



# Fantech

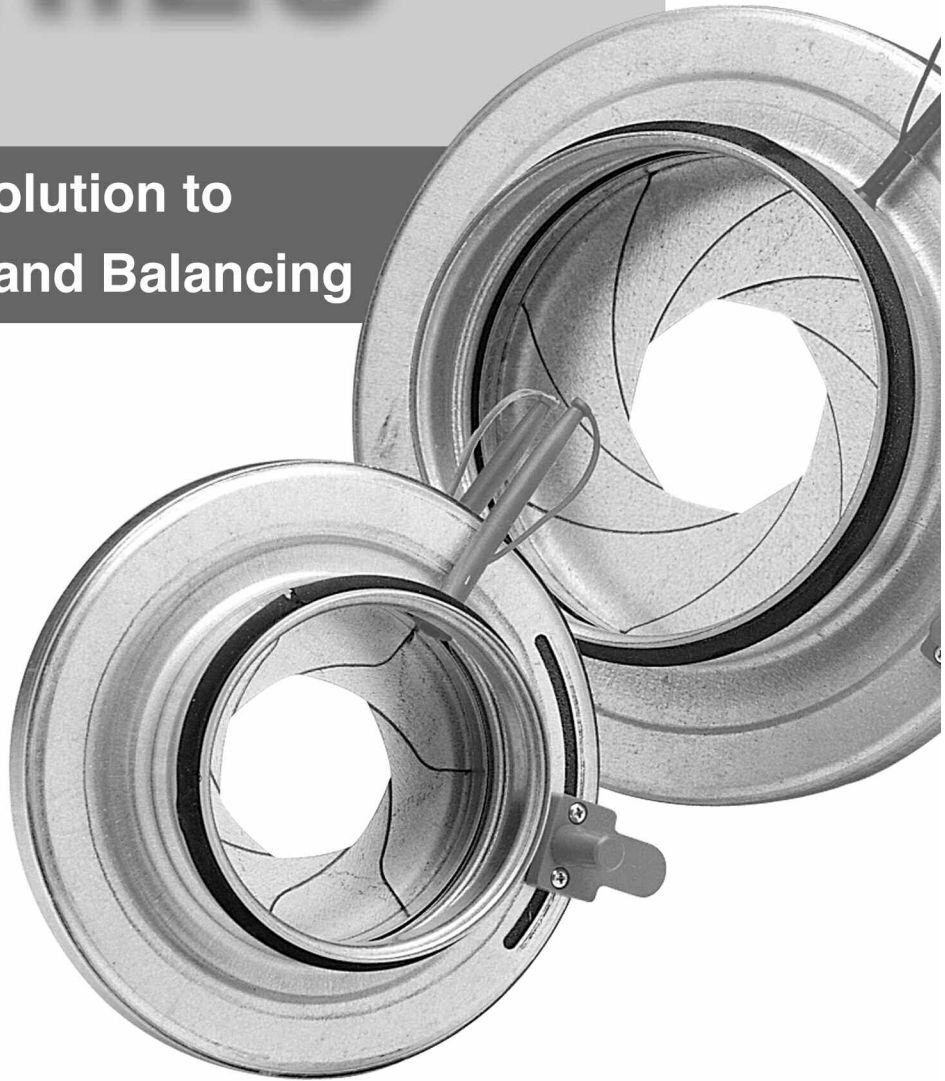
## IR SERIES

### IRIS DAMPERS

#### The 'Leave in Place' Solution to Airflow Measurement and Balancing

##### Features:

- Flow measurement accuracy +/- 5%
- Linear response flow control
- Nine sizes available from 4" to 25"
- Quiet, low self-generated noise characteristic
- Compact design allows for simple installation
- Each damper comes with permanent pressure taps
- Airtight construction with integral gaskets for duct connection
- Internal aperture opens fully to allow duct cleaning without dismantling
- Five year warranty



##### Description and Function

The Fantech Iris Damper is the ideal device for measuring and adjusting airflow through a duct. The design of the adjustable aperture ensures low turbulence resulting in minimal self-generated noise.

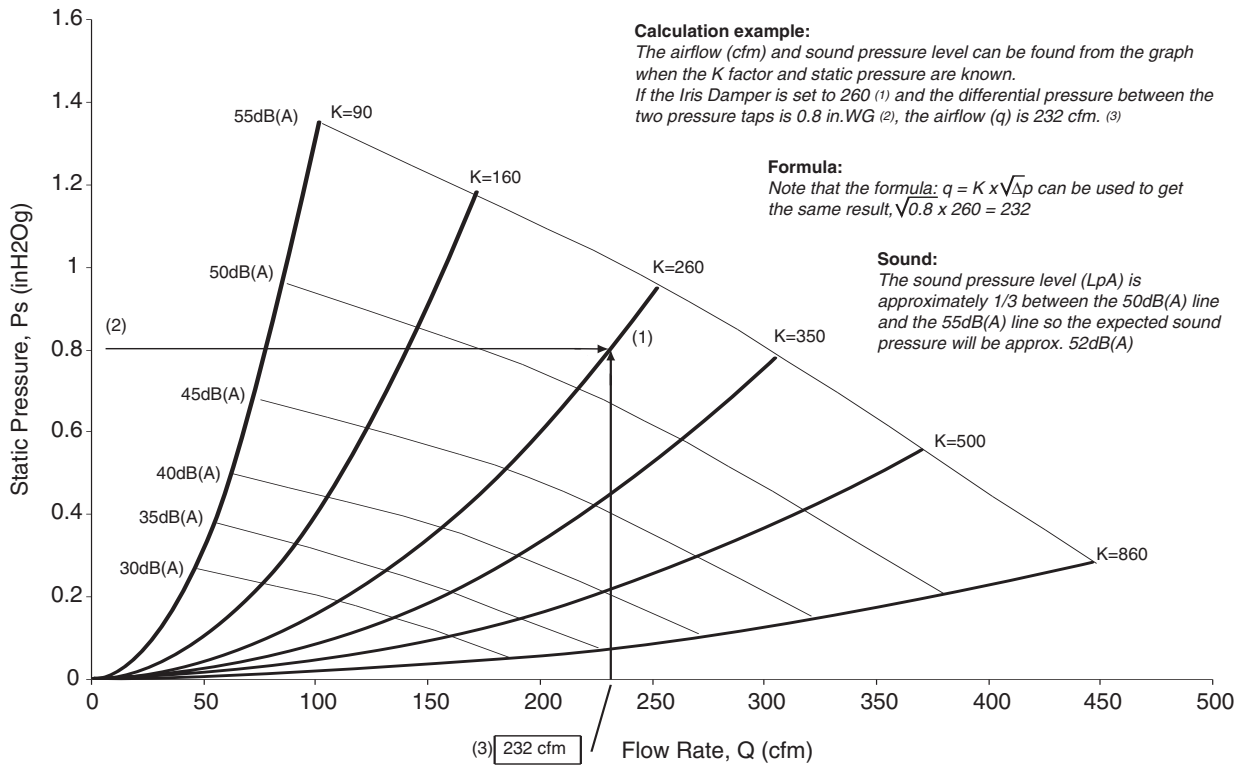
Adjusting airflow/pressure is a simple matter of positioning the calibrated control lever on the outside of the Iris Damper.

Flow can be determined from the K factor and a differential pressure measurement. Use the lever on the damper to select the K factor.

Airflow is found from the formula:  $q = K \times \sqrt{\Delta p}$ , where 'q' is the airflow in cfm and  $\Delta p$  is the differential pressure in in.w.g. found by connecting a manometer or other pressure instrument to the two pressure taps provided on the Iris Damper.

Alternatively, you may use the graph method to find airflow. Each model in the Fantech Iris Damper series has its own specific airflow and sound characteristics graph.

# IR6 - Calculation Example



## Sound Power Level L<sub>w</sub>

Sound power level (L<sub>w</sub>) for each frequency band can be found by applying the formula:  $L_w = L_{pA} + K_{ok}$

## Sound Data

SIZE	Mid-frequency (octave band) Hz						
	63	125	250	500	1K	2K	4K
IR4	11	10	3	-2	-8	-16	-24
IR5	7	8	2	-4	-11	-19	-27
IR6	9	6	1	-5	-11	-18	-27
IR8	9	5	1	-5	-12	-17	-24
IR10	6	1	-4	-3	-4	-17	-24
IR12	3	1	-4	-4	-9	-13	-19
IR16	3	1	-4	-4	-9	-13	-19
IR20	14	8	2	-3	-8	-11	-14
IR25	12	6	1	-3	-8	-11	-14
Tolerance	+/- 6	+/- 5	+/- 2	+/- 2	+/- 2	+/- 2	+/- 3

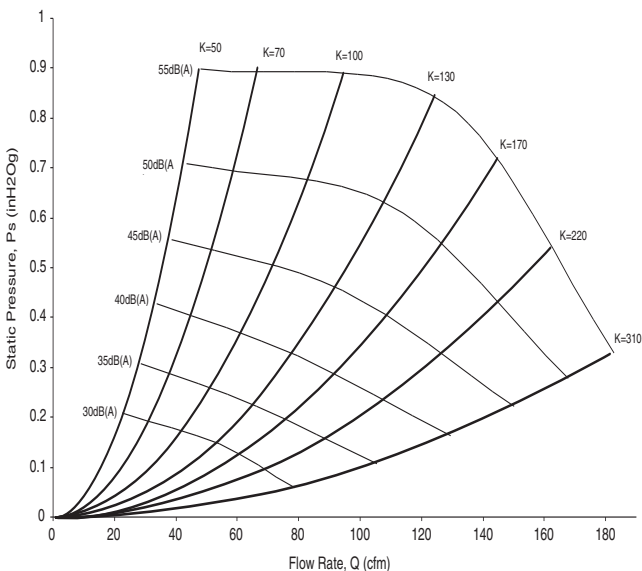
From the example above, sound pressure level (L<sub>pA</sub>) is 52dB(A).

Sound power level (L<sub>w</sub>) can now be found from the table.

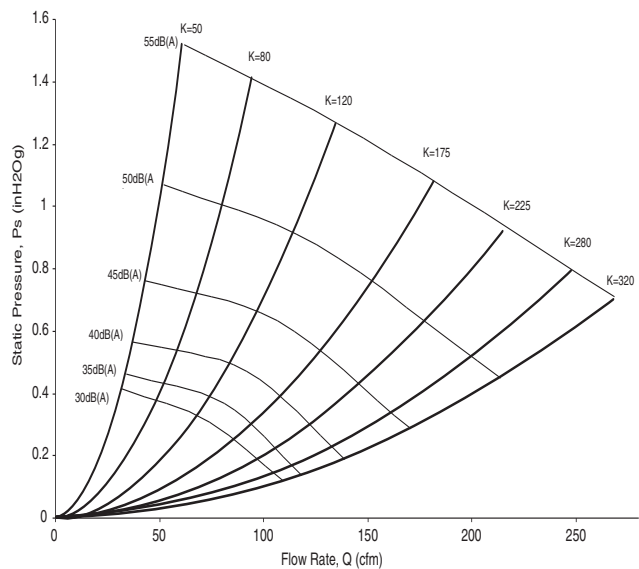
The sound power level (L<sub>w</sub>) in the 500Hz octave band is:

L<sub>pA</sub> (from graph) + K<sub>ok</sub> (correction factor from table) = L<sub>w</sub> or 52 + (-5) = 47dB(A).

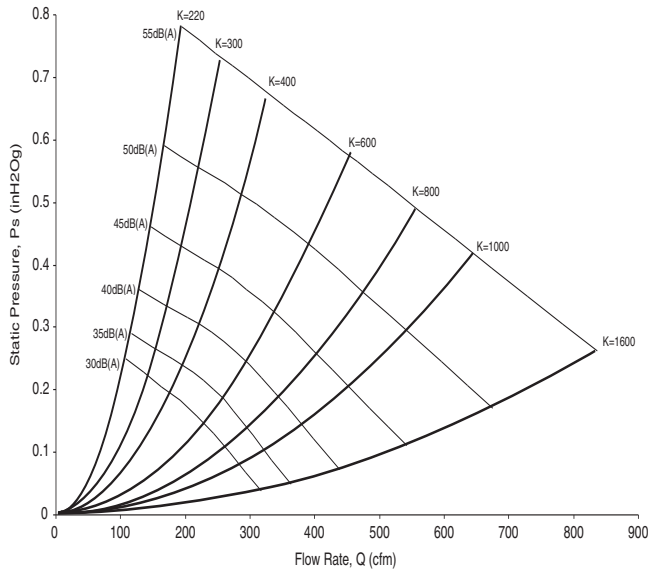
## IR4



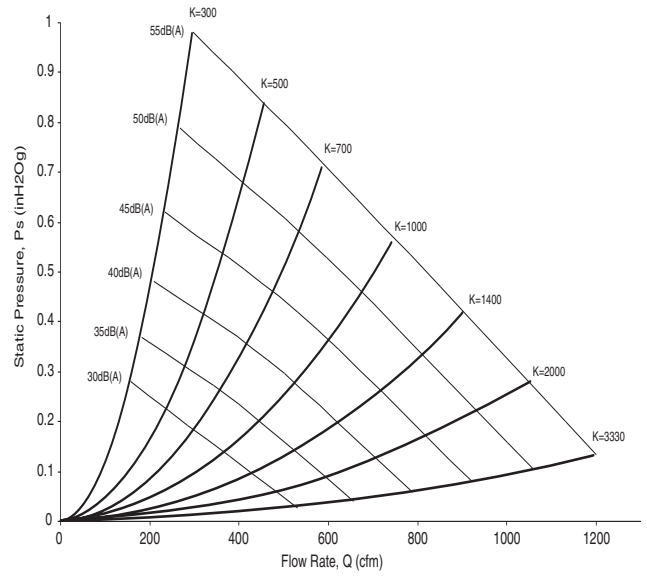
## IR5



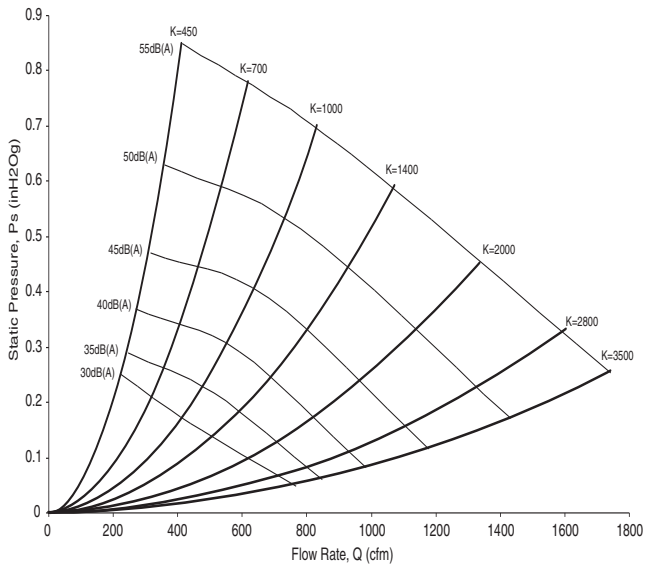
# IR8



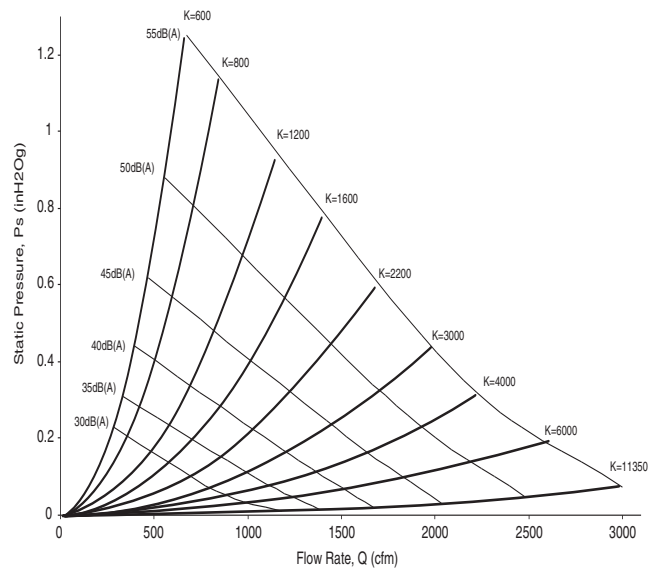
# IR10



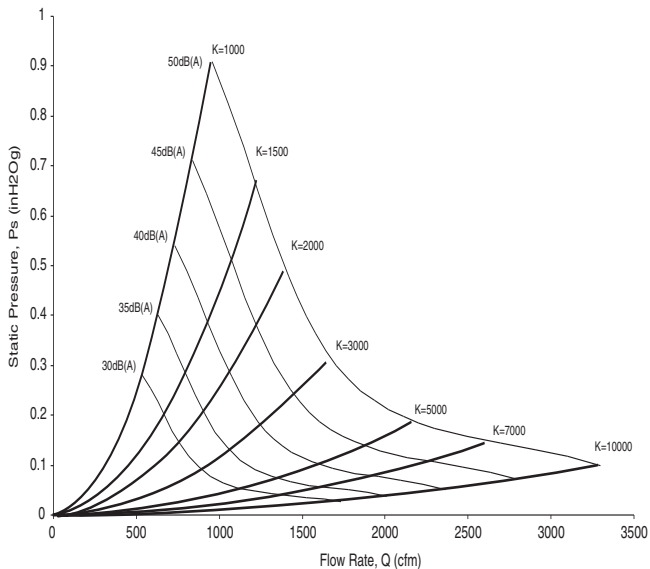
# IR12



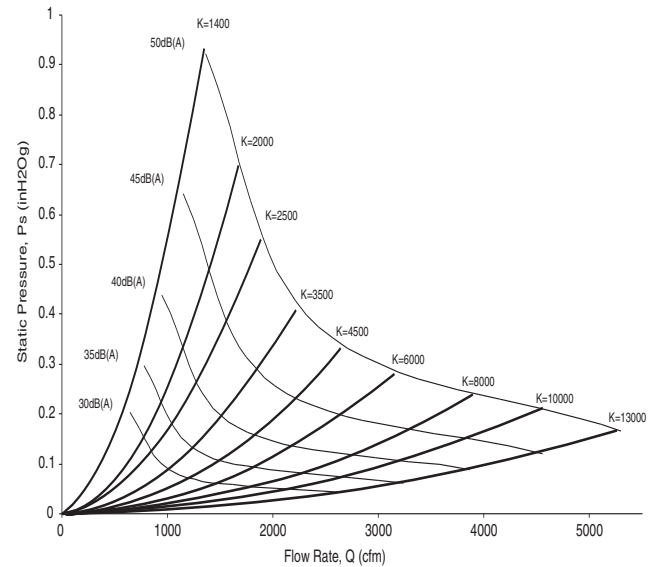
# IR16



# IR20



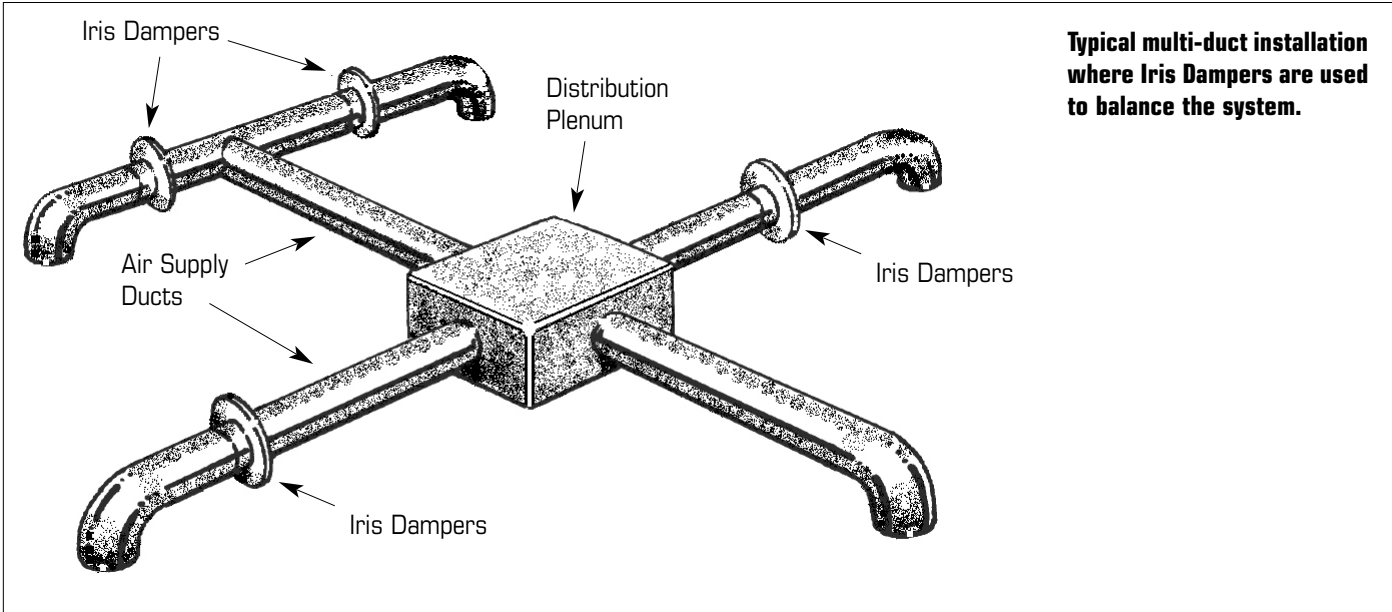
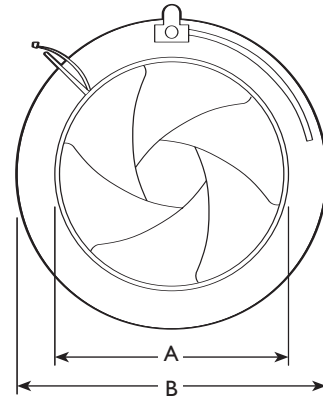
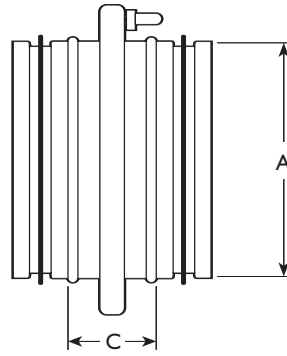
# IR25



## Dimensions

MODEL	Measurements			
	UPC#	A	B	C
IR4	63040	4	6 1/2	2 1/4
IR5	63050	5	8 1/4	2 1/2
IR6	63060	6	9	2
IR8	63080	8	11 1/4	2 1/4
IR10	63100	10	13	2 3/4
IR12	63120	12	16	2 3/8
IR16	63160	16	22	3 1/4
IR20	63200	19 3/4	25 3/8	2 3/8
IR25	63250	24 3/4	32	2 3/8

All Dimensions are in inches



### Installation note:

For precise metering of airflow, the Iris Damper should be located at minimum 1 diameter before or after an elbow, 3 diameters before a 'T', 1 diameter after a 'T', and 3 diameters before an outlet register.



#### United States

10048 Industrial Blvd.

Lenexa, KS 66215

Phone: 800-747-1762; 913-752-6000

Fax: 800-487-9915; 913-752-6466

www.fantech.net; info@fantech.net

#### Canada

50 Kanalfakt Way

Bouctouche, NB E4S 3M5

Phone: 800.565.3548; 506.743.9500

Fax: 877.747.8116; 506.743.9600

www.fantech.ca; info@fantech.ca

Fantech, reserves the right to modify, at any time and without notice, any or all of its products' features, designs, components and specifications to maintain their technological leadership position.

Article #: 411736  
Rev Date: 091311