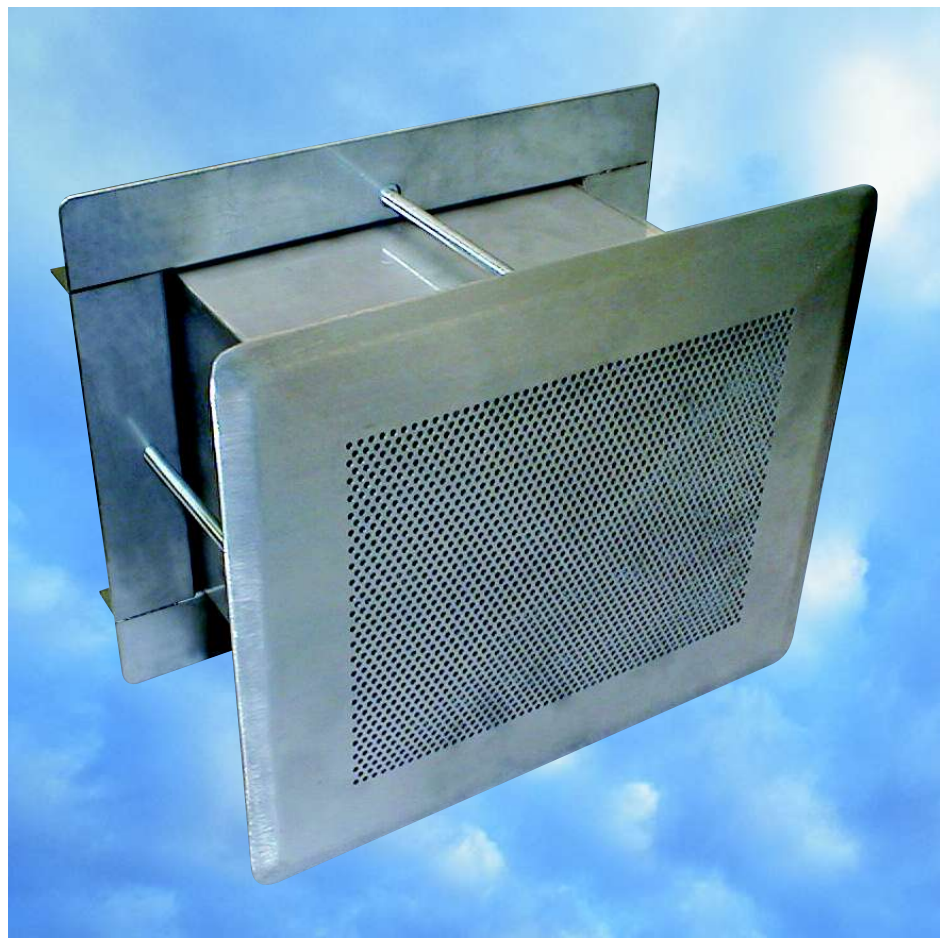


# Cell Ventilation Security Grille

Model CV

## Features

- Stainless Steel Construction
- Galvanised Steel/PPC Construction
- Supply and Exhaust
- Tested "Fit For Purpose"
- High Security Installation
- Approved Design



# Air Diffusion

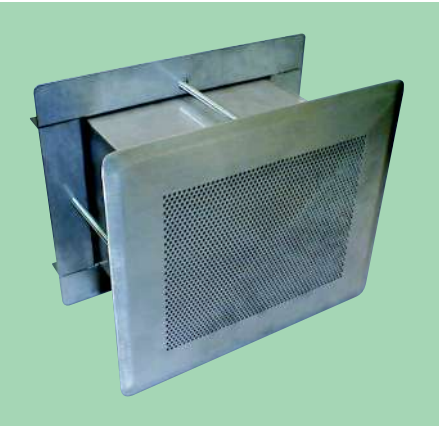
Grilles Diffusers Louvres Chilled Beams

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

Contents

Introduction	Page 2
Dimensions	Page 3 - 5
Selection Data	Page 6
Ordering Information	Page 7

Model CV



Introduction

The Model CV cell ventilation security grille has an inherent robust quality incorporated within its design to ensure compliance with the stringent requirements of both the Ministry of Justice Prison Service specification and Home Office Police Custody Design Guide.

Model CV for use within high security cell ventilation applications has been independently tested by the Home Office at their own facility and has achieved their “Fit For Purpose” status.

The Prison Service standard grille (Model CV/MJ) is constructed from 2 main sections, a front plate and stub duct with a circular spigot connection. The front plate is manufactured in a single piece from 2mm thick 304 grade stainless steel (3mm thick galvanised steel and PPC optional) and having an active perforated area formed from 3mm diameter holes on 5mm centres. The stub duct section is manufactured from 2mm thick 304 grade stainless steel stitch welded to the front plate, (3mm thick galvanised steel and PPC optional) which together with the stainless steel clamping angle frame and recommended number of anchor bolts is suitable for a high security installation.

The Police Service standard grille (Model CV/HO) is constructed from 2 main sections, a front plate and stub duct with circular spigot connection. The front plate section is manufactured in a single piece from 2mm thick 304 grade stainless steel, (3mm thick galvanised steel and PPC optional) having an active perforated area formed from 2mm diameter holes on 4mm centres. The stub duct section is manufactured from 2mm thick 304 grade stainless steel stitch welded to the front plate, (3mm thick galvanised steel and



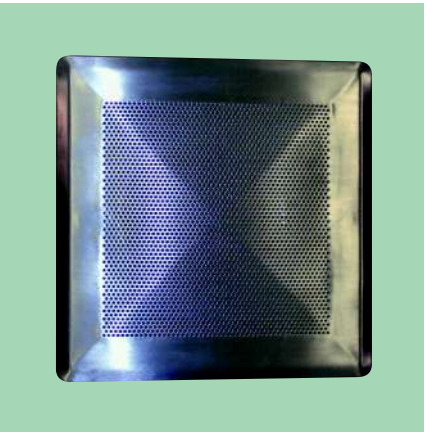
PPC optional), which together with the stainless steel clamping angle frame and recommended number of anchor bolts is suitable for a high security installation.

Factory fitted accessories include an opposed blade damper, intumescent fire block, smoke/fire damper and fire damper assemblies.

For alternative security applications the Model CV may be supplied as a front plate assembly only with countersunk holes in the flange for fixing with security screws (screws by others).

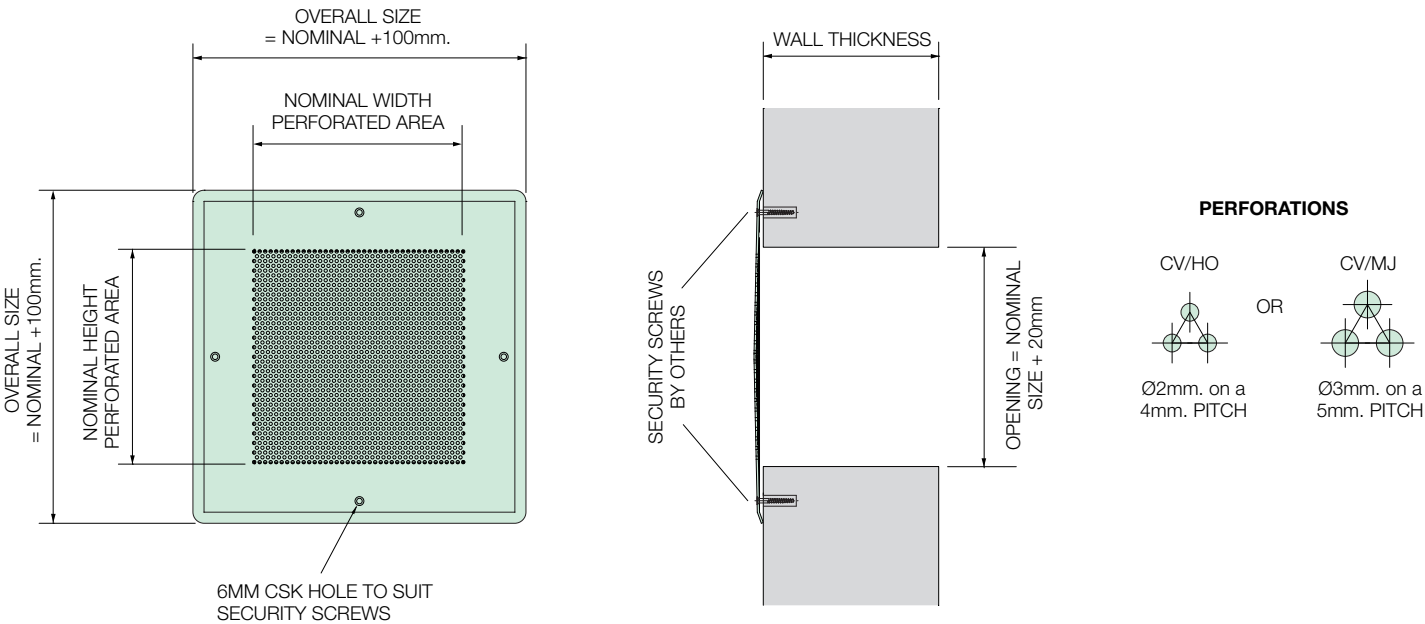
The front plate is supplied as standard with a brushed stainless steel finish and the stub duct section is in self-finished stainless steel. (Optional galvanised steel and PPC finish).

There are seven standard sizes available from a nominal size of 150 x 150 to 300 x 300mm, each size is normally supplied with a circular detachable spigot connection, but can be supplied without the circular connection if required. Other sizes are available on request.

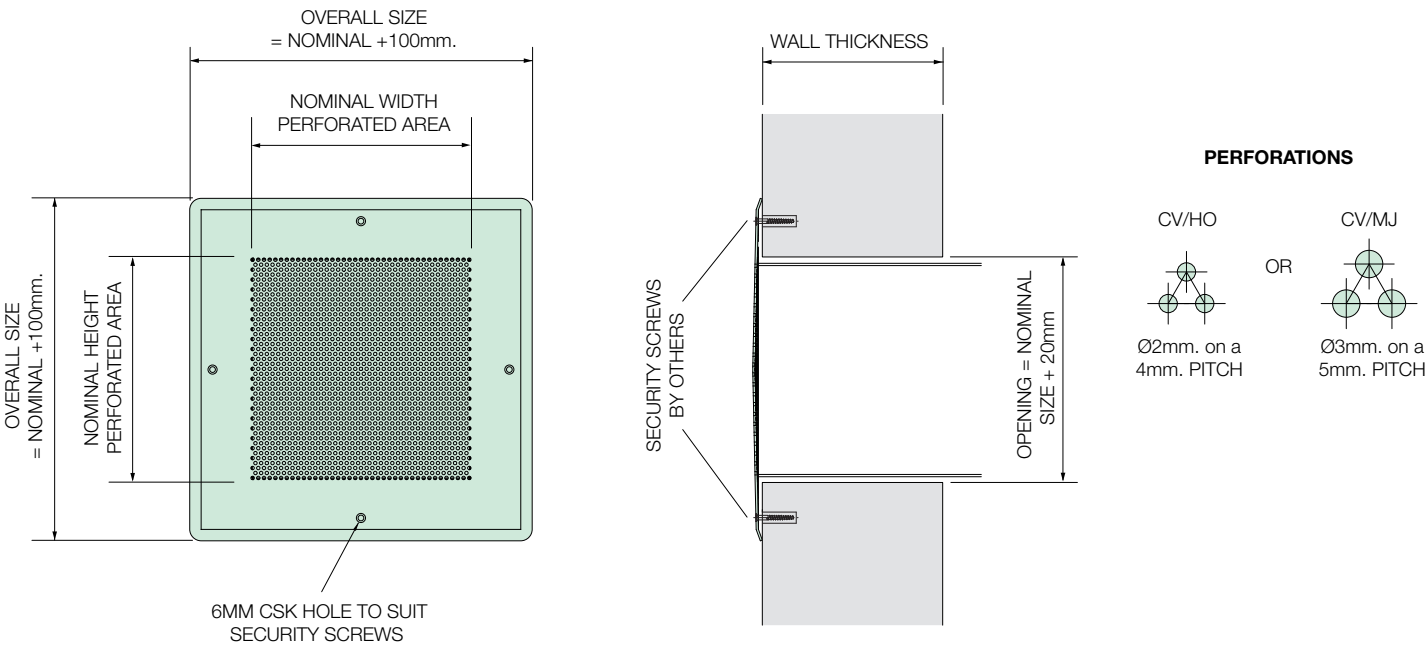


# Dimensions / Configurations / Options

## Configuration 0 - Front Grille Only

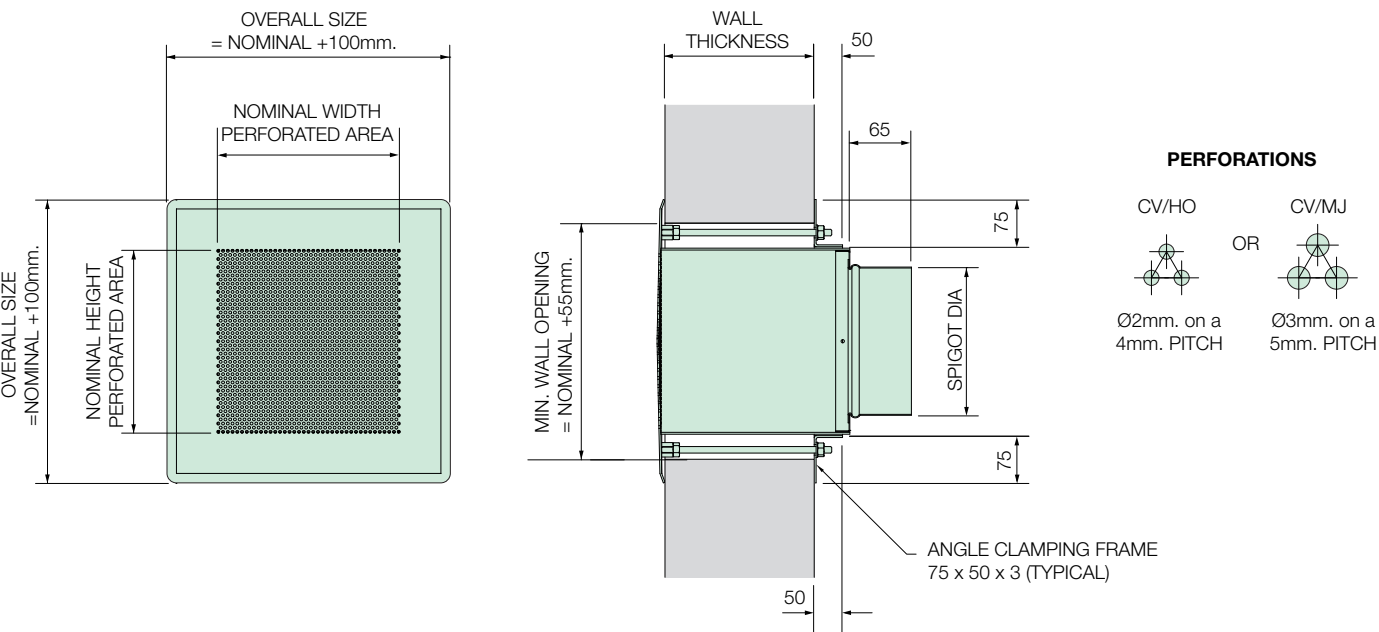


## Configuration 1 - Front Grille / Stub Duct

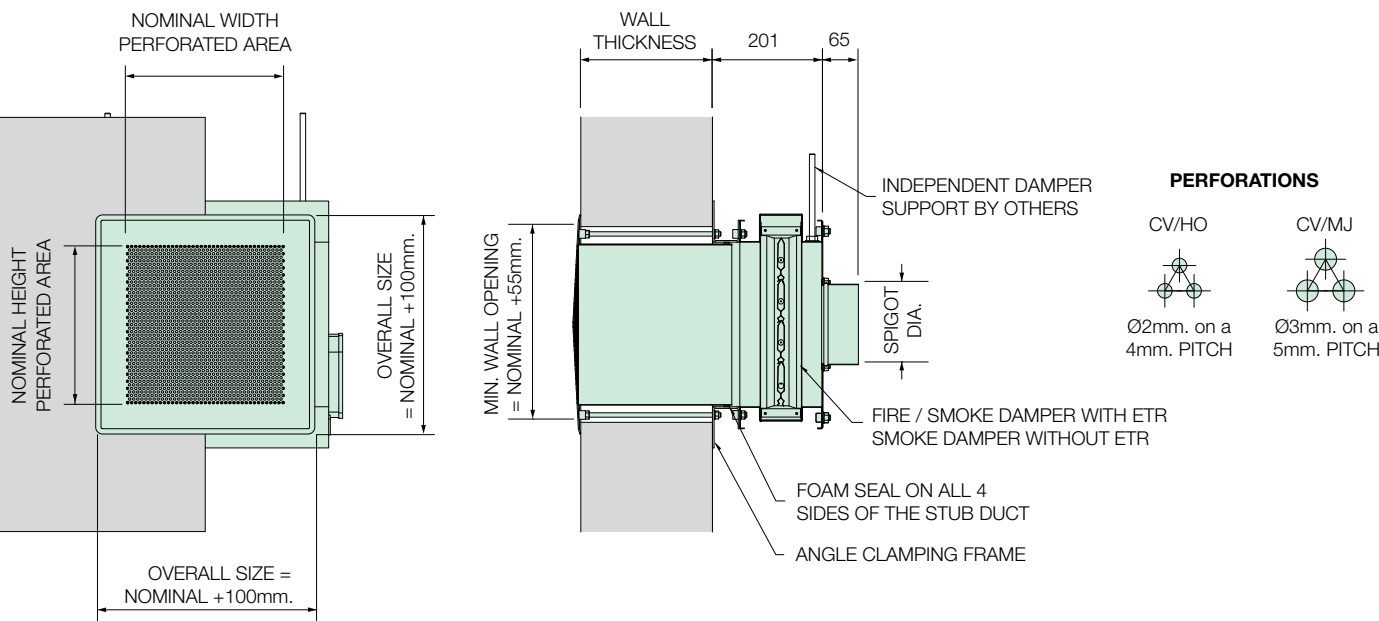


Dimensions / Configurations / Options

Configuration 2 - Front Grille / Stub Duct / Clamping Frame / Circular Spigot Connection

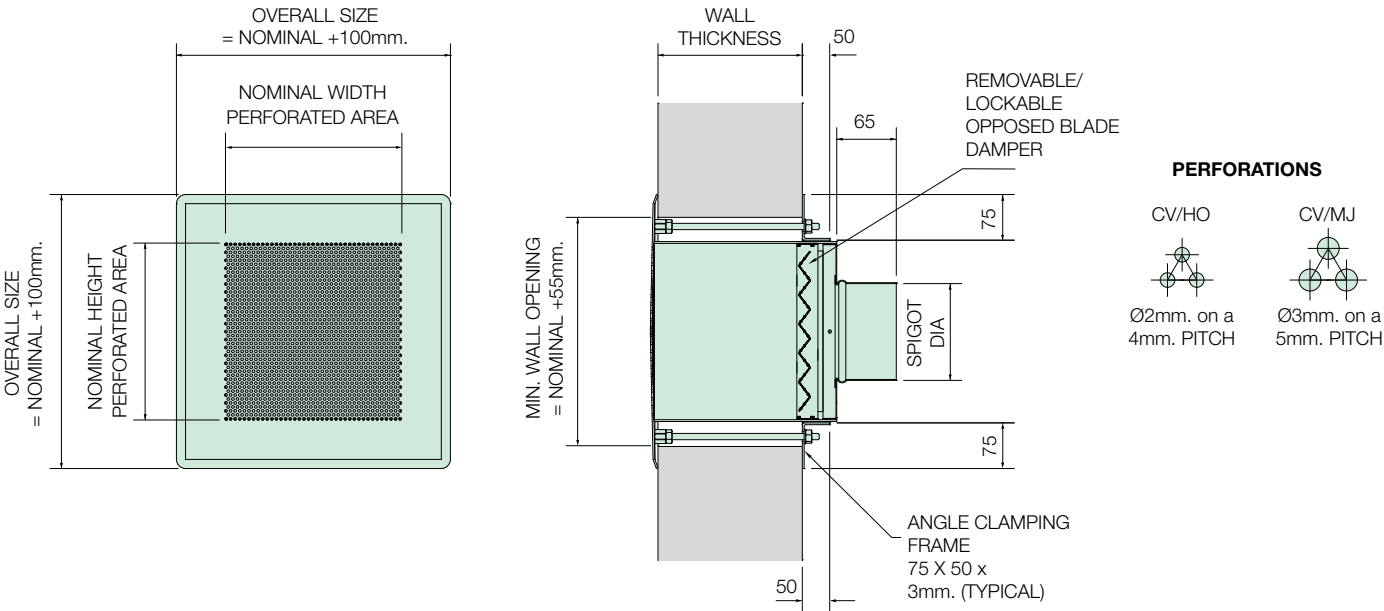


Configuration 2  
Option 4: Front Grille / Stub Duct / Fire / Smoke Damper / Clamping Frame / Circular Spigot Connection



# Dimensions / Configurations / Options

Configuration 2  
Option 6: Front Grille / Stub Duct / Removable Lockable Damper / Clamping Frame / Circular Spigot Connection



## Selection Data

## Model CV/MJ - 3mm holes on 5mm centres - Maximum Air Flow Rates, Complete Assembly, Stub Duct and Spigot

Nominal Grille Size	Nom Spigot Size									
150 x 150	125dia.	Air Volume (l/s)	10	17	20	30	35	40	45	50
		ThrowL <sub>T</sub> (m)	1.2	2	3.3	4.1	4.4	4.5	5	5.3
		Pressure Drop - (Pa)	1.25	2.2	6	11.5	15	21	24	28
		Sound level - NR <sub>lW</sub>	<10	<10	<15	20	22	24	26	28
200 x 150	125dia.	Air Volume (l/s)	15	20	35	45	50	60	70	80
		ThrowL <sub>T</sub> (m)	1.5	2.5	4.4	5.2	5.5	6.0	6.4	7.0
		Pressure Drop - (Pa)	1	1.76	4.8	9.2	12	16.8	19.2	22.4
		Sound level - NR <sub>lW</sub>	<10	<10	17	24	26	28	31	34
250 x 150	125dia.	Air Volume (l/s)	18	28	40	50	60	70	80	90
		ThrowL <sub>T</sub> (m)	1.1	2.3	4.1	5.1	5.5	5.6	6.3	6.6
		Pressure Drop - (Pa)	0.8	1.6	4.0	6.1	9.0	13.0	15.0	17.7
		Sound level - NR <sub>lW</sub>	<10	<10	16	22	24	27	29	33
200 x 200	160dia.	Air Volume (l/s)		30	40	55	65	75	85	95
		ThrowL <sub>T</sub> (m)		2.0	2.6	3.5	4.0	4.7	5.4	5.8
		Pressure Drop - (Pa)		1.6	5.0	10.0	15.0	22.0	25.0	28.0
		Sound level - NR <sub>lW</sub>		<10	17	26	28	31	35	38
250 x 200	160dia.	Air Volume (l/s)	25	40	50	60	75	90	100	110
		ThrowL <sub>T</sub> (m)	0.8	2.0	2.5	3.0	4.0	4.7	5.4	5.8
		Pressure Drop - (Pa)	1.0	4.0	6.0	8.0	13.0	19.0	23.0	26.0
		Sound level - NR <sub>lW</sub>	<15	<20	20.0	25.0	30.0	33.0	37.0	40.0
250 x 250	200dia.	Air Volume (l/s)	30	50	60	80	90	110	130	140
		ThrowL <sub>T</sub> (m)	0.8	2.1	2.5	3.0	4.0	4.7	5.4	5.8
		Pressure Drop - (Pa)	1.0	2.5	4.0	6.0	8.0	13.0	18.0	24.0
		Sound level - NR <sub>lW</sub>	<15	<20	19.0	23.0	26.0	30.0	36.0	42.0
300 x 300	250dia.	Air Volume (l/s)	45	70	90	110	135	160	180	200
		ThrowL <sub>T</sub> (m)	2.6	4.0	5.0	6.0	8.0	8.5	11.0	>12
		Pressure Drop - (Pa)	1.2	3.0	4.0	7.6	12.0	15.0	22.0	30.0
		Sound level - NR <sub>lW</sub>	19	22.0	19.0	23.0	35.0	37.0	40.0	>40

## Model CV/HO - 2mm holes on 4mm centres - Maximum Air Flow Rates, Complete Assembly, Stub Duct and Spigot

Nominal Grille Size	Nom Spigot Size									
150 x 150	125dia.	Air Volume (l/s)	10	17	20	30	35	40	45	50
		ThrowL <sub>T</sub> (m)	1.3	2.2	3.6	4.5	4.8	5.0	5.5	5.8
		Pressure Drop - (Pa)	1.5	2.7	7.3	14.0	17.1	23.9	27.4	31.9
		Sound level - NR <sub>lW</sub>	<10	<10	<15	22	24.0	26.0	28.0	30.0
200 x 150	125dia.	Air Volume (l/s)	15	20	35	45	50	60	70	80
		ThrowL <sub>T</sub> (m)	1.5	2.5	4.4	5.2	5.5	6.0	6.4	7.0
		Pressure Drop - (Pa)	1.1	2.0	5.5	10.5	12	16.8	19.2	22.4
		Sound level - NR <sub>lW</sub>	<10	<10	19.0	26.0	28.0	30.0	33.0	36.0
250 x 150	125dia.	Air Volume (l/s)	18	28	40	50	60	70	80	90
		ThrowL <sub>T</sub> (m)	1.2	2.5	4.5	5.6	7.4	7.5	8.4	8.9
		Pressure Drop - (Pa)	0.8	1.6	4.0	6.1	10.3	14.8	17.1	20.1
		Sound level - NR <sub>lW</sub>	<10	<10	18.0	24.0	26.0	29.0	31.0	35.0
200 x 200	160dia.	Air Volume (l/s)		30	40	55	65	75	85	95
		ThrowL <sub>T</sub> (m)		2.4	3.2	4.3	4.0	4.7	5.4	5.8
		Pressure Drop - (Pa)		1.8	5.7	11.4	15.0	22.0	25.0	28.0
		Sound level - NR <sub>lW</sub>		<10	18.0	27.0	29.0	32.0	36.0	39.0
250 x 200	160dia.	Air Volume (l/s)	25	40	50	60	75	90	100	110
		ThrowL <sub>T</sub> (m)	0.9	2.2	2.8	3.3	4.4	5.2	5.9	6.4
		Pressure Drop - (Pa)	1.0	4.0	6.0	8.0	18.1	26.4	32.0	36.2
		Sound level - NR <sub>lW</sub>	<15	<20	21.0	26.0	31.0	34.0	38.0	41.0
250 x 250	200dia.	Air Volume (l/s)	30	50	60	80	90	110	130	140
		ThrowL <sub>T</sub> (m)	0.9	2.3	2.8	3.3	4.4	5.2	5.9	6.4
		Pressure Drop - (Pa)	1.4	3.5	5.6	8.3	8.0	13.0	18.0	24.0
		Sound level - NR <sub>lW</sub>	<15	<20	20.0	24.0	27.0	31.0	37.0	43.0
300 x 300	250dia.	Air Volume (l/s)	45	70	90	110	135	160	180	200
		ThrowL <sub>T</sub> (m)	2.9	4.4	5.5	6.6	8.8	9.4	12.1	>13
		Pressure Drop - (Pa)	1.2	3.0	4.0	7.6	16.7	20.9	30.6	41.7
		Sound level - NR <sub>lW</sub>	21.0	24.0	21.0	25.0	37.0	39.0	42.0	>43

The selection data is based on the following parameters:-

- Grille mounting height 2.8m.
  - Throw distances are based on isothermal conditions and a terminal velocity (V<sub>t</sub>) of 0.5m/s.
  - No room absorption correction factors were considered for the acoustic results.
- For grille sizes greater than 300 x 300 please consult our sales office.



Ordering Information

Example

Model	Type	Stub Duct	Fixing	Accessory	Nominal Size (WxH)	Nominal Spigot Size*	Finish
CV/MJ	G	2	0	2	250 x 250	200 Ø	56
<b>CV/MJ</b> – (Ministry of Justice - Prison Service) <b>CV/HO</b> – (Home Office - Police Service)	<b>0</b> – Front Grille Only <b>1</b> – With Stub Duct <b>2</b> – With Stub Duct, Anchor Bolts and Angle Clamping Frame  <b>Note:</b> Wall thickness to be advised to ensure correct stub duct depth.		<b>0</b> – No Front Fixing <b>1</b> – Countersunk Screw Holes	<b>0</b> – No Accessories <b>1</b> – Intumescent Fire Block (1 hour rating) <b>2</b> – Circular Spigot Connection <b>3</b> – Intumescent Fire Block (1 hour rating and Circular Spigot Connection. <b>4</b> – Fire / Smoke Damper (with ETR)** <b>5</b> – Smoke Damper (without ETR)** <b>6</b> – Removable / Lockable Opposed Blade Damper Assembly - Rear Access <b>7</b> – Face Operated Opposed Blade Damper Assembly	<b>Nominal Size (W x H)</b> 150 x 150 200 x 150 250 x 150 200 x 200 250 x 200 250 x 250 300 x 300  (Standard Sizes shown, Other Sizes available on Request)	<b>Nominal Spigot Size</b> 125 Ø 125 Ø 125 Ø 160 Ø 160 Ø 200 Ø 250 Ø  *Includes quick release spigot as standard fitting with rear mounted damper.	<b>56</b> - Brushed Stainless Steel <b>83</b> - White PPC to RAL 9010 (20% Gloss)  (Other finishes only available on Special Request)
<b>G</b> – No OBD <b>R</b> – With OBD							

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

**Ruskin Air Management Limited  
is a BS EN ISO 9000 registered  
company.**

The statements made in this brochure or by our representatives in consequence of any enquiries arising out of this document are given for information purposes only. They are not intended to have any legal effect and the company is not to be regarded as bound thereby. The company will only accept obligations which are expressly negotiated for and agreed and incorporated into a written agreement made with its customers.

Due to a policy of continuous product development the specification and details contained herein are subject to alteration without prior notice.

**Comprehensive and detailed information  
is available for all Air Diffusion products.  
Visit our website at [www.air-diffusion.co.uk](http://www.air-diffusion.co.uk)**

## **Ruskin Air Management Limited**



Stourbridge Road, Bridgnorth, Shropshire,  
WV15 5BB England.  
Tel: 01746 761921  
Fax: 01746 760127  
Email: [sales@air-diffusion.co.uk](mailto:sales@air-diffusion.co.uk)  
Website: [www.air-diffusion.co.uk](http://www.air-diffusion.co.uk)

## **Air Diffusion**

Grilles Diffusers Louvres Chilled Beams