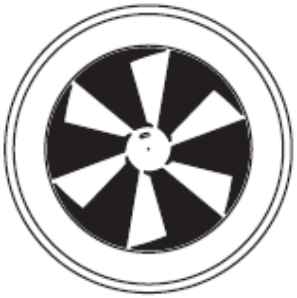
HIGH EXPOSURE DIFFUSERS

Rev.02
26-05-2015

GMC HED-027 PRODUCT SPECIFICATIONS:

- Standard Material: 1mm DKP sheet.
- Usable for supply air ducts.
- Designed for comfort and industrial applications.
- Suitable for applications up to 3,5 meters height.
- Has two models: Fixed-Bladed (HED-127) and Adjustable-Bladed (HED-227).
- Blade positions can either be adjusted by manually or servomotor between 30º and 90º. According to this angle maximum diffusion depth is from 1m to 20m.
- Electrostatic powder coating(oven-drying) with the colour from RAL catalogue.

HED-127
6 BLADES



HED-227
12 BLADES

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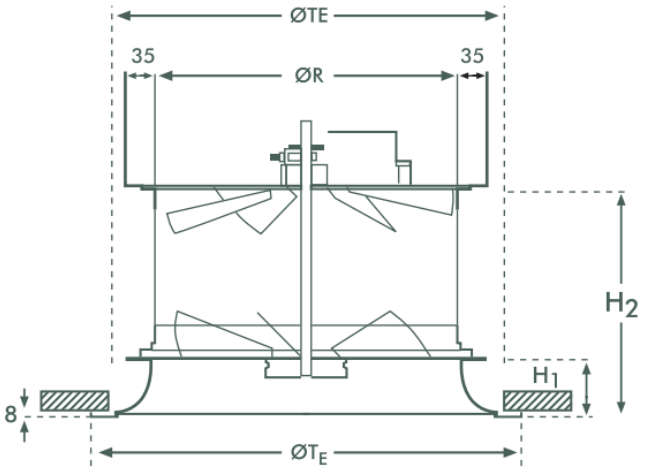
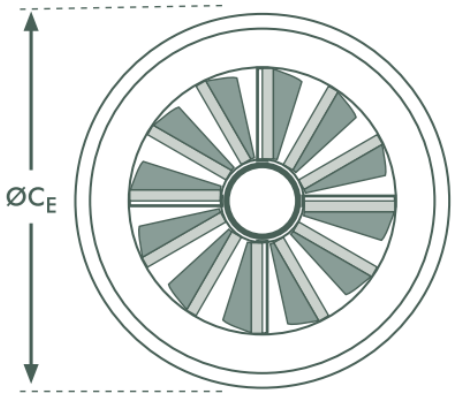
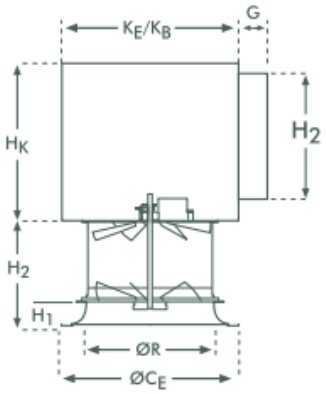
TECHNICAL DETAILS



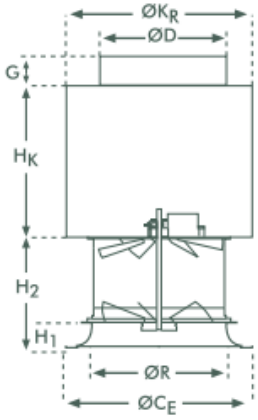


STANDARD DIMENSIONS									
$ØT_E$	K_E / K_B	ØD	H_K	ØR / $ØK_R$	H_1	H_2	G	$ØR_L$	*n
420	435	244	280	310	65	203	70	370	6
520	500	305	365	395	80	238	70	455	6
820	750	396	365	640	125	383	70	690	24
1020	1000	496	430	805	160	568	70	855	24

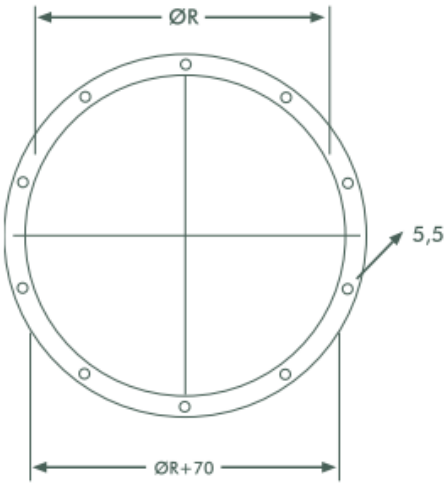
Lateral Access



Overhead Access



Flange



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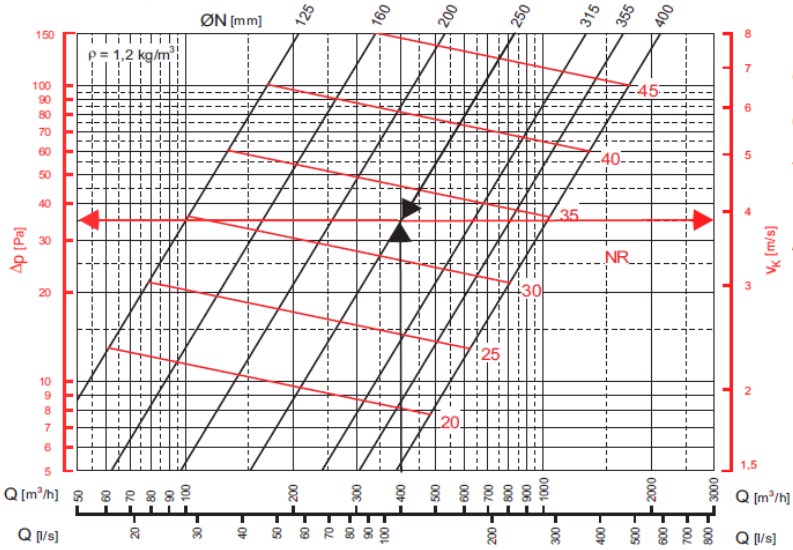
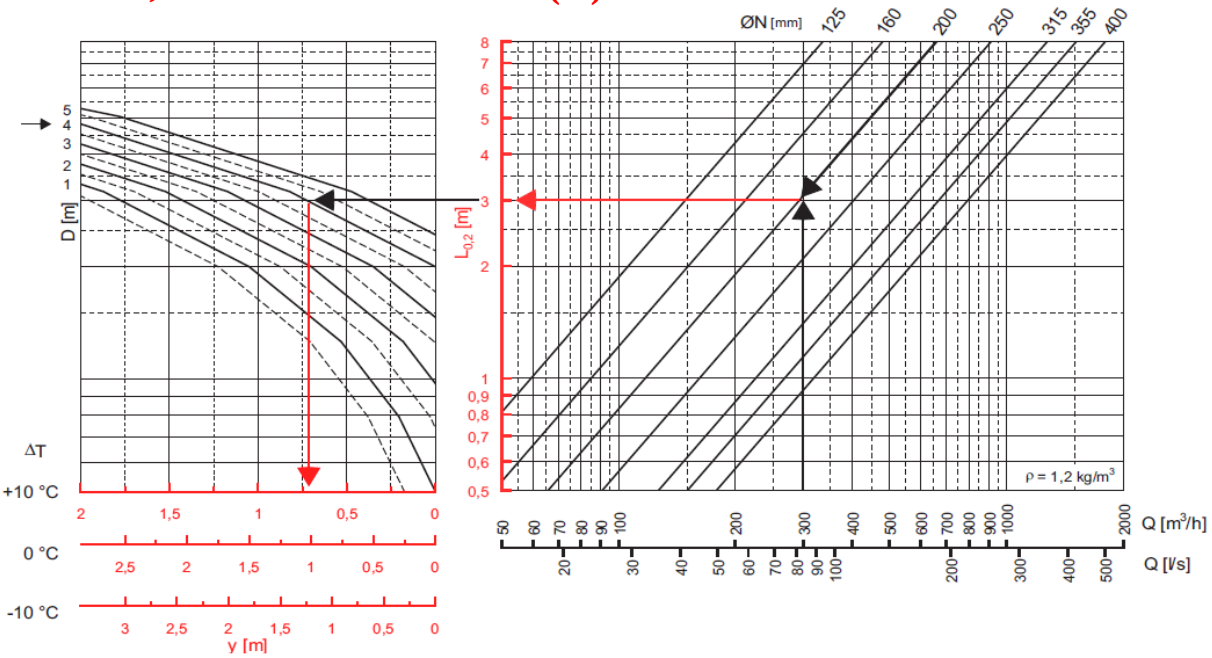
DATA DIAGRAMS

HED-027, PRESSURE ROP AND NOICE LEVELS



Q [m³/h]	supply air flow rate
ØN [mm]	diffuser diameter
v_k [m/s]	velocity relating to the effective outlet area S
Δp [Pa]	total pressure loss
NR	noise rating (ISO standard, in relation to 10^{-12} W) taking no account of the attenuation of the room

HED-027, THROW DISTANCES (m)



Q [m³/h] or [l/s]	supply air flow rate
ØN [mm]	nominal diameter of the diffuser
v_m [m/s]	average velocity of the throw at distance L
L [m]	diffusion radius (= x + y)
x [m]	horizontal dimension of the throw
y [m]	vertical dimension of the throw
$L_{0,2}$ [m]	throw with terminal velocity of 0.2 m/s
D [m]	distance between two diffusers
ΔT [°C]	difference between supply air temperature and ambient temperature

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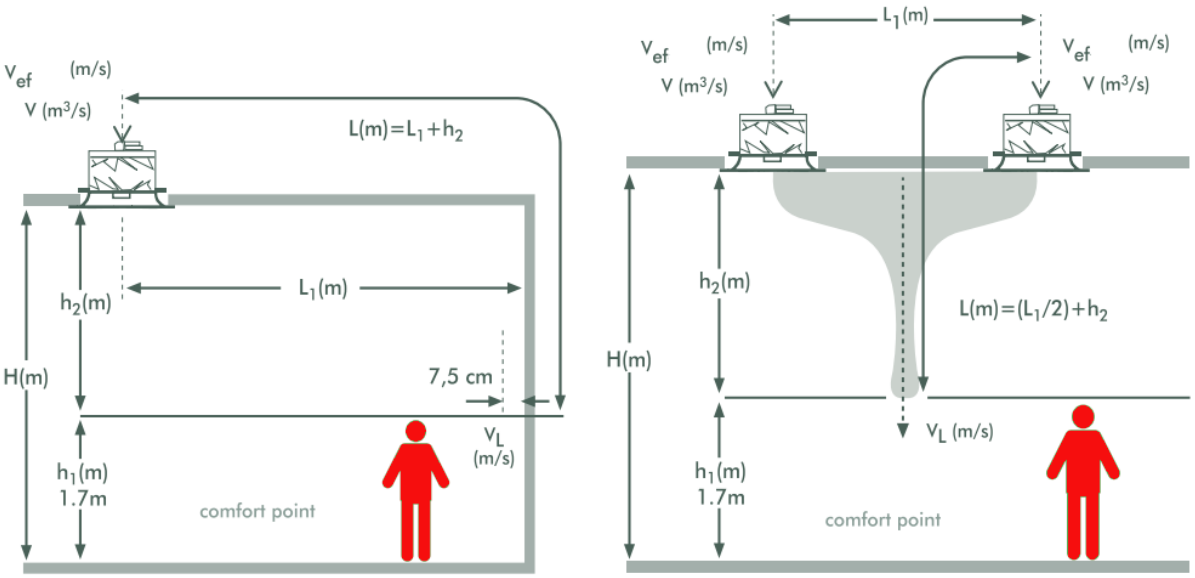
SELECTION TERMS



L1	The distance between the diffusers or between the diffuser and the wall (m)
h1	Comfort point height (m)
h_2	The distance between the diffuser and the comfort point (m)
V_{ef}	Effective comfort point (m/s)
V_L	At the comfort point (m)
Δt_0	The temperature difference between the air accessing to the environment and the temperature of the comfort point (°C)
Δt_L	The temperature difference between the air accessing to the comfort point and the temperature of the comfort point (°C)
L	Throw distance (m)
V	Mass air flow (m^3/h)
H	Ambient height (m)
S	Sound power level dB(A)

In order to get "Coanda Effect" the effective blow out speed (Vefek.) must at least be 2 m/s. To provide the comfort conditions the selection is done considering that sound level should not exceed 40 dB(A). The average upper limit of the comfort point (h1) is calculated as 1.70 m above from the ground. The air throw distance are selected from the table according to the diffuser size and mass air flow considering that the air speed at this level must be (VL) 0,25 ve 0,10 m/s

Note: The values in the table are given for mounting diffuser surface to the same level with the ceiling and for different locations the throw distance to be multiplied by 0,7.

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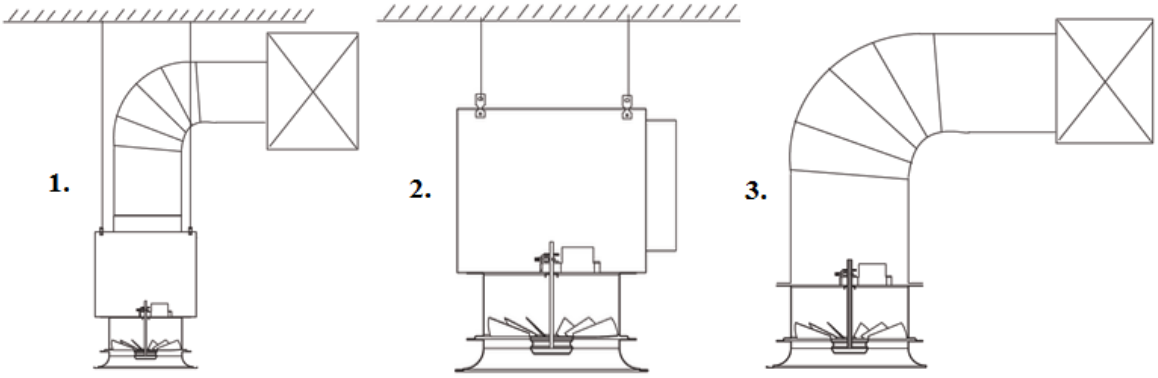
MOUNTING DETAILS

1. Plenum Box Mounting (Overhead Access)
2. Planum Box Mounting (Lateral Access)
3. Direct Mounting to Channel



Plenum Box Mounting (Overhead Access)

Plenum Box Mounting (Lateral Access)

Direct connection to air duct

ORDER PARAMETERS:

HED-027	00	OD9010	SM	D 820
HED-127: 6 blades (fixed) **HED-227:** 12 blades (adjustable)				**D: Neck Diameter**
				00: No Mounting **SM: Screw Mounting** **BM: Bridge Mounting**
				00: No coating **EX: Eloxal Coating** **OD----: Oven Drying Coating**
00: Without Plenum Box **PL: With Plenum Box**				