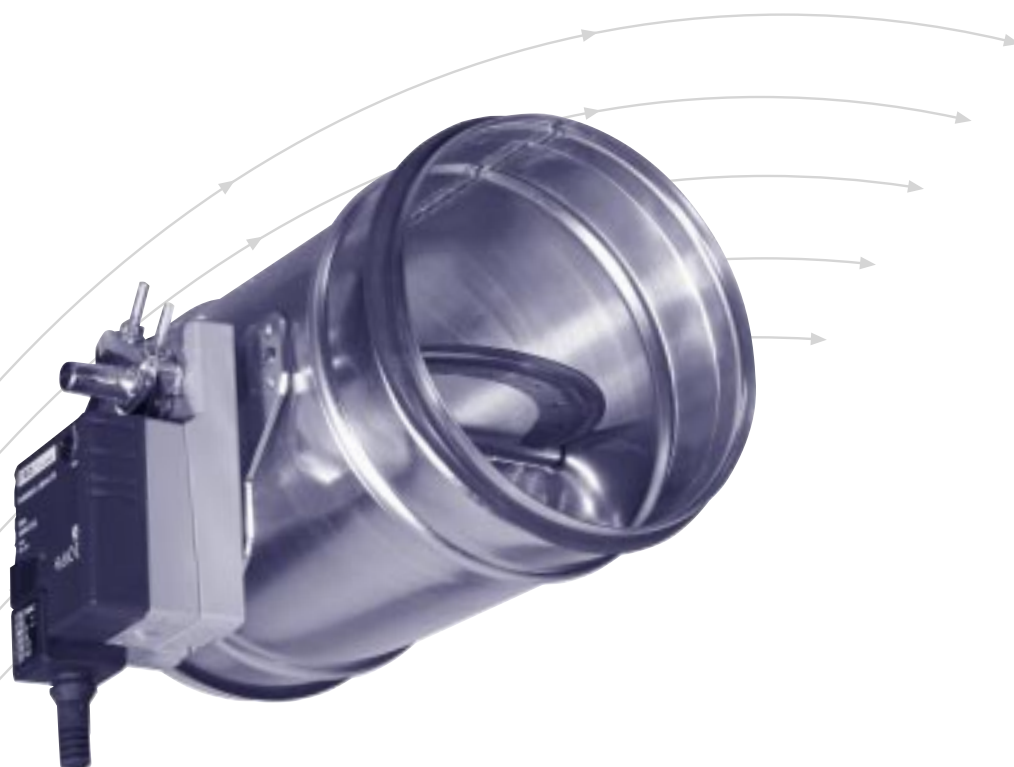


# Shut-off Damper

Low leakage according to DIN EN 1751  
Type AK



**TROX<sup>®</sup> TECHNİK**

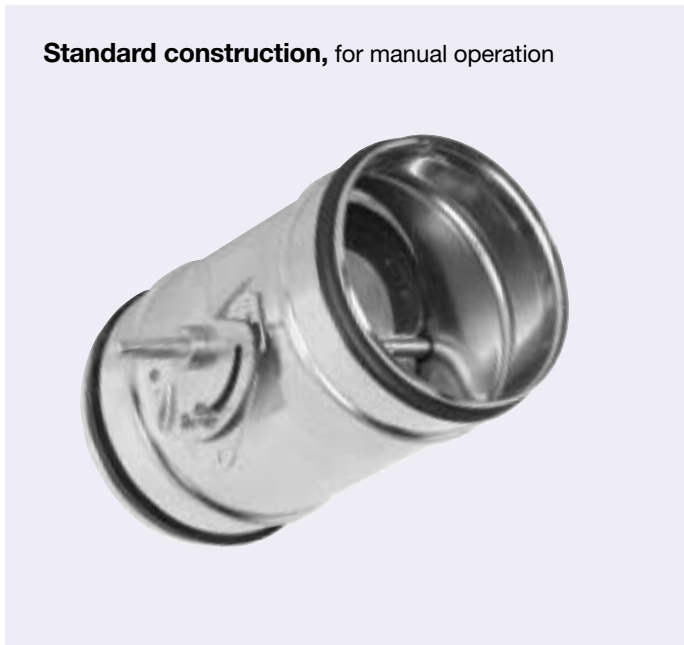
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# Contents · Description

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**Standard construction, for manual operation**



**Standard construction, with electric actuator**



TROX Type AK shut-off dampers are used to shut off volume flows in air conditioning systems. Type AK has nominal sizes of 100 to 400 mm. The damper blade with plastic seal when closed complies with the air tightness requirements of DIN EN 1751, class 4 (exception nominal sizes 100 and 125, class 3). Casing with groove for lip seal, lip seal is factory fitted or fitted by others. Shut-off damper available with manual operation or with an electric actuator. See order details or price list for further construction variations and accessories.

## Characteristics

- For shut-off of volume flows
- Circular construction in 7 nominal sizes
- Damper closed blade leakage complies with DIN EN 1751, class 4 (exception nominal size 100 and 125, class 3), also complies with the requirements of DIN 1946, part 4
- Operation either pneumatic, electrical actuation (available with spring return) or manual
- Maximum duct pressure 1500 Pa
- Mechanical parts maintenance-free
- Operating temperature range 10 to 50 °C

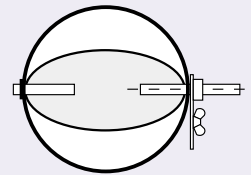
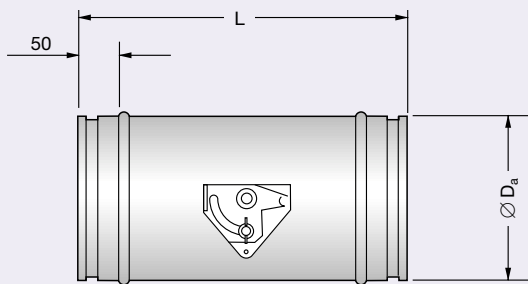
## Constructional features

- Spigot connections on both ends suitable for circular connecting ducts to DIN EN 1506 or DIN EN 13180 with groove for lip seal (if lip seals are required, these will be factory fitted)
- Optionally available with flange both ends to DIN EN 12220, part 1
- Casing air leakage complies with DIN EN 1751, class A

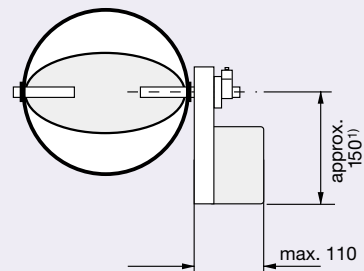
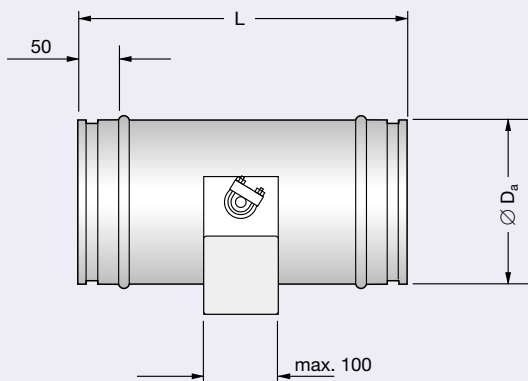
## Materials

- Casing and attachments galvanised sheet steel
- Plain polyurethane bearings
- Damper blade of galvanised sheet steel with thermoplastic elastomer seal TPE

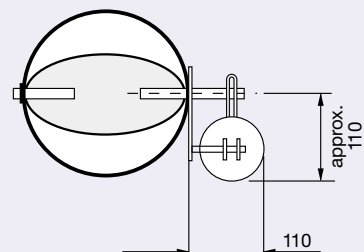
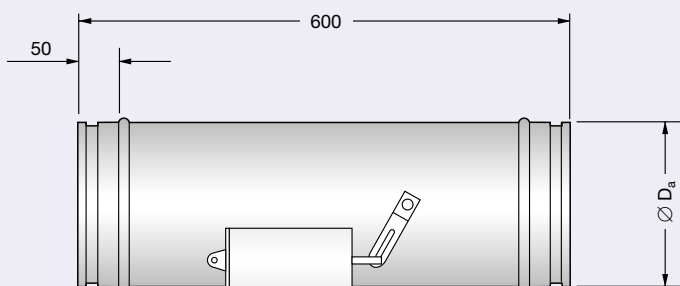
### Standard construction, manual operation



### Standard construction, electric actuator

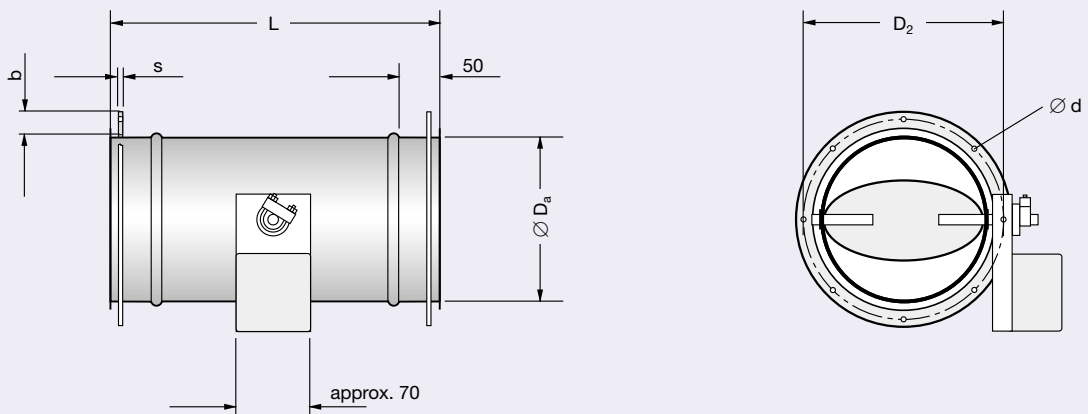


### Standard construction, pneumatic actuator

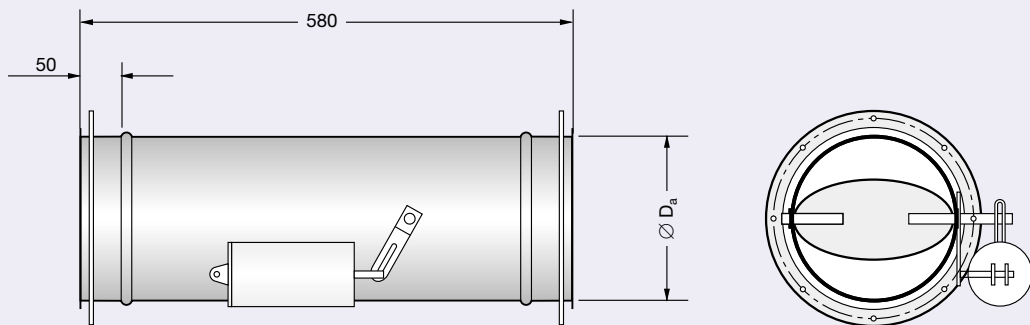


1) for spring return actuator maximum 195

### Flange construction, electric actuator or manual operation



### Flange construction, pneumatic actuator



2) n = Number of flange holes

Nominal size	Dimensions in mm							
	Ø D <sub>a</sub>	L	Flange				n <sup>2)</sup>	
		elec. man.	Flange	Ø D <sub>2</sub>	b	s	Ø d	
100	99	250	230	132	25	4	9.5	4
125	124	250	230	157	25	4	9.5	4
160	159	250	230	192	25	4	9.5	6
200	199	250	230	233	25	4	9.5	6
250	249	250	230	283	25	4	9.5	6
315	314	400	380	352	30	4	9.5	8
400	399	400	380	438	30	4	9.5	8

Nominal size	Weight in kg					
	AK without flange			AK with flange		
	elec.	man.	pneum.	elec.	man.	pneum.
100	2.6	1.1	3.3	3.2	1.8	3.9
125	2.9	1.4	3.6	3.5	2.0	4.2
160	3.3	1.8	4.2	4.4	3.0	5.3
200	4.0	2.5	5.1	5.4	3.9	6.5
250	5.0	3.5	6.1	6.7	5.2	7.8
315	6.6	5.1	7.2	9.7	8.2	10.3
400	8.6	7.1	9.4	12.5	11.0	13.3

# Nomenclature · Technical Data

## Nomenclature

$L_{pA}$  in dB(A): A-weighted sound pressure level of air-regenerated noise, discharge air side, taken into account an 8 dB/oct. room attenuation, damper blade open

$\dot{V}$  in l/s or m<sup>3</sup>/h: Flow rate

$\Delta p_g$  in Pa: Total pressure differential

All sound pressure levels are based on 20  $\mu$ Pa.  
All noise levels determined in a reverberation chamber.

## Example

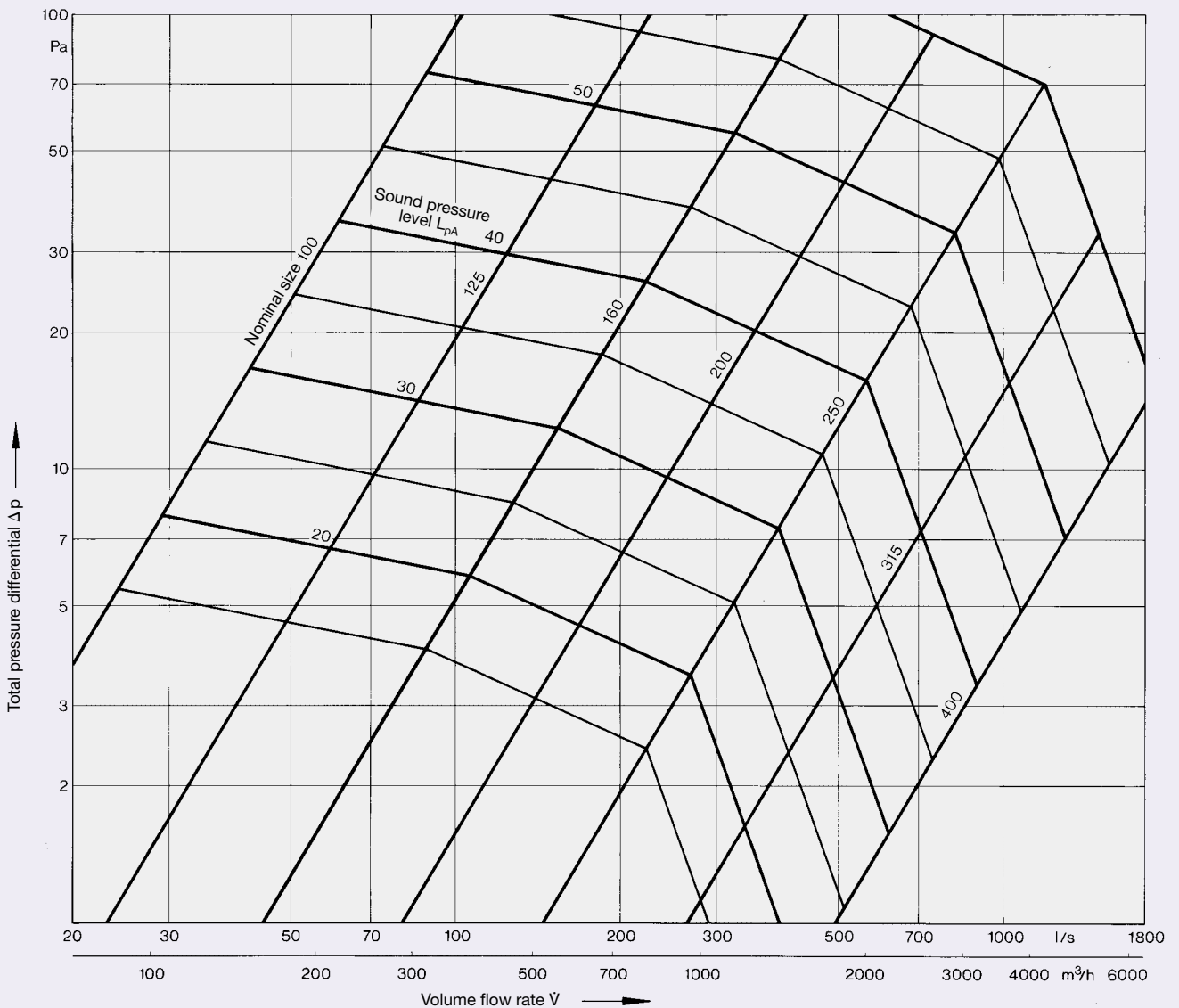
Given:  $\dot{V} = 200$  l/s (720 m<sup>3</sup>/h)  
Specified sound pressure level in the room 35 dB(A)

## Calculation procedure

AK 160  
 $L_{pA} \cong 37$  dB(A);  $\Delta p_g \cong 21$  Pa

better selection  
AK 200  
 $L_{pA} \cong 25$  dB(A);  $\Delta p_g \cong 7$  Pa

Total pressure differential and air-regenerated noise, damper blade open



# Order Details

## Specification text \*

Circular construction damper for shut off of volume flows in air conditioning systems, in 7 nominal sizes. Consists of a casing with damper and factory fitted actuator, closed blade leakage complies with DIN EN 1751, class 4 (exception nominal size 100 and 125, class 3), also complies with the requirements of DIN 1946, part 4. Same spigot diameter connections on both ends suitable for circular connecting ducts to DIN EN 1506 or DIN EN 13180 with groove for lip seal or push over spigot one end. Available with flanges to DIN EN 12220, part 1. Casing air leakage complies with DIN EN 1751, class A. Damper control either pneumatic, electric or manual.

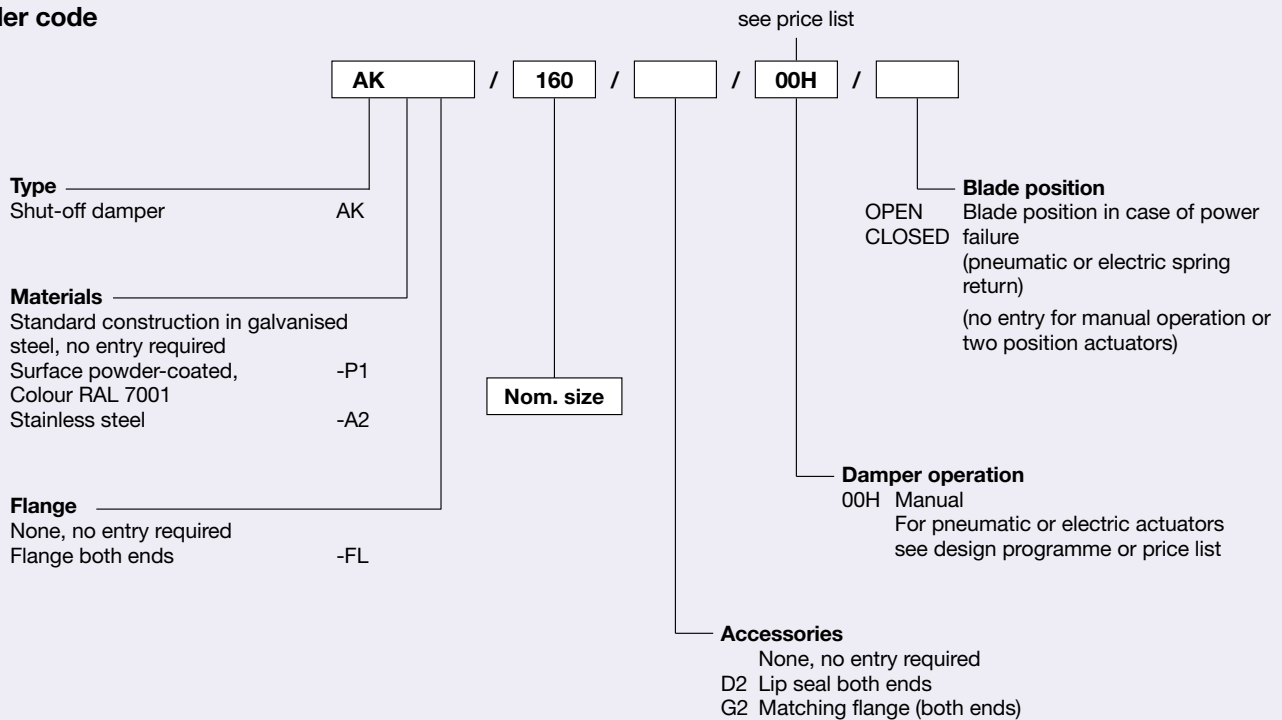
## Materials:

Casing and attachments in galvanised sheet steel, damper blade with thermoplastic elastomer seal TPE, plain plastic bearings.

\* Text for a basic construction

For actuators, see design programme or price list

## Order code



## Order example

Make: TROX  
Type: AK / 160 / 00H