Application
45° return filter grilles are used as return units that match the appearance of the supply outlets. They are well suited for locations where the occupant can see into the duct, and can be mounted on the wall or in the ceiling.

Standard Features
- Stainless steel (Type 304) construction.
- Teardrop blades are 3/4" deep, on 2/3" centers.
- Deflection is fixed at 45°.
- Minimum grille size is 4" x 4".
- Choice of 1" or 2" deep filter.
- Grille is attached to frame via full-length piano hinge.
- Grille is closed with knurled nut. (1/4 turn fastener available upon request.)
- Standard finish is #22 satin polish with one coat of clear lacquer.
- Choice of hinging along long or short side.
- Gasket around the edge of the mounting frame.

Optional Features

Quick Select Chart
This shows grilles with:
- A maximum NC of 35.
- A minimum duct velocity of 200 FPM.

Model Numbering System
- R - Register or Grille
- L - Stainless Steel Grille
- A - 45° Fixed Return
- H - Horizontal (Front Blade Parallel to Width)
- V - Vertical (Front Blade Parallel to Height)
- WIDTH 004 - 4" Minimum
- HEIGHT 04 - 4" Minimum
- FRACTIONAL SIZE 0 - 0" 1 - 1/8" 2 - 1/4" 3 - 3/8" 4 - 1/2" 5 - 5/8" 6 - 3/4" 7 - 7/8"
- HINGE PLACEMENT, FILTER SIZE D - Hinged to Long Side, 1" Filter
- E - Hinged to Short Side, 1" Filter
- K - Hinged to Long Side, 2" Filter
- L - Hinged to Short Side, 2" Filter
- H - Hinged to Long Side, No Filter
- J - Hinged to Short Side, No Filter
- FINISH 22 - Satin Finish w/One Coat Clear Lacquer (Default)
- 11 - Bright White
- 01 - Off-White
- 04 - Gray
# Multi-Panel Construction

## Multi-Panel Construction for the following Registers & Grilles

<table>
<thead>
<tr>
<th>Single Deflection</th>
<th>Steel</th>
<th>Stainless Steel</th>
<th>Aluminum</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSSB</td>
<td>RLSB, RTSB</td>
<td>RLSB, RMSB, RKS</td>
<td>RASM, RNSM</td>
</tr>
<tr>
<td>RTSB</td>
<td>RLDB, RMDB, RKDB</td>
<td>RADM, RNDM</td>
<td></td>
</tr>
<tr>
<td>RLSB</td>
<td>RLRB, RMFB, RKB</td>
<td>RARM, RNRM</td>
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<tr>
<td>RMSB</td>
<td>RLAB, RMB, RKB</td>
<td>RAAM, RNAM</td>
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</tr>
<tr>
<td>RKS</td>
<td>RLAB, RMAB, RKAB</td>
<td>RAAM, RNAM</td>
<td></td>
</tr>
</tbody>
</table>

### In-line Construction

- **W**: Over 72”
- **H**: Over 30”
- Height: Over 36”
- Width: Over 72”
- Three or more sections
- Any blade alignment

### Ganged Construction

- **W**: 38” - 72”
- **H**: 38” - 72”
- Height: 38-72”
- Width: Up to 36”
- Two sections
- Any blade alignment

### Notes:

1. Maximum single panel width and height is 36” listed size regardless of blade alignment.
2. Panels are made in even inch increments unless specified otherwise.
3. Front blade alignment is as pictured.
4. Grille height & width dimensions shown are listed size dimensions.
5. Panel flanges are sheared and aligned with joining strips.

### Ganged Construction

- **W**: 38” - 72”
- **H**: 38” - 72”
- Height: Over 72”
- Width: Up to 36”
- Three or More Sections
- Any blade alignment

### Notes:

1. Maximum single panel width is 36” listed size.
2. Maximum single panel height is 36” listed size.
3. Panels will be made in even inch increments unless specified otherwise.
4. Front blade alignment is always parallel to center support.
5. Either the vertical or horizontal joint can be sheared down, but not both.
6. The center support can be aligned vertically or horizontally, depending on blade alignment desired. It is shown here mounted horizontally.
7. Grille height and width dimensions shown are listed size dimensions.
8. Metric dimensions are shown in millimeters.

---

**Center Support Attachment to Wall Opening**

- Center Support installs flush with wall
- Wall Angle
- Wall

**Cross-Sectional View of Center Support with Grilles Attached**

- Duct Height
- Duct Width
- W: 38” - 72”
- H: 38” - 72”
- 2-3/8” (60)
- 2-1/2” (64)
- 1-1/4” (32)
- 2” (51)
### Multi-Panel Construction for the following Registers & Grilles

| Steel        | Louvered Return RSLA, RTLA | Perforated Return RSFA, RTFA |

#### In-Line Construction

- **Height:** Up to 36"  
- **Width:** Over 96"  
- **Horizontal Blade Alignment**  
- **Three or More Sections**

- **Height:** Over 36"  
- **Width:** Over 96"  
- **Vertical Blade Alignment**  
- **Three or More Sections**

#### Ganged Construction

**Notes:**
1. Either the vertical or horizontal joint can be sheared down, but not both.
2. Maximum single panel width is 48" listed size.
3. Maximum blade length on louvered face models is listed size 48".
4. Maximum single panel height is 36" listed size.
5. Panels are made in even inch increments unless specified otherwise.
6. Blade alignment is always parallel to center support.
7. The center support can be aligned vertically or horizontally, depending on the blade alignment desired. It is shown here mounted horizontally.
8. Grille dimensions shown are listed size dimensions.

**Center Support Attachment to Wall Opening**

- Center Support install flush with wall

**Cross-Sectional View of Center Support with Grilles Attached**

- 2-3/8" (60)
- 2-1/2" (64)
- 1/2 (13)
- 1-1/4" (32)
- 2" (51)
**Multi-Panel In-Line Construction**

**Notes:**
1. Maximum single panel width and height is 48” nominal size, regardless of blade alignment.
2. Panels are made in even inch increments unless specified otherwise.
3. Front blade alignment is always parallel to center support.
4. Either the vertical or horizontal joint can be sheared down, but not both.
5. The center support can be aligned vertically or horizontally, depending on blade alignment desired.
6. Duct dimensions shown are nominal dimensions.

**Multi-Panel Ganged Construction**

**Notes:**
1. Maximum single panel width and height is 48” nominal size, regardless of blade alignment.
2. Panels are made in even inch increments unless specified otherwise.
3. Front blade alignment is always parallel to center support.
4. Either the vertical or horizontal joint can be sheared down, but not both.
5. The center support can be aligned vertically or horizontally, depending on blade alignment desired.
6. Duct dimensions shown are nominal dimensions.
All Sections of Butted Grilles or Registers will be made in Listed Sizes as Standard.

**STANDARD REGISTERS AND GRILLES**
Applies to all models except louvered return air registers and grilles and door partition grilles. Registers and grilles over 36” x 36” butting two or more grilles together.

**NOTES:**
- Extruded aluminum supporting members with mounting angles, are furnished where required.
- Center support may run vertically or horizontally, depending upon combination of grilles used.
- Combination of panels will be furnished to fit duct opening with satisfactory clearance.
### Screw Hole Location for the following Registers & Grilles

<table>
<thead>
<tr>
<th></th>
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<th>Stainless Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Deflection</td>
<td>RSSB, RTSB</td>
<td>RASM, RNSM</td>
<td>RLSB, RMSB, RKSB</td>
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<tr>
<td>Double Deflection</td>
<td>RSDB, RTDB</td>
<td>RADM, RNDM</td>
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<td>RLRB, RMRB, RKRB</td>
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<td>Louvered Return</td>
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<td>— — — — — —</td>
<td>— — — — — — —</td>
</tr>
<tr>
<td>Perforated Return</td>
<td>RSFA, RTFA</td>
<td>RAFM, RNFM</td>
<td>— — — — — — —</td>
</tr>
</tbody>
</table>

**Notes:**
- Screw holes on the face are standard on Registers and Grilles.
- Steel R&G can be ordered without screw holes, for use with concealed hangers (Opt. N).
- The screw holes is 5/32” in diameter.
- Each Register or Grille is provided with the appropriate number of screws as standard.
- The standard screw is #8 x 1-1/4” pan head screw, with a flat blade head.
- Tamper-proof screws are available as an option (Opt. B).

### Diagrams

- **One Screw hole per Side**
  - Nominal Size Range 4” through 18”.
  - [Diagram](#)

- **Two Screw holes per Side**
  - Nominal Size Range 19” through 31”.
  - [Diagram](#)

- **Three Screw holes per Side**
  - Nominal Size Range 32” through 48”.
  - [Diagram](#)