

Application

The XSV-845 is a steel grille designed to FEMA 320 or FEMA 361 guidelines for shelters or safe rooms. It has been designed to withstand design loads from 260 PSF to 300 PSF produced by extreme wind phenomena such as tornadoes and hurricanes. The XSV-845 has been tested with impacts of 15lb 2" x 4"s traveling at 100 MPH per ICC 500. This makes the XSV-845 compliant for wind borne debris in all tornado or hurricane regions in the United States.

The XSV-845 can be mounted on the exterior of the wall or slip into the opening and still provide required protection. It is usually installed in front of another louver or damper that provides additional water penetration protection if required. The XSV-845 incorporates horizontal inverted V steel blades and is available in a wide array of painted finishes.

Standard Construction

Material: Hot rolled A36 steel.

Frame: 8" deep x 0.25" thick (203 x 6).

Blades: Inverted V, 3/16" (5).

Screen: 1/2" x 0.063" (12.7 x 1.6) expanded and flattened stainless steel.

Mullion: Visible

Flange: Single section: 4 3/8" (111) on top and bottom.
Multiple section: Single section high- 4 3/8" (111) on top and bottom. Single section wide- 4 3/8" (111) on jambs.

Factory Finish: Zinc Rich Prime Coat

Minimum Size: 6" x 6" (152 x 152)

Maximum Size: Single section: 60" x 96" (1524 x 2438)
120" x 60" (3048 x 1524)

Multiple section: Unlimited width x single section high
Single section wide x unlimited height

Options

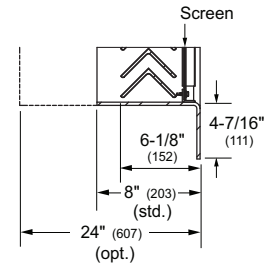
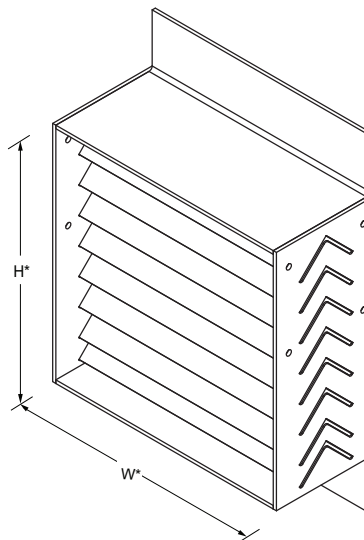
- Alternate Factory finish: (Two year warranty - this model only)
 - High Performance 100% resin Newlar®/70% resin Kynar®
 - Polyester Powder
 - Baked Enamel
 - Hot Dipped Galvanized
- Alternate Flanges:
 - On jambs (single section only)
 - On all four sides (single section only)
- Internal Mount
- Integral Sleeve
 - 14" (356) 16" (466) 24" (607) max.
 - Other _____

Ratings

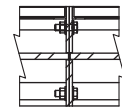
Free Area: [48" x 48" (1219 x 1219) unit]: 9.4 ft² (0.88 m²)
58.5%

Velocity @ 0.15 in.wg. Pressure Loss: 755 fpm (3.84 m/s)

Std. Design Load: 290 psf for 60" x 90" (1524 x 2286) and 54" x 96" (1372 x 2438) top and bottom mounted units.
260 psf for 60" x 96" (1524 x 2438) top and bottom mounted units.
Up to 300 psf for all jamb mounted units.



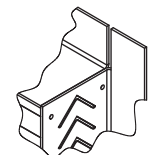
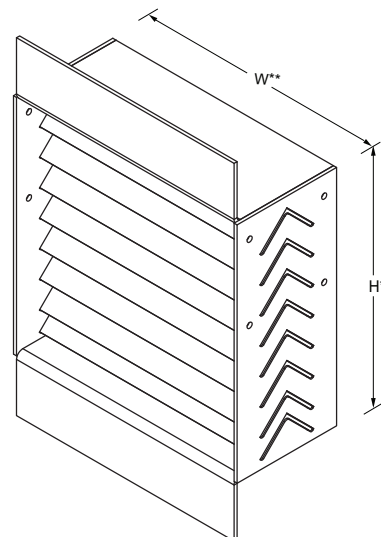
External Mount
(Standard)



Visible Vertical Splice
(Horizontal splice similar)

External Mount
(Standard)

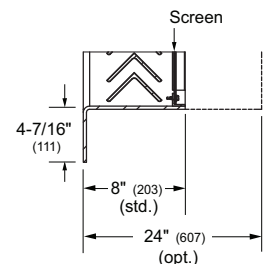
*Grille dimensions furnished approximately 1/2" (13) oversize.



Typical Closed Corner
(Optional flanges on all four (4) sides)

Internal Mount
(Optional)

**Grille dimensions furnished approximately 1/2" (13) undersize.



Internal Mount
(Optional)

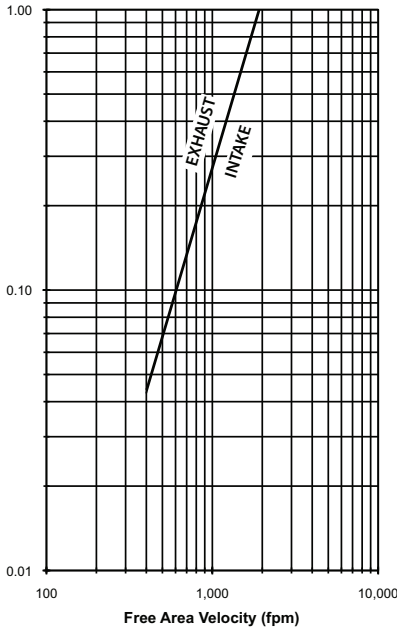
Free Area (ft²)

		Width (Inches)																			
		6	12	18	24	30	36	40	48	54	60	66	72	78	84	90	96	102	108	114	120
Height (Inches)	6	0.06	0.15	0.25	0.4	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9
	12	0.14	0.4	0.6	0.9	1.1	1.4	1.6	1.9	2.1	2.4	2.6	2.8	3.1	3.3	3.6	3.8	4.1	4.3	4.6	4.8
	18	0.25	0.7	1.1	1.5	2.0	2.4	2.8	3.2	3.7	4.1	4.5	5.0	5.4	5.8	6.2	6.7	7.1	7.5	8.0	8.4
	24	0.3	0.9	1.5	2.1	2.6	3.2	3.8	4.4	4.9	5.5	6.1	6.7	7.2	7.8	8.4	9.0	9.6	10.1	10.7	11.3
	30	0.4	1.1	1.9	2.6	3.3	4.0	4.8	5.5	6.2	6.9	7.7	8.4	9.1	9.8	10.6	11.3	12.0	12.7	13.5	14.2
	36	0.5	1.4	2.3	3.1	4.0	4.9	5.7	6.6	7.5	8.4	9.2	10.1	11.0	11.8	12.7	13.6	14.5	15.3	16.2	17.1
	42	0.6	1.6	2.6	3.7	4.7	5.7	6.7	7.7	8.8	9.8	10.8	11.8	12.8	13.9	14.9	15.9	16.9	17.9	19.0	20.0
	48	0.7	1.9	3.0	4.2	5.4	6.5	7.7	9.4	10.0	11.2	12.4	13.5	14.7	15.9	17.0	18.2	19.4	20.5	21.7	22.9
	54	0.8	2.1	3.5	4.8	6.2	7.5	8.9	10.2	11.6	12.9	14.3	15.6	17.0	18.3	19.7	21.0	22.4	23.7	25.1	26.4
	60	0.9	2.4	3.9	5.4	6.9	8.4	9.9	11.4	12.9	14.4	15.9	17.4	18.9	20.4	21.9	23.4	24.9	26.4	27.9	29.4
	66	1.0	2.6	4.3	5.9	7.5	9.2	10.8	12.5	14.1	15.8	17.4	19.1	20.7	22.4	24.0	25.7	27.3	29.0	30.6	32.3
	72	1.0	2.8	4.6	6.4	8.2	10.0	11.8	13.6	15.4	17.2	19.0	20.8	22.6	24.4	26.2	28.0	29.8	31.6	33.4	35.2
78	1.1	3.1	5.0	7.0	8.9	10.8	12.8	14.7	16.7	18.6	20.6	22.5	24.5	26.4	28.3	30.3	32.2	34.2	36.1	38.1	
84	1.2	3.4	5.5	7.6	9.7	11.9	14.0	16.1	18.2	20.4	22.5	24.6	26.7	28.9	31.0	33.1	35.2	37.4	39.5	41.6	
90	1.3	3.6	5.9	8.1	10.4	12.7	15.0	17.2	19.5	21.8	24.1	26.3	28.6	30.9	33.2	35.4	37.7	40.0	42.2	44.5	
96	1.4	3.8	6.3	8.7	11.1	13.5	15.9	18.4	20.8	23.2	25.6	28.0	30.5	32.9	35.3	37.7	40.2	42.6	45.0	47.4	

Single Section
60" x 96" (1524 x 2438)

Pressure Loss

(Data corrected to standard air density)



Anchor/Fastener Requirements

Substrate Condition	Anchor/Fastener Type	Minimum Embedment	Edge Distance	Anchor Spacing
Steel	1/4" Sheet Metal Screw	0.22"	-	12" Max. Spacing & 4" from Ends
Grout Filled CMU	1/2" Large Diameter Tapcon by Redhead	2-1/2"	3"	
3000 PSI Concrete	* 3/8" Hilti Kwik Bolt TZ	2"	2-7/8"	
Wood (.43 sg)	1/2" Lag Bolt	3"	2"	

*Meets ICC 2009 requirements for cracked concrete
Anchors or fasteners into building substrate are not supplied by C&S.

Weights (Approximate weight in lbs.)

		Width (Inches)																			
		6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Height (Inches)	6	22	37	52	67	82	97	112	127	142	157	172	187	202	216	231	246	261	276	291	306
	12	35	56	76	97	117	138	159	179	200	220	241	261	282	302	323	343	364	384	405	426
	18	49	75	101	127	153	179	206	232	258	284	310	336	362	388	414	440	466	492	519	545
	24	63	94	126	158	189	221	252	284	316	347	379	411	442	474	506	537	569	600	632	664
	30	75	110	145	181	216	251	287	322	357	393	428	463	499	534	569	605	640	675	711	746
	36	88	129	170	211	252	293	333	374	415	456	497	538	579	620	661	701	742	783	824	865
	42	102	148	195	241	288	334	380	427	473	520	566	613	659	705	752	798	845	891	938	984
	48	115	167	219	271	323	375	427	479	531	583	635	687	739	791	843	895	947	999	1051	1103
	54	129	187	244	302	359	417	474	532	589	647	704	762	820	877	935	992	1050	1107	1165	1222
	60	143	206	269	332	395	458	521	584	647	711	774	837	900	963	1026	1089	1152	1215	1278	1341
	66	155	221	288	355	422	489	555	622	689	756	825	892	959	1026	1093	1160	1227	1294	1361	1428
	72	168	241	313	385	458	530	602	675	747	819	894	966	1038	1110	1182	1254	1326	1398	1470	1542
78	182	260	338	416	494	571	649	727	805	883	963	1041	1119	1197	1275	1353	1431	1509	1587	1665	
84	196	279	362	446	529	613	696	780	863	947	1032	1115	1198	1281	1364	1447	1530	1613	1696	1779	
90	209	298	387	476	565	654	743	832	921	1010	1100	1189	1278	1367	1456	1545	1634	1723	1812	1901	
96	221	314	407	499	592	685	777	870	963	1055	1147	1239	1331	1423	1515	1607	1699	1791	1883	1975	

Information is subject to change without notice or obligation.

NOTE: Dimensions in parentheses () are millimeters.