



Air diffusion systems

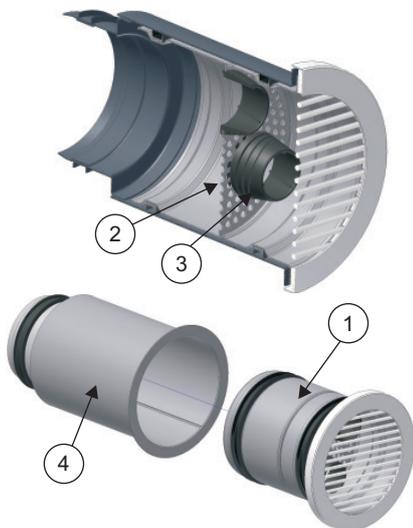
**Domestic air diffuser WA-WG
Size 100 and 125**

Application

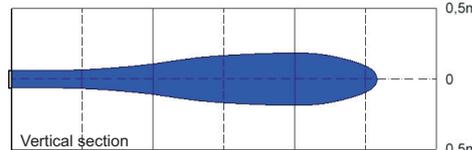
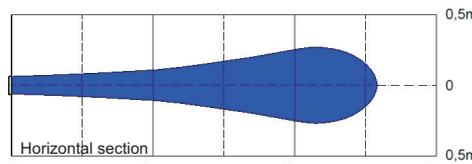
The air diffusers WA-WG 100 and 125 are designed to supply fresh air silently and without draught effects to smaller rooms such as apartments, offices or hotel rooms. Installed as a wall diffuser it supplies air volumes from 30 to 120 m³/h depending on its size. Its main advantage, apart from the very low sound power level, is its adjustable air flow pattern. Thus the horizontal throw can be adapted to suit the room geometry. The diffuser is designed to handle up to 6K in heating and in cooling mode and complies with DIN EN 13779.

Construction

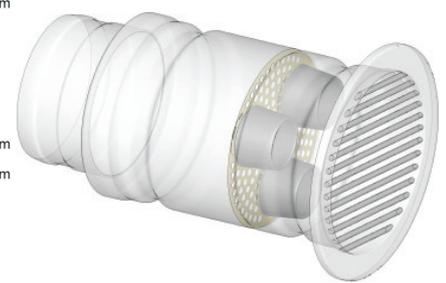
The WA-WG comprises a cylindrical air supply unit with wire front grill (1). The active air diffusion section, which mainly determines the air flow pattern, consists of a perforated plate (2) in which rubber jet nozzles size DN 25 or DN 50 (3) are integrated to adjust the flow direction. Depending on the position of the nozzles a swirled air flow with shorter or an unswirled air flow with longer horizontal throw can be created. The air supply unit is inserted into a cylindrical installation frame (4) that is flush with the wall and connected to the duct system by a rearward spigot. Two rubber lip gaskets keep the air diffusion unit into position.



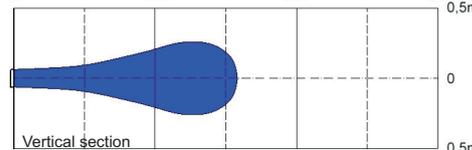
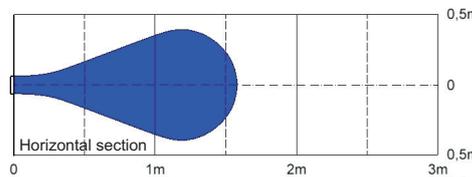
Subject to modification without notice.



Isovel 0,2 m/s
Penetration depth in m



WA-WG 100/25.3
Air flow: 30 m³/h
Straight nozzle position



Isovel 0,2 m/s
Penetration depth in m



WA-WG 100/25.3
Air flow: 30 m³/h
Tangential nozzle position

Function

At straight nozzle position one to seven long distance rubber jet nozzles create a horizontal central air flow. A second part of the air flow leaves through the perforated plate and is induced by the central flow. The front wire grill does not influence the horizontal expansion of the air flow if the wires are in a horizontal position, but reduces the vertical expansion. The air flow can also be deflected by 15 degrees if a bevel nozzle position is selected.

At a tangential nozzle position the central air flow is swirled which reduces the horizontal throw and enlarges the vertical penetration depth.

Assembly

To assemble the air diffuser the cylindrical installation frame is inserted into the wall and attached to the duct system by a rearward spigot. The air diffusion unit itself can be inserted later and is fixed by two rubber lip gaskets.

DG

**Domestic air diffuser WA-WG
Size 100 and 125**

Technical Data

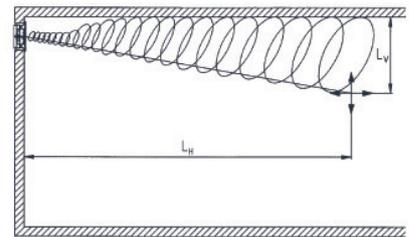
Type	Air flow (m ³ /h)	Horizontal throw L _H (m)	Vertical penetration depth L _V (m)	L _w dB(A)	Δp Pa
WA-WG 100/25.3	30 - 60	2,4 - 6,0 * 1,6 - 3,3 **	0,16 - 0,28 * 0,25 - 0,35 **	15 - 29	7 - 27
WA-WG 100/50.1	30 - 60	2,5 - 5,0	0,15 - 0,35	15 - 27	4 - 22
WA-WG 125/25.4	60 - 120	3,5 - 7,0 * 2,4 - 4,6 **	0,28 - 0,49 * 0,40 - 0,62 **	15 - 36	11 - 45
WA-WG 125/25.7	60 - 120	4,0 - 7,7 * 2,0 - 4,1 **	0,31 - 0,52 * 0,45 - 0,62 **	22 - 42	12 - 50

* Straight nozzle position
** Tangential nozzle position

Fig. 1: Operating and application conditions for different types of WA-WG

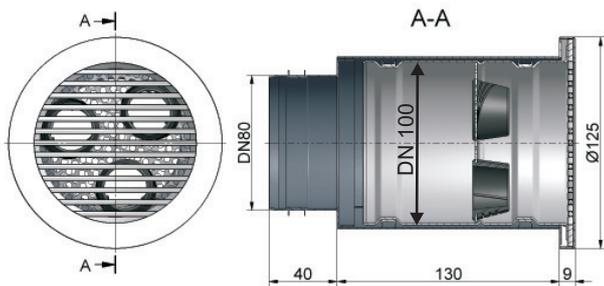
Dimensioning of the supply air flow rate and selection of the flow profile
To select the suitable diffuser type not only the sound power level but also the horizontal throw and the vertical penetration depth must be considered.

Fig. 1 shows an overview of application conditions of the different diffuser types at the design limits. Figs. 2 to 5 show the horizontal throw L_H and the vertical penetration depth L_V. Sound power level and pressure loss can be seen in figs. 6 and 7.

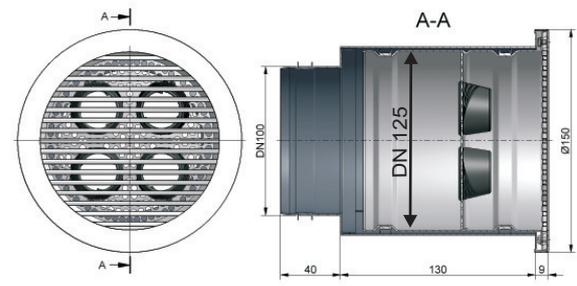


Attention!

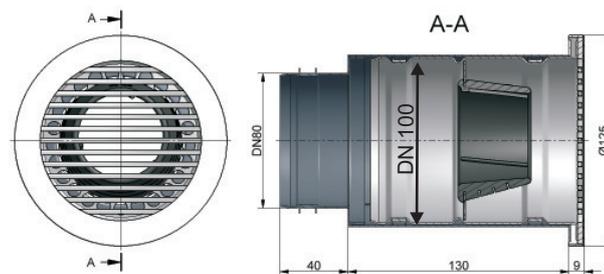
The WA-WG type size does not originate from the diameter of the duct connection, but from the diameter of the installation frame!



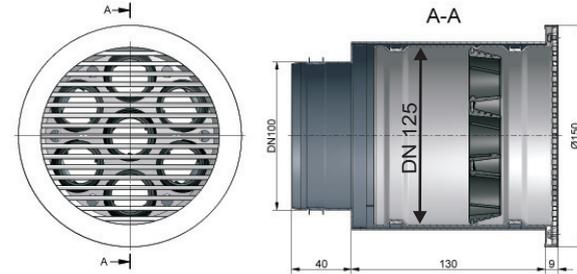
Bautyp WA-WG 100/25.3



Bautyp WA-WG 125/25.4



Bautyp WA-WG 100/50.1



Bautyp WA-WG 125/25.7

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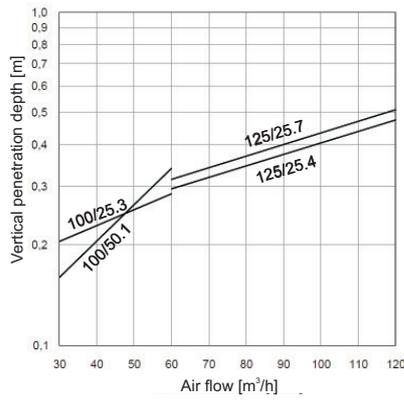
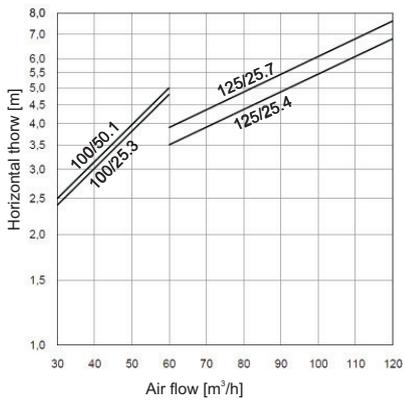


Fig. 2 and 3: Horizontal throw and vertical penetration depth, straight nozzle position

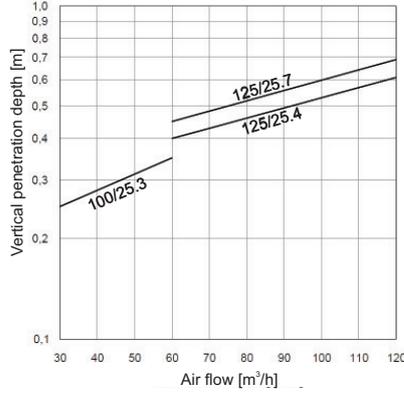
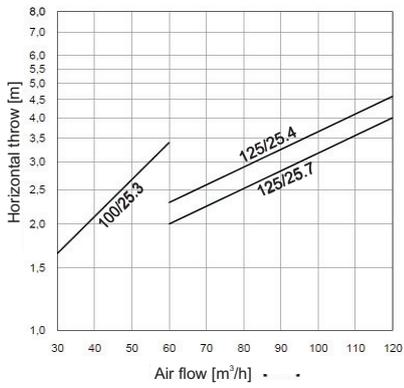


Fig. 4 and 5: Horizontal throw and vertical penetration depth, tangential nozzle position

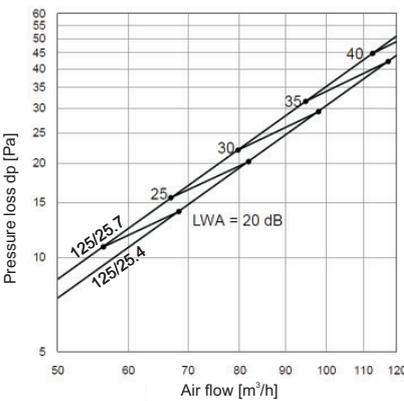
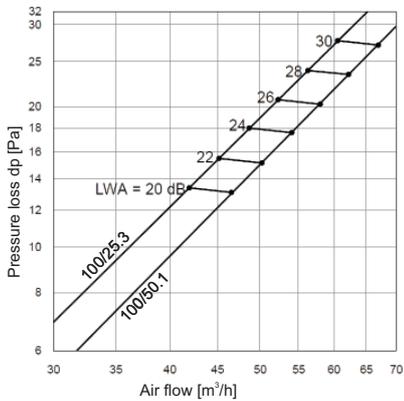


Fig. 6: Sound power level and pressure loss WA-WG 100

Fig. 7: Sound power level and pressure loss WA-WG 125

Tender text

Position	Description	No. of units	Unit price	Total price
	<p>Air diffuser type WA-WG for wall installation, consisting of a cylindrical installation frame with rearward spigot and inserted air diffusion unit, which is held by two rubber lips. Visible air diffuser grill made of 3 mm horizontal wire with 60% free cross section. Active air diffusion area with one to seven adjustable rubber jet nozzles DN 25 or DN 50, integrated into a perforated plate.</p> <p>Installation frame material: steel plate, powder-coated RAL 9005</p> <p>Air diffuser material: Front grill: steel plate, powder-coated RAL 9010 or stainless steel, micro-blasted Insert: steel plate, powder-coated RAL 9005</p> <p>Diffuser type</p> <p><input type="checkbox"/> WA-WG 100/25.3 <input type="checkbox"/> WA-WG 100/50.1 <input type="checkbox"/> WA-WG 125/25.4 <input type="checkbox"/> WA-WG 125/25.7</p> <p><input type="checkbox"/> Straight nozzle position <input type="checkbox"/> Tangential nozzle position</p> <p><input type="checkbox"/> WA-WG 100/0 (exhaust version without nozzles) <input type="checkbox"/> WA-WG 125/0 (exhaust version without nozzles)</p> <p>Front grill material</p> <p><input type="checkbox"/> Steel, powder-coated RAL 9010 <input type="checkbox"/> Steel, powder-coated RAL <input type="checkbox"/> Stainless steel, 1.4301 micro-blasted</p> <p>Horizontal throw: m Vertical penetration depth: m Air flow: m³/h Max. sound power level: dB(A)</p> <p>Manufacturer: Strulik Type: WA-WG</p>			