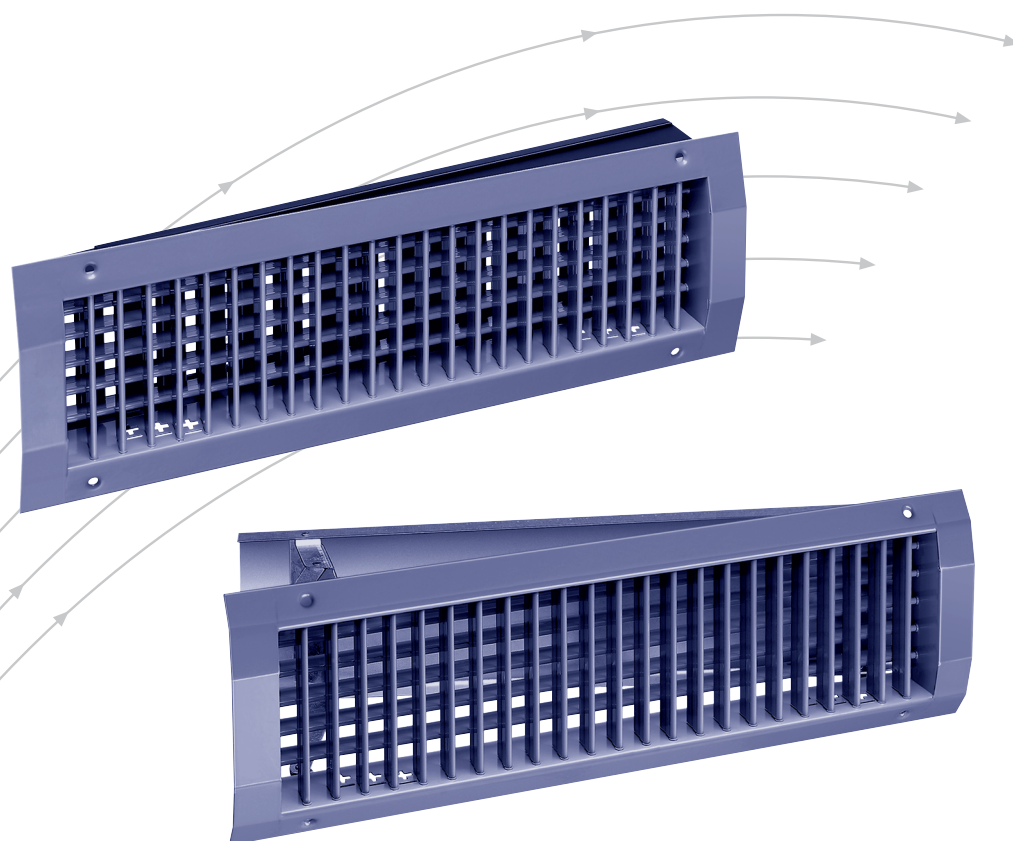


# Diffusion grilles for installation in ducts

Type DGR / DGRA



**TROX<sup>®</sup> / TECHNİK**



The art of handling air

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## Content

Application · Safety instructions	2
Realisation	3
Dimensions · Installation · Dimensioning	4
Quick selection	5
Range of application	6
Order details	7

The well-designed diffusion grilles of steel are made for installation in ducts with circular cross sections.

## Application

The diffusion grilles are used as air supply or exhaust grilles in visible ducts.

They are suitable for industrial plants, shopping centers, warehouses, etc.

Due to the different types and sizes available, an optimum solution is ensured for each individual application.

## 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.

## Realisation

The diffusion grilles type DGR are made of special angular frames, steel, powder coated, galvanised silver, which are designed for the corresponding duct diameter segments. Individually adjustable blades as for DG1 and DG3 (prospectus L-02-1-01e). Glued-on foam gasket. The recessed bolt holes **and** the slotted holes for the clamping springs are stamped in the angular frames of the assortment on stock (standard).

## Special models

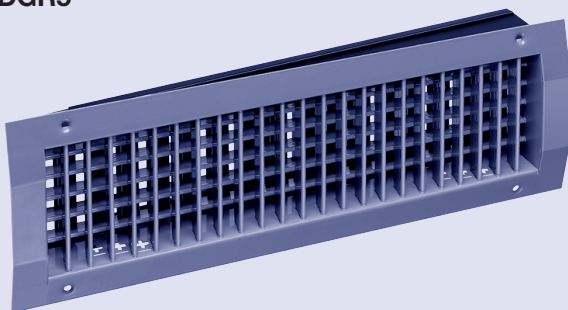
- Other sizes are limited to the dimensions of the normal steel diffusion grilles.
- Diffusion grilles of stainless steel, made for installation in ducts, types DGRX1, DGRX3, DGRX7, DGRX17 see prospectus L-02-1-13e.
- Diffusion grille of stainless steel **with** sliding damper, made for installation in ducts, type DGRX5 is **not** available.

For further details see individual documents of steel diffusion grilles.

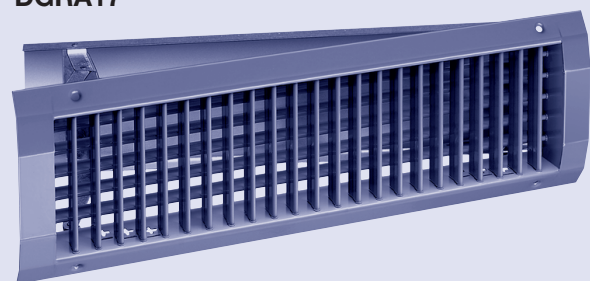
For supply air: DGR1, DGR5, DGR6, DGR17

For exhaust air: DGR3, DGR7, DGR8

DGR5



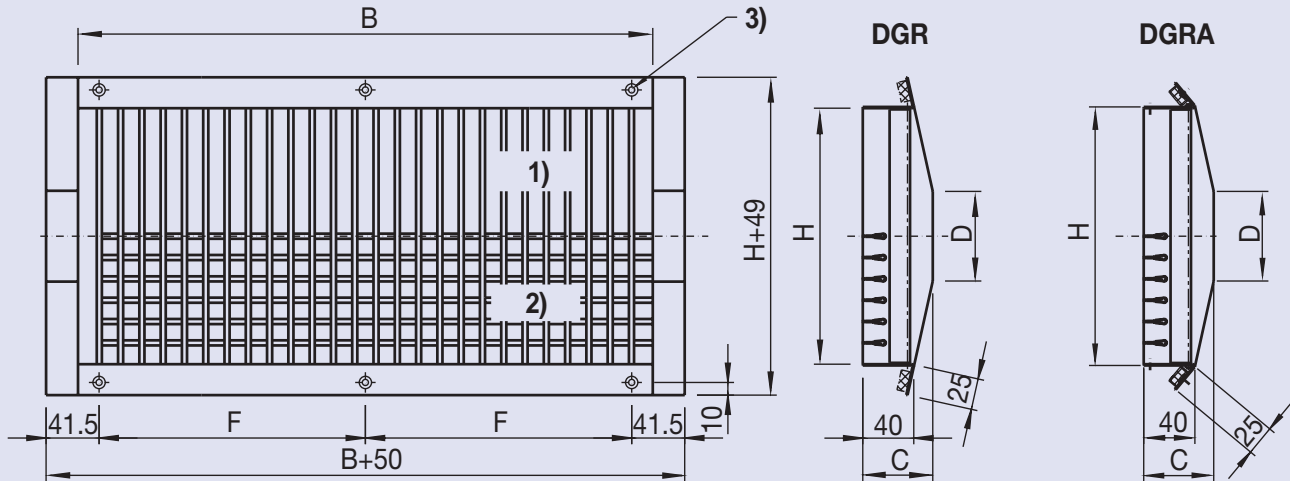
DGRA17



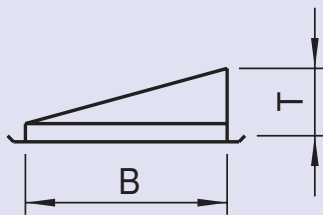
# Dimensions · Installation · Dimensioning

## Dimensions

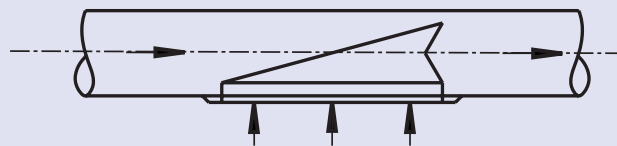
### DGR1 / DGR3



- 1) DGR3 + DGR7 + DGR8
- 2) DGR1 + DGR5 + DGR6 + DGR17
- 3) recessed bold holes  $\varnothing 4.8 \times 90^\circ$  and slotted holes for clamping springs



Depth of opening T for DGR5 / 7 / 17



Installation DGR7/DGRA7, for exhaust air

## Installation

1. Draw opening onto the duct using a stencil  
Size  $B + 15_0^{+2}$  mm  $\times$   $H + 10_0^{+2}$  mm  
(B  $\times$  H) = nominal grille dimension
2. Drill the rabbets tangent to the opening 10 mm outside of these marked openings and rivet them (blind rivet) to prevent the duct from decoiling when it is cut open.
3. Use a compass saw or shears to cut the openings.
4. Install the DGR using sheet metal screws or the patented invisible spring clips (SL)

## Dimensioning

You find the technical data of the air velocity, throw, quantity of air and pressure drop in the leaflet 'Diffusion grilles type DG..., Dimensioning' L-02-5-01e.

Surface proportion : free surface / nominal surface = 0.77

## Quick selection

Stock assortment DGR and DGRA (in bold types)  
nominal width B x nominal height H mm

Nom. length B [mm]	Nominal height											
	ZL	<b>H</b>	AL	ZL	<b>H</b>	AL	ZL	<b>H</b>	AL	ZL	<b>H</b>	AL
	[m <sup>3</sup> /h]	[mm]	[m <sup>3</sup> /h]	[m <sup>3</sup> /h]	[mm]	[m <sup>3</sup> /h]	[m <sup>3</sup> /h]	[mm]	[m <sup>3</sup> /h]	[m <sup>3</sup> /h]	[mm]	[m <sup>3</sup> /h]
<b>200</b>	83	<b>50</b>	97									
<b>300</b>	125	<b>50</b>	146	250	<b>100</b>	292						
<b>400</b>	167	<b>50</b>	195	334	<b>100</b>	390						
<b>500</b>	208	<b>50</b>	243	417	<b>100</b>	487	625	<b>150</b>	730	834	<b>200</b>	974
<b>600</b>	250	<b>50</b>	292	500	<b>100</b>	584	750	<b>150</b>	876	1000	<b>200</b>	1168
<b>750</b>	313	<b>50</b>	365	625	<b>100</b>	730	938	<b>150</b>	1095	1250	<b>200</b>	1460

**Base: DGR(A)5 mounted directly in the duct  
(run over by air with 3 m/s)**

ZL = supply air,  $v_{\text{eff}} = 3.0 \text{ m/s}$ ,  $\Delta p_s = 28 \text{ Pa}$

AL = exhaust air,  $v_{\text{eff}} = 3.5 \text{ m/s}$ ,  $\Delta p_s = 34 \text{ Pa}$

$L_w$  for nominal dimension 600 x 100 mm:

$L_{wZL} = 43 \text{ dB(A)}$ ,  $L_{wAL} = 46 \text{ dB(A)}$

### Legend

$v_{\text{eff}}$  = velocity of effective air

$\Delta p_s$  = static pressure drop

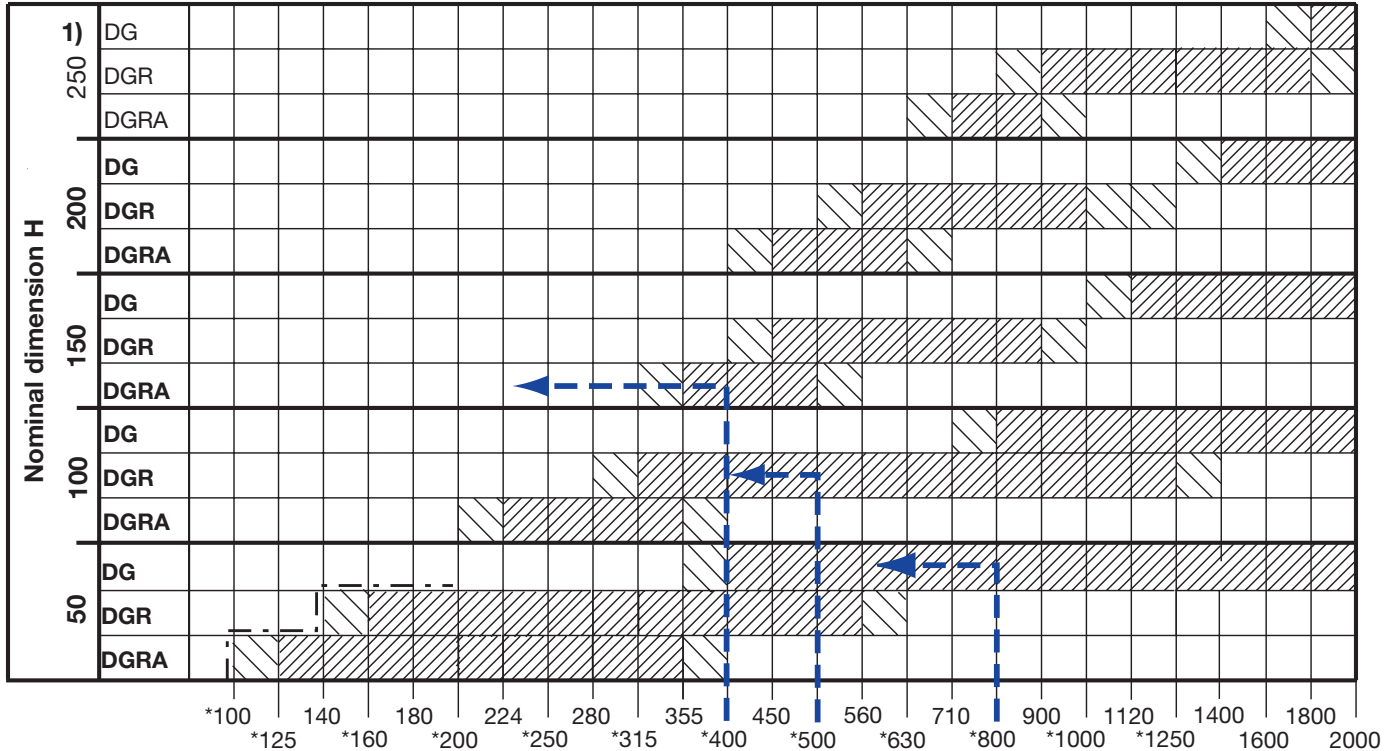
$L_w$  = sound power level

B [mm]	H [mm]					C/D	H [mm]					F [mm]			
	50	100	150	200	250		50	100	150	200	250	B = 400	B = 500	B = 600	B = 750
<b>200</b>	50														
<b>300</b>	50	<b>100</b>				<b>C</b>	40	44	50	55	55	-	-	283.5	358.5
<b>400</b>	50	<b>100</b>										-	-	283.5	358.5
<b>500</b>	50	<b>100</b>	<b>150</b>	<b>200</b>								-	-	283.5	358.5
<b>600</b>	50	<b>100</b>	<b>150</b>	<b>200</b>	250	<b>D</b>	50	65	65	70	110	-	-	283.5	358.5
<b>750</b>	50	<b>100</b>	<b>150</b>	<b>200</b>	250							-	-	283.5	358.5

# Range of application

## Range of application

The following table shows for which duct diameter range the appropriate nominal grille height H may be used.

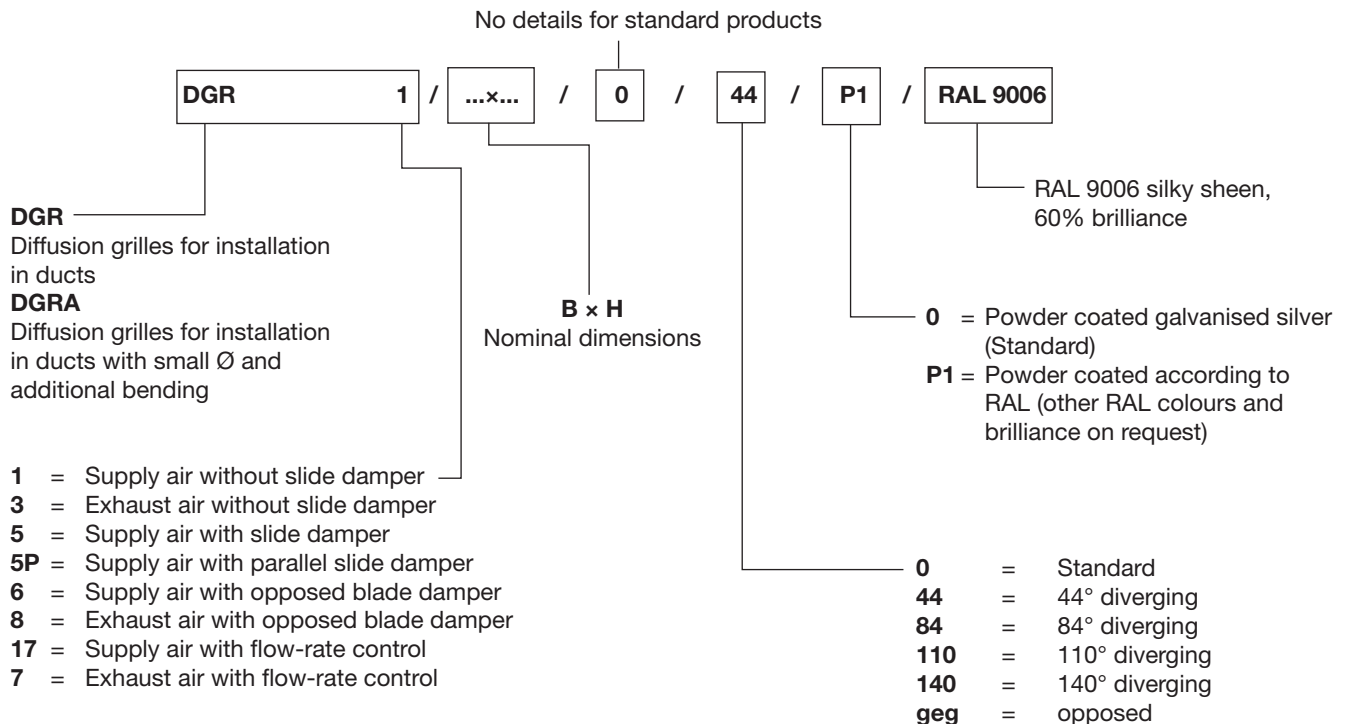


- = extreme range
- \* = duct diameter as per EN 1506 and EN 12220 (former: DIN 24 154 sheet 2 preference series)
- - - - check depth of opening for DGR5 / 7 / 17

- 1) Nom. height of the grille H = 250 is **not** in stock
- 2) Nom. width of the grille B = 900 is **not** in stock

B = Nominal width		200	300	400	500	600	750	900 <sup>2)</sup>	mm
T	DGR5	90	100	110	115	125	145	170	mm
	DGR7 / 17	max.155 (100% open)							

## Order codes



## Order examples

38 off DGR 5 / 600 x 100  
 20 off DGRA 7 / 500 x 150 / P1 / RAL 9006

## Text for tenders

### Type DGR1 for supply air

Diffusion grille with individually adjustable **vertical** (in front) and **horizontal** (behind) blades, designed for favorable flow, **for direct duct installation**.

Angular frame with countersunk screw holes and foam gaskets.

### Material

Diffusion grilles of steel, powder coated, galvanised silver.

### Type DGR3 for exhaust air

Realisation as DGR1, but with individually adjustable **vertical** blades only.

### Type DGR5 for supply air

Realisation as DGR1, with damper of light metal mounted on rear side, consisting of an inclined flap, black powder coated.

### Type DGR6 for supply air

Realisation as DGR1, with opposed blade damper of galvanized steel mounted on rear side, blades of untreated alu.

### Type DGR7 for exhaust air

Realisation as DGR3, with damper mounted on rear side, consisting of tiltable flap and baffle plate, galvanized steel.

### Type DGR8 for exhaust air

Realisation as DGR3 with opposed blade damper of galvanized steel mounted on rear side, blades of untreated alu.

### Type DGR17 for supply air

Realisation as DGR1 with damper mounted on rear side, consisting of tiltable flap and baffle plate, galvanized steel.

