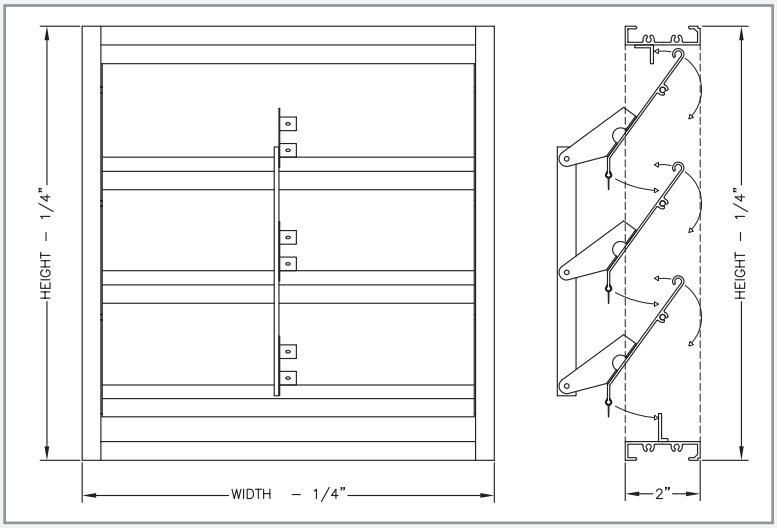
BDD - Back draft damper

Product description, features, and specifications

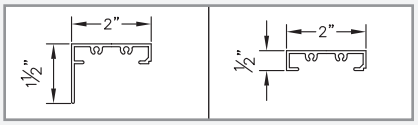
DURAVENT
Quality Extruded Aluminum Louvers

BDD

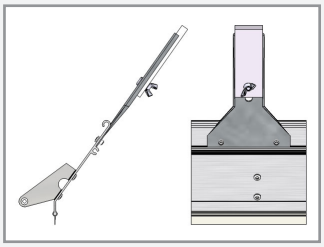
18" x 18" BDD2C with front linkage (exploded rendering)



BDD2C with front linkage (elevation and section)



Flange and channel frame (section)



Counterweight detail

Description

Duravent BDD is a 2 inch deep back-draft damper (also known as a gravity louver) with light-weight damper blades. Nylon blade seals ensure a tight seal between blades and silent operation. It is ideal for pressure relief, intake, or exhaust in ducts, panel wall buildings, and doors. **BDD4** is a 4 inch deep version for use in self-framing walls or deep enclosures. Linked and counter-balanced design is available. For controlling airflow in ducts or through wall openings, see **VCD** - volume control damper.

Construction

- 0.070 inch (1.78 mm) thick aluminum extrusions
- Blades move on 3/16 inch stainless steel pins in nylon bushings
- Dual durometer nylon blade seals
- Assembled with cadmium plated screws and rivets
- Optional steel counter-weights for barometric operation
- Optional linkage for coupled blade motion (aluminum angle and aluminum brackets)

Frame

- 2" deep flange frame (1" flange) for exhaust applications
- 2" deep channel frame for duct installation
- 4" deep flange frame (1" flange) for deep enclosures
- 4" deep channel frame for duct installation
- Reverse flange (rear flange) frames for intake applications

Screen (optional; fastened on back face; not available on couter-balanced models)

- 1/2" welded square mesh, 21ga galvanized steel
- 1/4" welded square mesh, 25ga galvanized steel
- 1/8" woven square mesh, 27ga galvanized steel
- 1/16" nylon insect screen

Additional notes

- Maximum 36" in width, 48" in height per section
- Maximum recommended velocity is 3200 FPM
- Maximum recommended temperature is 200 °F
- Finished dimension are 1/4" undersized unless otherwise specified
- Intake applications require weather hood or companion louver

BDD - Back draft damper

Perfomance data, Leakage, Pressure drop, Max. section width

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Performance data

Damper Width	Leakage at 1" w.g.	ΔP in inches w.g.	
	CFM / sq.ft	Blades first open	Blades fully open
36"	17.0	0.09	0.17
24"	22.0		
12"	47.0		

Pressure differential for blade opening is for 24"x24" BDD-2C independent-blade damper. Counter-balanced dampers can be adjusted to open at near-zero pressure differential. Leakage rate for 36" and 12" widths extrapolated from 24"x24" data. The data represent the performance of the stated size only and are meant as indicators for other available sizes.

Determining Leakage

For static pressure differential higher than 1" w.g., multiply leakage at 1" w.g. by square root of higher differential.

Example:
Find leakage for a 36" wide damper at 9" w.g.
17 CFM/sq.ft. x √9 = (17 x 3) CFM/sq.ft. = 51 CFM/sq.ft.

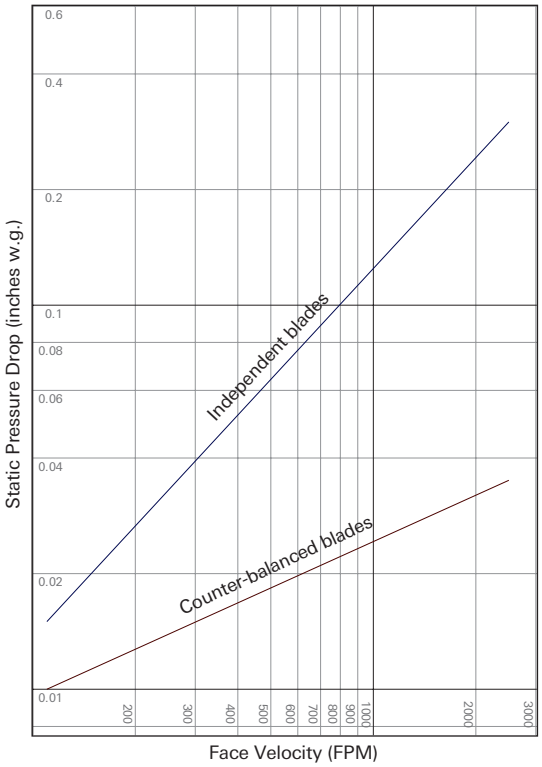
Maximum section width

Dampers falling outside of the shaded area on the graph below (due to maximum design pressure or panel width) should be split into multiple sections.

Pressure drop

Pressure drop is for duct-mounted 24"x24" BDD-2C dampers (both independent blade and counter-balanced). For wall- or plenum-mounted installations expect 33-50% greater pressure drop.

Pressure Drop (Duravent BDD-2C)



Blade Limitation (Duravent BDD)