

# IRIS DAMPER

## IRIS REGULATION AND MEASURING DEVICE

### TECHNICAL DATA

**IRIS DAMPER** - the ideal airflow regulation and measuring device circular ducts.

- Low noise level
- Operation independent of flow direction
- Fully openable for cleaning of duct tight construction
- Solid construction



### CONSTRUCTION

The **IRIS DAMPER** is composed of regulation plates, regulating nut or handle (size 13mm spanner) and regulation scale plus manometer connections and casing. The casing and regulation plates are made of hot-galvanized steel, other components of plastic. The joining collars are supplied with rubber sealing gasket.

### INSTALLATION

The **IRIS DAMPER** is secured to the ducting with rivets. For vertical mounting, ensure the weight of the interconnecting ductwork is fully supported. Refer to page 9 for recommended safety distances.

### REGULATION AND MEASUREMENT OF AIR FLOW

The regulation plates form a virtually ideal measuring orifice which enables an easy and reliable measurement of the air flow.

To determine the airflow, measure the pressure difference  $\Delta p_m$  at the manometer connections and check the corresponding airflow from the regulation chart.

The chart is shown on the damper casing and in the separate information for air flow regulation and measurement (the selection diagrams do not serve the air flow measurement).

The adjustment of the Iris is simple, all that is needed is a standard 13mm spanner and the damper locks in the right position automatically.



<b>Product:</b>	<b>IRIS</b>
<b>Size:</b>	<b>200</b>
<b>CODE:</b>	<b>DRIS200</b>

<b>Product:</b>	<b>IRIS Stainless steel</b>
<b>Size:</b>	<b>200</b>
<b>CODE:</b>	<b>DRIS-S200</b>

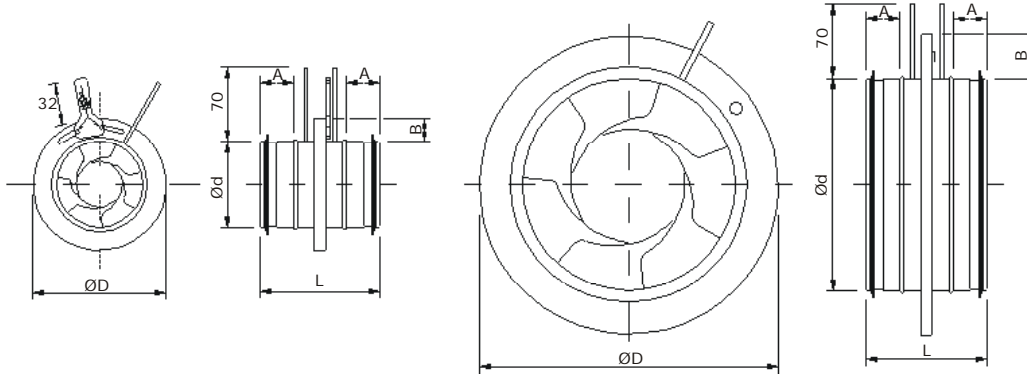
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# IRIS DAMPER

Size Ø80 mm

Size Ø100 mm - Ø800 mm



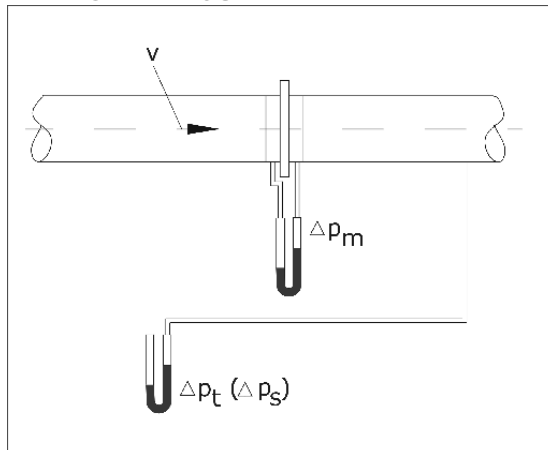
## DIMENSIONS

Size	Ød	ØD	L	A	B	Weight kg
80	79	125	110	30	22	0.5
100	99	165	110	30	32	0.5
125	124	188	110	30	32	0.7
150	149	230	210	27	40	0.9
160	159	230	110	30	35	0.9
200	199	285	110	30	42	1.4
250	249	335	135	40	42	2.1
315	314	410	135	40	47	3.5
400	398	525	190	60	62	6.4

## SPECIAL SIZES

Size	Ød	ØD	L	A	B	Weight kg
180	179	285	210	40	53	1.9
300	299	410	160	37	54	3.5
355	353	525	545	60	85	9.8
500	498	655	170	50	77	9.6
630	628	815	170	50	92	15.6
800	798	1015	270	100	107	25.0

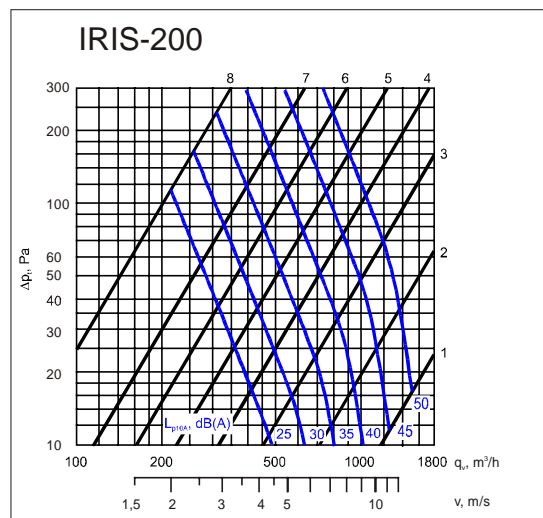
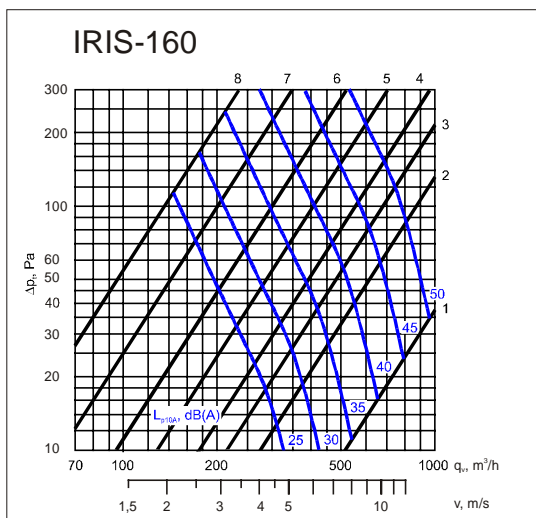
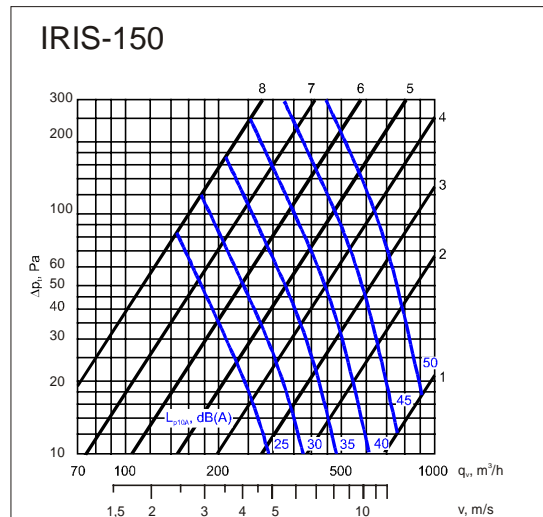
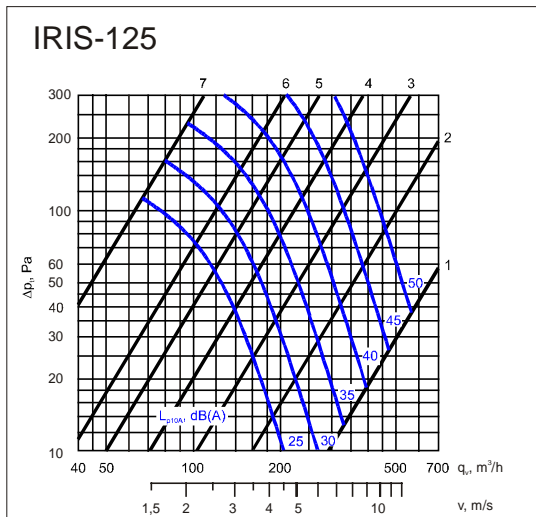
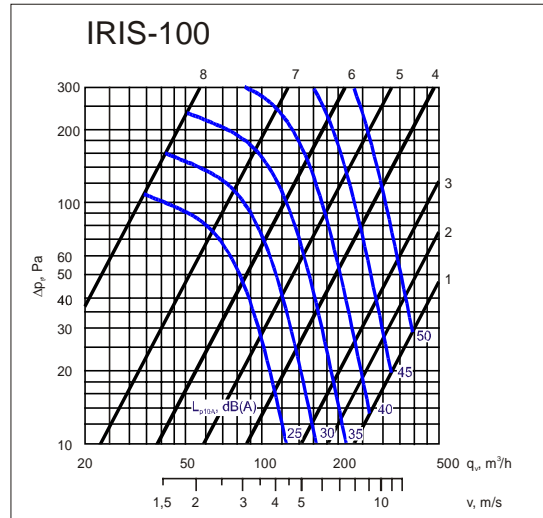
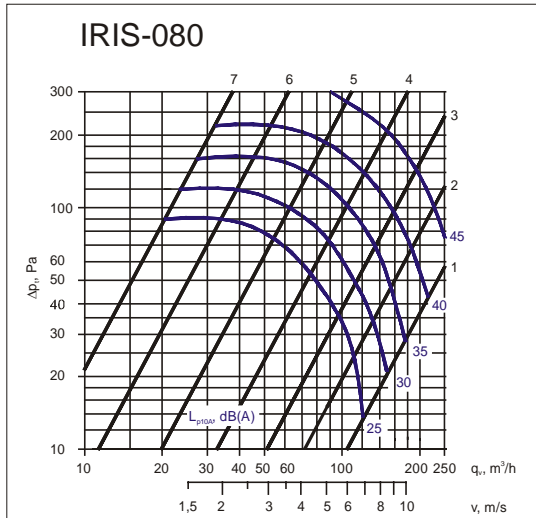
## AIRFLOW MEASUREMENT



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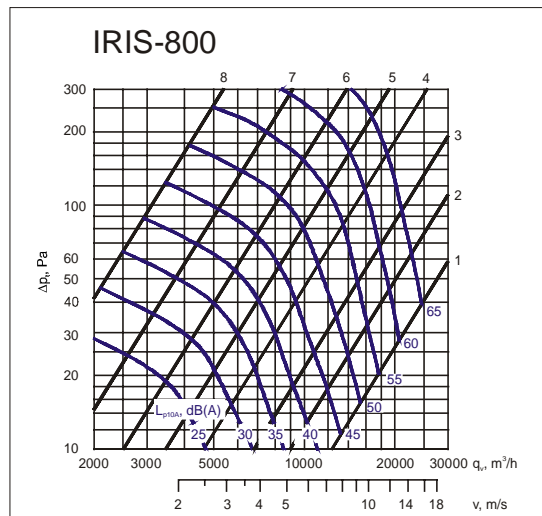
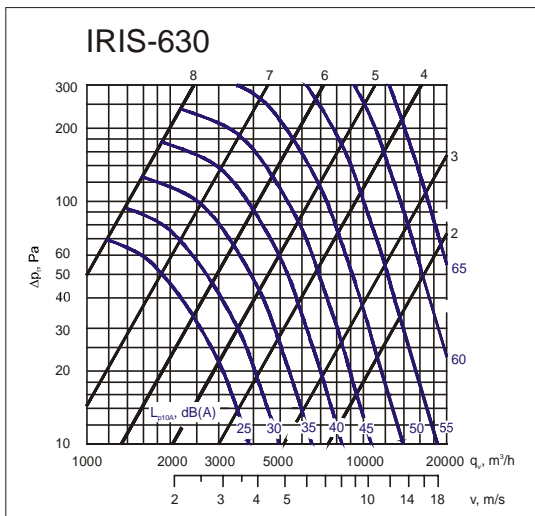
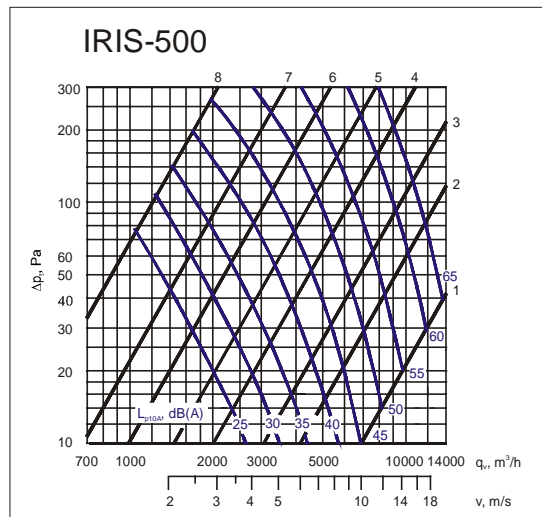
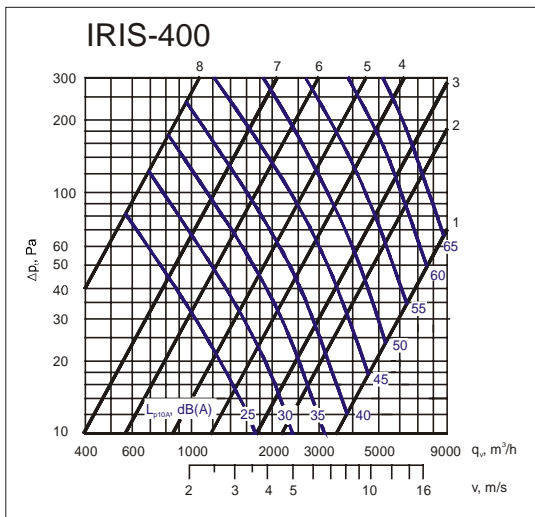
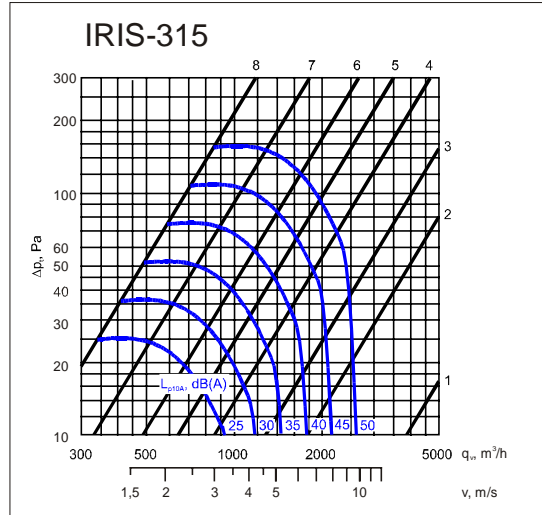
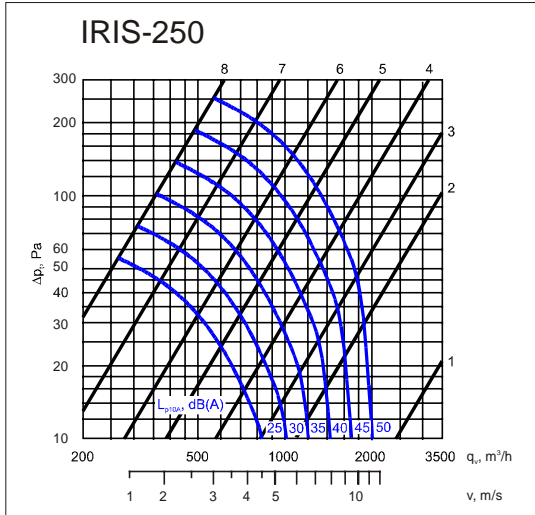


**IRIS 3.9**

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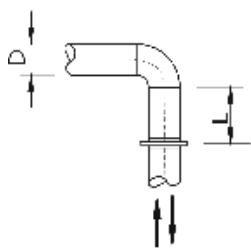
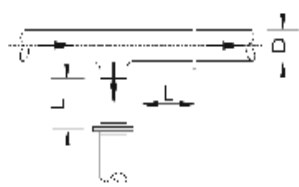
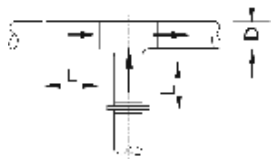
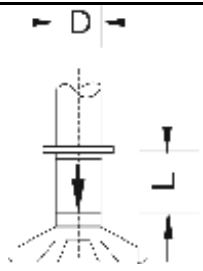


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## SAFETY DISTANCES

Type of flow disturbance	The required safety distance $L$		
	$m^2 = \pm 7\%$	$m^2 = \pm 10\%$	
	$\geq 1 D$	$\geq 1 D$	Accuracy of calibration during disturbance free air flow $\pm 5\%$
	$\geq 4 D$	$\geq 2 D$	
	$\geq 2 D$	$\geq 2 D$	
	$\geq 2 D$	$\geq 2 D$	

## SYMBOLS

$q_v$	air volume	(m <sup>3</sup> /h)
$L_{p10A}$	sound pressure level with 4 dB room attenuation (10 m <sup>2</sup> sab room)	[dB(A)]
$L_{woct}$	sound power level in the duct	(dB)
$K_{oct}$	correction	(dB)
$\Delta p_t$	total pressure drop	(Pa)
$\Delta p_s$	static pressure drop	(Pa)
$\Delta p_m$	pressure difference	(Pa)
$m_2$	method-specific measurement tolerance	%
$v$	average velocity	(m/s)

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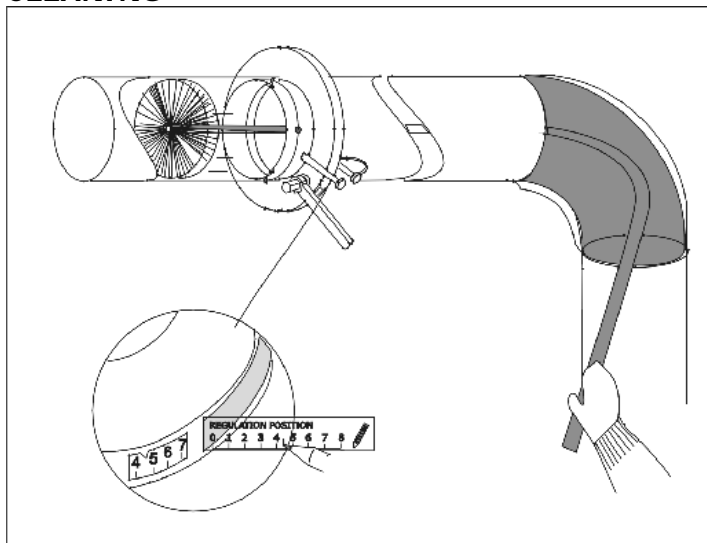
SOUND CHARACTERISTICS								
IRIS	CORRECTION $K_{oct}$ (dB)							
	Medium frequency by octave band (Hz)							
	63	125	250	500	1000	2000	4000	8000
80	10	16	12	9	5	-1	-6	-23
100	25	21	16	9	4	-6	-12	-25
125	17	17	13	7	1	-4	-6	-17
150	21	20	14	8	0	-6	-16	-29
160	19	18	14	6	-1	-6	-13	-25
200	20	17	12	5	-2	-5	-14	-26
250	16	12	8	3	1	-4	-17	-32
315	24	12	5	0	1	-2	-13	-27
400	15	9	6	2	-1	-4	-9	-13
500	14	7	4	1	-1	-4	-8	-11
630	15	7	3	2	-1	-5	-9	-11
800	9	5	3	3	-1	-6	-10	-13
Tol. ±	6	3	2	2	2	2	2	3

The sound power levels of the duct for every octave band are obtained by adding the corrections  $K_{oct}$  of octave bands (see table above) to the total sound pressure level  $L_{p10A}$  dB(A) according to the following formula:

$$L_{woct} = L_{p10A} + K_{oct}$$

Correction  $K_{oct}$  is the average in the range of use of the IRIS regulation and measuring device.

## CLEANING



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