

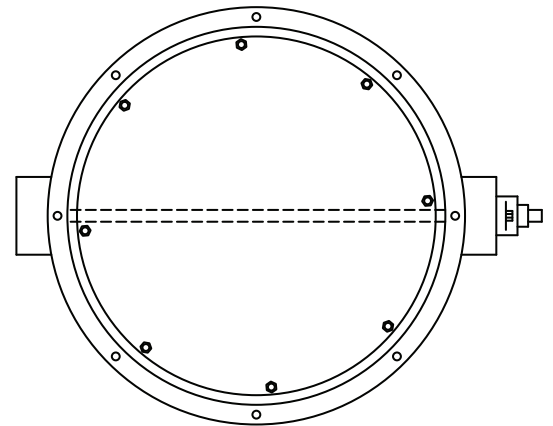
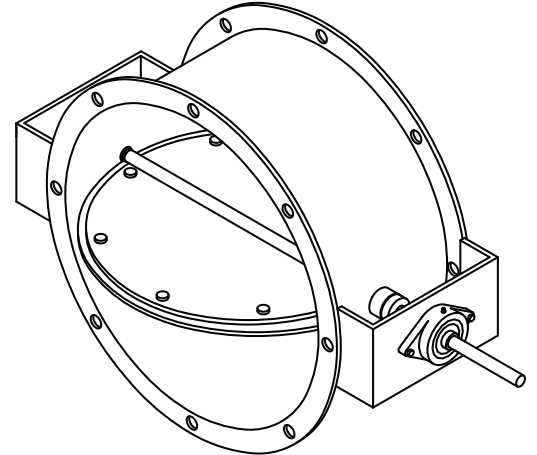


**INDUSTRIAL ROUND DAMPER  
BUBBLE TIGHT • HEAVY DUTY  
STAINLESS STEEL BLADES & FRAME  
MODEL: HTR-BT**

Model HTR-BT is an extra heavy duty, industrial bubble-tight isolation damper designed for use in high pressure industrial HVAC or process air systems. The model is ideal for applications requiring tight shut-off with extremely low leakage. The extra heavy duty flanged frame, with optional bolt holes, connects easily to flanged duct for fast, secure installation. Model HTR-BT is recommended for use in two-position control applications and can be operated with a selection of electric or pneumatic actuators, or manually with the optional locking hand quadrant or quarter-turn worm gearbox.

**STANDARD CONSTRUCTION:**

- FRAME:** Steel channel. See chart below for thickness, depth and flange dimensions.
- BLADE:** Steel, reinforced as required. See chart below for thickness.
- SEAL:** Full circumference silicone type. Secured to blade with bolted retaining ring.
- BLADE BEARING:** Sealed ball bearings, relubricable, external mounted with double silicone o-ring shaft seals.
- BLADE AXLE:** Plated steel, continuous, reinforced as required. See chart below for diameter.
- DRIVE SHAFT:** Continuous axle extends approximately 6" (152) beyond external bearing on drive side.
- MAX. VELOCITY:** 6000 FPM (30 m/s)
- PRESSURE:** 10" w.g. (2 kPa)
- TEMPERATURE RANGE:** -40°F to 250°F. (-40° to 121°C).



W x H	Minimum Size	Maximum Size
inch	6"	24"
mm	154	610

**OPTIONS:**

- BH Bolt Holes
  - 304 Type 304 Stainless Steel
  - 316 Type 316 Stainless Steel construction
  - SSA 304 stainless steel axles only
  - HDLQ Locking hand quadrant
  - FMA Factory mounted actuator. Special \_\_\_\_\_.
  - Special features: \_\_\_\_\_.
- Note: For variations not shown, contact factory. Modulating control is not recommended due to rubbing of blade seal where axle passes through frame.

**Special Construction:**

For higher temperatures, velocities, and pressure (up to 30 in. wg) contact factory.

Size ID	Frame Depth & Web Thickness	Flange	Blade Thickness	Axle Diameter	Maximum Static Pressure	Maximum Velocity
6" to 9"	6" x 1/4" Thk.	1-1/4"	1/4"	1/2"	10" w g	6000 fpm
>9" to 14"	9" x 1/4" Thk.	1-1/4"	1/4"	1/2"	10" w g	6000 fpm
>14" to 24"	9" x 1/4" Thk.	1-1/4"	1/4"	3/4"	10" w g	6000 fpm

The damper blade seal is designed and tested for leakage performance at the specified design pressure (typically 10" to 30" WC). Each Safe-Air Model HTR-BT is tested for leakage in conformance to AMCA Standard 500-D.



**SCHEDULE TYPE:**

**PROJECT:**

**ENGINEER:**

**CONTRACTOR:**

Page 1 of 2  
Dimensions are in inches (mm)

DATE	B SERIES	SUPERSEDES	DRAWING NO.
3 - 6 - 25	HTR	NEW	HTR-BT



**INDUSTRIAL ROUND DAMPER  
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STAINLESS STEEL BLADES & FRAME  
PERFORMANCE DATA  
MODEL: HTR-BT**

The HTR-BT design has been engineered in accordance to meet specifications for furnishing and installation on schedules such as heavy duty industrial grade bubble-tight dampers. Making this damper accessible for bubble-tight applications such as but not limited to, Medical Facilities, Food Processing, Laboratories, Clean Rooms, Nuclear Power Plans, Military Facilities, Federal Facilities, Biotech Labs & Microelectronic Manufacturing.

- HTR-BT is manufactured of 316 stainless steel, 304 stainless steel and Galv. Steel also available.
- Available in a wide variety of sizes, from 6" to 24".
- Manual or electric actuators are available.
- Includes pre-drilled bolt holes in flange.

Dampers are bubble-tight up to 10" W.G. (2.5 kPa) differential pressure. The air leakage is based on operation between 32°F - 120°F (0°C - 49°C).

TORQUE REQUIREMENTS	
Damper Diameter	Torque (in - lbs)
24"	962

**STANDARD BOLT HOLE PATTERN FOR HEAVY DUTY ROUND DAMPERS**

Order Size (Inches)	Flange (F)	Holes Size (Diameter)	Number of Holes	Bolt Circle Factor
6	1-1/4"	9/32"	6	1-5/16"
7	1-1/4"	3/8"	6	1-1/2"
8	1-1/4"	3/8"	6	1-9/16"
9	1-1/4"	7/16"	6	1-5/8"
10	1-1/4"	7/16"	6	1-13/16"
11	1-1/4"	7/16"	6	1-3/4"
12 to 18	1-1/2"	7/16"	8	1-3/4"
19 to 22	1-1/2"	7/16"	12	1-3/4"
23 to 24	1-1/2"	7/16"	12	1-7/8"

- Actual I. D. Size = Order Size + 1/8".
- Actual O. D. Size = Actual I. D. Size + (F x 2).
- Bolt Circles = Order Size + Bolt Circle Factor.

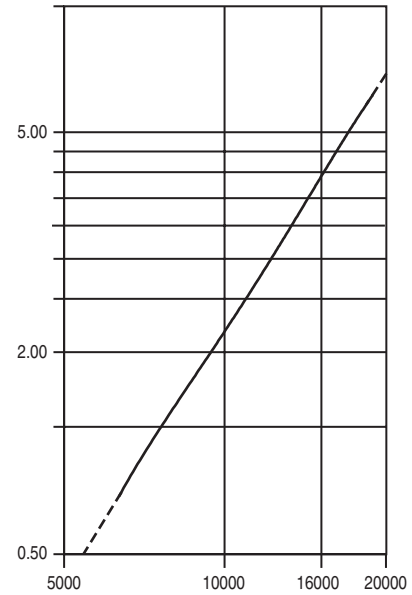
Bolt holes start perpendicular to blade axles (12 o'clock).



Safe-Air certifies that the model HTR-BT shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Programs. The AMCA Certified Ratings Seal applies to Air Leakage and Air Performance ratings.



**AIR PERFORMANCE**



**Airflow (cfm)**

Pressure drop data was conducted on test sample of 24" dia. in accordance with AMCA Standards 500-D using Figure 5.4. All data has been corrected to represent standard air at a density of 0.075 lb/ft<sup>3</sup> (1.2 kg/m<sup>3</sup>)

<b>SCHEDULE TYPE:</b>	
<b>PROJECT:</b>	
<b>ENGINEER:</b>	
<b>CONTRACTOR:</b>	

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Dimensions are in inches (mm)

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3 - 6 - 25	HTR	NEW	HTR-BT