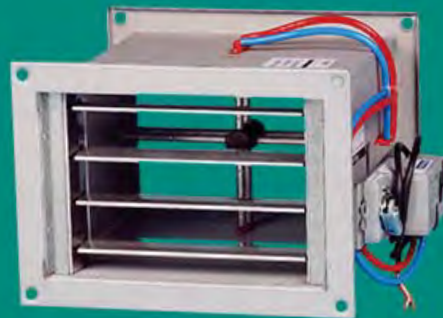


# VAV Commissioning Factors



## VAV Commissioning Factors

These commissioning factors are applicable to the Waterloo range of VAV units.

Both C and K factors are provided.

These are based on the following relationships:

$$\text{Airflow (l/s)} = C * \sqrt{\text{Flowgrid DP}}$$

$$\text{Flowgrid DP} = K * 0.6 * \text{Duct velocity (m/s)}^2$$

In both cases the air density is assumed at 1.2 kg/m<sup>3</sup>

WRS / WVSU-S		
Size Dia	C	K
100	5.92	2.60
125	9.77	2.39
160	18.99	1.73
200	29.95	1.73
250	47.76	1.68
315	76.46	1.67
355	94.57	1.71
400	121.8	1.72

WVSU-E		
Size Dia	C	K
100	4.30	3.24
125	8.05	2.92
160	16.11	2.42
200	26.65	2.18
250	46.40	2.08
315	69.79	2.00
355	83.61	2.45
400	96.08	2.76

WLM		
Size B X H	C	K
200 x 200	41.03	1.56
300 x 200	61.55	
400 x 200	82.07	
500 x 200	102.60	
600 x 200	123.12	
700 x 200	143.64	
800 x 200	164.16	
900 x 200	184.68	
1000 x 200	205.19	
300 x 300	92.34	1.56
400 x 300	123.12	
500 x 300	153.90	
600 x 300	184.68	
700 x 300	215.46	
800 x 300	246.23	
900 x 300	277.00	
1000 x 300	307.79	

WLM		
Size B X H	C	K
400 x 400	164.16	1.56
500 x 400	205.19	
600 x 400	246.23	
700 x 400	287.27	
800 x 400	328.31	
900 x 400	369.35	
1000 x 400	410.39	
500 x 500	256.49	1.56
600 x 500	307.79	
700 x 500	359.09	
800 x 500	410.39	
900 x 500	461.69	
1000 x 500	512.99	
600 x 600	369.35	1.56
700 x 600	430.91	
800 x 600	492.46	
900 x 600	554.03	
1000 x 600	615.59	

## Waterloo Product Range

### GRILLES

A complete range of products suitable for all wall, ceiling and floor applications. Most grilles are made from aluminium and have a range of fixed or moveable blades designed to give performance whilst remaining aesthetically pleasing to the eye. Grilles are made to customer specified sizes and colours (PPM/G); standard colour PPM9010 (20% Gloss White). The range is complemented by the Aircell range of polymer Grilles.



### DIFFUSERS

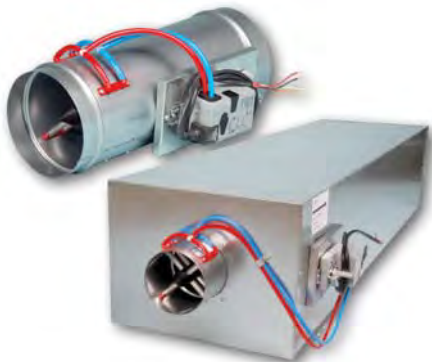
Designed to be installed in various ceiling systems, we have a complete range to suit both performance and aesthetical requirements. Most diffusers are made from aluminium and can be ordered with or without plenum boxes for easy duct work. Diffusers can be ordered in customer specified colours (PPM/G); standard colour is PPM 9010 (20% Gloss White). This range is complemented by the Aircell range of polymer Diffusers.



### ACTIVE AND PASSIVE CHILLED BEAMS

The finest quality range of high output active beams, used for ventilated heating and cooling applications. These units have 4 pipe coils to allow heating and cooling circuits to run simultaneously, giving constant and responsive control. The design allows a large optimum capacity and also allows the customer to specify the nozzle type and pitch for individual circumstances.

Active beams are made from steel to a large range of customer specified sizes and as such are suitable for various different ceiling systems. Standard finish is PPM 9010, however other (PPM/G) colours are available on request.



### AIR VOLUME CONTROL DAMPERS

Pressure independent Variable Air Volume and Constant Air Volume dampers made from zintec plate. Most volume dampers are regulated with an electronic motor and sensors and are calibrated to customer specifications before delivery.

The Constant Air Volume damper requires no power source as it is controlled via a mechanical device and calibrated before delivery. All volume dampers can be ordered with a single or double (insulation) skin.

### EXTERNAL LOUVRES

A quality range of products for external wall applications. Made from aluminium, with birdscreen or insect screen options. All louvres are made to customer specified sizes and (PPM/G) colours; standard colour is PPM 9006.



### DISPLACEMENT

A full range of recessed, semi-recessed, floor, wall and corner units providing high ventilation efficiency and excellent comfort. The very low pressure involved also offer quiet installations. Displacement units are available as wall or floor mounted, or indeed integrated within the architectural design.



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