

# Certificate

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**Certificate No: 52814/2**

**Issue No: 1**

**Date of issue: 21 April 2009**

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 : 2002 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**      Gilberts (Blackpool) Ltd  
Clifton Road  
Blackpool  
Lancashire  
FY4 4QT

**Product**                      WH 75 with Eliminator

**Test location**              BSRIA  
Old Bracknell West  
Bracknell  
Berkshire RG12 7AH

**Date of test**                24 to 27 February 2009

**Expiry date**                21 April 2012

**Test engineer**              M Roper / M Evans

**Quality approved**        Phil Stonard  
Principal Engineer  
MicroClimate & Test

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](mailto:bsria@bsria.co.uk) W: [www.bsria.co.uk](http://www.bsria.co.uk)

**TEST ITEM INFORMATION**

<b>Contract</b>	52814A
<b>Date</b>	24/02/2009
<b>Manufacturer</b>	Gilberts
<b>Louvre Model</b>	WH 75 with Eliminator
<b>Material</b>	Aluminium
<b>Painted</b>	No
<b>Blade Height</b>	932 mm
<b>Blade Width</b>	972 mm
<b>Blade Depth</b>	175 mm
<b>Frame Depth</b>	205 mm
<b>No. of Blades</b>	Front Bank: 12 Rear Bank: 29
<b>Blade Pitch</b>	Front Bank: 75 mm Rear Bank: 33mm
<b>Blade Angle</b>	45 Degrees
<b>No. of Banks</b>	2
<b>Guard Type</b>	None
<b>Guard Spacing</b>	N/A
<b>Side Channels</b>	Yes
<b>Water Drip Tray</b>	Yes
<b>Blade Orientation</b>	Front Bank: Horizontal Rear Bank: Vertical



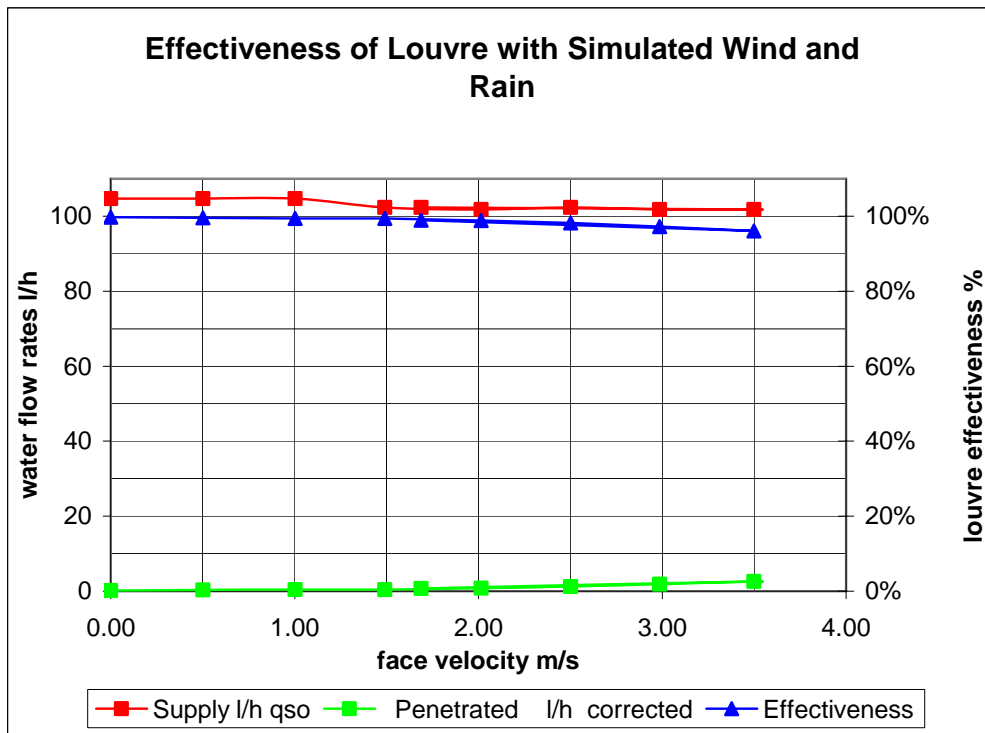
WATER PENETRATION

MANUFACTURER Gilberts  
 MODEL WH 75 with Eliminator

Date 24/02/2009  
 Contract 52814A

Simulated rainfall 75 mm/hr  
 Wind speed 13.0 m/s  
 louvre height 932 mm  
 louvre width 972 mm  
 louvre area 0.906 m<sup>2</sup>

VENTILATION RATE		WATER FLOW RATES		Effectiveness	Class
Volume m <sup>3</sup> /s	Velocity m/s	Supply l/h	Penetrated l/h		
0.00	0.00	104.7	0.2	99.7%	A
0.45	0.50	104.7	0.3	99.6%	A
0.91	1.00	104.7	0.4	99.5%	A
1.35	1.49	102.4	0.4	99.5%	A
1.83	2.02	101.8	0.8	98.8%	B
2.27	2.50	102.4	1.2	98.2%	B
2.71	2.99	101.8	1.9	97.3%	B
3.17	3.50	101.8	2.6	96.1%	B
1.53	1.69	102.4	0.7	98.9%	B



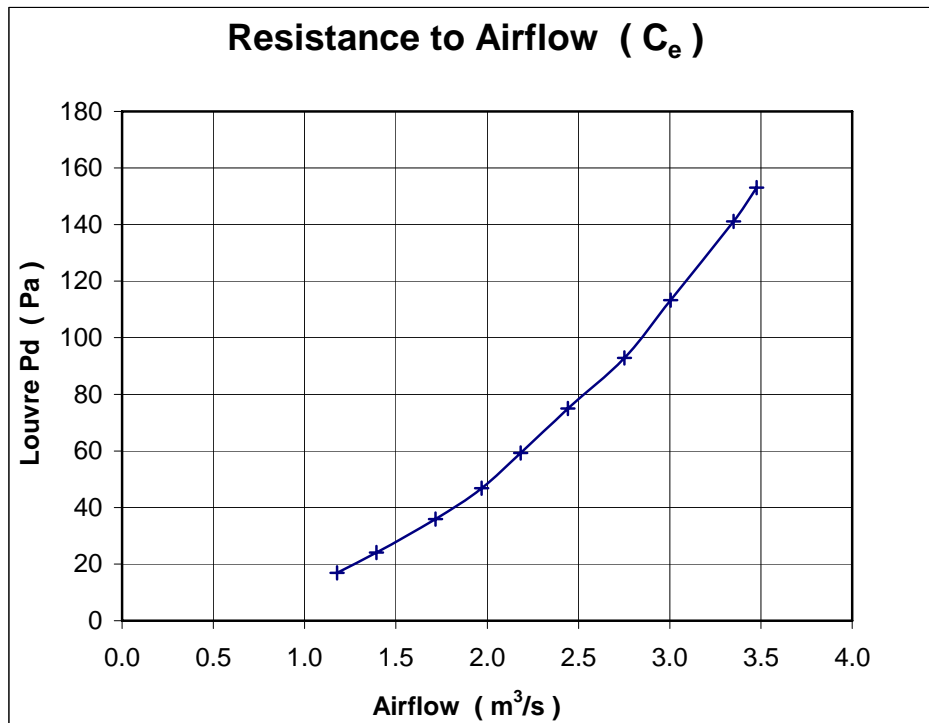
ENTRY LOSS COEFFICIENT

MANUFACTURER Gilberts  
 MODEL WH 75 with Eliminator

Date 27/02/2009  
 Contract 52814A

air temperature 15 °C                      louvre height 932 mm  
 barometer 1013 mbar                      louvre width 972 mm  
 air density 1.220 kg/m<sup>3</sup>                      louvre area 0.906 m<sup>2</sup>

louvre pd Pascals	louvre face velocity	air flow rate		coefficient C <sub>e</sub>
	m/s	test m <sup>3</sup> /s	theoretical m <sup>3</sup> /s	
17.0	1.30	1.178	4.776	0.247
24.1	1.54	1.393	5.697	0.244
35.9	1.89	1.716	6.952	0.247
46.8	2.17	1.970	7.938	0.248
59.3	2.41	2.185	8.935	0.245
75.0	2.70	2.442	10.044	0.243
92.9	3.04	2.752	11.177	0.246
113.3	3.32	3.006	12.345	0.243
141.1	3.70	3.349	13.781	0.243
153.1	3.84	3.477	14.352	0.242
mean C <sub>e</sub>				0.245
Class				3



## CLASSIFICATION OF WEATHER LOUVRES

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

### Penetration Classification

Table 1 shows difference classifications based on the maximum simulated rain penetration per square metre of louvre. The effectiveness 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  $13 \text{ ms}^{-1}$  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 6.2.4.

**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)