POTTORFF®

When Life Safety is a concern, we have the solution!

Heavy Duty Tunnel Transit Control Dampers

- Pressure Equalization
- Emergency Fire/Smoke Control
- Qualified to NFPA-130, 502 and UL 555S

Models TD-93, TD-94

Pottorff's tunnel specific dampers are industrial strength grade with the ability to function in the challenging tunnel environment. When extraction of smoke and toxic fumes are required for passenger safety and evacuation you can rely on Pottorff for the solution. Our Model TD-93 (parallel blade) and TD-94 (opposed blade) dampers are engineered for use in these transit tunnel systems where tight shutoff at high velocity and/or pressure is required.

- These dampers are designed to withstand 482^{0} F for one hour as per NFPA 130.
- Simulated 3,000,000 train pressure reversals @ 15 in. wg. of differential pressure.

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Visit www.pottorff.com for more information about this model.

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model TD-93, TD-94 Data Sheet

Application

The TD-93 and TD-94 industrial control dampers are specifically engineered and qualified for use in transit tunnel systems where tight shutoff at high velocity and/or pressure is required. The TD-93 and TD-94 meet the demanding requirements for strength, leakage and operability in accordance with NFPA-130, NFPA-502, and UL-555S.

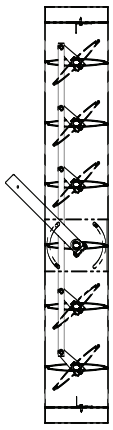
Ratings

Damper Width	Maximum System Pressure	Maximum System Velocity
12" (305)	32.0 in. wg (8.0 kPa)	4000 fpm (20.3 m/s)
24" (610)	27.0 in. wg (6.7 kPa)	4000 fpm (20.3 m/s)
36" (914)	22.0 in. wg (5.5 kPa)	4000 fpm (20.3 m/s)
48" (1219)	17.0 in. wg (4.2 kPa)	4000 fpm (20.3 m/s)

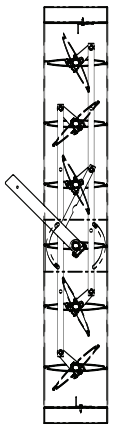
***Leakage:** 1.3 cfm/ft² @ 2.0 in. wg (0.007m³/s/ m² @ 0.5 kPa)
2.0 cfm/ft² @ 5.0 in. wg (0.01m³/s/ m² @ 1.25 kPa)
4.0 cfm/ft² @ 8.0 in. wg (0.02m³/s/ m² @ 2.0 kPa)
8.0 cfm/ft² @ 15.0 in. wg (0.04m³/s/ m² @ 3.75 kPa)
34.0 cfm/ft² @ 22.0 in. wg (0.17m³/s/ m² @ 5.5 kPa)

Temperature: 482°F (250°C) for 1 hour per NFPA -130

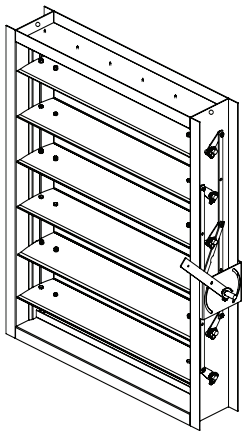
Pressure Reversal Cycles: 3,000,000 simulated train pressure reversals @ 15 in.wg (3.7 kPa) of differential pressure.



TD-93



TD-94



Model **TD-94**
Damper dimensions furnished approximately net I.D..

Standard Construction

Frame: 8" × 2" × 12 ga. (203 × 51 × 2.8) galvanized steel channel.

Blades: 14 gauge (2) 6063-T5 extruded aluminum airfoil with metal-to-metal blade overlap. Parallel (model TD-93) or opposed (model TD-94) action.

Axles: 3/4" (19) diameter stainless steel.

Linkage: 3/16" × 3/4" (5 × 19) tie bars and 3/8" (10) pivot pins concealed in frame. All components are stainless steel.

Bearings: Oil impregnated sintered stainless steel sleeve pressed into frame.

Control Shaft: 3/4" × 10" (19 × 254) round drive axle with shaft support bracket and bearing mounted to damper frame with factory mounted manual locking quadrant.

Lifting lugs: 7/8" (22) diameter, one on each side of jamb frame.

Blade Seal: Silicone, mechanically locked into blade.

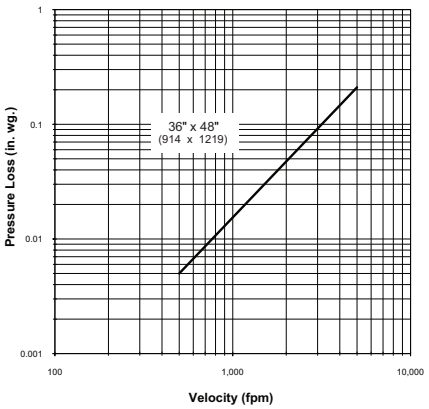
Jamb Seal: Flexible stainless steel compression type.

Minimum Size: TD-93 (two blades): 12" × 12" (305 × 305) TD-94 (two blades): 12" × 12" (305 × 305)

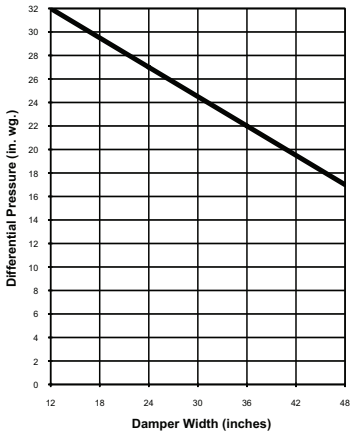
Maximum Size: Single section: 48" × 96" (1219 × 2438) Multiple sections: Unlimited

Pressure Loss vs. Velocity

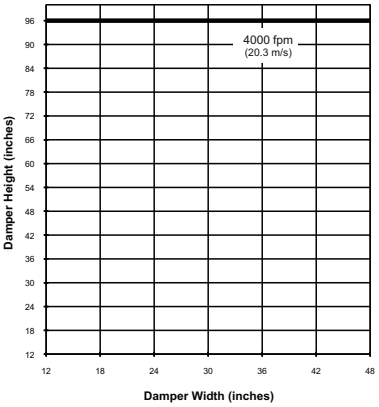
Ducted Inlet and Outlet



Pressure Limitations



Velocity Limitations



* Results based upon a 36" × 48" (914 × 1219) damper.

Information is subject to change without notice or obligation.

NOTE: Dimensions in parentheses ( ) are millimeters.