

## Iris damper -SI



### Description

The SI iris damper is used for the control of flow in circular ducts. The damper is designed in accordance with the requirements of the Swedish standard AMA VVS & Kyl 09 (Plumbing and Cooling). It handles tightness class C for circular ducts.

for adjusting the flow. SI allows for the cleaning of ducts as the damper can be fully opened. The connecting sleeves are fitted with silicone rubber seals. The damper is manufactured from galvanized steel.

### Design

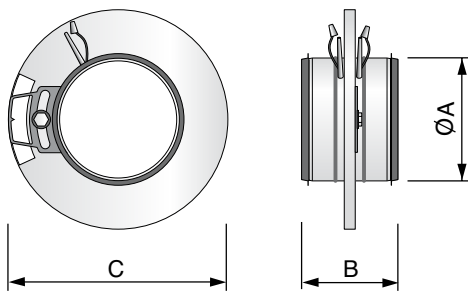
SI is used for supply air as well as exhaust air, and is fitted with controls and measurement nipples

### Sizes

The SI iris damper is manufactured in 11 standard dimensions.

## Technical data -SI

### Dimensions

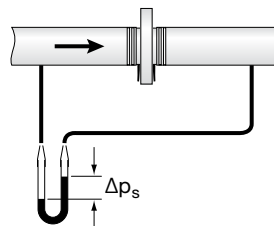


### Standard Sizes

EKO-SI	Ø A	B	Ø C	Weight, kg
80	78	117	145	0.5
100	98	125	165	0.6
125	123	135	188	0.8
160	158	140	231	1.1
200	198	147	284	1.5
250	248	182	335	2.2
315	313	182	409	3.0
400	398	225	526	5.0
500	498	225	655	8.5
630	628	225	815	12.1
800	798	270	1015	25.0

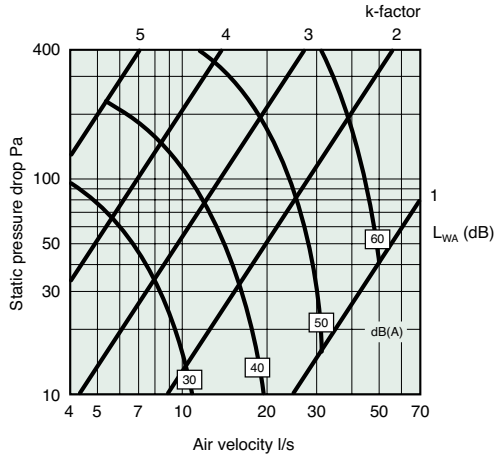
### Sizing diagram

The diagrams on the following two pages contain information concerning feed, sound level and static pressure drop concerning the damper at different settings. Information about K-factor and balancing pressure, see "Installation and Maintenance".



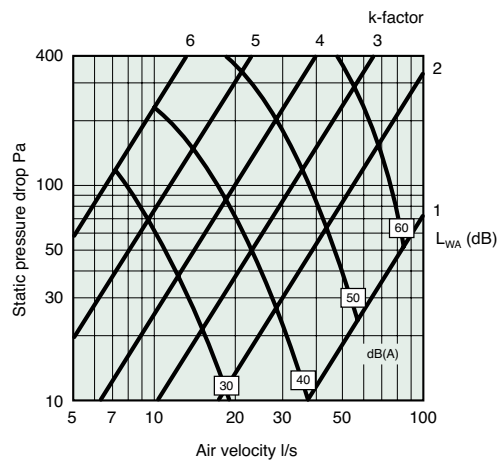
**Dimension diagram**

**SI 80**

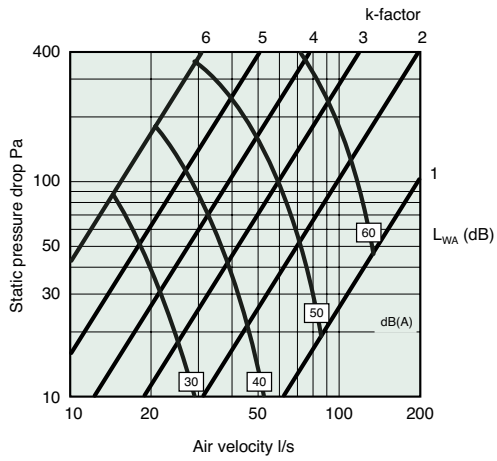


**Dimension diagram**

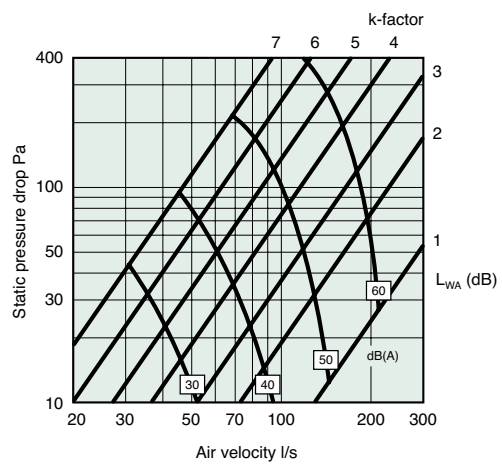
**SI 100**



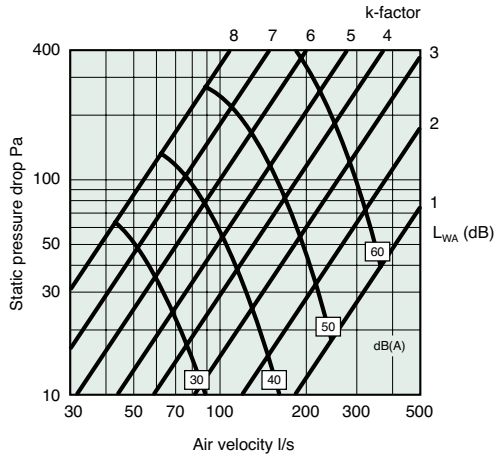
**SI 125**



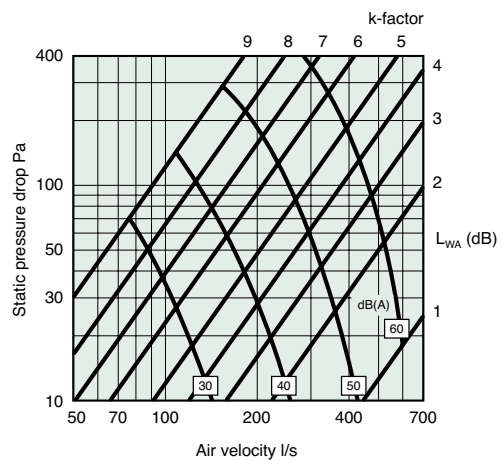
**SI 160**



**SI 200**

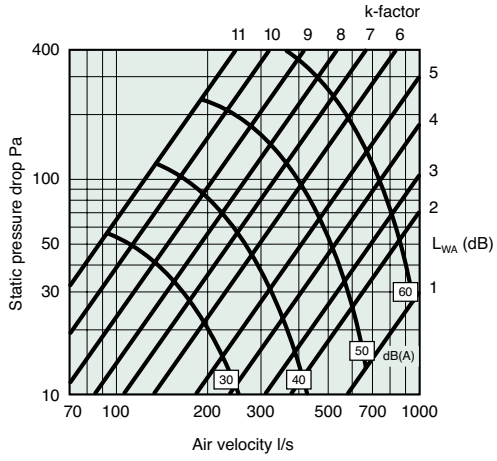


**SI 250**



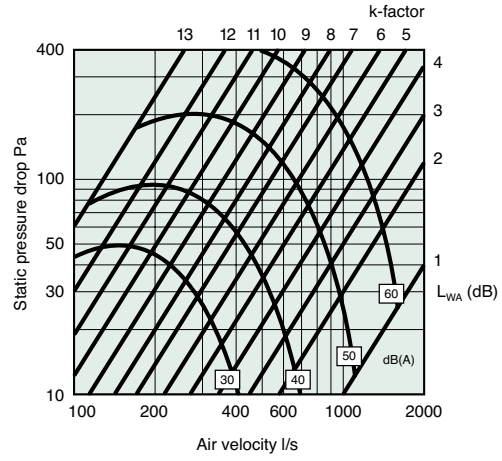
**Dimension diagram**

**SI 315**

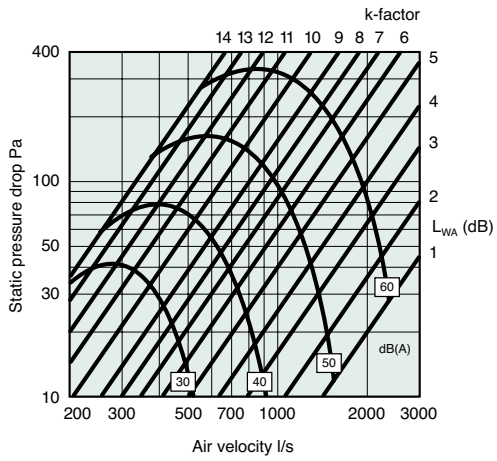


**Dimension diagram**

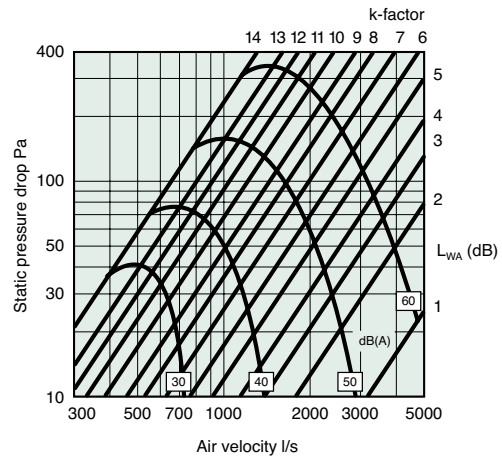
**SI 400**



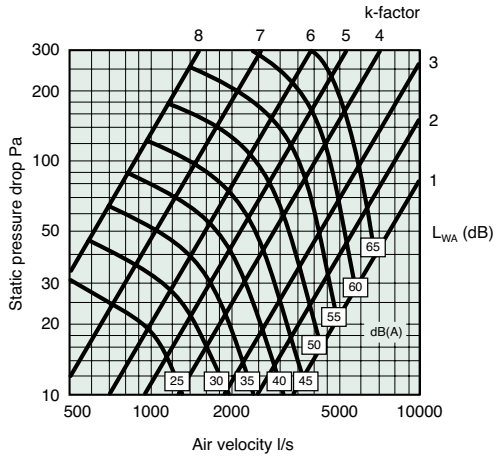
**SI 500**



**SI 630**



**SI 800**



**Noise level**

Diagram of the different sizes show the total generated noise level  $L_{WA}$  (dB), as a function of airflow and pressure drop across the damper.

By correcting the  $L_{WA}$  with the correction factors the sound effect levels are obtained for each octave band.  $L_{WAOK} = L_{WA} + K_{OK}$

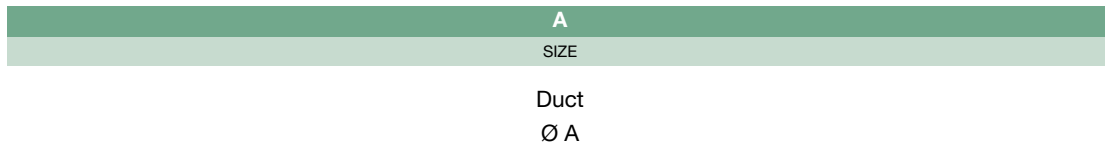
**Correction of noise level in octave bands  $K_{OK}$**

Octave band Size	63	125	250	500	1K	2K	4K	8K
80	+7	+6	+5	-3	-10	-16	-20	-22
100	+7	+7	+5	-3	-10	-16	-20	-22
125	+8	+8	+5	-3	-10	-15	-20	-23
160	+9	+9	+4	-3	-10	-14	-21	-23
200	+11	+9	+4	-3	-9	-14	-21	-22
250	+12	+9	+3	-3	-8	-14	-21	-21
315	+13	+9	+2	-3	-7	-13	-19	-20
400	+13	+8	+2	-4	-6	-12	-18	-19
500	+13	+8	+2	-3	-7	-12	-16	-18
630	+13	+7	+2	-2	-8	-12	-15	-18
Tolerance ±	6	5	3	2	2	2	2	4

Tolerance (±) = by SP Technical Research Institute of Sweden available measurement uncertainty

**How to order the -SI**

Designation: Iris damper -SI-A



Example: 1 Iris damper SI-250

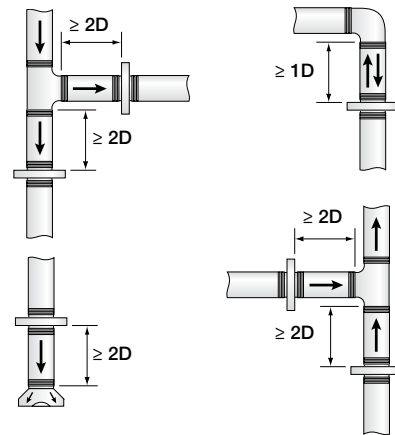
## Assembly, installation and maintenance

### Air volume variations at installation

The required safety distance is shown in the illustrations. The interference measurement requires a measurement accuracy of +/- 10 %.

Accuracy of specific safety distance +/- 10 %.

Leakage class C (EN 1751).

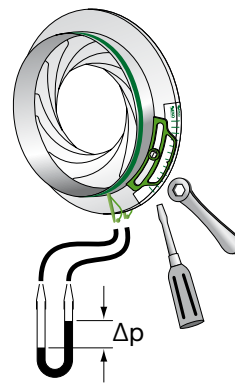


### Cleaning

When cleaning the duct, noting the position in which the damper is set before opening it fully. Reset the damper setting after cleaning.

### Adjusting the air flow

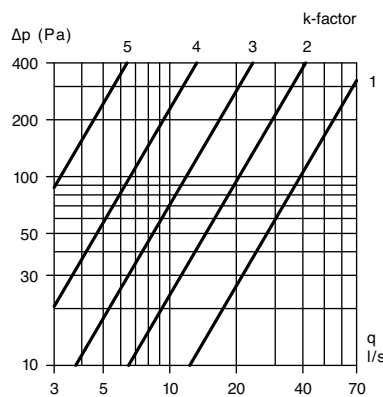
- Connect a differential pressure gauge on the damper adapters
- Set the desired throttle with a wrench or screwdriver. Note the k-factor.
- Read off the differential pressure  $\Delta p$
- Use the chart or formula  $q = k \cdot \sqrt{\Delta p}$  to calculate the airflow.



SI	Ring spanner mm
80-160	8
250-315	10
400-630	15
800	22

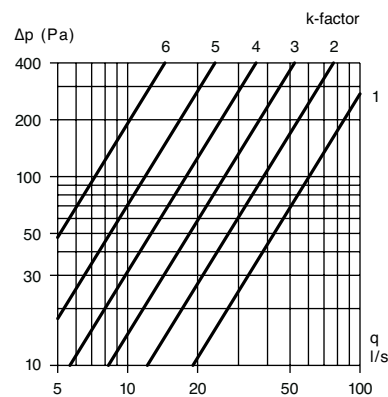
### Adjustment diagram

#### SI 80

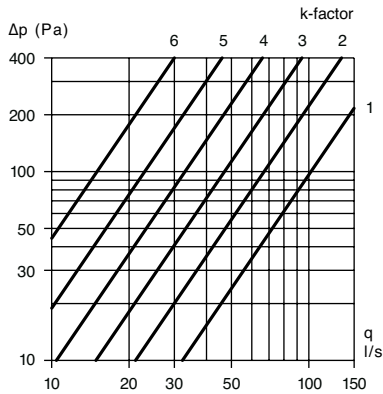


### Adjustment diagram

#### SI 100

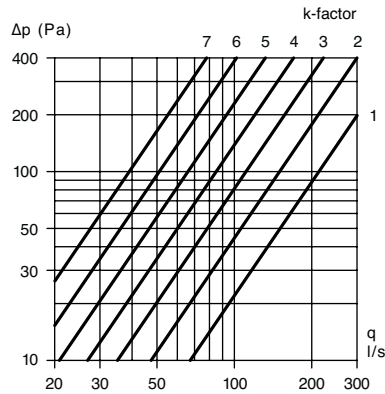


**Adjustment diagram  
SI 125**



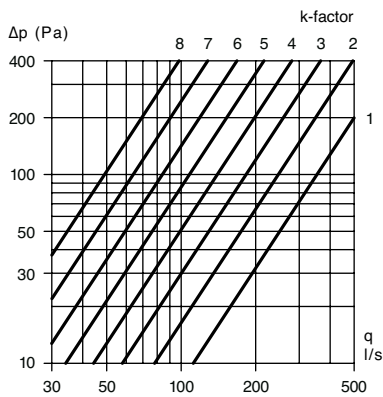
k	
1	10.2
2	6.7
3	4.7
4	3.3
5	2.3
6	1.5

**Adjustment diagram  
SI 160**



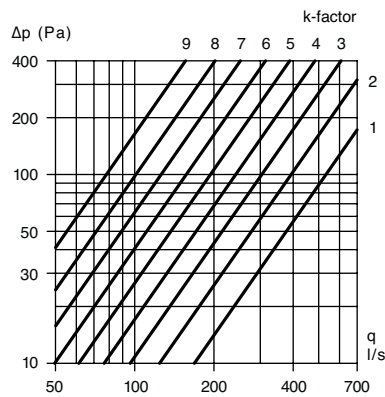
k	
1	21.3
2	15.0
3	11.1
4	8.5
5	6.6
6	5.1
7	3.9

**Adjustment diagram  
SI 200**



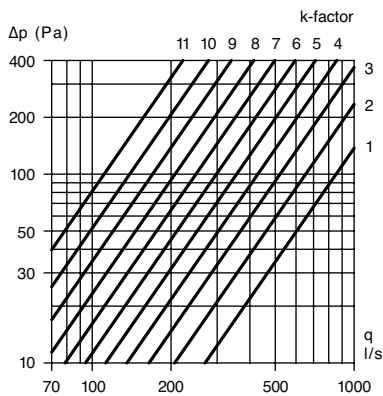
k	
1	35.4
2	24.7
3	18.3
4	14.0
5	10.8
6	8.4
7	6.4
8	4.9

**Adjustment diagram  
SI 250**



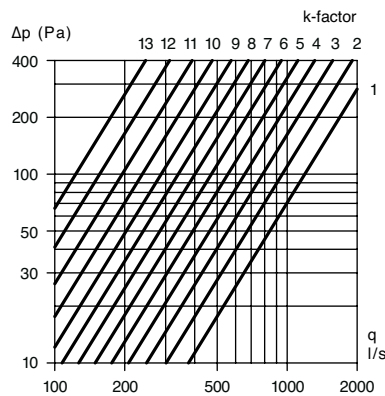
k	
1	53.3
2	39.3
3	30.4
4	24.2
5	19.4
6	15.7
7	12.6
8	10.1
9	7.8

**Adjustment diagram  
SI 315**



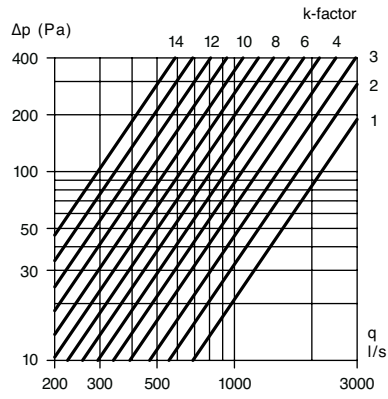
k	
1	85.3
2	65.3
3	52.1
4	42.9
5	35.6
6	29.8
7	24.9
8	20.7
9	17.0
10	13.9
11	11.1

**Adjustment diagram  
SI 400**



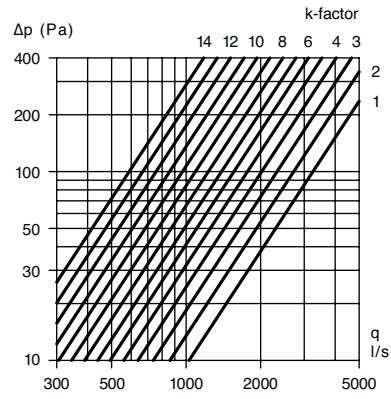
k	
1	119
2	95.3
3	78.5
4	65.7
5	55.6
6	47.2
7	40.1
8	34.0
9	28.7
10	23.8
11	19.5
12	15.6
13	12.3

**Adjustment diagram  
SI 500**



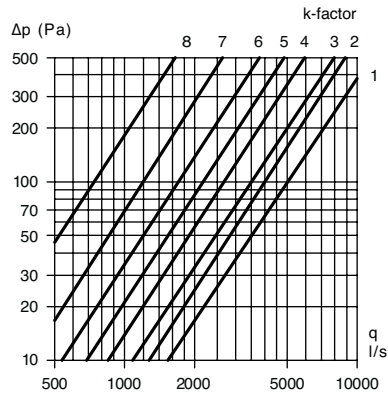
k	Value
1	218
2	176
3	148
4	124
5	107
6	93.1
7	81.2
8	71.0
9	62.0
10	54.0
11	46.7
12	40.4
13	34.4
14	29.4

**Adjustment diagram  
SI 630**



k	Value
1	325
2	272
3	233
4	202
5	177
6	156
7	139
8	123
9	109
10	96.7
11	85.8
12	75.6
13	66.8
14	58.9

**Adjustment diagram  
SI 800**



k	Value
1	489
2	402
3	344
4	267
5	217
6	170
7	122
8	73.7