

According to building regulations ventilation ducts that cross more than two storeys vertically must be protected against fire and smoke. These conditions have been fulfilled so far through installing the ventilation duct in a fire proof shaft. This has some disadvantages such as high investment cost, need of large space and longer building time, especially the construction of two shafts (separation of the mixed installation shaft from the ventilation shaft).

■ **The use of ELS-D fire dampers results in various benefits such as:**

- Ventilation ducting can be placed in mixed installation shaft with simple, 12,5 mm thick plasterboard cladding.
- ELS-D are completely maintenance free. Additional fire resistant elements that might need maintenance are not necessary.
- Allows the in-duct ventilation units to be connected via Aluflex ducting without fire protection sheathing and fire protection damper.
- In central ventilation systems, the poppet valves or air flow controlling extract air elements can be replaced with units made of polymer. In order to avoid cold smoke cold smoke dampers (KAK) to be used.
- The extraction of air from kitchens is admissible.
- The constructional and functional advantages of prewall installations or registers can be unconditionally implemented.
- Approximate reduction of the space required to the DN of the main ducting through axial rotation during installation (width like narrow side forward or diagonal).
- The full cross section of the ventilation duct remains, that means no additional pressure drop. Cleaning and maintenance works are not hindered.

ELS-D



Approval Z-41.3-368
maintenance-free

General Technical Approval
from DIBt with no. Z-41.3-368.
Fire resistance class:
K 90-18017 (three-storey test).

■ **Specification**

Casing made of galvanised sheet steel with integrated spigot on top and bottom. The top spigot can also be used as ceiling lead through.

■ **Two stage function**

- The shutter closes first at approx. 90 °C and prevents the transmission of high temperatures to other storeys.
- At approx. 180 °C the integrated fire rated foam seals the ventilation ducting completely above the shutter.

■ **Installation**

ELS-D can be easily installed single handed vertically against the bottom part of the floor slab or in installation registers. The fire damper is to be fixed with two mounting fish plates, that are held in grating and floor finish.

The ceiling leadthrough is already integrated in ELS-D. Thanks to the standard connection nozzles the main ducting can be simply imposed and inserted to the other side like a fitting.

■ **Accessories**
Cold smoke damper

Prevents any reverse flow of cold smoke in central ventilation systems and much else in other ventilation zones while the fan is not working. (Not required in individual ventilation systems.)

Type KAK 100 Ref. no. 4097
DN 100 mm

Type KAK 125 Ref. no. 4098
DN 125 mm

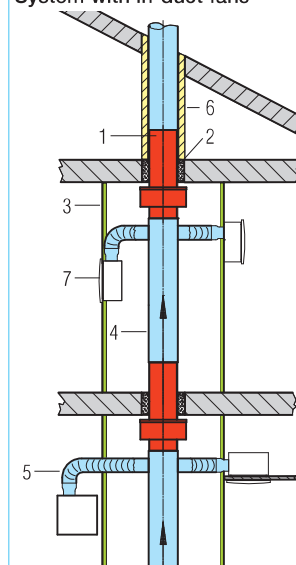
■ **Note**

Further sizes and product details for use of the cold smoke damper KAK.

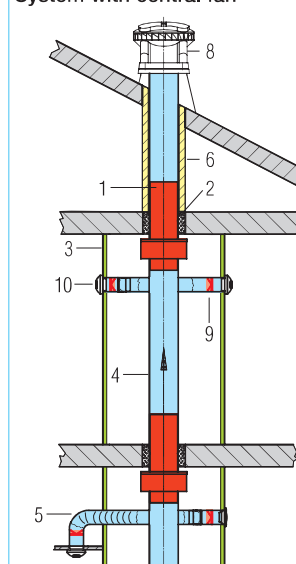
see page 523

- Legend**
- 1 Fire damper ELS-D
 - 2 Ceiling grouting
 - 3 Installation shaft cladding
e.g. 12,5 mm plasterboard panels
 - 4 Main ducting (spiral duct)
 - 5 Connection ducting (Aluflex)
 - 6 Insulation against condensation
 - 7 ELS individual ventilation units
surface of flush mounting without
fire protection requirements
 - 8 Central fan,
e.g. DV EC (see page 65 on)
 - 9 Cold smoke damper KAK
 - 10 Extract air element AE or poppet
valve (KTVA or MTVA)

System with in-duct fans



System with central fan



Ordering data

Type	Ref. no.	Dim. in mm								Weight approx. kg
		A	B	C	Ø d	Ø D	E	F	H	
ELS-D 100	0270	183	123	385	99	102	50	250	85	2,5
ELD-D 125	0185	208	148	394	124	127	50	250	94	3,4
ELS-D 140	0186	233	163	403	139	142	50	250	103	4,0
ELS-D 160	0187	258	183	413	159	162	50	250	113	5,0
ELS-D 180	0188	283	203	424	179	182	50	250	124	6,0
ELS-D 200	0271	308	223	434	199	202	50	250	134	7,2

Dim. in mm

