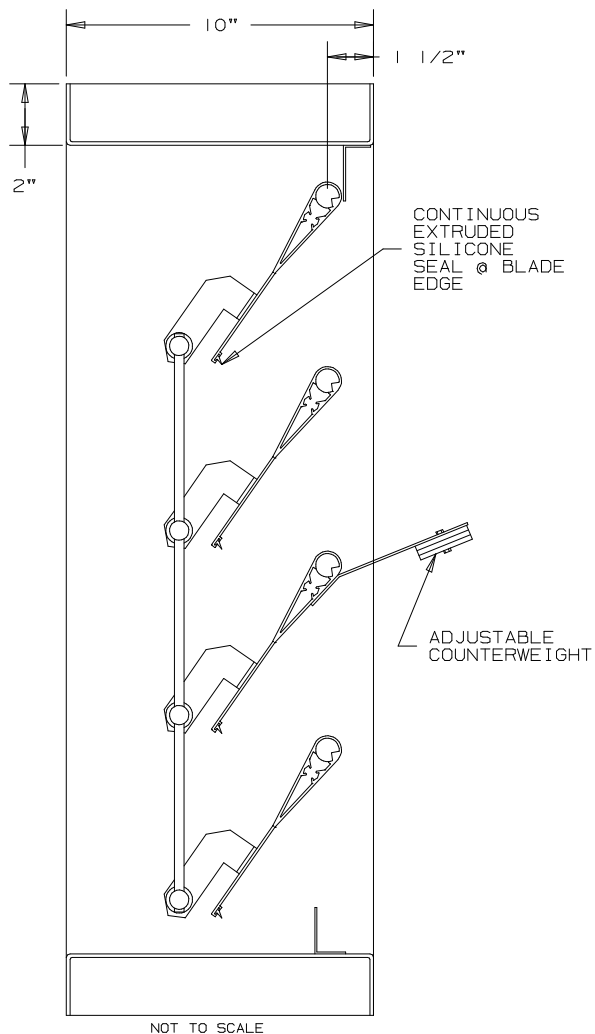


# ARROW BACKDRAFT DAMPERS

EXTRUDED ALUMINUM BLADE, FORMED STEEL FRAME

# TYPE 900

FOR EXTRA HEAVY-DUTY APPLICATIONS



ADJUSTABLE COUNTERWEIGHTS AVAILABLE TO ASSIST OR RESIST OPENING AT THE FULL RANGE OF PRESSURE INCREMENTS.

FOR HORIZONTAL OR VERTICAL OPERATION

### SPECIFICATIONS

FRAME: 2" x 10" x 2", 12 GA. GALVANIZED STEEL FORMED CHANNEL.

BLADE: EXTRUDED ALUMINUM TEARDROP, 6063-T52/T6 ALLOY, .080" THK. WITH GROOVE INSERTS AT BLADE EDGES FOR EXTRUDED SILICONE RUBBER SEALS. BLADE SPACING IS 6" ON CENTER

AXLES: 3/4" DIAMETER PLATED STEEL POSITIVELY LOCKED TO BLADE, PLACED OFF-CENTER IN BLADE.

SEALS: EXTRUDED SILICONE RUBBER OFF-SET LEG AT BLADE EDGES. NONE AT JAMBS.

LINKAGE: STANDARD IS 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, LOCKED TO PIVOT WITH A 1/4-20 UNC PLATED STEEL SET SCREW.

BEARINGS: BALL BEARING PRESSED INTO FRAME.

COUNTERWEIGHTS: ADJUSTABLE FOR A FULL RANGE OF OPENING PRESSURES. OPTIONAL MOUNTING LOCATIONS. SPECIFY IF AIR FLOW IS HORIZONTAL, VERTICAL-UP, OR VERTICAL DOWN. ALSO SPECIFY TO ASSIST OR RESIST OPENING.  
A - INTERNALLY (ON BLADES)  
B - EXTERNALLY (ON EXTENDED SHAFT)

FINISH - MILL IS STANDARD, OTHERS ARE AVAILABLE.

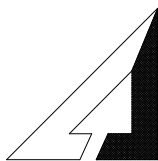
TEMPERATURE LIMITS: -30°F TO 190°F.

MINIMUM PANEL SIZE: 8" x 8" I.D.  
MAXIMUM PANEL SIZE: 60" x 96" I.D.

WHEN A NON-SYMETRICAL FRAME CROSS-SECTION IS SPECIFIED (I.E.: FLANGED), SPECIFY THE FLANGE/AIRFLOW ORIENTATION.

FOR PERFORMANCE DATA  
-SEE REVERSE SIDE

ITEM	QTY.	WIDTH	HEIGHT	MULL	COUNTER BALANCE	AIR FLOW (DIRECTION)	TAGGING
		DAMPER SIZE (I.D.)					



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CONTR.:

PROJECT:

EDR:

ECN:

JOB:

DATE:

DWN.:

DWG.:

# ARROW MODEL 900 BACKDRAFT DAMPER PERFORMANCE DATA

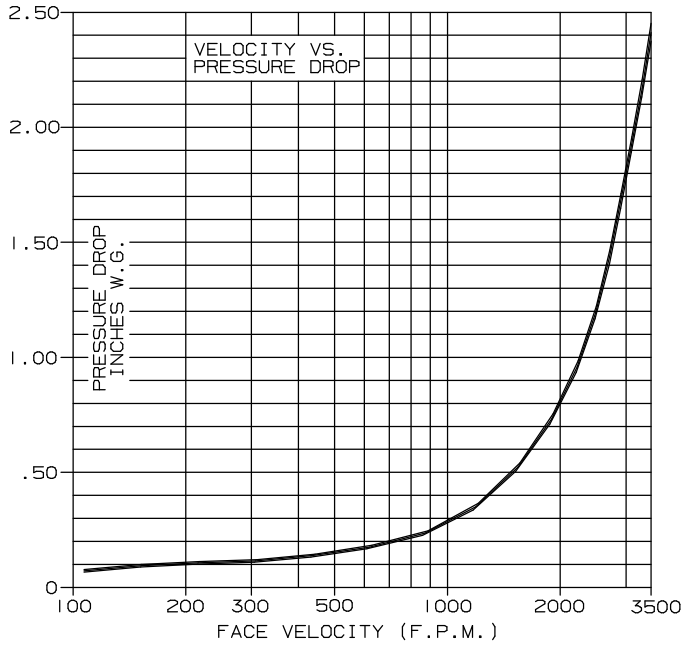
## WITHOUT DUCTWORK

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 - .02 INCHES W.G.  
FULLY OPEN - 1.50 INCHES W.G.



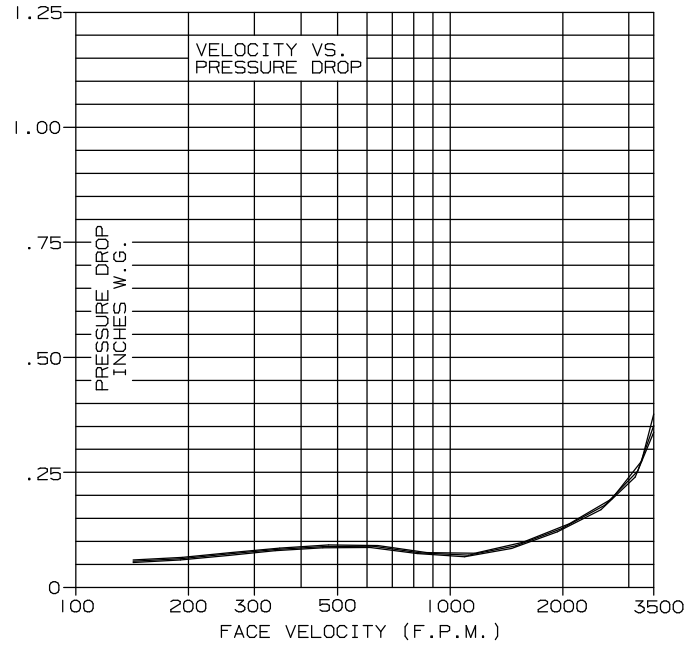
## WITH DUCTWORK

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 - .03 INCHES W.G.  
FULLY OPEN - .25 INCHES W.G.



TYPICAL PERFORMANCE FOR MODEL 900 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"	54"	60"	
DAMPER HEIGHT (INCHES)	12"	8	12	16	20	24	28	32	36	40
24"	16	24	32	40	48	56	64	72	80	
36"	24	36	48	60	72	84	96	108	120	
48"	32	48	64	80	96	112	128	144	160	
60"	40	60	80	100	120	140	160	180	200	
72"	48	72	96	120	144	168	192	216	240	
84"	56	84	112	140	168	196	224	252	280	
96"	64	96	128	160	192	224	256	288	320	

FOR DETERMINING LEAKAGE VALUES GREATER THAN 1" W.G. TO A  
MAXIMUM 8" W.G. USE THE MULTIPLIER CORRECTION CHART BELOW.

STATIC PRESSURE (IN)	2	3	4	5	6	7	8
MULTIPLIER CORRECTION FACTOR	1.5	1.9	2.3	2.5	2.9	3.0	3.1

\*MAXIMUM PANEL SIZE LIMIT 60" x 96" FOR STATIC PRESSURE LIMITS GREATER THAN  
5"W.G. TO 8" W.G. DIFFERENTIAL MAXIMUM PANEL SIZE LIMIT 48" x 96".

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.