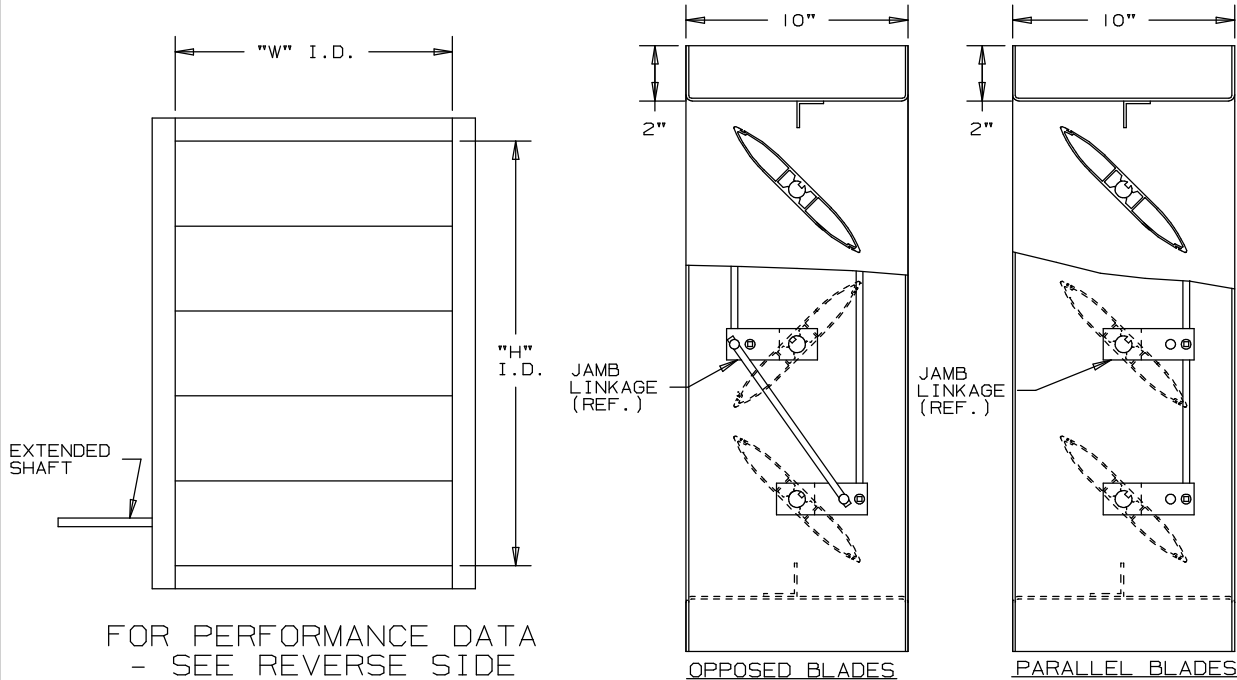


ARROW INDUSTRIAL DAMPER FOR PROCESS-CONTROL

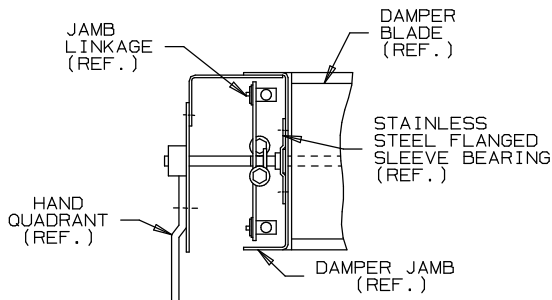
MODEL 545

HVAC AND PROCESS CONTROL
CLEAN AIR APPLICATIONS ONLY



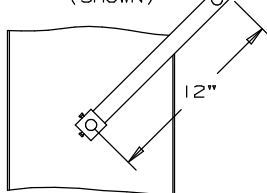
FOR PERFORMANCE DATA
- SEE REVERSE SIDE

OPPOSED BLADES PARALLEL BLADES
NOT TO SCALE



JAMB LINKAGE DETAIL

OPPOSED LINKAGE W/
HAND QUADRANT
(SHOWN)



LEVER FOR
MOTOR OPERATION

PLEASE SPECIFY OPERATOR TYPE

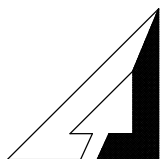
STANDARD SPECIFICATIONS

- FRAME: 2"x10"x2" - 12 GA. GALVANIZED STEEL FORMED CHANNEL FRAME
- BLADE: MINIMUM THICKNESS, .080" EXTRUDED ALUMINUM 8" WIDE ARROW-FOIL.
- SHAFT: 3/4" DIAMETER PLATED STEEL STUB SHAFT WITH A POSITIVE INTERLOCK INTO BLADE SECTION.
- LINKAGE: FORMED 12 GA. GALVANIZED STEEL. TRUNNION IS A MACHINED PIVOT OF PLATED STEEL WITH A 1/2" DIAMETER PLATED STEEL INTERCONNECTING ROD.
- BEARINGS: SINTERED STAINLESS STEEL OILITE FLANGED SLEEVE BOLTED TO FRAME.
- FINISH: FACTORY MILL.
- OPERATOR: MANUAL HAND QUADRANT OR LEVER ARM FOR MOTOR ACTUATOR. SPECIFY TYPE WHEN ORDERING.
- MAXIMUM TEMPERATURE: 400°F
- MAXIMUM PANEL SIZE: 60" x 96" I.D. OF DAMPERS
- MINIMUM PANEL SIZE: 12" x 8 1/4" I.D. (SINGLE BLADE)
12" x 16" I.D. (OPPOSED BLADES)

OPTIONAL EXTRAS

LISTED BELOW ARE SOME OPTIONS USED FOR THE MORE COMMON TYPES OF APPLICATIONS.

1. STAINLESS STEEL JAMB SEALS.
2. STAINLESS STEEL BLADE EDGE SEALS.
3. STUFFING BOXES AND REPLACEABLE PACKING.
4. FLANGES OTHER THAN STANDARD 2" WIDE
5. PAINTED FINISHES.
6. PERIMETER HOLES-ONE FLANGE.
7. PERIMETER HOLES-TWO FLANGES.
8. OTHER FRAME MATERIAL.



ARROW UNITED INDUSTRIES
A DIVISION OF MESTEK, INC.

314 RIVERSIDE DRIVE
WYALUSING, PA 18853
TEL: (570) 746-1888 FAX: (570) 746-9286
WEB ADDRESS: WWW.ARROWUNITED.COM

AGENT: _____

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

ARROW MODEL 545 INDUSTRIAL DAMPER PERFORMANCE DATA

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.

AIR LEAKAGE (TOTAL C.F.M.)

		DAMPER WIDTH (INCHES)								
		12"	18"	24"	30"	36"	42"	48"	54"	60"
DAMPER HEIGHT (INCHES)	12"	12	16	20	22	24	28	32	34	36
	24"	20	24	28	32	36	42	48	49	50
	36"	30	35	42	48	54	57	60	68	75
	48"	40	44	48	54	60	70	80	90	100
	60"	50	55	60	67	75	87	100	112	125
	72"	60	65	65	80	90	105	120	135	150
	84"	70	77	84	95	105	122	140	158	175
	96"	80	88	90	108	120	140	160	180	200

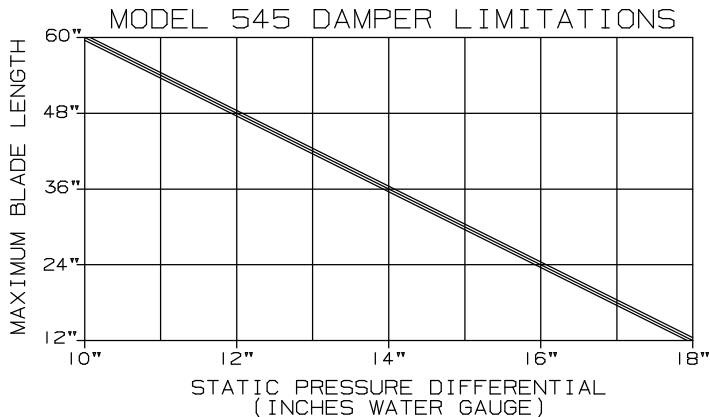
FOR DETERMINING LEAKAGE VALUES GREATER THAN 1" W.G. TO A MAXIMUM OF 10" W.G. USE THE MULTIPLIER CORRECTION CHART BELOW.

STATIC PRESSURE (IN)	2	3	4	5	6	7	8	9	10
MULTIPLIER CORRECTION FACTOR	1.3	1.5	1.6	1.8	2.0	2.3	2.6	2.8	3.0

AIR LEAKAGE RATINGS ARE BASED ON AMCA STANDARD 500 USING TEST SET UP 5.4 WITH A DAMPER CLOSING TORQUE APPLIED TO THE DAMPER OF 31 IN.LBS./SQ.FT. OF DAMPER AREA FOR A SIZE 60" x 96", WITH A MINIMUM OF 45 IN.LBS./SQ.FT. OF DAMPER AREA FOR A SIZE 60" x 8"

DAMPER AIR LEAKAGE SHOWN IS BASED UPON PUBLISHING ONLY THE MOST CONSERVATIVE LEAKAGE RESULTS FOR THE ARROW MODEL 545 INDUSTRIAL DAMPER FOR AN ENTIRE RANGE OF DAMPER SIZES.

TO ENSURE PROPER DAMPER OPERATION AND AIR LEAKAGE PERFORMANCE FOR THIS DAMPER DESIGN, THE STATIC PRESSURE/BLADE LENGTH LIMITS SHOWN PROVIDE THE USER WITH THIS INFORMATION AND IN ADDITION PROVIDES A REALATIONSHIP BETWEEN DAMPER COST AND THE APPLICATION.



THE MODEL 545 DAMPER DESIGN AT A BLADE LENGTH OF 60" HAS A MAXIMUM ALLOWABLE BLADE DEFLECTION OF L/360 FOR THE STATIC PRESSURE INDICATED ON THE CHART. AT REDUCED BLADE LENGTHS HIGHER STATIC PRESSURE LIMITS CAN BE ATTAINED WITHOUT SACRIFICING DAMPER OPERATING AND PERFORMANCE CHARACTERISTICS.

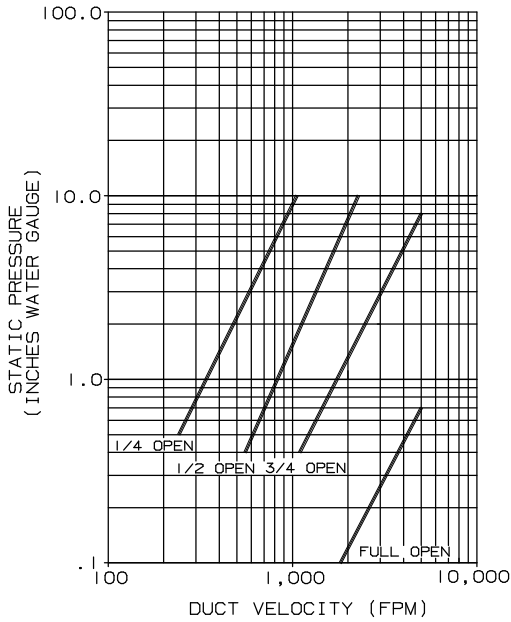
ARROW MODEL 545 INDUSTRIAL DAMPER PERFORMANCE DATA

VELOCITY LIMITATIONS:

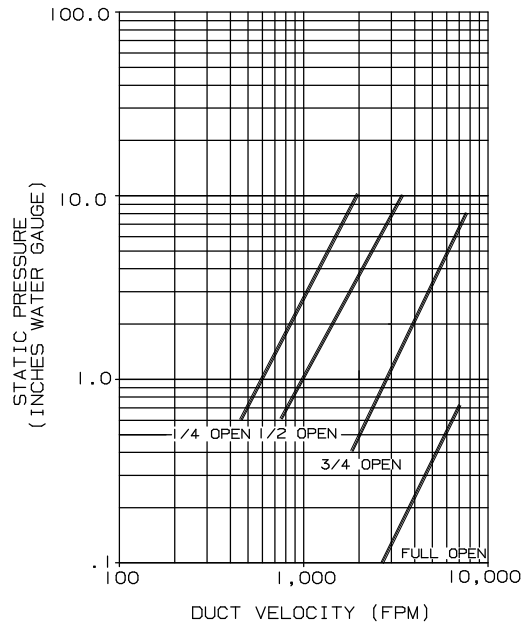
THE TABLE BELOW LISTS THE MAXIMUM ALLOWABLE VELOCITY FOR A GIVEN MAXIMUM DAMPER SIZE. WHEN APPLICATION REQUIREMENTS EXCEED THE RECOMMENDATIONS LISTED IN THE TABLE, SELECT ANOTHER MODEL OR CONSULT THE FACTORY.

MAXIMUM ALLOWABLE VELOCITY		
3000 FPM AND LESS	4000 FPM	5000 FPM
DAMPER SIZES:	DAMPER SIZES:	DAMPER SIZES:
12" x 9" MIN. TO 60" x 96" MAX.	12" x 9" MIN. TO 60" x 72" MAX.	12" x 9" MIN. TO 60" x 54" MAX.

ARROW MODEL 545 (OPPOSED BLADE) 42"x42" I.D.
PRESSURE DROP vs. DUCT VELOCITY

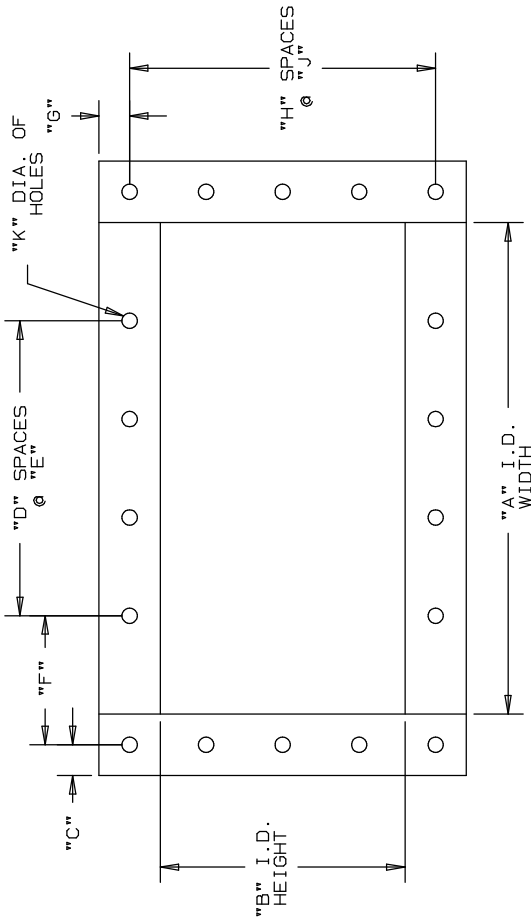


ARROW MODEL 545 (PARALLEL BLADE) 42"x42" I.D.
PRESSURE DROP vs. DUCT VELOCITY



PRESSURE DROP CURVES LISTED ARE BASED ON AMCA 500, USING TEST SET UP FIGURE 5.3 FOR DAMPER INSTALLED WITH DUCT UPSTREAM AND DOWNSTREAM. STATIC PRESSURES ARE CORRECTED TO .075 LB./CU. FT. AIR DENSITY.

NOTES:

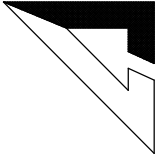


ITEM	QUANTITY	PARALLEL	OPPOSED	"A" I.D. (WIDTH)	"B" I.D. (HEIGHT)	"C"	"D"	"E"	"F"	"G"	"H"	"J"	"K"	"L"	"M"	HAND QUADRANT	MOTOR LEVER ARM	VARIATIONS

SHIP TO: _____ INVOICE TO: _____ PURCHASE ORDER: _____

MARK SHIPMENT: _____

SEND ORDER TO:



ARROW UNITED INDUSTRIES
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