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**1400, 1400FR, 51400, M1400 & M51400**  
These supply diffusers feature a round neck and four cones.



**1400A & 51400A**  
These supply diffusers feature a round neck, four cones, and adjustable pattern controllers.



**1450, 51450, M1450, & M51450**  
These supply diffusers feature a round neck and three cones.



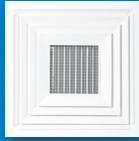
**1450A & 51450A**  
These supply diffusers feature a round neck, three cones, and adjustable pattern controllers.



**SH, 5SH, SHFR, MSH, SHV, 5SHV, SHR, 5SHR, SHRV, 5SHRV, SHFB, & 5SHFB**  
These supply diffusers feature a square neck, fixed louvered blades (1-way to 4-way), and removable core.



**SHPC, 5SHPC, SHPCR, & 5SHPCR**  
These supply diffusers feature a square neck, fixed louvered blades (1-way to 4-way), removable core, and adjustable pattern controllers.



**5SH/CAD & 5SHR/CAD**  
These supply diffusers feature fixed louvered blades with a center downblow.



**SHRPLQ**  
This supply diffuser features fixed louvered blades (1, 2, or 3 slots) with center plaque faceplate.

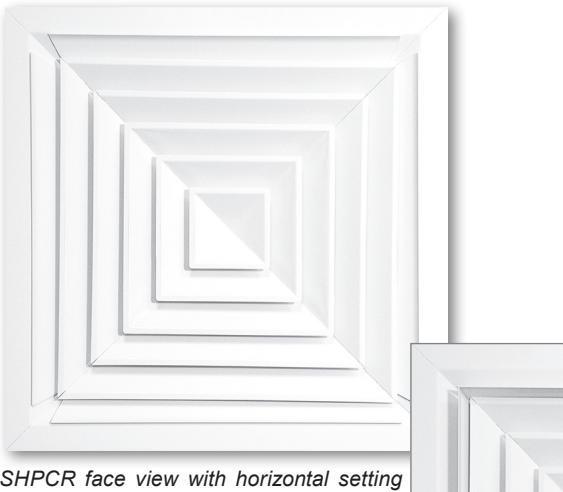


**7000**  
This combination supply/return diffuser features fixed louvered blades with removable egg-crate center frame.

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## B1 LOUVERED FACE DIFFUSERS

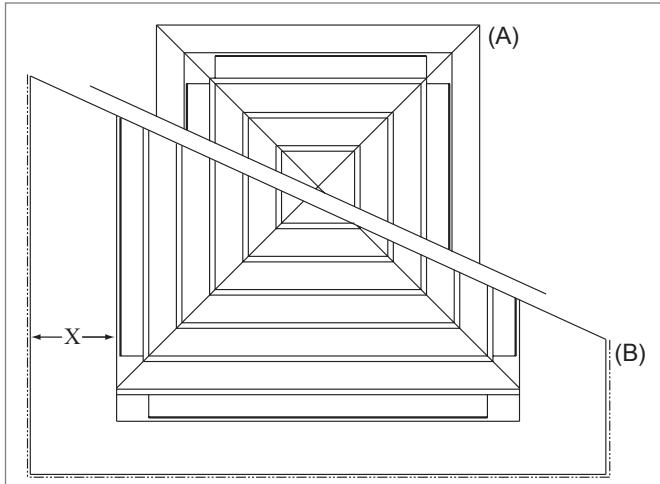
SHPCR, 5SHPCR | Flush Face, Round Neck, Pattern Controllers



SHPCR face view with horizontal setting (above) and vertical setting (right).

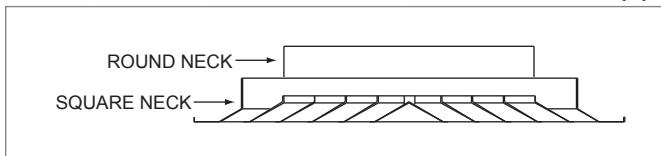
### SHPCR, 5SHPCR Dimensional Information

#### SHPCR, 5SHPCR, FACE VIEW

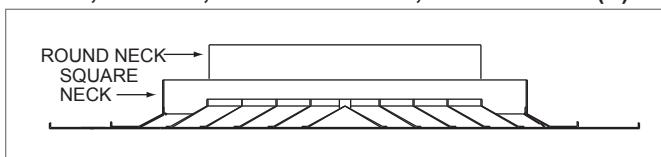


NOTE: Dimension 'X' will vary with neck sizes for Frames 23, 24, 27, and 98.

#### SHPCR, 5SHPCR, CROSS SECTION, SURFACE MOUNT (A)



#### SHPCR, 5SHPCR, CROSS SECTION, LAY-IN T-BAR (B)



### Introduction: SHPCR, 5SHPCR

The SHPCR/5SHPCR series square diffusers with round necks are available in various sizes and discharge air patterns to meet engineering requirements for capacity and directional throw in addition to a variety of frame styles to meet architectural requirements of today's ceilings. They feature a 1/4" horizontal lip on all sides of the louvered core, resulting in a tight horizontal pattern at the ceiling and a higher discharge velocity at the face. This creates a high induction region just below the face of the diffuser, which improves room air mixing. Additionally, these diffusers have manually adjustable pattern controllers mounted between the core and frame to provide vertical discharge when required. Because they have higher discharge face velocities, this series is an excellent choice for variable air volume systems with above normal temperature differentials. Also, the pattern controllers make them a great choice for use in high ceiling applications with ceiling heights ranging from 10 - 20 feet. At typical flow rates, isothermal throws of 18 - 30 feet make them ideal for mounting centrally in many spaces with high load requirements, while providing high mixing rates in the space.

#### MODELS

SHPCR - Steel Louvered Diffuser  
5SHPCR - Aluminum Louvered Diffuser

#### FEATURES

- Round duct connections.
- Adjustable pattern controllers for vertical throw.
- Core is removable from face of diffuser.
- Maintains a horizontal discharge air pattern from maximum to minimum CFM.
- Excellent choice for VAV applications with high loads.
- Excellent choice for high ceiling applications.

#### PANEL SIZES

- 12"x12"
- 24"x24"

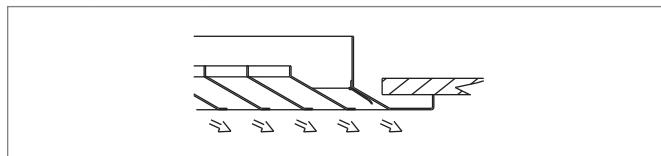
#### ACCESSORIES

- Optional straightening grids.
- Optional round damper.

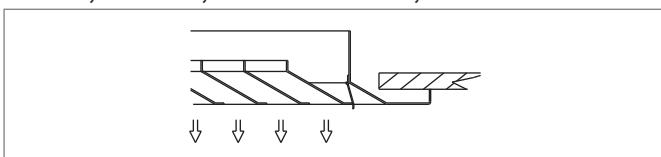
#### FINISHES

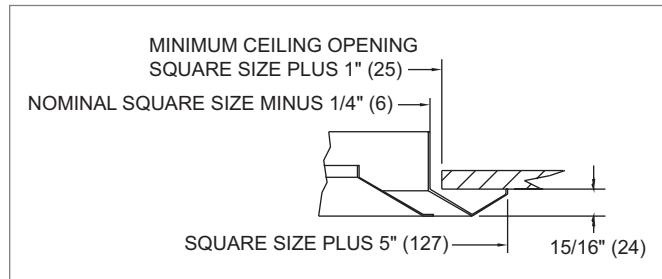
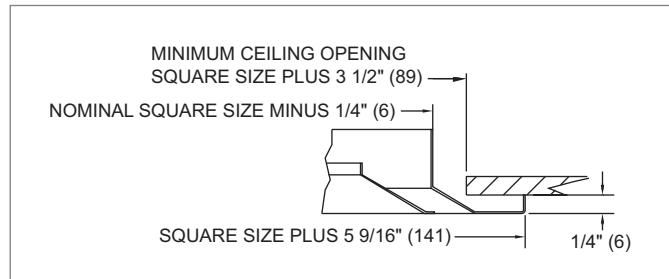
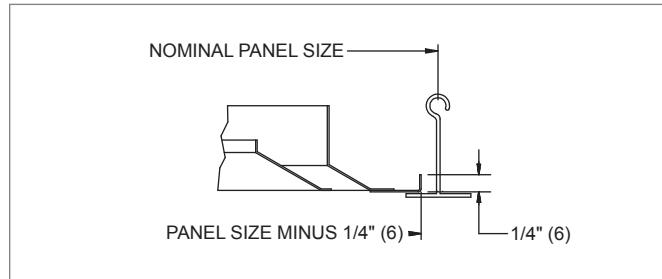
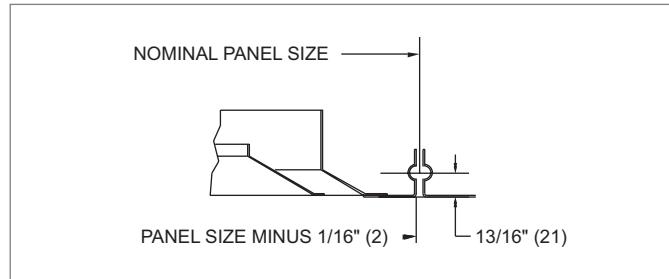
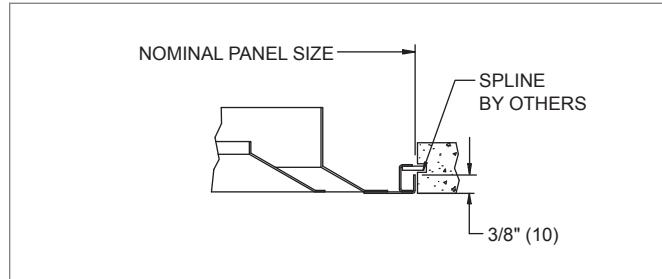
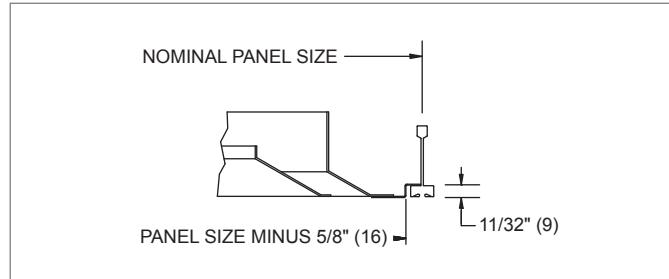
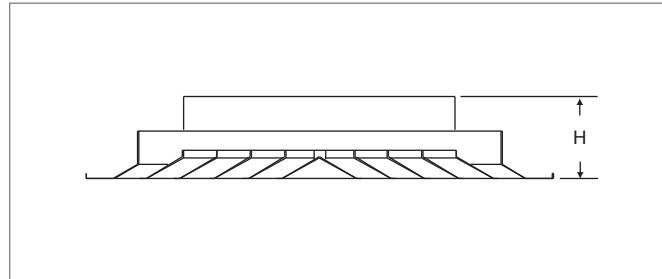
- Standard finish is #44 British White.
- Optional finishes available.

#### SHPCR, 5SHPCR, CROSS SECTION, HORIZONTAL



#### SHPCR, 5SHPCR, CROSS SECTION, VERTICAL



**SHPCR, 5SHPCR Frame Styles**
**SHPCR, 5SHPCR, FRAME 21, SURFACE MOUNT, BEVELED**

**SHPCR, 5SHPCR, FRAME 22, SURFACE MOUNT, FLAT**

**SHPCR, 5SHPCR, FRAME 23, LAY-IN T-BAR**

**SHPCR, 5SHPCR, FRAME 24, SNAP-IN T-BAR**

**SHPCR, 5SHPCR, FRAME 27, SPLINE**

**SHPCR, 5SHPCR, FRAME 98, NARROW-T**

**SHPCR, 5SHPCR, CROSS SECTION, OVERALL HEIGHT**


See page B1-38, "Snap-in Core Instructions" for removal of the core.

**SHPCR, 5SHPCR, AVAILABLE NECK SIZES**

Round Inlet	H	Panel Size	Nominal Square
6	3 1/8" (79)	12"x12" (305x305)	6" (152)
6	3 1/8" (79)	24"x24" (610x610)	6" (152) 9" (229) 12" (305) 15" (381) 18" (457)
8	3 3/8" (86)	24"x24" (610x610)	9" (229) 12" (305) 15" (381) 18" (457)
10	3 3/8" (86)	24"x24" (610x610)	12" (305) 15" (381) 18" (457)
12	3 3/8" (86)	24"x24" (610x610)	12" (305) 15" (381) 18" (457)
14	3 3/8" (86)	24"x24" (610x610)	15" (381) 18" (457)
16	3 3/8" (86)	24"x24" (610x610)	18" (457)

NOTE: Dimensions in parentheses are mm.

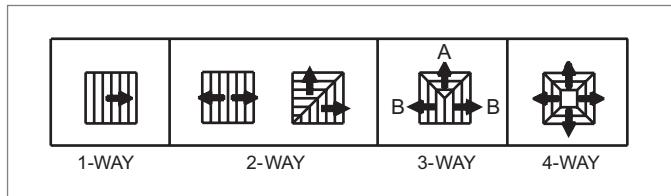
## B1 LOUVERED FACE DIFFUSERS

SHPCR, 5SHPCR | Flush Face, Round Neck, Pattern Controllers



### SHPCR, 5SHPCR Discharge Air Patterns

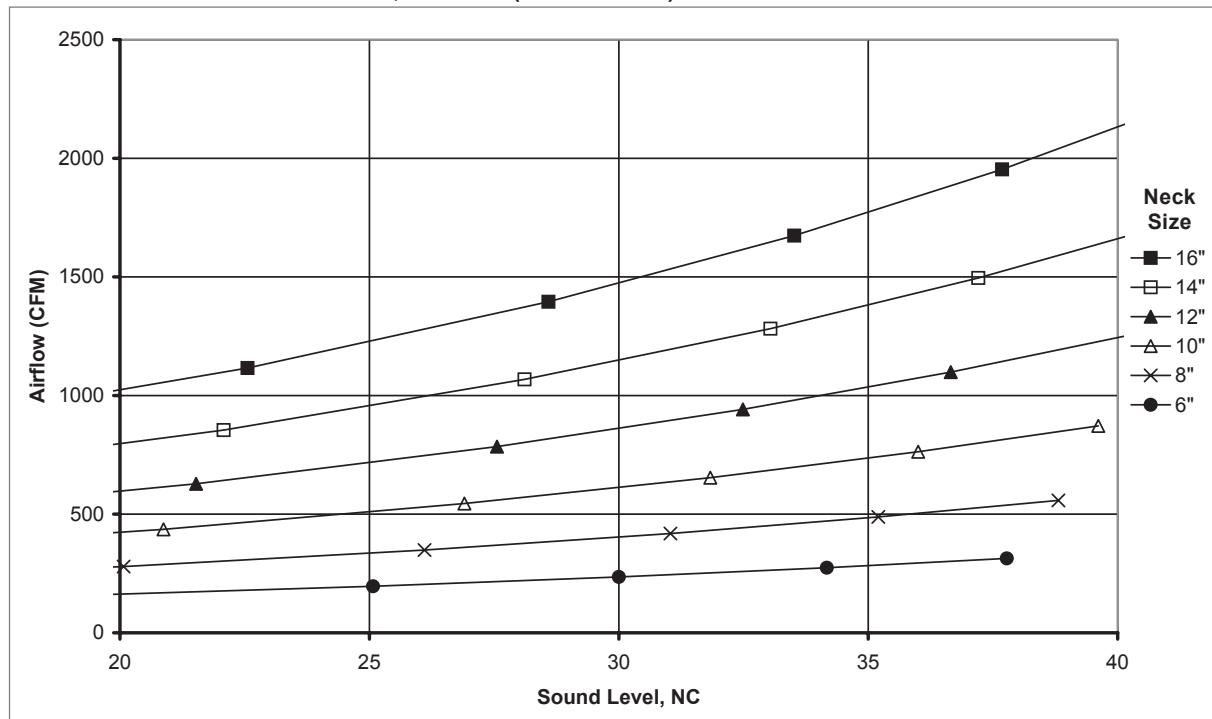
SHPCR, 5SHPCR, DISCHARGE AIR PATTERNS (FACE VIEW)



NOTE: 'A' & 'B' notations correspond to performance data.

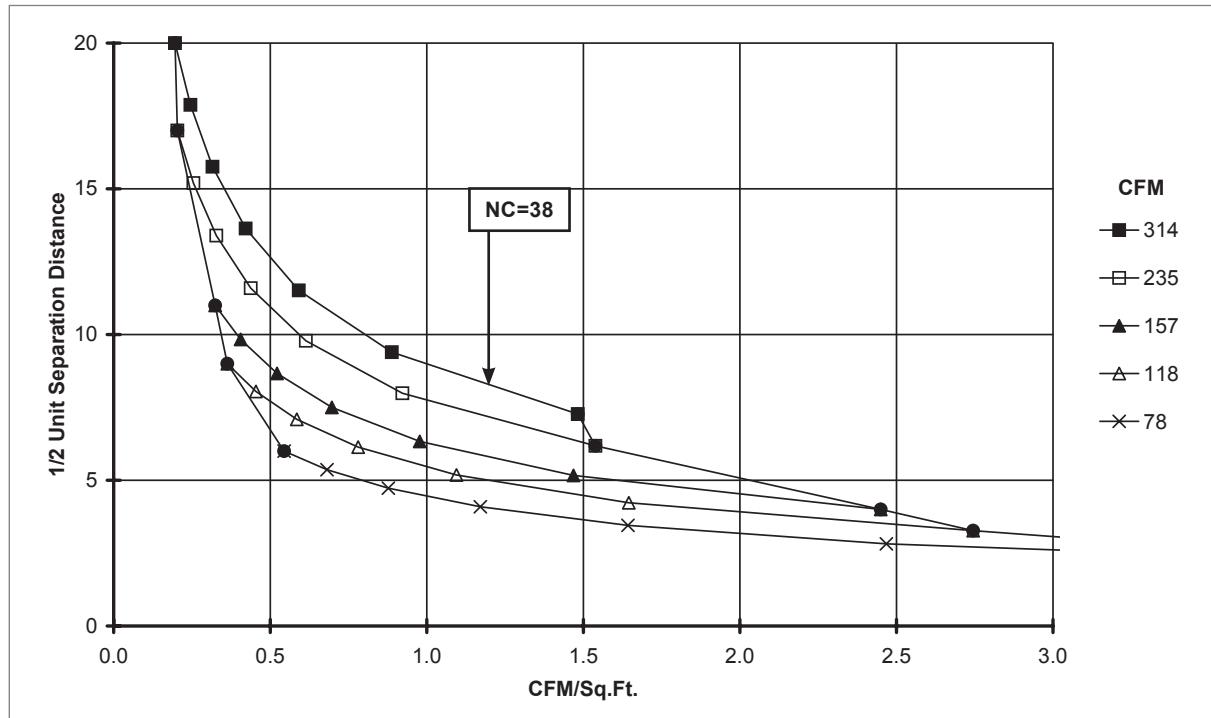
### SHPCR, 5SHPCR Reference Chart

AIRFLOW VS. NC LEVEL: SHPCR, 5SHPCR (NO DAMPER)

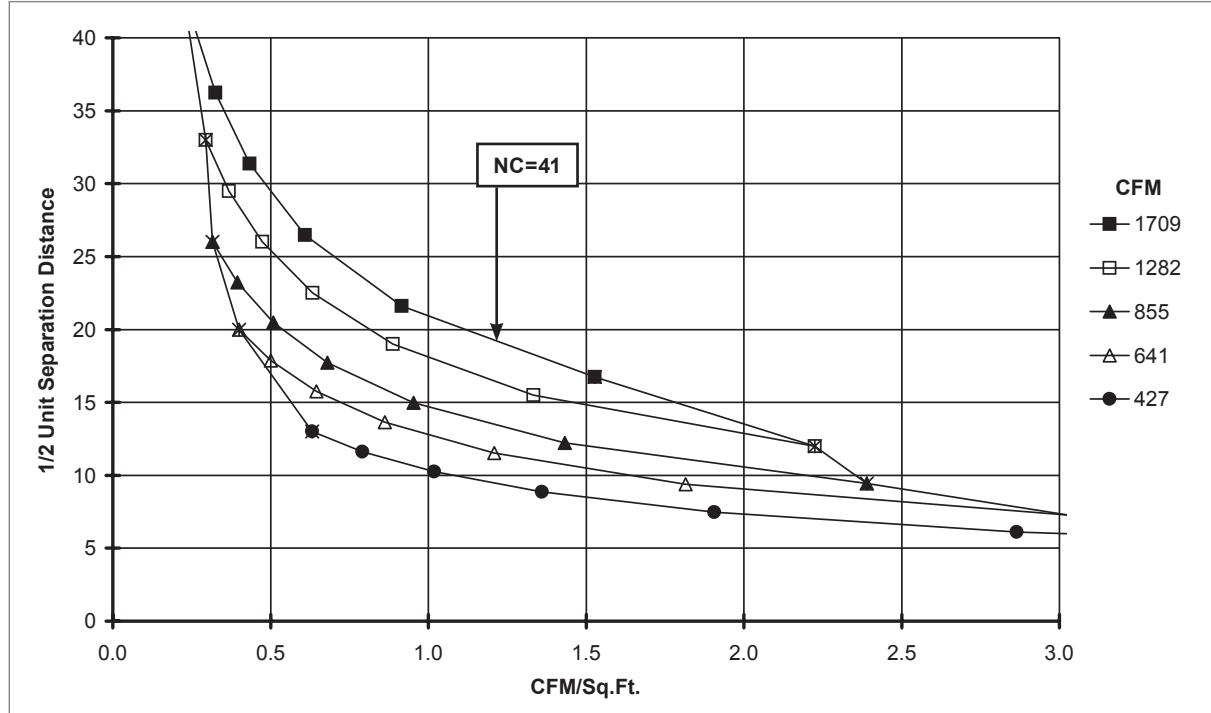


**SHPCR, 5SHPCR Reference Charts: Horizontal Throw**

DIFFUSER SPACING FOR 80% ADPI: SHPCR, 5SHPCR, 18"x18" TO 6" ROUND INLET, 4-WAY (NO DAMPER)



DIFFUSER SPACING FOR 80% ADPI: SHPCR, 5SHPCR, 18"x18" TO 14" ROUND INLET, 4-WAY (NO DAMPER)



NOTES: Charts are at 20 BTUH/ft<sup>2</sup> loads. See the Engineering section of this catalog for instructions on how to read these charts and additional ADPI information.

















**SHPCR, 5SHPCR Suggested Specification & Configuration**
**SHPCR, 5SHPCR**

The ceiling diffuser shall be Krueger model SHPCR (steel) or 5SHPCR (aluminum) louver face with adjustable pattern controllers for horizontal or vertical discharge airflow. The pattern controllers shall be accessible from the face. These diffusers shall have a round neck of the sizes and frame styles shown on the drawing or job schedule. The diffuser shall have an easily removable core with fixed blades in 1, 2, 3, or 4-way configurations.

**PERFORMANCE**

The manufacturer shall provide published performance data for the diffuser. Performance data shall include 2 - 7 octave band sound power levels. The diffuser shall be tested in accordance to the data standards at the time of product introduction or ANSI/ASHRAE Standard 70.

**FINISH**

The paint finish shall be #44 British White and be an anodic acrylic paint, baked at 315° for 30 minutes. The paint thickness shall be 0.8 - 1.0 mils, gloss at 60° per ASTM D523-89 of 50 - 85%, pencil hardness per ASTM D3363-92A of HB - H, crosshatch adhesion per ASTM D3359-83 of 4B - 5B, impact per ASTM D2794-93 of direct impact >100 in/lb and reverse impact >80 in/lb, salt spray per ASTM B117-9048 of 96 hours, humidity per ASTM D2247-92 of >500 hours and water soak per ASTM D870-92 of 250 hours.

**SAMPLE CONFIGURATION:** SHPCR - 04 - 08 - 12 - F22 - NONE - 08 - 00 - 44
**1. SERIES: (XXXXXX)**

SHPCR - Round Inlet with Pattern Controllers,  
Steel Ceiling Diffuser  
5SHPCR - Round Inlet with Pattern Controllers,  
Aluminum Ceiling Diffuser

**2. PATTERN: (XX)**

- 01 - 1-Way
- 02 - 2-Way
- 03 - 3-Way
- 04 - 4-Way

**3. ROUND INLET: (XX)**

6" - 16" in 2" Increments

**4. SQUARE NECK: (XX)**

If Round Inlet =

- 6 - Select 6", 9", 12", 15", or 18"
- 8 - Select 9", 12", 15", or 18"
- 10 - Select 12", 15", or 18"
- 12 - Select 12", 15", or 18"
- 14 - Select 15" or 18"
- 16 - Select 18"

**5. FRAME: (XXX) \***

- F21 - Surface Mount, Beveled
- F22 - Surface Mount, Flat
- F23 - Lay-in T-Bar
- F24 - Snap-in T-Bar
- F27 - Spline
- F98 - 5/16" Step Down

**6. PANEL: (XX)x(XX) \*\***

- None
- 12"x12"
- 24"x24"

**7. DAMPER: (XX)**

00 - None	03 - PR10
04 - PRD10	06 - PR12
08 - PRN100	

**8. ACCESSORIES: (XX)**

- 00 - None
- R - Round Straightening Grid

**9. FINISH: (XX)**

- 01 - Mill
- 10 - Alumican
- 35 - Black
- 44 - British White

\* If Frame 23, 24, 27, or 98 are specified, specify panel size.

\*\* Reference page B1-87 for panel and neck size availability.  
Specify Panel 'None' if Frame 21 or 22 has been selected.