5.1

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

SBcert ISO 9001 SWEDAC ACKREDITERING Ackred. nr. 10127 Certifiering av ledningssystem ISO/IEC 17021-1

SBcert ISO 14001 SWEDAC ACKREDITERING Ackred. nr. 10127 Certifiering av ledningssystem ISO/IEC 17021-1

Emmabodavägen 4, 382 45, Nybro, Sweden +46 (0)481-696 60 info@alemtek.com

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Introduction

Attachment

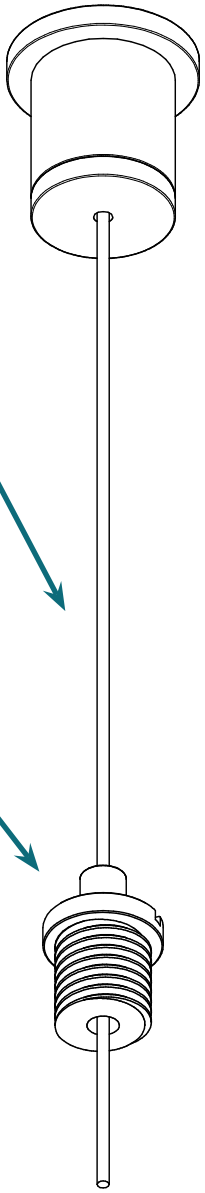
A fixed point attached to ceilings, walls, floors, or products by screws to enable wire suspension. Most often an attachment to the ceiling is used.

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

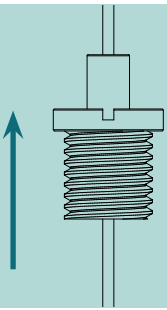
Grippers are using a quick-lock mechanism that allows for tool-free height adjustments along the wire. Connect the gripper to your product by selecting a suitable attachment.



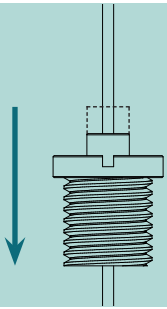
How to use grippers

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 and limitations

Weight guidelines

Wire diameter

Indicates the thickness of the steel wire.

Working load limit

Each value shows 1/5 of the minimum break load and are for guidelines only. The working coefficient of wire and gripper combinations is set to 5 to guarantee an adequate level of safety. This value should be a bit higher than the total weight of your product in a static position.

Minimum break load

The minimum load at which the wire and gripper combination will break.

Wire diameter	Working load limit	Minimum break load
Ø 0.8 mm	5 kg	25 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

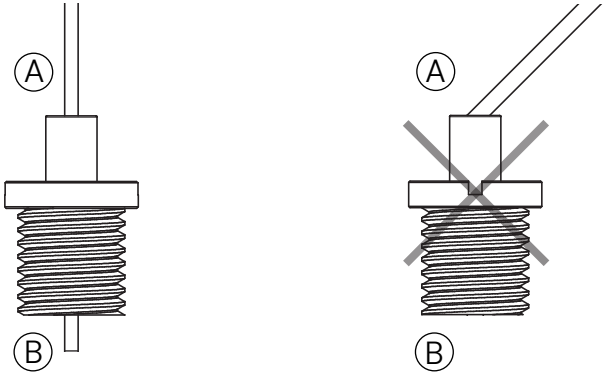
The table above shows results using stainless steel wire together with a suitable Alemtek gripper. Please note that improper installation, incorrect component choices, or mixing Alemtek products with other brands may lead to unreliable results.

Product testing and support

All tests are carried out with original Alemtek products, and we can provide tensile test reports from our own facilities or from independent third parties. Every product batch is fully traceable, rigorously tested, and verified with multiple checks and certifications throughout the manufacturing process.

For guidance, our technicians are available to offer expert advice and support when using Alemtek suspension systems.

Safety information



A The wire angle from the vertical axis of the gripper must not exceed 5°. (For angled suspension systems, see pages 41, 43, 46, and 47.)

B Under load, the wire must extend at least 25 mm beyond the gripper exit.

Caution

Our highest priority is safety, and our team is ready to assist you with any questions or uncertainties. Please don't hesitate to contact us. It is important to thoroughly review and understand safety information on our website before using the suspension systems.

Wire types and endings

How to choose wire

Wire ending

Refer to the *Applications* section (pages 12–45) or the *Standard wire endings* section (pages 9–11) to identify the option that best fits your solution. When using a ceiling attachment, a wire stopper is the most common choice. The other end of the wire remains free for assembly with a gripper.

Wire material and construction

- **Stainless steel wire:** Cost-effective, highly durable, corrosion-resistant, strong, and smooth to handle.
- **Galvanized steel wire:** Lower cost and able to withstand higher loads before breaking.

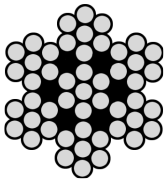
For use with a gripper, the steel wire construction must be 7x7.

Wire diameter

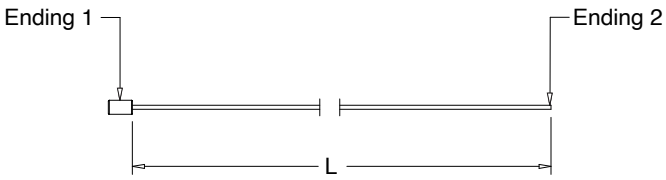
See the *Weight guidelines* (page 6). The working load limit should always be slightly higher than the total static weight of your product.

Wire length

Standard lengths are 1 500 mm, 3 000 mm, and 5 000 mm, but custom lengths are also available. Wire length ("L") is measured from the suspension point of Ending 1 to the free end of Ending 2.

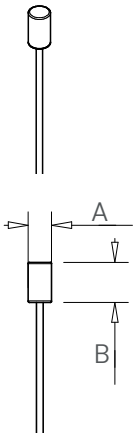


7 x 7 construction

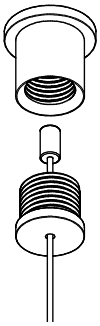


Standard wire endings

Stopper



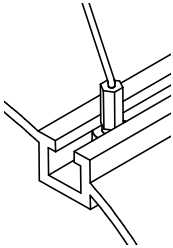
The most commonly used ending for ceiling attachments.

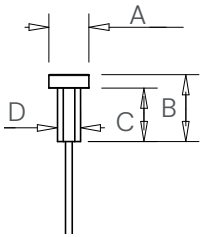


Art. no.	A mm	B mm
T2	Ø3.5	6
T20	Ø4.8	6.3

T-shaped

Designed for secure installation in profiles or tracks.

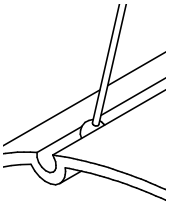


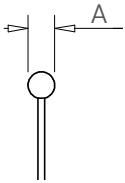


Art. no.	A mm	B mm	C mm	D mm
T3	Ø6	10	8	SW 3
T4	Ø8.5	11	9	SW 3
T5	Ø14	11.5	8.5	Ø5.5

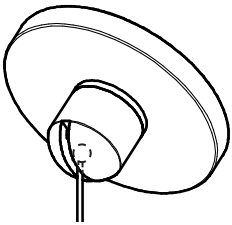
Ball

Ideal for suspending from angled ceilings or walls. Can also be used in profiles or tracks.



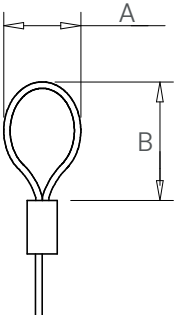


Art. no.	A mm
T7D4	Ø4
T7D5	Ø5
T7	Ø6

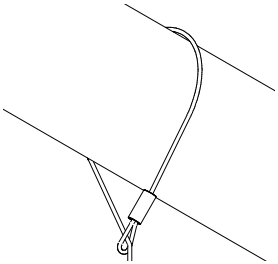


Loop

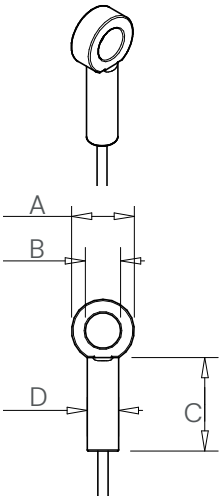
Commonly used to attach wire to hooks or for suspension from pipes.



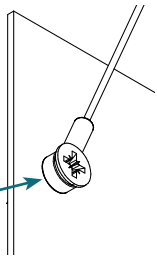
Art. no.	A mm	B mm
T95	12	22



Ring



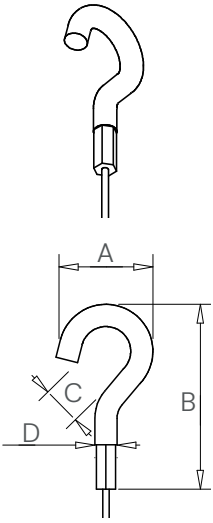
Features a hole diameter suitable for fastening with an M5 screw.



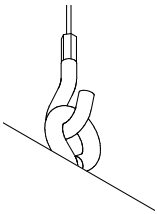
Note:
The moulded ring has a thickness of 4 mm.

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

Hook



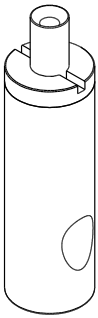
Shaped for easy attachment to ring fittings.



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

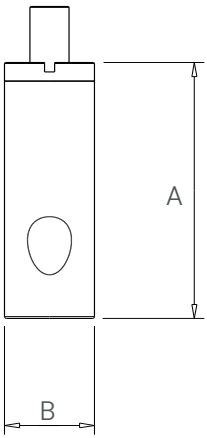
Applications

Classic grippers



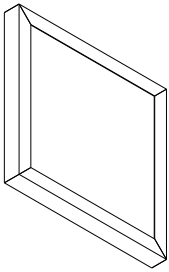
Our standard grippers, designed for versatile use. An excellent choice for suspending a wide range of products, from luminaires to acoustic panels and signs. With the side-exit wire design, adjusting the height of your suspended object is quick and simple.

These grippers are available in multiple sizes and with both male and female thread options, offering flexibility for different installation needs.



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
9-78MM6L10	45	Ø10	Male M6	1.2-1.5

1 What to install?



2 How to install.

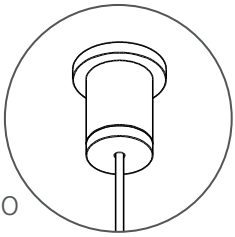
412M8M6BL14

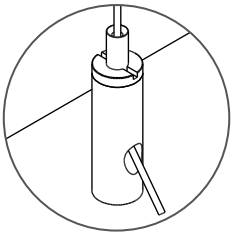
T2

411MM8BL10

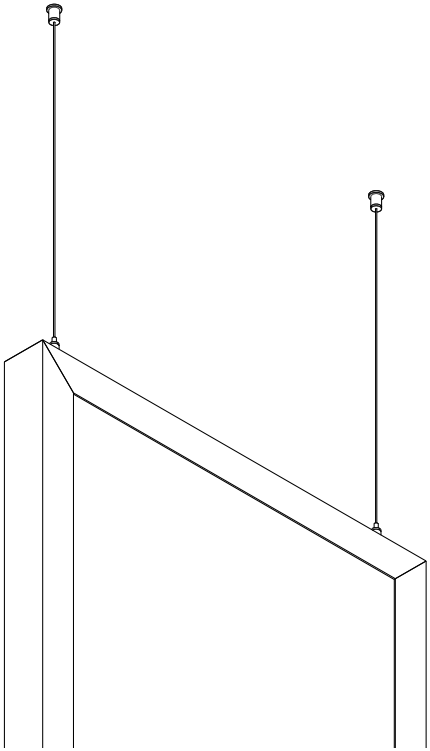
9-38M4

712MM4L8



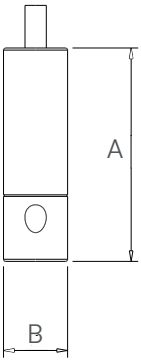


3 The result.



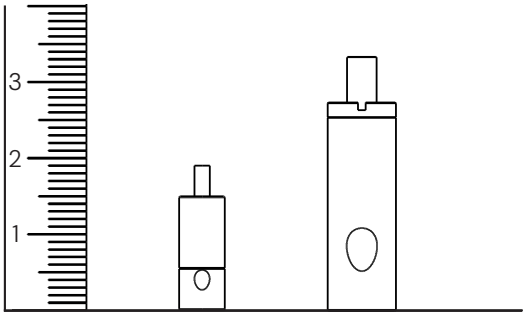
Classic micro grippers

The smallest grippers in our product range with a side-exit wire design. It is often used for suspending luminaires and signs where you want the suspension system to remain discreet and not draw attention away from the object itself.

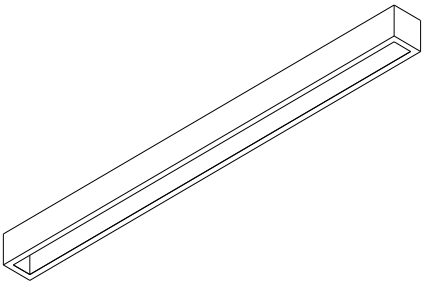


Art. no.	A mm	B mm	Thread	Wire Ø
9-08M3	15	Ø6	M3	0.8-1.0
9-08M4	15	Ø6	M4	0.8-1.0

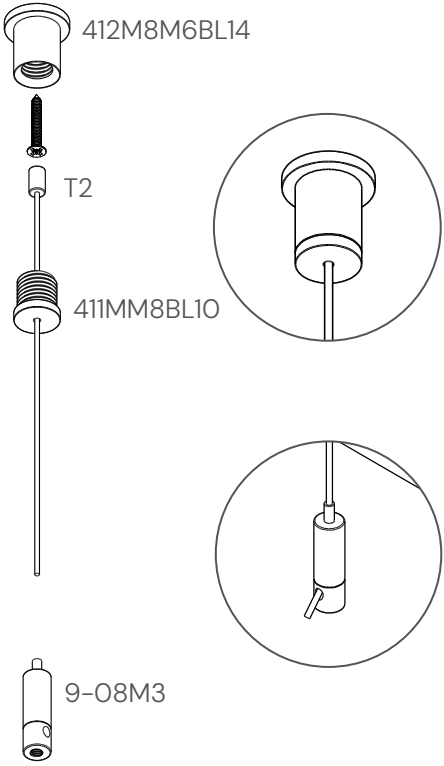
Below, you can see the size comparison between the classic micro grippers and the larger classic grippers. The picture is shown in actual size.



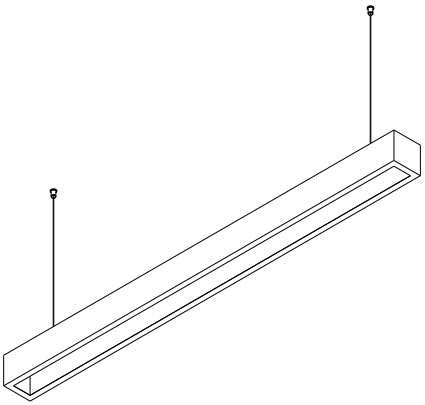
1 What to install?



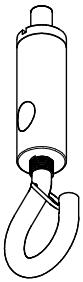
2 How to install.



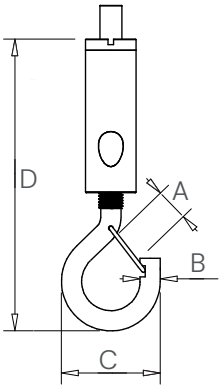
3 The result.



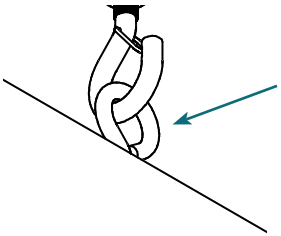
Special gripper



A gripper equipped with a snap hook at the bottom. Unlike ordinary hooks, the snap hook locks in place once installed, ensuring extra safety and security. It is ideal for hanging signs, lighting, acoustics, and other suspended elements.



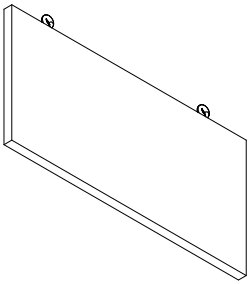
Art. no.	A mm	B mm	C mm	D mm	Wire Ø
9-38E	6.5	Ø4.0	18	55	1.0-1.2
9-78E	6.5	Ø4.0	18	63	1.2-1.5



Note:
When using either article 9-38E or 9-78E, the attachment ring of the suspended object must not exceed a thickness of Ø5 mm.

Similar products: 9-39J on page 20.

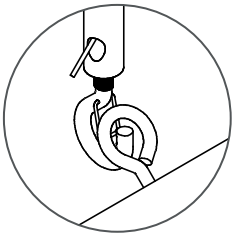
1 What to install?

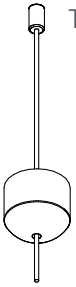


2 How to install.

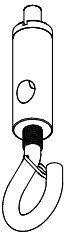
412MM12M5BL9

T2



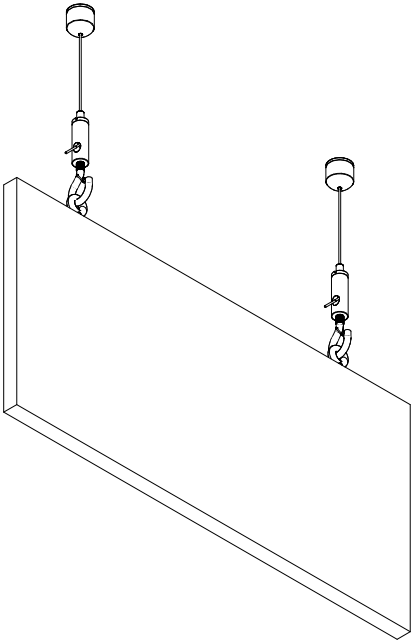


411M12BL14H



9-38E

3 The result.



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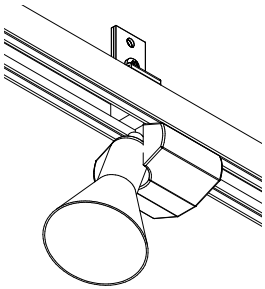
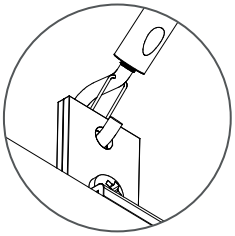
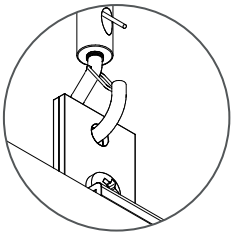


2 How to install.

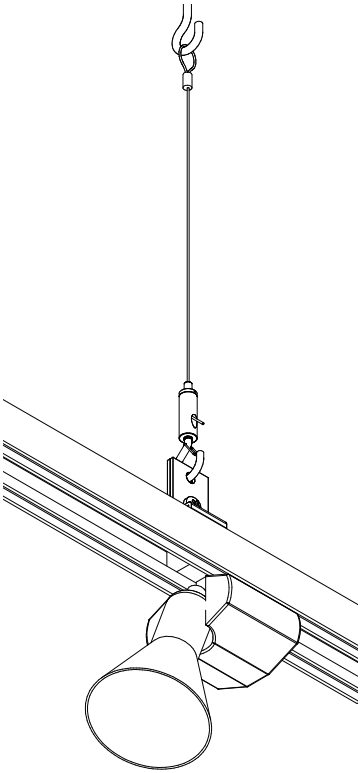
T95





9-38E

3 The result.



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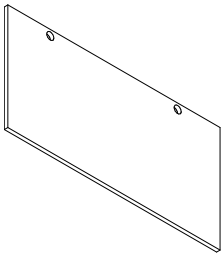
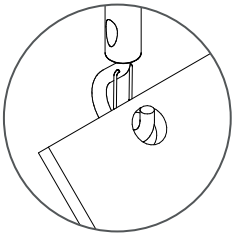
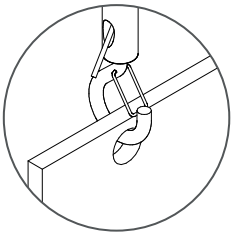


2 How to install.

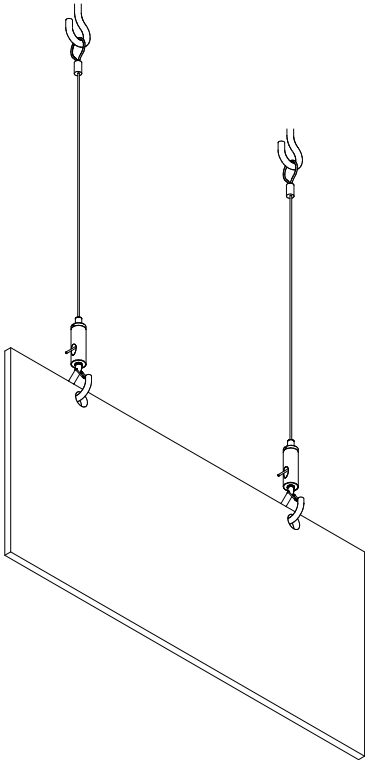
T95



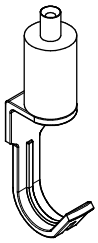


9-38E

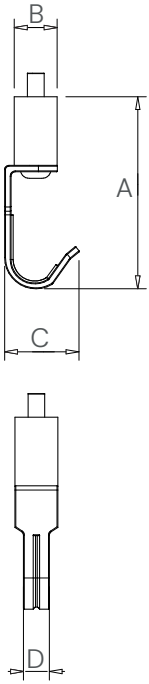
3 The result.



Special gripper



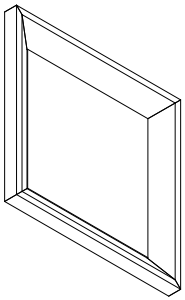
This hook gripper is designed for quick and easy suspension, ideal for hanging artwork, framed pieces, and decorative items in galleries, exhibitions, or residential settings. Featuring surface knurls, it offers a textured appearance that enhances its visual appeal.



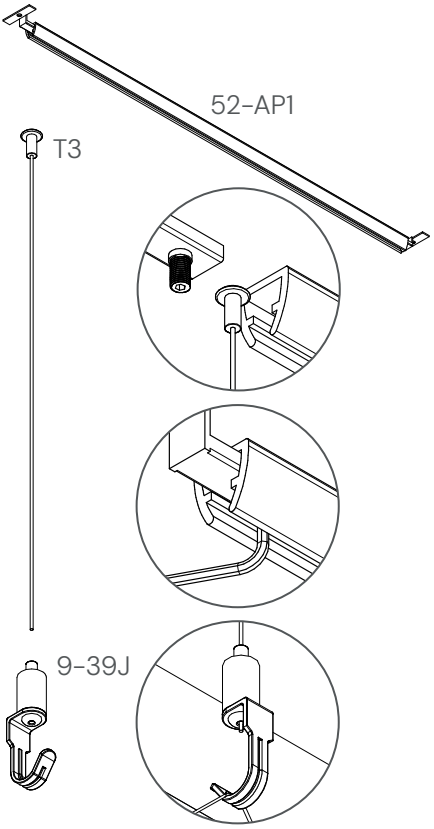
Art. no.	A mm	B mm	C mm	D mm	Wire Ø
9-39J	42	Ø10	13	6.1	1.0-1.8

Similar product: 9-38E on page 16.

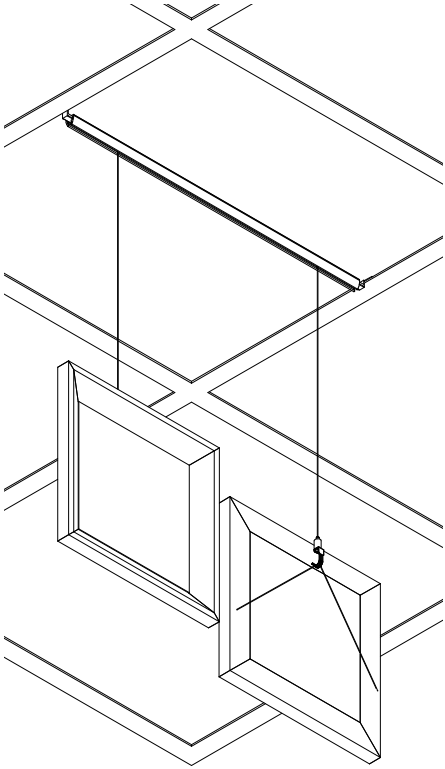
1 What to install?



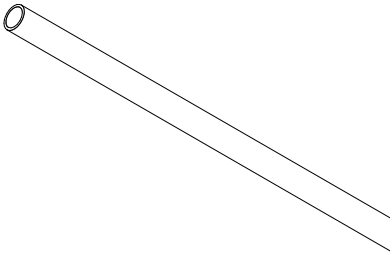
2 How to install.



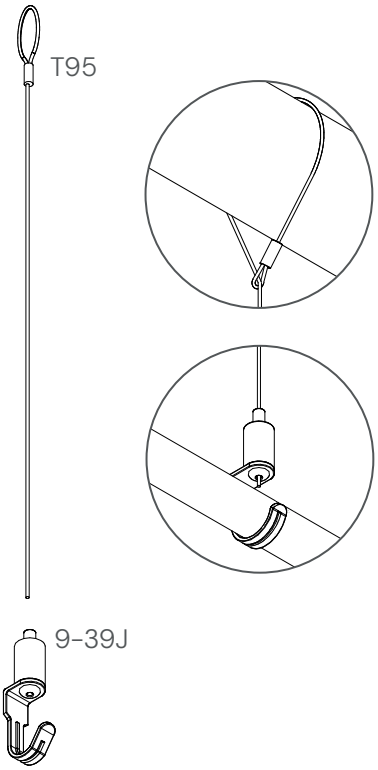
3 The result.



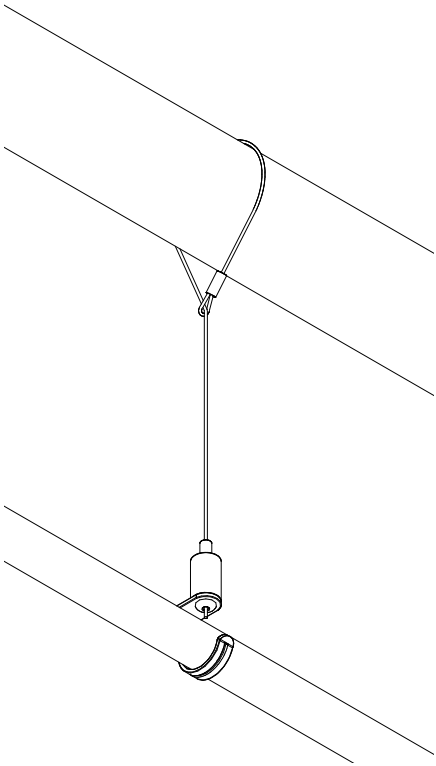
1 What to install?



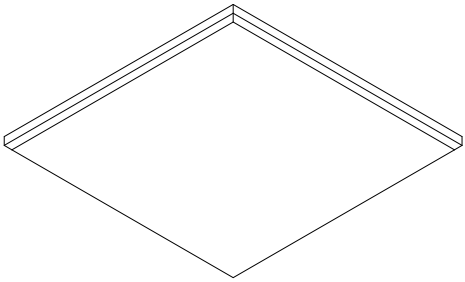
2 How to install.



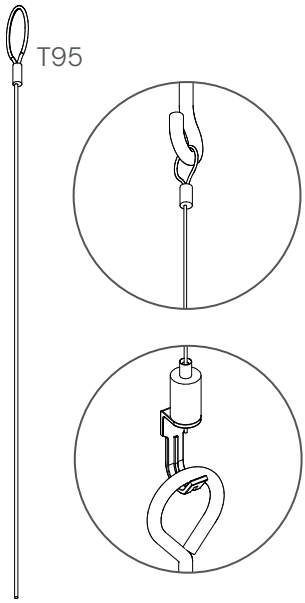
3 The result.

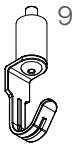


1 What to install?

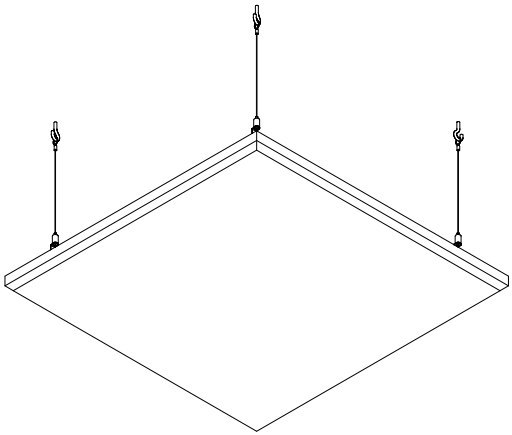


2 How to install.

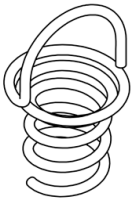




3 The result.

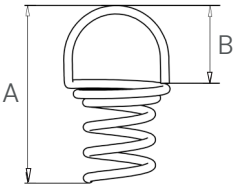


Spiral spring

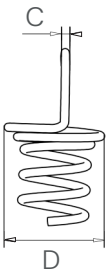


A spiral spring to be assembled into porous materials such as acoustic panels making an anchor point for wire suspension. By screwing it into the panel by hand, you establish a reliable anchor point for suspension.

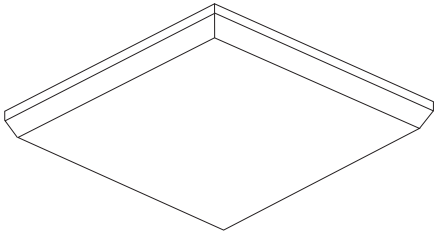
For a quick and reliable setup, we recommend combining the spiral spring 849-S002 with the hook gripper 9-38E.



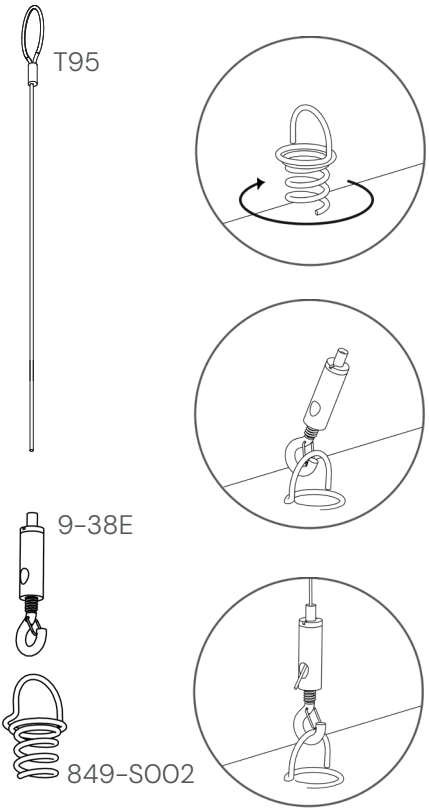
Art. no.	A mm	B mm	C mm	D mm
849-S002	43	16	Ø2	Ø24



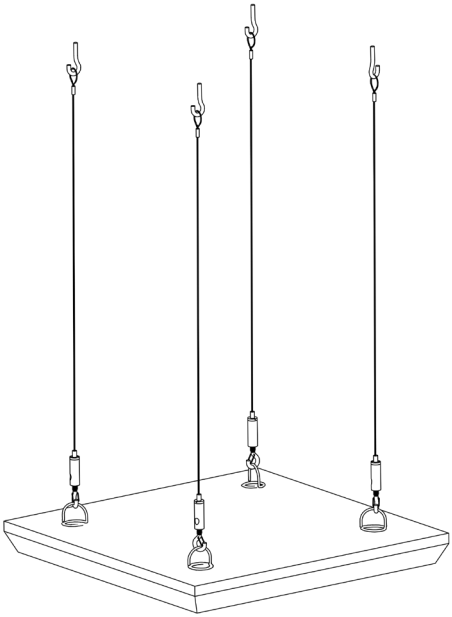
1 What to install?



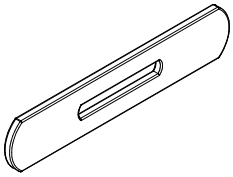
2 How to install.



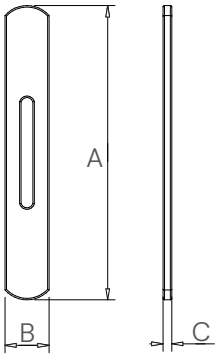
3 The result.



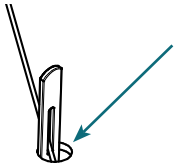
Toggle



A toggle with a slit is a practical solution for securing wire to a flat surface. Whether fastening to the ceiling or directly to a product, only a small hole is needed to create a reliable suspension point. It is also frequently used as an anchor for safety wires when required.
The toggle is designed to be used with a wire featuring a stopper ending.

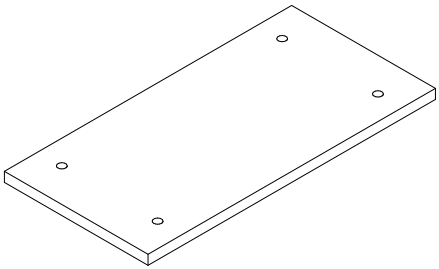


Art. no.	A mm	B mm	C mm	Wire Ø
4808	40	6	1.2	1.0–1.5

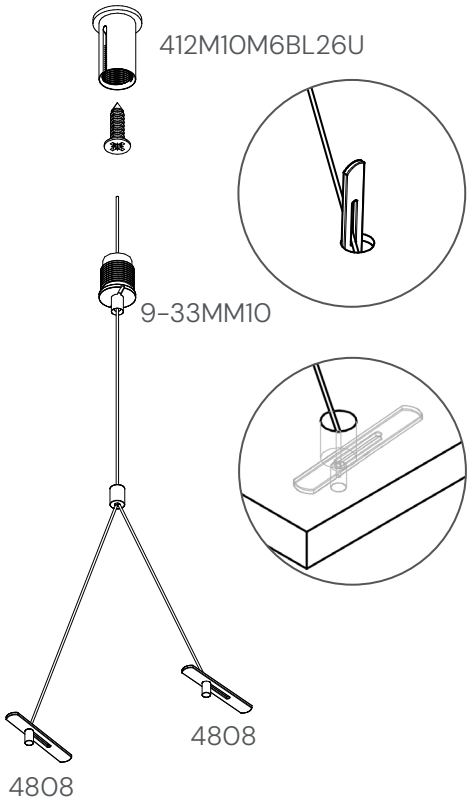


Note:
The hole in the suspended object must be at least Ø7 mm to allow article 4808 to pass through.

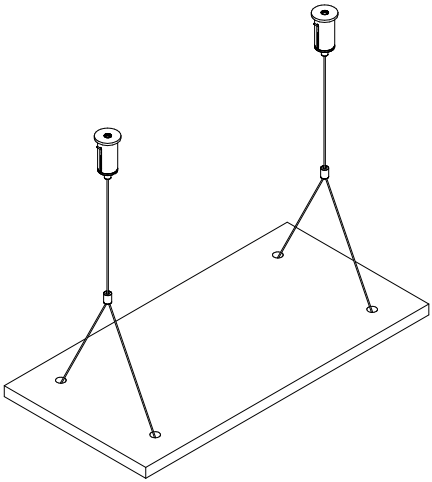
1 What to install?



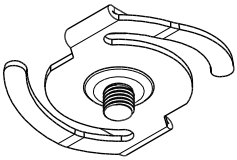
2 How to install.



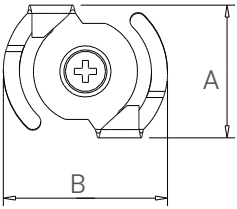
3 The result.

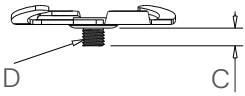


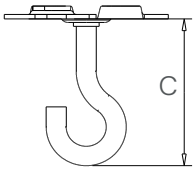
Grid ceiling clips



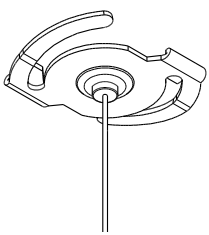
Clips are designed for suspension from grid ceilings. They attach directly to the profiles with a quick, one-hand motion, making installation fast and simple. Our clips fit two different widths, 15 mm and 24 mm, named T15 and T24. The clips are available in a variety of threads and configurations to suit any application.



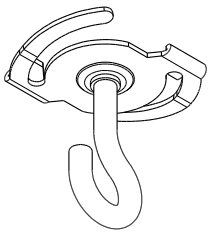




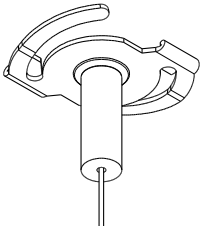
Art. no.	A mm	B mm	C mm	D mm	Profile
32SM5L5	27	41	5	M5	T24
32SM6L7	27	41	7	M6	T24
32SD4L30J	27	41	30	-	T24
32SM5LX	27	41	-	-	T24
31SM5L5	18	41	5	M5	T15
31SM6L7	18	41	7	M6	T15
31SD4L30J	18	41	30	-	T15
31SH	18	41	-	-	T15



32SM5LX
and T3 wire

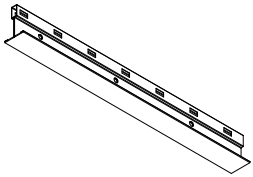


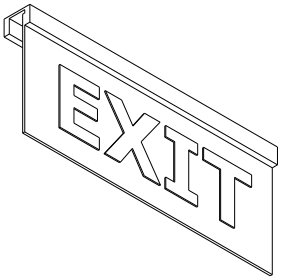
32SD4L30J



32SM5L5 with
412M5D9BL25
and T2 wire

1 What to install?

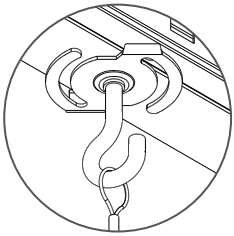


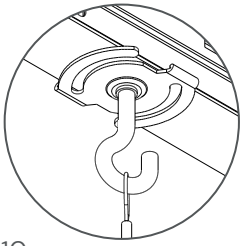


2 How to install.

32SD4L30J

T95

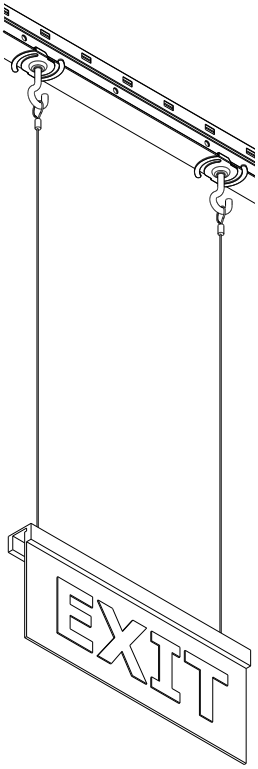




9-33MM10

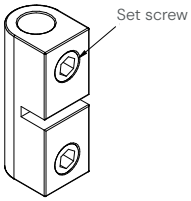
726M10P1

3 The result.

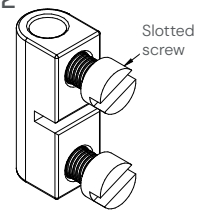


Loop terminals

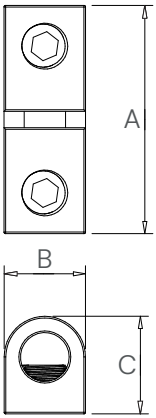
7801



7802



The loop terminals make it easy to create loops on wires using only a hex key or a standard screwdriver. Simply pull the wire through the terminal, pass it through the hole of the object to be suspended, and feed it back through the terminal. Ensure the wire protrudes at least 25 mm before tightening the screws for a safe and reliable connection.



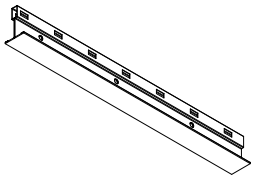
Art. no.	A mm	B mm	C mm	Wire Ø
7801 Set screw M3	14	5	6	1.0–1.5
7802 Slotted screw M3	14	5	6	1.0–1.5

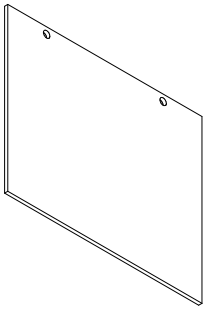
79601-5

Note:
The hex key required for 7801 is available separately.

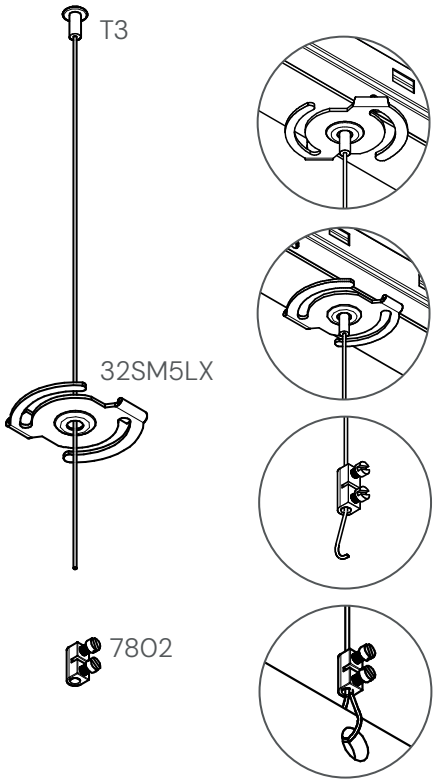
Similar product: 9-39UPDNW on page 32.

1 What to install?

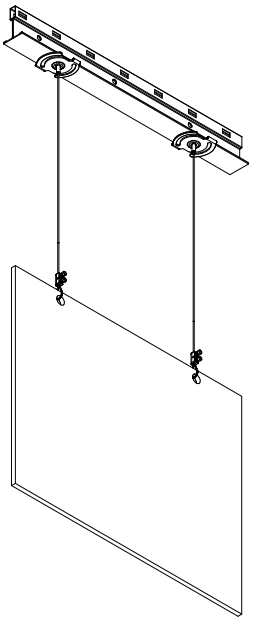




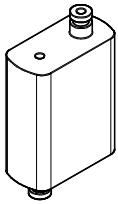
2 How to install.



3 The result.

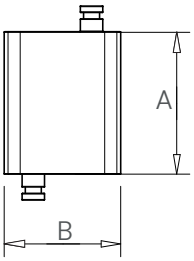


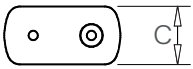
Loop grippers



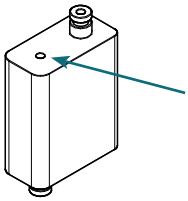
The loop grippers are designed for fast and secure creation of wire loops without any tools required. It features a reversed wire release mechanism, which requires a pull action to disengage, minimizing the risk of accidental release and enhancing safety in demanding environments.

The body is finished with straight knurling that not only adds a visual appeal but also provides excellent grip for easy handling. Perfect for signage, acoustics, beams, display setups, or any application where quick loop adjustments and secure locking are essential.





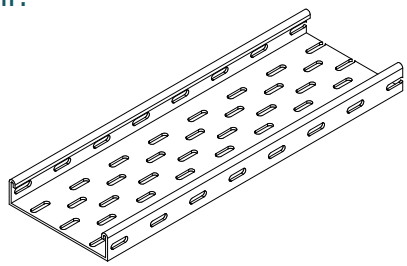
Art. no.	A mm	B mm	C mm	Wire Ø
9-39UPDNW	19	18	9	1.0-1.5
9-79UPDNW	24	20	11	1.8-2.0



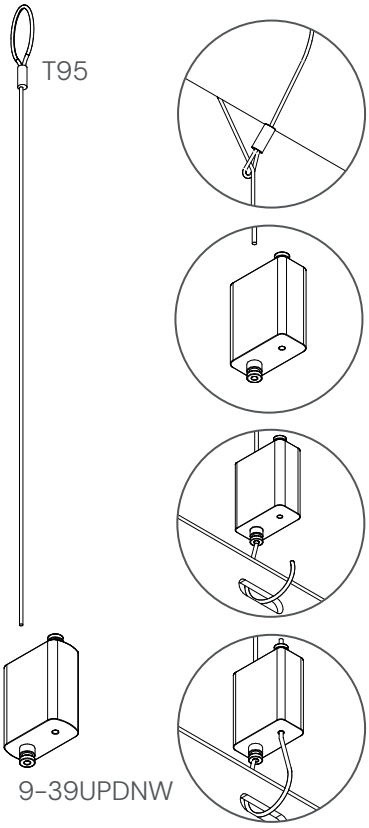
Note:
Always insert the wire through the hole of loop grippers with reversed wire release mechanism.

Similar products: 7801 & 7802 on page 30.

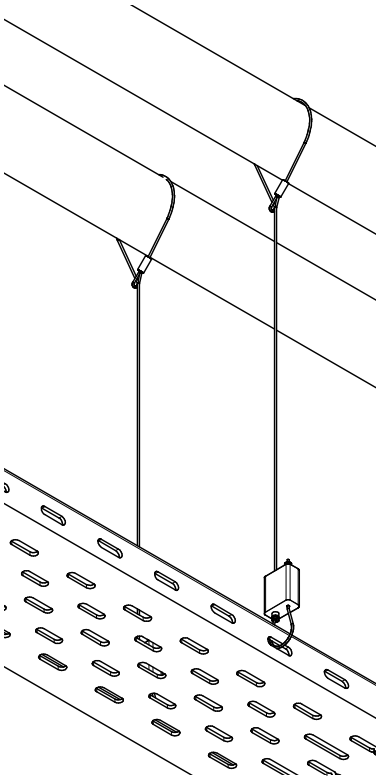
1 What to install?



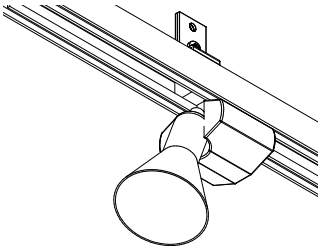
2 How to install.



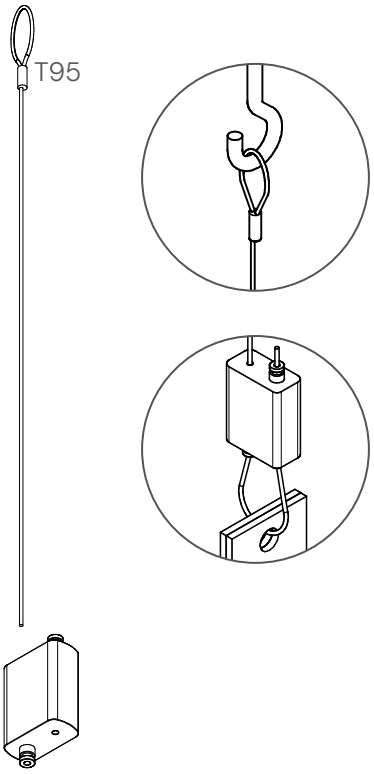
3 The result.



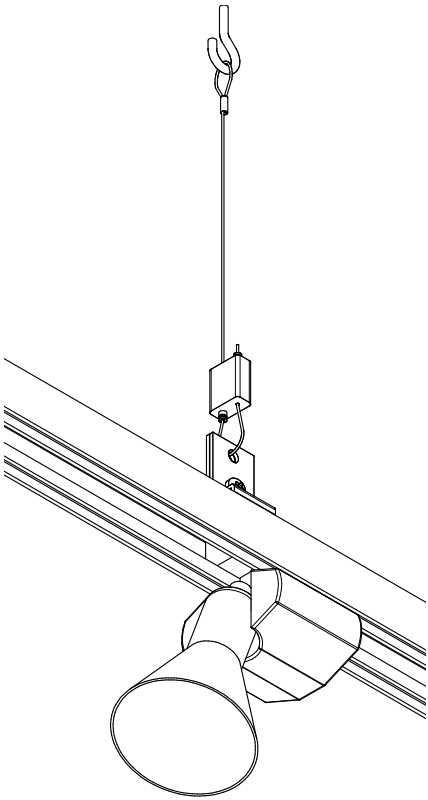
1 What to install?



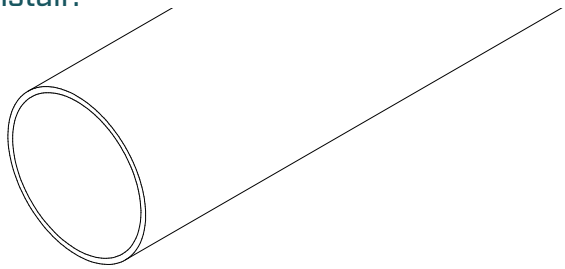
2 How to install.



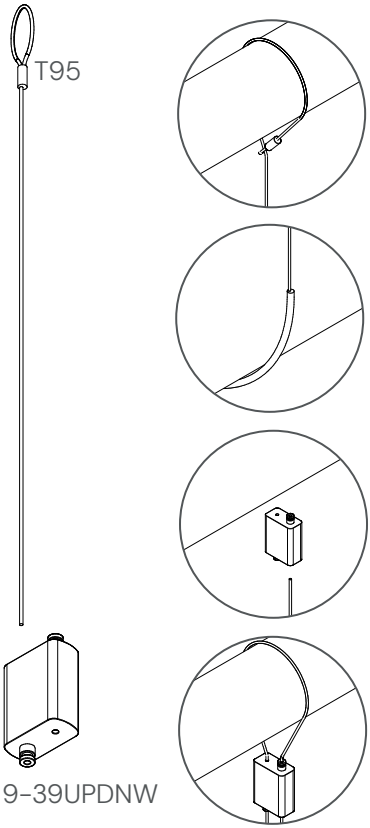
3 The result.



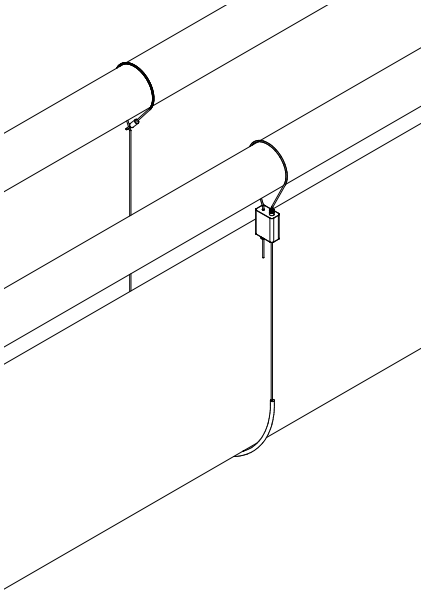
1 What to install?



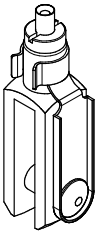
2 How to install.



3 The result.

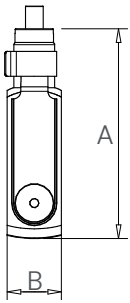


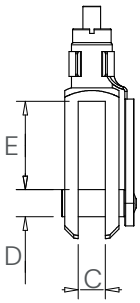
Fork grippers



Fork grippers are designed for secure suspension of acoustic and display panels, featuring an integrated steel clip for safe and reliable locking. It allows for fast, tool-free installation while maintaining a professional look.

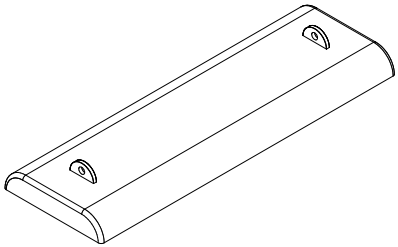
To ensure a proper fit, users should consider the material stiffness. Harder materials may require slightly thinner panels for optimal fit, while softer materials can be used up to the full fork gap size depending on the desired tightness.



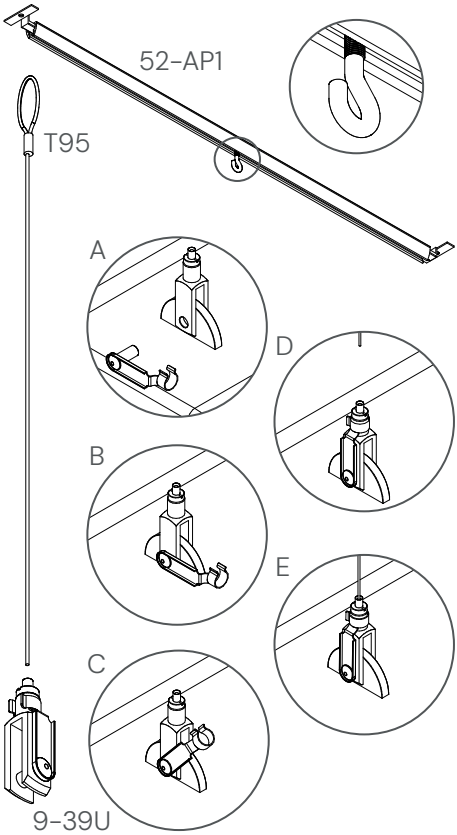


Art. no.	A mm	B mm	C mm	D mm	E mm	Wire Ø
9-39U	46	12	6	Ø6	20.5	1.0-1.5
9-39U11	52	12	11	Ø6	19	1.0-1.5
9-39U22	52	12	22	Ø8	19	1.0-1.5

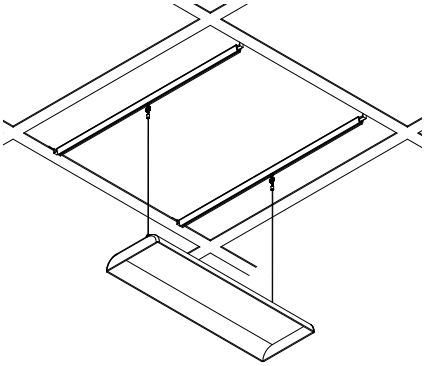
1 What to install?



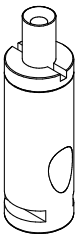
2 How to install.



3 The result.

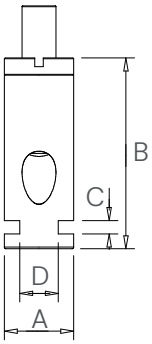


Track and rail grippers



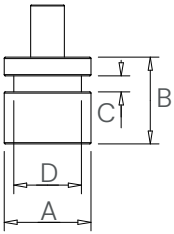
Non-threaded grippers designed to integrate into slotted systems, such as lighting tracks or mounting rails. Featuring a clean cylindrical form with a precision-cut slit, it securely locks into place when inserted into a compatible slot. Choose between side- or bottom-exit solutions. Offering a stable yet tool-free solution for suspending lighting, signage, or decorative elements.

9-18TD8

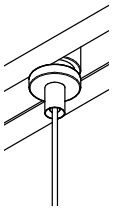


Art. no.	A mm	B mm	C mm	D mm	Wire Ø
9-18TD8	Ø8	21.5	1.5	4.5	1.0-1.2
9-12T	Ø10	10	1.9	Ø7.5	1.0-1.2

9-12T

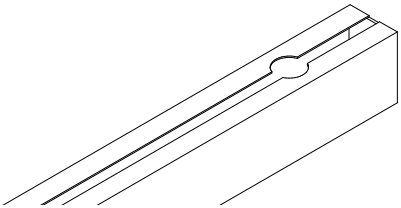


Article 9-12T is more compact than 9-18TD8 and allows the wire to pass straight through, exiting from the bottom.

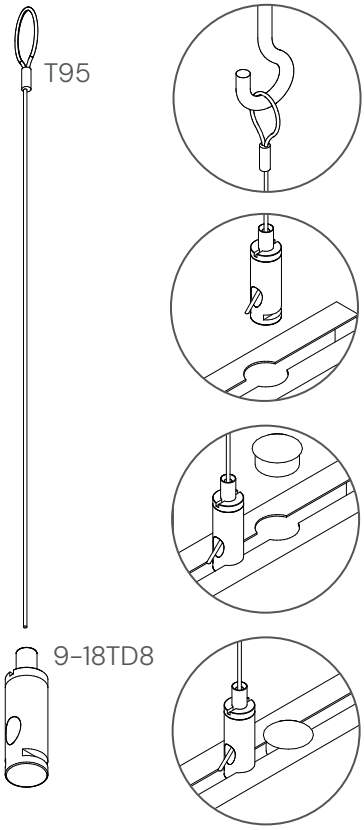


Similar product: 9-78MM13T on page 49.

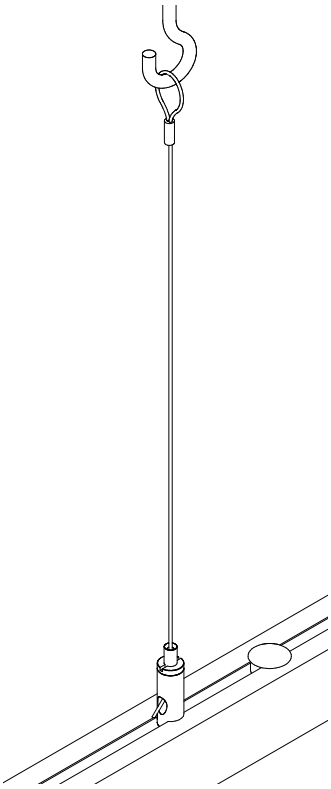
1 What to install?



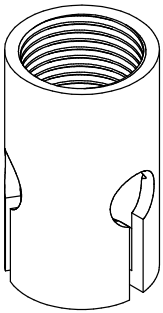
2 How to install.



3 The result.

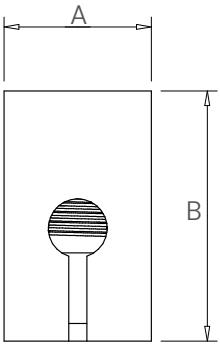


Multipoint suspension

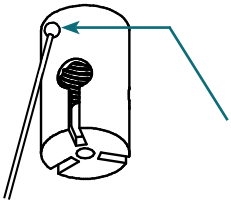


A connector made to suspend 3 steel wires, usually onto a round shaped object, for proper balancing. Assemble it with a gripper for easy height adjustments or with a ceiling attachment for a fixed position to the ceiling.

Please note that wires in an angle exert greater force than vertical wires. Angles above 30° from the vertical position are not recommended. Read the safety information on our website before installation.

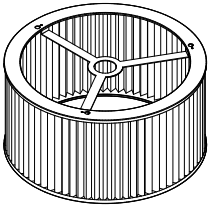


Art. no.	A mm	B mm	Thread
46M13BL26	Ø15	25.5	M13x1

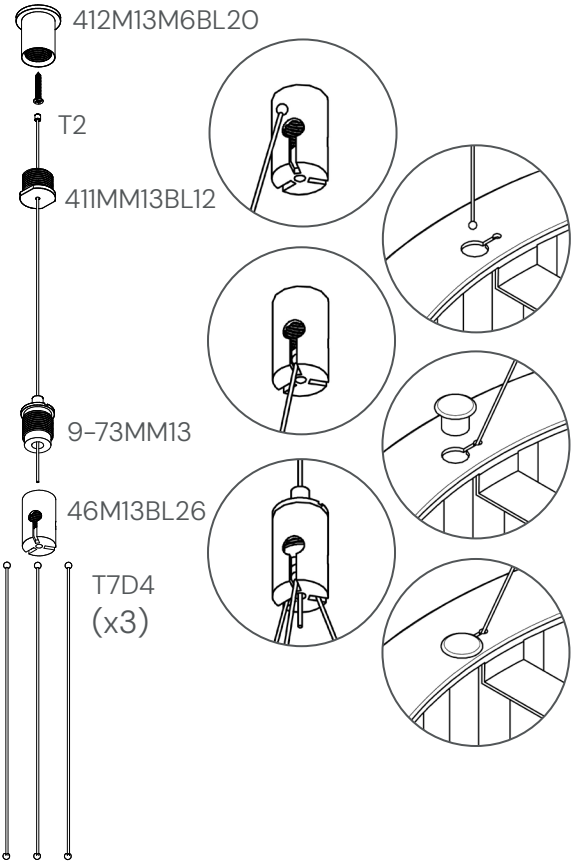


Note:
Combine article 46M13BL26 with Ø4 mm ball-ending wires and the gripper 9-73MM13 to automatically lock all three wires securely in place.

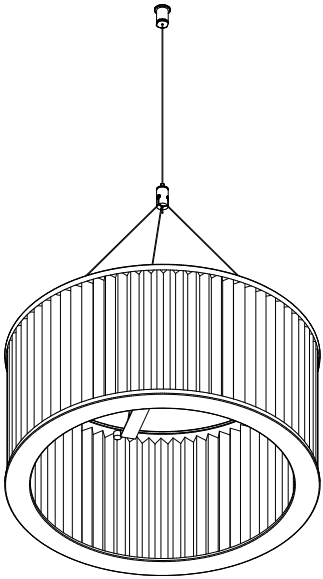
1 What to install?



2 How to install.

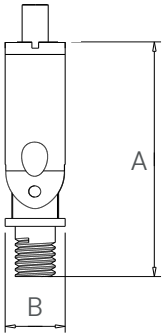


3 The result.



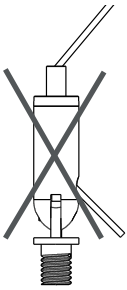
Gripper with a joint

Grippers featuring a 180° joint, making it an excellent choice for angled wire suspension where directional flexibility is essential. Its design is suited for installations involving sloped ceilings, curved or tilted displays, circular lighting fixtures, acoustic panels, and other architectural elements that require precise alignment and adaptable positioning.



It is available in various sizes and with both male and female thread options.

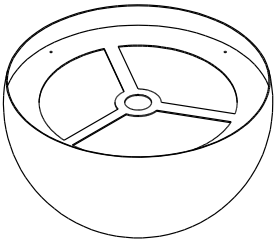
Art. no.	A mm	B mm	Thread	Wire Ø
9-38V8MM6L8	39	Ø9	M6 male	1.0-1.2
9-38V8M4	37	Ø9	M4 female	1.0-1.2
9-78V8MM10P1	45	Ø10	M10x1 male	1.2-1.5
9-78V8M4	47	Ø10	M4 female	1.2-1.5



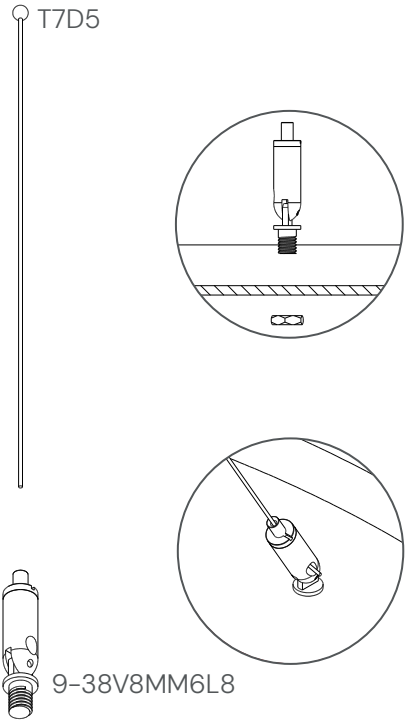
Note:
The angle of the wire must be in the same direction as the gripper body. Otherwise, the joint may break due to stress.

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

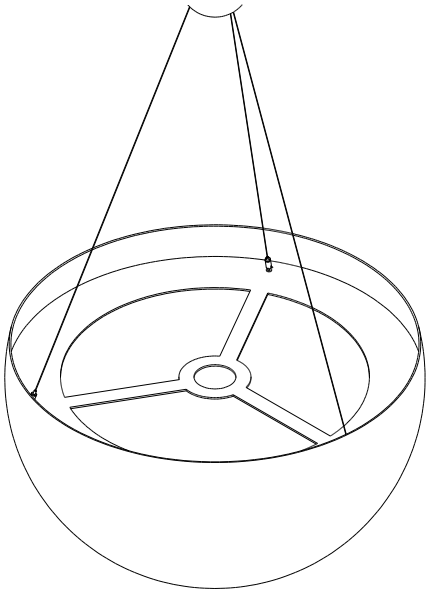
1 What to install?



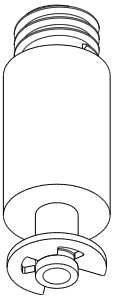
2 How to install.



3 The result.

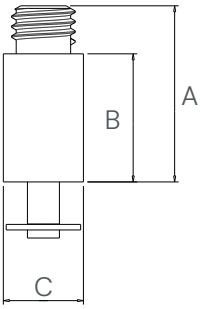


Pull gripper

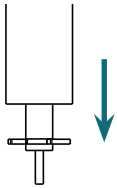


Pull grippers features a reverse wire release function, offering an added layer of safety by requiring a pull motion, rather than a push to release the wire. This mechanism reduces the chance of unintentional release, making it ideal for installations in public, high-traffic, or safety-sensitive environments.

Perfect when adjustment of the wire is required from below the suspended object.

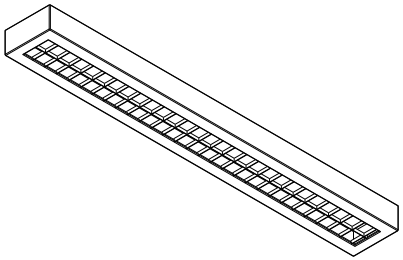


Art. no.	A mm	B mm	C mm	Thread	Wire Ø
9-39UPDN	22	16	Ø10	M8x1	1.0-1.5
9-39UPDNMM6	22	16	Ø10	M6	1.0-1.5
9-39UPDNMM6LX	28	16	Ø10	M6	1.0-1.5

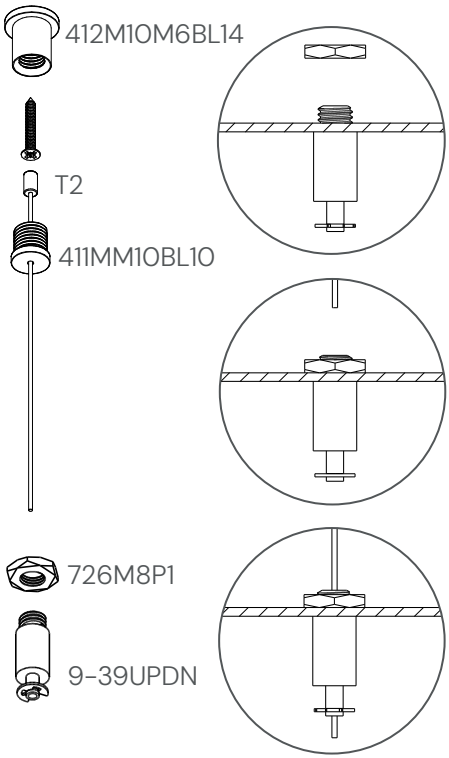


Note:
Release the wire by pulling the pin.

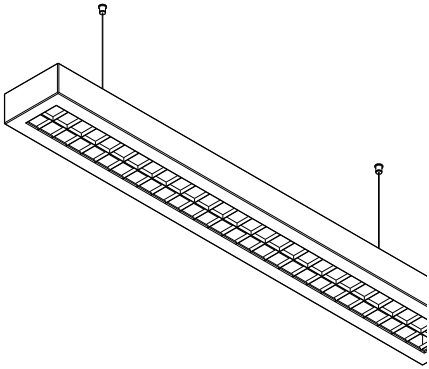
1 What to install?



2 How to install.



3 The result.

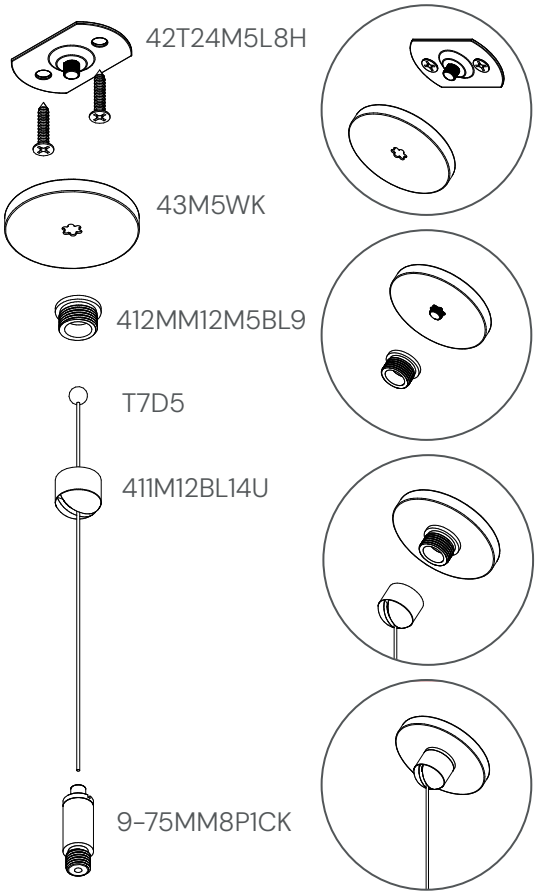


Installation examples

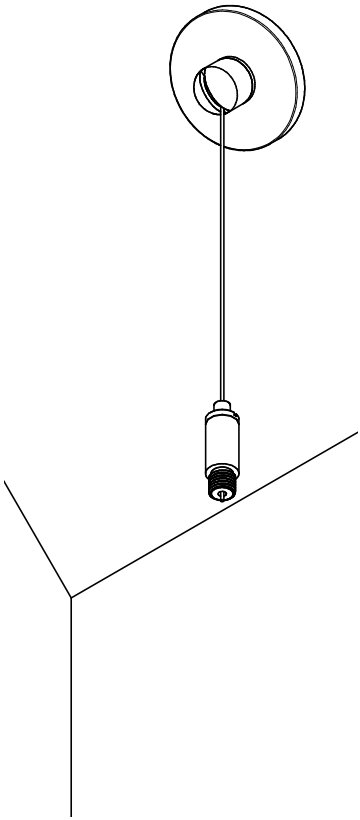
Angled

When suspending from an angle, the wire should always hang straight for stability and safety. A cap with a slit allows the wire to move freely, adapting to angled or uneven ceiling surfaces without stress on the suspension point. Designed for use with a wire with ball ending.

1 How to install.



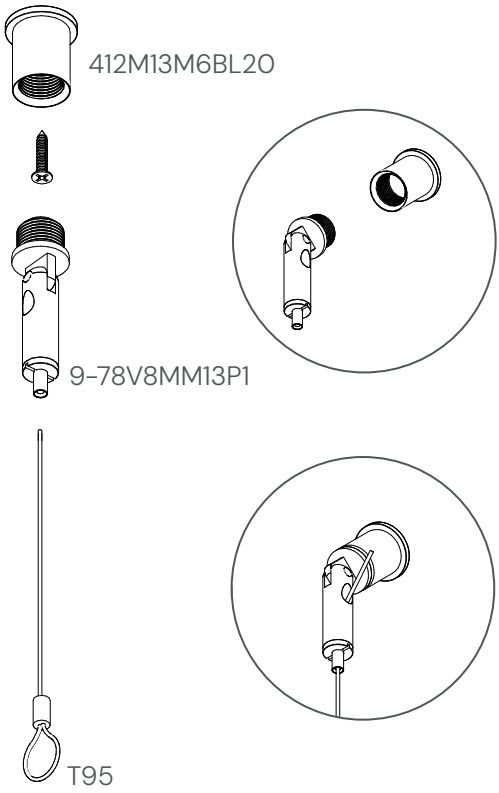
2 The result.



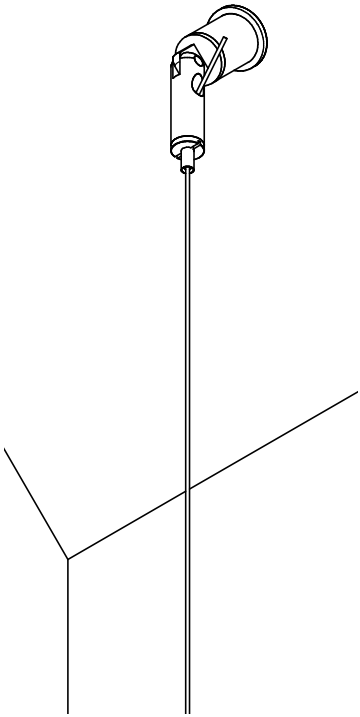
Angled

A gripper with joint can also be used to suspend objects from an angle. Ensure that the joint allows the gripper to hang straight down before applying the load.

1 How to install.



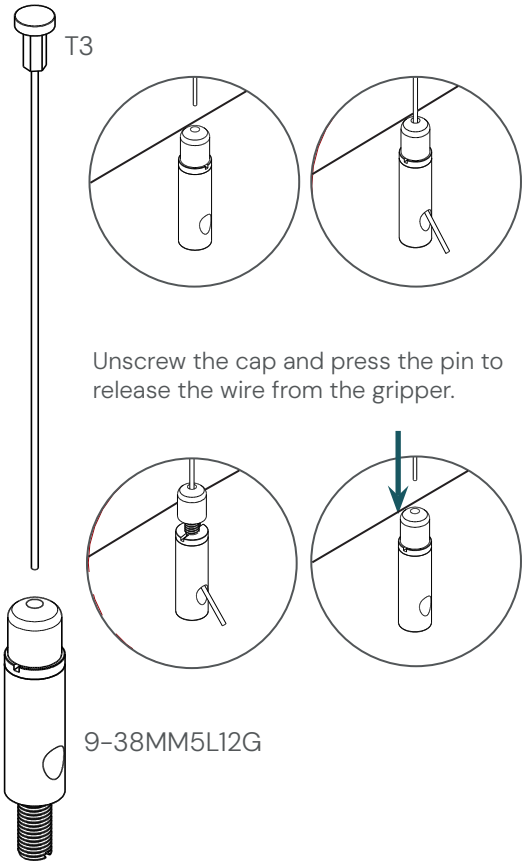
2 The result.



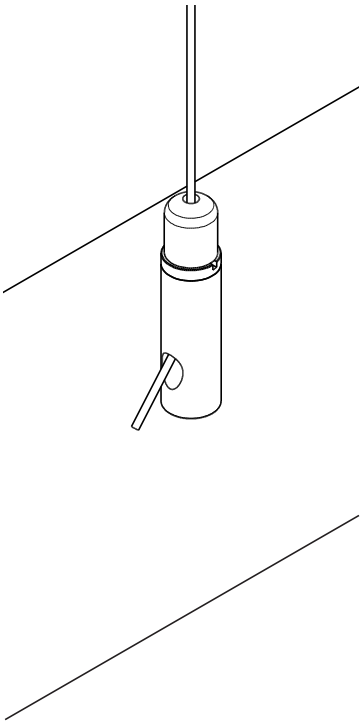
Enhanced safety

Increase installation safety in high-risk environments by using a gripper with a safety cap. Once assembled and fastened onto the threaded pin of the gripper, it blocks the pin from being activated. This minimizes the risk of the wire being unintentionally released.

1 How to install.



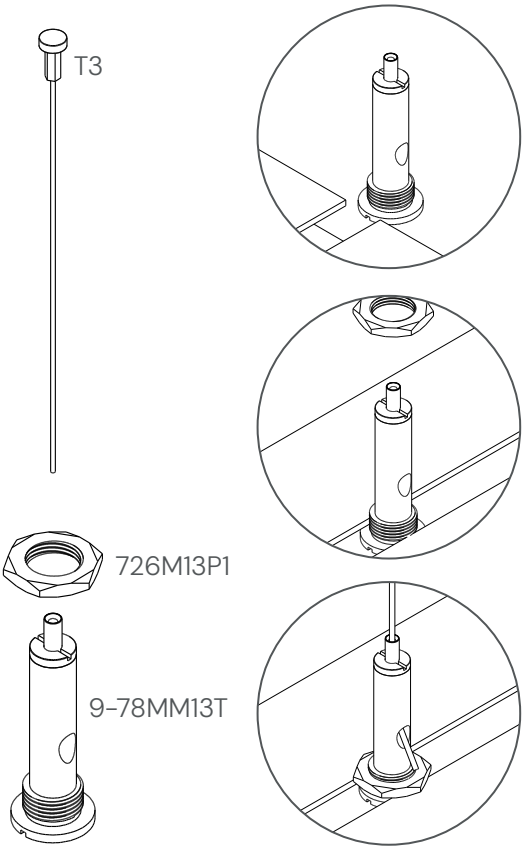
2 The result.



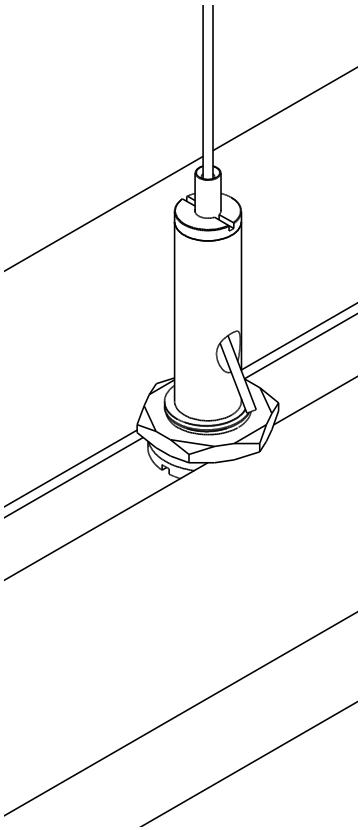
Track and rail

When suspending an object from a track, several solutions are available with adjustment at track height or the ceiling. There are grippers designed with a safety feature that allows you to lock the grippers position to the track by a nut.

1 How to install.



2 The result.

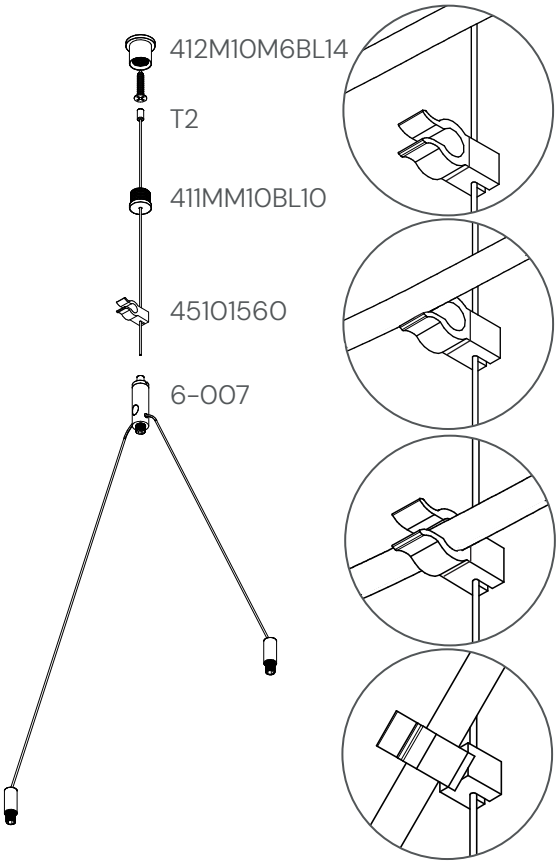


Aesthetics

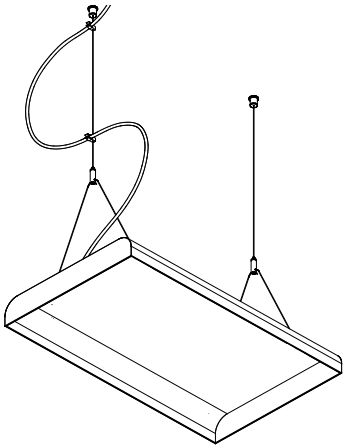
Add a transparent, 360° rotatable cable clip to make an elegant suspension. Attach the power cord to the steel wire of your multipoint suspension system and choose your design.

Art. no.	Wire Ø
45101560	1.0 - 1.5

1 How to install.



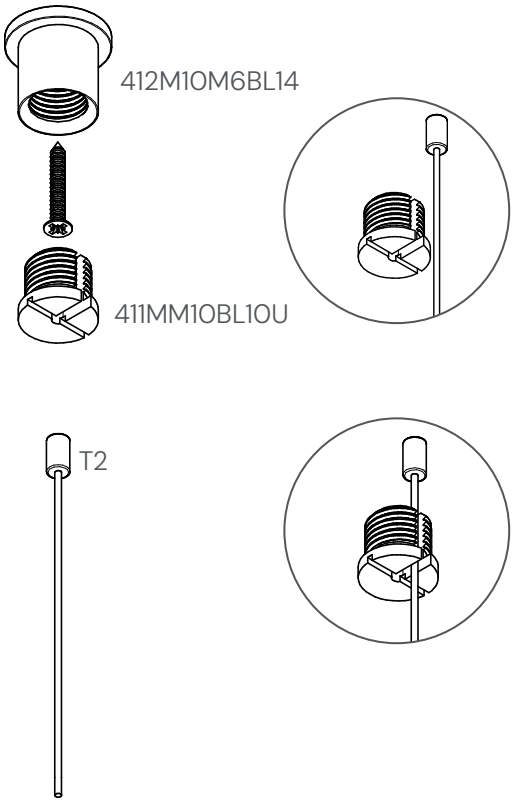
2 The result.



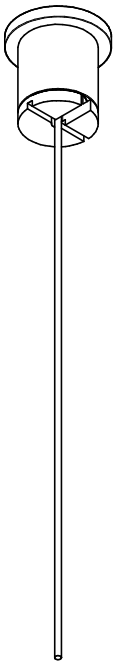
Time saving

Hanging objects with long wires can take a lot of time when you must pull the wire through the cap. Use a cap with a slit which makes installing even the longest wires quick and easy.

1 How to install.



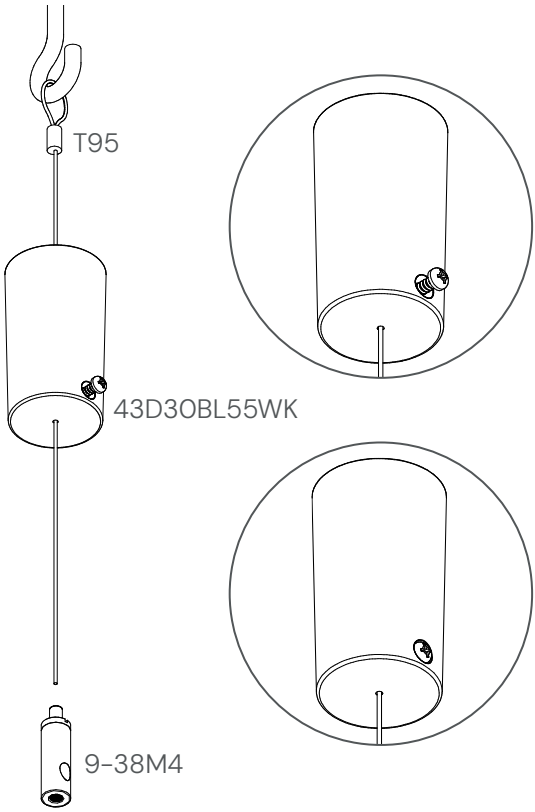
2 The result.



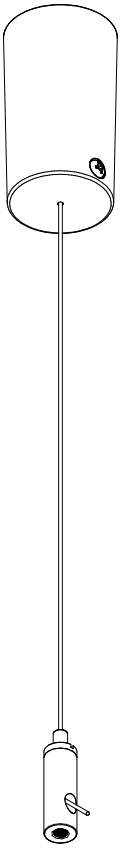
Ceiling canopy

A canopy is a clever solution to conceal the hook or other accessories in the ceiling for an elegant installation.

1 How to install.



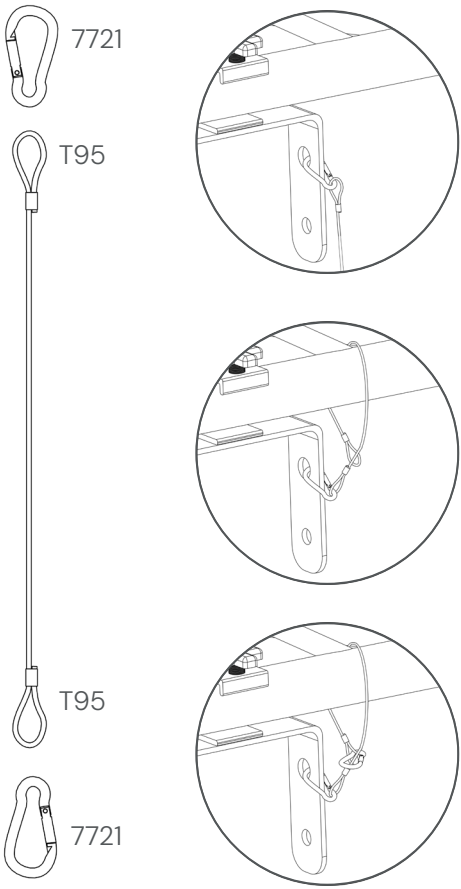
2 The result.



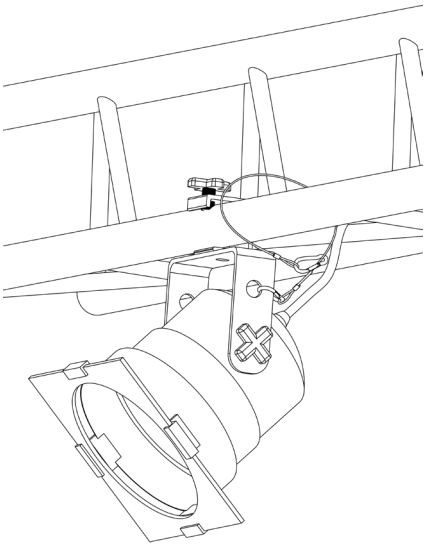
Safety wire

Use a safety wire to ensure secure handling during maintenance and provide fall protection. A safety wire can be customized according to your needs.

1 How to install.



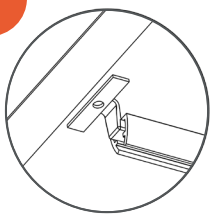
2 The result.



Carrying rail

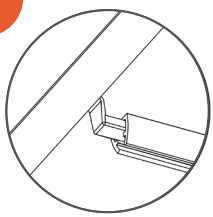
To create a hanging point on a grid ceiling, use carrying rails for tool-free installation. Article 52-AP1 is delivered with premounted accessories, ensuring time-saving installations. The hook slides horizontally within the rail, allowing you to easily position your suspended product.

1



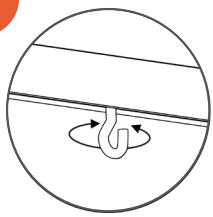
To adjust the rail bracket, loosen the set screw using the included hex key.

2

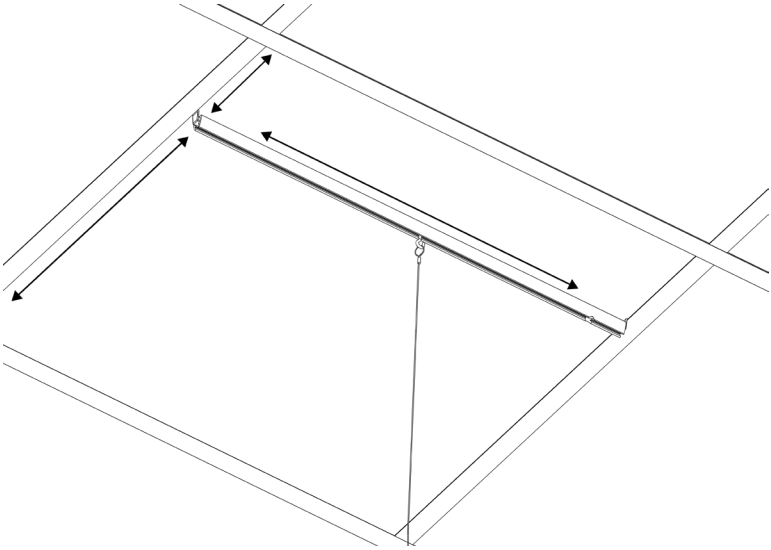


Lock the rail bracket in place by tightening the set screw again.

3



Fasten the hook at desired position.

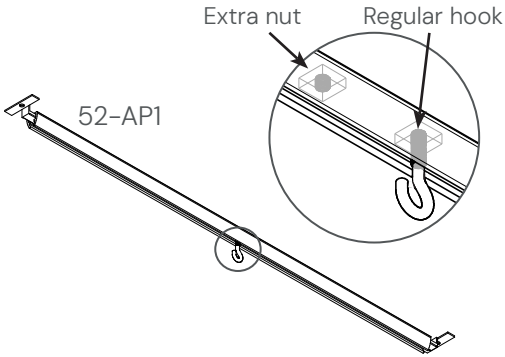


The hanging point is easy to adjust in any direction when using carrying rails.

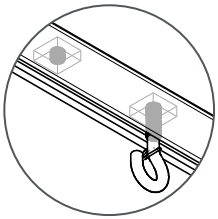
Carrying rail with snap hook

Add a snap hook with a safety latch to article 52-AP1, ensuring that the object stays fully locked without being unintentionally released in any environment. Article 52-AP1 is supplied with an extra nut inside the carrying rail.

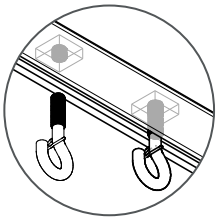
1 How to install.



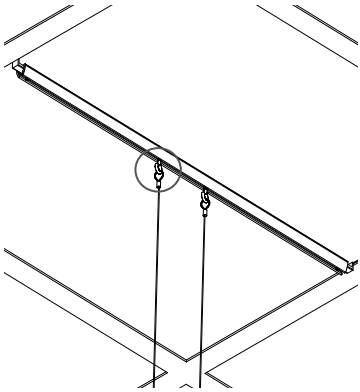
Replace regular hook with 717M4D2.

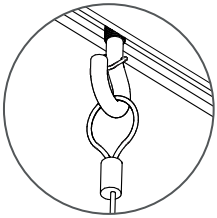


Assemble 717M4D2 to extra nut.



2 The result.





ALEMTEK

Emmabodavägen 4
382 45 Nybro
Sweden

Tel: +46 (0)481-696 60

info@alemtek.com
www.alemtek.com

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