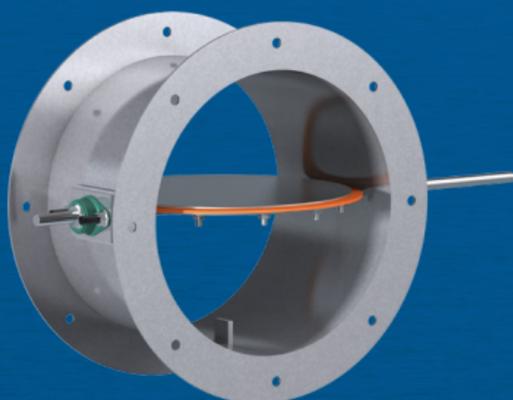


Bubble-Tight Dampers HBT & HBTR Series



Low-Leakage Isolation Dampers



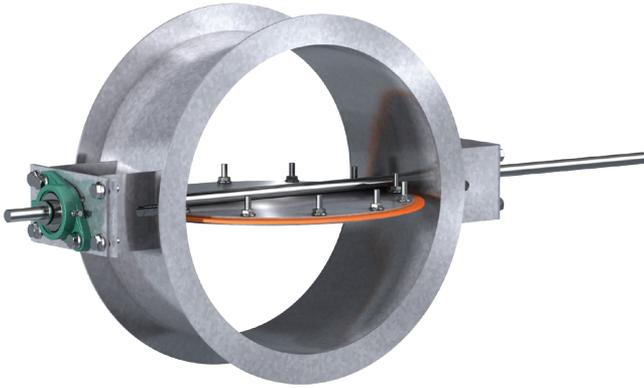
HCDR-351

- Less than .05 cfm/sq. ft. @ 10 in. wg (24 in. diameter)
- Heavy-duty round flanged frame
- Round butterfly style blade
- Silicone blade seal (field replaceable for easy maintenance)
- Wide variety of actuators available. Fast acting, spring return actuators are recommended for most applications
- Optional mounting holes on the flange



HCD-221

- 3 cfm/sq. ft. @ 10 in. wg
- Heavy-duty flanged channel frame
- Double skin blades
- Silicone blade seal
- Wide variety of actuators available. Fast acting, spring return actuators are recommended for most applications
- Optional mounting holes on the flange



HBTR Series

- Zero leakage up to 40 in. wg
- Heavy-duty round flanged frame
- Double skin round blade
- Silicone blade seal (field replaceable for easy maintenance)
- Wide variety of actuators available. Fast acting, spring return actuators are recommended for most applications
- Optional mounting holes on the flange



Bubble-Tight Test



HBT-221/HBT-321

- Zero leakage up to 10 in. wg (HBT-221)
- Zero leakage up to 20 in. wg (HBT-321)
- Heavy-duty flanged channel frame
- Double skin blades
- Silicone blade seal
- Wide variety of actuators available. Fast acting, spring return actuators are recommended for most applications
- Optional mounting holes on the flange



HBT-221 Video

Models	Max. Velocity	Max. Pressure	Temperature Ranges	Leakage
	fpm (m/s)	in. wg (kPa)	°F (°C)	
HBT-221	4000 (20.3)	10 (2.5)	-40 to 250 (-40 to 121)	Bubble-Tight
HBT-321	4000 (20.3)	20 (5)	-40 to 250 (-40 to 121)	Bubble-Tight
HBTR-151	3900 (19.8)	10 (2.5)	-40 to 250 (-40 to 121)	Bubble-Tight
HBTR-451	6500 (33)	30 (7.5)	-40 to 250 (-40 to 121)	Bubble-Tight
HBTR-551	6500 (33)	40 (10)	-40 to 250 (-40 to 121)	Bubble-Tight

Bubble-Tight Dampers

Designed for Critical Leakage Applications!

A bubble-tight damper is an isolation damper designed to meet the requirement for zero leakage. Every damper is factory tested for leakage to ensure a bubble-tight seal up to rated pressure.

Applications

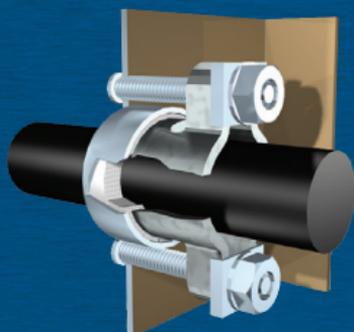
- Clean rooms
- Medical facilities
- BSL-3 and BSL-4 laboratories
- Federal buildings
- Microelectronics manufacturing
- Bag In Bag Out (BIBO) filtration

Bearings and Axle Seals



Relubricable Ball Bearing

The relubricable ball bearing features a flanged cast iron housing that is bolted externally to the damper frame. Capable of high radial loads, this bearing can be applied in applications with high pressures or velocities. Seals protect the bearings' balls from the environment, making this bearing a better choice for applications in dirty environments. External grease zerks allow for easy relubrication of the bearing.



Double Gland Stuffing Box

The double gland stuffing box is used to maintain zero leakage through axle penetrations.

FAQ

Q: Are bubble-tight dampers tested at the factory before shipment?

A: Yes, all bubble-tight dampers are tested to AMCA Standard 500D for bubble tightness prior to shipment. Testing certifications are shipped with the dampers to the jobsite. Additional copies are kept at Greenheck if needed.

Q: Can Greenheck build bubble-tight dampers with heavier frame and blade gauges if required?

A: Yes. Contact the factory for special pricing.

Q: Does Greenheck meet ASME NQA-1 “Quality Assurance Program Requirements for Nuclear Facilities”?

A: Our bubble-tight damper testing meets the requirements of ASME AG-1. Our overall Quality Management Systems meet ISO9001 and we can offer system enhancements to help support a client’s NQA-1 system if this is required for the job.

Q: My specification calls for “Pressure Decay Testing”. Does Greenheck do this?

A: Although pressure decay testing per ASME codes have been obsoleted, we can still perform this type of testing if required. Contact the factory for pricing and/or procedures if needed.

Q: My specification calls for bubble-tight testing per ASME N509. Does Greenheck comply with this?

A: Greenheck tests to zero bubbles and reworks any unit found to create any bubble before shipment. Therefore, we do comply with the requirements of ASME N509.

Greenheck

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00.DMP.NB008 R2 7-2023 SN