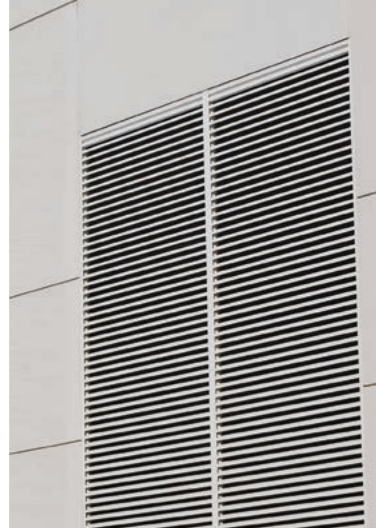




# C&S Air Products

## LOUVERS

ACOUSTICAL • BRICK VENT • COMBINATION • DRAINABLE  
EQUIPMENT SCREENS • FORMED METAL • NON-DRAINABLE • OPERABLE  
PENTHOUSE • SAND LOUVER • WIND-DRIVEN RAIN



# C&S AIR PRODUCTS IS:

Innovation, quality, performance and service are what differentiate C&S's products among the competition. It is our experience, versatility, and ability to react quickly to our customer's needs which makes us the choice for architects and engineers.



## HOW WE ARE DIFFERENT FROM THE COMPETITION:

- Ongoing commitment to personal and technical service
- Wide range of quality products
- Products delivered on time and on budget
- Innovative solutions for your design requirements
- Skilled engineering staff for structural design analysis
- Quick ship - when you need it FAST!
- Industry leading 5-year warranty
- Member of the US Green Building Council

## PRODUCT SELECTION GUIDE

| MODEL   | DEPTH | BLADE ANGLE | BLADE STYLE        | FREE AREA | VELOCITY (fpm) | AIR VOLUME (cfm) | PAGE     |
|---|-------|-------------|--------------------|-----------|----------------|------------------|----------|
| <b>NON-DRAINABLE LOUVERS</b>                      |       |             |                    |           |                |                  | <b>3</b> |
| EJ-245  | 2"    | 45°         | J                  | 46.9%     | 583            | 4373             | 3        |
| EJ-430  | 4"    | 30°         | J                  | 56.9%     | 889            | 8090             | 3        |
| EJ-437  | 4"    | 37.5°       | J                  | 56.9%     | 721            | 6547             | 3        |
| EJ-437-HP (DRAINABLE HEAD)                        | 4"    | 37.5°       | HIGH PERFORMANCE J | 56.3%     | 912            | 8220             | 3        |
| EJ-445  | 4"    | 45°         | J                  | 50.0%     | 689            | 5549             | 3        |
| EJ-637-HP (DRAINABLE HEAD)                        | 6"    | 37.5°       | HIGH PERFORMANCE J | 56.3%     | 915            | 8226             | 3        |
| EJ-645  | 6"    | 45°         | J                  | 50.0%     | 800            | 6416             | 3        |
| EK-430  | 4"    | 30°         | K                  | 56.9%     | 889            | 8090             | 3        |
| EK-437  | 4"    | 37.5°       | K                  | 56.9%     | 721            | 6547             | 3        |
| EK-445  | 4"    | 45°         | K                  | 50.0%     | 689            | 5549             | 3        |
| EK-637  | 6"    | 37.5°       | K                  | 50.0%     | 832            | 6673             | 3        |
| EY-245  | 2"    | 45°         | INVERTED Y         | 38.2%     | 383            | 2336             | 3        |
| EY-445  | 4"    | 45°         | INVERTED Y         | 38.8%     | 745            | 4589             | 3        |
| <b>DRAINABLE LOUVERS</b>                          |       |             |                    |           |                |                  | <b>4</b> |
| EDD-445   | 4"    | 45°         | DUAL DRAINABLE     | 50.4%     | 1026           | 8311             | 4        |
| EDD-637   | 6"    | 37.5°       | DUAL DRAINABLE     | 57.5%     | 1113           | 10242            | 4        |
| ED-245  | 2"    | 45°         | DRAINABLE          | 42.5%     | 955            | 6494             | 4        |
| ED-435  | 4"    | 35°         | DRAINABLE          | 58.1%     | 966            | 8984             | 4        |
| ED-437  | 4"    | 37.5°       | DRAINABLE          | 58.1%     | 903            | 8398             | 4        |
| ED-445  | 4"    | 45°         | DRAINABLE          | 50.4%     | 1026           | 8311             | 4        |
| ED-637  | 6"    | 37.5°       | DRAINABLE          | 57.5%     | 1113           | 10242            | 4        |
| ED-645  | 6"    | 45°         | DRAINABLE          | 54.6%     | 1009           | 8811             | 4        |
| ERD-645   | 6"    | 45°         | RECESSED-DRAINABLE | 50.6%     | 990            | 8059             | 4        |
| <b>WIND-DRIVEN RAIN LOUVERS</b>                   |       |             |                    |           |                |                  | <b>5</b> |
| ECD-245   | 2"    | 45°         | HORIZONTAL         | 41.3%     | 1172           | 7744             | 5        |
| ECD-445   | 4"    | 45°         | HORIZONTAL         | 42.7%     | 1250           | 8538             | 5        |
| ECD-545   | 5"    | 45°         | HORIZONTAL         | 46.3%     | 1250           | 9250             | 5        |
| ECD-635   | 6"    | 35°         | HORIZONTAL         | 53.8%     | 1217           | 10508            | 5        |
| ECD-745   | 7"    | 45°         | HORIZONTAL         | 50.6%     | 1218           | 9866             | 5        |
| <b>WIND-DRIVEN RAIN LOUVERS (VERTICAL BLADES)</b> |       |             |                    |           |                |                  |          |
| EV-245  | 2"    | 45°         | VERTICAL           | 41.5%     | 1250           | 8299             | 6        |
| EV-445  | 4"    | 45°         | VERTICAL           | 42.9%     | 1250           | 8575             | 6        |
| EV-545  | 5"    | 45°         | VERTICAL           | 41.9%     | 1250           | 8375             | 6        |
| EV-645  | 6"    | 45°         | VERTICAL           | 46.0%     | 1250           | 9250             | 6        |
| EJ-745  | 7"    | 45°         | HORIZONTAL J       | 43.8%     | 1250           | 8755             | 6        |

# PRODUCT SELECTION GUIDE (CONT)

| MODEL                       | DEPTH | BLADE ANGLE | BLADE STYLE           | FREE AREA | VELOCITY (fpm) | AIR VOLUME (cfm) | PAGE      |
|-----------------------------|-------|-------------|-----------------------|-----------|----------------|------------------|-----------|
| <b>OPERABLE LOUVERS</b>     |       |             |                       |           |                |                  | <b>7</b>  |
| EOD-445                     | 4"    | 45°         | OPERABLE-DRAINABLE    | 43.1%     | 1024           | 7096             | 7         |
| EOD-637                     | 6"    | 37.5°       | OPERABLE-DRAINABLE    | 57.5%     | 990            | 9108             | 7         |
| EO-445                      | 4"    | 45°         | OPERABLE-J            | 49.4%     | 683            | 5396             | 7         |
| EO-637                      | 6"    | 37.5°       | OPERABLE-J            | 56.3%     | 810            | 7282             | 7         |
| EOJ-690                     | 6"    | 90°         | OPERABLE-J            | 68.5%     | 748            | 8325             | 7         |
| SOJ-445                     | 4"    | 45°         | FORMED OPERABLE-J     | 46.9%     | 775            | 5813             | 7         |
| <b>COMBINATION LOUVERS</b>  |       |             |                       |           |                |                  | <b>8</b>  |
| EE-445                      | 4"    | 45°         | J-BD-EXHAUST          | 49.4%     | 689            | 5396             | 8         |
| EI-445                      | 4"    | 45°         | J-BD-INTAKE           | 49.4%     | 689            | 5396             | 8         |
| EXA-645                     | 6"    | 37.5°-45°   | COMBINATION           | 50.4%     | 1085           | 8756             | 8         |
| EX-437                      | 4"    | 37.5°       | COMBINATION           | 43.0%     | 1172           | 8134             | 8         |
| EX-645                      | 6"    | 37.5°-45°   | COMBINATION           | 44.4%     | 1050           | 7455             | 8         |
| <b>FORMED METAL LOUVERS</b> |       |             |                       |           |                |                  | <b>9</b>  |
| SE-245                      | 2"    | 45°         | J-BD-EXHAUST          | 41.0%     | 383            | 2528             | 9         |
| SE-445                      | 4"    | 45°         | J-BD-EXHAUST          | 46.9%     | 775            | 5813             | 9         |
| SI-445                      | 4"    | 45°         | J-BD-INTAKE           | 46.9%     | 775            | 5813             | 9         |
| SD-445                      | 4"    | 45°         | DRAINABLE             | 53.1%     | 715            | 6092             | 9         |
| SD-635                      | 6"    | 35°         | DRAINABLE             | 61.7%     | 815            | 8044             | 9         |
| SJ-245                      | 2"    | 45°         | J                     | 42.0%     | 603            | 4040             | 9         |
| SJ-430                      | 4"    | 30°         | J                     | 51.0%     | 847            | 6945             | 9         |
| SJ-445                      | 4"    | 45°         | J                     | 48.0%     | 775            | 5991             | 9         |
| SJ-630                      | 6"    | 30°         | J                     | 65.2%     | 825            | 8580             | 9         |
| SJ-645                      | 6"    | 45°         | J                     | 50.0%     | 800            | 6400             | 9         |
| SK-445                      | 4"    | 45°         | K                     | 48.0%     | 775            | 5991             | 9         |
| SK-645                      | 6"    | 45°         | K                     | 50.0%     | 800            | 6400             | 9         |
| SV-445                      | 4"    | 45°         | CHEVRON               | 38.0%     | 600            | 3648             | 9         |
| <b>ACOUSTICAL LOUVERS</b>   |       |             |                       |           |                |                  | <b>10</b> |
| EAA-645                     | 6"    | 45°         | AIRFOIL               | 30.0%     | 980            | 4704             | 10        |
| EAA-845                     | 8"    | 45°         | AIRFOIL               | 37.9%     | 649            | 3931             | 10        |
| EAA-1245                    | 12"   | 45°         | AIRFOIL               | 26.3%     | 999            | 4196             | 10        |
| EAJ-437                     | 4"    | 37°         | J                     | 33.8%     | 740            | 3996             | 10        |
| EAJ-637                     | 6"    | 37°         | J                     | 32.5%     | 890            | 4637             | 10        |
| FAA-1245                    | 12"   | 45°         | FORMED AIRFOIL        | 26.3%     | 999            | 4196             | 10        |
| SAJ-835                     | 8"    | 35°         | FORMED-J              | 33.1%     | 808            | 4293             | 10        |
| SAJ-1235                    | 12"   | 35°         | FORMED-J              | 30.6%     | 924            | 4528             | 10        |
| <b>SPECIALTY LOUVERS</b>    |       |             |                       |           |                |                  | <b>11</b> |
| EBV-145                     | 1.5"  | 45°         | J                     | -         | -              | -                | 11        |
| EBV-445                     | 4"    | 45°         | J                     | -         | -              | -                | 11        |
| EVS-422                     | 4"    | 22°         | VERTICAL              | 15.6%     | 1250           | 3125             | 11        |
| <b>PENTHOUSE</b>            |       |             |                       |           |                |                  | <b>11</b> |
| EPJ-445                     | 4"    | 45°         | J                     | 50.0%     | 689            | 5549             | 11        |
| <b>SIGHT SCREENS</b>        |       |             |                       |           |                |                  | <b>12</b> |
| HJ-445                      | 4"    | 45°         | HORIZONTAL-INVERTED-J | 50.6%     | -              | -                | 12        |
| HJ-645                      | 6"    | 45°         | HORIZONTAL-INVERTED-J | 50.0%     | -              | -                | 12        |
| HT-401                      | 4"    | -           | HORIZONTAL AIRFOIL    | 60.0%     | -              | -                | 12        |
| HZ-200                      | 2.25" | 45°         | HORIZONTAL CLADDING   | 19.4%     | -              | -                | 12        |
| VT-250                      | 2.5"  | -           | VERTICAL-CLADDING     | 24.4%     | -              | -                | 12        |
| VT-654                      | 4"    | -           | VERTICAL-CLADDING     | 21.0%     | -              | -                | 12        |
| VV-400                      | 4"    | -           | VERTICAL-V            | 38.8%     | -              | -                | 12        |
| VV-500                      | 5"    | -           | VERTICAL-V            | 53.8%     | -              | -                | 12        |

## Louver Project Cover Photos:

**Top Left:** Campbell Landings | St. Petersburg, Florida

**Top Center:** Methodist Hospital for Surgery | Addison, Texas

**Top Right:** Wilshire Grand Center | Los Angeles, California

**Middle Left:** T-Mobile | Irvine, California

**Center:** Detail, Bank of America | Richmond, Virginia

**Bottom Left:** DuPont Fabros | Ashburn, Virginia

**Bottom Center:** Oakmonte Village | St. Mary, Florida

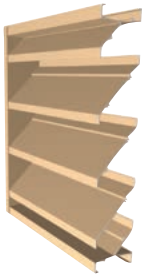
**Bottom Right:** Detail, Methodist Hospital for Surgery | Addison, Texas

# NON-DRAINABLE LOUVERS

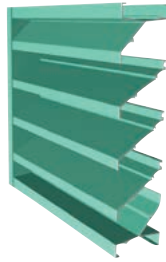
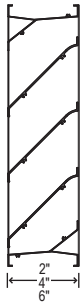
Available in a wide array of blade shapes and frame depths, non-drainable louvers offer value and economy for exhaust applications or intake conditions where protection against water

infiltration is not critical. Optional hidden mullions provide a continuous blade appearance on multiple section assemblies. Ideally suited for special shapes and transitional designs.

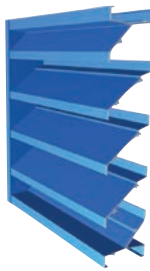
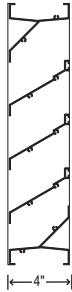
## NON-DRAINABLE



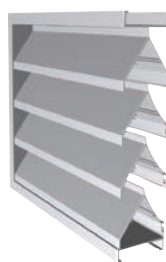
EJ-245  
EJ-445  
EJ-645  
EK-445



EJ-430  
EK-430



EJ-437  
EK-437  
EK-637



EY-245  
EY-445



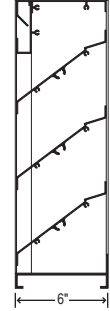
## DRAINABLE HEAD



EFJ-437-HP



EFJ-637-HP



| MODEL     | DEPTH | BLADE ANGLE | BLADE STYLE        | FREE AREA (%) (Sq. Ft.) | BEGINNING POINT OF WATER PENETRATION RATINGS |               |                         |
|-----------|-------|-------------|--------------------|-------------------------|--|---------------|-------------------------|
|           |       |             |                    |                         | VELOCITY (fpm)                               | AIRFLOW (cfm) | PRESSURE DROP (in. Wg.) |
| EJ-245    | 2"    | 45°         | J                  | 46.9% 7.5               | 583  | 4373          | 0.06                    |
| EJ-430    | 4"    | 30°         | J                  | 56.9% 9.1               | 889  | 8090          | 0.09                    |
| EJ-437    | 4"    | 37.5°       | J                  | 56.9% 9.1               | 721  | 6547          | 0.07                    |
| EJ-437-HP | 4"    | 37.5°       | HIGH PERFORMANCE-J | 56.3% 9.0               | 912  | 8220          | 0.14                    |
| EJ-445    | 4"    | 45°         | J                  | 50.0% 8.0               | 689  | 5549          | 0.08                    |
| EJ-637-HP | 6"    | 37.5°       | HIGH PERFORMANCE-J | 56.3% 9.0               | 915  | 8226          | 0.12                    |
| EJ-645    | 6"    | 45°         | J                  | 50.0% 8.0               | 800  | 6416          | 0.10                    |
| EK-430    | 4"    | 30°         | K                  | 56.9% 9.1               | 889  | 8090          | 0.09                    |
| EK-437    | 4"    | 37.5°       | K                  | 56.9% 9.1               | 721  | 6547          | 0.07                    |
| EK-445    | 4"    | 45°         | K                  | 50.0% 8.0               | 689  | 5549          | 0.08                    |
| EK-637    | 6"    | 37.5°       | K                  | 50.0% 8.0               | 832  | 6673          | 0.05                    |
| EY-245    | 2"    | 45°         | INVERTED Y         | 38.2% 6.1               | 383  | 2336          | 0.06                    |
| EY-445    | 4"    | 45°         | INVERTED Y         | 38.8% 6.2               | 745  | 4589          | 0.18                    |

# DRAINABLE LOUVERS

Drainable blade louvers are designed to prevent water penetration in non-wind-driven rain applications by collecting water in frame and blade gutters and channeling it into

downspouts and away from airflow. These models are available in a wide array of anodized and painted finishes including custom color matching.



EDD-445  
ED-445



ED-437  
ED-637  
EDD-637



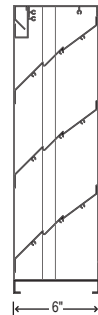
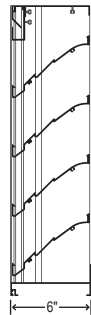
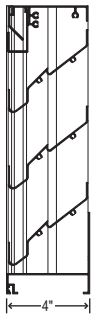
ED-245  
ED-645



ED-435



ERD-645



| MODEL   | DEPTH | ANGLE | BLADE STYLE        | FREE AREA (%) (Sq. Ft.) | BEGINNING POINT OF WATER PENETRATION RATINGS |               |                         |
|---------|-------|-------|--------------------|-------------------------|--|---------------|-------------------------|
|         |       |       |                    |                         | VELOCITY (fpm)                               | AIRFLOW (cfm) | PRESSURE DROP (in. Wg.) |
| EDD-445 | 4"    | 45°   | DUAL-DRAINABLE     | 50.4% 8.1               | 1026   | 8311          | 0.16                    |
| EDD-637 | 6"    | 37.5° | DUAL-DRAINABLE     | 57.5% 9.2               | 1113   | 10242         | 0.15                    |
| ED-245  | 2"    | 45°   | DRAINABLE          | 42.5% 6.8               | 955  | 6494          | 0.14                    |
| ED-435  | 4"    | 35°   | DRAINABLE          | 58.1% 9.3               | 966  | 8984          | 0.12                    |
| ED-437  | 4"    | 37.5° | DRAINABLE          | 58.1% 9.3               | 903  | 8398          | 0.13                    |
| ED-445  | 4"    | 45°   | DRAINABLE          | 50.4% 8.1               | 1026   | 8311          | 0.16                    |
| ED-637  | 6"    | 37.5° | DRAINABLE          | 57.5% 9.2               | 1113   | 10242         | 0.15                    |
| ED-645  | 6"    | 45°   | DRAINABLE          | 54.6% 8.7               | 1009   | 8811          | 0.13                    |
| ERD-645 | 6"    | 45°   | RECESSED-DRAINABLE | 50.6% 8.1               | 990  | 8059          | 0.11                    |

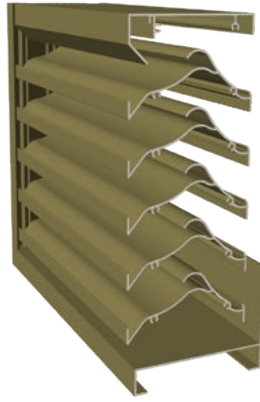
# WIND-DRIVEN RAIN LOUVER HORIZONTAL BLADES

Our horizontal blade louvers offer a traditional look and provide excellent protection against wind-driven rain under the most severe conditions. Designed to protect air intake and exhaust openings in building exterior walls that are sensitive to the

penetration of wind-driven rain. Available in depths ranging from 2 to 7 inches, these louvers are available in a wide array of anodized and painted finishes including custom color matching.



ECD-245



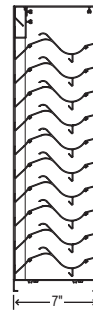
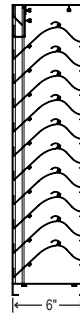
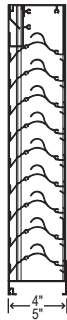
ECD-445  
ECD-545



ECD-635



ECD-745



| MODEL   | DEPTH | BLADE STYLE | BLADE ANGLE | FREE AREA (%) (Sq. Ft.) | AMCA 500L TEST      |                  |               |                         | BEGINNING POINT OF WATER PENETRATION RATINGS |                |               |                         |
|---------|-------|-------------|-------------|-------------------------|---------------------|------------------|---------------|-------------------------|--|----------------|---------------|-------------------------|
|         |       |             |             |                         | WIND VELOCITY (mph) | RAINFALL (in/hr) | AIRFLOW (cfm) | EFFECTIVENESS RATIO (%) | CLASS  | VELOCITY (fpm) | AIRFLOW (cfm) | PRESSURE DROP (in. Wg.) |
| ECD-245 | 2"    | HORIZ       | 45°         | 41.3% 6.6               | 29/50               | 3/8              | 2123/3011     | 99.0/95.0               | A/B  | 1172           | 7744          | 0.37                    |
| ECD-445 | 4"    | HORIZ       | 45°         | 42.7% 6.8               | 29/50               | 3/8              | 4062/4323     | 99.0/95.0               | A/B  | 1250           | 8538          | 0.32                    |
| ECD-545 | 5"    | HORIZ       | 45°         | 46.3% 7.4               | 29/50               | 3/8              | 9276/10502    | 99.4/95.3               | A/B  | 1250           | 9250          | 0.24                    |
| ECD-635 | 6"    | HORIZ       | 35°         | 53.8% 8.6               | 29                  | 3                | 1998          | 99.6                    | B  | 1217           | 10508         | 0.29                    |
| ECD-745 | 7"    | HORIZ       | 45°         | 50.6% 8.1               | 29/50               | 3/8              | 6260/5312     | 99.6/99.2               | A  | 1218           | 9866          | 0.57                    |

# WIND-DRIVEN RAIN LOUVER VERTICAL BLADES

Our vertical blade louvers offer the best protection against wind-driven rain. They can provide a flowing, continuous curtain like appearance. The closely spaced blade design of the EV-545

provides 99.6% effectiveness at wind velocities of 50 mph and rainfall up to 8 in/hr. Our EV-645 offers 100% effectiveness at 50 mph with rainfall up to 8 in/hr.

## VERTICAL BLADES



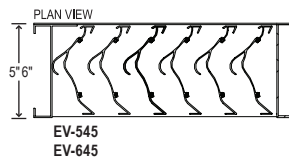
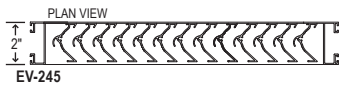
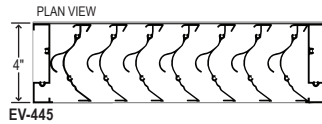
**EV-245**  
THIN LINE



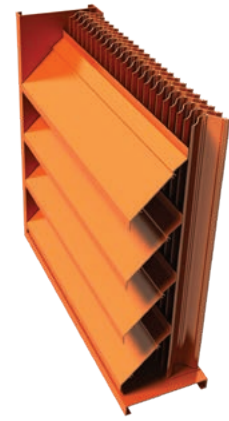
**EV-445**



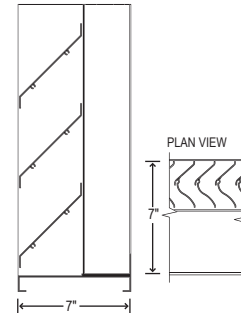
**EV-545**  
**EV-645**



## HORIZONTAL AND VERTICAL BLADES



**EJ-745**  
J BLADE WITH VERTICAL  
BLADE REAR SECTION



| MODEL  | DEPTH | BLADE STYLE | BLADE ANGLE | FREE AREA (%) (Sq. Ft.) | AMCA 500L TEST      |                  |               |                         | CLASS | BEGINNING POINT OF WATER PENETRATION RATINGS |               |                         |
|--------|-------|-------------|-------------|-------------------------|---------------------|------------------|---------------|-------------------------|-------|--|---------------|-------------------------|
|        |       |             |             |                         | WIND VELOCITY (mph) | RAINFALL (in/hr) | AIRFLOW (cfm) | EFFECTIVENESS RATIO (%) |       | VELOCITY (fpm)                               | AIRFLOW (cfm) | PRESSURE DROP (in. Wg.) |
| EV-245 | 2"    | VERT        | 45°         | 41.5% 6.6               | 29/50               | 3/8              | 6371/4300     | 99.6/99.3               | A     | 1250   | 8299          | 0.42                    |
| EV-445 | 4"    | VERT        | 45°         | 42.9% 6.9               | 29/50               | 3/8              | 7343/4350     | 99.5/99.4               | A     | 1250   | 8575          | 0.30                    |
| EV-545 | 5"    | VERT        | 45°         | 41.9% 6.7               | 29/50               | 3/8              | 7356/9485     | 99.9/99.6               | A     | 1250   | 8375          | 0.25                    |
| EV-645 | 6"    | VERT        | 45°         | 46.0% 7.4               | 50                  | 8                | 10390         | 100                     | A     | 1250   | 9250          | 0.15                    |
| EJ-745 | 7"    | HORIZ J     | 45°         | 43.8% 7.0               | 29                  | 3                | 7211          | 99.3                    | A     | 1250   | 8755          | 0.47                    |

# OPERABLE LOUVERS

Operable blade louvers provide weather protection for open and positive shutoff when no airflow is required. These units incorporate center pivoted blades that can be controlled manually

with a pull chain, hand quadrant, or hand crank. They can also be controlled automatically with electric or pneumatic actuators.

## OPERABLE EXTRUDED ALUMINUM

## OPERABLE FORMED



EOD-445



EOD-637



EO-445



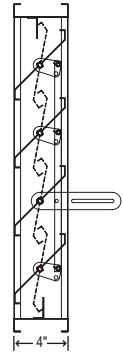
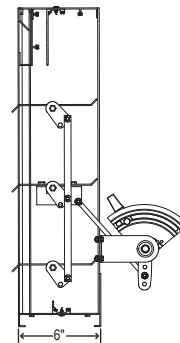
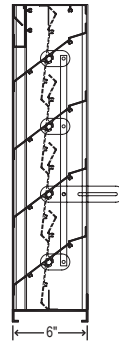
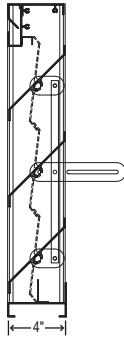
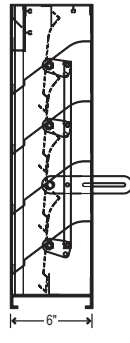
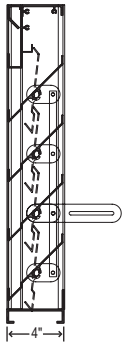
EO-637



EOJ-690



SOJ-445



| MODEL   | DEPTH | BLADE ANGLE | STYLE              | MATERIAL           | FREE AREA<br>(% (Sq. Ft.)) | BEGINNING POINT OF WATER PENETRATION RATINGS |                  |                            |
|---------|-------|-------------|--------------------|--------------------|----------------------------|--|------------------|----------------------------|
|         |       |             |                    |                    |                            | VELOCITY<br>(ft/min)                         | AIRFLOW<br>(cfm) | PRESSURE<br>DROP (in. Wg.) |
| EOD-445 | 4"    | 45°         | OPERABLE-DRAINABLE | EXTRUDED ALUMINUM  | 43.1% 6.9                  | 1024   | 7096             | 0.16                       |
| EOD-637 | 6"    | 37.5°       | OPERABLE-DRAINABLE | EXTRUDED ALUMINUM  | 57.5% 9.2                  | 990  | 9108             | 0.11                       |
| EO-445  | 4"    | 45°         | OPERABLE-J         | EXTRUDED ALUMINUM  | 49.4% 7.9                  | 683  | 5396             | 0.10                       |
| EO-637  | 6"    | 37.5°       | OPERABLE-J         | EXTRUDED ALUMINUM  | 56.3% 9.0                  | 810  | 7282             | 0.12                       |
| EOJ-690 | 6"    | 90°         | OPERABLE-J         | EXTRUDED ALUMINUM  | 68.5% 10.96                | 748  | 8325             | 0.19                       |
| SOJ-445 | 4"    | 45°         | OPERABLE-J         | GALVANNEALED STEEL | 46.9% 7.5                  | 775  | 5813             | 0.14                       |



# COMBINATION LOUVERS

Combination louvers feature stationary front blades and operable rear blades to ensure proper weather protection when open as well as a consistent appearance in both the open and closed positions. Optional low leakage seals provide further environmental protection in the closed position. These units incorporate center pivoted blades

that can be controlled manually with a pull chain, hand quadrant or hand crank. They can also be controlled automatically with electric or pneumatic actuators. The EE-445 and the EI-445 incorporate an integral gravity operated backdraft damper to protect exhaust or intake air openings in exterior walls.



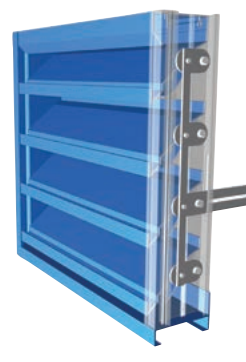
EE-445



EI-445



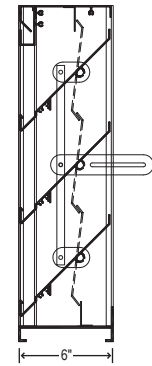
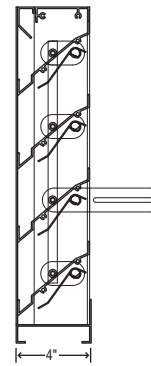
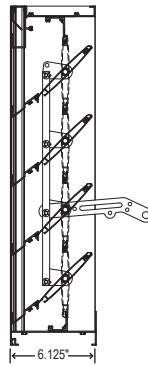
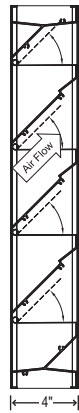
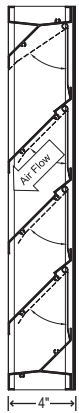
EXA-645



EX-437



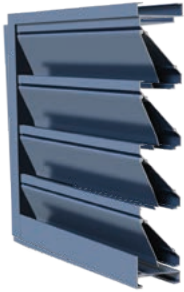
EX-645



| MODEL   | DEPTH | BLADE ANGLE | BLADE STYLE  | FREE AREA (%) (Sq. Ft.) | BEGINNING POINT OF WATER PENETRATION RATINGS |               |                         |
|---------|-------|-------------|--------------|-------------------------|--|---------------|-------------------------|
|         |       |             |              |                         | VELOCITY (fpm)                               | AIRFLOW (cfm) | PRESSURE DROP (in. Wg.) |
| EE-445  | 4"    | 45°         | J-BD-EXHAUST | 49.4% 7.9               | 689  | 5396          | 0.10                    |
| EI-445  | 4"    | 45°         | J-BD-INTAKE  | 49.4% 7.9               | 689  | 5396          | 0.10                    |
| EXA-645 | 6"    | 37.5° - 45° | COMBINATION  | 50.4% 8.1               | 1085   | 8756          | 0.11                    |
| EX-437  | 4"    | 37.5°       | COMBINATION  | 43.0% 6.9               | 1172   | 8134          | 0.17                    |
| EX-645  | 6"    | 37.5° - 45° | COMBINATION  | 44.4% 7.1               | 1050   | 7455          | 0.19                    |

# FORMED METAL LOUVERS

Typically formed from galvanized steel, these louvers accent building architecture while withstanding corrosion in caustic environments. The SE-245, SE-445 and SI-245 incorporate an integral gravity operated backdraft damper to protect exhaust or intake openings in exterior walls.



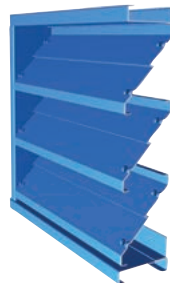
**SE-245  
SE-445  
SI-445**



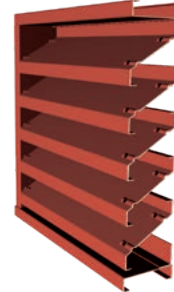
**SD-445**



**SD-635**



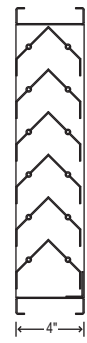
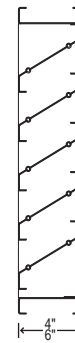
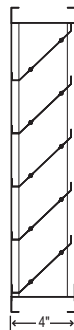
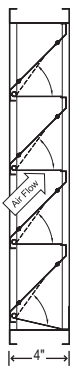
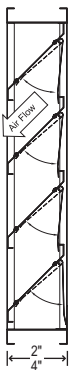
**SJ-245  
SJ-445  
SJ-645  
SK-445  
SK-645**



**SJ-430  
SJ-630**



**SV-445**



| MODEL  | DEPTH | BLADE ANGLE | BLADE STYLE  | FREE AREA<br>(%) (Sq. Ft.) | BEGINNING POINT OF WATER PENETRATION RATINGS |                  |                            |
|--------|-------|-------------|--------------|----------------------------|--|------------------|----------------------------|
|        |       |             |              |                            | VELOCITY<br>(fpm)                            | AIRFLOW<br>(cfm) | PRESSURE<br>DROP (in. Wg.) |
| SE-245 | 2"    | 45°         | J-BD-EXHAUST | 41.0% 6.6                  | 383  | 2528             | 0.08                       |
| SE-445 | 4"    | 45°         | J-BD-EXHAUST | 46.9% 7.5                  | 775  | 5813             | 0.13                       |
| SI-445 | 4"    | 45°         | J-BD-INTAKE  | 46.9% 7.5                  | 775  | 5813             | 0.14                       |
| SD-445 | 4"    | 45°         | DRAINABLE    | 53.1% 8.5                  | 715  | 6092             | 0.11                       |
| SD-635 | 6"    | 35°         | DRAINABLE    | 61.7% 9.9                  | 815  | 8044             | 0.08                       |
| SJ-245 | 2"    | 45°         | J            | 42.0% 6.7                  | 603  | 4040             | 0.06                       |
| SJ-430 | 4"    | 30°         | J            | 51.0% 8.2                  | 847  | 6945             | 0.13                       |
| SJ-445 | 4"    | 45°         | J            | 48.0% 7.7                  | 775  | 5991             | 0.13                       |
| SJ-630 | 6"    | 30°         | J            | 65.2% 10.4                 | 825  | 8580             | 0.08                       |
| SJ-645 | 6"    | 45°         | J            | 50.0% 8.0                  | 800  | 6400             | 0.09                       |
| SK-445 | 4"    | 45°         | K            | 48.0% 7.7                  | 775  | 5991             | 0.13                       |
| SK-645 | 6"    | 45°         | K            | 50.0% 8.0                  | 800  | 6400             | 0.09                       |
| SV-445 | 4"    | 45°         | CHEVRON      | 38.0% 6.1                  | 600  | 3648             | 0.25                       |

# ACOUSTICAL LOUVERS

Acoustical louvers provide low static pressure loss and reliable noise reduction over a wide range of frequencies. Ideally suited for intake or exhaust applications where maximum noise reduction is required.



EAA-645  
EAA-845



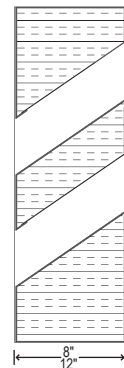
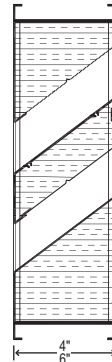
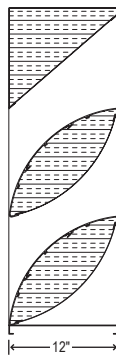
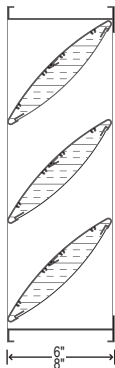
EAA-1245  
FAA-1245



EAJ-437  
EAJ-637



SAJ-835  
SAJ-1235



| MODEL    | DEPTH | BLADE ANGLE | BLADE STYLE      | NOISE REDUCTION |     |     |    |    |    | FREE AREA (%) (Sq. Ft.) |               | BEGINNING POINT OF WATER PENETRATION RATINGS |      |      |
|----------|-------|-------------|------------------|-----------------|-----|-----|----|----|----|-------------------------|---------------|--|------|------|
|          |       |             |                  | 125             | 250 | 500 | 1K | 2K | 4K | VELOCITY (fpm)          | AIRFLOW (cfm) | PRESSURE DROP (in. Wg.)                      |      |      |
| EAA-645  | 6"    | 45°         | AIRFOIL          | 11              | 11  | 13  | 16 | 18 | 17 | 30.0%                   | 4.8           | 980  | 4704 | 0.10 |
| EAA-845  | 8"    | 45°         | AIRFOIL          | 8               | 8   | 10  | 14 | 15 | 13 | 37.9%                   | 6.1           | 649  | 3931 | 0.03 |
| EAA-1245 | 12"   | 45°         | AIRFOIL          | 13              | 14  | 17  | 19 | 18 | 17 | 26.3%                   | 4.2           | 999  | 4196 | 0.09 |
| EAJ-437  | 4"    | 37°         | J                | 11              | 10  | 12  | 17 | 18 | 17 | 33.8%                   | 5.4           | 740  | 3996 | 0.06 |
| EAJ-637  | 6"    | 37°         | J                | 10              | 10  | 12  | 22 | 20 | 19 | 32.5%                   | 5.2           | 890  | 4637 | 0.15 |
| FAA-1245 | 12"   | 45°         | FORMED - AIRFOIL | 13              | 14  | 17  | 19 | 18 | 17 | 26.3%                   | 4.2           | 999  | 4196 | 0.09 |
| SAJ-835  | 8"    | 35°         | FORMED - J       | 13              | 13  | 19  | 26 | 28 | 23 | 33.1%                   | 5.3           | 808  | 4293 | 0.07 |
| SAJ-1235 | 12"   | 35°         | FORMED - J       | 12              | 14  | 18  | 21 | 19 | 16 | 30.6%                   | 4.9           | 924  | 4528 | 0.08 |

# SPECIALTY PRODUCTS

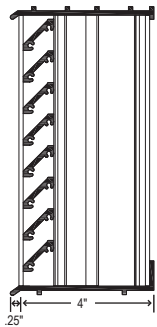
Brick vents are used primarily on renovation projects and provide a permanent means of gravity ventilation for crawl spaces, hung ceilings, foundations, pipe spaces and corridors. Our EVS-422 is ideally suited for high wind areas that are sensitive

to wind-driven sand penetration. The EPJ-445 penthouse serves frequently as a gravity ventilator, fan discharge cap, fresh air intake cap, sight shield or pressure relief ventilator.

## BRICK VENTS



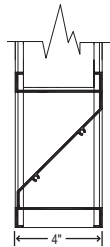
EBV-145  
EBV-445



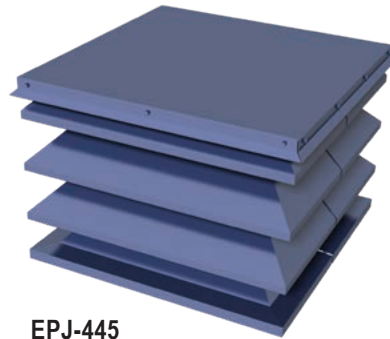
## SAND LOUVER



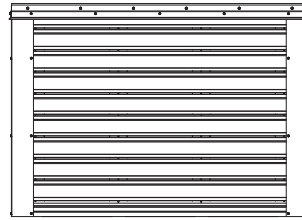
EVS-422



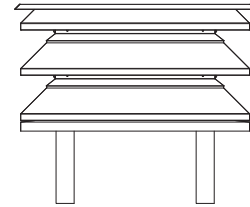
## PENTHOUSE



EPJ-445



BOXED CORNER

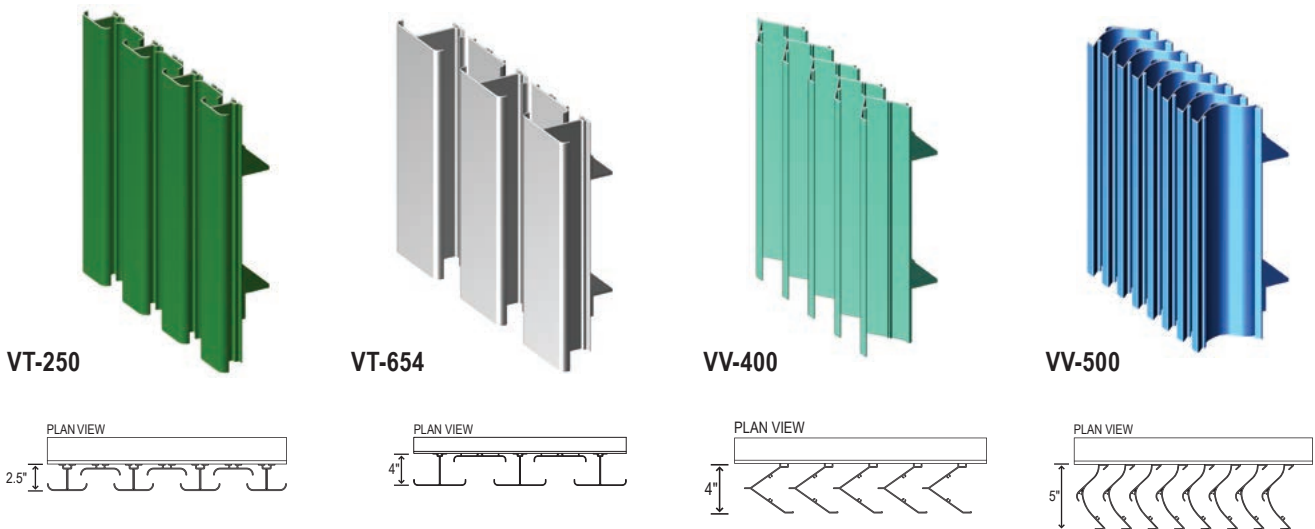
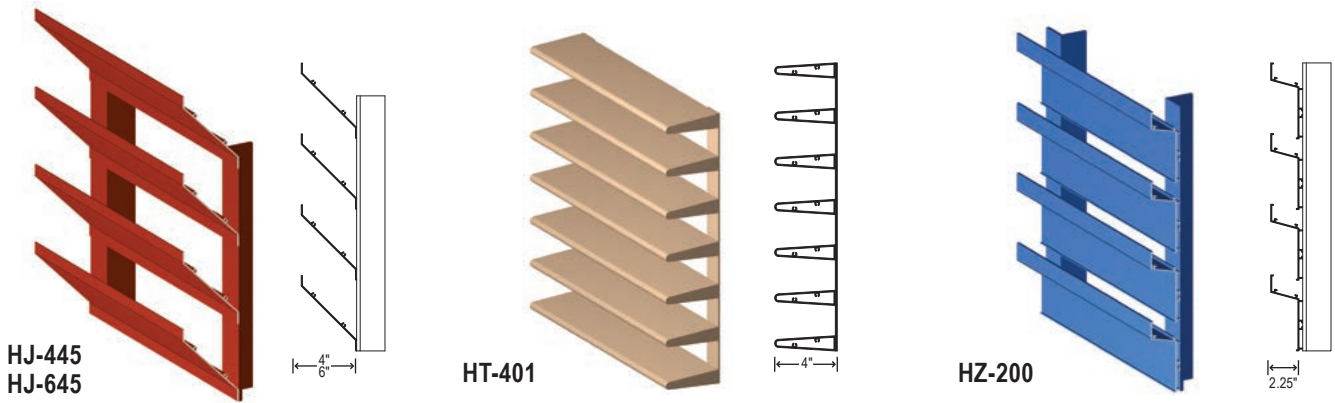


MITERED CORNER

| MODEL            | DEPTH | BLADE ANGLE | BLADE STYLE | FREE AREA (%) (Sq. Ft.) | BEGINNING POINT OF WATER PENETRATION RATINGS |               |                         |
|------------------|-------|-------------|-------------|-------------------------|--|---------------|-------------------------|
|                  |       |             |             |                         | VELOCITY (fpm)                               | AIRFLOW (cfm) | PRESSURE DROP (In. Wg.) |
| EBV-145          | 1.5"  | 45°         | J           | -                       | -  | -             | -                       |
| EBV-445          | 4"    | 45°         | J           | -                       | -  | -             | -                       |
| EVS-422          | 4"    | 22°         | VERTICAL    | 15.6% 2.5               | 1250   | 3125          | 1.00                    |
| <b>PENTHOUSE</b> |       |             |             |                         |  |               |                         |
| EPJ-445          | 4"    | 45°         | J-BLADE     | 50.0% 8.0               | 689  | 5549          | 0.08                    |

# SIGHT SCREENS

Whether the design calls for total sight concealment, partial screening, high volume airflow, specialty shapes, or thermal shading, our sight screens are engineered to meet the most stringent project parameters while satisfying our customer's aesthetic requirements.



| MODEL  | DEPTH | BLADE ANGLE | BLADE                     | FREE AREA (%) (Sq. Ft.) |
|--------|-------|-------------|---------------------------|-------------------------|
| HJ-445 | 4"    | 45°         | HORIZONTAL - INVERTED J   | 50.6% 8.1               |
| HJ-645 | 6"    | 45°         | HORIZONTAL - INVERTED J   | 50.0% 8.0               |
| HT-401 | 4"    | -           | HORIZONTAL - AIRFOIL TUBE | 60.0% 9.6               |
| HZ-200 | 2.25" | 45°         | HORIZONTAL - CLADDING     | 19.4% 3.1               |
| VT-250 | 2.5"  | -           | VERTICAL - CLADDING       | 24.4% 3.9               |
| VT-654 | 4"    | -           | VERTICAL - CLADDING       | 21.0% 3.4               |
| VV-400 | 4"    | -           | VERTICAL - V              | 38.8% 6.2               |
| VV-500 | 5"    | -           | VERTICAL - V              | 53.8% 8.6               |

# LOUVER SHAPES

C&S offers a complete line of louver options. Whether your project requires special architectural shapes, security burglar bars, flange or frame options, we have the accessories you need. See the back cover for finish options.

## LOUVER SHAPES



**A**

TRAPEZOID



**B**



**C**

RIGHT TRIANGLE



**D**



**E**

TRIANGLE



**F**

DOUBLE SLOPE TOP



**G**

DIAMOND



**H**

1/4 ROUND

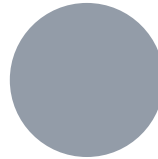


**J**



**K**

RADIUS TOP



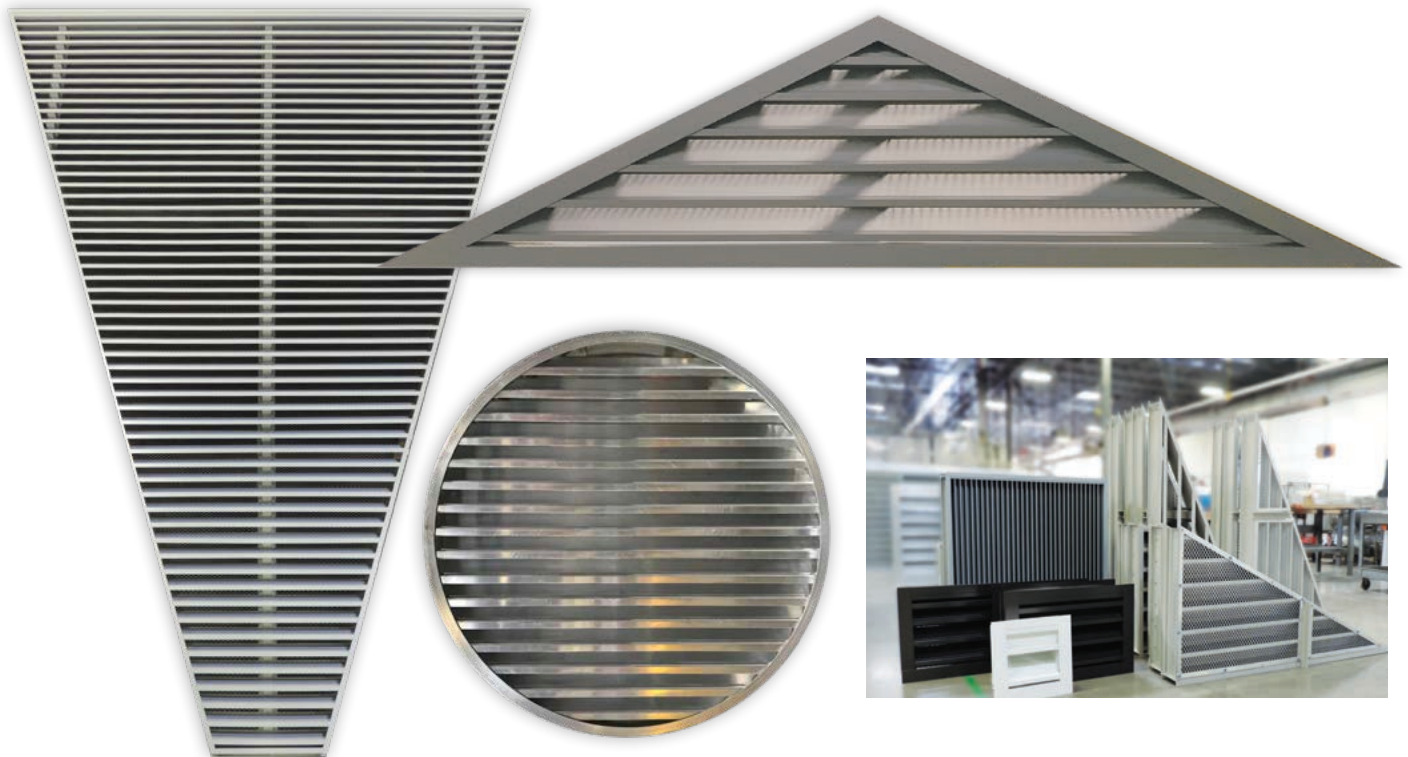
**L**

ROUND



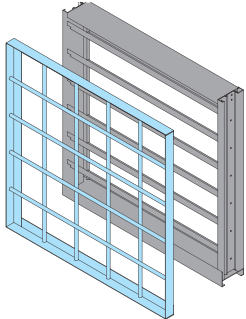
**M**

1/2 ROUND

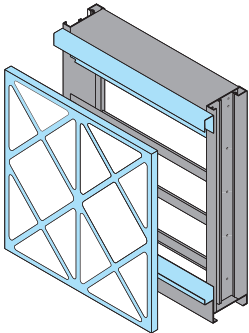


# LOUVER OPTIONS

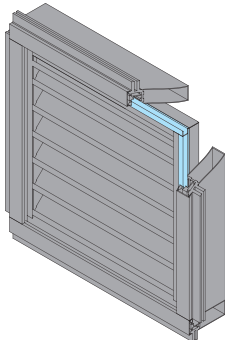
## OPTIONS



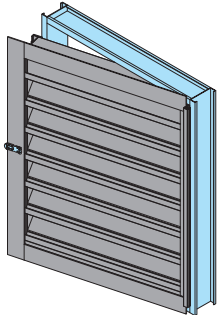
**BURGLAR BARS**



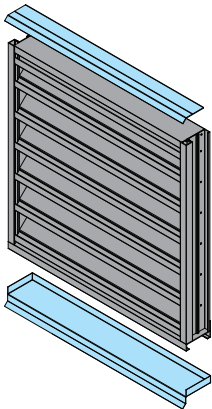
**FILTER RACK**



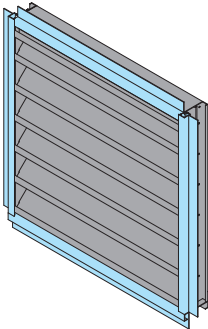
**GLAZING FRAME**



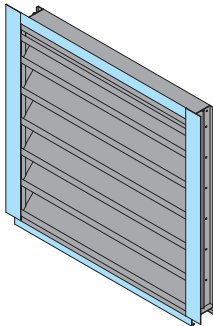
**LOUVER HINGE**



**SILL/HEAD FLASHING**



**STUCCO FLANGE**



**VARIABLE FLANGE**

## BEST WARRANTY IN THE INDUSTRY

To reinforce our reputation for high quality products and dependable service, C&S Air Products offers an industry leading 5-year warranty on our entire line of louver products.

*"By backing every product we ship with a 5-year warranty, we reinforce the depth of our commitment to providing customers quality products the first time and every time" says Pat Cockrum, president of C&S.*

**5**  
year  
warranty



## FINISHES OPTIONS

| FINISH TYPE  | DESCRIPTION/APPLICATION  | COLOR SELECTION   | WARRANTY   |
|--|--|---|--|
| 2-coat 100% Fluoropolymer Powder Coat meets AAMA 2605. Dry film thickness 2 mil. Equivalent to Kynar 500®/Hylar5000®, Duranar®, Fluoropon® | Our premier finish for extruded aluminum. Tough, long lasting, environmentally friendly powder coating has superior color retention and abrasive properties. Resists chalking, fading, chemical abrasion and weathering.             | Standard Colors: 20 standard colors plus Premium Pearl finishes. Custom colors are available. Consult factory.                      | 10 Years (consult factory for availability of extended warranty up to 20 years). |
| 2-coat Polyester Powder Coat meets AAMA 2604. Dry film thickness 2 mil. Equivalent to Baked Enamel   | Environmentally friendly powder coating has good color retention and abrasive properties. Resists chalking, fading, chemical abrasion and weathering.  | 20 standard colors for aluminum products and acoustical louvers, 18 colors for steel. Custom colors are available. Consult factory. | 5 Years  |
| Integral Color Anodize AA-M10C22A42 (>0.7 mil)   | Electrochemically deposited inorganic color pigment which is sealed to convert an aluminum oxidation into a corrosion resistant finish. Some shade variation will occur.   | Champagne; Light, Medium or Dark Bronze; Black  | 5 Years  |
| Clear Anodize 215 R-1 AA-M10C22A41 (>0.7 mil)  | Electrochemically oxidized aluminum surface for uniform clear finish. More resistant to natural oxidizing. Improved luster and less glossy than mill finish.   | Clear   | 5 Years  |
| Alkyd Prime Coat   | Preparation for field applied epoxy, vinyl, urethane, or other heavy-duty coatings. Must be finished within 6 months of application. Contamination can occur in transit and in the field; requires field cleaning prior to painting. | N/A   | N/A  |
| Mill   | Aluminum or Galvanized Steel. Normal weathering will occur.  | N/A   | N/A  |

To request a standard color sample or anodized variation sample, please contact customer service.

# C&S Air Products

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