United Enertech

(ENGINEERS)

SUBMITTAL DATA

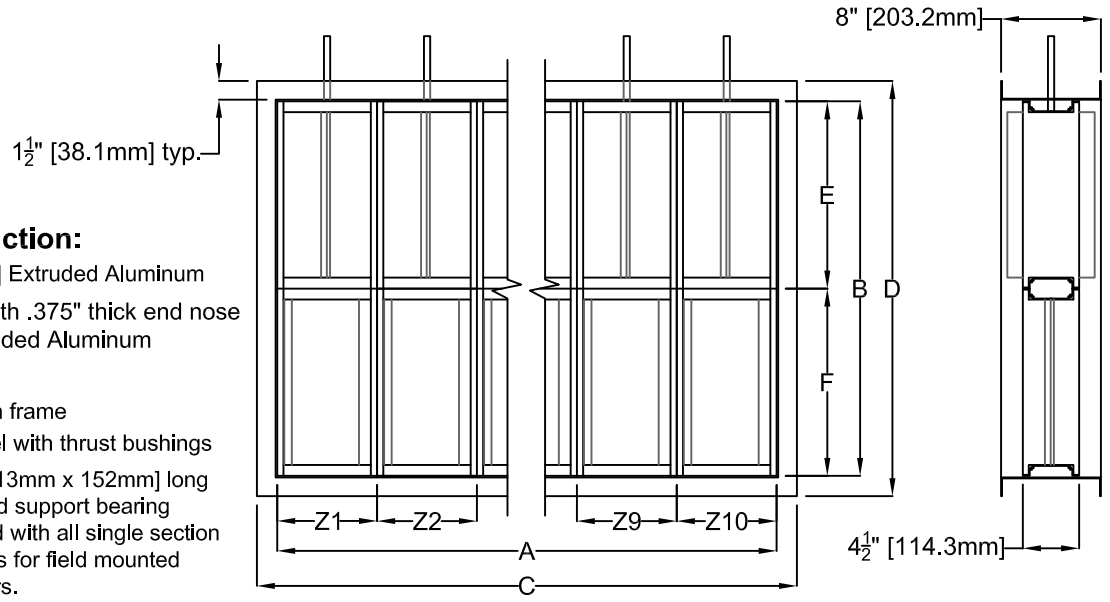
CONTROL DAMPERS

Airfoil Blade

MULTI-ZONE DAMPER

Suggested Specifications:

Furnish and install at location shown on drawing or in accordance with schedules dampers meeting the following specifications: Rectangular damper shall have 3/8" thick nose hollow airfoil blade and .081 extruded aluminum top and bottom frames. Damper to have thrust bushings and meet the low pressure drop and low leakage equal to United Enertech **MODEL MZD-150.**



Standard Construction:

Frame: 0.081 [2.06mm] Extruded Aluminum

Blade: Hollow Airfoil with .375" thick end nose (6063-T5) Extruded Aluminum

Bearing: Bronze Oilite

Linkage: Concealed in frame

Axles: zinc plated steel with thrust bushings

Control Shaft: ½" x 6" [13mm x 152mm] long outboard support bearing supplied with all single section dampers for field mounted actuators.

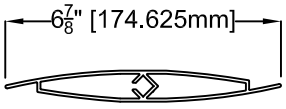
Outer Sleeve: 18ga. galvanized

Blade seals: Removable TPV (250° F)

Jamb seals: Stainless Steel (compression)

Options:

☐ Insulated (Foam-filled blades)



Blade Detail

Minimum Zone Size: 5" (E/F) x 4" (Z) [127mm x 102mm], 8" [203mm] and under single blade

Maximum Zone Size: 30" (E/F) x 30" (Z) [762mm x 762mm] (single section) Multi-section: unlimited

Maximum Assembly Size (C x D): 84" x 120" [2134mm x 3048mm] or 120" x 84" [3048mm x 2134mm]

	OVERALL DIMENSIONS						ZONE DIMENSIONS										TAG
QTY	A	B	C	D	E	F	Z1	Z2	Z3	Z4	Z5	Z6	Z7	Z8	Z9	Z10	

Due to continuing research, United Enertech reserves the right to change specifications without notice.

Job Name:	☐ MODEL MZD-150		
Location:			
Architect:			
Engineer:	DRAWN BY: CAS	DATE: 5-19-17	REV. DATE:
Contractor:	REV. NO.	APPROVED BY: CJ	DWG. NO.: A-26b

MODEL MZD-150 PERFORMANCE DATA

Imperial Units (MZD-150 Opposed Blade, Forward Flow)

* Damper Width X Height	1 in. w.g.	4 in. w.g.	8 in. w.g.	*Torque (per sq. ft.)
36" X 36"	Class 1A	Class 1	Class 1	10 lbs-in
12" X 48"	Class 1	Class 1	Class 1	17.5 lbs-in
48" X 36"	Class 1A	Class 1	Class 2	10 lbs-in
60" X 36"	Class 1A	Class 2		10 lbs-in

*Torque applied to close and seat damper in during the test.

Imperial Units (MZD-150 Opposed Blade, Reverse Flow)

Damper Width X Height	1 in. w.g.	4 in. w.g.	8 in. w.g.	*Torque (per sq. ft.)
36" X 36"	Class 1A	Class 1	Class 1	10 lbs-in
12" X 48"	Class 1A	Class 1	Class 1	17.5 lbs-in
48" X 36"	Class 1A	Class 1	Class 2	10 lbs-in
60" X 36"	Class 1A	Class 1		10 lbs-in

*Torque applied to close and seat damper in during the test.

Note: Leakage data applies only to horizontal blade damper configurations.

Air leakage is based on operation between 50° F to 104° F. All data corrected to represent air density of 0.075 lbs/ft³.

12" x 12" (305mm x 305mm)

Face Velocity ft/min (m/s)	Pressure Drop in. w.g. (Pa)
1000 (5.08)	0.07 (17)
1500 (7.62)	0.16 (39)
2000 (10.16)	0.28 (69)

24" x 24" (610mm x 610mm)

Face Velocity ft/min (m/s)	Pressure Drop in. w.g. (Pa)
1000 (5.08)	0.03 (8)
1500 (7.62)	0.07 (18)
2000 (10.16)	0.13 (32)

48" x 12" (1219mm x 305mm)

Face Velocity ft/min (m/s)	Pressure Drop in. w.g. (Pa)
1000 (5.08)	0.03 (8)
1500 (7.62)	0.07 (17)
2000 (10.16)	0.12 (31)

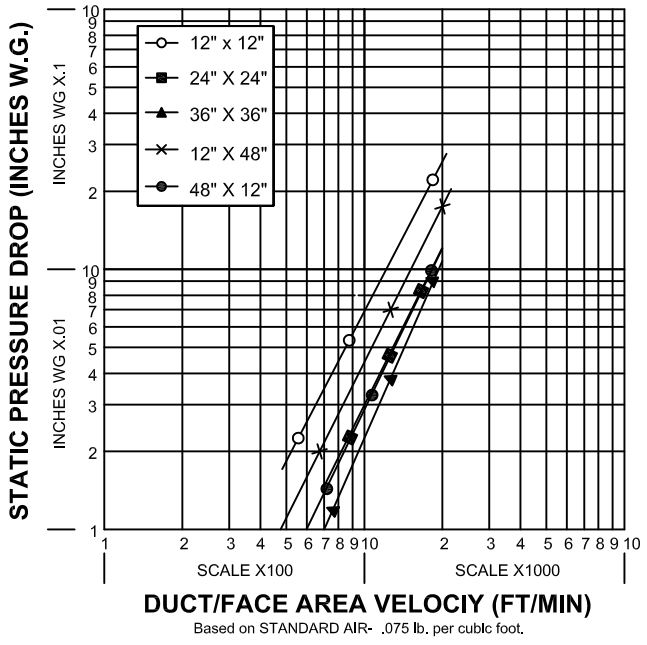
12" x 48" (305mm x 1219mm)

Face Velocity ft/min (m/s)	Pressure Drop in. w.g. (Pa)
1000 (5.08)	0.05 (12)
1500 (7.62)	0.09 (22)
2000 (10.16)	0.18 (45)

36" x 36" (914mm x 914mm)

Face Velocity ft/min (m/s)	Pressure Drop in. w.g. (Pa)
1000 (5.08)	0.03 (7)
1500 (7.62)	0.06 (15)
2000 (10.16)	0.11 (27)

PRESSURE DROP



* All sizes shown are individual damper sections (Zones).