

Reversible Core Grilles

(R)RTC / 2(R)RTC

Introduction

Waterloo's reversible core grilles have been designed for commercial projects requiring aesthetically attractive grilles but with a superior performance. The specially designed close pitch vanes produce high levels of induction and mixing with ambient air resulting in more even air diffusion in the occupied zone.

The core is removable and may be rotated or reversed to provide either 5° or 15° deflection upwards or downwards; in addition the core can easily be cleaned before replacing in the frame. Alternatively any of the Exhaust grille's or Airline Linear grille's cores may be specified.

Product Description

- RTC** Reversible core grille
2RTC Reversible core grille with rear vertical blades
RRTC Same as RTC grille with frame suitable for round ducts
2RRTC Same as 2RTC grille with frame suitable for round ducts
RTC(C) Reversible core only (no frame)
OBSS Allen key operated opposed blade damper
DT-2MG Adjustable Air Turn (fixed on grille)
DT-2M Adjustable Air Turn (fixed in duct)

Features

- Turbulator vanes provide high induction and mixing with room air
- Core removable for access and cleaning
- One core provides 5° or 15° deflection, up or down
- Rear set of vanes available as an option for horizontal spread/deflection control
- Available in 6mm or 12mm blade pitch

Finishes

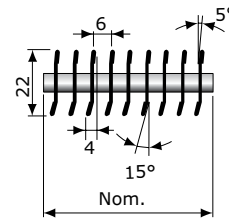
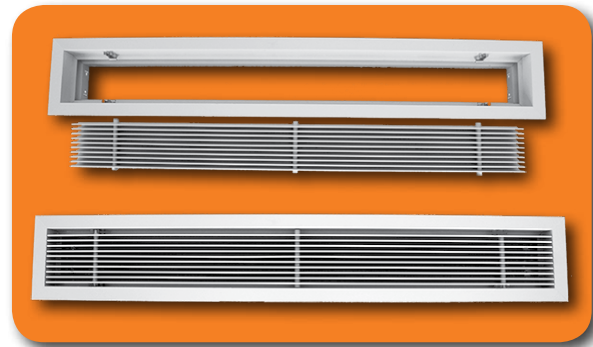
PPG9010 (RAL 9010 Gloss - 80% Gloss White)
 PPM9010 (RAL 9010 Matt - 20% Gloss White)
 PPM9006 (RAL 9006 Matt - 30% Gloss Silver)
 Other colours or anodised finish available on request
 (Anodised finish unavailable on (2)RRTC)

Weights

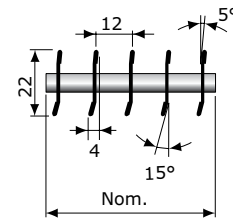
R(R)TC	14 kg/m ² face area
2R(R)TC	18.0 kg/m ² face area
OBSS/ED	9.5 kg/m ² face area
DT2M(G)	9.0 kg/m ² face area

Sizes

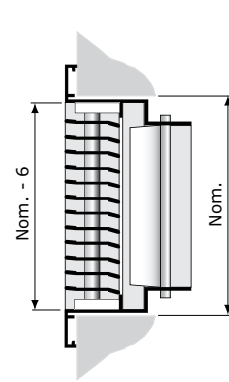
Minimum Size - 100 x 100 mm
 Maximum Size - 1500 x 450mm



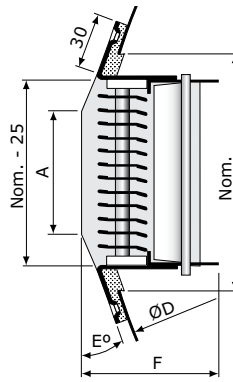
RTC(C)-6



RTC(C)-12



2RTC-6

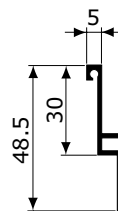


2RRTC-6

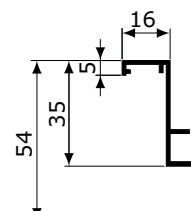
For sizes E and F see 1RV/2RV

Free Area			
RTC-6 RRTC-6 RTCC-6	2RTC-6 2RRTC-6	RTC-12 RRTC-12 RTCC-12	2RTC-12 2RRTC-12
74%	66%	87%	79%

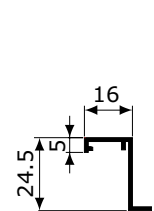
Border Types



R5



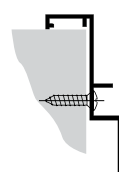
R16



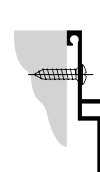
R16-24

Fixings

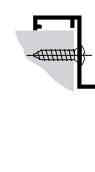
- STS
- RCCF
- SF only for (2)RRTC
- BSSBD
- BSSBP



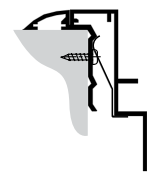
R16 + STS



R5 + STS



R16-24 + STS



R16 + RCCF

ORDER EXAMPLE

RTC-6/500/250/PPM9010/R16/RCCF/OBSS

Type _____
 Nominal Width _____
 Nominal Height _____
 Finish _____
 Border _____
 Fixing _____
 Options _____

Reversible Core Grilles

(R)RTC / 2(R)RTC

Performance Table Nom. H =75 mm Suitable for round ducts Ø 150 up to Ø 400																	
RRTC-6 2RRTC-6			Supply / Exhaust														
			325 X 75		425 X 75		525 X 75		625 X 75		825 X 75		1025 X 75		1225 X 75		
m³/h	l/s		0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	
100	28	T	3.6	2.8	3.4	2.7	3.2	2.5	2.9	2.3							
		P _S	4	6	2	3	1	3	1	2							
		L _W	-	-	-	-	-	-	-	-							
150	42	T	4.1	3.3	3.9	3.1	3.7	2.9	3.4	2.6	3.1	2.1					
		P _S	11	16	6	9	3	5	2	3	1	2					
		L _W	24	29	16	19	-	-	-	-	-	-					
200	56	T	6.0	4.7	5.3	4.2	4.9	3.9	4.5	3.4	3.9	2.9	3.5	2.7	3.2	2.4	
		P _S	19	27	11	16	7	10	4	6	2	3	1	3	1	2	
		L _W	31	37	24	29	18	21	-	-	-	-	-	-	-	-	
300	83	T			6.5	5.1	5.9	4.6	5.5	4.3	4.7	3.6	4.2	3.2	3.8	3.0	
		P _S			24	32	15	21	10	15	5	8	3	4	2	3	
		L _W			37	43	28	34	24	29	18	22	-	-	-	-	
400	111	T							8.2	6.9	7.3	5.7	6.3	5.0	5.6	4.3	
		P _S							17	25	10	15	5	8	4	6	
		L _W							30	36	25	30	20	25	17	21	
500	139	T									8.2	6.7	7.4	6.1	6.8	5.5	
		P _S									16	25	10	14	7	10	
		L _W									30	35	26	31	22	27	
600	167	T											9.4	7.8	8.6	6.8	
		P _S											15	23	11	19	
		L _W											31	36	27	32	
750	208	T													11.1	9.1	
		P _S														18	26
		L _W														33	38

Selection Example
2RRTC-6/825/75

Spread 0°

Air Volume 83 l/s

Throw 4.7 m

Pressure Drop 5 Pa

Noise Level 18 dBA

Ceiling Height Throw
Correction Factors

Ceiling Height (m)	2.5	2.7	3.0	3.5
Maximum Throw (m)	2.5	3.3	4.5	6.3

Performance Table Nom. H =125 mm Suitable for round ducts Ø 300 up to Ø 900																
RTC-6 2RTC-6			Supply / Exhaust													
			325 X 125		425 X 125		525 X 125		625 X 125		825 X 125		1025 X 125		1225 X 125	
m³/h	l/s		0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°
100	28	T	2.9	2.3												
		P _S	1	2												
		L _W	-	-												
150	42	T	3.4	2.6	3.1	2.1										
		P _S	2	3	1	2										
		L _W	-	-	-	-										
200	56	T	4.5	3.4	3.9	2.9	3.5	2.7	3.2	2.4						
		P _S	4	6	2	3	1	3	1	2						
		L _W	-	-	-	-	-	-	-	-						
300	83	T	5.5	4.3	4.7	3.6	4.2	3.2	3.8	3.0	3.5	2.8				
		P _S	10	15	5	8	3	4	2	3	1	2				
		L _W	24	29	18	22	-	-	-	-	-	-				
400	111	T	8.2	6.9	7.3	5.7	6.3	5.0	5.6	4.3	5.0	4.1	4.6	3.6		
		P _S	17	25	10	15	5	8	4	6	2	4	1	2		
		L _W	30	31	25	30	20	25	17	21	-	-	-	-		
500	139	T			8.2	6.7	7.4	6.1	6.8	5.5	6.3	5.0	5.5	4.3	4.8	3.8
		P _S			16	25	10	14	7	10	3	6	2	3	1	2
		L _W			30	35	26	30	22	27	-	16	-	-	-	-
600	167	T					9.4	7.8	8.6	6.8	7.4	5.8	6.4	5.4	5.9	4.8
		P _S					15	23	11	19	6	8	3	5	2	3
		L _W					31	36	27	32	20	25	-	19	-	-
750	208	T							11.1	9.1	9.8	7.6	8.2	6.6	7.5	6.0
		P _S							18	26	8	13	5	8	3	5
		L _W							33	38	26	30	22	27	18	22
1000	278	T									13.4	10.6	11.3	9.2	10.1	8.0
		P _S									16	25	10	15	7	10
		L _W									33	38	28	33	24	29
1250	347	T											14.8	12.0	12.9	10.2
		P _S											16	24	10	15
		L _W											34	39	29	34
1500	417	T													17.0	13.5
		P _S													17	25
		L _W													35	40

Selection Example
2RRTC-6/425/125

Spread 0°

Air Volume 83 l/s

Throw 4.7 m

Pressure Drop 5 Pa

Noise Level 18 dBA

Ceiling Height Throw
Correction Factors

Ceiling Height (m)	2.5	2.7	3.0	3.5
Maximum Throw (m)	2.5	3.3	4.5	6.3

Reversible Core Grilles

(R)RTC / 2(R)RTC

Performance Table Nom. H = 175 mm Suitable for round ducts Ø 450 up to Ø 1250 (Supply / Exhaust)															
RRTC-6 / 2RRTC-6		325 X 175		425 X 175		525 X 175		625 X 175		825 X 175		1025 X 175		1225 X 175	
m³/h	l/s	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°
200	56	T	3.5	2.7	3.1	2.3									
		P _s	1	3	1	2									
		L _w	-	-	-	-									
300	83	T	4.5	3.3	3.8	3.0	3.5	2.7							
		P _s	3	5	1	3	1	2							
		L _w	-	-	-	-	-	-							
400	111	T	6.1	5.0	5.6	4.4	5.1	4.1	4.9	3.8					
		P _s	8	12	4	6	2	3	1	2					
		L _w	22	26	17	21	-	-	-	-					
500	139	T	7.8	6.1	6.8	5.5	6.3	5.1	5.8	4.5	4.8	3.8			
		P _s	13	20	7	10	4	6	2	4	1	2			
		L _w	27	32	22	27	19	21	-	18	-	-			
600	167	T	9.9	7.9	8.6	6.8	7.7	6.2	7.1	5.4	5.9	4.8	5.2	4.0	
		P _s	21	34	11	19	7	9	4	7	2	3	1	2	
		L _w	37	41	27	35	22	26	18	23	-	-	-	-	
750	208	T			11.1	9.2	10.1	8.2	9.1	7.0	7.5	6.0	6.6	5.4	6.0
		P _s			18	26	10	15	7	11	3	5	2	3	1
		L _w			33	38	28	32	24	29	18	22	-	-	-
1000	278	T					14.1	11.5	12.6	9.7	10.1	8.0	8.9	7.1	7.9
		P _s					19	29	13	19	7	10	3	5	2
		L _w					36	41	30	35	24	29	19	23	-
1250	347	T							16.1	12.5	12.9	10.2	11.3	9.3	10.5
		P _s							23	35	10	15	6	9	3
		L _w							38	43	29	34	25	29	20
1500	417	T									17.0	13.5	14.7	11.9	13.0
		P _s									17	25	11	15	6
		L _w									35	40	30	34	26
2000	556	T											19.6	16.1	17.1
		P _s											18	27	11
		L _w											35	42	33
2500	694	T													20.5
		P _s													14
		L _w													40

Selection Example 2RRTC-6/425/175

Spread 0°

Air Volume 111 l/s

Throw 5.6 m

Pressure Drop 4 Pa

Noise Level 17 dBA

Ceiling Height Throw Correction Factors

Ceiling Height (m)	2.5	2.7	3.0	3.5
Maximum Throw (m)	2.5	3.3	4.5	6.3

Performance Table Nom. H = 225 mm Suitable for round ducts Ø 600 up to Ø 1500 (Supply / Exhaust)															
RRTC-6 / 2RRTC-6		325 X 225		425 X 225		525 X 225		625 X 225		825 X 225		1025 X 225		1225 X 225	
m³/h	l/s	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°	0°	30°
200	56	T	3.1	2.3											
		P _s	1	2											
		L _w	-	-											
300	83	T	3.8	3.0	3.5	2.8									
		P _s	2	3	1	2									
		L _w	-	-	-	-									
400	111	T	5.6	4.4	5.0	4.1	4.6	3.6							
		P _s	4	6	2	4	1	2							
		L _w	17	21	-	-	-	-							
500	139	T	6.8	5.5	6.3	5.0	5.5	4.3	4.8	3.8					
		P _s	7	10	3	6	2	3	1	2					
		L _w	22	27	-	21	-	-	-	-					
600	167	T	8.6	6.8	7.4	5.8	6.4	5.4	5.9	4.8	5.5	4.5			
		P _s	11	19	6	8	3	5	2	3	1	2			
		L _w	27	32	20	25	-	19	-	-	-	-			
750	208	T	11.1	9.1	9.8	7.6	8.2	6.6	7.5	6.0	6.7	5.3	6.0	4.7	
		P _s	18	26	8	13	5	8	3	5	2	3	1	2	
		L _w	33	38	26	30	22	27	18	22	-	-	-	-	
1000	278	T			13.4	10.6	11.3	9.2	10.1	8.0	8.9	7.1	8.0	5.9	6.7
		P _s			16	25	10	15	7	10	3	5	2	3	1
		L _w			33	38	28	33	24	29	17	22	-	-	-
1250	347	T					14.8	12.0	12.9	10.2	11.3	9.4	10.1	8.1	8.9
		P _s					16	24	10	15	4	7	3	5	2
		L _w					34	39	29	34	23	27	16	22	-
1500	417	T							17.0	13.5	14.4	12.0	12.9	10.5	11.4
		P _s							17	25	9	12	5	8	4
		L _w							35	40	28	33	23	28	18
2000	556	T									18.0	15.1	16.3	13.4	14.5
		P _s									16	24	10	16	6
		L _w									36	40	30	35	27
2500	694	T										19.4	16.1	17.4	14.1
		P _s										16	24	10	15
		L _w										36	41	33	37
3000	833	T												20.5	16.8
		P _s												16	25
		L _w												39	44

Selection Example 2RRTC-6/425/225

Spread 30°

Air Volume 139 l/s

Throw 5.0 m

Pressure Drop 6 Pa

Noise Level 21 dBA

Ceiling Height Throw Correction Factors

Ceiling Height (m)	2.5	2.7	3.0	3.5
Maximum Throw (m)	2.5	3.3	4.5	6.3