

INDUSTRIAL 3V BLADE CONTROL DAMPER
Model H-620

DESIGN / APPLICATION

Model **H-620** (Opposed Blade Operation) and **H-621** (Parallel Blade Operation) are Industrial Air Control Damper with a 3V blade design. These models consist of a heavy duty flanged frames designed for direct attachment to the ductwork or equipment. **H-620/H-621** models are ideal for balancing and/or shut off HVAC applications in the industrial systems with many options (See Page 3) to meet your needs.

STANDARD CONSTRUCTION

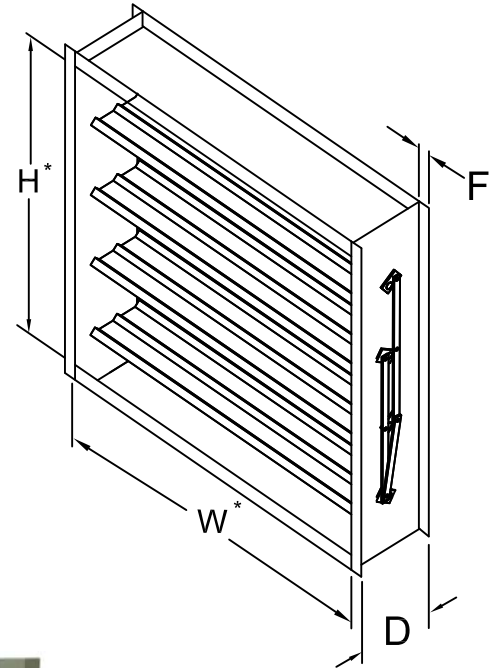
- Frame:** 8" x 2" x 10 ga. Galvanized steel channel
- Blades:** 10 ga. Galvanized steel, symmetrical design
- Bearing:** Bronze Sleeve 185°F max
- Linkage:** Heavy Duty jamb linkage
- Axles:** Ø3/4" plated steel
- Finish:** Mill galvanized with high temperature paint touch up.

SIZE LIMITATIONS

- Minimum Size:** 6"W x 5"H (single blade)
 6"W x 9"H (multiple blade)
- Maximum Size:** 60"W x 96"H (single section)

RATINGS

- Velocity:** 5000 - 6000 fpm
 - Pressure:** 13-21 in. w.g. - differential pressure
 - Temperature:** Bronze Brg. -20°F ~ 185°F (Standard)
 Stainless Brg. 185°F ~ 1,000°F (Optional)
- Temperatures over 400°F require special blade and clearance. For higher temperatures, consult United Enertech.



NOTE: Damper blades always run horizontal and are always the first dimension (W) when ordering (example: alway order W" x H").
***Inside Dimensions are Actual Size(not undersized)**

Quantity	Max. Temp. (if higher than 250°F)	"W" Width	"H" Height	Frame Depth "D" (8" Std.)	Flange Width "F" (2" Std.)	Bolt Hole Information (See page 3)						Remarks	
						J	N1	L Spacing	M Dia.	K	N2		C

Job Name:	<input type="checkbox"/> MODEL H-620 (opposed blades) <input type="checkbox"/> MODEL H-621 (parallel blades)
Location:	
Architect:	DRAWN BY: SRB DATE: 7-3-06 REV. DATE: 12-22-10
Engineer:	
Contractor:	REV. NO. 10 APPROVED BY: BGT DWG. NO.: C-5

MODEL H-620 PERFORMANCE DATA

Temperature Limitations

Blade seals: EPDM -40° to +250°F
 Silicone Rubber -40° to +400°F
 Jamb seals: Flexible stainless steel -40° to +400°F
 For higher temperatures consult United Enertech

Velocity Limitations

The graph below represents a conservative size to velocity limitation.

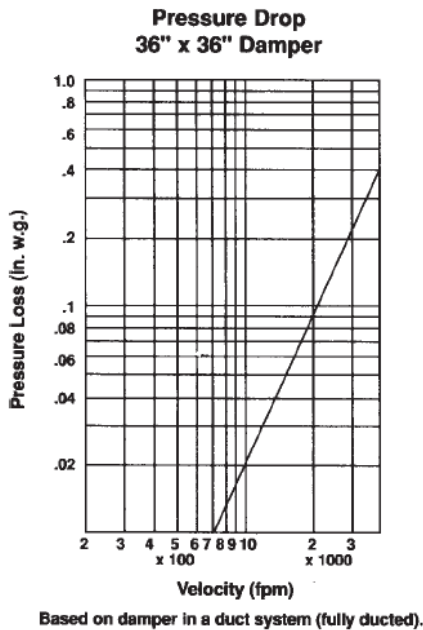
Max. Width	Max. Duct Velocity	Max. Static Pressure
12" wide	6000 fpm	21.0" wg
24" wide	6000 fpm	19.0" wg
36" wide	5000 fpm	17.0" wg
48" wide	5000 fpm	15.0" wg
60" wide	5000 fpm	13.0" wg

Options

Temperature Limitations
 Blade seals: EPDM -40° to +250°F
 Silicone Rubber -40° to +400°F
 Jamb seals: Flexible stainless steel -40° to +400°F
 For higher temperatures consult United Enertech

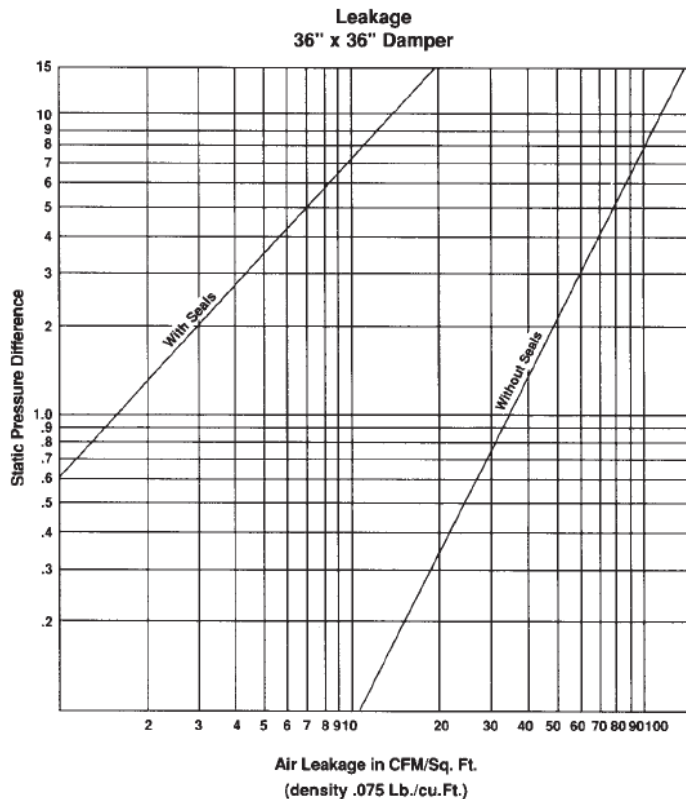
Pressure Drop Data

The pressure drop on this damper (shown below) was performed per AMCA Standard 500-D, Fig. 5.3 (straight ductwork upstream and down). Other figures and system configurations can vary the pressure drop from that shown. Any variations to entering and exiting ductwork or additional objects in the ductwork should be considered when estimating the pressure drop.



Leakage Data

The leakage data below (with seals) is based on the damper having the options of both blade and jamb seals and with the damper blades in their fully closed position. Models H-620/621 standard construction is with no seals and its leakage is shown (Without Seals).



MATERIAL OPTIONS

Frame: 12 or 14 ga. Galvanized steel
 10, 12, or 14 ga. 304 stainless steel
 (Std - 10 ga. Galv. steel)

Axles: 3/4" dia. stainless steel
 (Std - 3/4" dia. plated steel)

Blades: 12 or 14 ga. Galvanized steel
 10, 12, or 14 ga. 304 stainless steel
 (Std - 10 ga. Galv. steel)

FRAME & BOLT HOLE CONSTRUCTION OPTIONS

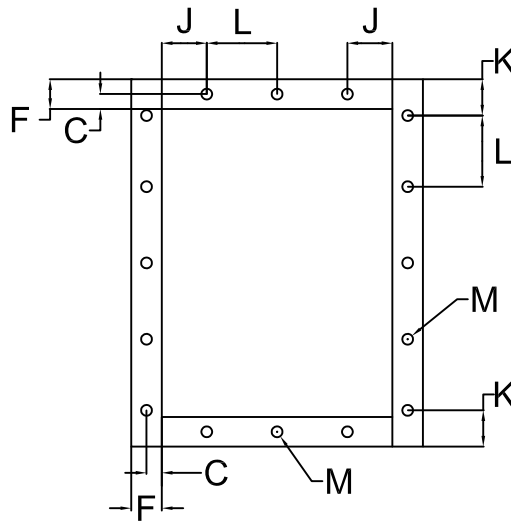
Flange (F Dim): Standard - 2"
 Optional - 1-1/2" to 4"

Bolt holes: (Standard construction is **no** bolt holes)
 Optional - Unlited Enertech recommended standard pattern.
 Dim. "M": 7/16" dia. hole
 Dim. "L": 6" Center to Center

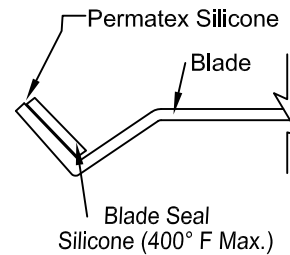
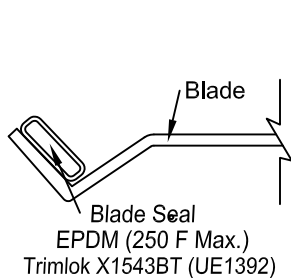
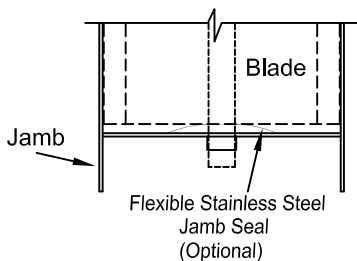
Web Depth (D Dim): Standard - 8"
 Optional - 8" to 12"

Note: Customer must be within Min. or Max limits on table below.

Dim.	Min or Max	Standard	Description
J	min. 3/4"		First/Last Space in <u>Head/Sill</u>
N1	min. 1.0"		No. of holes in <u>Head/Sill</u>
K	min. F/2"		First/Last Space in <u>Jamb</u>
N2	min. 1.0"		No. of holes in <u>Jamb</u>
C	.75*D" to 3/4"	F/(2*M)"	Centerline of bolt hole from inside edge of frame
L	2" to 12"	6.0"	Hole Spacing
M	1/4" to 11/16"	7/16"	Mounting hole Diameter



BLADE AND JAMB SEAL OPTIONS



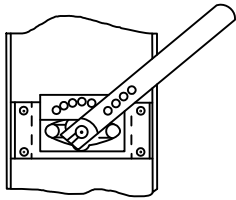
Note: Adhesive w/Permatex RTV Silicone #26C

OTHER OPTIONS:

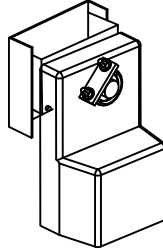
- ▣ Two hole flanged ball bearings
 - ▣ with grease fittings
 - ▣ permanently sealed
- ▣ Stainless steel sleeve bearing
- ▣ Manifold hydraulic hi-pressure grease system
- ▣ Removable jamb linkage enclosure
- ▣ Powder coated 8 mills-thermoplastics polyamides based on nylon 11
- ▣ 1000°F resistance powder coated

ACTUATOR OPTIONS

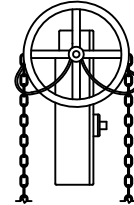
Model **H-620/621** has available many operators shown below that can be factory mounted by United Enertech. Consult factory for other operators not shown.



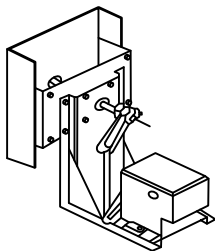
Hand Quadrant #2



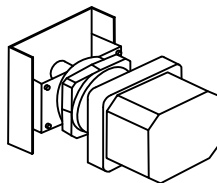
Direct Drive Mounted
Electric Actuators



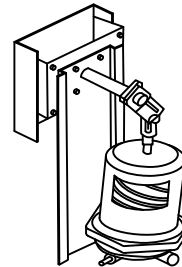
Pull Chain and
Worm Gear



Foot Mounted Actuators
Such as Honeywell,
Siebe/Barber Coleman



RCS Surepowr TM



Pneumatic
Diaphragm

Suggested Specifications

Industrial Grade Rectangular Dampers meeting the following specifications shall be furnished and installed where shown on drawings and described in the schedule. The damper frame shall consist of heavy 10 gauge steel with a 2" minimum depth flange/web. The damper blade shall be of a single thickness, heavy 10 gauge steel crimped design. The axle shall be 3/4" dia. plated steel. Bearings shall be of the bronze oilite sleeve type to minimize wear. Also submitted with submittal package is the dampers performance data such as pressure drop, leakage, and temperature ratings. The damper shall be suitable for velocities up to 6000 fpm at a pressure differential of 15" wg depending on width. Damper shall be United Enertech **Model H-620/621** or equivalent.

ADDITIONAL INFORMATION THAT MAY BE ADDED TO SPECIFICATIONS:

Damper shall be factory supplied with Blade Seals for low leakage. Blade Seals shall be PVC (180°F), EPDM (250°F), or Silicone (450°F) {Specifier to choose one}. Damper shall also have flexible stainless steel jamb seals for low leakage. Frame and blades shall be 304 or 316 Stainless Steel {Specifier to choose one}. Dampers shall be shipped with factory installed bolt hole patterns as shown on drawings.