

TEST CERTIFICATE No. 1


ACOUSTIC AND AIRFLOW PERFORMANCE TEST OF VARIOUS AIR OUTLETS

SUPPLIED BY: PCJ INDUSTRIES CO LTD
TESTED BY: VIPAC ENGINEERS & SCIENTISTS LTD
TEST DATE: 13 / 08 / 2003
CLIENT: PCJ INDUSTRIES CO LTD
UNIT: Aluminium Square Ceiling Diffuser, Ordinary Face, Type: 4-SCD
 Trade Mark: "STREAM AIR"
 Size: 150mm x 150mm
 Test Configuration: 4-way
 Throw Pattern: Horizontal

TEST CONDITIONS				SOUND POWER LEVEL, dB re 1E-12 W						
				OCTAVE BAND CENTRE FREQUENCY (Hz)						
Qs (l/s)	Ps (Pa)	T (m)	NR	125	250	500	1000	2000	4000	8000
70	39	3.5	24	37.8	39.9	38.4	32.6	23.5	<17.8	<15.1
88	54	4.5	27	45.8	45.9	40.8	37.2	30.7	23.6	<15.7
106	72	5.0	31	46.9	49.7	42.7	40.6	35.6	31.1	<18.7
131	102	6.5	35	52.0	52.4	47.0	45.1	40.9	38.6	27.5
151	128	>8	38	52.9	55.5	48.9	47.9	45.0	43.0	33.3

LEGEND

- Qs - Primary Air Flow Rate (l/s)
- Ps - Supply Static Pressure (Pa)
- < - Insufficient margin above background noise to allow accurate determination
- > - Length of throw greater than that able to be measured
- NR - Noise Rating number based upon room absorption of 10 dB
- T - Throw in meters to a terminal velocity of 0.25m/s



 Zarko Drinic
 PROJECT ENGINEER



 Norm Broner
 N.A.T.A. SIGNATORY

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TEST CERTIFICATE No. 2


ACOUSTIC AND AIRFLOW PERFORMANCE TEST OF VARIOUS AIR OUTLETS


SUPPLIED BY: PCJ INDUSTRIES CO LTD
TESTED BY: VIPAC ENGINEERS & SCIENTISTS LTD
TEST DATE: 12 / 08 / 2003
CLIENT: PCJ INDUSTRIES CO LTD
UNIT: Aluminium Square Ceiling Diffuser, Ordinary Face, Type: 4-SCD
 Trade Mark: "STREAM AIR"
 Size: 300mm x 300mm
 Test Configuration: 4-way
 Throw Pattern: Horizontal

TEST CONDITIONS				SOUND POWER LEVEL, dB re 1E-12 W						
				OCTAVE BAND CENTRE FREQUENCY (Hz)						
Qs (l/s)	Ps (Pa)	T (m)	NR	125	250	500	1000	2000	4000	8000
193	13	6.0	20	38.6	40.6	32.0	<21.5	<15.3	<15.4	<15.0
222	18	7.5	24	41.9	43.3	37.7	25.3	<18.3	<15.6	<15.1
254	24	>8	26	43.4	44.8	39.7	30.7	21.8	<17.0	<15.3
283	31	>8	29	45.8	46.9	42.7	36.7	27.5	20.9	<16.0
326	42	>8	32	49.9	51.7	45.6	39.7	32.9	27.3	<17.9

LEGEND

Qs - Primary Air Flow Rate (l/s)
 Ps - Supply Static Pressure (Pa)
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TEST CERTIFICATE No. 3


ACOUSTIC AND AIRFLOW PERFORMANCE TEST OF VARIOUS AIR OUTLETS

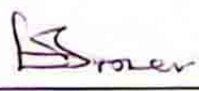
SUPPLIED BY: PCJ INDUSTRIES CO LTD
TESTED BY: VIPAC ENGINEERS & SCIENTISTS LTD
TEST DATE: 11 / 08 / 2003
CLIENT: PCJ INDUSTRIES CO LTD
UNIT: Aluminium Square Ceiling Diffuser, Ordinary Face, Type: 4-SCD
 Trade Mark: "STREAM AIR"
 Size: 450mm x 450mm
 Test Configuration: 4-way
 Throw Pattern: Horizontal

TEST CONDITIONS				SOUND POWER LEVEL, dB re 1E-12 W						
				OCTAVE BAND CENTRE FREQUENCY (Hz)						
Qs (l/s)	Ps (Pa)	T (m)	NR	125	250	500	1000	2000	4000	8000
289	5	7.0	22	41.8	42.7	35.5	27.7	20.2	<16.3	<15.0
379	8	>8	27	45.5	45.8	41.5	33.1	28.1	21.7	<16.3
454	12	>8	33	49.4	50.1	46.6	38.0	34.2	29.5	20.1
492	14	>8	34	50.4	50.8	48.3	40.8	36.0	31.3	22.0
552	18	>8	37	54.4	53.9	51.2	44.0	39.5	34.8	25.2

LEGEND

Qs - Primary Air Flow Rate (l/s)
 Ps - Supply Static Pressure (Pa)
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 > - Length of throw greater than that able to be measured
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TEST CERTIFICATE No. 4

ACOUSTIC AND AIRFLOW PERFORMANCE TEST OF VARIOUS AIR OUTLETS

SUPPLIED BY: PCJ INDUSTRIES CO LTD
TESTED BY: VIPAC ENGINEERS & SCIENTISTS LTD
TEST DATE: 13 / 08 / 2003
CLIENT: PCJ INDUSTRIES CO LTD
UNIT: Aluminium Air Grille, Fixed Core, 1 inch Z-Blade
 Trade Mark: "STREAM AIR"
 Type: AGF 1
 Size: 350mm x 150mm


TEST CONDITIONS			SOUND POWER LEVEL, dB re 1E-12 W OCTAVE BAND CENTRE FREQUENCY (Hz)						
Qs (l/s)	Ps (Pa)	NR	125	250	500	1000	2000	4000	8000
64	15	21	<35.1	41.7	29.0	<18.4	<14.6	<15.2	<15.0
80	24	24	38.0	42.2	37.9	27.7	<16.9	<15.7	<15.1
110	43	40	40.3	48.1	53.7	38.0	28.2	<19.8	<15.2
136	64	44	43.5	48.5	57.4	45.5	36.2	29.0	<16.9
151	78	38	44.5	48.7	52.0	46.4	39.9	32.4	<18.9
166	93	40	46.0	49.9	52.3	49.6	43.8	35.9	22.5
191	124	43	48.7	52.3	54.5	53.2	46.7	40.8	29.5


NOTE: Whistling Noise at some frequencies (caused by big gaps between the edges and the blades).

LEGEND

Qs - Primary Air Flow Rate (l/s)
 Ps - Supply Static Pressure (Pa)
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 NR - Noise Rating number based upon room absorption of 10 dB
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TEST CERTIFICATE No. 5


ACOUSTIC AND AIRFLOW PERFORMANCE TEST OF VARIOUS AIR OUTLETS

SUPPLIED BY: PCJ INDUSTRIES CO LTD
TESTED BY: VIPAC ENGINEERS & SCIENTISTS LTD
TEST DATE: 13 / 08 / 2003
CLIENT: PCJ INDUSTRIES CO LTD
UNIT: Aluminium Air Grille, Fixed Core, 1 inch Z-Blade
 Trade Mark: "STREAM AIR"
 Type: AGF 1
 Size: 700mm x 300mm

TEST CONDITIONS			SOUND POWER LEVEL, dB re 1E-12 W OCTAVE BAND CENTRE FREQUENCY (Hz)						
Qs (l/s)	Ps (Pa)	NR	125	250	500	1000	2000	4000	8000
206	6	18	38.5	38.7	26.1	19.2	<16.4	<15.8	<15.3
247	10	23	41.5	43.4	32.0	29.6	23.3	<18.9	<15.4
282	14	28	46.0	47.6	39.0	31.0	26.1	20.3	<16.5
322	18	30	49.2	50.2	41.9	33.9	29.9	23.7	<18.0
366	22	31	51.1	50.7	45.0	36.2	32.3	28.1	19.7

LEGEND

Qs - Primary Air Flow Rate (l/s)
 Ps - Supply Static Pressure (Pa)
 < - Insufficient margin above background noise to allow accurate determination
 > - Length of throw greater than that able to be measured
 NR - Noise Rating number based upon room absorption of 10 dB
 T - Throw in meters to a terminal velocity of 0.25m/s



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TEST CERTIFICATE No. 6

ACOUSTIC AND AIRFLOW PERFORMANCE TEST OF VARIOUS AIR OUTLETS

SUPPLIED BY: PCJ INDUSTRIES CO LTD
TESTED BY: VIPAC ENGINEERS & SCIENTISTS LTD
TEST DATE: 14 / 08 / 2003
CLIENT: PCJ INDUSTRIES CO LTD
UNIT: Aluminium Air Grille, Fixed Core, 1 inch Z-Blade
 Trade Mark: "STREAM AIR"
 Type: AGF 1
 Size: 1050mm x 450mm

TEST CONDITIONS			SOUND POWER LEVEL, dB re 1E-12 W OCTAVE BAND CENTRE FREQUENCY (Hz)						
Qs (l/s)	Ps (Pa)	NR	125	250	500	1000	2000	4000	8000
271	1	21	38.3	35.9	35.6	25.9	<19.0	<16.5	<14.8
346	3	25	45.5	43.2	39.6	32.6	26.6	<18.9	<15.3
436	5	31	49.8	47.9	45.0	38.6	33.4	26.7	<17.6
472	6	34	53.8	50.8	47.9	41.1	35.9	30.6	20.0
506	7	36	56.9	53.7	49.4	42.9	38.4	33.4	22.8

LEGEND

Qs - Primary Air Flow Rate (l/s)
 Ps - Supply Static Pressure (Pa)
 < - Insufficient margin above background noise to allow accurate determination
 > - Length of throw greater than that able to be measured
 NR - Noise Rating number based upon room absorption of 10 dB
 T - Throw in meters to a terminal velocity of 0.25m/s



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TEST CERTIFICATE No. 7

ACOUSTIC AND AIRFLOW PERFORMANCE TEST OF VARIOUS AIR OUTLETS

SUPPLIED BY: PCJ INDUSTRIES CO LTD
TESTED BY: VIPAC ENGINEERS & SCIENTISTS LTD
TEST DATE: 11 / 08 / 2003
CLIENT: PCJ INDUSTRIES CO LTD
UNIT: Supply Air Register
 Trade Mark: "STREAM AIR"
 Type: SAR
 Size: 100mm x 600mm
 Throw Pattern: Horizontal

TEST CONDITIONS			SOUND POWER LEVEL, dB re 1E-12 W							
Qs	Ps	T	NR	OCTAVE BAND CENTRE FREQUENCY (Hz)						
(l/s)	(Pa)	(m)		125	250	500	1000	2000	4000	8000
148	13	>8	17	38.4	38.2	31.4	23.3	17.4	<15.3	<15.0
170	17	>8	21	40.4	39.0	35.5	29.7	23.3	<16.9	<15.1
206	24	>8	28	44.0	43.4	41.6	35.4	31.4	23.7	<15.2
232	30	>8	30	46.2	45.2	44.2	38.8	35.3	29.9	<15.8
249	35	>8	32	49.7	47.6	45.2	41.7	38.2	32.4	<16.5

LEGEND

Qs - Primary Air Flow Rate (l/s)
 Ps - Supply Static Pressure (Pa)
 < - Insufficient margin above background noise to allow accurate determination
 > - Length of throw greater than that able to be measured
 NR - Noise Rating number based upon room absorption of 10 dB
 T - Throw in meters to a terminal velocity of 0.25m/s



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TEST CERTIFICATE No. 8

ACOUSTIC AND AIRFLOW PERFORMANCE TEST OF VARIOUS AIR OUTLETS

SUPPLIED BY: PCJ INDUSTRIES CO LTD
TESTED BY: VIPAC ENGINEERS & SCIENTISTS LTD
TEST DATE: 12 / 08 / 2003
CLIENT: PCJ INDUSTRIES CO LTD
UNIT: Supply Air Register
 Trade Mark: "STREAM AIR"
 Type: SAR
 Size: 150mm x 900mm
 Throw Pattern: Horizontal

TEST CONDITIONS			SOUND POWER LEVEL, dB re 1E-12 W							
Qs	Ps	T	NR	OCTAVE BAND CENTRE FREQUENCY (Hz)						
(l/s)	(Pa)	(m)		125	250	500	1000	2000	4000	8000
232	3	>8	19	38.6	<37.6	33.0	25.2	<19.1	<17.5	<15.2
256	4	>8	22	42.9	39.9	36.1	29.2	22.1	<17.8	<15.3
277	6	>8	25	45.7	42.2	39.5	33.4	26.9	20.5	<15.8
332	10	>8	29	50.7	44.8	42.9	38.1	32.1	26.3	<17.4
386	14	>8	34	53.6	49.3	47.9	42.4	37.5	32.0	<20.8

LEGEND

Qs - Primary Air Flow Rate (l/s)
 Ps - Supply Static Pressure (Pa)
 < - Insufficient margin above background noise to allow accurate determination
 > - Length of throw greater than that able to be measured
 NR - Noise Rating number based upon room absorption of 10 dB
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TEST CERTIFICATE No. 9

ACOUSTIC AND AIRFLOW PERFORMANCE TEST OF VARIOUS AIR OUTLETS

SUPPLIED BY: PCJ INDUSTRIES CO LTD
TESTED BY: VIPAC ENGINEERS & SCIENTISTS LTD
TEST DATE: 11 / 08 / 2003
CLIENT: PCJ INDUSTRIES CO LTD
UNIT: Supply Air Register
 Trade Mark: "STREAM AIR"
 Type: SAR
 Size: 200mm x 1200mm
 Throw Pattern: Horizontal

TEST CONDITIONS				SOUND POWER LEVEL, dB re 1E-12 W						
Qs	Ps	T	NR	OCTAVE BAND CENTRE FREQUENCY (Hz)						
(l/s)	(Pa)	(m)		125	250	500	1000	2000	4000	8000
254	2	7.5	19	42.9	34.3	33.6	26.7	18.1	<15.9	<15.0
311	3	>8	24	45.0	40.2	38.5	32.1	25.5	<18.8	<15.4
383	5	>8	29	51.9	44.8	42.9	36.8	31.3	24.7	<16.7
442	6	>8	33	55.9	48.9	46.7	41.3	35.8	29.9	19.6
511	8	>8	37	59.5	52.3	51.2	46.3	41.0	35.7	25.7

LEGEND

Qs - Primary Air Flow Rate (l/s)
 Ps - Supply Static Pressure (Pa)
 < - Insufficient margin above background noise to allow accurate determination
 > - Length of throw greater than that able to be measured
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 T - Throw in meters to a terminal velocity of 0.25m/s



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