



Incorporating



V2.0



Product spec >>>

> Series DD - Double deflection grilles

Grilles

Double deflection

Recommended for:

Wall, ceiling & duct

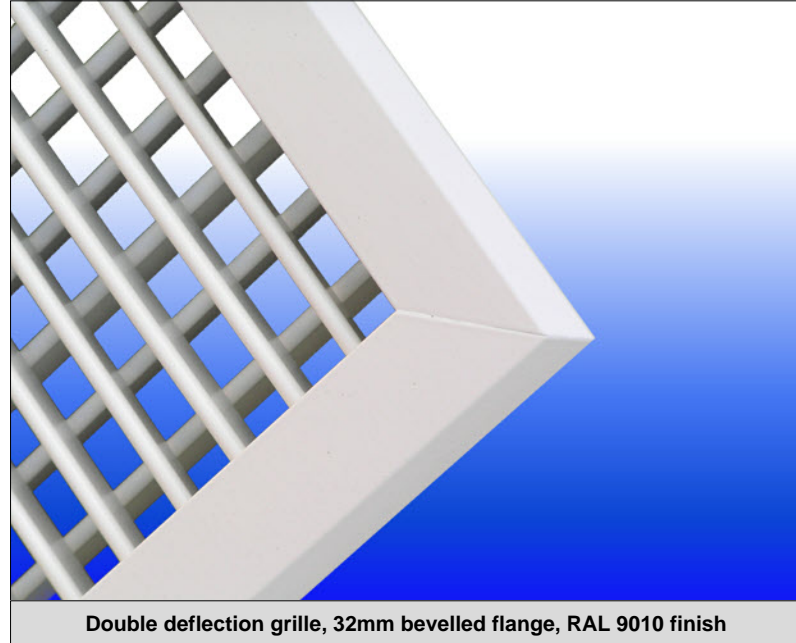
Supply & extract

Overview

Enhanced functionality

As per the name, double deflection grilles add another row of blades set at 90° to the forward set, enabling throw to be created in a 360° pattern.

Just like their single deflection counterparts though, volume control and a wide range of further options and accessories are available for Series DD grilles.



Free area max:	70%
Mass/M sq face area:	14.5 kg
Mass/M sq face area inc OBD:	22.5 kg

Specifications:

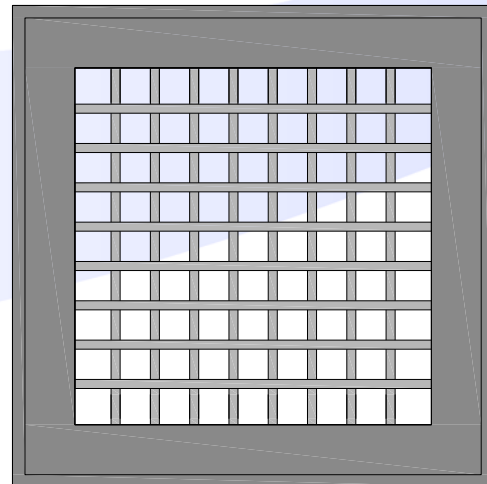
Materials:	Extruded aluminium throughout.
Construction:	Two rows of adjustable blades within frame, both extruded aluminium. Blades held in place with high tensile spring wire & starlock washers.
Frame:	Standard - 32mm bevelled. Optional - See page 40.
Fixings:	Standard - None. Optional - See page 39.
Sizes:	Minimum size single unit 100mm x 50mm. Maximum size single unit 2900mm x 2900mm.
Mullions:	Central mullion on any unit above 570mm wide or high.
Finish:	Standard - Satin anodised (AA5). Optional - Polyester powder coat to any RAL / BS colour.

Adjustability

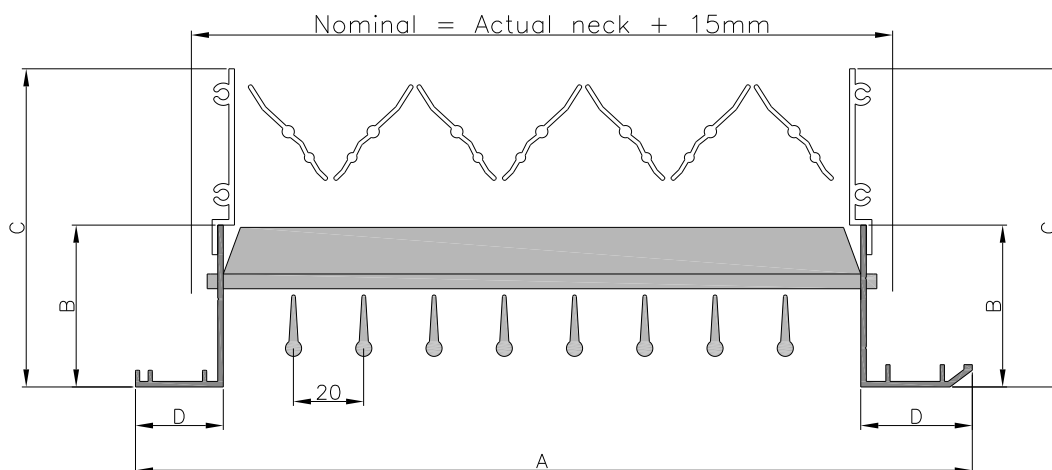
The second bank of individually adjustable blades allows for even greater adjustment of throw, able to create a full 360° of even flow. Perfect for ceiling applications where all round blow is required.

Aesthetics

The range of frame types, and HVC's full in-house powder coating facility means you need never worry that your double deflection grille will not compliment any building it is fitted into.

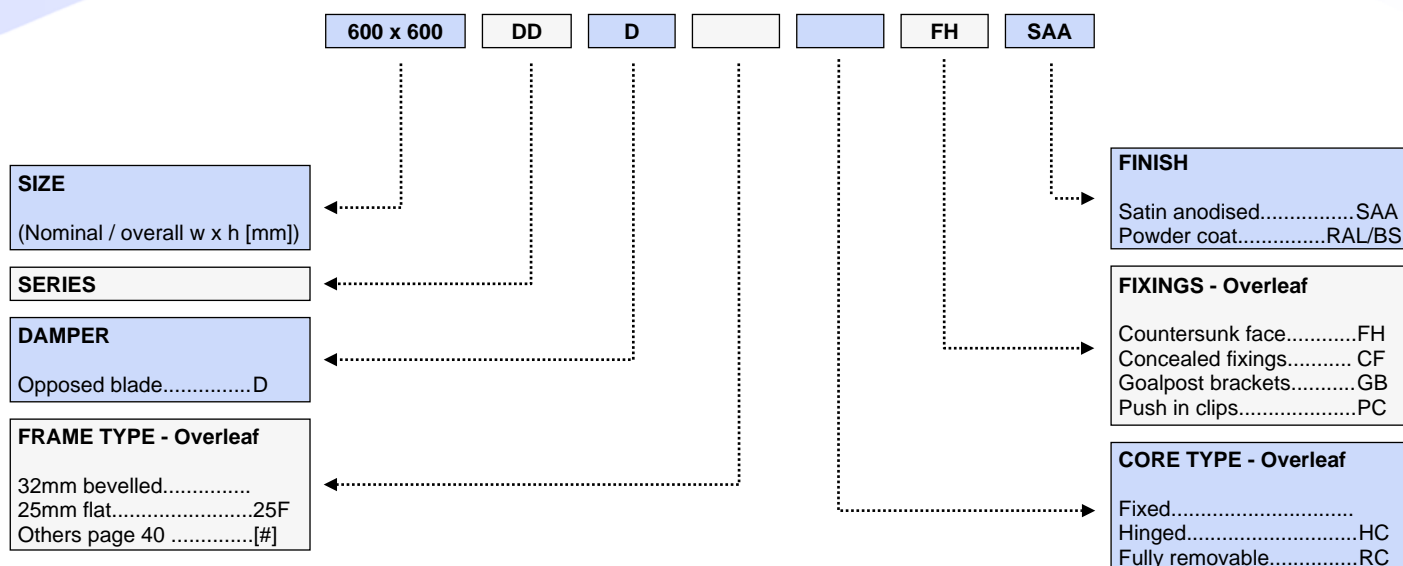


Series DD



	25mm flat flange (Opt)
A	Nominal + 30mm
B	46mm
C	90mm
D	25mm

	32mm bevelled flange (Std)
A	Nominal + 45mm
B	46mm
C	90mm
D	32mm



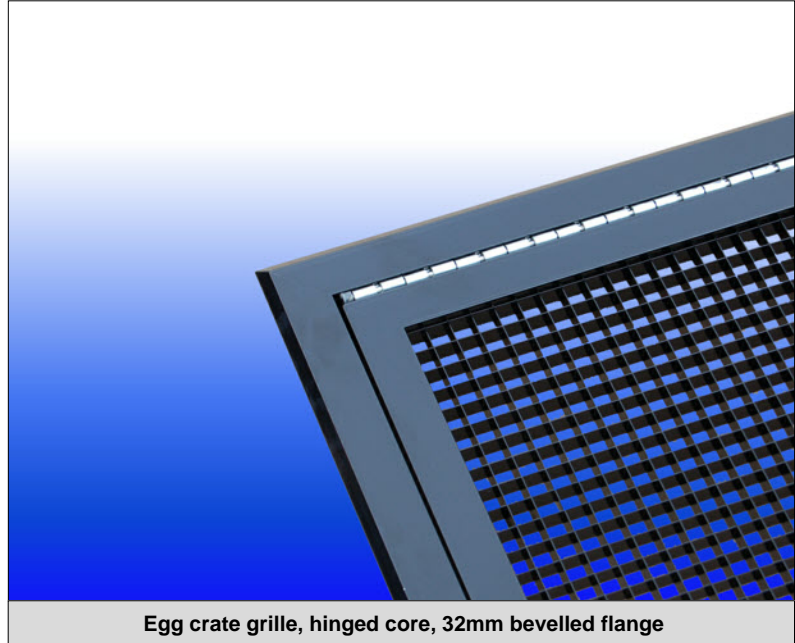
Grilles

Hinged & removable cores

Overview

Envisage you need access to the ductwork behind a grille to inspect a fire damper, or to adjust a rear mounted opposed blade damper.

Without a removable or hinged core the whole grille will have to be removed. Not only a time consuming process, but also likely damaging the grille itself and the wall or ceiling in the process.



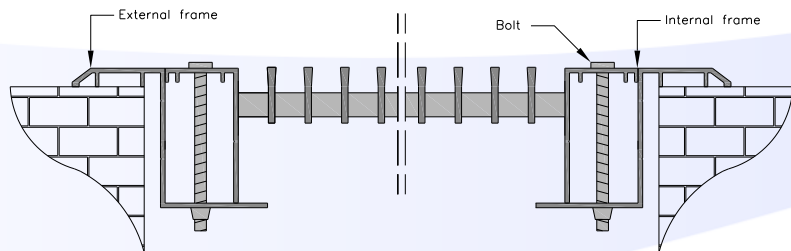
Egg crate grille, hinged core, 32mm bevelled flange

Removable core

Enabling the core to be removed entirely from the frame allows maximum entry space into ductwork behind.

Held within its own frame, the core comes out in one whole unit for maximum ease.

Colour matched bolts are fitted as standard.

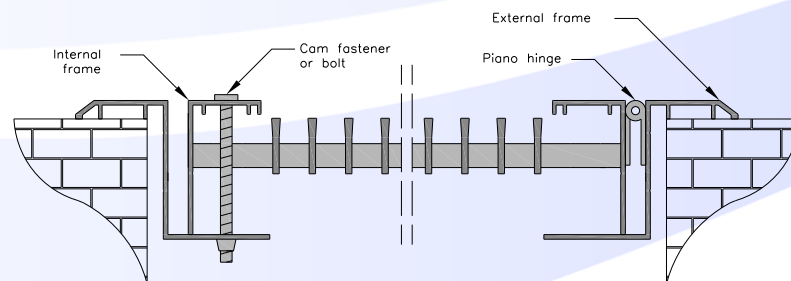


Hinged core

Held within its own frame as with the removable option, a silver piano hinge is fitted to one side of the internal frame.

Able to swing out to 180°, access through hinged grilles is comparable to their fully removable cousins.

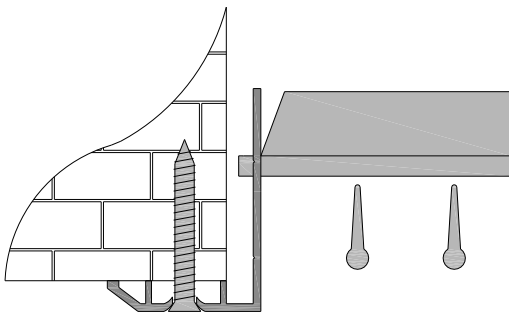
Cam fasteners are fitted as standard, bolts will be fitted upon specification.



Core type	Grille series													
	SD	DD	FB	ECG	NV	CB	LG	LGFR	CFLG	RGS	PSG	LFP	PPG	LCD
Hinged core	✓	✓	✓	✓	✓	✓	✓	✗	N/A	N/A	N/A	✓	✓	✓
Removable core	✓	✓	✓	✓	✓	✓	✓	✗				✓	✓	✓

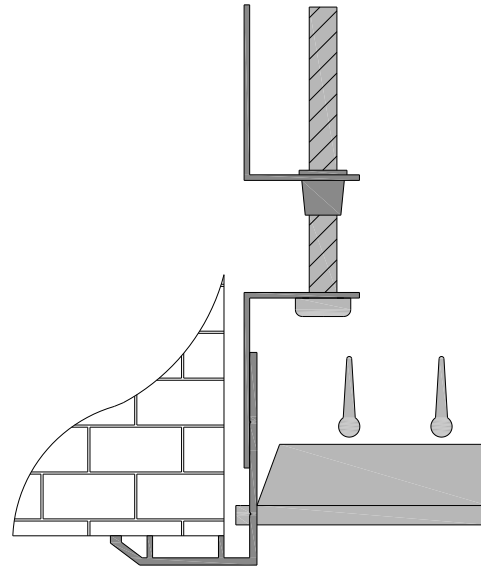
Grilles

Fitting options



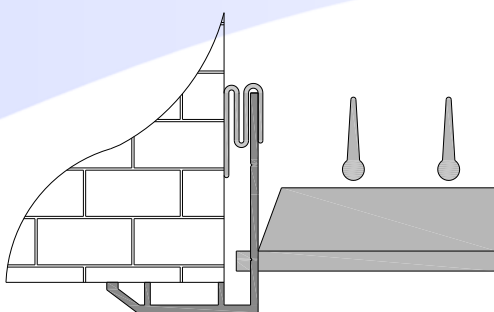
Countersunk fixing holes: Code suffix FH

Countersunk fixing holes in the grille frame are the easiest fitting method. Screws in the same finish are supplied with the grille.



Concealed fixings: Code suffix CF

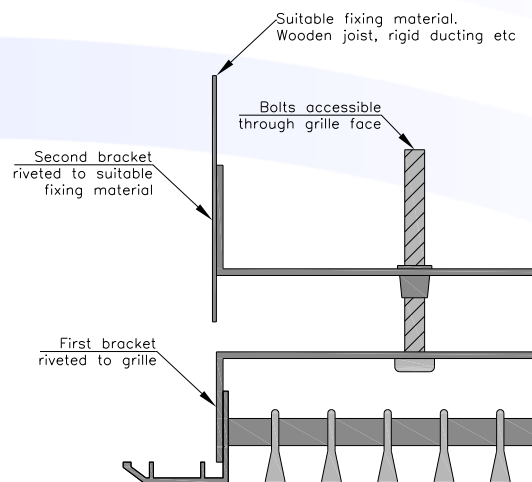
Consisting of L brackets with threaded ports, one L bracket is fixed into the ductwork or plenum, the other is riveted to the rear of the grille frame. Supplied bolts are then used to hold the grille into the supporting structure.



Push-in clip method: Code suffix PC

These sprung clips are compressed when the grille is pushed into place. The outward force provided then holds the grille securely in place.

This method has the advantage of requiring no drilling or bolting, for maximum ease and causing no damage to walls or ceilings.



Goalpost method: Code suffix GB

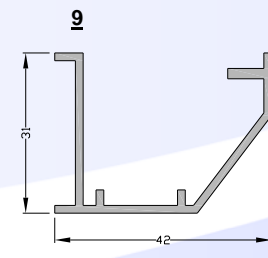
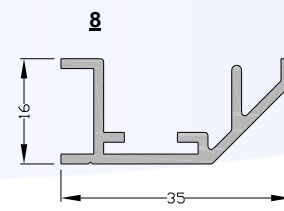
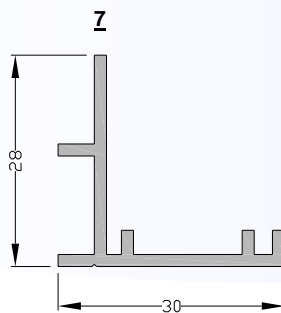
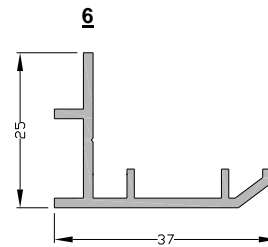
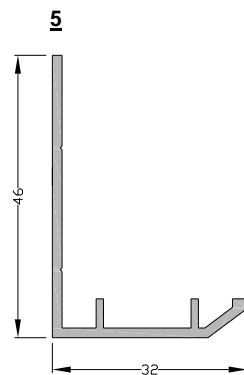
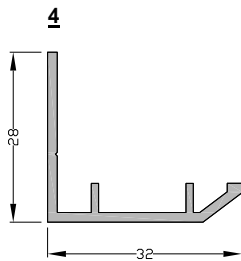
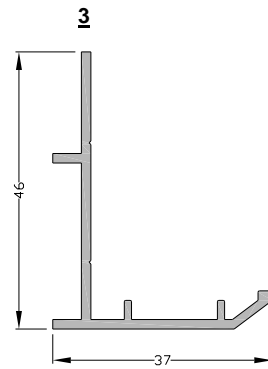
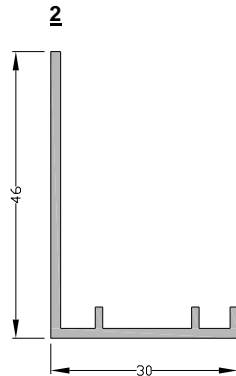
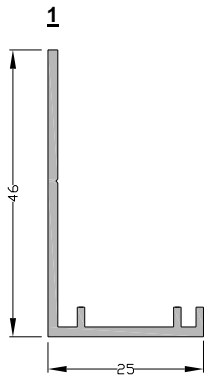
Normally used on linear slot diffusers, HVC has made this effective fixing method available to a wider range of grilles with the addition of a second bracket.

It enables the whole grille to be fully supported by, and removable from the plenum.

This method is only suitable for linear grilles with 0° blade, single / double deflection grilles, egg crate grilles, curved blade grilles, and any other grille with the removable or hinged core option specified.

Grilles

Frame types



		Grille series													
Frame types		SD	DD	FB	ECG	NV	CB	LG	LGFR	CFLG	SDG	PSG	LFP	PPG	LCD
1	25mm large flat	✓	✓	✓	X	X	✓	✓	✓	N/A	N/A	N/A	X	X	STD
2	30mm flat	✓	✓	✓ 1 way	X	X	✓	✓	✓				X	X	✓
3	NV angle	✓	X	✓	✓	NV1-3	✓	✓	✓				✓	✓	X
4	32mm small bevelled	STD	X	STD	X	X	STD	STD	X				X	X	X
5	32mm large bevelled	✓	STD	✓	X	X	✓	✓	STD				X	X	✓
6	32mm ECG	X	X	X	STD	X	X	X	X				✓	STD	X
7	25mm ECG	X	X	X	✓	X	X	X	X				✓	✓	X
8	Slimline surface mounted	X	X	X	✓	NV4	X	X	X				X	✓	X
9	Large surface mounted	✓	X	✓	✓	✓	✓	✓	X				X	✓	✓

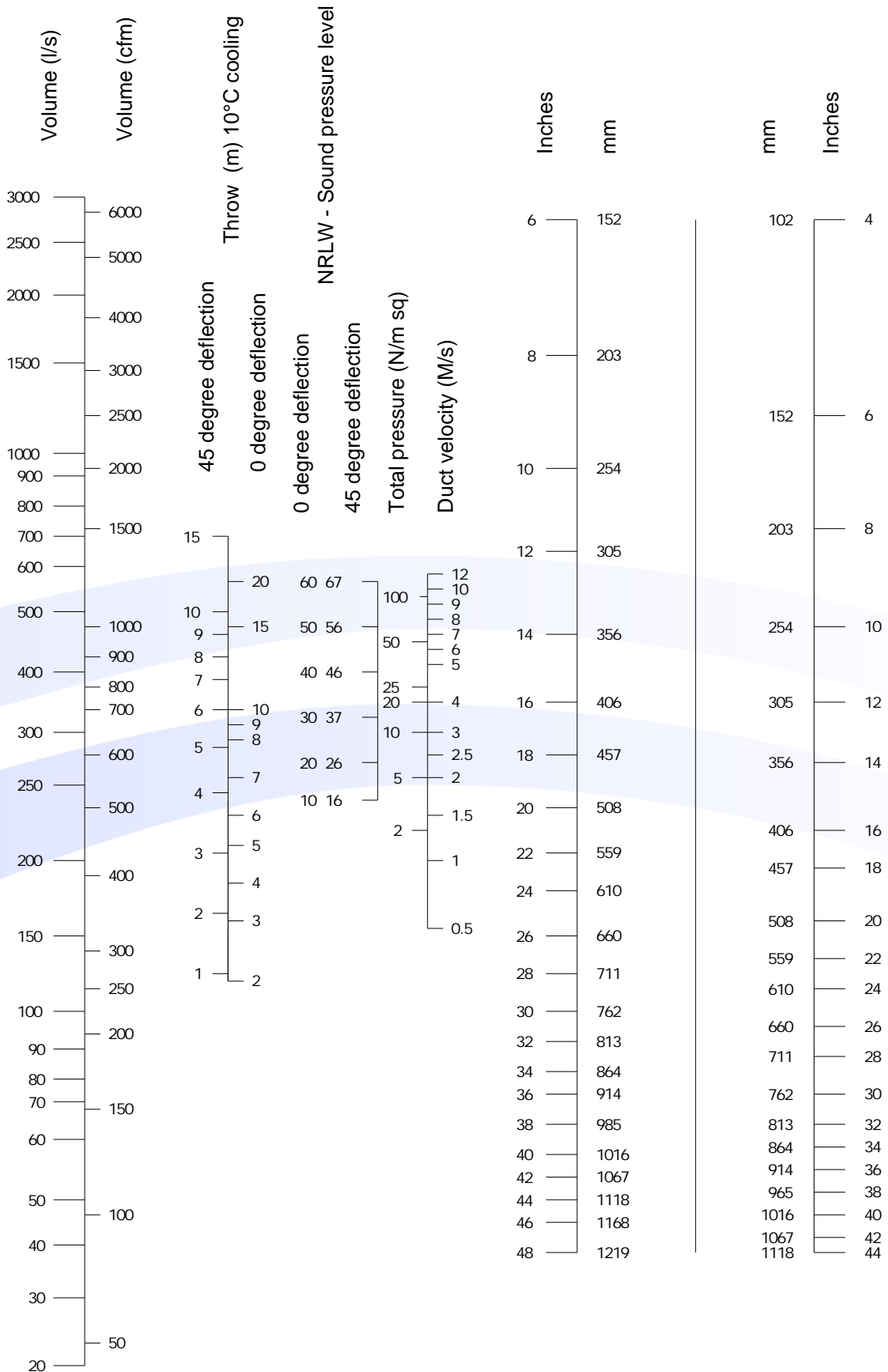
Throw values based on grilles mounted in sidewall not more than 1m below an unrestricted ceiling.
 For grilles positioned more than 1m below an unrestricted ceiling, reduce throw values by 25%.

Sound power & pressure levels are based upon supply air with dampers fully open.
 Without dampers subtract 2dB and multiply total pressure by 0.9.

Throw values based on a 10°C cooling application. For isothermal applications, increase throw values by 25%.

Selection data

DD



Ancillaries

Plenum boxes

Overview

Designed to facilitate the fitment of ducting to a grille or diffuser.

HVC plenum boxes are available in top or side entry models with one or multiple spigots of any diameter. Fire rated models & acoustically lined variants are also available.

Specifications:

Materials: Galvanised steel throughout

Construction: Brake press formed.

Spot welding on spigots.

Sealant used on any joints.

Fixings: Standard - Plenum riveted (or other suitable method) to grille or diffuser on site.

Optional - Fixing lugs to suit drop rod ceiling.

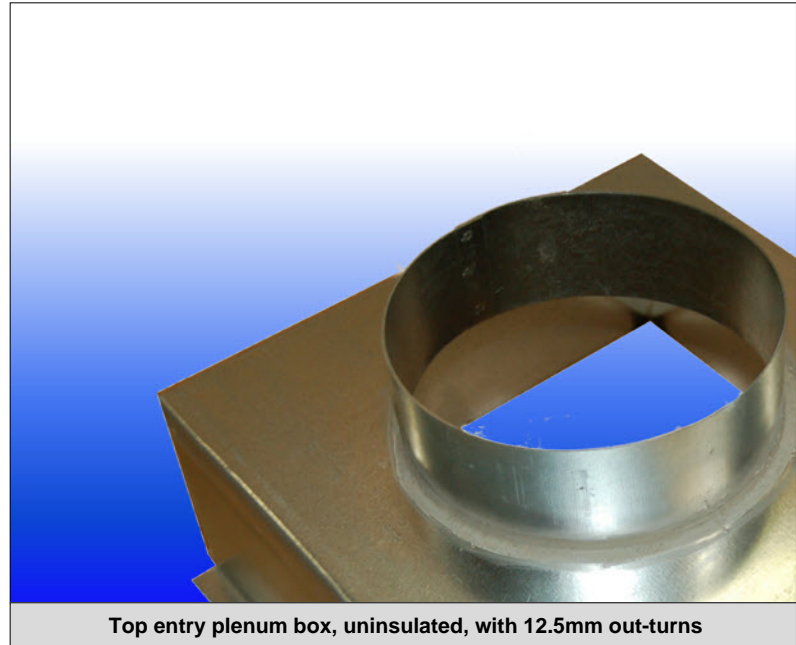
Flange: 12.5mm outturned flange used on everything except type CD and PPD diffusers.

Finish: Standard - Galvanised steel.

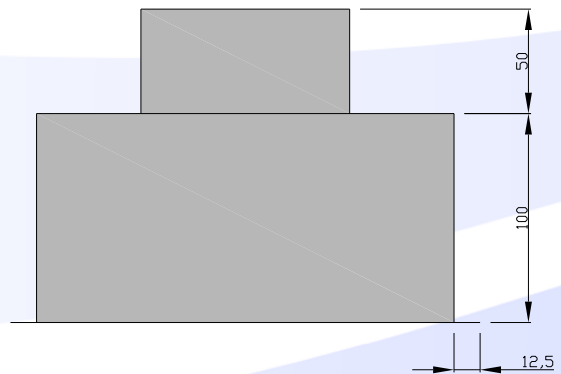
Optional - Painted to any RAL / BS colour.

The chart below gives maximum volume in m³/s that shown spigot sizes can handle for a given noise level, with neck velocities in m/s.

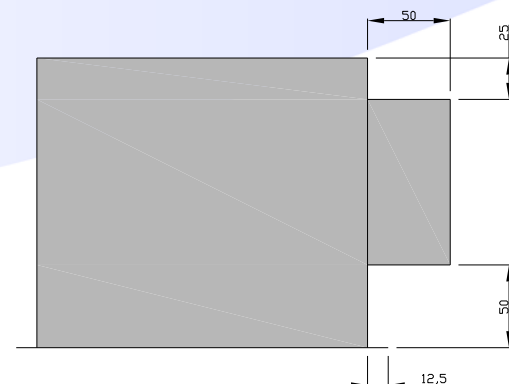
Spigot selection					
NC Level	25	30	35	40	45
Diameter	2.5m/s	3.0m/s	3.5m/s	4.0m/s	4.5m/s
100	0.019	0.023	0.027	0.031	0.035
125	0.03	0.037	0.043	0.049	0.055
150	0.044	0.053	0.062	0.07	0.079
160	0.05	0.06	0.07	0.08	0.09
175	0.06	0.072	0.084	0.096	0.108
200	0.078	0.094	0.11	0.125	0.14
225	0.1	0.12	0.14	0.16	0.18
250	0.12	0.147	0.17	0.196	0.22
300	0.177	0.212	0.247	0.28	0.32
315	0.195	0.23	0.27	0.31	0.35
350	0.24	0.29	0.33	0.38	0.43
400	0.31	0.38	0.44	0.5	0.56
450	0.4	0.48	0.56	0.64	0.72
500	0.49	0.59	0.68	0.78	0.88
550	0.59	0.71	0.83	0.95	1.07
600	0.7	0.85	0.99	1.13	1.27



Top entry: Series TEPB



Side entry: Series SEPB



TEPB / SEPB / FRTEPB / FRSEPB

Fire rated: Series FRTEPB / FRSEPB

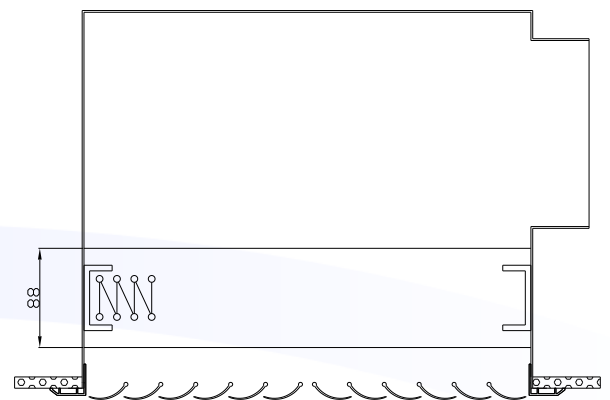
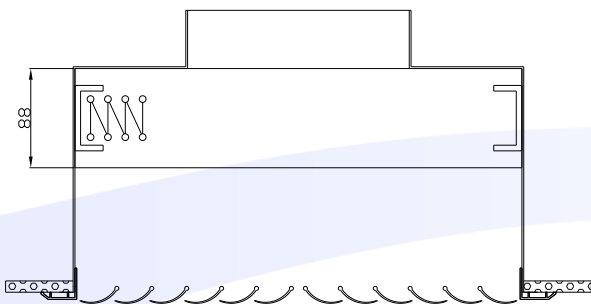
Constructed from fully welded 1.22mm thick galvanised steel, and with an integrated S200 fire damper rated for a period of six hours, or an intumescent damper rated at one hour.

The spring loaded damper blades of S200 fire dampers also mean that top entry boxes can be made fire rated, as well as side entry.

HVC always recommend consulting the relevant fire authority when installing fire rated HVAC equipment.

Side entry: Series FRSEPB

Top entry: Series FRTEPB



600 x 600 SEPB 2C 200 F SBD IN-RAL9005

SIZE
(Nominal / overall w x h [mm])

SERIES

SPIGOT ARRANGEMENT
State number reqd 'n'.....'n'
Double spigot opposite...2OP
Double spigot corner..... 2C

SPIGOT SIZE
000.....∅
000 x 000..... W x H

FURTHER OPTIONS
Painted interior..... IN-RAL__
Painted exterior..... EX-RAL__
Insulated interior....IN-INS
Insulated exterior...EX-INS

SPIGOT DAMPER
Single blade damper fitted to all spigots.....SBD

FLANGE
12.5mm all round
If different required state size

BOX DEPTH
Not needed if Series = SEPB



Supplies Ltd

Grilles & diffusers

Louvres

Fire / Fire smoke dampers

Volume control dampers



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