



RTBM

- ▶ Swirl diffuser
- ▶ Supply
- ▶ For Tee-bar mounting

Design:

- Swirl diffuser:**
 face plate: steel
 finish visible parts: epoxy powder
 colour: RAL 9010
- Plenum box:**
 material: steel
 sendzimir
 lining: 1/2" ductliner
 finish: none
- Damper:**
 material: steel
 sendzimir
 finish: none
- Optional:**
 face plate: up to 750 mm
 plenum box: lower height

Available types:

- RTB - - -**
- R** swirl diffuser
 - T** supply
 - B** rotating exhaust pattern, petal shaped
- **face plate**
M suited for Tee-bar mounting module size 600 mm
T tegular (not available for model 550)
- **accessories**
O none
V damper (key operated from adjacent tile)
- **designed with**
A round top connection
R lined plenum box (assembled)
U un-lined plenum box (assembled)

Application:

The swirl diffuser type RTBM is suitable for the supply of cooled air with a large temperature differential and can be utilised for constant and variable volume installations. The air pattern is fixed. The diffuser is for Tee-bar mounting in a ceiling with a 600 mm module size and can be fitted with a plenum box which is delivered ready assembled. The special high induction swirl effect enables a significant number of air changes. The very shallow inflow pattern also makes the diffuser suitable for somewhat lower spaces.

Features:

- Max. air exchanges: up to 15 x
 Under temperature: up to 10 K
 Over temperature: up to 15 K

Dimensional data:

model	A	D	T	P	H
250	273	123	60	220	115
350	373	158	70	265	130
450	473	198	80	315	145
550	573	248	80	365	165

Weights:

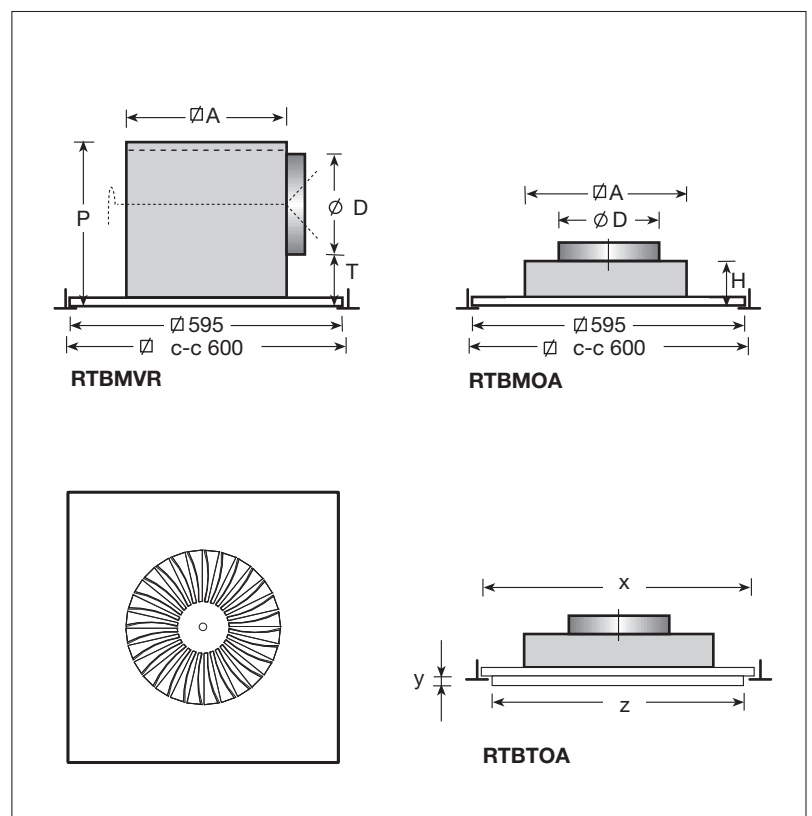
model	type		Ø vcd
	OA	OR	
250	4.2	4.9	0.1
350	5.4	6.6	0.2
450	6.9	8.8	0.3
550	8.7	11.4	0.4

Remarks:

The dimensions are given in mm, weights in kg. Connection "D" is actual O.D. Diffusers for Tee-bar mounting with a smaller module see type RTBD.

For the diffuser with a tegular edge RTBT-- the dimensions x, y and z must be provided when ordered. x - z = 12 minimum (model 550: z = 583mm). y = 6 minimum.

Dimensions:



Performance data RTBM:

air volume		model											
		250			350			450			550		
m ³ /s	m ³ /h	T	Ps	Lp	T	Ps	Lp	T	Ps	Lp	T	Ps	Lp
0.020	72	0.7	3	-									
0.025	90	0.9	5	-									
0.030	108	1.1	7	16	0.9	3	-						
0.040	144	1.5	13	24	1.2	5	-						
0.050	180	1.9	20	30	1.4	7	16	1.1	2	-			
0.060	216	2.2	28	34	1.7	11	21	1.3	3	-			
0.070	252	2.6	38	38	2.0	15	25	1.5	4	13	1.3	2	-
0.080	288	3.0	50	42	2.3	19	29	1.7	6	16	1.5	3	-
0.100	360				2.9	30	34	2.2	9	22	1.9	5	14
0.125	450				3.6	46	40	2.7	14	28	2.3	7	20
0.150	540							3.2	20	32	2.8	11	25
0.200	720							4.3	36	40	3.7	19	32
0.250	900										4.6	30	38

Throw correction factor:

V _{end} m/s	throw factor
0.15	1.67
0.20	1.25
0.25	1.00
0.35	0.71
0.50	0.50

Throw figures are based on 0.25 m/s end velocity. In case other end velocities are required correct according to table.

General:

The throw applies to flush mounted in a horizontal dropped ceiling.

- throw T in metres.
 - static pressure drop Ps in Pa.
- The assumed room absorption is 10 dB.
- sound pressure Lp in dB(A).
- Intermediate values may be interpolated.

Lined Plenums:

model	middle frequency bands					
	125	250	500	1K	2K	4K
250	5	0	3	10	5	11
350	2	2	7	7	7	9
450	2	3	9	7	7	9
550	0	6	7	7	6	9