

Certificate

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Certificate No: 53929/1 Edition 2 Issue No: 1 Date of issue: 19 March 2010

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 Alumet Systems (UK) Ltd
Senator House
Bourne End Road
Southam
Warwickshire
CV47 0NA

Product ASC50 W Louvre System

Test location BSRIA
Old Bracknell West
Bracknell
Berkshire RG12 7AH

Date of test 18 February 2010

Expiry date 19 March 2013

Test engineer M Roper / M Evans

Quality approved Phil Stonard
Laboratory Manager
Testing & Certification

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TEST ITEM INFORMATION

| | | |
|--------------------------|-----------------------|---------|
| Contract | 53929A | |
| Date | 18/02/2010 | |
| Manufacturer | Alumet | |
| Louvre Model | ASC50 W Louvre System | |
| Material | Aluminium | |
| Painted | No | |
| Blade Height | 970 | mm |
| Blade Width | 903 | mm |
| Blade Depth | 40 | mm |
| Frame Depth | 100 | mm |
| No.of Blades | 20 | |
| Blade Pitch | 50 | mm |
| Blade Angle | 45 | Degrees |
| No.of Banks | 1 | |
| Guard Type | Insect and Bird Mesh | |
| Guard Spacing | 60 | |
| Side Channels | No | |
| Water Drip Tray | Yes | |
| Blade Orientation | Horizontal | |



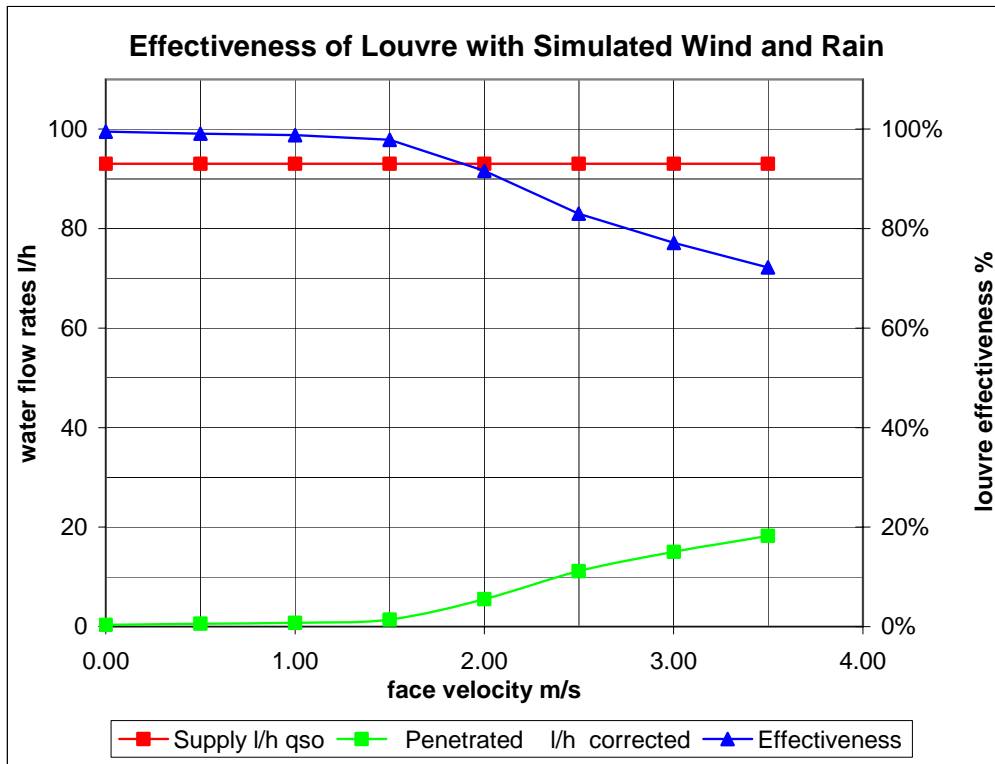
WATER PENETRATION

MANUFACTURER Alumet
 MODEL ASC50 W Louvre System

Date 18/02/2010
 Contract 53929A

Simulated rainfall 75 mm/hr
 Wind speed 13.0 m/s
 louvre height 970 mm
 louvre width 903 mm
 louvre area 0.876 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 | 93.0 | 0.3 | 99.5% | A |
| 0.44 | 0.50 | 93.0 | 0.6 | 99.1% | A |
| 0.88 | 1.00 | 93.0 | 0.8 | 98.8% | B |
| 1.31 | 1.50 | 93.0 | 1.4 | 97.8% | B |
| 1.75 | 2.00 | 93.0 | 5.5 | 91.6% | C |
| 2.19 | 2.50 | 93.0 | 11.2 | 83.0% | C |
| 2.63 | 3.00 | 93.0 | 15.0 | 77.1% | D |
| 3.06 | 3.50 | 93.0 | 18.3 | 72.2% | D |



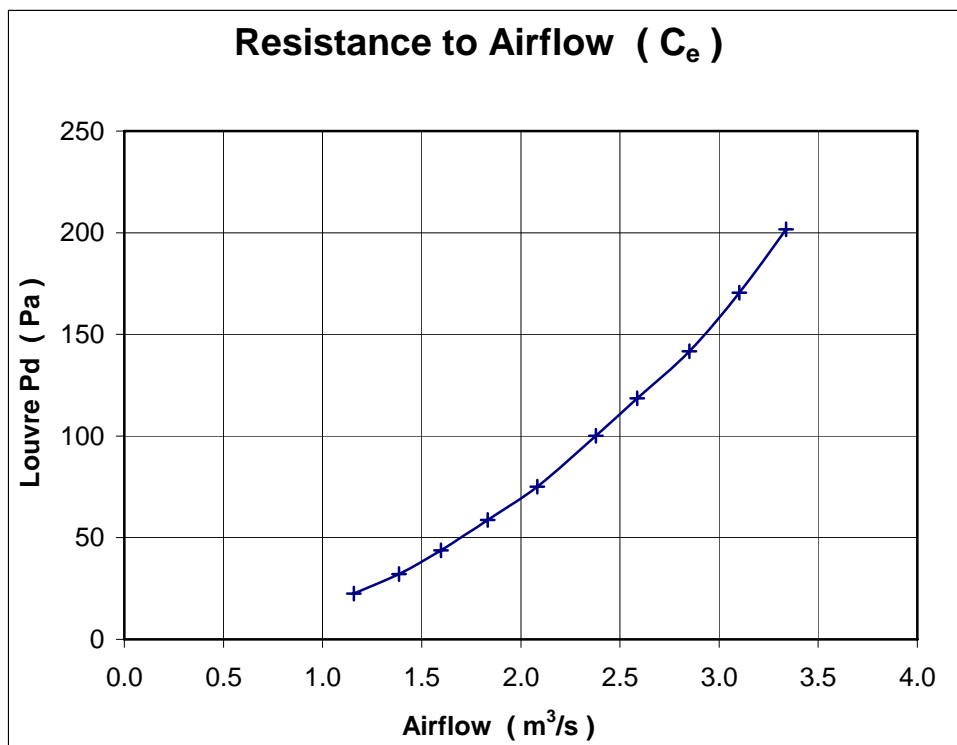
ENTRY LOSS COEFFICIENT

MANUFACTURER Alumet
 MODEL ASC50 W Louvre System

Date 18/02/2010
 Contract 53929A

air temperature 9 °C louvre height 970 mm
 barometer 979.8 mbar louvre width 903 mm
 air density 1.205 kg/m³ louvre area 0.876 m²

| louvre pd Pascals | louvre face velocity | | air flow rate | | coefficient C _e |
|----------------------|----------------------|---------------------------|----------------------------------|-------|-------------------------------|
| | m/s | test m ³ /s | theoretical m ³ /s | | |
| 22.5 | 1.32 | 1.158 | 5.347 | 0.217 | |
| 32.1 | 1.58 | 1.386 | 6.398 | 0.217 | |
| 43.8 | 1.82 | 1.598 | 7.471 | 0.214 | |
| 58.7 | 2.09 | 1.833 | 8.645 | 0.212 | |
| 75.2 | 2.38 | 2.083 | 9.783 | 0.213 | |
| 100.1 | 2.72 | 2.378 | 11.288 | 0.211 | |
| 118.6 | 2.95 | 2.588 | 12.289 | 0.211 | |
| 141.7 | 3.25 | 2.850 | 13.433 | 0.212 | |
| 170.6 | 3.54 | 3.101 | 14.738 | 0.210 | |
| 201.7 | 3.81 | 3.339 | 16.027 | 0.208 | |
| mean C _e | | | | 0.212 | |
| 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)