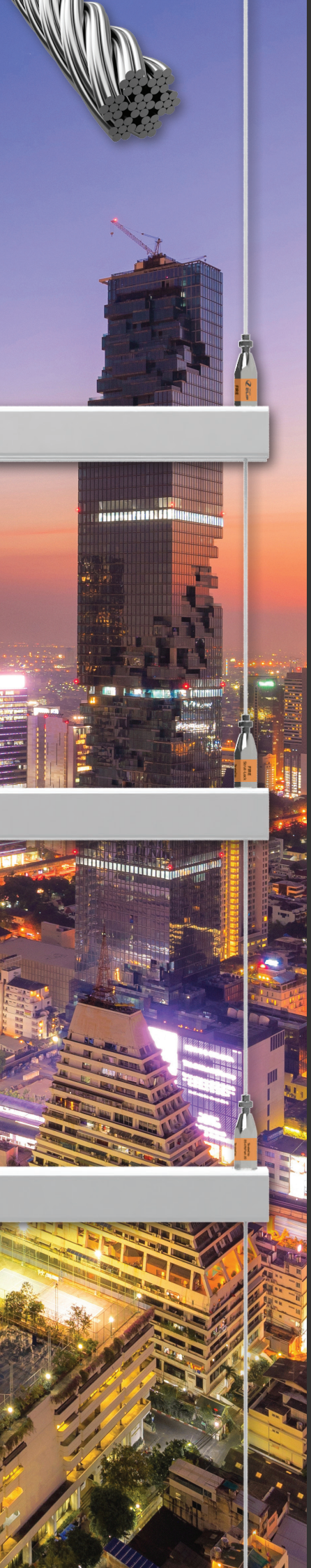

A FUSION OF ENGINEERING AND DESIGN

High specification solutions recognized globally for fully accountable performance, functionality and flexibility.

SUSPENSION BRACING AND VIBRATION ISOLATION SOLUTIONS FOR BUILDING SERVICES

HVAC and Mechanical

Electrical and Lighting

Signage and Panels

ZIP CLIP

SAFETY | **SUSPENSION** | SPEED

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THE QUEEN'S AWARDS FOR ENTERPRISE: INTERNATIONAL TRADE 2019

WHO ARE ZIP-CLIP?

Zip-Clip are designers and manufacturers of high specification wire suspension and bracing solutions used in an ever-increasing range of applications. The systems are recognized globally for their fully accountable performance, functionality and flexibility.

Developed by highly experienced in-house R&D teams, in close consultation with specifiers, engineers and contractors, Zip-Clip systems offer suspension and bracing solutions for all electrical, HVAC, mechanical, acoustic and radiant panel and signage needs, and this list of applications is ever increasing!

WHY USE WIRE?

A Proven Concept …

Early in the nineteenth century, visionary engineers discovered that when steel is drawn into wires its strength increases, meaning a flexible wrap of steel wires is stronger than a solid steel bar of the same diameter, thereby offering higher load capacity with less material.

Zip-Clip Wire Suspension and Bracing Systems

The wire used in all Zip-Clip systems is a premium product with a tensile strength of 1960 N/mm^2. It is available in load ranges from 15 kg to 500 kg and all solutions are designed with a built-in safety factor.

This level of performance and accountability provides the confidence to use Zip-Clip wire in place of traditional threaded rod or chain supported suspensions and is one of the principal reasons why today wire rope is being specified for an ever-increasing range of applications.

WHERE CAN YOU USE WIRE?

Zip-Clip wire rope systems can be utilised for suspension, bracing, and more, and are typically used within the construction industry, where they are utilised as an equivalent to systems such as threaded rod or chain.

Zip-Clip solutions are typically used for the suspension and/or bracing of:

- Electrical containment trays, baskets or ladders,
- Lighting,
- HVAC and mechanical services,
- Acoustic and radiant heating panels,
- Signage, screens and partitions.

> ***BE INSPIRED** … With Zip-Clip wire rope suspension and bracing systems, applications are as varied as your imagination.*

If you automatically think of using rigid threaded rod or chain to solve your suspension and bracing needs, you may want to think again and look at all the advantages offered by wire.








CONTENTS

By working together we can make change happen

bsi ISO 9001 Quality Management Systems CERTIFIED
FM 765116

bsi UKAS MANAGEMENT SYSTEMS 0003
FM 765116

INDEPENDENTLY TESTED

All Zip-Clip suspension and bracing solutions offer fully assured performance and accountability and are independently tested to exacting standards.

apave ADCAS THE VOICE OF THE DUCTWORK INDUSTRY bre element SATRA TECHNOLOGY SMACNA UL

For details of test undertaken and copies of test certificates please contact our offices.

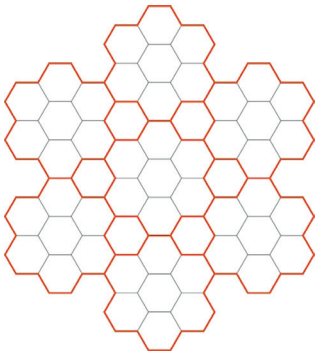
INTRODUCTION TO ZIP-CLIP WIRE ROPE

Zip-Clip suspension and bracing systems utilise premium grade high strength wire rope made from Extra Improved Plow Steel (EIPS) which exhibits minimal permanent elongation under design load. The wire is manufactured in accordance with BS EN 12385, ASTM A1023/A1023M. For seismic bracing applications, the effective modulus of elasticity of each wire rope size has been independently verified and break strength has been tested to ASTM A931.

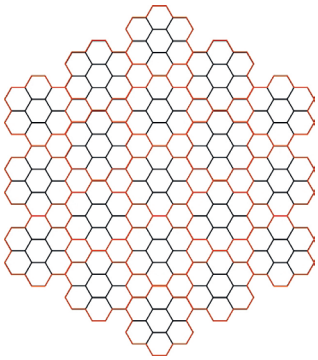
AVAILABLE SYSTEMS

Galvanised mild steel electroplated wire rope:

Wire Code	SWL of Wire	Construction	Tensile Strength
G	15 kg	7×7 (6/1) RHRL	1960 N/mm²
S	50 kg	7×7 (6/1) RHRL	1960 N/mm²
Y	120 kg	7×7 (6/1) RHRL	1960 N/mm²
P	300 kg	7×19 (6/1) RHRL	1960 N/mm²
N	500 kg	7×19 (6/1) RHRL	1960 N/mm²



▲ Construction of 7×7 wire rope.



▲ Construction of 7×19 wire rope.

Stainless steel wire rope:

Wire Code	SWL of Wire	Construction	Grade
G/SS	12 kg	7×7 (6/1) RHRL	AISI316
S/SS	40 kg	7×7 (6/1) RHRL	AISI316
Y/SS	100 kg	7×7 (6/1) RHRL	AISI316
P/SS	250 kg	7×19 (6/1) RHRL	AISI316
N/SS	400 kg	7×19 (6/1) RHRL	AISI316

Angular Performance

The table below shows the effect on Safe Working Load when a system is working at an angle from the vertical.

Wire Code	Vertical	15°	30°	45°	60°
G	15 kg	14.40 kg	12.9 kg	10.5 kg	7.5 kg
S	50 kg	48 kg	43 kg	35 kg	25 kg
Y	120 kg	115.2 kg	103.2 kg	84 kg	60 kg
P	300 kg	288 kg	258 kg	210 kg	150 kg
N	500 kg	480 kg	430 kg	350 kg	250 kg
LOAD	**100%**	**96%**	**86%**	**70%**	**50%**

COMMON MISCONCEPTIONS

Don't wire rope suspensions swing about?

NO - Though there is some flexibility designed into the systems, when loaded with the suspended services, wire rope offers a fixed, secure suspension solution.

Don't threaded rod suspension systems support more load?

NO - Traditional rod-based systems are frequently over-engineered, using more materials than necessary. A 2 mm diameter wire rope performs to the same level as 10 mm threaded rod. Zip-Clip systems are available with proven load carrying capacities from 15 kg to 500 kg per wire support, plus **all systems are designed with a built-in safety factor** for complete peace of mind. Wire rope also allows longer drops to be installed without the need for additional couplers.

Don't threaded rod-based suspension systems have to be installed under fire regulations?

NO - All Zip-Clip suspension and bracing systems are fully metallic and compliant under Edition 18 (Electrical Wiring Regulations). Zip-Clip offer suspension solutions that have been third-party tested for fire performance and test result data is available.

ENVIRONMENTAL BENEFITS OF WIRE ROPE

A case study:

A typical retail store uses approximately 1,200 suspension drops at 2 m (i.e. 2,400 metres in total).

M8 rod would weigh 748.80 kg and produce 1,344 kg of CO_2 to manufacture the 2,400 metres required.

A Zip-Clip wire rope system would weigh 37.86 kg and produce 96 kg of CO_2 to manufacture the 2,400 metres.

- **Saving on weight: 710 kg**
- **Saving on CO_2: 1,248 kg**

Therefore a 92.6% reduction of CO_2 emission can be realised by utilising a Zip-Clip wire rope Suspension System and this major environmental benefit does not take into account transportation!

Data provided by the Worldwide Lifecycle Inventory Methodology Report 1999/2000.

INTRODUCTION TO THE RIZE SYSTEM ... where it all began!

The Zip-Clip Rize system is a highly versatile system that consists of wire rope, supplied on reels in dispensing boxes, and corresponding Zip-Clip locking devices. The system is designed to give installers the flexibility to custom fit desired drop lengths on site for both lightweight or heavy-duty installations.

Zip-Clip devices are utilised to anchor the wire rope to a ceiling or anchor point, as well as being used to attach the wire to the desired fixture or fitting.

AVAILABILITY

Five different Rize systems are available, each allocated a letter to differentiate between safe working loads (SWL).

System	Device	Wire Rope	SWL (kg)
G	KL50	R200G	15
S	KL100	R100S	50
		R200S	
		R500S	
Y	KL150	R100Y	120
P	KL200	R100P	300
N	KL600	R100N	500

Loads indicated are per individual wire support when coupled with the appropriate locking device.

Note: G-system not for use with HVAC.

FEATURES AND ADVANTAGES

- High tensile galvanised mild steel or 316 marine grade stainless steel wire rope with 7×7 or 7×19 construction.
- Designed-in safety factor.
- Fully metallic locking device (zinc alloy main body).
- 18th Edition Amendment 2:2022 compliant.
- Key-free release mechanism for easy adjustment.
- Ideal for both short drop lengths in small void spaces and for very long wire supports.
- Easy to transport and store – 100 m coil of wire is equivalent to 30 × 3 m lengths of threaded rod!
- Easy, safe and time efficient to install even in confined spaces – Only wire cutters being required.
- Can be used as a wrap-around solution for applications such as I-beams or purlins.
- Can be used in conjunction with a number of different brackets or fixings, including eye bolt adapters, concrete eye bolts, rib-deck fixings, purlin clips.
- Low visual impact (also available in black).

SUITABLE FOR

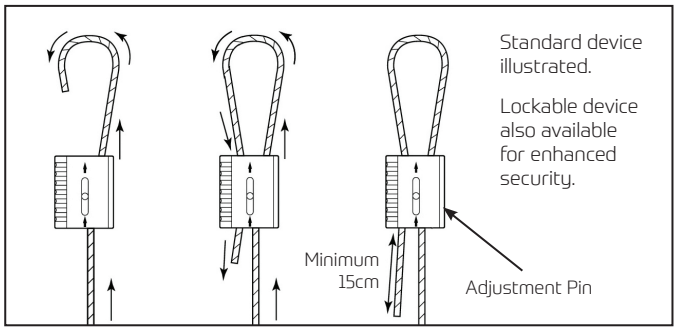
- Electrical containment
- HVAC and mechanical installations
- Signage and displays
- Acoustic panel and radiant heat panel suspension
- Bracing
- Catenaries

ZIP-CLIP RIZE – HOW IT WORKS

The Standard Device

- Pass the wire rope through the locking device in the direction of the arrow.
- Loop the wire rope through or around the anchor point.
- Pass the wire rope back through the device allowing 15 cm of wire rope protruding.
- Apply tension.
- Confirm engagement of the locking device on the wire rope by pushing the adjustment pin in the opposite direction of the arrows indicated on the side of the device.

Zip-Clip devices are also available in a lockable version offering a more secured method of wire rope suspension.




Standard Device


Standard Device (Black)


Lockable Device

THE FLEXIBILITY OF A ZIP-CLIP RIZE DEVICE

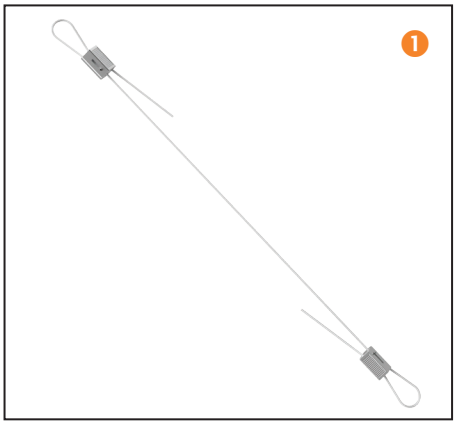
Due to the unique way in which the Zip-Clip device is manufactured, each channel can be utilised in different ways to perform a number of different functions.

Each locking channel within a Zip-Clip device works independently of the other. This allows a Zip-Clip to be used in a variety of different ways.

❶Clip Top and Bottom

Zip-Clip's RIZE system offers the flexibility to customise your own drop lengths and is ideal for long drops with no limit on length.

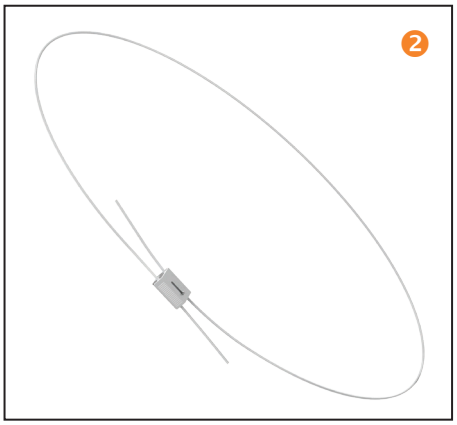
A device is used to anchor the wire rope to the soffit/ceiling structure and another to attach to the fixture/application.



❷All-Round Loop

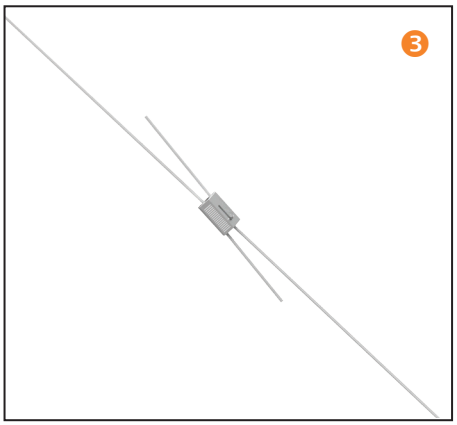
A Zip-Clip device can be used to create an all-round loop by joining two free ends of wire rope together. This can be coupled with a fixing or fixings of choice in order to create one full suspension.

- Cut double the length of wire rope required for the final drop length.
- Pass or feed one end of wire rope around your chosen anchor point and return this wire rope into one locking channel of the device. Ensure the exit tail is 15 cm.
- Take the other end of wire rope and pass/feed this around your chosen fixture/application, returning the wire rope back into the other available locking channel. Ensure the exit tail is 15 cm.



❸In-Line Joint

By following the arrows on each side of the Zip-Clip device, an in-line joint can be created. This can be used to extend a drop length that is too short. Ensure the exit tails are 15 cm.



❹Stop-End for Trapeze Brackets

As each Zip-Clip device has a flat face across its smallest axis, it can be used as a stopper unit by feeding the wire rope through just one channel. Adjustment can be made by the key-free release mechanism.

By incorporating an optional penny washer above each device, the supporting surface area can be increased.

This method is ideal for multi-tier trapeze drops offering a quick, cost-effective and simple solution which can be used in two different guises, see diagram.

Installers must ensure that 15 cm of wire rope exits through the back of each device once locked off, known as the dead wire.

All supports must be used within the safe working load.

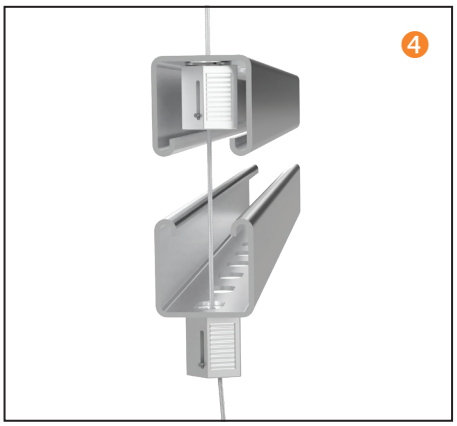
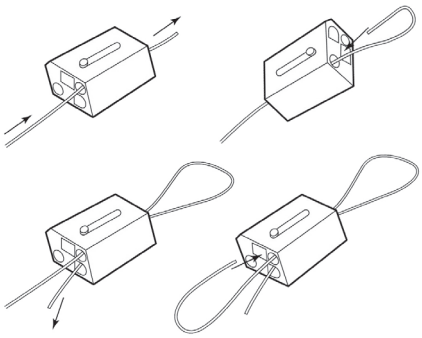


FIGURE OF EIGHT SUSPENSION

The KL200 can be used to make a figure of eight suspension, using just one device.

- Insert the wire rope into the “through-hole” of the KL200. Note, this through-hole has no locking wedge inside it. The wire rope will move freely through this hole.
- Wrap the wire rope around your chosen anchor point and return it back into the KL200 using the available locking channel. Ensure the exit tail is 15 cm.
- Always confirm engagement of the Zip-Clip device on the wire rope by pushing the adjustment pin in the opposite direction of the arrows indicated on the side of the Zip-Clip device.
- Repeat this process with the other end of wire rope.
- Wrap the wire rope around your chosen fixture/application and return the wire rope back into the KL200 using the available locking channel. Again, ensure the exit tail is 15 cm.



QUICK AND EASY ADJUSTMENT

To shorten the suspension:

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

To lengthen the suspension:

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

Please note: Before any adjustments can be made, it is necessary to take the weight off the Zip-Clip device. It will not be possible to make any adjustment if this is not done.

"Today, more than ever before, environmental implications of installations have to be fully evaluated and this is especially true with the drive to reduce CO_2 levels and the ultimate goal of achieving 'net zero' buildings."

HVAC and Mechanical

HVAC and Mechanical Solutions

INTRODUCTION

Mechanical engineers and others responsible for the design and installation of heating, ventilation, and air-conditioning (HVAC) are today facing an increasingly varied range of installation requirements, whilst working to ever-tightening regulations and industry guidelines, just like those working in many other M&E disciplines.

The design, installation, and operation of systems that heat, cool, and ventilate indoor spaces, optimizing indoor air quality by controlling temperature, humidity, and air flow in individual rooms as well as whole buildings is now in the spotlight more than ever before.

During the design phase, engineers are required to select HVAC components to be used in a project and calculate sizes and loads for pumps, pipes, ductwork, etc. Not only does the effectiveness and efficiency of the system layout have to be methodically scrutinised and optimised but like all other aspects of construction environmental implications have to be fully evaluated and this is especially true with the drive to reduce CO_2 levels and the ultimate goal of achieving 'net zero' buildings.

HVAC SPECIFIC SUSPENSION RECOMMENDATIONS

In all cases Zip-Clip recommends that installations of supports follow guidelines laid down in DW/144, Third Edition 2016, Specification for Sheet Metal Ductwork.

With special reference to sections titled "Arrangement of bearers and hangers" Zip-Clip recommends following industry standards with regards to the regularity of supports, as well as the exact arrangement of the support in relation to the application. In all cases it is the responsibility of the installer to ensure that industry standards are met and followed.

Zip-Clip wire supports are used as an alternative means of suspension to traditional threaded rod systems.

Due to the nature of HVAC installations, Zip-Clip do not recommend the use of the G-SYSTEM 15 kg SWL wire suspension for this application.

Although there are many applications within HVAC that do not call for a suspension greater than 15 kg, installation factors must be taken into account. Some HVAC applications will by nature be subjected to dynamic loads. To give peace of mind Zip-Clip recommend the S-SYSTEM and above range of wire suspensions.

GENERAL RECOMMENDATIONS

Zip-Clip suspension systems are designed to support **STATIC loads only**. Dynamic and shock loads must be avoided as they can greatly increase the overall effective load of the product being suspended and therefore compromise the safe working load of the suspension.

To ensure integrity and safety of the system only Zip-Clip wire rope should be used.

- Do not exceed the safe working load (SWL) of the product.
- Do not use locking devices with a coated wire rope.
- Do not paint or apply any other coating.
- Do not lubricate.
- Do not use for lifting applications.
- Remove any frayed cable prior to inserting into the locking devices.
- Do not shock load.
- Do not use for dynamic loads/installations.
- Do not overload.
- Do not mix Zip-Clip systems with other wire rope suspension manufacturers products.
- Do not use in corrosive environments, e.g. chlorinated environments – For specialist applications, such as corrosive environments, please contact Zip-Clip Technical Department.

INSTALLATION FACTORS

Installers must pay attention to the nature of the installation process. Certain installations will introduce dynamic forces onto the supports. Where this might be the case, it is advised to select heavier duty systems.

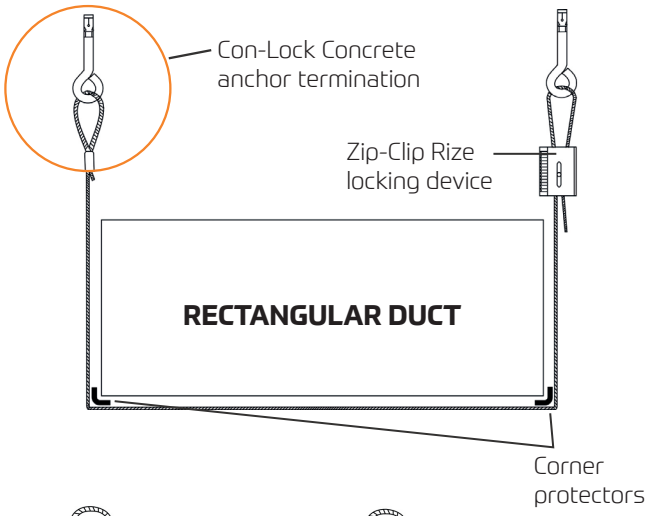
Ball Strikes – Where this may be a potential factor, such as installations within sports halls, heavier duty wire rope supports should be utilised to offer maximum resistance to dynamic shock loads. Zip-Clip cannot guarantee its systems against the effects of ball strikes.

RECTANGULAR DUCTWORK SOLUTIONS

METHOD OF SUSPENSION

CRADLE

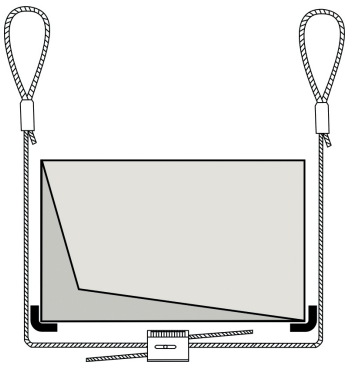
1. Anchor wire to ceiling.
2. Drop down wire and run underneath ductwork.
3. Run wire up to the ceiling and install a Zip-Clip Rize locking device onto wire.
4. Install an additional fixing and connect to this with the locking device.
5. Position corner saddles where wire passes over corners of ductwork.
6. Ensure exit tail from the locking device is 15 cm minimum.



In-Line Joint

Due to the unique way in which the Zip-Clip Rize locking device is manufactured, an "In-Line Joint" can also be utilised to create a suspension.

This method involves joining together two free ends of wire using a single locking device.



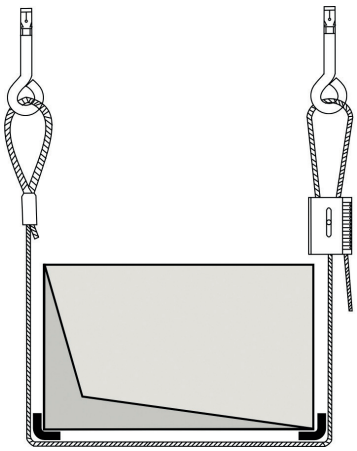
Cradle suspension solution utilising an in-line joint

To support rectangular ductwork using the cradle method, Zip-Clip systems offer a range of termination options to suit various substrates and steelwork:

Con-Lock System

Designed to fix a wire suspension to cracked and none cracked concrete ceilings.

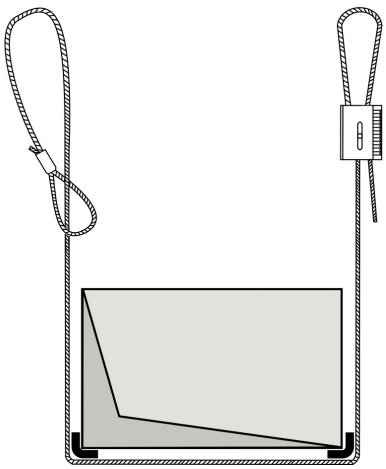
See Page 36



Loop-It System

Designed to produce a choke-knot around your chosen anchor position.

See Page 32

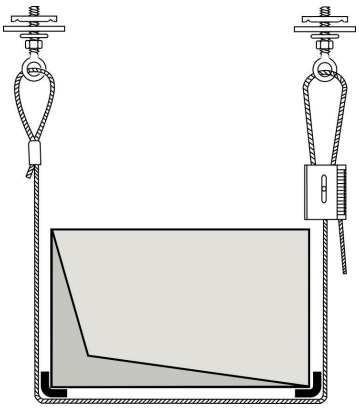


Thread-It System

Suitable for:

- Drop-in anchors
- Coupling with deck wedges
- Coupling with channel nuts

See Page 40



METHOD OF SUSPENSION CONTINUED

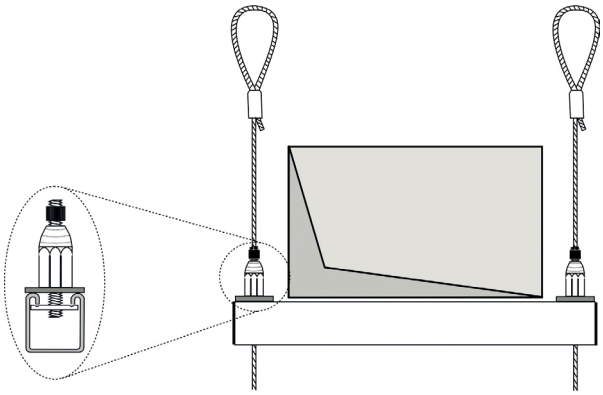
TRAPEZE

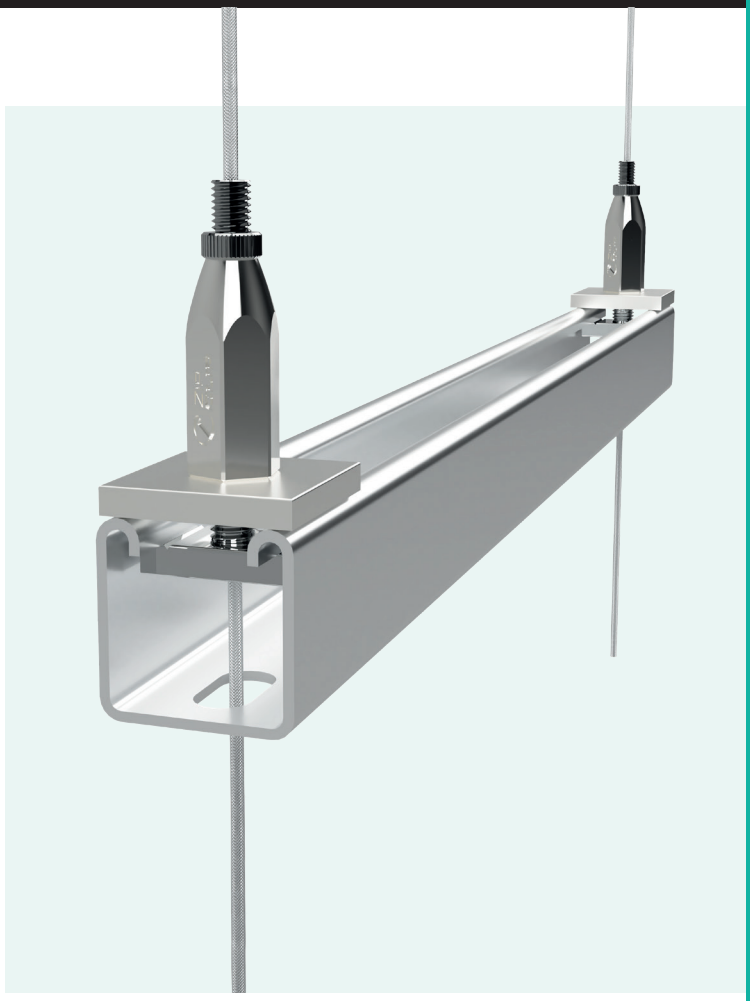
To support rectangular ductwork using the trapeze method, there are a range of locking devices designed to improve installation times, and ensure a secure suspension.

Strut-Lock System

- Medium to light duty
- Installed with a channel nut and washer
- Compatible with all slotted channel

See Page 54





BRACKET

Duct-Lock System

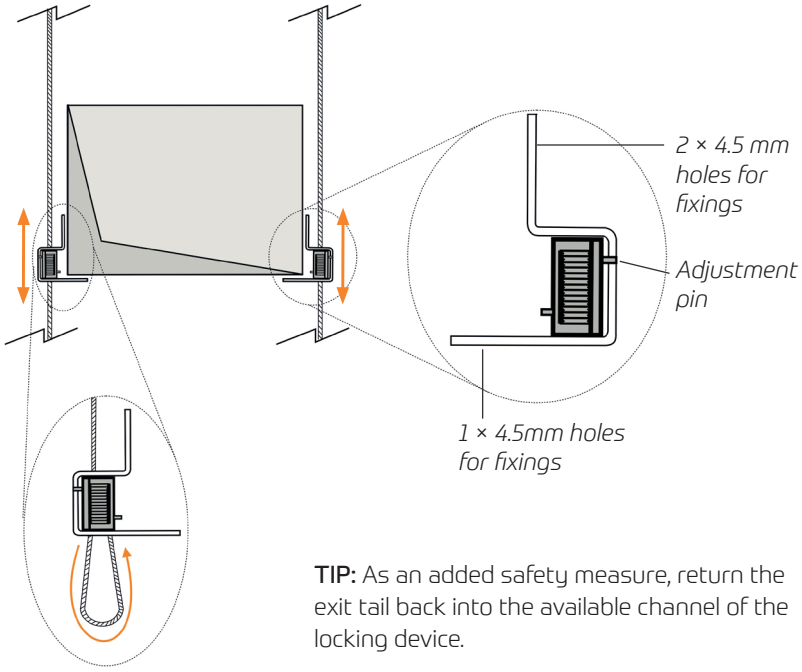
The Duct-Lock system uses a steel bracket, utilised to connect a wire rope device to rectangular duct. This allows for the suspension of ductwork without the need of a bearer underneath.

- Wire locking device pre-assembled into bracket
- Adjustment pin to alter height of ductwork
- 4.5 mm holes to accommodate tek or sheet metal screws

Please ensure that a suitable fixing has been selected, that will:

- Correctly fix the bracket to the duct
- Appropriately fix into the gauge of the ductwork

See Page 58



TIP: As an added safety measure, return the exit tail back into the available channel of the locking device.

PLEASE NOTE: Only do this once the installation is complete, as it will prevent further adjustment.

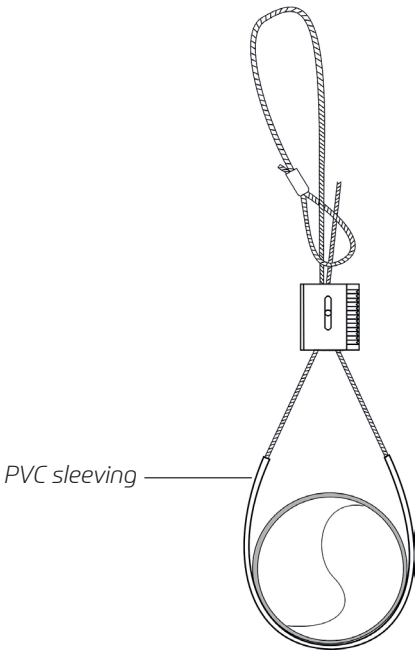
SPIRAL DUCTWORK SOLUTIONS

METHOD OF SUSPENSION

TEAR-DROP

To support spiral ductwork up to 315 mm diameter:

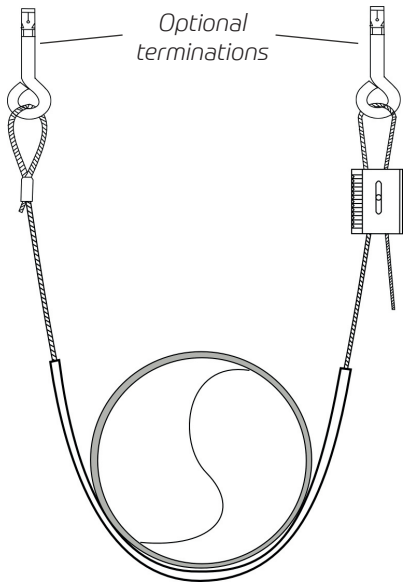
- Optional termination methods, as with rectangular duct options.
- Use Zip-Clip systems to select a suspension supporting loads from 45 kg – 500 kg.
- PVC Sleeving, used to create a condensation barrier, protecting both the ductwork and wire.
- Follow DW144 with regard to fixing centres and maximum duct size for support arrangement.



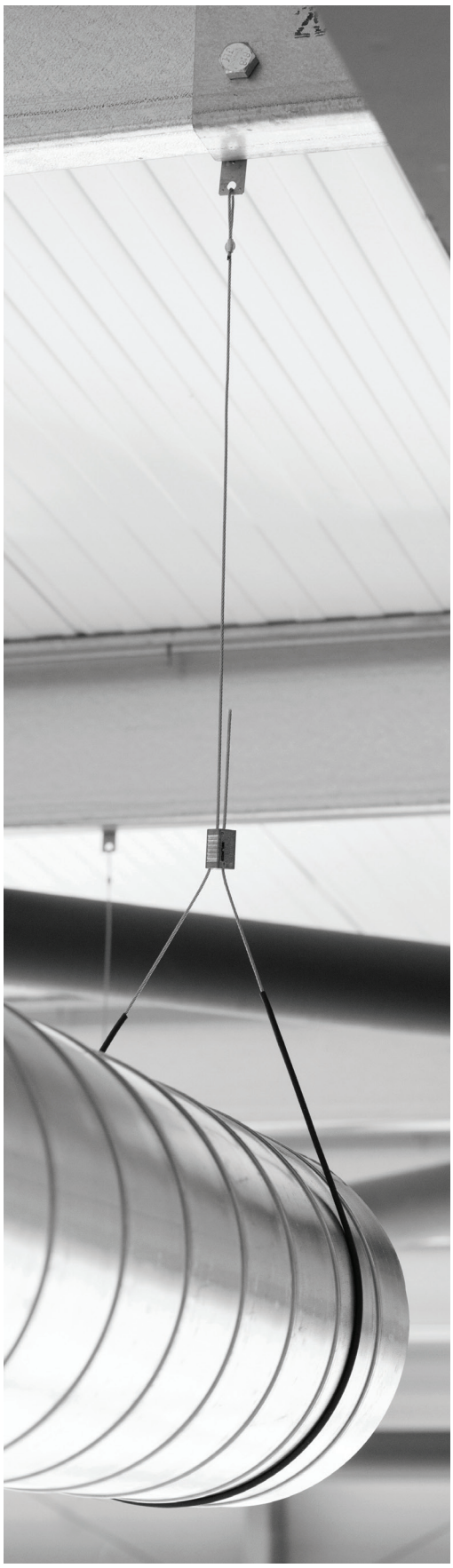
CRADLE

To support larger spiral ductwork, up to 2000 mm diameter:

- Optional termination methods, as with rectangular duct options
- Use an additional fixing to assemble the cradle and connect the wire suspension
- Use our systems to select a suspension supporting loads from 45 kg – 500 kg
- PVC Sleeving, used to create a condensation barrier, protecting both the ductwork and the wire
- Follow DW144 with regard to fixing centres and maximum duct size for support arrangement



ATTACHING TO BRACKETRY



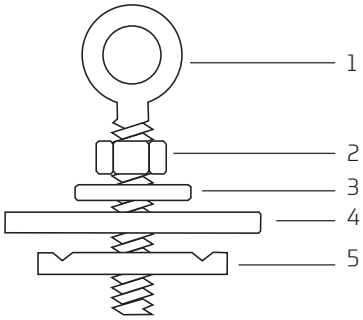
It is recommended that profile channel be used to support the weight of services. Other supporting bracketry is available such as angled steel. Installers must make sure that the supporting steel is fit for purpose.

METHOD OF CONNECTION

Eye bolt

This method gives a secure and smooth point of attachment for the wire suspension.

1. Eye bolt
2. Hex Nut
3. Washer
4. Square Plate Washer
5. Channel Nut

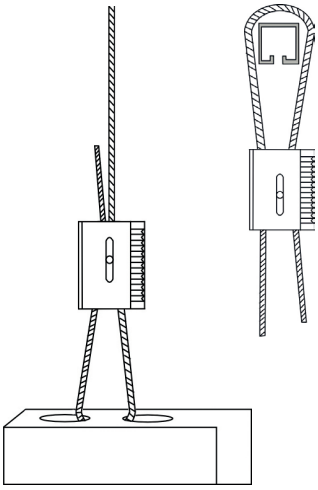


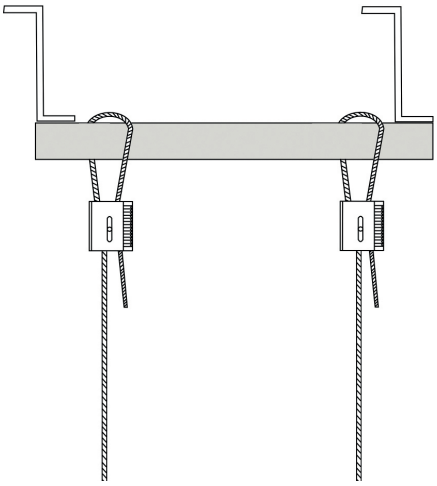
LOOPING THE BRACKETRY

This method involves using the zip-clip to directly loop through an existing hole in the profile channel or bracket.

Installers must make sure the holes drilled into in the bracketry have been de-burred and do not cause any abrasion to the wire support.

The size of the hole must not affect the strength of the bracket or be too close to any edges.





"If you automatically think of using rigid threaded rod to solve your suspension and bracing needs, you may want to think again and look at all the advantages offered by wire rope, not least the materials savings and considerable environmental benefits."

Electrical and Lighting

Electrical and Lighting Solutions

INTRODUCTION

Electrical Engineers face an increasingly varied range of installations. From long runs of lightweight cable containment through to heavy modular systems, each one calling for a unique set of solutions in order to overcome install issues.

Attention to detail, alongside safety and security, are all key elements that go into delivering the finished solution.

Differences in ceiling types, load requirements and service connections are just a few of the critical components that must be assessed and fully addressed. The wide range of solutions provided by Zip-Clip are all purpose designed to meet exacting requirements.

WHERE CAN WIRE ROPE SUSPENSION SYSTEMS BE USED?

Zip-Clip wire rope systems can be utilised for suspension, bracing, and more, and are typically utilised as an equivalent to systems such as threaded rod but with added flexibility.

Traditional rod-based systems are frequently over-engineered, using more materials than necessary. A 2 mm diameter wire rope performs to the same level as 10 mm threaded rod!

Zip-Clip systems are available with proven load carrying capacities from 15 kg to 500 kg per wire support, plus **all systems are designed with a built-in safety factor** for complete peace of mind. Wire rope also allows longer drops to be installed without the need for additional couplers.

Systems are compliant with 18th Edition Amendment 2:2022 unless otherwise stated.

- **Cable management including cable basket, cable tray and cable ladder**
- **Trunking systems including busbar**
- **Lighting systems including luminaires or tracks**
- **High bays**
- **CCTV cameras and audio equipment**
- **Secondary support**
- **Audio systems**
- **Bracing**

GENERAL RECOMMENDATIONS

Zip-Clip suspension systems are designed to support **STATIC loads only**. Dynamic and shock loads must be avoided as they can greatly increase the overall effective load of the product being suspended and therefore compromise the safe working load of the suspension. To ensure integrity and safety of the system only Zip-Clip wire rope should be used. Some install applications, will by their nature, expose the suspension system to dynamic loads. To give increased peace of mind in this scenario Zip-Clip recommends utilizing the S-SYSTEM or above. Also, to ensure integrity and safety of the system only Zip-Clip wire rope should be used.

- Do not exceed the safe working load (SWL) of the product.
- Do not use locking devices with a coated wire rope.
- Do not paint or apply any other coating.
- Do not lubricate.
- Do not use for lifting applications.
- Remove any frayed cable prior to inserting into locking devices.
- Do not shock load.
- Do not use for dynamic loads/installations.
- Do not overload.
- Do not mix Zip-Clip systems with other wire rope suspension manufacturers products.
- Do not use in corrosive environments, e.g. chlorinated environments – For specialist applications, such as corrosive environments, please contact Zip-Clip Technical Department.

INSTALLATION FACTORS

Installers must pay attention to the nature of the installation process. Certain installations, such as cable pulling, will introduce dynamic forces onto the supports. Where this might be the case, it is advised to select heavier duty systems.

Ball Strikes – Where this may be a potential factor, such as installations within sports halls, heavier duty wire rope supports should be utilised to offer maximum resistance to dynamic shock loads. Zip-Clip cannot guarantee its systems against the effects of ball strikes.

CABLE TRAY SOLUTIONS

LUMA-LOCK

THE LUMA-LOCK SYSTEM is designed to suspend services from a single point suspension. The aim of this support is to reduce the amount of material that is used to build a support. Luma-Locks are fitted to the intended application using toggles and then coupled to a chosen Zip-Clip vertical suspension to hang from a variety of different base materials.

Use for:

- Long suspension drops up to 10 m
- Cable tray runs
- Off-shoots from the main containment
- Single tier systems

See Page 62 for further details.

Luma-Lock used in conjunction with Rize locking devices

Y-IT – TOGGLE END

THE Y-IT SYSTEM of wire supports is designed to turn one suspension point in the ceiling into two connections points at the service level. The system incorporates an inverted Y-Shape design with equal leg lengths that ensures the services are level once installed.

Use for:

- Short suspensions in tight void spaces or low ceilings
- Cable tray runs
- Off-shoots from the main containment
- Single tier systems

See Page 64 for further details.

Luma-Lock | Y-It – Toggle | Toggle-It

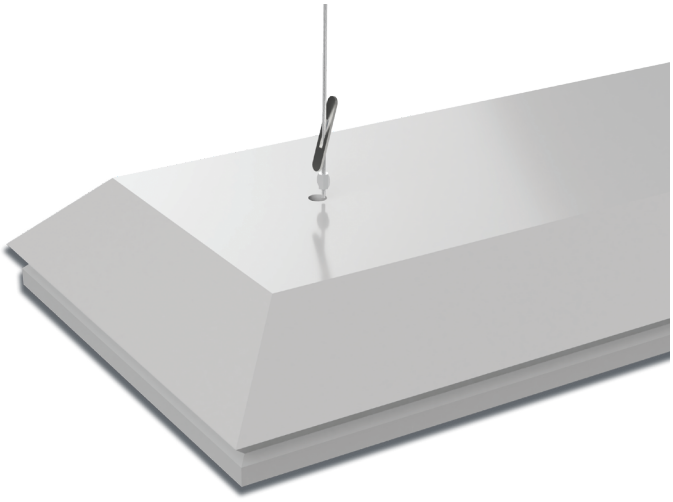
TOGGLE-IT

THE TOGGLE-IT SYSTEM is a wire suspension solution that incorporates a toggle that forms the termination point. The toggle is designed to span a through-hole of a ceiling material or fixture and has been manufactured to support a load.

Use for:

- Installing trays into tight void spaces
- Wider cable trays
- Single cable tray runs
- Off-shoots from the main containment
- Single tier systems

See Page 46 for further details.



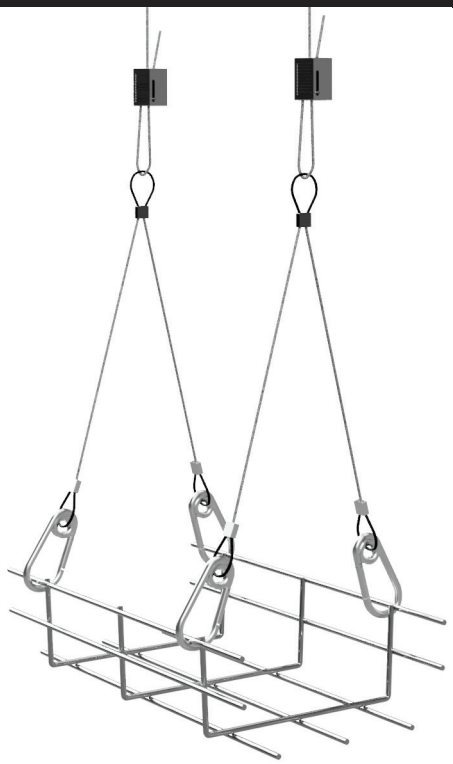
TRY-LOCK

THE TRY-LOCK SYSTEM is designed to suspend services from a single point suspension. The aim of this support is to reduce the amount of material that is used to build a support. Try-Locks are fitted to the intended application using carabiners and then coupled to a chosen Zip-Clip vertical suspension to hang from a variety of different base materials.

Use for:

- Long suspension drops up to 10 m
- Cable basket runs
- Off-shoots from the main containment

See Page 60 for further details.



Y-IT – CARABINER END

THE Y-IT SYSTEM of wire supports is designed to turn one suspension point in the ceiling into two connections points at the service level. The system incorporates an inverted Y-Shape design with equal leg lengths that ensures the services are level once installed.

Use for:

- Short suspensions in tight void spaces or low ceilings
- Cable basket runs
- Off-shoots from the main containment

See Page 64 for further details.

Try-Lock | Y-It – Carabiner | Snap-It

SNAP-IT

THE SNAP-IT SYSTEM is a wire suspension solution that incorporates a carabiner as the termination point. The system is designed for quick installation or removal of a wire support. The inclusion of the carabiner allows the suspension to be coupled with additional fixings to support applications from multiple ceiling types.

Use for:

- Installing basket into tight void spaces
- Wider cable basket
- Single cable basket runs
- Off-shoots from the main containment
- Reducing the use of profile channel

See Page 48 for further details.

TRUNKING AND BUSBAR SOLUTIONS

BEST PRACTICE

Utilise components such as stirrups or brackets which accompany trunking in order to connect a wire suspension to the services. The important element is the method of securely fixing to the trunking or the bus bar.

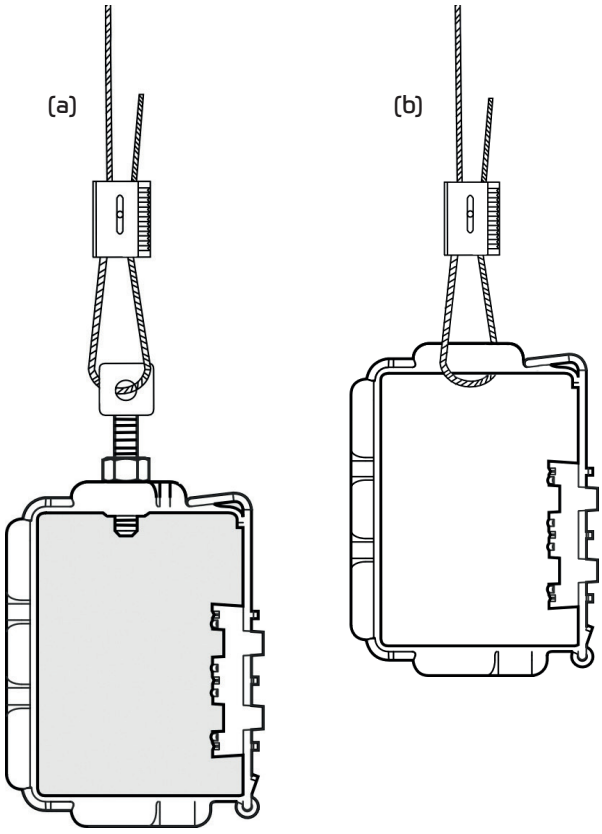
The best way to achieve this is with Zip-Clip adaptor eye bolts.

◀ **Round head eye bolt** Offers the option of longer thread lengths

▲ **Square head eye bolt** – Offers enhanced aesthetics

Selecting Eye Bolts

CODE	HEAD TYPE	LENGTH	SAFE WORKING LOAD (SWL)*
UNI1	Square	20 mm	50 kg
UNI2	Square	45 mm	50 kg
UNI3	Square	25 mm	90 kg
UNI6M60	Round	60 mm	50 kg
UNI8M60	Round	60 mm	50 kg
UNI10M60	Round	60 mm	300 kg



The Installation

1. Utilise an eye bolt adapter to join the wire support to the trunking stirrup **(a)** or directly loop any available through-holes that may be in the bracket or stirrup **(b)**.
2. Install Zip-Clip adaptor eye bolt into stirrup, by either:
   - Screwing into available female thread,
   - Utilising integral nut washer to clamp onto through hole, (Utilise larger washer to span through hole if required).
3. Anchor the Zip-Clip wire suspension of choice to the ceiling and join wire rope to the eye bolt adapter using a Zip-Clip locking device.

Zip-Clip adapter eye bolt installed into through-hole offering point of attachment for wire suspension.

Note: Nuts and washers have been utilised to clamp available through-hole.

Image showing example of stirrup which accompanies trunking.

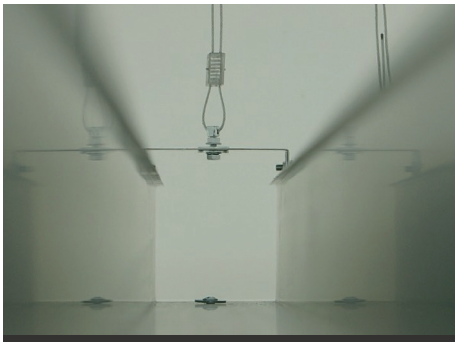


Image displaying adapter and wire suspension in-situ, offering a mechanical fix to the services which are secure and level.

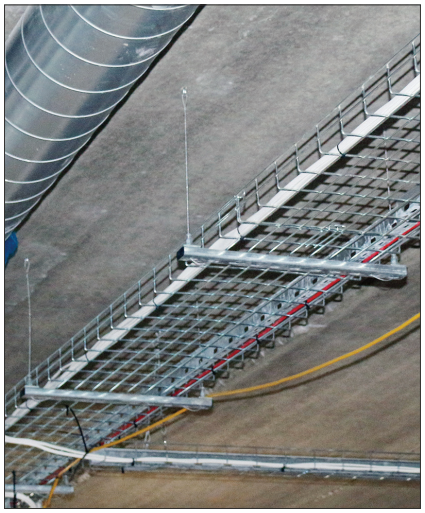
STRUT-LOCK AND FIRE STRUT-LOCK

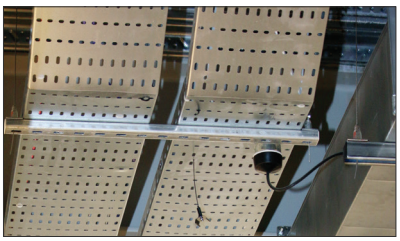
STRUT-LOCK SYSTEMS are used to support services from the S-RANGE and Y-RANGE of Zip-Clip wire supports. The devices are typically installed into profile channel which can then be hung from a wire suspension. **FIRE STRUT-LOCK** is designed to build wire rope suspensions that have resistance to fire and the system utilises stainless steel wire rope offering optimum third-party tested performance in fire environments.

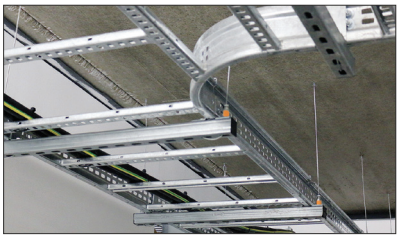
Use for **Medium Duty Applications:**

- Single and multi-tier trapeze brackets
- Cable basket, tray or ladder runs
- Off-shoots from the main containment
- Compatible with 41×41 and 41×21 profile channels plus other channel types when compatible channel nuts are used (metric only).
- Attaching to existing bracketry

See Page 54 for further details.







EYE BOLT ASSEMBLIES

EYE BOLT ASSEMBLIES provide a means of attaching wire suspension solutions to trapeze bracket profile channel using a male threaded eye bolt (adapter) coupled with a variety of female threaded connections or fixings, along with square plate washers, channel washers, etc., to give a mechanical fix.

Use for **Medium to Heavy Duty Applications:**

- Assembling single-tier trapeze brackets
- Cable basket, tray or ladder runs
- Off-shoots from the main containment
- Supporting armoured cable containment
- Reinforcement at start and end of trapeze runs and at corners/junctions of trapeze brackets

See Page 40
for further details.

SUSPENDING LIGHTING

Lighting suspension applications generally fall into two main categories:

- Individual lighting – such as high bays
- Linear lighting – such as track or bus bar

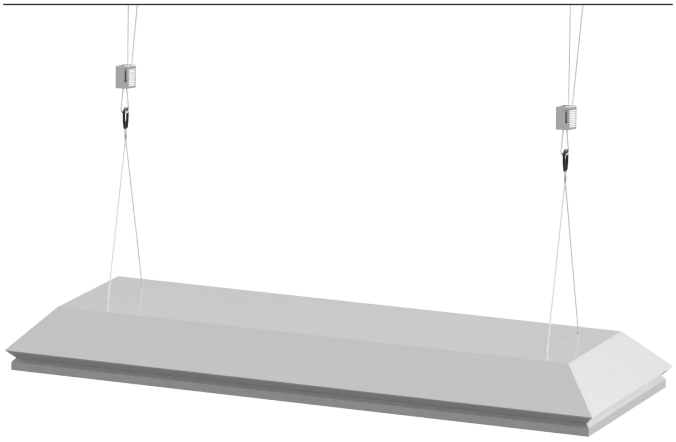
Similar best practice should be applied for both types of applications with regard to:

1. The correct anchoring system for the ceiling type.
2. The correct wire suspension to safely support the intended load.
3. The correct connection method of the wire suspension to the lighting/track.

ATTACHMENTS

Many different forms of attachment to lights exist and manufacturer's guidelines should always be followed with regards to recommended methods of suspension.

It is important to utilise fixing points that have been provided by the lighting manufacturer – for example, through-holes or ring eyes.



Where through-holes or side brackets exist, a Zip-Clip Rize device can be used to directly link a light to a wire support utilising a number methods as illustrated opposite.

Where threaded connections points are available Zip-Clip provide a range of eye bolts which can be fitted to give secure points of attachment for the wire suspension. Eye bolts can also be retro fitted to any stirrups that accompany lighting track. See Selecting Eye Bolts on Page 18.

For linear lighting track installations it is always recommended to utilise components, such as brackets, supplied by the track manufacturer to connect a wire suspension to the services.

Individual lighting systems may be recessed into a false ceiling or be stand-alone units. In both cases the available fixing points should be confirmed and test connection fixes should be trialled to confirm the right attachment.

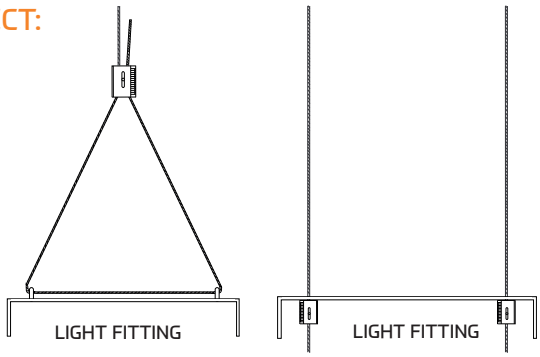
SECONDARY LIGHT SUPPORTS

The Zip-Clip Rize system lends itself to being used as a fail-safe solution. By utilising an all-round loop all forms of lighting can be secured against collapse.

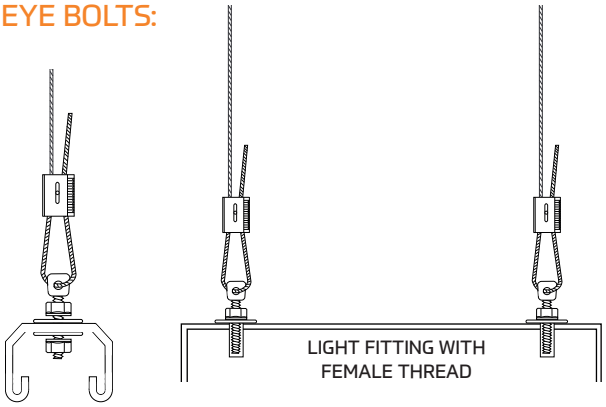
See: THE FLEXIBILITY OF A ZIP CLIP RIZE DEVICE on Page 6.

CONNECTION METHODS TO LIGHTING

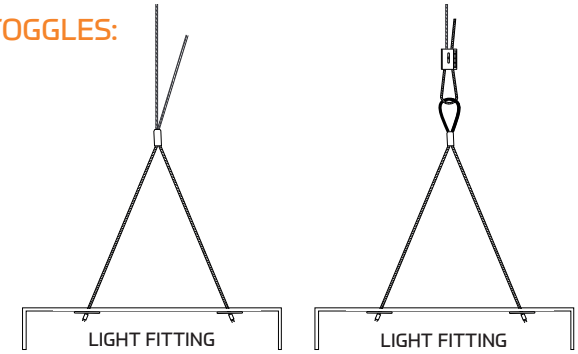
DIRECT:

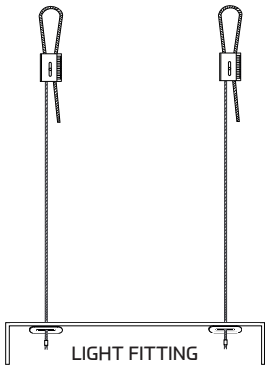


EYE BOLTS:



TOGGLES:





GENERAL CONSIDERATIONS AND RECOMMENDATIONS

- Zip-Clip supports are designed for static loads only. Any dynamic loading should be avoided.
- Always follow the lighting manufacturer's recommendations on approved methods of suspension.
- Always use the manufacturers anchor points to connect the lighting to the wire suspension.
- Pay attention to the load and ensure that wire suspensions are not used beyond the recommended Safe Working Load.
- Make sure the fixing or anchor utilised is suitable for the intended base material and the required load.
- Vibration – it is not advised to support lighting from anything that causes vibration.
- Swaying must always be avoided. The use of additional bracing should be considered.
- External locations or installations near open doors could be subject to wind loadings and should be designed appropriately.
- Ensure wire exit tails from Rize locking devices are at least 15 cm in length. Tails can be tied to the main wire rope using cable ties.
- Frayed wire ropes must always be replaced.
- Always remove the weight from the suspension before adjustment. This will facilitate ease of adjustment and prevent 'pig-tailing' of the wire rope – which should be avoided.
- Do not mix Zip-Clip components with other manufacturers products.
- Carry out regular inspections and maintenance.

Signage and Panels

Signage and Acoustic Panel Solutions

INTRODUCTION

Installers of suspended signage, screens and partitions and those installing acoustic panels frequently face wide-ranging requirements. Applications can exist in many different formats, the most popular of which are referenced in this guide.

Attention to detail, alongside safety and security, are all key elements that go into delivering the finished solution.

Differences in ceiling types, load requirements and service connections are just a few of the critical components that must be assessed and fully addressed. The wide range of solutions provided by Zip-Clip are all purpose designed to meet exacting requirements.

WHERE CAN WIRE ROPE SUSPENSION SYSTEMS BE USED?

Zip-Clip wire rope systems can be utilised for suspension, bracing, and more, offering considerable application functionality and flexibility.

Zip-Clip systems are available with proven load carrying capacities from 15 kg to 500 kg per wire support, plus **all systems are designed with a built-in safety factor** for complete peace of mind. Wire rope also allows longer drops to be installed without the need for additional couplers.

Systems are compliant with 18th Edition Amendment 2:2022 unless otherwise stated.

- **Light to heavy duty signage**
- **Acoustic ceilings, islands or baffles**

FIXING SOLUTIONS

The Zip-Clip range offers a variety of suspension options to suit light, medium and heavy duty applications. Anchoring solutions are available for concrete, steel frame, metal-deck and wooden structures.

Concrete anchors compliant to BS 8539:2012 (The selection and installation of post installed anchors in concrete and masonry) can be tested on site by CFA (Construction Fixings Association) certified technical managers. This service is available on request.

GENERAL RECOMMENDATIONS

Zip-Clip suspension systems are designed to support **STATIC loads only**. Dynamic and shock loads must be avoided as they can greatly increase the overall effective load of the product being suspended and therefore compromise the safe working load of the suspension. To ensure integrity and safety of the system only Zip-Clip wire rope should be used. Some install applications, will by their nature, expose the suspension system to dynamic loads. To give increased peace of mind in this scenario Zip-Clip recommends utilizing the S-SYSTEM or above. Also, to ensure integrity and safety of the system only Zip-Clip wire rope should be used.

- Do not exceed the safe working load (SWL) of the product.
- Do not use locking devices with a coated wire rope.
- Do not paint or apply any other coating.
- Do not lubricate.
- Do not use for lifting applications.
- Remove any frayed cable prior to inserting into locking devices.
- Do not shock load.
- Do not use for dynamic loads/installations.
- Do not overload.
- Do not mix Zip-Clip systems with other wire rope suspension manufacturers products.
- Do not use in corrosive environments, e.g. chlorinated environments – For specialist applications, such as corrosive environments, please contact Zip-Clip Technical Department.

INSTALLATION FACTORS

Installers must pay attention to the nature of the installation process. Certain installations will introduce dynamic forces onto the supports. Where this might be the case, it is advised to select heavier duty systems.

Ball Strikes – Where this may be a potential factor, such as installations within sports halls, heavier duty wire rope supports should be utilised to offer maximum resistance to dynamic shock loads. Zip-Clip cannot guarantee its systems against the effects of ball strikes.

SUSPENDING SIGNAGE

As said previously in this document, signage applications can exist in many different formats, however the most popular signage encountered are referenced in this guide.

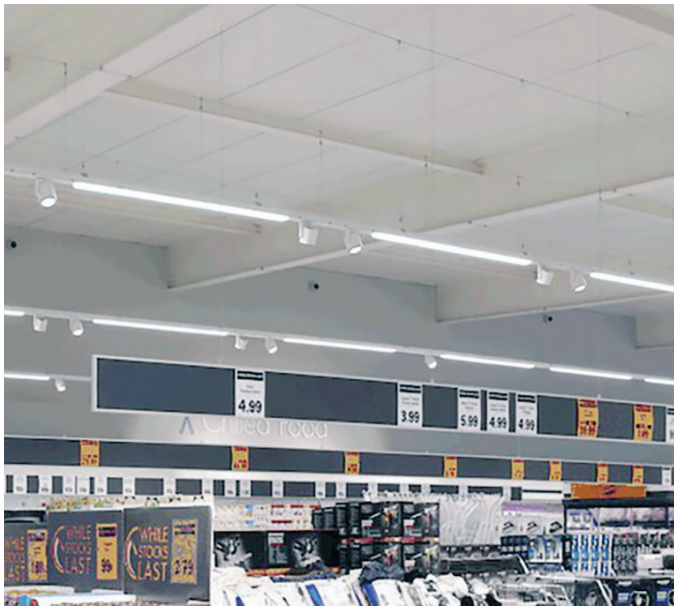
- Individual signage
- Continuous signage

In all cases it is important to select:

1. The correct anchoring system for the ceiling type.
2. The correct wire suspension to safely support the intended load.
3. The correct connection method of the wire suspension to the sign.

This guide shows several methods that can be utilised to build signage supports when using Zip-Clip products.

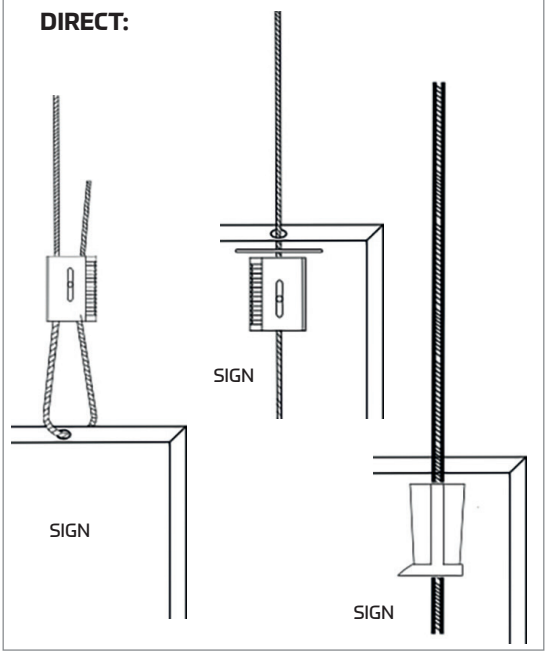
See: THE FLEXIBILITY OF A ZIP-CLIP RIZE DEVICE – Page 6



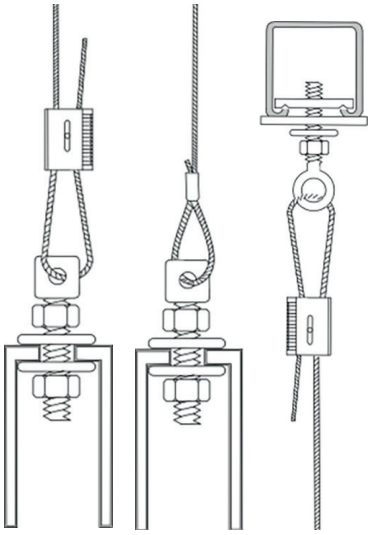
CONNECTION METHODS TO SIGNAGE:

- Directly with a Zip-Clip device
- Eye bolts
- Toggles
- Strut-Lock
- Dual threaded studs
- Carabiners
- Thread-It
- Plus on Wire
- 90 Degree brackets

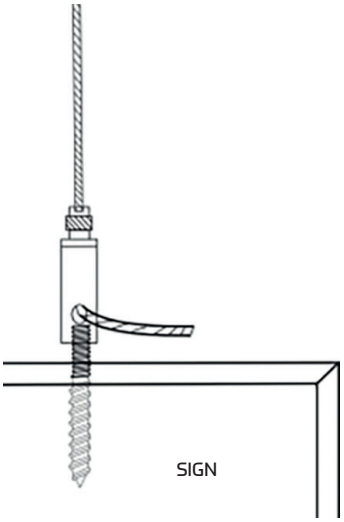
DIRECT:



EYE BOLTS:



DUAL THREAD SCREWS:

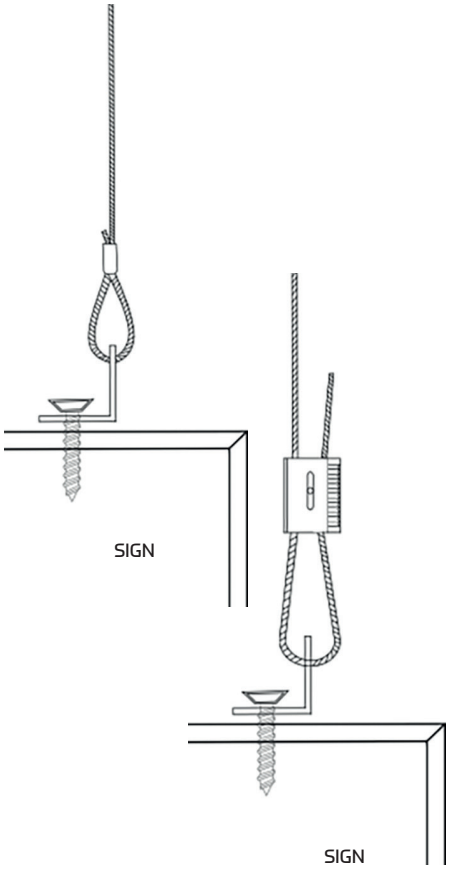


GENERAL CONSIDERATIONS AND RECOMMENDATIONS

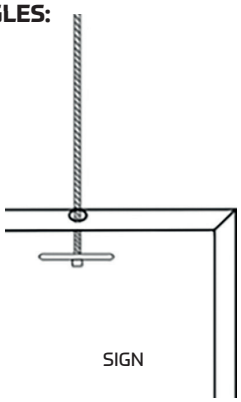
- Zip-Clip supports are designed for static loads only. Any dynamic loading should be avoided.

  Always follow the signage manufacturer's recommendations on approved suspension methods.
- Always use the manufacturers anchor points to connect the lighting to the wire suspension.
- Suspensions should be typically "one use only". If new signage is being installed or replaced it is advised to install new suspensions.
- Pay attention to the load and ensure that wire suspensions are not used beyond the recommended Safe Working Load.
- Make sure the fixing or anchor utilised is suitable for the intended base material and the required load.
- Swaying must always be avoided. The use of additional bracing should be considered.
- External locations or installations near open doors could be subject to wind loadings and should be designed appropriately.
- Ensure wire exit tails from Rize locking devices are at least 15 cm in length. Tails can be tied to the main wire rope using cable ties.
- Frayed wire ropes must always be replaced.
- Always remove the weight from the suspension before adjustment. This will facilitate ease of adjustment.
- Do not mix Zip-Clip components with other manufacturers products.
- Carry out regular inspections and maintenance.

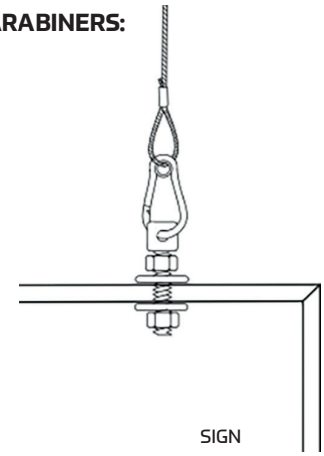
90 DEGREE BRACKETS:



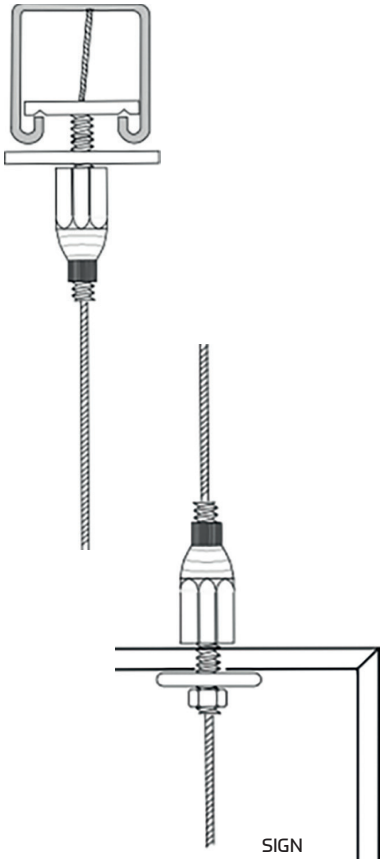
TOGGLES:



CARABINERS:



STRUT-LOCK:



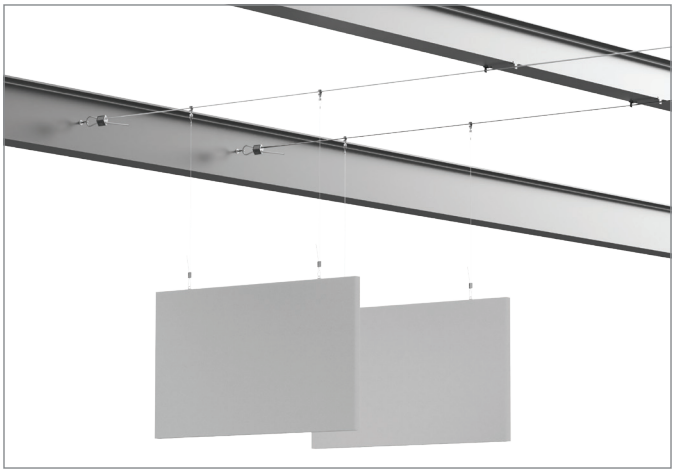
SUSPENDING ACOUSTIC PANELS

Acoustic islands and baffle boards provide a lightweight solution to enhance the working environment of any office space.

Zip-Clip offer a suspension system to compliment a range of acoustic products and requirements.

▲ Acoustic island

▲▼ Acoustic baffles

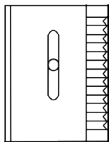


SUGGESTED FIXING METHODS

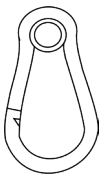
The following attachments can be utilised in conjunction with a spiral anchor to fix to the boards:

Spiral anchor

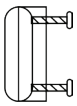
Architectural Carabiner



Zip-Clip Locking Device

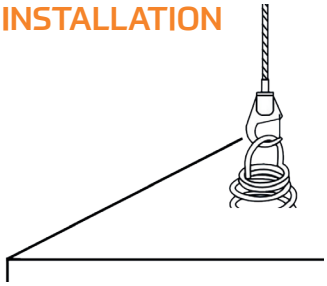


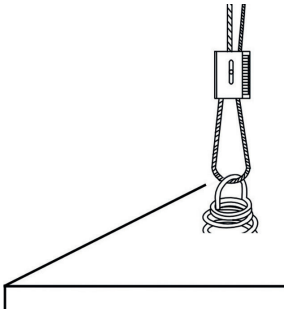
Snap Gate Carabiner

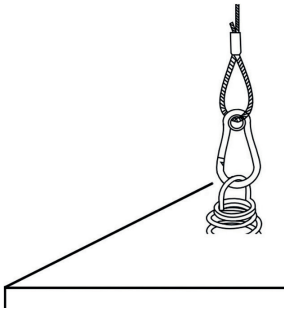


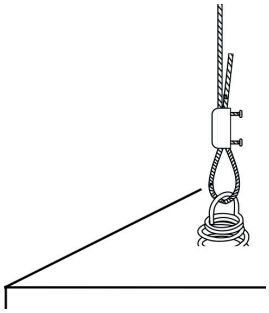
AC10

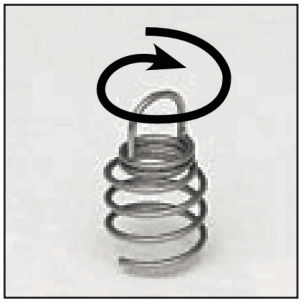
INSTALLATION



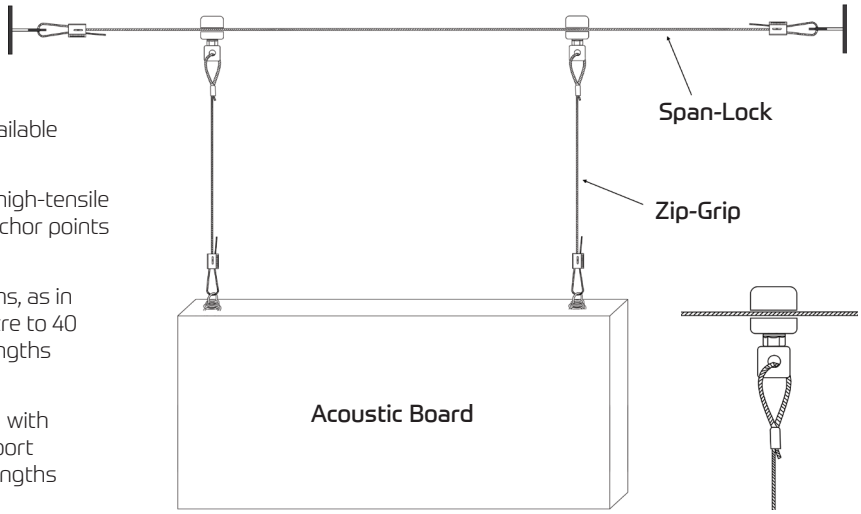








CATENARY SYSTEMS



SPAN-LOCK is a horizontal catenary wire rope suspension system used where there is no available base material directly above to anchor to.

Zip-Clip locking devices are used to connect a high-tensile catenary wire rope between two horizontal anchor points providing a fixed base line to support from.

Zip-Clip offer three different Span-Lock systems, as in the table below, and catenary lengths of 5 metre to 40 metre are available as standard with longer lengths available on request.

ZIP-GRIP is designed to be used in conjunction with Span-Lock to create a complete catenary support solution. Zip-Grip is available in 1 to 10 metre lengths with a choice of two safe working loads (SWL).

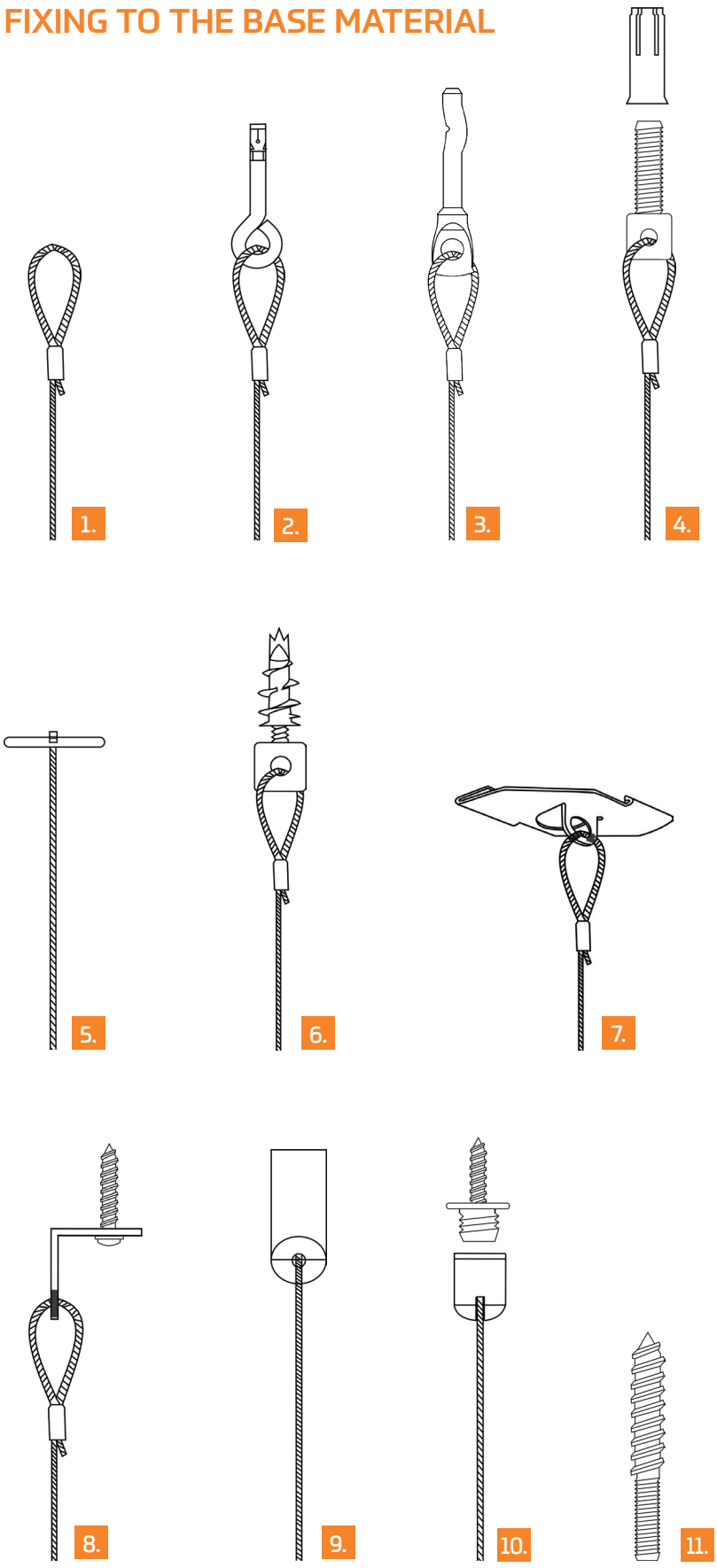
SPAN-LOCK	SWL: (Galvanised)	PRODUCT CODE:
Y system	30 kg	GLHCSY
P system	75 kg	GLHCSP
N system	100 kg	GLHCSN

ZIP-GRIP	SWL: (Galvanised)	PRODUCT CODE:
G system	15 kg	GLG
S system	35 kg	GLS

All systems have a designed-in safety factor.

SUSPENDING ACOUSTIC PANELS

FIXING TO THE BASE MATERIAL

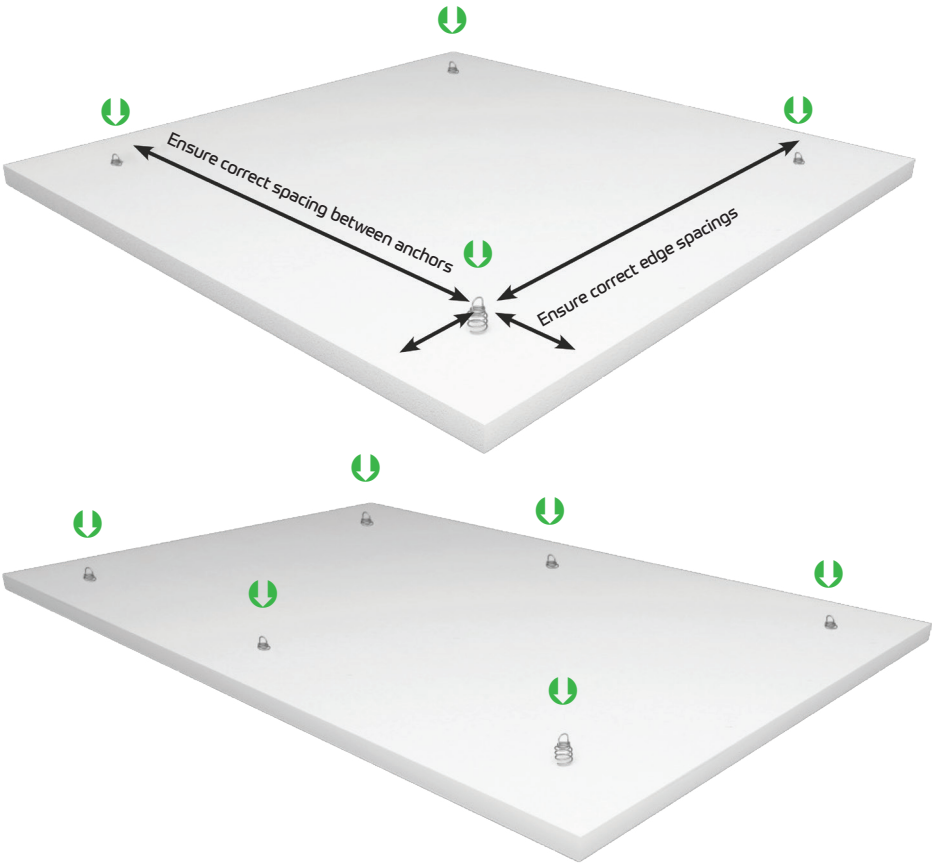


1. **WRAP AROUND:**
   Use Loop-It.
   Form a choke knot.
2. **CONCRETE:**
   Use Con-Lock.
   Drill 6 mm hole, clean, locate fixing into hole and hammer until set.
3. **CONCRETE:**
   Use Anchor-It.
   Drill 5 mm hole, clean, locate fixing into hole and hammer until set.
4. **CONCRETE:**
   Use Thread-It M6 or M8.
   Set drop-in anchor, screw in eye bolt.
5. **THIN TIN AND/OR PLASTERBOARD:**
   Use Toggle-It.
   Drill hole, slot through.
6. **PLASTERBOARD:**
   Use Thread-It with Driva.
   Screw in Driva self-tap.
7. **SUSPENDED CEILINGS:**
   Vertical drop with T-Bar.
   Mount onto ceiling grid.
8. **UNIVERSAL:**
   Use Uni-Lock.
   Use a concrete screw, wood screw, plug screw or tek screw.
9. **M6 CEILING ATTACHMENT:**
   Use architectural ceiling mount.
   Use dual thread stud.
10. **ARCHITECTURAL:**
    Use architectural ceiling mount.
    Use a wood, concrete screw, plug screw or dual thread screw.
11. **DUAL THREAD SCREW:**
    Compatible with, architectural, ceiling and universal attachments.

AVAILABLE WIRE SIZES

Availability of wire size is dependent on fixing method utilised and required safe working load (SWL).

IMPORTANT CONSIDERATIONS AND RECOMMENDATIONS



- Zip-Clip can provide a kit to suit your desired acoustic board product and base material.
- Always follow manufacturer guidelines for correctly fixing into the acoustic board.
- Observe recommended edge spacing.
- Ensure anchor spacing distances are to manufacturers specifications.
- Ensure enough fixings have been placed into the boards.
- Ensure fixing into base material has been correctly installed and that material is suitable to fix into.
- Ensure exit tail from Zip-Clip locking device is 15 cm minimum.
- Maximum load per spiral anchor is 5 kg (static vertical loads only).
- For none corrosive and indoor environments only.

RIZE SYSTEM

See Pages 5-6 for further information on the RIZE system

THE RIZE SYSTEM consists of wire rope which is supplied on reels in a variety of diameters and lengths, along with the corresponding Zip-Clip locking devices.

The system is designed to give installers the flexibility to custom-fit desired drop lengths on-site for both lightweight or heavy-duty installations.

Zip-Clip devices are utilised to anchor the wire rope to a ceiling or anchor point, as well as being used to attach the wire rope to the desired fixture or fitting.

APPLICATIONS ... INCLUDE BUT NOT LIMITED TO

- Electrical containment
- Lighting and audio
- HVAC and mechanical services
- Signage and display, screens and partitions
- Acoustic and radiant heat panels
- Bracing
- Catenaries

SYSTEM	DEVICE	WIRE ROPE	SWL (KG)
G	KL50	R200G	15
S	KL100	R100S	50
		R200S	
		R500S	
Y	KL150	R100Y	120
P	KL200	R100P	300
N	KL600	R100N	500

Note:
G-system not recommended for HVAC.

FEATURES

- Key-free release mechanism on each device for easy adjustment.
- Single die-cast locking devices (zinc alloy).
- High tensile wire rope with 7×7 and 7×19 construction.
- 18th Edition Amendment 2:2022 compliant.
- Designed-in safety factor.
- Ideal for both short drop lengths in small void spaces and for very long wire rope supports.
- Only wire rope cutters are required.
- Wire rope supplied on reels in dispensing box – avoids birds nesting.
- Can be used as a wrap-around solution for applications such as I-beams or purlins.
- Can be used in conjunction with a number of different brackets or fixings, including eye bolt adapters, concrete eye bolts, rib-deck fixings, purlin clips.

AVAILABILITY

Zip-Clip have five different systems which are allocated a letter to differentiate between the available safe working loads (SWL).

Each system comprises a specific diameter of wire rope and is supplied with the required Zip-Clip device. See table for systems available.

- Loads indicated are per individual wire rope support when coupled with the appropriate Zip-Clip locking device.
- Third-party test certificates available upon request.
- All safe working loads and certifications are based on the Zip-Clip Rize devices being used in conjunction with Zip-Clip high tensile wire rope.
- Zip-Clip cannot guarantee the safe working load of a product when used with non-Zip-Clip wire rope and cannot support projects where non-Zip-Clip wire rope has been used.

INSTALLATION

Standard Devices

- Pass the wire rope through the Zip-Clip device in the direction of the arrow.
- Loop the wire rope through or around the anchor point.
- Pass the wire rope back through the Zip-Clip allowing 15 cm of wire rope protruding.
- Apply tension.
- Always confirm engagement of the zip clip device on the wire rope by pushing the adjustment pin in the opposite direction of the arrows indicated on the side of the device.

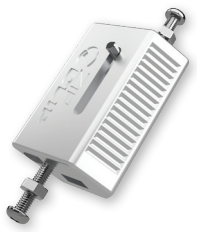
Lockable Devices

Zip-Clip devices are also available in a lockable version offering a more secured method of wire rope suspension.

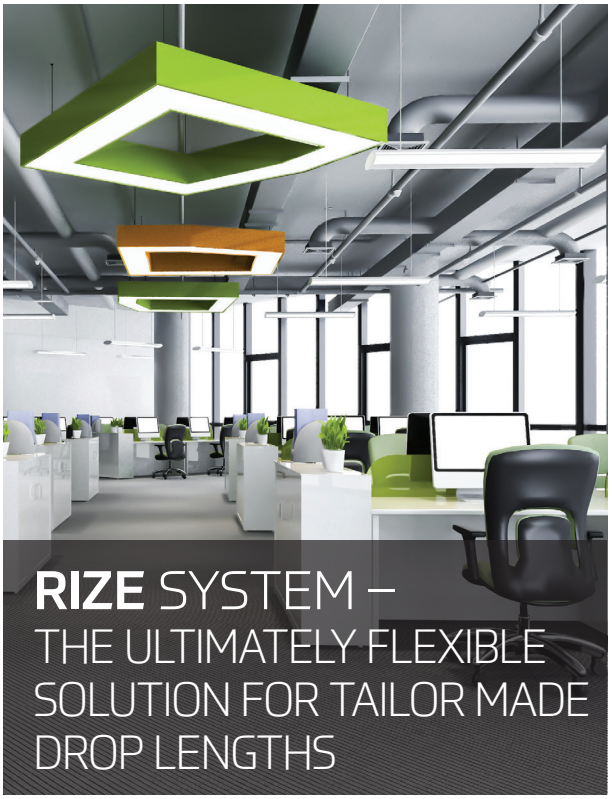
- Unscrew the M4 locking nut and bolt until the adjustment pin is pushed back fully.
- Pass one end of the wire rope through the Zip-Clip in the direction of the arrow and draw enough wire rope to go around your fixing point.
- Pass the wire rope back through the Zip-Clip leaving at least 15 cm of wire rope protruding.
- Tighten the M4 locking bolt and nut until the adjustment pin can no longer be moved.
- Always confirm engagement of the Zip-Clip device on the wire rope by pushing the adjustment pin in the opposite direction of the arrows indicated on the side of the device.

CODE	DESCRIPTION	SWL	PACK QTY
KL50	Zip-Clip Rize KL50	15 kg	10
R200G	200 m G wire reel in dispenser box	15 kg	1
R100G/SS	100 m stainless steel AISI 316 G wire reel	8 kg	1
R200G/SS	200 m stainless steel AISI 316 G wire reel	8 kg	1
KL100	Rize KL100	50 kg	10
R100S	100 m S wire reel in dispenser box	50 kg	1
R200S	200 m S wire reel in dispenser box	50 kg	1
R500S	500 m S wire reel	50 kg	1
R100S/SS	100 m stainless steel AISI 316 S wire reel	45 kg	1
KL150	Rize KL150	120 kg	10
R100Y	100 m Y wire reel	120 kg	1
R100Y/SS	100 m stainless steel AISI 316 Y wire reel	100 kg	1
KL200	Rize KL200	300 kg	10
R100P	100 m P wire reel	300 kg	1
R100P/SS	100 m stainless steel AISI 316 P wire reel	200 kg	1
KL600	Rize KL600	500 kg	10
R100N	100 m N wire reel	500 kg	1
KL100LOK	Rize KL100 Lockable	50 kg	10
KL150LOK	Rize KL150 Lockable	120 kg	10
KL200LOK	Rize KL200 Lockable	300 kg	10
KL600LOK	Rize KL600 Lockable	500 kg	10

Standard Device



Lockable Device



Together we can make a difference on a global scale

SUSPENSION BRACING AND VIBRATION ISOLATION SOLUTIONS FOR BUILDING SERVICES

ZIP CLIP

Atlas
A Division of the Zip-Clip Group

Staalkabelstunter.com

ZIP-CLIP GROUP

United Kingdom HQ
ZIP-CLIP LTD
Tel: +44 (0)1686 623 366
Email: info@zip-clip.com
www.zip-clip.com

Europe
ZIP-CLIP S.A.R.L
Tel: +33 (0)4 81 15 02 95
Email: france@zip-clip.com
www.zip-clip.fr

Australasia
ZIP-CLIP AUSTRALIA PTY LTD
Tel: +61 (0)431 464 272
Email: sales@zip-clip.com.au
www.zip-clip.com.au