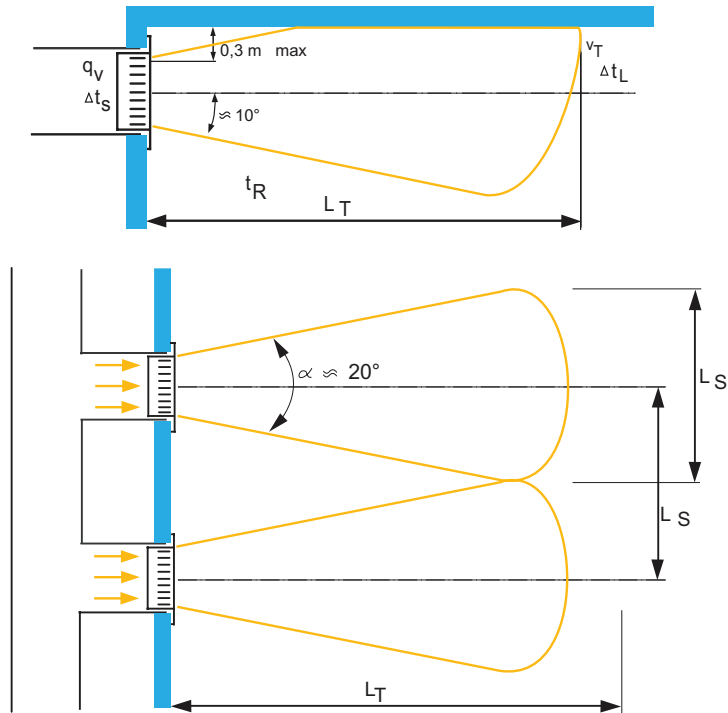
with damper type .. 7



with perforated sheet type .. 3



### Example



#### SUPPLY

##### Selection data:

Air flow rate  $q_v = 0,09 \text{ m}^3/\text{s}$   
Throw  $L_T = 7 \text{ m}$  at  $v_T = 0,25 \text{ m/s}$ .

##### Solution:

Grille  $500 \times 100$  or  $300 \times 150 \text{ mm}$ .  
Supply air velocity  $v_k = 3,9 \text{ m/s}$ .  
Noise level NR 29  
Total pressure loss with perforated sheet:  $\Delta p_t = 59 \text{ Pa}$ .  
Noise level correction NR  
 $29 + 10 = \text{NR } 39$

#### EXHAUST

##### Selection data:

Exhaust air flow rate  $q_v = 0,16 \text{ m}^3/\text{s}$

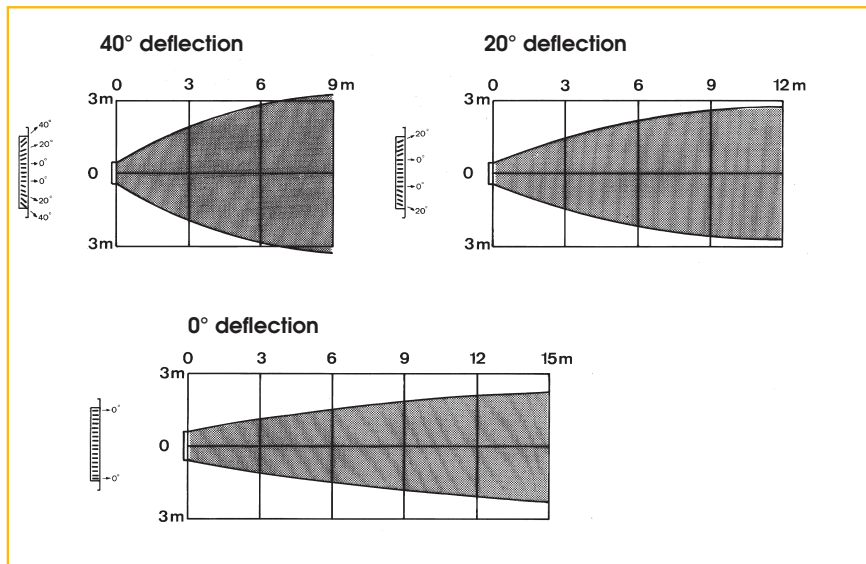
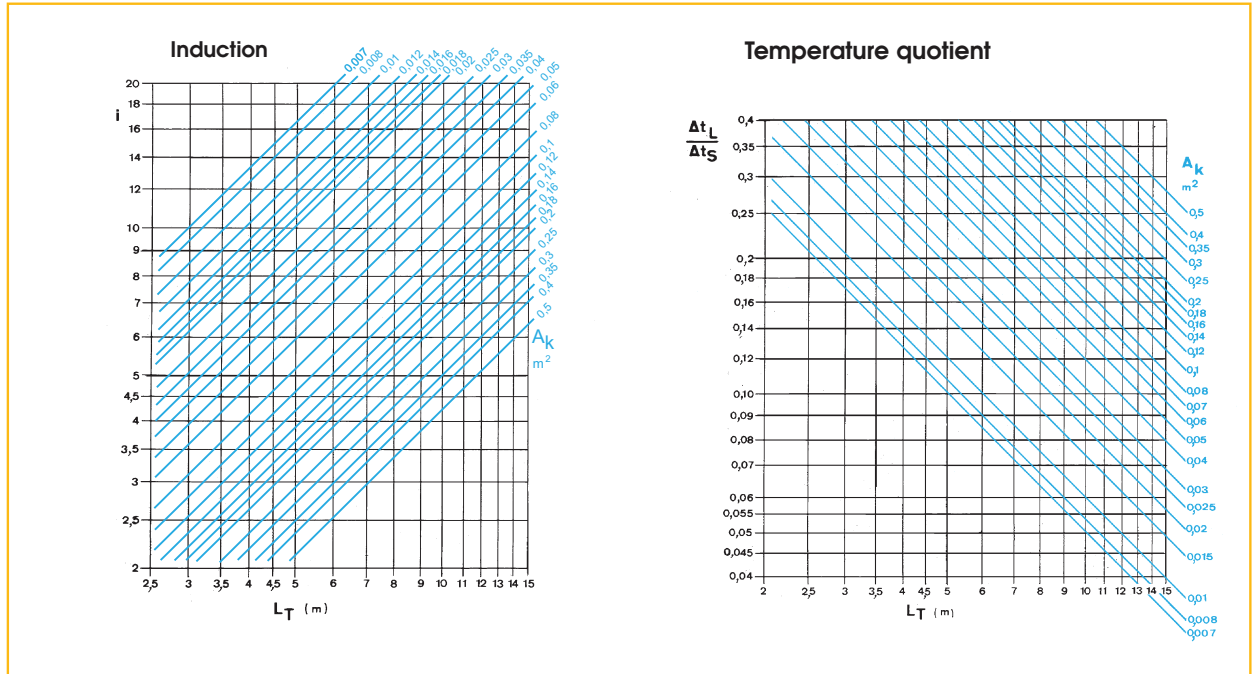
##### Solution:

Grille  $1000 \times 100 \text{ mm}$ .  
Air velocity  $v_k = 3,9 \text{ m/s}$ .  
Noise level NR 25  
Total pressure loss with damper  
100 % open:  $\Delta p_t = 3,2 \text{ Pa}$

# BAR GRILLE

## TYPE: FLBG200 SERIES

Induction and temperature quotient with ceiling effect (also valid for linear grilles)

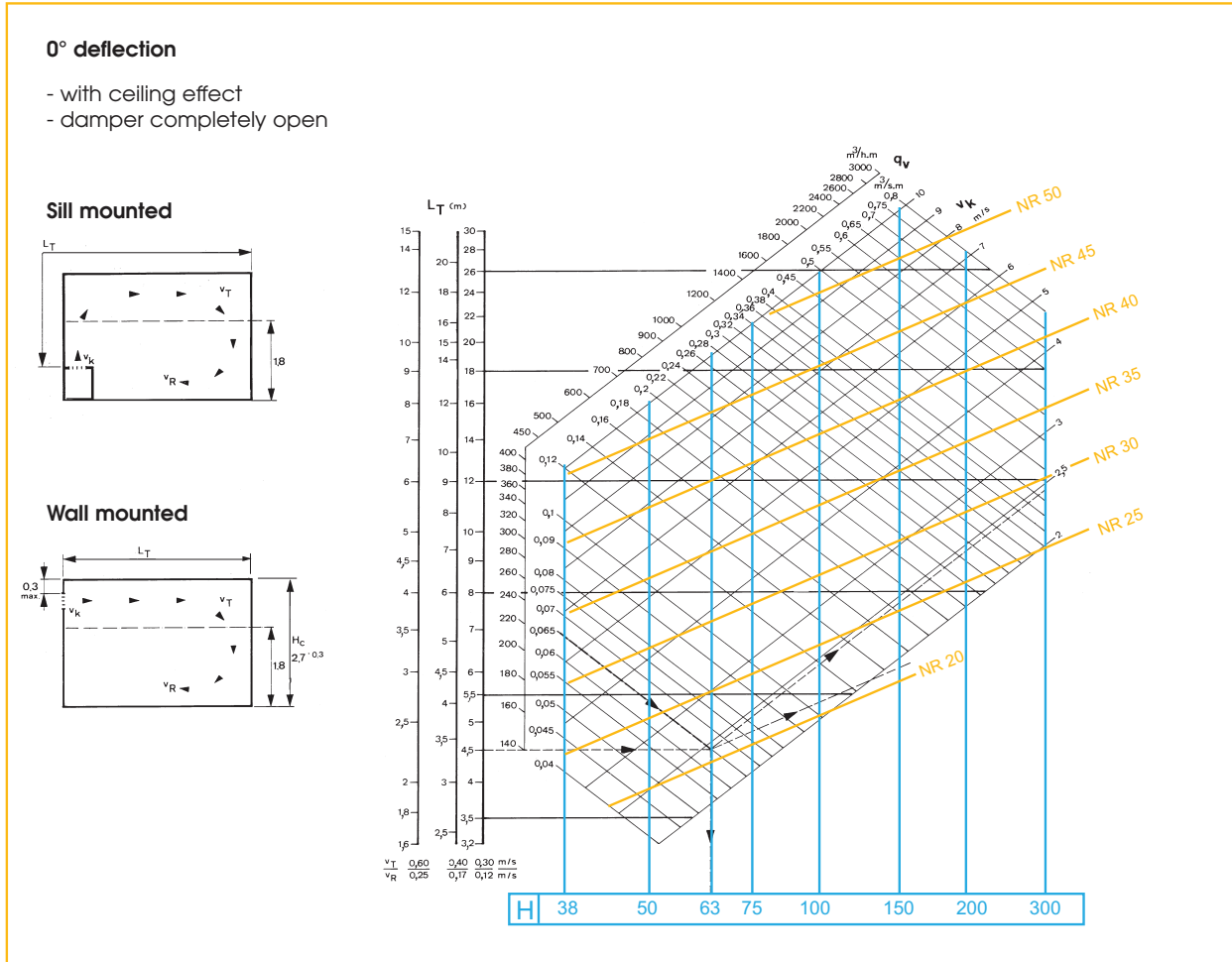


Correction factors	Type	Deflection	A <sub>k</sub>	v <sub>k</sub>	L <sub>T</sub>	NR	i	$\frac{\Delta t_L}{\Delta t_S}$
Correction factors for vertical vane deflection of flow equalizer	FLBG 200	20°	x 0,87	x 1,15	x 0,85	+ 3	x 1,4	x 0,7
		40°	x 0,80	x 1,25	x 0,75	+ 5	x 2	x 0,5

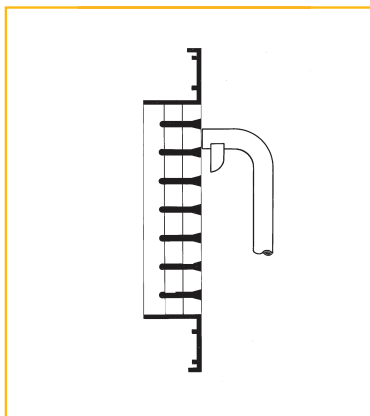
# BAR GRILLE

## TYPE: FLBG200 SERIES

### Selection diagram - supply



### Air flow rate measurement - supply



Velometer jet 2220 A or 6070

A <sub>k</sub> -values (m <sup>2</sup> /m)			
H (mm)	A <sub>k</sub>	H (mm)	A <sub>k</sub>
38*	0,012	100	0,049
50*	0,019	150	0,079
63*	0,027	200	0,110
75	0,034	300	0,171

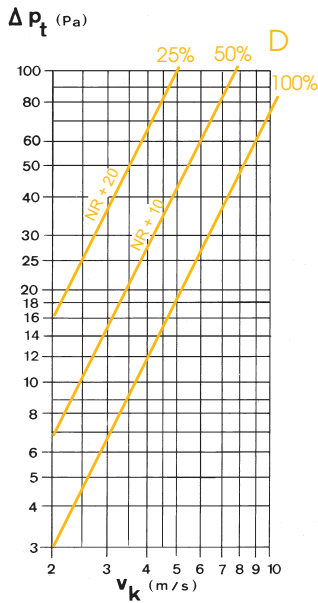
FLBG200

# BAR GRILLE

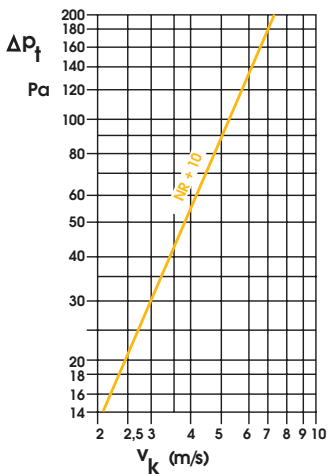
## TYPE: FLBG200 SERIES

### Pressure loss - supply

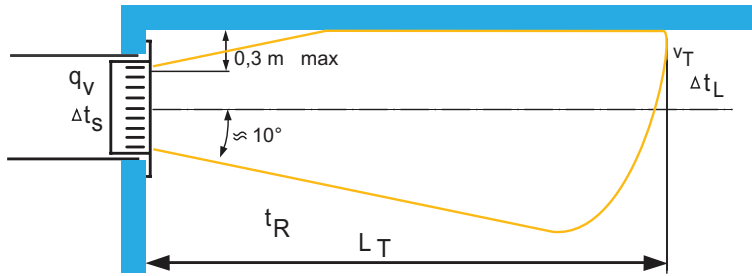
with damper type .. 7



with perforated sheet type .. 3



### Example



#### Correction factors - supply:

- Throw correction factor without ceiling effect

Distance between ceiling and supply grilles	Correction
$\geq 0,9 \text{ m}$	$L_T \times 0,75$

- Correction factors for linear grilles

Grill length (m)	Throw correction	Noise level correction (NR)
1 - 2	$L_T \times 1,00$	+ 0 NR
2 - 6,5	$L_T \times 1,10$	+ 5 NR

#### SUPPLY:

##### Selection data:

Air flow rate  $q_V = 0,065 \text{ m}^3/\text{s}$   
Throw  $L_T = 4,5 \text{ m}$  at  $v_T = 0,30 \text{ m/s}$

##### Solution:

Size  $H = 63 \text{ mm}$   
Supply air velocity  $v_k = 2,4 \text{ m/s}$   
Noise level NR 21  
Total pressure with damper 100 % open:  $\Delta p_t = 10 \text{ Pa}$   
Correction on noise level  
NR 21 + 10 = NR 31

#### EXHAUST:

##### Selection data:

Air flow rate  $q_V = 0,1 \text{ m}^3/\text{s.m}$

##### Solution:

Size  $H = 75 \text{ mm}$   
Air velocity  $v_k = 4 \text{ m/s}$   
Noise level NR 20  
Total pressure loss with damper 100 % open:  $\Delta p_t = 2,5 \text{ Pa}$