

## Belco Fiberglass Dampers

Belco Fiberglass Dampers are manufactured to meet the needs of the odor control and corrosive HVAC industries by providing a corrosion-resistant FRP Damper that is used to regulate a gas flow or shut off and isolate a system. The operating conditions for the dampers are designed to match the operating conditions of the duct system. Premium vinyl ester resins are used throughout the damper. Fire-retardant resins are also available for a Class 1 flame spread.

### BELCO MANUFACTURING CO., INC. PROVIDES SEVEN DAMPER MODELS:

- Model 201: Used to control airflow for balancing a system. Model 201 is less expensive and has a shaft seal, but does not have a blade seal.
- Model 202: Used to control airflow for balancing a system. Model 202 has a shaft seal and full circumferential blade stop.
- Model 203: Used for isolating a system with low leakage. Model 203 has a shaft seal, blade seal, and a full circumferential blade stop. Designed for up to 30".
- Model 204: Used for isolating a system, and has a PTFE encapsulated O-ring to provide a factory-tested watertight seal. Each model 204 damper is tested watertight before shipping.

### BELCO BACKDRAFT DAMPERS

Designed to prevent air from flowing back into the system when the fan is turned off. Backdraft Dampers are sometimes referred to as check valves.

- Model 301 & 302 (Vertical): Designed to open under air flow and close when air flow stops. Counterweight design for vertical run installation. Model 301 is for upward flow and Model 302 is for downward flow.
- Model 401 (Horizontal): Designed to close in the event of an interruption in air flow. Model 401 Backdraft dampers utilize a gravity operated counterweight to move the blade into a "closed" position when air flow stops. Model 401 Backdraft dampers have shaft seals but no blade seal.

### DAMPER NAMES

Dampers are often referred to by many different industry names. The chart below may be used as a guide to determine the BELCO Damper model(s) you require.

INDUSTRY NAME	BELCO MODEL EQUIVALENT
Check Valves	301, 302, 401
Control Dampers	201, 202
Volume Dampers	201, 202
Butterfly Dampers	201, 202, 203, 204
Shut-off Valves	203, 204
Isolation Valves	203, 204
Watertight Dampers	204 - Watertight

### Certified Ratings Authorized by AMCA

BELCO Manufacturing Company, Inc. certifies that the Standard Model 203 & 204 Dampers shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air leakage and air performance ratings only.

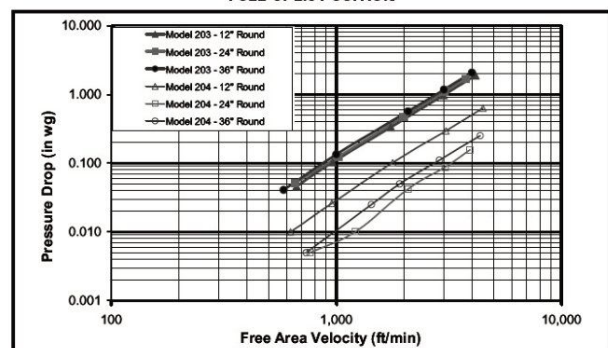
- 1.) Test method per AMCA Standard 500-89
- 2.) Torque: 1049 in-lbs for 48" damper. 67.35 in-lbs for 6" damper
- 3.) Air leakage is based on operation between 50°F & 104°F

MODEL 203 ROUND DAMPERS		MODEL 204 ROUND DAMPERS	
DAMPER DIAMETER	6" - 48"	DAMPER DIAMETER	10" - 60"
AMCA LEAKAGE CLASS		AMCA LEAKAGE CLASS	
CLASS 1A 1" wg	CLASS 1 4"wg, 8"wg, 12"wg	CLASS 1A 1" wg	CLASS 1 4"wg, 8"wg, 12"wg

PRESSURE CLASS	LEAKAGE, L/s/m <sup>2</sup> (ft <sup>3</sup> /min/ft <sup>2</sup> )			
	REQUIRED RATING		EXTENDED RANGE (OPTIONAL)	
	0.25 kPa (1" wg)	1.0 kPa (4" wg)	2.0 kPa (8" wg)	3.0 kPa (12" wg)
1A	15.2 (3)	N/A	N/A	N/A
1	20.3 (4)	40.6 (8)	55.9 (11)	71.1 (14)
2	50.8 (10)	102 (20)	142 (28)	178 (35)
3	203 (40)	406 (80)	569 (112)	711 (140)

Contact BELCO Manufacturing Company, Inc. for tested leakage rates.

### AIR PERFORMANCE FOR BELCO MODEL 203 & 204 DAMPERS FULL OPEN POSITION



Summary of testing as of 06-29-10.xls.

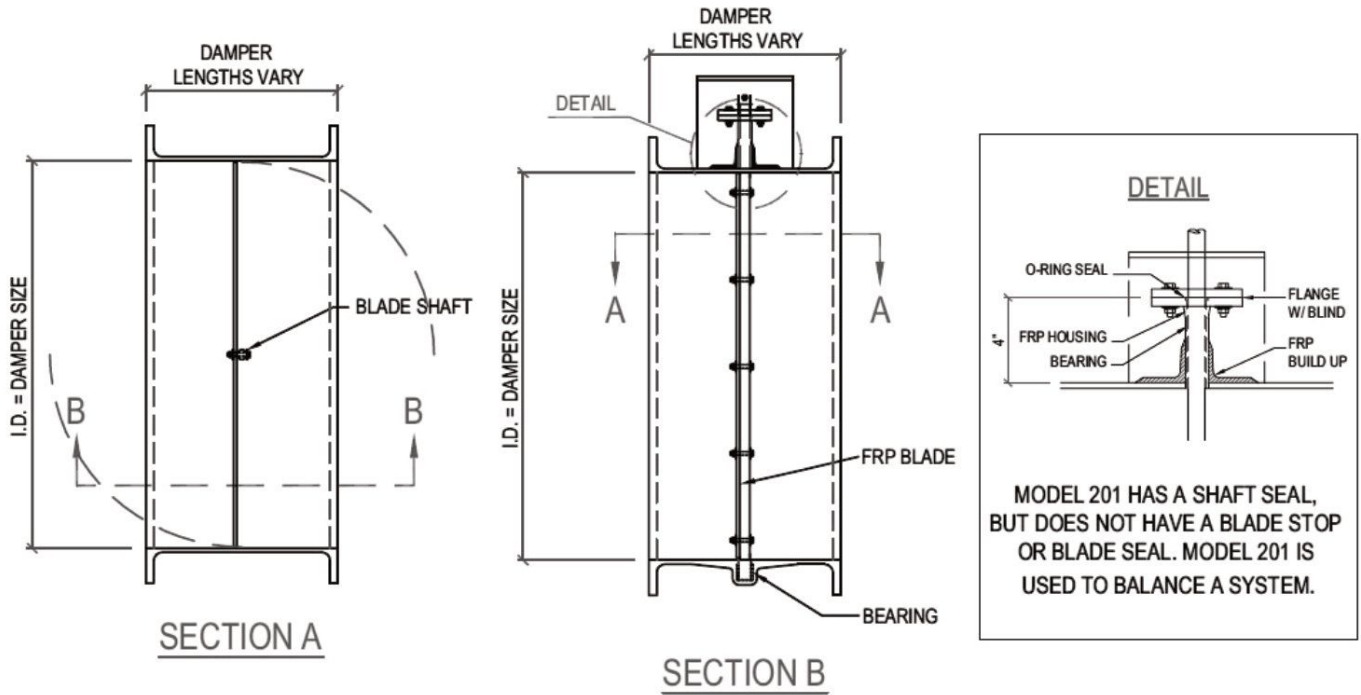
### WARRANTY

BELCO Fiberglass Dampers are warranted for eighteen (18) months from the date of shipment to be free from defects in manufacturing, materials, or workmanship. Liability shall not exceed the purchase price of the damper and, at BELCO's option, is limited to repair or replacement. BELCO Manufacturing Co., Inc. shall not be liable for any costs incurred either directly or indirectly other than repair or replacement of the product.

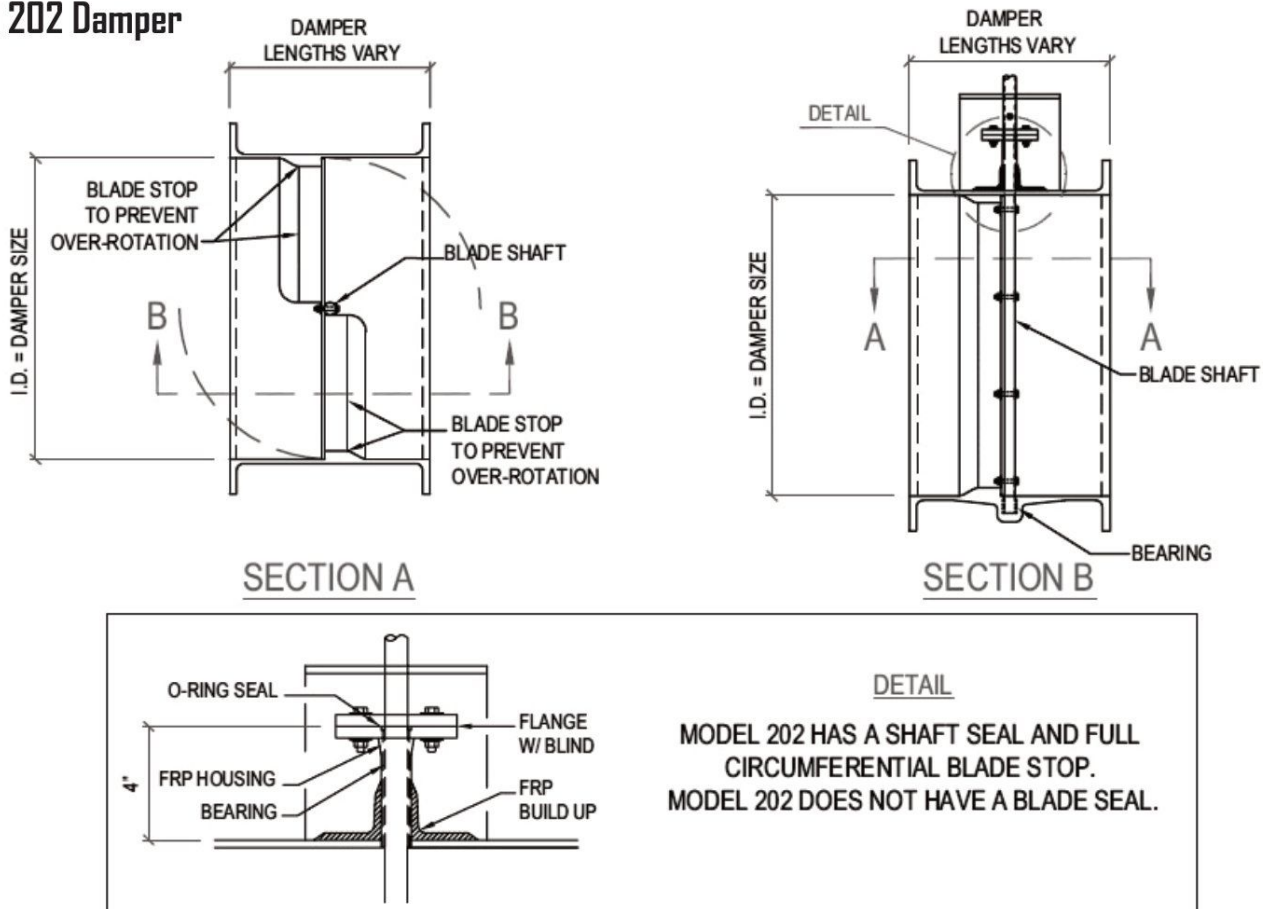


# Fiberglass Dampers

## Model 201 Damper

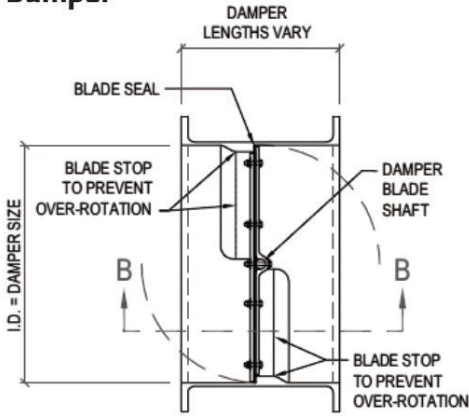


## Model 202 Damper

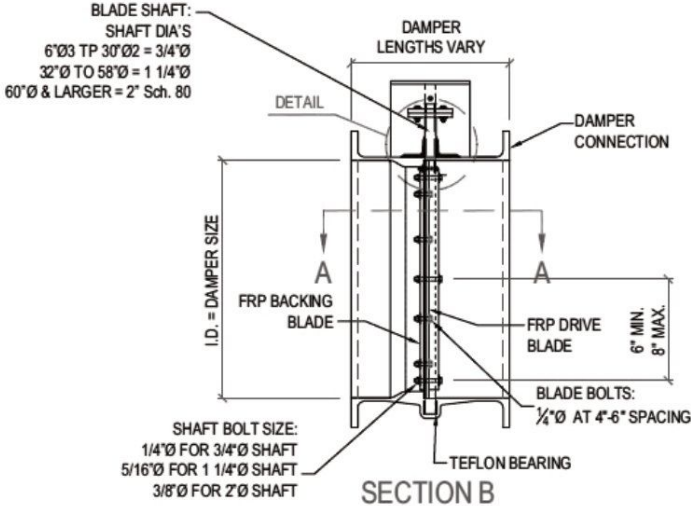




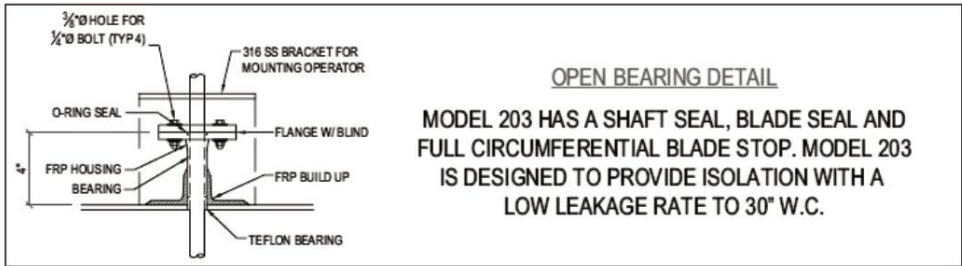
## Model 203 Damper



SECTION A

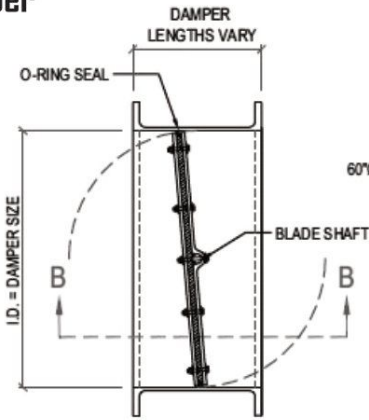


SECTION B

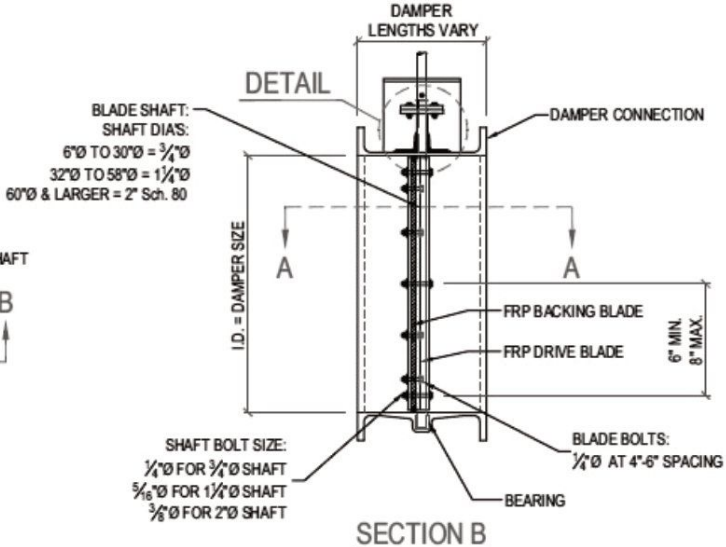


OPEN BEARING DETAIL

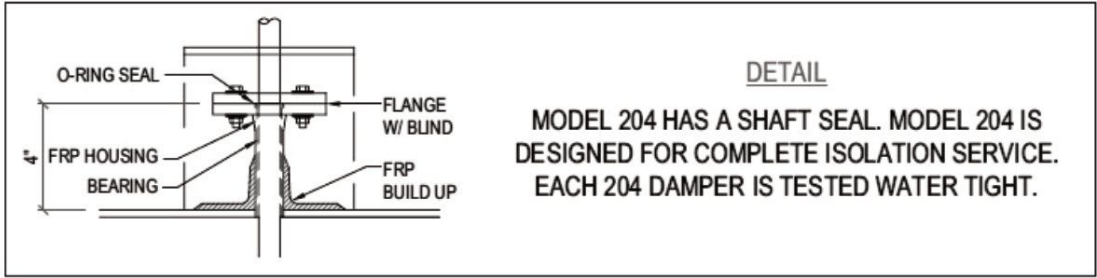
## Model 204 Damper



SECTION A



SECTION B



DETAIL

