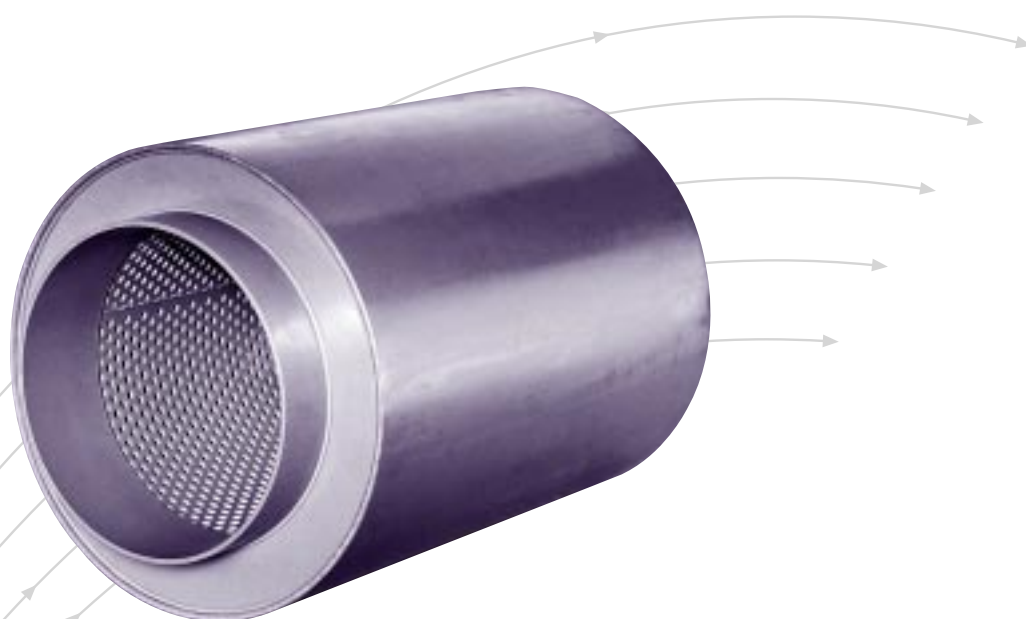


# Circular Silencer

- Type CAK
- Plastic construction



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## Type CAK



TROX circular silencers Type CAK made of PP's plastic, are intended for use in room air conditioning systems subject to aggressive media.

In air distribution systems they can be used to attenuate fan noise and to reduce the air-regenerated noise of air terminal units.

To avoid sound transmission through ventilation ducting between adjacent rooms they can be integrated into the duct system as so called cross talk silencers.

The outer casing and perforated inner duct are PP's plastic.

Absorption material non-combustible with glass fibre scrim facing as protection against erosion. Insulation thickness 50 mm.

Both inlet and outlet connections available with spigot or flange.

The materials used have been selected from experience and have proved successful in practise. Please note that in critical cases, material compatibility testing should be carried out on the circular silencer, taking into consideration the aggressive substances involved and the concentrations in which they occur.

## Constructional features

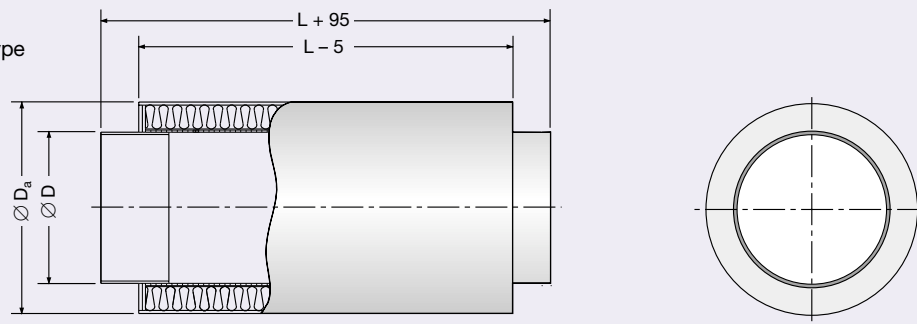
- Circular silencer in rigid construction
- Insertion loss tested according to DIN EN ISO 7235
- Casing air leakage complies with DIN EN 1751, class C
- Construction with spigot connections suitable for circular connecting ducts to DIN 8077/8078
- Flange construction with drilled holes

## Materials

- Outer casing and perforated inner duct are flame resistant plastic polypropylene PPs to DIN 4102, fire rating class B1
- Lining is mineral wool conforming to DIN 4102, fire rating class A2, with RAL quality mark RAL-GZ 388, bio-degradable as defined by TRGS 905 and EU directive 97/69/EG
- Mineral wool faced with fibreglass as protection against erosion suitable for air velocities up to 20 m/s

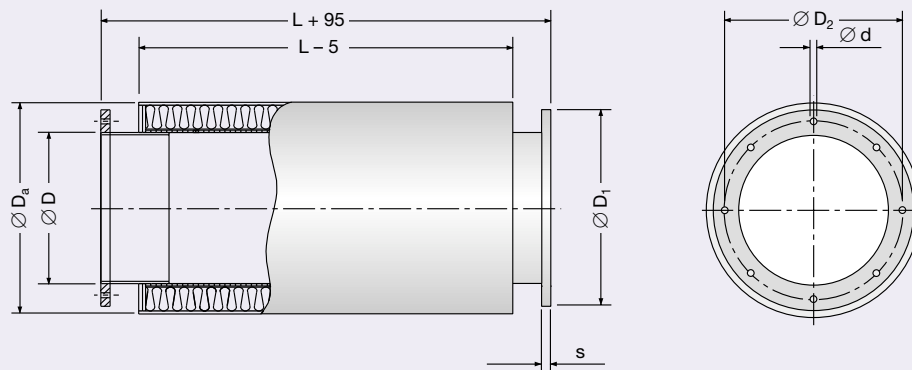
### Type CAK

Construction with plug type spigots (standard)



### Type CAK

Construction with flanges



### Dimensions in mm

Nominal size	Ø D	Ø D <sub>a</sub>	Flange construction					n <sup>1)</sup>
			Ø D <sub>1</sub>	Ø D <sub>2</sub>	s	Ø d		
110	110	200	170	145	12	9.0	6	
125	125	225	185	160	12	9.0	6	
160	160	250	220	195	12	9.0	8	
200	200	280	260	235	12	9.0	10	
250	250	355	310	285	15	9.0	10	
315	315	415	375	350	15	9.0	12	
400	400	500	480	445	15	9.5	18	

1) n = Number of flange holes

### Weight in kg

Nominal size	L in mm			Flange (both ends)
	500	1000	1500	
110	1.8	3.3	4.7	0.3
125	2.2	4.1	5.9	0.3
160	2.6	4.7	6.8	0.4
200	3.2	5.8	8.5	0.4
250	4.3	7.6	10.9	0.6
315	4.6	8.6	12.5	0.7
400	5.2	9.3	13.4	1.6

## Insertion loss $D_e$

From the test conditions described in DIN EN ISO 7235, the duct/reverberation chamber method was chosen. This method involves an empty duct being exposed to a noise, the third octave levels of which are measured in the connecting reverberation chamber under defined conditions. The silencer to be tested is then inserted in the empty duct and the measurement repeated. The difference between the two measurements is the "insertion loss  $D_e$ ".

The octave values are calculated from the third octave measurements.

## Pressure drop; Air-regenerated noise

Pressure drop and air-regenerated noise do not vary significantly from the values of the air flowing in circular ducts.

## Nomenclature

$f_m$  in Hz: Octave band centre frequency

L in mm: Length

$D_{e, \text{oct}}$  in dB: Insertion loss

### Insertion loss $D_{e, \text{oct}}$ in dB

Nominal size	Length L = 500 mm							
	$f_m$ in Hz							
	63	125	250	500	1k	2k	4k	8k
110	1	6	7	14	26	27	16	12
125	1	6	7	14	25	23	14	12
160	0	3	5	11	22	21	12	10
200	0	2	4	10	21	17	10	8
250	0	2	4	9	19	13	9	8
315	0	2	3	8	18	12	7	6
400	0	2	3	6	14	8	6	4

Nominal size	Length L = 1000 mm							
	$f_m$ in Hz							
	63	125	250	500	1k	2k	4k	8k
110	2	9	14	23	34	38	26	16
125	2	9	13	22	34	35	24	16
160	1	4	9	18	30	31	19	13
200	1	4	9	15	29	25	16	11
250	0	4	8	14	26	22	15	11
315	0	4	6	14	26	17	11	8
400	0	3	6	11	25	13	10	7

Nominal size	Length L = 1500 mm							
	$f_m$ in Hz							
	63	125	250	500	1k	2k	4k	8k
110	3	12	20	32	44	44	34	21
125	3	12	19	31	42	43	33	20
160	2	7	13	25	38	41	27	17
200	1	6	12	21	36	33	20	14
250	1	6	11	20	35	30	20	15
315	1	6	9	19	34	23	15	10
400	1	4	8	16	29	15	11	8

## Specification text

Type CAK circular silencer for ventilation systems with aggressive media; insertion loss tested to DIN EN ISO 7235.

Absorption material non-combustible mineral wool conforming to DIN 4102, fire rating class A2, with RAL quality mark RAL-GZ 388; with glass fibre scrim facing covered with perforated plate as protection against erosion suitable for air velocities up to 20 m/s. Outer casing and perforated inner duct made of flame resistant polypropylene (PPs). Spigot connections on both ends suitable for circular connecting ducts to DIN 8077/8078. Casing air leakage complies with DIN EN 1751, class C.

Dimensions:

Nominal size

Length in mm

Insulation thickness in mm

Flow rate in m<sup>3</sup>/h (in l/s)

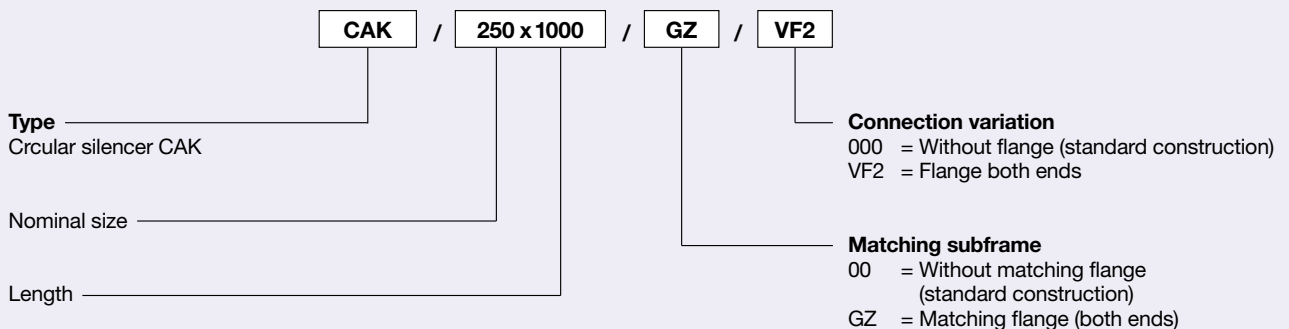
Insertion loss in dB at 250 Hz octave band centre frequency

Item

Type (in accordance with order code; see below) CAK...-

Make TROX

## Order code



## Connection variations



Plug type - 000 -



Flange both ends - VF2 -

