Installation guide

NCA Series 700 motorised leakage rated fire damper c/w plate frame

Prior to installation

- If damper is to be stored on site, ensure it is stored in a clean and dry environment.
- Immediately prior to fitment, remove all packaging from the unit. Take particular care inspecting the inside of the unit for any packing materials which may disrupt damper operation.
- Perform a visual check of the damper to ensure it is free from damage.

Installation

- Fire damper installation should only be carried out by competent persons.
- Appropriate PPE should be used throughout the installation.
- Dampers can be heavy, ensure suitable lifting methods are used to help prevent injury.
- Provision for access to both sides of the damper (inside the duct) must be made.
- A small section of ductwork should be connected to the spigot (plate frame side) prior to positioning the damper to assist installation.
- Any cabling should be tied back so as not to be in contact with the duct.
- Breakaway joints should be used where ductwork connects to a damper spigot, for example through the use of aluminium rivets.
- There should be a minimum of 200mm of supporting construction between fire dampers installed in separate ducts (as per direct field of application).
- There should be a minimum of 75mm of supporting construction between the fire damper and any adjacent construction element, e.g. a wall or ceiling (as per direct field of application).
- An increase of the gap (area) between the damper and supporting construction of up to 50% is permitted (as per EXAP report, clause X.45).
- A decrease of the gap (area) between the damper and supporting construction is permitted (as per EXAP report, clause X.46).

Recommended spares

- Thermal probe tripping element - 'Belimo ZBAT72'

Installation S700-2VP

Drywall partition installation

Installation classified to (in accordance with BS EN 13501-3):
E 120 (ve i↔o) S
120 minute rated reduced leakage vertical installation
Air permitted to flow in either direction through damper
Permitted for single and multiple section assemblies

Installation procedure

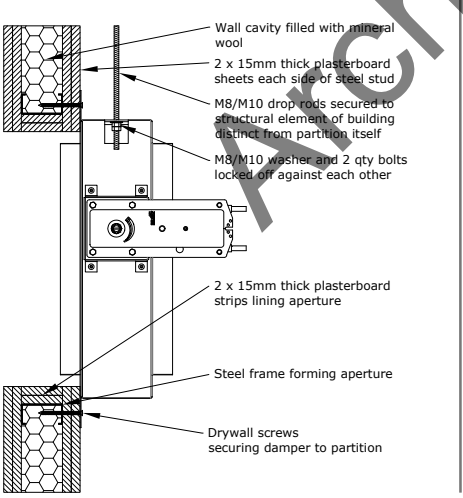
- Construct drywall partition steel frame incorporating a rectangular aperture for the damper 94mm larger than damper nominal size.
- Fill wall cavity with mineral wool and fix two layers of plasterboard to both sides of partition and inside of aperture (lined aperture should be 34mm larger than damper nominal size).
- Hang damper from M8/M10 drop-rods secured to a structural element of the building distinct from the partition using a washer and two nuts positioned below each fixing lug.
- Centralise damper spigot within aperture.
- Screw damper to partition using all pre-punched 5mm holes in plate frame, ensure all screws gain a positive fix on the steel aperture frame.
- Lock both pairs of drop-rod nuts off against each other.
- Proceed to actuator connection procedure at bottom right.

Material specifications

Wall:	Constructed to achieve 'EI 120' classification (or greater) in accordance with EN 1363-1 Minimum thickness 130mm
Stud depth:	70mm
Plasterboard:	EN 520 F rated, 15mm thick 'Gyproc Fireline', 'Knauf DF' or equivalent
Mineral wool:	Minimum density 100kg/m^3 Minimum thickness 60mm 'Rockwool RW5' or equivalent
Fixing screws:	Minimum spec 4.2mm x 65mm drywall screws

Notes

- No backfilling, sealing or pattress frame is required.
- Blades must run horizontally, and the CE label must not be upside-down.
- The steel aperture frame must be joined to vertical frame members which are themselves fixed to the supporting construction.



Installation S700-2VM

Masonry wall installation

Installation classified to (in accordance with BS EN 13501-3):
E 120 (ve i↔o) S
120 minute rated reduced leakage vertical installation
Air permitted to flow in either direction through damper
Permitted for single and multiple section assemblies

Installation procedure

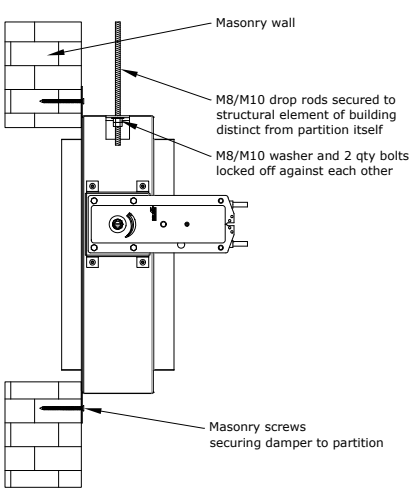
- Construct wall incorporating a rectangular aperture for the damper 34mm larger than damper nominal size.
- Open the factory punched 5mm diameter fixing holes in the plate frame out to 8mm.
- Hang damper from M8/M10 drop-rods secured to a structural element of the building distinct from the partition using a washer and two nuts positioned below each fixing lug.
- Centralise damper spigot within aperture.
- Screw damper to wall using all 8mm holes in plate frame, ensure all screws gain a positive fix.
- Lock both pairs of drop-rod nuts off against each other.
- Proceed to actuator connection procedure at bottom right.

Material specifications

Wall:	Constructed to achieve an equivalent or greater fire resistance as a drywall partition of 'EI 120' classification in accordance with EN 1363-1 Minimum thickness 130mm
Fixing screws:	Minimum spec 6mm x 60mm masonry screws

Notes

- No backfilling, sealing or pattress frame is required.
- Blades must run horizontally, and the CE label must not be upside-down.



Installation S700-2HC

Concrete floor installation

Installation classified to (in accordance with BS EN 13501-3):
E 120 (ho i↔o) S
120 minute rated reduced leakage horizontal installation
Air permitted to flow in either direction through damper
Permitted for single section assemblies only

Installation procedure

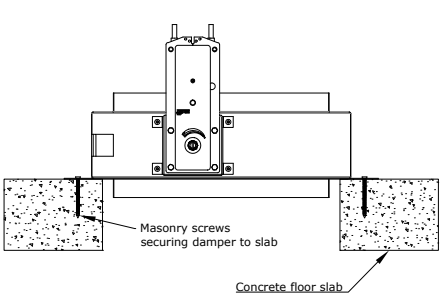
- Construct floor slab incorporating a rectangular aperture for the damper 34mm larger than damper nominal size.
- Open the factory punched 5mm diameter fixing holes in the plate frame out to 8mm.
- Centralise damper spigot within aperture.
- Screw damper to slab using all 8mm holes in plate frame, ensure all screws gain a positive fix.
- Proceed to actuator connection procedure at bottom right.

Material specifications

Floor:	Concrete slab (aerated or normal) Minimum thickness 150mm Minimum density 600kg/m^3
Fixing screws:	Minimum spec 6mm x 60mm masonry screws.

Notes

- No backfilling, sealing or pattress frame is required.
- The damper must sit on top of the floor, not be hung from below.
- Fixing lugs are redundant in this installation.



Actuator connection procedure - Single section assemblies

- Fit thermal probe to ductwork (top-half when damper is being used vertically).
- Connect actuator to an appropriate power supply.

Actuator connection procedure - Multiple section assemblies

- Fit fire damper relay box to partition/wall/floor using predrilled holes in saddle and appropriate fixings. Do not fit to ductwork.
- Fit thermal probe to ductwork (top-half when damper is being used vertically).
- Follow wiring diagram supplied with relay box.

IMPORTANT NOTE

It is a legal requirement that fire dampers are installed in the way instructed by the manufacturer. Any other installation is untested and therefore illegal.

Responsibility for ensuring correct installation lies with all parties in the supply chain.

Installation declaration overleaf →

Fire damper installation declaration

Installation record, check-list and sign-off

Damper type:	NCA Series 700 motorised leakage rated fire damper c/w plate frame
Thermal probe rated temperature:	72°C
Damper reference (if applicable):	
Damper serial number (see CE label):	
Damper location (within site):	
Installation type used (see overleaf):	
Installation address:	

Installation company:	
Installation company contact telephone number:	
Installation company contact email address:	
Installation company address:	

No.	Question	*Notes*	Yes/No
1	Is the damper correct for the installation?	*Are S700 motorised leakage rated fire dampers c/w plate frame what the installation requires?*	
2	Is the damper installed correctly?	*Has the damper been installed in accordance with the appropriate method shown overleaf?*	
3	Is the penetration solely used by the damper?	*Other services running through the same penetration is a violation of the installation method.*	
4	Is access sufficient?	*Can someone access the inside of the duct and damper safely to perform ongoing inspections and maintenance?*	
5	Is the damper in good working condition?	*Check specifically for cleanliness, damage to blades and the presence of foreign objects which might obstruct the damper's operation.*	
6	Has a successful cycle test been carried out?	*Has the damper been cycle tested on power and have the blades themselves been observed to open and close correctly?*	
7	Is the actuator driving the blades correctly?	*S700 fire dampers must only be used in a power open, fail closed setup.*	
8	Has the damper been registered with HVC?	*S700 fire dampers must be registered at www.h-v-c.com/product-registration*	
9	Do you have any concerns about the installation?	*Is there anything that does not look correct, do you have any doubts etc.?*	

If any of questions 1 - 8 is answered 'no', or if the answer to question 9 is 'yes', it must be reported to the relevant persons on site and acted upon.

Print name: **Date:**

Signature:

Installation guide overleaf →