Publication
DIFFUSERS
section 2

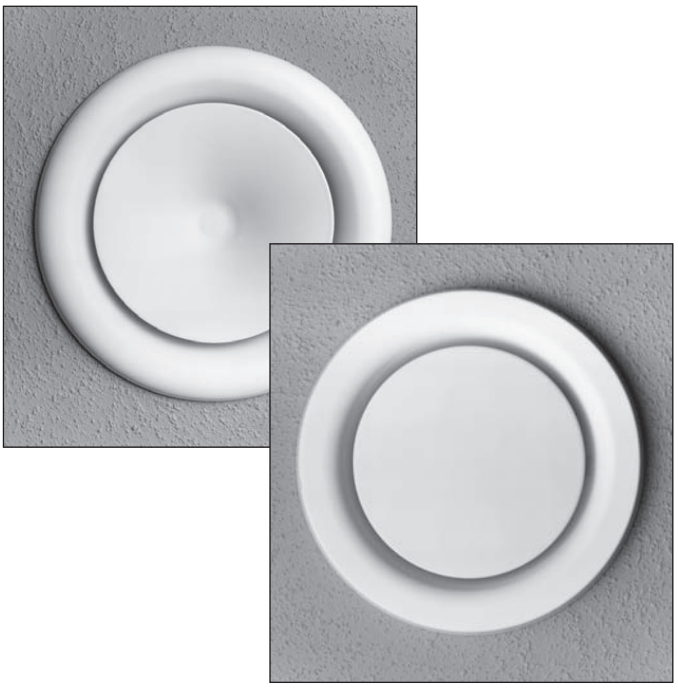
PART G

SEPT 2005

Air Valves

supply and exhaust ventilation systems

supply and extract valves



Brooke Air®

introduction

The K series range of small format supply and extract air terminals are ideally suited for low air volume applications such as domestic residences or hotel rooms.
The range comprises a supply valve (type KE), two styles of extract valve (types KK and KS) and an extract fire damper (type KF).

All models have an aerodynamically profiled, adjustable and lockable centre cone which is designed to provide an easy method of flow regulation, with minimal influence on the noise level.

type

K

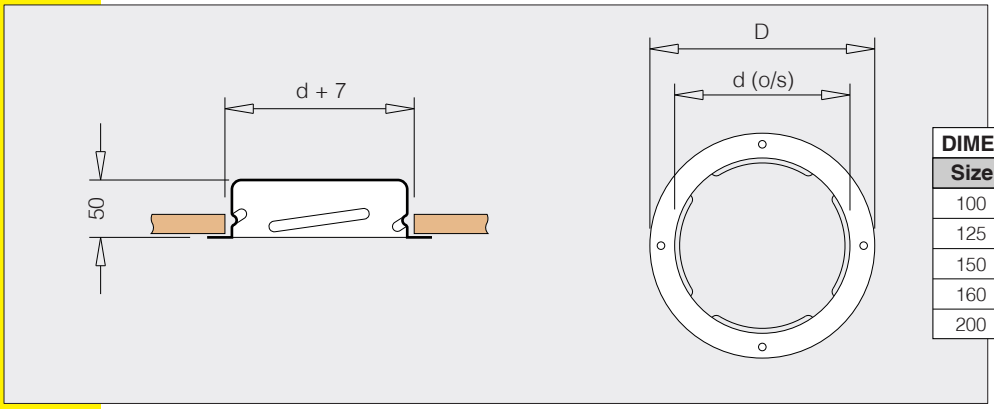
finishes

Gloss white epoxy stove enamelled paint is offered as a standard finish to provide maximum corrosion resistance in damp environments. A full range of colours are however available in either the BS or RAL ranges. See **Part I** for details.

fixings

The valves are supplied with an easy fit bayonet collar which can either be rivetted to the duct or screw fixed to the mounting surface.

mounting collar



DIMENSIONS (mm)		
Size	**D**	**d**
100	130	98
125	155	123
150	178	148
160	190	158
200	236	198

ordering details

EXAMPLE :

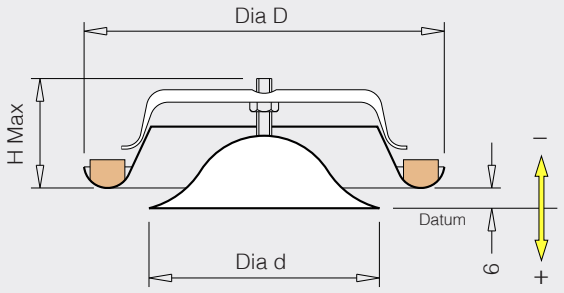
type	finish		size		quantity
KE	/ White (SEE)	/	160	/	3

Supply and Extract Valves

DIMENSIONS

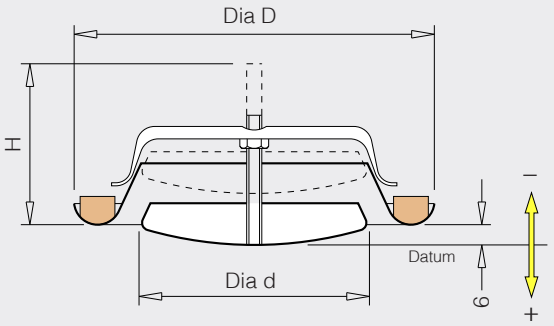
DIMENSIONS (mm)

Size	D	d	H
KE100	137	94	47
KE125	161	110	49
KE150	202	135	60
KE160	212	145	60
KE200	249	194	75



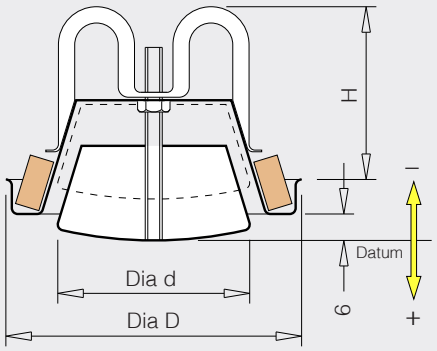
DIMENSIONS (mm)

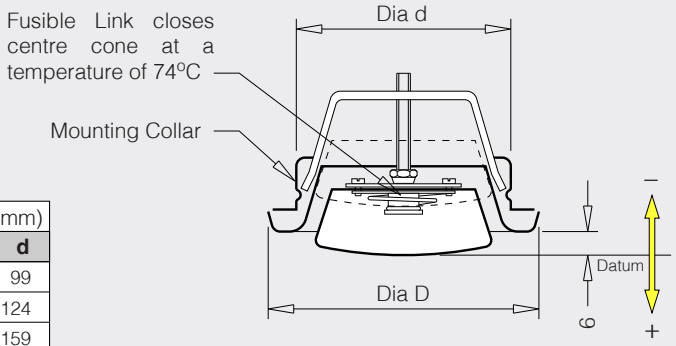
Size	D	d	H
KK100	137	75	70
KK125	161	100	85
KK150	202	120	85
KK160	212	130	85
KK200	249	157	110



DIMENSIONS (mm)

Size	D	d	H
KS100	134	87	91
KS125	160	108	97
KS150	191	130	85
KS160	191	130	85
KS200	241	177	104





DIMENSIONS (mm)

Size	D	d
KF100	140	99
KF125	165	124
KF160	200	159
KF200	250	199

design features

TYPE KE

Supply air valve

TYPE KK

Extract air valve

TYPE KS

Low Noise Extract air valve

TYPE KF

Extract Fire Damper

PERFORMANCE DATA

basis of data

The following data is all based on an optimum centre cone position 6mm below the level of the outer frame. Where applicable, correction factors may be applied for other cone settings.

throws

Jet throws are given in meters to a terminal velocity of 0.2m/s.

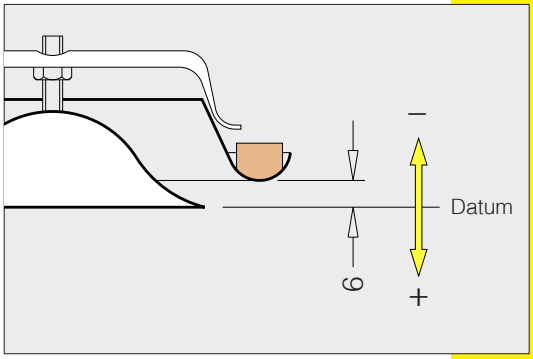
noise levels

Noise data is expressed in terms of NR level with a room absorption factor of 8db.

		AIR FLOW RATE (l/s)											CONE POSITION PRESSURE FACTOR	
SIZE	PARAMETER	10	15	20	25	30	40	50	60	70	80	90	-6mm	+6mm
KE80	THROW (m) PRESSURE LOSS (Pa) NR LEVEL	1.0 25 15	1.5 55 23	1.9 95 30	2.2 140 35								9.0	0.4
KE100	THROW (m) PRESSURE LOSS (Pa) NR LEVEL	0.7 12	1.1 25	1.6 40 20	1.9 58 25	2.2 90 35	2.7 150 42						3.3	0.4
KE125	THROW (m) PRESSURE LOSS (Pa) NR LEVEL		1.1	1.5 12	1.9 20	2.1 30	2.6 55 20	3.1 85 25	3.4 120 30	3.6 170 35			3.3	0.5
KE150	THROW (m) PRESSURE LOSS (Pa) NR LEVEL			0.6 10	0.9 15	1.2 22	1.6 40 17	1.9 70 25	2.2 90 32	2.5 130 35	2.7 180 42		2.2	0.4
KE160	THROW (m) PRESSURE LOSS (Pa) NR LEVEL			0.6 10	0.9 15	1.2 22	1.6 40 17	1.9 70 25	2.2 90 32	2.5 130 35	2.7 180 42		2.2	0.4
KE200	THROW (m) PRESSURE LOSS (Pa) NR LEVEL			0.6 12	0.8 17	1.0 25	1.2 38 15	1.6 60 23	1.8 85 30	1.9 105 33	2.1 140 37	2.3 200 43	2.9	0.4

		AIR FLOW RATE (l/s)											CONE POSITION PRESSURE FACTOR	
SIZE	PARAMETER	10	15	20	25	30	40	50	60	70	80	90	-6mm	+6mm
KK80	PRESSURE LOSS (Pa) NR LEVEL	22	50 15	82 23	140 30								1.9	0.6
KK100	PRESSURE LOSS (Pa) NR LEVEL	15	32	60 15	90 21	120 24	200 30						1.4	0.6
KK125	PRESSURE LOSS (Pa) NR LEVEL		18	31	48	70 15	120 21	180 30					1.5	
KK150	PRESSURE LOSS (Pa) NR LEVEL			17	34	42	70 17	110 24	170 30				1.4	
KK160	PRESSURE LOSS (Pa) NR LEVEL			17	34	42	70 17	110 24	170 30				1.4	
KK200	PRESSURE LOSS (Pa) NR LEVEL							50	75 22	100 27	140 30	170 35	1.5	0.65

PERFORMANCE DATA



		AIR FLOW RATE (l/s)											CONE POSITION PRESSURE FACTOR	
SIZE	**PARAMETER**	**10**	**15**	**20**	**25**	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**-6mm**	**+6mm**
KS100	PRESSURE LOSS (Pa) NR LEVEL	35	72	120 15	180 22								1.9	0.6
KS125	PRESSURE LOSS (Pa) NR LEVEL		17	30	43	60	110	160 20					1.5	0.6
KS150	PRESSURE LOSS (Pa) NR LEVEL			23	36	50	90	140 17	190 24				1.6	0.7
KS160	PRESSURE LOSS (Pa) NR LEVEL			23	36	50	90	140 17	190 24				1.6	0.7
KS200	PRESSURE LOSS (Pa) NR LEVEL					48	80	140	180	220 17	280 20	340 30	1.3	0.75

		AIR FLOW RATE (l/s)											CONE POSITION PRESSURE FACTOR	
SIZE	**PARAMETER**	**10**	**15**	**20**	**25**	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**-6mm**	**+6mm**
KF100	PRESSURE LOSS (Pa) NR LEVEL	20	32	80 16	130 22	180 25							1.9	0.6
KF125	PRESSURE LOSS (Pa) NR LEVEL		20	45	70	100 17	180 26						1.5	0.6
KF160	PRESSURE LOSS (Pa) NR LEVEL			27	45	60	110 20	170 25					1.6	0.7
KF200*	PRESSURE LOSS (Pa) NR LEVEL			20	34	48	85 17	140 25	200 30				1.3	0.75

*** NOTE**: Cone position datum for KF200 is 12mm below outer frame.

Diffuser programme literature

Brooke Air®

JC House,
Hurricane Way,
Wickford Business Park,
Wickford,
Essex SS11 8YB,
UK.

Tel: +44 (0)1268 572266
Fax: +44 (0)1268 560606
email: info@brookeair.co.uk
web: www.brookeair.co.uk