

**INDUSTRIAL ISOLATION DAMPERS**  
**Model HD-492-ISO**

**DESIGN / APPLICATION**

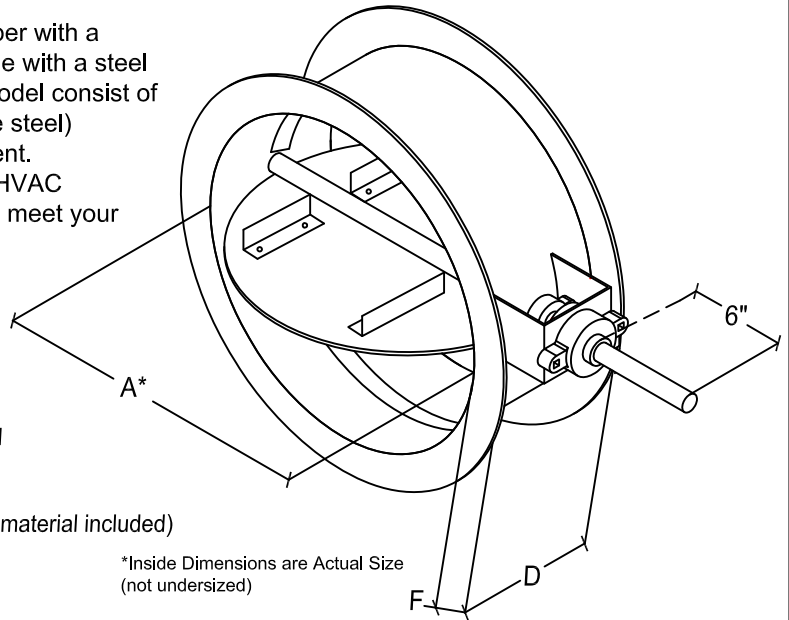
Model **HD-492-ISO** is a Round Industrial Air Control Damper with a single skin 3/16" [4.76mm] - 1/4" [6.35mm] thick steel blade with a steel retainer ring to secure a 450°F [232°C] blade seal. This model consist of a heavy duty flanged frame (10 ga to 3/16" [4.76mm] plate steel) designed for direct attachment to the ductwork or equipment.

**HD-492-ISO** model is ideal for balancing and/or shut off HVAC applications in the industrial systems with many options to meet your needs.

**STANDARD CONSTRUCTION**

(see table below for specifics)

- Frame: Steel channel
- Blades: Steel, w/ retainer rings for seals
- Axles: Steel
- Bearings: Lubricated ball bearings w/ packing gland, \*\*Type VI
- Finish: Baked Powder Polyester
- Seals: Double Lapped Silicone 450° F [232°C]
- \*\*over 200° F [93°C] (450° F [232°C] packing gland material included)

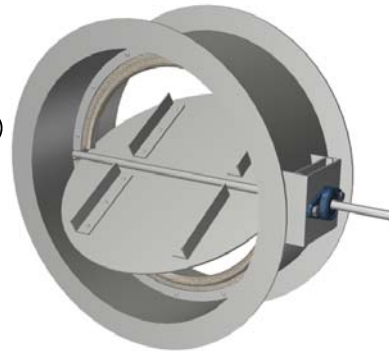


**SIZE LIMITATIONS**

Minimum Size: 4" [102mm] Diameter  
 Maximum Size: 60" [1524] Diameter

**RATINGS**

- Velocity: 6400 fpm
- Pressure: 20 in [508mm] w.g.- differential pressure (up to 30" [762mm] dia)  
 15 in [381mm] w.g.- differential pressure (up to 60" [1524mm] dia)
- Temperature: -20°F ~ \*450° F [-29°C ~ 232°C]
- Leakage: Shall not exceed .350 scfm per inch of blade circumference at 10" [254mm] w.g.
- 20°F to \*200° F [-29°C ~ 93°C]
- 205°F to \*450° F [96°C ~ 232°C]



**OPTIONS:**

- Bolt Holes
  - one side
  - both sides
- Stainless Steel Bearings
- Bearings (see page 3)  
 Type \_\_\_\_\_ Upgrade \_\_\_\_\_
- Hand Quadrant # \_\_\_\_\_
- Actuator Mounting Plate
- Stainless Steel Construction
  - 304 S.S.
  - 304L S.S.
  - 316 S.S.
  - 316L S.S.

**AVAILABLE FINISHES:**

- Epoxy Powder
- Heresite Coat
- Zinc Rich Gray Primer

Diameter(A)		Frame		Flange Width F	Axle Diameter	*Blade Thickness
Above	Through	Depth D	Gauge			
3.99"	20"	6"	10	1.25"	0.75"	3/16" (thk)
20"	28"	8"	10	1.5"	1.0"	3/16" (thk)
28"	40"	8"	10	1.5"	1.50"	1/4" (thk)
40"	48"	8"	3/16" (thk)	2.0"	1.50"	1/4" (thk)
48"	60"	8"	3/16" (thk)	2.0"	1.75"	1/4" (thk)

\*blades reinforced as required.

Job Name: \_\_\_\_\_

Location: \_\_\_\_\_

Architect: \_\_\_\_\_

Engineer: \_\_\_\_\_

Contractor: \_\_\_\_\_

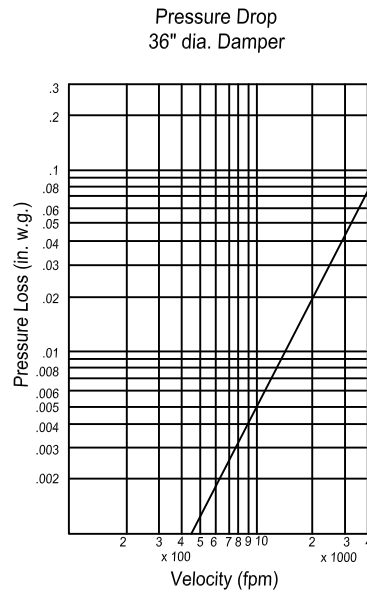
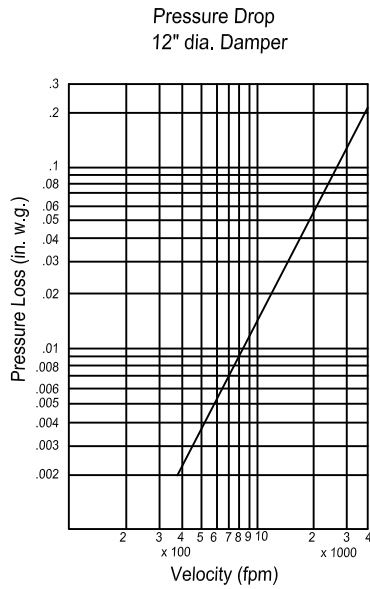
**MODEL HD-492-ISO**

DRAWN BY: CLJ	DATE: 7-6-05	REV. DATE: 7-25-16
REV. NO. 16	APPROVED BY: SDC	DWG. NO.: D-15

## MODEL HD-492-ISO PERFORMANCE DATA

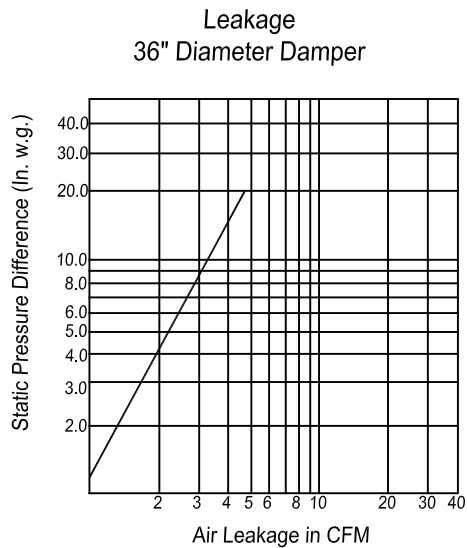
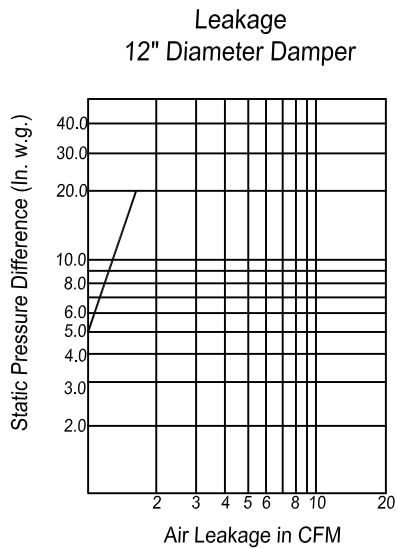
### Pressure Drop Data

The HVAC system has many factors that effect its internal pressure losses. Dampers in the system is one contributing factor. These dampers have been tested per AMCA Standard 500-D, Fig. 5.3 (ductwork upstream and downstream). There are many influences the ductwork configuration that could effect the performance below such as other objects close to the dampers, elbows or turns near the dampers, internally mounted actuators, etc. This data will assist the designer in the analysis of the system.



### Leakage Data

The damper leakage shown below is per AMCA Standard 500-D. The leakage shown is with silicone seals (standard construction). The damper is in the fully closed position.

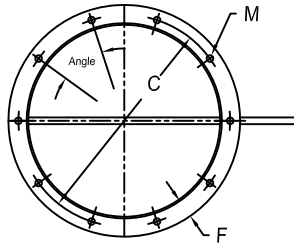


# FRAME CONSTRUCTION OPTIONS

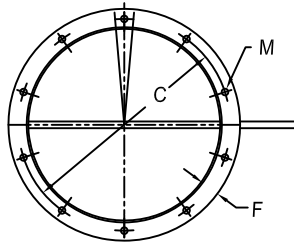
Bolt Holes: Standard construction is no bolt holes. Optional: Bolt holes in one flange or both flanges

If bolt holes are required, United Enertech recommends either pattern shown on the drawings below. The patterns shown below "Parallel to Axle" or "Straddle Axle" drawings should be specified when ordering. The table below also gives further details and recommendations on our standard hole patterns. Should a custom hole pattern be required, then it must be approved and sent in at time of order.

Bolt Holes  
Parallel to Axle Centerline (P)



Bolt Holes  
Straddle Axle Centerline (S)



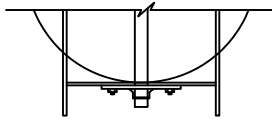
United Enertech Recommended Bolt Hole Pattern  
(Bolt Holes Parallel to Axle Centerline)

Diameter/ID (A)		Number of Holes	Mounting Hole Diameter "M"	Bolt Circle Diameter "C"	Degrees Between Holes
Above	Through				
4"	5"	4	3/8"	*	90
5"	8"	6	3/8"	*	60
8"	11"	6	7/16"	*	60
11"	18"	8	7/16"	*	45
18"	24"	12	7/16"	*	30
24"	36"	16	7/16"	*	22.5
36"	58"	24	7/16"	*	15
58"	60"	32	9/16"	*	11.25
60"	72"	36	9/16"	*	10

\* Bolt Circle Diameter = Damper Diameter + Flange Height + 1/4"

Quantity	Max. Temp. (if higher than 250°F)	"A" Diameter	Bolt Hole Information			
			# of Holes	M Dia.	C Dia.	Placement (P or S)

# BEARING OPTIONS



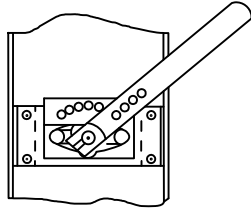
Type 3: Two Hole Pressed Steel Sealed Bearing

Options:

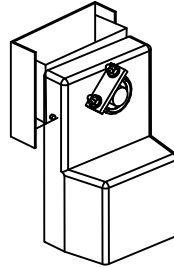
- O-Ring Seal
- Bearing Cover
- Packing Gland, Steel
- Packing Gland, SS
- Stainless Steel Insert

## ACTUATOR OPTIONS

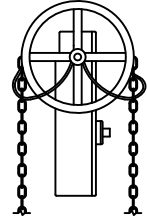
Model **HD-492-ISO** has available many operators shown below that can be factory mounted by United Enertech. Consult factor for other operators not shown.



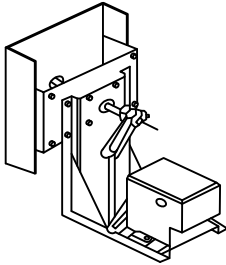
Hand Quadrant #2



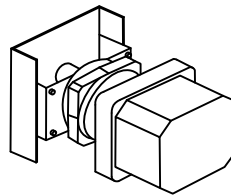
Direct Drive Mounted  
Electric Actuators



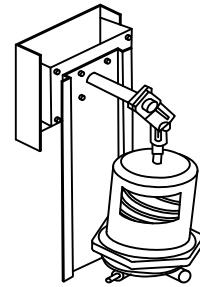
Pull Chain and  
Worm Gear



Foot Mounted Actuators  
Such as Honeywell,  
Siebe/Barber Coleman



RCS Surepwr TM



Pneumatic Diaphragm

## SPECIFICATIONS:

Industrial Round 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 gauge steel (10 ga - 3/16" plate) rolled with a 1-1/4" minimum depth flange/web. The damper blade shall be of a single thickness heavy gauge steel (3/16" plate < 28"D, 1/4" thick plate > 54"). The axle shall be a continuous length of 3/4" dia. up to 20", 1" dia. up to 28", 1.5" dia up to 48", and 2" dia over 48". Bearings shall be lubricated ball bearings with packing gland, type VI 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 6400 fpm at a pressure differential of 20" wg. up to 36" diameter and 15" w.g. up to 60" diameter. Damper shall be United Enertech Model HD-492-ISO or equivalent.

## ADDITIONAL INFORMATION THAT MAY BE ADDED TO SPECIFICATIONS:

3XX grade Stainless Steel construction for corrosion resistance. Powder Coated Epoxy or Heresite Coating to be applied for additional corrosion resistance.

