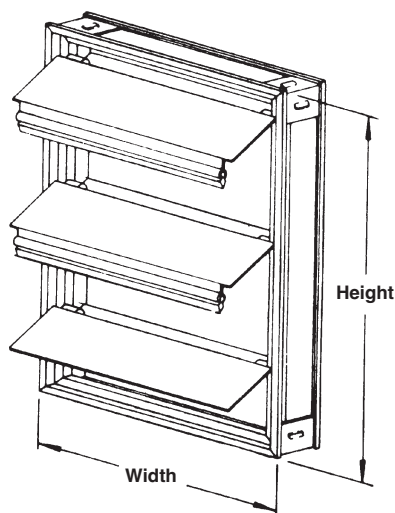


## 2BDE/2BDHD BACKDRAFT DAMPERS



### STANDARD CONSTRUCTION

#### FRAME

6063T5 extruded aluminum, .090" (2.3) wall thickness, mitered corners.

#### BLADES

2BDE – .025 (.6) formed aluminum, extruded vinyl edge seals.

2BDHD – 6063T5 extruded aluminum, .050" (1.2) wall thickness, extruded vinyl edge seals.

#### BEARINGS

Synthetic.

#### LINKAGE

Concealed in frame.

#### FINISH

Mill.

#### TEMPERATURE LIMITS

-40°F to +200°F (-40°C to +93°C).

#### MAXIMUM SPOT VELOCITY

2BDE – 1500 fpm.

2BDHD – 2500 fpm.

#### MINIMUM SIZE

6"w x 6"h (152 x 152).

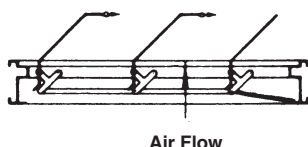
#### MAXIMUM SIZE

Single section – 40"w x 48"h (1016 x 1219).

#### Note:

When used in fan discharge applications, damper should be located at a minimum distance equal to half the fan diameter away from the fan discharge.

Dimensions in parentheses ( ) indicate millimeters.



**HORIZONTAL MOUNT**  
(Upward air flow only)

### FEATURES

The 2BD dampers offer backdraft protection in light to medium duty applications that demand less than 12 CFM per square foot of leakage at 1/2" w.g. Non-metallic blade-to-blade seal provides quiet operation during the highest spot velocities.

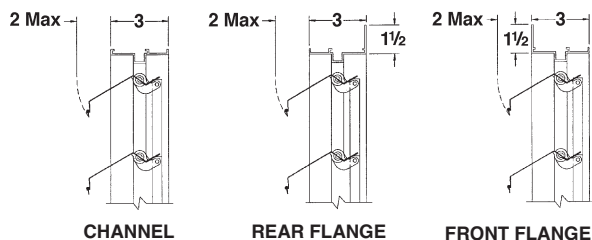
The damper's good looking appearance is maintained by sturdy, corrosion resistant aluminum construction. Contemporary styling features blades that overlap the frame for optimum resistance to weather.

### VARIATIONS

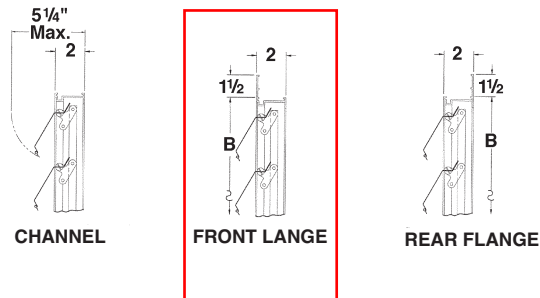
The following variations to the 2BD's are available at additional cost:

- Rear mounted screen
- Special finishes
- Electric actuators

### 2BDE FRAME CONSTRUCTION



### 2BDHD FRAME CONSTRUCTION





## 2BDE 2BDHD

## SUGGESTED SPECIFICATION



Furnish and install at locations on plans or in accordance with schedules backdraft dampers that meet the following minimum construction standards: Frame shall be .090" (2.3) 6063T5 extruded aluminum wall thickness with mitered corners. Blades shall be (specify) .025" (.6) formed aluminum with extruded vinyl edge seals or .050" (1.3) 6063T5 extruded aluminum with extruded vinyl

edge seals. Blade edge seals shall be mechanically locked into blade edge; adhesive type seals are unacceptable. Bearings shall be corrosion resistant synthetic and linkage shall be concealed in frame for low pressure drop and noise. Damper shall be, in all respects, equivalent to Reliable model (specify) 2BDE or 2BDHD.

## PERFORMANCE DATA

### 2BDE

DAMPER WIDTH	MAXIMUM BACK PRESSURE (EXTERNAL WIND VELOCITY)	MAXIMUM SYSTEM VELOCITY	LEAKAGE*	
			% OF MAX. FLOW	CFM/ SQ. FT.
40" (1016)	55 mph/1.5" w.g.	1000 fpm	1.5	15.0
36" (914)	70 mph/2.5" w.g.	1000 fpm	1.5	15.0
24" (610)	85 mph/3.5" w.g.	1000 fpm	2.0	20.0
12" (305)	95 mph/4.5" w.g.	1000 fpm	4.0	40.0

AMCA Standard 500 provides a reasonable basis for testing and rating dampers. Testing to AMCA 500 is performed under a certain set of laboratory conditions. This does not guarantee that other conditions will not occur in the actual environment where dampers must operate.

Designs should provide a reasonable safety factor for damper performance by selecting at some point below damper leakage or pressure drop system requirements.

### 2BDHD

DAMPER WIDTH	MAXIMUM BACK PRESSURE (EXTERNAL WIND VELOCITY)	MAXIMUM SYSTEM VELOCITY	LEAKAGE*	
			% OF MAX. FLOW	CFM/ SQ. FT.
40" (1016)	75 mph/3" w.g.	1500 fpm	1.0	15.0
36" (914)	90 mph/4" w.g.	1500 fpm	1.0	15.0
24" (610)	100 mph/5" w.g.	1500 fpm	1.17	17.5
12" (305)	100 mph/6" w.g.	1500 fpm	2.67	40.0

OPERATIONAL PRESSURES INCHES W.G.		
DAMPER MODEL	BLADES START TO OPEN	BLADES FULLY OPEN
2BDE	.03	.10
2BDHD	.10	.15

\*Leakage information based on pressure differential of 1" w.g.

## INSTALLATION INSTRUCTIONS

1. When used in fan discharge applications, damper should be located at least one-half the fan diameter away from the fan.
2. For proper operation, damper must be installed square and free from racking.
3. Bracing of multiple section assemblies: The 2BDE/2BDHD is intended to be self supporting only in the largest single section size. Multiple section damper assemblies may require bracing

to support the weight of the assembly and to hold against system pressure. Reliable recommends appropriate bracing to support the weight of the assembly and to hold against system pressure. Reliable recommends appropriate bracing to support the damper horizontally at least once for every 8 feet of damper width. Vertical assemblies and higher system pressures may require more bracing.

