

Motor-actuated flue gas dampers for negative-pressure flue gas systems

MOK ...
MOK ... AD



INSTALLATION INSTRUCTIONS

- This installation instructions are mainly targeted at trained experts.
- Read the installation instructions carefully before you begin work!
- Special designs and custom-made solutions may differ from these installation instructions in certain points.

Range of Use

Model series **MOK ...** for devices with pilot flame and solid fuels without condensate drain with minimum opening for negative-pressure flue gas systems.

Model series **MOK ... AD** for devices without pilot flame, without condensate drain, metallic sealed for negative-pressure flue gas systems.



Warning

Only the model MOK ... (with minimum opening) must be used in flue gas systems with solid fuel boilers and devices with pilot flame. In the case of solid fuel fireplaces without electric control, only the model MOK ... "currentless open" (actuator STA 6) must be used. The standard actuator "STA 2 (S1)" must only be used in fireplaces that can be shut down quickly and are electronically controlled - e.g. oil or gas fan burners.

Models

MOK ...

Characteristics:

- Actuator: STA 2 (S1) – currentless closed
- maximum flue gas temperature: 400 °C
- with minimum opening

MOK ... AD

Characteristics:

- Actuator: STA 2 (S1) – currentless closed
- maximum flue gas temperature: 400 °C
- metallic sealed



Warning

Motor-controlled flue gas dampers must only be used in dry rooms. Current laws, standards, stipulations and guidelines have to be followed. The installation must only be conducted by trained professionals. We advise you to contact your responsible building control before installation. Before beginning the installation, the system has to be turned off and disconnected from voltage.



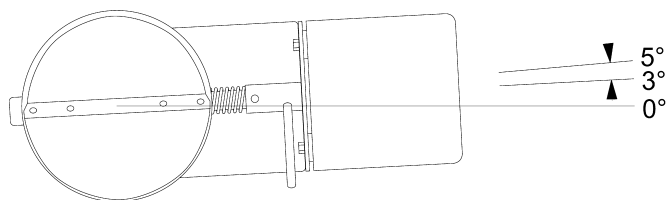
Installation

Installation Place

The device is installed in the flue gas pipe between the flue outlet of the fireplace and the chimney connection. Please see the actuator's installation instructions for the max. ambient temperature. The actuator has to be circulated by air and must not be exposed to dammed up heat (e.g. in cavities).

Installation Position

The flue gas damper can be installed in horizontal, diagonal or vertical flue gas pipes. The damper axis has to be aligned at an angle of 3° to 5° to the horizontal (see figure).



Installation position mot. flue gas damper sideways 3-5°

Installation

The casings of the flue gas dampers are pluggable with a wide and a narrow end. The flue gas damper can be directly inserted into the flue gas pipe during the latter's installation. When retrofitting at a later point, a part of the connection pipe has to be uninstalled at the installation place. Considering the plug direction, a part of the uninstalled flue gas pipe corresponding to the effective

length of the flue gas damper has to be cut off. Afterwards the flue gas damper is installed with the remaining pipe piece.

Fastening

Regardless of the overall size of the flue gas damper, it is necessary to check if it needs additional fastening, e.g. with brackets and clamps. Flue gas dampers have to be protected against distortion on-site.

Insulation

If the flue gas pipe is insulated, please keep the minimum distance of 100 mm to the motor holder plate, butterfly valve stem and motor. Free air circulation has to be ensured.

Electric Connection

Please see the installation instructions of the corresponding actuator for the description of the electric connection.



Start-Up

Before the system is handed over, the entire flue gas evacuation and functioning of the flue gas damper has to be tested. Please make sure that the burner only starts up when the flue gas damper has freed up at least 90% of the pipe cross section and the end switch of the actuator is interconnected. The switch's operation can be tested by measuring the voltage.

For actuator STA 2 (S1) this means:

If the wiring is correct, there is no voltage on clamp 3 when the flue gas damper is closed. When the system is switched on, first the damper has to open and activate the end switch. Now there has to be voltage on clamp 3.

Please see the corresponding installation instructions for the exact clamp and cable laying for this and all other actuators.



Maintenance

During the maintenance of the fireplace, but at least once a year, the flawless operation of the flue gas damper and the flue gas evacuation has to be tested. If necessary, clean the casing inside and outside as well as the shut-off disc and the stem. The actuator is maintenance-free. Testing the end switch that is installed in the actuator is only possible when the switch cam is connected to the butterfly valve stem.

Opening the Flue Gas Damper Manually

If the actuator fails or the if you want to test and clean the flue gas system, the shut-off disc can be moved from the outside with a setting pin and can be locked in the open position with the locking lever. This closes the end switch, which makes it possible to keep using the fireplace.

Accessories / Spare Parts

Actuators:

- "STA 2 (S1)" standard motor, 1x not potential-free end switch
- "STA 2 (S3)" like STA 2 (S1) but with two additional potential-free end switches
- "STA 6" clamp currentless open
- "SWM 4" turning motor

Collars / Connection Pieces

- "A1" collar up to 250 mm nominal width (1 pair, not condensate-tight)
- "A2" collar up to 400 mm nominal width (1 pair, not condensate-tight)
- "AV GKSA ..." impact sound silencer (1 piece, condensate-tight)

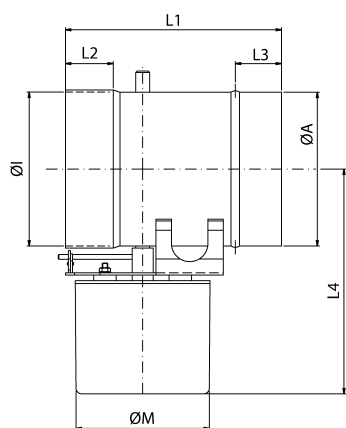
Additional motors, flanges or redundant end switches on request.

Dimensions / Technical Data*

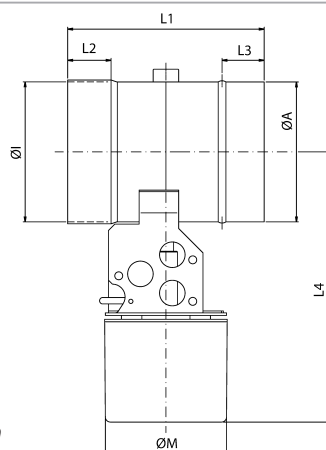
MOK...	ø	80	90	100	110	120	130	150	160	180	200	225	250	300	350	400
L1 ± 5	mm	197,0	197,0	197,0	197,0	197,0	197,0	197,0	197,0	197,0	197,0	197,0	197,0	197,0	330,0	330,0
L2 ± 3	mm	55,0	55,0	55,0	55,0	55,0	55,0	55,0	55,0	55,0	55,0	55,0	55,0	55,0	55,0	55,0
L3 ± 3	mm	48,0	48,0	48,0	48,0	48,0	48,0	48,0	48,0	48,0	48,0	48,0	48,0	48,0	48,0	48,0
L4 ± 10	mm	147,0	152,0	157,0	162,0	167,0	172,0	182,0	187,0	197,0	207,0	219,0	232,0	257,0	282,0	307,0
ØI + 0,5 / - 0	mm	80,0	90,0	100,0	110,0	120,0	130,0	150,0	160,0	180,0	200,0	225,0	250,0	300,0	350,0	400,0
ØA + 0 / - 0,5	mm	79,5	89,5	99,5	109,5	119,5	129,5	149,5	159,5	179,5	199,5	224,5	249,5	299,5	349,5	399,5
ØM ± 10	mm	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0	90,0
Wall thickness	mm	0,8	0,8	0,8	0,8	0,8	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,5	1,5
ζ-value closed	-	ca. 120														
ζ-value open	-	< 1,2														
Maximum flue gas temperature	°C	400														

MOK...AD	ø	80	90	100	110	120	130	150	-	180	200	-	250	300	350	400
L1 ± 5	mm	186,0	186,0	186,0	186,0	186,0	186,0	186,0		186,0	186,0		186,0	186,0	330,0	330,0
L2 ± 3	mm	55,0	55,0	55,0	55,0	55,0	55,0	55,0		55,0	55,0		55,0	55,0	55,0	55,0
L3 ± 3	mm	55,0	55,0	55,0	55,0	55,0	55,0	55,0		55,0	55,0		55,0	55,0	55,0	55,0
L4 ± 10	mm	197,0	202,0	207,0	212,0	217,0	222,0	232,0		247,0	257,0		282,0	307,0	332,0	357,0
ØI + 0,5 / - 0	mm	80,0	90,0	100,0	110,0	120,0	130,0	150,0		180,0	200,0		250,0	300,0	350,0	400,0
ØA + 0 / - 0,5	mm	79,5	89,5	99,5	109,5	119,5	129,5	149,5		179,5	199,5		249,5	299,5	349,5	399,5
ØM ± 10	mm	90,0	90,0	90,0	90,0	90,0	90,0	90,0		90,0	90,0		90,0	90,0	90,0	90,0
Wall thickness	mm	0,8	0,8	0,8	0,8	0,8	1,0	1,0		1,0	1,0		1,0	1,0	1,5	1,5
ζ-value closed	-	> 600														
ζ-value open	-	< 1,2														
Maximum flue gas temperature	°C	400														

* Technical changes and errors excepted.



MOK ...



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Konformitätserklärung
Declaration of conformity

Produkt <i>Product</i>	Abgas-Absperrvorrichtung für Feuerstätten
Handelsbezeichnung <i>Trademark</i>	motorisch gesteuerte Abgasklappen
Typ, Ausführung <i>Type, Model</i>	MOK ...; MOK ... AD; MUK ...; MUK ... D
Produkt ID Nummer <i>Product ID number</i>	CE 0085 AO 1027 CE 0085 AO 0052
EU-Richtlinien <i>EU-Directives</i>	bis 28. 12. 2009: 98/37/EWG ab 29. 12. 2009: 2006/42/EG 2006/95/EG 2004/108/EG 90/396/EWG
Normen <i>Standards</i>	DIN 3388 T2: 1979-09; EN 60730-1: 2005-12; EN 60730-2-14: 2002-02
Konformitätsnachweis <i>Type examination</i>	DVGW Cert GmbH Notified Body 0085
Überwachungsverfahren <i>Surveillance procedure</i>	Qualitätssicherungssystem (QS) auf Basis der DIN EN ISO 9001: 2000-12 Zusicherung der Produktionsqualität nach 90/396/EWG (II, Abs. 3)

Wir erklären als Hersteller:

Die entsprechend gekennzeichneten Produkte erfüllen die Anforderungen der aufgeführten Richtlinien und Normen. Sie stimmen mit dem geprüften Baumuster überein. Die Herstellung unterliegt dem genannten Überwachungsverfahren.

We declare as manufacturer:

Products labeled accordingly meet the requirements of the listed directives and standards. They are conform to the examined type samples. The production underties the stated surveillance procedure.

Maisach, 17. 02. 2009

Technische Leitung



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