HTD-630

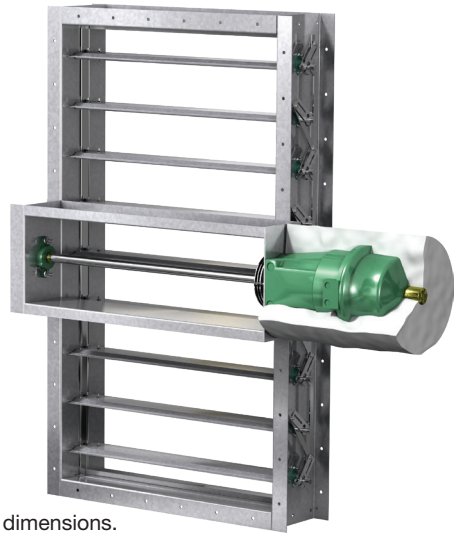
Tunnel Transit Damper

meets UL Class I leakage rate

Application

Model HTD-630 is a heavy duty flanged frame style industrial control damper qualified for use in tunnel and transit systems. The airfoil blades, silicone blade seals and stainless steel jamb seals meet the demanding requirements for strength and operability to standards such as NFPA-130 and 502. The leakage of the HTD-630 meets UL Class I at 12 in wg.

The design can be modified and the product can be qualified to meet the requirements of most tunnel transit specifiations.



*Actual inside dimensions.

Ratings

Velocity

Up to 4000 fpm (20.3 m/s)

Temperature

250°F (121°C) continuous;
482°F (250°C) for 2 hours (NFPA 130, 502).
Consult factory for high temperature options

Pressure

Up to 24 in. wg (6 kPa) - differential pressure

Fatigue Cycles

8 million reverse cycles at 24 in. wg (6kPa)

Size Limitations	
The following table provides minimum and maximum single section size. Multiplie sections can be linked together to create larger damper assemblies.	
Single Section Size	
Minimum	12 in. W x 12 in. H (305mm x 305mm)
Maximum	60 in. W x 96 in. H (1524mm x 2438mm)

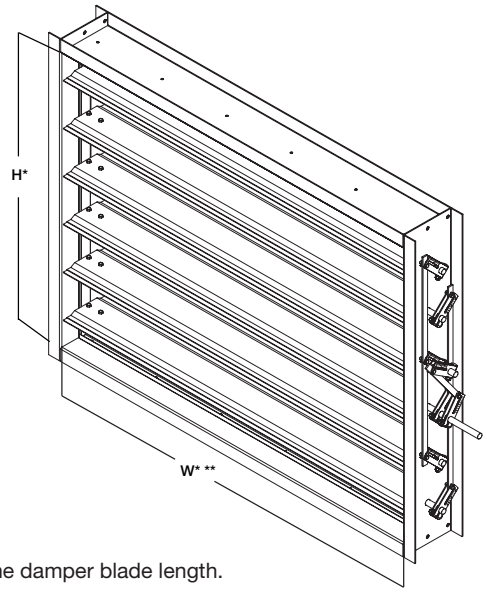
Options

- Wide range of electric (spring return or power open/power closed) and pneumatic actuators available (482°F (250°C) for a minimum of 1 hour or other temperatures as required)
- High Temp Limit Switches
- Junction boxes with factory wiring
- Mounting holes in flanges
- Multiple panel assemblies
- Perimeter gaskets
- Rubbish screens
- Structural supports

Construction

	Standard	Optional
Frame Depth	12 in. (305 mm)	8 in. (203 mm) 10 in. (254 mm)
Frame Material	Galvanized (ASTM A653)	304SS, 316SS
Frame Thickness	10 ga. (3.4 mm)	12 ga. (2.7 mm) 0.188 in. (4.8 mm) 0.25 in. (6.4 mm)
Flange Width	3 in. (76mm) front flange 2 in. (51 mm) back flange	1½ in. - 4 in. (38 mm - 102mm),
Blade Action	Parallel	Opposed
Blade Deflection	L/180	L/360
Blade Material	Galvanized steel (ASTM A653)	304SS, 316SS
Blade Seals	Silicone	None, Stainless steel
Blade Thickness	14 ga. (1.9 mm)	16 ga. (1.5mm) 12 ga. (2.7 mm) 10 ga. (3.5 mm)
Blade Type	Double Skin Airfoil	
Linkage	External industrial type zinc plated steel	External industrial type stainless steel
Axle Diameter	¾ in. (12.7 mm)	-
Axle Bearing	Stainless steel sleeve	Oil impregnated bronze, Relubricable ball, High temperature carbon
Axle Material	Zinc plated steel	304SS, 316SS
Axle Seal	None	O-ring, Double gland
Axle Type	Stub	Full length
Jamb Seal	Compression type stainless steel	None

Assembly



*Actual inside dimensions.

** The W dimension is ALWAYS parallel with the damper blade length.

Multiple Panel Assemblies

Multiple panels can be stacked on top of each other and side-by-side to span opening that are larger than the maximum single panel damper. Jackshafting can be added to couple multiple panels, allowing them to be operated using a single actuator. Consult the factory for design assistance for multiple panel assemblies.

3 sections wide
1 section high

3 sections wide
2 sections high

Pressure Drop

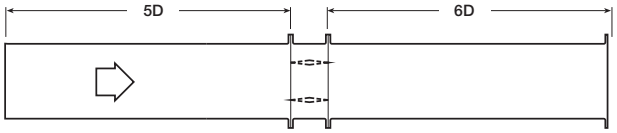
This pressure drop data was conducted in accordance with AMCA Standard 500-D using the two configurations shown. All data has been corrected to represent standard air at a density of .075 lb./ft^3 (1.2 kg/m^3).

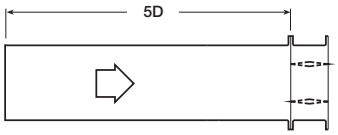
Actual pressure drop found in any HVAC system is a combination of many factors. This pressure drop information along with an analysis of other system influences should be used to estimate actual pressure losses for a damper installed in a given HVAC system.

AMCA Test Figures

Figure 5.3 Illustrates a fully ducted damper. This configuration has the lowest pressure drop of the two test configurations because entrance and exit losses are minimized by straight duct runs upstream and downstream of the damper.

Figure 5.2 Illustrates a ducted damper exhausting air into an open area.

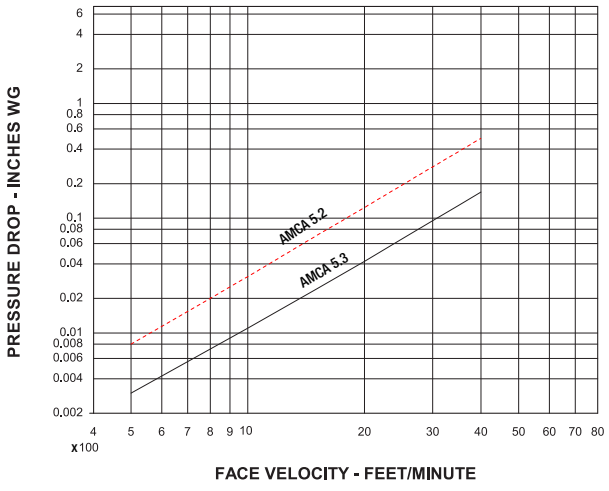




$$D \sqrt{\frac{4\,(W)\,(H)}{3.14}}$$

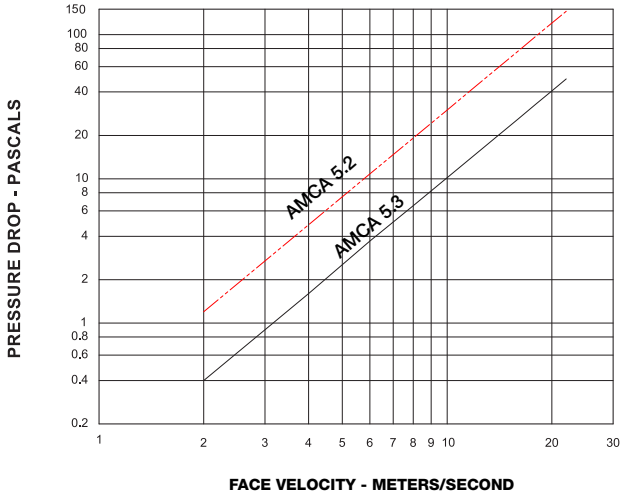
Pressure Drop (english version)

42 in. x 42 in. (1067mm x 1067mm) Damper



Pressure Drop (metric version)

42 in. x 42 in. (1067mm x 1067mm) Damper

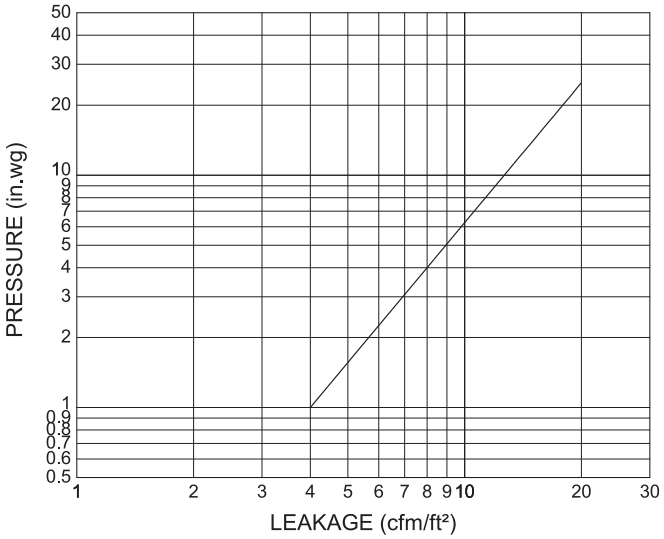


Leakage

Damper leakage (with blades fully closed) varies based on the type of low leakage seals applied. Leakage testing was conducted in accordance with AMCA Standard 500-D and is expressed as CFM per sq. ft. of damper face area. All data has been corrected to represent standard air at a density of .075 lb./ft^3 (1.2 kg/m^3).

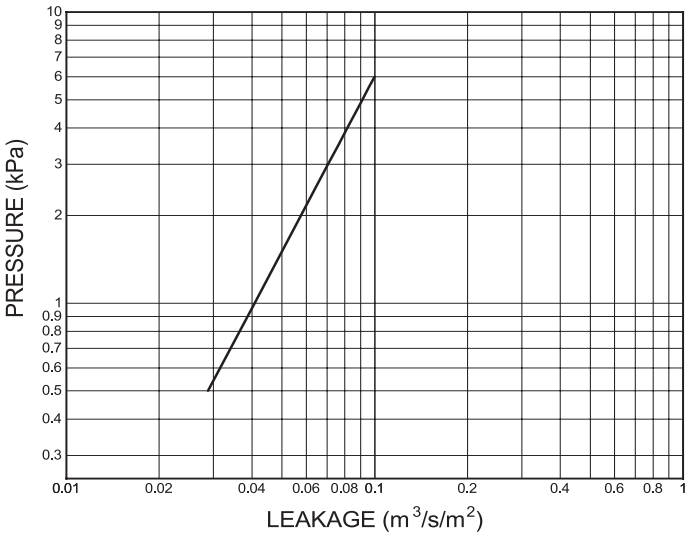
Leakage (english version)

42 in. x 42 in. (1067mm x 1067mm) Damper



Leakage (metric version)

42 in. x 42 in. (1067mm x 1067mm) Damper



Document Links

Installation Instructions

Heavy Duty/Industrial Damper Catalog

Tunnel Transit

Damper Interactive Selection Guide

Warranty

Specifications

Industrial grade control dampers meeting the following specifications shall be furnished and installed where shown on plans and/or as described in schedules.

Dampers shall consist of: a 10 ga. (3.4mm) galvanized steel channel frame with 12 in. (305mm) minimum depth and 3 in. (76mm) front flange, 2 in. (51mm) back flange; double skin airfoil type blades fabricated from two layers of 14 ga. (1.9mm) galvanized steel; ¾ in. (19mm) dia. plated steel axles turning in oil impregnated sintered stainless steel bearings press-fit into frame; and external (out of the airstream) blade-to-blade linkage. Blade seals shall be silicone rubber and jamb seals shall be flexible stainless steel.

Damper manufacturer's printed application and performance data including pressure, velocity and temperature limitations shall be submitted for approval showing damper suitable for pressures to 24 in. wg
(6 kPa), velocities to 4000 fpm (20.3 m/s) and temperatures to 482°F (250°C) for one hour*. Testing and ratings to be in accordance with AMCA Standard 500-D and NFPA-130/502 as applicable.

Dampers shall meet the requirements of NFPA-130, NFPA-502 and remain fully operational during and after exposure to a temperature of 482°F (250°C) for a minimum of 1 hour*.

Basis of design is Greenheck model HTD-630.

*Consult factory for other temperatures.

GREENHECK
P.O. Box 410 • Schofield, WI 54476-0410 • 715.359.6171 • greenheck.com

Copyright ® 2023 Greenheck Fan Corporation
HTD-630, R10, April 2023
Greenheck Fan Corporation reserves the right to make product changes without notice