

## Plain Face Circular Diffusers

- RWK      Circular supply diffuser with plain face-plate
- RWK-R    Circular return diffuser with plain face-plate



## Plain Face Circular Diffusers

### RWK

#### Introduction

The Waterloo Circular Diffuser type RWK has an adjustable radial diffusion pattern and provides excellent induction characteristics. The diffuser and face-plate are manufactured from aluminium and the plenum is zinc steel. The shape of both the plenum and the adjustable face-plate ensure an excellent air pattern, and the internal control disc can also be adjusted to achieve high induction rates and a low sound power level.

#### Product Description

- RWK** Circular supply diffuser with plain face-plate
- RWK-R** Circular return diffuser with plain face-plate
- UKDV** Supply air plenum
- UKDVI** Insulated supply air plenum
- UKRV** Return air plenum
- UKRVI** Insulated return air plenum
- RW - FIX** Plasterboard fixing

#### Features

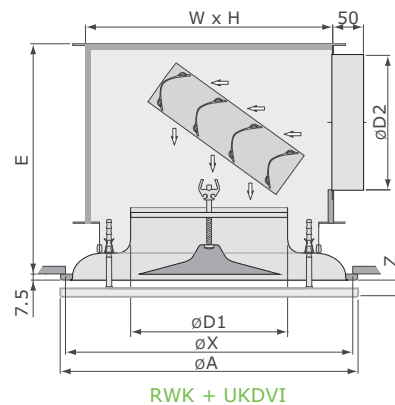
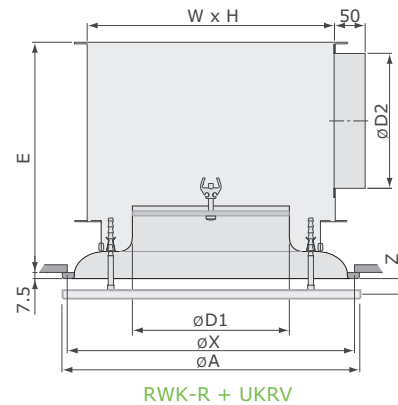
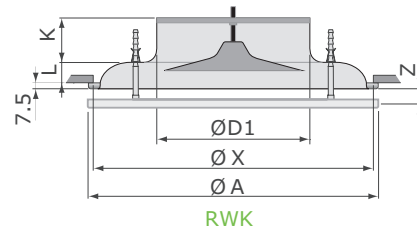
- Supply and exhaust applications for heating, cooling and isothermal conditions
- Excellent induction characteristics
- Variety of air patterns
- Suitable for modular ceiling systems

#### Finishes

PPM9010 (RAL 9010 Matt - 20% Gloss White)  
Other colours available on request

#### Advantages

- Excellent aerodynamic performance
- Suitable for exposed ceilings
- Short throw



#### Sizes

Nom Size Ø D1	W x H	Ø D2	Ø A overall	Ø X aperture	E	K	L
100	210x210	100	190	175	205	55	12.5
125	210x210	125	230	215	215	60	20.0
160	310x310	160	270	255	295	65	27.5
200	310x310	200	370	345	295	70	27.5
250	410x410	250	470	440	365	75	35.0
315	510x510	315	570	535	435	90	35.0

Note: Z = 19/26.5/34mm (depending on face-plate setting)

#### ORDER EXAMPLE

RWK-250/RW-FIX/9010-Gloss/UKDV

Type \_\_\_\_\_  
 Fixing \_\_\_\_\_  
 Finish \_\_\_\_\_  
 Plenum Type \_\_\_\_\_

## Plain Face Circular Diffusers

RWK

### Selection Criteria

Ceiling Height 2.7m  
 Temperature Differential -11K  
 Average room velocity  $V_r$  0.15m/s  
 Noise level is based on diffuser sound power level less 8dB room absorption.  
 All selections include the plenum

### Selection Example RWK-125

Air Volume 42 l/s  
 Throw 1.1 m  
 Pressure Drop 29 Pa  
 Noise Level 25 dBA

Face-plate	Z (mm)	'T' Throw(m)	Pressure (Pa)	Noise level (dBA)
Height	19	x 1.0	x 1.0	0
	26.5	x 0.9	x 0.6	- 1
Corrections	34	x 0.8	x 0.5	- 2

### Performance Table

RWK		Supply							Exhaust					
m <sup>3</sup> /h	l/s		100 Dia	125 Dia	160 Dia	200 Dia	250 Dia	315 Dia	100 Dia	125 Dia	160 Dia	200 Dia	250 Dia	315 Dia
50	14	T	0.5											
		P <sub>s</sub>	6						7					
		L <sub>w</sub>	-						-					
75	21	T	0.6	0.5										
		P <sub>s</sub>	20	7					17					
		L <sub>w</sub>	-	-					-					
100	28	T	0.8	0.7										
		P <sub>s</sub>	36	12					27	10				
		L <sub>w</sub>	25	-					-	-				
125	35	T	1.0	0.9	0.7									
		P <sub>s</sub>	50	20	8				39	16	9			
		L <sub>w</sub>	29	-	-				26	-	-			
150	42	T		1.1	0.8									
		P <sub>s</sub>		29	12				51	22	13			
		L <sub>w</sub>		25	-				32	-	-			
200	56	T		1.3	1.1									
		P <sub>s</sub>		48	18					40	23	8		
		L <sub>w</sub>		36	-					25	-	-		
250	69	T			1.4	1.3								
		P <sub>s</sub>			28	12				60	36	14		
		L <sub>w</sub>			28	-				31	26	-		
300	83	T			1.7	1.5	1.4							
		P <sub>s</sub>			40	16	7				53	20		
		L <sub>w</sub>			32	-	-				25	-		
400	111	T				1.9	1.7							
		P <sub>s</sub>				30	13					36	12	
		L <sub>w</sub>				29	21					-	-	
500	139	T				2.3	2.1	1.2						
		P <sub>s</sub>				45	20	7				56	18	
		L <sub>w</sub>				34	31	-				29	26	
600	167	T					2.5	1.5						
		P <sub>s</sub>					30	10				80	26	10
		L <sub>w</sub>					36	26				33	29	-
750	208	T					3.1	2.1						
		P <sub>s</sub>					48	15					39	14
		L <sub>w</sub>					45	33					35	28
1000	278	T						2.7						
		P <sub>s</sub>						30						24
		L <sub>w</sub>						39						34
1250	347	T						3.5						
		P <sub>s</sub>						54						32
		L <sub>w</sub>						45						37



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## Waterloo Product Range

### GRILLES

A complete range of products suitable for all wall, ceiling and floor applications. Most grilles are made from aluminium and have a range of fixed or moveable blades designed to give performance whilst remaining aesthetically pleasing to the eye. Grilles are made to customer specified sizes and colours (PPM/G); standard colour PPM9010 (20% Gloss White). The range is complemented by the Aircell range of polymer Grilles.



### DIFFUSERS

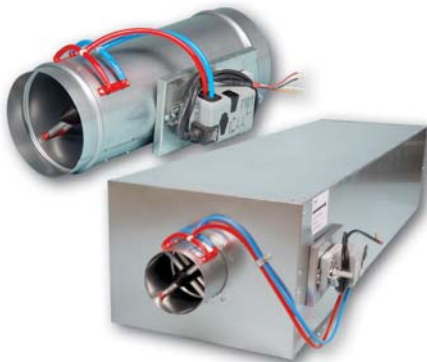
Designed to be installed in various ceiling systems, we have a complete range to suit both performance and aesthetic requirements. Most diffusers are made from aluminium and can be ordered with or without plenum boxes for easy duct work. Diffusers can be ordered in customer specified colours (PPM/G); standard colour is PPM 9010 (20% Gloss White). This range is complemented by the Aircell range of polymer Diffusers.



### ACTIVE AND PASSIVE CHILLED BEAMS

The finest quality range of high output active beams, used for ventilated heating and cooling applications. These units have 4 pipe coils to allow heating and cooling circuits to run simultaneously, giving constant and responsive control. The design allows a large optimum capacity and also allows the customer to specify the nozzle type and pitch for individual circumstances.

Active beams are made from steel to a large range of customer specified sizes and as such are suitable for various different ceiling systems. Standard finish is PPM 9010, however other (PPM/G) colours are available on request.



### AIR VOLUME CONTROL DAMPERS

Pressure independent Variable Air Volume and Constant Air Volume dampers made from zintec plate. Most volume dampers are regulated with an electronic motor and sensors and are calibrated to customer specifications before delivery.

The Constant Air Volume damper requires no power source as it is controlled via a mechanical device and calibrated before delivery. All volume dampers can be ordered with a single or double (insulation) skin.

### EXTERNAL LOUVRES

A quality range of products for external wall applications. Made from aluminium, with birdscreen or insect screen options. All louvres are made to customer specified sizes and (PPM/G) colours; standard colour is PPM 9006.



### DISPLACEMENT

A full range of recessed, semi-recessed, floor, wall and corner units providing high ventilation efficiency and excellent comfort. The very low pressure involved also offer quiet installations. Displacement units are available as wall or floor mounted, or indeed integrated within the architectural design.



# WATERLOO

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