

IRS damper

The IRS damper enables fast measurement, balancing and adjustment of the air flow in circular ventilation ducts.

The damper can be used both in supply and exhaust ducts. It is suitable for use also in ducts requiring cleaning.

Material

The casing and regulation plates of the IRS damper are made of galvanized steel, the zinc layer thickness is at least 275 g/m² on both sides.

The gaskets are made of EPDM rubber and measurement tips of polyethylene. The plastic part of the damper is made of high-performance plastic.

Characteristics

The body of the IRS damper meets tightness class C.

Marking of the product

1. Marking
2. Connection dimension mm

Table of dimensions

Size d, mm	Ø d, mm	Ø D, mm	H, mm	A, mm
080	79	125	110	30
100	99	165	110	30
125	124	188	110	30
160	159	230	110	30
200	199	285	110	30
250	249	335	135	40
315	314	410	135	40
400	398	525	190	60
500	498	655	170	50
630	628	815	170	50
800	798	1015	270	100

Example

IRS	315
1	2

Installation

The IRS damper is connected to a duct and fastened to the duct by rivets.

If the damper is mounted directly into the channel, the max air flow measurement precision is

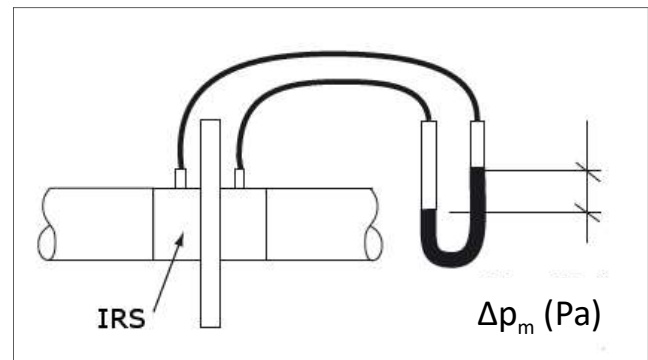
$\pm 7\%$ ($L = 10xD$). Duct connections block the movement of air in the duct and influence the measurement precision. Minimum distances are illustrated in the table below, with the desired precision.

7 %	L=1xD	L=4xD	L=2xD	L=2xD
10%	L=1xD	L=2xD	L=2xD	L=2xD

Adjustment

Every damper must be adjusted separately (max measurement tolerance $\pm 7\%$).

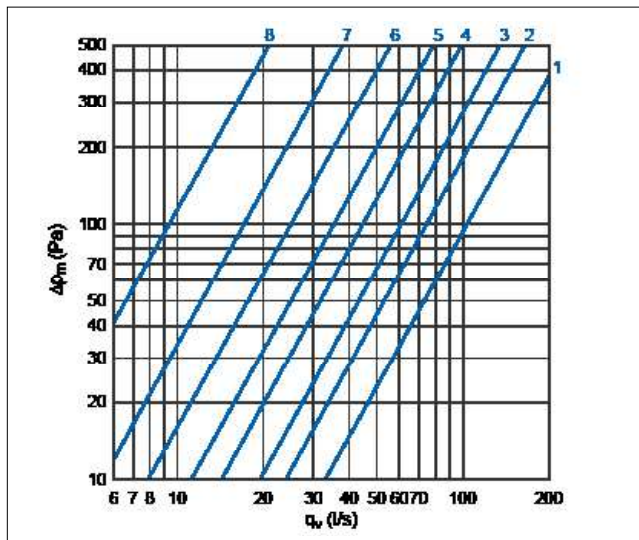
At the manometer connections, air flow is measured by differences in pressure, and the desired air flow is determined. The air flow is adjusted by turning the regulating nut.



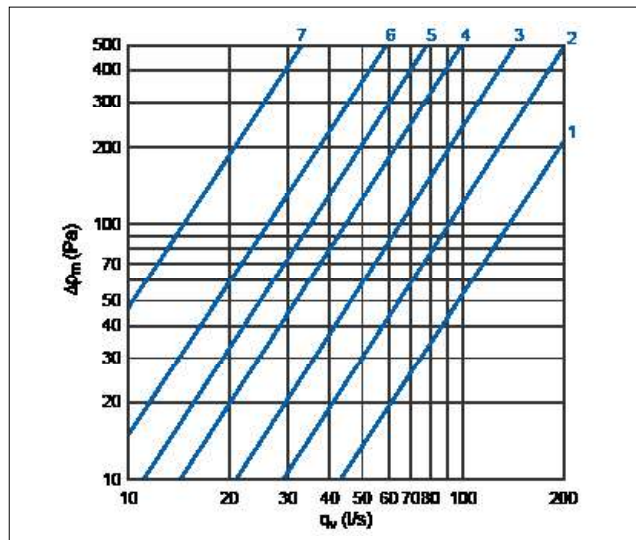
$$q_v = k * \sqrt{\Delta p_m}$$

Position IRS	1	1,5	2	2,5	3	3,5	4	4,5	5	5,5	6	6,5	7	7,5	8
100	10,4	7,9	7,5	6,6	6,0	5,2	4,5	3,8	3,4	2,9	2,5	2,1	1,7	1,2	0,9
125	13,8	10,4	8,8	7,3	6,5	5,5	4,7	4,0	3,5	3,1	2,7	2,2	1,5	-	-
160	22,1	17,2	14,8	13,4	12,5	11,5	10,7	9,5	8,5	7,5	6,8	5,6	4,9	4,0	3,5
200	44,2	36,6	30,9	26,9	23,2	20,6	18,2	15,9	14,0	12,3	11,0	9,6	8,4	6,5	5,0
250	64,4	53,5	45,6	41,8	38,7	34,5	30,7	27,3	24,1	21,4	18,4	15,8	12,8	10,9	8,9
315	118,0	88,3	70,0	64,5	58,7	53,0	45,1	42,4	37,0	33,3	30,0	25,9	21,8	19,0	15,8
400	131,0	-	102,0	-	88,3	-	67,3	-	52,7	-	38,5	-	28,4	-	15,5
500	230,0	-	177,0	-	146,0	-	112,0	-	88,5	-	66,6	-	48,0	-	30,0
630	451,0	-	297,0	-	238,0	-	169,0	-	127,0	-	91,6	-	62,8	-	35,1
800	489,0	-	402,0	-	344,0	-	267,0	-	217,0	-	170,0	-	122,0	-	73,7

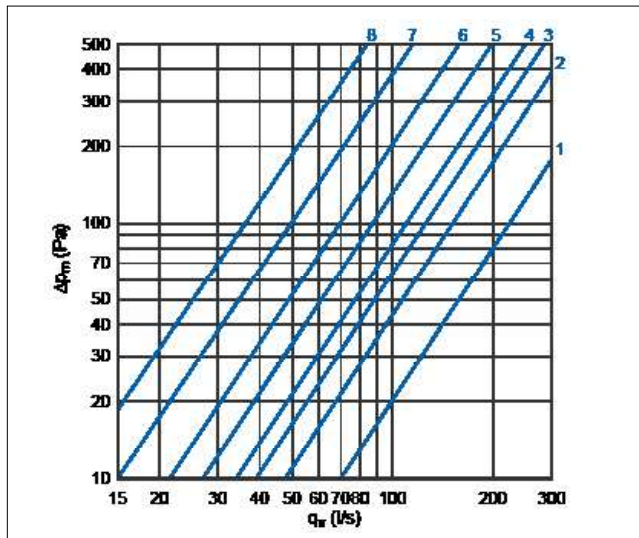
IRS 100



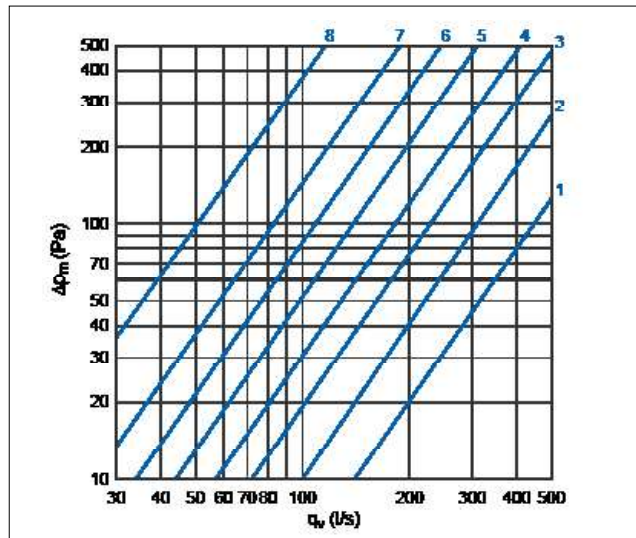
IRS 125



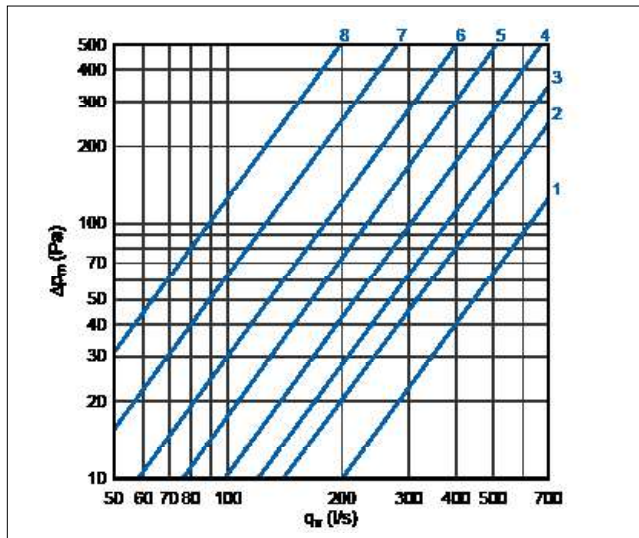
IRS 160



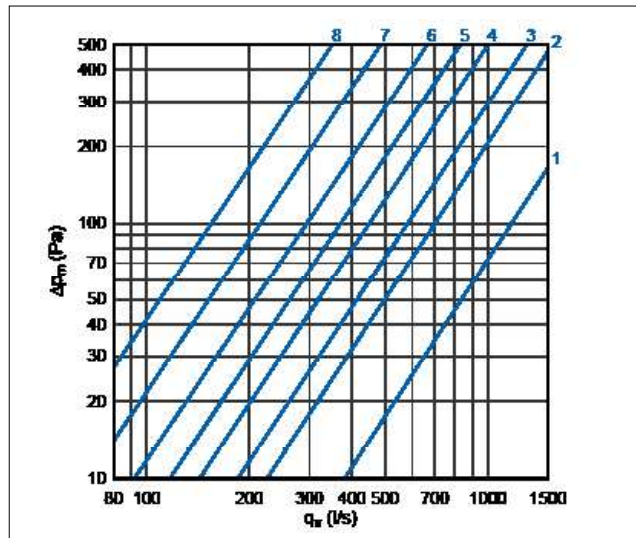
IRS 200



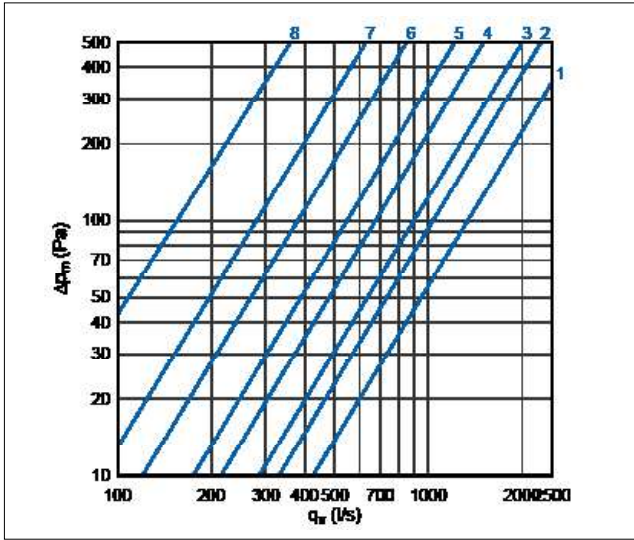
IRS 250



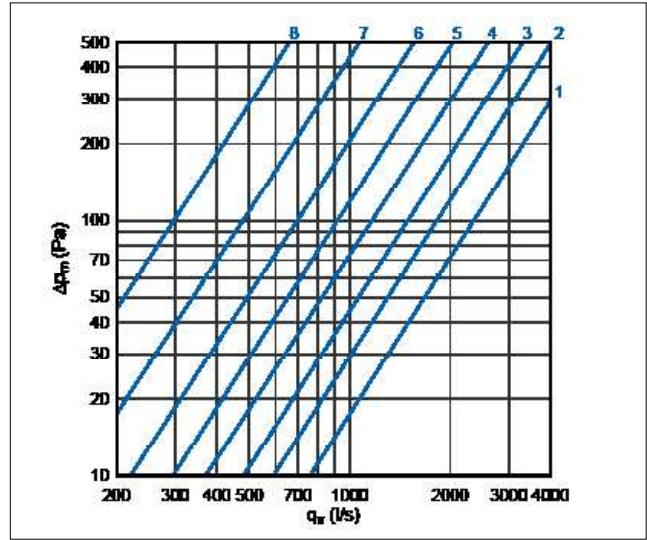
IRS 315



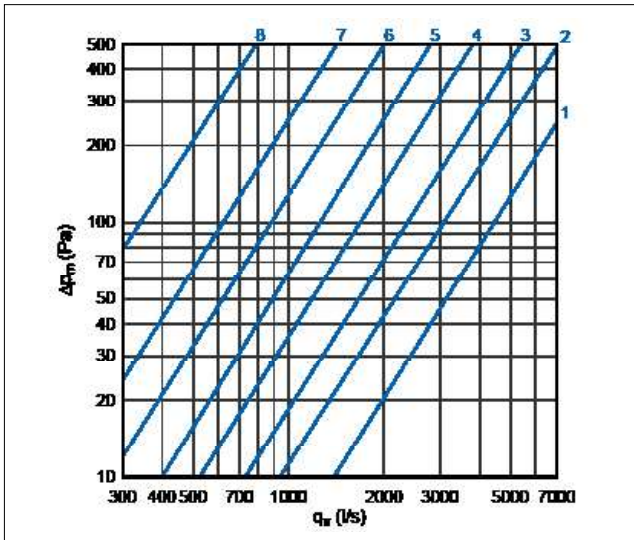
IRS 400



IRS 500



IRS 630



IRS 800

