MODEL PC80

Industrial Damper • Single Thickness Blade • Round Frame • Fabricated Steel • 250°F Max Temperature

Standard Construction and Materials

FRAME: Fabricated steel channel. Channel depth equal to blade diameter of 10" and less.

BLADE: Single thickness with reinforcing gussets welded to blade parallel to air flow as required.

SHAFT: Plated steel continuous length welded to blade.

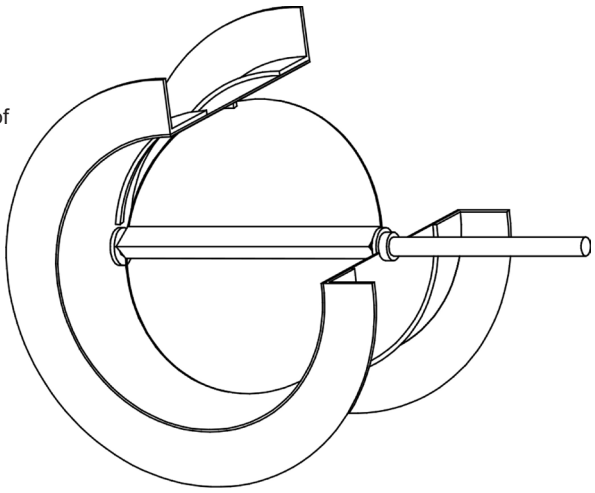
BEARINGS: Sintered stainless steel flanged sleeve, pressed into the frame.

STOP: ¼" x ¼" metal bar for sizes up to 12" dia. ¼" x ½" metal bar above 12" dia. to 48" dia. Shall be welded to interior perimeter of sleeve.

OPERATOR: Extended shaft 6" long beyond frame flanges.

FINISH: Mill, galvanized with zinc rich touch up.

TEMP. LIMIT: 250°F
Consult the factory for temperature limits over 250°F.



Options

Materials - stainless steel, extruded aluminum, and others
Stuffing boxes and replaceable packing
Ball bearings
Finishes - Acrylic, baked enamel, etc.
Perimeter holes: one flange or two flanges
Low leakage seal systems

Notes

1. ¼" nominal deduction will be made to the opening size given.
2. Construction may be with other materials when required to meet special conditions, such as: temperature, pressure, velocity, system environment, or other specifications.
3. Approximate shipping weight is 5 lbs./in. of inside diameter.

The construction described above is conservative. There are applications where this design may be used in sizes that can operate satisfactorily when static pressures are above 15 inches.

Damper Sizing Info

Inside Diameter		Frame		Blade Thickness	Shaft Diameter
Above	Through	Depth	Flanges		
6"	12"	10 GA.	1¼" x 1¼" x ⅛" for 6" to 11" dia. 1½" x 1½" x ⅛" for 12" dia.	12 GA.	½"
12"	24"	10" 10 GA.	1½" x 1½" x ⅛" for 12" to 15" dia. 1½" x 1½" x 3⁄16" for 16" to 24" dia. 2" x 2" x 3⁄16" for 25" to 48" dia.	10 GA. to 36" dia.	¾"
24"	48"			10 GA. w/ (2) gussets 37" to 48" dia.	1"

							Union Made
Item #	Qty	Damper Size I.D.	Tagging		Remarks		
Arch. / Eng.:			EDR:		ECN:	Job:	
Contractor:							
Project:			Date:		DWN:	DWG:	

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Pressure and Velocity Limitations

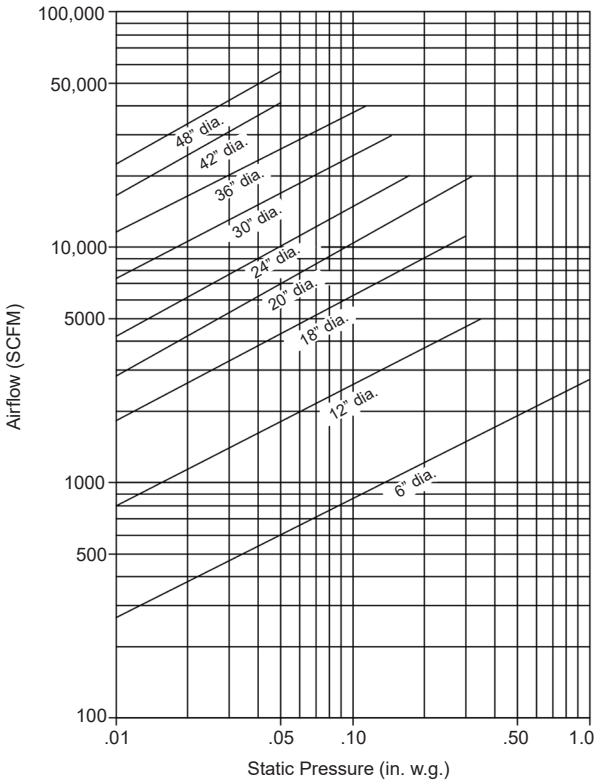
The model PC80 damper has been designed to operate satisfactorily within the limits shown below. Consult the factory when applications exceed the limits shown.

Air Leakage (Total CFM)

Damper Diameter	Max System Static Pressure	Max System Velocity
6” to 12”	12”	6000 FPM
13” to 24”	10”	6000 FPM
25” to 36”	8”	5000 FPM
37” to 48”	8”	4000 FPM

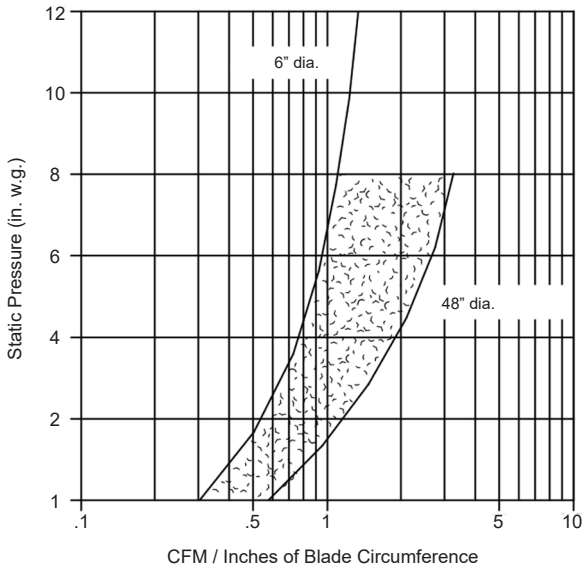
Damper performance for pressure drop and air leakage is based on AMCA Standard 500 using fig. 5.3 (damper installed with duct upstream and downstream for pressure drop) and fig. 5.4 for air leakage. Static pressure and CFM are corrected to .075 lbs./cu.ft. air density.

Pressure Drop



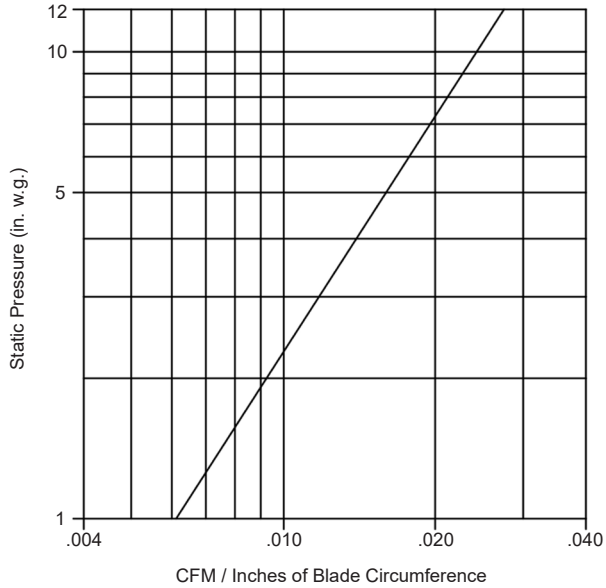
Air Leakage Charts

Standard Construction
using metal bar stop



Leakage results shown are based on tests using various damper sizes. The shaded area between the graph lines indicate normal expected leakage range for a standard damper operating conditions and sizes.

Optional Construction
using low leak seal system*



* Low Leakage seal system consists of: rubber seal bolted to blade, stuffing box with packing gland material, and outboard bearing.

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