

VFBD35

IRIS Balancing Damper



APPLICATION

Ruskin IRIS Balancing Damper model VFBD35 is an excellent solution for airflow measurement, balance and control at branch takeoff and exhaust locations. It provides fast and accurate measurement for office buildings, schools, pharmaceuticals, clean room environments and laboratories.

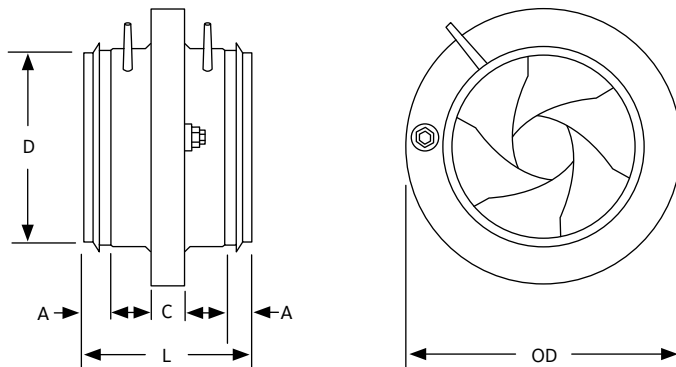
Since measurement and control are accomplished at the same location, initial installation and commissioning time is reduced dramatically. The IRIS damper is perfect for applications requiring air balance on a regular basis.

STANDARD CONSTRUCTION

Frame	22 gauge (.759) galvanized steel.
Blade Segments	22 gauge (.759) galvanized steel.
Seal	Full circumference neoprene.
Casing Leakage	6 CFM (170 l/s) Max.
Air Pressure Taps	Plastic with integral plastic caps.
Accuracy	±5%
Capacities	15 cfm (425 l/s) to 20,000 cfm (566337 l/s).
Finish	Mill.
Damper Sizes	4, 5, 6, 8, 10, 12, 16, 20, 25 & 32 (102, 127, 152, 203, 254, 305, 406, 508, 635, and 813).
Temperature Range	32°F (0°C) – 180°F (82°C) Continuous. 250°F (121°C) Intermittent (stainless option).

VARIATIONS

- ▶ Stainless Steel Frame & Blades.
- ▶ Low Pressure Transducers are available as an Accessory.
- ▶ Positive Seal.



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5
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FEATURES

- ▶ Factory calibrated for precise airflow measurement.
- ▶ Single station measurement and control.
- ▶ Blades fully retract into frame for duct cleaning.
- ▶ Reduced installation and balancing labor time.
- ▶ Linear response flow control.

NOTE:

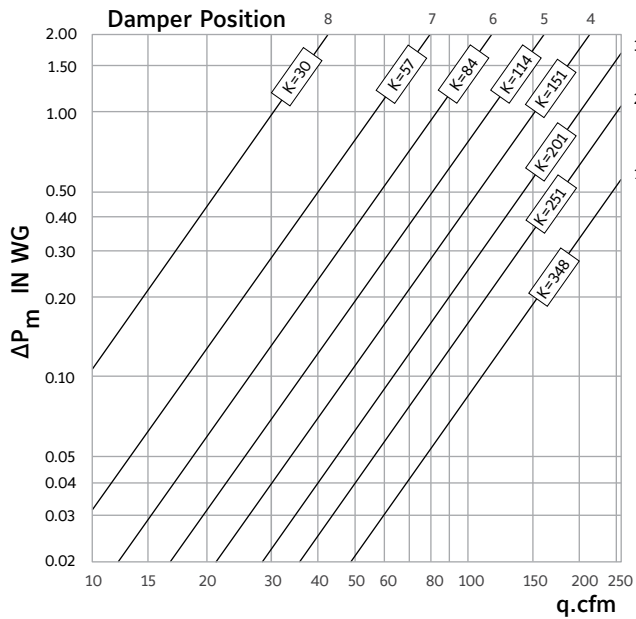
– Dimensions shown in parentheses () indicate millimeters.

DIMENSIONS

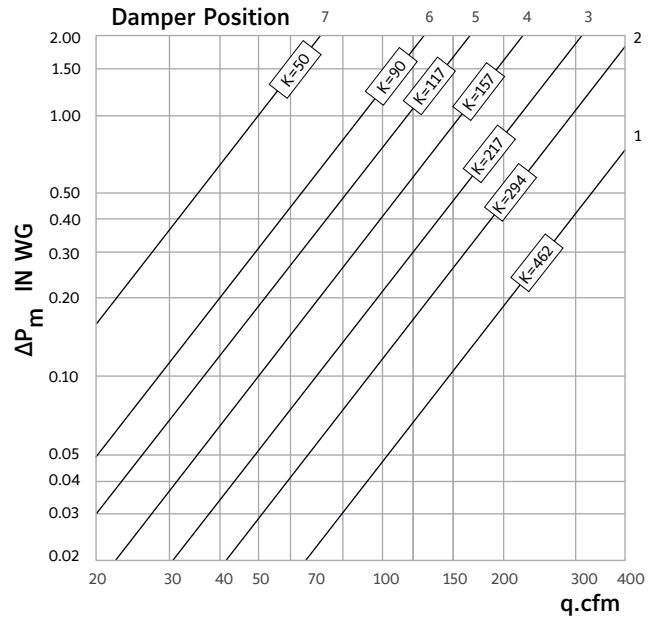
Dimensions In Inches						
Dimensions	A	C	D	L	OD	WT(lbs)
4" (102)	1.2	0.6	3.9	4.6	6.5	1.1
5" (127)	1.2	0.6	4.9	4.6	7.4	1.5
6" (152)	1.2	0.6	5.9	4.6	9.1	2.0
8" (203)	1.2	0.6	7.8	4.6	11.2	3.1
10" (254)	1.6	0.7	9.8	5.3	13.2	4.6
12" (305)	1.6	0.7	11.8	6.1	16.1	7.7
16" (406)	2.4	0.8	15.7	7.5	20.7	14.1
20" (508)	2.0	0.8	19.6	6.7	25.8	21.2
25" (635)	2.0	0.9	24.7	6.7	32.1	34.4
32" (813)	3.9	0.9	31.4	10.6	40.0	55.1

DAMPER ADJUSTMENT CHART

4" Damper Adjustment Chart

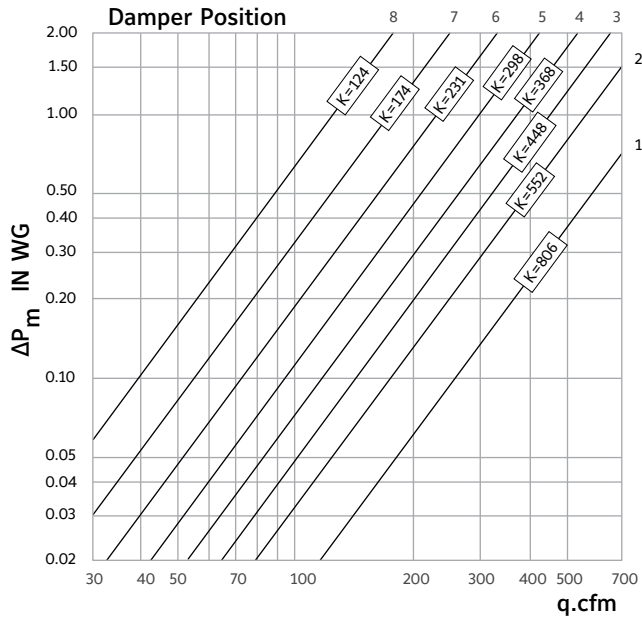


5" Damper Adjustment Chart

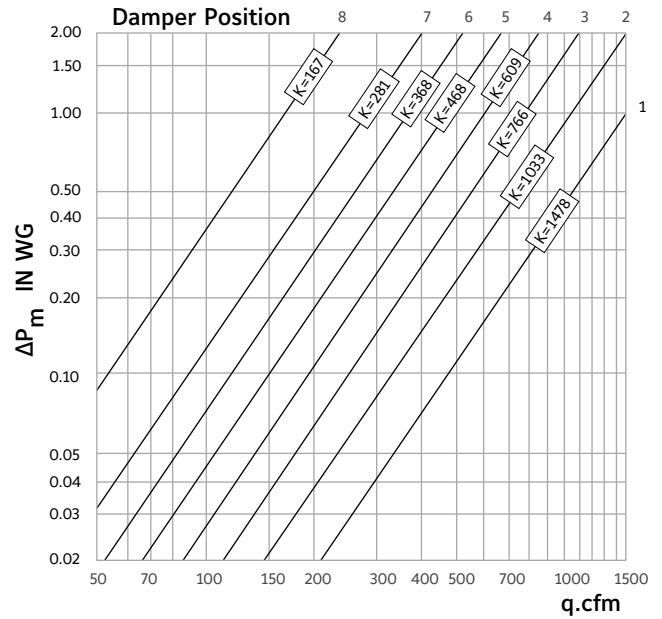


DAMPER ADJUSTMENT CHART

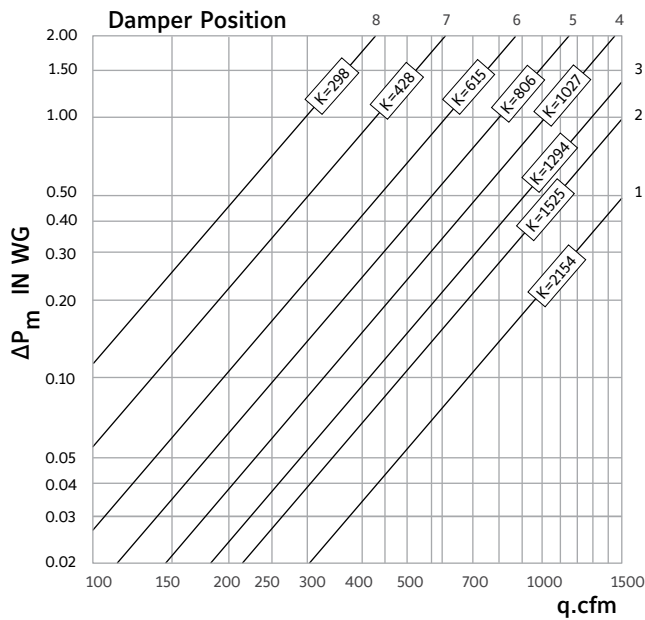
6" Damper Adjustment Chart



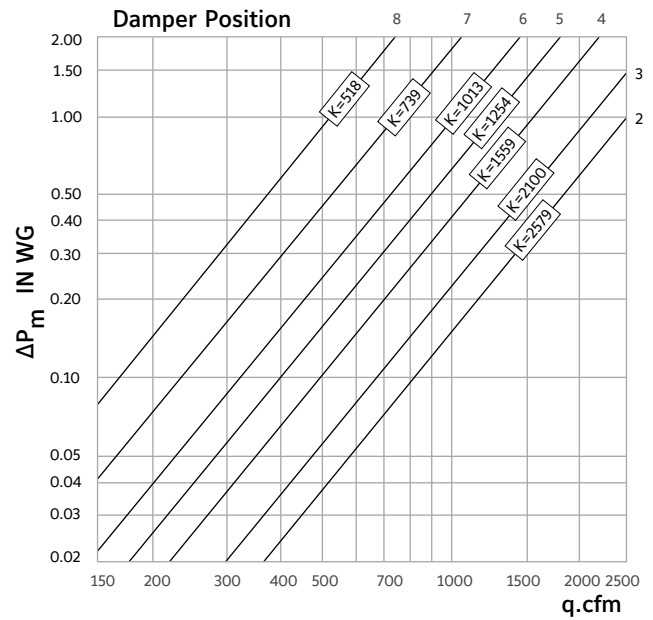
8" Damper Adjustment Chart



10" Damper Adjustment Chart

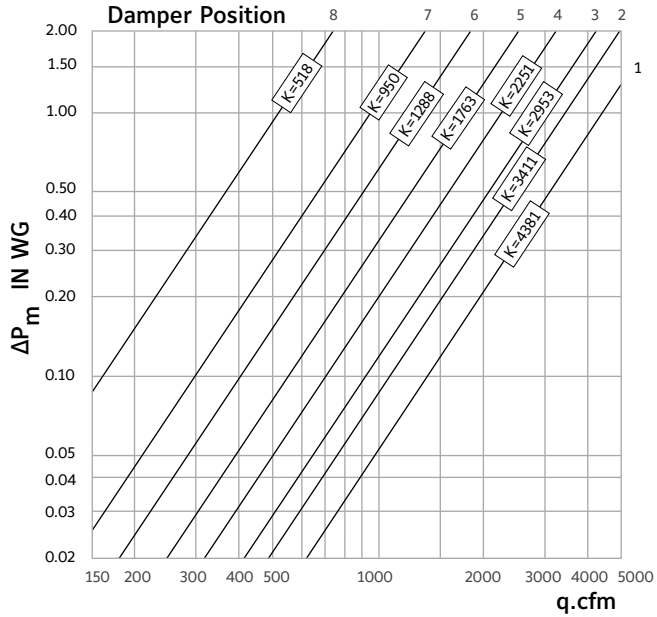


12" Damper Adjustment Chart

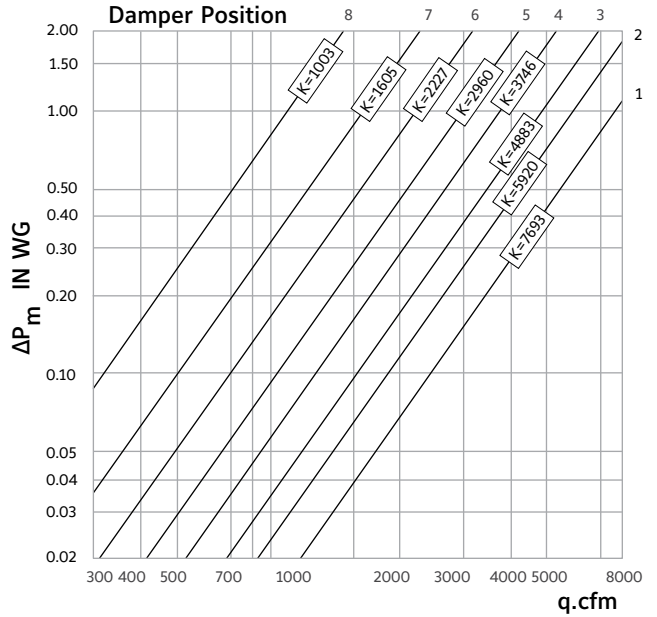


DAMPER ADJUSTMENT CHART

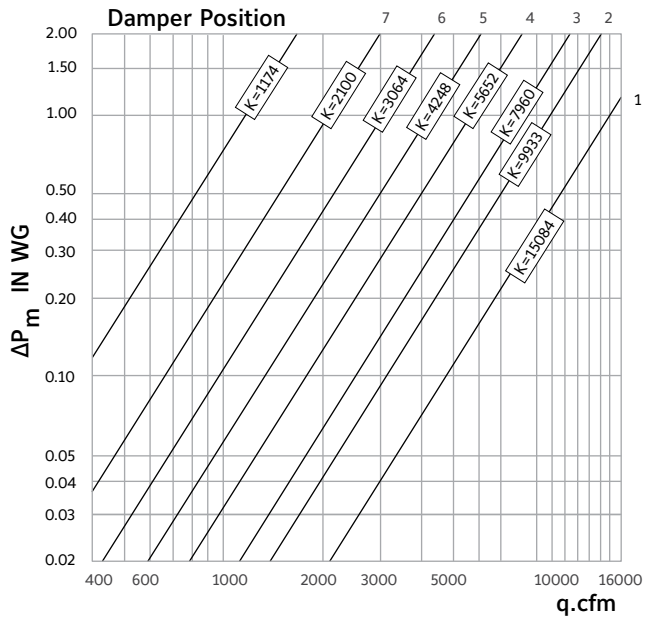
16" Damper Adjustment Chart



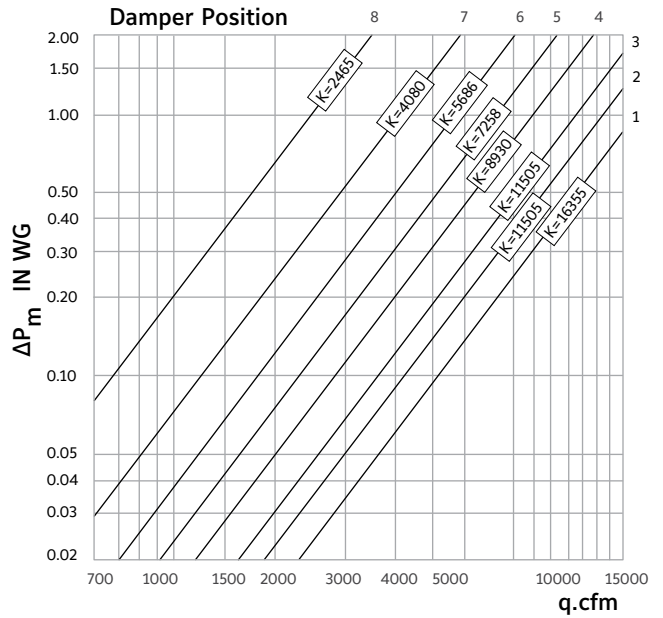
20" Damper Adjustment Chart



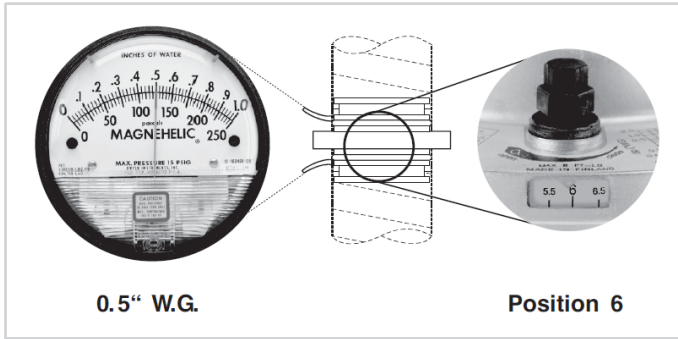
25" Damper Adjustment Chart



32" Damper Adjustment Chart



IRIS DAMPER ADJUSTMENT



Easy To Use

Graph Method

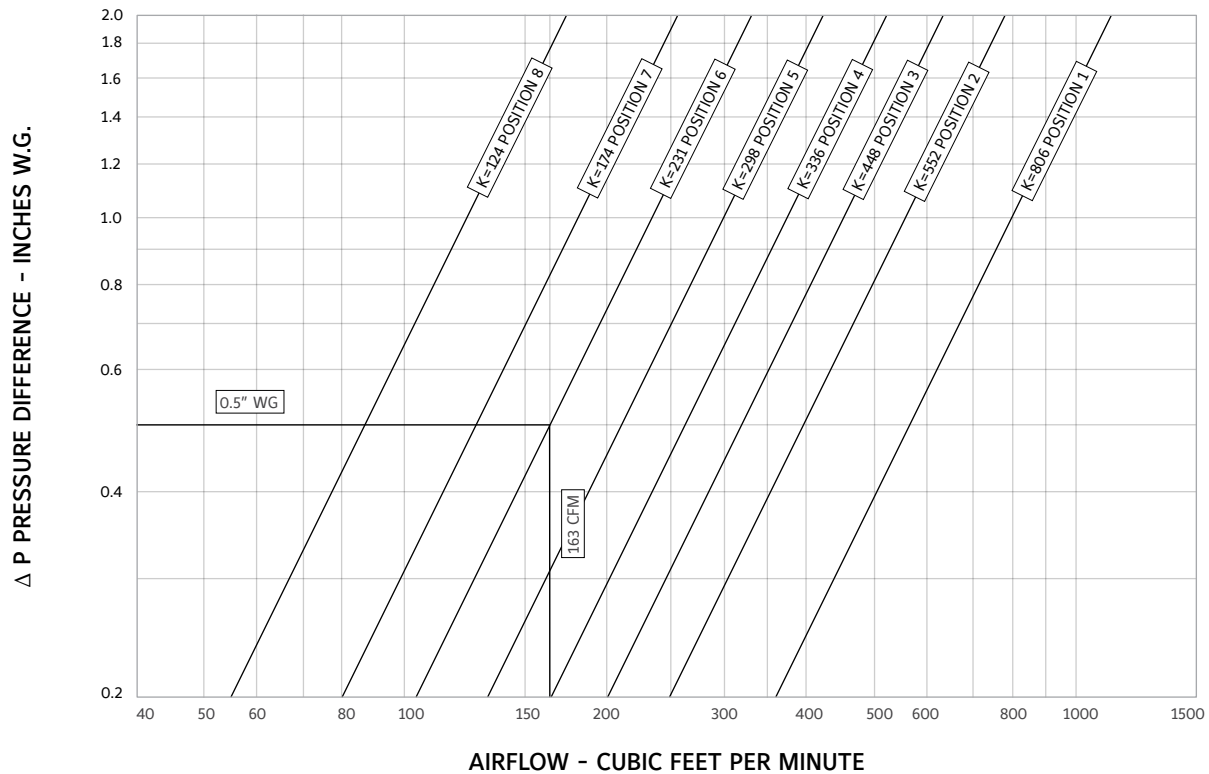
- ▶ Note pressure drop and damper position.
- ▶ Refer to matching performance curve to determine CFM (see example below).

Formula Method

$$CFM = K \sqrt{\Delta P} \text{ (K from Table on Damper)}$$

TYPICAL PERFORMANCE CURVE

IRIS 6" ADJUSTMENT



Installation Notes:

- For precise metering of airflow, the IRIS Damper should be located a minimum of 1 duct diameter before or after an elbow, 3 diameters before a 'T', 1 diameter after a 'T' and 3 diameters before an outlet register.
- Refer to IRIS Damper installation instructions for complete application selection and installation details.

SUGGESTED SPECIFICATION

Furnish and install, at locations shown on plans or in accordance with schedules, calibrated IRIS balancing dampers. IRIS damper frame shall be 22 gage steel or 316 stainless (as called for on schedules). Frame shall fully encapsulate IRIS blade segments, holding them firmly into position, and have rolled mounting beads to increase the overall strength of the assembly. Full circumference duct seal shall be furnished on the air entering and air leaving side of the frame to insure a tight duct connection. Casing leakage shall not exceed 6 cfm. IRIS blade segments shall be internally linked and driven by a factory calibrated manual adjustment knob. All linkage parts shall be fully encapsulated and out of the air stream for years of dependable, maintenance-free operation. Manual adjustment knob shall be calibrated to the exact aperture position and aligned with the K factor set point to provide linear response flow control. Flow measurement shall be +/- 5%. Assembled units shall be furnished with specific charts designed for the exact size and blade aperture configuration. Air pressure taps shall be integral to the damper frame and positioned on either side of the IRIS blade segments. The damper shall have minimal self-generated noise characteristics as detailed on published sound data to be included with submittals. Damper in all respects shall be equivalent to Ruskin Model VFBD35.

LINKS TO IMPORTANT DOCUMENTS

Document Title
Limited Warranty Document



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