

## RWI

### Introduction

The Waterloo high induction, perforated face circular diffuser type RWI, has an adjustable radial diffusion pattern and provides excellent induction characteristics. The diffuser and faceplate are manufactured from aluminium with the plenum being zintec steel, and have been designed with modern ceiling types in mind. With their perforated face design, these diffusers ensure that the primary air is already mixed inside the diffuser with the room air, which results in a rapid temperature decay and short throw.

### Product Description

- RWI** Circular supply diffuser with perforated faceplate
- RWI-R** Circular return diffuser with perforated faceplate
- UKDV** Supply air plenum
- UKDVI** Insulated supply air plenum
- UKRV** Return air plenum
- UKRVI** Insulated return air plenum

### Features

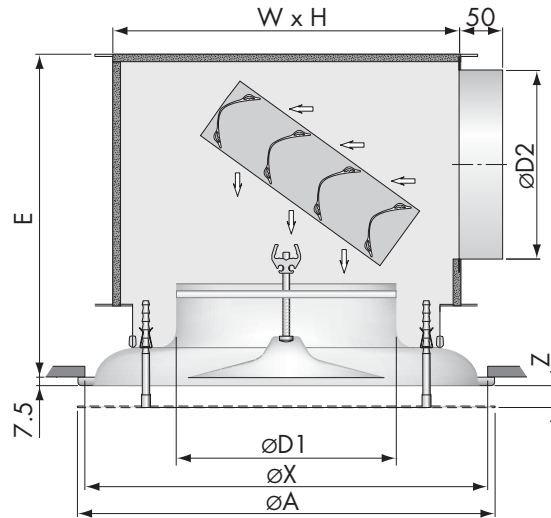
- Supply and exhaust applications for heating, cooling and isothermal conditions
- Excellent induction characteristics
- Variety of air patterns
- Suitable for modular ceiling systems

### Finishes

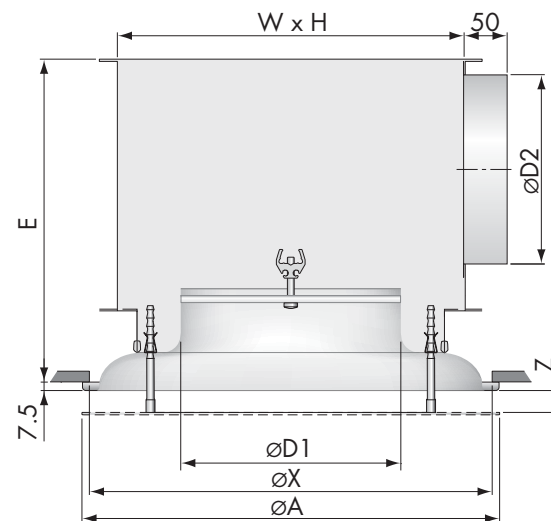
PPM9010 (RAL 9010 20% Gloss White)  
Other colours are available on request

### Advantages

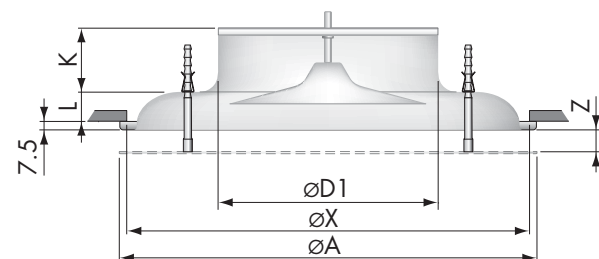
- Excellent aerodynamic performance
- No ceiling effect required
- Short throw



**RWI + UKDVI**



**RWI-R + UKRV**



**RWI**

### Order Example

**RWI-200/UKDV-160**

Type \_\_\_\_\_  
Diameter \_\_\_\_\_  
Plenum Type \_\_\_\_\_  
Plenum Spigot Diameter \_\_\_\_\_

Nom Size øD1	WxH	øD2	øA overall	øX aperture	E	K	L	Z
100	210x210	100	190	175	205	55	12.5	19 / 26.5 / 34
125	210x210	125	230	215	215	60	20.0	19 / 26.5 / 34
160	310x310	160	270	255	295	65	27.5	19 / 26.5 / 34
200	310x310	200	370	345	295	70	27.5	19 / 26.5 / 34
250	410x410	250	470	440	365	75	35.0	19 / 26.5 / 34
315	510x510	315	570	535	435	90	35.0	19 / 26.5 / 34



### Selection Criteria

Ceiling Height 2.7m  
 Temperature Differential -11K  
 Average room velocity  $V_r$  0.15m/s  
 NC is sound pressure level/Noise Criteria  
 Curve based on a room absorption of 8dB  
**All selections include the plenum**

### Selection Example RWI-200

Air Volume 111 l/s  
 Throw 1.2 m  
 Pressure Drop 37 Pa  
 Noise Level NR 26

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

### Performance Table

RWI		Supply						
m <sup>3</sup> /h	l/s	100 Dia	125 Dia	160 Dia	200 Dia	250 Dia	315 Dia	
50	14	T	0.2					
		Ps	10					
		Lw	-					
75	21	T	0.3	0.2				
		Ps	22	10				
		Lw	24	-				
100	28	T	0.4	0.3				
		Ps	35	14				
		Lw	28	21				
125	35	T	0.5	0.4	0.3			
		Ps	56	22	10			
		Lw	33	25	-			
150	42	T		0.5	0.4			
		Ps		29	15			
		Lw		28	20			
200	56	T		0.7	0.6	0.5		
		Ps		45	25	12		
		Lw		34	24	-		
250	69	T			0.7	0.6		
		Ps			33	19		
		Lw			29	-		
300	83	T			1.1	0.9	0.8	
		Ps			48	23	9	
		Lw			32	21	-	
400	111	T				1.2	1.0	
		Ps				37	17	
		Lw				26	20	
500	139	T				1.5	1.3	1.1
		Ps				50	24	11
		Lw				30	24	21
600	167	T					1.5	1.3
		Ps					33	16
		Lw					28	24
750	208	T					1.9	1.6
		Ps					50	22
		Lw					34	28
1000	278	T						2.3
		Ps						36
		Lw						34
1250	347	T						2.9
		Ps						52
		Lw						38

Exhaust					
100 Dia	125 Dia	160 Dia	200 Dia	250 Dia	315 Dia
7					
-					
21					
22					
30	6				
26	-				
46	10				
31	-				
	13	5	2		
	-	-	-		
	23	9	4		
	18	-	-		
	36	13	5	2	
	24	-	-	-	
	52	19	8	3	
	29	-	-	-	
	91	34	14	6	2
	35	23	-	-	-
		52	21	9	4
		29	15	-	-
		75	31	13	5
		34	22	-	-
			48	21	9
			28	-	-
			84	38	15
			36	23	-
				60	24
				29	19