Summary Report

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Summary Report 54763/2 **Issue No: 1** **Date of issue: 9 October 2018**

This Summary Report confirms that BSRIA Ltd 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 to 6. For further details of the test item see Page 2 of this Summary Report.

Manufacturer/Agent	N.V. Renson Projects IZ 2 Vijverdam Maalbeekstraat 6 B-8790 Waregem
Product	421 WK2
Test location	BSRIA Old Bracknell West Bracknell Berkshire RG12 7AH
Date of test	22 December 2010 and 11 February 2011
Date of issue	9 October 2018
Test engineer	A Freeth

Quality approved Mark Roper
Principal Test Engineer

This summary report supersedes certificate 54763/2. This up-date was carried out under BSRIA contract reference 61223.

TEST INFORMATION

Contract	54763	
Date	December 2010	
Manufacturer	N.V. Renson Projects	
Louvre Model	421 WK2	
Material	Aluminium	
Painted	No	
Blade Height	1025	mm
Blade Width	1000	mm
Blade Depth	42	mm
Frame Depth	48	mm
No. of Blades	20	
Blade Pitch	50	mm
Blade Angle	45	degrees
No. of Banks	1	
Guard Type	Insect/None	
Guard Spacing	8	mm
Side Channels	None	
Water Drip Tray	Yes	
Blade Orientation	Horizontal	

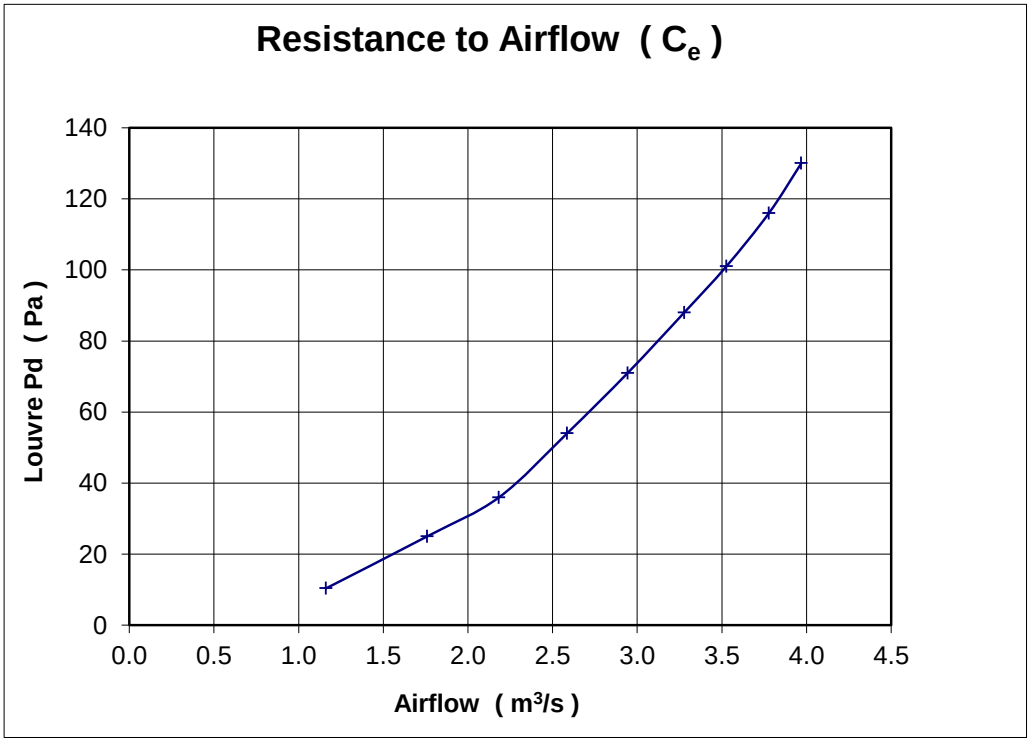
Front view of louvre

COEFFICIENT OF ENTRY (with mesh)

MANUFACTURER Renson Date 22/12/2010
MODEL 421 WK2 (with mesh) Contract 54763

air temperature	11.5	°C	louvre height	1025	mm
barometer	1003	mbar	louvre width	1000	mm
air density	1.223	kg/m^3	louvre area	1.025	m^2

	louvre face velocity	air flow rate		
louvre pd Pascals	m/s	test m^3/s	theoretical m^3/s	coefficient C_e
130.0	3.87	3.970	14.947	0.266
116.0	3.69	3.778	14.119	0.268
101.0	3.44	3.527	13.175	0.268
88.0	3.20	3.278	12.298	0.267
71.0	2.87	2.944	11.046	0.267
54.0	2.52	2.585	9.634	0.268
36.0	2.13	2.184	7.866	0.278
25.0	1.72	1.759	6.555	0.268
10.4	1.13	1.162	4.228	0.275
			mean C_e	0.269
			Class	3

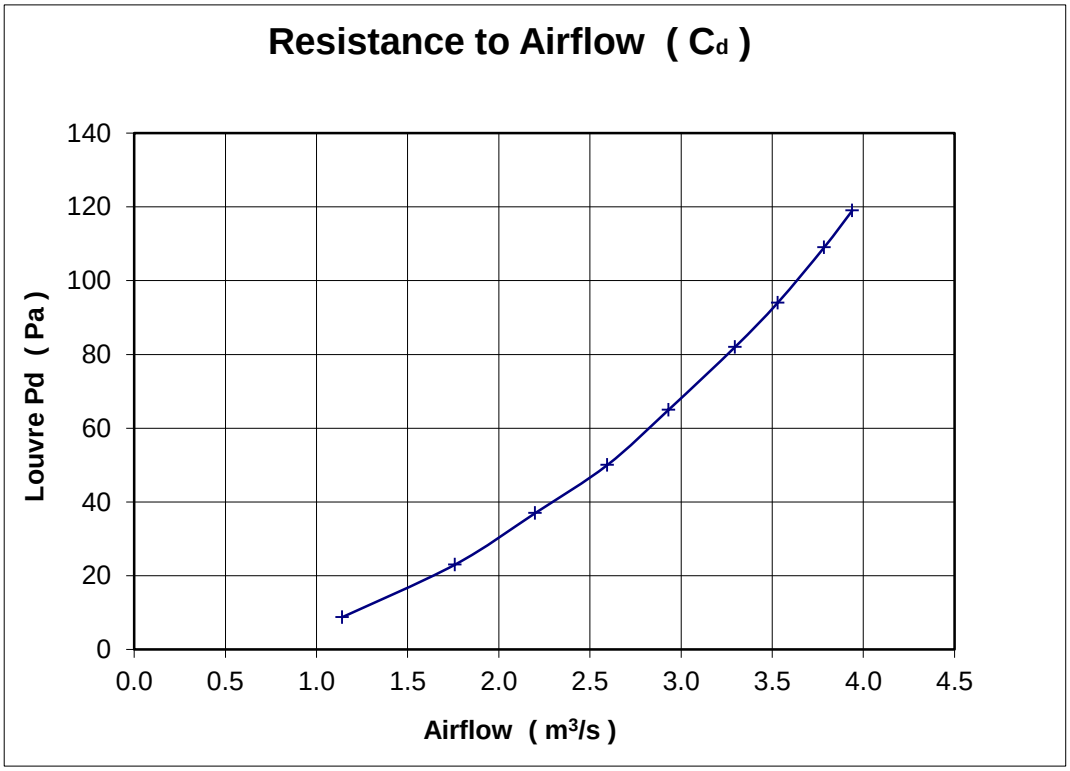


COEFFICIENT OF DISCHARGE (with mesh)

MANUFACTURER Renson Date 22/12/2010
MODEL 421 WK2 Reversed (with mesh) Contract 54763

air temperature	11.5	°C	louvre height	1025	mm
barometer	1003	mbar	louvre width	1000	mm
air density	1.223	kg/m^3	louvre area	1.025	m^2

	louvre face velocity	air flow rate		
louvre pd Pascals	m/s	test m^3/s	theoretical m^3/s	coefficient Cd
119.0	3.84	3.939	14.301	0.275
109.0	3.69	3.785	13.687	0.277
94.0	3.44	3.530	12.710	0.278
82.0	3.22	3.296	11.871	0.278
65.0	2.86	2.932	10.569	0.277
50.0	2.53	2.595	9.270	0.280
37.0	2.15	2.200	7.974	0.276
23.0	1.72	1.759	6.287	0.280
8.8	1.11	1.142	3.889	0.294
			mean Cd	0.279
			Class	3

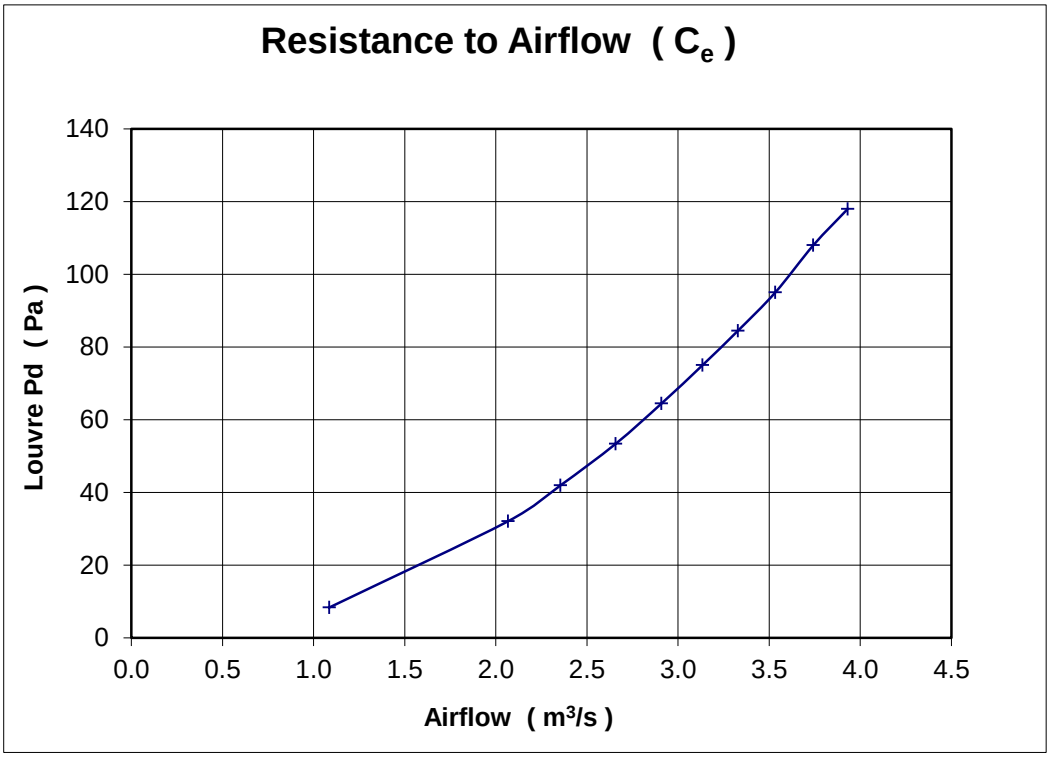


COEFFICIENT OF ENTRY (no mesh)

MANUFACTURER Renson Date 11/02/2011
MODEL 421 WK2 (no mesh) Contract 54763

air temperature	11.5	°C	louvre height	1025	mm
barometer	1007	mbar	louvre width	1000	mm
air density	1.228	kg/m^3	louvre area	1.025	m^2

	louvre face velocity	air flow rate		
louvre pd Pascals	m/s	test m^3/s	theoretical m^3/s	coefficient C_e
118.0	3.84	3.931	14.212	0.277
108.0	3.65	3.742	13.597	0.275
95.0	3.45	3.533	12.752	0.277
84.5	3.25	3.329	12.027	0.277
75.0	3.06	3.134	11.331	0.277
64.5	2.84	2.910	10.508	0.277
53.4	2.59	2.658	9.561	0.278
42.0	2.30	2.355	8.479	0.278
32.1	2.02	2.067	7.413	0.279
8.4	1.06	1.086	3.792	0.286
			mean C_e	0.278
			Class	3

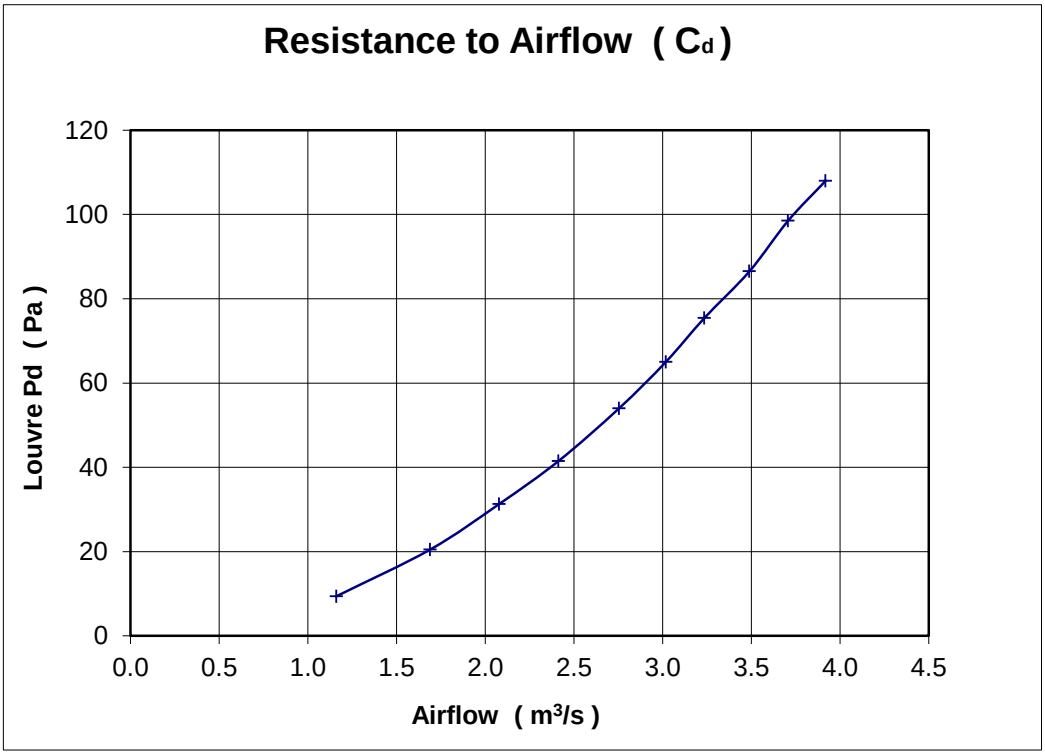


COEFFICIENT OF DISCHARGE (no mesh)

MANUFACTURER Renson Date 22/12/2010
MODEL 421 WK2 Reversed (no mesh) Contract 54763

air temperature	11.5	°C	louvre height	1025	mm
barometer	1007	mbar	louvre width	1000	mm
air density	1.228	kg/m^3	louvre area	1.025	m^2

	louvre face velocity	air flow rate		
louvre pd Pascals	m/s	test m^3/s	theoretical m^3/s	coefficient Cd
108.0	3.82	3.919	13.597	0.288
98.5	3.62	3.707	12.985	0.286
86.5	3.40	3.489	12.168	0.287
75.4	3.16	3.235	11.361	0.285
65.0	2.94	3.018	10.548	0.286
54.0	2.69	2.754	9.614	0.286
41.5	2.35	2.413	8.428	0.286
31.3	2.03	2.078	7.320	0.284
20.5	1.65	1.690	5.924	0.285
9.4	1.13	1.160	4.011	0.289
			mean Cd	0.286
			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 8.2 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 $l.h^{-1}.m^{-2}$
A	1,00 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 and Entry Loss Coefficient

The discharge and entry loss coefficient given in Table 2, shall be determined in accordance with section 8.3 of test standard EN13030:2001.

Table 2 Discharge and Entry loss coefficient classification

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