

# Dampers

for the adjustment of volume flow rates

Type TDK



**TROX<sup>®</sup> TECHNİK**

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## TDK



Trox Type TDK dampers with nominal sizes of 80 to 400 are circular control dampers to adjust air volume flow rates in air-conditioning and ventilation systems; they can be used with a duct pressures of up to 1000 Pa. The damper is designed without a seal and with a circumferential gap between the case and blade tip of approximately 3 mm.

The manual control knob with integral position indication can be rotated to provide adjustment between 0 and 90° in 2° increments using a positive locking click stop system. No adjustment tools required.

The required setting angle as a function of pressure difference and volume flow rate is indicated on a diagram label affixed to the outside of the casing also the resulting sound power level can be read from the diagram.

When the damper is in the fully open position, the blade is still contained within the casing.

The AK shut-off damper in leaflet no. 5/10/EN/... must be used for the air-tight shut-off of volume flows according to DIN 1946, Part 4.

# Construction · Dimensions

## Design Features

### Damper

- Adjustment of volume flow rates and pressures.
- Manual adjustment no tools required.
- Adjustment of the damper in increments of 2°.
- Maximum duct pressure 1000 Pa.
- The control mechanism of the damper is maintenance-free.
- Operating temperature 10 to 50 °C.

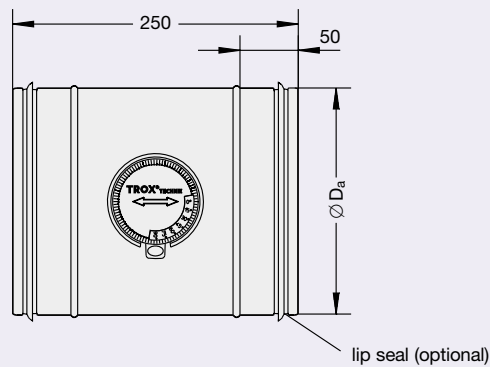
### Casing

- Circular design in 14 nominal sizes.
- Matching to ducts according to DIN 24 145 and 24 146, resp., with rebate for a lip seal (lip seal can be fitted at factory or later at construction site).
- High dimensional stability because of double crimping.
- Optionally available with push over spigot at one end.
- Leakage air flow according to Class II, VDI 3803 and DIN V 24 194, Part 2

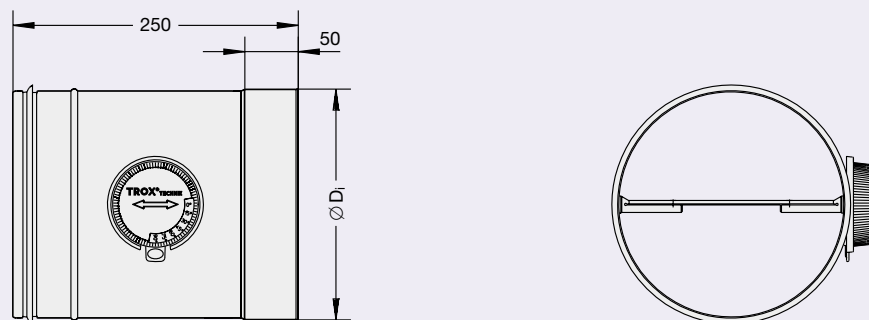
### Material

- Casing and damper blade of galvanised sheet steel.
- Optionally, surface powder-coated (colour RAL 7001) or of stainless steel 1.4301.
- Adjustment device and bearings of plastic PPE, with fire protection rating (UL 94V-0)

### TDK



### Push over spigot one end



**Table 1:** Dimensions in mm and weight in kg

Nominal size	$\varnothing D_a$	$\varnothing D_i$	Weight
80	79	80	0,5
100	99	100	0,6
125	124	125	0,8
140	139	140	0,9
150	149	150	0,9
160	159	160	1,0
180	179	180	1,1

Nominal size	$\varnothing D_a$	$\varnothing D_i$	Weight
200	199	200	1,3
224	223	224	1,4
250	249	250	1,6
280	279	280	1,8
315	314	315	2,0
355	354	355	2,2
400	399	400	2,5

# Nomenclature · Aerodynamic Data

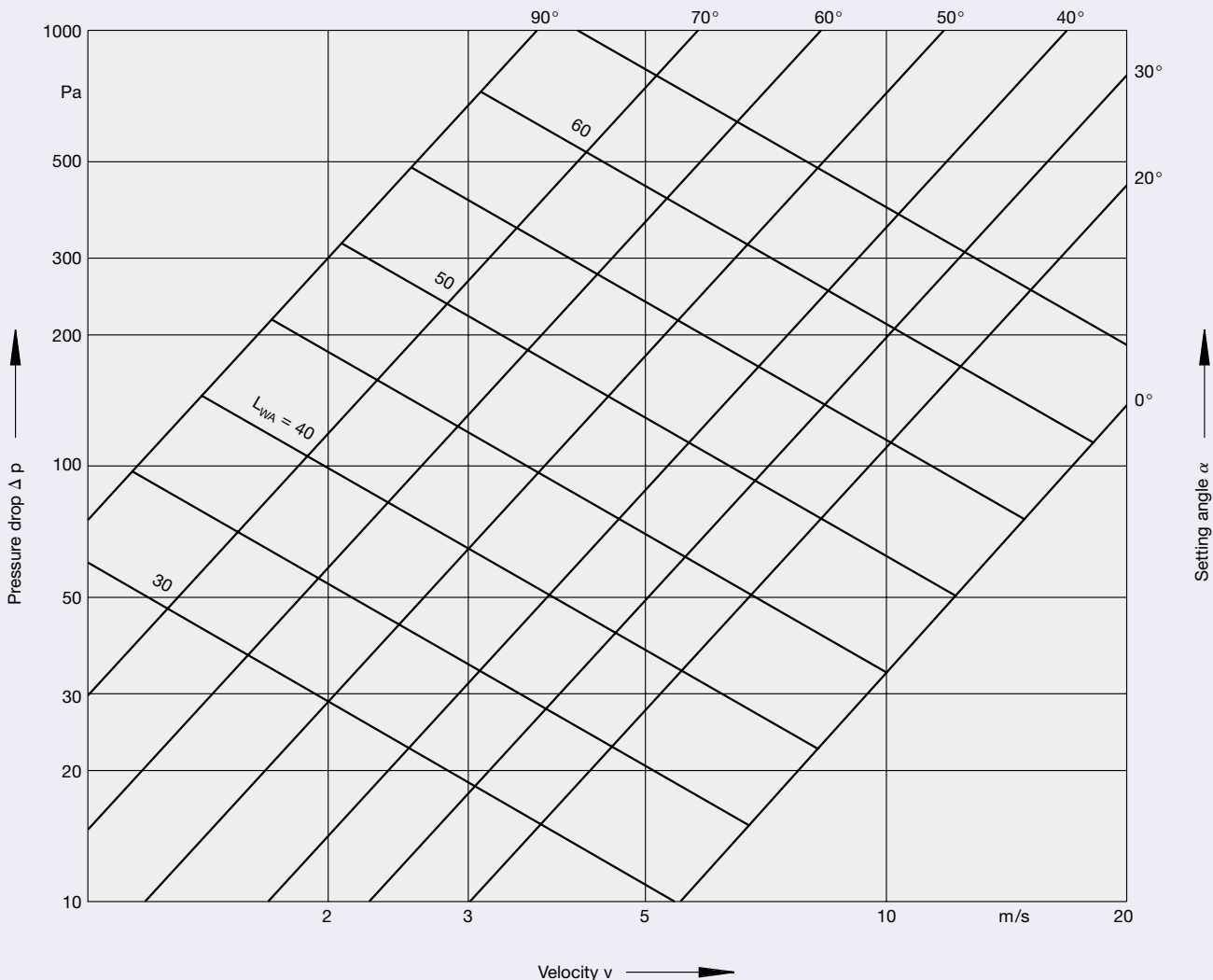
**Nomenclature:**

- $L_{WA}$  in dB(A): Flow generated noise:  
A weighted sound power level (re 1 pW)  
in duct,  
A-weighted  
(All levels were measured in a reverberation chamber. The sound power data was determined and corrected according to ISO 5135, December 1997)
- $\Delta L$  in dB: Correction values for other nominal sizes
- $v$  in m/s: Velocity in connection duct
- $\Delta p$  in Pa: Pressure drop
- $\alpha$  in °: Setting angle

**Correction Table**

Nominal size	80	100	125	140	150	160	180
$\Delta L$ in dB	- 3	0	3	4	5	6	8

**1 Nominal sizes 80 to 180**



# Aerodynamic Data

## Example:

Given: Nominal size 250  
 $v = 5 \text{ m/s}$   
 $\Delta p = 100 \text{ Pa}$

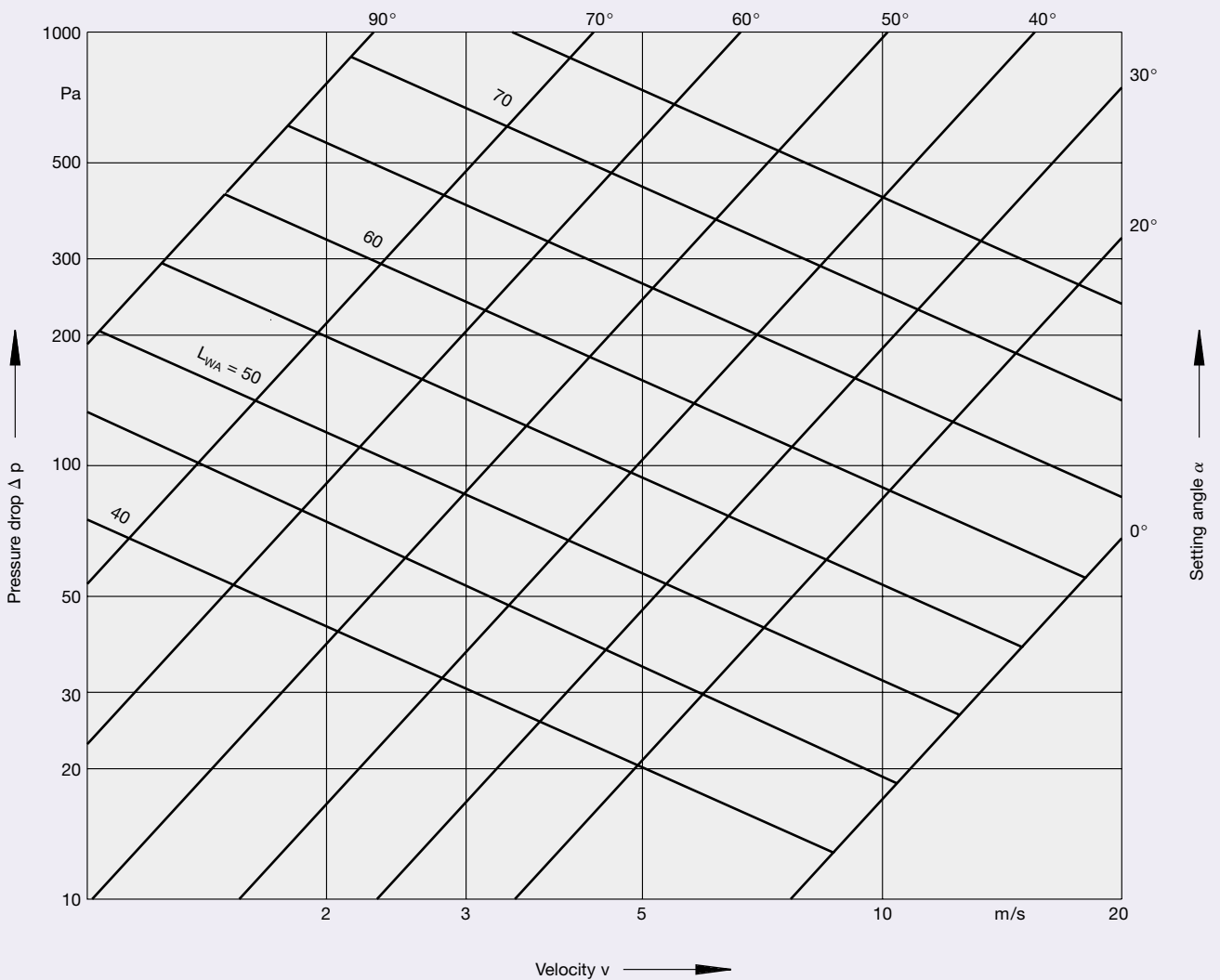
Required: Setting angle  $\alpha$  and sound power level  $L_{WA}$

Result: The result according to the diagram 2 is  $\alpha = 40^\circ$   
 and  $L_{WA} = 56 \text{ dB(A)}$

## Correction Table

Nominal size	200	224	250	280	315	355	400
$\Delta L$ in dB	-2	-1	0	1	2	3	4

## 2 Nominal size 200 to 400



# Order Details

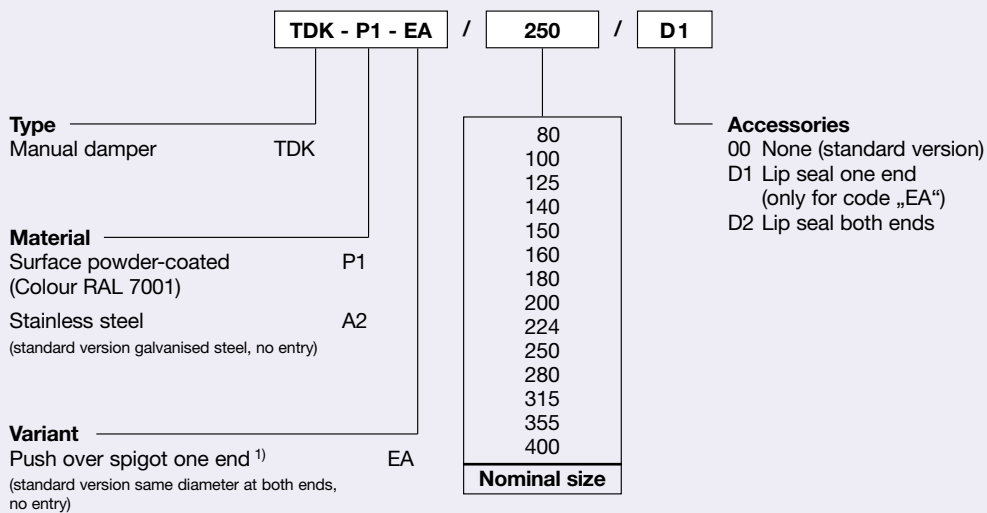
## Specification Text

Circular damper for the adjustment of volume flow rates in air-conditioning and ventilation systems, can be used with duct pressures of up to 1000 Pa. Consists of the casing with damper blade and the lockable adjusting device. Matching ducts according to DIN 24 145 or 24 146, respectively, both ends, same diameter, with rebate for lip seal or with one end as push over spigot. Casing air leakage according to Class II, VDI or DIN V 24 194, Part 2.

## Material:

Casing and damper blade of galvanised sheet steel.  
Adjusting device and bearings of plastic PPE with fire protection rating (UL 94V-0).

## Order Code



1) Opposite end with rebate

## Order Example

Make: Trox  
Type: TDK - P1 - EA / 250 / D1