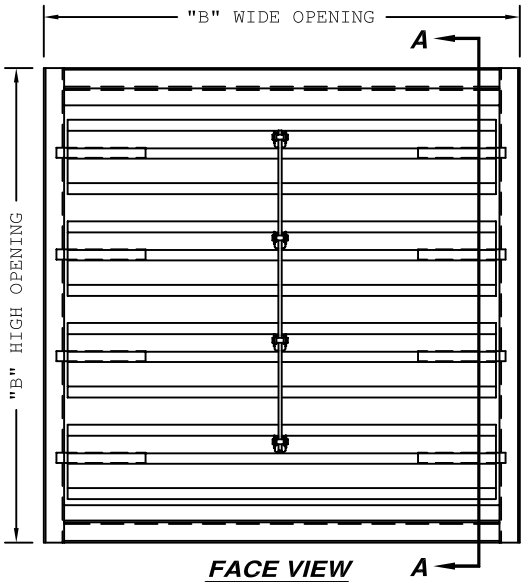
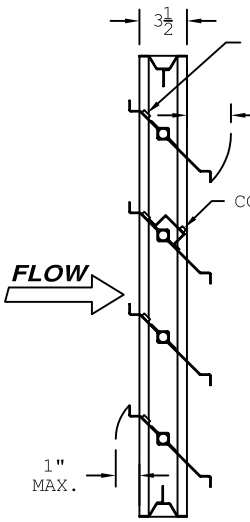
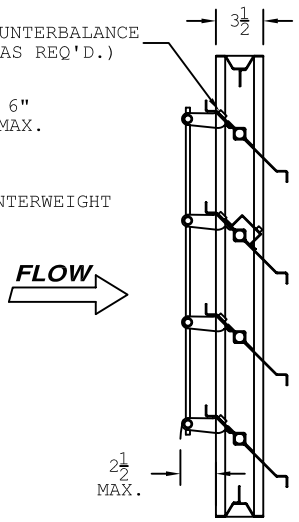
# BACKDRAFT DAMPER, SINGLE THICKNESS BLADE GALV. STEEL CONSTRUCTION, 250°F. MAX. TEMP.



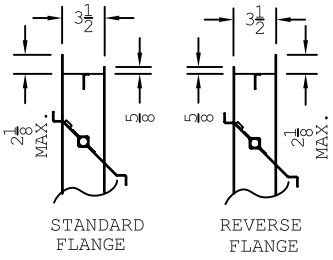

**FACE VIEW**
**FLOW ENTERING SIDE**



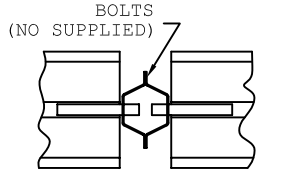

**SECTION A-A**
**BD-40**




**SECTION A-A**
**BD-41**




**ALTERNATE FRAMES**




**FIELD ASSEMBLED STANDARD MULLION**

| AWV ITEM NO. | QUANTITY | MODEL TYPE BD-40 OR BD-41 | "A" WIDE OPENING | "B" HIGH OPENING | OPTIONS: BEARINGS: S.S. SLEEVE (350°F) | BEARINGS: TEFLON SLEEVE (200°F) | BEARINGS: O.I.B. SLEEVE (300°F) | BEARINGS: S.S. BALL (250°F) | SEALS: VINYL BLADE (150°F) | SEALS: EPT WEDGE @ JAMB (150°F) | LINKAGE: 300 SERIES STAINLESS STEEL | LINKAGE: 316 STAINLESS STEEL | AXLES: 304 STAINLESS STEEL | AXLES: 316 STAINLESS STEEL | FRAME: ALUMINUM MATERIAL | FRAME: SPECIAL FLANGE WIDTH (2-1/8" MAX) | FRAME: SPECIAL REVERSE FLANGE WIDTH (2-1/8" MAX) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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STANDARD SPECIFICATIONS

FRAME: 3-1/2" x 5/8" x 16 GAUGE GALVANIZED STEEL HAT CHANNEL FOR "IN DUCT" MOUNTING. DAMPERS UNDER 12" HIGH WILL BE FABRICATED WITH A 16 GAUGE GALVANIZED STEEL INVERTED CHANNEL AT HEAD AND SILL.

BLADES: 16 GAUGE ALUMINUM, 10-3/8" MAX. BLADE WIDTH AND 6" MIN. BLADE WIDTH.

AXLES: 1/2" DIAMETER PLATED STEEL STUB.

BEARINGS: PRESS FIT FLANGED BALL BEARINGS.

LINKAGE: BD-40: NONE
BD-41: PLATED STEEL BRACKETS, BRASS BARRELS, AND 5/16 DIAMETER PLATED STEEL ROD.

STOPS: GALVANIZED STEEL ANGLE AT HEAD AND SILL.

FINISH: MILL WITH TOUCH UP ON WELDS.

ACTUATOR: COUNTERBALANCED FOR EASY OPERATION.

NOTES

1. DESIGN CRITERIA:
   MAX. VELOCITY: BD-40: 1000 FPM / 5 m/s.
   BD-41: 3000 FPM / 15 m/s.
   MAX. DIFF. PRESS.: .5 IN. WG. / 125 Pa.
   MAX. TEMPERATURE: 250°F / 120°C (WITHOUT SEALS).
   150°F / 65°C (WITH SEALS).
2. "A" (WIDTH) AND "B" (HEIGHT) DIMENSIONS ARE OPENING SIZES. DAMPERS WILL BE FABRICATED 1/4" UNDERSIZE.
3. MAXIMUM PANEL SIZE: 48" W x 72" H.
   MINIMUM PANEL SIZE: 6" W x 6" H.
4. DAMPERS CAN BE MOUNTED VERTICAL WITH HORIZONTAL AIR FLOW OR HORIZONTALLY WITH VERTICAL UP OR VERTICAL DOWN AIR FLOW. PLEASE SPECIFY WHEN ORDERING.
5. DAMPERS LESS THAN 12" HIGH WILL HAVE ONE BLADE.
6. DAMPERS ARE NOT RECOMMENDED FOR PRECISE PRESSURE CONTROL.
7. DAMPERS WILL START TO OPEN AT .05 IN. WG.
8. THE START OPEN SENSITIVITY OF THE DAMPER IS REDUCED SUBSTANTIALLY AND PERFORMANCE ALTERED IF SLEEVE BEARINGS ARE USED.

| REV | DESCRIPTION | DATE | BY |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

DATE:
AWV PROD. No.:
PROJECT:
CUSTOMER / ORDER No.:
ARCH. / ENGR.:
AGENT / ORDER No.:

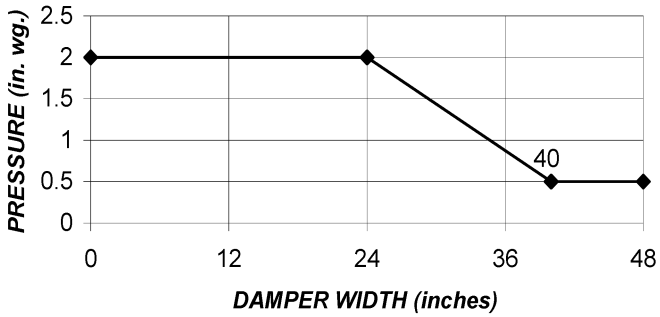
awv american warming and ventilating
A MESTEK COMPANY
7301 INTERNATIONAL DRIVE HOLLAND, OHIO
WWW.AWV.COM PHONE: 419-865-5000 FAX: 419-865-1375

BD-40 & 41 BACKDRAFT DAMPERS

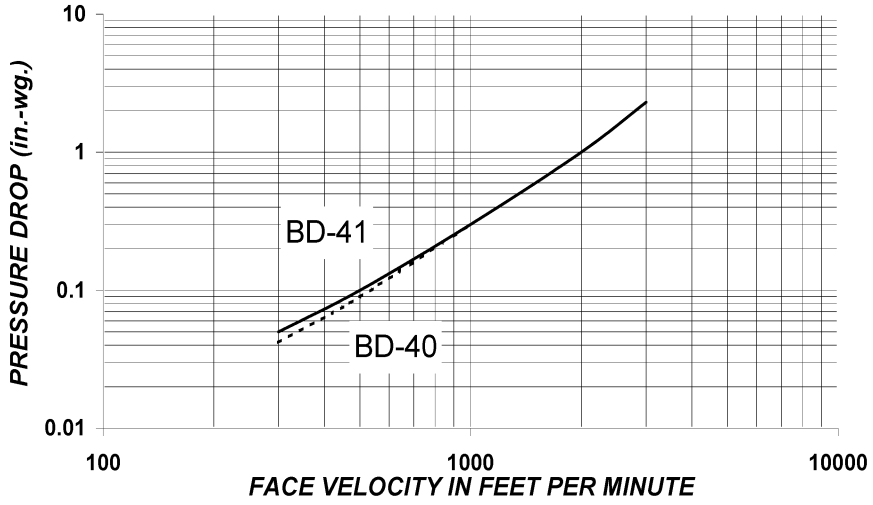
| DRN BY | DWG. NO. | REV. |
|---|---|---|
| PRE | BD-40-1 | |
| DATE 6-19-08 | | |

## PRESSURE LIMITATIONS:

The pressure limitations shown below are based on the design limits of the axles or blade deflection. Another model should be selected if pressure exceeds the values shown.

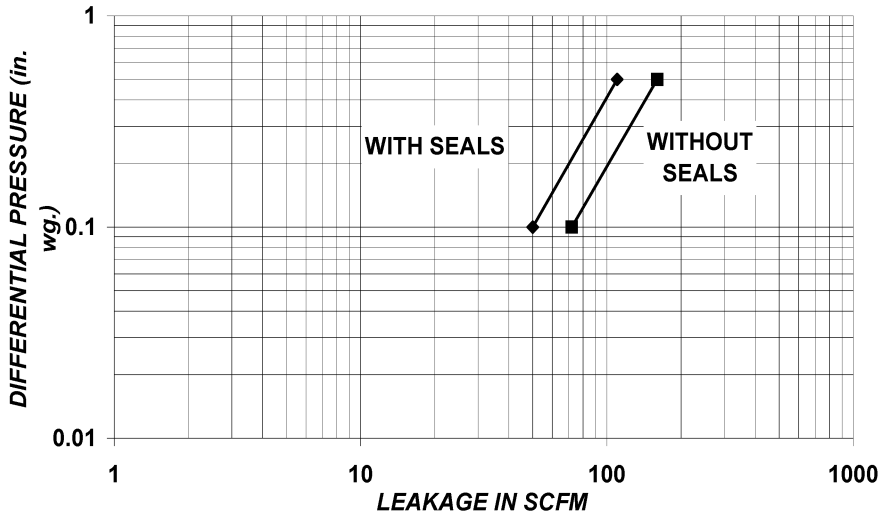



## PRESSURE DROP: TYPICAL PERFORMANCE CURVE




**TESTED PER AMCA STANDARD 500; FIGURE 5.3 (IN-DUCT MOUNT) SIZE TESTED - 24" x 24"**

## LEAKAGE: TYPICAL LEAKAGE CURVES FOR BD-40/41




**TESTED PER AMCA STANDARD 500; FIGURE 5.4 (PLENUM MOUNT) SIZE TESTED - 24" x 24"**

Note: The leakage curves shown are for reference only. Where specific leakage rates are critical to the application of the product, or certified leakage rates are required, consult our representative or factory customer service department prior to selection.