SUSPENSION
SOLUTION DATASHEET

SHOT-LOCK SYSTEM

THE SHOT-LOCK SYSTEM is designed to fix a wire suspension to a base material using Powder Actuated Tools (PAT).

The suspension consists of a length of wire rope with a shot-fire bracket termination (nail included) and is supplied with an appropriate SUFIX locking device.

AVAILABILITY

The Shot-Lock system should only be used for lightweight installations and is available with the following safe working loads (SWL):

- **G** system – 15 kg SWL
- **S** system – 25 kg SWL

Note: G-system should not be used for HVAC.

Shot-Lock systems are available in drop lengths of 1 m to 10 m. Loads indicated are per individual wire support when coupled with the appropriate SUFIX locking device.

Important Note: Overall SWL of the Shot-Lock system is governed by the strength of the base material as well as the quality of the fixing into the base material. The Shot-Lock system must be de-rated appropriately if either of these factors are applicable.

PROOF LOAD TESTING

- SUFIX recommend that Proof Load Testing should be carried out prior to installation in order to confirm system suitability.
- For assistance with Proof Load Testing (UK only) contact SUFIX Technical Department.

SUITABLE BASE MATERIALS

- Concrete slab.
- Solid brick.
- Solid block.
- Grout-filled block.
- Concrete over steel rib deck.
- Steel beams (19 mm nail required).

SUITABLE SHOT-FIRE TOOLS

Manufacturer:	Models:
SPIT	P200, P370
HILTI	DX460, 351
POWERS	PA3500, PA351
SYMPAFIX	PX60M

INSTALLATION

- Fasten the shot-fire bracket to the base material.
- Connect the wire support to the application using the SUFIX locking device.

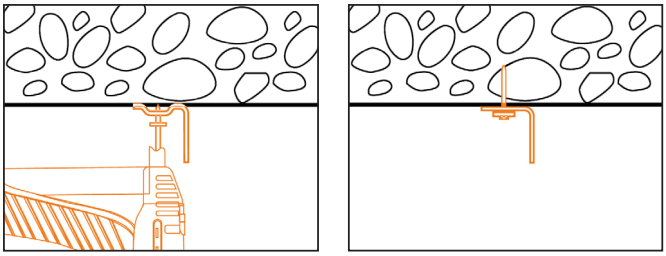
STEP 1:

Tools required:	PAT cartridge nailing tool.
PPE:	Wear the recommended PPE equipment specified/provided by the manufacturer.
Other requirements:	Relevant up to date training (certificate) on the safe use of the nailing tool (not provided by SUFIX).

Before installation SUFIX recommend referring to Construction Fixings Association guidance notes, ref: CFA Guidance Note: Powder Actuated Fixing Systems.

Always perform test fixes prior to commencing installations to ensure fixing is suitable for base material and application.

1. Ensure substrate is suitable for nail and cartridge.
2. Locate nail into barrel of the Powder Actuated Tool.
3. Follow the gun manufacturers' firing guidelines and CFA guidance notes.



Note: It is important to carefully follow PAT tool manufacturers guidelines with regard to installing PAT fixings safely and correctly. Always pay attention to:

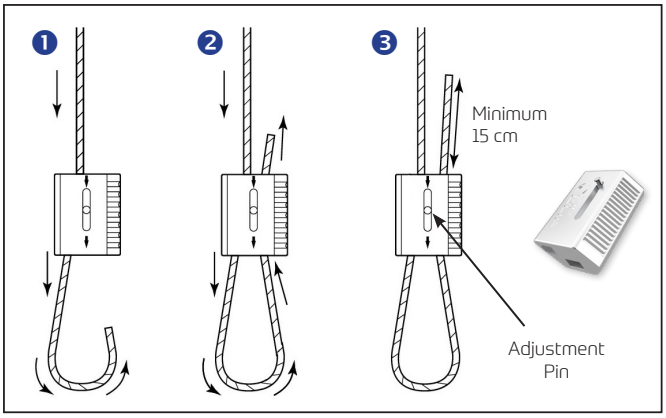
- Correct cartridge settings.
- Correct concrete depths.
- Correct edge and anchor spacing.

STEP 2:

❶ Pass the wire through the SUFIX locking device in the direction of the arrow.

❷ Pass through or around your required suspension and back through the locking device leaving 15 cm wire tail protruding.

❸ Always confirm engagement of the SUFIX locking device on the wire by pushing the pin in the opposite direction to the arrows indicated.



ADJUSTMENT OF THE SUFIX LOCKING DEVICE

Please Note: Before any adjustments can be made it is necessary to take all weight off the locking device. It will not be possible to make adjustment if this is not done.

To shorten the suspension:

1. Push the SUFIX device further up the live (load) wire – This will make the loop bigger.
2. Pull on the dead wire (exit tail) to make the loop smaller – This will shorten the suspension.
3. Trim the dead wire tail to minimum 15 cm or coil the wire neatly to allow for future adjustment.

To lengthen the suspension:

1. Select the channel that holds the dead wire.
2. Make sure there is enough spare dead wire to allow for adjustment whilst maintaining an exit tail.
3. Push the adjustment pin in the direction of the arrow. This will release the dead wire (exit tail).
4. Allow the dead wire to feed back through the SUFIX. This will make the loop bigger.
5. Now select the channel that holds the live wire (load).
6. Push the adjustment pin in the direction of the arrow. This will release the live wire.
7. Allow the SUFIX to travel down the live wire. This will make the loop smaller.

MATERIALS

Shot-Fire Bracket with Nail:
Manufactured from zinc plated steel.

SUFIX Devices:
Zamak zinc alloy main body with internal stainless steel spring and sintered steel locking wedge(s).

Wire Rope:
Galvanised mild steel electro-galvanised wire rope, 1960 N/mm² grade, 7×7 IWRC construction, manufactured to BS EN 12385.

- 18th Edition Amendment 2 : 2022 compliant.

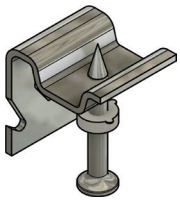
THE SHOT-FIRE BRACKET

The shot-fire bracket is designed for permanently fastening a wire suspension to concrete. The brackets are supplied with pre-mounted pins with a specially designed point to allow proper penetration into typical base materials.

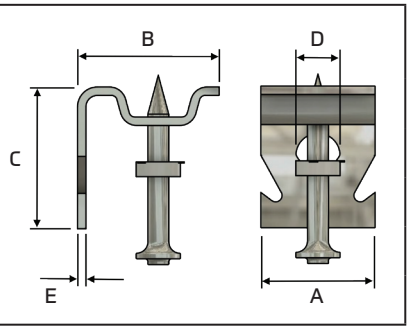
A plastic retention disc is mounted to the shank to retain the drive pin in the fastener guide of the tool providing guidance during the driving operation.

DIMENSIONS:

Nail	Head Ø (mm)	Shank Ø (mm)	Length (mm)
34×8	7.8	3.7	33.5



Bracket	Size (mm)
A	20.2
B	26
C	25.5
D	7.5
E	1.5



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