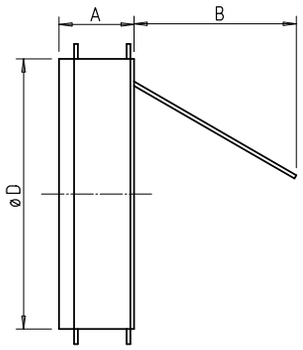
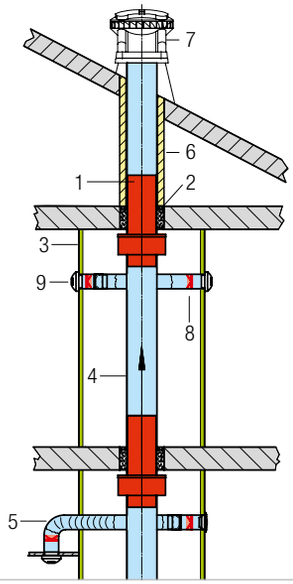
KAK

Dimensions KAK



Dim. in mm see table

System with central fan



The Model Building Regulation and various regional building regulations require the following: The spread of fire and smoke must be prevented!
This requirement is met by the automatic Helios cold smoke shutters with magnetic closure. They seal supply air and extract air openings against the ingress of cold smoke according to regulations.

Application

- Central ventilation systems according to DIN 18017-3 in multi-floor buildings have a central fan which is connected to a shared main pipeline and located above or below the roof. via The connected rooms (e.g. kitchens, bathrooms, WCs) on the respective floor (fire section) are ventilated via the extract air duct.
- The main pipeline must cross multiple fire sections and therefore has to be placed in a fireproof, i.e. F90 classified shaft. The extract air openings in the individual fire sections must be equipped with fire dampers or fire protection disc valves.
- This cost-intensive and space-consuming solution can be replaced by using certified ceiling seals. Ceiling seals are installed or embedded in the main pipeline in the ceiling area. The main pipeline can thus be integrated in the installation shaft.
- Regional building regulations and general technical approvals for damper elements and ceiling seals stipulate that an outflow into the atmosphere via the main pipelines must be guaranteed for vertically installed dampers.
- This requirement becomes relevant if, in the event of a fire, the central fan fails and smoke enters the main pipeline due to overpressure in the fire area and it can enter areas which are not affected by the fire (other fire sections) via openings (disc valves) due to generated dynamic pressure.

Helios cold smoke shutters with magnetic closure KAK prevent the ingress of cold smoke into other fire sections. They must be positioned in all supply air/ extract air openings downstream of the disc valves or extract air elements (also in combination with BAE/BAK).

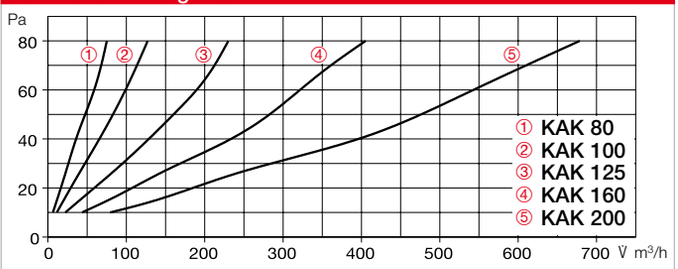
Design

- Ready-to-install element for insertion in ducts and fittings.
- Frame with circumferential U lip seal ring made of EPDM rubber for sealing in the ventilation duct.
- Double-sided shutter frame made of plastic with metal insert covers the silicone membrane. The shutter is therefore flutter-free and quiet in the air flow.
- A permanent magnet is positioned on the thread axle in the Internal frame cylinder, which tightly seals the shutter in case of falling pressure.
- The closing and opening pressure can be adapted to the installation situation.
- The very short installation depth and the asymmetric shape of the shutter frame, which allow a large opening angle, are particularly advantageous.

Installation and setting

- Insert KAK into duct on room side and note the flow direction.
- In case of vertical installation with horizontal flow, Make sure that the axis of rotation is positioned horizontally.

Pressure loss diagram



- Position directly downstream of the disc valve or air inlet/outlet element.

Order data

Type	Ref. no.	Dimensions in mm Ø D	A	B
KAK 80	04096	79	12	63
KAK 100	04097	95	20	60
KAK 125	04098	120	20	83
KAK 160	04099	155	20	110
KAK 200	04100	196	20	150

Legend

1 Ceiling seal ELS-D
2 Ceiling grouting
3 Installation shaft cladding e.g. 12.5 mm plasterboard
4 Main duct (spiral duct)
5 Connection duct (Aluflex)
6 Insulation against condensation
7 Central fan, e.g. Type DV EC (see page 80 ff.)
8 Cold smoke shutter KAK
9 Extract air element AE or disc valve (KTVA or MTVA)