



**Hart & Cooley**<sup>®</sup>  
*install confidence*

# Light Commercial Grilles, Registers & Diffusers

Edition 5

See  
Inside  
Front  
Cover For  
What's New...

## LIGHT COMMERCIAL

|                                |                             |
|--------------------------------|-----------------------------|
| <b>Product<br/>Information</b> | <b>Engineering<br/>Data</b> |
|--------------------------------|-----------------------------|

### LINEAR & SLOT DIFFUSERS

|    |                           |       |       |         |
|----|---------------------------|-------|-------|---------|
|    | L Series .....            | 40-42 | ..... | 100-101 |
|    | S Series .....            | 43-47 | ..... | 102-105 |
| DP | Distribution Plenum ..... | 47    |       |         |



Minimum width 1-1/2"

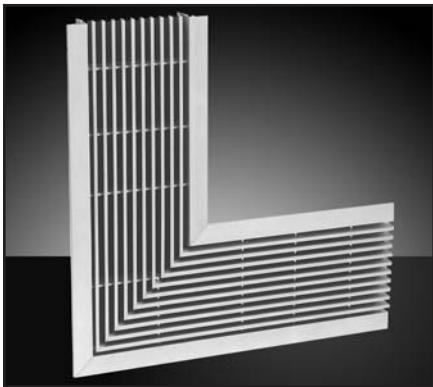
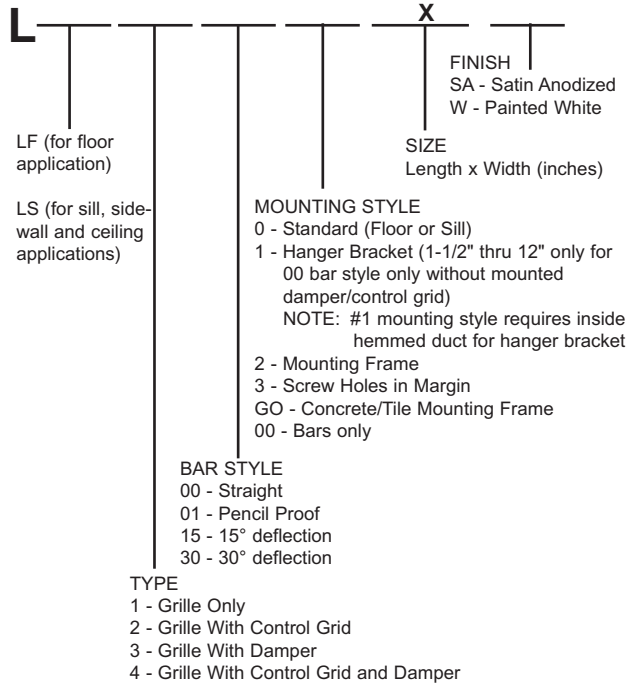
**Note:** Floor application must be ordered as "LF." Eight-inch maximum width for constant traffic; 12" maximum width for occasional traffic; maximum length 72".

See following page for dimensional data.

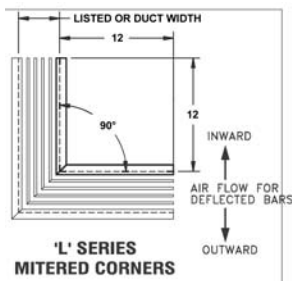
## LS/LF Series Diffuser

- Extruded aluminum construction
- Ceiling, sidewall, sill or floor applications
- Available in 0, 15, or 30 degrees and pencil proof bar deflections
- Four mounting styles—standard, hanger bracket, mounting frame and screw holes in margin
- Maximum one-piece length 72", width 24" (1/2" width increments)
- Lengths over 72" made in multiple units with keyway splices to form even continuous lengths
- Bright White or Satin Anodized finish

## HOW TO ORDER



Mitered Corner Sections furnished as shown. Blank off baffles available upon request.

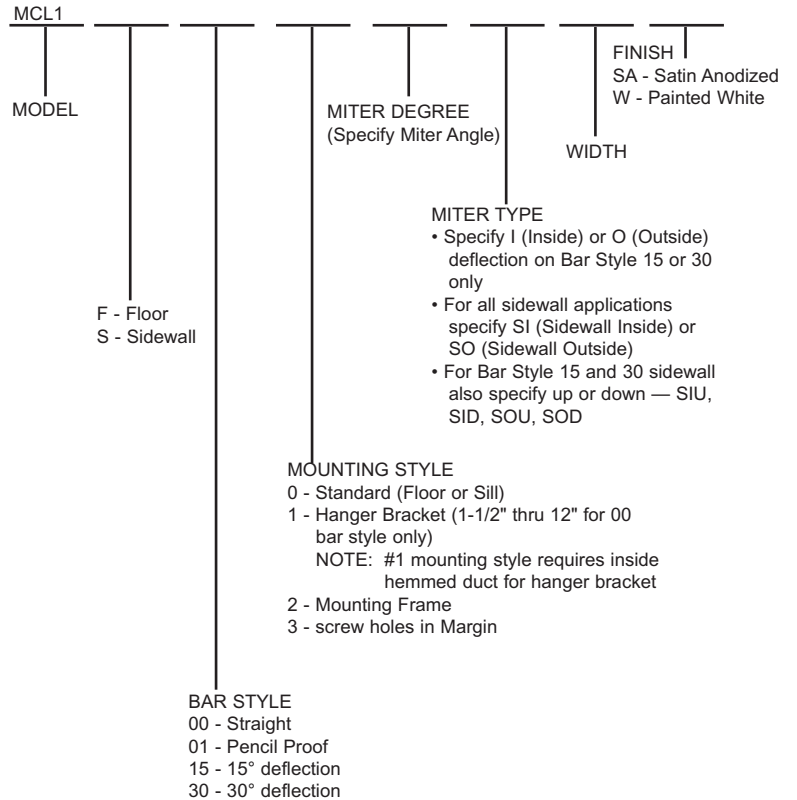


See page 47 for distribution plenums.

## L Series Mitered Corners

Mitered corner sections furnished as shown.

## HOW TO ORDER







### L Series Single-Leaf Damper Option

- Aluminum construction
- Leaf type for sizes 1½" to 3"

**Note:** Order with desired diffuser for attachment at factory.

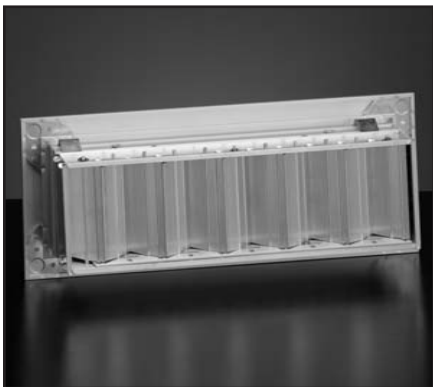
Cannot be used with hanger brackets.



### L Series G Grid Option

- Aluminum construction
- Individual adjustable blades
- Cannot be used with hanger brackets

**Note:** G Grid blades are assembled parallel to short dimension. Order with desired diffuser for factory fitting.



### L Series D Damper Option

- Extruded aluminum construction
- Controls the air volume from full flow to shut-off
- Fits widths of 3½" and wider

**Note:** Order with desired diffuser for attachment at factory.

Must be ordered separately and duct-mounted if mounting style #1 is used.

| D Available Sizes (in.) |
|-------------------------|
| 3½" and wider           |

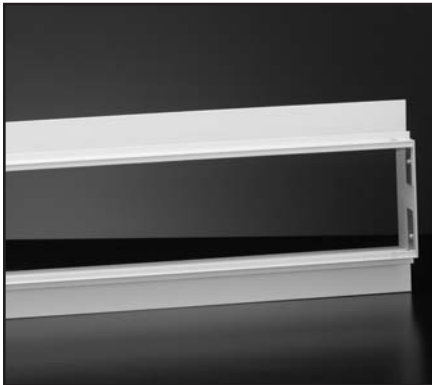




## Damper

Single-leaf dampers are furnished in each slot opening throughout the entire diffuser length when specified. Dampers are fastened to the margin and are spring-loaded to hold their setting at all duct pressures. Multiple dampers are furnished for grille lengths over 24 inches.

Dampers are part of the S Series and are not specified separately.



No. 2

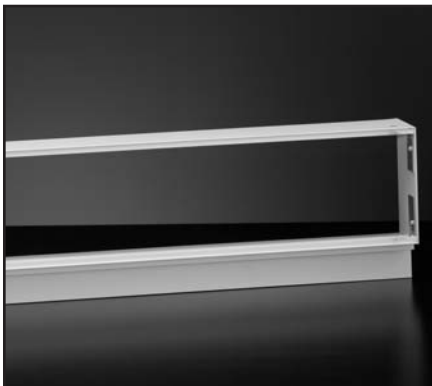
## Frames

Plaster frames are available to provide a positive-dimensioned ceiling or wall opening for the diffuser or grille.

Frames for S Series diffusers are furnished with formed bridge spacers to maintain a uniform rigid opening during installation. The duct collar is fastened to the frame.

See specific S Series for frame dimensions and installation details.





90-degree mitered corners are available as factory-fabricated sections. Precise factory cutting and assembly reduces field fabrication time and assures proper fit. Mitered corner sections are furnished in one piece, with pattern deflectors and dampers in the dimensions as indicated. Corner sections butt to adjacent straight sections, which are spliced together with aligning keys.

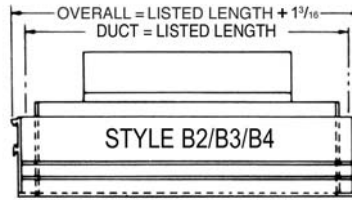
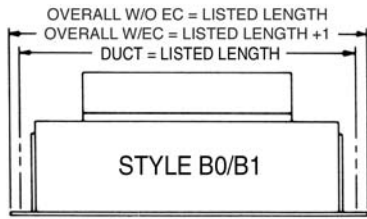


No. 3

Mitered corners are furnished in style #4 (with pattern controller and damper). When viewed from the room side, the mitered corner section appears identical to the butting straight sections.

Plaster frame mitered corners can be specified with the outlet mitered corner.

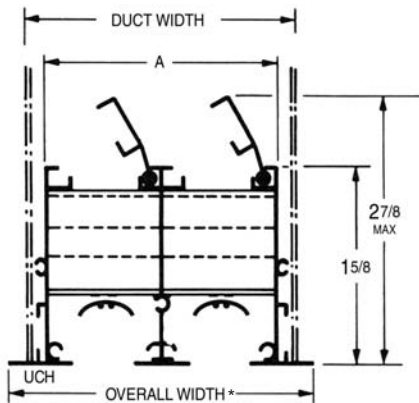
| STYLE DETAILS |  |   |   |
|---------------|--|---|---|
| 1             |  | 2 |  |
|               | DIFFUSER ONLY  |   | DIFFUSER AND<br>PATTERN CONTROLLER  |
| 3             |  | 4 |  |
|               | DIFFUSER AND DAMPER  |   | DIFFUSER, DAMPER AND<br>PATTERN CONTROLLER  |



### STYLE B0

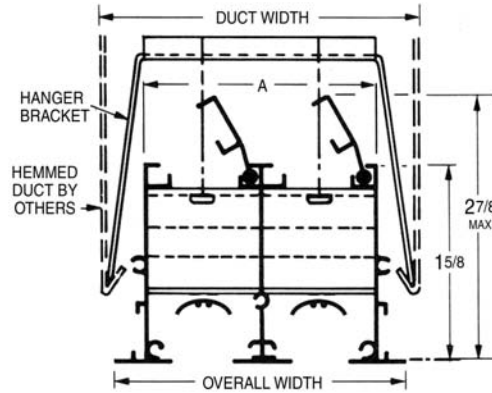
Also for T-Bar applications

Order 22<sup>3</sup>/<sub>4</sub>" or 46<sup>3</sup>/<sub>4</sub>" lengths with End Caps.



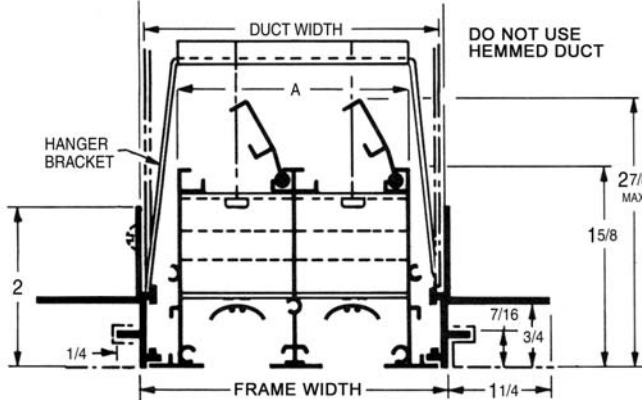
\*Overall width is only 5/16" greater than the duct width.

### STYLE B1

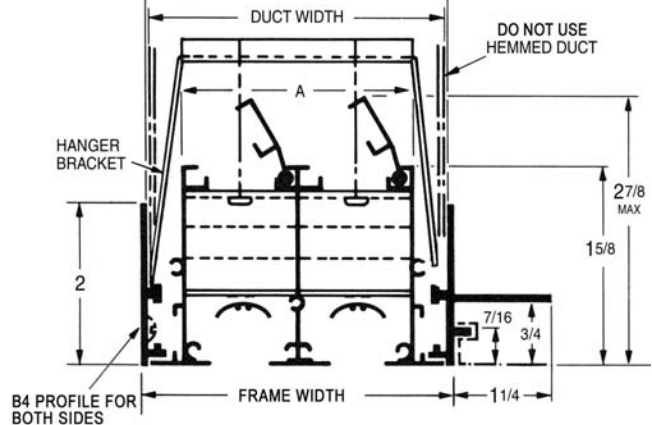


Duct width equals overall width.

### STYLE B2



### STYLE B3/B4



Style B0

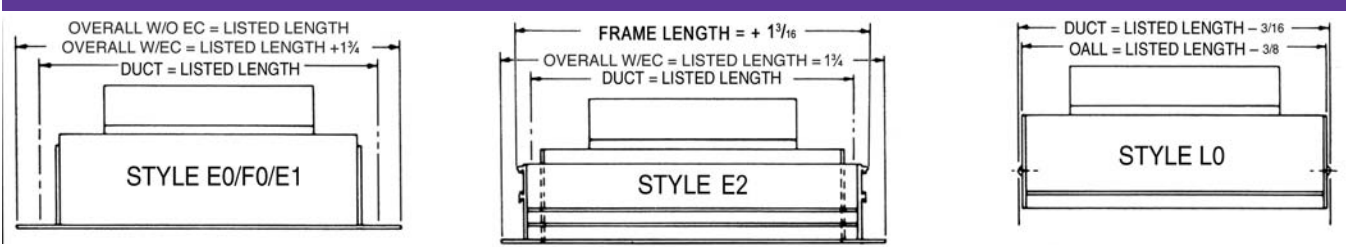
| Dimension | Type | Number of Slots               |                               |                               |   |                               |                                |                                |    |                                |                                | Duct Width                       | Overall Width                   |
|-----------|------|-------------------------------|-------------------------------|-------------------------------|---|-------------------------------|--------------------------------|--------------------------------|----|--------------------------------|--------------------------------|----------------------------------|---------------------------------|
|           |      | 1                             | 2                             | 3                             | 4 | 5                             | 6                              | 7                              | 8  | 9                              | 10                             |                                  |                                 |
| A         | 50   | 1 <sup>1</sup> / <sub>4</sub> | 2 <sup>1</sup> / <sub>2</sub> | 3 <sup>3</sup> / <sub>4</sub> | 5 | 6 <sup>1</sup> / <sub>4</sub> | 7 <sup>1</sup> / <sub>2</sub>  | 8 <sup>3</sup> / <sub>4</sub>  | 10 | 11 <sup>1</sup> / <sub>4</sub> | 12 <sup>1</sup> / <sub>2</sub> | A + <sup>7</sup> / <sub>16</sub> | A + <sup>3</sup> / <sub>4</sub> |
|           | 75   | 1 <sup>1</sup> / <sub>2</sub> | 3                             | 4 <sup>1</sup> / <sub>2</sub> | 6 | 7 <sup>1</sup> / <sub>2</sub> | 9                              | 10 <sup>1</sup> / <sub>2</sub> | 12 | 13 <sup>1</sup> / <sub>2</sub> | 15                             | A + <sup>7</sup> / <sub>16</sub> | A + <sup>3</sup> / <sub>4</sub> |
|           | 10   | 1 <sup>3</sup> / <sub>4</sub> | 3 <sup>1</sup> / <sub>2</sub> | 5 <sup>1</sup> / <sub>4</sub> | 7 | 8 <sup>3</sup> / <sub>4</sub> | 10 <sup>1</sup> / <sub>2</sub> | 12 <sup>1</sup> / <sub>4</sub> | 14 | 15 <sup>3</sup> / <sub>4</sub> | 17 <sup>1</sup> / <sub>2</sub> | A + <sup>7</sup> / <sub>16</sub> | A + <sup>3</sup> / <sub>4</sub> |

Style B1

| Dimension | Type | Number of Slots               |                               |                               |   |                               |                                |                                |    |                                |                                | Duct Width                      | Overall Width                   |
|-----------|------|-------------------------------|-------------------------------|-------------------------------|---|-------------------------------|--------------------------------|--------------------------------|----|--------------------------------|--------------------------------|---------------------------------|---------------------------------|
|           |      | 1                             | 2                             | 3                             | 4 | 5                             | 6                              | 7                              | 8  | 9                              | 10                             |                                 |                                 |
| A         | 50   | 1 <sup>1</sup> / <sub>4</sub> | 2 <sup>1</sup> / <sub>2</sub> | 3 <sup>3</sup> / <sub>4</sub> | 5 | 6 <sup>1</sup> / <sub>4</sub> | 7 <sup>1</sup> / <sub>2</sub>  | 8 <sup>3</sup> / <sub>4</sub>  | 10 | 11 <sup>1</sup> / <sub>4</sub> | 12 <sup>1</sup> / <sub>2</sub> | A + <sup>3</sup> / <sub>4</sub> | A + <sup>3</sup> / <sub>4</sub> |
|           | 75   | 1 <sup>1</sup> / <sub>2</sub> | 3                             | 4 <sup>1</sup> / <sub>2</sub> | 6 | 7 <sup>1</sup> / <sub>2</sub> | 9                              | 10 <sup>1</sup> / <sub>2</sub> | 12 | 13 <sup>1</sup> / <sub>2</sub> | 15                             | A + <sup>3</sup> / <sub>4</sub> | A + <sup>3</sup> / <sub>4</sub> |
|           | 10   | 1 <sup>3</sup> / <sub>4</sub> | 3 <sup>1</sup> / <sub>2</sub> | 5 <sup>1</sup> / <sub>4</sub> | 7 | 8 <sup>3</sup> / <sub>4</sub> | 10 <sup>1</sup> / <sub>2</sub> | 12 <sup>1</sup> / <sub>4</sub> | 14 | 15 <sup>3</sup> / <sub>4</sub> | 17 <sup>1</sup> / <sub>2</sub> | A + <sup>3</sup> / <sub>4</sub> | A + <sup>3</sup> / <sub>4</sub> |

Style B2/B3/B4

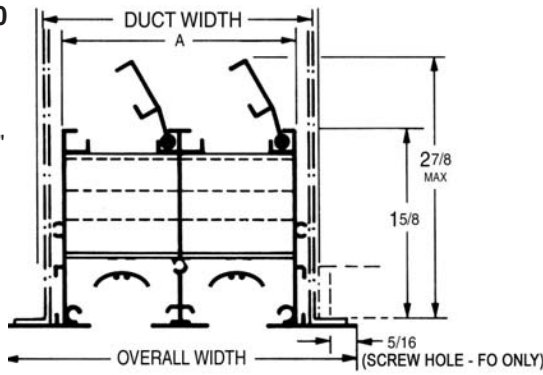
| Dimension | Type | Number of Slots               |                               |                               |   |                               |                                |                                |    |                                |                                | Duct Width                        | Frame Width                       |
|-----------|------|-------------------------------|-------------------------------|-------------------------------|---|-------------------------------|--------------------------------|--------------------------------|----|--------------------------------|--------------------------------|-----------------------------------|-----------------------------------|
|           |      | 1                             | 2                             | 3                             | 4 | 5                             | 6                              | 7                              | 8  | 9                              | 10                             |                                   |                                   |
| A         | 50   | 1 <sup>1</sup> / <sub>4</sub> | 2 <sup>1</sup> / <sub>2</sub> | 3 <sup>3</sup> / <sub>4</sub> | 5 | 6 <sup>1</sup> / <sub>4</sub> | 7 <sup>1</sup> / <sub>2</sub>  | 8 <sup>3</sup> / <sub>4</sub>  | 10 | 11 <sup>1</sup> / <sub>4</sub> | 12 <sup>1</sup> / <sub>2</sub> | A + <sup>13</sup> / <sub>16</sub> | A + <sup>15</sup> / <sub>16</sub> |
|           | 75   | 1 <sup>1</sup> / <sub>2</sub> | 3                             | 4 <sup>1</sup> / <sub>2</sub> | 6 | 7 <sup>1</sup> / <sub>2</sub> | 9                              | 10 <sup>1</sup> / <sub>2</sub> | 12 | 13 <sup>1</sup> / <sub>2</sub> | 15                             | A + <sup>13</sup> / <sub>16</sub> | A + <sup>15</sup> / <sub>16</sub> |
|           | 10   | 1 <sup>3</sup> / <sub>4</sub> | 3 <sup>1</sup> / <sub>2</sub> | 5 <sup>1</sup> / <sub>4</sub> | 7 | 8 <sup>3</sup> / <sub>4</sub> | 10 <sup>1</sup> / <sub>2</sub> | 12 <sup>1</sup> / <sub>4</sub> | 14 | 15 <sup>3</sup> / <sub>4</sub> | 17 <sup>1</sup> / <sub>2</sub> | A + <sup>13</sup> / <sub>16</sub> | A + <sup>15</sup> / <sub>16</sub> |



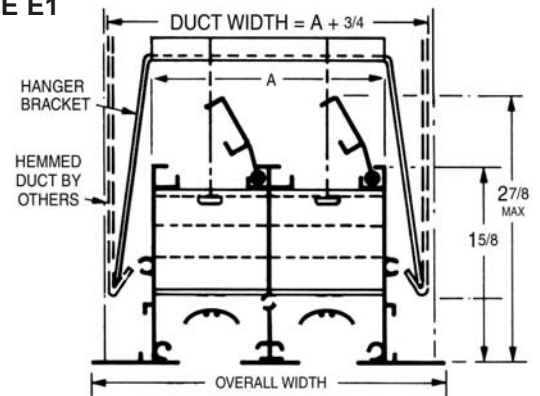
### STYLE E0/F0

Also for T-Bar applications

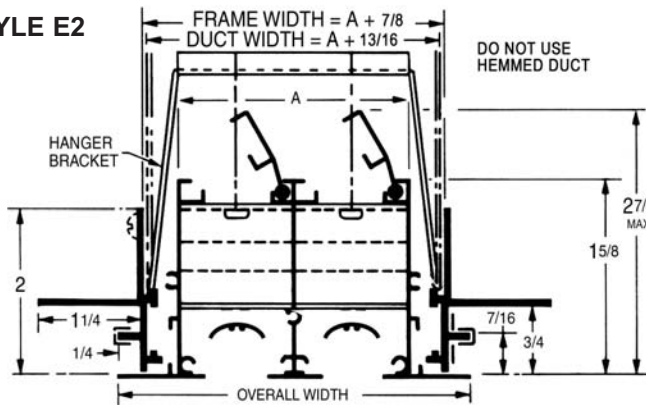
For E0, order 22" and 46" lengths with End Caps.



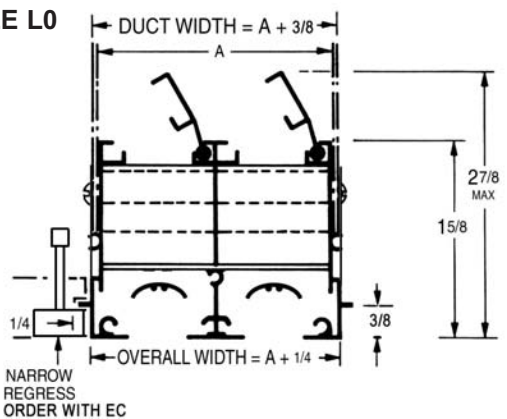
### STYLE E1



### STYLE E2



### STYLE L0



Style E1

| Dimension | Type | Number of Slots |       |       |   |       |        |        |    |        |        | Overall Width |
|-----------|------|-----------------|-------|-------|---|-------|--------|--------|----|--------|--------|---------------|
|           |      | 1               | 2     | 3     | 4 | 5     | 6      | 7      | 8  | 9      | 10     |               |
| A         | 50   | 1 1/4           | 2 1/2 | 3 3/4 | 5 | 6 1/4 | 7 1/2  | 8 3/4  | 10 | 11 1/4 | 12 1/2 | A + 1 1/2     |
|           | 75   | 1 1/2           | 3     | 4 1/2 | 6 | 7 1/2 | 9      | 10 1/2 | 12 | 13 1/2 | 15     | A + 1 1/2     |
|           | 10   | 1 3/4           | 3 1/2 | 5 1/4 | 7 | 8 3/4 | 10 1/2 | 12 1/4 | 14 | 15 3/4 | 17 1/2 | A + 1 1/2     |

Style E2

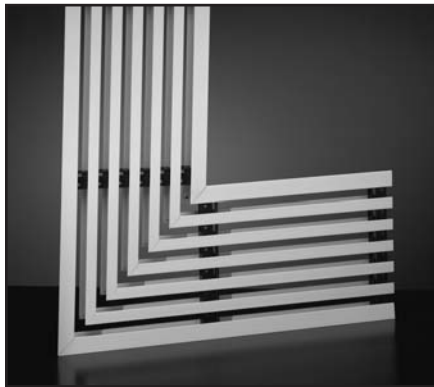
| Dimension | Type | Number of Slots |       |       |   |       |        |        |    |        |        | Overall Width |
|-----------|------|-----------------|-------|-------|---|-------|--------|--------|----|--------|--------|---------------|
|           |      | 1               | 2     | 3     | 4 | 5     | 6      | 7      | 8  | 9      | 10     |               |
| A         | 50   | 1 1/4           | 2 1/2 | 3 3/4 | 5 | 6 1/4 | 7 1/2  | 8 3/4  | 10 | 11 1/4 | 12 1/2 | A + 1 1/2     |
|           | 75   | 1 1/2           | 3     | 4 1/2 | 6 | 7 1/2 | 9      | 10 1/2 | 12 | 13 1/2 | 15     | A + 1 1/2     |
|           | 10   | 1 3/4           | 3 1/2 | 5 1/4 | 7 | 8 3/4 | 10 1/2 | 12 1/4 | 14 | 15 3/4 | 17 1/2 | A + 1 1/2     |

Style E0/F0

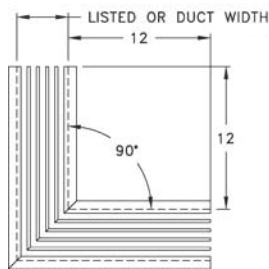
| Dimension | Type | Number of Slots |       |       |   |       |        |        |    |        |        | Duct Width | Overall Width |
|-----------|------|-----------------|-------|-------|---|-------|--------|--------|----|--------|--------|------------|---------------|
|           |      | 1               | 2     | 3     | 4 | 5     | 6      | 7      | 8  | 9      | 10     |            |               |
| A         | 50   | 1 1/4           | 2 1/2 | 3 3/4 | 5 | 6 1/4 | 7 1/2  | 8 3/4  | 10 | 11 1/4 | 12 1/2 | A + 7/16   | A + 1 1/2     |
|           | 75   | 1 1/2           | 3     | 4 1/2 | 6 | 7 1/2 | 9      | 10 1/2 | 12 | 13 1/2 | 15     | A + 7/16   | A + 1 1/2     |
|           | 10   | 1 3/4           | 3 1/2 | 5 1/4 | 7 | 8 3/4 | 10 1/2 | 12 1/4 | 14 | 15 3/4 | 17 1/2 | A + 7/16   | A + 1 1/2     |

Style L0

| Dimension | Type | Number of Slots |       |       |   |       |        |        |    |        |        |
|-----------|------|-----------------|-------|-------|---|-------|--------|--------|----|--------|--------|
|           |      | 1               | 2     | 3     | 4 | 5     | 6      | 7      | 8  | 9      | 10     |
| A         | 50   | 1 1/4           | 2 1/2 | 3 3/4 | 5 | 6 1/4 | 7 1/2  | 8 3/4  | 10 | 11 1/4 | 12 1/2 |
|           | 75   | 1 1/2           | 3     | 4 1/2 | 6 | 7 1/2 | 9      | 10 1/2 | 12 | 13 1/2 | 15     |
|           | 10   | 1 3/4           | 3 1/2 | 5 1/4 | 7 | 8 3/4 | 10 1/2 | 12 1/4 | 14 | 15 3/4 | 17 1/2 |



**S SERIES  
MITERED CORNERS**



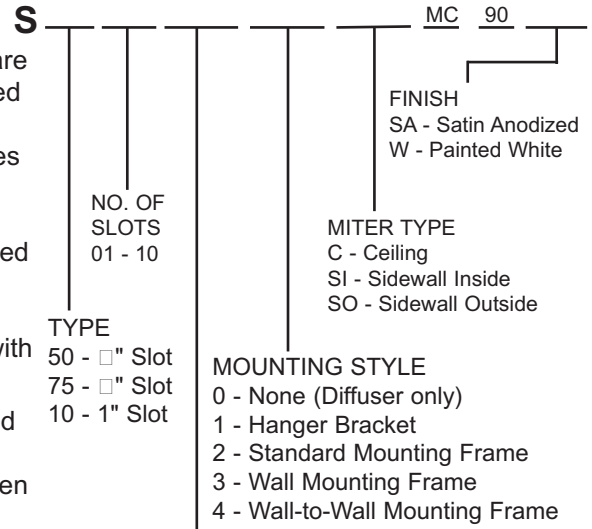
## S Series Mitered Corners

90-degree mitered corners are available as factory-fabricated section. Precise factory cutting and assembly reduces field fabrication time and assures proper fit. Corner sections are furnished blanked off. Corner sections butt to adjacent straight sections, which are spliced together with aligning keys.

Mitered corners are furnished in style #4 (with pattern controller and damper). When viewed from the room side, the mitered corner section appears identical to the butting straight sections.

Plaster frame mitered corners can be specified with the outlet mitered corner.

Mitered Corner Sections Order as:



MARGIN (see page 77)

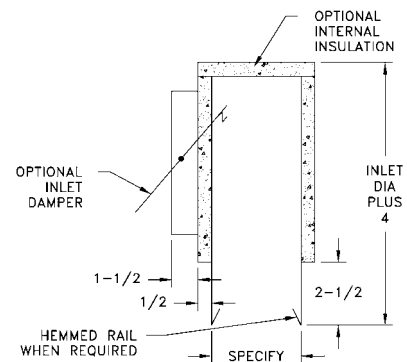
**Note:** Margins ordered without mounting frame may require hanger brackets and inside hemmed duct for installation.



## DP Distribution Plenum

- Galvannealed steel construction
- For L and S Series Linears and Slots
- Available in insulated or noninsulated designs

| DP Available Sizes                   |
|--------------------------------------|
| 12", 24", 36", 48", 60", 72" lengths |



## DP

I - Internally insulated  
N - Noninsulated

Number of slots for slot diffuser. Listed width in inches for linear bar grilles

S - Slots for slot diffusers  
W - Listed width for linear bar grilles

Inlet size  
5" to 12"

N - No Inlet  
O - Oval Inlet  
R - Round Inlet

D - Inlet Damper  
N - No Damper

H - Hemmed rail for concealed mfg. hanger brackets - Do not use with mounting frames  
S - Straight sides - Use with all mounting frames

Nominal Length - 12" to 72"