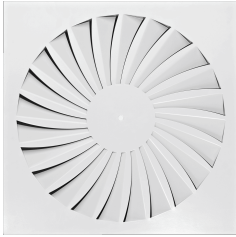


Project Structure

Učebny	-----	TDF-SA-Q-Z-H-M-L/400
Knihovna	-----	TJN/250/D
Místnost	-----	TDF-SA-Q-Z-H-L/300



TDF-SA-Q-Z-H-M-L/400

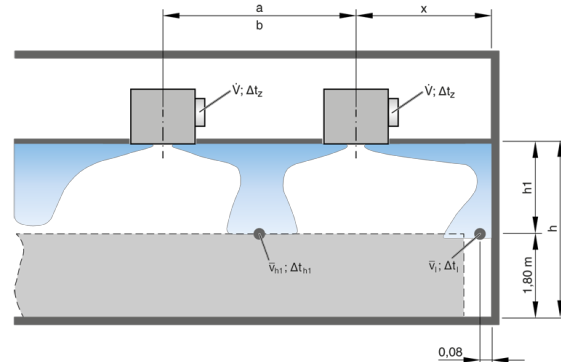
Construction style	Q	Square
System	Z	Supply air
Connection	H	Horizontal
Damper blade for volume flow rate balancing	M	With damper blade
Accessories	L	With lip seal
Nominal size	400	
Total amount	1	

Input Data

Strategy: Single row diffuser arrangement

Volume flow V	235 m ³ /h
Distance a	3,0 m
Distance x	1,8 m
Distance h ₁	0,9 m
Supply air to room air temperature	0 K

Schematic side view



Results

Distance (h ₁ + x) l	2,7 m
Effective air velocity v _{eff}	3,38 m/s
Velocity at h ₁ v _{h1}	0,10 m/s
Temperature difference at h ₁ Δt _{h1}	0,00 K
Velocity at l v _l	0,16 m/s
Temperature difference at l Δt _l	0,00 K

Acoustic results

	Δp _t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC	LWNR
damper blade position open	13	24	26	22	32	19	< 15	< 15	< 15	< 15	18	22
damper blade position 45°	17	23	26	25	30	17	< 15	< 15	< 15	< 15	16	20
damper blade position closed	34	25	20	26	31	22	17	< 15	< 15	< 15	17	21

Description

Ceiling swirl diffusers with square or circular diffuser face. Supply air and extract air variants for comfort zones. Diffuser face with fixed air control blades for horizontal swirling supply air discharge creating high induction levels. For installation into all types of suspended ceilings. Ready-to-install component which consists of the diffuser face and a plenum box, side entry or top entry spigot, and suspension holes or suspension lugs. The diffuser face is fixed to the cross bar with a central screw. Spigot suitable for ducts to EN 1506 or EN 13180. Sound power level of the air-regenerated noise measured according to EN ISO 5135.



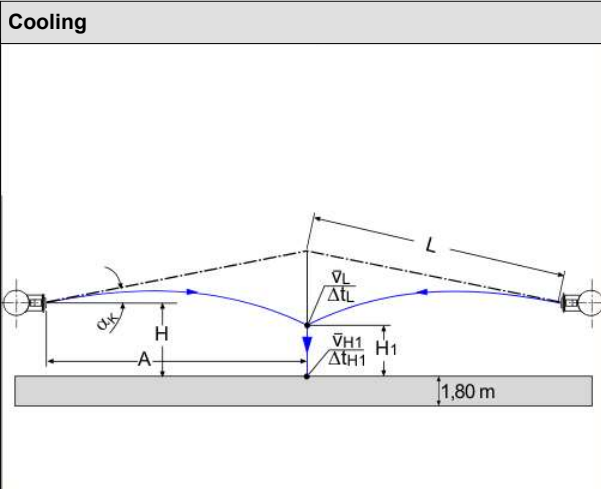
Size
Accessories
Total amount

250
D
1

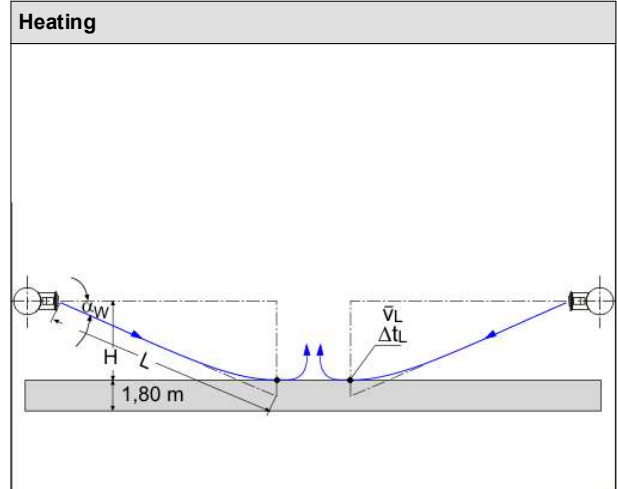
TJN/250/D

Width

Cooling



Heating



Volume flow V: 275 m³/h
Distance a: 5,00 m
Distance b: 4,80 m
Distance h: 1,20 m
Air discharge: Discharging towards
Duct air velocity VK1: 2,00 m/s
Duct air velocity VK2: 1,00 m/s
Swirl unit cover: With cover

Cooling
Temperature difference Δt : -2,0 K
Angle α : 0 °
Distance H1: 1,09 m
Air velocity V_{H1}: 0,26 m/s
Temperature difference Δt_{H1} : -0,1 K

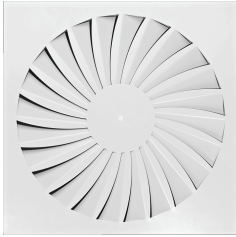
0
Temperature difference Δt : 4,0 K
Angle α : -18 °
Air velocity V_L: 0,73 m/s
Temperature difference Δt_L : 0,4 K

Axial Installation			
	Cool.	Heat.	
Δp_t	18	18	Pa
LWA	<15	<15	dB(A)

Branch Installation			
	Cool.	Heat.	
Δp_t	20	21	Pa
L _{WA}	<15	<15	dB(A)

Description

Adjustable jet nozzles for the ventilation of large indoor spaces such as halls and assembly rooms. Air discharge with long throw distance and excellent acoustic properties. For horizontal air discharge with a vertical discharge angle of $\pm 30^\circ$. Discharge angle indication, limiting and setting using a concealed scale. Consists of a casing for the spherical discharge nozzle, flange, face cover ring and nozzle. Can be mounted onto circular ducts or installed into walls.



Construction style
System
Connection
Accessories
Nominal size
Total amount

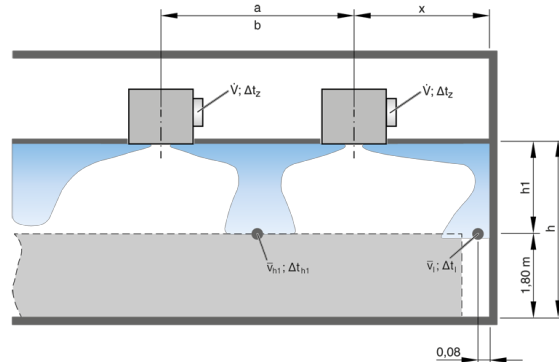
TDF-SA-Q-Z-H-L/300

Q Square
Z Supply air
H Horizontal
L With lip seal
300
1

Input Data

Strategy: Single row diffuser arrangement
Volume flow V 150 m³/h
Distance a 1,7 m
Distance x 1,7 m
Distance h₁ 0,9 m
Supply air to room air temperature 0 K

Schematic side view



Results

Distance (h₁ + x) l 2,6 m
Effective air velocity v_{eff} 3,86 m/s
Velocity at h₁ v_{h1} 0,07 m/s
Temperature difference at h₁ Δt_{h1} 0,00 K
Velocity at l v_l 0,14 m/s
Temperature difference at l Δt_l 0,00 K

Acoustic results

	Δp _t [Pa]	LWA [dB(A)]	63Hz [dB]	125Hz [dB]	250Hz [dB]	500Hz [dB]	1kHz [dB]	2kHz [dB]	4kHz [dB]	8kHz [dB]	LWNC	LWNR
damper blade position open	19	30	28	27	35	29	22	< 15	< 15	< 15	23	25
damper blade position 45°	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
damper blade position closed	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN

Description

Ceiling swirl diffusers with square or circular diffuser face. Supply air and extract air variants for comfort zones. Diffuser face with fixed air control blades for horizontal swirling supply air discharge creating high induction levels. For installation into all types of suspended ceilings. Ready-to-install component which consists of the diffuser face and a plenum box, side entry or top entry spigot, and suspension holes or suspension lugs. The diffuser face is fixed to the cross bar with a central screw. Spigot suitable for ducts to EN 1506 or EN 13180. Sound power level of the air-regenerated noise measured according to EN ISO 5135.