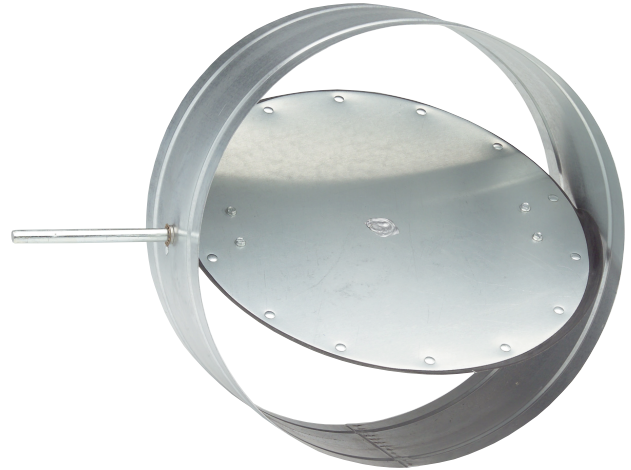


## CDRS25 ROUND CONTROL DAMPER

### APPLICATION

The CDRS25 is an **ultra low leak** "true" round control damper that easily installs in round spiral ductwork. The ultra low leak feature is a result of the specially designed blade-to-frame neoprene seal sandwiched between two round blades and fully encompassing the blade edge.

DAMPER DIA. INCHES	MAXIMUM SYSTEM PRESSURE
24" (610)	6.0" w.g.
18" (457)	6.0" w.g.
12" (305)	8.0" w.g.
6" (152)	10.0" w.g.



### STANDARD CONSTRUCTION

#### FRAME

20 gage (1.0) galvanized steel up to 24" (610) diameter, 6" (152) long.

#### BLADE

Two layers of galvanized steel; 14 gage (2.0) equivalent thickness.

#### BLADE SEAL

Neoprene seal sandwiched between two sides of blades. Seal fully encompasses blade edge.

#### AXLE

1/2" (13) diameter.

#### BEARING

Stainless steel sleeve pressed into frame.

#### CONTROL SHAFT

Axle extends 6" (152) beyond frame exterior.

#### FINISH

Mill galvanized.

#### DAMPER SIZES

Minimum 4" (102)  
Maximum 24" (610)

#### MAXIMUM VELOCITY

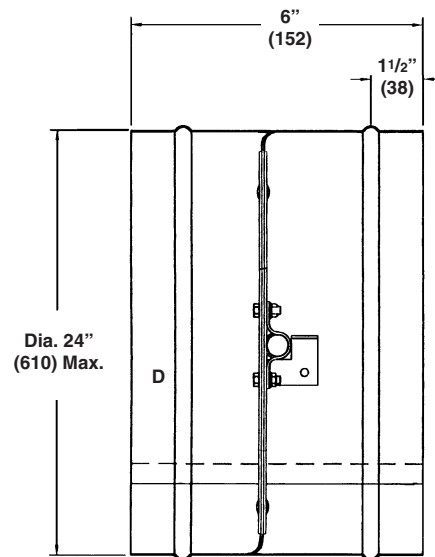
4000 FPM (1219 MPM)

#### LEAKAGE

.15 cfm per inch of perimeter at 4 in. w.g.

#### MAXIMUM TEMPERATURE

200°F (93°C)



### SUGGESTED SPECIFICATION

Furnish and install, at locations shown on plans or in accordance with schedules, round control dampers meeting the following specifications:

Dampers shall consist of a single circular blade mounted to a shaft. Inside frame surface shall be clean and smooth with no full circumference blade stops or similar inward projections.

Frames shall be 20 gage galvanized steel and shall include rolled stiffener beads to allow easy sealing of spiral ductwork joints. Damper blade shall be double skin equivalent to 14 gage and shall include a neoprene seal sandwiched between the two sides. Leakage through the damper in the closed position shall not exceed .15 cfm per inch of blade circumference at a pressure differential of 4" w.g. Leakage through the bearings shall be less than 1/4" cfm at 4" static pressure. Dampers shall be in all respects equivalent to Ruskin Model CDRS25.

Dimensions in parenthesis ( ) indicate millimeters.\*

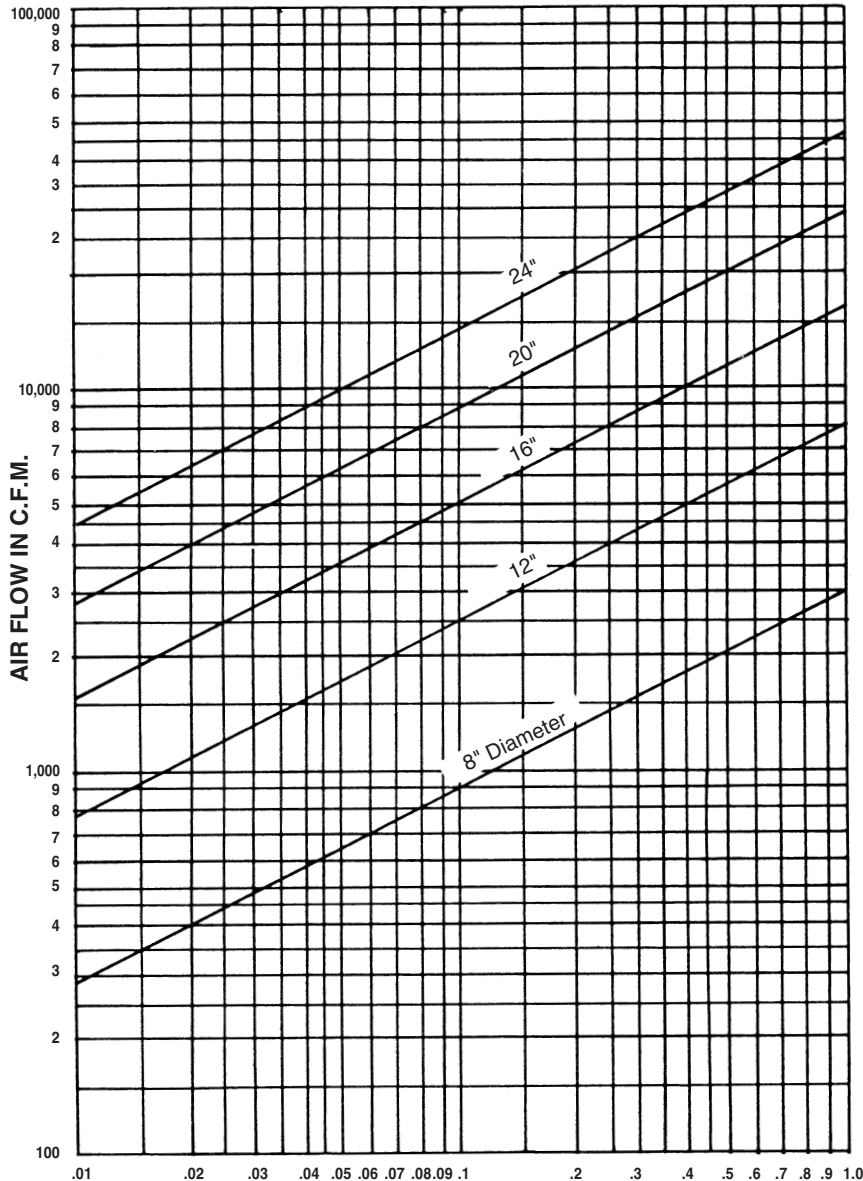
Units furnished approximately 1/8" (3) smaller than D diameter dimensions.

### OPTIONS

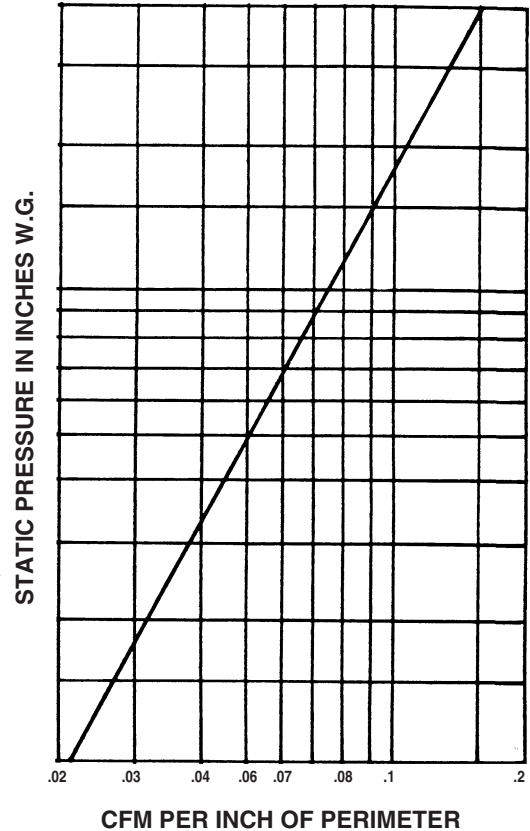
- Enamel, Epoxy and Kynar finishes
- Silicone rubber blade seal
- Stainless steel construction
- Factory installed electric and pneumatic actuators.

# CDRS25 PERFORMANCE DATA

Static Pressure Drop Chart



Leakage Chart



**DETERMINING LEAKAGE**

To determine damper leakage, enter Damper Leakage chart from the left side. Given the static pressure the damper will encounter in closed position, move horizontally to diagonal line, then go straight down the chart to CFM of leakage per inch of perimeter.

Example: Damper operating at 1.5" w.g. static pressure will leak .09 CFM per inch of perimeter. Total leakage on an 8" round will be  $8 \times 3.14 \times .09$  CFM per inch perimeter = 2.26 CFM leakage.

**NOTES:**

1. Ratings are based on AMCA Standard 500 using Test Set-up Apparatus Figure 5.3 (damper installed with duct upstream and downstream).
2. Static pressure and CFM are corrected to .075 lb./cu. ft. air density.

**DETERMINING STATIC PRESSURE DROP**

To determine static pressure drop through an open damper, enter the Damper Pressure Drop chart from the left side. Given the CFM of air flow through the damper, follow the CFM line to the diagonal line with the damper size required, then down to the static pressure drop of the unit.

Example:  
The pressure drop of an 8" damper with 700 CFM flow is .06 inches w.g.

STATIC PRESSURE IN INCHES W.G.

DIMENSION D (Diameter)	MIN. IN. LBS. TORQUE AT 2" w.g. OR LESS STATIC PRESSURE
4"	36
5"	40
6"	44
7"	48
8"	52
9"	56
10"	60
12"	68
14"	76
16"	84
18"	92
20"	100
22"	108
24"	116



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