

RD-2000 Round Control Dampers

Description

Johnson Controls provides top-quality, low-leakage RD-2000 Round Control Dampers for use in Heating, Ventilating, and Air Conditioning (HVAC) systems that fit your size and application requirements. Round dampers are available with seals for low-leakage control dampers and are easily installed in round ducts. Round dampers are available with or without a factory-installed actuator.

Refer to the *RD-2000 Round Control Dampers Product Bulletin (LIT-2681045)* for important information.

Features

- Formed shroud
- Available factory-installed actuator
- One-piece construction

Applications

Furnish and install round control dampers manufactured by Johnson Controls.

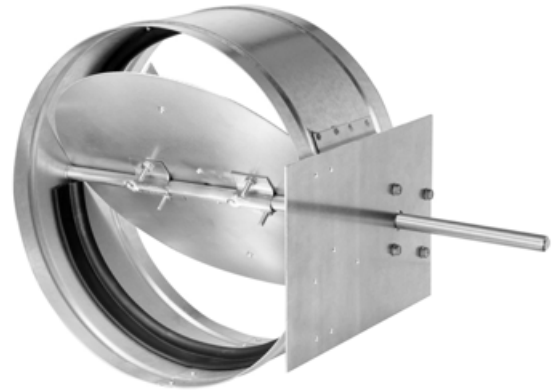
Damper shrouds are to be constructed of formed 20-gauge galvanized steel, mechanically joined. Blade rotation shall not exceed 80 degrees.

Damper blades are to be constructed with 1-piece or 2-piece 16-gauge or 20-gauge galvanized steel, determined by size.

Damper performance shall be designed for tight shutoff. Leakage rating at 4 inches. Water Gauge (w.g.) differential pressure with 5 lb.-in./sq ft closing torque shall not exceed 10 cfm per square foot. Dampers without actuators must be rated to operate over a temperature range of -20 to 200°F (-29 to 93°C).

Damper sizing shall be by the designer in accordance with accepted industry practices to ensure proper system performance.

Factory-installed electric and pneumatic actuators are available.



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Repair Information

If the RD-2000 Round Control Damper fails to operate within its specifications, replace the unit. For a replacement RD-2000 Damper, contact the nearest Johnson Controls® representative.

Selection Chart

Note: Not all combinations are available; check the selector tool software application for valid combinations.

	Code Number	R	C	G	d	d			NC
Product Family	R = Round dampers								
Application	B = Balancing (no seals) C = Control (Class II) L = Low Leakage Control (Class I)								
Shroud Type	A = Aluminum (Class I only) G = Galvanized steel S = Stainless steel (304)								
Diameter	4 to 24 in., 1 in. increments								
Actuator¹	B = Bracket with no actuator E = Electric non-spring return M = Manual locking quadrant N = None P = Pneumatic, D-3062 S = Spring return electric								
Control Signal	B = Floating with two Single-Pole Double-throw (SPDT) auxiliary switches E = Proportional with two SPDT auxiliary switches P = 8-13 lb spring range								
Operation	NC = Normally Closed NO = Normally Open								

1. Based on torque requirements, RCG construction dampers use M9106 or M9206 actuators on all sizes, and RLG construction dampers use M9210 and M9220 actuators on all sizes.

RD-2000 Round Control Dampers (Continued)

Technical Specifications

RD-2000 Round Control Dampers ¹			
		RCG Construction	RLA, RLG, and RLS Construction
Leakage per in. diameter	1 in. static pressure	0.41	0.079
	2 in. static pressure	0.55	0.12
	4 in. static pressure	0.82	0.15
Pressure Drop (in. w.g. at 1,000 fpm)	8 in. diameter damper	0.12	
	12 in. diameter damper	0.012	
	16 in. diameter damper	0.001	
	20 in. diameter damper	0.001	
Actuator Torque Required for Closing at 1,500 fpm Velocity	4 to 8 in. diameter damper	52 lb-in maximum	
	9 to 16 in. diameter damper	84 lb-in maximum	
	17 to 22 in. diameter damper	116 lb-in maximum	
Leakage	Class I	RLG Construction	
	Class II	RCG Construction	
	Not Rated	RBG Construction	
Electric Actuator	M9106 and M9206: Running and breakaway torque 53 lb-in (6 N·m) M9116 and M9220: Running and breakaway torque 140 lb-in (16 N·m)		
Pneumatic Actuator	Maximum control pressure: 25 psig (172 kPa)		
Temperature Limits	without actuator	-20 to 200°F (-29 to 93°C)	
	with electric actuator	35 to 125°F (2 to 52°C)	
	with pneumatic actuator	-20 to 150°F (-29 to 66°C)	

1. Dampers are tested using instrumentation and procedures in accordance with AMCA Standard No. 500, Test Methods for Louvers, Dampers, and Shutters.