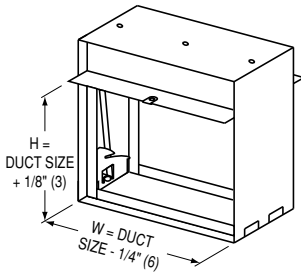
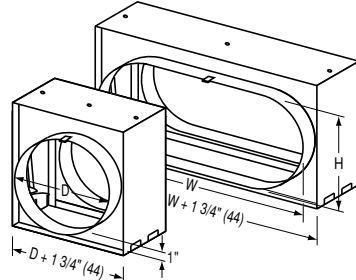


## DIMENSIONAL DATA:

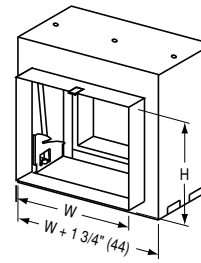


**MODEL D0120:  
TYPE B**

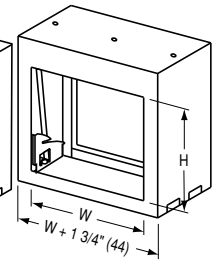


**MODEL D0130:  
TYPE CR**

**MODEL D0130:  
TYPE CO**



**MODEL D0140:  
TYPE CSR  
WITH COLLAR  
(STANDARD)**



**MODEL D0140:  
TYPE CSR  
WITHOUT COLLAR**

For overall damper dimensions see sizing chart on page D53.

## PERFORMANCE DATA:

### MODEL SERIES: D0100 - 1 1/2 HOUR LABEL

Curtain type fire dampers impose minimal resistance to air flow in the system. The following charts indicate both free area for the different damper types and static pressure losses for various velocities.

#### Type A Damper Free Area – sq. ft.

|                            |            | Duct Width in inches (mm) |           |           |           |           |           |            |            |            |            |
|----------------------------|------------|---------------------------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|
|                            |            | 6" (152)                  | 12" (305) | 18" (457) | 24" (610) | 30" (762) | 36" (914) | 42" (1067) | 48" (1219) | 54" (1372) | 60" (1524) |
| Duct Height in inches (mm) | 6" (152)   | .14                       | .33       | .52       | .70       | .89       | 1.1       | 1.3        | 1.5        | 1.7        | 1.8        |
|                            | 12" (305)  | .31                       | .72       | 1.1       | 1.5       | 1.9       | 2.4       | 2.8        | 3.2        | 3.6        | 4.0        |
|                            | 18" (457)  | .48                       | 1.1       | 1.7       | 2.4       | 3.0       | 3.7       | 4.3        | 4.9        | 5.6        | 6.2        |
|                            | 24" (610)  | .65                       | 1.5       | 2.4       | 3.2       | 4.1       | 5.0       | 5.8        | 6.7        | 7.5        | 8.4        |
|                            | 30" (762)  | .82                       | 1.9       | 3.0       | 4.1       | 5.2       | 6.3       | 7.3        | 8.4        | 9.5        | 10.6       |
|                            | 36" (914)  | .99                       | 2.3       | 3.6       | 4.9       | 6.3       | 7.6       | 8.9        | 10.2       | 11.5       | 12.8       |
|                            | 42" (1067) | 1.2                       | 2.7       | 4.2       | 5.8       | 7.3       | 8.8       | 10.4       | 11.9       | 13.4       | 15.0       |
|                            | 48" (1219) | 1.3                       | 3.1       | 4.9       | 6.6       | 8.4       | 10.2      | 11.9       | 13.7       | 15.5       | 17.2       |
|                            | 54" (1372) | 1.5                       | 3.5       | 5.5       | 7.5       | 9.5       | 11.5      | 13.5       | 15.5       | 17.5       | 19.4       |
|                            | 60" (1524) | 1.7                       | 3.9       | 6.1       | 8.3       | 10.6      | 12.8      | 15.0       | 17.2       | 19.4       | 21.7       |

#### Type B Damper Free Area – sq. ft.

|                            |            | Duct Width in inches (mm) |           |           |           |           |           |            |            |            |            |
|----------------------------|------------|---------------------------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|
|                            |            | 6" (152)                  | 12" (305) | 18" (457) | 24" (610) | 30" (762) | 36" (914) | 42" (1067) | 48" (1219) | 54" (1372) | 60" (1524) |
| Duct Height in inches (mm) | 6" (152)   | .17                       | .39       | .62       | .84       | 1.1       | 1.3       | 1.5        | 1.7        | 2.0        | 2.2        |
|                            | 12" (305)  | .36                       | .83       | 1.3       | 1.8       | 2.3       | 2.7       | 3.2        | 3.7        | 4.1        | 4.6        |
|                            | 18" (457)  | .54                       | 1.3       | 2.0       | 2.7       | 3.4       | 4.2       | 4.9        | 5.6        | 6.3        | 7.1        |
|                            | 24" (610)  | .73                       | 1.7       | 2.7       | 3.7       | 4.6       | 5.6       | 6.6        | 7.5        | 8.5        | 9.5        |
|                            | 30" (762)  | .92                       | 2.1       | 3.4       | 4.6       | 5.8       | 7.0       | 8.3        | 9.5        | 10.7       | 11.9       |
|                            | 36" (914)  | 1.1                       | 2.6       | 4.1       | 5.5       | 7.0       | 8.5       | 9.9        | 11.4       | 12.9       | 14.4       |
|                            | 42" (1067) | 1.3                       | 3.0       | 4.7       | 6.5       | 8.2       | 9.9       | 11.6       | 13.4       | 15.1       | 16.8       |
|                            | 48" (1219) | 1.5                       | 3.5       | 5.4       | 7.4       | 9.4       | 11.4      | 13.3       | 15.3       | 17.3       | 19.2       |
|                            | 54" (1372) | 1.7                       | 3.9       | 6.1       | 8.3       | 10.6      | 12.8      | 15.0       | 17.2       | 19.5       | 21.7       |

Type C Dampers have Free Area equal to Nominal Duct Area.

To calculate Free Area of round duct:  $Diameter^2 \times .00545 = \text{Free Area (sq ft.)}$

| D0100 Series - Maximum Performance Ratings |                    |
|--|--------------------|
| UL 555 Fire Resistance Rating              | 1 1/2 Hour         |
| Maximum Velocity                           | 4000 fpm (20 m/s)  |
| Maximum Pressure                           | 4 in. w.g. (1 kPa) |

To determine pressure drop across open damper, calculate **free area velocity** as shown, find velocity on curve and read across for s.p. differential.

$$\text{Free Area Velocity (fpm)} = \frac{\text{cfm}}{\text{Free Area}}$$

Example:

1 – 36" x 24" Damper required for 8,500 cfm. (Type A)

$$\text{FAV} = \frac{8500}{5 \text{ sq. ft.}} = 1700 \text{ fpm}$$

1700 fpm located on the 'A' curve shows a pressure drop of .07 in. wg.

cfm = cubic feet per minute

fpm = feet per minute velocity

S.P. = static pressure in inches water gauge

FAV = Free Area Velocity

Imperial System Shown

To convert to SI (metric) system:

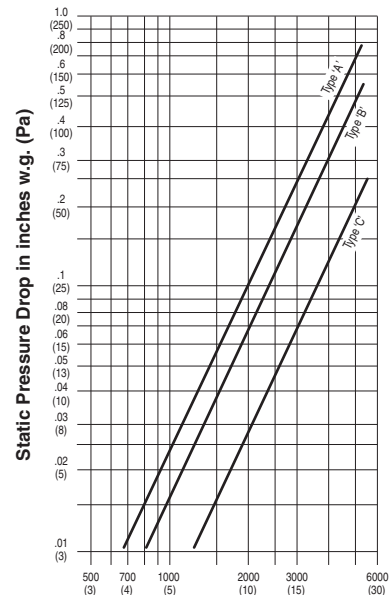
Multiply cfm by .4719 for liters per second

Multiply fpm by .00508 for meters per second

Multiply in. wg. by .2486 for kilopascals

Multiply sq. ft. by .0929 for square meters.

#### Pressure Drop



Free Air Velocity in feet per minute (m/s)