

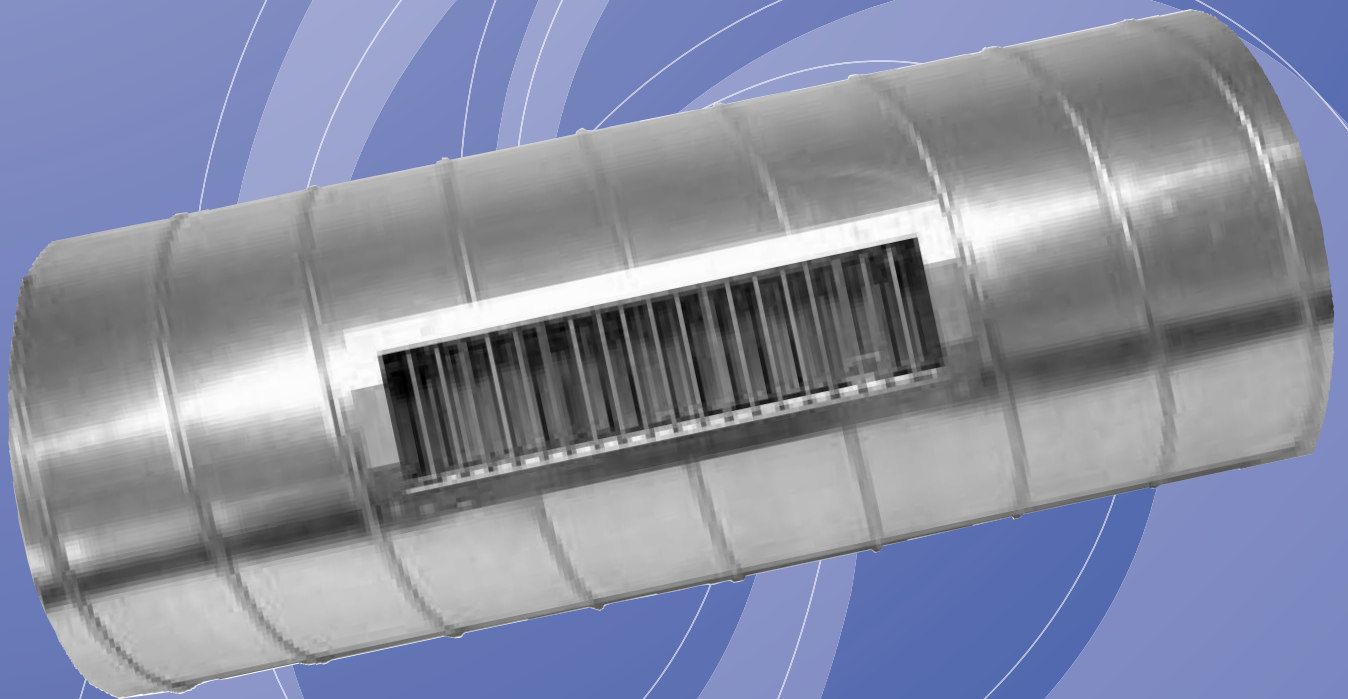
SERIES C

Adjustable Deflection
Grilles for Circular Ducting

PUBLICATION

GRILLES 18

APRIL 2012



Features

- Designed for circular duct applications
- Single or double deflection
- Individually adjustable blades
- 4mm aerofoil section blade profile
- Galvanised or mild steel construction



GILBERTS

Series C

Adjustable Deflection Grilles for Circular Ducting

Introduction

Gilberts C series provides a range of single and double deflection adjustable deflection grilles suitable for both supply and extract applications in circular ducting. Comprising of 3mm wide individually adjustable aerofoil blades set on 19mm centres the C series is available in both galvanised steel finish, providing a good match with

unfinished exposed ductwork or powder coated mild steel. Blades are firmly located in nylon bushings allowing for simple and positive manual blade adjustment and positioning. The 25mm wide border frame is presented at an angle which allows it to sit comfortably on popular duct diameters.

STANDARD SERIES OPTIONS:

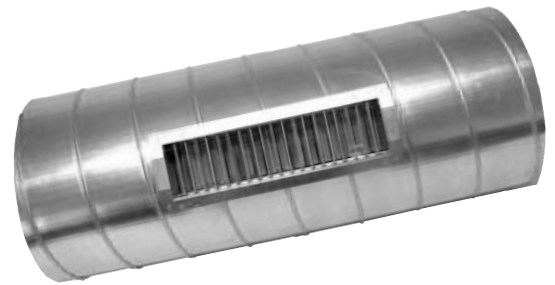
Series CV - Single deflection grille with one set of vertical blades.

Series CVH - Double deflection grille with vertical front and horizontal rear blades.

Features

- Designed for circular duct applications
- Single or double deflection
- Individually adjustable blades
- 4mm aerofoil section blade profile
- Galvanised or mild steel construction

All units are available with screwdriver operated rear mounted opposed blade volume control damper or, as an alternative, a flat air deflection plate type damper. Standard



finish is a galvanised steel or a mild steel with White polyester powder coating.

Performance Data

The performance tables listed in this brochure relate to isothermal heating and cooling applications. Performance figures for throw, pressure drop and also sound data under isothermal conditions can be found in the sizing tables on the inside back cover.

Pressure: All pressures are in Pa (N/m²).

Throw: All terminal velocity figures in (m/s) as indicated in the performance charts.

Sound: Measured in average dba level.

Selection Procedure

Horizontal throw example (isothermal conditions). An air column of 0.3 m³/s needs to be supplied over a distance of 12 metres with an average terminal velocity of approximately 0.5 m/s.

Referring to the sizing chart on the inside back cover, a range of throws from 3m up to 15m is indicated across the top. Using the 12m throw column, look down until a residual velocity is found that matches, or is close to, the required value. In this example we can see that both a 525x225 or an 825x125 would be appropriate.

Although this selection example fits exactly with the data it may be necessary to compromise slightly on either volume or velocity to achieve a desired match.

Having established the selection you can then also check the pressure drop (15pa) and the noise level (30dbA) to ensure acceptability.

Note - The terminal velocities or throws can be reduced by spreading the air over a wider angle or discharge using the grilles deflection vanes.

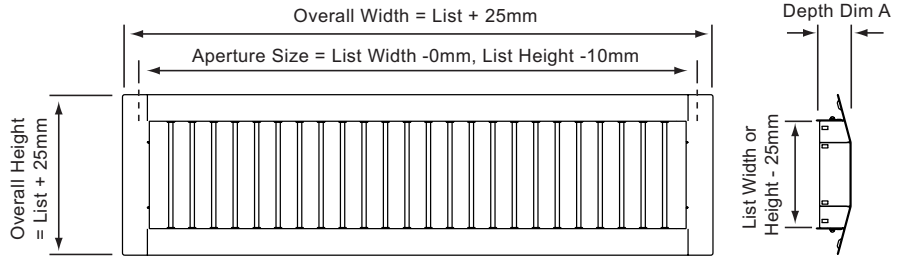
Area to be served	Recommended Maximum NC Levels
Sound Broadcasting, Recording Studios, TV (Audience Studios)	15 - 20 20 - 25
Lecture Theatres, Cinemas, Concert Halls, Boardroom/Ex Offices Lounge, Conference Room, Court Room, Churches, Private Bedrooms	25 - 30
Operating Theatres, Hospital Wards, Staff Room, Class Rooms, Ballroom, Banquet Room, Library, Bank, Museum, Offices	30 - 40
Restaurants, Department Stores, Computer Suite, Washroom Toilet	35 - 40
Laundries, Kitchens, Swimming Pools, Sports Arena	40 - 45
Garage, Light Engineering Workshop	45 - 50
Heavy Engineering Workshop	50 - 65

Dimensional Data

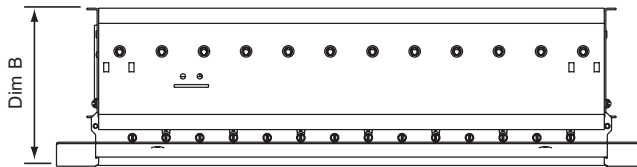
Type CV

Single Deflection

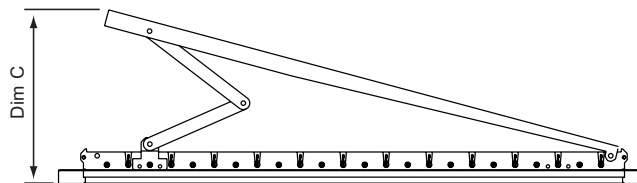
Grille



Grille C/W Opposed Blade Damper DO



Grille C/W Deflection Plate Damper DP



Size Range:

Width: 225, 325, 425, 525,
625, 825, 1025 & 1225
Height: 85, 125 & 225

List Height	Suitable Duct Dia
85	150 - 400
125	315 - 900
225	630 - 1250

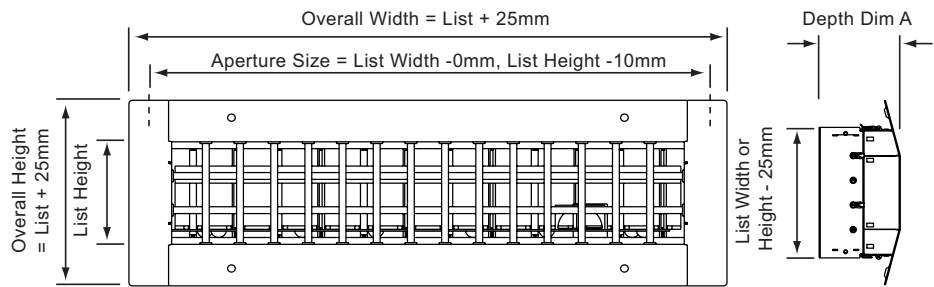
List Height (mm)	CV Dim A	CV-DO Dim B	CV-DP Dim C
85	28.0	93.0	200
125	28.5	93.4	200
225	35.2	100.1	200



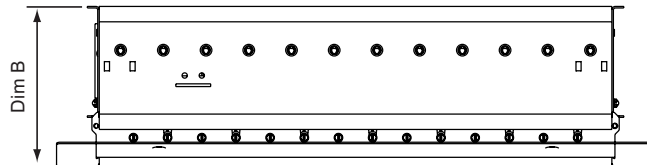
Dimensional Data

Type CVH
Double Deflection

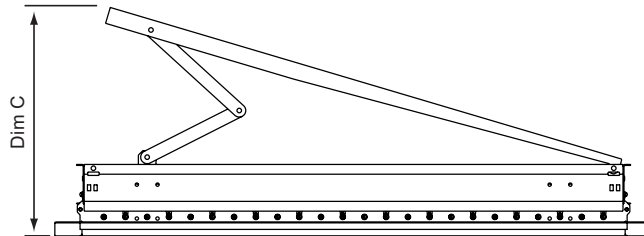
Grille



Grille C/W Opposed Blade Damper DO



Grille C/W Deflection Plate Damper DP



Size Range:

Width: 225, 325, 425, 525, 625, 825, 1025 & 1225

Height: 85, 125 & 225

List Height	Suitable Duct Dia
85	150 - 400
125	315 - 90--0
225	630 - 1250

List Height (mm)	CVH Dim A	CVH-DO Dim B	CVH-DP Dim C
85	64.4	93.0	240
125	64.9	93.4	240
225	71.6	100.1	240



Sizing Data

UNIT	VOL	Throw in Metres					PS	SOUND
SIZES	M ³ /S	3	6	9	12	15	(Pa)	(dba)
		Average Residual Velocities						
225 x 85	0.025	0.43	0.22				8	20
	0.05	0.90	0.45	0.30	0.20		28	25
225 x 125 325 x 85	0.05	0.70	0.35	0.35	0.24		12	20
	0.075	1.00	0.50	0.35	0.25		28	30
	0.10		0.70	0.45	0.38	0.30	45	35
325 x 125 425 x 85 525 x 85	0.075	0.08	0.40	0.25			8	20
	0.10	1.20	0.60	0.35	0.28	0.22	14	27
	0.125	1.40	0.70	0.38	0.35	0.28	28	32
	0.150	1.60	0.90	0.55	0.45	0.35	38	38
425 x 125 625 x 85	0.100	0.95	0.50	0.33	0.26	0.19	10	23
	0.125	1.20	0.60	0.40	0.32	0.25	13	28
	0.150	1.40	0.75	0.50	0.40	0.30	28	33
325 x 225 525 x 125 625 x 125 825 x 85	0.125	1.00	0.50	0.38	0.28	0.20	7	20
	0.150	1.20	0.60	0.40	0.32	0.25	10	25
	0.20	1.40	0.80	0.54	0.45	0.32	15	33
	0.25		1.00	0.62	0.54	0.40	28	38
425 x 225 1225 x 85	0.15	1.10	0.53	0.36	0.30	0.22	7	20
	0.20	1.30	0.70	0.50	0.38	0.28	10	25
	0.25	1.50	0.90	0.58	0.48	0.35	16	32
525 x 225 825 x 125	0.20	1.20	0.63	0.45	0.35	0.26	7	20
	0.25	1.40	0.80	0.55	0.42	0.32	10	27
	0.30	1.85	1.00	0.65	0.50	0.40	15	30
	0.40	2.15	1.20	0.80	0.65	0.50	25	39
1025 x 125	0.25	1.30	0.70	0.45	0.38	0.28	6	26
	0.30	1.60	0.80	0.55	0.45	0.34	9	28
	0.40	2.00	1.15	0.75	0.62	0.45	14	37
625 x 225 1225 x 125	0.25	1.20	0.68	0.43	0.36	0.26	6	22
	0.30	1.50	0.78	0.50	0.43	0.32	8	27
	0.40	1.90	1.10	0.71	0.60	0.42	12	35
825 x 225	0.30	1.40	0.75	0.48	0.42	0.30	7	20
	0.40	1.60	1.00	0.65	0.52	0.40	12	28
	0.50	2.46	1.40	0.75	0.68	0.52	20	34
1025 x 225	0.40	1.34	0.80	0.55	0.45	0.34	6	25
	0.50	1.88	1.10	0.75	0.60	0.48	10	29
	0.60	2.6	1.50	0.95	0.75	0.55	14	33

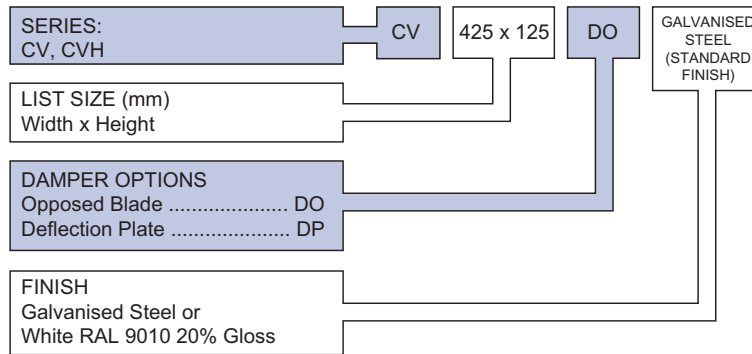


Selection example/see inside front cover

SERIES C

Adjustable Deflection Grilles for Circular Ducting

Ordering Specification



Fixing

Standard flange screw fixing using self tapping screws provided.

Finish

Standard Finish: Galvanised Steel
Optional: PPC White Ral 9010 20% Gloss

Size Range

Width: 225, 325, 425, 525, 625, 825, 1025 & 1225
Height: 85, 125 & 225

(225x225 Size Not Available)

GILBERTS

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