Features
- Single or Double Deflection.
- Individually Adjustable Aerofoil Blades.
- Robust 10mm Blade Section.
- All Extruded Aluminium Construction.
Introduction

Gilberts H Series provides an established and comprehensive range of heavy duty single and double adjustable deflection grilles for all types of ceiling and sidewall supply and extract application. Comprising of robust 10mm section individually adjustable aerofoil blades set on 25mm centres the H Series was designed and is especially suitable, for heavy duty or industrial type applications. Blades are firmly located into a 32mm bevel edged flange border frame for secure blade positioning and strength.

Series Options:
- Type HH: Single Deflection Grille with one set of horizontal blades.
- Type HV: Single Deflection Grille with one set of vertical blades.
- Type HHV: Double Deflection Grille with horizontal front and vertical rear blades.
- Type HVH: Double Deflection Grille with vertical front and horizontal rear blades.

All units are available complete with screwdriver operated, rear mounted opposed blade volume control damper as well as other accessories such as knob operated dampers and special fixings such as concealed bracket or quick release.

Standard finish on the H Series is a White Polyester Powder. Other special colours and finishes are available on request.

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Performance Data

From the proposed layout and application determine:

1. Volume of air to be handled at each outlet.
2. Throw. To prevent overblow this should be 75% of the distance to the wall opposite or, if the outlets are opposed to one another, this should be one third of the distance between them.
3. Acceptable sound level from chart. Please note that data is only available down to NC20. For selection at lower noise levels please consult with our technical dept.
4. Determine the centres of the outlets and, referring to the effective zone chart, establish if deflection is necessary to obtain full coverage of the area served.
5. Temperature differential between primary and secondary air.
6. Mounting Height or outlet.

Example:

Select a suitable supply outlet for a private office 6m x 3m x 3m high, the outlet being located in the centre of the 3m wall. Duty 0.07m³/sec. Throw 4.5m. Acceptable sound level 30db ‘A’. Cooling temperature differential 6°C. Mounting height 2.75m. Referring to the effective zone chart, no deflection is necessary.

From Sizing Nomogram:

A size 300 x 150mm Grille meets the requirements and the sound level is acceptable. Noting the jet velocity refer to the drop assessment chart from which it can be seen that the air-stream does not drop into the occupied zone before the terminal velocity has reached a permissible figure.
A horizontal air stream drops because of two reasons.

1. Discharge velocity and spread (always positive).
2. The temperature differential between the primary air (outlet) and secondary air (room) which is positive for cooling and negative for heating.

**EXAMPLE**

1. Joining the jet velocity of 2.5m/s to the throw of 3.7 metres the drop due to spread is seen to be 0.45m.
2. Taking the point on the pivot line where the line intersects, it can be seen that with a cooling temperature differential of 6° the drop is 0.65m.
3. Total drop
   \[0.45 + 0.65 = 1.1\text{m}\]
Dimensional Data

OVERALL SIZE = LIST WIDTH OR HEIGHT + 45mm

SINGLE DEFLECTION

GRILLE TYPES HH & HV

DOUBLE DEFLECTION

GRILLE C/W DAMPER TYPES HH-DO & HV-DO

GRILLE C/W DAMPER TYPES HHV-DO & HVH-DO

Hole - 4mm dia.

LIST HEIGHT OR WIDTH - 19mm

APERTURE SIZE = LIST WIDTH X HEIGHT

32mm 82mm 64mm 115mm

OVERALL SIZE = LIST WIDTH-OR-HEIGHT + 45mm

OVERALL SIZE = LIST WIDTH-OR-HEIGHT + 12mm

OVERALL SIZE = LIST WIDTH-OR-HEIGHT + 25mm

OVERALL SIZE = LIST WIDTH-OR-HEIGHT + 32mm

OVERALL SIZE = LIST WIDTH-OR-HEIGHT + 82mm

OVERALL SIZE = LIST WIDTH-OR-HEIGHT + 64mm

OVERALL SIZE = LIST WIDTH-OR-HEIGHT + 115mm
Sizing Nomogram

ALL DATA BASED ON ISOTHERMAL CONDITIONS
DAMPERS FULLY OPEN
SERIES H
Heavy Duty Adjustable Deflection Grilles

Ordering Specification

- SERIES: HH, HV, HHV, HVH
- LIST SIZE (Width x Height mm): HH 300 x 200
- SPECIAL FIXING OPTIONS:
  - Concealed Bracket...CB
  - Quick Release...QR
  - Concealed Leg Bracket...LB
- DAMPER OPTIONS:
  - Opposed Blade...DO
  - Knob Operated...DK
  - For matt black finish on damper add ref. BB ie: DO/BB
- FINISH (Please Specify): PPC White RAL 9010 20% Gloss
- NUMBER REQUIRED: 15

Example: HH 300 x 200/CB/DO/BB

Finish
- Standard Finish: Polyester Powder Coat White RAL 9010 20% Gloss.
- Special Finishes: Polyester Powder Finish to stock BS or RAL colour.
  - (Dampers Mill Finish Aluminium).

Fixing
- Standard flange screw fixing using self tapping screws provided.

Size Range
- Available sizes range from 100 x 100 up to 1200 x 1200, in 1mm increments. For other sizes please contact Head Office.

Options
- Special fixing, border and damper options detailed separately in grille options and accessories data.