

2/S8
v 3.3 (en)

PERFORATED DIFFUSER

ANP

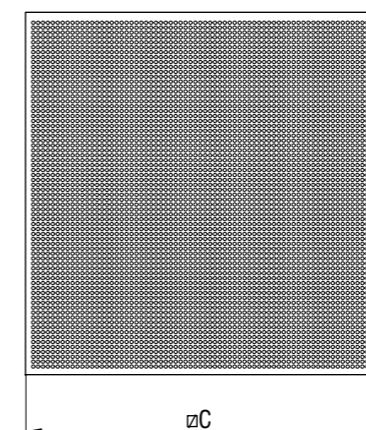
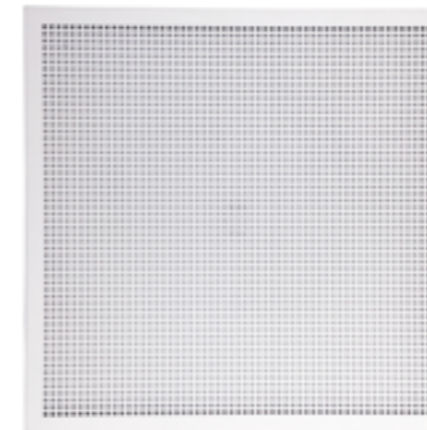


TABLE OF CONTENTS

Ceiling diffuser with perforated front plate..... 125
 Ordering key..... 125
 Selection diagram..... 126
 Discharge diagram..... 127

Definition of symbols:

V [m³/h]	- Air flow	t_z [°C]	- Supply air temperature
x [m]	- Distance from wall	t_p [°C]	- Air temperature in a room
A, B [m]	- Distance between diffusers	t_m [°C]	- Core air temperature
C, X [m]	- Distance between diffusers and walls	Δt_z [K]	- $(t_z - t_p)$
L [m]	- Throw distance $L = x + h$	Δt_p [K]	- $(t_m - t_p)$
v_L [m/s]	- Average core velocity at distance from a diffuser	Δp_t [Pa]	- Total pressure drop
h [m]	- Distance from the ceiling to the occupied zone	L_{WA} [dB(A)]	- Sound power level
v_h [m/s]	- Average core velocity between two diffusers at distance h [m]		
H [m]	- Room height		



ANP

- Ceiling diffuser for room heights from 2,5 to 4m.
- Made out of steel sheet, standard RAL 9010
- Fixing with central screw

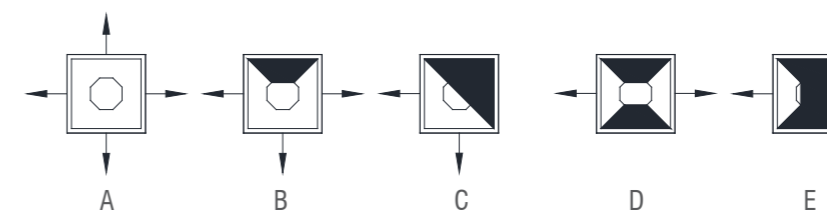
Options

- RAL...
- Plenum box

Diffuser dimensions

Size	øC [mm]	ANP	
		Free A_s [m²]	Effective A_{ef} [m²]
300	298	0,01834	0,01687
400	398	0,03746	0,03448
500	498	0,06057	0,05572
600	595	0,09253	0,08512
625	623	0,10128	0,09318

Air discharge directions*



• in cases B, C, D and E, discharge patterns in the same RAL are delivered.

Technical diagrams given on the subsequent pages apply only to the discharge direction pattern "A"

Outlet areas for pattern [m²]:

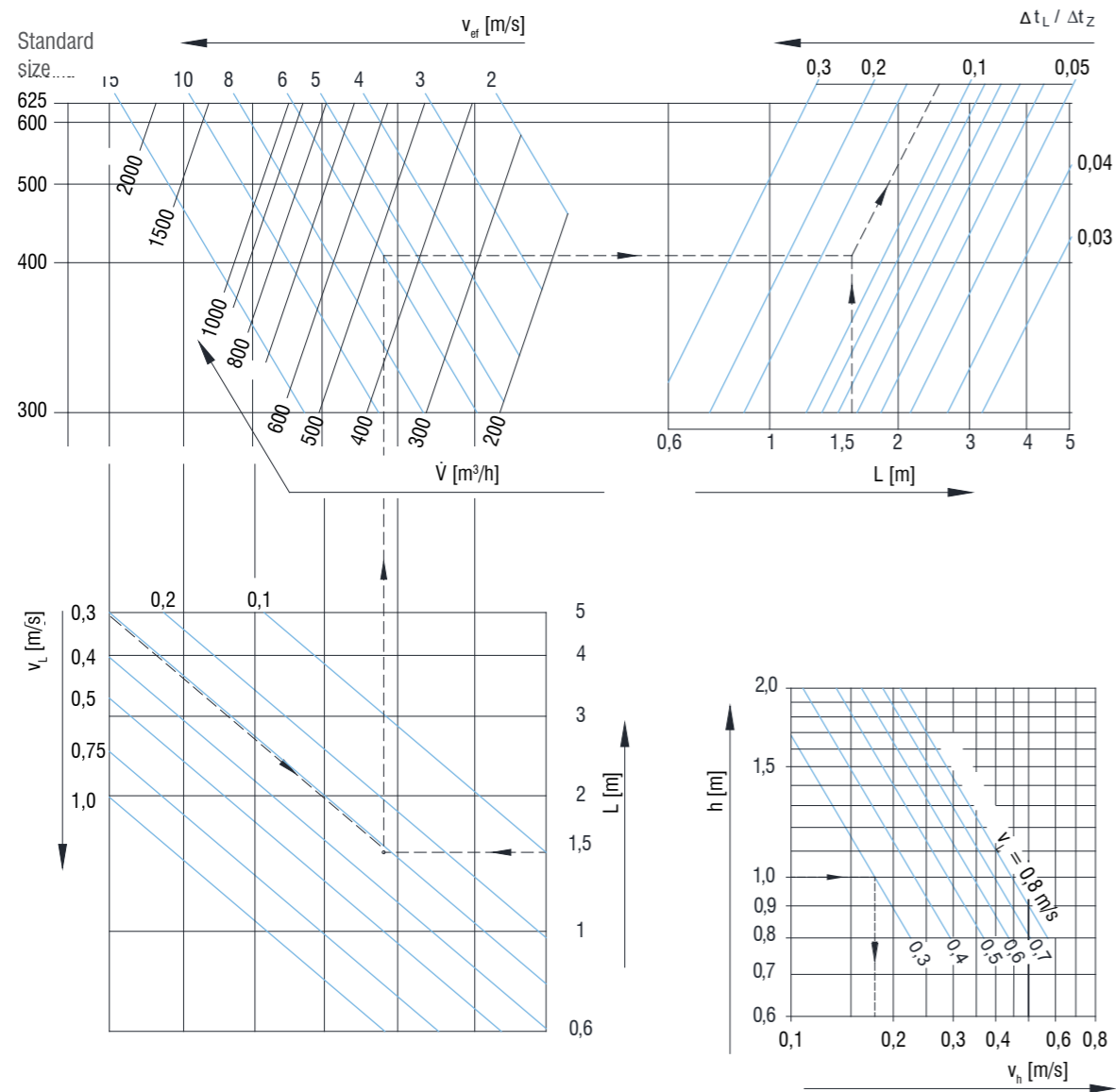
- Direction "B" → $0,75 \cdot A_s$, or $0,75 \cdot A_{ef}$
- Direction "C" → 0,5
- Direction "D" → 0,5
- Direction "E" → 0,25

Ordering key

Perforated diffuser **ANP - 500 - A - A - H - ød - Z**
 Size
 Discharge direction **(A, B, C, D, E)**
A - supply air
B - exhaust air
H - horizontal connection
V - vertical connection
 Connection diameter
 Insulation

*Screws are delivered only for central screw version
 **Ordering key for Plenum box on page 184
 ***Only plenum box UPK1

SELECTION DIAGRAM



Example:

Given: ANP
 $\dot{V} = 480 \text{ m}^3/\text{h}$
 $H = 2,8 \text{ m}$
 $L = 1,5 \text{ m}$
 $v_L = 0,3 \text{ m/s}$
 $\Delta t_z = 5^\circ\text{C}$
 The room has normal acoustic characteristics

Solution: ANP
 $v_{eff} = 6 \text{ m/s}$
 Temperature ratio
 $\Delta t_L / \Delta t_z = 0,12$
 Temperature difference
 $\Delta t_L = 0,125 \cdot 5 = 0,6^\circ\text{C}$
 $v_h = 0,17 \text{ m/s}$

DISCHARGE DIAGRAM

