

# MODEL AFDTI-25

Extruded Aluminum Damper • 5" Deep • 6" Airfoil Blades • Opposed or Parallel • Thermal Break

## Standard Materials and Construction

**FRAME:** 5" wide x .081" thick (nominal) 6063-T52/T6 extruded aluminum, hat shaped channel.

**BLADES:** 6" wide x .081" thick (nominal) 6063-T52/T6 extruded aluminum, airfoil profile injected with a two part polyurethane (CFC free) foam, and debridged for thermal isolation.

**AXLES:** 1/2" dia. extruded aluminum, "Pin-Lock" design, interlocking into blade section.

**LINKAGE:** Concealed in jamb of heavy aluminum. Crank arm permanently locked to blade axle by two stainless steel fasteners. The crank arm contains a 1/2" dia. metal pivot riding in a celcon bearing. A 1/4" - 20 set screw with locking patch ties the 5/16" dia. aluminum linkage rod. The linkage of each damper is individually adjusted.

**BEARINGS:** "Double-sealed" type with celcon inner bearing riding inside a polycarbonate outer bearing positively locked into frame, designed so that there shall be no metal-to-metal or metal-to-bearing riding surfaces.

**SEALS:** Extreme low temperature seal system, extruded silicone rubber blade edge seal that fits into a ribbed groove insert in blades with an extruded polycarbonate seal at jambs.

**FINISH:** Mill

**TEMP. LIMITS:** -40°F to +200°F

## Options

Frame - Optional .125" thick nominal 6063-T6/T52 extruded aluminum

Hand Quadrants

120V, 24V Electric, or Pneumatic Actuators

Jackshifting

Auxiliary Switch

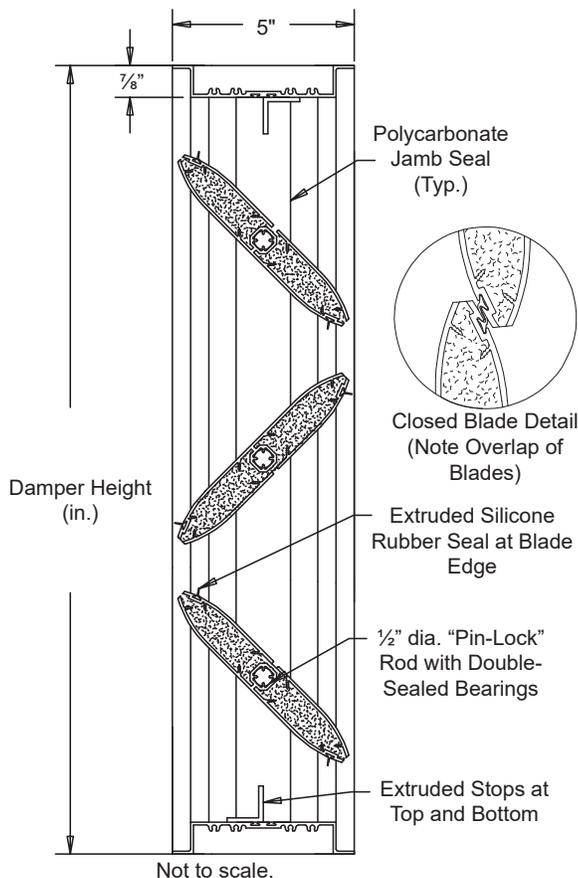
Explosion Proof Housing

## Notes

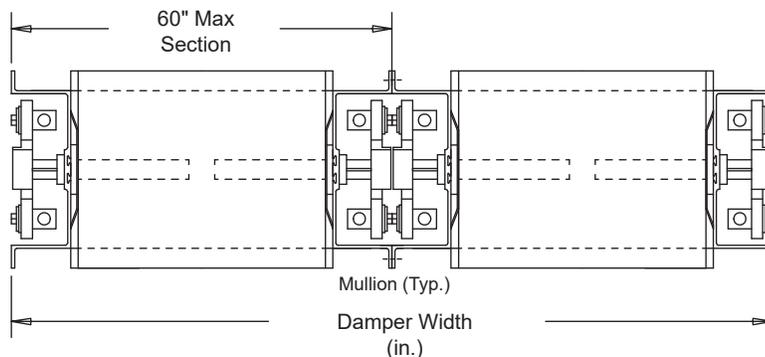
- 1/4" nominal deduction will be made to the opening size given.
- Dampers with multiple panels in both width and height may require structural support. It is recommended that large openings be designed with structural members so that dampers will span either width or height with a single panel. Structural support will not be provided with standard dampers.
- Dampers more than one panel wide or high and operated with one actuator must be jackshafed. Factory supplied actuators are shipped loose to be mounted external as standard.
- Not recommended for blades installed vertically.
- Approximate damper weight is 6.5 lbs./sq.ft.

## Damper Sizes

Blade Type	Minimum Panel	Maximum Panel
Parallel	6"W x 8 7/8"H	60"W x 72"H
Opposed	6"W x 8 7/8"H	60"W x 72"H



Opposed Blade Model shown (Parallel Blade Model also Available)



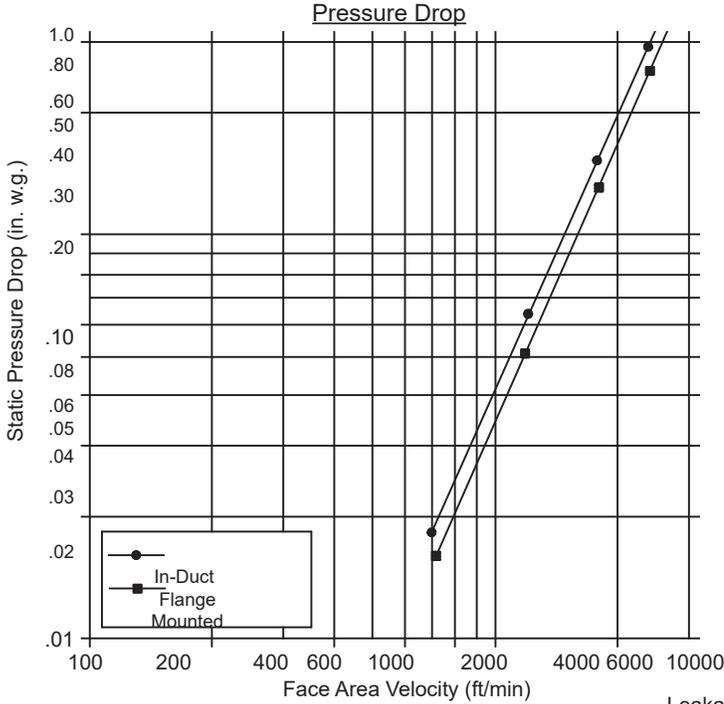
Item #	Qty	Width	Height	Blade Position		Actuator Model	Location		Function		Union Made
				Para.	Oppo.		Interior	Exterior	N.C.	N.O.	
Arch. / Eng.:						EDR:	ECN:		Job:		
Contractor:											
Project:						Date:	DWN:		DWG:		

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## Performance Data

Pressure Drop Ratings are tested in accordance with AMCA Standard 500-D using test set-up Fig. 5.3 for damper installed with duct upstream and downstream. Static pressures are corrected to .075 lb./cu.ft. air density.



## LEAKAGE

Total cfm Leakage at 1 in. w.g. Static Pressure Differential

Height	Width				
	12"	24"	36"	48"	60"
12"	2	4	6	8	10
18"	3	6	9	12	15
24"	4	8	12	16	20
30"	5	10	15	20	25
36"	6	12	18	24	30
42"	7	14	21	28	35
48"	8	16	24	32	40
54"	9	18	27	36	45
60"	10	20	30	40	50
66"	11	22	33	44	55
72"	12	24	36	48	60

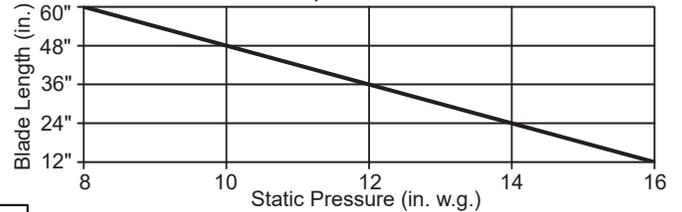
## Leakage Correction Factor

Damper Width (in.)	Static Pressure in.wg							
	2"	3"	4"	5"	6"	7"	8"	
12" - 60"	1.44	1.64	2.00	2.22	2.44	2.64	2.82	

Use of correction factors will give leakage values at greater than 1" pressures.

Leakage Ratings are tested in accordance with AMCA Standard 500-D using test set-up Fig. 5.4. Data is based on a closing torque of 5 in.lb./sq.ft. for dampers less than 5 sq.ft. having a closing torque of 40 in.lb. damper closing torque is applied to damper operating shaft.

## Damper Limitations



Model AFDTI-25 damper design at reduced lengths can withstand higher static pressure limits without sacrificing damper operation and performance. Static pressures above 8 in. w.g. will affect operation torque value.

Damper Assembly Thermal Performance Rating Tested to ASTM C-1363-97, Standard Test Method for Thermal Performance of Building Assemblies by Means of a Hot Box Apparatus and Replaces C236 and C-975 Test Methods.

## Thermal Performance

