

**VEN** tac  
G R O U P



## Linear slot diffusers

**VEN** tac  
air management

**VEN** tac  
noise control

**VEN** tac  
laboratories

# Linear Slot Diffusers

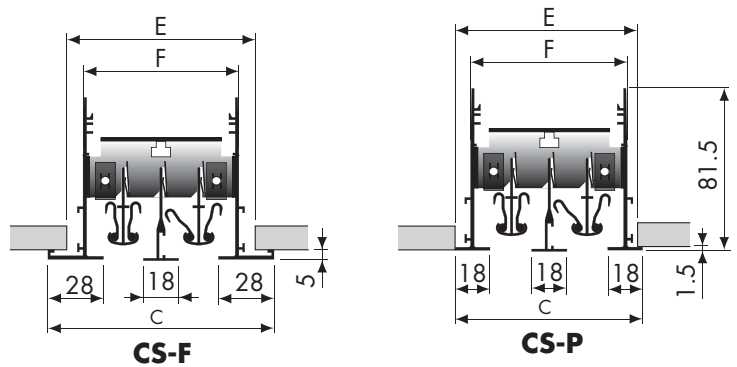
## CS-F CS-P CS-S&E CS-WR

### Introduction

The Waterloo small format continuous slot diffuser series CS has for many years set the industry standard in terms of highest aerodynamic and acoustic performance. The CS range is ideally suited to variable volume applications due to its excellent low flow rate air diffusion characteristics and high air handling capacity. The novel air pattern control element design allows any air diffusion to vertical projection, without any change in the facial appearance.

CS diffusers are suitable for all commercial and industrial projects requiring single or multislot diffusers for ceilings, bulkheads or sidewall supply and exhaust.

Diffusers are manufactured from aluminium alloy extrusions fixed or clipped to cross stays allowing easy removal of internal vanes and pattern control elements.

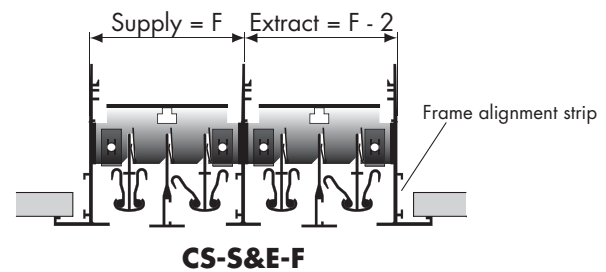


### Product Description

- CS-F** Wide flanged general purpose
- CS-P** Narrow flange for flush / recess mounting
- CS-S&E** Supply and Exhaust (or dual supply) system diffuser
- CS-WR** Plank Replacement Unit
- Ends** End caps
- ED** Equalising Deflector

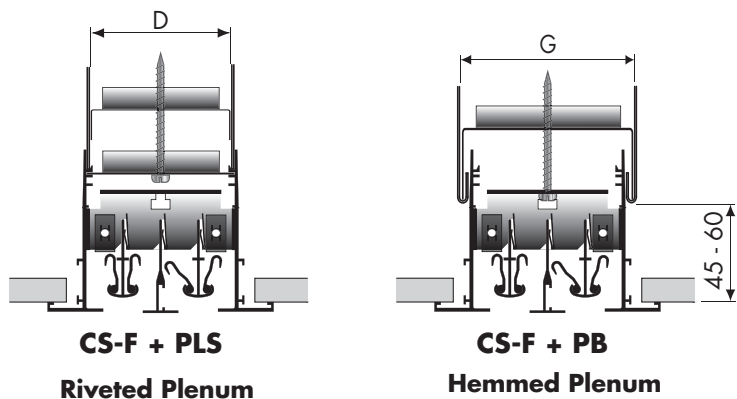
### Features

- High air handling capacity
- Wide dynamic range for perfect VAV systems
- Strong coanda effects for good low flow performance
- Fully adjustable air pattern from horizontal to vertical
- Hidden flow control vanes for consistent facial appearance
- Continuous joint detail for ceiling integrations



### Finishes

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



### Weights

0.8N + 0.7 kg/m  
N = number of slots

### Sizes

Standard from 1 to 8 slots wide 1500mm long (excluding ends).  
Continuous diffuser lengths are supplied in sections for butt jointing on site. (Alignment plates supplied)

Type	Slots	1	2	3	4	5	6	7	8
<b>CS-F</b>	<b>C</b>	76	114	152	190	228	266	304	343
	<b>E</b>	57	95	133	171	209	247	285	324
	<b>F</b>	40	79	117	155	193	231	269	307
<b>CS-P</b>	<b>C</b>	56	95	133	171	209	247	285	323
	<b>E Flush</b>	50	89	127	165	203	241	279	317
	<b>E Recess</b>	57	96	134	172	210	248	286	324
	<b>F</b>	40	79	117	155	193	231	269	307
<b>CS-S &amp; E-F</b>	<b>C</b>	-	114	152	190	228	266	304	343
	<b>E</b>	-	95	133	171	209	247	285	324
<b>N° of Slots (Supply or Extract)</b>	<b>F</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
	<b>F</b>	40	79	117	155	193	231	269	

### Order Example

**CS-F/3000/S1/PPM9010/ENDS**

Type \_\_\_\_\_  
 Length \_\_\_\_\_  
 N° of slots \_\_\_\_\_  
 Finish \_\_\_\_\_  
 End caps \_\_\_\_\_

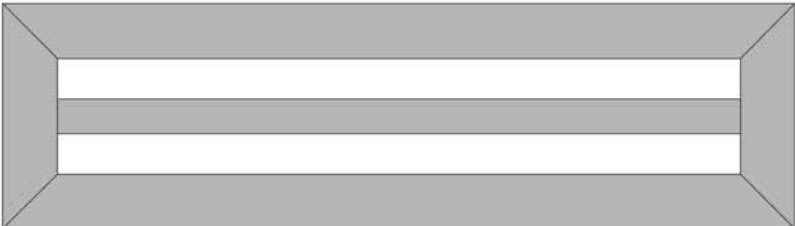
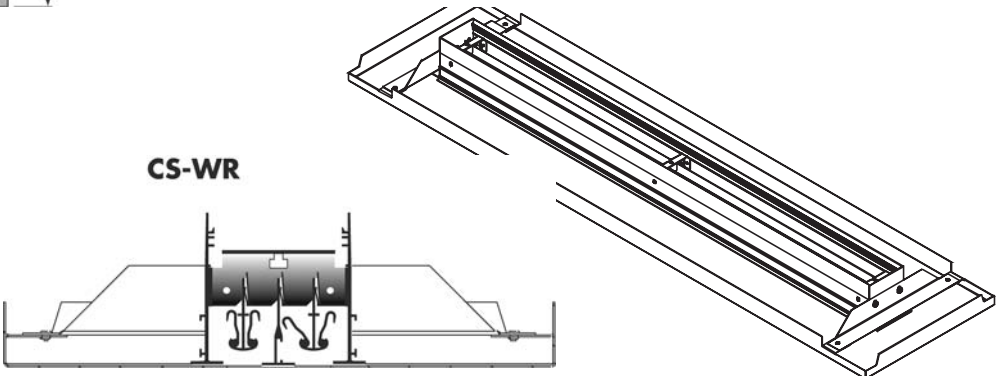
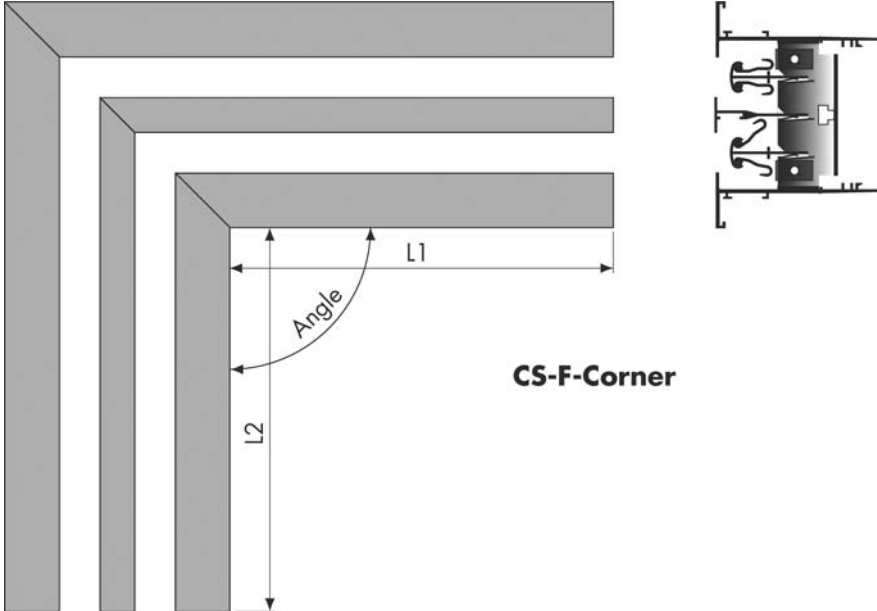
	PB	PLS	D	G
<b>1 slot</b>	34	46		
<b>2 slot</b>	72	84		
<b>3 slot</b>	110	122		
<b>4 slot</b>	148	160		
<b>5 slot</b>	186	198		
<b>6 slot</b>	225	236		
<b>7 slot</b>	263	274		
<b>8 slot</b>	301	312		

# Linear Slot Diffusers

**CS-F CS-P CS-S&E CS-WR**

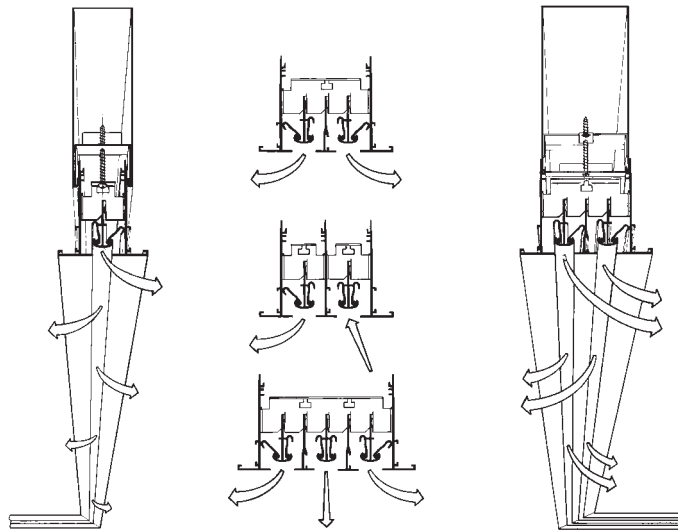
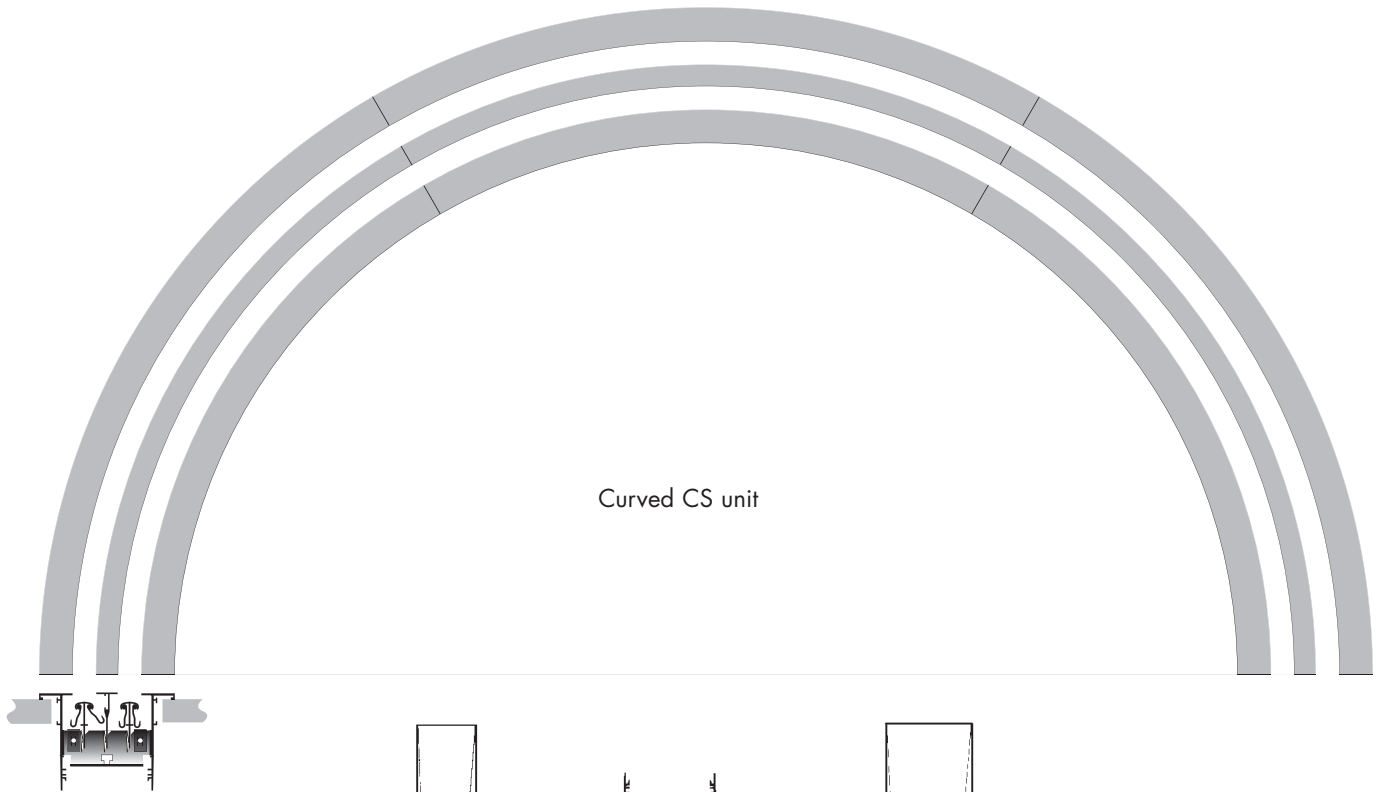
## Special Products

More information about these products available on request

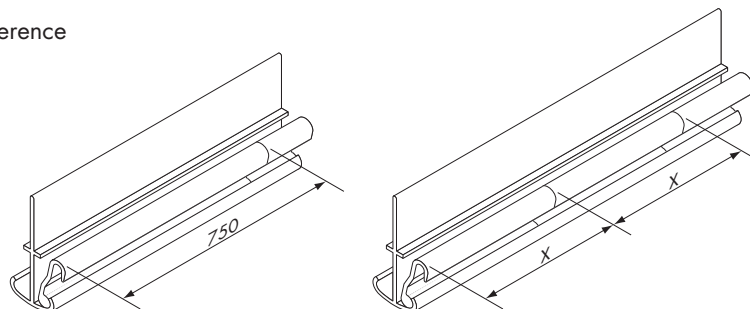


# Linear Slot Diffusers

CS-F CS-P CS-S&E



See page 16 for plenum reference

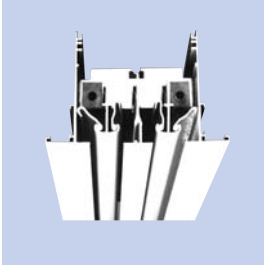


**Standard**  
Diffusers are supplied with flow control vanes in lengths up to 750mm (to suit diffuser length).

**Special**  
To provide finer control of the air pattern, flow control vanes may be supplied in any specified length.

# Linear Slot Diffusers

## CS-F CS-P CS-S&E



### Selection Criteria

Ceiling height 2.75m, increase throw by 1m for each 1m increase in ceiling height  
Horizontal diffusion is based on a cooling differential of 11°C

Vertical projection is based on a heating differential of 11°C

NR is sound pressure level/Noise Criteria Curve & based on a room absorption of 8dB.

$V_r$  = mean room air velocity (m/s)

$V_t$  = terminal velocity of supply air jet (m/s)

### Selection Example CS2/1800

Total air flow rate 180 l/s = 100 l/s/m

#### 1 Way Throw

Minimum throw 2.8m (3.5 x 0.8 factor)

Maximum throw 7.2m (9.0 x 0.8 factor)

Pressure drop 25Pa

Noise level NR29 (NC32 - 3db length correction)

#### 2 Way Throw

Minimum throw 2.0m (2.5 x 0.8 factor)

Maximum throw 5.2m (6.5 x 0.8 factor)

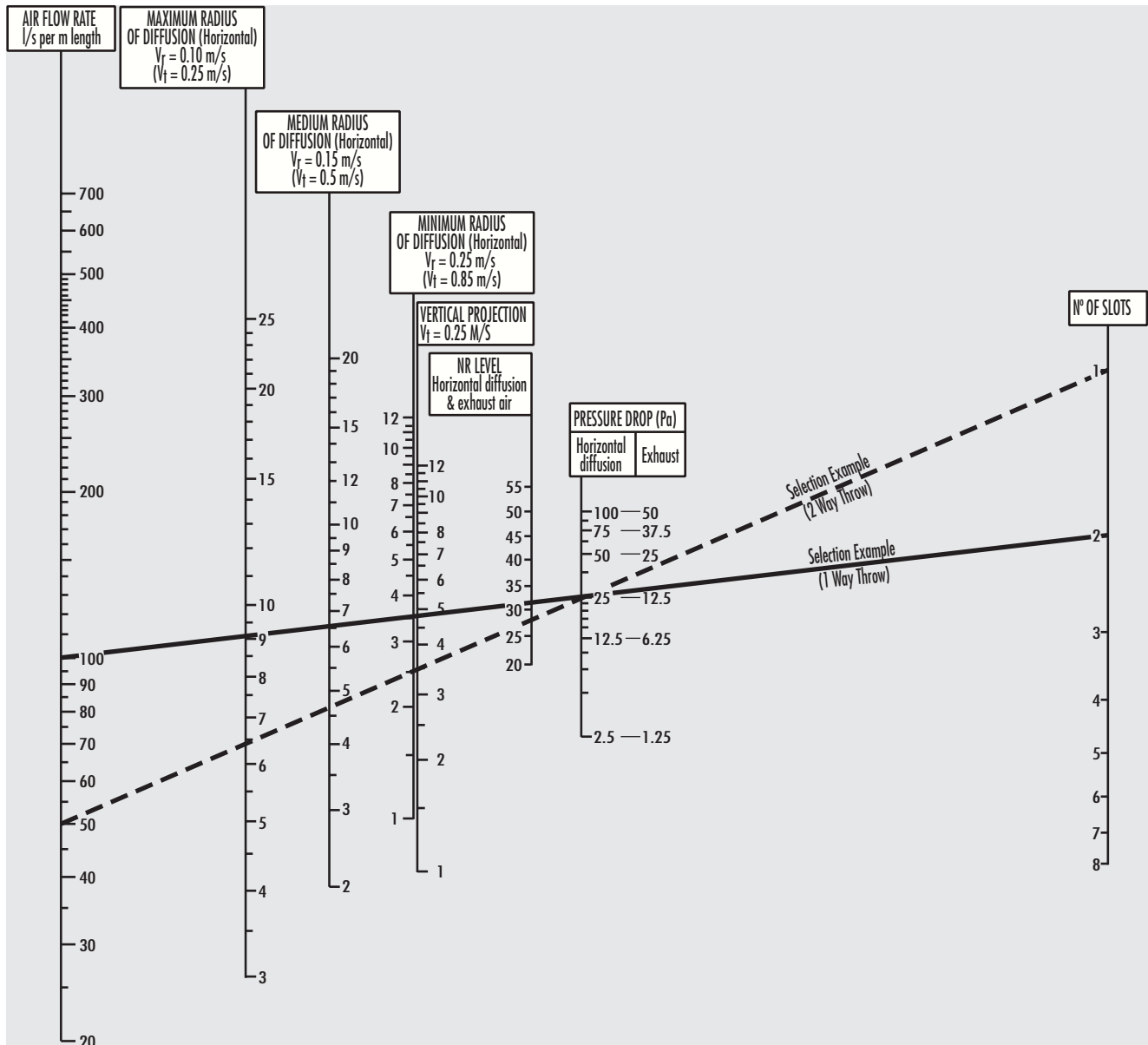
Pressure drop 25Pa

Noise level NR25 (NR28 - 3db length correction)

### Length Corrections

Active Length (m)	0.5	1.25	2.0	2.5	3.0
NR Reduction	-8	-5	-3	-2	0
Throw multiplier	0.45	0.65	0.8	0.9	1.0

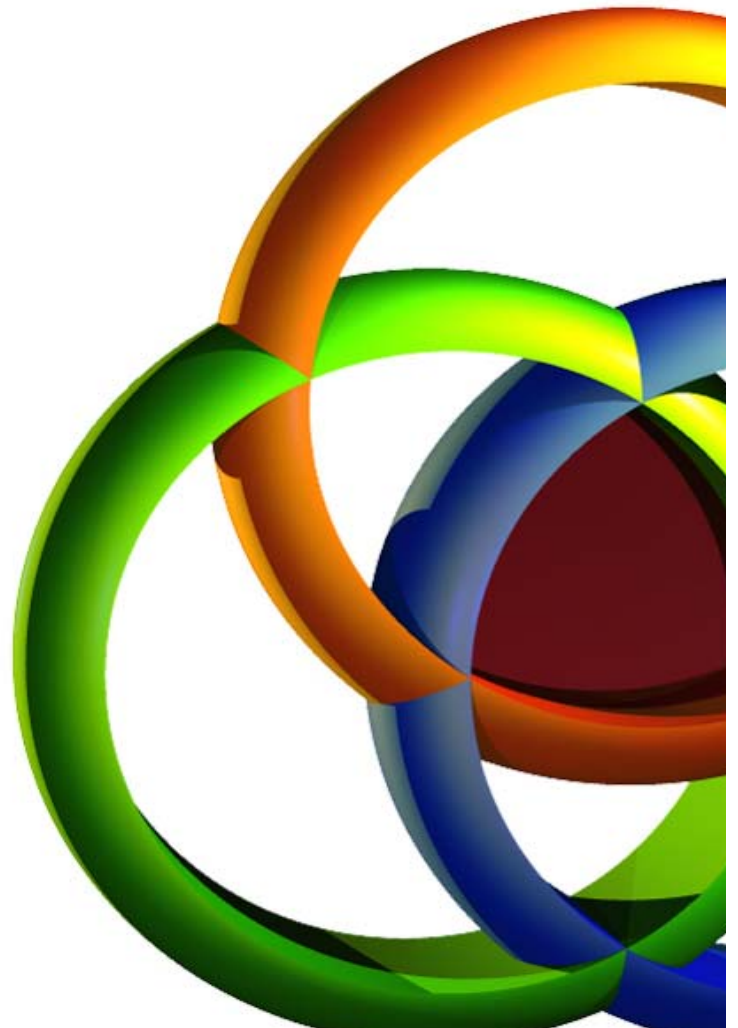
### Performance Nomogram



# VEN tac

G R O U P

[www.ventac.com](http://www.ventac.com)



**Fitzwilliam House, Blessington, Co. Wicklow, Ireland**

**t: 045 851500**

**f: 045 851501**

**e: [sales@ventac.com](mailto:sales@ventac.com)**

**VEN tac**  
air management

**VEN tac**  
noise control

**VEN tac**  
laboratories