

SEÑOR A4MIXTO-H 20 G

HYBRID DAMPER WITH DOUBLE METRIC OUTLET AND ANGLE CORRECTOR FOR SUSPENDING HVAC EQUIPMENT

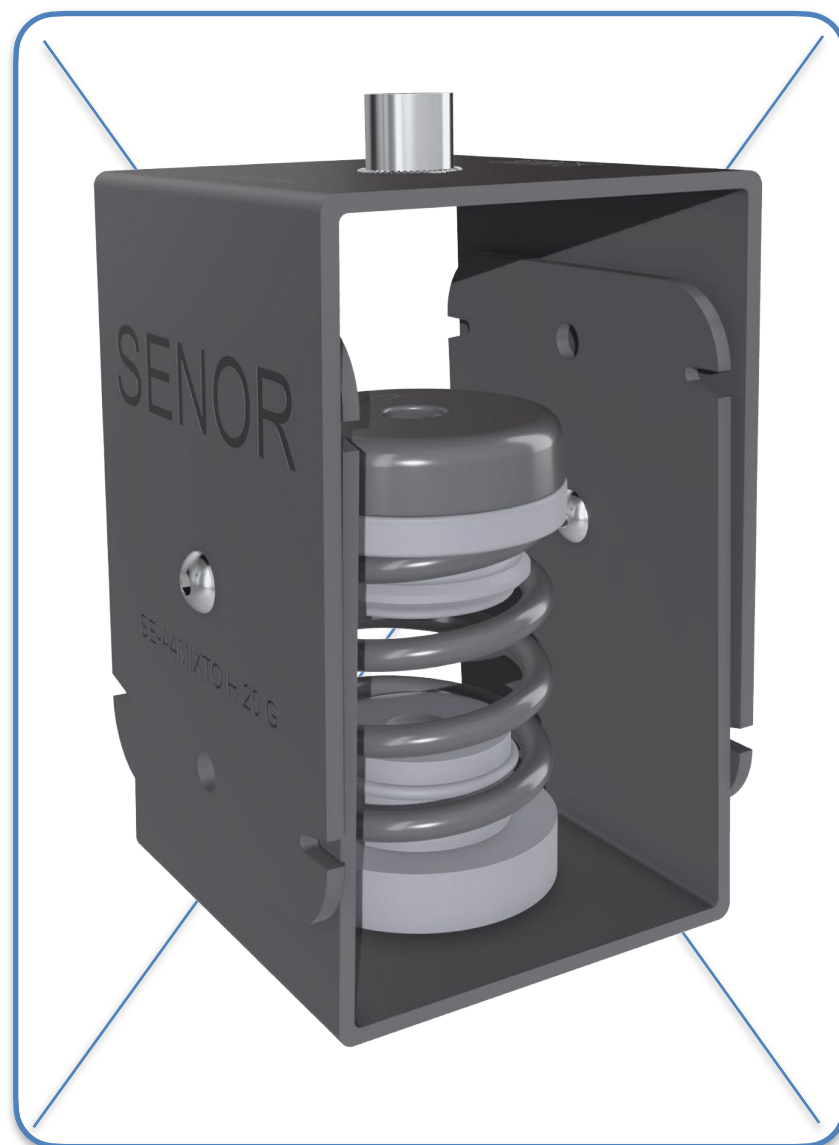
It is a high-performance, innovative, and upgraded **HYBRID** damper. Manufactured using cutting-edge technology and designed to suppress all solid-borne acoustic pollution.

The **A4MIXTO-H 20 G** features a robust steel frame with an innovative dual rotary joint mechanism (**RT-10**). This design enables precise angle adjustment between the two independently functioning metric outputs, providing remarkable versatility. This functionality is crucial in ensuring that the elastic component's compression remains strictly axial, preventing any torsion that could compromise its integrity. By limiting the vectorial degrees of polymer deformation, the system optimizes the elastic component's performance, ultimately enhancing durability and operational efficiency. For instance, in applications that require continuous and precise movement, this mechanism minimizes the risk of structural failure and ensures smooth, reliable operation.



I+D+i

*System registered with the
Spanish Patent and
Trademark Office (OEPM).



REF.	COLOUR	APPLICATION FIELD	LOAD (Kg) MIN-MAX	METRIC
SE-A4MIXTO-H 20 G		HVAC	3 - 20	8

HYBRID System: The result of combining the most advanced polymer with a helical steel spring.

- Helical Spring: Manufactured using steel wire in accordance with **DIN 2095-UNE EN 10270** standards, featuring an anti-corrosion finish and **metallic grey epoxy** coating.
- Rubber Polymer: Manufactured by KRAIBURG-TPE for SEÑOR, following UNE-EN ISO 10846-1:2009 standards.

✓ Resonance Frequency: 3-7Hz

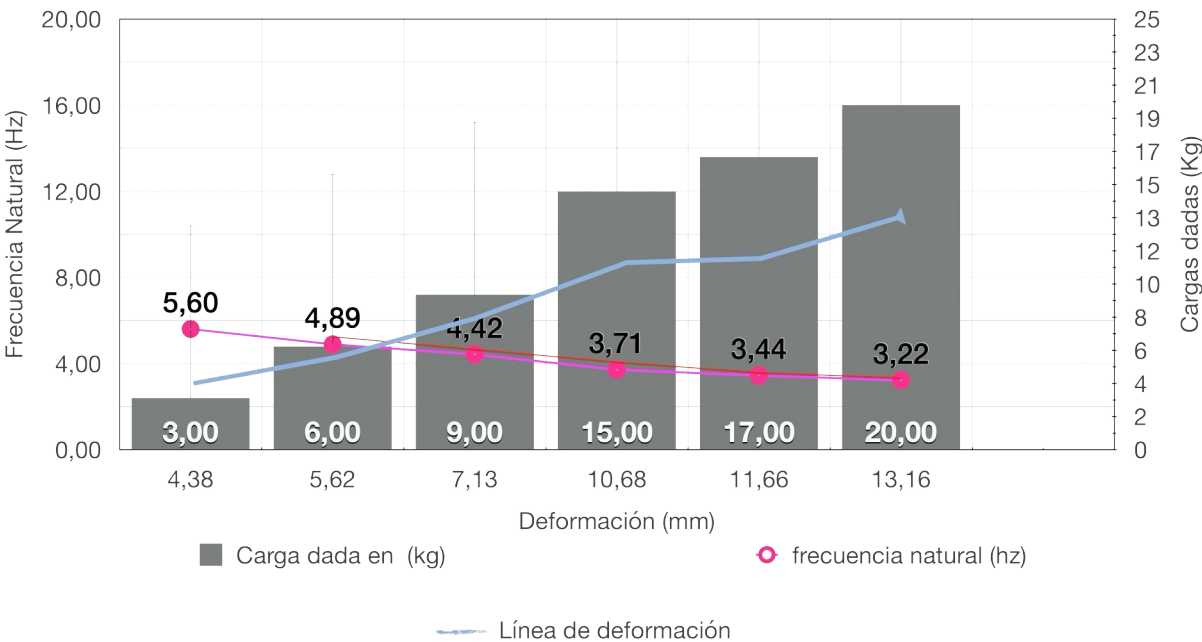
Recommended for USE: with acoustic ceilings, structure suspensions, and machinery with an operational frequency above 350 RPM and a load ranging between 3 and 20 kg per support point.

Dynamic Behaviour and Axial Deformation

Steel helical springs exhibit dynamic stiffness equivalent to their static stiffness, making them ideal for applications that demand predictable mechanical properties. In contrast, viscoelastic materials exhibit more complex behavior. The dynamic stiffness of these materials never equals their static stiffness, as they absorb and dissipate energy, adapting to the frequency and magnitude of vibrations. To fully understand this phenomenon, the dynamic behavior of viscoelastic materials cannot be determined through theoretical calculations alone; it requires specific laboratory testing to ensure accurate data for industrial applications.

TABLE AND GRAPH OF LAB RESULTS

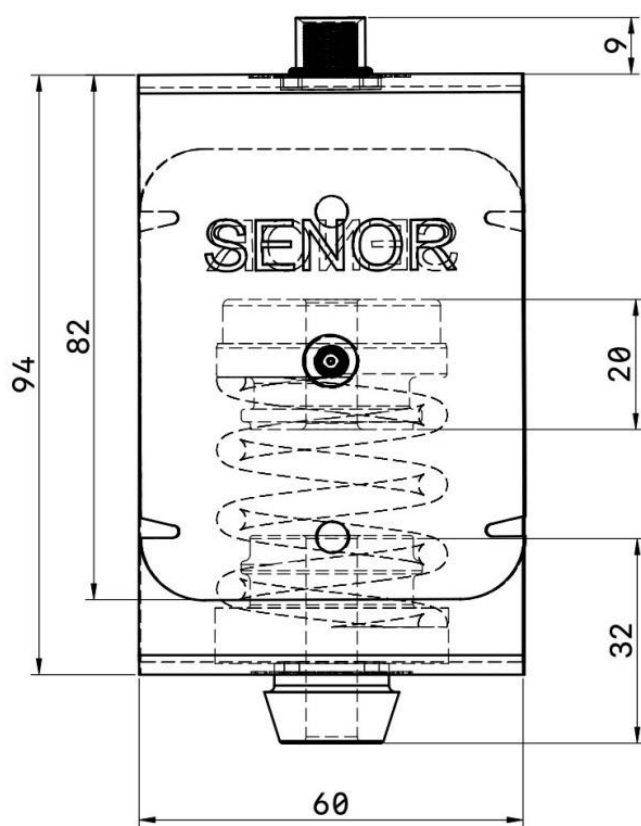
LOAD (Kg)	DEFORMATION (mm)	RESONANCE FREQUENCY (Hz)	SWEEP (Hz)	% SOUNDPROOFING
3	4,38	5,60	50	98,73
6	5,62	4,89		99,03
9	7,13	4,42		99,21
15	10,68	3,71		99,45
17	11,66	3,44		99,52
20	13,16	3,22		99,58



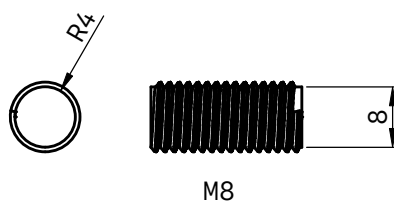
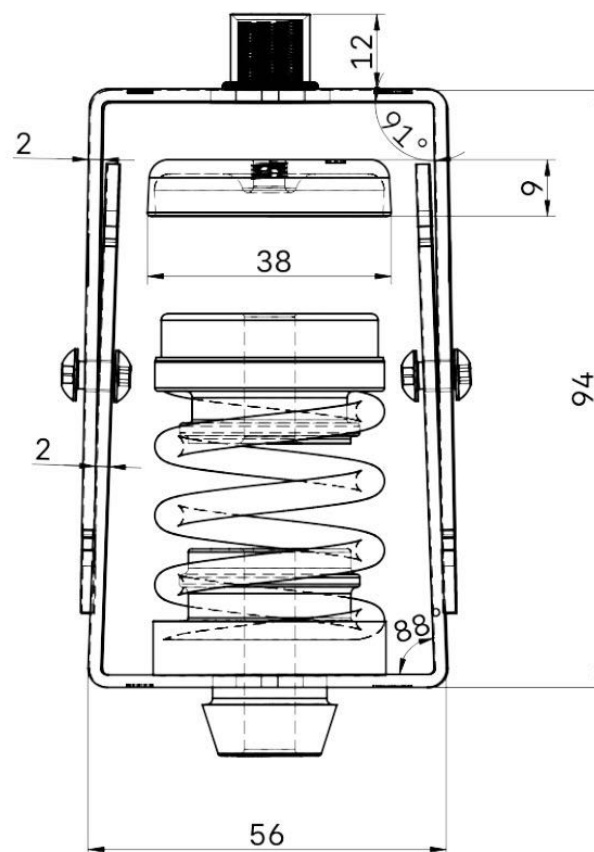
Dimensions

You'll be surprised by its performance! It's the ideal damper for equipment suspension. Say NO to noise.

**VISTA
LATERAL**



**VISTA
FRONTAL**



KEY Features

A4MIXTO-H 20 G is the most powerful damper on the market for suspending equipment. It is the present and future solution for noisy spaces.

Our engineers work every day to develop new solutions for the future.

A: The TC3/GPN Rubber Top Cap is distinguished by its design with an extended collar, an innovative feature that prevents unwanted contact between the threaded rod and the steel housing. This is critical for ensuring both the durability and performance of the system in which it is used. This component serves not only as a physical decoupler but also plays a pivotal role in vibration damping. Its ability to effectively reduce vibrations in the mid-to-high-frequency range (measured in hertz, Hz) makes it an ideal solution for applications where stability and smooth operation are paramount. Furthermore, its design guarantees the proper seating of the helical wire of the spring, enhancing the overall functioning of the mechanism, preventing premature wear, and extending the service life of the components involved.

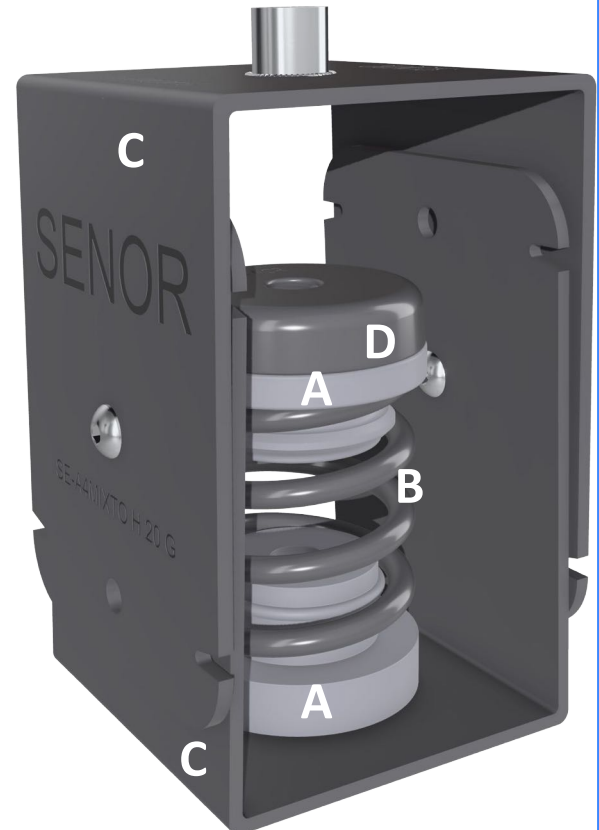
B: The Steel Helical Spring is recognized for its ability to effectively eliminate vibro-mechanical energy contamination, particularly in the mid and low-frequency ranges, typically within the hertz (Hz) spectrum. This spring is designed to absorb and dissipate unwanted vibrations, making it an ideal solution for applications where stability and noise control are critical.

C: The STEEL housing is crafted from high-quality galvanized steel, specifically of type Dx51d + Z275, providing excellent corrosion resistance and long-lasting durability in harsh environments. With a thickness of 2 mm, this structure not only offers substantial rigidity to the system but also plays a vital role in the axial compression of the elastic components, ensuring they maintain optimal performance and stability under load. This robustness is crucial for industrial applications requiring safe and efficient handling of dynamic forces.

D: CN The Leveling Cup is made from DC04 deepdrawing steel, compliant with the EN10131 steel standard, and has a thickness of 1.5 mm. It is designed to withstand heavy loads.

Note:

All metal components are treated with an anti-corrosion coating to prevent material corrosion.



SENROR A4MIXTO-H 20 G

 Youtube
SENROR Acoustic Dampers



SENROR Products
Suspended Machines

1.

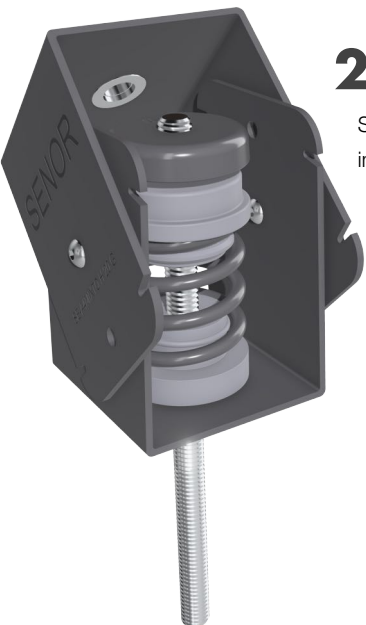
Bend the casing.



Application Mode

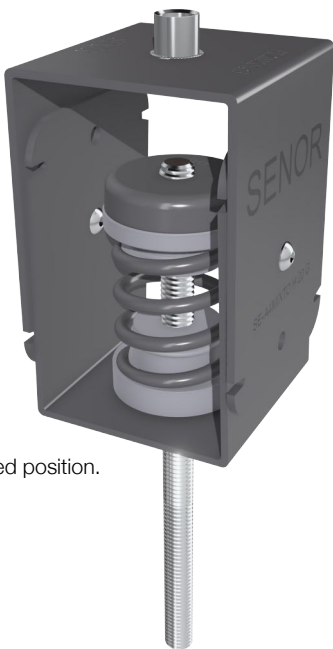
2.

Screw the cup onto the rod previously inserted into the bottom of the acoustic insulator.



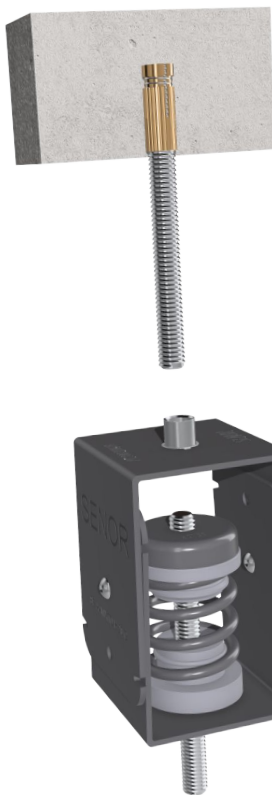
3.

Return the casing to the desired position.



4.

Secure the acoustic insulator directly to the floor slab.

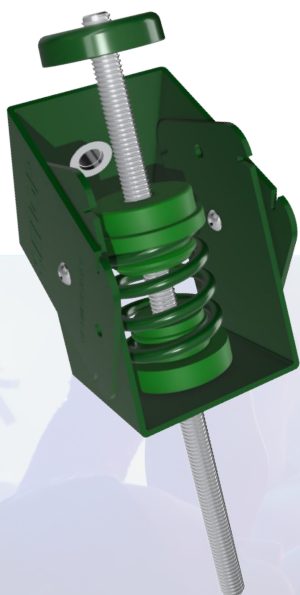


SEÑOR A4MIXTO-H 45 V

HYBRID DAMPER WITH DOUBLE METRIC OUTLET AND ANGLE CORRECTOR FOR SUSPENDING HVAC EQUIPMENT

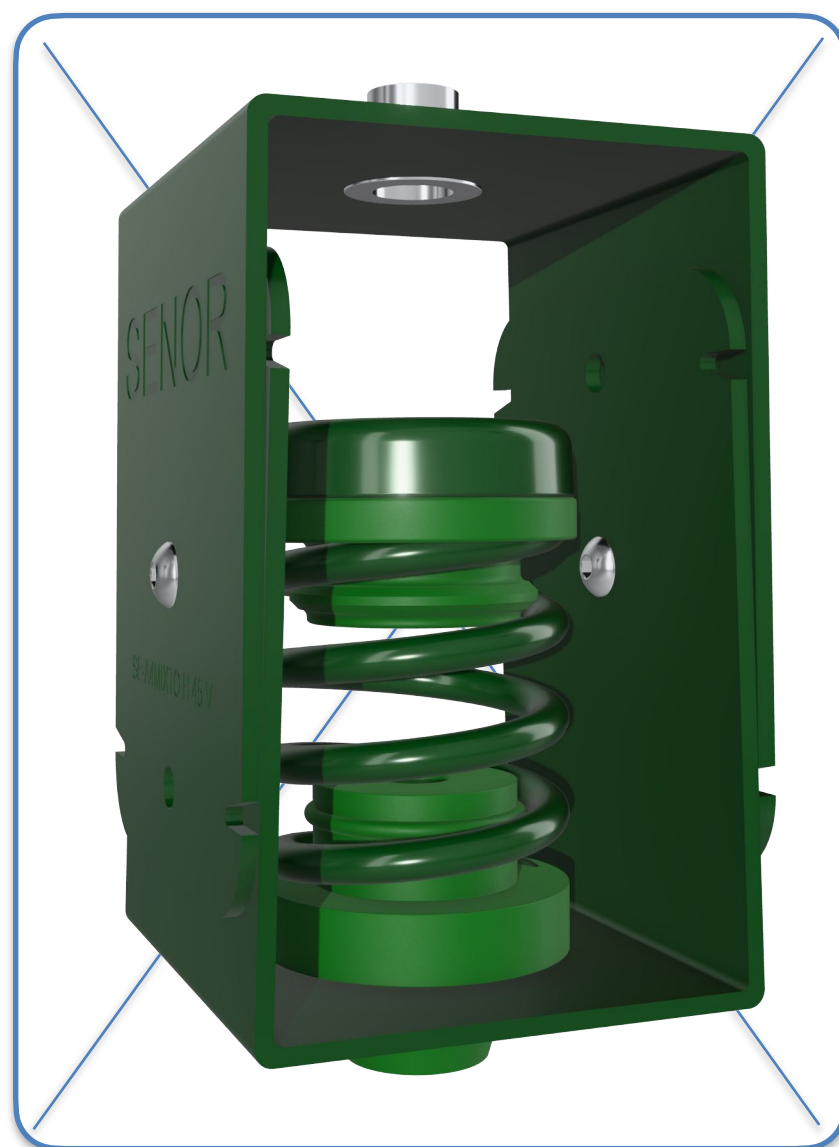
It is a high-performance, innovative, and upgraded **HYBRID** damper. Manufactured using cutting-edge technology and designed to suppress all solid-borne acoustic pollution.

The **A4MIXTO-H 45 V** features a robust steel frame with an innovative dual rotary joint mechanism (**RT-10**). This design enables precise angle adjustment between the two independently functioning metric outputs, providing remarkable versatility. This functionality is crucial in ensuring that the elastic component's compression remains strictly axial, preventing any torsion that could compromise its integrity. By limiting the vectorial degrees of polymer deformation, the system optimizes the elastic component's performance, ultimately enhancing durability and operational efficiency. For instance, in applications that require continuous and precise movement, this mechanism minimizes the risk of structural failure and ensures smooth, reliable operation.



I+D+i

*System registered with the
Spanish Patent and
Trademark Office (OEPM).



REF.	COLOUR	APPLICATION FIELD	LOAD (Kg) MIN-MAX	METRIC
SE-A4MIXTO-H 45 V		HVAC	15 - 45	8

HYBRID System: The result of combining the most advanced polymer with a helical steel spring.

- Helical Spring: Manufactured using steel wire in accordance with **DIN 2095-UNE EN 10270** standards, featuring an anti-corrosion finish and **metallic green epoxy** coating.
- Rubber Polymer: Manufactured by KRAIBURG-TPE for SEÑOR, following UNE-EN ISO 10846-1:2009 standards.

✓ Resonance Frequency: 3-7Hz

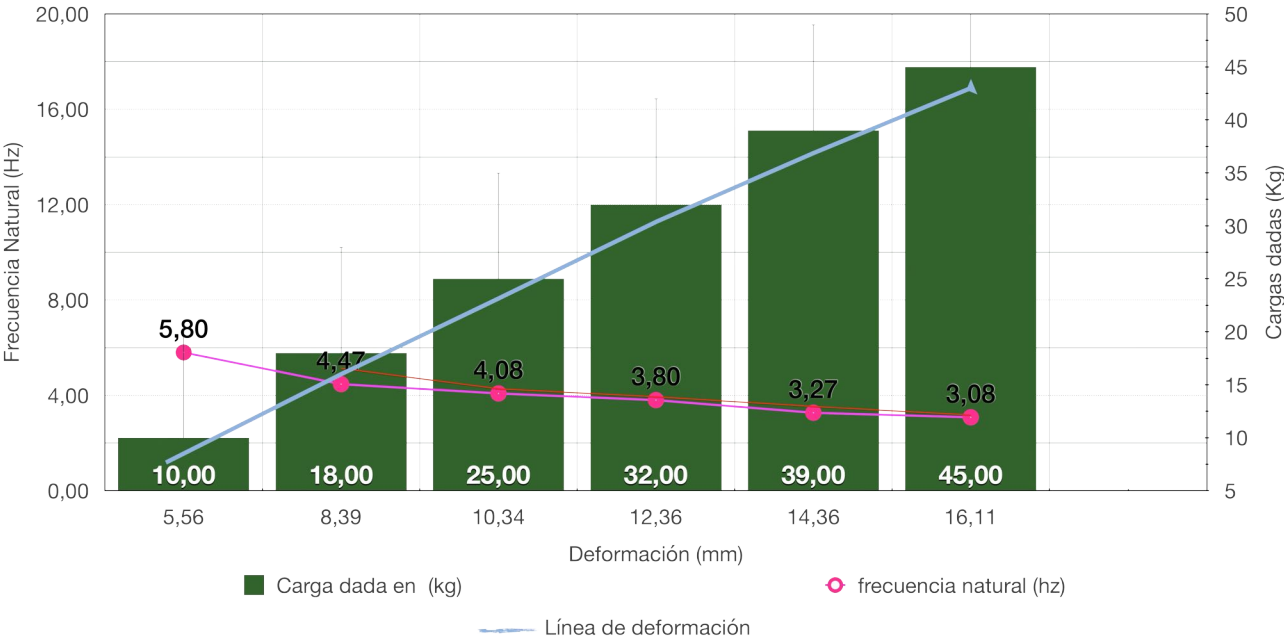
Recommended for USE: with acoustic ceilings, structure suspensions, and machinery with an operational frequency above 350 RPM and a load ranging between 15 and 45 kg per support point.

Dynamic Behaviour and Axial Deformation

Steel helical springs exhibit dynamic stiffness equivalent to their static stiffness, making them ideal for applications that demand predictable mechanical properties. In contrast, viscoelastic materials exhibit more complex behavior. The dynamic stiffness of these materials never equals their static stiffness, as they absorb and dissipate energy, adapting to the frequency and magnitude of vibrations. To fully understand this phenomenon, the dynamic behavior of viscoelastic materials cannot be determined through theoretical calculations alone; it requires specific laboratory testing to ensure accurate data for industrial applications.

TABLE AND GRAPH OF LAB RESULTS

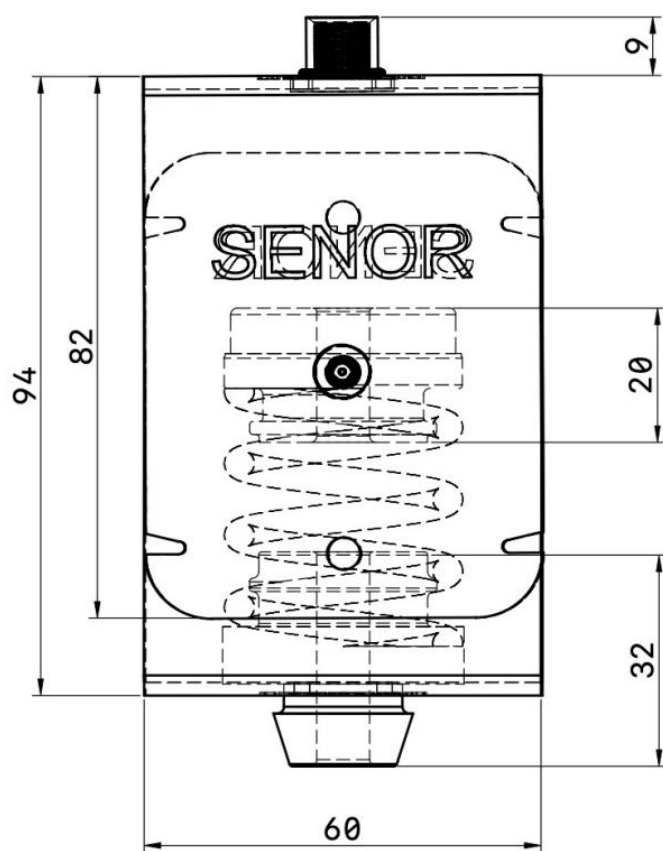
LOAD (Kg)	DEFORMATION (mm)	RESONANCE FREQUENCY (Hz)	SWEEP (Hz)	% SOUNDPROOFING
10	5,56	5,80	50	98,64
18	8,39	4,47		99,19
25	10,34	4,08		99,33
32	12,36	3,80		99,42
39	14,36	3,27		99,57
45	16,11	3,08		99,62



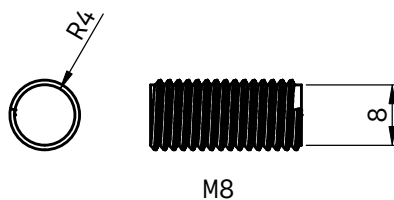
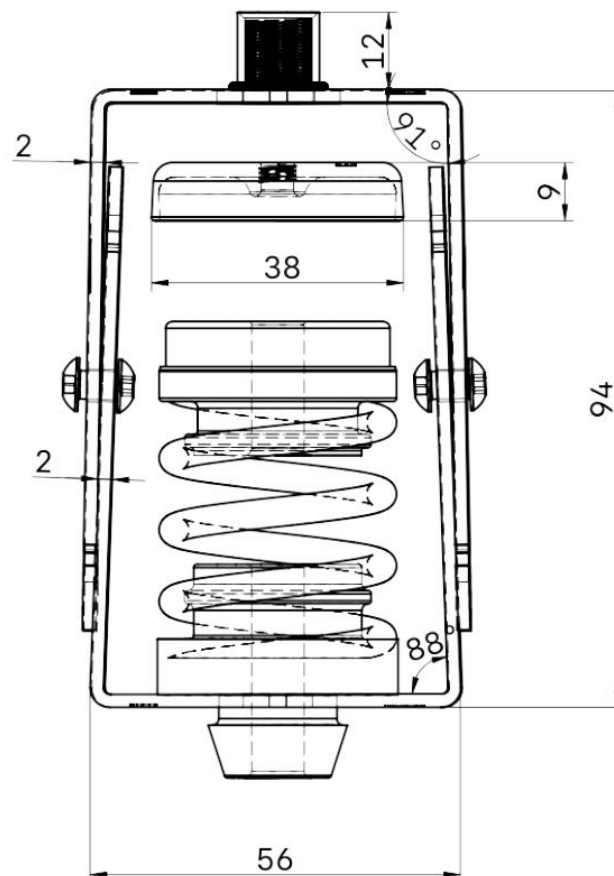
Dimensions

You'll be surprised by its performance! It's the ideal damper for equipment suspension. Say NO to noise.

**VISTA
LATERAL**



**VISTA
FRONTAL**



KEY Features

A4MIXTO-H 45 V is the most powerful damper on the market for suspending equipment. It is the present and future solution for noisy spaces.

Our engineers work every day to develop new solutions for the future.

A: The TC4/GPN Rubber Top Cap is distinguished by its design with an extended collar, an innovative feature that prevents unwanted contact between the threaded rod and the steel housing. This is critical for ensuring both the durability and performance of the system in which it is used. This component serves not only as a physical decoupler but also plays a pivotal role in vibration damping. Its ability to effectively reduce vibrations in the mid-to-high-frequency range (measured in hertz, Hz) makes it an ideal solution for applications where stability and smooth operation are paramount. Furthermore, its design guarantees the proper seating of the helical wire of the spring, enhancing the overall functioning of the mechanism, preventing premature wear, and extending the service life of the components involved.

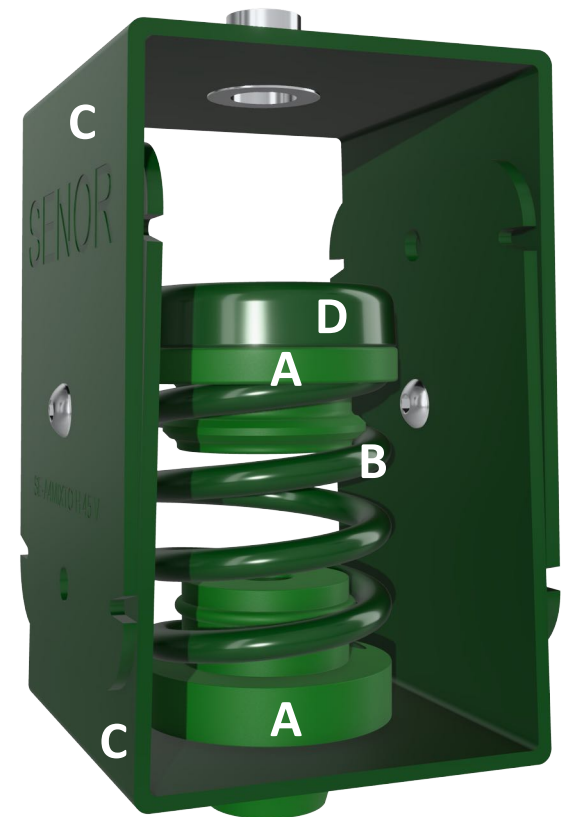
B: The Steel Helical Spring is recognized for its ability to effectively eliminate vibro-mechanical energy contamination, particularly in the mid and low-frequency ranges, typically within the hertz (Hz) spectrum. This spring is designed to absorb and dissipate unwanted vibrations, making it an ideal solution for applications where stability and noise control are critical.

C: The STEEL housing is crafted from high-quality galvanized steel, specifically of type Dx51d + Z275, providing excellent corrosion resistance and long-lasting durability in harsh environments. With a thickness of 2 mm, this structure not only offers substantial rigidity to the system but also plays a vital role in the axial compression of the elastic components, ensuring they maintain optimal performance and stability under load. This robustness is crucial for industrial applications requiring safe and efficient handling of dynamic forces.

D: CN The Leveling Cup is made from DC04 deepdrawing steel, compliant with the EN10131 steel standard, and has a thickness of 1.5 mm. It is designed to withstand heavy loads.

Note:

All metal components are treated with an anti-corrosion coating to prevent material corrosion.



SENOR A4MIXTO-H 45 V

 Youtube
SENOR Aisladores Acústicos



Application Mode

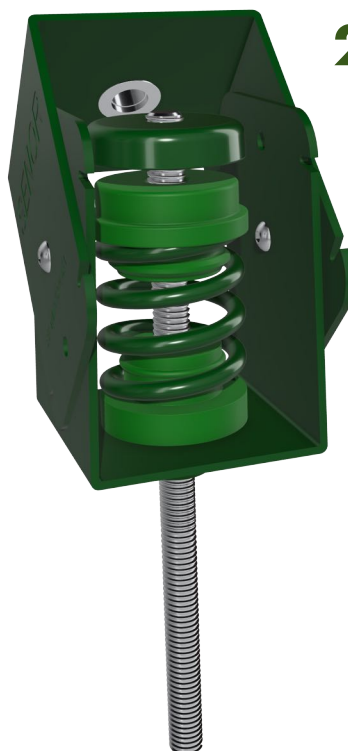
1.

Bend the casing.



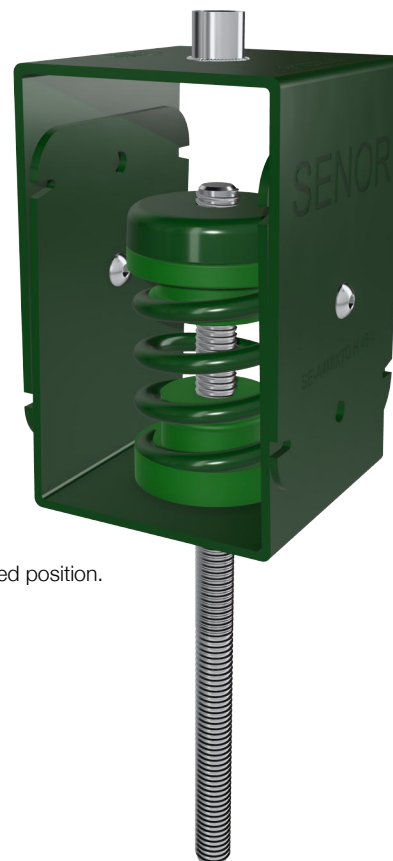
2.

Screw the cup onto the rod previously inserted into the bottom of the acoustic insulator.



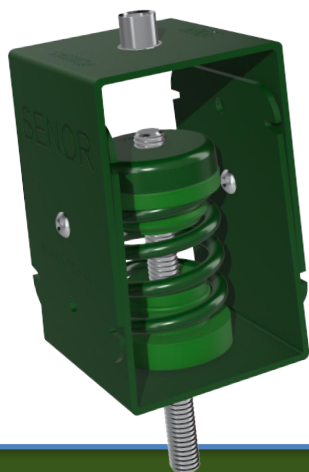
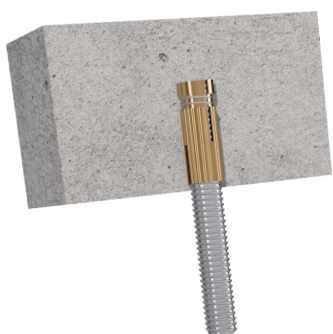
3.

Return the casing to the desired position.



4.

Secure the acoustic insulator directly to the floor slab.

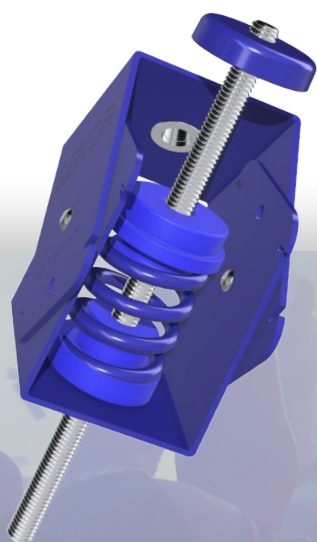
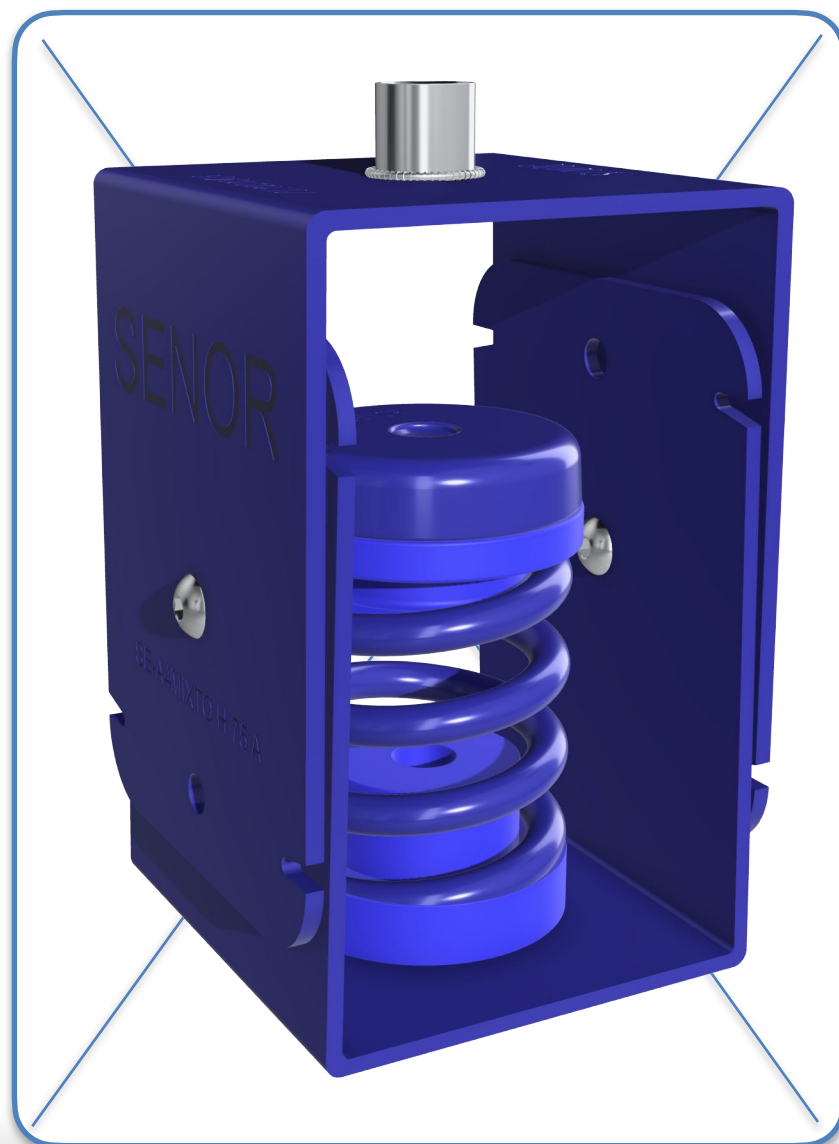


SEÑOR A4MIXTO-H 75 A

HYBRID DAMPER WITH DOUBLE METRIC OUTLET AND ANGLE CORRECTOR FOR SUSPENDING HVAC EQUIPMENT

It is a high-performance, innovative, and upgraded **HYBRID** damper. Manufactured using cutting-edge technology and designed to suppress all solid-borne acoustic pollution.

The **A4MIXTO-H 75 A** features a robust steel frame with an innovative dual rotary joint mechanism (**RT-10**). This design enables precise angle adjustment between the two independently functioning metric outputs, providing remarkable versatility. This functionality is crucial in ensuring that the elastic component's compression remains strictly axial, preventing any torsion that could compromise its integrity. By limiting the vectorial degrees of polymer deformation, the system optimizes the elastic component's performance, ultimately enhancing durability and operational efficiency. For instance, in applications that require continuous and precise movement, this mechanism minimizes the risk of structural failure and ensures smooth, reliable operation.



I+D+i

*System registered with the
Spanish Patent and
Trademark Office (OEPM).

Recommended for USE: with acoustic ceilings, structure suspensions, and machinery with an operational frequency above 350 RPM and a load ranging between 30 and 75 kg per support point.

REF	COLOUR	APPLICATION FIELD	LOAD (Kg) MIN-MAX	METRIC
SE-A4MIXTO-H 75 A		HVAC	30 - 75	8

HYBRID System: The result of combining the most advanced polymer with a helical steel spring.

- Helical Spring: Manufactured using steel wire in accordance with **DIN 2095-UNE EN 10270** standards, featuring an anti-corrosion finish and **metallic blue epoxy** coating.
- Rubber Polymer: Manufactured by KRAIBURG-TPE for SEÑOR, following UNE-EN ISO 10846-1:2009 standards.

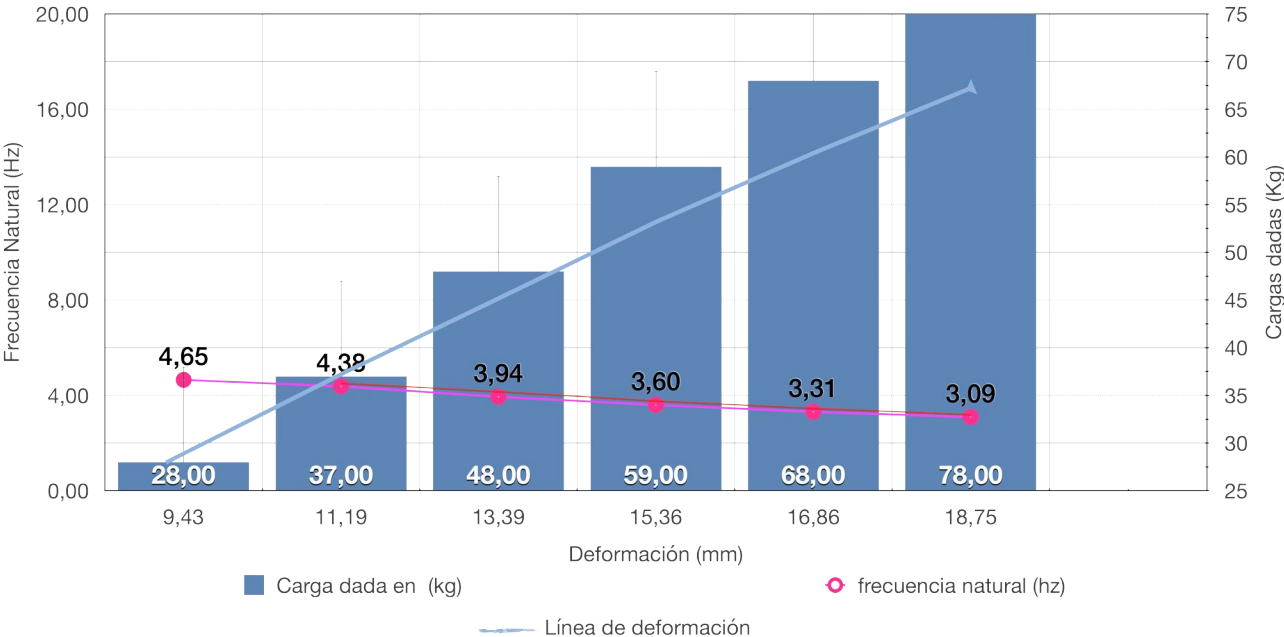
✓ Resonance Frequency: 3-7Hz

Dynamic Behaviour and Axial Deformation

Steel helical springs exhibit dynamic stiffness equivalent to their static stiffness, making them ideal for applications that demand predictable mechanical properties. In contrast, viscoelastic materials exhibit more complex behavior. The dynamic stiffness of these materials never equals their static stiffness, as they absorb and dissipate energy, adapting to the frequency and magnitude of vibrations. To fully understand this phenomenon, the dynamic behavior of viscoelastic materials cannot be determined through theoretical calculations alone; it requires specific laboratory testing to ensure accurate data for industrial applications.

TABLE AND GRAPH OF LAB RESULTS

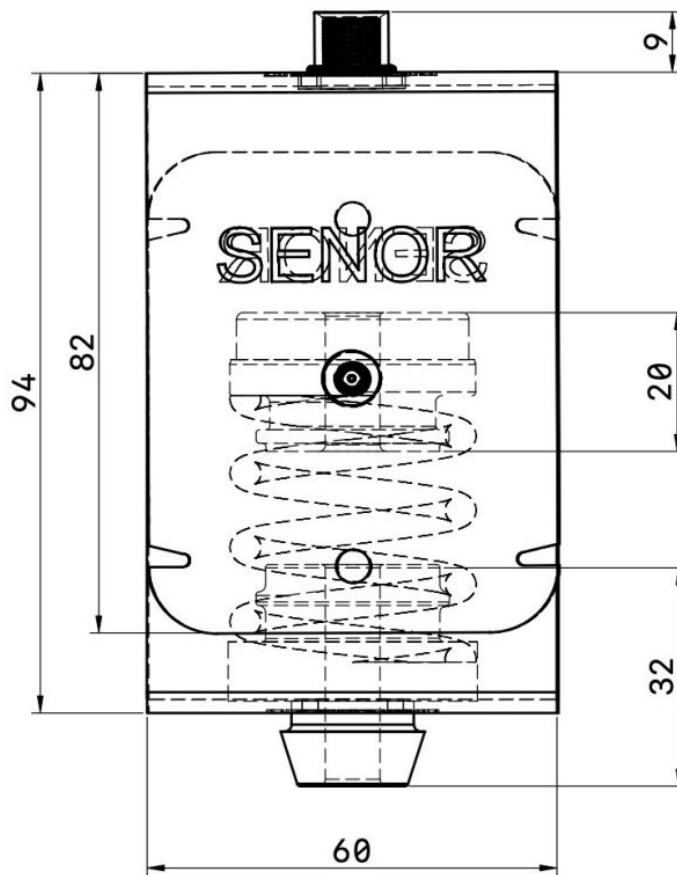
LOAD (Kg)	DEFORMATION (mm)	RESONANCE FREQUENCY (Hz)	SWEEP (Hz)	% SOUNDPROOFING
28	9,43	4,65	50	99,13
37	11,19	4,38		99,23
48	13,39	3,94		99,38
59	15,36	3,60		99,48
68	16,86	3,31		99,56
78	18,75	3,09		99,62



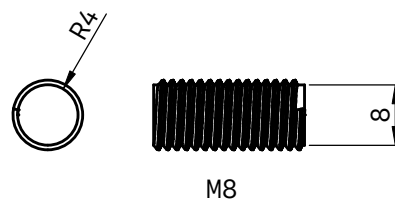
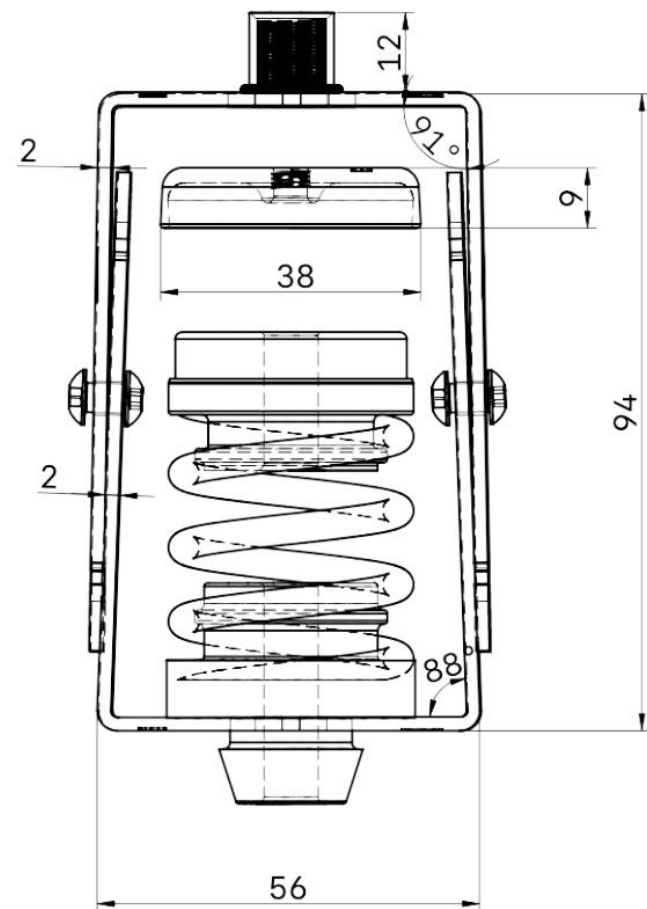
Dimensions

You'll be surprised by its performance! It's the ideal damper for equipment suspension. Say NO to noise.

**VISTA
LATERAL**



**VISTA
FRONTAL**



KEY Features

A4MIXTO-H 75 A is the most powerful damper on the market for suspending equipment. It is the present and future solution for noisy spaces.

Our engineers work every day to develop new solutions for the future.

A: The TC5/EXN Rubber Top Cap is distinguished by its design with an extended collar, an innovative feature that prevents unwanted contact between the threaded rod and the steel housing. This is critical for ensuring both the durability and performance of the system in which it is used. This component serves not only as a physical decoupler but also plays a pivotal role in vibration damping. Its ability to effectively reduce vibrations in the mid-to-high-frequency range (measured in hertz, Hz) makes it an ideal solution for applications where stability and smooth operation are paramount. Furthermore, its design guarantees the proper seating of the helical wire of the spring, enhancing the overall functioning of the mechanism, preventing premature wear, and extending the service life of the components involved.

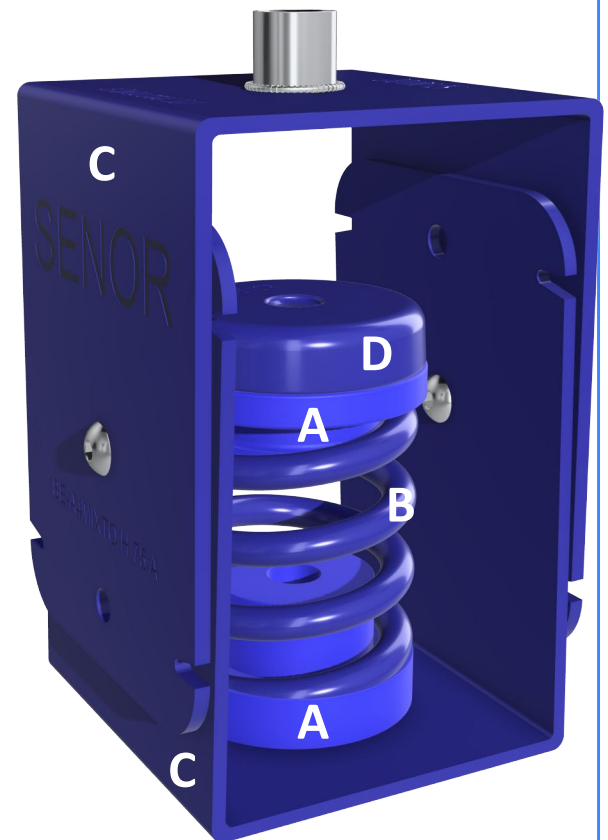
B: The Steel Helical Spring is recognized for its ability to effectively eliminate vibro-mechanical energy contamination, particularly in the mid and low-frequency ranges, typically within the hertz (Hz) spectrum. This spring is designed to absorb and dissipate unwanted vibrations, making it an ideal solution for applications where stability and noise control are critical.

C: The STEEL housing is crafted from high-quality galvanized steel, specifically of type Dx51d + Z275, providing excellent corrosion resistance and long-lasting durability in harsh environments. With a thickness of 2 mm, this structure not only offers substantial rigidity to the system but also plays a vital role in the axial compression of the elastic components, ensuring they maintain optimal performance and stability under load. This robustness is crucial for industrial applications requiring safe and efficient handling of dynamic forces.

D: CN The Leveling Cup is made from DC04 deepdrawing steel, compliant with the EN10131 steel standard, and has a thickness of 1.5 mm. It is designed to withstand heavy loads.

Note:

All metal components are treated with an anti-corrosion coating to prevent material corrosion.



SENR A4MIXTO-H 75 A

 **Youtube**
SENR Acoustic Dampers

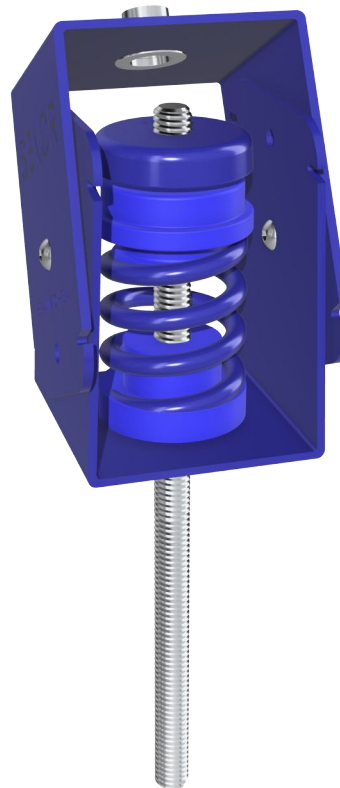


Application Mode



1.

Bend the casing.

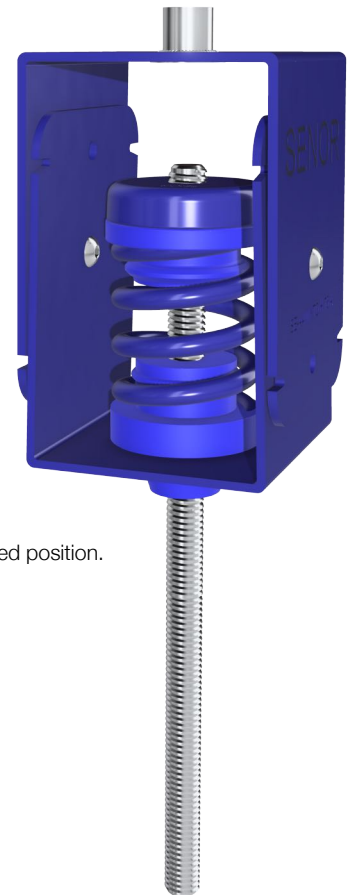


2.

Screw the cup onto the rod previously inserted into the bottom of the acoustic insulator..

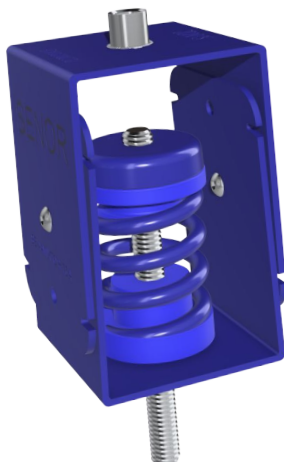
3.

Return the casing to the desired position.



4.

Secure the acoustic insulator directly to the floor slab.

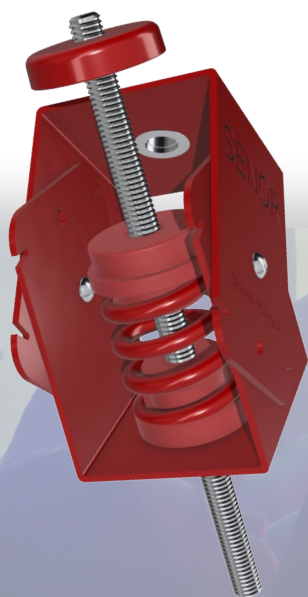
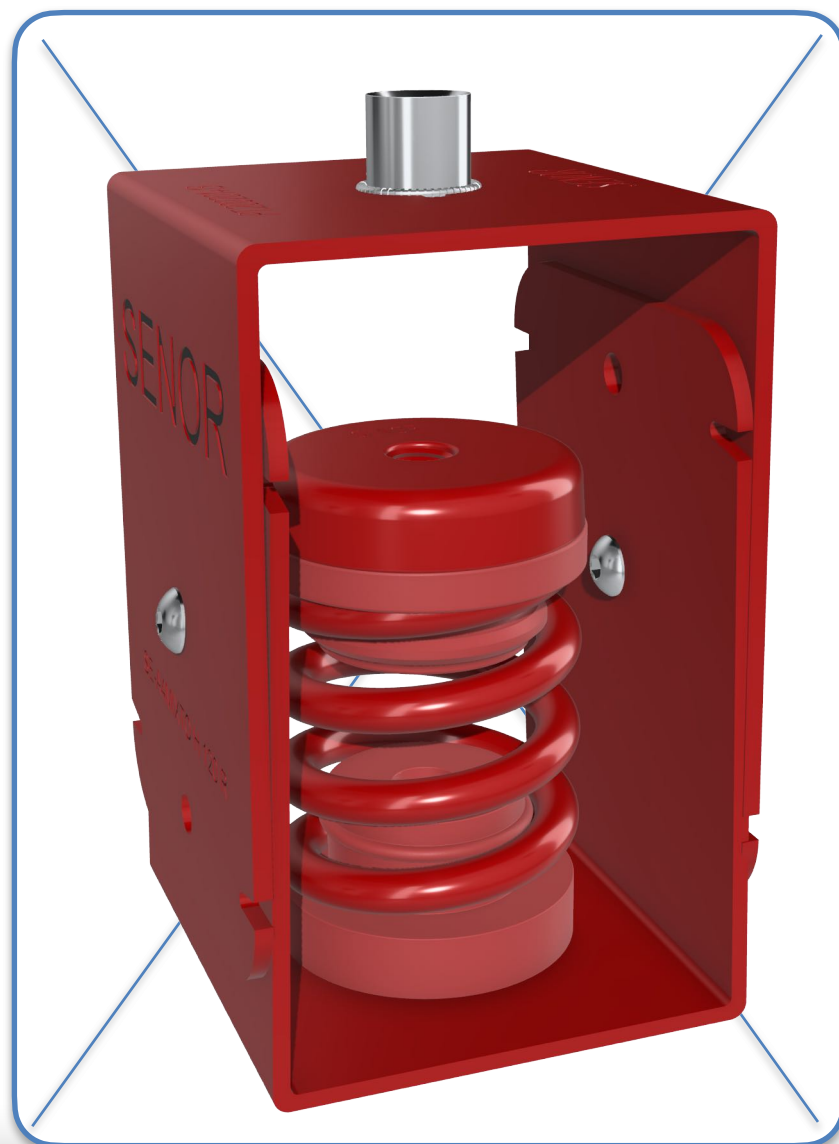


SEÑOR A4MIXTO-H 120 R

HYBRID DAMPER WITH DOUBLE METRIC OUTLET AND ANGLE CORRECTOR FOR SUSPENDING HVAC EQUIPMENT

It is a high-performance, innovative, and upgraded **HYBRID** damper. Manufactured using cutting-edge technology and designed to suppress all solid-borne acoustic pollution.

The **A4MIXTO-H 120 R** features a robust steel frame with an innovative dual rotary joint mechanism (**RT-10**). This design enables precise angle adjustment between the two independently functioning metric outputs, providing remarkable versatility. This functionality is crucial in ensuring that the elastic component's compression remains strictly axial, preventing any torsion that could compromise its integrity. By limiting the vectorial degrees of polymer deformation, the system optimizes the elastic component's performance, ultimately enhancing durability and operational efficiency. For instance, in applications that require continuous and precise movement, this mechanism minimizes the risk of structural failure and ensures smooth, reliable operation.



I+D+i

*System registered with the
Spanish Patent and
Trademark Office (OEPM).

REF	COLOUR	APPLICATION FIELD	LOAD (Kg) MIN-MAX	METRIC
SE-A4MIXTO-H 120 R		HVAC	60 - 120	8

HYBRID System: The result of combining the most advanced polymer with a helical steel spring.

- Helical Spring: Manufactured using steel wire in accordance with **DIN 2095-UNE EN 10270** standards, featuring an anti-corrosion finish and **metallic red epoxy** coating.
- Rubber Polymer: Manufactured by KRAIBURG-TPE for SEÑOR, following UNE-EN ISO 10846-1:2009 standards.

✓ Resonance Frequency: 3-7Hz

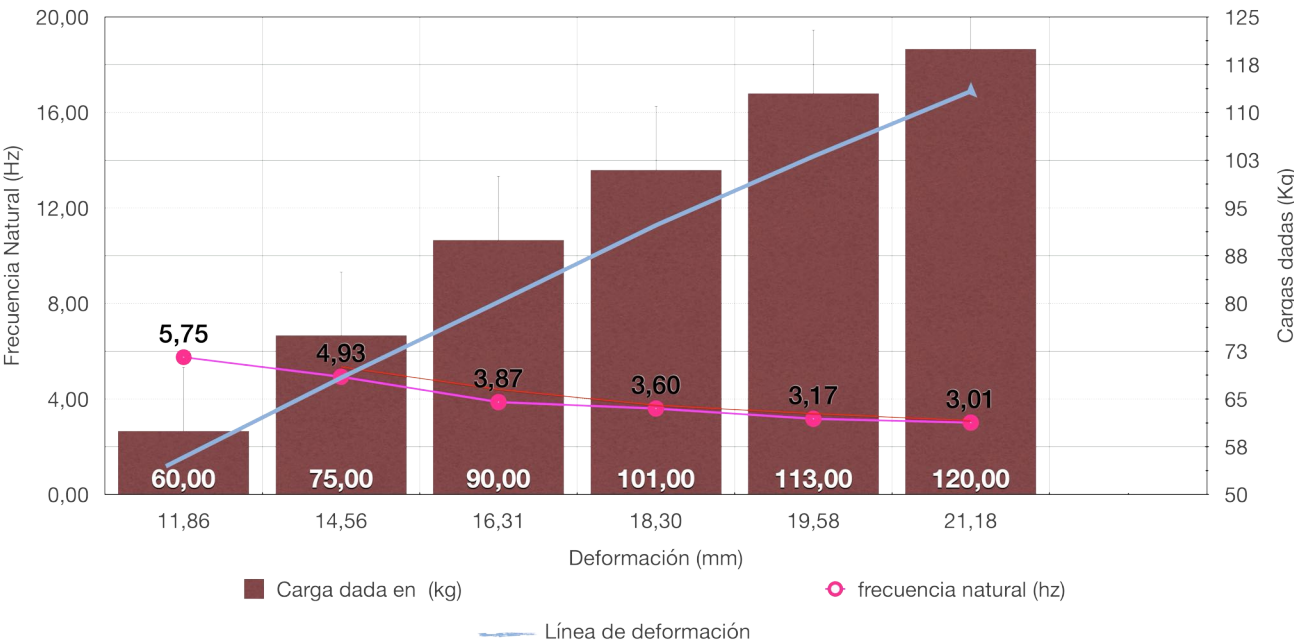
Recommended for USE: with acoustic ceilings, structure suspensions, and machinery with an operational frequency above 350 RPM and a load ranging between 60 and 120 kg per support point.

Dynamic Behaviour and Axial Deformation

Steel helical springs exhibit dynamic stiffness equivalent to their static stiffness, making them ideal for applications that demand predictable mechanical properties. In contrast, viscoelastic materials exhibit more complex behavior. The dynamic stiffness of these materials never equals their static stiffness, as they absorb and dissipate energy, adapting to the frequency and magnitude of vibrations. To fully understand this phenomenon, the dynamic behavior of viscoelastic materials cannot be determined through theoretical calculations alone; it requires specific laboratory testing to ensure accurate data for industrial applications.

TABLE AND GRAPH OF LAB RESULTS

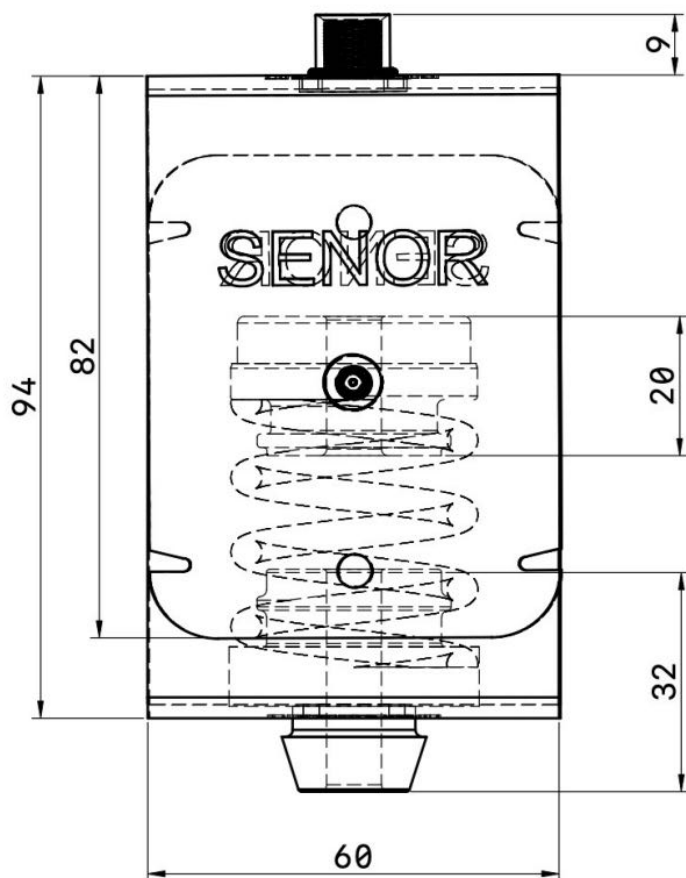
LOAD (Kg)	DEFORMATION (mm)	RESONANCE FREQUENCY (Hz)	SWEEP (Hz)	% SOUNDPROOFING
60	11,86	5,75	50	98,66
75	14,56	4,93		99,02
90	16,31	3,87		99,40
101	18,30	3,60		99,48
113	19,58	3,17		99,60
120	21,18	3,01		99,64



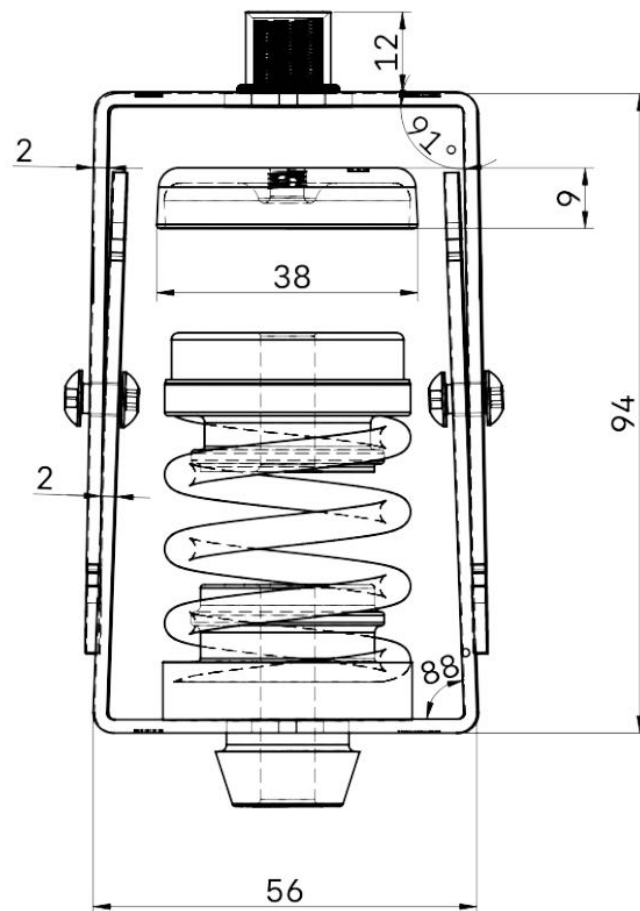
Dimensions

You'll be surprised by its performance! It's the ideal damper for equipment suspension. Say NO to noise.

**VISTA
LATERAL**



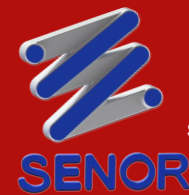
**VISTA
FRONTAL**



M8

SENOR A4MIXTO-H 120 R

 Youtube
SENOR Acoustic Dampers



SENOR Products
Suspended Machines

KEY Features

A4MIXTO-H 120 R is the most powerful damper on the market for suspending equipment. It is the present and future solution for noisy spaces.

Our engineers work every day to develop new solutions for the future.

A: The TC6/EXN Rubber Top Cap is distinguished by its design with an extended collar, an innovative feature that prevents unwanted contact between the threaded rod and the steel housing. This is critical for ensuring both the durability and performance of the system in which it is used. This component serves not only as a physical decoupler but also plays a pivotal role in vibration damping. Its ability to effectively reduce vibrations in the mid-to-high-frequency range (measured in hertz, Hz) makes it an ideal solution for applications where stability and smooth operation are paramount. Furthermore, its design guarantees the proper seating of the helical wire of the spring, enhancing the overall functioning of the mechanism, preventing premature wear, and extending the service life of the components involved.

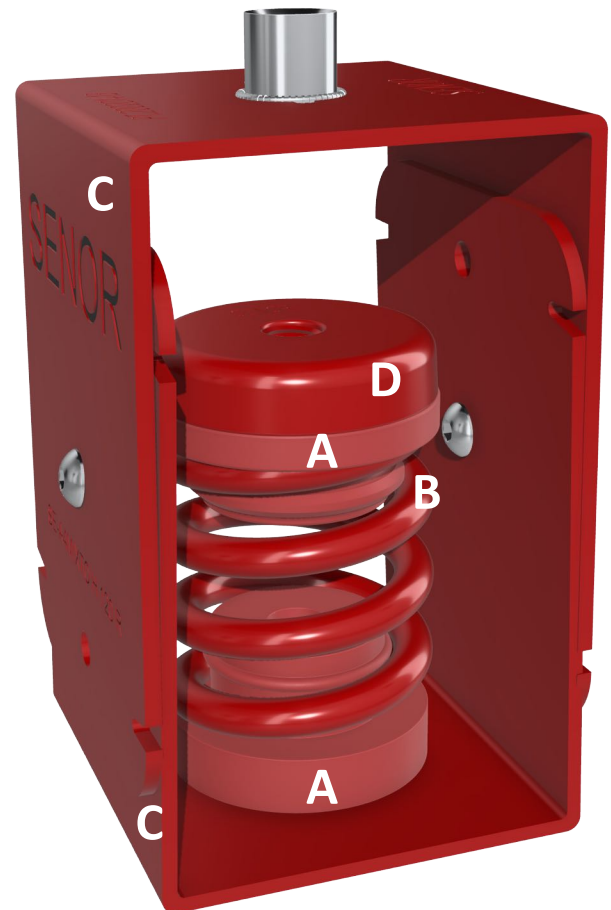
B: The Steel Helical Spring is recognized for its ability to effectively eliminate vibro-mechanical energy contamination, particularly in the mid and low-frequency ranges, typically within the hertz (Hz) spectrum. This spring is designed to absorb and dissipate unwanted vibrations, making it an ideal solution for applications where stability and noise control are critical.

C: The STEEL housing is crafted from high-quality galvanized steel, specifically of type Dx51d + Z275, providing excellent corrosion resistance and long-lasting durability in harsh environments. With a thickness of 2 mm, this structure not only offers substantial rigidity to the system but also plays a vital role in the axial compression of the elastic components, ensuring they maintain optimal performance and stability under load. This robustness is crucial for industrial applications requiring safe and efficient handling of dynamic forces.

D: CN The Leveling Cup is made from DC04 deepdrawing steel, compliant with the EN10131 steel standard, and has a thickness of 1.5 mm. It is designed to withstand heavy loads.

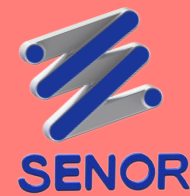
Note:

All metal components are treated with an anti-corrosion coating to prevent material corrosion.



SENROR A4MIXTO-H 120 R

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SENROR Acoustic Dampers

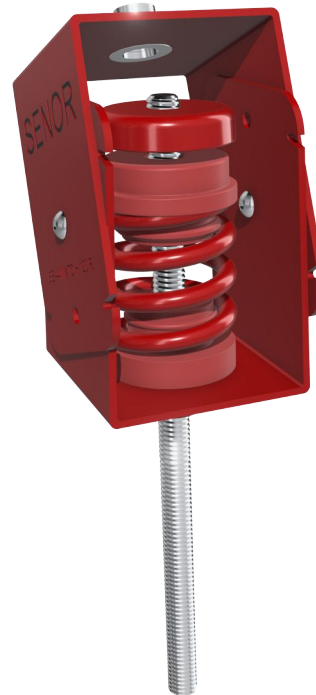


SENROR Products
Suspended Machines

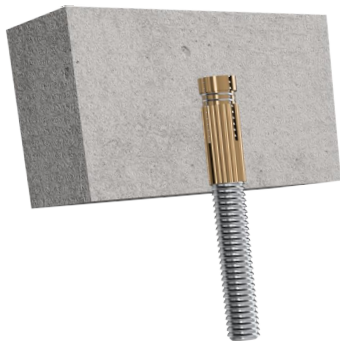
Application Mode



1.
Bend the casing.



2.
Screw the cup onto the rod previously inserted into the bottom of the acoustic insulator.



3.
Return the casing to the desired position.



4.
Secure the acoustic insulator directly to the floor slab.