

5.0

# TECHNICAL MANUAL

**ALEMTEK**

Alemtek, founded in 2000, is a multigenerational family company dedicated to providing innovative suspension systems through a unique partnership. Working with our team is a creative process that enables new ideas and offers you support in developing new solutions.

With over 25 years in the industry, partnering with us is simple, and our suspension solutions are easy-to-use, durable, and designed for minimal impact.

Note that the examples shown are only some parts of our full product range. Visit our website or contact us directly for more information and customization.

Our service is at your disposal.

# ALEMTEK



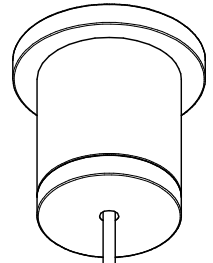
# Index

Section	Page
Introduction	4-5
Usage & limitations	6-7
Wire type & endings	8-11
Applications	12-45
Installation examples	46-55

# Introduction

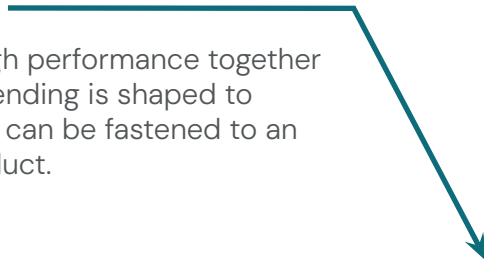
## Attachment

A fixed point attached to ceilings, walls, floors, or products by screws to enable wire suspension. Most often an attachment to the ceiling is used.



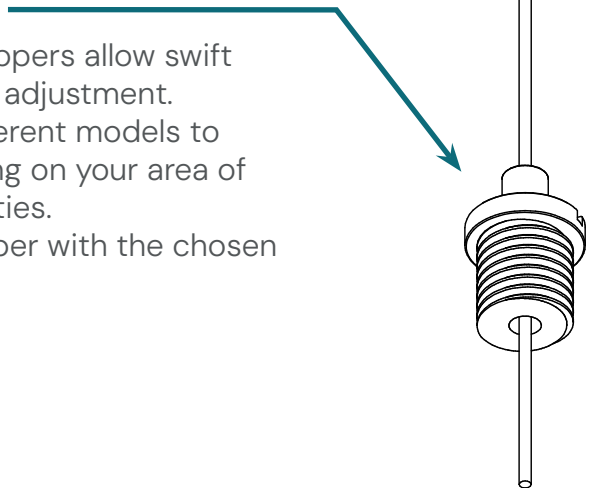
## Wire

A steel wire made for high performance together with a gripper. The wire ending is shaped to suit your installation and can be fastened to an attachment or your product.



## Gripper

Compact designed grippers allow swift installation and instant adjustment. Alemtek has many different models to choose from, depending on your area of use and weight capacities. Always match the gripper with the chosen wire diameter.

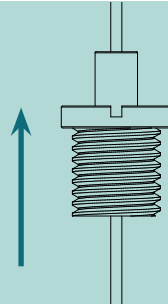


## How to use grippers

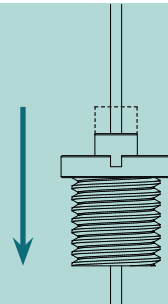
- A** Insert the wire through the gripper pin, unless specified otherwise.



- B** Slide the gripper upward to adjust its position. Once you release it, the gripper will automatically lock onto the wire.



- C** To unlock, press down the gripper pin. This allows the gripper to slide freely up and down the wire. To lock it in place again, simply release the gripper pin.



# Usage & limitations

## Weight guidelines

The table shows weight guidelines when a wire and gripper combination is used. Please contact us for additional technical support. Please note that there are exceptions for some products regarding working load limit.

Wire diameter	Working load limit	Minimum break load
Ø 0.8 mm	4 kg	20 kg
Ø 1.0 mm	8 kg	40 kg
Ø 1.2 mm	12 kg	60 kg
Ø 1.5 mm	18 kg	90 kg
Ø 1.8 mm	24 kg	120 kg
Ø 2.0 mm	28 kg	140 kg

### Wire diameter:

Each value shows the diameter (mm) of the steel wire.

### Working load limit:

Each value shows 1/5 of the minimum break load and are for guidelines only. This value should be a bit higher than the total weight of your product in a static position.

### Minimum break load:

Each value shows the minimum load when the combination with wire and gripper breaks.

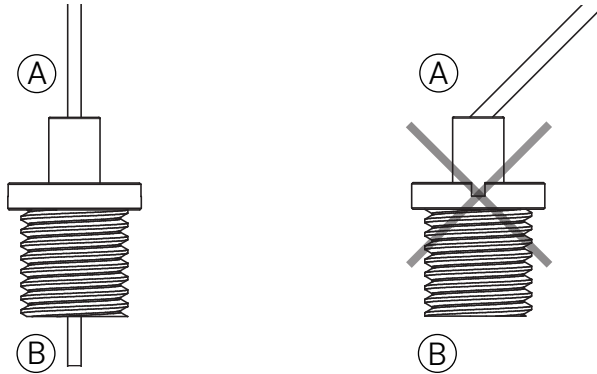
## Product testing

Our tests are conducted with original Alemtek products, and we can supply you with tensile test reports from our testing facility or from a third party. We have fully traceability of our products. Each individual batch of products is rigorously tested and supported with multiple checks and certifications throughout the whole manufacturing process.

## Technical support

Contact our technicians if you need technical advice or support when using our suspension systems.

## For safe installation



- A.** The angle of the wire rope from the vertical symmetry axis of the gripper must not exceed  $5^\circ$  (for angled suspension systems, please see page 41, 43, 46 and 47).
- B.** The wire shall under load protrude at least 25 mm from the gripper exit.

## Caution

- Beware of the risk for electrical shock when the wire enters an electrical appliance.
- Any attempt to manipulate the gripper mechanism voids all our liabilities.
- Impulses and vibrations can considerably reduce the total strength.
- Keep oils/fats away from the wire and grippers.
- Avoid using grippers in spaces with chlorine or acids that generate fumes.
- Do not paint or coat the wire or grippers.
- Dust and small particles can clog the gripper mechanism.
- Frayed wires might damage the locking mechanism inside grippers.
- To prevent cut wires from fraying, apply a drop of super-glue.
- For extra safety, always perform an optical inspection to make sure that all three balls are in place before installing the gripper.
- Do not over-torque the threads when installing threaded grippers.
- All products are for indoor use only.
- Combining other products with original Alemtek products limits our responsibility.

# Wire type & endings

## How to choose wire

### 1) What wire ending do I need?

Check the Applications section to find similarities to the solution you are looking for or read about the endings in the section Standard wire endings. If you use a ceiling attachment, a wire stopper is the most common choice. The other end of the wire is free to assemble with a gripper.

### 2) What wire material and construction do I need?

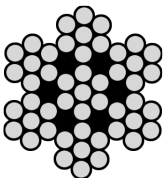
Stainless steel wire is a cost-effective solution suitable for a wide range of applications, offering high strength, a softer touch, and higher corrosive resistance compared to galvanized steel wire. However, galvanized steel wires are cheaper and can take higher loads without breaking. In combination with a gripper, the steel wire construction shall be 7x7.

### 3) What wire diameter do I need?

Check the Weight guidelines on page 6. The value of the Working load limit shall be a bit higher than the total weight of your product in a static position.

### 4) What wire length do I need?

Standard lengths are 1500 mm, 2000 mm, 3000 mm, 5000mm, but can also be customized according to your needs. The wire length is measured as "L" below. From the suspension point of Ending 1 to the free end of the wire mentioned as Ending 2.

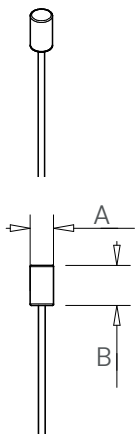


7 x 7 interlaced

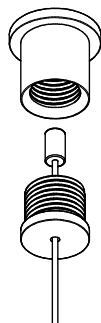


## Standard wire endings

### Stopper

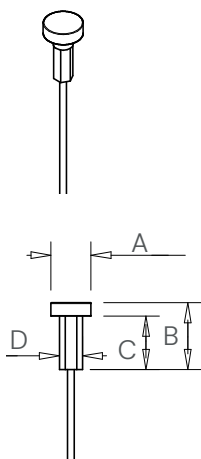


The most commonly used ending for ceiling attachments.

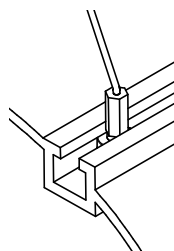


Art. no.	A mm	B mm
T2	Ø3.5	6
T20	Ø4.8	6.3

### T- shaped

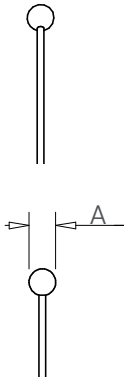


T-shaped endings are ideally used for profiles.

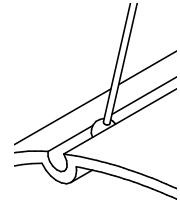


Art. no.	A mm	B mm	C mm	D mm
T3	Ø6	10	8	SW 3
T4	Ø8.5	11	9	SW 3
T5	Ø14	11.5	8.5	Ø5,5

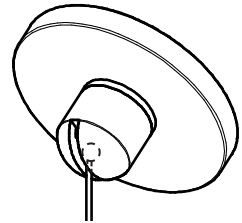
## Ball



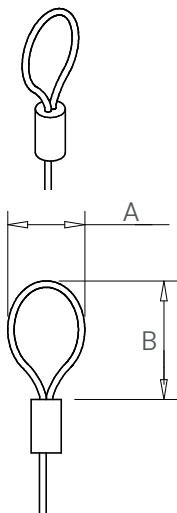
A moulded ball ending is used when suspending from an angled ceiling or when it is important to maintain balance of the load in one point. A moulded ball can also be used in profiles.



Art. no.	A mm
T7D4	Ø4
T7D5	Ø5
T7	Ø6



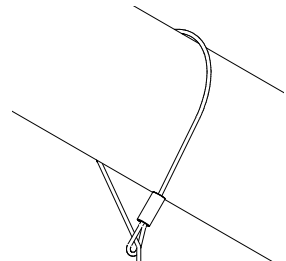
## Loop



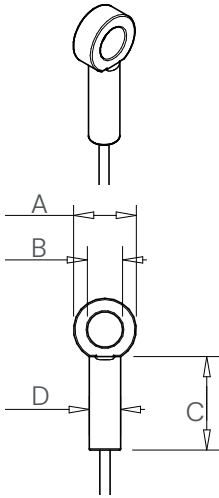
The loop is commonly used when attaching wire to hooks or when suspending from a pipe.



Art. no.	A mm	B mm
T95	12	22



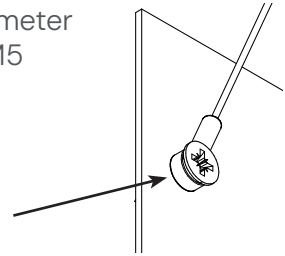
## Ø5 Ring



A moulded ring with a hole diameter suitable for fastening with an M5 screw.

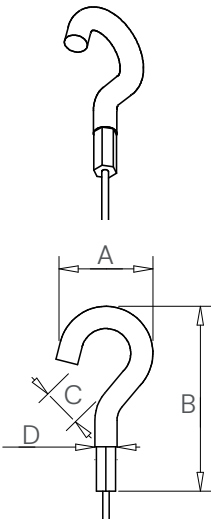
**Please note:**

Thickness of the moulded ring is 2 mm.

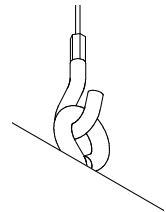


Art. no.	A mm	B mm	C mm	D mm
T12	9	Ø5	13.5	Ø5

## Hook

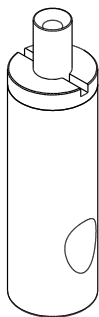


Hook shaped ending used to attach wire to ring attachments.



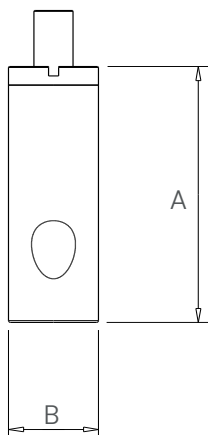
Art. no.	A mm	B mm	C mm	D mm
TJ	15	27	4.5	Ø3.5

## 9-38M4



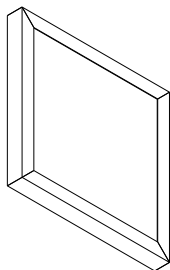
9-38M4 is one of our standard products. This gripper is an ideal choice for installation of practically anything, from luminaries to acoustic panels and signs with a metal frame. As the wire exits from the side it is easy to adjust the height of your suspended object afterwards.

Available in many different sizes and with different threads, both male and female.



Art. no.	A mm	B mm	Thread	Wire Ø
9-38M4	28	Ø9	M4	1.0-1.2
9-38M5	28	Ø9	M5	1.0-1.2
9-38M6	28	Ø9	M6	1.0-1.2
9-38MM5L6	34	Ø9	Male M5	1.0-1.2
9-78M4	35	Ø10	M4	1.2-1.5
9-78M5	35	Ø10	M5	1.2-1.5
9-78M6	35	Ø10	M6	1.2-1.5

## 1 What to install?



## 2 How to install.



412M8M6BL14



T2



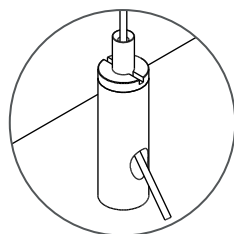
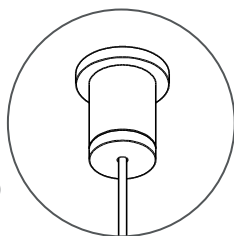
411MM8BL10



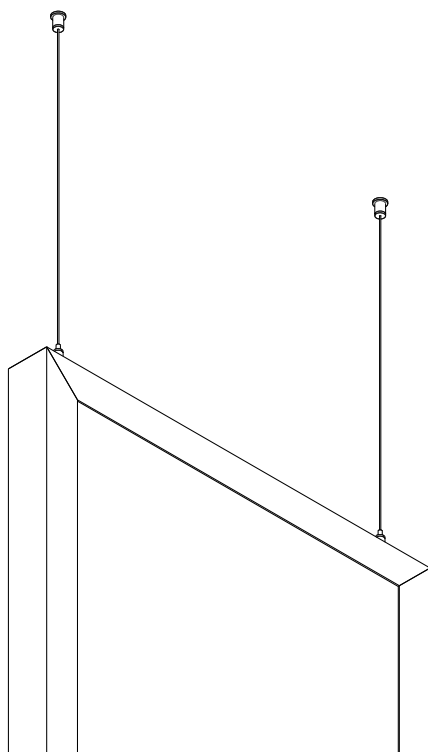
9-38M4



712MM4L8

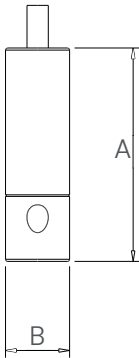


## 3 The result.



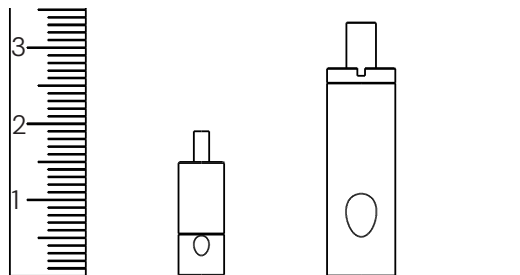


9-08M3 is the smallest gripper in our product range. Often used when suspending luminaries and signs when you do not want the suspension system to steal any attention from the object you are suspending.

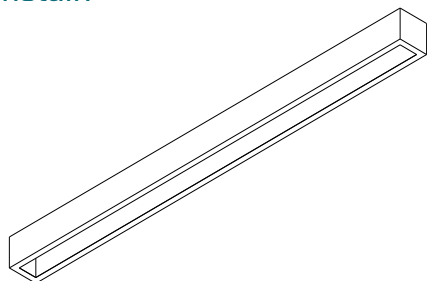


Art. no.	A mm	B mm	Thread	Wire Ø
9-08M3	15	Ø6	M3	0.8-1.0
9-08M4	15	Ø6	M4	0.8-1.0

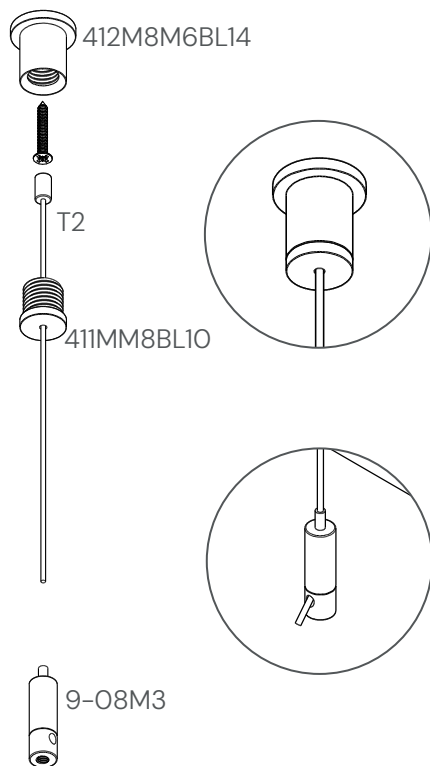
Below you can see the difference in size between 9-08M3 och 9-38M4. The picture is in natural size.



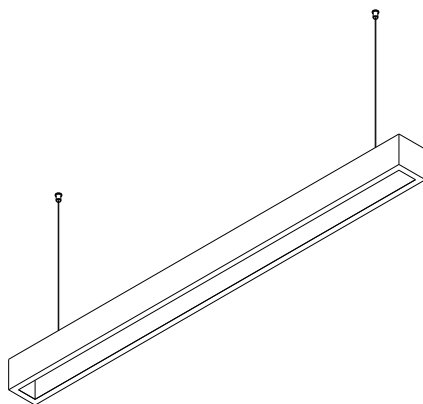
## 1 What to install?

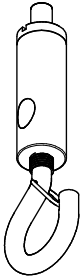


## 2 How to install.

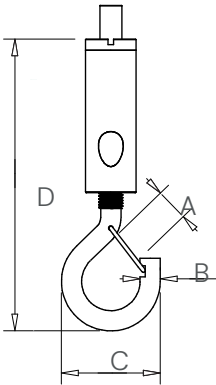


## 3 The result.

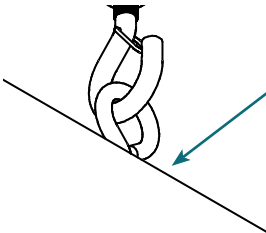




9-38E is a gripper with a snap hook assembled in the bottom. The snap hook provides extra safety compared to ordinary hooks, as the hook stays closed when the installation is complete.



Art. no.	A mm	B mm	C mm	D mm	Wire Ø
9-38E	6.5	Ø4.0	18	55	1.0-1.2
9-78E	6.5	Ø4.0	18	63	1.5

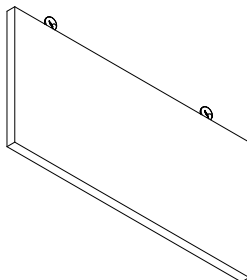


**Please note:**

The ring of the suspended object used to attach 9-38E or 9-78E cannot be thicker than Ø5 mm.

*Similar products: 9-39J on page 20.*

# 1 What to install?



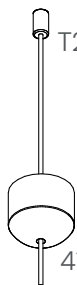
# 2 How to install.



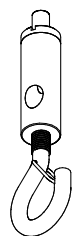
412MM12M5BL9



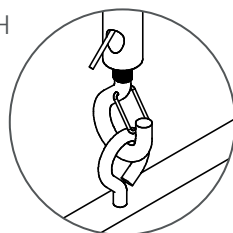
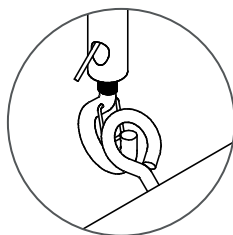
T2



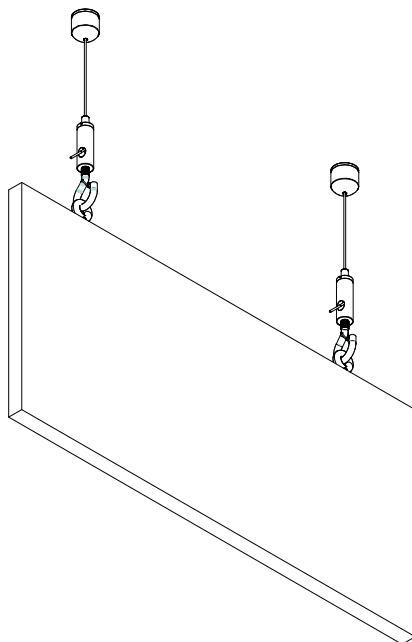
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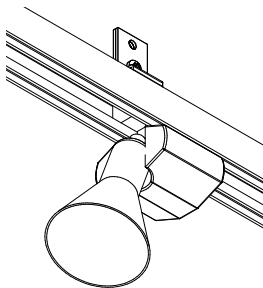
9-38E



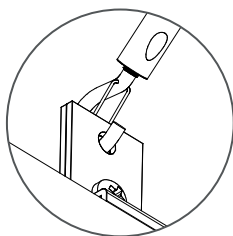
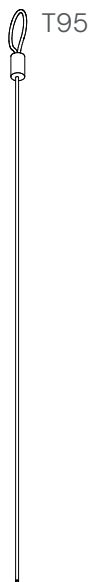
# 3 The result.



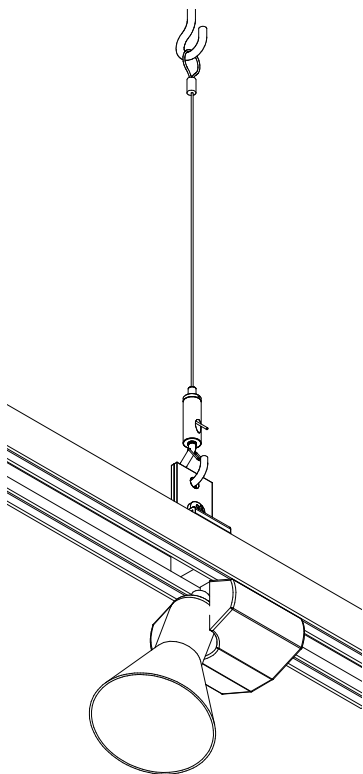
# 1 What to install?



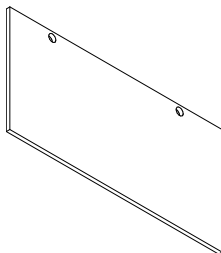
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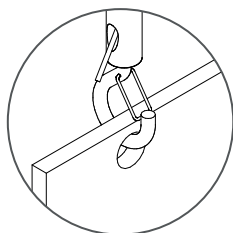
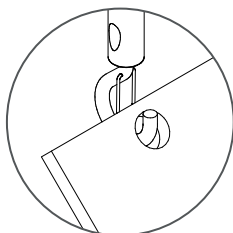
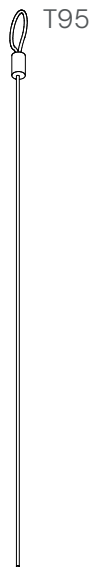
# 3 The result.



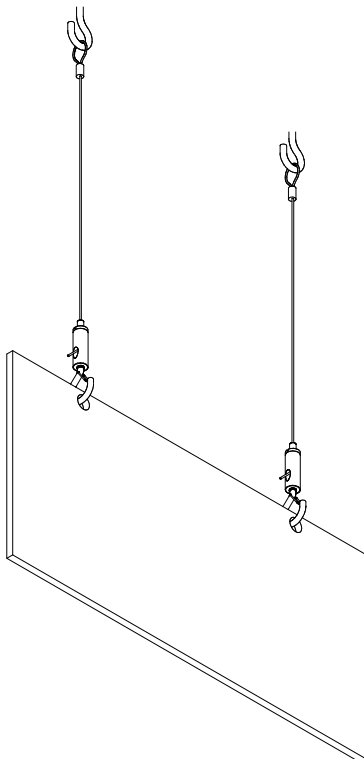
# 1 What to install?

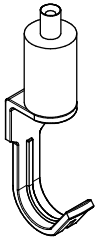


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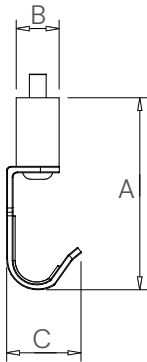


# 3 The result.

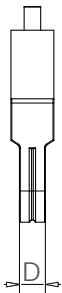




9-39J gives you the swift installation and instant adjustment capabilities of a gripper combined with a simple yet versatile hook.

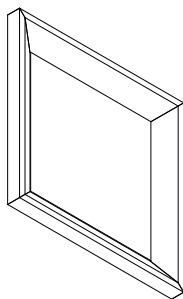


Art. no.	A mm	B mm	C mm	D mm	Wire Ø
9-39J	42	Ø10	13	6.1	1.0-1.5

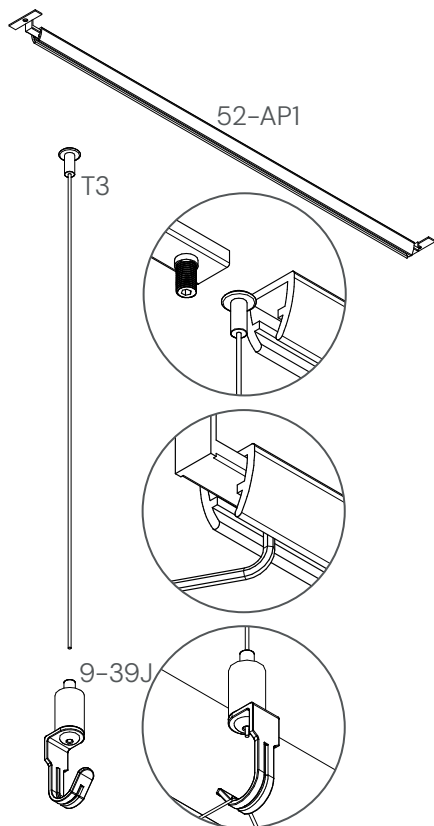


*Similar products: 9-38E on page 16.*

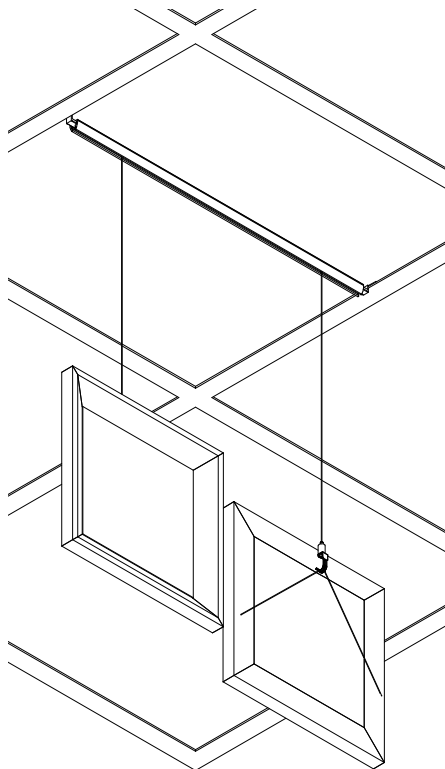
# 1 What to install?



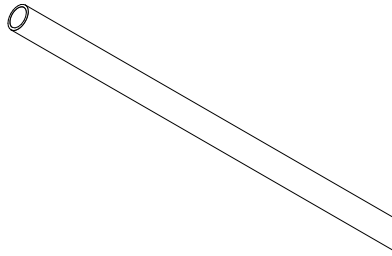
# 2 How to install.



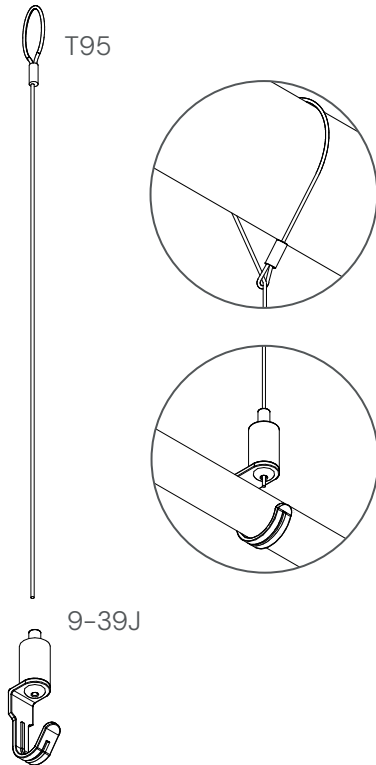
# 3 The result.



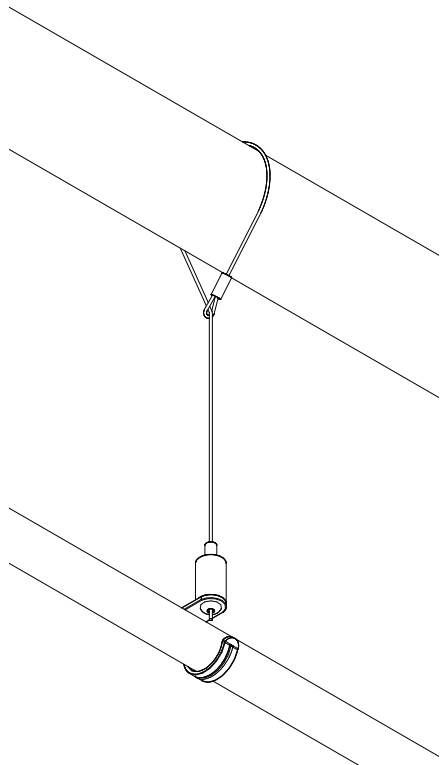
# 1 What to install?



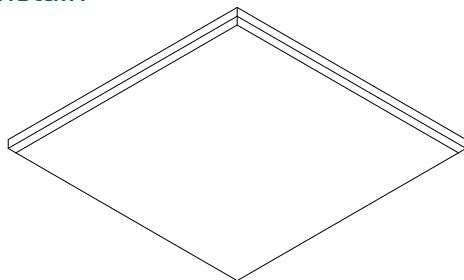
# 2 How to install.



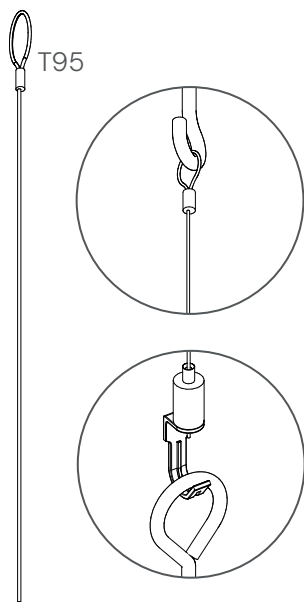
# 3 The result.



# 1 What to install?

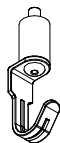


## 2 How to install.

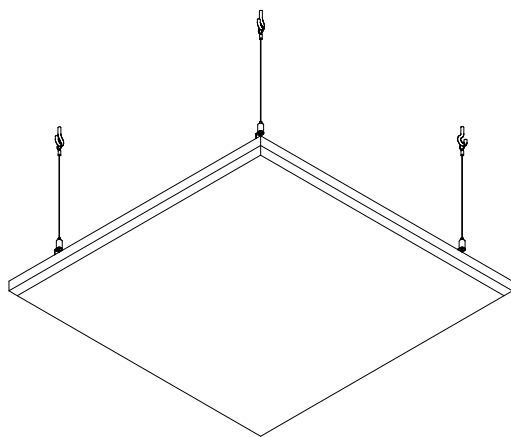


T95

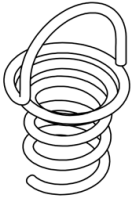
9-39J



## 3 The result.

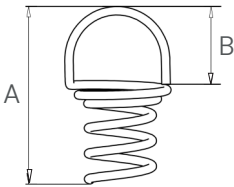


## 849-S002

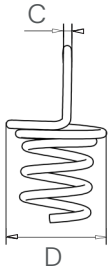


The spiral spring 849-S002 facilitates the installation of hanging acoustic panels made out of porous material. Simply screw in the 849-S002 and you'll have an anchor to attach the rest of the suspension system.

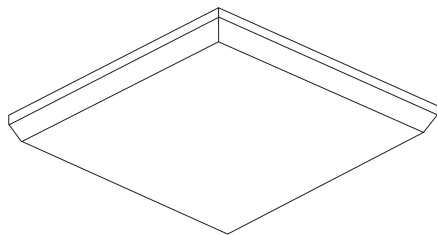
We recommend you to use 849-S002 with 9-38E for a quick and easy installation.



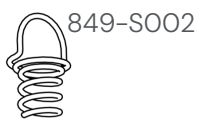
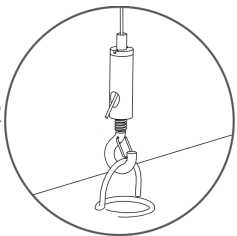
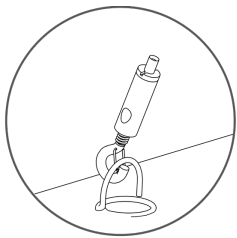
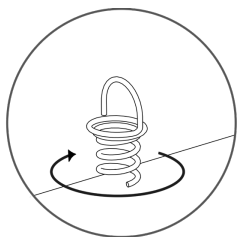
Art. no.	A mm	B mm	C mm	D mm
849-S002	43	16	2	24



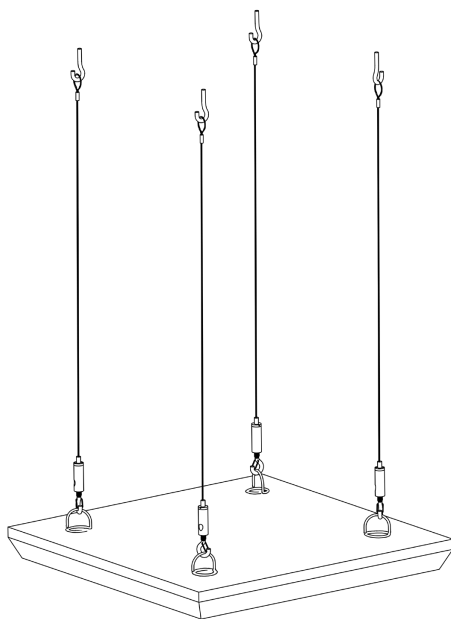
# 1 What to install?

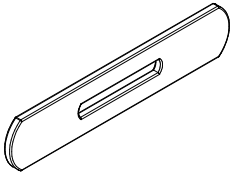


## 2 How to install.



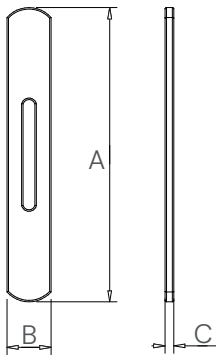
## 3 The result.



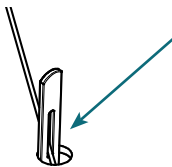


A 4808 is simple to use when attaching wire to a plane surface. Regardless if you want to attach the wire to the ceiling or to your product, a small hole is all that is required to create a suspension system using 4808. It is also commonly used as the attachment of a safety wire when required.

4808 is combined with a wire with T2 ending.



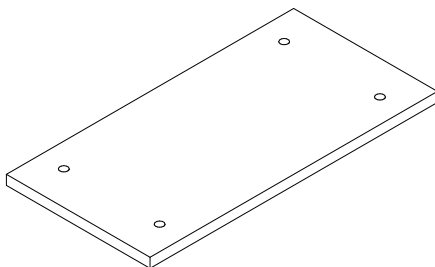
Art. no.	A mm	B mm	C mm	Wire Ø
4808	40	6	1.2	1.0-1.5



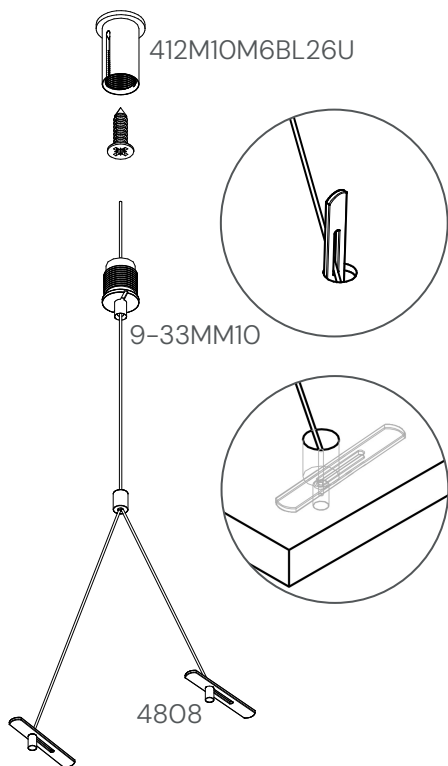
**Please note:**

The hole of the suspended object must be at least  $\varnothing 7$  mm for the 4808 to go through.

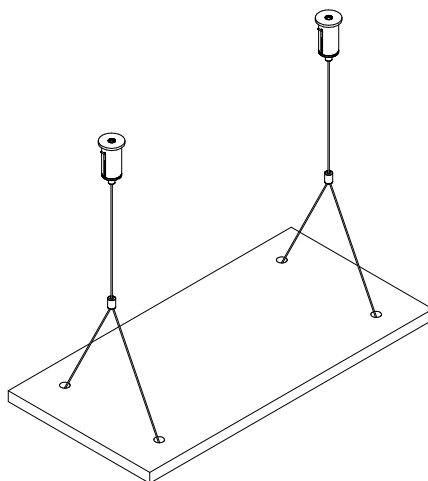
# 1 What to install?



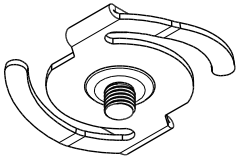
# 2 How to install.



# 3 The result.

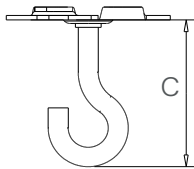
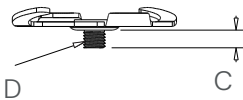
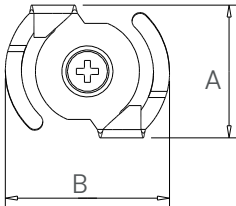


## 32SM5L5, 32SD4L30J, 32SM5LX

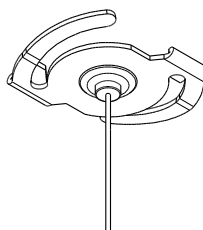


Clips are used when suspending from a suspended ceiling. The clip is attached to the T-bar with a simple move that can be done using only one hand.

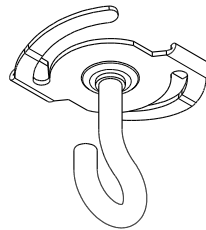
We have clips to fit both T15 and T24 profiles and they are available with different threads and solutions.



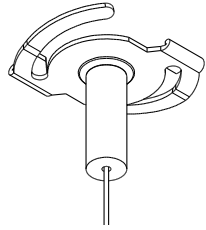
Art. no.	A mm	B mm	C mm	D mm	Profile
32SM5L5	27	41	5	M5	T24
32SM6L7	27	41	7	M6	T24
32SD4L30J	27	41	30	-	T24
32SM5LX	27	41	-	-	T24
31SM5L5	18	41	5	M5	T15
31SM6L7	18	41	7	M6	T15
31SD4L30J	18	41	30	-	T15
31SH	18	41	-	-	T15



32SM5LX  
and T3 wire

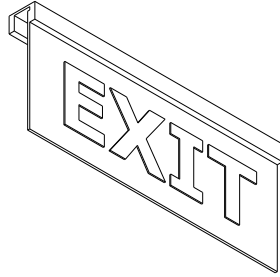
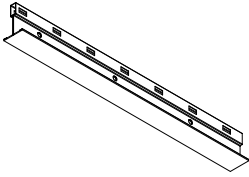


32SD4L30J



32SM5L5 with  
412M5D9BL25  
and T2 wire

# 1 What to install?



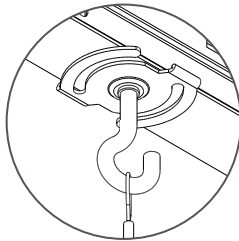
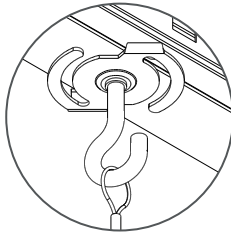
# 2 How to install.



32SD4L30J



T95

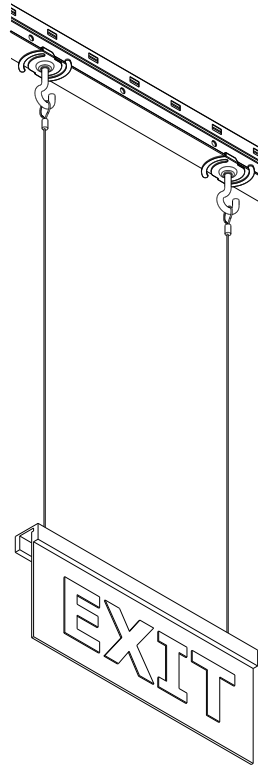


9-33MM10



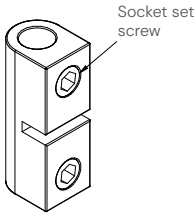
726M10P1

# 3 The result.



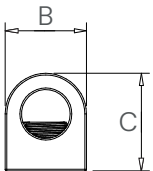
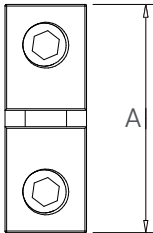
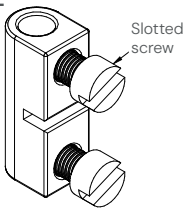
## 7801 & 7802

7801



Create loops on wires by using a hex key or an ordinary screw driver. These small components are very easy to use. Insert the wire through the 7801 or 7802, then through the hole of the object you want to suspend, and then finally back through the 7801 or 7802 again. Let the wire protrude min 25 mm and fasten the screws.

7802



Art. no.	A mm	B mm	C mm	Wire Ø
7801 Socket set screw M3	14	5	6	1.0-1.5
7802 Slotted screw M3	14	5	6	1.0-1.5

796D1-5

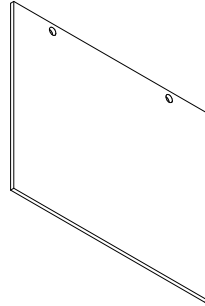
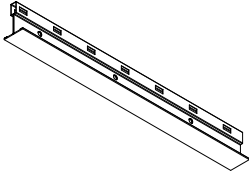


**Please note:**

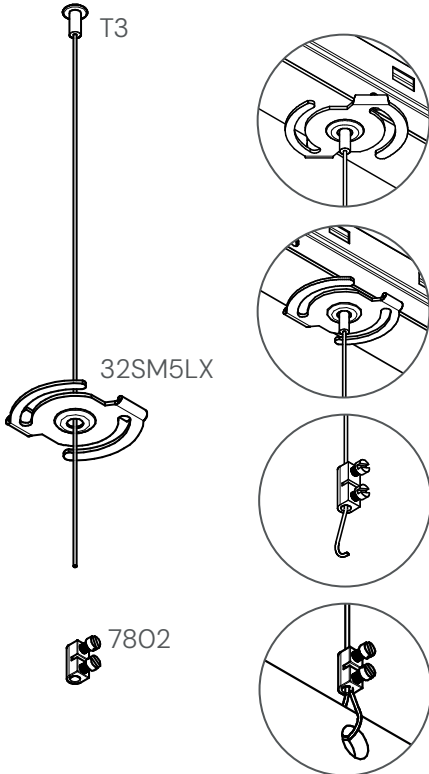
Hex key for 7801 provided separately.

*Similar products: 9-39UPDNW on page 32.*

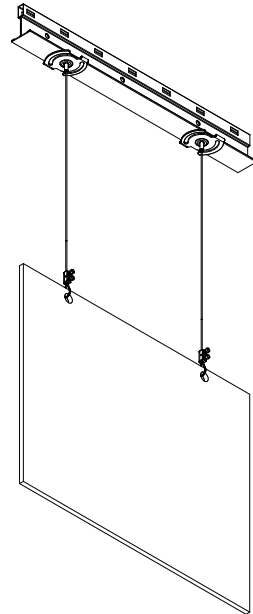
# 1 What to install?



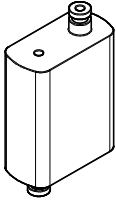
# 2 How to install.



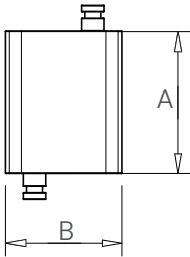
# 3 The result.



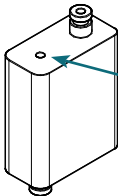
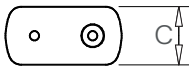
## 9-39UPDNW



Creating a loop has never been easier or quicker. Just insert the wire through the opening of this elegant little box and you will have a loop within three seconds. And best of all: no tools required at all. Just pull the pin to release the wire.



Art. no.	A mm	B mm	C mm	Wire Ø
9-39UPDNW	19	18	9	1.0-1.5
9-79UPDNW	24	20	11	1.8-2.0

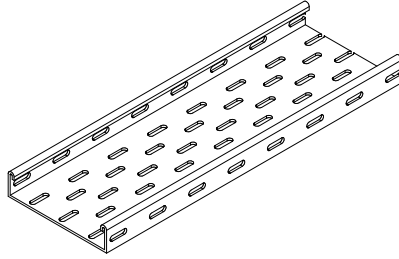


**Please note:**

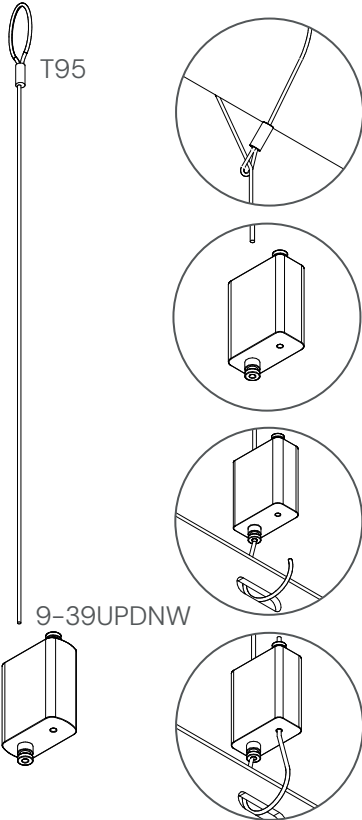
Always insert wire through the hole of loop grippers. Pull the pin on the opposite side to release wire.

*Similar products: 7801 & 7802 on page 30.*

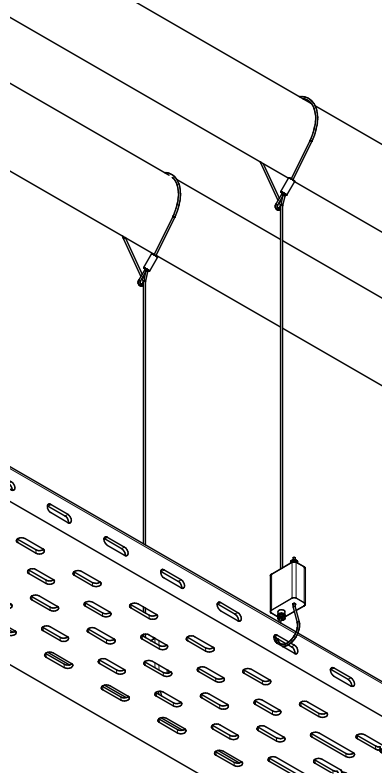
# 1 What to install?



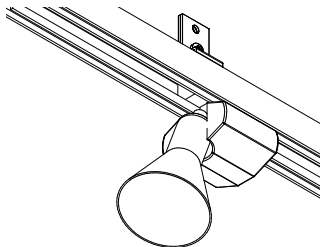
# 2 How to install.



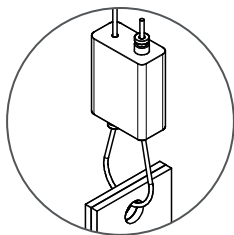
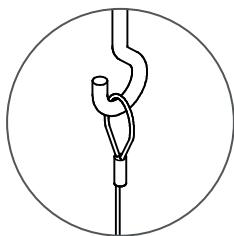
# 3 The result.



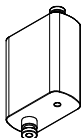
# 1 What to install?



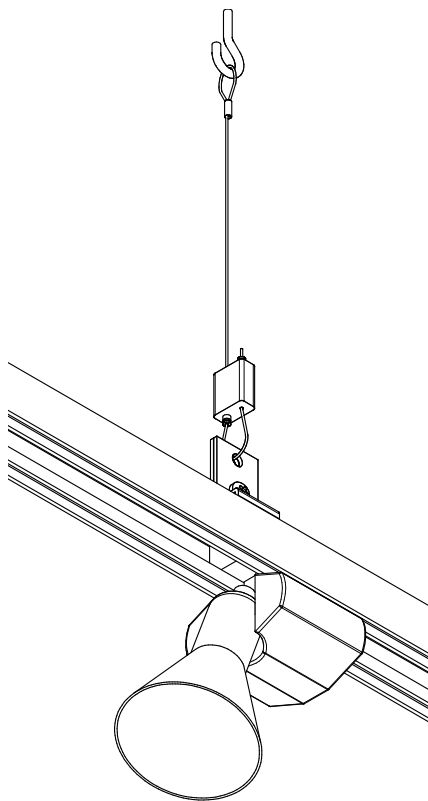
# 2 How to install.



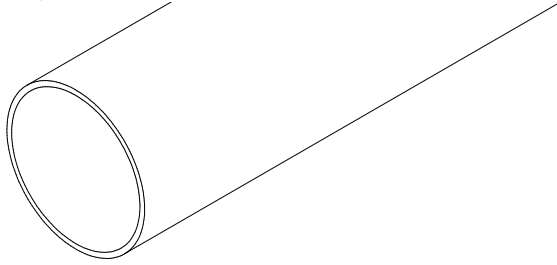
9-39UPDNW



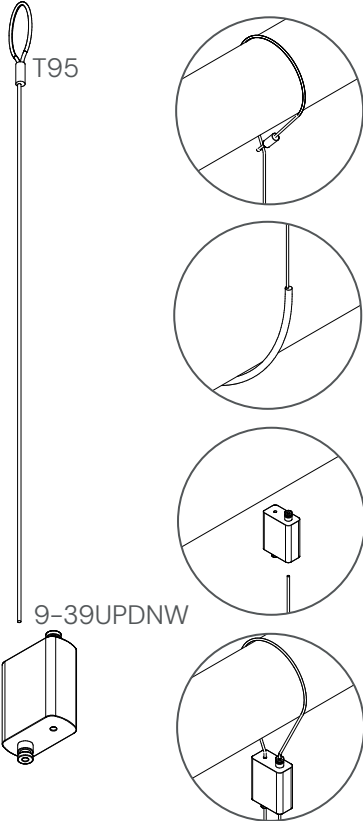
# 3 The result.



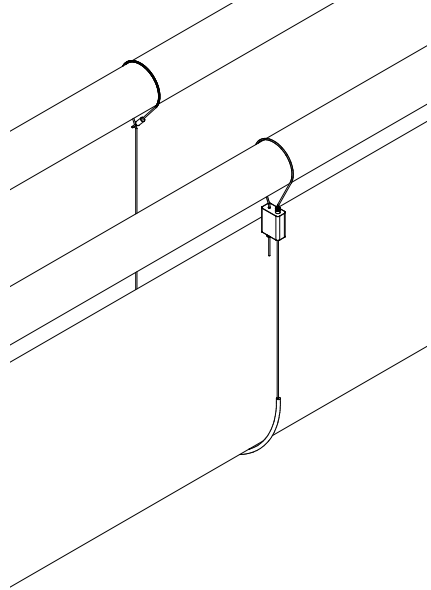
# 1 What to install?

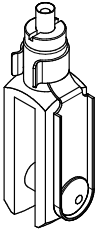


# 2 How to install.

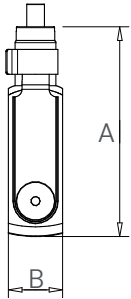


# 3 The result.

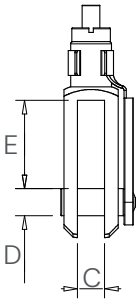




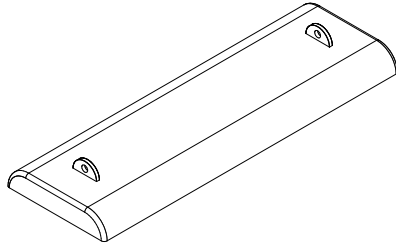
With this special shaped gripper your product is attached to the gripper with a safety spring. The spring guarantees that the gripper is securely attached to the suspended object at all time.



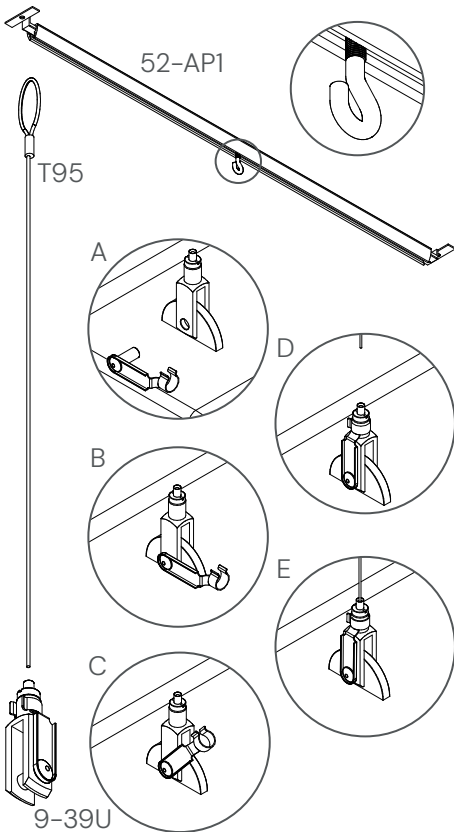
Art. no.	A mm	B mm	C mm	D mm	E mm	Wire Ø
9-39U	46	12	6	Ø6	20.5	1.0-1.5



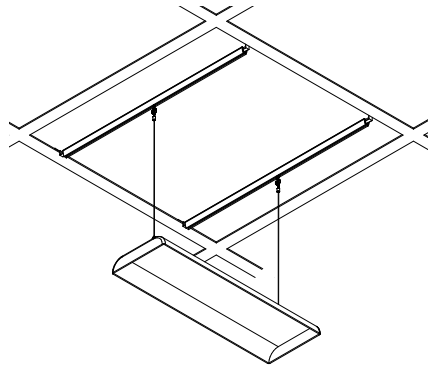
# 1 What to install?



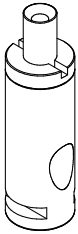
# 2 How to install.



# 3 The result.

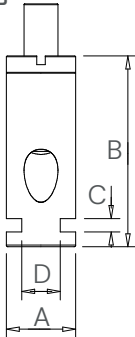


## 9-18TD8, 9-12T & T6



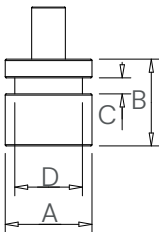
When suspending an object with a track or when suspending from a track, we have a number of different solutions. 9-18TD8 and 9-12T are grippers suitable for insertions inside the track. 9-18TD8 lets the wire exit from the side in case electricity runs inside the track.

9-18TD8

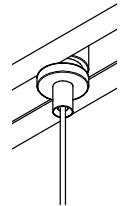


Art. no.	A mm	B mm	C mm	D mm	Wire
9-18TD8	Ø8	21.5	1.5	4.5	1.0-1.5
9-12T	Ø10	10	2	Ø7.5	1.0-1.2
T6	Ø10.5	9	6	Ø3.5	1.0-2.0

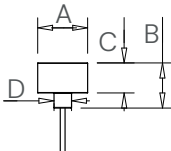
9-12T



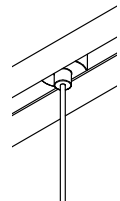
9-12T is smaller than 9-18TD8 and lets the wire go right through the gripper and exit from the bottom.



T6

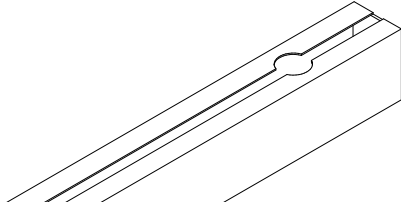


A wire with T6 ending is also suitable for track suspension. Perfect to use if you want to assemble a gripper in the other end.

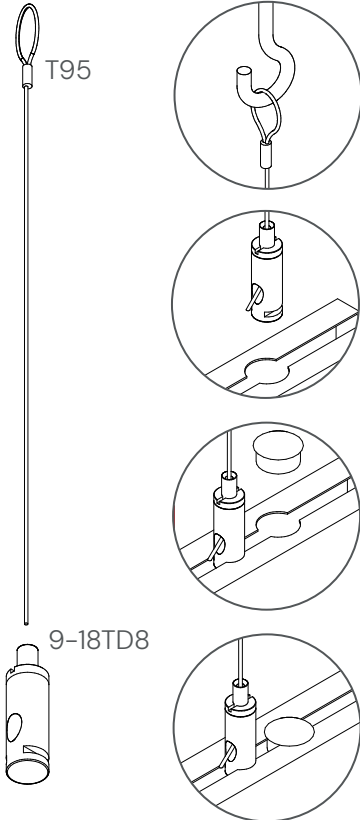


*Similar products: 9-78MM13T on page 49.*

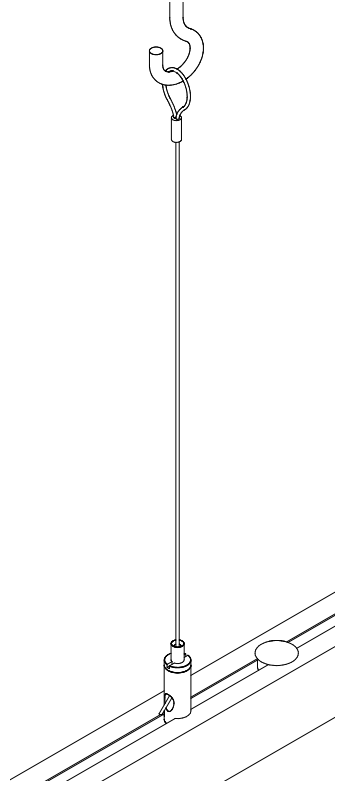
# 1 What to install?



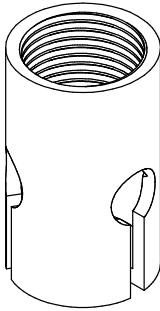
# 2 How to install.



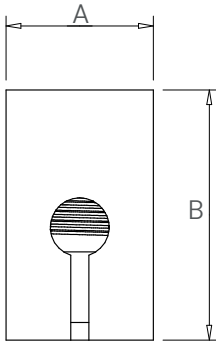
# 3 The result.



## 46M13BL26



46M13BL26 is the ideal choice if your product is round shaped and needs three points for suspension. When the gripper is assembled to 46M13BL26 it automatically locks the three wires into place.



Art. no.	A mm	B mm	Thread
46M13BL26	15	25.5	M13

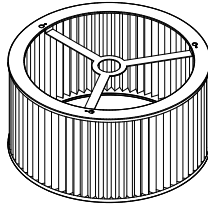


**Please note:**

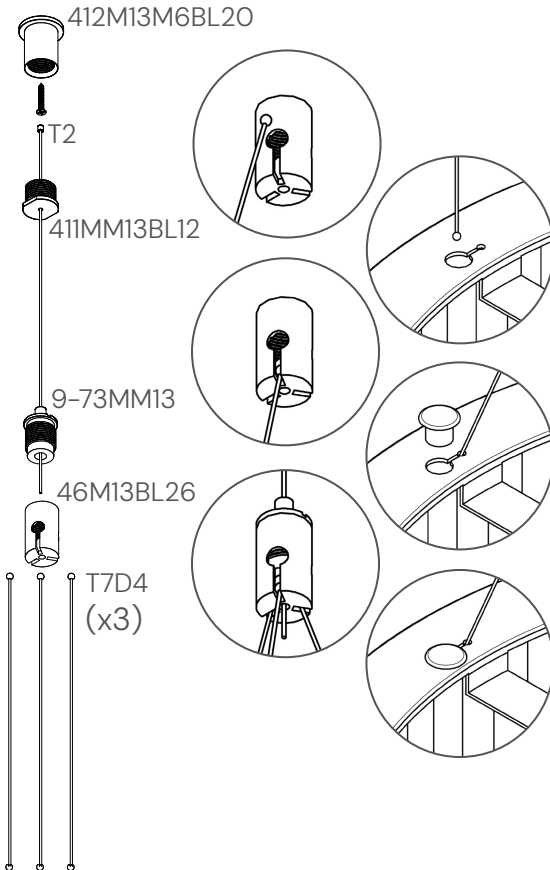
Always use 46M13BL26 with 9-73MM13 gripper.

Use T7D4 ending with Ø4 mm ball.

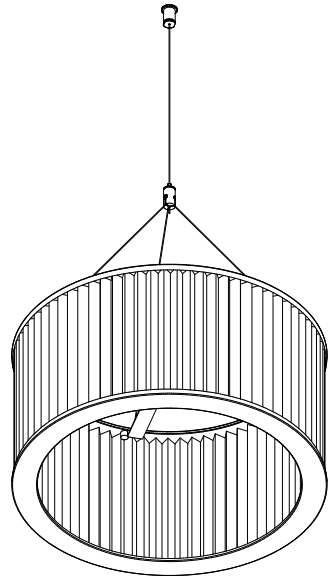
# 1 What to install?



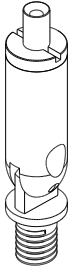
## 2 How to install.



## 3 The result.

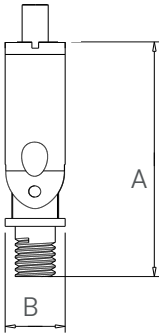


## 9-38V8MM6L8

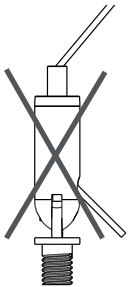


A gripper with joint is used when you need to suspend something from an angled position, or when you want to gather three suspension points of your object in one attachment point in the ceiling – commonly used with round objects.

Available in many different sizes and with different threads, both male and female.



Art. no.	A mm	B mm	Thread	Wire Ø
9-38V8MM6L8	39	Ø9	M6 male	1.0-1.2
9-38V8M4	37	Ø9	M4 female	1.0-1.2
9-78V8MM10P1	45	Ø10	M10 male	1.2-1.5
9-78V8M4	47	Ø10	M4 female	1.2-1.5

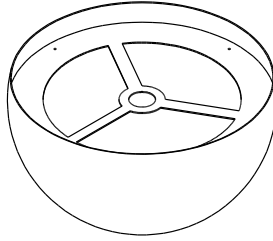


### Please note:

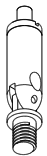
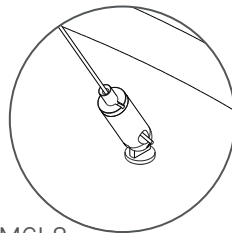
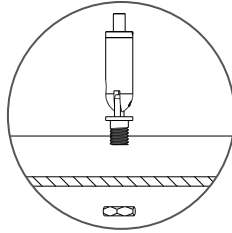
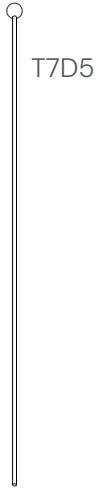
The angle of the wire must be in the same direction as the gripper joint. Otherwise the joint may break.

*A gripper with joint can also be used to suspend from an angled ceiling. See picture on page 47.*

# 1 What to install?



# 2 How to install.

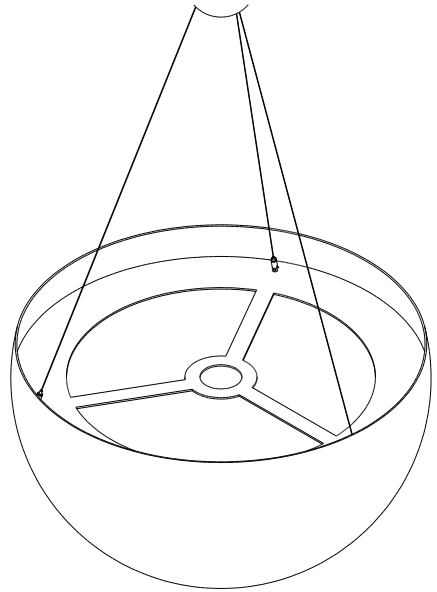


9-38V8MM6L8

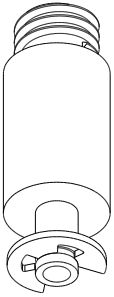


726M6D10

# 3 The result.

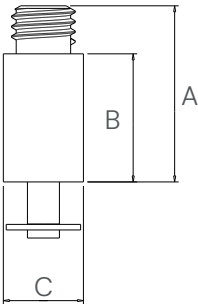


## 9-39UPDN

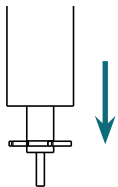


9-39UPDN has a different construction compared to the other grippers, and is used "upside-down". The wire enters through the threaded part and exits from the pin, which you pull to release the wire.

Ideal to use when you want to adjust the wire from underneath your suspended object.



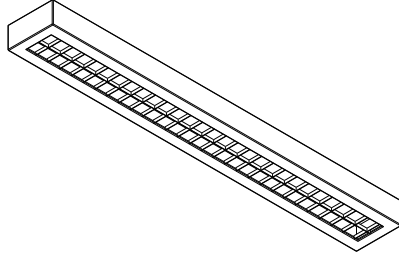
Art. no.	A mm	B mm	C mm	Thread	Wire Ø
9-39UPDN	22	16	Ø10	M8	1.0-1.5
9-39UPDNMM6	22	16	Ø10	M6	1.0-1.5
9-39UPDNMM6LX	28	16	Ø10	M6	1.0-1.5



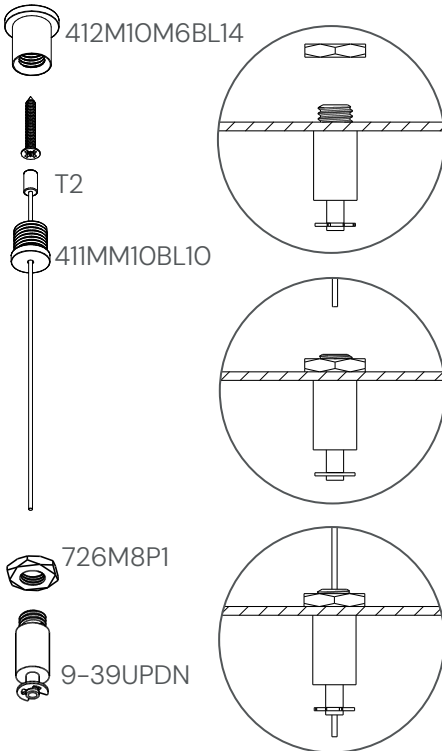
**Please note:**

To release wire from gripper pull instead of press the pin.

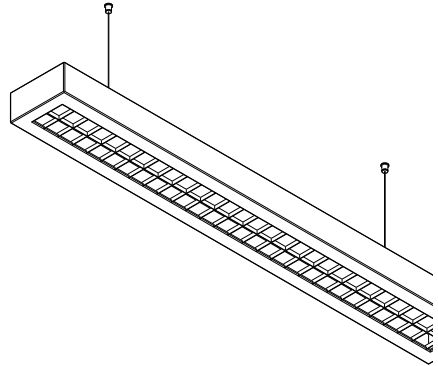
## 1 What to install?



## 2 How to install.



## 3 The result.

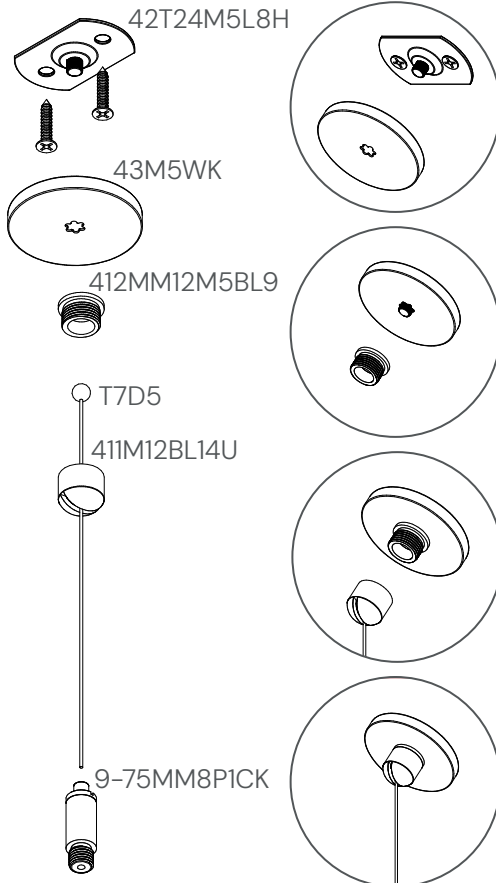


# Installation examples

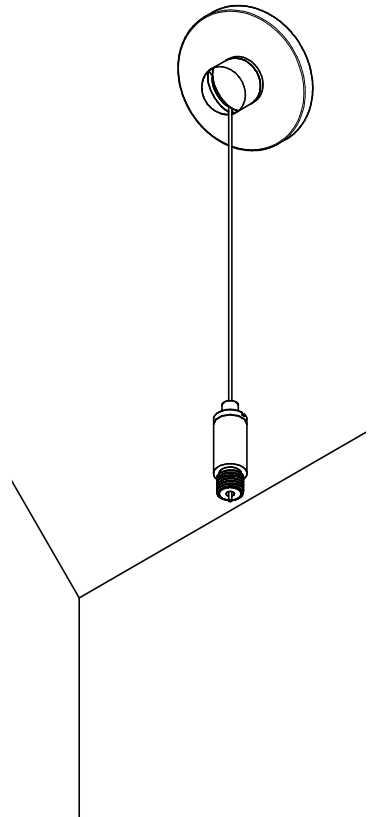
## Angled ceilings - attachment

If you want to suspend something from an angled ceiling it is best to let the wire hang in a straight direction. The 411M12BL14U attachment cap has a slit which lets the wire do exactly that. Always use ball endings for applications with an angled suspension point.

### 1 How to install.



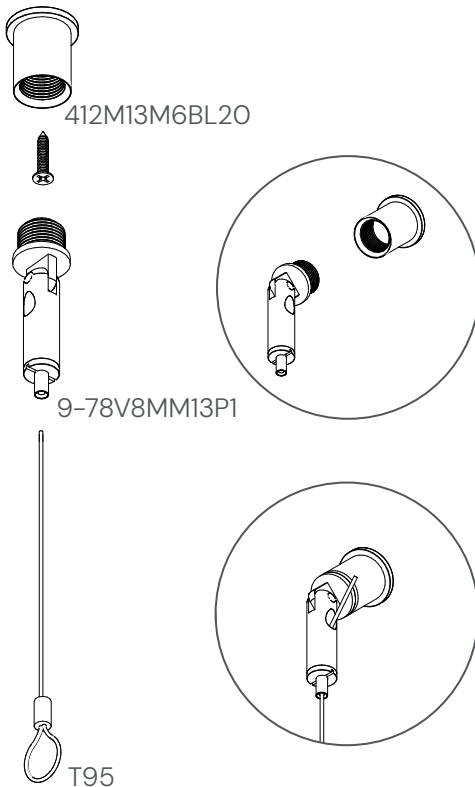
### 2 The result.



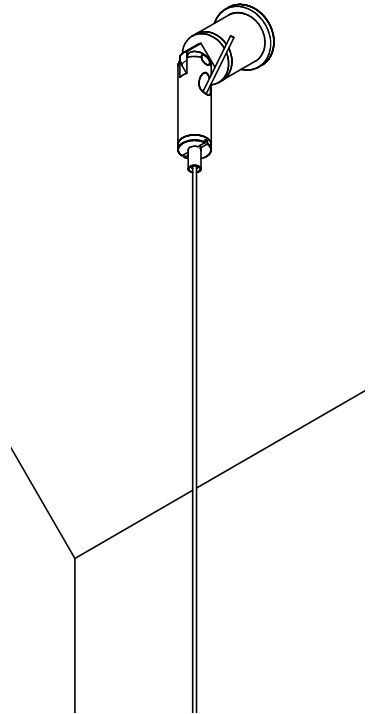
## Angled ceilings - gripper

You can also use a gripper with joint to suspend an object from an angled position. Just ensure that the joint of the gripper lets the gripper point straight down before applying the load.

### 1 How to install.



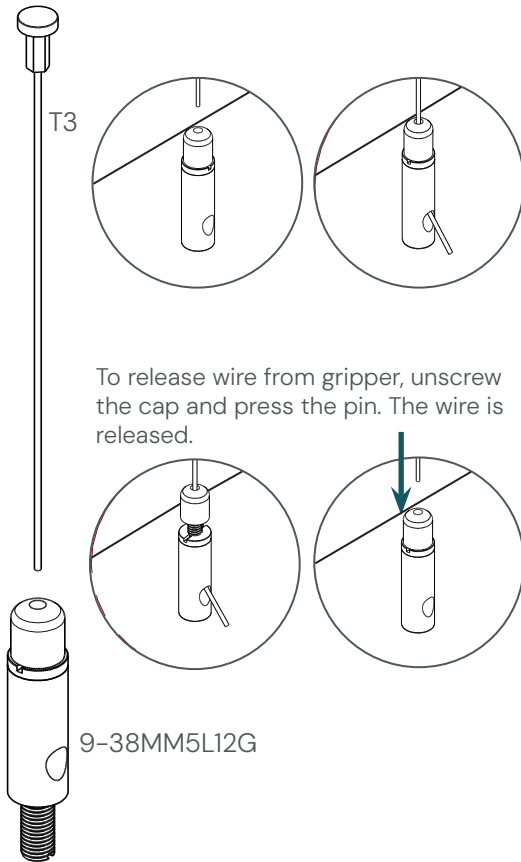
### 2 The result.



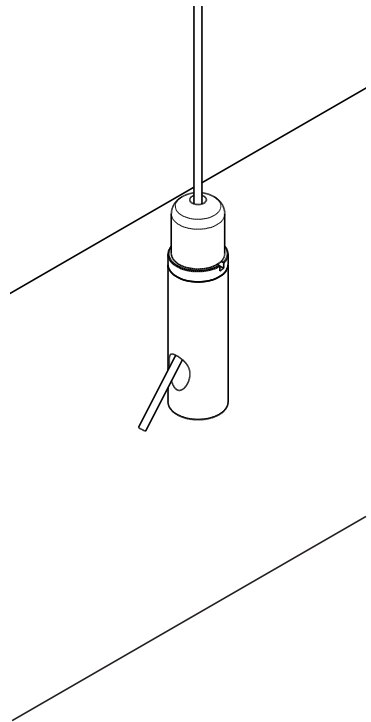
## Safety cap

A safety cap prevents the pin from being pressed unintentionally. By assembling and fastening the cap on to the threaded pin of the gripper, the pin is prevented from being pressed and the wire cannot be released.

### 1 How to install.



### 2 The result.

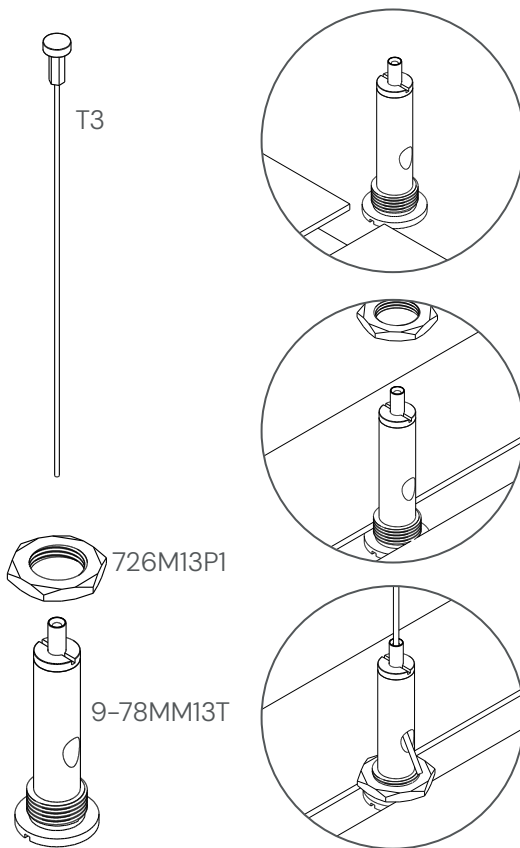


## 9-78MM13T

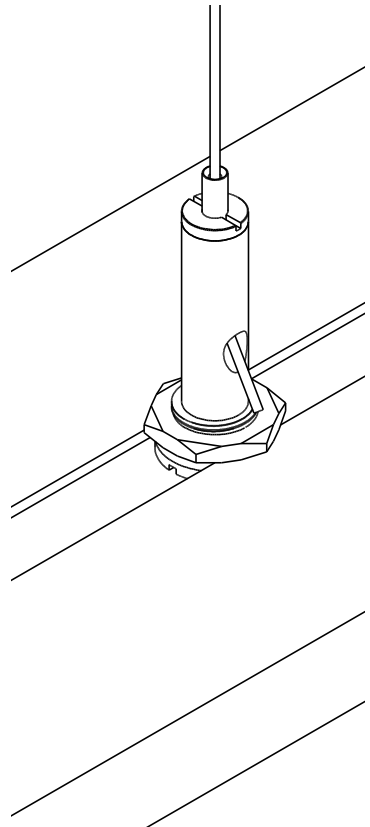
9-78MM13T has an M13 thread above the “hat” in the bottom, which can be used to lock the gripper’s position inside a track.

**Please note:** The M13 thread is pitch 1.

### 1 How to install.



### 2 The result.

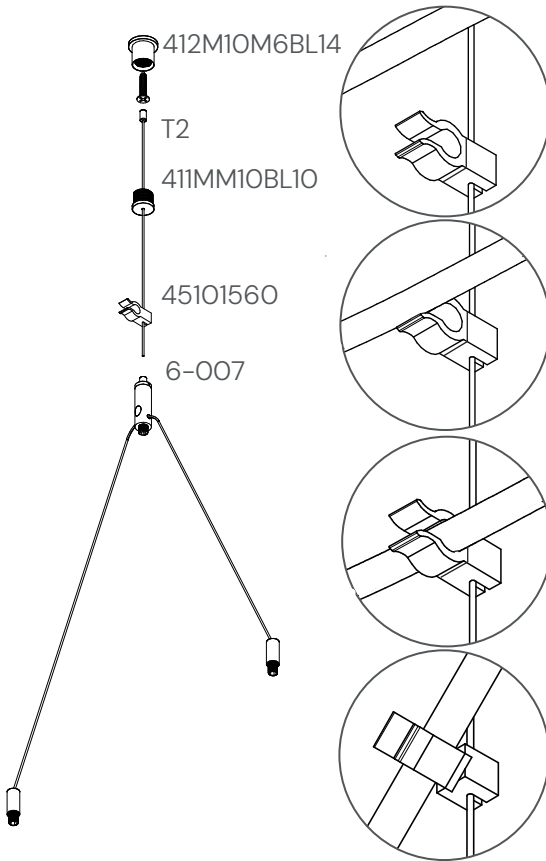


## Cable clip

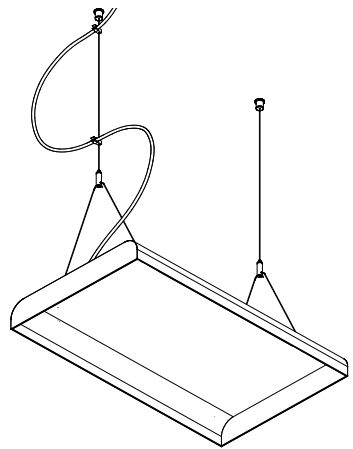
Use a cable clip to attach the power cord to the wire. The cable clip is transparent and rotatable 360°.

Art. no.	Wire Ø
45101560	1.0 - 1.5

### 1 How to install.



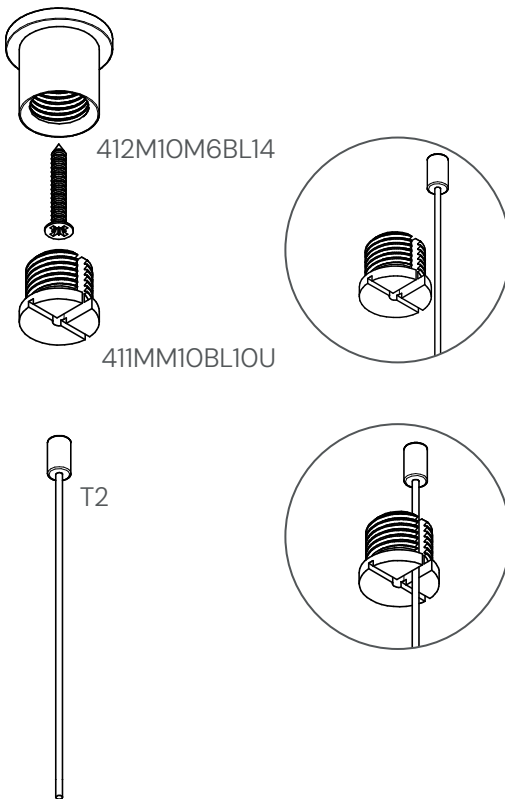
### 2 The result.



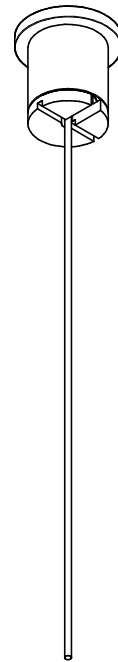
## 411MM10BL10U

When suspending objects using long wires it can be very time consuming to insert the wire all the way through the attachment cap. 411MM10BL10U has a slit which makes it swift and easy to install even the longest wires.

### 1 How to install.



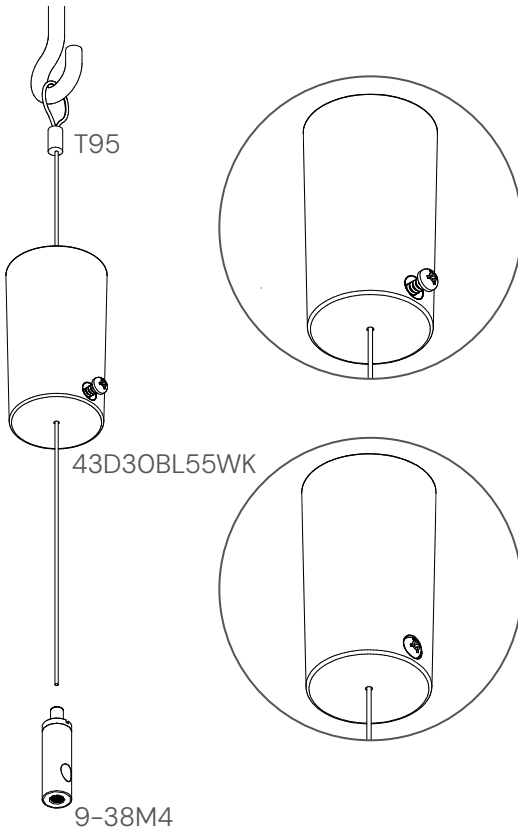
### 2 The result.



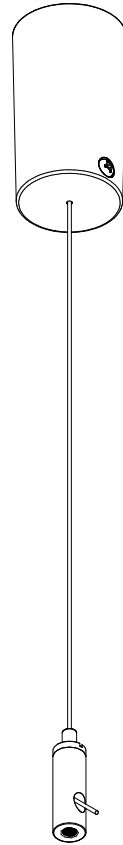
## Ceiling cup

Using a ceiling cup is a smart way to "hide" the hook in the ceiling. All ceiling cups are made of plastic.

### 1 How to install.



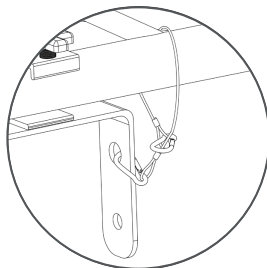
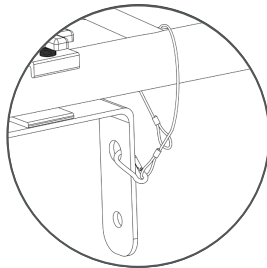
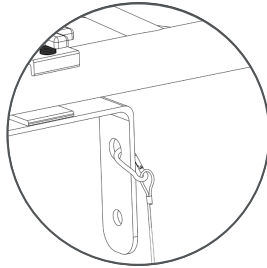
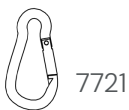
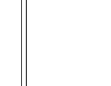
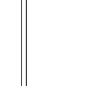
### 2 The result.



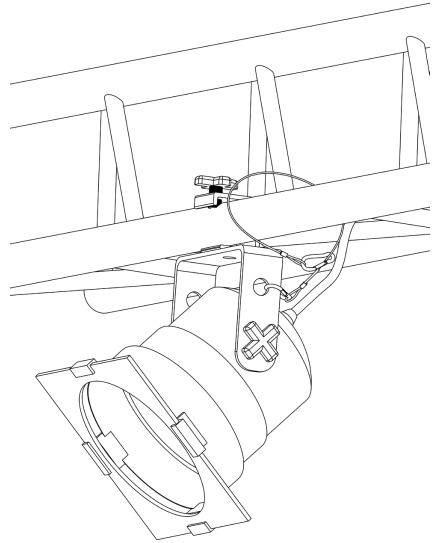
## Safety wire

Use a safety wire to secure an object in which the primary fastening might fail from vibrations or other forces. Safety wire is also good to have for safety reasons during installation and maintenance of products on elevated heights.

### 1 How to install.



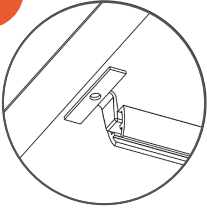
### 2 The result.



## 52-AP1 Installation

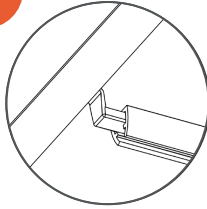
Use carrying rails if you need to create a hanging point anywhere on a grid ceiling.

1



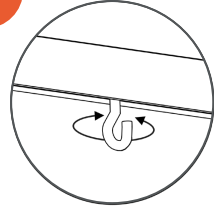
To adjust the Z-clips, loosen the set screw using the included allen key.

2

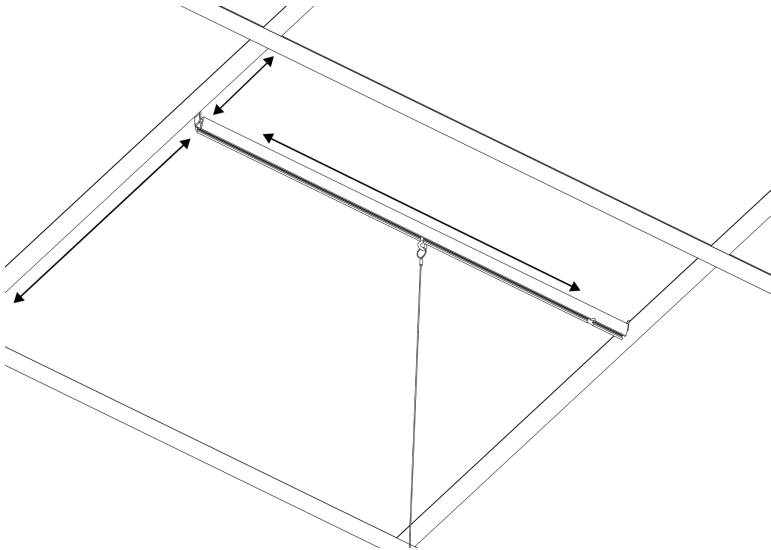


Lock the Z-clips in place by tightening the set screw again.

3



Screw to loosen and fastening the hook at the desired position.

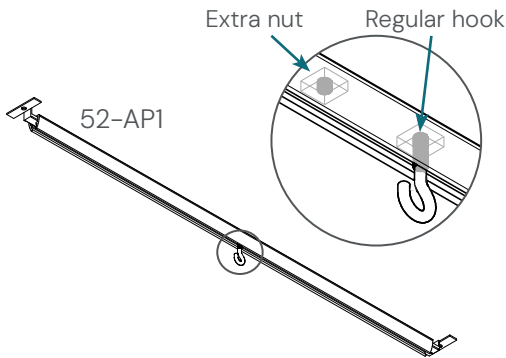


The hanging point is easy to adjust in any direction when using carrying rails.

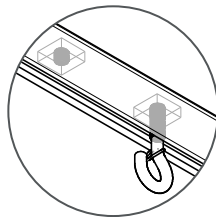
## 52-AP1 & 717M4D2

Using a 717M4D2 snap hook is an easy way to give the suspension system a little extra safety. When using 52-AP1 to suspend from a suspended ceiling you can simply replace the regular hook with 717M4D2. All 52-AP1 contains two rails which are supplied with an extra nut inside.

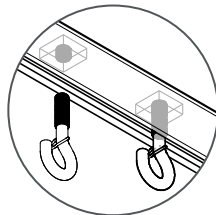
### 1 How to install.



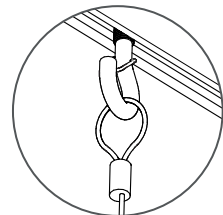
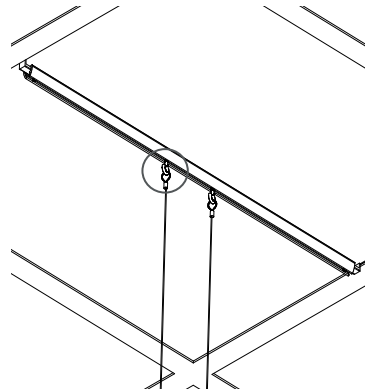
Replace regular hook with 717M4D2.



Assemble 717M4D2 to extra nut.



### 2 The result.



# ALEMTEK

Emmabodavägen 4  
382 45 Nybro  
Sweden

Tel: +46 (0)481-696 60

[info@alemtek.com](mailto:info@alemtek.com)  
[www.alemtek.com](http://www.alemtek.com)

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