

VEN tac
G R O U P



Single & Double Deflection Grilles

VEN tac
air management

VEN tac
noise control

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laboratories

Adjustable Blade Grilles

1H 1V 2H 2V

Introduction

The Waterloo adjustable, single and double deflection grilles are suitable for duct, ceiling and sidewall applications in most commercial projects. The grille vanes are individually adjustable to allow jet spread or deflection to be set within 45° of the duct axis.

Product Description

1H	Single set of horizontal blades
1V	Single set of vertical blades
2H	Double set of blades with front set horizontal
2V	Double set of blades with front set vertical
OBSS	Allen key operated opposed blade damper
ED	Equalising deflector
DT-2M	Adjustable duct turn (Installed in duct)

Features

- Single or double deflection for complete air pattern control
- Teardrop blade for quiet operation but maximum induction

Finishes

PPM9006 (RAL 9006 Matt Silver)
 PPM9010 (RAL 9010 20% Gloss White)
 PPG9010 (RAL 9010 Gloss White)
 Other colours or anodised finish available on request

Weights

1H /1V	8.5 kg/m ² face area
2H/2V	12.0 kg/m ² face area
OBSS/ED	9.5 kg/m ² face area
DT2M	9.0 kg/m ² face area

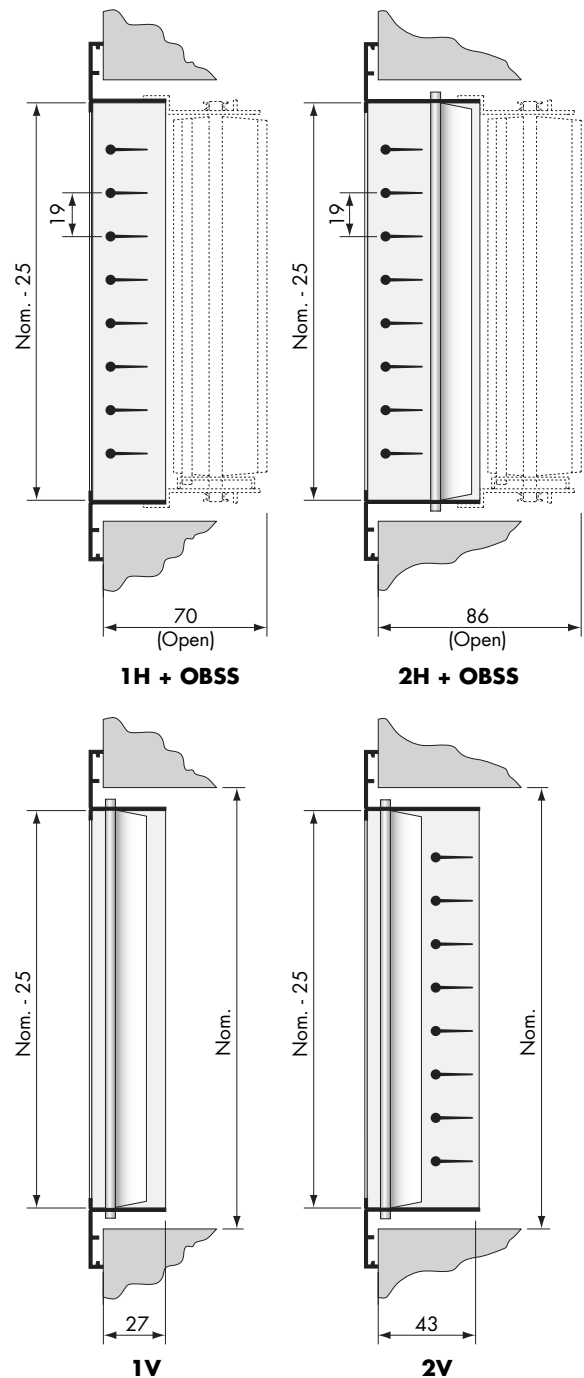
Sizes

Minimum Size - 100 x 100
 Maximum Size - 1200 x 1200

Fixing Options

SF	CF	CRB	VS	AFVS
PFVS	RCHS	AFHS	AFCF	RCCF
BSSBD				

BSSBP (NOT for 2H or 2V)



Free Area	
1H/1V	2H/2V
74%	66%

Please refer to pages 40 - 43 for full details of:

- Fixing Options
- Control Options
- Sub Frames
- Sizing Implications
- Border Options

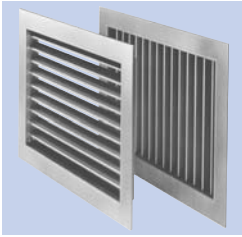
Order Example

1H/300x300/PPM9010/R25/SF/OBSS

Type	_____
Nominal Width	_____
Nominal Height	_____
Finish	_____
Border	_____
Fixing	_____
Options	_____

Adjustable Blade Grilles

1H 1V 2H 2V



Selection Criteria

Performance data is based on grilles situated within 0.6m of ceiling with supply air at an 11°C cooling differential. Throw is the horizontal distance from the grille face to the point at which the velocity of the airstream has retarded to 0.4 m/s.

For grilles situated 0.6m or more below ceiling level reduce throw by 1/3. NC is sound pressure level/Noise Criteria Curve based on a room absorption of 8 dB for sound power (Lw) ref 10⁻¹² W.

Selection Example 2H/500x150/25T/SF

Air Volume 300 l/s

Grille @ 0° deflection

Throw 16m Velocity 6.1m/s NC 22 P_s 10

Grille @ 45° deflection

Throw 8.5m Velocity 6.1m/s NC 30 P_s 32

Grille with damper @ 0° deflection

Throw 16m Velocity 6.1m/s NC 27 P_s 16

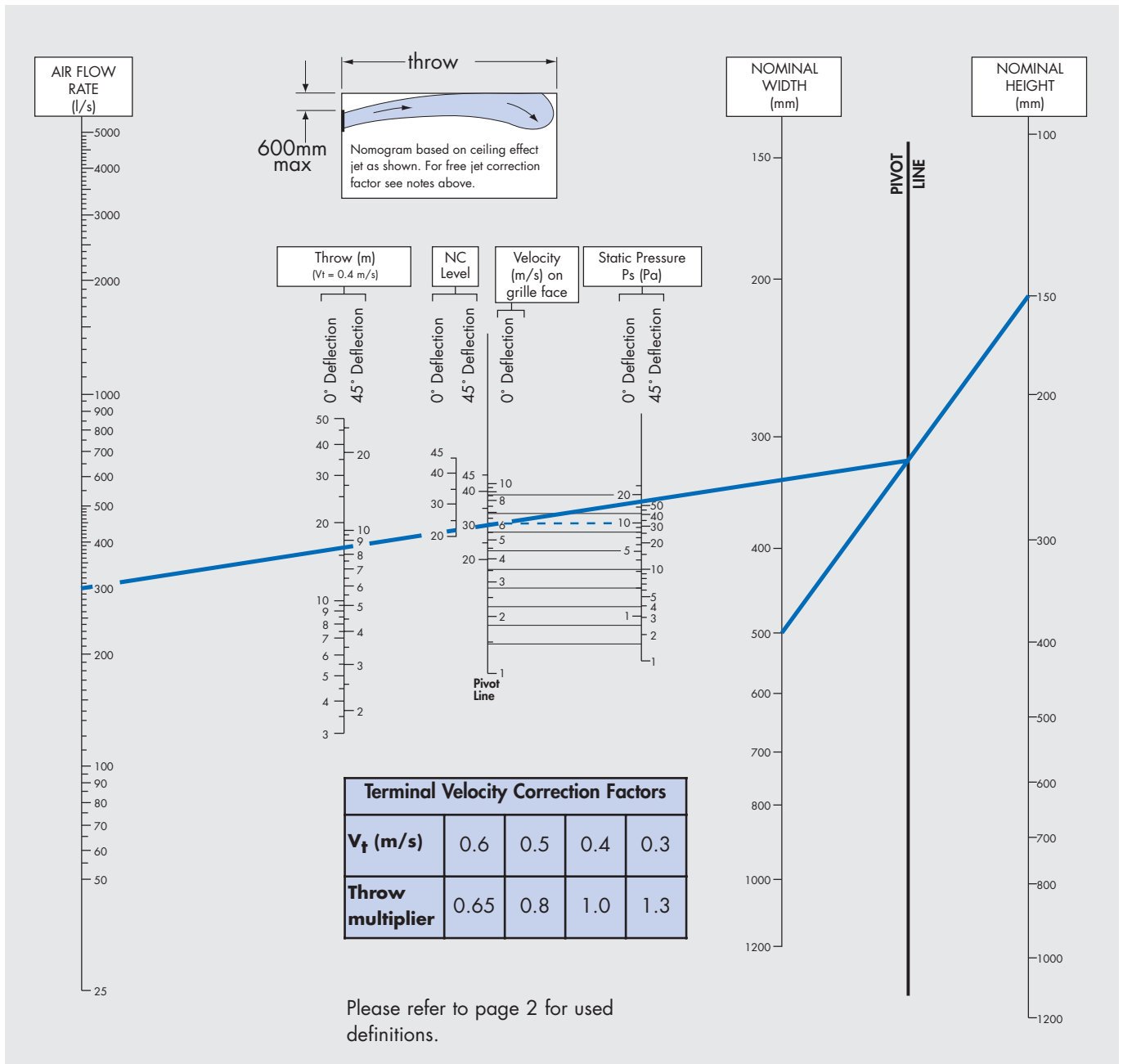
Grille with damper @ 45° deflection

Throw 8.5m Velocity 6.1m/s NC 35 P_s 51

NR(L_p) and Static Pressure (P_s) Correction Factors for Grilles With an Open Damper

Grille Width	100+	125+	150+	200+	250+	300+	350+	450+	550+	600+	700+	850+	>1000
L _p Addition (C _l)	12	11	10	9	8	7	6	5	5	4	4	4	3
P _s Multiplier (C _p)	2.5	2.4	2.2	2.0	1.9	1.8	1.7	1.6	1.5	1.5	1.4	1.3	1.2

Performance Nomogram

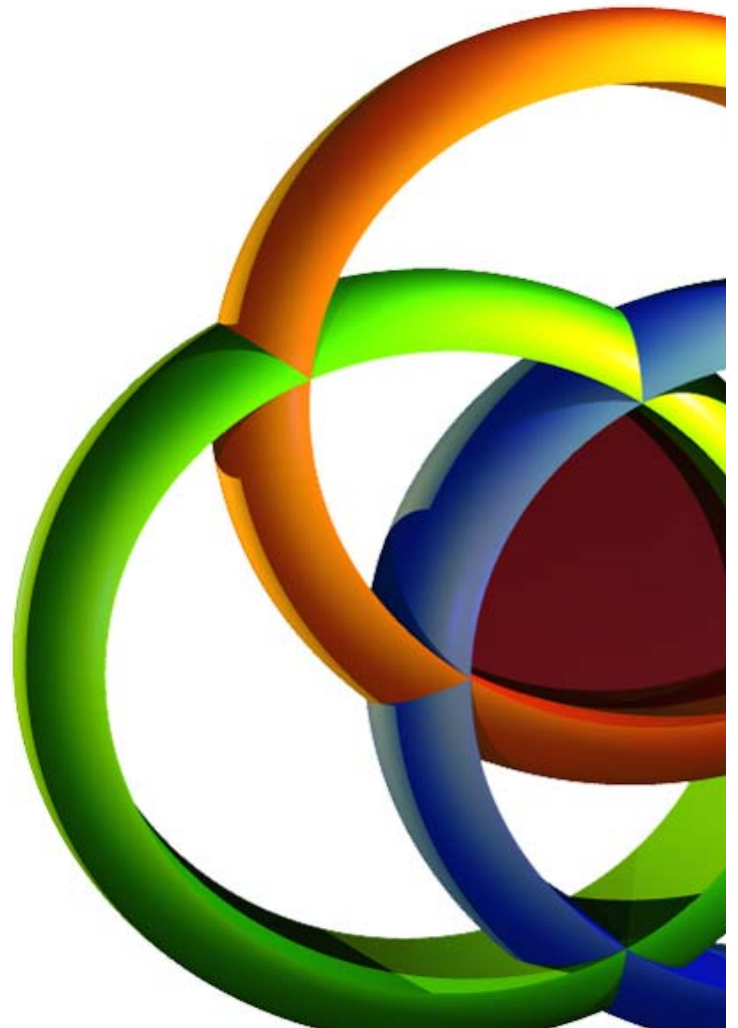


Please refer to page 2 for used definitions.

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