



Grilles & Diffusers

Incorporating



Series SD / DD / FB

Deflection grilles - Single / Double / Fixed blade

- Versatile range of grilles suitable for extract or supply
- Maximum 80% free area
- Single deflection grilles have one bank of individually adjustable blades
- Double deflection grilles have two banks of individually adjustable blades set at 90° to each other
- Fixed blade grilles have one bank of blades set at 0°, 15° or 45°



Index

Overview

3 SD / DD / FB

SD - Single deflection

4 Product overview and features

5 Technical drawings

DD - Double deflection

6 Product overview and features

7 Technical drawings

FB - Fixed blade

8 Product overview and features

9 Technical drawings

Removable and hinged cores

10 Removable cores

11 Hinged cores

Further information

12 Fixings

13 Notes

14 Selection data

16 Finish detail and ordering codes

Quality assurance

HVC Supplies (Stourbridge) Ltd is an ISO 9001 certified company.



Assessed to ISO 9001
Cert/Ref No. 1186

Overview: SD / DD / FB

The deflection range of grilles are a versatile and cost-effective range, available in three models.

All are manufactured from the same aluminium extrusions for a consistent appearance across the range.

All series are available with hinged or removable cores, and Series SD and FB grilles are also available in a surface mounted frame.

Single deflection: A single bank of individually adjustable blades, held in place by high tensile spring wire.

Double deflection: Two banks of individually adjustable blades set at 90° to each other, held in place with high tensile spring wire.

Fixed blade: A single bank of fixed blades, set at either 0°, 15° or 45°.



Series SD

A fully adjustable, cost-effective grille, suitable for supply or extract applications.

Single deflection grilles have one bank of fully adjustable blades, which are held in place by high tensile spring wire, hidden behind the grille flange.

With a maximum free area of around 80%, and aerodynamic teardrop shaped blades, single deflection grilles are effective extract grilles, creating minimal noise and pressure drops, even when handling high air volumes.

For supply, aim the blades in one direction for a targeted throw, or spread them for a wide, gentle diffusion.

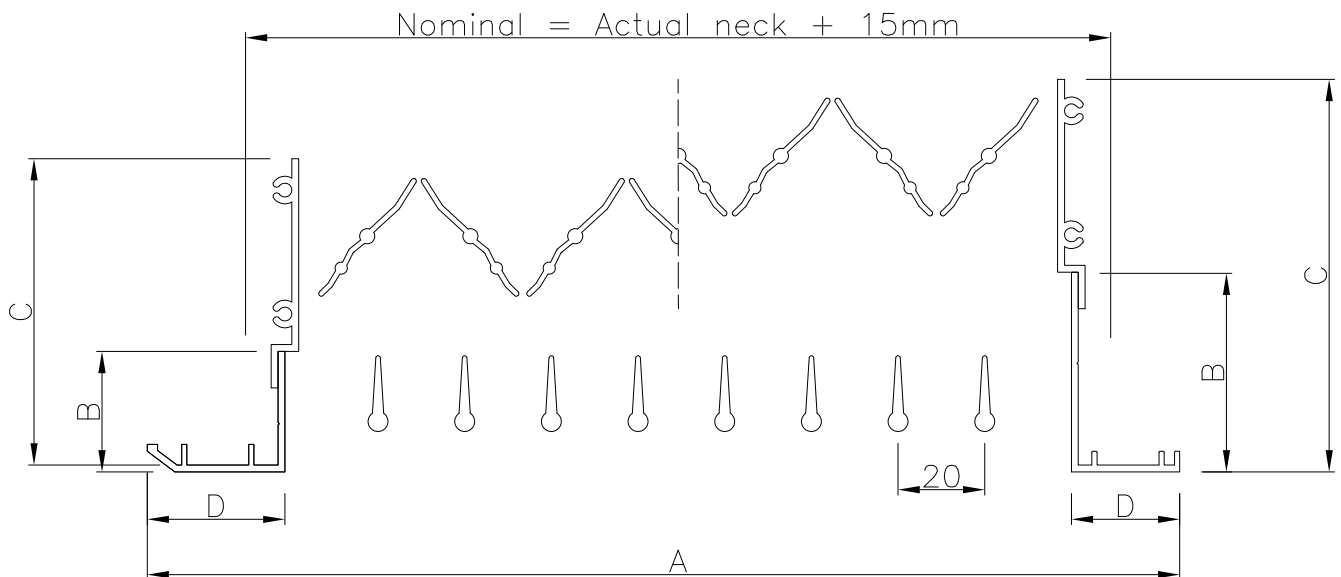


Design features

Material	Extruded aluminium frame and blades
	High tensile steel wire
Frame	Standard: 32BS - 32mm bevelled small
	Optional: 25F - 25mm flat
	SML - Surface mounted
Sizes	Minimum: 100mm x 50mm
	Maximum: 2900mm x 2900mm
	Maximum blade length is 570mm, above this mullions will be used
Fixings	Standard: None
	Optional: See page 11
Finish	Standard: Satin anodised (AA5)
	Optional: See page 8
Mass/m² face area	8.5kg
	16.5kg including opposed blade damper
Free area	Approx 80% maximum

Technical drawings

Standard

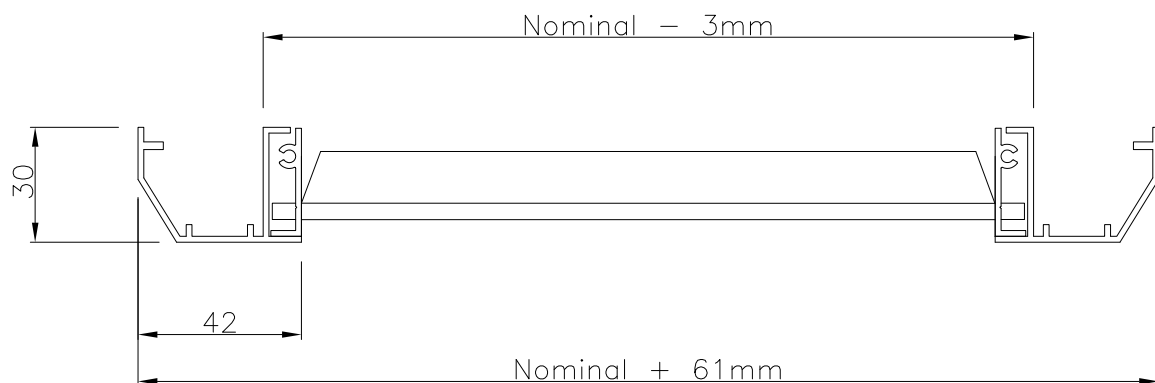


32BS: 32mm bevelled small	
A	Nominal + 45mm
B	28mm
C	72mm
D	32mm

25F: 25mm flat	
A	Nominal + 30mm
B	46mm
C	90mm
D	25mm

Please note: Blade pins stick out approximately 6mm from the grille neck each side.

Surface mounted

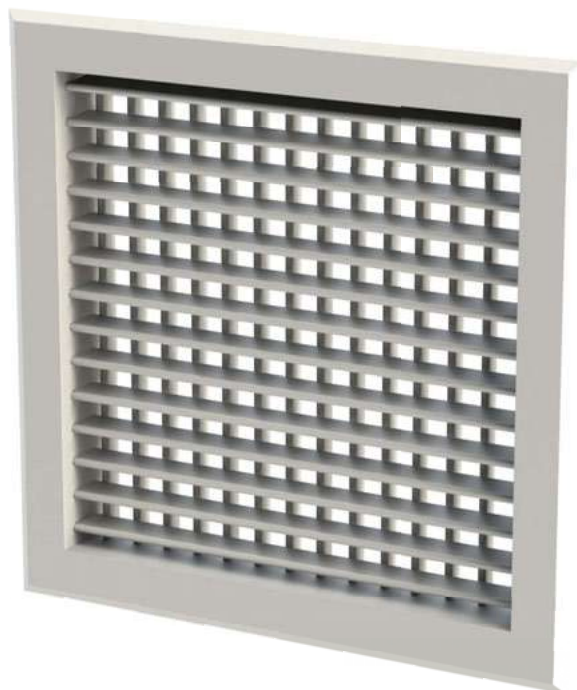


Series DD

With two banks of individually adjustable blades, Series DD double deflection grilles allow further control over throw than Series SD single deflections.

Blades are secured with high tensile spring wire, which provides enough force to keep them in their assigned position, while also allowing easy manual adjustment.

The maximum free area of 80% is identical to that of single deflection grilles, however noise generation and pressure drops are slightly higher, making Series DD double deflection grilles more suitable for supply applications.

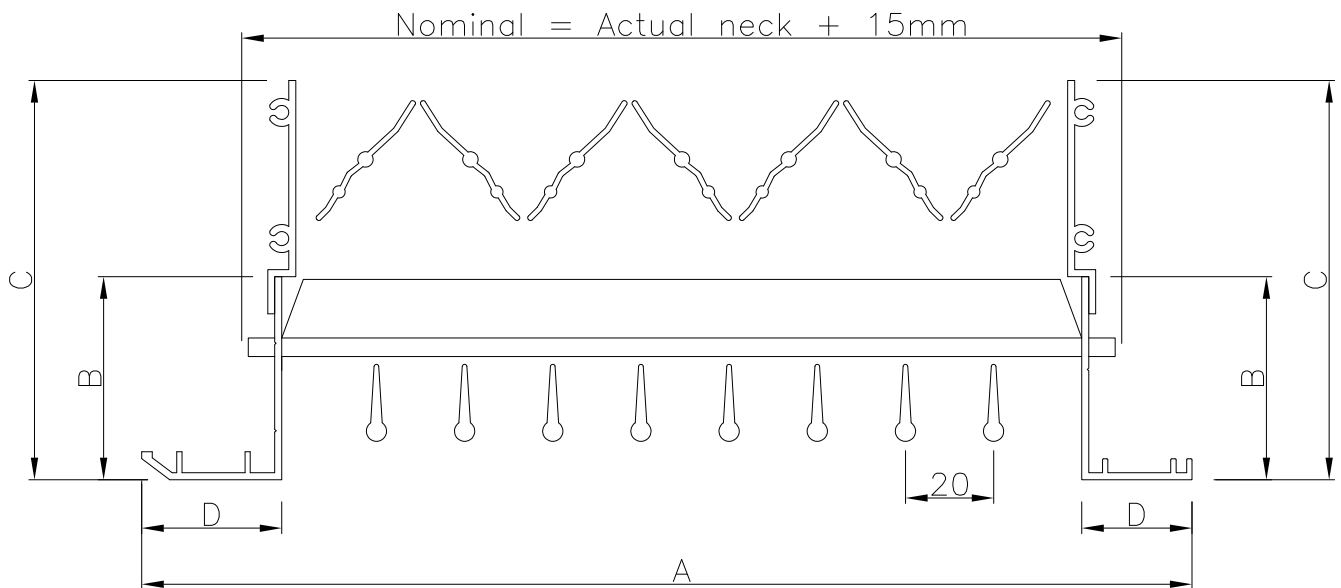


Design features

Material	Extruded aluminium frame and blades
	High tensile steel wire
Frame	Standard: 32BD - 32mm bevelled large
	Optional: 25F - 25mm flat
Sizes	Minimum: 100mm x 50mm
	Maximum: 2900mm x 2900mm
	Maximum blade length is 570mm, above this mullions will be used
	Unless requested, the front set of blades will run horizontally, with the rear set running vertically
Fixings	Standard: None
	Optional: See page 11
Finish	Standard: Satin anodised (AA5)
	Optional: See page 8
Mass/m² face area	14.5kg
	22.5kg including opposed blade damper
Free area	Approx 80% maximum

Technical drawings

Standard



32BD: 32mm bevelled large	
A	Nominal + 45mm
B	46mm
C	90mm
D	32mm

25F: 25mm flat	
A	Nominal + 30mm
B	46mm
C	90mm
D	25mm

Please note: Blade pins stick out approximately 6mm from the grille neck each side.

Series FB

Fixed blade grilles are the same as Series SD single deflection grilles except the blades are fixed at either 0°, 15° or 45°.

Specified with 0° blades, the high free area and aerodynamic blade design make this a very effective extract unit with minimal noise generation and pressure drops.

Should you not require an adjustable throw, fixed blade grilles will often give a tidier appearance than single deflections since the blades cannot be set at different angles to each other.

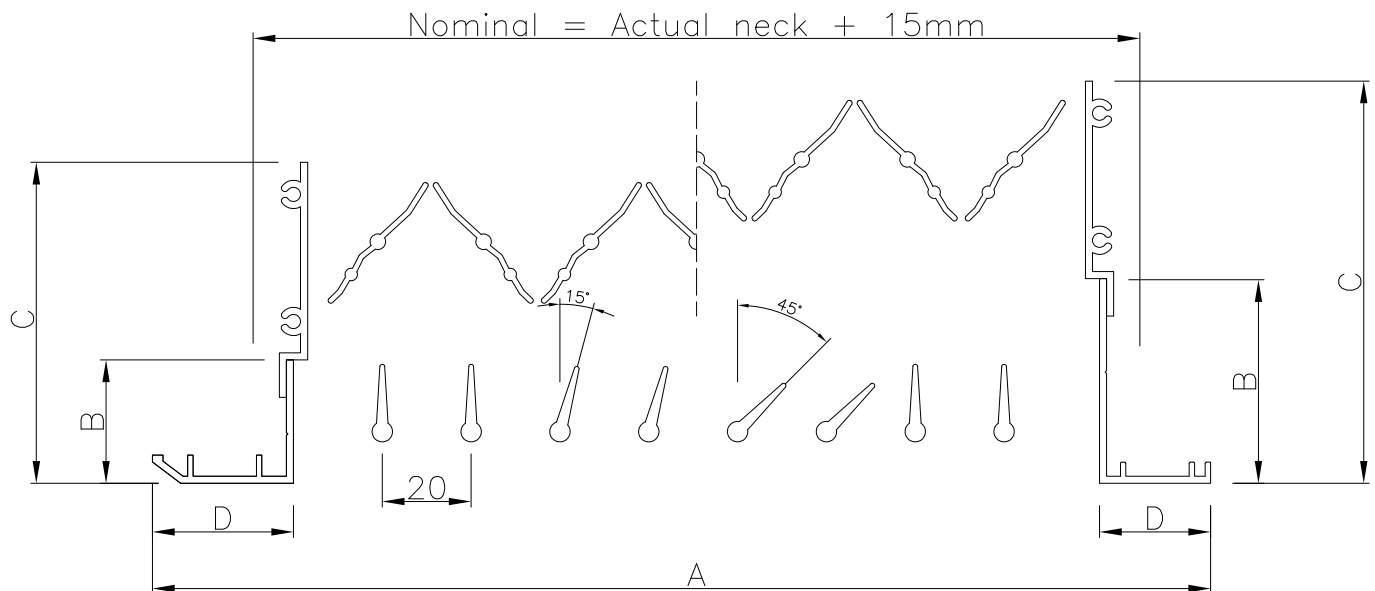


Design features

Material	Extruded aluminium frame and blades
	High tensile steel wire
Frame	Standard: 32BS - 32mm bevelled small
	Optional: 25F - 25mm flat
	SML - Surface mounted
Sizes	Minimum: 100mm x 50mm
	Maximum: 2900mm x 2900mm
	Maximum blade length is 570mm, above this mullions will be used
Fixings	Standard: None
	Optional: See page 11
Finish	Standard: Satin anodised (AA5)
	Optional: See page 8
Mass/m² face area	8.5kg
	16.5kg including opposed blade damper
Free area	Approx 80% with FB0

Technical drawings

Standard

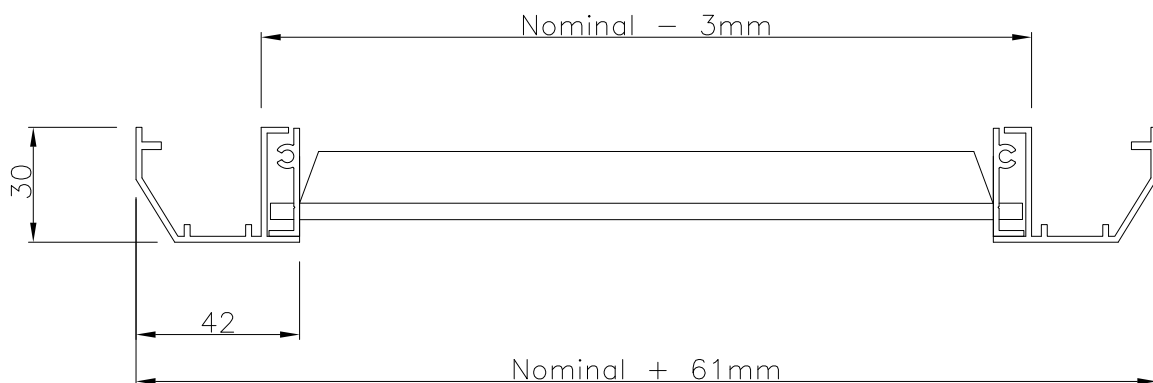


32BS: 32mm bevelled small	
A	Nominal + 45mm
B	28mm
C	72mm
D	32mm

25F: 25mm flat	
A	Nominal + 30mm
B	46mm
C	90mm
D	25mm

Please note: Blade pins stick out approximately 6mm from the grille neck each side.

Surface mounted



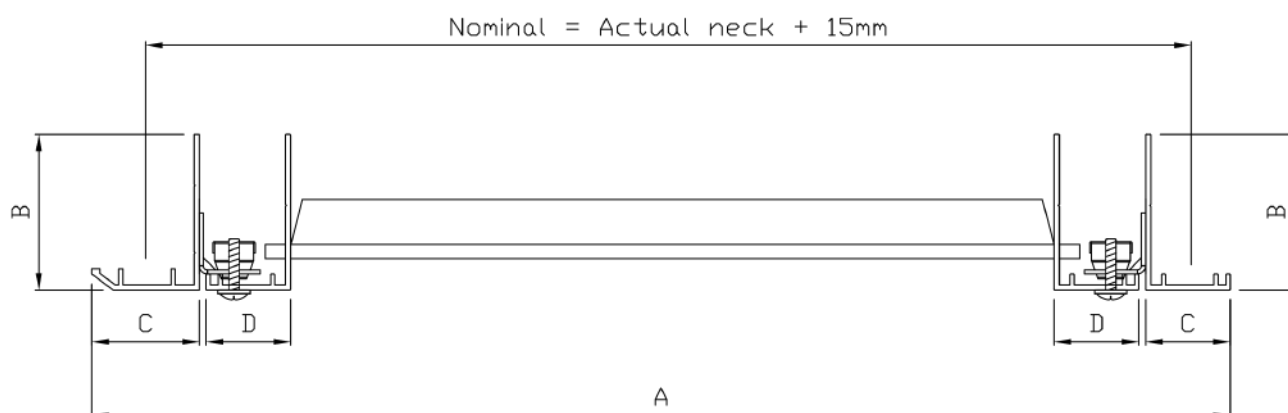
Removable core

Recently introduced and replacing quarter turn brackets, cage nut brackets are now standard with removable core grilles. Comprising a steel bracket with fitted floating cage nut, allowing easier removal and replacement of the removable core.

The inner removable frame holds the M4 flanged head machine screw, for removal with a pozi screwdriver, as standard.

Other fixing types are available e.g. allen keys or thumb turn screws.

Ordering code for type shown here: RC-CN



32BD: 32mm bevelled large (standard)

A	Nominal + 45mm
B	46mm
C	32mm
D	25mm

25F: 25mm flat (optional)

A	Nominal + 30mm
B	46mm
C	25mm
D	25mm

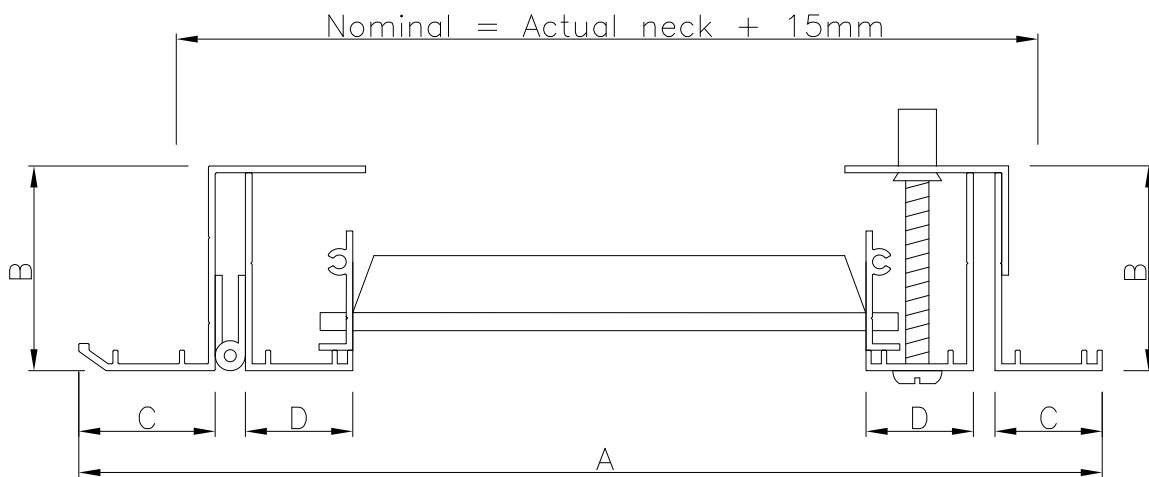
Hinged core

Enabling the core to hinge outwards may be preferable to it being fully removable.

The full length piano hinge at one side is discreet, and gives minimal loss of core area.

The inner core is held in place by a chrome plated cam fastener as standard, bolts are optional.

Ordering code for type shown here: HC-BLT



	32BD: 32mm bevelled large (standard)
A	Nominal + 45mm
B	47mm
C	32mm
D	25mm

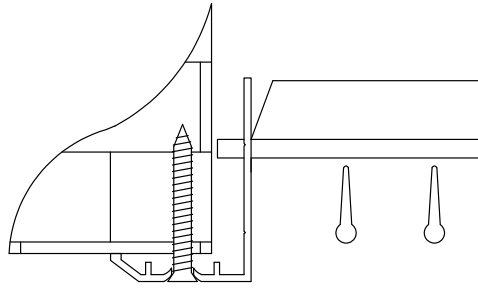
	25F: 25mm flat (optional)
A	Nominal + 30mm
B	47mm
C	25mm
D	25mm

Fixings

Countersunk fixing holes: Code suffix FH

For extremely simple fitting, countersunk fixing holes can be punched into the outer frame.

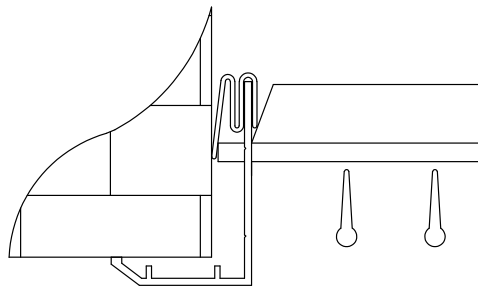
Self tapping screws in the same finish as the grille are provided as standard.



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 fixing method is not suitable for use in ceilings.

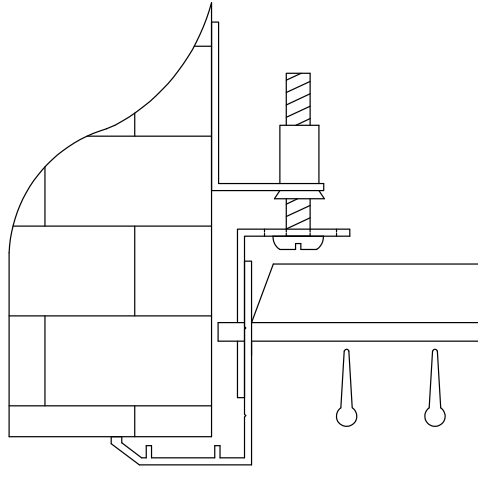


Concealed fixings: Code suffix CF

Recently redesigned, concealed fixings comprise two small lengths of aluminium angle, one with a punched slot, the other with a factory fitted nutsert.

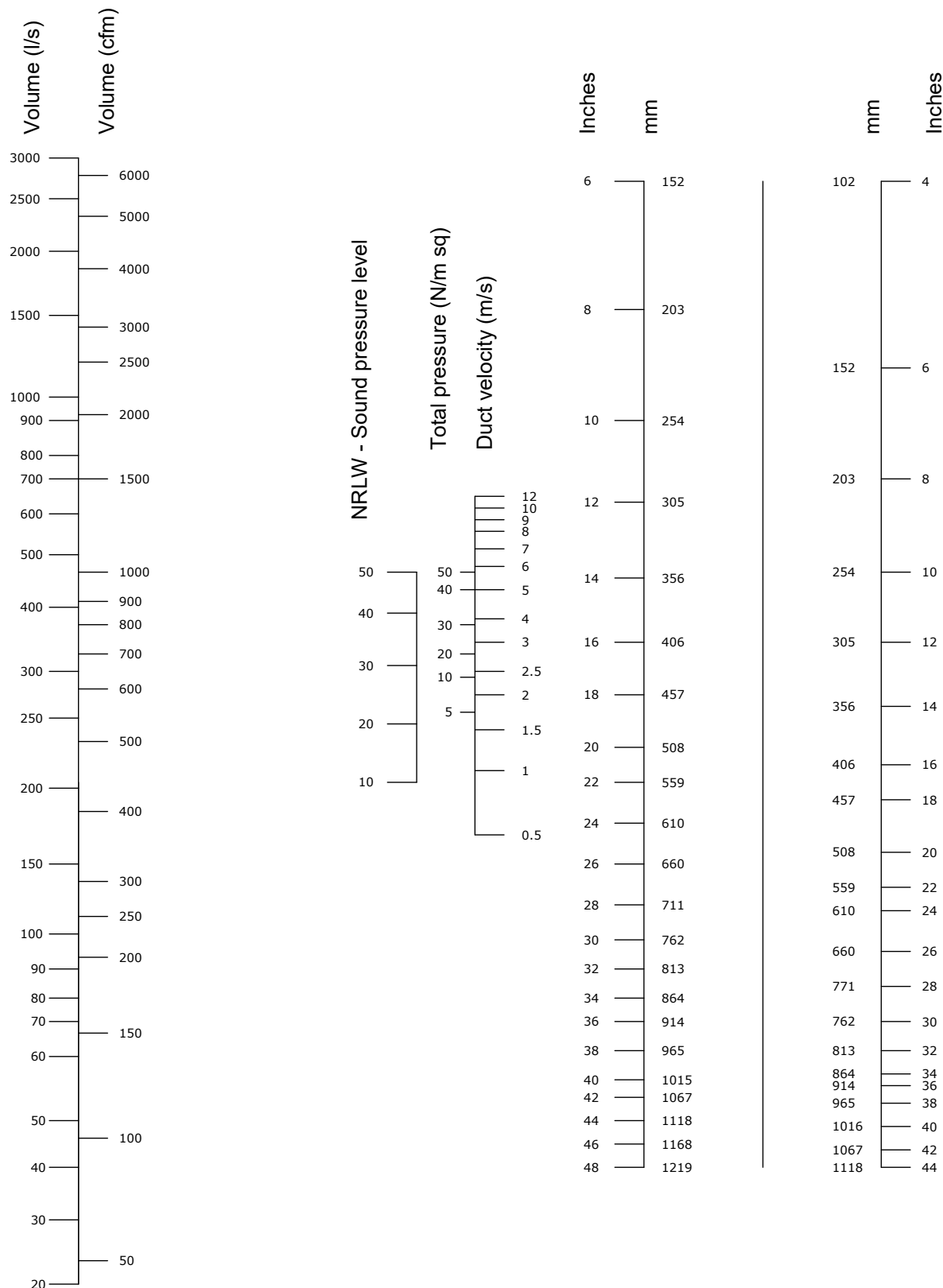
The punched bracket should be fitted to the grille neck, and the bracket with nutsert fixed to the inside of the plenum, duct or builderswork opening.

Factory supplied bolts can then be used to pull the grille securely into place.



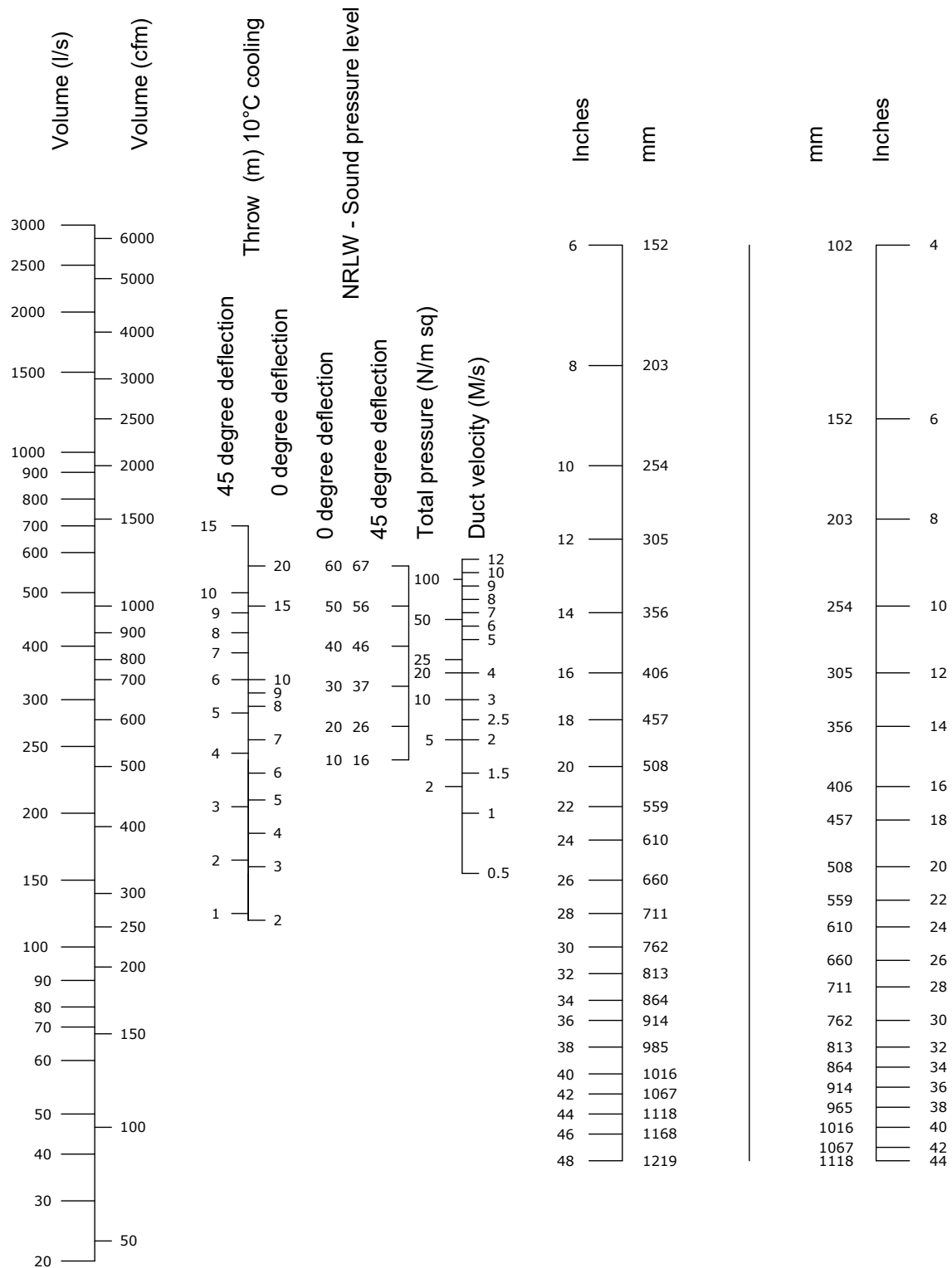
Notes

Selection data: SD & FB (extract application)



When using an SD grille for supply, refer to DD nomogram for figures.
Sound power & pressure levels are based upon exhaust air with dampers fully open. Without dampers subtract 2dB and multiply total pressure by 0.9.

Selection data: DD. Also SD and FB (supply application)



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%.

Finish

Satin anodised (AA5) - Standard

Mill aluminium

Polyester powder coating to any RAL or BS colour



Ordering codes

Example

1 - 400 x 400 - DD - D - 32BD - FH - RAL9010

Codes

1)	Quantity		
2)	Size (mm)	(Width x height)	
3)	Series	SD DD FB0 FB15 FB45	Single deflection grille Double deflection grille Fixed blade grille - 0° Fixed blade grille - 15° Fixed blade grille - 45°
4)	Damper	D	Opposed blade damper fitted
5)	Frame	32BS 32BD 25F SML	32mm bevelled small (standard with SD and FB, not available with DD) 32mm bevelled large (standard with DD, not available with SD or FB) 25mm flat Surface mounted (not available with DD)
6)	Fixings	FH CF PC	Countersunk fixing holes (screws supplied in same finish) Concealed fixings (not suitable for grilles with 'SML' frame) Push-in clips (not for use in ceilings, not suitable for grilles with 'SML' frame)
7)	Core type	RC-CN HC-BLT HC-CAM	Removable core - Cage nut type (standard method) Hinged core - Bolt type (standard method) Hinged core - Cam fastener (optional)
8)	Finish	SAA Mill RAL... BS...	Satin anodised (standard) Mill aluminium Polyester powder coated to RAL... Polyester powder coated to BS...

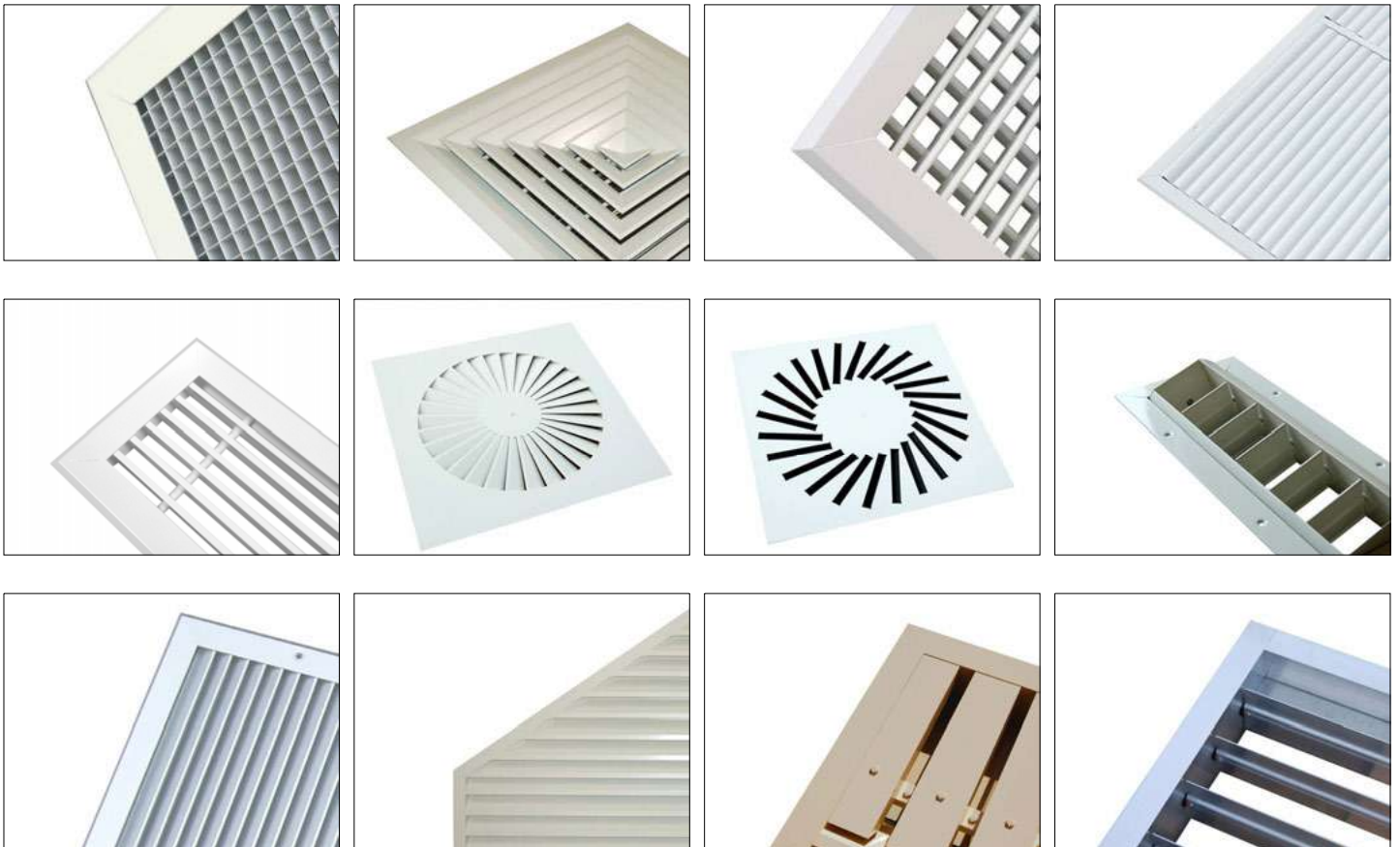
Leave code section blank if no option is required.

HVC & NCA products

HVC offer the significant advantage of manufacturing both in duct and duct terminal equipment, making us a one stop shop for all your HVAC needs.

The products shown below are a selection, not an exhaustive list. Go to www.h-v-c.com for details on all HVC and NCA products.

HVC: Grilles, Diffusers, Louvres and Volume Control Dampers



NCA: Fire and Volume Control Dampers





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Cert/Ref No. 1186

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