

**Features**

- Model TAFR  
Circular Floor Swirl
- Model VM  
Circular Floor Swirl



# Air Diffusion

Grilles Diffusers Louvres Chilled Beams

Ruskin Air Management Limited  
[www.ruskinuk.co.uk](http://www.ruskinuk.co.uk)

## Contents

### Model TAFR

Circular Swirl Diffusers, from high impact polycarbonate material, suitable for applications requiring high induction air distribution.

Pages 2 – 4

### Model VM

Circular Swirl Diffusers, having an aluminium slotted face plate and incorporating a swirl effect suitable for most floor applications.

Page 5 – 7

## Model TAFR



### Description

Model TAFR circular floor swirl diffuser blends both form and function into its design. The diffuser face possesses a series of curved slots, which provides a high induction helical air pattern and yet results in an astonishingly low plenum pressure, making it ideal for most applications using pressurised under floor air distribution systems.

Cleverly incorporated into the design is a manual air volume damper, which is easily adjusted by simply rotating the diffuser face. Each diffuser is supplied with M6 grub screws as a damper locking screw. Visual status of the damper position is via the external open/close indicator coupled with the internal open/close stop. There is

no need to remove the diffuser face, a unique feature only found in the Model TAFR.

Each diffuser also includes a dirt/dust collection receptacle, which is easily removed for cleaning.

### Construction

Constructed from durable high impact polycarbonate material, manufactured to comply with UL 94-5V standard for flammability and smoke.

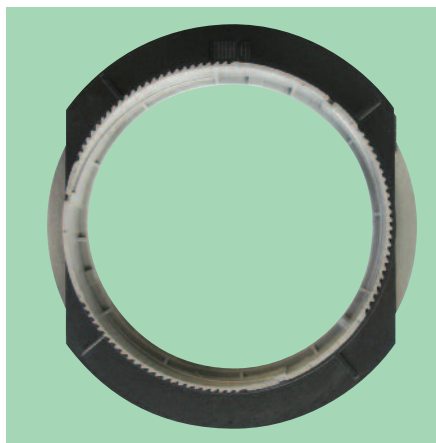
### Dimension and Finish

Model TAFR is supplied in a standard nominal size of 200mm diameter and is available in two standard finishes: Black or Grey.

### Standard Installation Method

Floor panel installation into a prepared opening is by, quick mount under floor, positive compression, gasketed ring for rapid and secure fixing. The extra wide flange is to prevent carpet, pulling away from the diffuser edge. The diffuser may be installed after the flooring or carpet fitting is complete.

Relocation of the diffuser to another area is simply carried out by moving the entire floor panel to the desired new position. Removal of the diffuser from the floor panel is not normally required.



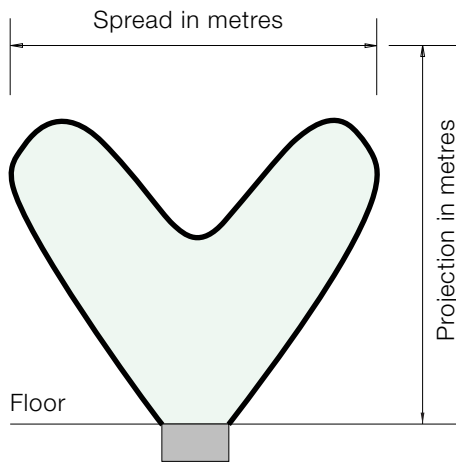
Trim and gasket ring



Dirt basket and adjustable damper

## Model TAF-R Performance

	Airflow L/s	33	35	38	40	42	45	47	50	52	57
200 Dia.	Plenum pressure, Pa	10	11	12	15	17	19	21	23	26	30
	NR (Noise Rating)	-	-	-	11	13	14	15	17	18	20
12 °C	Projection, m., 0.76, 0.51, 0.25 m/s	0.27-0.46-0.90	0.30-0.49-0.95	0.36-0.52-1.0	0.37-0.55-1.0	0.4-0.58-1.0	0.4-0.58-1.0	0.43-0.64-1.1	0.46-0.67-1.1	0.46-0.67-1.1	0.52-0.76-1.2
∅T	Spread, m., @ 0.51 -0.25 m/s	0.49 - 0.98	0.52 - 1.04	0.58 - 1.1	0.61 - 1.16	0.64 - 1.19	0.67 - 1.22	0.7 - 1.25	0.73 - 1.28	0.76 - 1.31	0.85 - 1.37
8 °C	Projection, m., 0.76, 0.51, 0.25 m/s	0.15-0.21-0.43	0.15-0.21-0.46	0.15-0.24-0.49	0.15-0.24-0.52	0.18-0.27-0.55	0.18-0.27-0.58	0.18-0.3-0.61	0.21-0.30-0.64	0.21-0.34-0.64	0.24-0.37-0.67
∅T	Spread, m., @ 0.51 -0.25 m/s	0.40 - 0.85	0.43 - 0.88	0.46 - 0.91	0.49 - 0.94	0.52 - 0.98	0.55 - 1.01	0.58 - 1.04	0.61 - 1.07	0.64 - 1.10	0.70 - 1.13



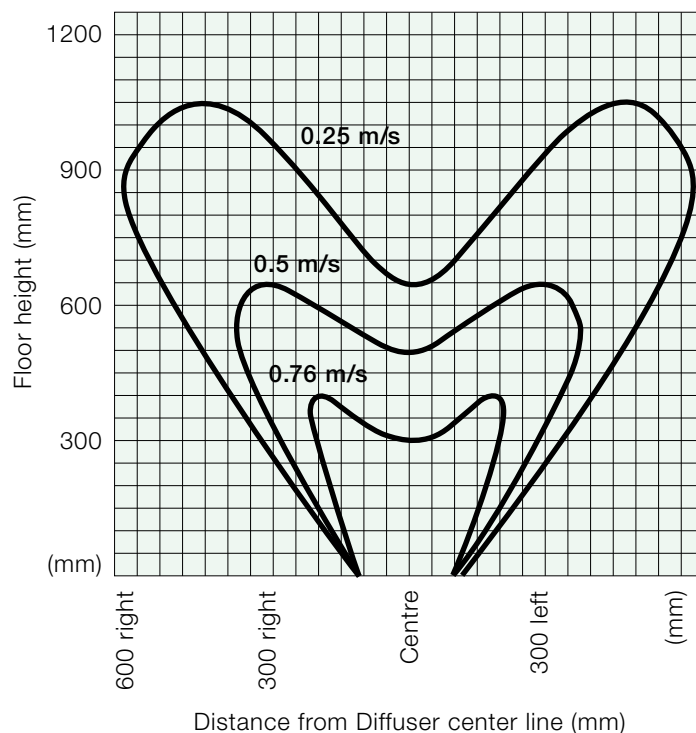
**Performance Notes:**

NR values are based on Octave bands 2-7. Sound power levels minus a room absorption of 10 dB.

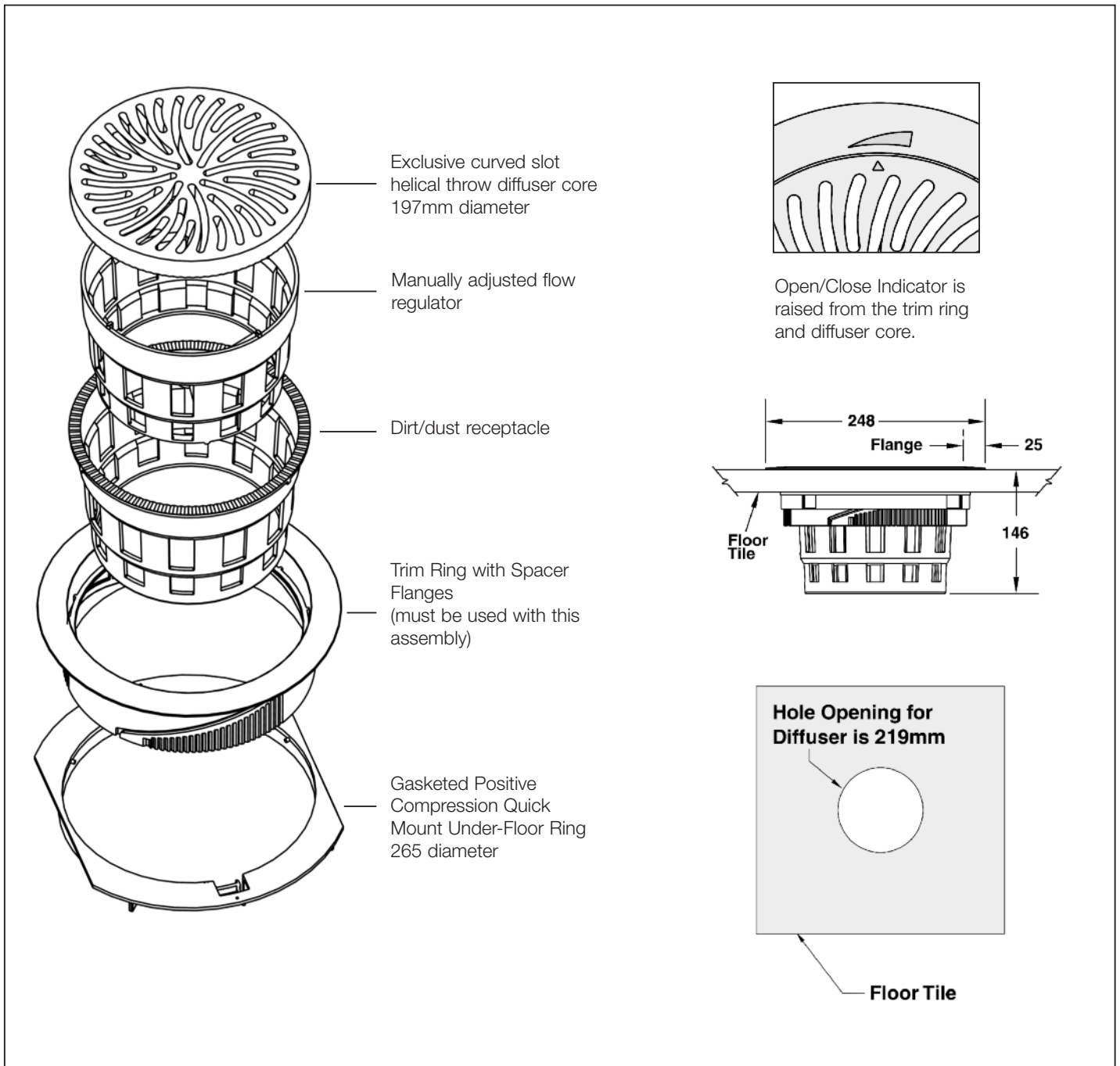
Dash (-) in space denotes NR value of less than 10dB.

Projection is the upward distance from floor to the top of the diffuser air flow jet for terminal velocities (Vt) of 0.76, 0.51 and 0.25 m/s, with cooling in meters. Spread is the total width of the air flow jet to terminal velocities of 0.51 and 0.25 m/s.

TAF-R 12°C Delta-T at 47L/s



## Model TAFR Dimension and Installation Information



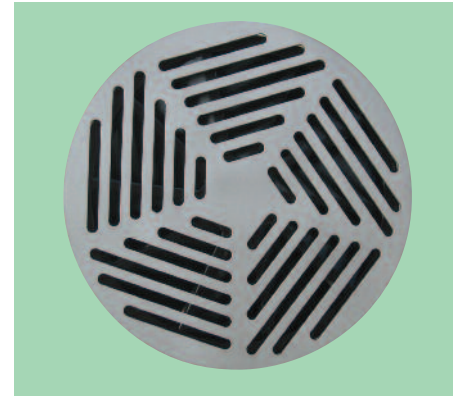
### Ordering Information Example

Model	Fixing	Colour	Size
TAFR	Under-floor ring	Black	200mm
TAFR	Under-floor ring	Black or Grey	200mm diameter (one size only)

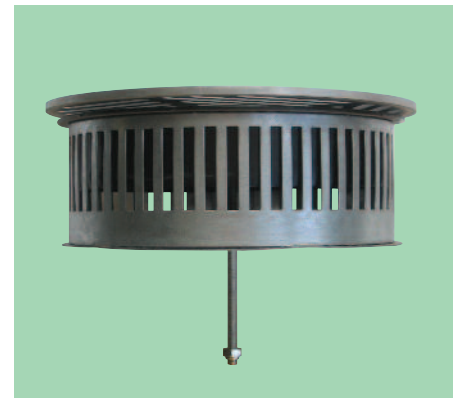
Note: Balancing damper supplied as standard

**Important Note:** All orders must be addressed to Air Diffusion, Ruskin Air Management Limited.

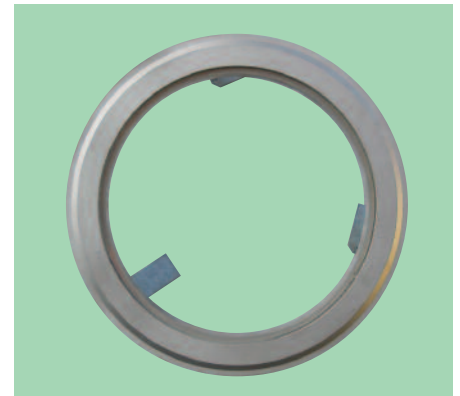
## Model VM



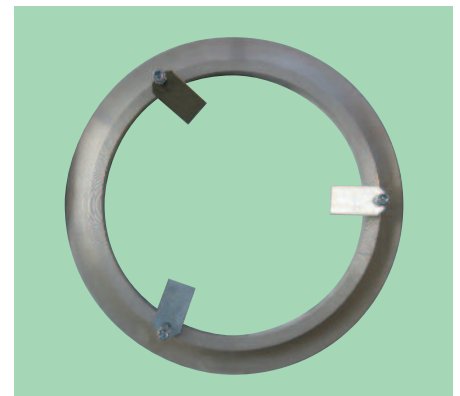
Front plate only



Dirt basket and adjustable damper



Outer flange front view



Outer flange rear view

### Description

The Model VM combines a robust floor grille with a swirl effect diffuser, which is suitable for cooling or heating on supply or extract air systems.

Compatible with most raised access floor tiles and ideal for installation in offices, meeting rooms, auditoriums and concert halls.

Inner grille section is removable for access and maintenance. Complete with dirt basket cum adjustable damper assembly.

Separate outer flange.

Swirl effect for either horizontal or vertical air pattern.

### Specification

#### Materials

Floor grille and outer flange from aluminium.

Swirl diffuser and dirt basket/damper assembly from galvanised steel.

#### Finish

Standard:

Linished aluminium grille

Black swirl Diffuser

Damper/dirt basket galvanised steel.

Alternative finishes also available on request.

#### Sizes

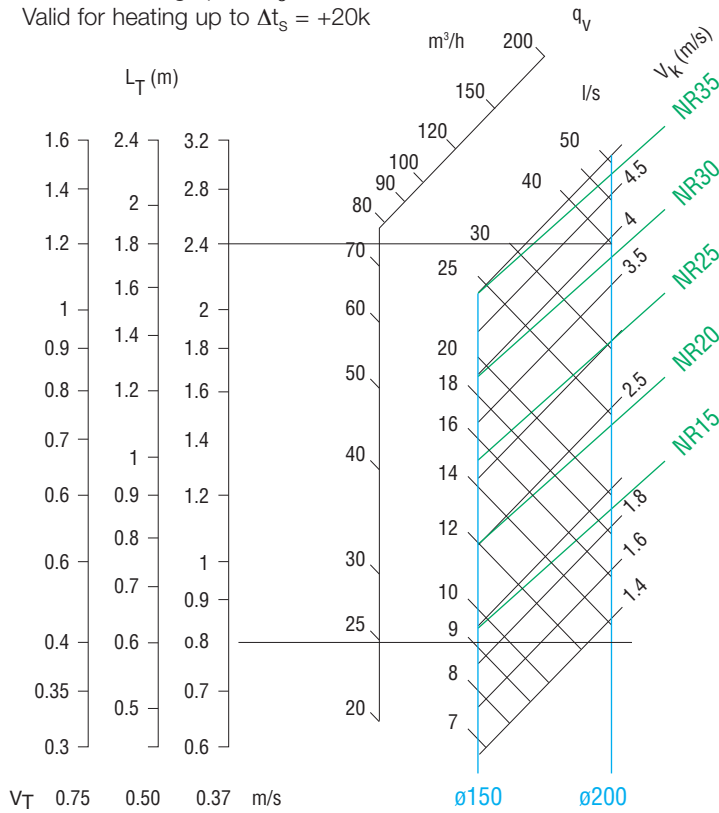
Size 150

Size 200.

## Model VM Performance

### Selection Diagram - Supply Vertical Air Pattern

Valid for cooling up to  $\Delta t_s = -10k$   
Valid for heating up to  $\Delta t_s = +20k$

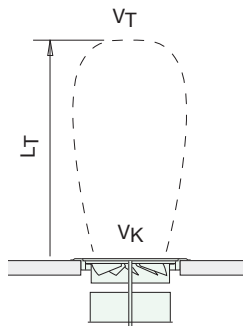


### Correction factor $L_T$

$\Delta t$	0°	-4°	-6°	-8°	-10°
	x 1	x 0.7	x 0.6	x 0.5	x 0.45

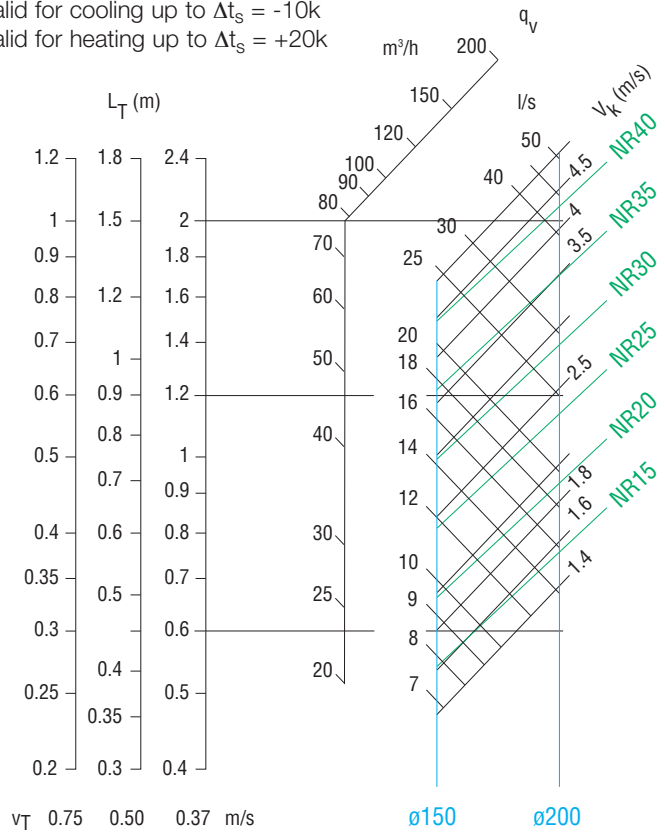
### Correction factor according to the position of the dust basket

%open	v150	Ø200
100%	NR + 0	NR + 0
50%	NR + 2	NR + 5
25%	NR + 5	NR + 11



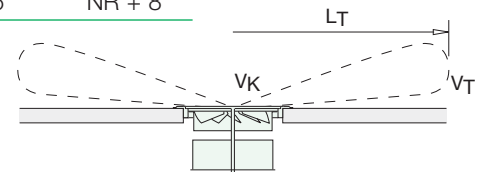
### Selection Diagram - Supply Horizontal Air Pattern

Valid for cooling up to  $\Delta t_s = -10k$   
Valid for heating up to  $\Delta t_s = +20k$



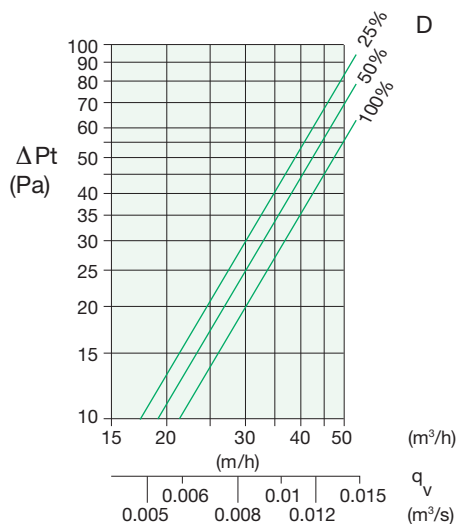
### Correction factor according to the position of the dust basket

%open	v150	Ø200
100%	NR + 0	NR + 0
50%	NR + 2	NR + 2
25%	NR + 5	NR + 8



### Pressure loss

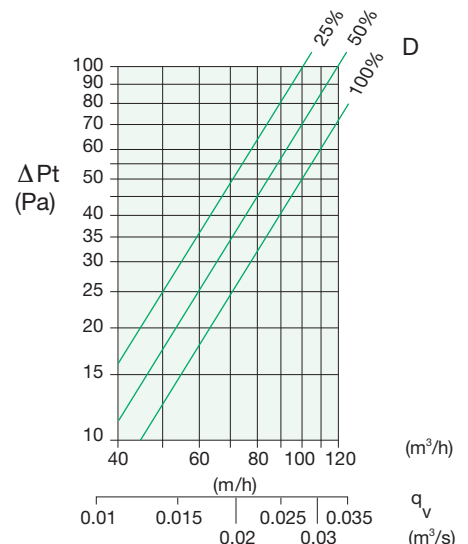
Size 150mm  
Horizontal  
Air Pattern. VM011



Correction factor :  
vertical air pattern :  
 $\varnothing Pt \times 0.9$

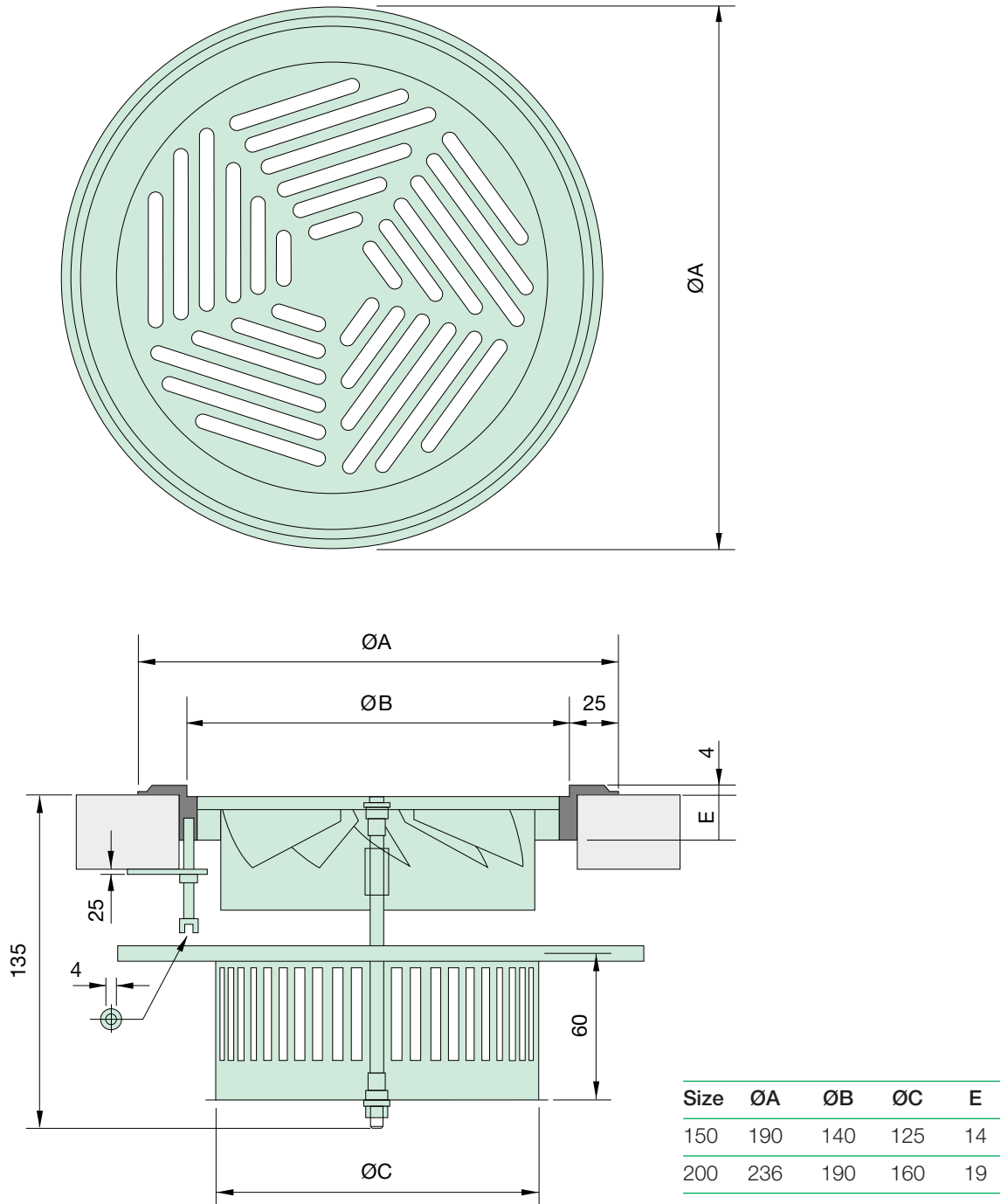
### Pressure loss

Size 200mm  
Horizontal  
Air Pattern. VM011



Correction factor :  
vertical air pattern :  
 $\varnothing Pt \times 0.9$

# Model VM Dimensions



**Ordering Information** Example

Model	Finish	Size
VM	011 (54)	200

VM - Complete assembly  
 VT - Front grille only

011 (54) - Brushed aluminium to front grille with black rear swirl vanes

150  
 200

**Important Note:** All orders must be addressed to Air Diffusion, Ruskin Air Management Limited.

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