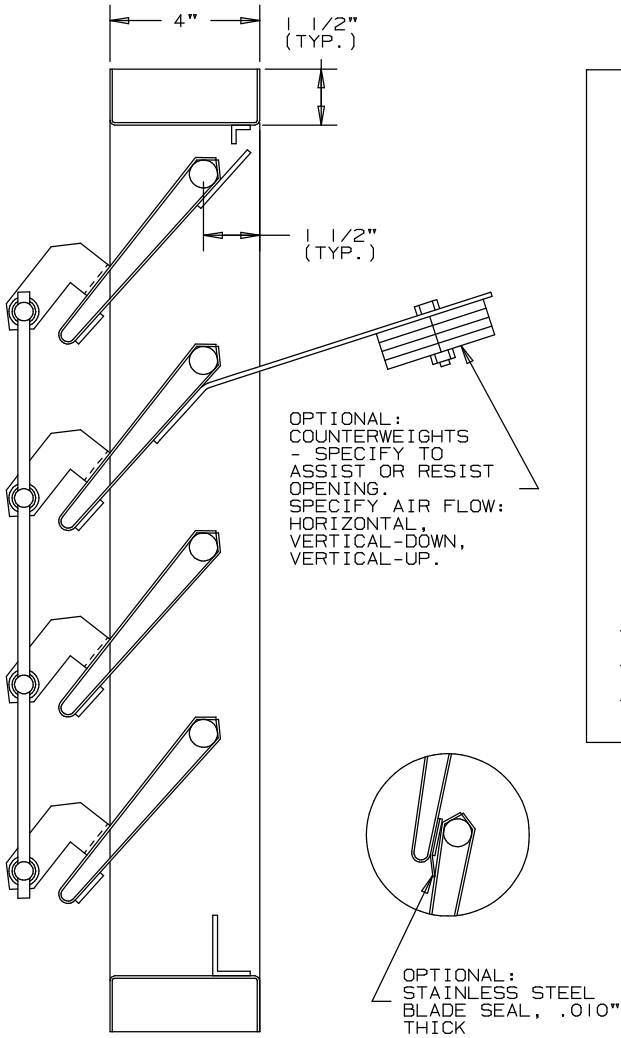


ARROW BACKDRAFT DAMPERS FORMED STEEL

TYPE 400

HEAVY DUTY - "TEAR-DROP" DESIGN



SPECIFICATIONS

- FRAME: CHANNEL OR FLANGED TYPE - 10 GA. GALVANIZED STEEL (SPECIFY FLANGE/AIRFLOW ORIENTATION).
- BLADE: 16 GAUGE GALVANIZED STEEL.
- BLADE SPACING: 3 3/8" MINIMUM TO 7 1/8" MAXIMUM.
- LINKAGE: 1/8" THICK PLATED STEEL BRACKET, WITH 1/2" DIAMETER PLATED STEEL PIVOT RIDING IN A CELCON SLEEVE BEARING. LINKAGE ROD IS 5/16" DIAMETER ALUMINUM, LOCKED TO PIVOT WITH A 1/4"-20 UNC PLATED STEEL SET SCREW. SINGLE LINKAGE FOR PANELS UNDER 20" WIDE. DOUBLE LINKAGE FOR PANELS OVER 20" WIDE.
- AXLES: 3/4" DIAMETER STEEL, FULL LENGTH OF BLADE.
- BEARINGS: BRONZE OILITE.
- SEALS: POLYURETHANE ON BLADE EDGES, NONE AT JAMBS.
- TEMPERATURE LIMITS: 180°F MAXIMUM.


OPTIONAL

- FRAMES ARE AVAILABLE TO COMPLETELY CONTAIN BLADES AND LINKAGE
- SPECIAL SEALS ON BLADES AND JAMBS MAY BE ADDED TO PROVIDE LOW LEAKAGE.
- ARROW DESIGNS AND CUSTOM FABRICATES SPECIAL DAMPERS TO MEET SPECIFIC APPLICATIONS

FOR PERFORMANCE DATA
SEE REVERSE SIDE

NOMINAL DEDUCTIONS WILL BE MADE TO THE OPENING SIZE GIVEN.

ITEM	QTY.	WIDTH	HEIGHT	WIDTH	HEIGHT	MULL	COUNTER BALANCE	AIR FLOW (DIRECTION)	 UNION MADE
		OPENING SIZE		DAMPER SIZE					


ARROW UNITED INDUSTRIES
 A DIVISION OF MESTEK, INC.
 314 RIVERSIDE DRIVE
 WYALUSING, PA 18853
 TEL: (570) 746-1888 FAX: (570) 746-9286

AGENT: _____

ARCH./ENG.:		
CONTR.:		
PROJECT:		
EDR:	ECN:	JOB:
DATE:	DWN.:	DWG.:

ARROW MODEL 400 BACKDRAFT DAMPER PERFORMANCE DATA

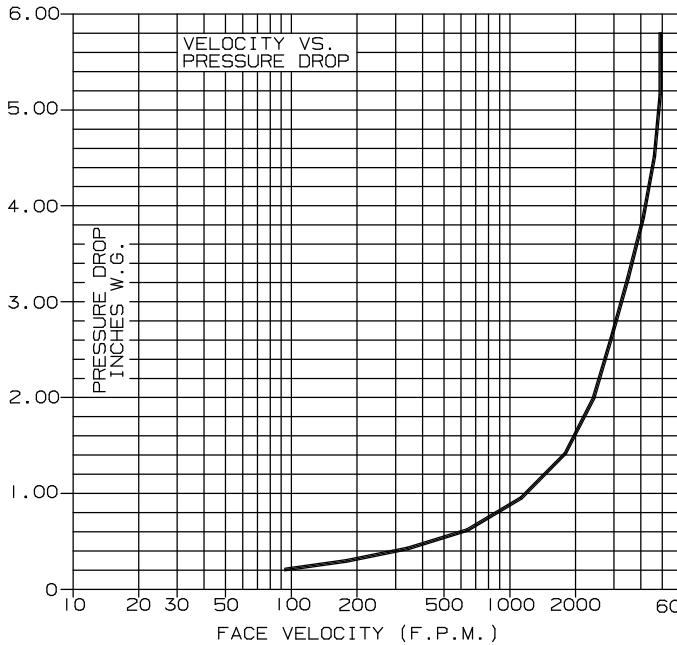
WITHOUT DUCTWORK

DAMPER INSTALLED PER AMCA 500 FIG. 5.4
(FACE MOUNTED TO A PLENUM).

PRESSURE IS CORRECTED TO .075 LB./CU.FT.
AIR DENSITY.

OPERATIONAL PRESSURES

START TO OPEN - .12 INCHES W.G.
FULLY OPEN - 3.37 INCHES W.G.



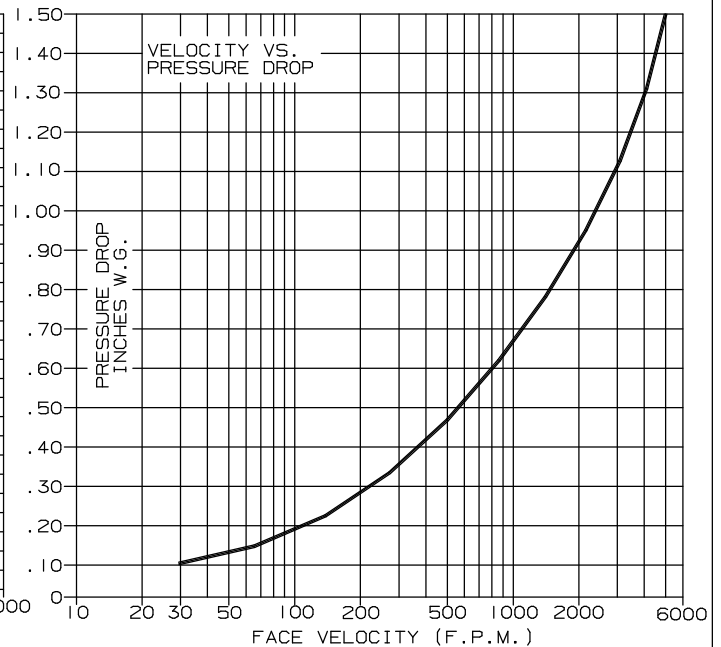
WITH DUCTWORK

DAMPER INSTALLED PER AMCA 500 FIG. 5.3
(DUCTWORK INSTALLED UPSTREAM AND DOWNSTREAM
OF DAMPER).

PRESSURE IS CORRECTED TO .075 LB./CU. FT.
AIR DENSITY.

OPERATIONAL PRESSURES

START TO OPEN - .05 INCHES W.G.
FULLY OPEN - .70 INCHES W.G.



TYPICAL PERFORMANCE FOR MODEL 400 BACKDRAFT DAMPER
SIZE TESTED 42" x 42", FURNISHED WITH COUNTERWEIGHT TO ASSIST OPENING.

AIR LEAKAGE

AIR LEAKAGE QUANTITIES SHOWN IN THE CHART ARE RESULTS OF TESTS PER AMCA
STANDARD 500 AND ARE SHOWN AT 1" W.G. DIFFERENTIAL PRESSURE AND CORRECTED
TO .075 LB./CU.FT. AIR DENSITY.

TOTAL CFM AIR LEAKAGE AT ONE INCH STATIC PRESSURE
DIFFERENTIAL THROUGH CLOSED DAMPER.

		DAMPER WIDTH (INCHES)						
		12"	18"	24"	30"	36"	42"	48"
DAMPER HEIGHT (INCHES)	12"	8	12	16	20	24	28	32
	24"	16	24	32	40	48	56	64
	36"	24	36	48	60	72	84	96
	48"	32	48	64	80	96	112	128
	60"	40	60	80	100	120	140	160
	72"	48	72	96	120	144	168	192

FOR DETERMINING LEAKAGE VALUES GREATER THAN 1" W.G. TO A
MAXIMUM 10" W.G. USE THE MULTIPLIER CORRECTION CHART BELOW.

STATIC PRESSURE (IN)	2	3	4	5	6	7	8	9	10
MULTIPLIER CORRECTION FACTOR	1.3	1.5	1.8	2.0	2.3	2.5	2.8	3.0	3.3

*MAXIMUM PANEL SIZE LIMIT 48" x 72"

AIR LEAKAGE RATINGS ARE BASED ON AMCA STANDARD 500 USING TEST SET UP FIG. 5.4
WITH DAMPER IN THE CLOSED POSITION WITHOUT THE AID OF A COUNTERWEIGHT OR OTHER
MECHANICAL MEANS TO PROVIDE CLOSING TORQUE, FOR A SIZE 42" x 42" DAMPER
WITH BLADE & JAMB SEALS.