RUSKIN®

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CDRI92 HEAVY DUTY ROUND ISOLATION DAMPER

STANDARD CONSTRUCTION

FRAME
Steel channel. See table below for web dimension and thickness.

BLADE
Steel, stiffened as required. See table below for blade thickness.

SEAL
Adjustable, full circumference elastomer type wiper seal. Seal fastened to blade with bolted retainer ring.

AXLE
Continuous, plated steel axle; angle reinforced as required. See table below for axle diameter.

CONTROL SHAFT
Axle extends 6" (152) beyond frame.

BEARINGS
Grease lubricated ball bearings mounted outboard of frame with adjustable packing gland shaft seals.

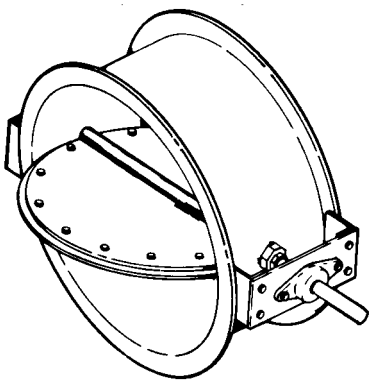
FINISH
Bonded, industrial alkyd-epoxy enamel.

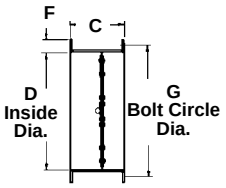
MINIMUM SIZE
4" (102) diameter.

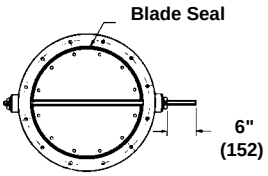
MAXIMUM SIZE
72" (1829) diameter.

MAXIMUM TEMPERATURE
250˚F.

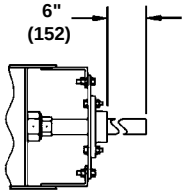
Dimensions in parenthesis ( ) indicate millimeters.



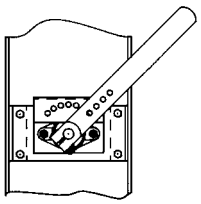




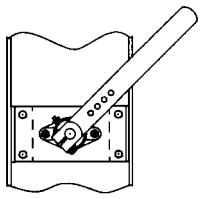
Illustrated with Optional Bolt Holes.
H = Number of Holes (Even Number Only)
M = Diameter of Hole
S = Holes Straddle Axle (Standard) (Illustrated)
T = Holes Parallel with Axle (Not Illustrated)



OUTBOARD BEARING W/SHAFT SEAL



HAND QUADRANT (MAX 24" DIAMETER)



CRANK LEVER

D - Inside Diameter				Frame		Blade Thickness	Axle Diameter
Above		Through		Flange (F)	Web (C)		
4"	(102)	8 3/4"	(222)	1 1/4" x 10 ga.	6" x 10 ga.	1/4"	1/2"
8 3/4"	(222)	11 3/4"	(299)	1 1/4" x 10 ga.	9" x 10 ga.	1/4"	3/4"
11 3/4"	(299)	14"	(356)	1 1/2" x 10 ga.	9" x 10 ga.	1/4"	3/4"
14"	(356)	24"	(610)	1 1/2" x 1/4"	9" x 10 ga.	1/4"	3/4"
24"	(610)	32"	(813)	2" x 1/4"	12" x 1/4"	1/4"	3/4"
32"	(813)	44"	(1118)	2" x 1/4"	12" x 1/4"	1/4"	1"
44"	(1118)	48"	(1219)	2" x 1/4"	12" x 1/4"	1/4"	1 1/2"
48"	(1219)	52"	(1321)	2 1/2" x 5/16"	12" x 5/16"	3/8"	1 1/2"
52"	(1321)	72"	(1829)	2 1/2" x 5/16"	12" x 5/16"	3/8"	2"

VARIATIONS

Additional variations to those listed in table are available. Contact Ruskin for pricing.

- Individual leakage testing and certification to leakage rate of .009 SCFM per inch of perimeter at 10" WG (with special handling).
- Special finishes.
- Higher temperature construction.
- Manual actuators above 24" diameter.

FRAME		BLADE		SEALS		BEARINGS		AXLE		ACCESSORIES (Opt)	
STEEL CHANNEL – SEE CONSTRUCTION TABLE		STEEL STIFFENED AS REQUIRED – SEE TABLE		FULL CIRCUMFERENCE ELASTOMER WIPER SEAL		GREASE LUBRICATED BALL BRGS MOUNTED OUTBOARD WITH SHAFT SEALS		PLATED CONTINUOUS 6" EXTENSION BEYOND FRAME		BOLT HOLES IN ONE FLANGE	
304 STAINLESS STEEL (OPT)		304 STAINLESS STEEL (OPT)		SILICONE BLADE SEAL (OPT)				304 STAINLESS STEEL (OPT)		BOLT HOLES IN BOTH FLANGES	
										MANUAL ACTUATOR	
										ELECTRIC ACTUATOR	
										PNEUMATIC ACTUATOR	

QTY.	FRAME				BOLT HOLE ORIENTATION		COMMENTS	TAG
	D-DIA.	G Bolt Circle Diam.	H No. Holes	M Hole Diam.	S Straddle	T Parallel		

JOB **LOCATION**

CONTRACTOR

 ALL STATED SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE OR OBLIGATION.

SUGGESTED SPECIFICATION

Furnish and install, at locations shown on plans or in accordance with schedules, heavy duty industrial grade isolation dampers meeting the following specifications. Dampers shall be butterfly type consisting of circular blade, mounted to axle within formed flanged frame. Frame shall be constructed of steel channel with a clean and smooth interior surface. Dampers with full circumference blade stops are not acceptable. Blade shall be minimum 1/4" (6) thick and be complete with a full circumference elastomer type wiper seal retained by a seal ring bolted to the blade. Adhesive type seals are not acceptable. The seal shall be field adjustable and replaceable. Damper shaft shall be continuous, solid cold rolled steel extending through the entire damper diameter and extending beyond damper bearing a minimum of 6" (152). Stub type axles are not acceptable. The axle shall be supported in sealed, relubricable ball bearings mounted outboard of frame and be complete with axle shaft seals. Damper frame and blade shall be fabricated from hot rolled steel. All parts not otherwise protected shall be given one prime coat and one finish coat of bonded industrial alkyd-epoxy enamel. Leakage through damper in closed position shall not exceed .029 SCFM per inch of blade circumference at a pressure differential of 10" W.G. Maximum pressure drop across a 56" (1422) diameter unit shall not exceed .015" W.G. at 40,000 CFM. Submittal shall include published performance data on a complete range of damper sizes developed from testing in accordance with AMCA Standard 500 in an AMCA registered laboratory. Damper shall be Ruskin model CDRI92.

CDRI92 PERFORMANCE DATA

LEAKAGE AND PRESSURE LIMITATIONS

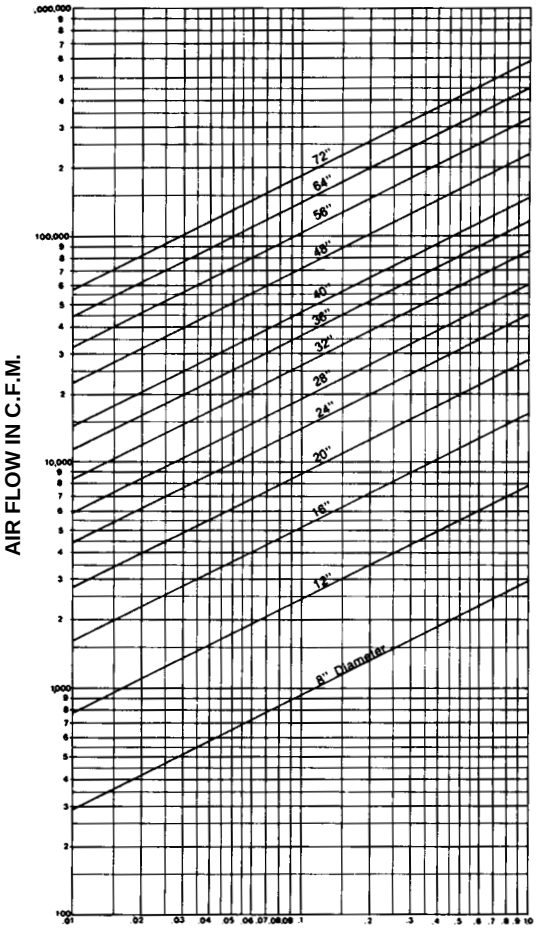
Damper Diameter	Maximum System Pressure	Maximum System Velocity	Leakage*
			Total CFM Based on Blade Circumference
72" (1829)	15.0" w.g.	7000 fpm	6.56
60" (1524)	15.0" w.g.	7000 fpm	5.47
48" (1219)	15.0" w.g.	7000 fpm	4.37
36" (914)	16.0" w.g.	7000 fpm	3.28
24" (610)	17.0" w.g.	7000 fpm	2.19
12" (305)	20.0" w.g.	7000 fpm	1.09

*Leakage information based on pressure differential of 10" w.g.

Dampers may tolerate higher pressures and velocities than those listed here. Conservative ratings are presented intentionally in an effort to avoid misapplication. Consult Ruskin or your Ruskin representative when damper is to be applied in conditions exceeding recommended maximums.

Leakage ratings are based on AMCA Standard 500 using Test Setup Apparatus Figure 5.5. Torque applied holding damper closed: 0 in lbs.

PRESSURE DROP INFORMATION



Performance curves based on AMCA Standard 500 using test setup apparatus figure 5.3 (damper installed with duct upstream and downstream). Static pressure and CFM are corrected to .075 lb/cu ft air density.