

Certificate

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Certificate No: 52907/1 Ed 2 Issue No: 1 Date of issue: 11 August 2009

This certificate supersedes 52907/1, issued 26 March 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	Antamex International Inc 210 Great Gulf Drive Concord Ontario L4K 5W1 Canada
Product	L300 Series
Test location	BSRIA Old Bracknell West Bracknell Berkshire RG12 7AH
Date of test	24 to 25 March 2009
Expiry date	26 March 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.

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TEST ITEM INFORMATION

Contract	52907A
Date	24/03/2009
Manufacturer	Antamex
Louvre Model	L300 Series
Material	Aluminium
Painted	No
Blade Height	988 mm
Blade Width	1001 mm
Blade Depth	78 mm
Frame Depth	80 mm
No.of Blades	12
Blade Pitch	81 mm
Blade Angle	45 Degrees
No.of Banks	1
Guard Type	None
Guard Spacing	N/A
Side Channels	Yes
Water Drip Tray	Yes
Blade Orientation	Horizontal



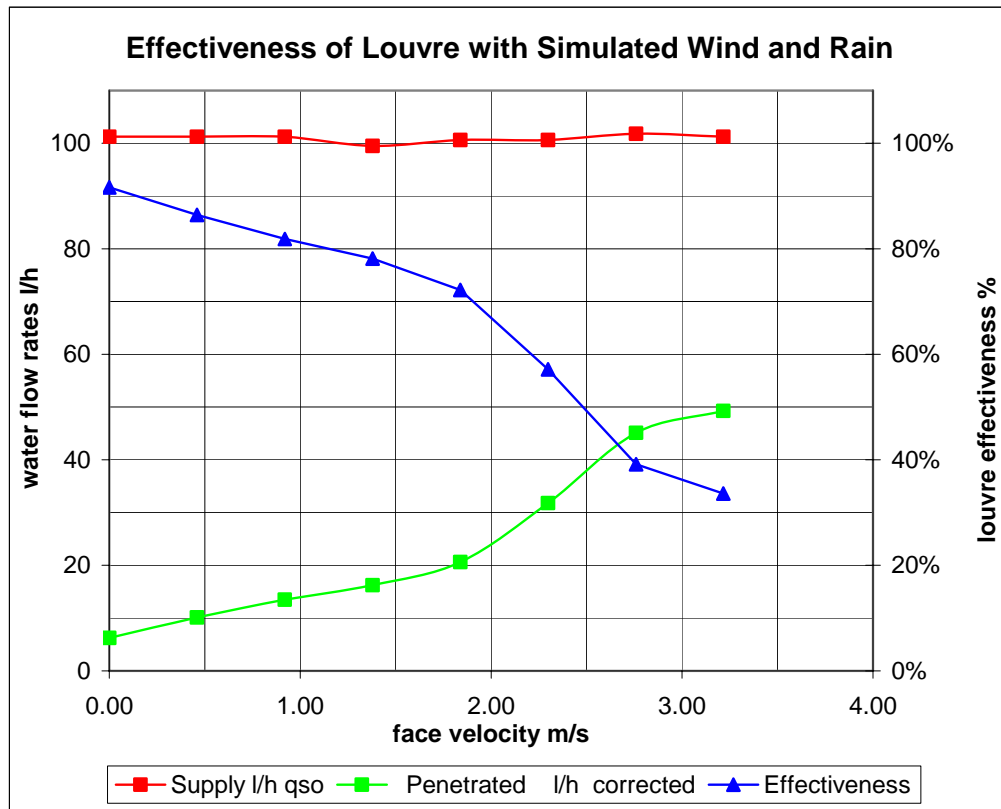
WATER PENETRATION TEST

MANUFACTURER Antamex
 MODEL L300 Series

Date 24/03/2009
 Contract 52907A

Simulated rainfall 75 mm/hr
 Wind speed 13.0 m/s
 louvre height 988 mm
 louvre width 1001 mm
 louvre area 0.989 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	101.2	6.2	91.6%	C
0.45	0.46	101.2	10.1	86.4%	C
0.91	0.92	101.2	13.5	81.8%	C
1.36	1.38	99.5	16.2	78.1%	D
1.82	1.84	100.6	20.6	72.2%	D
2.27	2.30	100.6	31.8	57.1%	D
2.73	2.76	101.8	45.1	39.2%	D
3.18	3.22	101.2	49.3	33.6%	D



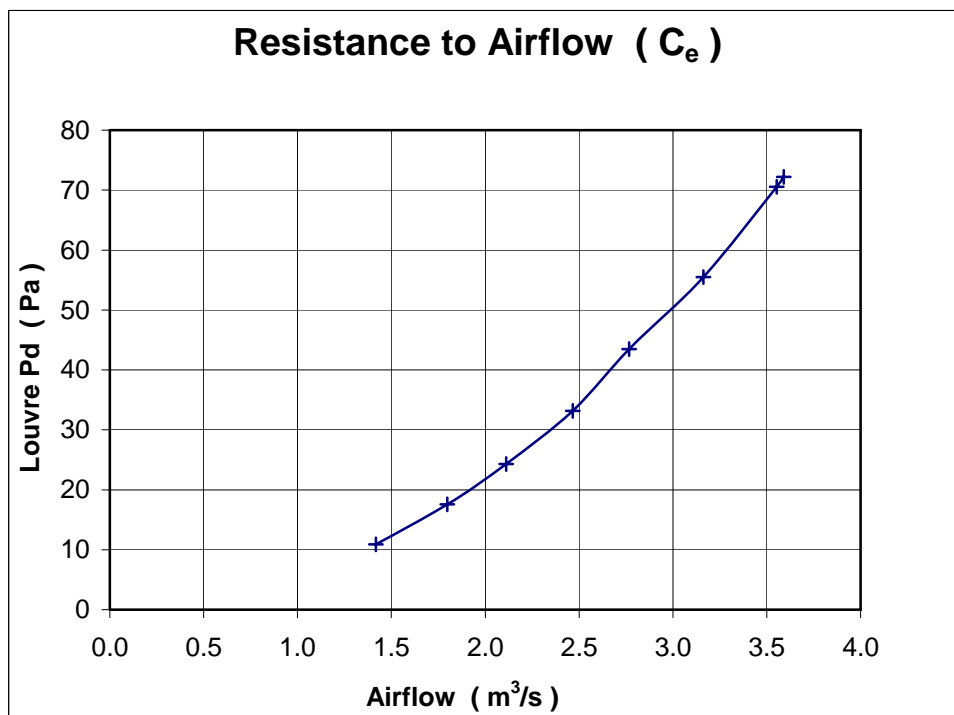
ENTRY LOSS COEFFICIENT

MANUFACTURER Antamex
 MODEL L300 Series

Date 24/03/2009
 Contract 52907A

air temperature 7 °C louvre height 988 mm
 barometer 998.1 mbar louvre width 1001 mm
 air density 1.236 kg/m³ louvre area 0.989 m²

louvre pd Pascals	louvre face velocity	air flow rate		coefficient C _e
	m/s	test m ³ /s	theoretical m ³ /s	
10.9	1.43	1.417	4.155	0.341
17.6	1.82	1.798	5.274	0.341
24.3	2.14	2.112	6.204	0.341
33.2	2.49	2.466	7.244	0.340
43.5	2.80	2.767	8.293	0.334
55.5	3.20	3.162	9.369	0.337
70.6	3.59	3.552	10.567	0.336
72.2	3.63	3.590	10.688	0.336
mean C _e				0.338
Class				2



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, the height of the louvre was incorrectly recorded as 908mm, not 988mm. This not only affected the stated dimensions given on page 2, but also influenced the results shown on Pages 3 and 4, as the air velocities were lower than initially calculated. These results have been recalculated to show the correct air velocities. The classification details on Page 5 have also been updated to reflect the current standard.