Construction Specialties™

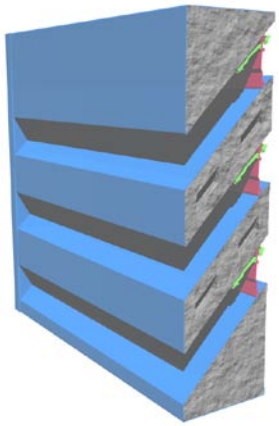
MODEL A12970

C/S 12″(304.8 mm) DUAL COMBINATION ACOUSTICAL LOUVER

AIRFLOW DATA

For a 4 Foot by 4 Foot Unit. *Tested with mil finish and no screen.*

- Free area = 3.50 ft^2
- Percent free area = 22.0%
- Free area velocity at point of beginning water penetration (@0.01 oz./ft^2 =1036 FPM (5.26m/s)
- Maximum recommended air intake velocity = 836 FPM (4.25 m/s)
  Air volume @ 836 FPM free area velocity = 2926 CFM (1.38 m^3/s)
  Pressure drop @ 836 FPM intake velocity = 0.06 in. H_2O (14.9 Pa)
- Maximum recommended air exhaust velocity = 1750 FPM (8.89 m/s)
  Air volume @ 1750 FPM free area velocity = 6125 CFM (2.89 m^3/s)
  Pressure drop @ 1750 FPM exhaust velocity = 0.26 in. H_2O (64.6 Pa)



SUGGESTED SPECIFICATIONS:

GENERAL: Furnish and install where indicated on the drawings C/S 12" (304.8 mm) DUAL COMBINATION ACOUSTICAL LOUVER MODEL **A12970** as manufactured by Construction Specialties, Inc. Cranford, New Jersey and Mississauga, Ontario. Complete details shall be submitted to the architect for approval prior to fabrication. Supplier must be a member of AMCA or BSRIA

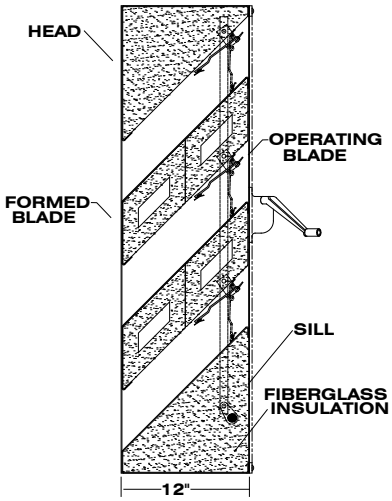
MATERIAL: Fixed blades and frame to be formed from 1100 series aluminum alloy. Interior acoustical material to be fiberglass insulation protected by a woven fire retardant (self-extinguishing) 100% polyester sheeting. Material thickness shall be as follows: Heads, sills, jambs, mullion, and fixed blades to be: 0.081" (2.06 mm). All fasteners to be non-corrosive. All louvers to be furnished with 5/8″ (15.87 mm) flattened expanded mesh, aluminum bird screen with a .055″ (1.4 mm) thick extruded aluminum frame. Screens and screen frames to be standard mill finish. Operating blades shall have ½" (12.7 mm) diameter, zamac alloy pinions operating in self-lubricating nylon bearings. All operating blades shall be operated by concealed drive arms at each jamb and assembled with stainless steel shoulder rivets. Drive arm to be interconnected by a 5/8" (15.88 mm) diameter torque bar. All louver blades and sills shall be equipped with vinyl jamb gaskets riveted to blade ends.

STRUCTURAL DESIGN: Structural supports shall be designed and furnished by the louver manufacturer to carry a wind load of not less than_____ psf (Pascals). (Note: If this paragraph is omitted or if the design wind load is not specified, the louvers will be manufactured in self-supporting units up to a maximum of 5′ (1524 mm) wide by 8′ (2438 mm) high. Any additional structural supports required to adequately secure these units within the opening shall be the responsibility of others.)

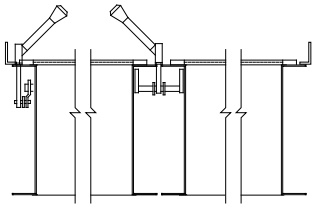
TEST DATA: The louver manufacturer shall submit test data from an accredited acoustical laboratory in accordance with ASTM Standard E90-90. The minimum acceptable performance through all octave bands is as follows: STC = 15

Frequency (hz):	63	125	250	500	1000	2000	4000	8000
Transmission Loss:	10	8	9	13	17	17	13	13
Noise Reduction:	16	14	15	19	23	23	19	19

FINISH: All louvers shall be finished with C/S Powder Coat, a coating to be 1.5 to 3 mil. thick full strength **100% resin Fluoropolymer coating. Finish to allow zero VOCs** to be emitted into facility of application. Finish to adhere to a 4H Hardness rating. All finishing procedures shall be one continuous operation in the plant of the manufacturer. **The coating shall meet or exceed all requirements of AAMA specification 2605-5** "Voluntary Specification for High Performance Organic Coatings on Architectural extrusions and Panels." The louver manufacturer shall supply an industry standard **20-year limited warranty against failure or excessive fading** of the Fluoropolymer Powder Coat finish. This limited warranty shall begin on the date of material shipment.



SECTION VIEW



PLAN VIEW

PERFORMANCE DATA MODEL A12970

Width in Inches and Meters

Height in Inches and Meters

	12	18	24	30	36	42	48	54	60
	0.30	0.46	0.61	0.76	0.91	1.07	1.22	1.37	1.52
24	**0.21**	**0.37**	**0.53**	**0.69**	**0.85**	**1.01**	**1.17**	**1.32**	**1.48**
0.61	0.02	0.03	0.05	0.06	0.08	0.09	0.11	0.12	0.14
30	**0.21**	**0.37**	**0.53**	**0.69**	**0.85**	**1.01**	**1.17**	**1.32**	**1.48**
0.76	0.02	0.03	0.05	0.06	0.08	0.09	0.11	0.12	0.14
36	**0.42**	**0.74**	**1.06**	**1.38**	**1.70**	**2.01**	**2.33**	**2.65**	**2.97**
0.91	0.04	0.07	0.10	0.13	0.16	0.19	0.22	0.25	0.28
42	**0.42**	**0.74**	**1.06**	**1.38**	**1.70**	**2.01**	**2.33**	**2.65**	**2.97**
1.07	0.04	0.07	0.10	0.13	0.16	0.19	0.22	0.25	0.28
48	**0.64**	**1.11**	**1.59**	**2.07**	**2.54**	**3.02**	**3.50**	**3.97**	**4.45**
1.22	0.06	0.10	0.15	0.19	0.24	0.28	0.33	0.37	0.41
54	**0.64**	**1.11**	**1.59**	**2.07**	**2.54**	**3.02**	**3.50**	**3.97**	**4.45**
1.37	0.06	0.10	0.15	0.19	0.24	0.28	0.33	0.37	0.41
60	**0.85**	**1.48**	**2.12**	**2.76**	**3.39**	**4.03**	**4.66**	**5.30**	**5.93**
1.52	0.08	0.14	0.20	0.26	0.31	0.37	0.43	0.49	0.55
66	**0.85**	**1.48**	**2.12**	**2.76**	**3.39**	**4.03**	**4.66**	**5.30**	**5.93**
1.68	0.08	0.14	0.20	0.26	0.31	0.37	0.43	0.49	0.55
72	**1.06**	**1.85**	**2.65**	**3.44**	**4.24**	**5.03**	**5.83**	**6.62**	**7.42**
1.83	0.10	0.17	0.25	0.32	0.39	0.47	0.54	0.62	0.69
78	**1.06**	**1.85**	**2.65**	**3.44**	**4.24**	**5.03**	**5.83**	**6.62**	**7.42**
1.98	0.10	0.17	0.25	0.32	0.39	0.47	0.54	0.62	0.69
84	**1.27**	**2.23**	**3.18**	**4.13**	**5.09**	**6.04**	**6.99**	**7.95**	**8.90**
2.13	0.12	0.21	0.30	0.38	0.47	0.56	0.65	0.74	0.83
90	**1.27**	**2.23**	**3.18**	**4.13**	**5.09**	**6.04**	**6.99**	**7.95**	**8.90**
2.29	0.12	0.21	0.30	0.38	0.47	0.56	0.65	0.74	0.83
96	**1.48**	**2.60**	**3.71**	**4.82**	**5.93**	**7.05**	**8.16**	**9.27**	**10.39**
2.44	0.14	0.24	0.34	0.45	0.55	0.65	0.76	0.86	0.97
102	**1.48**	**2.60**	**3.71**	**4.82**	**5.93**	**7.05**	**8.16**	**9.27**	**10.39**
2.59	0.14	0.24	0.34	0.45	0.55	0.65	0.76	0.86	0.97
108	**1.70**	**2.97**	**4.24**	**5.51**	**6.78**	**8.05**	**9.33**	**10.60**	**11.87**
2.74	0.16	0.28	0.39	0.51	0.63	0.75	0.87	0.98	1.10
114	**1.70**	**2.97**	**4.24**	**5.51**	**6.78**	**8.05**	**9.33**	**10.60**	**11.87**
2.90	0.16	0.28	0.39	0.51	0.63	0.75	0.87	0.98	1.10
120	**1.91**	**3.34**	**4.77**	**6.20**	**7.63**	**9.06**	**10.49**	**11.92**	**13.35**
3.05	0.18	0.31	0.44	0.58	0.71	0.84	0.97	1.11	1.24
126	**1.91**	**3.34**	**4.77**	**6.20**	**7.63**	**9.06**	**10.49**	**11.92**	**13.35**
3.20	0.18	0.31	0.44	0.58	0.71	0.84	0.97	1.11	1.24
132	**2.12**	**3.71**	**5.30**	**6.89**	**8.48**	**10.07**	**11.66**	**13.25**	**14.84**
3.35	0.20	0.34	0.49	0.64	0.79	0.94	1.08	1.23	1.38
138	**2.12**	**3.71**	**5.30**	**6.89**	**8.48**	**10.07**	**11.66**	**13.25**	**14.84**
3.51	0.20	0.34	0.49	0.64	0.79	0.94	1.08	1.23	1.38
144	**2.33**	**4.08**	**5.83**	**7.58**	**9.33**	**11.07**	**12.82**	**14.57**	**16.32**
3.66	0.22	0.38	0.54	0.70	0.87	1.03	1.19	1.35	1.52
150	**2.33**	**4.08**	**5.83**	**7.58**	**9.33**	**11.07**	**12.82**	**14.57**	**16.32**
3.81	0.22	0.38	0.54	0.70	0.87	1.03	1.19	1.35	1.52
156	**2.54**	**4.45**	**6.36**	**8.27**	**10.17**	**12.08**	**13.99**	**15.90**	**17.80**
3.96	0.24	0.41	0.59	0.77	0.94	1.12	1.30	1.48	1.65
162	**2.54**	**4.45**	**6.36**	**8.27**	**10.17**	**12.08**	**13.99**	**15.90**	**17.80**
4.11	0.24	0.41	0.59	0.77	0.94	1.12	1.30	1.48	1.65
168	**2.76**	**4.82**	**6.89**	**8.95**	**11.02**	**13.09**	**15.15**	**17.22**	**19.29**
4.27	0.26	0.45	0.64	0.83	1.02	1.22	1.41	1.60	1.79
174	**2.76**	**4.82**	**6.89**	**8.95**	**11.02**	**13.09**	**15.15**	**17.22**	**19.29**
4.42	0.26	0.45	0.64	0.83	1.02	1.22	1.41	1.60	1.79
180	**2.97**	**5.19**	**7.42**	**9.64**	**11.87**	**14.09**	**16.32**	**18.54**	**20.77**
4.57	0.28	0.48	0.69	0.90	1.10	1.31	1.52	1.72	1.93
186	**2.97**	**5.19**	**7.42**	**9.64**	**11.87**	**14.09**	**16.32**	**18.54**	**20.77**
4.72	0.28	0.48	0.69	0.90	1.10	1.31	1.52	1.72	1.93
192	**3.18**	**5.56**	**7.95**	**10.33**	**12.72**	**15.10**	**17.49**	**19.87**	**22.25**
4.88	0.30	0.52	0.74	0.96	1.18	1.40	1.62	1.85	2.07
198	**3.18**	**5.56**	**7.95**	**10.33**	**12.72**	**15.10**	**17.49**	**19.87**	**22.25**
5.03	0.30	0.52	0.74	0.96	1.18	1.40	1.62	1.85	2.07
204	**3.39**	**5.93**	**8.48**	**11.02**	**13.56**	**16.11**	**18.65**	**21.19**	**23.74**
5.18	0.31	0.55	0.79	1.02	1.26	1.50	1.73	1.97	2.21

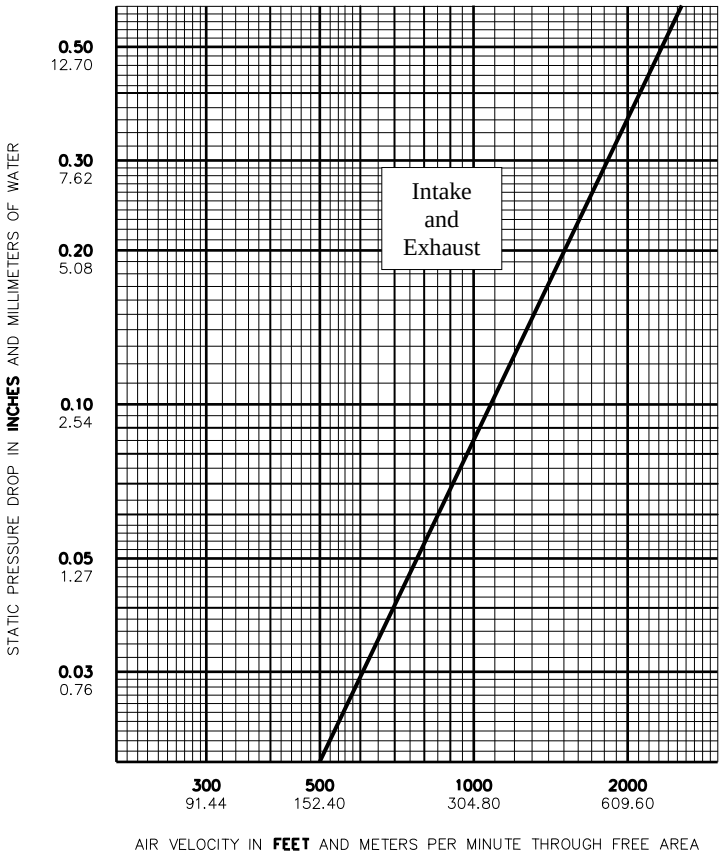
Upper Numerals English Units/Lower Numerals Metric Units

Water Penetration Statement

AMCA defines the point of beginning water penetration as the free area velocity at which the AMCA water test has yielded 0.01 or less ounces of water per square foot of louver free area during a 15-minute test period.

Tests on non-drainable louvers have shown that the point of beginning water penetration for 4 and 6-inch deep louvers usually occurs at between 600 and 800 FPM free area velocity. In addition, the total amounts of water penetration for non-drainable louvers significantly higher in comparison to drainable louvers when intake velocities exceed the 600 to 800 FPM range.

Because of these characteristics, C/S recommends that drainable blade louvers be used for air intake applications whenever water entrainment must be minimized. In addition, we suggest that non-drainable louver air intake velocities be held to 600 FPM through the free area. This will help to limit significant water penetration during times of average rain conditions.



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