TURBULANCE DIFFUSERS

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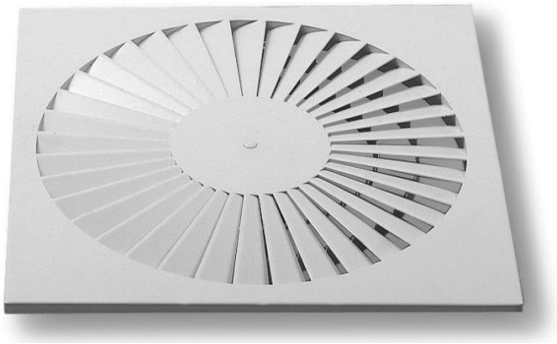
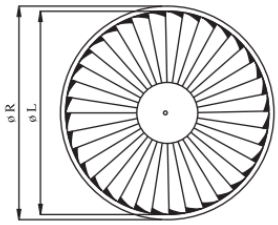


GMC TWD-026 PRODUCT SPECIFICATIONS:

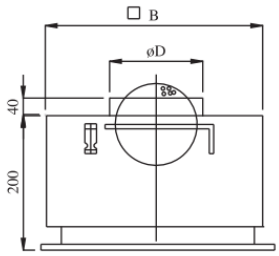
- Standard Material: 1mm DKP sheet. Optional: Aluminum or stainless steel sheets.
- Used for faster air diffusion in wide indoor areas. Usable for supply and return air ducts.
- Diffusion of fresh air occurs faster than any other diffusers, because of vortex-type air flow.
- Suitable for applications between 2,6 to 4 meters height.
- Has two models: Standard model(TWD-126), Improved model (TWD-226).
- Electrostatic powder coating with the color from RAL catalogue.

TECHNICAL DETAILS

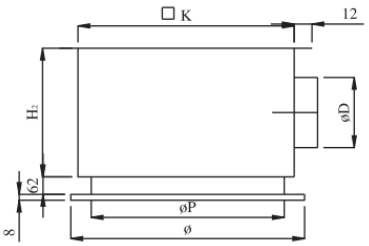
TWD-126 R



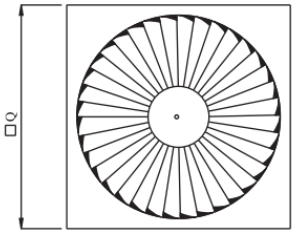
Plenum Box, Overhead Access

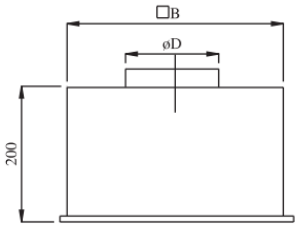


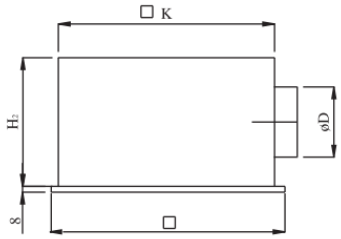
Plenum Box, Lateral Access



TWD-126 K







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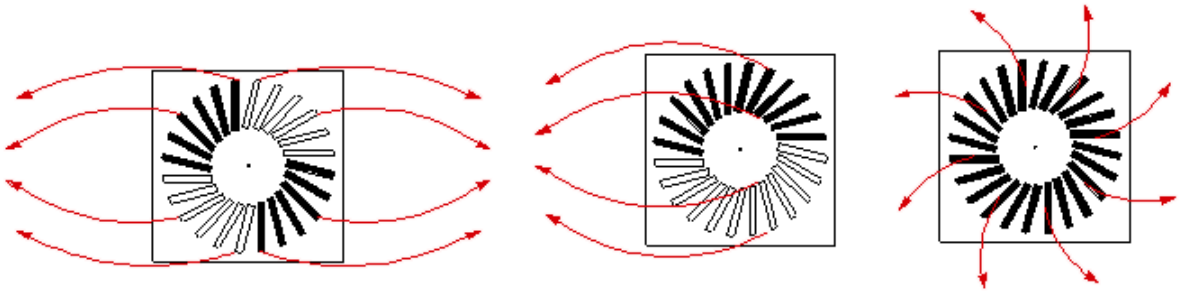
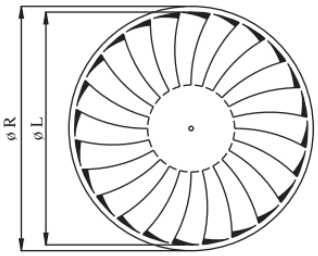
TWD-126 STANDARD SELECTION TABLE

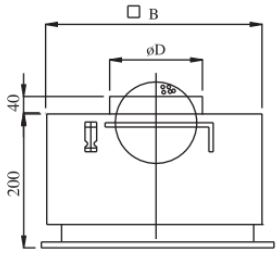
Standard size	Effective Area m²	B	D	L	Q	R	H_2	K	ØP	(Vmin-Vmax) Air volume (m³/h)
300	0,009	280	158	250	298	300	250	290	278	145-200
400	0,018	364	198	350	398	400	295	372	362	180-400
500	0,025	462	198	450	498	500	295	476	460	215-520
600	0,030	559	248	538	598	600	345	567	557	290-600
625	0,030	559	248	538	623	623	345	567	557	290-600



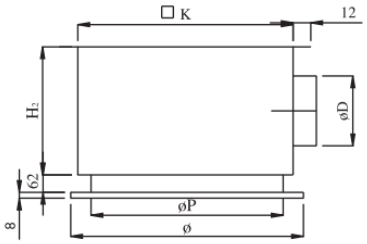
TWD-226 R



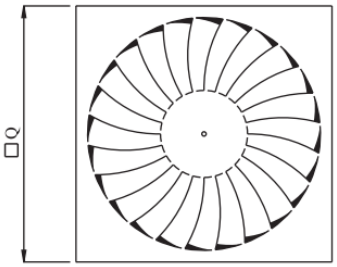
Plenum Box, Overhead Access

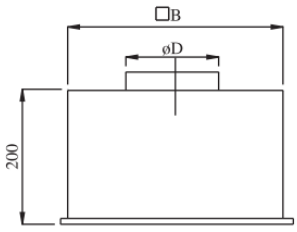


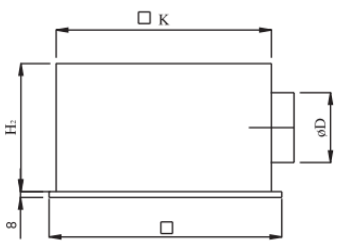
Plenum Box, Lateral Access



TWD-226 K







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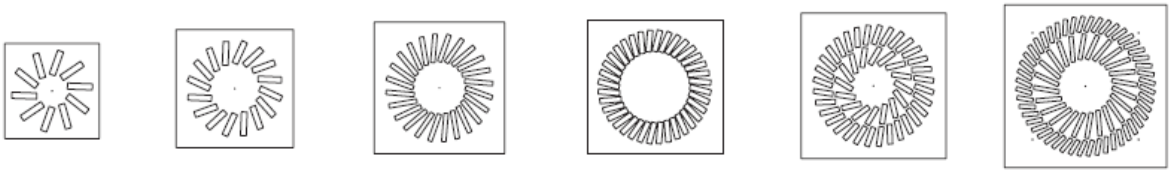
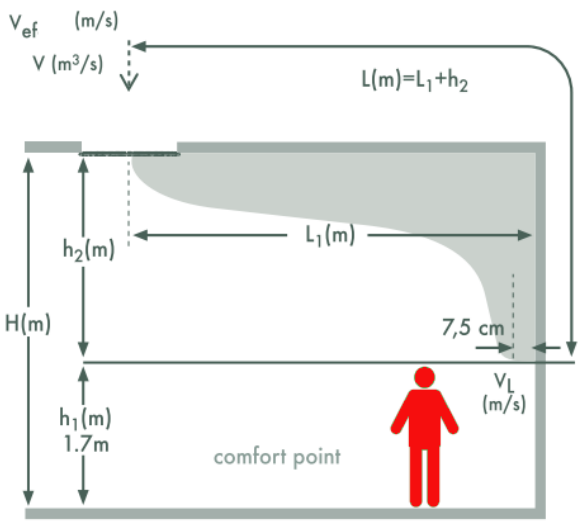
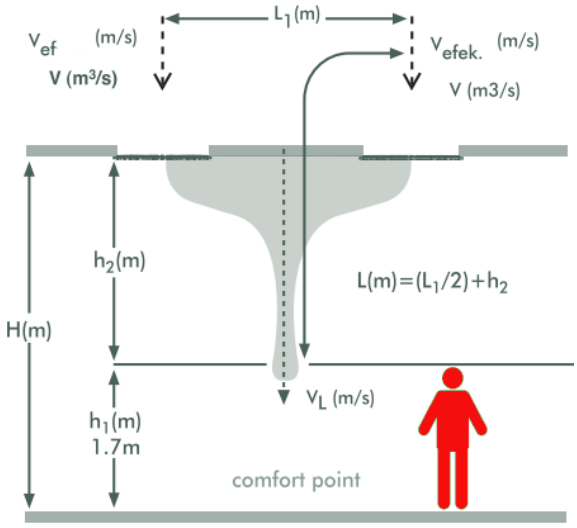
TWD-226 STANDARD SELECTION TABLE

Standard size	Effective Area m²	B	D	L	Q	R	H_2	K	ØP	(Vmin-Vmax) Air volume (m³/h)
300	0,011	280	158	254	298	300	250	290	278	108-360
400	0,019	364	198	336	398	400	295	372	362	252-540
500	0,028	462	198	440	498	500	295	476	460	252-648
600	0,040	559	248	530	598	600	345	567	557	360-900
625	0,040	559	248	530	623	623	345	567	557	360-900



SELECTION TERMS





L1	The distance between the diffusers or between the diffuser and the wall (m)	**Δt_L**	The temperature difference between the air accessing to the comfort point and the temperature of the comfort point (°C)
h1	Comfort point height (m)	**L**	Throw distance (m)
h_2	The distance between the diffuser and the comfort point (m)	**V**	Mass air flow (m³/h)
V_{ef}	Effective comfort point (m/s)	**H**	Ambient height (m)
V_L	At the comfort point (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 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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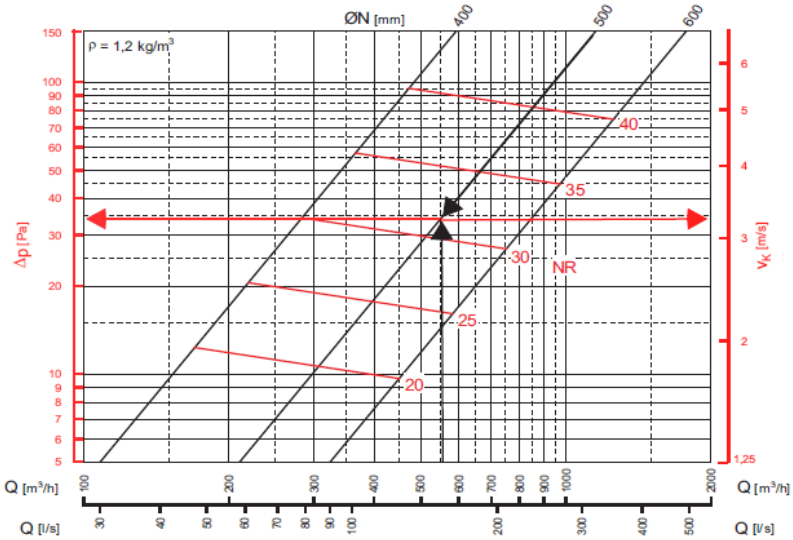
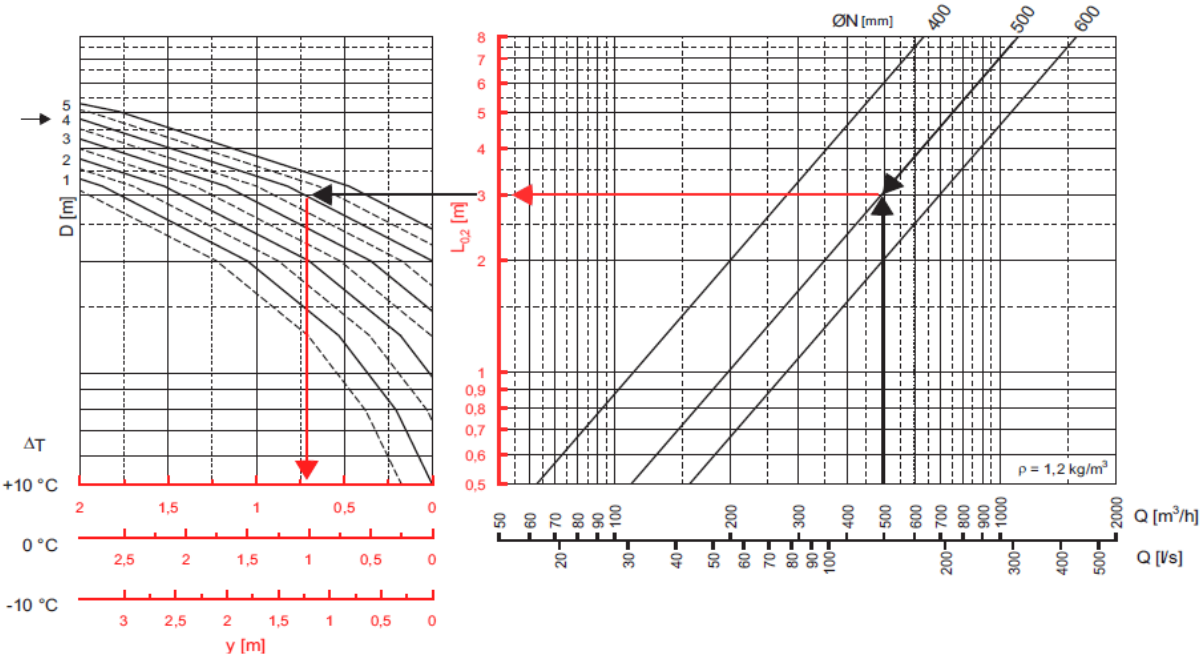
DATA DIAGRAMS

TWD-026, PRESSURE DROP AND NOISE 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

TWD-026, THROW DISTANCES (m)



Q [m³/h] o [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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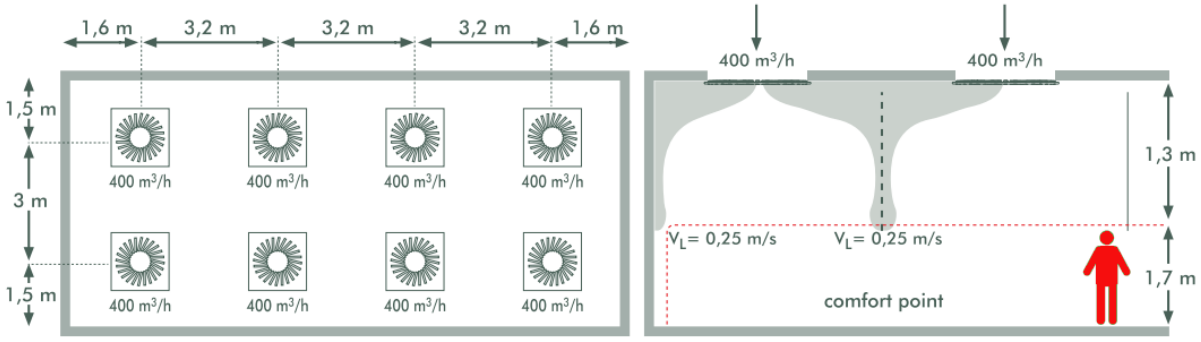
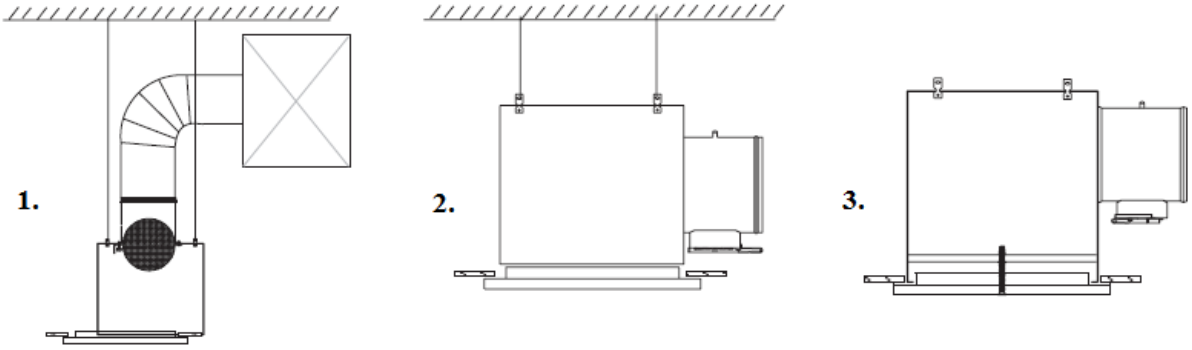
DIMENSIONING & LAY-OUT



MOUNTING DETAILS

1. Plenum Box Mounting (Overhead access)
2. Plenum Box Mounting (Lateral access)
3. Support Beam Mounting



Plenum Box Mounting (Overhead Access)

Plenum Box Mounting (Lateral Access)

Plenum Box Mounting (Bridge)

ORDER PARAMETERS

TWD-026	SQP	OD9010	SM	F 600

TWD-126: Standard
TWD-226: Improved

CRP: Circular Plate
SQP: Rectangular Plate

F: Frame Size

00: No Mounting
SM: Screw Mounting
SB: Support Beam Mounting

00: No coating
EX: Eloxal Coating
OD----: Oven Drying Coating