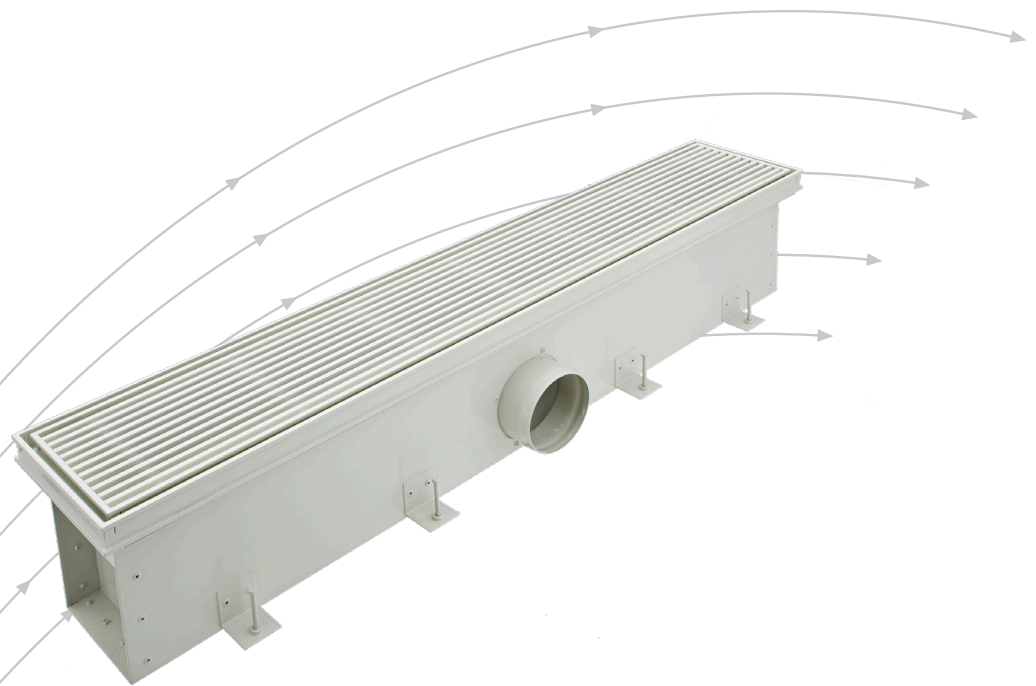


Displacement flow diffuser continuous floor band

Type QL-BB



TROX[®] TECHNIK



The art of handling air

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Application

TROX HESCO displacement flow diffusers are for use where it is important to ensure good ventilation efficiency, i.e. the lowest possible pollutant load, while also attaining optimum thermal comfort in the working or living area.

Type	H min.	H max.
BG (Floor grille)	95 mm	445 mm
FR (front plate)	95 mm	200 mm

Construction

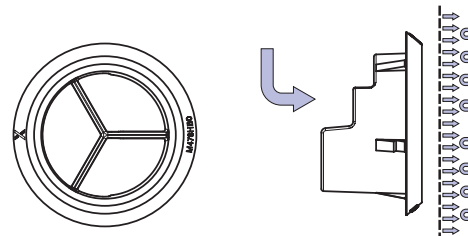
TROX HESCO displacement flow diffusers type continuous floor band are available in standard design with 2 different diffuser types and plenum boxes. They are maintenance-free as no filter material is used. Special manufacturing is an option.

Dimensional tolerance $\pm 2,5\text{mm}$.

In the standard design, TROX HESCO displacement flow diffusers are supplied as a ready-to-install unit. The special nozzles with moulded blades are made of PP plastic.

Principle of operation

Special nozzles with integral air deflector scoops.



Safety instructions

CAUTION!

Risk of injury from sharp edges and corners, ridges and thin-walled sheet metal parts!

- Proceed carefully with all work.
- Wear protective gloves, safety shoes and protective helmet.

WARNING!

Danger from incorrect use. Misuse of the product may lead to dangerous situations.

The product must not be used:

- in areas subject to explosion hazards;
- in the open air without sufficient protection against weather effects;
- in atmospheres that may have a damaging and/or corrosive effect on the product due to scheduled or unscheduled chemical reactions.

CAUTION!

Damage to the product due to improper handling. Check the device for damage and contamination prior to operation!

Improper handling may lead to considerable material damage of the product.

- Do not use any acid or abrasive cleaning agents.
- Adhesives from sticky tape may lead to colour damage.
- Excessive moisture may lead to colour damage and corrosion.
- Use only cleaning agents, greases and oils that are expressly specified.

General technical information · Assembly

General technical information for the selection of TROX HESCO displacement flow diffusers

Displacement ventilation differs from mixed ventilation, not only because the exhaust area is no longer in or close to the ceiling area, but in particular because the “motor” for the air movement is the thermal impetus of users of the room, machines, PCs, etc. As the placement of the exhaust air is usually with the displacement ventilation in living areas, the air diffuser speeds are to be set low in contrast to mixed ventilation, at 0.1 to 0.2 m/s, in the comfort range.

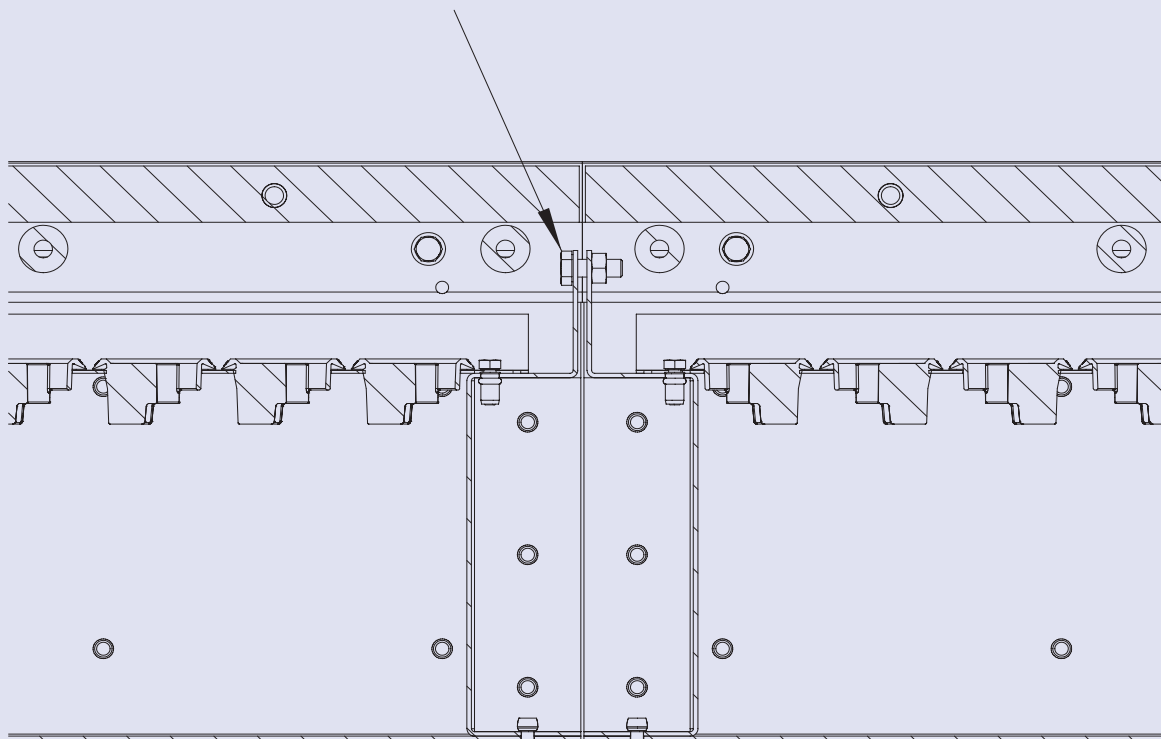
The vertical temperature gradient differs considerably from mixed ventilation. If the room temperature for mixed ventilati

on is practically the same from the floor to the ceiling, then a clear temperature gradient is characteristic of displacement ventilation. This means the important value Δt in mixed ventilation loses significance. Please note with the layout that you should select an supply air temperature of not less than 18°C for the comfort range where activities are mainly sedentary.

We will be pleased to assist you with the concept and design.

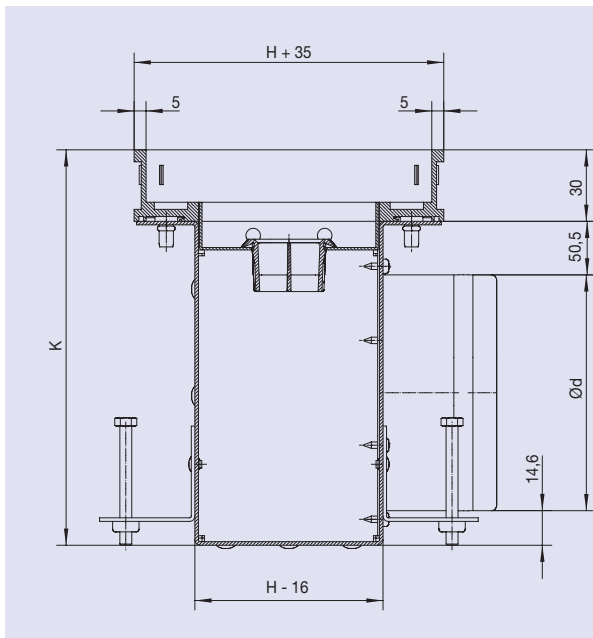
Assembly

Lengths over 2000mm will be supplied in sections. They can be attached flush to a continuous band by using screws and nuts. The individual parts are put together in the factory using screws and nuts.



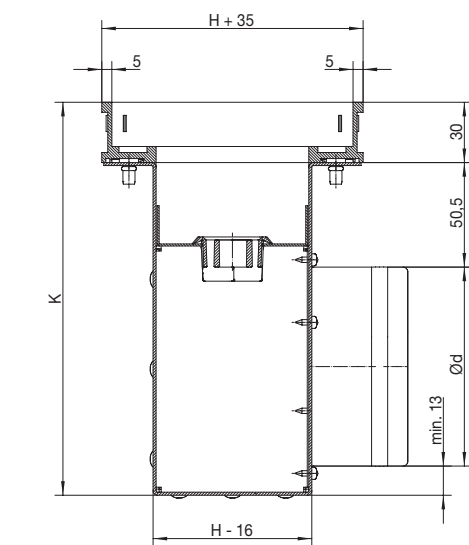
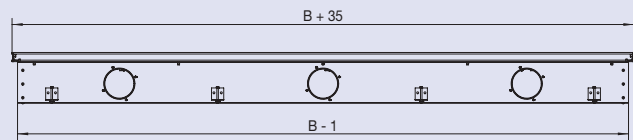
Connection Options

Connection Options



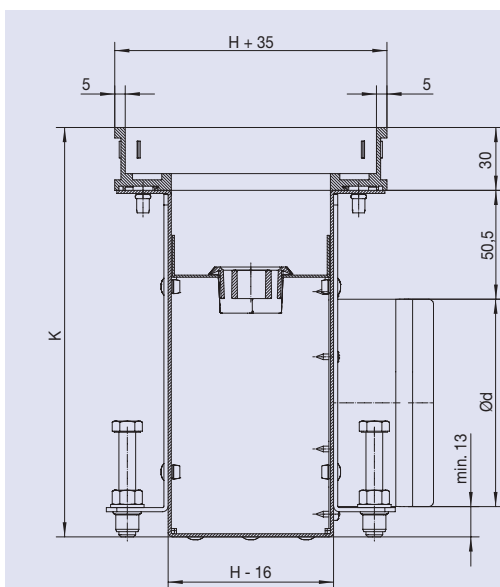
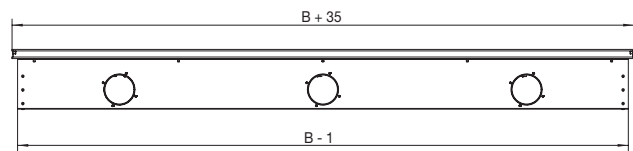
Moulded plenum box (G)

Plenum box made of galvanised sheet steel with special nozzles with moulded blades made of PP plastic. Terminal box G is supplied with auto level screws for adjustment on-site and can be moulded.



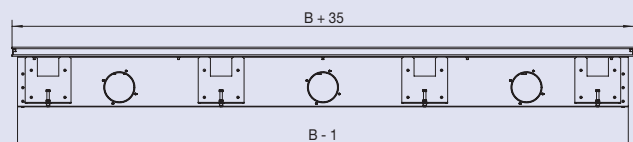
Mounted plenum box (E)

Plenum box made of galvanised sheet steel with special nozzles inserted with moulded blades made of PP plastic. Plenum box E is intended for installation in double floors.



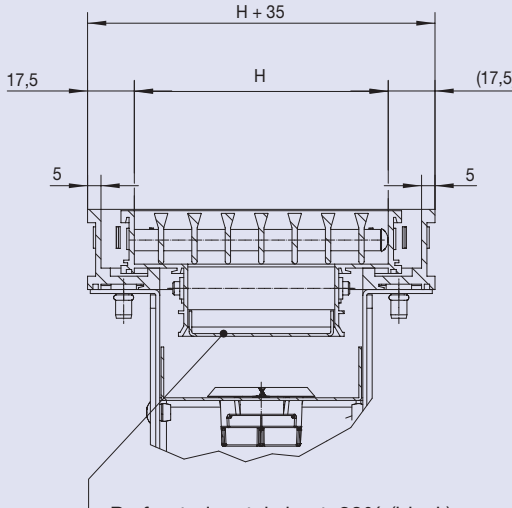
Self-supporting plenum box (S)

Plenum box made of galvanised sheet steel with special nozzles inserted with moulded blades made of PP plastic. Plenum box S is supplied with auto-level screws for adjustment on-site and is self-supporting.



Cover Options

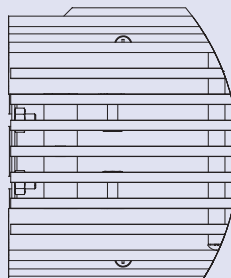
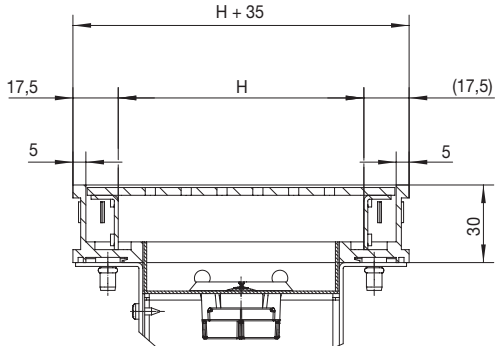
Cover Options



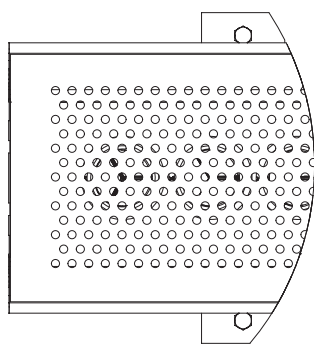
Perforated metal sheet, 20% (black)

Covering with floor grille (BG)
 Floor grille made of light metal, colourless and anodised, consisting of a frame with inserted lamina grating. The grille is fixed using grey plastic buffers

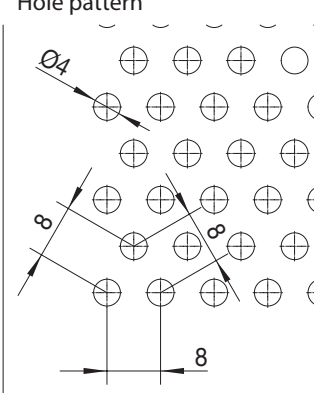
Product information for floor grille, type BG:
 See brochure L-03-2-01e

Cover with front sheet (perforated sheet, FR)
 Consisting of a frame and front sheet inserted. The frame consists of colourless, anodised light metal, the front sheet of galvanised sheet steel, the visible surface is painted according to RAL 9006. Other colours are available upon request.



Hole pattern



All outlet types can be removed for cleaning.

Technical Data · Quick Selection

Technical Data

Size	v_0	0.10 m/s	0.20 m/s	0.30 m/s	0.40 m/s	
1000 x 157 - 2 x 80		\dot{V}		Δp	L_w	
		[m/s]	[l/s]	[m ³ /h]	[Pa]	[dB(A)]
	0.1	8.6	31	4	<15	
	0.2	17.5	63	15	30	
	0.3	26.1	94	34	42	

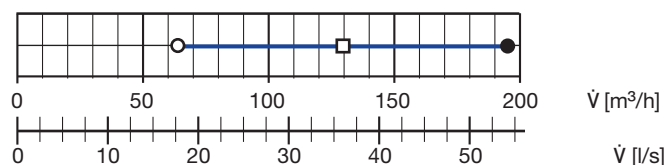
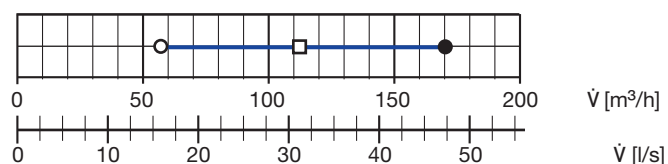
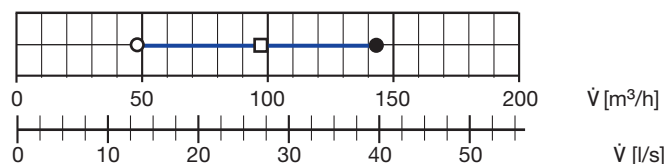
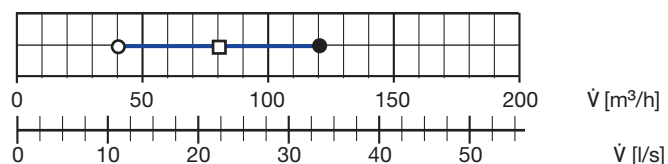
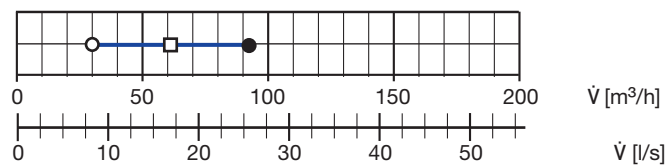
Size	v_0	0.10 m/s	0.20 m/s	0.30 m/s	0.40 m/s	
1250 x 157 - 3 x 80		\dot{V}		Δp	L_w	
		[m/s]	[l/s]	[m ³ /h]	[Pa]	[dB(A)]
	0.1	11.1	40	3	<15	
	0.2	21.9	79	11	26	
	0.3	33.1	119	24	38	

Size	v_0	0.10 m/s	0.20 m/s	0.30 m/s	0.40 m/s	
1500 x 157 - 3 x 80		\dot{V}		Δp	L_w	
		[m/s]	[l/s]	[m ³ /h]	[Pa]	[dB(A)]
	0.1	13.3	48	4	<15	
	0.2	26.7	96	15	30	
	0.3	40.0	144	34	42	

Size	v_0	0.10 m/s	0.20 m/s	0.30 m/s	0.40 m/s	
1750 x 157 - 3 x 100		\dot{V}		Δp	L_w	
		[m/s]	[l/s]	[m ³ /h]	[Pa]	[dB(A)]
	0.1	15.6	56	2	<15	
	0.2	31.4	113	9	25	
	0.3	46.9	169	21	37	

Size	v_0	0.10 m/s	0.20 m/s	0.30 m/s	0.40 m/s	
2000 x 157 - 3 x 100		\dot{V}		Δp	L_w	
		[m/s]	[l/s]	[m ³ /h]	[Pa]	[dB(A)]
	0.1	18.1	65	3	<15	
	0.2	36.1	130	12	27	
	0.3	53.9	194	27	39	

Quick Selection



Nomenclature

\dot{V} Flow rate
 v_0 Discharge velocity based on gross outlet area
 L_w Sound power level

m/s
 dB(A)

- $v_0 = 0.10$ m/s
- $v_0 = 0.20$ m/s
- $v_0 = 0.30$ m/s

Technical Data · Quick Selection

Quick Selection Data

Size	v_0	0.10 m/s	0.20 m/s	0.30 m/s	0.40 m/s
1000 x 195 - 2 x 100		\dot{V}		Δp	L_w
	[m/s]	[l/s]	[m ³ /h]	[Pa]	[dB(A)]
	0.1	12.2	44	2	<15
	0.2	24.4	88	10	23
	0.3	36.7	132	22	35

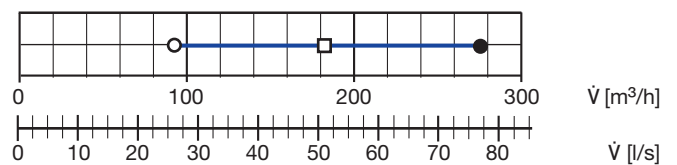
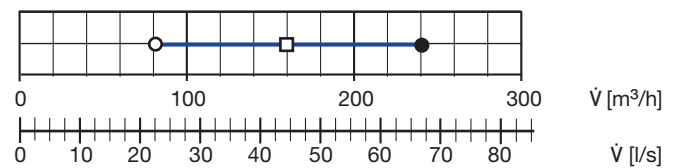
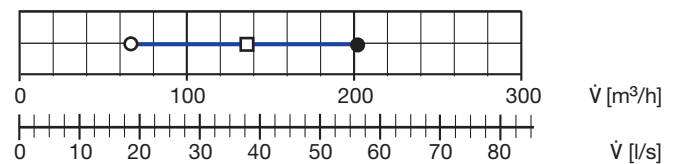
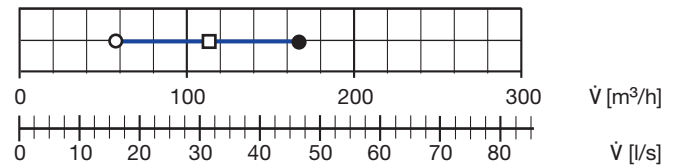
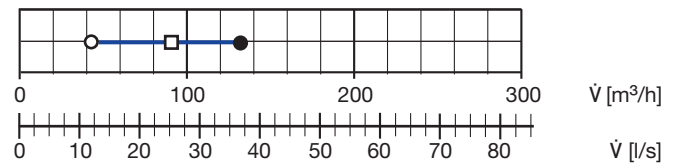
Size	v_0	0.10 m/s	0.20 m/s	0.30 m/s	0.40 m/s
1250 x 195 - 2 x 100		\dot{V}		Δp	L_w
	[m/s]	[l/s]	[m ³ /h]	[Pa]	[dB(A)]
	0.1	15.6	56	4	<15
	0.2	31.1	112	16	31
	0.3	46.7	168	36	44

Size	v_0	0.10 m/s	0.20 m/s	0.30 m/s	0.40 m/s
1500 x 195 - 3 x 100		\dot{V}		Δp	L_w
	[m/s]	[l/s]	[m ³ /h]	[Pa]	[dB(A)]
	0.1	18.9	68	2	<15
	0.2	37.5	135	10	24
	0.3	56.4	203	22	36

Size	v_0	0.10 m/s	0.20 m/s	0.30 m/s	0.40 m/s
1750 x 195 - 3 x 100		\dot{V}		Δp	L_w
	[m/s]	[l/s]	[m ³ /h]	[Pa]	[dB(A)]
	0.1	22.2	80	4	<15
	0.2	44.2	159	14	29
	0.3	66.4	239	32	41

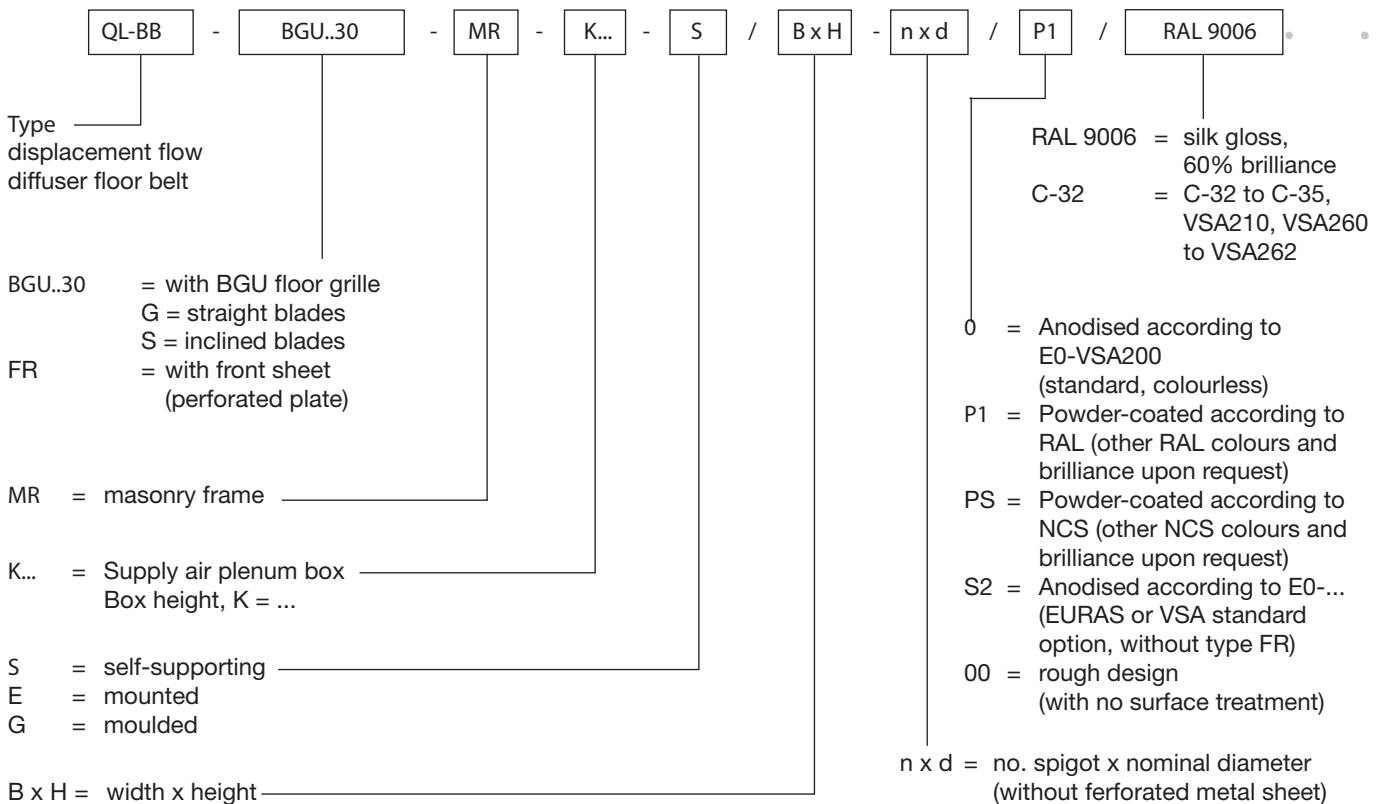
Size	v_0	0.10 m/s	0.20 m/s	0.30 m/s	0.40 m/s
2000 x 195 - 3 x 100		\dot{V}		Δp	L_w
	[m/s]	[l/s]	[m ³ /h]	[Pa]	[dB(A)]
	0.1	25.3	91	5	<15
	0.2	50.8	183	19	34
	0.3	76.1	274	43	47

Quick Selection



Order details

Order code



Order examples

10 units QL-BB-FR-MR-K200-S/2000x95-3x160/P1/RAL 9006
 2 units QL-BB-BGUG30NT-MR-K200-G/6000x145-9x125/P1/RAL 9006

Specification texts

TROX HESCO displacement flow diffusers for optimum supply of prepared air into the room, according to the displacement principle. Even flow profile due to built-in special nozzles with moulded blades.

Displacement flow diffuser floor bands, QL-BB, for use as continuous bands inset into the floor in sections up to a maximum of 2.00m.

Floor grilles made of stable and walkable light metal profiles, colourless and anodised. Consisting of a frame with removable grille. Blades set out lengthwise, non-adjustable. The grille is fixed with plastic buffers.

Front sheet (perforated sheet) consisting of a frame and a front sheet inserted. The frame is made of light metal, colourless anodised, and the front sheet is made of galvanised sheet steel, the visible surface is painted according to RAL 9006. Other colours are available upon request.

Material plenum box
 Galvanised sheet steel, nozzles made of PP plastic