

VFT series

Square Face Swirl diffuser

Swirl diffuser with square face-plate and fixed, radial air pattern

- supply -

Type VFT..O4



Application

Types VFT..O4 swirl diffusers with square face-plate are designed for (easy) installation in suspended T-bar type ceilings or surface mounting. The horizontal discharge pattern and high induction ratio result in rapid temperature and velocity equalization and ensure confident use in cooling and/or heating in CAV or VAV applications with temperature differences up to 11°C and a high number of air changes.

Technical information

Features:

- High induction ratio and horizontal discharge pattern.
- Suitable for CAV / VAV applications and air flow ranges from 100% to 25%
- Suitable for a high number of air changes.
- Suitable with or without ceiling, model 25 will assure a horizontal discharge even without a ceiling to create "Coanda-effect"
- The integral air pattern stabilizer assures a uniform air distribution across the diffuser face independent to the inlet spigot position, even with irregular duct approach, resulting in reduced pressure drop through the plenum box.
- Removable face-plate with centre bolt.
- Panel design allows quick/easy "lay-in" installation on site in T-bar suspended ceiling systems or surface mounting.
- Volume control damper adjustable from the diffuser face

Construction:

- Removable diffuser face-plate: sheet steel, with fixed, radially angled blades.
- Standard finish: no. 4 white stove enamelled, RAL 9010.
- Plenum box: (option) galvanized sheet steel with integral air pattern stabilizer, with or without internal thermal or acoustic insulation.
- Adaptor (option) constructed from galvanized sheet steel with round top inlet connection.
- Other versions are available upon request.

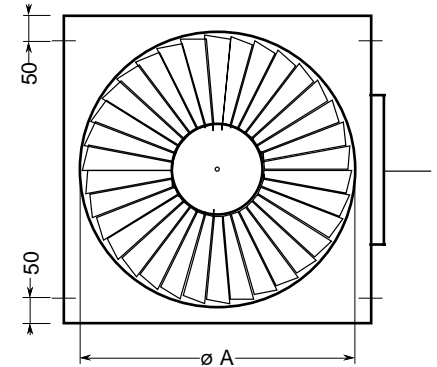
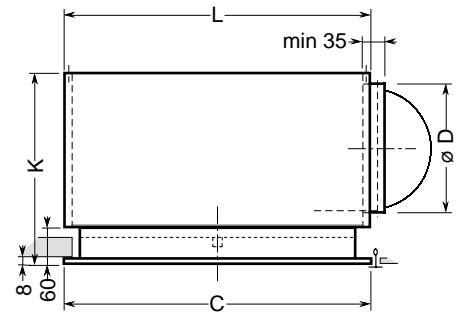
Delivery format:

- Diffuser and plenum box are supplied as a single assembly.

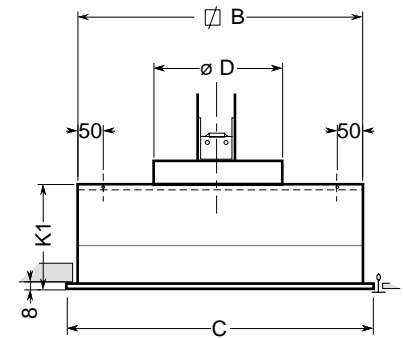
Specify as:

Example:

Supply and install, swirl diffusers with fixed, radial air pattern and square face-plate suitable for suspended T-bar ceiling systems or surface mounting. Complete with internally insulated plenum box from galvanized sheet steel with integral air pattern stabilizer and volume control damper. Finish, white stove enamelled, RAL 9010
Barcol-Air type: VFTO4O4
Sizes and arrangements as shown on the plans.



Type VFTO4O4



Type VFTO6O4

Dimensions

Model	ø A	□ B	C	ø D	K	K1	L
24	538	555	598	248	340	200	600
25	538	555	623	248	340	200	600

Other dimensions are available upon request

Notes:

1. All dimensions are in millimetres.

Swirl diffuser with square face-plate and fixed, radial air pattern

- supply -

Type VFTO304

Type VFTO304 model 24 and 25, diffuser with insulated plenum box

180 - 720 m³/h

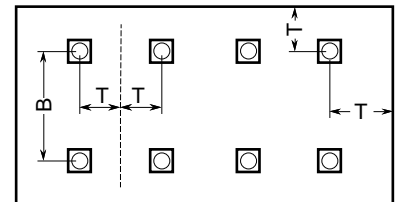
Diffuser arrangement					in more than one row and B < 4.0 m			in one row or more rows and B ≥ 4.0 m
ceiling height	air volume		P _s Pa	L _{pA} NC	distance between rows:			throw (T) m
	m ³ /s	m ³ /h			B = 2.7 m throw (T) m	B = 3.2 m throw (T) m	B = 3.6 m throw (T) m	
2.7 m	0.050	180	3	--	0.7	0.7	0.7	0.7
	0.060	216	4	--	1.2	1.0	0.8	0.7
	0.070	252	5	--	1.4	1.2	1.0	0.9
	0.080	288	7	--	1.6	1.3	1.2	1.0
	0.090	324	8	--	1.7	1.4	1.3	1.2
	0.100	360	10	--	1.8	1.5	1.4	1.2
	0.125	450	16	--	1.9	1.7	1.5	1.4
	0.150	540	23	25	2.0	1.8	1.6	1.5
	0.175	630	31	29	2.2	1.9	1.8	1.7
0.200	720	41	33	2.4	2.2	2.1	2.0	
3.0 m	0.050	180	3	--	0.7	0.7	0.7	0.7
	0.060	216	4	--	0.7	0.7	0.7	0.7
	0.070	252	5	--	1.0	0.8	0.7	0.7
	0.080	288	7	--	1.3	1.1	0.9	0.8
	0.090	324	8	--	1.5	1.2	1.1	0.9
	0.100	360	10	--	1.6	1.3	1.2	1.0
	0.125	450	16	--	1.8	1.5	1.4	1.3
	0.150	540	23	25	1.9	1.7	1.5	1.4
	0.175	630	31	29	2.0	1.7	1.6	1.5
0.200	720	41	33	2.1	1.8	1.7	1.6	
3.6 m	0.050	180	3	--	0.7	0.7	0.7	0.7
	0.060	216	4	--	0.7	0.7	0.7	0.7
	0.070	252	5	--	0.7	0.7	0.7	0.7
	0.080	288	7	--	0.7	0.7	0.7	0.7
	0.090	324	8	--	0.8	0.7	0.7	0.7
	0.100	360	10	--	1.2	0.9	0.8	0.7
	0.125	450	16	--	1.5	1.2	1.1	1.0
	0.150	540	23	25	1.7	1.4	1.3	1.1
	0.175	630	31	29	1.8	1.6	1.4	1.3
0.200	720	41	33	1.9	1.6	1.5	1.4	

1. Throw data refers to diffusers mounted in a flat ceiling (without obstructions), 2.70 to 3.60 m above the floor.
2. Throw data is based on supply air 11°C below room temperature.
3. When model 24 swirl diffusers are mounted free within the room (i.e. without a ceiling) the throw is decreased by up to 40% and cooled air will be discharged downwards at a maximum angle of 20°. Horizontal discharge can be obtained by using a model 25 diffuser.
4. The sound pressure level data and pressure

drop data apply to diffusers which have no volume control or whose volume control is fully open.

5. Sound pressure levels based on a room absorption of 10 dB, levels less than NC 20 are indicated by "--".
6. The values for "insertion loss insulated plenum box" do not include end reflection.
7. For non standard applications and/or selections, please contact our technical staff.

Diffuser arrangement



Insertion loss insulated plenum box

Model	Insertion loss in dB/oct.					
	125	250	500	1000	2000	4000
24	0	3	4	4	3	5
25	0	3	4	4	3	5

