



**AIR MOVEMENT AND CONTROL
ASSOCIATION INTERNATIONAL, INC.**

Asia AMCA Sdn Bhd (Malaysia Lab Location)
No. 7, Jalan SiLC 1/6,
Kawasan Perindustrian SiLC Nusajaya,
Mukim Jelutong, 79200 Nusajaya, Johor

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Test No. 33705-A1

September 07, 2016

TO: CSR Building Products Ltd T/A CSR Edmonds
10 Stanton Road
Seven Hills, NSW AUSTRALIA 2147

ATTN: Colin Schwecke
cschwecke@csr.com.au

**SUBJECT: CONTRACT TESTING
MODEL No. 900**

Attached are the test results of the subject model performed on August 20, 2016.

If you should have any questions concerning these data, please let us know.

Sincerely,
AIR MOVEMENT AND CONTROL
ASSOCIATION INTERNATIONAL, INC.

Tan TinTin
Technical Director
Approved Signatory

Attachment

Copy To: [dmunn@csr.com.au](mailto:dmun@csr.com.au)



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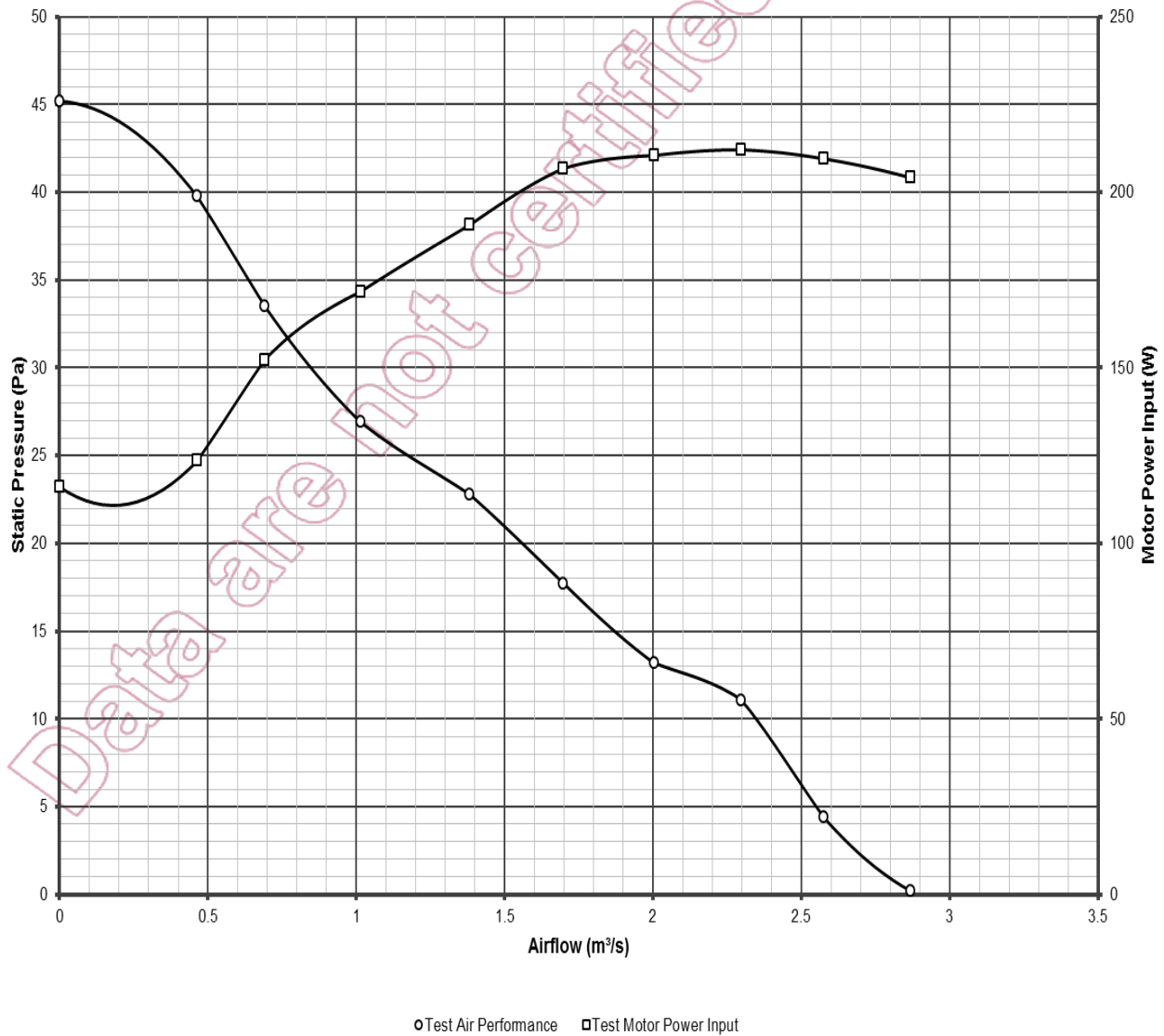
Test Number
33705-A1

Test Unit:	Pwr. Roof Ventilator (Exhaust, Centrifugal)	Test Purpose:	Contract Test
Manufacturer:	CSR Building Products Ltd T/A CSR Edmonds	Date of Test:	20 Aug 2016
Trade Name:	Ecopower	Client:	CSR Building Products Ltd T/A CSR Edmonds
Model Number:	900 (10V)	Witness:	No
Impeller Diameter:	1091 mm	Personnel:	LTH
Inlet Area:	0.622 m ²	P _b :	100.8 kPa
Outlet Area:	0.622 m ²	Unit System:	SI

Test Method per ANSI / AMCA Standard 210-07, Figure 15 Setup, Installation Type A

Comments: ebmpapst Motor: 200-277V, 1Ph, 50/60Hz, 185W, 180RPM, 0.9A, IP54 (S/N: M3G112-GA47-22)
Test at 230V with 10VDC control voltage
Test performed is in accordance to standard ISO 5801

As-Run Results at Standard Air





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Trade Name: Ecopower
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Inlet Area: 0.622 m²
Outlet Area: 0.622 m²

Test Purpose: Contract Test
Date of Test: 20 Aug 2016
Client: CSR Building Products Ltd T/A CSR Edmonds
Witness: No
Personnel: LTH
P_b: 100.8 kPa
Unit System: SI

Test Method per ANSI / AMCA Standard 210-07, Figure 15 Setup, Installation Type A

Comments:

ebmpapst Motor: 200-277V, 1Ph, 50/60Hz, 185W, 180RPM, 0.9A, IP54 (S/N: M3G112-GA47-22)
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Results at Test Conditions:

Det. No.	ρ (kg/m ³)	N (rpm)	P_t (Pa)	P_v (Pa)	P_s (Pa)	Q (m ³ /s)	W (W)
1	1.148	170	12	12	0	2.867	195
2	1.141	168	14	10	4	2.574	199
3	1.141	166	18	8	11	2.298	202
4	1.141	167	18	6	13	2.004	200
5	1.141	169	21	4	17	1.698	197
6	1.141	179	24	3	22	1.382	181
7	1.143	190	27	2	26	1.014	164
8	1.143	202	33	1	32	0.691	145
9	1.142	220	38	0	38	0.464	118
10	1.144	225	43	0	43	0.000	111

As-Run Results at Standard Air:

Det. No.	P_t (Pa)	P_v (Pa)	P_s (Pa)	Q (m ³ /s)	W (W)
1	13	13	0	2.867	204
2	15	10	4	2.574	210
3	19	8	11	2.298	212
4	19	6	13	2.004	210
5	22	4	18	1.698	207
6	26	3	23	1.382	191
7	29	2	27	1.014	172
8	34	1	34	0.691	152
9	40	0	40	0.464	124
10	45	0	45	0.000	116



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Data at Test Conditions:

Det. No.	t _{d0} (°C)	t _{w0} (°C)	t _{d2} (°C)	t _{d5} (°C)	P _{s5} (Pa)	ΔP (Pa)	t _{d8} (°C)	P _{d8} (Pa)	N (rpm)	W (W)	I (A)	V (V)
1	30.3	25.4	30.1	30.5	909	909	29.2	0	170	195	0.894	230
2	30.7	25.4	30.1	30.6	721	725	31.0	-4	168	199	0.902	230
3	30.8	25.4	30.3	30.6	567	578	31.1	-11	166	202	0.904	230
4	30.9	25.4	30.4	30.5	427	440	31.1	-13	167	200	0.905	230
5	30.9	25.4	30.3	30.4	299	316	31.1	-17	169	197	0.888	230
6	30.9	25.4	30.7	30.4	188	210	31.0	-22	179	181	0.824	230
7	30.9	25.4	30.5	29.8	88	114	30.4	-26	190	164	0.751	230
8	30.9	25.4	31.1	29.8	21	53	30.4	-32	202	145	0.675	230
9	30.9	25.4	31.2	30.0	-14	24	30.7	-38	220	118	0.564	230
10	30.9	25.4	30.8	29.6	-43	0	30.1	-43	225	111	0.535	230

Open Nozzle Diameters (mm):

Det. No.	Open Nozzle Diameters
1	304.7 mm
2	304.7 mm
3	304.7 mm
4	304.7 mm
5	304.7 mm
6	304.7 mm
7	304.7 mm
8	304.7 mm
9	304.7 mm
10	All nozzles closed.



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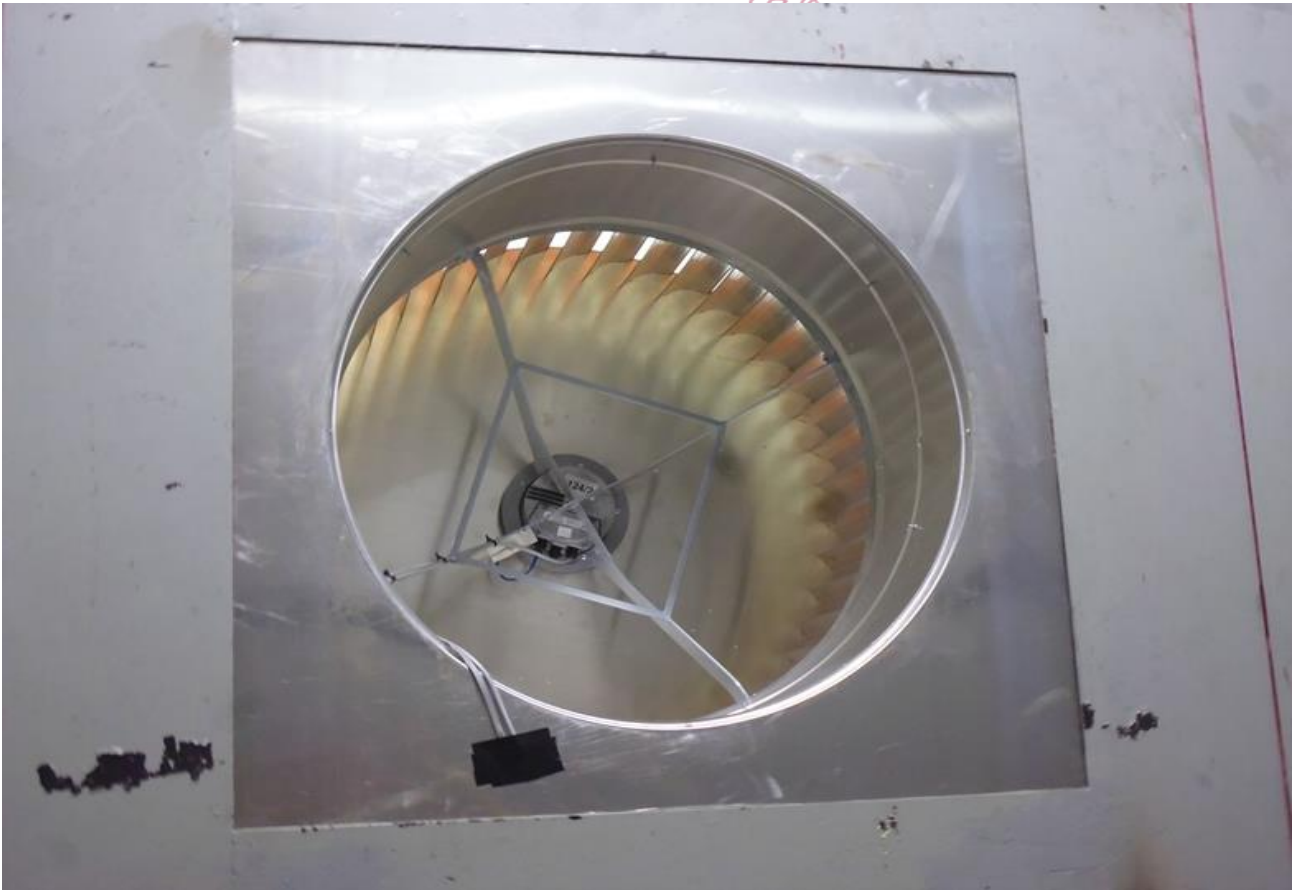
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ASIA AMCA INSTRUMENT LIST

Test Number: 33705-A1

Date: 20 Aug 2016

Technician: LTH

The following instruments,calibrated as applicable per the test standard, were used for this test.

Facility: Reverberant Room

Standard: ANSI / AMCA Standard 210-07

Figure: Figure 15

Pressure

Barometer							
Asset	Manufacturer	Model	Plane	Serial Number	Scale Range	Last Calibration	Next Calibration
m69	Comet	T2114	0	14960520		-	-

Transducer							
Asset	Manufacturer	Model	Plane	Serial Number	Scale Range	Last Calibration	Next Calibration
m13	Furness	FCO332	8	0710182 Iss.12	-2500Pa	12 Oct 2015	12 Oct 2016
m72	Furness	FCO332-4W	5,6	1005017 Iss.18	±2500Pa	12 Oct 2015	12 Oct 2016

Speed

Pick Up							
Asset	Manufacturer	Model	Plane	Serial Number	Scale Range	Last Calibration	Next Calibration
m68	Monarch	ROLS-W	0	1402221		30 Sep 2015	30 Sep 2016
m23	Autonics	MP5W-44	0	GL29		30 Sep 2015	30 Sep 2016

Temperature

Instrument							
Asset	Manufacturer	Model	Plane	Serial Number	Scale Range	Last Calibration	Next Calibration
m04	Kimo	TH-200-HN/STH-PD150	0	07122634/07102438		-	-

RTD							
Asset	Manufacturer	Model	Plane	Serial Number	Scale Range	Last Calibration	Next Calibration
m71	Valutemp	RTD-PT100	2	130626	15-80°C	25 Sep 2015	25 Sep 2016
m06	Valutemp	RTD-PT100	5	101217	-20°C to +80°C	25 Sep 2015	25 Sep 2016
m05	Valutemp	RTD-PT100	8	101218	-20°C to +80°C	25 Sep 2015	25 Sep 2016

Power Meter

Instrument							
Asset	Manufacturer	Model	Plane	Serial Number	Scale Range	Last Calibration	Next Calibration
m27	Yokogawa	WT230	NA	91GB26679		10 Aug 2016	10 Aug 2017

Data are not certified by AMCA