

# LVR-1045

Natural Intake Ventilation

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# LVR-1045-4 Natural Intake Ventilator

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## LVR-1045-4EA Product Details

### PRODUCT DESCRIPTION

The 1045-4EA extruded aluminum louver is designed for intake and exhaust application where protection against water infiltration is not critical. The 1045-4EA is well suited for special shape applications and is available with hidden mullions for a continuous blade appearance of multiple section assemblies. 1045-4EA is available in a wide array of anodized and painted finishes including custom color matching.

### STANDARD FEATURES

- Material: Mill finish 6063-T5 extruded aluminum
- Frame: 4" deep × 0.081" thick (102 × 2) channel
- Blades: 45° × 0.081" (2) thick J-style
- Screen: 1/2" × 0.063" (12.7 × 1.6) expanded and flattened aluminum.
- Mullion: Visible.
- Minimum Size: 4.5" × 9" (114 × 229)
- Maximum Size:
  - Single section:
    - 60" × 120" (1524 × 3048)
    - 120" × 60" (3048 × 1524)
  - Multiple section: Unlimited
- Free Area: [48" × 48" (1219 × 1219) unit]: 7.7 ft<sup>2</sup> (0.72 m<sup>2</sup>) 48.0%
- Water Penetration Beginning Point Performance
  - Free Area Velocity: 781 fpm (3.97 m/s)
  - Air Volume Delivered: 6,317 cfm (2.98 m<sup>3</sup>/s)
  - Pressure Loss: 0.10 in.wg. (24 Pa)
- Velocity @ 0.15 in.wg. Pressure Loss: 840 fpm (4.26 m/s)
- Design Load: 30 psf

### OPTIONAL FEATURES

- Factory finish:
  - High Performance Fluoropolymer
  - Prime Coat
  - Baked Enamel
  - Clear Anodize
  - Integral Color Anodize
- Frame Options
  - 11/2" (38) flange frame
  - Stucco flange
  - Galvanizing Frame
- Installation Hardware
  - Clip angles
  - Continuous Angles
- Hidden Vertical Mullion
- Heavy duty 0.125" (3) construction
- Welded construction
- Alternate bird or insect screens
- Insulated or non-insulated blank-off panels
- Filter racks
- Hinged frame
- Subframe
- Head and/or sill flashing
- Burglar bars
- Frame closure
- Net OD (actual size)

### INDUSTRY APPLICATION

- Aluminum Plants
- Automotive Plants
- Cement & Concrete
- Chemical Plants
- Foundries & Forging
- General Manufacturing
- Glass & Glass Products
- Gypsum Plants
- Heavy Manufacturing
- Mining & Minerals
- Plastics Plants
- Processing Industry
- Power Stations
- Pulp & Paper Plants
- Specialty Chemicals
- Steel Mills
- Warehouses
- +Others

# LVR-1045-4 Natural Intake Ventilator

## LVR-1045-4EA Free Area

Free Area ( $\text{ft}^2$ )		12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Height (Inches)	Width (Inches)	0.3	0.5	0.6	0.8	1	1.2	1.3	1.5	1.7	1.9	2.0	2.2	2.4	2.6	2.7	2.9	3.1	3.3	3.4
12	0.5	0.8	1.1	1.4	1.7	2.0	2.3	2.6	2.9	3.2	3.5	3.8	4.2	4.5	4.8	5.1	5.4	5.7	6.0	
18	0.7	1.2	1.6	2.0	2.5	2.9	3.3	3.7	4.2	4.6	5.0	5.5	5.9	6.3	6.8	7.2	7.6	8.1	8.5	
24	1.0	1.7	2.3	2.9	3.6	4.2	4.8	5.4	6.1	6.7	7.3	7.9	8.6	9.2	9.8	10.4	11.1	11.7	12.3	
30	1.3	2.1	2.9	3.7	4.5	5.3	6.1	6.9	7.7	8.5	9.2	10.0	10.8	11.6	12.4	13.2	14	14.8	15.6	
36	1.6	2.5	3.5	4.4	5.4	6.3	7.3	8.2	9.2	10.1	11.0	12.0	12.9	13.9	14.8	15.8	16.7	17.7	18.6	
42	2.0	3.2	4.4	5.6	6.8	8.0	9.2	10.4	11.6	12.8	14.0	15.2	16.5	17.7	18.9	20.1	21.3	22.5	23.7	
54	2.3	3.7	5.0	6.4	7.8	9.1	10.5	11.9	13.3	14.6	16.0	17.4	18.7	20.1	21.5	22.8	24.2	25.6	27.0	
60	2.6	4.1	5.6	7.2	8.7	10.2	11.8	13.3	14.9	16.4	17.9	19.5	21	22.5	24.1	25.6	27.1	28.7	30.2	
66	2.8	4.5	6.2	7.9	9.6	11.3	13.1	14.8	16.5	18.2	19.9	21.6	23.3	25.0	26.7	28.4	30.1	31.8	33.5	
72	3.1	4.9	6.8	8.6	10.5	12.3	14.2	16.0	17.8	19.7	21.5	23.4	25.2	27.1	28.9	30.8	32.6	34.5	36.3	
78	3.3	5.3	7.2	9.2	11.2	13.2	15.1	17.1	19.1	21.1	23.0	25.0	27.0	29.0	30.9	32.9	34.9	36.9	38.8	
84	3.5	5.6	7.7	9.8	11.9	14.0	16.1	18.2	20.3	22.4	24.5	26.6	28.7	30.9	33	35.1	37.2	39.3	41.4	
90	3.8	6.1	8.4	10.6	12.9	15.2	17.5	19.8	22.0	24.3	26.6	28.9	31.2	33.4	35.7	38.0	40.3	42.6	44.9	
96	4.1	6.5	9.0	11.4	13.9	16.3	18.8	21.2	23.6	26.1	28.5	31.0	33.4	35.9	38.3	40.8	43.2	45.7	48.1	
102	4.4	7.0	9.6	12.2	14.8	17.4	20.0	22.6	25.2	27.9	30.5	33.1	35.7	38.3	40.9	43.5	46.1	48.8	51.4	
108	4.6	7.3	10.1	12.8	15.6	18.3	21.1	23.8	26.5	29.3	32	34.8	37.5	40.3	43.0	45.8	48.5	51.3	54.0	
114	4.8	7.7	10.5	13.4	16.3	19.2	22.0	24.9	27.8	30.7	33.5	36.4	39.3	42.2	45.0	47.9	50.8	53.7	56.5	
120																				

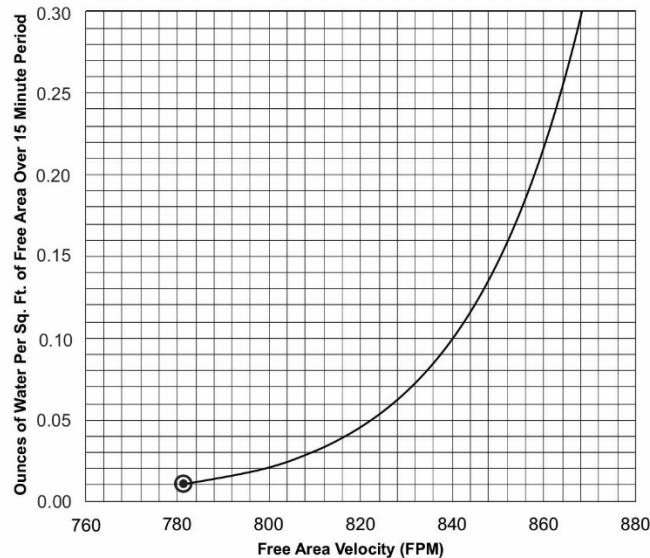
Width (Inches)

## Water Penetration

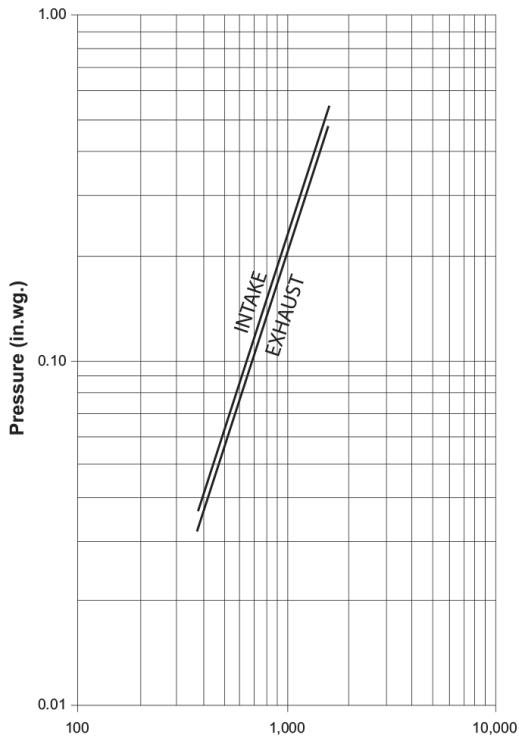
AMCA defines the beginning point of water penetration as the free area velocity at the intersection of a simple linear regression of test data and the line of 0.01 ounces of water per square foot of free area and is measured through a 48" x 48" louver during a 15-minute period.

The AMCA water penetration test provides a method for comparing louver models and designs as to their efficiency in resisting the penetration of rainfall under specific lab conditions. We recommend that intake louvers are selected with a reasonable margin of safety below the beginning point of water penetration to avoid unwanted penetration during severe storm conditions.

Beginning Point of Water Penetration = 781 fpm



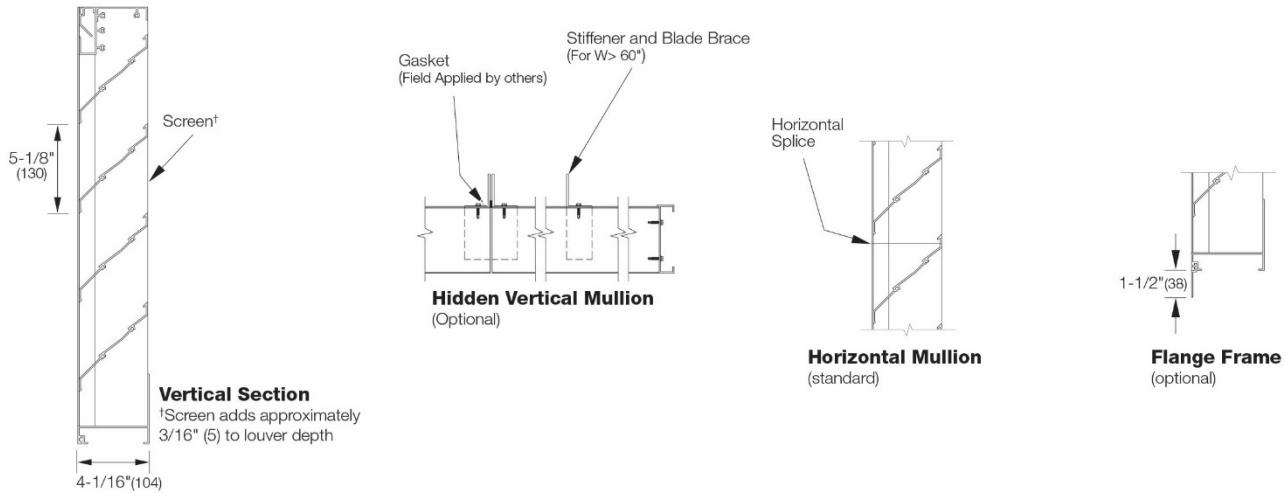
## Pressure Loss



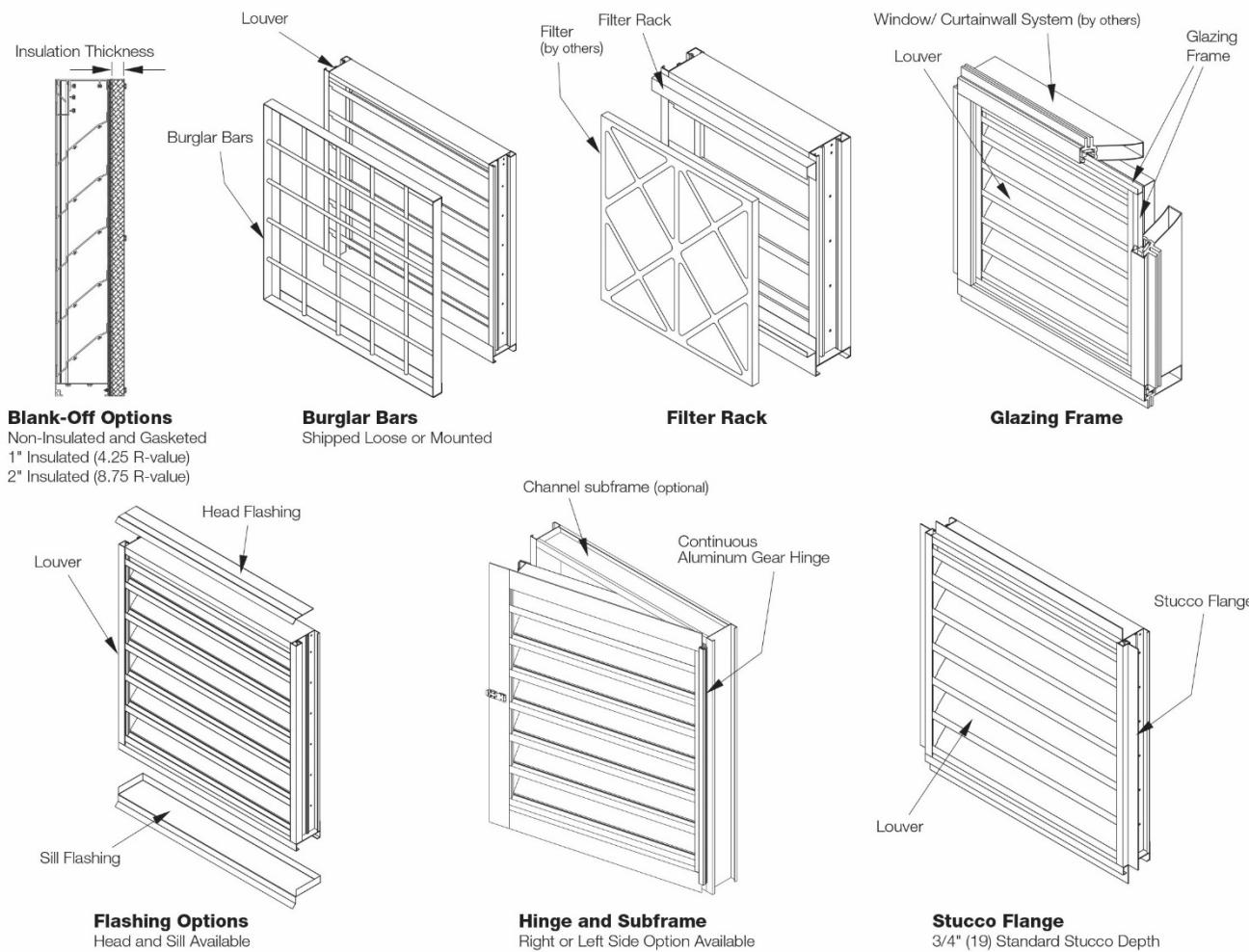
Free Area Velocity (fpm)  
 Louver Test Size = 48" x 48" (1219 x 1219)  
 Pressure loss tested in accordance with Figure 5.5  
 of AMCA standard 500-L. Data corrected to  
 standard air density.

# LVR-1045-4 Natural Intake Ventilator

## LVR-1045-4EA Attributes



## LVR-1045-4EA Supplemental Options



## LVR-1045-4G Product Details

### PRODUCT DESCRIPTION

The 1045-4G formed steel louver is designed for intake and exhaust application where protection against water infiltration is not critical. The 1045-4G is available in a wide array of painted finishes including custom color matching.

### STANDARD FEATURES

- Material: Galvannealed steel
- Frame: 4" deep × 20 ga. thick (102 × 1) channel
- Blades: 45° × 20 ga. (1) thick J-style
- Screen: 1/2" × 0.063" (12.7 × 1.6) expanded and flattened aluminum
- Mullion: Visible
- Minimum Size: 12" × 12" (305 × 305)
- Maximum Size:
  - Single section: 48" × 96" (1219 × 2438)
  - Multiple section: Unlimited
- Free Area: [48" × 48" (1219 × 1219) unit]: 7.7 ft<sup>2</sup> (0.72 m<sup>2</sup>) 48.0%
- Water Penetration Beginning Point Performance
  - Free Area Velocity: 775 fpm (3.94 m/s)
  - Air Volume Delivered: 5,991 cfm (2.83 m<sup>3</sup>/s)
  - Pressure Loss: 0.13 in.wg. (32 Pa)
- Velocity @ 0.15 in.wg. Pressure Loss: 840 fpm (4.26 m/s)
- Design Load: 30 psf

### OPTIONAL FEATURES

- Factory finish:
  - Polyester Powder
  - Baked Enamel
  - Prime Coat
- Frame Options
  - 1 1/2" (38) flange frame
  - Stucco flange
  - Galvanizing Frame
- Installation Hardware
  - Clip angles
  - Continuous Angles
- Hidden Vertical Mullion
- Heavy duty 16 ga. (1.6) construction
- 304 stainless steel construction
- Welded construction
- Alternate bird or insect screens
- Insulated or non-insulated blank-off panels
- Filter racks
- Hinged frame
- Subframe
- Head and/or sill flashing
- Burglar bars
- Frame closure
- Net OD (actual size)

### INDUSTRY APPLICATION

- |   |  |   |
|---|--|---|
| <ul style="list-style-type: none"><li>• Aluminum Plants</li><li>• Automotive Plants</li><li>• Cement &amp; Concrete</li><li>• Chemical Plants</li><li>• Foundries &amp; Forging</li><li>• General Manufacturing</li></ul> | <ul style="list-style-type: none"><li>• Glass &amp; Glass Products</li><li>• Gypsum Plants</li><li>• Heavy Manufacturing</li><li>• Mining &amp; Minerals</li><li>• Plastics Plants</li><li>• Processing Industry</li></ul> | <ul style="list-style-type: none"><li>• Power Stations</li><li>• Pulp &amp; Paper Plants</li><li>• Specialty Chemicals</li><li>• Steel Mills</li><li>• Warehouses</li><li>• +Others</li></ul> |
|---|--|---|

# LVR-1045-4 Natural Intake Ventilator

## LVR-1045-4G Free Area Chart

Free Area (ft<sup>2</sup>)

	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96
Height (Inches)	0.2	0.3	0.5	0.6	0.7	0.8	1.0	1.1	1.2	1.3	1.5	1.6	1.7	1.8	2.0
12	0.2	0.3	0.5	0.6	0.7	0.8	1.0	1.1	1.2	1.3	1.5	1.6	1.7	1.8	2.0
18	0.5	0.8	1.1	1.4	1.6	1.9	2.2	2.5	2.8	3.1	3.3	3.6	3.9	4.9	4.5
24	0.8	1.2	1.7	2.1	2.6	3.0	3.5	3.9	4.3	4.8	5.2	5.7	6.1	6.6	7.0
30	0.9	1.4	1.9	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.1	6.6	7.1	7.6	8.1
36	1.2	1.9	2.5	3.2	3.9	4.6	5.2	5.9	6.6	7.3	7.9	8.6	9.3	10.0	10.7
42	1.5	2.3	3.1	4.0	4.8	5.7	6.5	7.3	8.2	9.0	9.8	10.7	11.5	12.3	13.2
48	1.7	2.7	3.7	4.7	5.7	6.7	7.7	8.7	9.7	10.7	11.7	12.7	13.7	14.7	15.7
54	1.9	2.9	4.0	5.1	6.1	7.2	8.3	9.3	10.4	11.5	12.6	13.6	14.7	15.8	16.8
60	2.2	3.4	4.6	5.8	7.1	8.3	9.5	10.8	12.0	13.2	14.4	15.7	16.9	18.1	19.3
66	2.4	3.8	5.2	6.6	8.0	9.4	10.8	12.2	13.5	14.9	16.3	17.7	19.1	20.5	21.9
72	2.6	4.0	5.5	6.9	8.4	9.9	11.3	12.8	14.2	15.7	17.2	18.6	20.1	21.5	23.0
78	2.8	4.5	6.1	7.7	9.3	10.9	12.6	14.2	15.8	17.4	19.0	20.7	22.3	23.9	25.5
84	3.1	4.9	6.7	8.5	10.2	12.0	13.8	15.6	17.4	19.1	20.9	22.7	24.5	26.3	28.0
90	3.4	5.3	7.3	9.2	11.2	13.1	15.0	17.0	18.9	20.9	22.8	24.7	26.7	28.6	30.6
96	3.5	5.5	7.5	9.6	11.6	13.6	15.6	17.6	19.6	21.6	23.6	25.7	27.7	29.7	31.7

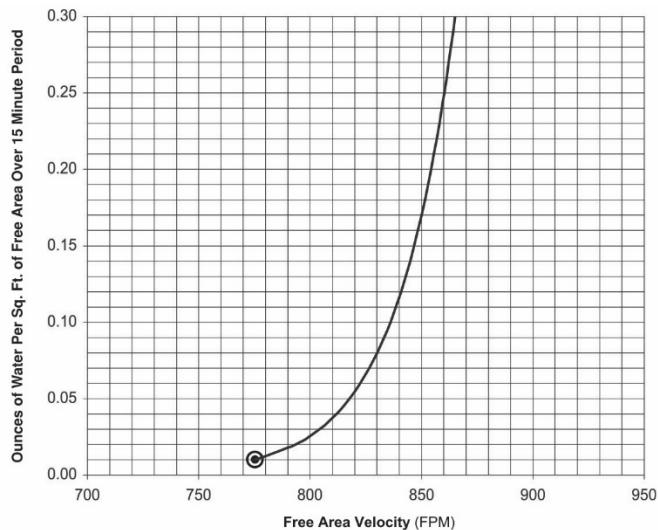
Width (Inches)

## Water Penetration

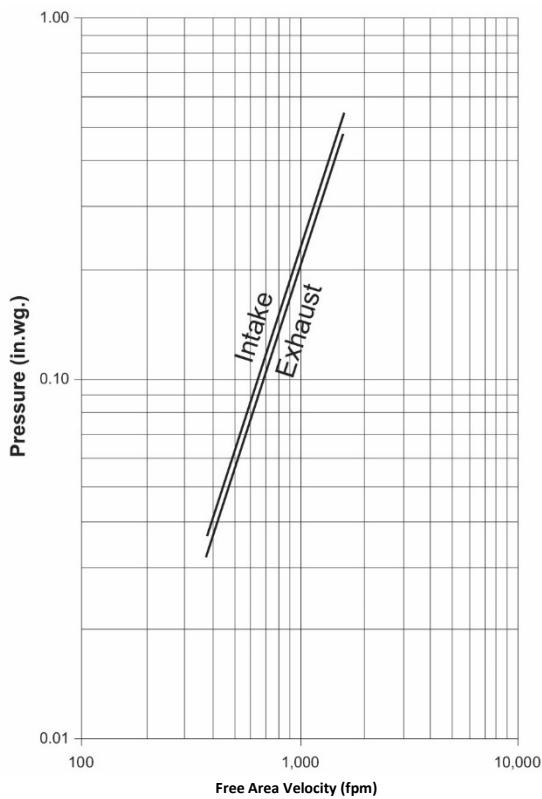
AMCA defines the beginning point of water penetration as the free area velocity at the intersection of a simple linear regression of test data and the line of 0.01 ounces of water per square foot of free area and is measured through a 48" x 48" louver during a 15-minute period.

The AMCA water penetration test provides a method for comparing louver models and designs as to their efficiency in resisting the penetration of rainfall under specific lab conditions. We recommend that intake louvers are selected with a reasonable margin of safety below the beginning point of water penetration to avoid unwanted penetration during severe storm conditions.

Beginning Point of Water Penetration = 781 fpm



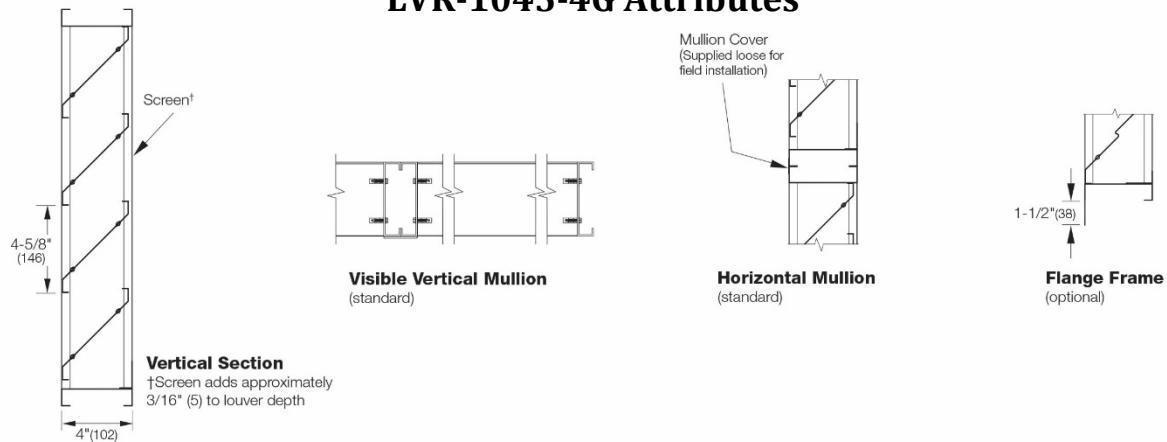
## Pressure Loss



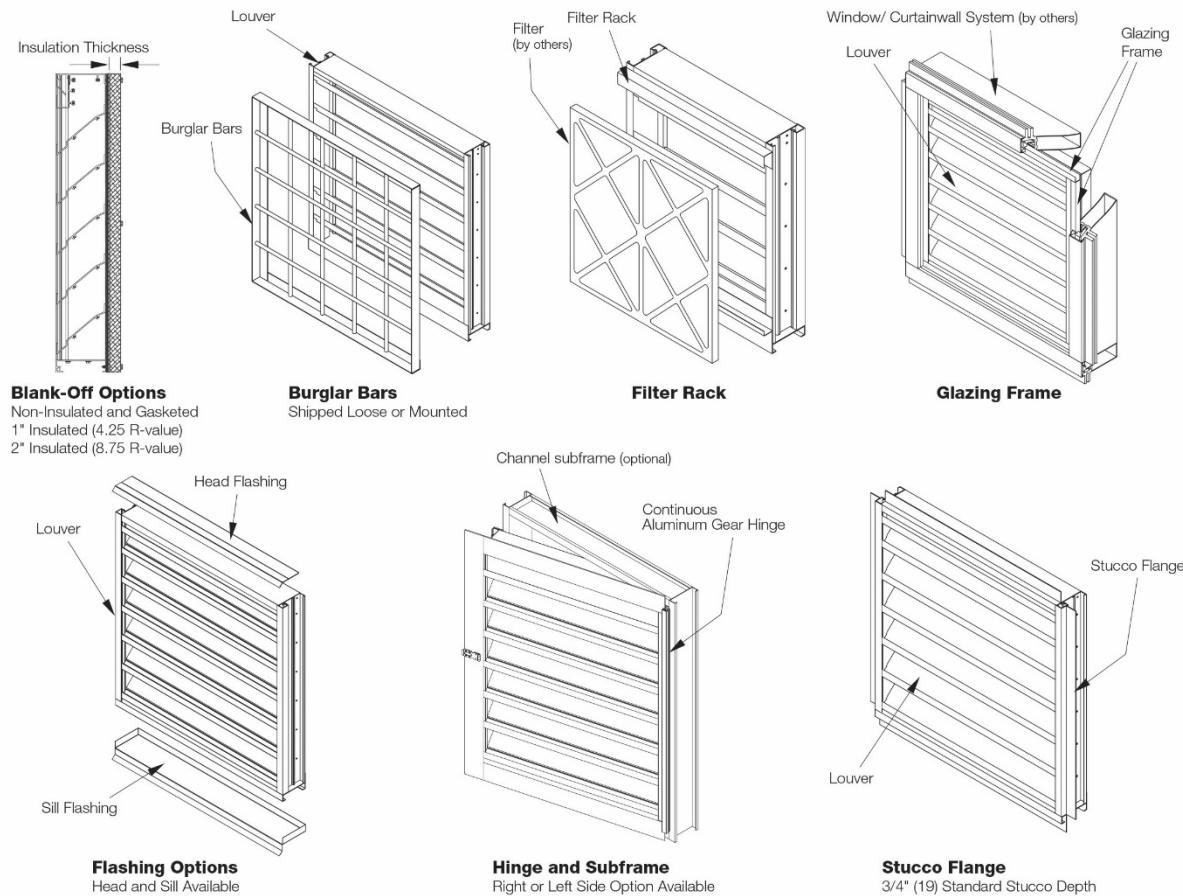
Louver Test Size = 48" x 48" (1219 x 1219)  
Pressure loss tested in accordance with Figure 5.5 of AMCA standard 500-L. Data corrected to standard air density.

# LVR-1045-4 Natural Intake Ventilator

## LVR-1045-4G Attributes



## LVR-1045-4G Supplemental Options



# LVR-1045-4 Natural Intake Ventilator

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## LVR-1045-6 Product Details

### PRODUCT DESCRIPTION

The 1045-6 extruded aluminum louver is designed for intake and exhaust application where protection against water infiltration is not critical. The 1045-6 is well suited for special shape applications and is available with hidden mullions for a continuous blade appearance of multiple section assemblies. The 1045-6 is available in a wide array of anodized and painted finishes including custom color matching.

### STANDARD FEATURES

- Material: Mill finish 6063-T5 extruded aluminum
- Frame: 6" deep × 0.081" thick (102 × 2) channel
- Blades: 45° × 0.081" (2) thick J-style
- Screen: 1/2" × 0.063" (12.7 × 1.6) expanded and flattened aluminum
- Minimum Size: 4.5" × 9.5" (114 × 241)
- Maximum Size:
  - Single section:
    - 60" × 120" (1524 × 3048)
    - 120" × 60" (3048 × 1524)
  - Multiple section: Unlimited
- Free Area: [48" × 48" (1219 × 1219) unit]: 8.1 ft<sup>2</sup> (0.75 m<sup>2</sup>) 50.6%
- Water Penetration Beginning Point Performance
  - Free Area Velocity: 1,155 fpm (5.87 m/s)
  - Air Volume Delivered: 9,359 cfm (4.42 m<sup>3</sup>/s)
  - Pressure Loss: 0.18 in.wg. (44 Pa)
- Design Load: 30 psf

### OPTIONAL FEATURES

- Factory finish:
  - High Performance Fluoropolymer
  - Prime Coat
  - Baked Enamel
  - Clear Anodize
  - Integral Color Anodize
- Frame Options
  - 1 1/2" (38) flange frame
  - Stucco flange
  - Galvanizing Frame
- Installation Hardware
  - Clip angles
  - Continuous Angles
- Hidden Vertical Mullion
- Welded construction
- Alternate bird or insect screens
- Insulated or non-insulated blank-off panels
- Filter racks
- Hinged frame
- Subframe
- Head and/or sill flashing
- Burglar bars
- Frame closure
- Net OD (actual size)

### INDUSTRY APPLICATION

- Aluminum Plants
- Automotive Plants
- Cement & Concrete
- Chemical Plants
- Foundries & Forging
- General Manufacturing
- Glass & Glass Products
- Gypsum Plants
- Heavy Manufacturing
- Mining & Minerals
- Plastics Plants
- Processing Industry
- Power Stations
- Pulp & Paper Plants
- Specialty Chemicals
- Steel Mills
- Warehouses
- +Others

# LVR-1045-4 Natural Intake Ventilator

## LVR-1045-6 Free Area Chart

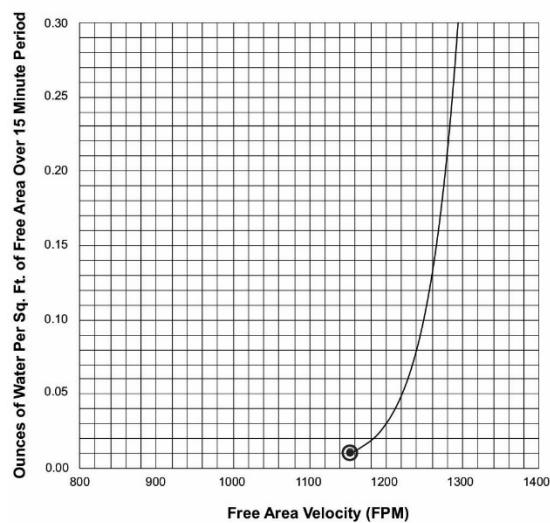
Free Area (ft <sup>2</sup> )		12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Height (Inches)	Width (Inches)	0.3	0.4	0.6	0.8	0.9	1.1	1.3	1.4	1.6	1.8	1.9	2.1	2.3	2.4	2.6	2.8	2.9	3.1	3.3
12	0.5	0.8	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.4	3.7	4.0	4.3	4.6	4.9	5.3	5.6	5.9	6.2	
18	0.8	1.2	1.7	2.2	2.6	3.1	3.6	4.0	4.5	4.9	5.4	5.9	6.3	6.8	7.3	7.7	8.2	8.7	9.1	
24	1.0	1.6	2.2	2.9	3.5	4.1	4.7	5.3	5.9	6.5	7.1	7.7	8.4	9.0	9.6	10.2	10.8	11.4	12.0	
30	1.3	2.0	2.8	3.5	4.3	5.1	5.8	6.6	7.3	8.1	8.9	9.6	10.4	11.1	11.9	12.7	13.4	14.2	14.9	
36	1.5	2.4	3.3	4.2	5.1	6.1	7.0	7.9	8.8	9.7	10.6	11.5	12.4	13.3	14.2	15.1	16.0	17.0	17.9	
42	1.8	2.8	3.9	4.9	6.0	7.0	8.1	9.2	10.2	11.3	12.3	13.4	14.4	15.5	16.6	17.6	18.7	19.7	20.8	
54	2.0	3.2	4.4	5.6	6.8	8.0	9.2	10.4	11.6	12.9	14.1	15.3	16.5	17.7	18.9	20.1	21.3	22.5	23.7	
60	2.3	3.6	5.0	6.3	7.7	9.0	10.4	11.7	13.1	14.4	15.8	17.1	18.5	19.8	21.2	22.6	23.9	25.3	26.6	
66	2.5	4.0	5.5	7.0	8.5	10.0	11.5	13.0	14.5	16.0	17.5	19.0	20.5	22.0	23.5	25.0	26.5	28.0	29.5	
72	2.7	4.4	6.0	7.7	9.3	11.0	12.6	14.3	15.9	17.6	19.2	20.9	22.5	24.2	25.8	27.5	29.1	30.8	32.4	
78	3.0	4.8	6.6	8.4	10.2	12.0	13.8	15.6	17.4	19.2	21.0	22.8	24.6	26.4	28.2	30.0	31.8	33.6	35.4	
84	3.2	5.2	7.1	9.1	11.0	13.0	14.9	16.9	18.8	20.8	22.7	24.7	26.6	28.5	30.5	32.4	34.4	36.3	38.3	
90	3.5	5.6	7.7	9.8	11.9	14.0	16.1	18.2	20.2	22.3	24.4	26.5	28.6	30.7	32.8	34.9	37.0	39.1	41.2	
96	3.7	6.0	8.2	10.5	12.7	15.0	17.2	19.4	21.7	23.9	26.2	28.4	30.7	32.9	35.1	37.4	39.6	41.9	44.1	
102	4.0	6.4	8.8	11.2	13.6	15.9	18.3	20.7	23.1	25.5	27.9	30.3	32.7	35.1	37.5	39.9	42.2	44.6	47.0	
108	4.2	6.8	9.3	11.9	14.4	16.9	19.5	22.0	24.5	27.1	29.6	32.2	34.7	37.2	39.8	42.3	44.9	47.4	49.9	
114	4.5	7.2	9.9	12.5	15.2	17.9	20.6	23.3	26.0	28.7	31.4	34.0	36.7	39.4	42.1	44.8	47.5	50.2	52.9	

## Water Penetration

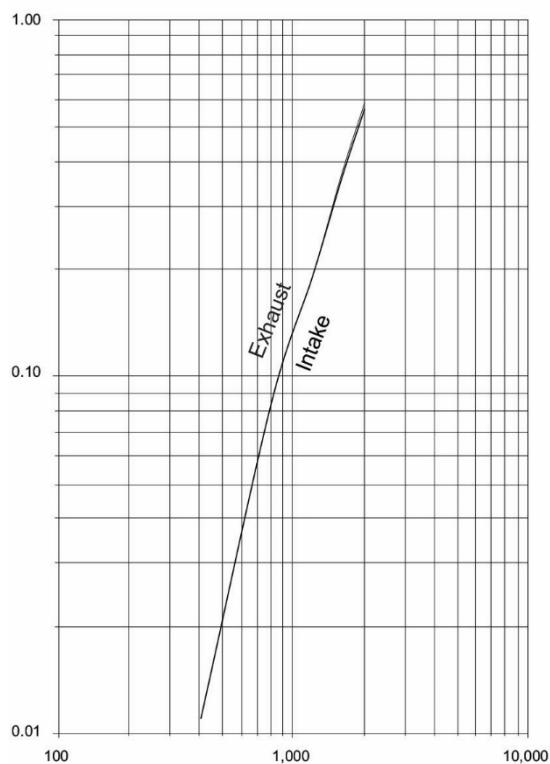
AMCA defines the beginning point of water penetration as the free area velocity at the intersection of a simple linear regression of test data and the line of 0.01 ounces of water per square foot of free area and is measured through a 48" x 48" louver during a 15-minute period.

The AMCA water penetration test provides a method for comparing louver models and designs as to their efficiency in resisting the penetration of rainfall under specific lab conditions. We recommend that intake louvers are selected with a reasonable margin of safety below the beginning point of water penetration to avoid unwanted penetration during severe storm conditions.

Beginning Point of Water Penetration = 1,155 fpm



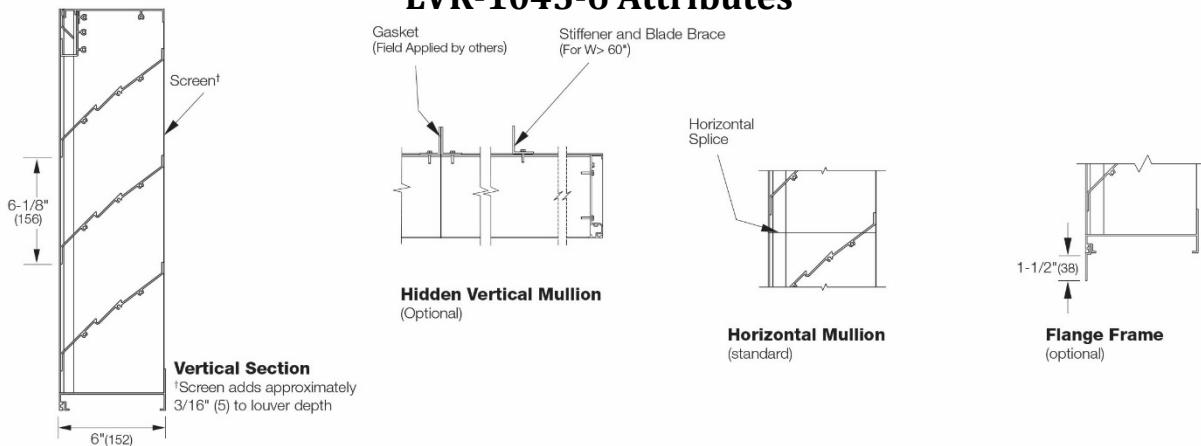
## Pressure Loss



Free Area Velocity (fpm)  
Louver Test Size = 48" x 48" (1219 x 1219)  
Pressure loss tested in accordance with Figure 5.5 of AMCA standard 500-L. Data corrected to standard air density.

# LVR-1045-4 Natural Intake Ventilator

## LVR-1045-6 Attributes



## LVR-1045-6 Supplemental Options

