AYSU
HVAC SYSTEMS

DAMPERS · TECHNICAL DATASHEET

Product code: **AYS-DMP-YS**

CALCIUM SILICATE FIRE DAMPER



Fire damper with an asbestos-free calcium silicate blade and intumescent seals for high fire resistance. Available motorized or with thermal fuse.

FIRE RATING	EI 120 S
SIZE	Made to project
CONTROL	Motor / thermal
THERMAL FUSE	72 °C

FEATURES

- Asbestos-free calcium silicate blade
- Intumescent seals close the gaps in a fire
- Normally open; motorized or thermal fuse release
- Thermal release closes the damper at 72 °C
- Sizes made to project
- Actuators: SIEMENS, BELIMO, NANOTEK, HOOCON

VERSIONS

MOTORIZED
Spring-return actuator
closes on panel / BMS signal; position feedback, remote test

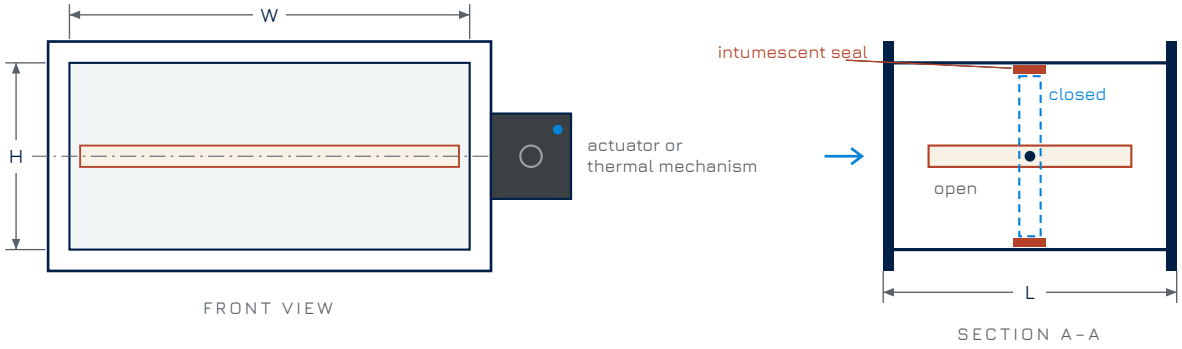
THERMAL FUSE
Non-motorized, mechanical
fuse melts at 72 °C, spring closes the blade; no electrical connection

TECHNICAL SPECIFICATIONS

Fire resistance EI 120 S	Blade calcium silicate, asbestos-free
Seal intumescent	Release 72 °C
Actuator voltage 24 V AC/DC or 230 V AC	Duct connection flanged

DIMENSIONS

W × H to project · dimensions in mm



FRONT VIEW

SECTION A–A

ORDERING INFORMATION

Order code	AYS-DMP-YS-[W×H], e.g. AYS-DMP-YS-600×400
Release	state when ordering: motorized (24 V / 230 V) or thermal fuse
Actuator	SIEMENS as standard; BELIMO, NANOTEK, HOOCON on request
Size	W × H duct inner size, any size to project; L casing length per model

Fire resistance class and certificates are stated per model. The actuator is selected to the damper maker's approved torque and combination.

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OPERATING PRINCIPLE

MOTORIZED

1. **Normal operation:** The actuator is powered, holding the spring loaded and the blade open.
2. **Release:** A close signal comes from the fire panel or BMS, power is cut, or the duct air reaches 72 °C.
3. **Closing:** With power off, the spring closes the blade (fail-safe) onto its seals.
4. **Feedback and testing:** End switches report open / closed; the damper is tested by remote closing and opening.

THERMAL FUSE

1. **Normal operation:** The blade is held open by the thermal fuse with the spring loaded.
2. **Release:** When duct air reaches 72 °C the fuse melts and releases the blade latch.
3. **Closing:** The spring closes the blade onto its seals, stopping flame and smoke.
4. **Resetting:** After a fire the fuse is replaced, the blade opened by hand and the spring reset.

In both versions: in a fire the intumescent seals expand to close the gaps between blade and casing; the calcium silicate blade keeps heat from passing to the other side.

ACTUATOR OPTIONS

Brands and voltages from the catalogue

BRAND	SERIES	TORQUE	VOLTAGE	NOTE
SIEMENS	GMA · GCA	7 – 16 Nm	24 V AC/DC · 230 V AC	standard · OpenAir spring return
BELIMO	BFL · BFN · BFG · BF	4 – 18 Nm	24 V AC/DC · 230 V AC	MP-Bus, Modbus, BACnet options
NANOTEK	Fire / smoke series	–	24 V AC/DC · 230 V AC	actuators with thermal release
HOOCON	SA-FU · SA-MU	3 – 30 Nm	AC/DC 24 V · AC 100–240 V	IP54, 72 °C thermal sensor option

INSTALLATION AND MAINTENANCE

1. **Installation:** The damper is installed to the certified wall / floor detail with the blade axis inside the wall; the gap is filled with mortar or approved fire-stopping.
2. **Duct connection:** Ducts are flange-connected and supported separately; no load on the damper casing, and the blade must rotate freely.
3. **Electrical (motorized):** Connect the actuator to the voltage on its label (24 V or 230 V); wire the end switches to the fire panel or BMS.
4. **Maintenance and testing:** Regularly check the blade, intumescent seals and release; test by closing and opening the damper. Provide an access door.

WHY CALCIUM SILICATE?

High fire resistance
the blade blocks heat transfer; suitable for class EI 120 S

Safe material
contains no asbestos

Tightness
intumescent seals expand in a fire and close the gaps

VALIDITY

Fire resistance class and certificates are stated per model. Actuator series and torques are based on manufacturers' documents; select the approved combination.

SYMBOLS

E	integrity: no flame or hot gas passes
I	insulation: the other side stays cool
S	smoke leakage
120	fire resistance time (min)
BMS	building management system