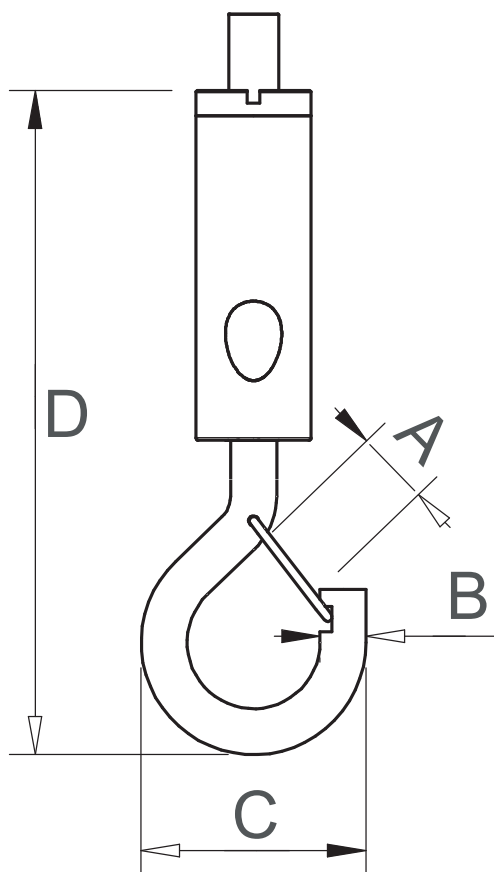


ALEMTEK

HANGING SYSTEMS

Technical Manual



ALEMTEK, located in Sweden, has for over 20 years served our partners within lighting, acoustics, signage, and interior design.

ALEMTEK's hanging systems are engineered and designed in Sweden with a timeless touch and quality made to last. With our mind on the global environment, material of choice is considered out of a life cycle perspective to reduce our carbon footprint in every stage.

The examples shown in this manual are meant to give suggestions and inspiration for your product development. Please note that these are only some parts of our full product range; please contact us for more information and to customize products.

Our service is at your disposal.

Best regards,

ALEMTEK

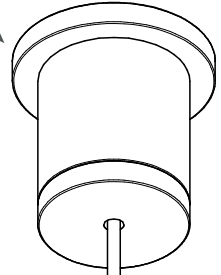


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Usage & limitations	6-7
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Applications	12-45
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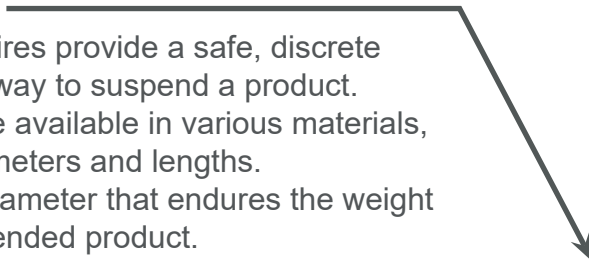
Attachments

Use ALEMTEK attachments to fix the wire to ceilings, walls or floors. Depending on your installation we have several options for you to choose from. Use screws and plugs that are optimized for your specific applications.



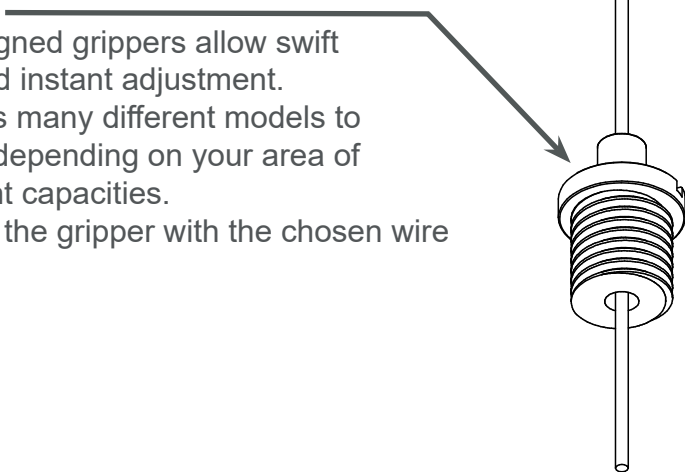
Wires

ALEMTEK wires provide a safe, discrete and elegant way to suspend a product. Our wires are available in various materials, platings, diameters and lengths. Use a wire diameter that endures the weight of your suspended product.



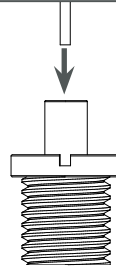
Grippers

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.

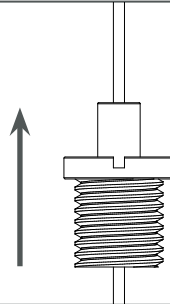


How to use grippers

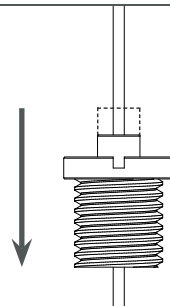
- A. Insert the wire into the gripper. Always insert the wire through the pin unless otherwise stated.



- B. Adjust the gripper up. When you let go of the gripper it will automatically lock itself on the wire.



- C. Press the pin and adjust down. When you press the pin the lock opens and the gripper slides freely up and down the wire. Release the pin to lock the gripper again.



Weight guidelines

The table above shows results using stainless steel wire with suitable ALEMTEK gripper. Improper installation, incorrect choice of components or combining ALEMTEK products with products from other brands may give undesirable results.

Wire diameter	Recommended load	Min. Breaking 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

Recommended load:

Each value shows 1/5 of the breaking load and are for guidelines only.

Min. Breaking load :

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

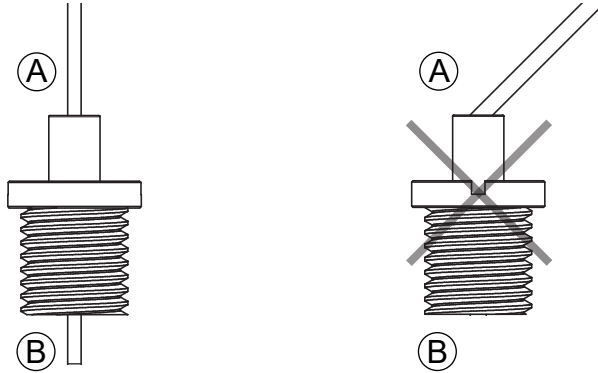
Product testing :

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 full traceability of our products. Each individual batch of products is rigorously tested and supported with multiple checks and

Technical support

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

For safe installation



A. Direction of wire and gripper must be in a straight line (for angled suspension systems, please see page 41, 43, 46 and 47).

B. The wire must be inserted all the way through the gripper and protrude at least 5 mm from the bottom.

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.

How to choose wire

1) What ending do I need?

Check the "Applications" section in this technical manual to see if you find any similarities to the solution you are looking for, or read about the different endings in the "Standard wire endings" section on the next page. If you want a regular ceiling attachment, a stopper is the most common choice. The other end is left free (F) for assembling of gripper.

2) Material and construction?

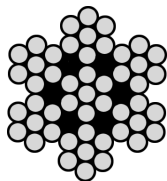
Zinc plated wire is a little harder and can therefore carry a slightly heavier load. S/S wire is commonly used in damp environments. Standard wire construction used is 7x7.

3) Which wire diameter do I need?

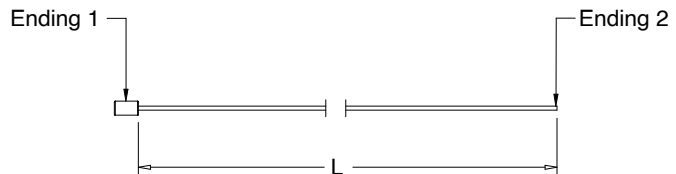
Check the table in "Weight guidelines" on page 6. Look at "Recommended load" and choose the one closest to the weight of your product.

4) What length do I need?

We supply wires in a wide variety of lengths; 500 mm, 1000 mm, 1500 mm, 2000 mm, 3000 mm, but also custom specified. Length is measured from suspension point ("Ending 1" shown below) to the end of the wire ("Ending 2").

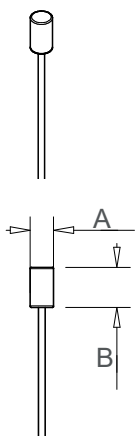


7 x 7 interlaced

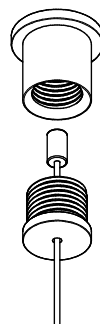


Standard wire endings

Stopper

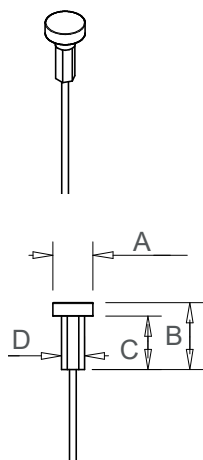


The most commonly used ending for ceiling attachments.

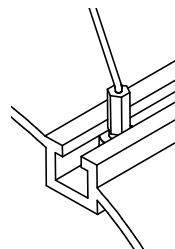


Art. no.	A mm	B mm
T2	Ø3,5	6
T20	Ø4,8	6,3

T- shaped nipples

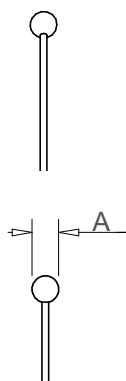


Pressed ending ideally used for profiles.

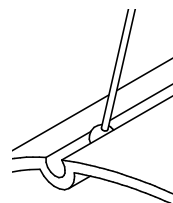


Art. no.	A mm	B mm	C mm	D mm
T3	Ø6	10	8	SW 3
T4	Ø8,5	11	10	SW 3
T5	Ø14	11,5	8,5	Ø5,5
T6	Ø10,5	9	3	Ø3,5

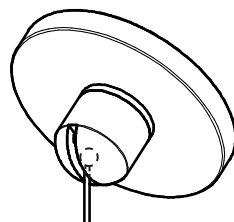
Ball



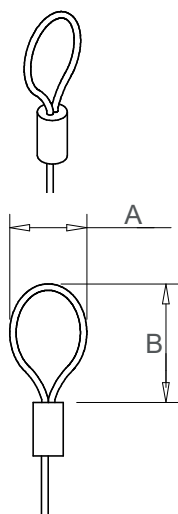
A moulded ball ending is used when suspending from an angled ceiling or when it is important to maintain balance of the load in one point. A moulded ball can also be used in profiles.



Art. no.	A mm
T7D3	Ø3
T7D4	Ø4
T7D5	Ø5
T7	Ø6

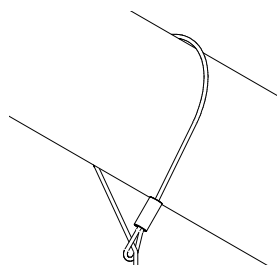


Loop

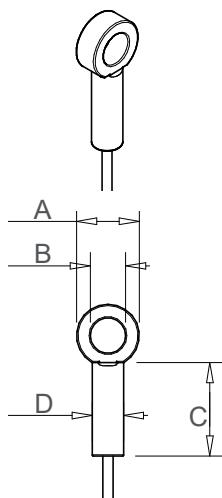


The loop is commonly used when attaching wire to hooks or when suspending from a pipe.

Art. no.	A mm	B mm
T95	12	22



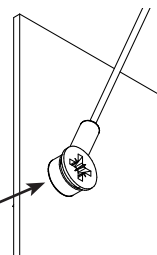
Ø5 Ring



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

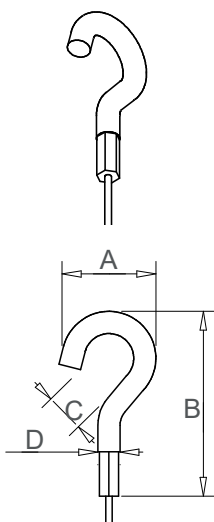
Please note:

Thickness of the moulded ring is 4 mm.

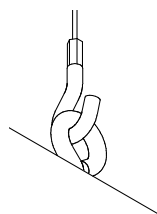


Art. no.	A mm	B mm	C mm	D mm
T12	9	Ø5	13,5	Ø5

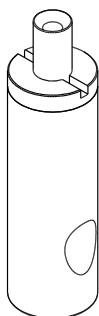
Hook



Hook shaped ending used to attach wire to ring attachments.

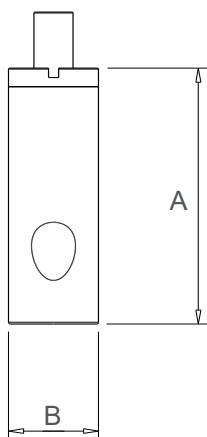


Art. no.	A mm	B mm	C mm	D mm
TJ	15	27	6	Ø3,5



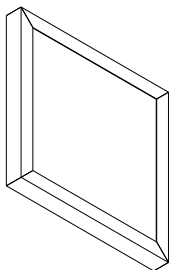
9-38M4 is one of our standard products. This gripper is an ideal choice for installation of practically anything, from luminaries to acoustic panels and signs with a metal frame. As the wire exits from the side it is easy to adjust the height of your suspended object afterwards.

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
9-78MM5L6	41	Ø10	Male M5	1,2-1,5

1 What to install?



2 How to install.



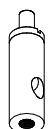
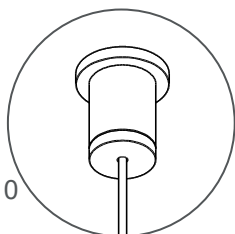
412M8M6BL14



T2F



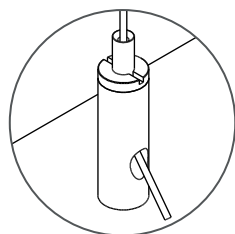
411MM8BL10



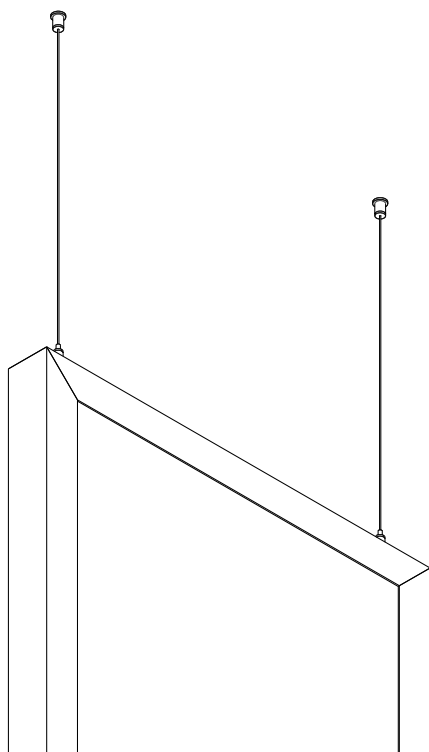
9-38M4



712MM4L6

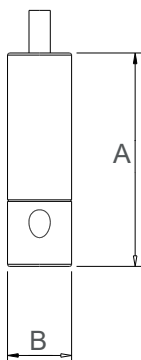


3 The result.



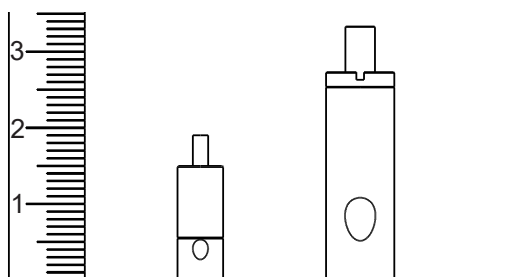


9-08M3 is the smallest gripper in our product range. Often used when suspending luminaries and signs when you do not want the suspension system to steal any attention from the object you are suspending.

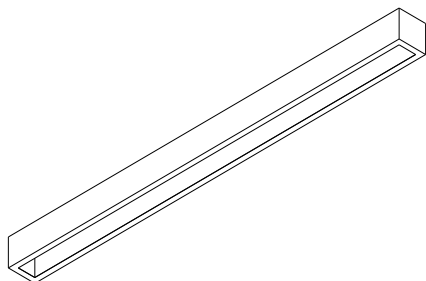


Art. no.	A mm	B mm	Thread	Wire Ø
9-08M3	15	Ø6	M3	0,8-1,0
9-08M4	15	Ø6	M4	0,8-1,0

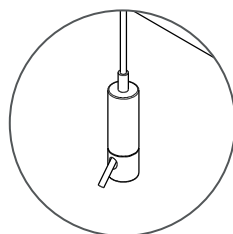
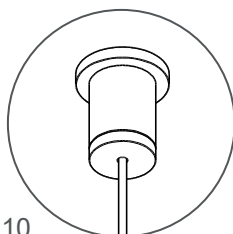
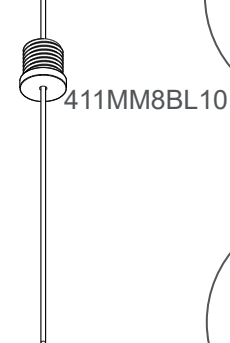
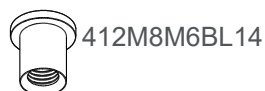
Below you can see the difference in size between 9-08M3 och 9-38M4. The picture is in natural size.



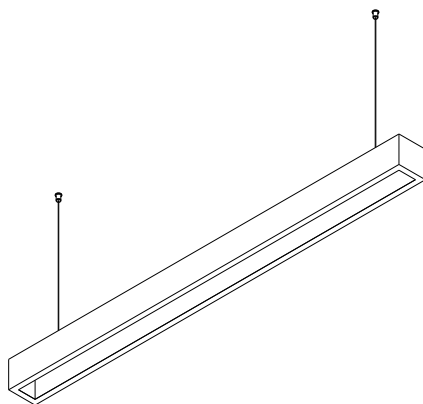
1 What to install?

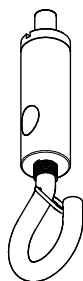


2 How to install.



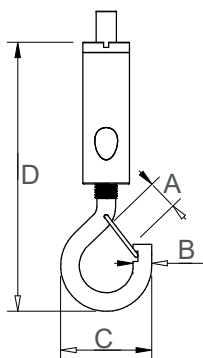
3 The result.



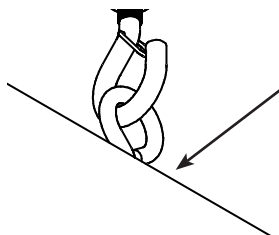


9-38E is a gripper with a snap hook assembled in the bottom. The snap hook provides extra safety compared to ordinary hooks, as the hook stays closed when the installation is complete.

Also ideal to use when the suspended object requires maintenance.



Art. no.	A mm	B mm	C mm	D mm	Wire Ø
9-38E	4,5	Ø3,6	14,5	53	1,0-1,2
9-78E	4,5	Ø3,6	14,5	58	1,5
9-38E2	4,5	Ø3,6	17	57	1,0-1,2
9-78E2	4,5	Ø3,6	17	62	1,5

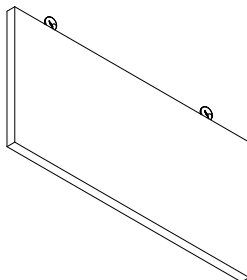


Please note:

The ring of the suspended object used to attach 9-38E or 9-78E cannot be thicker than Ø3 mm. When using 9-38E2 or 9-78E2 the thickness limit is Ø6 mm.

Similar products: 9-39J on page 20.

1 What to install?



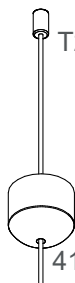
2 How to install.



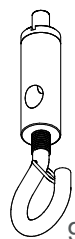
412MM12M5BL9



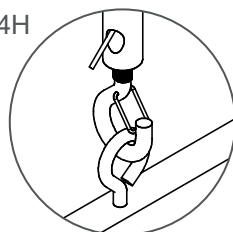
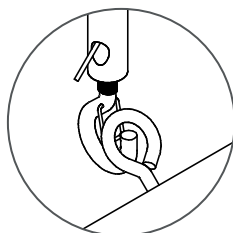
T2F



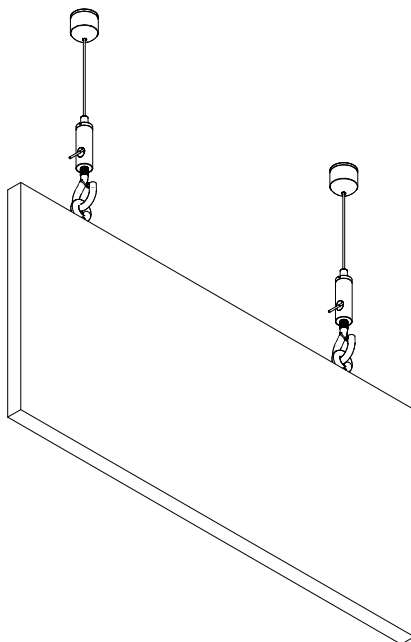
411M12BL14H



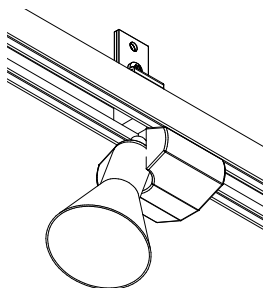
9-38E



3 The result.

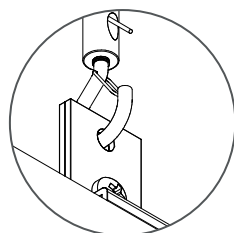
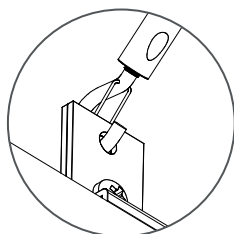


1 What to install?

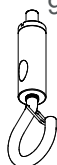


2 How to install.

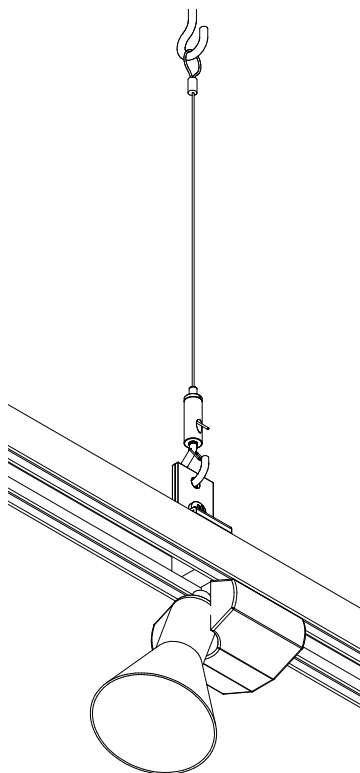
T95F



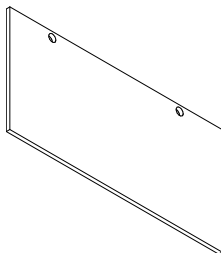
9-38E2



3 The result.



1 What to install?

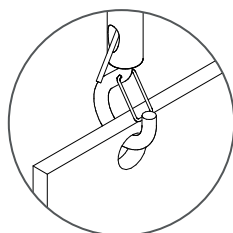
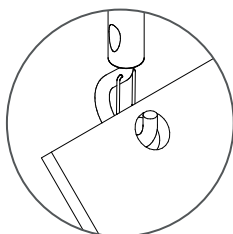
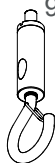


2 How to install.

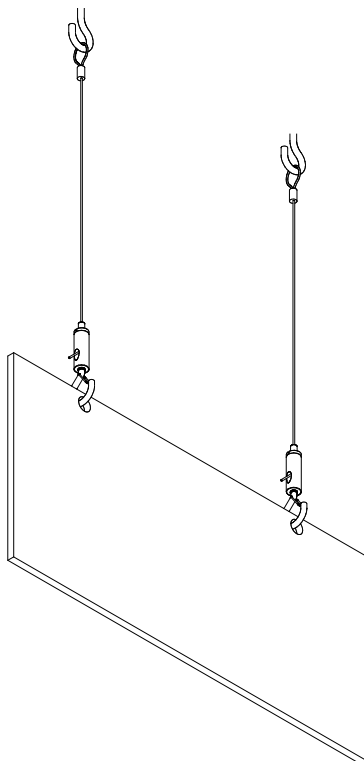
T95F

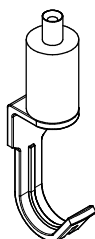


9-38E2

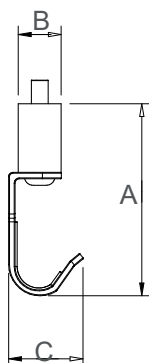


3 The result.

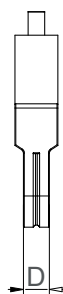




9-39J gives you the swift installation and instant adjustment capabilities of a gripper combined with a simple yet versatile hook.

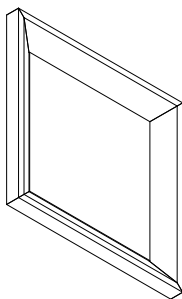


Art. no.	A mm	B mm	C mm	D mm	Wire Ø
9-39J	41	Ø10	15	6	1,0-1,5
9-79J	46	Ø11	15	6	1,8-2,0

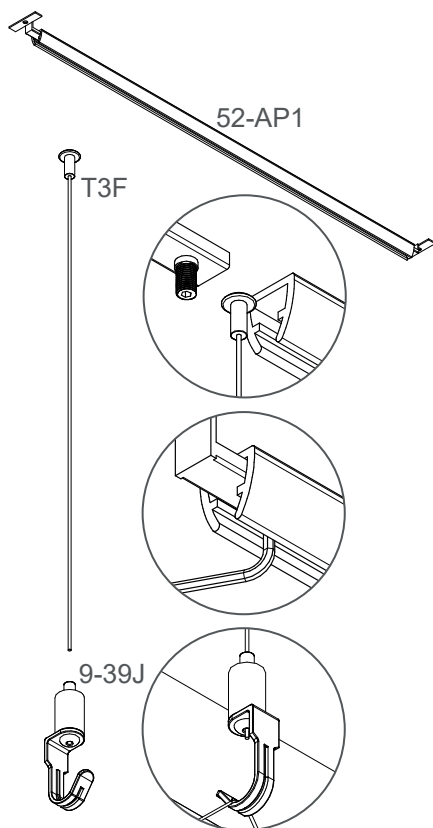


Similar products: 9-38E on page 16.

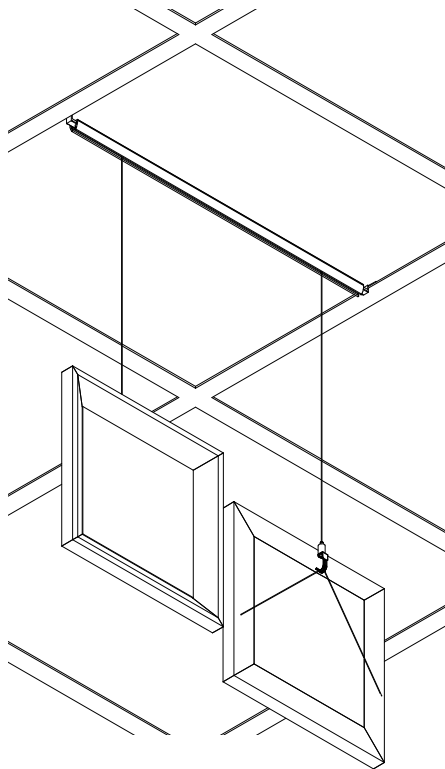
1 What to install?



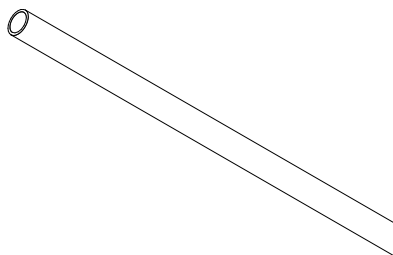
2 How to install.



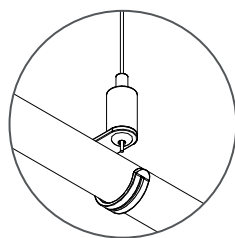
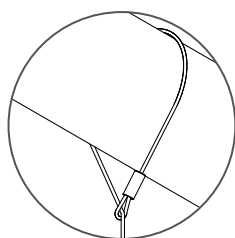
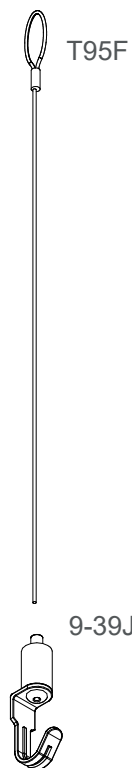
3 The result.



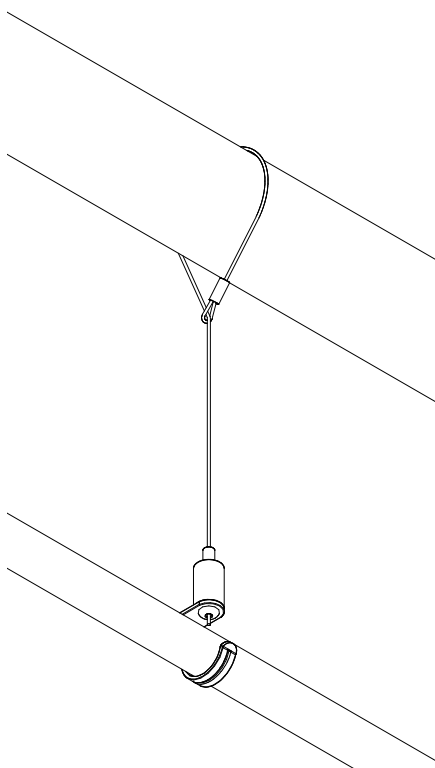
1 What to install?



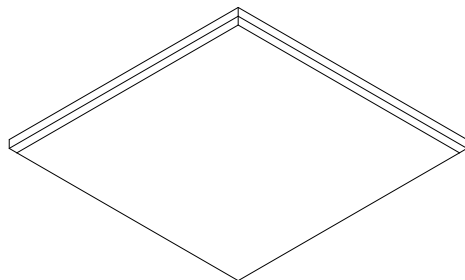
2 How to install.



3 The result.



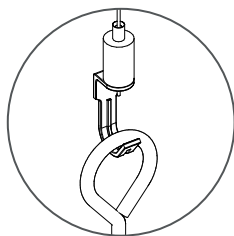
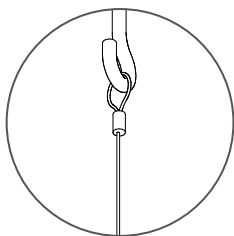
1 What to install?



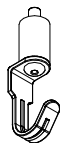
2 How to install.



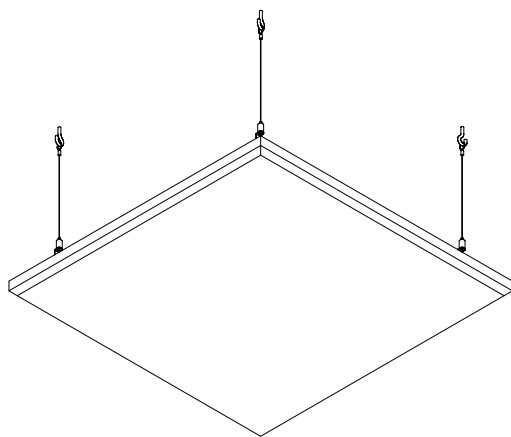
T95F

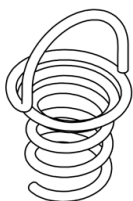


9-39J



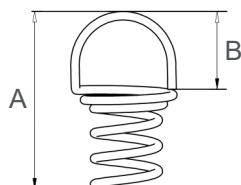
3 The result.



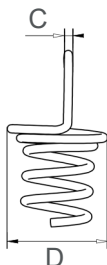


The spiral spring 849-S002 facilitates the installation of hanging acoustic panels made out of porous material. Simply screw in the 849-S002 and you'll have an anchor to attach the rest of the suspension system.

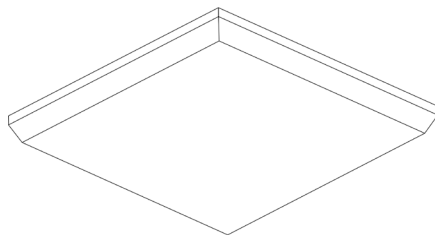
We recommend you to use 849-S002 with 9-38E for a quick and easy installation.



Art. no.	A mm	B mm	C mm	D mm
849-S002	45	15	2	23



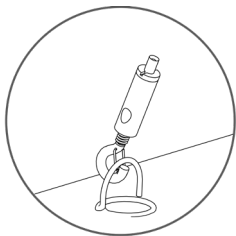
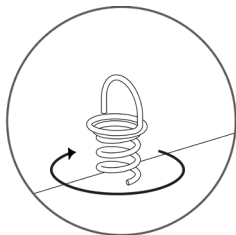
1 What to install?



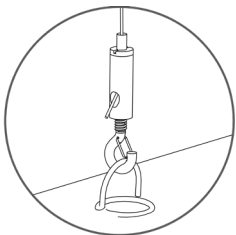
2 How to install.



T95F

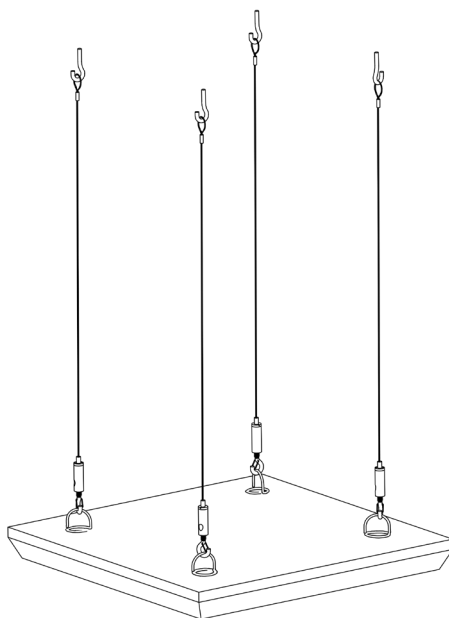


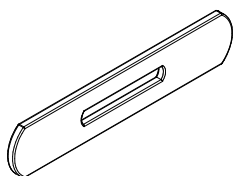
9-38E



849-S002

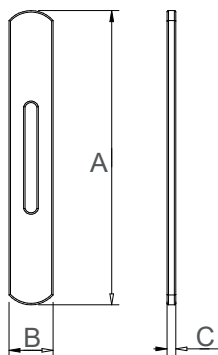
3 The result.



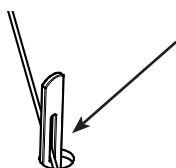


A 4808 is simple to use when attaching wire to a plane surface. Regardless if you want to attach the wire to the ceiling or to your product, a small hole is all that is required to create a suspension system using 4808. It is also commonly used as the attachment of a safety wire when required.

4808 is combined with a wire with T2 ending.



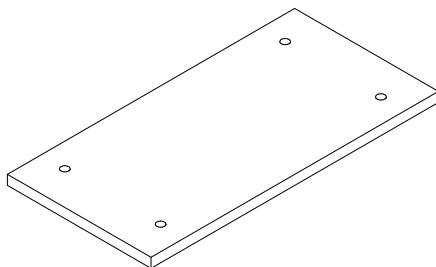
Art. no.	A mm	B mm	C mm	Wire Ø
4808	40	6	1,2	1,0-1,5
4808D2	40	8	1,2	1,8-2,0



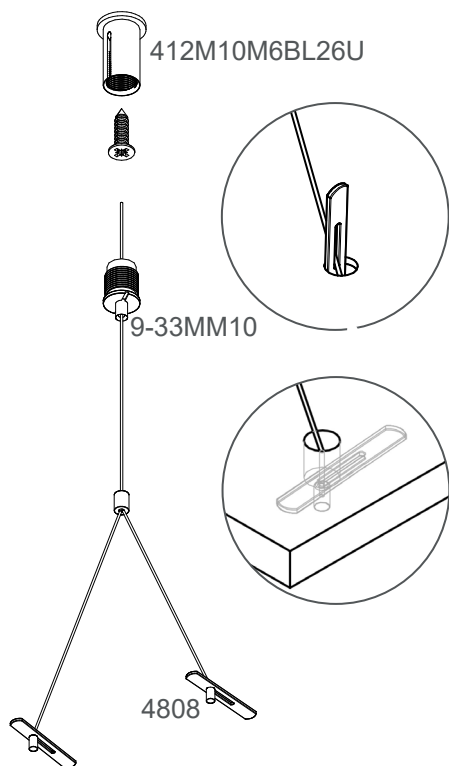
Please note:

The hole of the suspended object must be at least Ø7 mm for the 4808 to go through (or Ø9 mm if using 4808D2).

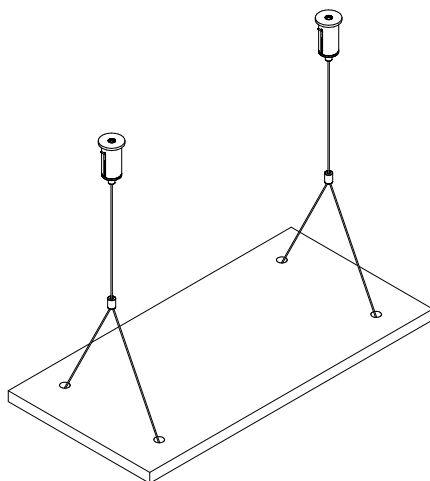
1 What to install?



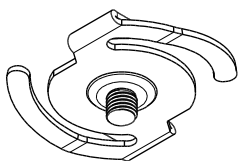
2 How to install.



3 The result.

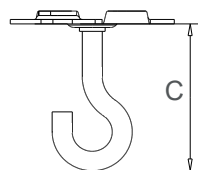
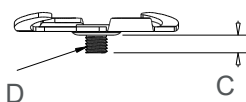
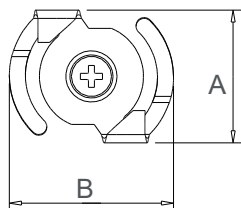


32SM5L5, 32SD4L30J, 32SH

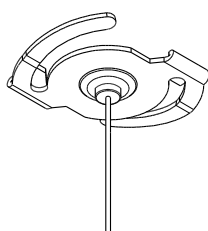


Clips are used when suspending from a suspended ceiling. The clip is attached to the T-bar with a simple move that can be done using only one hand.

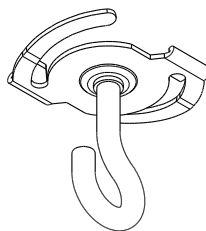
We have clips to fit both T15 and T24 profiles and they are available with different threads and solutions.



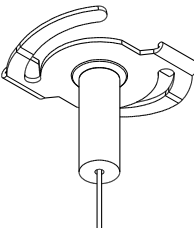
Art. no.	A mm	B mm	C mm	D mm	Profile
32SM5L5	27	41	5	M5	T24
32SM6L7	27	41	7	M6	T24
32SD4L30J	27	41	30	-	T24
32SH	27	41	-	-	T24
31SM5L5	18	41	5	M5	T15
31SM6L7	18	41	7	M6	T15
31SD4L30J	18	41	30	-	T15
31SH	18	41	-	-	T15



32SH and
T33 wire

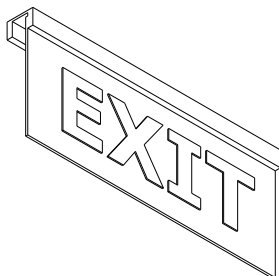
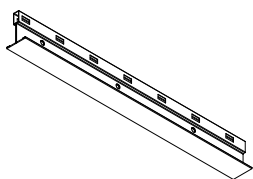


32SD4L30J



32SM5L5 with
412M5D9BL25
and T2 wire

1 What to install?



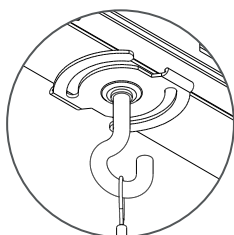
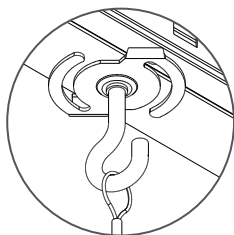
2 How to install.



32SD4L30J



T95F

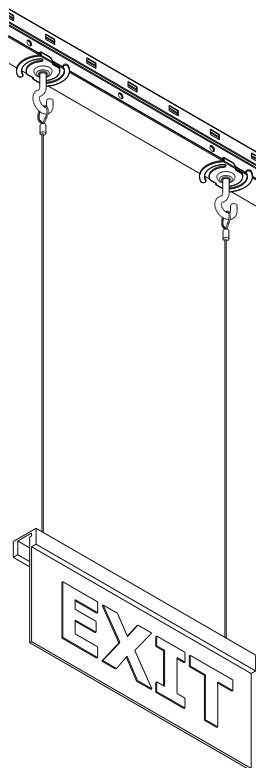


9-33MM10



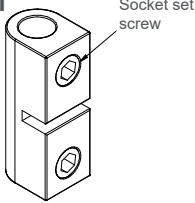
726M10P1

3 The result.

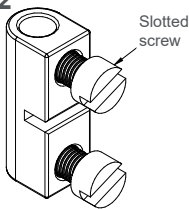


7801 & 7802

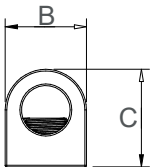
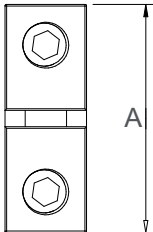
7801



7802



Create loops on wire 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 a bit and fasten the screws.



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



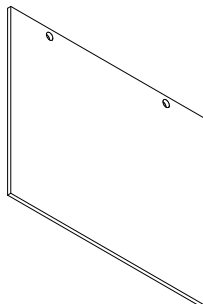
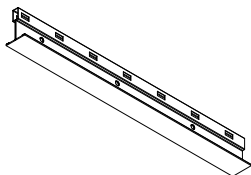
Please note:

Hex key for 7801 provided separately.

Similar products: 9-39UPDNW on page 32.

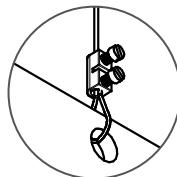
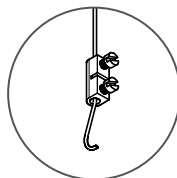
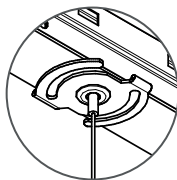
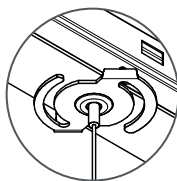
1

What to install?



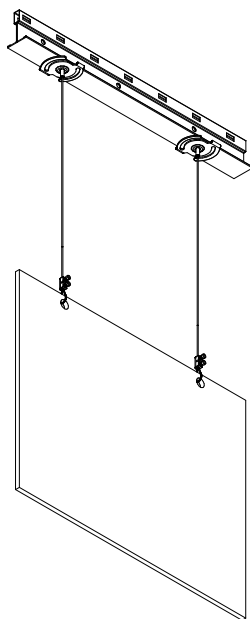
2

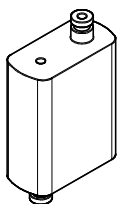
How to install?



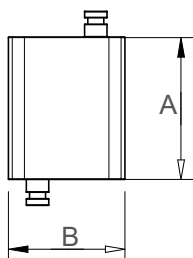
3

The result.

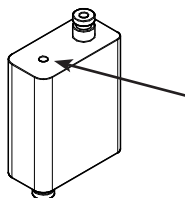




Creating a loop has never been easier or quicker. Just insert the wire through the opening of this elegant little box and you will have a loop within three seconds. And best of all: no tools required at all. Just pull the pin to release the wire.



Art. no.	A mm	B mm	C mm	Wire Ø
9-39UPDNW	22	18	9	1,0-1,5
9-79UPDNW	24	20	12	1,8-2,0

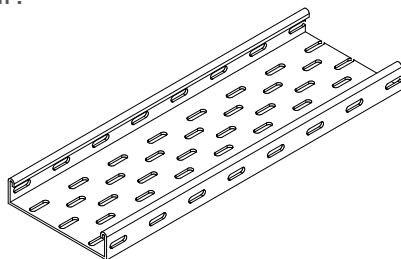


Please note:

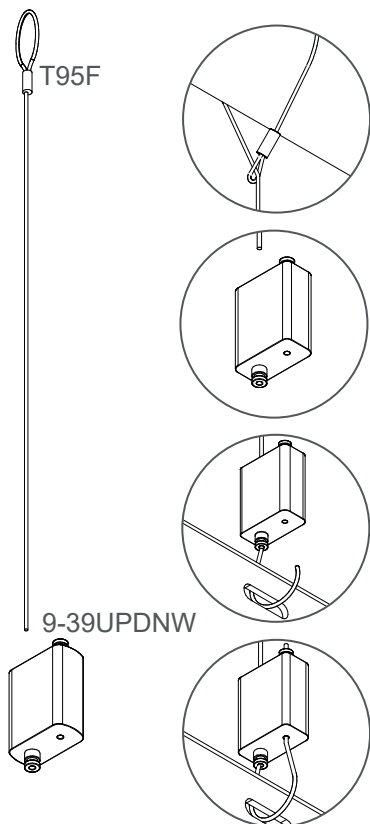
Always insert wire through the hole of 9-39UPDNW. Pull the pin on the opposite side to release wire.

Similar products: 7801 & 7802 on page 30.

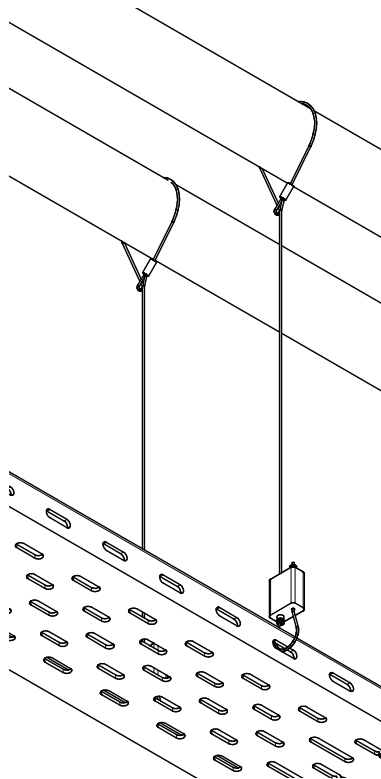
1 What to install?



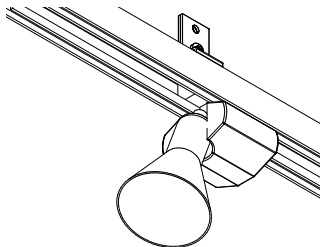
2 How to install.



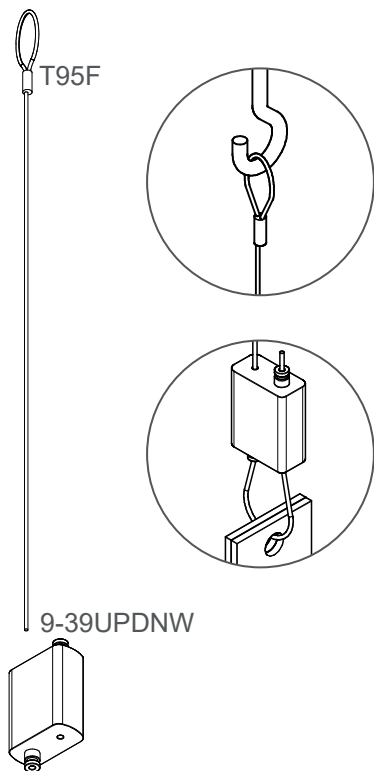
3 The result.



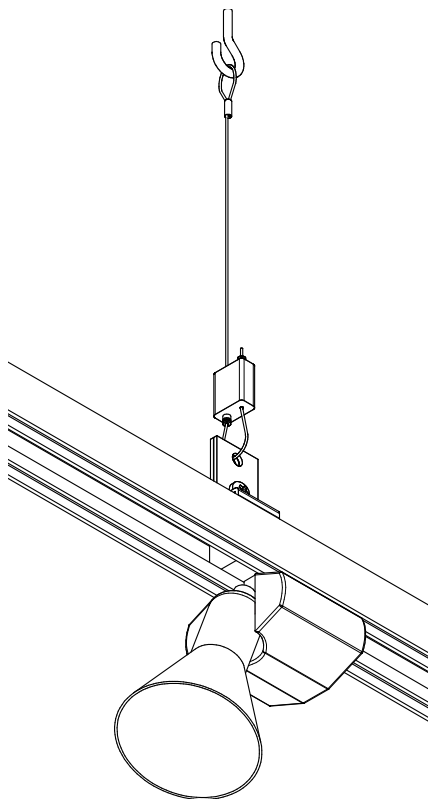
1 What to install?



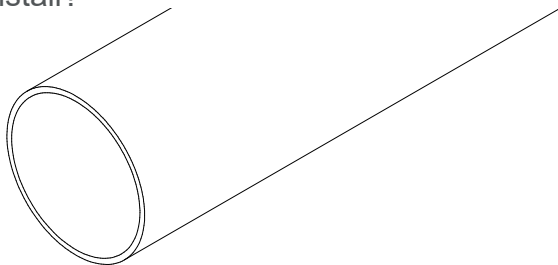
2 How to install.



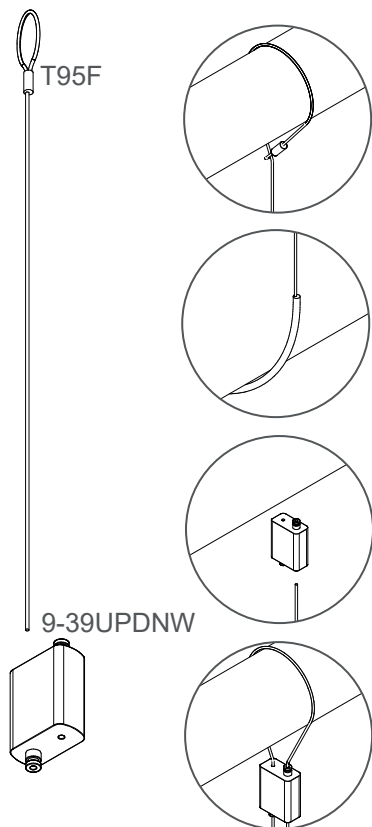
3 The result.



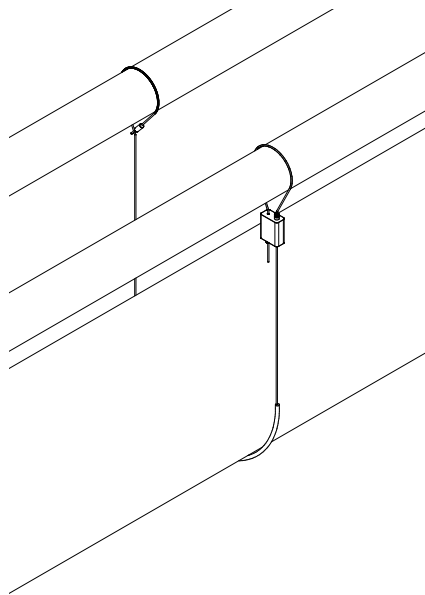
1 What to install?

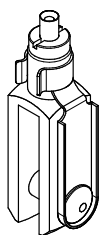


2 How to install.

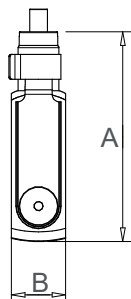


3 The result.

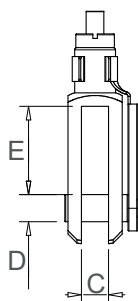




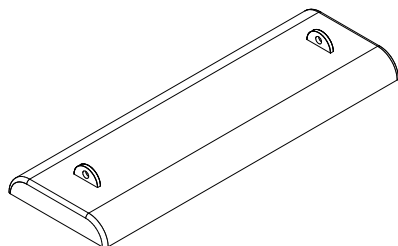
With this special shaped gripper your product is attached to the gripper with a safety spring. The spring guarantees that the gripper is securely attached to the suspended object at all time.



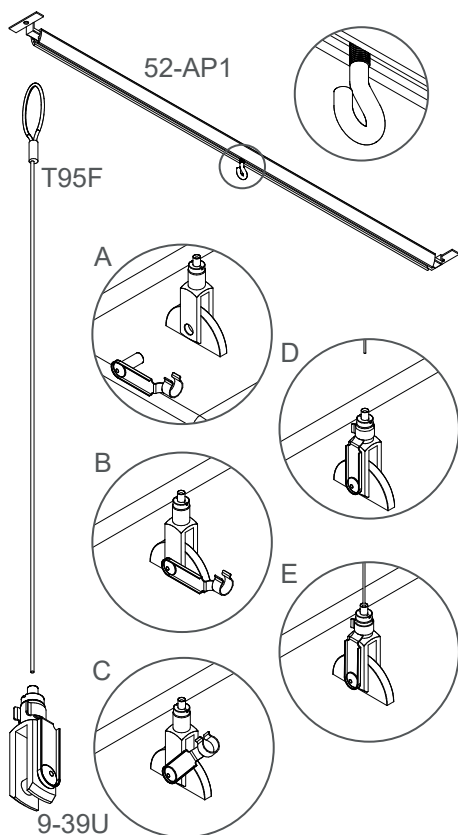
Art. no.	A mm	B mm	C mm	D mm	E mm	Wire Ø
9-39U	46	12	6	Ø6	20,5	1,0-1,5



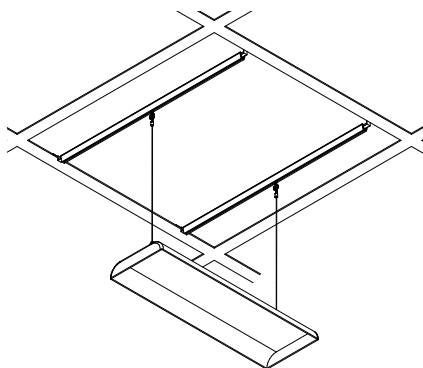
1 What to install?



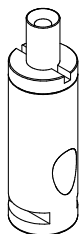
2 How to install?



3 The result.

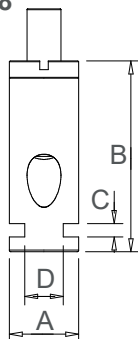


9-18TD8, 9-12T & T6



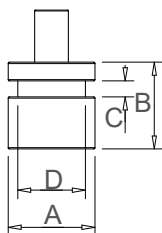
When suspending an object with a track or when suspending from a track, we have a number of different solutions. 9-18TD8 and 9-12T are grippers suitable for insertions inside the track. 9-18TD8 lets the wire exit from the side in case electricity runs inside the track.

9-18TD8

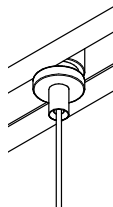


Art. no.	A mm	B mm	C mm	D mm	Wire
9-18TD8	Ø8	21,5	1,5	4,5	1,0-1,5
9-12T	Ø10	10	2	Ø7,5	1,0-1,2
T6	Ø10,5	9	6	Ø3,5	1,0-2,0

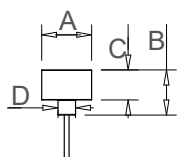
9-12T



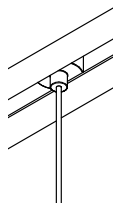
9-12T is smaller than 9-18TD8 and lets the wire go right through the gripper and exit from the bottom.



T6

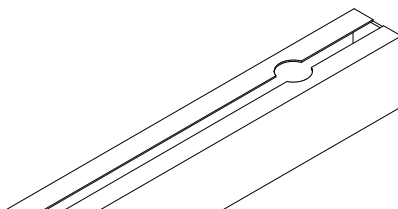


A wire with T6 ending is also suitable for track suspension. Perfect to use if you want to assemble a gripper in the other end.

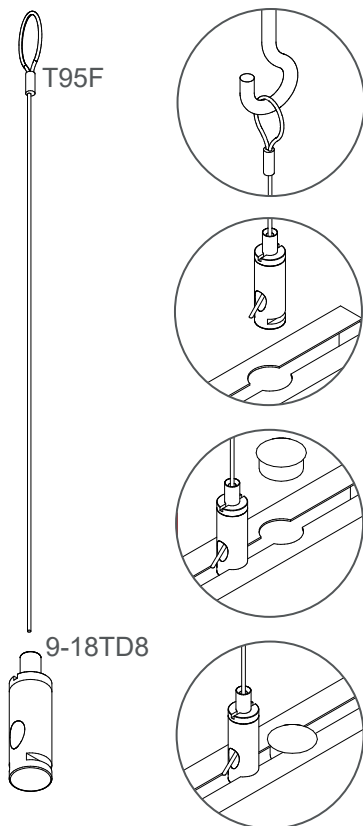


Similar products: 9-78MM13T on page 49.

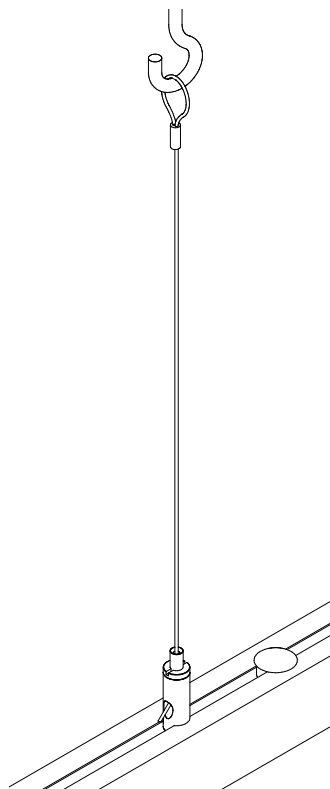
1 What to install?



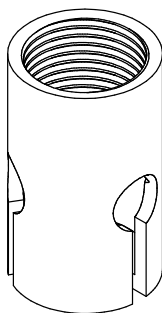
2 How to install.



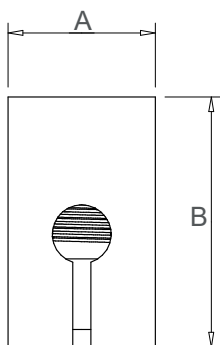
3 The result.



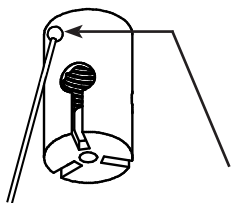
46M13BL26



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	Wire Ø
46M13BL26	15	25,5	M13	1,0-1,5



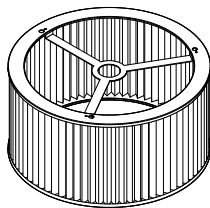
Please note:

Always use 46M13BL26 with 9-73MM13 gripper.

Use T7D3 ending with Ø3 mm ball.

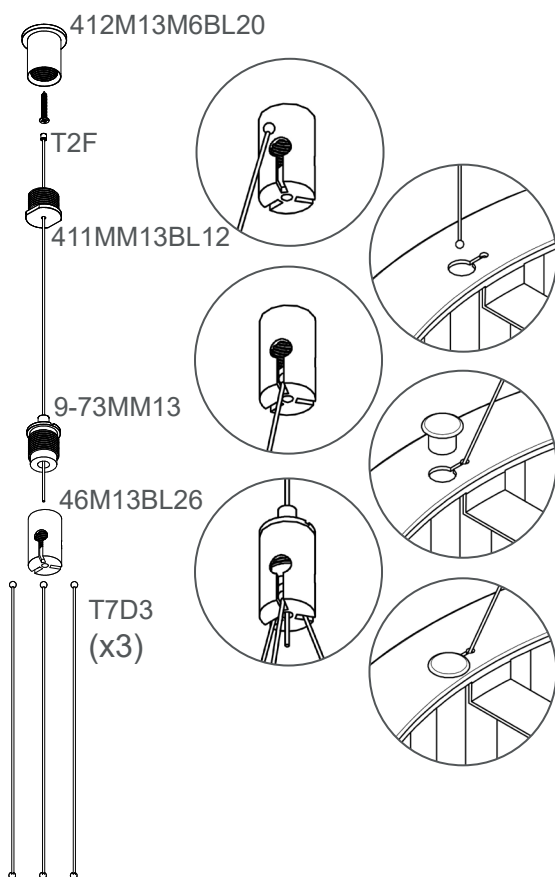
1

What to install?



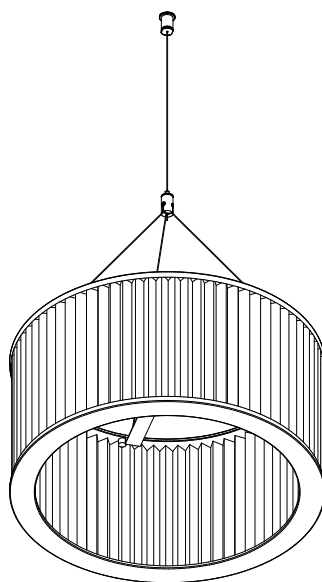
2

How to install.

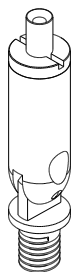


3

The result.

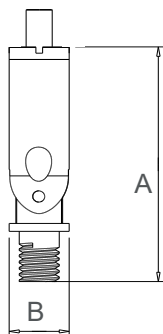


9-38V8MM6L8

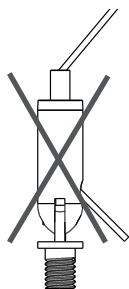


A gripper with joint is used when you need to suspend something from an angled position, or when you want to gather three suspension points of your object in one attachment point in the ceiling - commonly used with round objects.

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

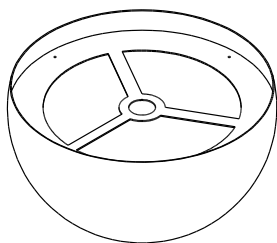


Please note:

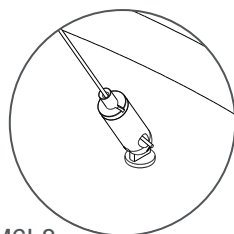
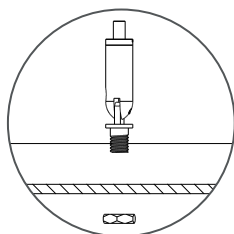
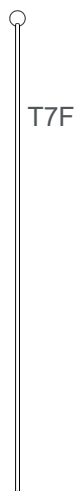
The angle of the wire must be in the same direction as the gripper joint. Otherwise the joint may break.

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.

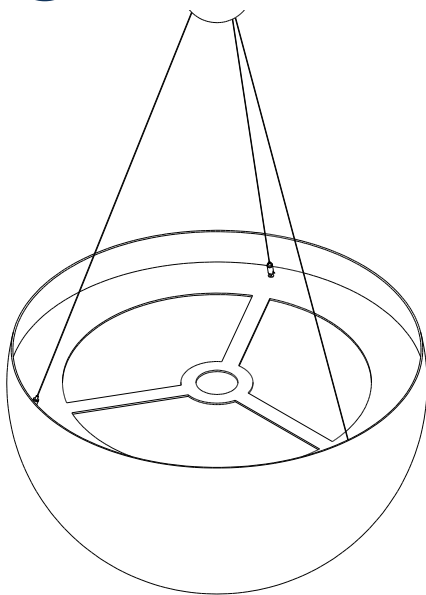


9-38V8MM6L8

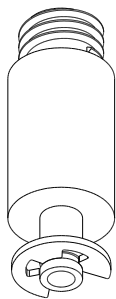


726M6D10

3 The result.

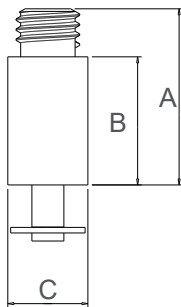


9-39UPDN

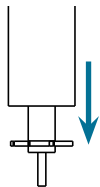


9-39UPDN has a different construction compared to the other grippers, and is used "upside-down". The wire enters through the threaded part and exits from the pin, which you pull to release the wire.

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

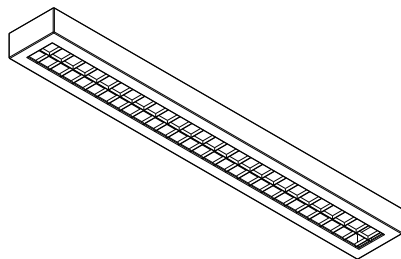


Art. no.	A mm	B mm	C mm	Thread	Wire Ø
9-39UPDN	22	16	Ø10	M8	1,0-1,5
9-39UPDNMM6	22	16	Ø10	M6	1,0-1,5
9-39UPDNMM6LX	28	16	Ø10	M6	1,0-1,5

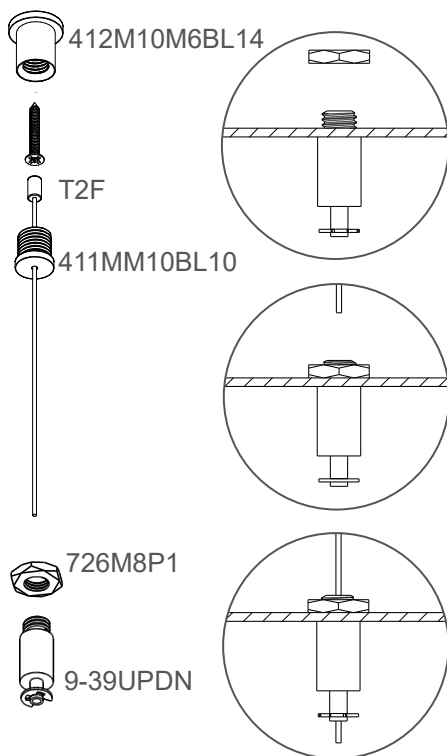


Please note:
To release wire from gripper pull instead of press the pin.

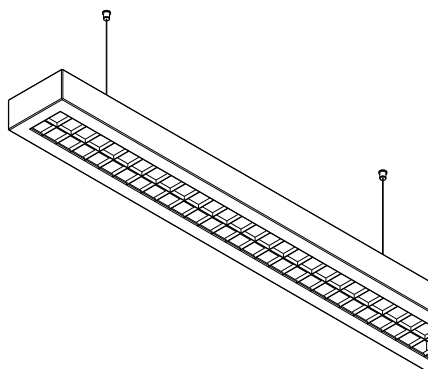
1 What to install?



2 How to install.



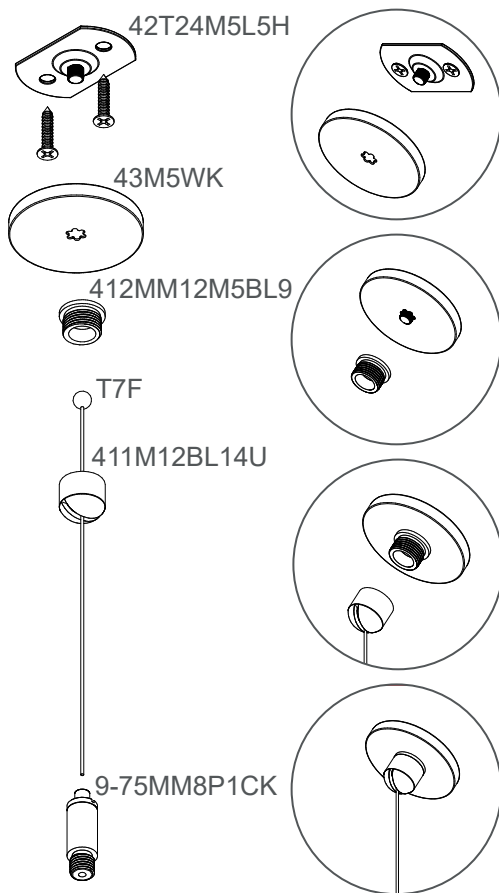
3 The result.



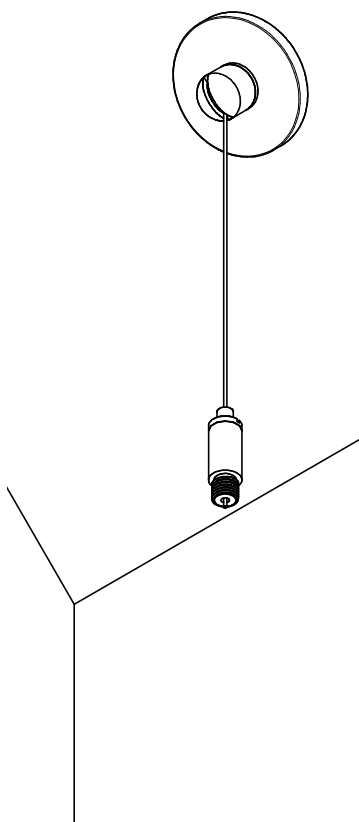
Angled ceilings - attachment

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 T7 ending for applications with an angled suspension point.

1 How to install.



2 The result.

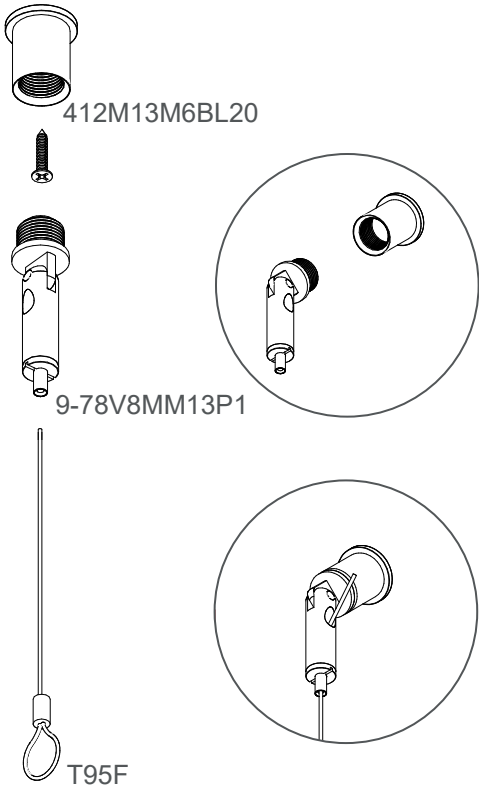


Angled ceilings - gripper

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.

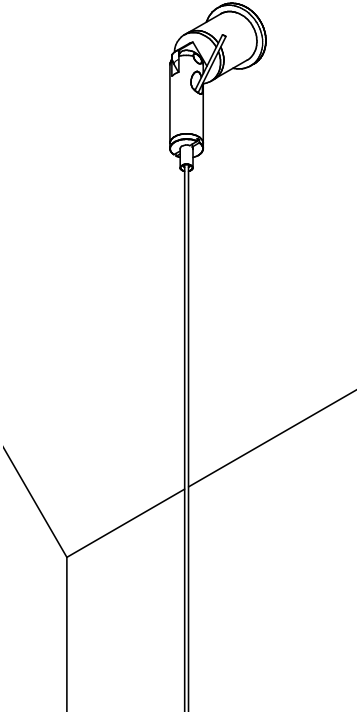
1

How to install.



2

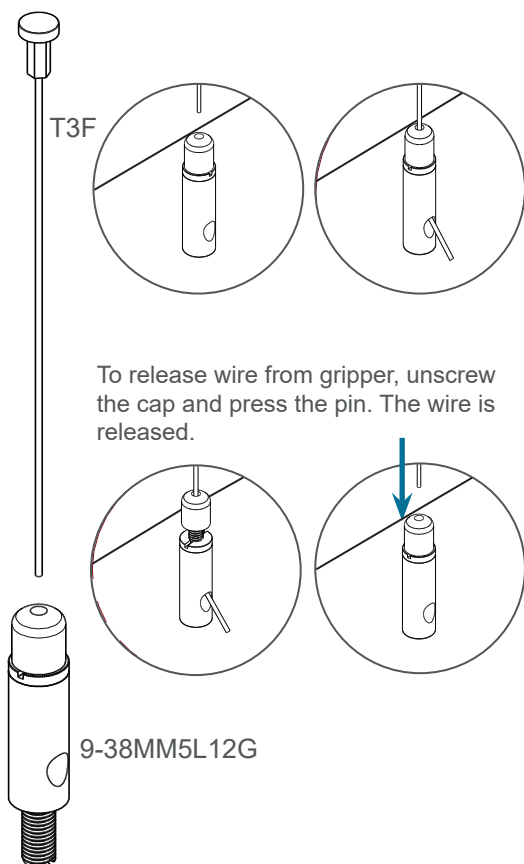
The result.



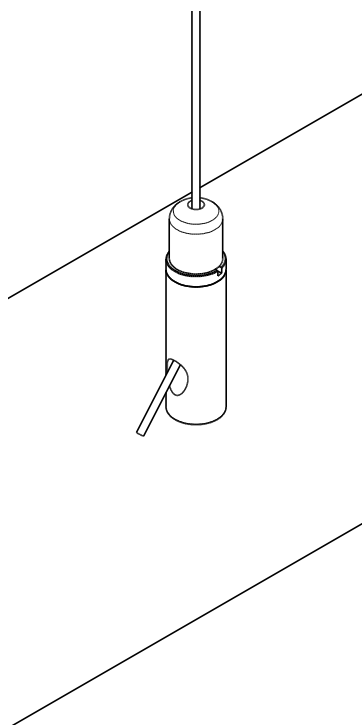
Safety cap

A safety cap prevents the pin from being pressed unintendently. 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.

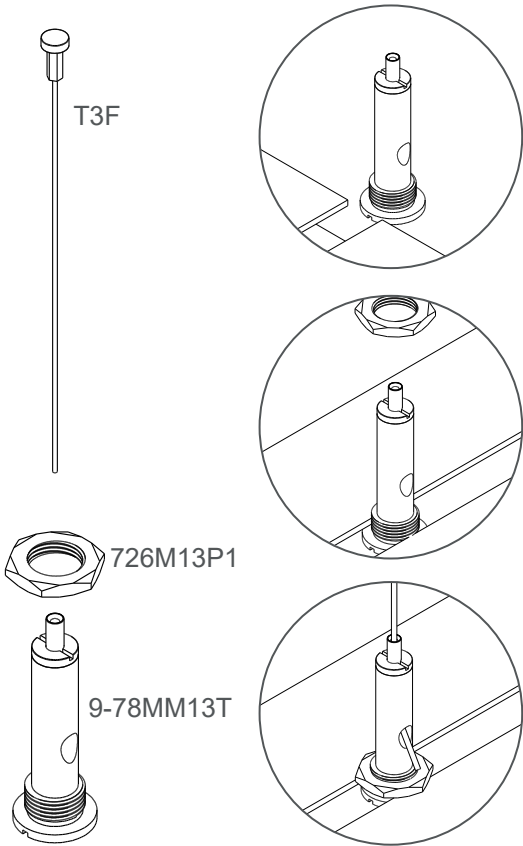


9-78MM13T

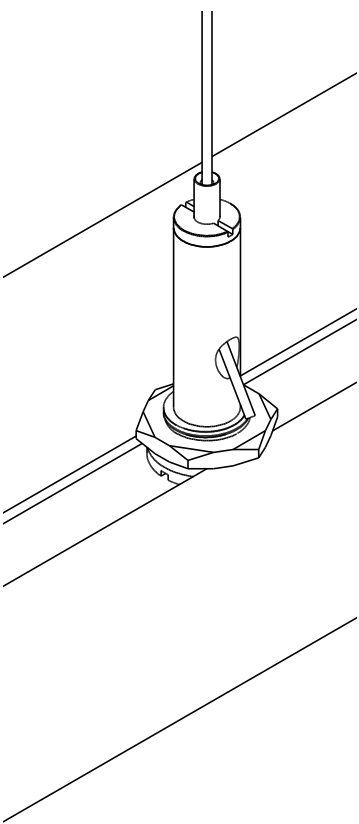
9-78MM13T has an M13 thread above the "hat" in the bottom, which can be used to lock the gripper's position inside a track.

Please note: The M13 thread is pitch 1.

1 How to install.



2 The result.

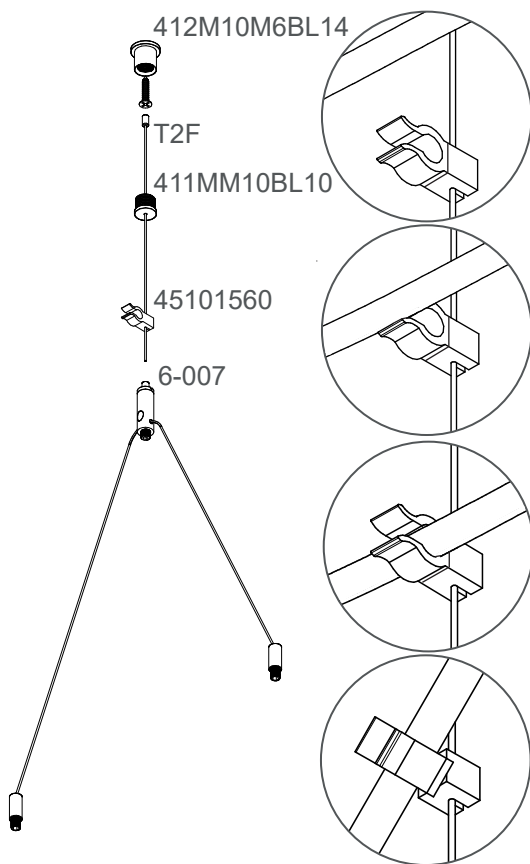


Cable clip

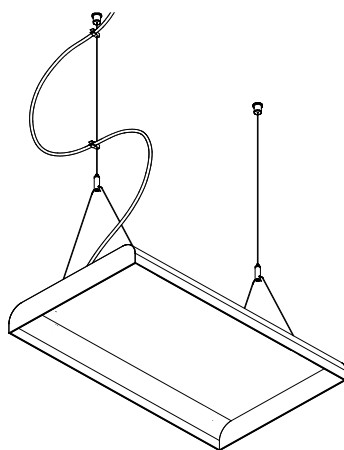
Use a cable clip to attach the power cord to the wire. The cable clip is transparent and rotatable 360°.

Art. no.	Wire Ø
45101560	1,0 - 1,5

1 How to install.



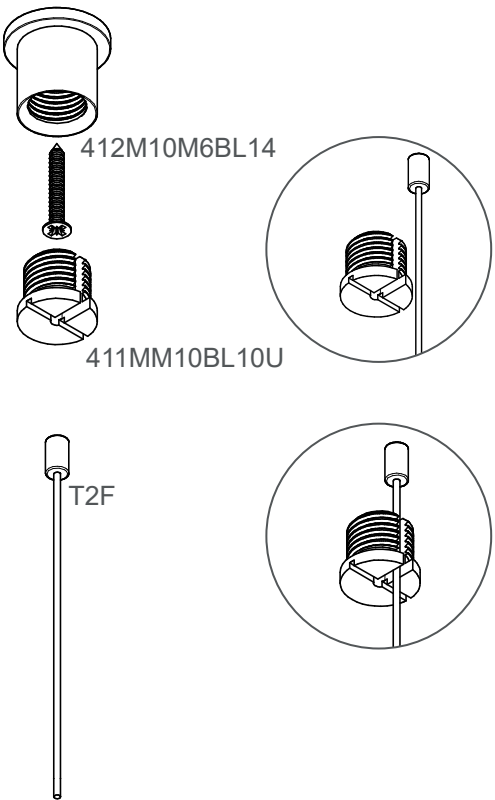
2 The result.



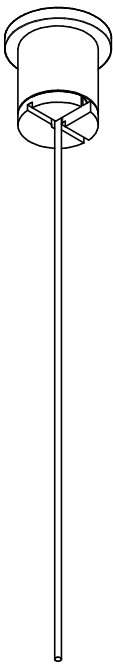
411MM10BL10U

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.

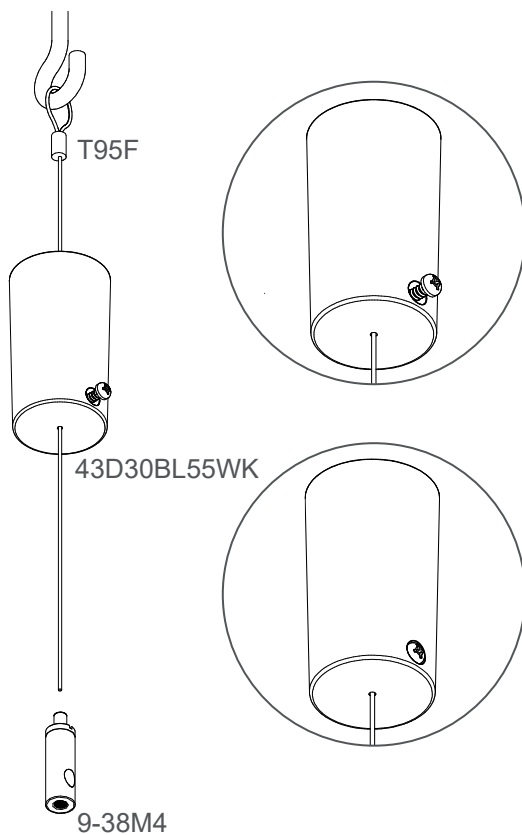


Ceiling cup

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

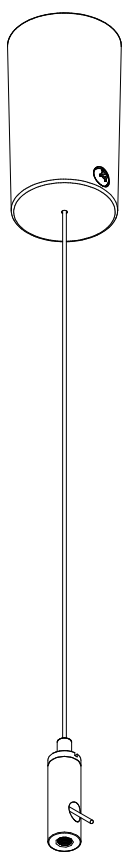
1

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.



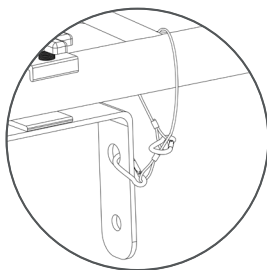
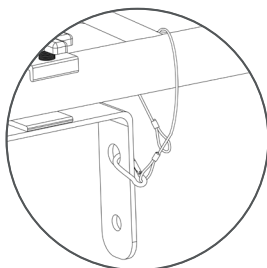
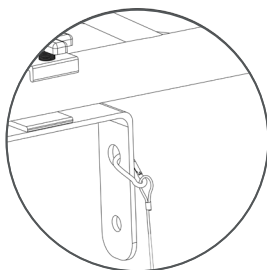
7711



T95W

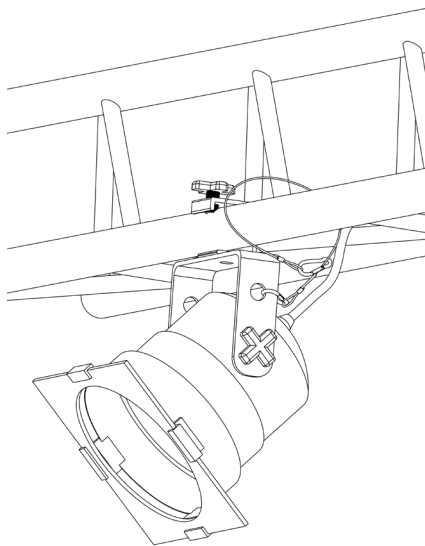


7711



2

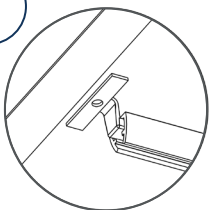
The result.



52-AP1 Installation

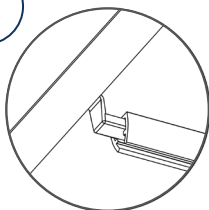
Use carrying rails if you need to create a hanging point anywhere on a suspended ceiling.

1



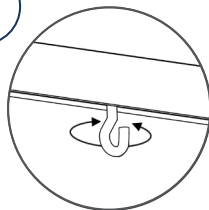
To adjust the Z-clips, loosen the set screw using the included allen key.

2

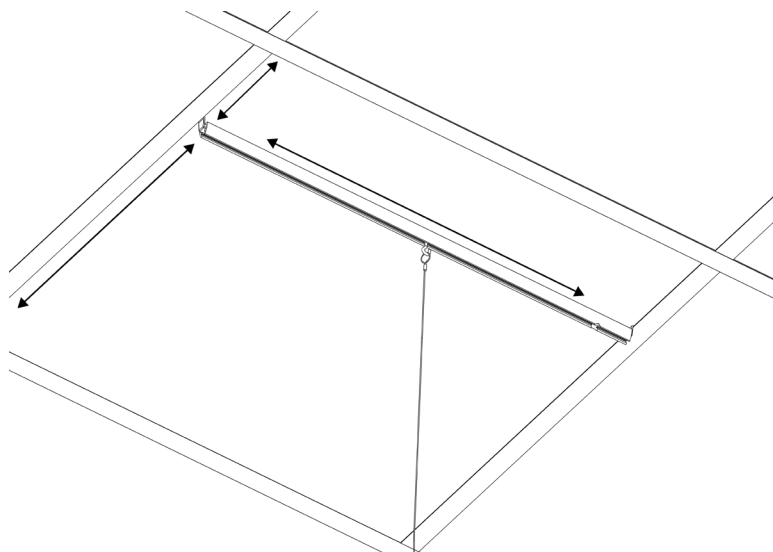


Lock the Z-clips in place by tightening the set screw again.

3



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

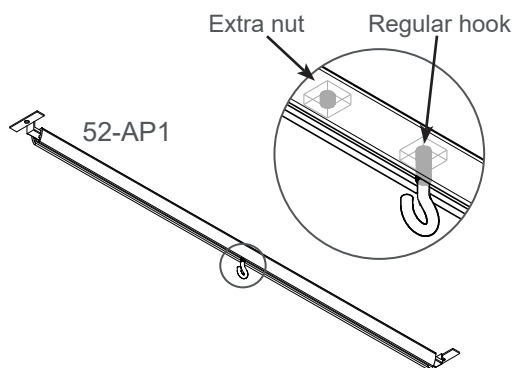


The hanging point is easy to adjust in any direction when using carrying rails.

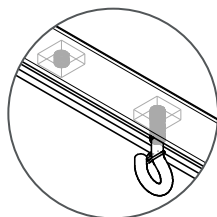
52-AP1 & 717M4D

Using a 717M4D 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 common hook with 717M4D. All 52-AP1 contains two profiles which are supplied with an extra nut inside.

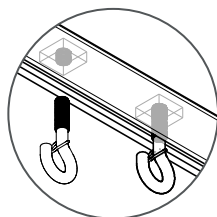
1 How to install.



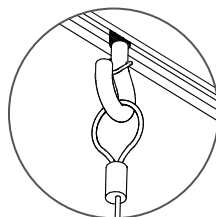
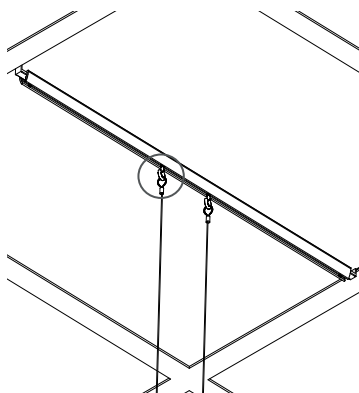
Replace regular hook with 717M4D.



Assemble 717M4D to extra nut.



2 The result.



ALEMTEK

Emmabodavägen 4
382 45 Nybro
SWEDEN

Tel: +46 (0)481-69660

info@alemtek.com
www.alemtek.com