



TSOI-T-125-T

Item no. 423555

Document type: Product card Document date: 2019-05-29

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Description

Function

The TSOI-T is a perforated facemultidirectional ceiling diffuser with adjustable deflectors set internally. The diffuser is suitable for both supply and extract applications. As standard all side entry plenums are insulated and Top entry plenums are non insulated. Internal deflectors permit the diffuser to be set for Air pattern direction of 1 to 4 way. Diffuser and deflectors are as standard powder painted to RAL9010.

Product Description

TSOI-T-ØD-T : Top-entry perforated plate supply diffuser

Features

- Supply and extract functionality
- Suitable for chilled, isothermal or warmed air
- Ideal for modular ceiling tile replacement
- High entrainment and mixing of surrounding air
- · Short throw

Selection Criteria

- Ceiling Height 2.7m
- Temperature Differential (Room/Supply air) ≤10K
- Lt, throw velocities shown in the table are for 0.375m/s to achieve air velocity of 0.15m/s in the occupied zone.



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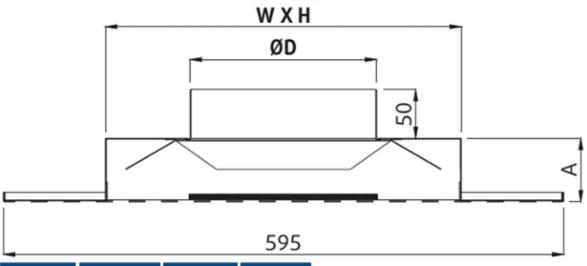


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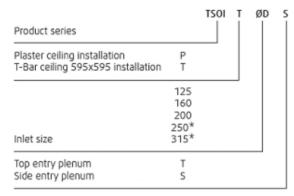


Dimensions



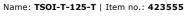
Туре	WxH	ØD	Α	
125	240X240	123	61	
160	300X300	158	61	
200	380X380	198	65	
250	480X480	248	80	
315	560X560	313	86	

Ordering codes



Documentation





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Diagram

TSOI			4-Way Supply					
m³/h	I/s		125	160	200	250	315	
100		L _{10.25}	0.5	0.4			İ	
	28	ΔP _t (Pa)	8	3				
		L _{MA}	-	-				
150	42	L _{10.25}	0.8	0.6				
		ΔP ₁ (Pa)	16	7				
		L _{wx}	35	-				
		L _{10.25}	1	0.8	0.7			
200	56	ΔP ₁ (Pa)	33	12	5			
		Lwa	43	29	-			
250		L _{10.25}	1.3	1	0.8	0.5		
	69	ΔP _t (Pa)	48	18	8	3		
		L _{ws}	52	37	-	-		
		L _{10.25}		1.2	1	0.8		
300	83	ΔP,(Pa)		28	12	5		
		L _{wa}		46	28	-		
		L _{10.25}			1.3	1.1	0.9	
400	111	ΔP _t (Pa)			20	9	4	
		Lwa			39	-	-	
500		L _{10.25}			1.6	1.4	1.2	
	139	ΔP,(Pa)			32	13	6	
		Lwa			45	33	-	
600		L _{10.25}				1.7	1.4	
	167	ΔP _t (Pa)				18	9	
		L _{wa}				40	29	
750		L _{10.25}					1.7	
	208	ΔP,(Pa)					13	
		L _{wa}					37	
1000		L _{10.25}					23	
	278	ΔP,(Pa)					24	
		L _{wa}					48	

L $_{
m t0.25}$ = Throw value (m) with terminal velocity of 0.25 m/s

 L_{WA} = Sound Power level in dB (A)

 ΔP_t = Total pressure Drop (Pa)

With room height of 2.7m, average occupied room velovity of 0.15m/s can be achieved

The diffusers and plenums are tested together as one unit

Selection Example

Selection Criteria

Ceiling Height 2.7 m

Temperature Differential (Room to Supply air) ΔT of -10K

Air Velocity In The Comfort Zone V_t = 0.15 m/s

Result

TSOI-T-ØD-S

Air Volume $Q_V = 111 \text{ l/s or } 400 \text{ m3/h}$

Throw $L_t = 1.1 \text{ m}$

Pressure Drop ΔP_t = 9Pa

Noise Level $L_{WA} \approx <25 dBA$

Specification text

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