

Certificate

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Certificate No: 53026/1 Ed 2 Issue No: 1 Date of issue: 11 August 2009

This certificate supersedes 53026/1, issued 18 May 2009. See Page 5 for details

This is to certify that

BSRIA Limited

Has tested a sample of the product described below in accordance with the test methods contained within EN 13030 : 2001 and have determined the item met the detailed classification shown on pages 3 and 4 of this certificate. For further details of the test item see Page 2 of this certificate

Manufacturer/Agent Advanced Ventilation Systems Ltd

20 Channel Keep
St Augustine Road
Littlehampton
West Sussex
BN17 5NQ

Product AVS 34

Test location BSRIA
Old Bracknell West
Bracknell
Berkshire RG12 7AH

Date of test 20 to 23 March 2009

Expiry date 18 May 2012

Test engineer M Roper / M Evans

Quality approved Phil Stonard
Laboratory Manager
Testing & Certification

This certificate must not be reproduced except in full without the written approval of an executive director of BSRIA. It is only intended to be used within the context described in the text.

BSRIA Limited

Old Bracknell Lane West, Bracknell, Berkshire RG12 7AH UK

T: +44 (0)1344 426511 F: +44 (0)1344 487575

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E: bsria@bsria.co.uk W: www.bsria.co.uk

TEST ITEM INFORMATION

Contract	53026A
Date	20/04/2009
Manufacturer	Advanced Ventilation systems
Louvre Model	AVS 34
Material	Aluminium
Painted	Yes
Blade Height	980 mm
Blade Width	980 mm
Blade Depth	20 mm
Frame Depth	40 mm
No.of Blades	28
Blade Pitch	35 mm
Blade Angle	45 Degrees
No.of Banks	1
Guard Type	Insect
Guard Spacing	16 mm
Side Channels	No
Water Drip Tray	Yes
Blade Orientation	Horizontal



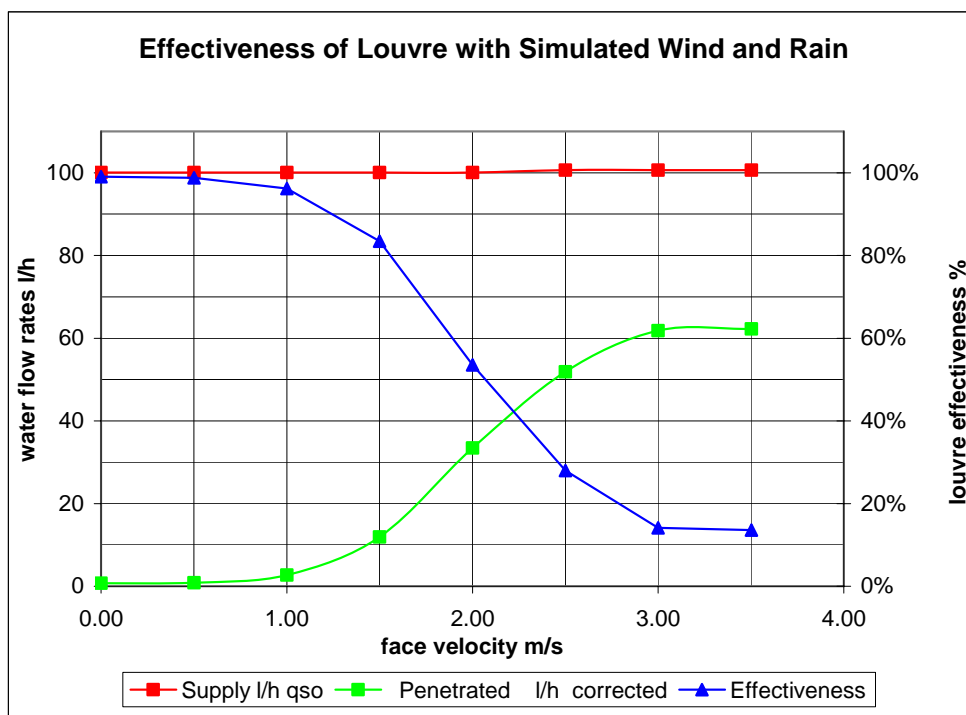
WATER PENETRATION test

MANUFACTURER Advanced Ventilation systems
 MODEL AVS 34

Date 20/04/2009
 Contract 53026A

Simulated rainfall 75 mm/hr
 Wind speed 13.0 m/s
 louvre height 980 mm
 louvre width 980 mm
 louvre area 0.960 m²

VENTILATION RATE		WATER FLOW RATES		Effectiveness	Class
Volume m ³ /s	Velocity m/s	Supply l/h	Penetrated l/h		
0.00	0.00	100.1	0.7	99.0%	A
0.48	0.50	100.1	0.9	98.8%	B
0.96	1.00	100.1	2.7	96.2%	B
1.44	1.50	100.1	11.9	83.5%	C
1.92	2.00	100.1	33.4	53.6%	D
2.40	2.50	100.6	51.9	28.0%	D
2.88	3.00	100.6	61.9	14.1%	D
3.36	3.50	100.6	62.2	13.6%	D



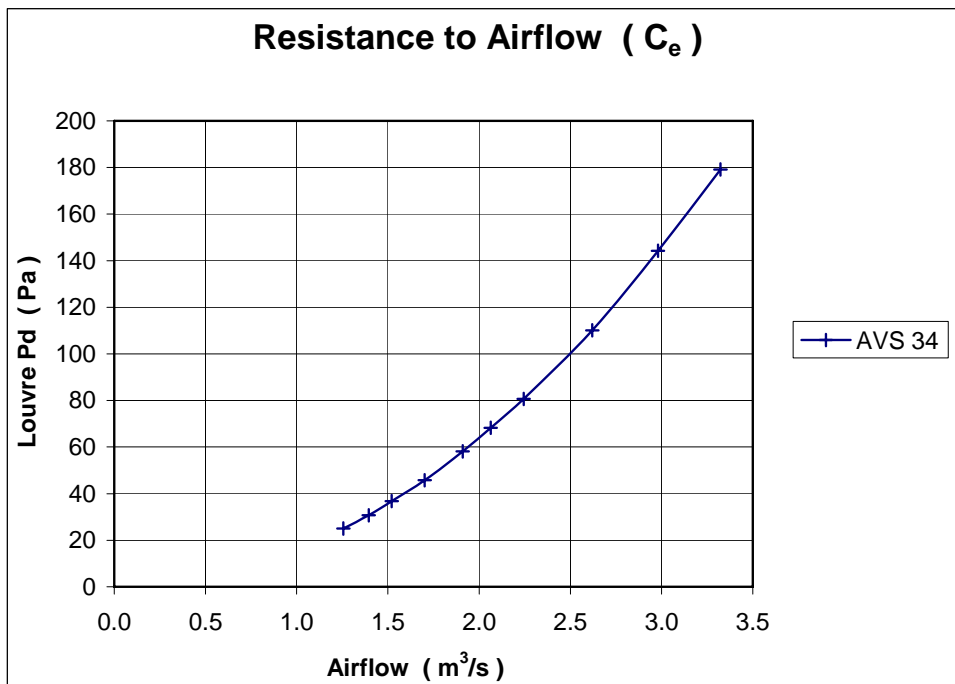
ENTRY LOSS COEFFICIENT test

MANUFACTURER Advanced Ventilation systems
 MODEL AVS 34

Date 20/04/2009
 Contract 53026A

air temperature 20.9 °C louvre height 980 mm
 barometer 1016 mbar louvre width 980 mm
 air density 1.198 kg/m³ louvre area 0.960 m²

louvre pd Pascals	louvre face velocity	air flow rate		coefficient C _e
	m/s	test m ³ /s	theoretical m ³ /s	
25.0	1.31	1.256	6.204	0.202
30.7	1.45	1.395	6.875	0.203
36.8	1.58	1.521	7.527	0.202
45.8	1.77	1.702	8.397	0.203
58.2	1.99	1.910	9.466	0.202
68.3	2.15	2.063	10.254	0.201
80.6	2.34	2.244	11.139	0.201
110.1	2.73	2.620	13.019	0.201
144.3	3.10	2.981	14.905	0.200
179.2	3.46	3.322	16.609	0.200
mean C _e				0.202
Class				3



CLASSIFICATION OF WEATHER LOUVRES

Weather louvres shall be classified by their ability to reject simulated rain.

Penetration Classification

Table 1 shows the different classifications based on the maximum simulated rain penetration per square metre of louvre. The classification is determined in accordance with section 8 of EN 13030:2001.

Water penetration rating at a given louvre face velocity is determined by the water penetration while the louvre is subjected to a 13 ms^{-1} simulated wind velocity and a simulated rain fall at the nominal rate.

Table 1 Penetration classification

Class	Effectiveness	Maximum allowed penetration of simulated rain $\text{l.h}^{-1}.\text{m}^{-2}$
A	1 TO 0,99	0,75
B	0,989 TO 0,95	3,75
C	0,949 TO 0,80	15,0
D	Below 0,8	Greater than 15,0

These classifications apply to various core velocities.

Discharge Loss Coefficient

The discharge loss coefficient given in Table 2, shall be determined in accordance with section 7.2 of test standard EN13030:2001.

Table 2 Discharge loss coefficient classification

Class	Discharge Loss Coefficient
1	0,4 and above
2	0,3 to 0,399
3	0,2 to 0,299
4	0,199 and below

(Note: The above also applies to entry loss coefficient)

Changes From Edition 1 of this Certificate

In Edition 1 of this certificate, a data entry error meant that in the test item description on Page 2, the majority of the item details were offset by one row, meaning the label and data were not correctly paired up. This has been corrected. The classification details on Page 5 have also been updated to reflect the current standard.