

Supply and Exhaust Valves

VA Supply valve

VB Exhaust valves

VC Exhaust valve with tamper



VA



VB



VC

Supply and Exhaust Valves

VA / VB / VC

Introduction

A range of high quality valves for supply and exhaust applications for commercial and industrial projects. Series V valves are best applied to air distribution systems handling relatively low air flow rates within small circular ductwork. The valves provide high initial resistance with wide throttling capability which is necessary to offset the relatively high system resistances.

Product Description

- VA** Supply valve with spindle locknut
- VB** Exhaust valves with spindle locknut
- VC** Exhaust valve with tamper proof screw locking of inner core

Installation

All units are supplied with a steel mounting subframe which should be fixed to the prepared opening.

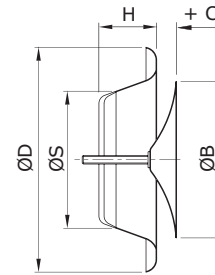
- Cut aperture to suit subframe size shown in table below
- Screw subframe into aperture
- Offer valve body into subframe and rotate into bayonet fixing
- Valves can be made tamper proof with the addition of a lock nut on either side of the rear bracket.

Finishes

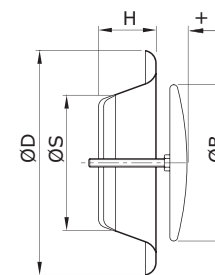
VA/VB - Polyester powder RAL 9010

VA/VB - Other finishes available by request

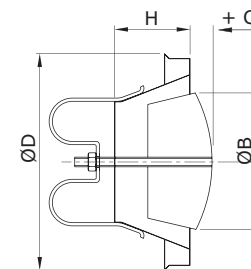
VC - Polyester Powder RAL 9010



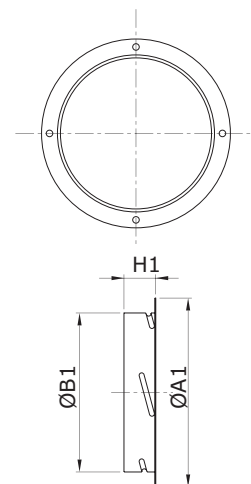
Supply Valve VA



Exhaust Valve VB



Exhaust Valve VC
C - Core adjustment



Subframe

	Subframe				
	Ø 100	Ø 125	Ø150	Ø160	Ø 200
B1	100	125	150	160	200
A1	130	155	180	190	236
H1	28	29	31	31	33

ORDER EXAMPLE

VA-125/9010

Type
Size
Finish

Supply and Exhaust Valves

VA / VB / VC

Selection Criteria

Throw is the radius of diffusion ($V_t = 0.2 \text{ m/s}$)

(Supply valve VA only).

Ps is the static pressure loss (Pa).

Noise level is based on diffuser sound power level less 8dB room absorption.

Selection Example

VA/200

Air Volume 80 l/s

Throw 2.1 m

Pressure Drop 24 Pa

Noise Level <20 dBA

Performance Tables for C = Max

VA	Air Volume										
	m³/h	36	72	108	144	180	216	288	360	432	504
	l/s	10	20	30	40	50	60	80	100	120	140
ø100	Throw(m)	0.8	1.2	1.9							
	Ps(Pa)	6	22	46							
	Lw(dBA)	<20	23	34							
ø125	Throw(m)			2	2.4	2.8	3.1				
	Ps(Pa)			18	35	54	79				
	Lw(dBA)			<20	24	32	37				
ø150	Throw(m)			0.8	1.1	1.3	1.6				
	Ps(Pa)			12	21	34	47				
	Lw(dBA)			<20	21	28	32				
ø160	Throw(m)			0.7	1.1	1.3	1.6	2.1			
	Ps(Pa)			12	20	30	41	68			
	Lw(dBA)			<20	<20	24	29	37			
ø200	Throw(m)					1.3	1.6	2.1	2.4	3	3.3
	Ps(Pa)					10	15	29	43	68	85
	Lw(dBA)					<20	<20	27	32	39	43

VB	Air Volume										
	m³/h	36	72	108	144	180	216	288	360	432	504
	l/s	10	20	30	40	50	60	80	100	120	140
ø100	Ps(Pa)	5	21	46							
	Lw(dBA)	<20	20	29							
ø125	Ps(Pa)		14	30	54						
	Lw(dBA)		<20	20	28						
ø150	Ps(Pa)		6	12	22	33	47				
	Lw(dBA)		<20	<20	21	27	32				
ø160	Ps(Pa)										
	Lw(dBA)										
ø200	Ps(Pa)					8	11	19	29	40	55
	Lw(dBA)					<20	<20	<20	26	32	38

VC	Air Volume							
	m³/h	36	72	108	144	180	216	288
	l/s	10	20	30	40	50	60	80
ø100	Ps(Pa)	10	39	85				
	Lw(dBA)	-	20	25				
ø125	Ps(Pa)		16	34	62			
	Lw(dBA)		-	22	28			
ø160	Ps(Pa)		8	16	30	45	70	
	Lw(dBA)		-	-	-	22	28	
ø200	Ps(Pa)			12	20	32	50	80
	Lw(dBA)			-	-	-	24	34

	VA					VB					VC			
	ø100	ø125	ø150	ø160	ø200	ø100	ø125	ø150	ø160	ø200	ø100	ø125	ø160	ø200
ØD	138	164	202	211	248	138	164	202	211	248	135	160	189	240
S	98	123	148	158	198	98	123	148	158	198	-	-	-	-
B	92	111	135	147	194	75	100	120	130	158	87	103	130	175
H	40	46	50	54	63	40	46	50	54	63	50	47	47	47

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

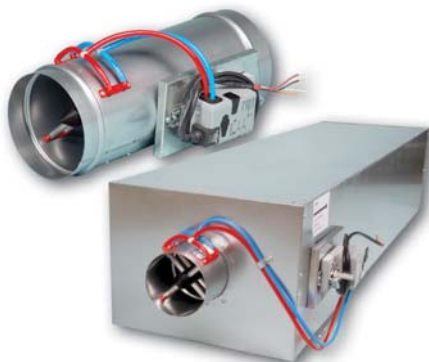
Designed to be installed in various ceiling systems, we have a complete range to suit both performance and aesthetical requirements. Most diffusers are made from aluminium and can be ordered with or without plenum boxes for easy duct work. Diffusers can be ordered in customer specified colours (PPM/G); 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.



Waterloo Air Products Ltd

Head Office:

Mills Road, Aylesford,
Maidstone, Kent ME20 7NB
Tel: +44 (0)1622 711500
Fax: +44 (0)1622 710648
email: sales@waterloo.co.uk
internet: www.waterloo.co.uk

Northern Office:

Hyde Park House, Cartwright Street,
Newton, Hyde SK14 4EH
Tel: +44 (0)161 367 1264
Fax: +44 (0)161 367 1262
email: sales@waterloo.co.uk
internet: www.waterloo.co.uk



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