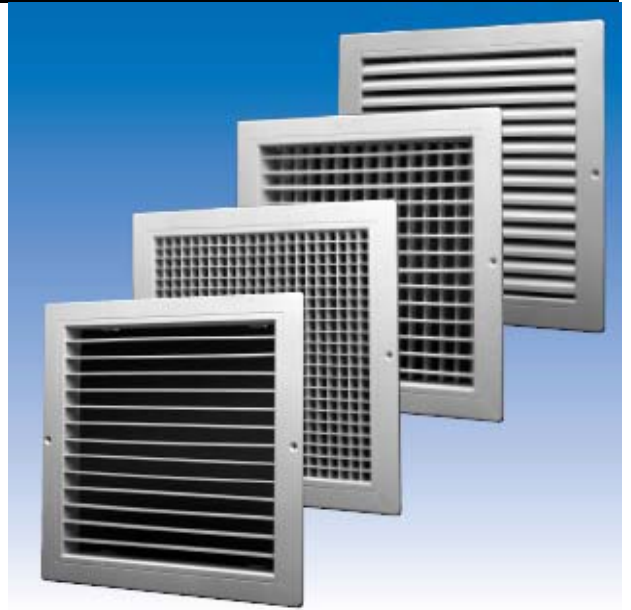


VEN tac
G R O U P



Aircell Grilles

VEN tac
air management

VEN tac
noise control

VEN tac
laboratories

Aircell polymer grilles

S, D, G, A, T, E

Introduction

The Aircell range of supply & exhaust grilles are injection moulded in self coloured white, Class 0 fire rated engineering polymer.

Aircell S (Single deflection) and **Aircell D** (Double deflection) have individually adjustable vanes on a 19mm pitch to allow jet spread or deflection to be set within 45° of the duct axis.

Aircell G (0° fixed blade) has horizontal 0° fixed blades on a 20mm pitch.

Aircell A (45° fixed blade) can be used as a wall or ceiling mounted grille, or alternatively they can be supplied with a reduced stack for use as a door mounted transfer grille. (see **Aircell T**)

Aircell T (45° fixed blade) are supplied as a pair of reduced stack Aircell A grilles for door mounting.

Aircell E (Eggcrate) has a lattice core with a 13mm pitch and is suitable for all exhaust applications.

All types are available in 5 standard sizes, plus an **E600** which has been specifically designed for full ceiling tile replacement.

The **E600** has an overall size of 596mm x 596mm and for the North American market 603mm x 603mm overall (**E603**) and for the German Market, 621mm x 621mm overall (**E621**).

Waterloo's Aircell products can be used in any air distribution system where temperatures do not exceed 50°C.

Product Description

Aircell S Single deflection grille

Aircell D Double deflection grille

Aircell G 0° fixed blade grille

Aircell A 45° fixed blade grille

Aircell T 45° fixed blade grilles for door transfer

Aircell E 13mm Eggcrate grille

GO Opposed blade damper in black engineering polymer

N Neck reducer in black engineering polymer

OBSS Aluminium opposed blade damper for E600

NR Steel neck reducer for E600

Features

- Class 'O' fire rating
- Consistent high quality
- Moulded in easy to clean engineering polymer

Fixing

Screw through face flange

Finishes

Self coloured white

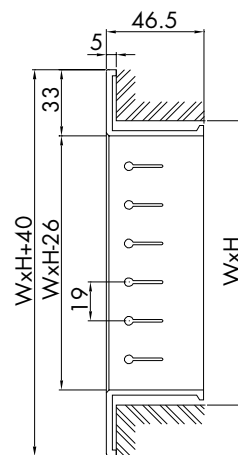
Advantages

- Good size range
- Standard size neck reducers
- No visible mitres
- Available 'off the shelf'

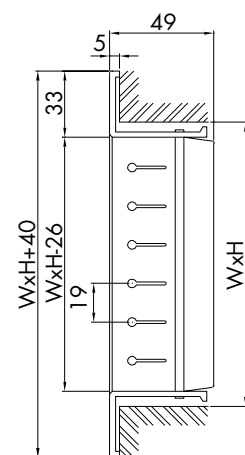
Order example:

Aircell A-300x300-GO-N

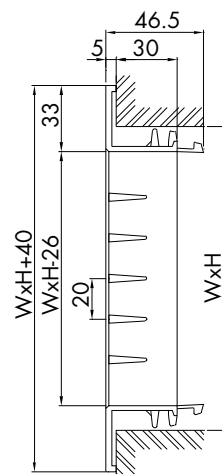
Grille type _____
 Nominal size _____
 Opposed blade damper _____
 Neck reducer _____



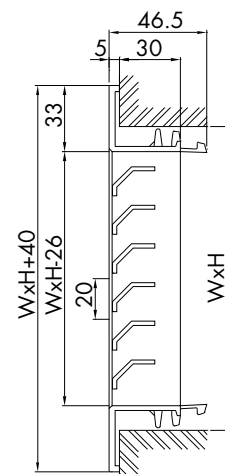
Aircell S



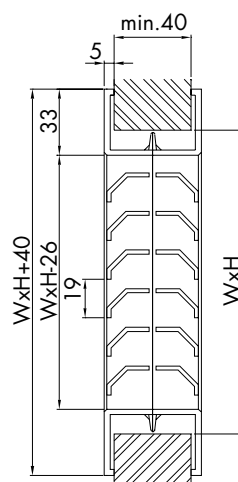
Aircell D



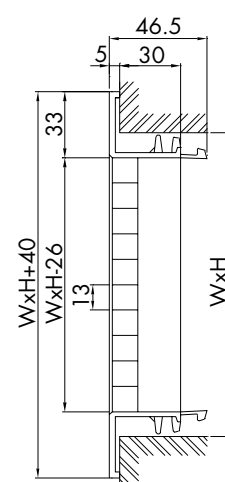
Aircell G



Aircell A



Aircell T



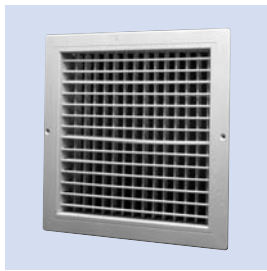
Aircell E

W x H

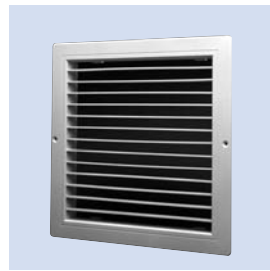
150x150
 200x200
 250x250
 300x150
 300x300

Aircell polymer grilles

S, D, G, A, T, E



Aircell D



Aircell G

Selection Criteria

Ceiling height 2.7m
 Temperature Differential -11K
 Throw T (m) is to a terminal velocity of 0.4m/s
 NC is sound pressure level/Noise Criteria Curve based on a room absorption of 8dB

Selection Example Aircell D-250x250

Air Volume 250 l/s
 Throw 15.0 m
 Pressure Drop 15 Pa
 Noise Level NR 24

Selection Tables

Aircell S & D		Supply				
Air flow rate (l/s)		150	200	250	300	300
		x	x	x	x	x
		150	200	250	150	300
25	T	2.5				
	Pa	1				
	NR	-				
50	T	5.5	4.0	3.0	3.5	
	Pa	3	2	1	1	
	NR	-	-	-	-	
100	T	10.0	7.5	6.0	7.0	5.0
	Pa	14	8	3	6	1
	NR	29	-	-	-	-
150	T	16.0	11.0	9.0	11.0	7.5
	Pa	29	18	6	12	2
	NR	41	21	-	20	-
200	T	21.0	15.0	12.0	14.0	10.0
	Pa	52	31	10	21	3
	NR	49	30	17	28	-
250	T		19.0	15.0	18.0	12.0
	Pa		48	15	32	5
	NR		37	24	35	-
300	T		23.0	18.0	21.0	15.0
	Pa		66	21	45	7
	NR		42	29	40	18
400	T			24.0		20.0
	Pa			36		12
	NR			38		25

Aircell G		Return				
Air flow rate (l/s)		150	200	250	300	300
		x	x	x	x	x
		150	200	250	150	300
25	Pa	2	1			
	NR	-	-			
	Pa	10	3	1	3	
50	NR	-	-	-	-	
	Pa	39	13	5	10	2
	NR	28	23	-	15	-
100	Pa	90	30	10	23	5
	NR	37	33	14	25	13
	Pa		53	18	40	9
200	NR		40	21	31	20
	Pa		85	29	63	15
	NR		46	27	36	24
250	Pa			42	90	22
	NR			31	40	28
	Pa			72		40
300	NR			39		34
	Free Area (m ²)	0.013	0.024	0.04	0.028	0.06

45° Blade angle correction factors for S & D

Throw multiplier 0.55 NC addition +8dB Pa multiplier 3.1

Please note that when using the N series neck reducer, air volumes must not exceed the following guidelines.

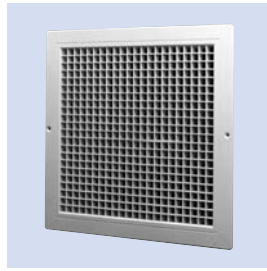
Grille W x H	Spigot Ø	Max Vol. (l/s)
150x150	97	35
200x200	147	70
250x250	197	130
300x150	97	35
300x300	247	190

Aircell polymer grilles

S, D, G, A, T, E



Aircell A



Aircell E

Selection Criteria

Ceiling height 2.7m
 NC is sound pressure level/Noise
 Criteria Curve based on a room
 absorption of 8dB

Selection Example Aircell A-200x200

Air Volume 50 l/s
 Pressure Drop 15 Pa
 Noise Level NR 28

Selection Tables

Aircell A		Return				
Air flow rate (l/s)		150	200	250	300	300
		x	x	x	x	x
		150	200	250	150	300
25	Pa	10	4	2	2	-
	NR	21	15	-	-	-
50	Pa	40	15	6	10	3
	NR	35	28	-	25	-
100	Pa		57	24	39	11
	NR		42	28	38	20
150	Pa			50	88	25
	NR			39	46	31
200	Pa					45
	NR					39
250	Pa					70
	NR					45
Free Area (m ²)		0.007	0.012	0.023	0.015	0.032

For performance of the **Aircell T** series, please multiply the above pressure loss by 2 and add 3dB to the NR level.

Please note that when using the N series neck reducer, air volumes must not exceed the following guidelines.

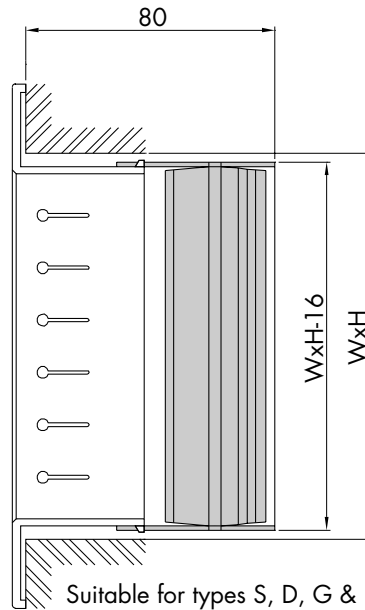
Grille W x H	Spigot Ø	Max Vol. (l/s)
150x150	97	35
200x200	147	70
250x250	197	130
300x150	97	35
300x300	247	190

Aircell E		Return					
Air flow rate (l/s)		150	200	250	300	300	600
		x	x	x	x	x	x
		150	200	250	150	300	600
25	Pa	2					
	NR	-					
50	Pa	10	3		2		
	NR	-	-		-		
100	Pa	40	11	5	10	2	
	NR	33	15	-	15	-	
150	Pa		26	11	22	5	
	NR		27	-	27	-	
200	Pa		45	19	39	9	
	NR		36	23	36	-	
250	Pa		72	30	62	14	
	NR		44	31	43	16	
300	Pa			42	88	20	
	NR			38	49	23	
400	Pa			74		35	
	NR			48		35	
500	Pa					55	4
	NR					44	-
750	Pa						8
	NR						-
1000	Pa						14
	NR						22
1250	Pa						21
	NR						31
1500	Pa						30
	NR						39
2000	Pa						54
	NR						51
Free Area (m ²)		0.01	0.02	0.032	0.022	0.048	0.2

Accessories

Aircell GO Opposed Blade Damper

Aircell GO series opposed blade dampers are manufactured from injection moulded components in self coloured black engineering polymer. Adjustable through the grille face, the damper can be clipped directly onto the grille without fixings.



Suitable for types S, D, G & E
in sizes 150x150, 200x200,
250x250, 300x150 & 300x300

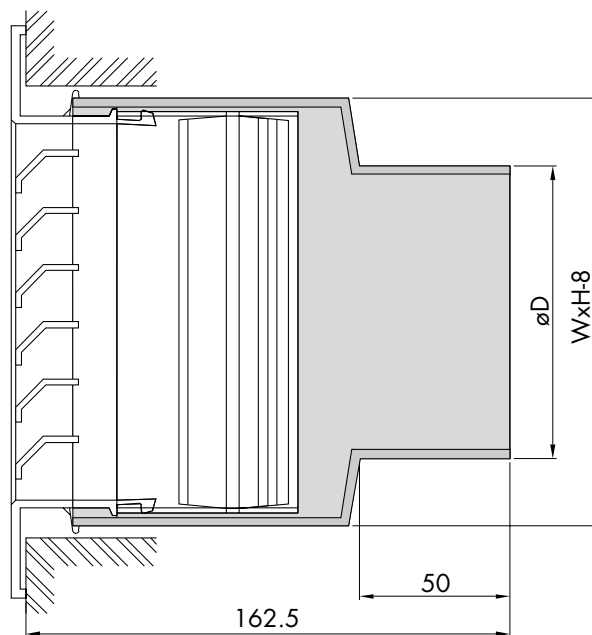
Aircell N Neck Reducer

Aircell N series neck reducers are injection moulded in self coloured black engineering polymer. The units are available in five sizes to suit the grille range and are designed to snap fit over the opposed blade damper or directly onto the grille stack.

All reducers have standard size circular spigots related to the grille height (see dimensional details below).

Please note that when using the N series neck reducer, air volumes must not exceed the following guidelines.

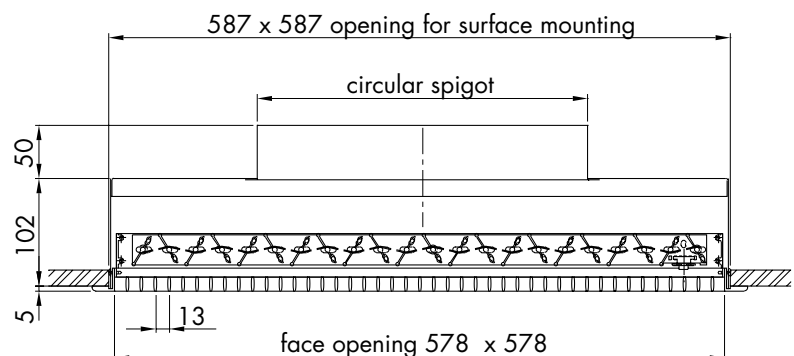
Grille W x H	Spigot ØD	Max Vol. (l/s)
150x150	97	35
200x200	147	70
250x250	197	130
300x150	97	35
300x300	247	190



Suitable for all types excluding the
E600, E603 & E621

OBSS damper and NR neck reducer for E600 series

The OBSS aluminium opposed blade damper and NR steel neck reducer are available for the E600 series to allow volume control and circular duct connection directly onto the E600 grille. Please state spigot size required when ordering.

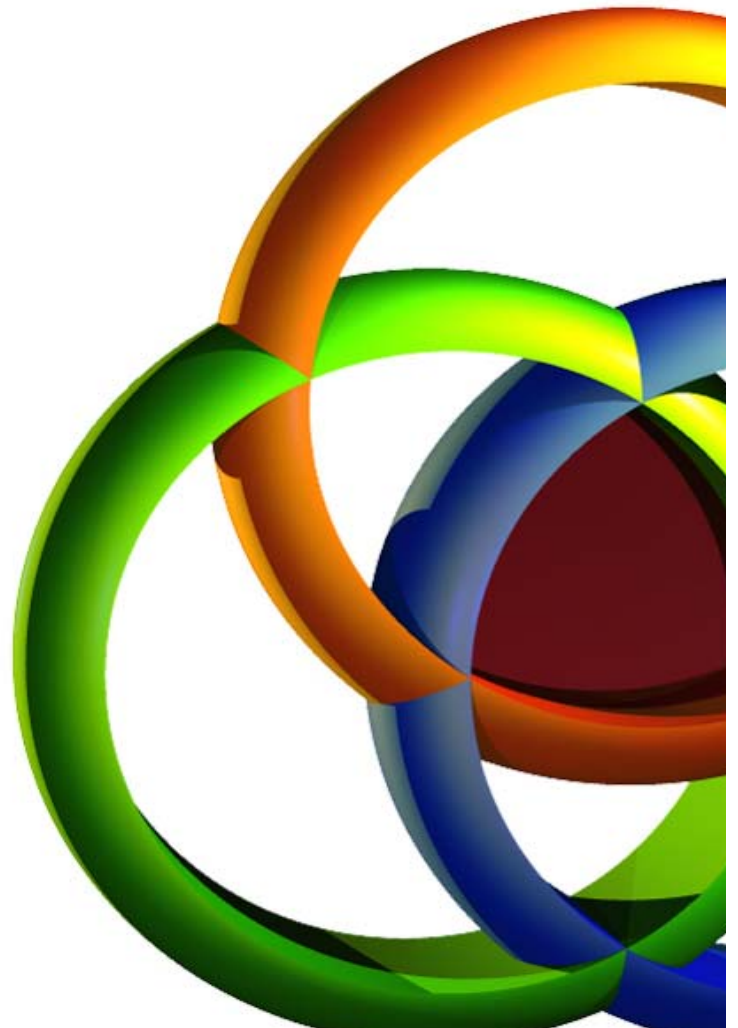


Suitable only for the E600 E603 & E621

VEN tac

G R O U P

www.ventac.com



Fitzwilliam House, Blessington, Co. Wicklow, Ireland

t: 045 851500

f: 045 851501

e: sales@ventac.com

VEN tac
air management

VEN tac
noise control

VEN tac
laboratories