

Fixed Louvers



CVSA 
LOUVER SERIES



**HIGH PERFORMANCE 2" FIXED LOUVER
MODEL FL-D-2**

STANDARD CONSTRUCTION:

Frame: .060 Extruded Aluminum, 2.16" Deep

Blade: .060 Extruded Aluminum positioned on a 37° angle on approximately 1.47" centers

Birdscreen: .75" x .051" Flattened Aluminum in removable frame. Screen is mounted as standard on inside (rear) as looking from exterior of building.

Finish: Mill Aluminum (Std.)

Minimum Size: 12 x 12

Maximum Single Section: 120"w x 84"h or 84"w x 120"h

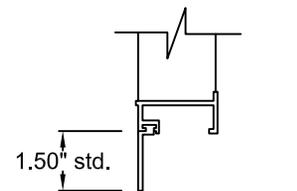
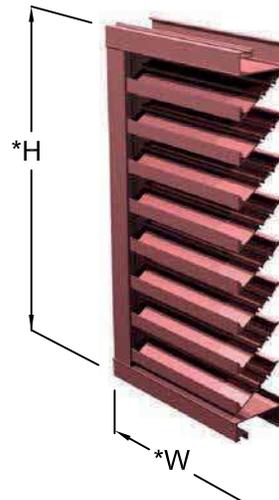
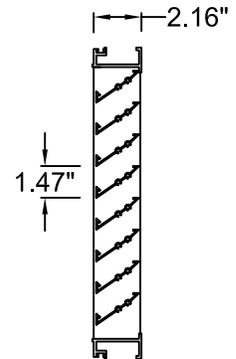
Note: 10' max width

OPTIONS:

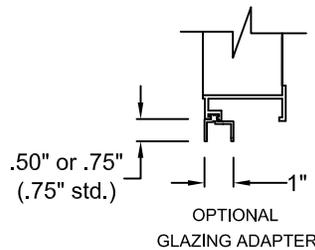
- Flanged Frame (1.50" std.), (1" std for shapes R_)
- Custom Flange (1", 2" , or 3"), (1.5", 2", or 3" for shapes R_)
- Extended Sill
- Glazing Adapter (.50" or .75")
- Insect Screen (Other Screens Available, See Screen Page)
- Filter Racks (no screen)
- Security Bars
- Hinged Sub Frame
- Welded Construction (Wind Load +/- 50 psf)
- Blank-off, Alum., non-insulated, no screen, non-removeable
- Blank-off, Alum., non-insulated, with bird screen or insect screen
- Blank-off, Alum., insulated double wall, with bird screen, removable
- Blank-off, Alum., insulated double wall, no screen, non-removeable

AVAILABLE FINISHES:

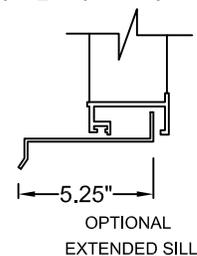
- Powder Polyester TGIC** (2 coats) baked on at 410°F, 2.5 to 3.5 mils Meets AAMA-2603 Standards
 - Powder Super durable polyester** (2 coats) baked on at 410°F, 2.5 to 3.5 mils Meets AAMA-2604-05 Standards
 - Acrylic baked enamel** (ACRA-BOND® ULTRA) by AkzoNobel baked on at 350°F, 0.8 to 1.2 mils dry Meets AAMA-2603 Standards
 - Kynar®** (ALUM*A*STAR®) 2 coats by AkzoNobel baked on at 450°F, 1.2 to 1.6 mils dry Meets AAMA-2604-04 Standards
 - Kynar 500®** or **HYLAR® 5000 70% TRINAR®** (2 coats) by AkzoNobel baked on at 450°F, 1.2 to 1.6 mils dry, Meets AAMA-2605-05 Standards
 - Kynar 500®** or **HYLAR® 5000 (70% Tri-Escnt II)** (2 coats) by AkzoNobel, a superior finish to other metallic or anodized finishes. A blend of mica, ceramic, and inorganic pigments creates subtle yet dazzling design that goes beyond metallic color without the requirement of a clear coat. 14 standard colors - custom colors available. Baked on at 415°F, 1.4 to 1.8 mils dry, meets AAMA 2605-05.
 - Clear Anodize 204 R-1 Class II** (AA-C22A31)(0.4 to 0.7 mil)
 - Clear Anodize 215 R-1 Class I** (AA-C22A41)(>0.7 mil)
 - Integral Color Anodize** (AA-C22A42)(>0.7 mil)
- Clear coat available for all above finishes.
 - Hylar® 5000 is a registered trademark of Solvay Solexis, Inc.
 - Kynar® 500 is a registered trademark of Arkema.
 - ALUM*A*STAR® 50 and TRINAR® are registered trademarks of AkzoNobel
 - ACRA-BOND® ULTRA is a registered trademark of AkzoNobel



OPTIONAL FLANGE
(except R_ Shapes, 1" optional std)



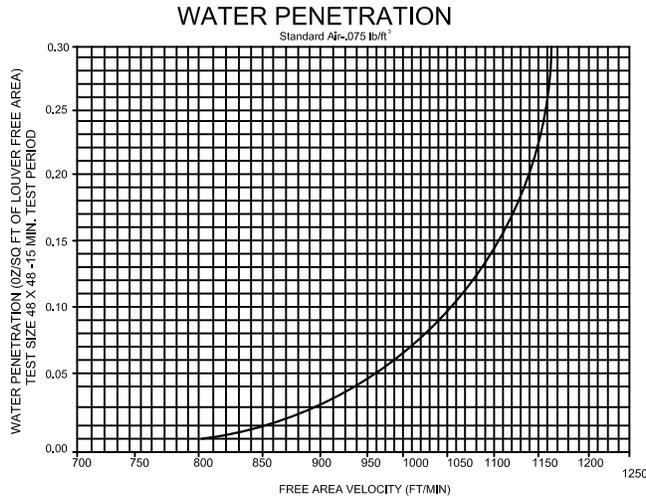
OPTIONAL
GLAZING ADAPTER



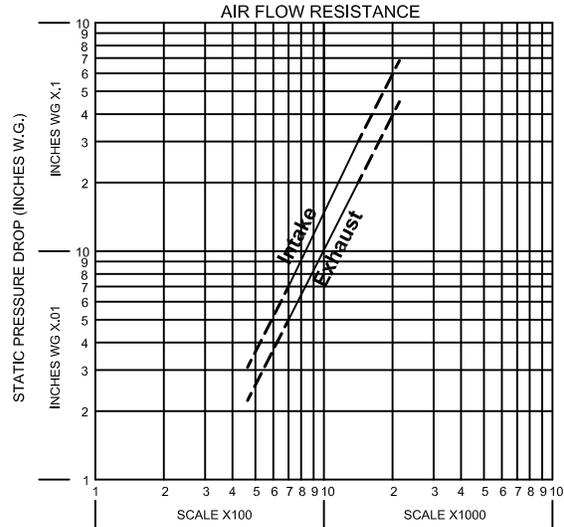
OPTIONAL
EXTENDED SILL

*Width and Height dimensions are approximately 1/4" under listed size.

**MODEL FL-D-2
HIGH PERFORMANCE 2" FIXED LOUVER**



Beginning point of WATER PENETRATION
is
805 fpm
free area velocity at .01 oz. of water penetration



FREE AREA VELOCITY (FT/MIN)
Based on STANDARD AIR-.075 lb. per cubic foot.
Ratings do not include the effects of screen.
Test size 48" x 48"

FREE AREA CHART (SQURE FEET)

Louver Height Inches	Louver Width In Inches																Louver Height Inches			
	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102		108	114	120
12	0.33	0.54	0.74	0.95	1.16	1.36	1.57	1.77	1.98	2.18	2.39	2.59	2.80	3.00	3.21	3.41	3.62	3.82	4.03	12
18	0.57	0.92	1.27	1.63	1.98	2.33	2.68	3.03	3.38	3.74	4.09	4.44	4.79	5.14	5.49	5.85	6.20	6.55	6.90	18
24	0.81	1.31	1.81	2.30	2.80	3.30	3.80	4.30	4.79	5.29	5.79	6.29	6.79	7.28	7.78	8.28	8.78	9.28	9.77	24
30	1.11	1.79	2.47	3.15	3.83	4.52	5.20	5.88	6.56	7.24	7.93	8.61	9.29	9.97	10.65	11.33	12.02	12.70	13.38	30
36	1.35	2.19	3.02	3.85	4.69	5.52	6.35	7.19	8.02	8.85	9.69	10.52	11.35	12.19	13.02	13.85	14.69	15.52	16.35	36
42	1.60	2.58	3.57	4.55	5.54	6.52	7.51	8.49	9.48	10.46	11.45	12.43	13.42	14.40	15.39	16.37	17.36	18.34	19.33	42
48	1.85	2.98	4.12	5.26	6.39	7.53	8.66	9.80	10.94	12.07	13.21	14.35	15.48	16.62	17.75	18.89	20.03	21.16	22.30	48
54	2.09	3.38	4.67	5.96	7.24	8.53	9.82	11.11	12.39	13.68	14.97	16.26	17.55	18.83	20.12	21.41	22.70	23.98	25.27	54
60	2.34	3.78	5.22	6.66	8.10	9.54	10.97	12.41	13.85	15.29	16.73	18.17	19.61	21.05	22.49	23.93	25.37	26.81	28.25	60
66	2.53	4.09	5.65	7.21	8.77	10.33	11.89	13.45	15.00	16.56	18.12	19.68	21.24	22.80	24.36	25.92	27.48	29.03	30.59	66
72	2.77	4.48	6.18	7.89	9.59	11.30	13.00	14.71	16.41	18.12	19.82	21.53	23.23	24.94	26.64	28.35	30.06	31.76	33.47	72
78	3.01	4.86	6.71	8.56	10.42	12.27	14.12	15.97	17.82	19.67	21.52	23.38	25.23	27.08	28.93	30.78	32.63	34.49	36.34	78
84	3.25	5.24	7.24	9.24	11.24	13.24	15.23	17.23	19.23	21.23	23.23	25.22	27.22	29.22	31.22	33.22	35.21	37.21	39.21	84
90	3.48	5.63	7.77	9.92	12.06	14.21	16.35	18.49	20.64	22.78	24.93	27.07	29.22	31.36	33.50	35.65	37.79	39.94	42.08	90
96	3.72	6.01	8.30	10.59	12.88	15.18	17.47	19.76	22.05	24.34	26.63	28.92	31.21	33.50	35.79	38.08	40.37	42.66	44.95	96
102	4.02	6.50	8.97	11.45	13.92	16.40	18.87	21.35	23.82	26.30	28.77	31.25	33.72	36.20	38.67	41.15	43.62	46.10	48.57	102
108	4.27	6.89	9.52	12.15	14.77	17.40	20.03	22.65	25.28	27.91	30.53	33.16	35.79	38.41	41.04	43.67	46.29	48.92	51.55	108
114	4.51	7.29	10.07	12.85	15.63	18.41	21.18	23.96	26.74	29.52	32.30	35.07	37.85	40.63	43.41	46.19	48.96	51.74	54.52	114
120	4.76	7.69	10.62	13.55	16.48	19.41	22.34	25.27	28.20	31.13	34.06	36.99	39.92	42.85	45.78	48.71	51.63	54.56	57.49	120

SUGGESTED SPECIFICATION

Furnish and install louvers as hereinafter specified where shown on plans or as described in schedules. Louvers shall be stationary drainable type with drain gutters in each blade and downspouts in jambs and mullions. Stationary drainable blades shall be contained within a 2.16" frame. Louver components (heads, jambs, sills, blades, and mullions) shall be factory assembled by the louver manufacturer. Louver sizes too large for shipping shall be built up by the contractor from factory assembled louver sections to provide overall sizes required. Louver design shall incorporate structural supports required to withstand a wind load of 30 lbs. Per sq. ft. (equivalent of a 110 mph).

Published louver performance data bearing the AMCA Certified Ratings Seal for Air Performance & Water Penetration must be submitted for approval prior to fabrication and must demonstrate pressure drop and water penetration equal to or less than the CVS model specified.

Louvers shall be model FL-D-2, 6063-T6 extruded aluminum construction as follows:
 Frame: 2.16" deep, .060 nominal wall thickness.
 Blades: .060 nominal wall thickness. Drainable.
 Blades are positioned at 37-degree angle and spaced approximately 1.47" center to center.
 Screen: .75" x .051" (19 x 1.3) expanded, flattened aluminum in removable frame.



MODEL FL-D-4 HIGH PERFORMANCE 4" FIXED LOUVER

STANDARD CONSTRUCTION:

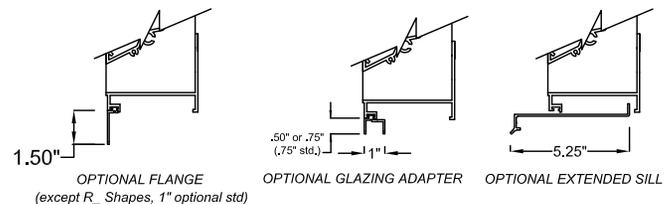
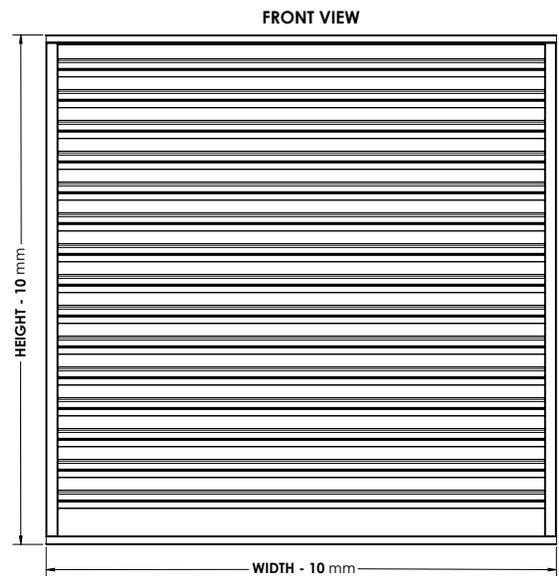
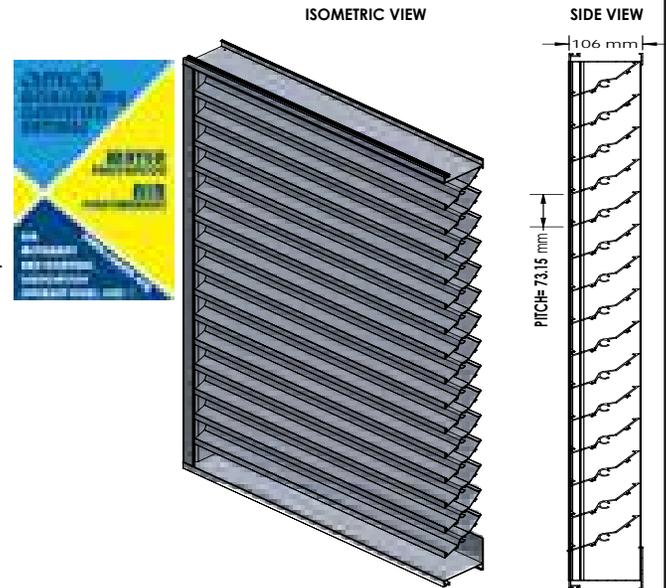
- Frame:** 0.081" (2.00 mm) Extruded Aluminum, 4.19" (106 mm) Deep
- Blade:** 0.081" (2.00 mm) Extruded Aluminum positioned on a 37° angle on approximately 2.88" (73.15 mm) centers.
- Birdscreen:** 0.5" x .039" (12 mm x 1 mm) wire mesh or flattened aluminum. Screen is mounted as standard on inside (rear) as looking from exterior of building.
- Finish:** RAL 9010 (Std.). For other finishes, please contact the manufacturer.
- Minimum Section Size:** 12" x 12" (300 mm x 300 mm)
- Maximum Single Section Size:** 120" x 84" (3000 mm x 2100 mm) / 84" x 120" (2100 mm x 3000 mm)

OPTIONS:

- FBC Approved for +/- 50 PSF (FL 12335.1)
- Flanged Frame (1.50" std.)
- Custom Frame (1", 2", or 3"), (1.5", 2", 3" for shapes R)
- Extended Sill
- Security Bars
- Filter Racks (No screen)
- Insect Screen (Other screens available)
- Glazing Adapter (0.50" or 0.75")
- Hinged Sub Frame
- Split Deflection 45°/ 0° blades
- Welded Construction (Wind load +/- 50 psf 0.125" (6 mm) construction
- Blank-off, Alum., non-insulated, no screen, non-removable
- Blank-off, Alum., non-insulated, with bird screen or insect screen
- Blank-off, Alum., insulated double wall, with bird screen, removable
- Blank-off, Alum., insulated double wall, no screen, non-removable

AVAILABLE FINISHES:

- Powder Polyester TGIC** (2 coats) baked on at 410°F, 2.5 to 3.5 mils Meets AAMA-2603 Standards
- Powder Super durable polyester** (2 coats) baked on at 410°F, 2.5 to 3.5 mils Meets AAMA-2604-05 Standards
- Acrylic baked enamel** (ACRA-BOND® ULTRA) by AkzoNobel baked on at 350°F, 0.8 to 1.2 mils dry Meets AAMA-2603 Standards
- Kynar®** (ALUM*A*STAR®) 2 coats by AkzoNobel baked on at 450°F, 1.2 to 1.6 mils dry Meets AAMA-2604-05 Standards
- Kynar 500®** or HYLAR® 5000 70% TRINAR® (2 coats) by AkzoNobel baked on at 450°F, 1.2 to 1.6 mils dry, Meets AAMA-2605-05 Standards
- Kynar 500®** or HYLAR® 5000 (70% Tri-Scint II) (2 coats) by AkzoNobel, a superior finish to other metallic or anodized finishes. A blend of mica, ceramic, and inorganic pigments creates subtle yet dazzling design that goes beyond metallic color without the requirement of a clear coat. 14 standard colors - custom colors available. Baked on at 415°F, 1.4 to 1.8 mils dry, meets AAMA 2605-05.
- Clear Anodize** 204 R-1 Class II (AA-C22A31)(0.4 to 0.7 mil)
- Clear Anodize** 215 R-1 Class I (AA-C22A41)(>0.7 mil)
- Integral Color Anodize** (AA-C22A42)(>0.7 mil)
- Clear coat available for all above finishes.
- Hylar® 5000 is a registered trademark of Solvay Solexis, Inc.
- Kynar® 500 is a registered trademark of Arkema.
- ALUM*A*STAR® 50 and TRINAR® are registered trademarks of AkzoNobel
- ACRA-BOND® ULTRA is a registered trademark of AkzoNobel

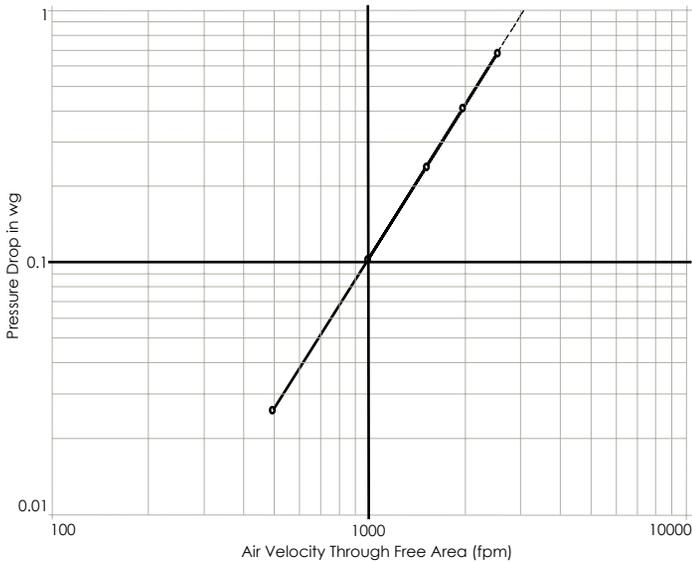


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HIGH PERFORMANCE 4" FIXED LOUVER MODEL FL-D-4	Cat ID: FL-D-4	Rev. No.: 01	Date: September 2021	Page: 1/4
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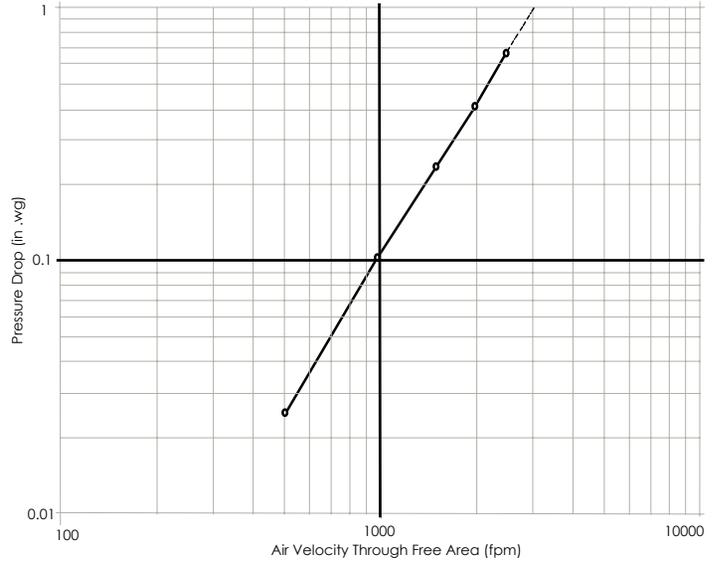
PRESSURE DROP - INTAKE



Tested in accordance with ANSI/AMCA 500-L, Figure 5.5
 Test sample size is 1220 mm x 1220 mm (48 in. x 48 in.)
 Air performance data are based on Intake performance with standard air - 0.075 lb/ft³

Detail No.	V _{Free Area} (fpm)	ΔP _{Ds} (in. wg)
1	2497	0.68
2	1989	0.43
3	1493	0.24
4	1001	0.11
5	499	0.03

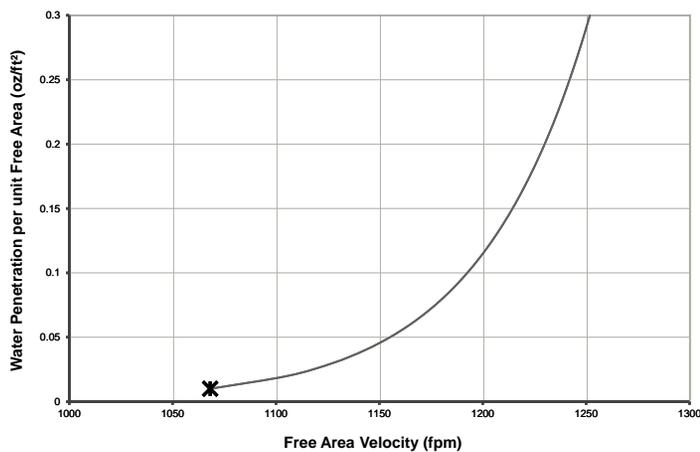
PRESSURE DROP - EXHAUST



Tested in accordance with ANSI/AMCA 500-L, Figure 5.5
 Test sample size is 1220 mm x 1220 mm (48 in. x 48 in.)
 Air performance data are based on Exhaust performance with standard air - 0.075 lb/ft³

Detail No.	V _{Free Area} (fpm)	ΔP _{Ds} (in. wg)
1	2500	0.68
2	1992	0.41
3	1493	0.24
4	998	0.10
5	499	0.02

WATER PENETRATION



— Water Penetration of CVS FL-D-4 X Beginning of Water Penetration

Test sample size is 1220 mm x 1220 mm 48 in. x 48 in.
 Beginning of water penetration per AMCA Publication 511 Section 8.3.2 based on AMCA measured free area: **1068.3 fpm**

Detail No.	V _{Free Area} (fpm)	Net Weight (oz./ft. ²)
1	927	0.001
2	1031	0.003
3	1083	0.016
4	1135	0.035

SUGGESTED SPECIFICATION

Furnish and install louvers as hereinafter specified where shown on plans or as described in schedules. Louvers shall be stationary drainable type with drain gutters in each blade and downspouts in jambs and mullions. Stationary drainable blades shall be contained within a 4.19" (106 mm) frame. Louver components (heads, jambs, sills, blades and mullions) shall be factory assembled by the louver manufacturer. Louver sizes too large for shipping shall be built by the contractor from factory assembled louver sections to provide overall sizes required.

Louvers shall be model CVS FL-D-4, 6063-T6 Aluminum construction as follows:

- FRAME: 4.19" (106 mm) deep, 0.081" (2 mm) nominal wall thickness.
- BLADES: 0.081" (2 mm) nominal wall thickness. Blades are positioned at 39° angle and spaced approx. 2.88" (73.15 mm) center to center.
- SCREEN: 0.5" x 0.039" (12 mm x 1 mm) wire mesh or flattened aluminium on the inside (rear).
- FINISH: Select finish specification from CVS Finishes brochure.

Published louver performance bearing the AMCA Certified Ratings Seal for Air Performance & Water Penetration must be submitted for approval prior to fabrication and must demonstrate pressure drop and water penetration equal to or less than the CVS model specified.

AMCA Standard 500 provides a reasonable basis for testing and rating louvers. Testing to AMCA 500-L is performed under a certain set of laboratory conditions. This does not guarantee that other conditions will not occur in the actual environment where louvers must operate. The louver system should be designed with a reasonable safety factor for louver performance to ensure protection from water carryover, design with a performance level somewhat below maximum desired pressure drop and 0.01 oz./sq/ ft. of water penetration.



FREE AREA CHART FL-D-4

Height (H)	Width (W)																		
	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
300 mm	0.33	0.54	0.74	0.94	1.15	1.35	1.55	1.76	1.96	2.16	2.36	2.57	2.77	2.97	3.18	3.38	3.58	3.79	3.99
450 mm	0.03	0.05	0.06	0.08	0.10	0.12	0.14	0.15	0.17	0.19	0.21	0.23	0.24	0.26	0.28	0.30	0.31	0.33	0.35
600 mm	0.58	0.93	1.28	1.64	1.99	2.34	2.69	3.04	3.40	3.75	4.10	4.45	4.80	5.16	5.51	5.86	6.21	6.56	6.92
750 mm	0.05	0.08	0.11	0.14	0.18	0.21	0.24	0.27	0.30	0.33	0.36	0.39	0.42	0.46	0.49	0.52	0.55	0.58	0.61
900 mm	0.82	1.33	1.83	2.33	2.83	3.33	3.83	4.33	4.83	5.33	5.83	6.33	6.84	7.34	7.84	8.34	8.84	9.34	9.84
1050 mm	0.07	0.12	0.16	0.21	0.25	0.29	0.34	0.38	0.43	0.47	0.52	0.56	0.61	0.65	0.69	0.74	0.78	0.83	0.87
1200 mm	1.07	1.72	2.37	3.02	3.67	4.32	4.97	5.62	6.27	6.92	7.57	8.22	8.87	9.52	10.17	10.82	11.47	12.12	12.77
1350 mm	0.09	0.15	0.21	0.27	0.33	0.38	0.44	0.50	0.56	0.61	0.67	0.73	0.79	0.84	0.90	0.96	1.02	1.07	1.13
1500 mm	1.32	2.11	2.91	3.71	4.51	5.31	6.11	6.91	7.71	8.51	9.31	10.11	10.91	11.71	12.51	13.30	14.10	14.90	15.70
1650 mm	0.12	0.19	0.26	0.33	0.40	0.47	0.54	0.61	0.68	0.75	0.83	0.90	0.97	1.04	1.11	1.18	1.25	1.32	1.39
1800 mm	1.56	2.51	3.46	4.41	5.35	6.30	7.25	8.20	9.15	10.10	11.04	11.99	12.94	13.89	14.84	15.79	16.73	17.68	18.63
1950 mm	0.14	0.22	0.31	0.39	0.47	0.56	0.64	0.73	0.81	0.90	0.98	1.06	1.15	1.23	1.32	1.40	1.49	1.57	1.65
2100 mm	1.73	2.78	3.83	4.88	5.93	6.98	8.03	9.08	10.14	11.19	12.24	13.29	14.34	15.39	16.44	17.49	18.54	19.59	20.64
2250 mm	0.16	0.26	0.36	0.45	0.55	0.65	0.75	0.84	0.94	1.04	1.14	1.24	1.33	1.43	1.53	1.63	1.72	1.82	1.92
2400 mm	1.97	3.16	4.36	5.56	6.75	7.95	9.14	10.34	11.54	12.73	13.93	15.12	16.32	17.52	18.71	19.91	21.10	22.30	23.50
2550 mm	0.18	0.29	0.40	0.51	0.62	0.74	0.85	0.96	1.07	1.18	1.29	1.40	1.51	1.62	1.73	1.84	1.95	2.06	2.17
2700 mm	2.21	3.56	4.90	6.25	7.59	8.94	10.28	11.63	12.97	14.32	15.66	17.01	18.35	19.70	21.04	22.39	23.73	25.08	26.42
2850 mm	0.20	0.33	0.45	0.58	0.70	0.82	0.95	1.07	1.20	1.32	1.44	1.57	1.69	1.82	1.94	2.06	2.19	2.31	2.44
3000 mm	2.46	3.96	5.45	6.94	8.44	9.93	11.42	12.92	14.41	15.91	17.40	18.89	20.39	21.88	23.38	24.87	26.36	27.86	29.35
3150 mm	0.23	0.36	0.50	0.64	0.77	0.91	1.05	1.19	1.32	1.46	1.60	1.74	1.87	2.01	2.15	2.28	2.42	2.56	2.70
3300 mm	2.70	4.35	5.99	7.63	9.28	10.92	12.56	14.21	15.85	17.49	19.14	20.78	22.42	24.07	25.71	27.35	28.99	30.64	32.28
3450 mm	0.25	0.40	0.55	0.70	0.85	1.00	1.15	1.30	1.45	1.60	1.75	1.90	2.05	2.20	2.35	2.51	2.66	2.81	2.96
3600 mm	2.95	4.74	6.53	8.33	10.12	11.91	13.70	15.49	17.29	19.08	20.87	22.66	24.45	26.25	28.04	29.83	31.62	33.41	35.21
3750 mm	0.26	0.42	0.58	0.74	0.90	1.06	1.22	1.38	1.53	1.69	1.85	2.01	2.17	2.33	2.49	2.65	2.81	2.97	3.13
3900 mm	3.20	5.14	7.08	9.02	10.96	12.90	14.84	16.78	18.73	20.67	22.61	24.55	26.49	28.43	30.37	32.31	34.26	36.20	38.14
4050 mm	0.28	0.46	0.63	0.80	0.97	1.15	1.32	1.49	1.66	1.84	2.01	2.18	2.35	2.53	2.70	2.87	3.04	3.22	3.39
4200 mm	3.44	5.53	7.62	9.71	11.80	13.89	15.98	18.07	20.16	22.25	24.34	26.43	28.52	30.61	32.70	34.79	36.88	38.97	41.06
4350 mm	0.30	0.49	0.68	0.86	1.05	1.23	1.42	1.60	1.79	1.98	2.16	2.35	2.53	2.72	2.91	3.10	3.29	3.48	3.67
4500 mm	3.69	5.93	8.16	10.40	12.64	14.88	17.12	19.36	21.60	23.84	26.08	28.32	30.56	32.80	35.04	37.28	39.52	41.76	44.00
4650 mm	0.33	0.53	0.72	0.92	1.12	1.32	1.52	1.72	1.92	2.12	2.32	2.52	2.71	2.91	3.11	3.31	3.51	3.71	3.91
4800 mm	102	162	222	282	342	402	462	522	582	642	702	762	822	882	942	1002	1062	1122	1182
4950 mm	0.35	0.56	0.77	0.99	1.20	1.41	1.62	1.83	2.05	2.26	2.47	2.68	2.90	3.11	3.32	3.53	3.74	3.95	4.16
5100 mm	108	168	228	288	348	408	468	528	588	648	708	768	828	888	948	1008	1068	1128	1188
5250 mm	0.37	0.60	0.82	1.05	1.27	1.50	1.72	1.95	2.17	2.40	2.63	2.85	3.08	3.31	3.53	3.76	3.99	4.22	4.45
5400 mm	114	174	234	294	354	414	474	534	594	654	714	774	834	894	954	1014	1074	1134	1194
5550 mm	0.39	0.63	0.87	1.11	1.35	1.59	1.82	2.06	2.30	2.54	2.78	3.02	3.26	3.50	3.74	3.98	4.22	4.46	4.70
5700 mm	120	180	240	300	360	420	480	540	600	660	720	780	840	900	960	1020	1080	1140	1200
5850 mm	0.41	0.67	0.92	1.17	1.42	1.67	1.93	2.18	2.43	2.68	2.93	3.19	3.44	3.69	3.94	4.19	4.44	4.69	4.94

--- Louvers will be manufactured in multi-section configuration for these highlighted sizes.



Central Ventilation Systems certifies that FL-D-4 shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to Air Performance and Water Penetration ratings.





HIGH PERFORMANCE 4" FIXED LOUVER MODEL FL-D-4

STANDARD CONSTRUCTION:

Frame: .081 Extruded Aluminum, 4.19" Deep

Blade: .081 Extruded Aluminum positioned on a 37° angle on approximately 2.88" centers

Birdscreen: .75" x .051" Flattened Aluminum in removable frame. Screen is mounted as standard on inside (rear) as looking from exterior of building.

Finish: Mill Aluminum (Std.)

Minimum Size: 12 x12

Maximum Single Section: 120"w x 84"h or 84"w x 120"h

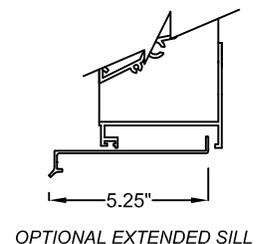
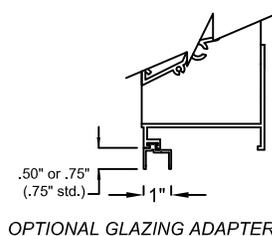
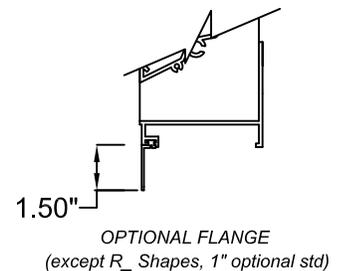
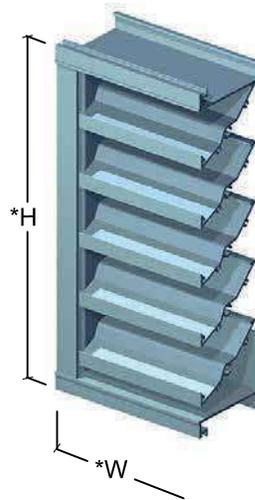
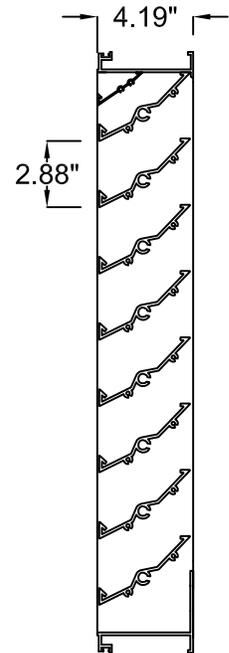
Note: 10' max width

OPTIONS:

- FBC Approved for +/- 50 PSF (FL 12335.1)
- Flanged Frame (1.50" std.), (1" std for shapes R_)
- Custom Flange (1", 2" , or 3"), (1.5", 2", or 3" for shapes R_)
- Extended Sill
- Glazing Adapter (.50" or .75")
- Insect Screen (Other Screens Available, See Screen Page)
- Filter Racks (no screen)
- Security Bars
- Hinged Sub Frame
- Split Deflection 45°/ 0° Blades
- Welded Construction (Wind Load +/- 50 psf)
- .125" Construction
- Blank-off, Alum., non-insulated, no screen, non-removeable
- Blank-off, Alum., non-insulated, with bird screen or insect screen
- Blank-off, Alum., insulated double wall, with bird screen, removable
- Blank-off, Alum., insulated double wall, no screen, non-removeable

AVAILABLE FINISHES:

- Powder Polyester TGIC** (2 coats) baked on at 410°F, 2.5 to 3.5 mils Meets AAMA-2603 Standards
- Powder Super durable polyester** (2 coats) baked on at 410°F , 2.5 to 3.5 mils Meets AAMA-2604-05 Standards
- Acrylic baked enamel (ACRA-BOND® ULTRA)** by AkzoNobel baked on at 350°F, 0.8 to 1.2 mils dry Meets AAMA-2603 Standards
- Kynar® (ALUM*A*STAR®)** 2 coats by AkzoNobel baked on at 450°F, 1.2 to 1.6 mils dry Meets AAMA-2604-05 Standards
- Kynar 500® or HYLAR® 5000 70% TRINAR®** (2 coats) by AkzoNobel baked on at 450°F, 1.2 to 1.6 mils dry, Meets AAMA-2605-05 Standards
- Kynar 500® or HYLAR® 5000 (70% Tri-Escent II)** (2 coats) by AkzoNobel, a superior finish to other metallic or anodized finishes. A blend of mica, ceramic, and inorganic pigments creates subtle yet dazzling design that goes beyond metallic color without the requirement of a clear coat. 14 standard colors - custom colors available. Baked on at 415°F, 1.4 to 1.8 mils dry, meets AAMA 2605-05.
- Clear Anodize 204 R-1 Class II (AA-C22A31)**(0.4 to 0.7 mil)
- Clear Anodize 215 R-1 Class I (AA-C22A41)**(>0.7 mil)
- Integral Color Anodize (AA-C22A42)**(>0.7 mil)
 - Clear coat available for all above finishes.
 - Hylar® 5000 is a registered trademark of Solvay Solexis, Inc.
 - Kynar® 500 is a registered trademark of Arkema.
 - ALUM*A*STAR® 50 and TRINAR® are registered trademarks of AkzoNobel
 - ACRA-BOND® ULTRA is a registered trademark of AkzoNobel



*Width and Height dimensions are approximately 1/4" under listed size.

MODEL FL-D-4
HIGH PERFORMANCE 4" FIXED LOUVER

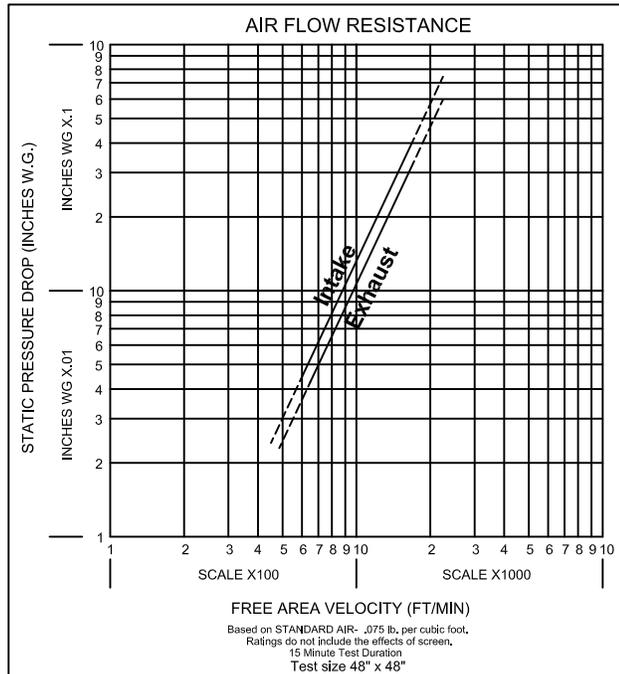
SUGGESTED SPECIFICATION

Finish and install louvers as hereinafter specified where shown on plans or as described in schedules. Louvers shall be stationary drainable type with drain gutters in each blade and downspouts in jambs and mullions. Stationary drainable blades shall be contained within a 4.19" frame. Louver components (heads, jambs, sills, blades, and mullions) shall be factory assembled by the louver manufacturer. Louver sizes too large for shipping shall be built up by the contractor from factory assembled louver sections to provide overall sizes required. Louver design shall incorporate structural supports required to withstand a wind load of 25 lbs. per sq. ft. (optional 50 lbs. per sq. ft.) (equivalent of a 100 mph wind).

Louvers shall be CVS FL-D-4, 6063-T5 aluminum construction as follows:
 FRAME: 4.19" deep, .081" nominal wall thickness
 BLADES: .081" nominal wall thickness. Blades are positioned at 39° angle and spaced approximately 2.88" center to center.
 SCREEN: .75" x .051" (19 x 1.3) expanded, flattened aluminum in removable frame.
 FINISH: Select finish specification from CVS Finishes brochure.

Published louver performance data bearing the AMCA Certified Ratings seal for Air Performance & Water Penetration must be submitted for approval prior to fabrication and must demonstrate pressure drop and water penetration equal to or less than the CVS model specified.

PERFORMANCE DATA



AMCA Standard 500 provides a reasonable basis for testing and rating louvers. Testing to AMCA 500-L is performed under a certain set of laboratory conditions. This does not guarantee that other conditions will not occur in the actual environment where louvers must operate. The louver system should be designed with a reasonable safety factor for louver performance. To ensure protection from water carryover, design with a performance level somewhat below maximum desired pressure drop and .01 oz./sq. ft. of water penetration.

Beginning point of **WATER PENETRATION**
 for **MODEL FL-D-4** lies above
1250 fpm
 free area velocity at .01 oz. of water
 (penetration)

FL-D-4 FREE AREA CHART (SQUARE FEET)

Louver Height Inches	Louver Width In Inches																Louver Height Inches			
	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102		108	114	120
12	0.32	0.51	0.71	0.91	1.10	1.30	1.50	1.70	1.89	2.09	2.29	2.48	2.68	2.88	3.08	3.27	3.47	3.67	3.86	12
18	0.55	0.90	1.24	1.59	1.93	2.28	2.63	2.97	3.32	3.66	4.01	4.35	4.70	5.04	5.39	5.73	6.08	6.42	6.77	18
24	0.80	1.30	1.80	2.30	2.80	3.30	3.80	4.30	4.80	5.30	5.80	6.30	6.80	7.30	7.80	8.30	8.80	9.30	9.79	24
30	0.99	1.61	2.23	2.84	3.46	4.08	4.70	5.31	5.93	6.55	7.17	7.78	8.40	9.02	9.64	10.25	10.87	11.49	12.11	30
36	1.21	1.97	2.73	3.48	4.24	4.99	5.75	6.51	7.26	8.02	8.78	9.53	10.29	11.05	11.80	12.56	13.31	14.07	14.83	36
42	1.47	2.38	3.30	4.22	5.13	6.05	6.96	7.88	8.79	9.71	10.63	11.54	12.46	13.37	14.29	15.20	16.12	17.04	17.95	42
48	1.69	2.75	3.80	4.86	5.91	6.96	8.02	9.07	10.13	11.18	12.24	13.29	14.35	15.40	16.45	17.51	18.56	19.62	20.67	48
54	1.92	3.12	4.32	5.52	6.72	7.92	9.11	10.31	11.51	12.71	13.91	15.11	16.31	17.51	18.70	19.90	21.10	22.30	23.50	54
60	2.16	3.50	4.85	6.19	7.53	8.88	10.22	11.57	12.91	14.26	15.60	16.94	18.29	19.63	20.98	22.32	23.67	25.01	26.35	60
66	2.39	3.88	5.37	6.86	8.35	9.84	11.33	12.82	14.31	15.80	17.29	18.79	20.28	21.77	23.26	24.75	26.24	27.73	29.22	66
72	2.63	4.26	5.90	7.54	9.18	10.81	12.45	14.09	15.73	17.36	19.00	20.64	22.28	23.91	25.55	27.19	28.83	30.46	32.10	72
78	2.85	4.63	6.40	8.18	9.95	11.73	13.51	15.28	17.06	18.84	20.61	22.39	24.16	25.94	27.72	29.49	31.27	33.05	34.82	78
84	3.11	5.04	6.98	8.91	10.85	12.78	14.72	16.66	18.59	20.53	22.46	24.40	26.34	28.27	30.21	32.14	34.08	36.01	37.95	84
90	3.34	5.42	7.50	9.53	11.66	13.74	15.82	17.90	19.97	22.05	24.13	26.21	28.29	30.37	32.45	34.53	36.61	38.69	40.77	90
96	3.58	5.82	8.05	10.29	12.52	14.76	16.99	19.22	21.46	23.69	25.93	28.16	30.39	32.63	34.86	37.10	39.33	41.57	43.80	96
102	3.76	6.10	8.44	10.78	13.12	15.47	17.81	20.15	22.49	24.83	27.17	29.52	31.86	34.20	36.54	38.88	41.22	43.57	45.91	102
108	4.05	6.58	9.11	11.64	14.16	16.69	19.22	21.75	24.27	26.80	29.33	31.86	34.38	36.91	39.44	41.96	44.49	47.02	49.55	108
114	4.24	6.89	9.53	12.18	14.82	17.47	20.12	22.76	25.41	28.05	30.70	33.34	35.99	38.63	41.28	43.92	46.57	49.21	51.86	114
120	4.48	7.27	10.06	12.85	15.64	18.43	21.22	24.02	26.81	29.60	32.39	35.18	37.97	40.76	43.55	46.34	49.14	51.93	54.72	120



MODEL FL-D-6.1

HIGH PERFORMANCE 6" FIXED LOUVER

STANDARD CONSTRUCTION:

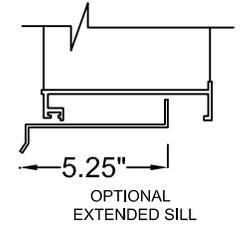
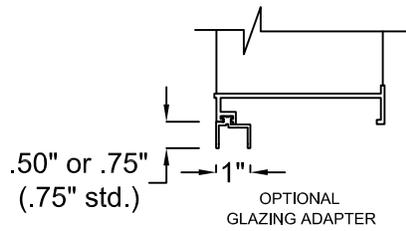
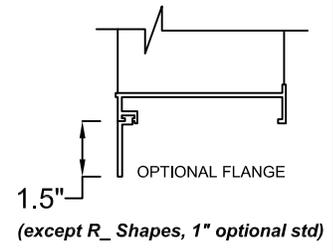
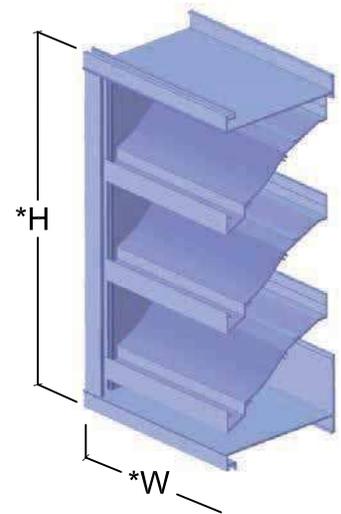
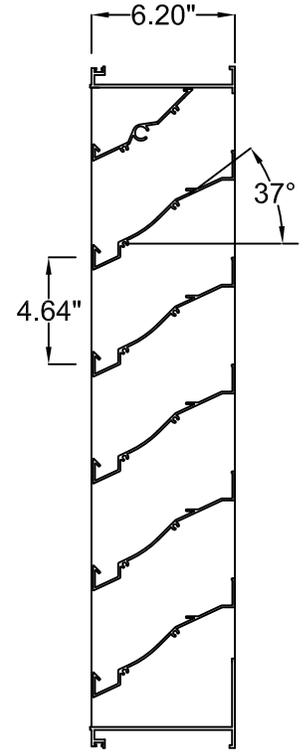
- Frame:** .125" Extruded Aluminum, 6.20" Deep
- Blade:** .081 Extruded Aluminum positioned on a 37° angle on approximately 4.64" centers
- Birdscreen:** .75" x .051" Flattened Aluminum in removable frame. Screen is mounted as standard on inside (rear) as looking from exterior of building.
- Finish:** Mill Aluminum (Std.)
- Minimum Size:** 12 x12
- Maximum Single Section:** 84"w x 120"h or 120"w x 84"h
- Note:** 10' Max Width

OPTIONS:

- FBC Approved for +/- 50 PSF (FL 12351.1)
- Flanged Frame (1.50" std.), (1" std for shapes R_)
- Custom Flange (1", 2" , or 3"), (1.5", 2", or 3" for shapes R_)
- Glazing Adapter (.50" or .75")
- Extended Sill
- .125" Blades
- Insect Screen (Other Screens Available, See Screen Page)
- Filter Racks (no screen)
- Security Bars
- Hinged Sub Frame
- Welded Construction (Wind Load +/- 50 psf)
- Blank-off, Alum., non-insulated, no screen, non-removeable
- Blank-off, Alum., non-insulated, with bird screen or insect screen
- Blank-off, Alum., insulated double wall, with bird screen, removable
- Blank-off, Alum., insulated double wall, no screen, non-removeable

AVAILABLE FINISHES:

- Powder Polyester TGIC** (2 coats) baked on at 410°F, 2.5 to 3.5 mils Meets AAMA-2603 Standards
- Powder Super durable polyester** (2 coats) baked on at 410°F, 2.5 to 3.5 mils Meets AAMA-2604-05 Standards
- Acrylic baked enamel** (ACRA-BOND® ULTRA) by AkzoNobel baked on at 350°F, 0.8 to 1.2 mils dry Meets AAMA-2603 Standards
- Kynar®** (ALUM*A*STAR®) 2 coats by AkzoNobel baked on at 450°F, 1.2 to 1.6 mils dry Meets AAMA-2604-05 Standards
- Kynar 500®** or HYLAR® 5000 70% TRINAR® (2 coats) by AkzoNobel baked on at 450°F, 1.2 to 1.6 mils dry, Meets AAMA-2605-05 Standards
- Kynar 500®** or HYLAR® 5000 (70% Tri-Escent II) (2 coats) by AkzoNobel, a superior finish to other metallic or anodized finishes. A blend of mica, ceramic, and inorganic pigments creates subtle yet dazzling design that goes beyond metallic color without the requirement of a clear coat. 14 standard colors - custom colors available. Baked on at 415°F, 1.4 to 1.8 mils dry, meets AAMA 2605-05.
- Clear Anodize** 204 R-1 Class II (AA-C22A31)(0.4 to 0.7 mil)
- Clear Anodize** 215 R-1 Class I (AA-C22A41)(>0.7 mil)
- Integral Color Anodize** (AA-C22A42)(>0.7 mil)
 - Clear coat available for all above finishes.
 - Hylar® 5000 is a registered trademark of Solvay Solexis, Inc.
 - Kynar® 500 is a registered trademark of Arkema.
 - ALUM*A*STAR® 50 and TRINAR® are registered trademarks of AkzoNobel
 - ACRA-BOND® ULTRA is a registered trademark of AkzoNobel



*Width and Height dimensions are approximately 1/4" under listed size.

MODEL FL-D-6.1
HIGH PERFORMANCE 6" FIXED LOUVER

SUGGESTED SPECIFICATION

Furnish and install louvers as hereinafter specified where shown on plans or as described in schedules. Louvers shall be stationary drainable type with drain gutters in each blade and downspouts in jams and mullions. Stationary drainable blades shall be contained within a 6.20" frame. Louver components (heads, jams, sills, blades, and mullions) shall be factory assembled by the louver manufacturer. Louver sizes too large for shipping shall be built up by the contractor from factory assembled louver sections to provide overall sizes required. Louver design shall incorporate structural supports required to withstand a wind load of 30 lbs. Per sq. ft. (equivalent of a 110 mph wind), CVS Model FL-D-6.1.

*50 PSF Rating available.

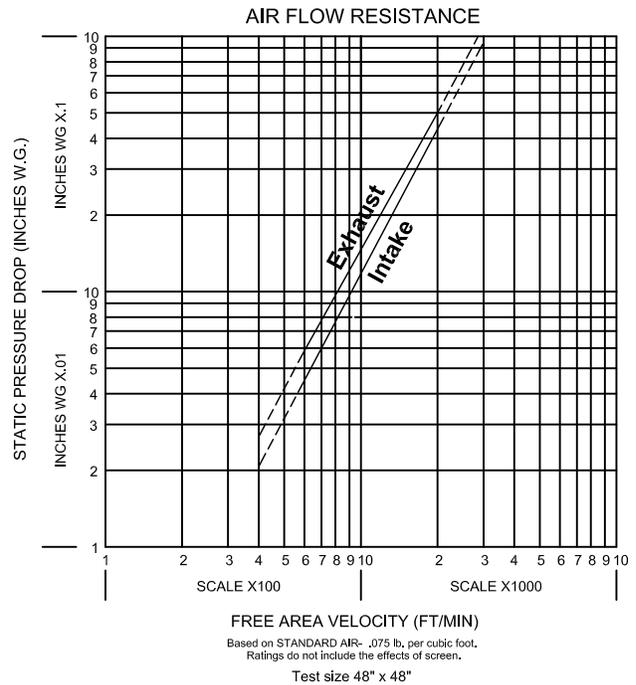
PERFORMANCE DATA

Beginning point of WATER PENETRATION

lies above

1250 fpm

free area velocity at .01 oz. of water penetration



FL-D-6.1 FREE AREA IN SQ. FT.

Louver Height Inches	Width - Inches																		Louver Height Inches	
	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114		120
12	0.24	0.39	0.54	0.69	0.83	0.98	1.13	1.28	1.43	1.58	1.73	1.87	2.02	2.17	2.32	2.47	2.62	2.76	2.91	12
18	0.47	0.76	1.05	1.34	1.63	1.92	2.21	2.51	2.80	3.09	3.38	3.67	3.96	4.25	4.54	4.83	5.12	5.41	5.70	18
24	0.70	1.14	1.57	2.00	2.43	2.86	3.30	3.73	4.16	4.59	5.03	5.46	5.89	6.32	6.76	7.19	7.62	8.05	8.49	24
30	0.93	1.51	2.08	2.66	3.23	3.81	4.38	4.95	5.53	6.10	6.68	7.25	7.83	8.40	8.98	9.55	10.12	10.70	11.27	30
36	1.16	1.88	2.60	3.31	4.03	4.75	5.46	6.18	6.90	7.61	8.33	9.05	9.76	10.48	11.19	11.91	12.63	13.34	14.06	36
42	1.63	2.63	3.63	4.63	5.63	6.63	7.63	8.63	9.63	10.63	11.63	12.63	13.63	14.63	15.63	16.63	17.63	18.63	19.63	42
48	1.86	3.00	4.14	5.28	6.43	7.57	8.71	9.85	11.00	12.14	13.28	14.42	15.57	16.71	17.85	18.99	20.14	21.28	22.42	48
54	2.09	3.37	4.66	5.94	7.22	8.51	9.79	11.08	12.36	13.65	14.93	16.22	17.50	18.78	20.07	21.35	22.64	23.92	25.21	54
60	2.32	3.74	5.17	6.60	8.02	9.45	10.88	12.30	13.73	15.16	16.58	18.01	19.44	20.86	22.29	23.71	25.14	26.57	27.99	60
66	2.55	4.12	5.69	7.25	8.82	10.39	11.96	13.53	15.10	16.66	18.23	19.80	21.37	22.94	24.51	26.08	27.64	29.21	30.78	66
72	2.78	4.49	6.20	7.91	9.62	11.33	13.04	14.75	16.46	18.17	19.88	21.59	23.30	25.02	26.73	28.44	30.15	31.86	33.57	72
78	3.01	4.86	6.72	8.57	10.42	12.27	14.12	15.98	17.83	19.68	21.53	23.39	25.24	27.09	28.94	30.80	32.65	34.50	36.35	78
84	3.47	5.61	7.74	9.88	12.02	14.15	16.29	18.43	20.56	22.70	24.84	26.97	29.11	31.25	33.38	35.52	37.65	39.79	41.93	84
90	3.70	5.98	8.26	10.54	12.82	15.09	17.37	19.65	21.93	24.21	26.49	28.77	31.04	33.32	35.60	37.88	40.16	42.44	44.71	90
96	3.93	6.35	8.77	11.19	13.61	16.04	18.46	20.88	23.30	25.72	28.14	30.56	32.98	35.40	37.82	40.24	42.66	45.08	47.50	96
102	4.16	6.73	9.29	11.85	14.41	16.98	19.54	22.10	24.66	27.23	29.79	32.35	34.91	37.48	40.04	42.60	45.16	47.73	50.29	102
108	4.39	7.10	9.80	12.51	15.21	17.92	20.62	23.33	26.03	28.73	31.44	34.14	36.85	39.55	42.26	44.96	47.67	50.37	53.07	108
114	4.63	7.47	10.32	13.16	16.01	18.86	21.70	24.55	27.40	30.24	33.09	35.94	38.78	41.63	44.48	47.32	50.17	53.01	55.86	114
120	4.86	7.84	10.83	13.82	16.81	19.80	22.79	25.78	28.76	31.75	34.74	37.73	40.72	43.71	46.69	49.68	52.67	55.66	58.65	120



MODEL EL-4

STANDARD CONSTRUCTION:

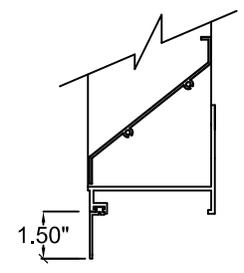
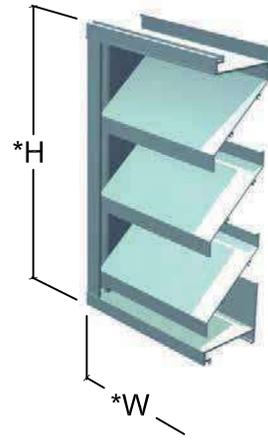
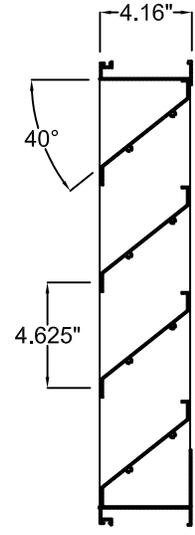
- Frame:** .081 Extruded Aluminum, 4.16" Deep
- Blade:** .081 Extruded Aluminum positioned on a 40° angle on approximately 4.625" centers
- Birdscreen:** .75" x .051" Flattened Aluminum in removable frame. Screen is mounted as standard on inside (rear) as looking from exterior of building.
- Finish:** Mill Aluminum (Std.)
- Minimum Size:** 12 x12
- Maximum Single Section:** 120"w x 84"h or 84"w x 120"h

OPTIONS:

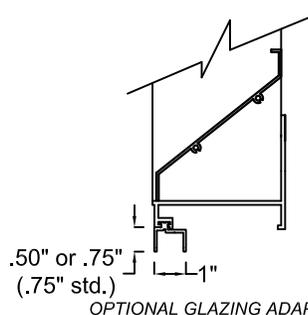
- Flanged Frame (1.50" std.), (1" std for shapes R_)
- Custom Flange (1", 2" , or 3"), (1.5", 2", or 3" for shapes R_)
- Glazing Adapter (.50" or .75")
- Extended Sill
- Insect Screen (Other Screens Available, See Screen Page)
- Filter Racks (no screen)
- Security Bars
- Hinged Sub Frame
- Welded Construction (Wind Load +/- 50 psf)
- Blank-off, Alum., non-insulated, no screen, non-removeable
- Blank-off, Alum., non-insulated, with bird screen or insect screen
- Blank-off, Alum., insulated double wall, with bird screen, removable
- Blank-off, Alum., insulated double wall, no screen, non-removeable

AVAILABLE FINISHES:

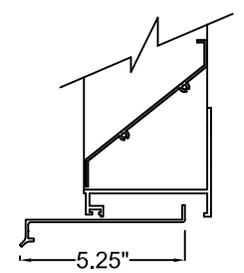
- Powder Polyester TGIC** (2 coats) baked on at 410°F, 2.5 to 3.5 mils Meets AAMA-2603 Standards
- Powder Super durable polyester** (2 coats) baked on at 410°F, 2.5 to 3.5 mils Meets AAMA-2604-05 Standards
- Acrylic baked enamel** (ACRA-BOND® ULTRA) by AkzoNobel baked on at 350°F, 0.8 to 1.2 mils dry Meets AAMA-2603 Standards
- Kynar®** (ALUM*A*STAR®) 2 coats by AkzoNobel baked on at 450°F, 1.2 to 1.6 mils dry Meets AAMA-2604-05 Standards
- Kynar 500®** or HYLAR® 5000 70% TRINAR® (2 coats) by AkzoNobel baked on at 450°F, 1.2 to 1.6 mils dry, Meets AAMA-2605-05 Standards
- Kynar 500®** or HYLAR® 5000 (70% Tri-Escent II) (2 coats) by AkzoNobel, a superior finish to other metallic or anodized finishes. A blend of mica, ceramic, and inorganic pigments creates subtle yet dazzling design that goes beyond metallic color without the requirement of a clear coat. 14 standard colors - custom colors available. Baked on at 415°F, 1.4 to 1.8 mils dry, meets AAMA 2605-05.
- Clear Anodize** 204 R-1 Class II (AA-C22A31)(0.4 to 0.7 mil)
- Clear Anodize** 215 R-1 Class I (AA-C22A41)(>0.7 mil)
- Integral Color Anodize** (AA-C22A42)(>0.7 mil)
 - Clear coat available for all above finishes.
 - Hylar® 5000 is a registered trademark of Solvay Solexis, Inc.
 - Kynar® 500 is a registered trademark of Arkema.
 - ALUM*A*STAR® 50 and TRINAR® are registered trademarks of AkzoNobel
 - ACRA-BOND® ULTRA is a registered trademark of AkzoNobel



OPTIONAL FLANGE (except R_ Shapes, 1" optional std)



OPTIONAL GLAZING ADAPTER



OPTIONAL EXTENDED SILL

*Width and Height dimensions are approximately 1/4" under listed size.

SUGGESTED SPECIFICATION

Finish and install louvers as hereinafter specified where shown on plans or as described in schedules. Louvers shall be "J" blade style with 40° stationary blades. Stationary blades shall be contained within a 4.16" frame. Louver components (heads, jambs, sills, blades, and mullions) shall be factory assembled by the louver manufacturer. Louver sizes too large for shipping shall be built up by the contractor from factory assembled louver sections to provide overall sizes required. Louver design shall incorporate structural supports required to withstand a wind load of 30 lbs. per sq. ft. (equivalent of a 110 mph wind).

Published louver performance data bearing the AMCA Certified Ratings seal for Air Performance & Water Penetration must be submitted for approval prior to fabrication and must demonstrate pressure drop and water penetration equal to or less than the CVS model specified.

Louvers shall be CVS EL-4 6063T5 aluminum construction as follows:

FRAME: 4.16" deep, .081" nominal wall thickness

BLADES: .081" nominal wall thickness. Blades are positioned at 39° angle and spaced approximately 4.625" center to center.

SCREEN: .75" x .051" (19 x 1.3) expanded, flattened aluminum in removable frame.

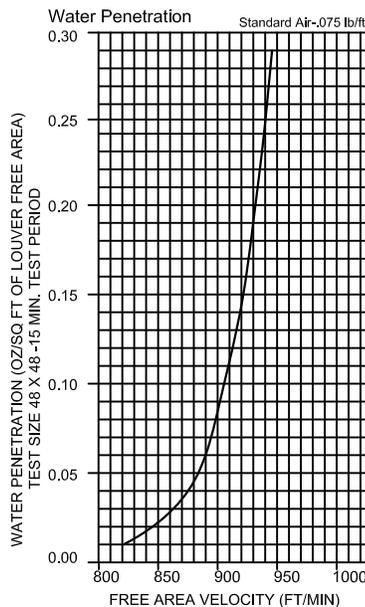
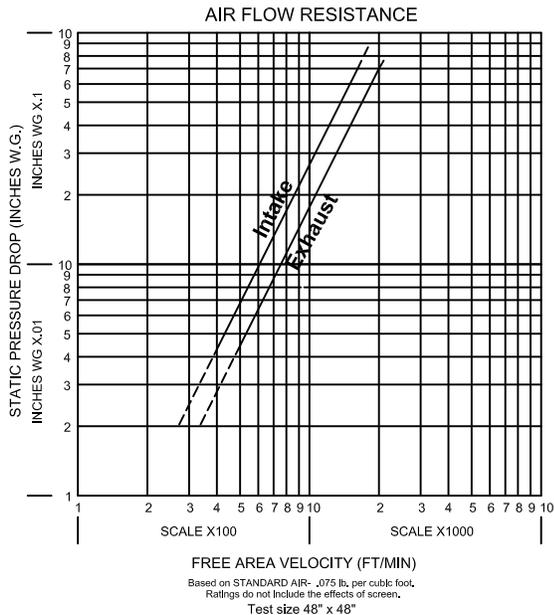
FINISH: Select finish specification from CVS Finishes brochure.

PERFORMANCE DATA

AMCA Standard 500-L provides a reasonable basis for testing and rating louvers. Testing to AMCA 500-L is performed under a certain set of laboratory conditions. This does not guarantee that other conditions will not occur in the actual environment where louvers must operate. The louver system should be designed with a reasonable safety factor for louver performance. To ensure protection from water carryover, design with a performance level somewhat below maximum desired pressure drop and .01 oz./sq. ft. of water penetration.

FREE AREA CHART (SQUARE FEET)

Louver Height Inches	Louver Width In Inches																Louver Height Inches			
	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102		108	114	120
12	0.19	0.31	0.43	0.54	0.66	0.78	0.89	1.01	1.13	1.24	1.36	1.48	1.59	1.71	1.83	1.94	2.06	2.18	2.29	12
18	0.50	0.80	1.10	1.41	1.71	2.01	2.31	2.62	2.92	3.22	3.53	3.83	4.13	4.43	4.74	5.04	5.34	5.65	5.95	18
24	0.77	1.23	1.70	2.16	2.63	3.09	3.56	4.02	4.49	4.96	5.42	5.89	6.35	6.82	7.28	7.75	8.21	8.68	9.14	24
30	0.96	1.54	2.13	2.71	3.30	3.88	4.46	5.05	5.63	6.22	6.80	7.38	7.97	8.55	9.13	9.72	10.30	10.89	11.47	30
36	1.15	1.85	2.55	3.25	3.96	4.66	5.36	6.06	6.76	7.46	8.16	8.86	9.56	10.26	10.96	11.66	12.36	13.06	13.76	36
42	1.43	2.29	3.16	4.02	4.89	5.76	6.62	7.49	8.36	9.22	10.09	10.95	11.82	12.69	13.55	14.42	15.29	16.15	17.02	42
48	1.61	2.59	3.57	4.55	5.53	6.51	7.49	8.47	9.45	10.43	11.41	12.39	13.37	14.35	15.33	16.31	17.29	18.27	19.25	48
54	1.92	3.09	4.26	5.42	6.59	7.76	8.93	10.10	11.26	12.43	13.60	14.77	15.93	17.10	18.27	19.44	20.61	21.77	22.94	54
60	2.11	3.40	4.68	5.97	7.25	8.54	9.82	11.11	12.39	13.67	14.96	16.24	17.53	18.81	20.10	21.38	22.67	23.95	25.23	60
66	2.35	3.78	5.21	6.64	8.07	9.50	10.93	12.36	13.79	15.22	16.65	18.08	19.51	20.94	22.37	23.80	25.23	26.66	28.09	66
72	2.81	4.52	6.23	7.94	9.65	11.36	13.07	14.78	16.49	18.20	19.90	21.61	23.32	25.03	26.74	28.45	30.16	31.87	33.58	72
78	2.88	4.63	6.39	8.14	9.89	11.64	13.39	15.14	16.90	18.65	20.40	22.15	23.90	25.65	27.40	29.16	30.91	32.66	34.41	78
84	3.07	4.94	6.81	8.68	10.55	12.42	14.28	16.15	18.02	19.89	21.76	23.63	25.49	27.36	29.23	31.10	32.97	34.84	36.70	84
90	3.28	5.27	7.27	9.26	11.25	13.25	15.24	17.23	19.23	21.22	23.21	25.21	27.20	29.19	31.18	33.18	35.17	37.16	39.16	90
96	3.55	5.70	7.86	10.02	12.17	14.33	16.48	18.64	20.80	22.95	25.11	27.26	29.42	31.57	33.73	35.89	38.04	40.20	42.35	96
102	3.82	6.13	8.45	10.77	13.09	15.41	17.73	20.05	22.36	24.68	27.00	29.32	31.64	33.96	36.28	38.59	40.91	43.23	45.55	102
108	3.96	6.37	8.78	11.19	13.60	16.01	18.42	20.82	23.23	25.64	28.05	30.46	32.87	35.28	37.68	40.09	42.50	44.91	47.32	108
114	4.24	6.81	9.38	11.96	14.53	17.10	19.68	22.25	24.82	27.40	29.97	32.54	35.12	37.69	40.26	42.84	45.41	47.98	50.56	114
120	4.28	6.89	9.49	12.09	14.69	17.30	19.90	22.50	25.10	27.71	30.31	32.91	35.51	38.12	40.72	43.32	45.92	48.53	51.13	120



Beginning point of
WATER PENETRATION
for **MODEL EL-4** is
812 fpm
free area velocity at .01
oz. of water



MODEL EL-6

6" DEEP "J" BLADE FIXED LOUVER

STANDARD CONSTRUCTION:

Frame: .125 Extruded Aluminum, 6.20" Deep

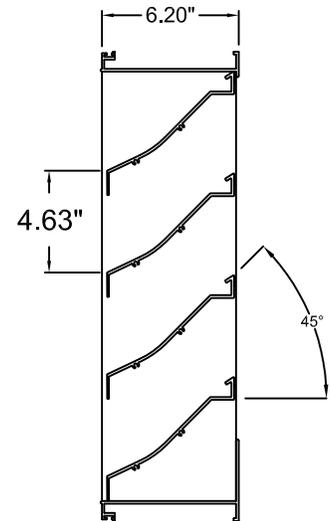
Blade: .110 Extruded Aluminum positioned on a 45° angle on approximately 4.63" centers

Birdscreen: .75" x .051" Flattened Aluminum in removable frame. Screen is mounted as standard on inside (rear) looking from exterior of building.

Finish: Mill Aluminum (Std.)

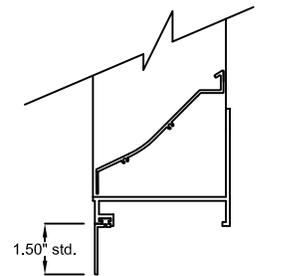
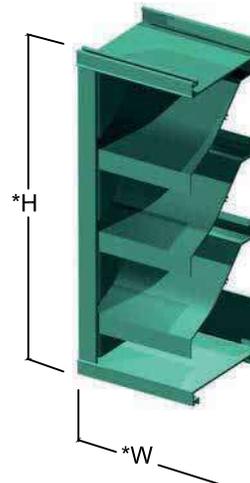
Minimum Size: 12 x12

Maximum Single Section: 120"w x 84"h or 84"w x 120"h



OPTIONS:

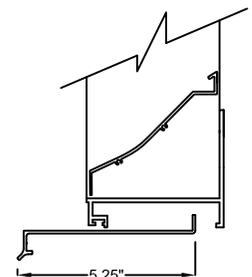
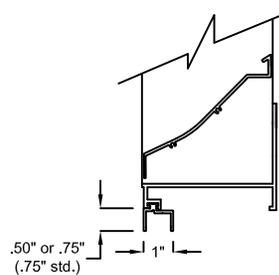
- Flanged Frame (1.50" std.), (1" std for shapes R_)
- Custom Flange (1", 2" , or 3"), (1.5", 2", or 3" for shapes R_)
- Extended Sill (Other Screens Available, See Screen Page)
- Glazing Adapter (.50" or .75")
- Insect Screen
- Filter Racks (no screen)
- Security Bars
- Hinged Sub Frame
- Welded Construction (Wind Load +/- 50 psf)
- Blank-off, Alum., non-insulated, no screen, non-removeable
- Blank-off, Alum., non-insulated, with bird screen or insect screen
- Blank-off, Alum., insulated double wall, with bird screen, removable
- Blank-off, Alum., insulated double wall, no screen, non-removeable



OPTIONAL FLANGE (except R_ Shapes, 1" optional std)

AVAILABLE FINISHES:

- Powder Polyester TGIC (2 coats) baked on at 410°F, 2.5 to 3.5 mils Meets AAMA-2603 Standards
- Powder Super durable polyester (2 coats) baked on at 410°F, 2.5 to 3.5 mils Meets AAMA-2604-05 Standards
- Acrylic baked enamel (ACRA-BOND® ULTRA) by AkzoNobel baked on at 350°F, 0.8 to 1.2 mils dry Meets AAMA-2603 Standards
- Kynar® (ALUM*A*STAR®) 2 coats by AkzoNobel baked on at 450°F, 1.2 to 1.6 mils dry Meets AAMA-2604-05 Standards
- Kynar 500® or HYLAR® 5000 70% TRINAR® (2 coats) by AkzoNobel baked on at 450°F, 1.2 to 1.6 mils dry, Meets AAMA-2605-05 Standards
- Kynar 500® or HYLAR® 5000 (70% Tri-Escent II) (2 coats) by AkzoNobel, a superior finish to other metallic or anodized finishes. A blend of mica, ceramic, and inorganic pigments creates subtle yet dazzling design that goes beyond metallic color without the requirement of a clear coat. 14 standard colors - custom colors available. Baked on at 415°F, 1.4 to 1.8 mils dry, meets AAMA 2605-05.
- Clear Anodize 204 R-1 Class II (AA-C22A31)(0.4 to 0.7 mil)
- Clear Anodize 215 R-1 Class I (AA-C22A41)(>0.7 mil)
- Integral Color Anodize (AA-C22A42)(>0.7 mil)



*Width and Height dimensions are approximately 1/4" under listed size.

- Clear coat available for all above finishes.
- Hylar® 5000 is a registered trademark of Solvay Solexis, Inc.
- Kynar® 500 is a registered trademark of Arkema.
- ALUM*A*STAR® 50 and TRINAR® are registered trademarks of AkzoNobel
- ACRA-BOND® ULTRA is a registered trademark of AkzoNobel

MODEL EL-6
6" DEEP "J" BLADE FIXED LOUVER

SUGGESTED SPECIFICATION

Furnish and install louvers as hereinafter specified where shown on plans or as described in schedules. Louvers shall be "J" blade style with 45° stationary blades. Stationary blades shall be contained within a 6.20" frame. Louver components (heads, jambs, sills, blades, and mullions) shall be factory assembled by the louver manufacturer. Louver sizes too large for shipping shall be built up by the contractor from factory assembled louver sections to provide overall sizes required. Louver design shall incorporate structural supports required to withstand a wind load of 30 lbs. Per sq. ft. (equivalent of a 110 mph).

Louvers shall be CVS #EL-6 with 6063-T5 extruded aluminum construction as follows:

- Frame: 6.20" deep, .081" nominal wall thickness.
- Blades: .110" nominal wall thickness, Non-Drainable.
- Blades are positioned at 45-degree angle and spaced approximately 4.63" center to center.
- Screen: .75" x .051" (19 x 1.3) expanded, flattened aluminum in removable frame.
- Finish: Select finish specification from CVS Finishes Brochure.

PERFORMANCE DATA

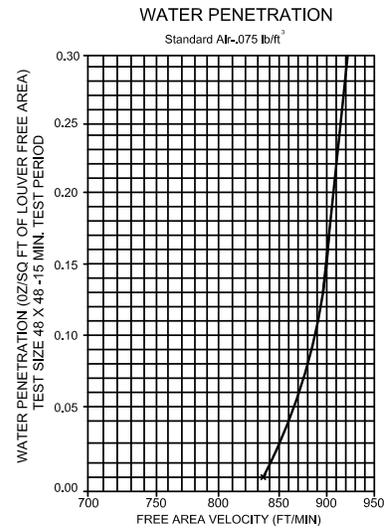
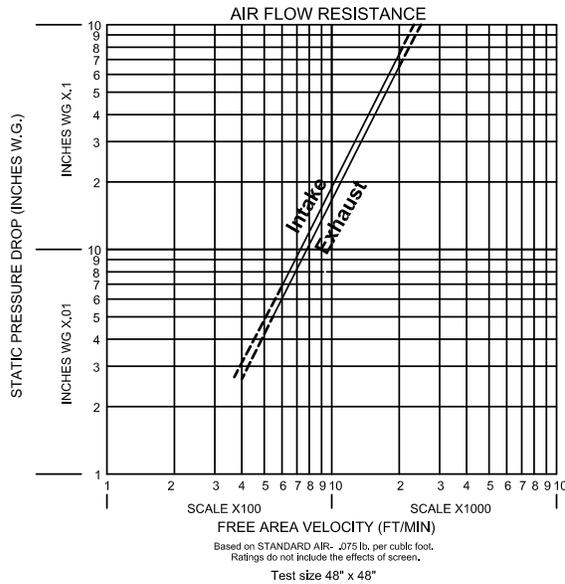
AMCA Standard 500-L provides a reasonable basis for testing and rating louvers. Testing to AMCA 500-L is performed under a certain set of laboratory conditions. This does not guarantee that other conditions will not occur in the actual environment where louvers must operate.

The louver system should be designed with a reasonable safety factor for louver performance. To ensure protection from water carryover, design with a performance level somewhat below maximum desired pressure drop and .01 oz./sq.ft. of water penetration.

Published louver performance data bearing the AMCA Certified Ratings Seal for Air Performance & Water Penetration must be submitted for approval prior to fabrication and must demonstrate pressure drop and water penetration equal to or less than the CVS model specified.

Beginning point of WATER PENETRATION
is
834 fpm

free area velocity at .01 oz. of water penetration



EL-6 FREE AREA IN SQ. FT.

Louver Height Inches	Width - Inches																Louver Height Inches			
	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102		108	114	120
12	0.23	0.38	0.52	0.66	0.80	0.95	1.09	1.23	1.38	1.52	1.66	1.81	1.95	2.09	2.24	2.38	2.52	2.67	2.81	12
18	0.45	0.73	1.01	1.28	1.56	1.84	2.12	2.39	2.67	2.95	3.23	3.50	3.78	4.06	4.34	4.61	4.89	5.17	5.45	18
24	0.67	1.08	1.49	1.90	2.32	2.73	3.14	3.55	3.96	4.38	4.79	5.20	5.61	6.02	6.44	6.85	7.26	7.67	8.08	24
30	0.89	1.43	1.98	2.53	3.07	3.62	4.16	4.71	5.26	5.80	6.35	6.90	7.44	7.99	8.53	9.08	9.63	10.17	10.72	30
36	1.11	1.79	2.47	3.15	3.83	4.51	5.19	5.87	6.55	7.23	7.91	8.59	9.27	9.95	10.63	11.31	12.00	12.68	13.36	36
42	1.54	2.49	3.44	4.39	5.34	6.29	7.24	8.19	9.14	10.09	11.04	11.99	12.93	13.88	14.83	15.78	16.73	17.68	18.63	42
48	1.76	2.84	3.93	5.01	6.10	7.18	8.26	9.35	10.43	11.51	12.60	13.68	14.77	15.85	16.93	18.02	19.10	20.18	21.27	48
54	1.98	3.20	4.42	5.63	6.85	8.07	9.29	10.51	11.72	12.94	14.16	15.38	16.60	17.81	19.03	20.25	21.47	22.69	23.91	54
60	2.20	3.55	4.90	6.26	7.61	8.96	10.31	11.67	13.02	14.37	15.72	17.07	18.43	19.78	21.13	22.48	23.84	25.19	26.54	60
66	2.42	3.90	5.39	6.88	8.36	9.85	11.34	12.82	14.31	15.80	17.28	18.77	20.26	21.75	23.23	24.72	26.21	27.69	29.18	66
72	2.63	4.26	5.88	7.50	9.12	10.74	12.36	13.98	15.60	17.23	18.85	20.47	22.09	23.71	25.33	26.95	28.57	30.20	31.82	72
78	2.85	4.61	6.36	8.12	9.88	11.63	13.39	15.14	16.90	18.65	20.41	22.16	23.92	25.68	27.43	29.19	30.94	32.70	34.45	78
84	3.29	5.31	7.34	9.36	11.39	13.41	15.44	17.46	19.48	21.51	23.53	25.56	27.58	29.61	31.63	33.65	35.68	37.70	39.73	84
90	3.51	5.67	7.83	9.98	12.14	14.30	16.46	18.62	20.78	22.94	25.10	27.25	29.41	31.57	33.73	35.89	38.05	40.21	42.36	90
96	3.73	6.02	8.31	10.61	12.90	15.19	17.48	19.78	22.07	24.36	26.66	28.95	31.24	33.54	35.83	38.12	40.42	42.71	45.00	96
102	3.94	6.37	8.80	11.23	13.65	16.08	18.51	20.94	23.36	25.79	28.22	30.65	33.07	35.50	37.93	40.36	42.78	45.21	47.64	102
108	4.16	6.72	9.29	11.85	14.41	16.97	19.53	22.10	24.66	27.22	29.78	32.34	34.91	37.47	40.03	42.59	45.15	47.71	50.28	108
114	4.38	7.08	9.77	12.47	15.17	17.86	20.56	23.25	25.95	28.65	31.34	34.04	36.74	39.43	42.13	44.82	47.52	50.22	52.91	114
120	4.60	7.43	10.26	13.09	15.92	18.75	21.58	24.41	27.24	30.08	32.91	35.74	38.57	41.40	44.23	47.06	49.89	52.72	55.55	120



MODEL SFL-D-4

4" STEEL DRAINABLE FIXED LOUVER

STANDARD CONSTRUCTION:

FRAME:

18 ga. galvanized steel, 4.13" deep

BLADES:

Drainable, 18 ga. galvanized steel, positioned at 45° angles on approximately 3.94" centers.

BIRDSCREEN:

.50" x .050" Expanded flattened alum. in removable frame
Screen is mounted on inside (rear)

FINISH:

Mill Galvanized

MINIMUM SIZE:

8"w x 12"h

MAXIMUM SECTION SIZE:

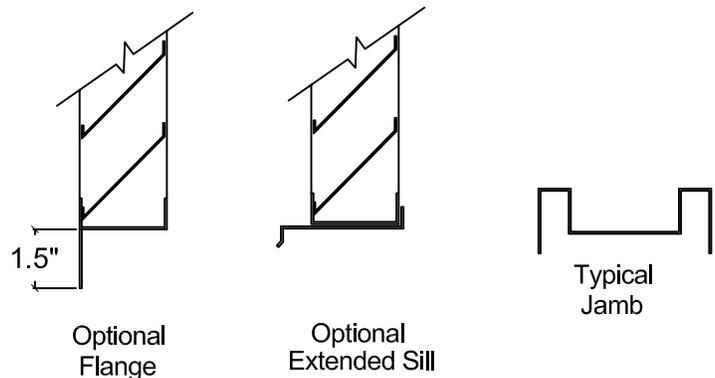
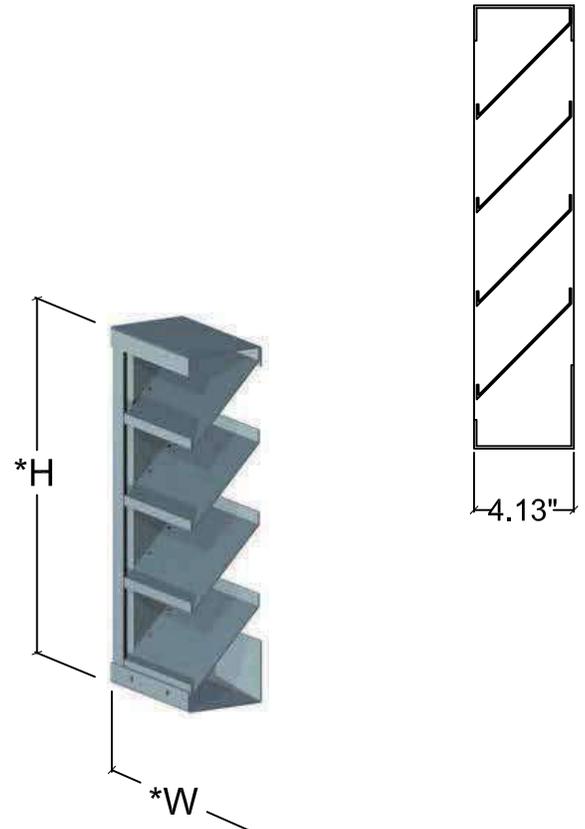
96"w x 72"h
Larger sizes made in multiple sections.

OPTIONS:

- Flanged Frame (1.5" std.)
- Custom Flange (1", 2" , or 3")
- Extended Sill
- Insect Screen (Other Screens Available, See Screen Page)
- Filter Racks (no screen)
- Security Bars
- Hinged Sub Frame
- Welded Construction
- Blank-off, Steel, non-insulated, no screen, non-removeable
- Blank-off, Steel, non-insulated, with bird screen or insect screen
- Blank-off, Steel, insulated double wall, with bird screen, removable
- Blank-off, Steel, insulated double wall, no screen, non-removeable

AVAILABLE FINISHES:

- Powder Polyester TGIC** (2 coats) baked on at 410°F, 2.5 to 3.5 mils Meets AAMA-2603 Standards
- Powder Super durable polyester** (2 coats) baked on at 410°F, 2.5 to 3.5 mils Meets AAMA-2604-05 Standards
- Acrylic baked enamel (ACRA-BOND® ULTRA)** by AkzoNobel baked on at 350°F, 0.8 to 1.2 mils dry Meets AAMA-2603 Standards
- Kynar® (ALUM*A*STAR®)** 2 coats by AkzoNobel baked on at 450°F, 1.2 to 1.6 mils dry Meets AAMA-2604-05 Standards
- Kynar 500® or HYLAR® 5000 70% TRINAR®** (2 coats) by AkzoNobel baked on at 450°F, 1.2 to 1.6 mils dry, Meets AAMA-2605-05 Standards
- Kynar 500® or HYLAR® 5000 (70% Tri-Escnt II)** (2 coats) by AkzoNobel, a superior finish to other metallic or anodized finishes. A blend of mica, ceramic, and inorganic pigments creates subtle yet dazzling design that goes beyond metallic color without the requirement of a clear coat. 14 standard colors - custom colors available. Baked on at 415°F, 1.4 to 1.8 mils dry, meets AAMA 2605-05.
- Clear Anodize 204 R-1 Class II (AA-C22A31)**(0.4 to 0.7 mil)
- Clear Anodize 215 R-1 Class I (AA-C22A41)**(>0.7 mil)
- Integral Color Anodize (AA-C22A42)**(>0.7 mil)
 - Clear coat available for all above finishes.
 - Hylar® 5000 is a registered trademark of Solvay Solexis, Inc.
 - Kynar® 500 is a registered trademark of Arkema.
 - ALUM*A*STAR® 50 and TRINAR® are registered trademarks of AkzoNobel
 - ACRA-BOND® ULTRA is a registered trademark of AkzoNobel



*Width and Height dimensions are approximately 1/4" under listed size.

MODEL SFL-D-4
4" STEEL DRAINABLE FIXED LOUVER

SUGGESTED SPECIFICATION

Furnish and install louver as hereinafter specified where shown on plans or as described in schedules. Louvers shall be stationary drainable type with drain gutters in each blade and downspouts in jambs and mullions. Stationary blades shall be contained within a 4.13" deep frame. Louver components (heads, jambs, sills, blades, and mullions) shall be factory assembled by the louver manufacturer. Louver sizes too large for shipping shall be built up by the contractor from factory assembled louver sections to provide overall sizes required. Louver design shall incorporate structural supports required to withstand a wind load of 30 lbs. per sq. ft. (equivalent of 110 mph wind).

PERFORMANCE DATA

AMCA Standard 500-L provides a reasonable basis for testing and rating louvers. Testing to AMCA 500-L is performed under a certain set of laboratory conditions. This does not guarantee that other conditions will not occur in the actual environment where louvers must operate.

The louver system should be designed with a reasonable safety factor for louver performance. To ensure protection from water carryover, design with a performance level somewhat below maximum desired pressure drop and .01 oz./sq.ft. of water penetration.

MODEL SFL-D-4 FREE AREA CHART (SQUARE FEET)

Louver Height Inches	Louver Width In Inches														Louver Height Inches		
	8	12	18	24	30	36	42	48	54	60	66	72	78	84		90	96
12	0.31	0.47	0.70	0.93	1.17	1.40	1.63	1.87	2.10	2.33	2.57	2.80	3.03	3.27	3.51	3.72	12
18	0.47	0.70	1.05	1.40	1.75	2.10	2.45	2.80	3.15	3.50	3.85	4.20	4.52	4.91	5.23	5.61	18
24	0.62	0.93	1.40	1.87	2.33	2.80	3.27	3.73	4.20	4.67	5.13	5.60	6.05	6.51	7.02	7.48	24
30	0.78	1.17	1.75	2.33	2.92	3.50	4.08	4.67	5.25	5.84	6.42	7.00	7.55	8.14	8.76	9.36	30
36	0.93	1.40	2.10	2.80	3.50	4.20	4.90	5.60	6.30	7.00	7.70	8.40	9.06	9.76	10.52	11.24	36
42	1.09	1.63	2.45	3.27	4.08	4.90	5.72	6.54	7.35	8.17	8.99	9.80	10.57	11.38	12.27	13.12	42
48	1.24	1.87	2.80	3.73	4.67	5.60	6.54	7.47	8.40	9.34	10.27	11.20	12.08	13.00	14.03	15.00	48
54	1.40	2.10	3.15	4.20	5.25	6.30	7.35	8.40	9.45	10.50	11.55	12.60	13.59	14.62	15.78	16.88	54
60	1.56	2.33	3.50	4.67	5.84	7.00	8.17	9.34	10.50	11.67	12.84	14.00	15.10	16.24	17.54	18.76	60
66	1.71	2.57	3.85	5.13	6.42	7.70	8.99	10.27	11.55	12.84	14.12	15.40	16.61	17.86	19.29	20.64	66
72	1.87	2.80	4.20	5.60	7.00	8.40	9.80	11.20	12.60	14.00	15.40	16.80	18.12	19.48	21.05	22.52	72

Beginning point of WATER PENETRATION

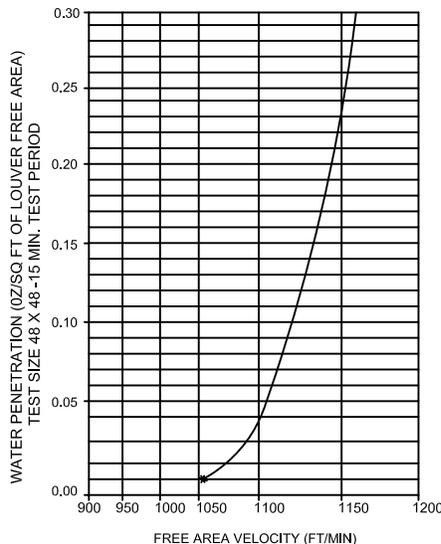
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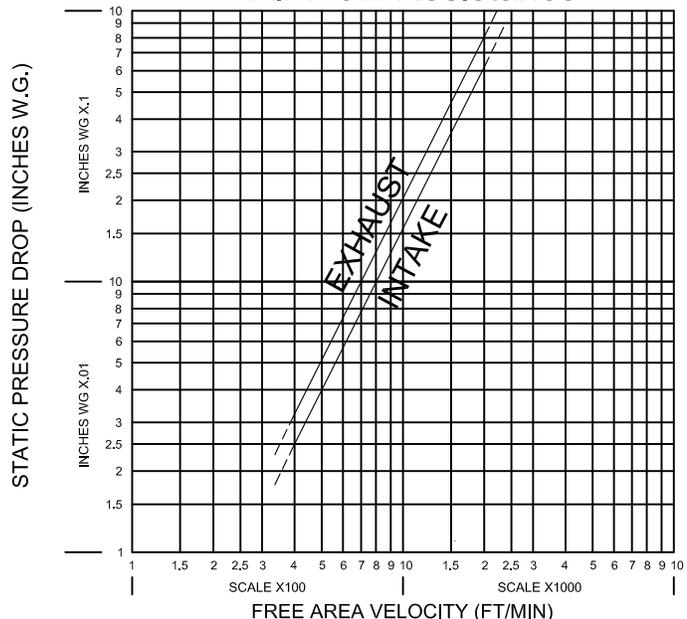
free area velocity at .01 oz. of water penetration

WATER PENETRATION

Standard Air-.075 lb/ft³



Air Flow Resistance



Based on STANDARD AIR- .075 lb. per cubic foot.

Ratings do not include the effects of screen.

SIZE TESTED: 48"X48"

INTAKE & EXHAUST



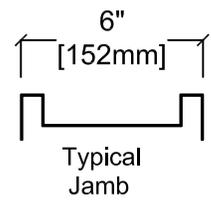
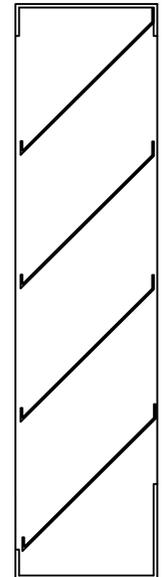
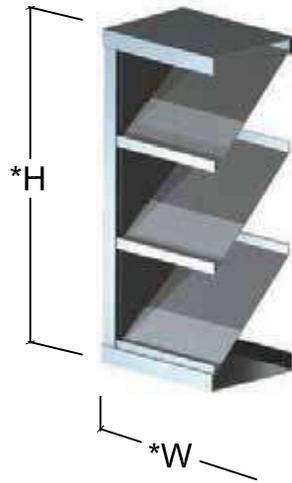
MODEL SFL-D-6

6" [152mm] FIXED/DRAINABLE STEEL LOUVER

STANDARD CONSTRUCTION:

- FRAME: 18 ga. galvanized steel, 6.13" [156mm] deep
- BLADES: Drainable, 18 ga. galvanized steel, positioned at 45° angles on approximately 5.88" [149mm] centers.
- BIRDSCREEN: 0.50" x 0.050" [12.70mm x 1.27mm] Expanded flattened alum. in removable frame. Screen is mounted on inside (rear)
- FINISH: Mill Galvanized
- MINIMUM SIZE: 8"w x 12"h [203mm x 305mm]
- MAXIMUM SECTION SIZE: 96"w x 72"h [2438mm x 1829mm]
Larger sizes made in multiple sections.

6.13 [156mm]

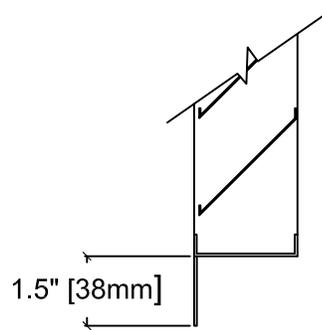


OPTIONS:

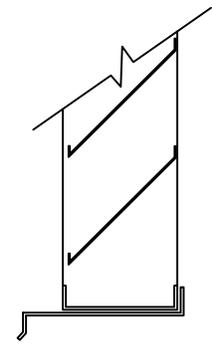
- Flanged Frame (1.5" [38mm] std.)
- Custom Flange (1", 2" , or 3") [25mm, 51mm, 76mm]
- Extended Sill
- Insect Screen (Other Screens Available, See Screen Page)
- Filter Racks (no screen)
- Security Bars
- Hinged Sub Frame
- Welded Construction
- Blank-off, Steel, non-insulated, no screen, non-removeable
- Blank-off, Steel, non-insulated, with bird screen or insect screen
- Blank-off, Steel, insulated double wall, with bird screen, removable
- Blank-off, Steel, insulated double wall, no screen, non-removeable
- Aluminum Construction
- 304 Stainless Steel Const. 316 Stainless Steel Const.

AVAILABLE FINISHES:

- Powder Polyester TGIC (2 coats) baked on at 410°F [210° C], 2.5 to 3.5 mils Meets AAMA-2603 Standards
- Powder Super durable polyester (2 coats) baked on at 410°F [210° C], 2.5 to 3.5 mils Meets AAMA-2604-05 Standards
- Acrylic baked enamel (ACRA-BOND® ULTRA) by AkzoNobel baked on at 350°F [177° C], 0.8 to 1.2 mils dry Meets AAMA-2603 Standards
- Kynar® (ALUM*A*STAR®) 2 coats by AkzoNobel baked on at 450°F [222° C], 1.2 to 1.6 mils dry Meets AAMA-2604-05 Standards
- Kynar 500® or HYLAR® 5000 70% TRINAR® (2 coats) by AkzoNobel baked on at 450°F [222° C], 1.2 to 1.6 mils dry, Meets AAMA-2605-05 Standards
- Kynar 500® or HYLAR® 5000 (70% Tri-Escent II) (2 coats) by AkzoNobel, a superior finish to other metallic or anodized finishes. A blend of mica, ceramic, and inorganic pigments creates subtle yet dazzling design that goes beyond metallic color without the requirement of a clear coat. 14 standard colors - custom colors available. Baked on at 415°F [213° C], 1.4 to 1.8 mils dry, meets AAMA 2605-05.
- Clear Anodize 204 R-1 Class II (AA-C22A31)(0.4 to 0.7 mil)
- Clear Anodize 215 R-1 Class I (AA-C22A41)(>0.7 mil)
- Integral Color Anodize (AA-C22A42)(>0.7 mil)
 - Clear coat available for all above finishes.
 - Hylar® 5000 is a registered trademark of Solvay Solexis, Inc.
 - Kynar® 500 is a registered trademark of Arkema.
 - ALUM*A*STAR® 50 and TRINAR® are registered trademarks of AkzoNobel
 - ACRA-BOND® ULTRA is a registered trademark of AkzoNobel



Optional Flange



Optional Extended Sill

*W & H dimensions furnished approximately 1/4" [6.35mm] under size.

MODEL SFL-D-6
6" [152mm] FIXED/DRAINABLE STEEL LOUVER



MODEL SFL-2

2" [51mm] FIXED STEEL LOUVER

STANDARD CONSTRUCTION:

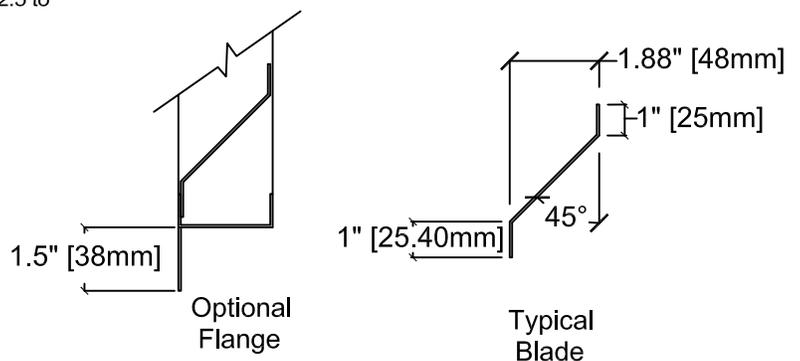
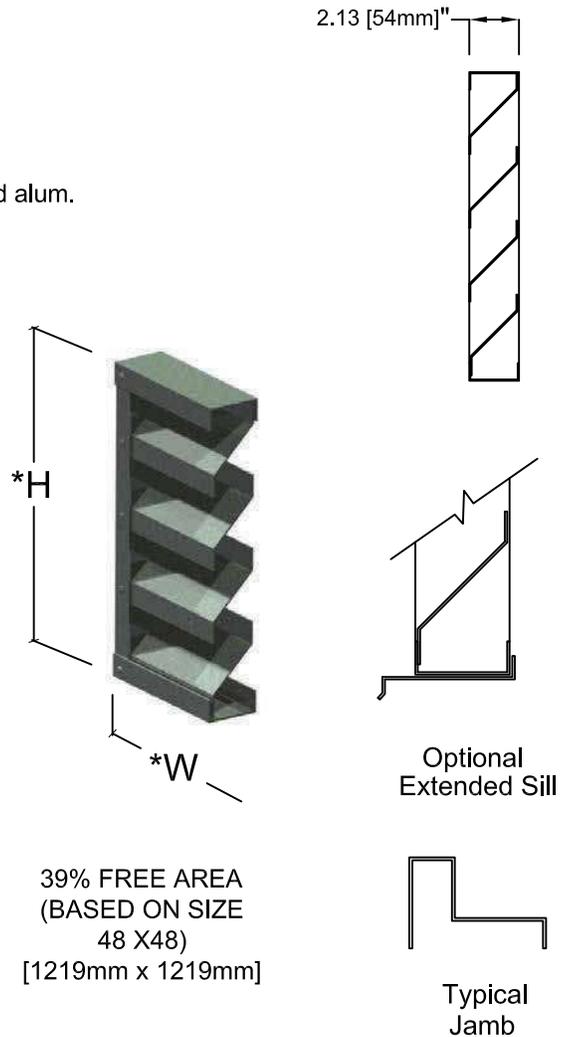
- FRAME: 18 ga. galvanized steel, 2.13" [54mm] deep
- BLADES: 18 ga. galvanized steel, positioned at 45° angles on approximately 3.5" [89mm] centers.
- BIRDSCREEN: 0.50" x 0.050" [12.70mm x 1.27mm] Expanded flattened alum. in removable frame. Screen is mounted on inside (rear)
- FINISH: mill galvanized
- MINIMUM SIZE: 8"w x 10"h [203mm x 254mm]
- MAXIMUM SIZE: 96"w x 72"h [2438mm x 1829mm]
Larger sizes made in multiple sections.

OPTIONS:

- Flanged Frame (1.5" [38mm] std.)
- Custom Flange (1", 2" , or 3") [25mm, 51mm, or 76mm]
- Extended Sill
- Insect Screen (Other Screens Available, See Screen Page)
- Filter Racks (no screen)
- Security Bars
- Hinged Sub Frame
- Welded Construction
- Blank-off, Steel, non-insulated, no screen, non-removeable
- Blank-off, Steel, non-insulated, with bird screen or insect screen
- Blank-off, Steel, insulated double wall, with bird screen, removable
- Blank-off, Steel, insulated double wall, no screen, non-removeable
- Aluminum Construction
- 304 Stainless Steel Const. 316 Stainless Steel Const.

AVAILABLE FINISHES:

- Powder Polyester TGIC (2 coats) baked on at 410°F [210° C], 2.5 to 3.5 mils Meets AAMA-2603 Standards
- Powder Super durable polyester (2 coats) baked on at 410°F [210° C], 2.5 to 3.5 mils Meets AAMA-2604-05 Standards
- Acrylic baked enamel (ACRA-BOND® ULTRA) by AkzoNobel baked on at 350°F [177° C], 0.8 to 1.2 mils dry Meets AAMA-2603 Standards
- Kynar® (ALUM*A*STAR®) 2 coats by AkzoNobel baked on at 450°F [222° C], 1.2 to 1.6 mils dry Meets AAMA-2604-05 Standards
- Kynar 500® or HYLAR® 5000 70% TRINAR® (2 coats) by AkzoNobel baked on at 450°F [222°C], 1.2 to 1.6 mils dry, Meets AAMA-2605-05 Standards
- Kynar 500® or HYLAR® 5000 (70% Tri-Escent II) (2 coats) by AkzoNobel, a superior finish to other metallic or anodized finishes. A blend of mica, ceramic, and inorganic pigments creates subtle yet dazzling design that goes beyond metallic color without the requirement of a clear coat. 14 standard colors - custom colors available. Baked on at 415°F [213° C], 1.4 to 1.8 mils dry, meets AAMA 2605-05.
- Clear Anodize 204 R-1 Class II (AA-C22A31)(0.4 to 0.7 mil)
- Clear Anodize 215 R-1 Class I (AA-C22A41)(>0.7 mil)
- Integral Color Anodize (AA-C22A42)(>0.7 mil)
 - Clear coat available for all above finishes.
 - Hylar® 5000 is a registered trademark of Solvay Solexis, Inc.
 - Kynar® 500 is a registered trademark of Arkema.
 - ALUM*A*STAR® 50 and TRINAR® are registered trademarks of AkzoNobel
 - ACRA-BOND® ULTRA is a registered trademark of AkzoNobel



*Width and Height dimensions are approximately 1/4" [6.35mm] under listed size.

MODEL SFL-2
2" [51mm] FIXED STEEL LOUVER



MODEL SFL-4

4" [102mm] FIXED STEEL LOUVER

STANDARD CONSTRUCTION:

FRAME: 18 ga. galvanized steel, 4.13" [105mm] deep

BLADES: J style, 18 ga. galvanized steel, positioned at 45° angles on approximately 4" [102mm] centers.

BIRDSCREEN: 0.50" x 0.050" [12.70mm x 1.27mm] Expanded flattened alum. in removable frame. Screen is mounted on inside (rear)

FINISH: Mill Galvanized

MINIMUM SIZE: 8"w x 10"h [203mm x 254mm]

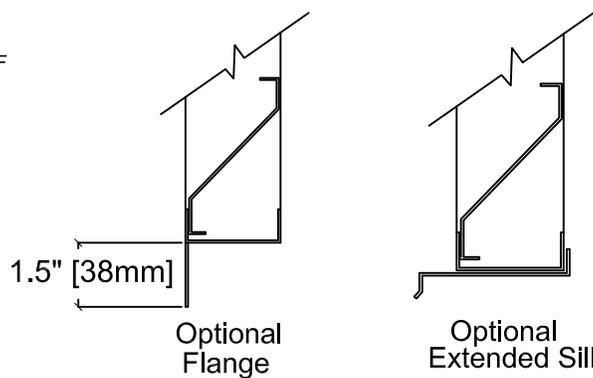
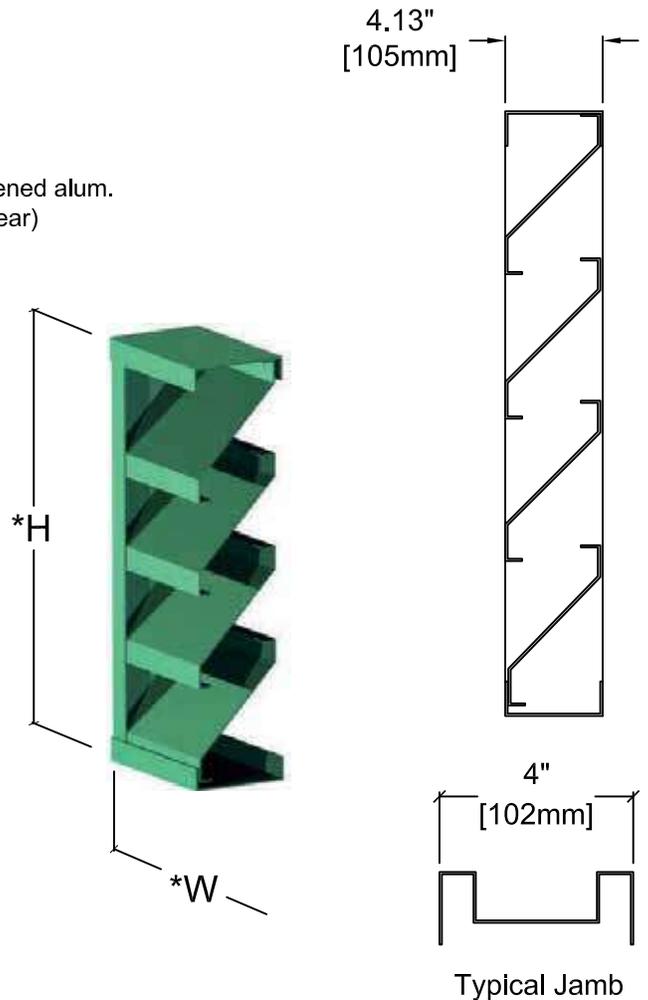
MAXIMUM SECTION SIZE: 96"w x 72"h [2438mm x 1829mm] Larger sizes made in multiple sections.

OPTIONS:

- Flanged Frame (1.5" [38mm] std.)
- Custom Flange (1", 2" , or 3" [25mm, 51mm, 76mm])
- Extended Sill
- Insect Screen (Other Screens Available, See Screen Page)
- Filter Racks (no screen)
- Security Bars
- Hinged Sub Frame
- Welded Construction
- Blank-off, Steel, non-insulated, no screen, non-removeable
- Blank-off, Steel, non-insulated, with bird screen or insect screen
- Blank-off, Steel, insulated double wall, with bird screen, removable
- Blank-off, Steel, insulated double wall, no screen, non-removeable
- Aluminum Construction
- 304 Stainless Steel Const. 316 Stainless Steel Const.

AVAILABLE FINISHES:

- Powder Polyester TGIC** (2 coats) baked on at 410°F [210° C], 2.5 to 3.5 mils Meets AAMA-2603 Standards
- Powder Super durable polyester** (2 coats) baked on at 410° [210° C], 2.5 to 3.5 mils Meets AAMA-2604-05 Standards **F**
- Acrylic baked enamel (ACRA-BOND® ULTRA)** by AkzoNobel baked on at 350°F [177° C], 0.8 to 1.2 mils dry Meets AAMA-2603 Standards
- Kynar® (ALUM*A*STAR®)** 2 coats by AkzoNobel baked on at 450°F [222° C], 1.2 to 1.6 mils dry Meets AAMA-2604-05 Standards
- Kynar 500®** or **HYLAR® 5000 70% TRINAR®** (2 coats) by AkzoNobel baked on at 450°F [222°C], 1.2 to 1.6 mils dry, Meets AAMA-2605-05 Standards
- Kynar 500®** or **HYLAR® 5000 (70% Tri-Escent II)** (2 coats) by AkzoNobel, a superior finish to other metallic or anodized finishes. A blend of mica, ceramic, and inorganic pigments creates subtle yet dazzling design that goes beyond metallic color without the requirement of a clear coat. 14 standard colors - custom colors available. Baked on at 415°F [213° C], 1.4 to 1.8 mils dry, meets AAMA 2605-05.
- Clear Anodize 204 R-1 Class II (AA-C22A31)**(0.4 to 0.7 mil)
- Clear Anodize 215 R-1 Class I (AA-C22A41)**(>0.7 mil)
- Integral Color Anodize (AA-C22A42)**(>0.7 mil)
 - Clear coat available for all above finishes.
 - Hylar® 5000 is a registered trademark of Solvay Solexis, Inc.
 - Kynar® 500 is a registered trademark of Arkema.
 - ALUM*A*STAR® 50 and TRINAR® are registered trademarks of AkzoNobel
 - ACRA-BOND® ULTRA is a registered trademark of AkzoNobel

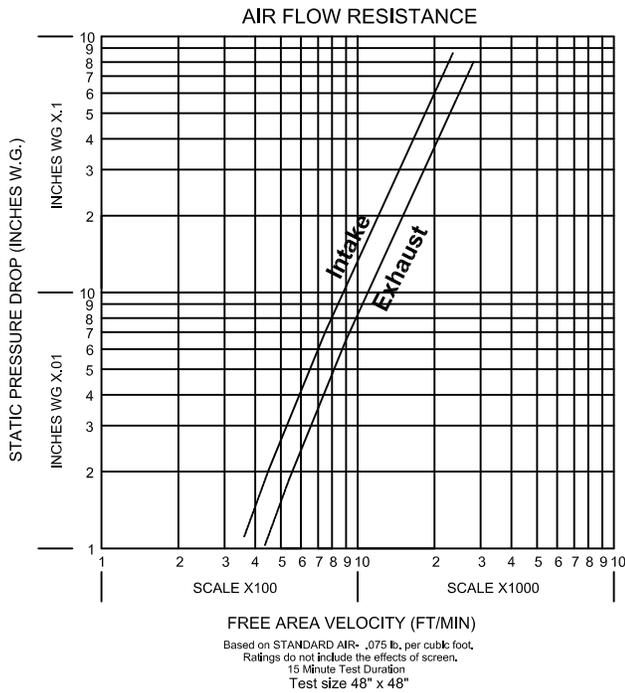


*Width and Height dimensions are approximately 1/4" [6.35mm] under listed size.

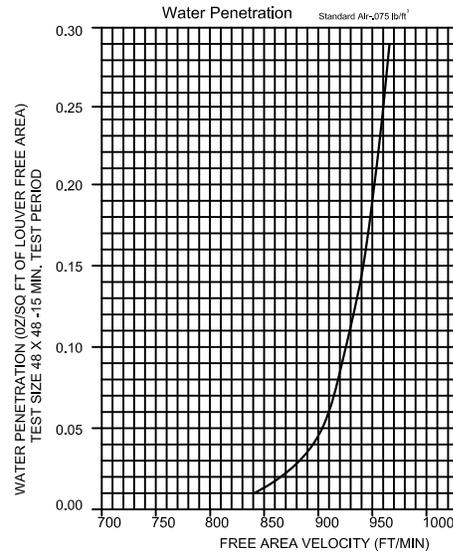
MODEL SFL-4
4" [102mm] FIXED STEEL LOUVER

SFL-4 LOUVER PERFORMANCE DATA

Model SFL-4 resistance to airflow varies depending on louver application (air intake or air exhaust). Free area velocities (shown) are higher than average velocity through the overall louver size. See louver selection information.



Beginning Point of water penetration for Model SFL-4 is **840 FPM**
FREE AREA VELOCITY AT .01 OZ. OF WATER



LOUVER SELECTION AND APPLICATION

Application of any louver involves selecting an airflow velocity through the louver free area (free area velocity in fpm) that produces an acceptable pressure drop and minimizes carry through of normally encountered rain water.

No louver manufacturer warrants their louver to prevent water penetration under all possible combinations of wind and rain. Water penetration through SFL-4 begins at approximately 840 FPM free area velocity. Intake air louver selection using free area velocity below 840 FPM is recommended. Louver selection involves the following two steps, and depending on air conditions, either step may come first.

Select Free Area Velocity:

Using the Airflow Resistance Chart, select a free area velocity that produces an acceptable pressure drop with minimal water penetration. (Water penetration need not be considered when selecting exhaust louvers.)

Determine Louver Free Area:

Using the free area velocity from the previous step and total CFM, determine Louver Free Area required. Using Louver Free Area Chart, select a louver with the required free area. If louver size is given, determine free area from chart and work backwards to determine maximum airflow. See examples below.

Free Area Chart (square feet):

Louver Height Inches	Louver Width in Inches										Louver Height Inches
	8	12	18	24	30	36	42	48	54	60	
10	0.07	0.11	0.19	0.26	0.34	0.41	0.49	0.56	0.64	0.71	10
12	0.13	0.23	0.38	0.53	0.68	0.83	0.98	1.13	1.28	1.43	12
18	0.23	0.41	0.67	0.93	1.20	1.46	1.73	1.99	2.25	2.52	18
24	0.38	0.67	1.10	1.54	1.97	2.40	2.84	3.27	3.70	4.14	24
30	0.48	0.84	1.39	1.94	2.49	3.04	3.58	4.13	4.68	5.23	30
36	0.63	1.11	1.82	2.54	3.26	3.98	4.69	5.41	6.13	6.85	36
42	0.73	1.28	2.11	2.95	3.78	4.61	5.44	6.27	7.11	7.94	42
48	0.88	1.54	2.55	3.55	4.55	5.55	6.55	7.55	8.56	9.56	48
54	0.98	1.72	2.84	3.95	5.07	6.18	7.30	8.42	9.53	10.65	54
60	1.12	1.98	3.27	4.55	5.84	7.12	8.41	9.70	10.98	12.27	60
66	1.22	2.16	3.56	4.96	6.36	7.76	9.16	10.56	11.96	13.36	66
72	1.37	2.42	3.99	5.56	7.13	8.70	10.27	11.84	13.41	14.98	72
78	1.47	2.60	4.28	5.96	7.65	9.33	11.02	12.70	14.38	16.07	78
84	1.62	2.86	4.71	6.57	8.42	10.27	12.13	13.98	15.83	17.69	84
90	1.72	3.03	5.00	6.97	8.94	10.91	12.87	14.84	16.81	18.78	90
96	1.87	3.30	5.43	7.57	9.71	11.85	13.98	16.12	18.26	20.40	96



MODEL SFL-6

6" [152mm] FIXED STEEL LOUVER

STANDARD CONSTRUCTION:

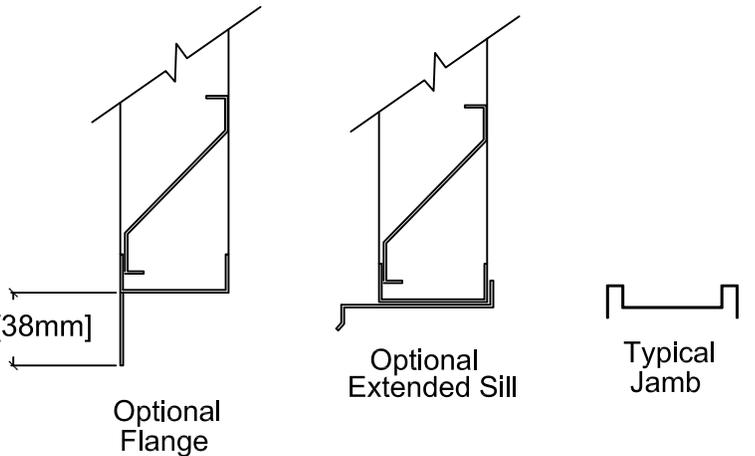
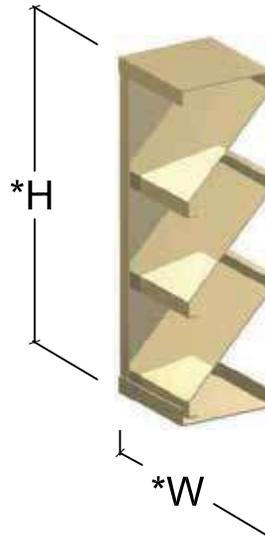
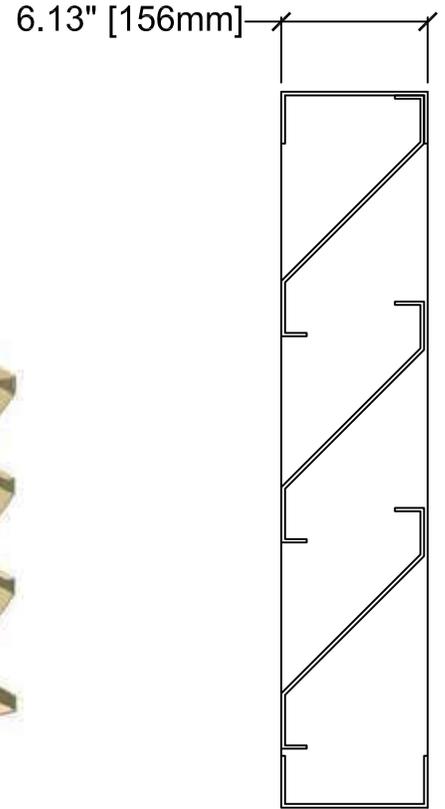
- FRAME: 18 ga. galvanized steel, 6" [152mm] deep
- BLADES: J style, 18 ga. galvanized steel, positioned at 45° angles on approximately 6" [152mm] centers.
- BIRDSCREEN: 0.50" x 0.050" [12.70mm x 1.27mm] Expanded flattened alum. in removable frame. Screen is mounted on inside (rear)
- FINISH: Mill Galvanized
- MINIMUM SIZE: 8"w x 12"h [203mm x 305mm]
- MAXIMUM SIZE: 96"w x 72"h [2438mm x 1829mm]
Larger sizes made in multiple sections.

OPTIONS:

- Flanged Frame (1.5" [38mm] std.)
- Custom Flange (1", 2", or 3") [25mm, 51mm, or 76mm]
- Extended Sill
- Insect Screen (Other Screens Available, See Screen Page)
- Filter Racks (no screen)
- Security Bars
- Hinged Sub Frame
- Welded Construction
- Blank-off, Steel, non-insulated, no screen, non-removeable
- Blank-off, Steel, non-insulated, with bird screen or insect screen
- Blank-off, Steel, insulated double wall, with bird screen, removable
- Blank-off, Steel, insulated double wall, no screen, non-removeable
- Aluminum Construction
- 304 Stainless Steel Const. 316 Stainless Steel Const.

AVAILABLE FINISHES:

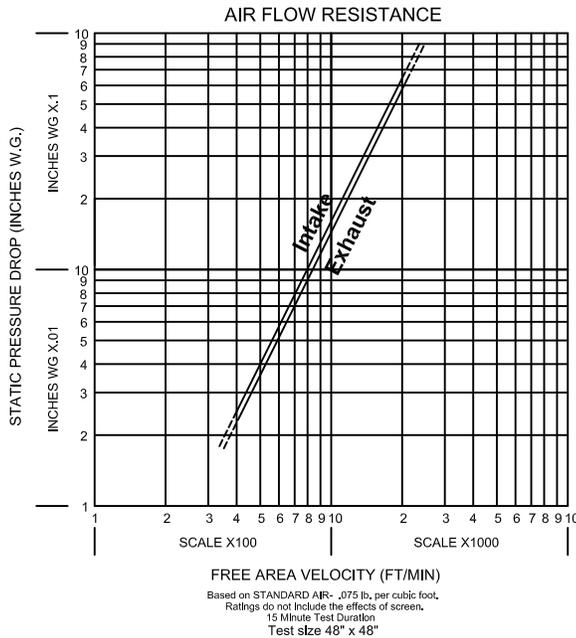
- Powder Polyester TGIC** (2 coats) baked on at 410°F [210° C], 2.5 to 3.5 mils Meets AAMA-2603 Standards
- Powder Super durable polyester** (2 coats) baked on at 410°F [210° C], 2.5 to 3.5 mils Meets AAMA-2604-05 Standards
- Acrylic baked enamel** (ACRA-BOND® ULTRA) by AkzoNobel baked on at 350°F [177° C], 0.8 to 1.2 mils dry Meets AAMA-2603 Standards
- Kynar®** (ALUM*A*STAR®) 2 coats by AkzoNobel baked on at 450°F [222° C], 1.2 to 1.6 mils dry Meets AAMA-2604-05 Standards
- Kynar 500®** or **HYLAR® 5000** 70% **TRINAR®** (2 coats) by AkzoNobel baked on at 450°F [222° C], 1.2 to 1.6 mils dry, Meets AAMA-2605-05 Standards
- Kynar 500®** or **HYLAR® 5000** (70% Tri-Escent II) (2 coats) by AkzoNobel, a superior finish to other metallic or anodized finishes. A blend of mica, ceramic, and inorganic pigments creates subtle yet dazzling design that goes beyond metallic color without the requirement of a clear coat. 14 standard colors - custom colors available. Baked on at 415°F [213°C], 1.4 to 1.8 mils dry, meets AAMA 2605-05.
- Clear Anodize** 204 R-1 Class II (AA-C22A31)(0.4 to 0.7 mil)
- Clear Anodize** 215 R-1 Class I (AA-C22A41)(>0.7 mil)
- Integral Color Anodize** (AA-C22A42)(>0.7 mil)
- Clear coat available for all above finishes.
- Hylar® 5000 is a registered trademark of Solvay Solexis, Inc.
- Kynar® 500 is a registered trademark of Arkema.
- ALUM*A*STAR® 50 and TRINAR® are registered trademarks of AkzoNobel
- ACRA-BOND® ULTRA is a registered trademark of AkzoNobel



*W & H dimensions furnished approximately 1/4" [6.35mm] under size.

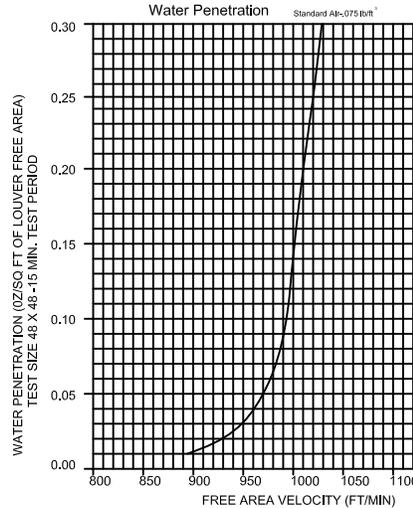
MODEL SFL-6
6" [152mm] FIXED STEEL LOUVER

SFL-6 LOUVER PERFORMANCE DATA



Model SFL-6 resistance to airflow varies depending on louver application (air intake or air exhaust). Free area velocities (shown) are higher than average velocity through the overall louver size. See louver selection information.

Beginning Point of water penetration for Model SFL-6 is 896 FPM FREE AREA VELOCITY AT .01 OZ. OF WATER



LOUVER SELECTION AND APPLICATION

Application of any louver involves selecting an airflow velocity through the louver free area (free area velocity in fpm) that produces an acceptable pressure drop and minimizes carry through of normally encountered rain water.

No louver manufacturer warrants their louver to prevent water penetration under all possible combinations of wind and rain. Water penetration through SFL-6 begins at approximately 896 FPM free area velocity. Intake air louver selection using free area velocity below 896 FPM is recommended. Louver selection involves the following two steps, and depending on air conditions, either step may come first.

Select Free Area Velocity:

Using the Airflow Resistance Chart, select a free area velocity that produces an acceptable pressure drop with minimal water penetration. (Water penetration need not be considered when selecting exhaust louvers.)

Determine Louver Free Area:

Using the free area velocity from the previous step and total CFM, determine Louver Free Area required. Using Louver Free Area Chart, select a louver with the required free area. If louver size is given, determine free area from chart and work backwards to determine maximum airflow. See examples below.

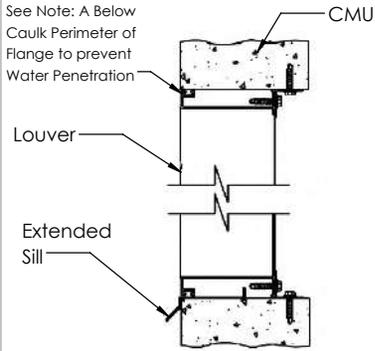
Free Area Chart (square feet):

Louver Height Inches	Louver Width in Inches										Louver Height Inches
	8	12	18	24	30	36	42	48	54	60	
12	0.1	0.11	0.3	0.41	0.53	0.65	0.77	0.88	1	1.12	12
18	0.22	0.23	0.65	0.9	1.16	1.41	1.67	1.92	2.18	2.43	18
24	0.34	0.41	1	1.39	1.79	2.18	2.57	2.97	3.36	3.75	24
30	0.46	0.67	1.35	1.88	2.41	2.94	3.48	4.01	4.54	5.07	30
36	0.59	0.84	1.7	2.37	3.04	3.71	4.38	5.05	5.72	6.39	36
42	0.74	1.11	2.15	2.99	3.83	4.68	5.52	6.37	7.21	8.06	42
48	0.88	1.28	2.55	3.55	4.56	5.56	6.56	7.57	8.57	9.57	48
54	1.02	1.54	2.95	4.12	5.28	6.44	7.6	8.77	9.93	11.09	54
60	1.16	1.72	3.36	4.68	6	7.32	8.64	9.96	11.29	12.61	60
66	1.30	1.98	3.76	5.24	6.72	8.2	9.68	11.16	12.64	14.12	66
72	1.43	2.16	4.16	5.8	7.43	9.07	10.7	12.34	13.98	15.61	72
78	1.55	2.42	4.51	6.28	8.06	9.83	11.61	13.38	15.16	16.93	78
84	1.67	2.6	4.86	6.77	8.69	10.6	12.51	14.42	16.34	18.25	84
90	1.79	2.86	5.21	7.26	9.31	11.36	13.42	15.47	17.52	19.57	90
96	1.92	3.03	5.56	7.75	9.94	12.13	14.32	16.51	18.7	20.89	96

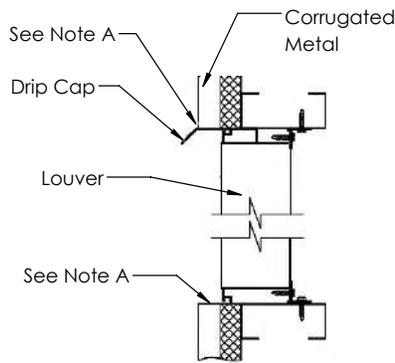


Louver Installation Instructions

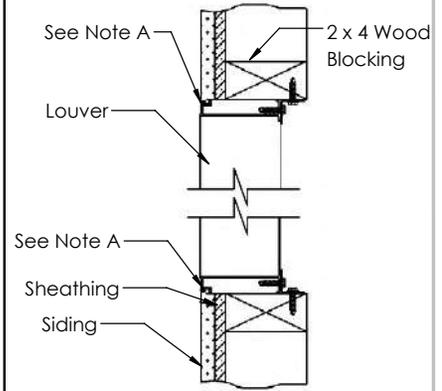
Masonry Wall



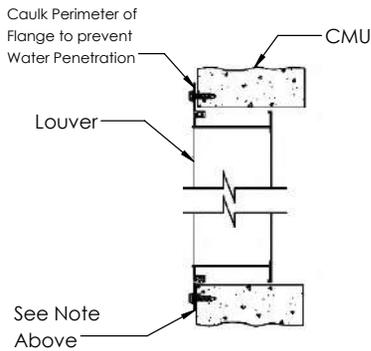
Metal Panel Wall



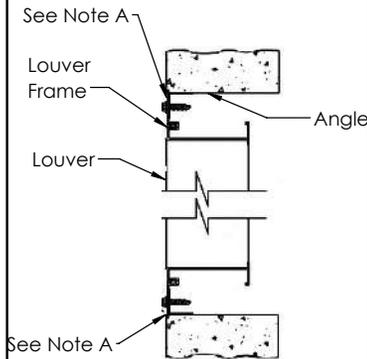
Wood Installation



Flange Mount

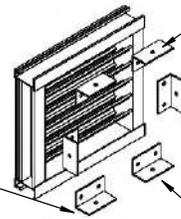


Angle Subframe



Suggested are (2) 7/32" diameter holes & (2) #10 x 5/8" sheet metal screws for angle attachment to louver. Not by CVS

To prevent corrosion, apply heavy coating of bituminous paint on any surface in contact with concrete, masonry or dissimilar metals

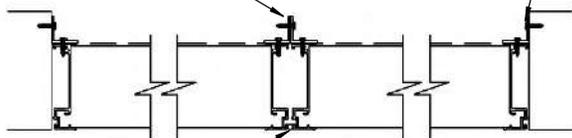


Holes for attachment to wall conditions drilled in field by customer. Anchor for your specific installation not supplied by CVS

Multi-Section Assembly / Plan View

Attach Louver Sections together with vertical angles or angle clips and min. #10sms, placed 12" max. o.c., $\Phi 3/8"$ thru bolts may also be used. Not Supplied by CVS

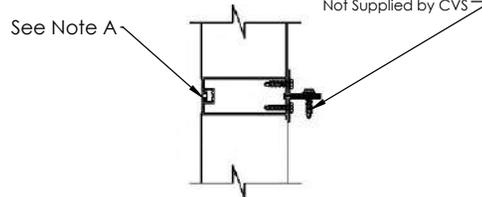
Holes for attachment to wall conditions drilled in field by customer. Anchors for your specific installation not supplied by CVS



See Note A

Multi-Section Assembly / Elevation View

Optional: Attach louver sections together with horizontal angles or angle clips and min. #10 sms, placed 12" max. o.c., $\Phi 3/8"$ thru bolts may also be used. Not Supplied by CVS



See Note A

Note A: After the louver is secured to the substrate, install backer rod and caulking (not provided by CVS) around the perimeter of the louver to the substrate and at section joints where possible. If mullion strips are provided, place caulk behind mullion strip (if possible) before attaching. If mullion strips already installed, apply a small bead where it touches the louver. Due to continuing research, **Central Ventilation Systems (CVS)** reserves the right to change specifications without notice.

Product Range

- ▶ Fire-Resisting Ductwork (BS & EN)
- ▶ Fire-rated Insulation (ASTM & UL)
- ▶ Sound Attenuators (ASTM & BS)
- ▶ VAV Boxes (AHRI)
- ▶ Life Safety Dampers (UL)
- ▶ Control Dampers (AMCA & BS)
- ▶ Access Doors (BS & EN)
- ▶ Louvers (AMCA)
- ▶ Smoke Exhaust, Building, Car Park & Tunnel Ventilation Fans (AMCA & EN)
- ▶ Domestic and Industrial Ventilation Fans
- ▶ AHU, FAHU, FCU, RTU, ERV & Ecology Units (Eurovent, TUV & AHRI)
- ▶ Electrostatic Precipitators (ESPs) & UL Listed Air Filters (UL)

Our Brands



Control Dampers, Louvers,
Sound Attenuators & VAV Boxes



Non-Coated Fire-Resisting Ductwork
& Life Safety Dampers



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Building & Industry



Smoke Exhaust, Car Park &
Tunnel Ventilation



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Co. L.L.C**

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Sharjah, U.A.E

CVS Arabia L.L.C

2nd Industrial City,
Dammam 31952,
K.S.A

**Badr and Asfour
Company For Engineering
and Metal Industries**

Al Minya Industrial Zone,
Al Minya Governorate
2427606, Egypt

**Central Ventilation Systems
Co. W.L.L.**

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