VIBRABSORBER

by getzner
+sylomer®

GENERAL CATALOGUE

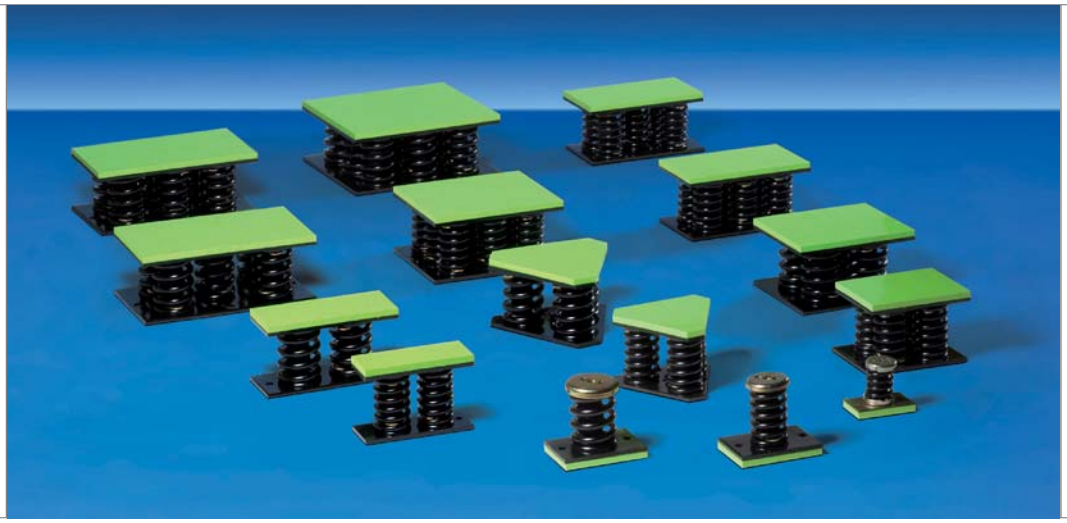
2010

MECANOCAUCHO

Aplicaciones Mecánicas del Caucho, S.A.

www.mecanocaucho.com

Index



Since 1969 AMC MECANOCAUCHO®, has pioneered the manufacture and design of products for the reduction of integral vibrations from structures and air-borne noise.

AMC Asteasu Building

1969

1995

Quality Commitment

We create comprehensive ranges of anti-vibration mounts based on metal to rubber bonded and moulded rubber spring for the effective reduction of structure borne noise.

We reduce noise thanks to our AKUSTIKABSORBER® noise absorbtion and damping composites.

Products marketed by AMC-MECANOCAUCHO are all manufactured In House.

Stiffness and levels of adhesion are controlled ensuring Traceability as required by ISO Standards.

AMC MECANOCAUCHO® is officially approved by NATO under the ID number NCAGE 0230 B- as a compliant Supplier.

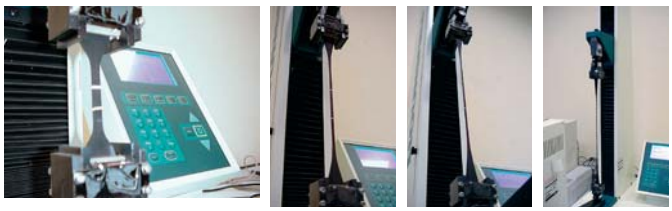

DET NORSKE VERITAS
CERTIFICAT DE SYSTÈME DE GESTION
APLICACIONES MECÁNICAS DEL CAUCHO, S.A.
ISO 9001:2000

ISO 9001:2000


DET NORSKE VERITAS
TYPE APPROVAL CERTIFICATE
Flexible Mounts for Propulsion or Auxiliary Machinery
Marine Mounting
Aplicaciones Mecánicas del Caucho, S.A.

Marine TYPE approval

Adhesion Test

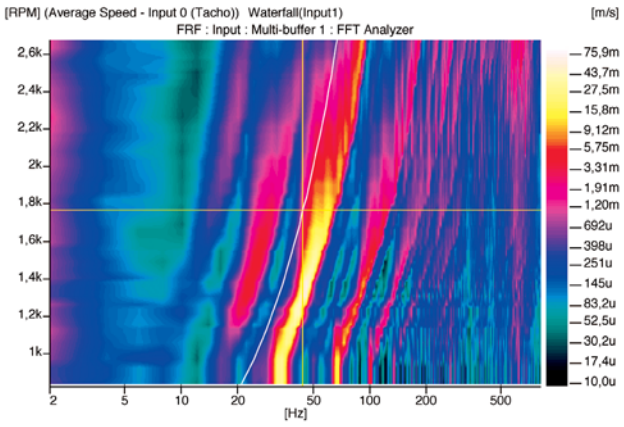


Extensometer

Rheometer

All machinery, which, by virtue of its design, has reciprocating or rotating parts, creates vibration to some degree through the imbalance of the moving parts.

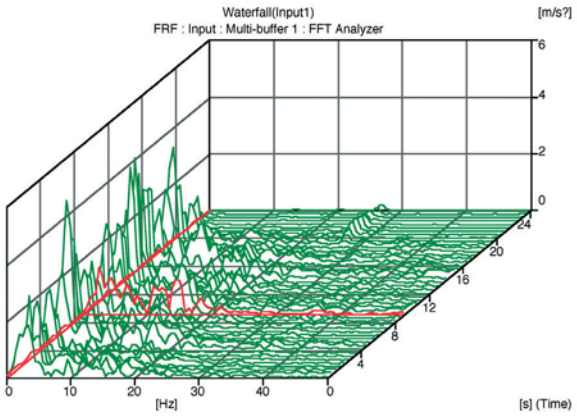
This vibration produced by a machine leads to different problems, such as a reduction in the machine's useful life through part wear, plus the transmission of this vibration to other non-insulated adjacent structures, giving rise to problems of noise and vibration transmission.

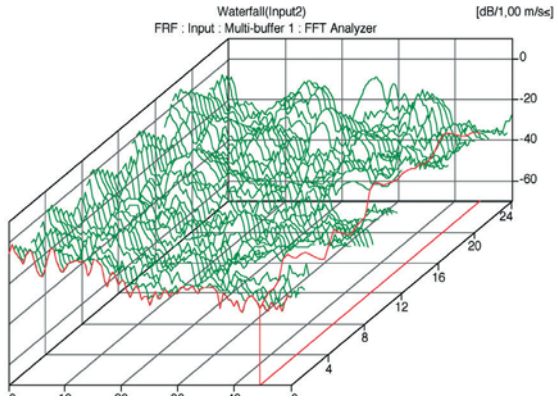


FFT analysis of orders for a diesel engine

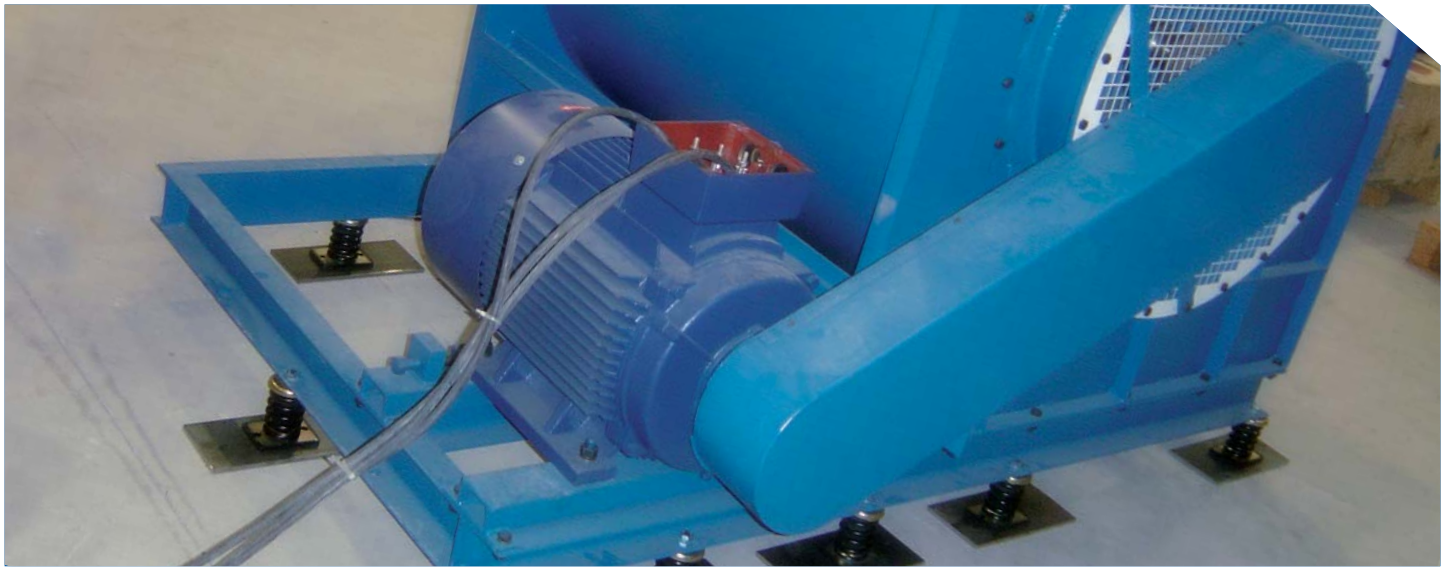
For over 40 years, AMC MECANOCAUCHO ® has been developing the "AMC MECANOCAUCHO ®" range of rubber-metal anti-vibration supports which can solve problems like the ones described above in all types of machinery, mobile or fixed. Thus protecting people and the environment from harmful effects of noise and vibration.

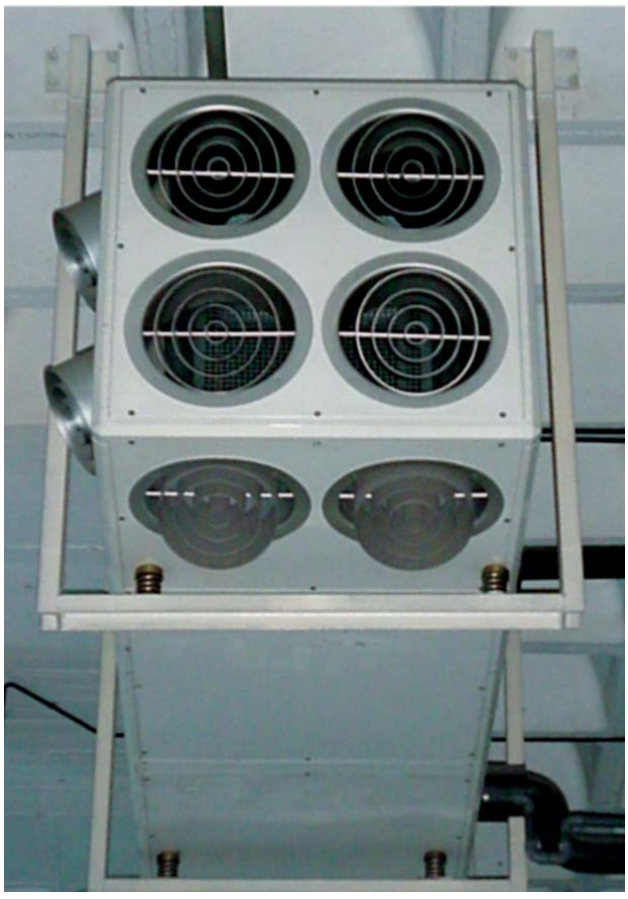
3D graphic of the vertical acceleration of a radiator





Applications in various sectors





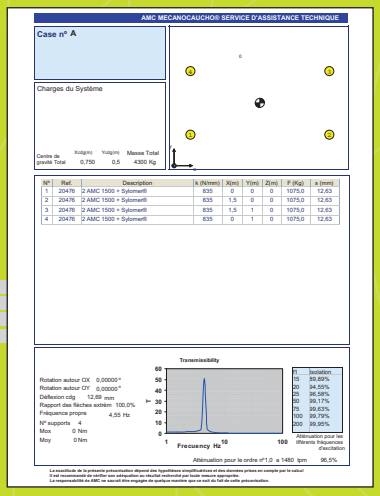
Ventilation system insulated with VIBRABSORBER®

Our products are used in sectors such as:

- Generation of electrical energy
- Air compressors and Blowers
- Pumps and Pumping equipment
- Industrial vehicles
- Machine Tools
- Marine propulsion and auxiliary equipment
- Agricultural and construction equipment machinery
- Acoustic isolation of premises

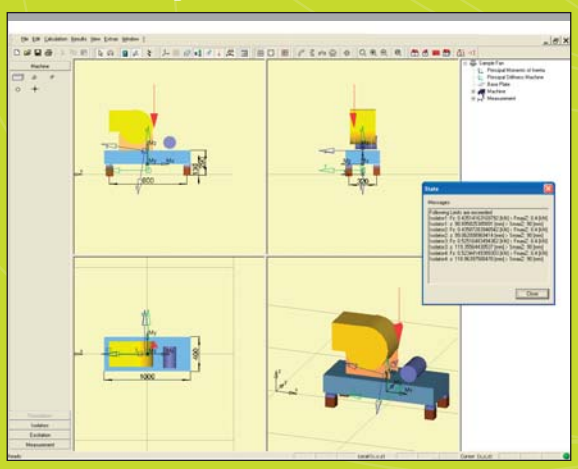
1. Calculation

AMC MECANOCAUCHO ® calculates anti-vibration solutions by taking into account data such as weight, mount positions, type of machine, C. of G., frequency of excitation, etc...



Calculation of 1 degree of freedom

Anti-vibration calculation with more than one degree of freedom

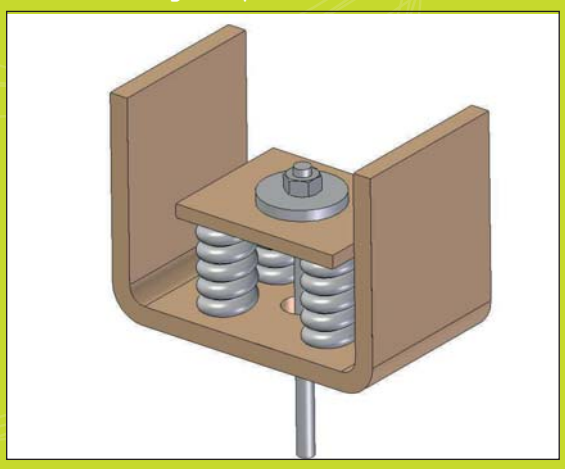


2. Design

After studying each client's specific needs for the application and the isolation performance required, AMC MECANOCAUCHO ® can design new products where conditions permit.

Vibrasorber Anti-seismic Supports

3D modelling of products



3. Test and dynamic characterisation

AMC MECANOCAUCHO ® continuous development of new products demonstrates its support in R&D. Our laboratory is equipped with the most advanced dynamic testing equipment.

4. Measurement

AMC MECANOCAUCHO ® provides its clients with many years of experience and know how in measuring vibrations and noise in the field so as to reduce machine-produced emissions of noise and vibrations.

Measuring of vibrations

AMC

Engineering

1.- ABC AT A GLANCE

MASS SPRING SYSTEM

A mass spring system may be represented by a mass "M", excited by a force "F" and supported on an elastic stiffness element "K" with a dampening factor "C".

The frequency of the mass spring system is equal to:

$$f_o = \frac{1}{2\cdot\pi}\sqrt{\frac{k}{M}}$$

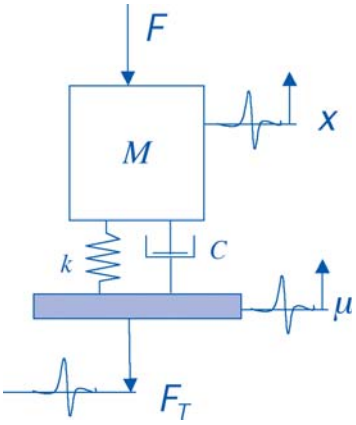


figure 3

K = N/m
M= in Kg
Fo in Hz
C in Ns/m

The effectiveness of the suspension may be measured by transmissibility, i.e. by the force which is transmitted by the machine to the ground or floor. It is defined as the ratio between the force transmitted to the ground, FOT, and the original force produced by the vibration FO.

Another practical term is often used to describe the efficacy of an anti-vibra $E = (1-T)\times 100\%$ of insulation, which is:

Transmissibility equation:

Taking the following parameters into account:

Excitation $x = x_o \sin(\omega t + \vartheta)$

$F = F_{To} \sin(\omega t + \vartheta)$

Response $\mu = \mu_o \sin\omega t$

$F = F_o \sin\omega t$

Own Pulsation: $\omega_o = \sqrt{\frac{k}{M}}$ for $C \cong 0$

and natural frequency of $f_o = \frac{1}{2\cdot\pi}\sqrt{\frac{k}{M}}$

The damping parameters are: $C_C = 2\cdot$

Where Cc is the critical damping and ξ the damping coefficient. $\xi = \frac{C}{C_C}$

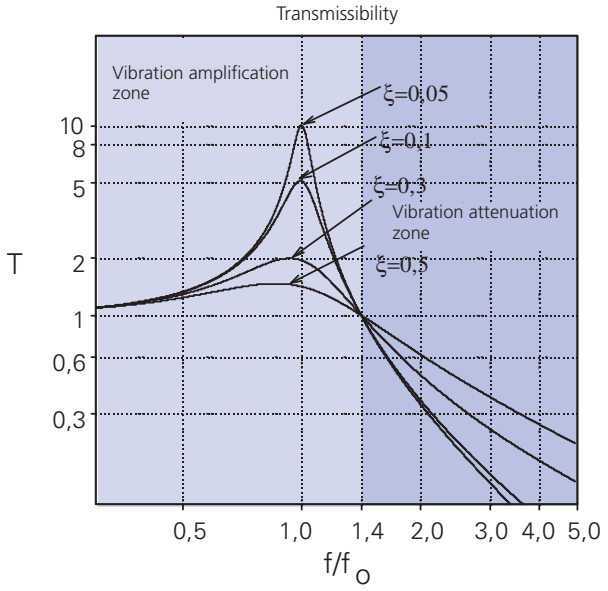
For this system we obtain a transmissibility T and a magnification factor A:

$$T = \frac{x_o}{\mu_o} = \frac{F_{TO}}{F_O} = \sqrt{\frac{1+\left(2\cdot\xi\cdot\frac{\omega}{\omega_o}\right)^2}{\left(1-\frac{\omega^2}{\omega_o^2}\right)^2+\left(2\cdot\xi\cdot\frac{\omega}{\omega_o}\right)^2}}$$

For the case of active $T = \frac{F_{TO}}{F_O}$ and

passive isolations, we will have to $T = \frac{x_o}{\mu_o}$

Figure 5 represents the transmissibility curve of the schematic mass spring system of figure 3.



Examining this curve allows us to reach basic conclusions for an effective isolation.

If the frequency of excitation is $\sqrt{2}$ times less the natural frequency, transmissibility is greater than one, then the force transmitted is greater than the excitation force, there is magnification of the vibrations. When we work in this area, the existing damping in the system is important. The greater the latter, the smaller the magnification of the vibrations will be.

If the frequency of excitation is $\sqrt{2}$ times greater than the natural frequency, transmissibility is less than one, or in other words the force transmitted is less than the force originated in the system, then we are in the damping area.

In order to achieve the greatest isolation, the lowest possible natural frequencies should be sought. There are two ways of doing this:

- By increasing the system mass.
- By reducing the stiffness of the anti-vibration mount.

To increase the efficacy of the isolation in the damping area, it is advisable to have low damping, although weak damping generates greater displacement when passing through the resonance, it is advisable to use a damping coefficient t so that passage through the resonance does not give rise to inadmissible displacement for the machine.

STATIC AND DYNAMIC STIFFNESS

The stiffness of a rubber anti-vibration mount changes when a dynamic force is applied to it. This parameter depends on architecture, the compound used and even the frequency of excitation.

Generally speaking, dynamic stiffness is always greater than static stiffness, so calculations based on static stiffness may lead to wrong conclusions. In some cases it is possible to reach limits of dynamic stiffness which are two and even three times greater than the static stiffness.

DAMPING

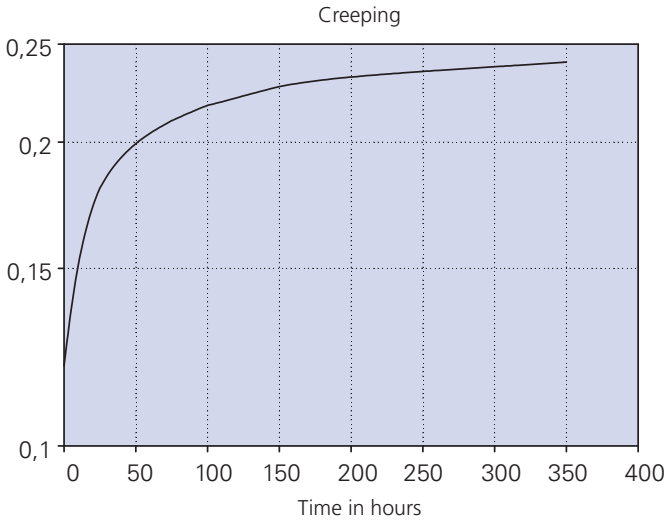
The damping coefficient depends basically on the compound used in manufacturing of the anti-vibration mount. It is a crucial parameter that must be addressed when designing anti-vibration suspensions.

CREEPING AND LONG-TERM BEHAVIOUR

If an elastomeric element is under a static load, this load produces a progressive increase in deformation. This phenomenon may be important in a wide variety of applications, from mounts for buildings to engine mounts. Creeping at a given time t is calculated as:

$$t = \frac{X_1 - X_o}{X_o} \times 100\%$$

And is expressed as a percentage (%) of the initial deformation. This value depends on the geometry of the mount, and above all on the way the rubber is worked.



Designs that use rubber in shear are more conducive to "Creep" than designs which use rubber in compression or shear and compression.

DYNAMIC TESTING MACHINE

Dynamic stiffness can only be established by measurement on a dynamic test bench. Similarly, the damping coefficients of compounds are further values that can be measured with this type of machines.

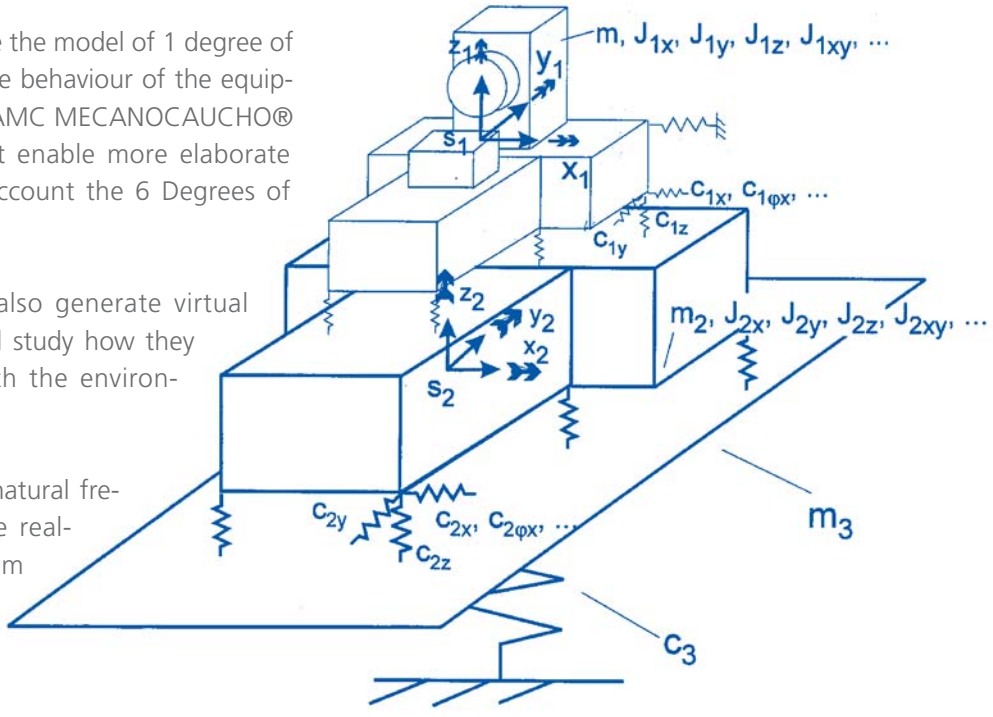
One concept that must be taken into account when designing an anti-vibration mount is its durability. A dynamic testing machine allows us to conduct fatigue tests that reproduce the real working conditions of the part so that its useful life can thus be predicted accurately.

2-ANALYSIS OF SYSTEMS OF MORE THAT ONE DEGREE OF FREEDOM

In actual fact, there are cases where the model of 1 degree of freedom cannot correctly define the behaviour of the equipment to be isolated. In such cases AMC MECANOCAUCHO® engineers have analysis tools that enable more elaborate models to be made taking into account the 6 Degrees of Freedom rules.

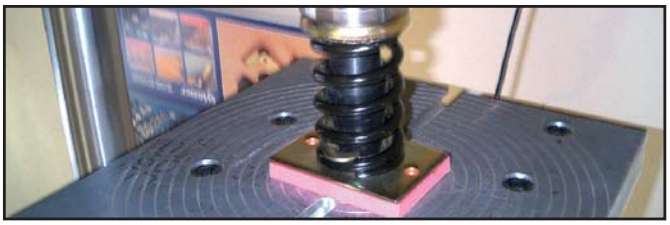
The latest computing tools can also generate virtual models of solid rigid multiples and study how they interact with each other and with the environment.

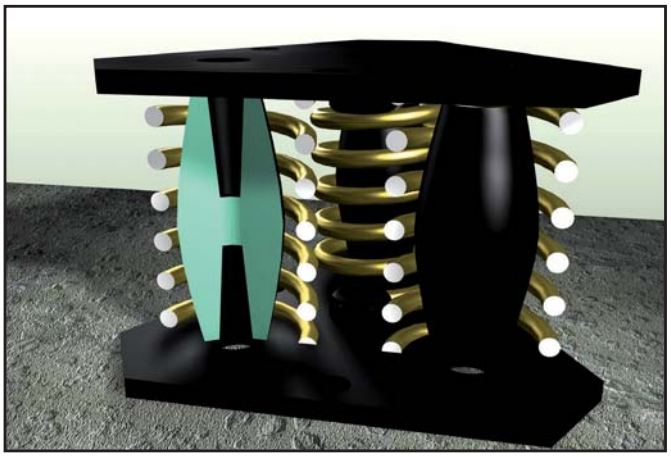
As a result, we can ascertain the natural frequencies of the system which are really important to prevent them from coinciding with the excitation frequencies so as not to have resonance problems.

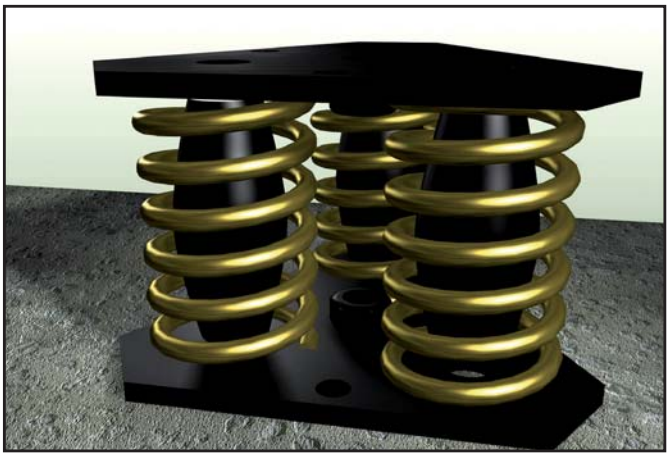


FUNCTION OF INVERTED DOUBLE CONE INSIDE THE SPRING

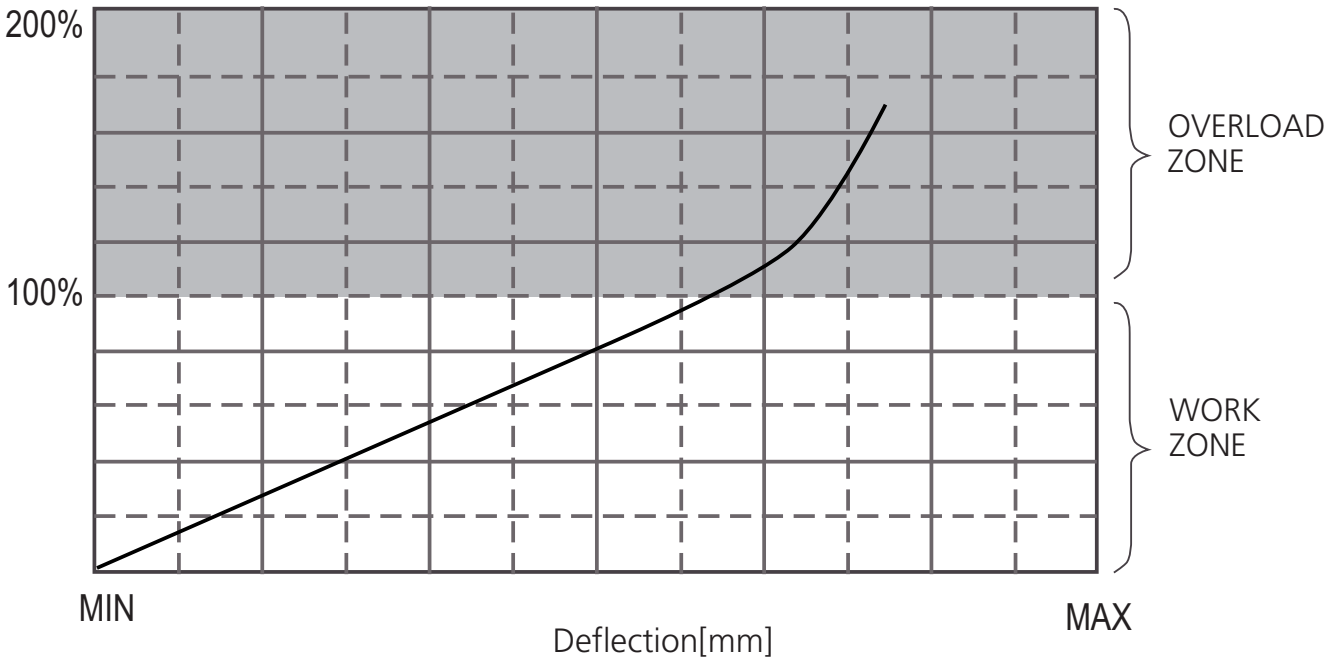
The function of this element is to limit the compression of the spring in case of an unexpected overload, acting as an end-of-stroke buffer

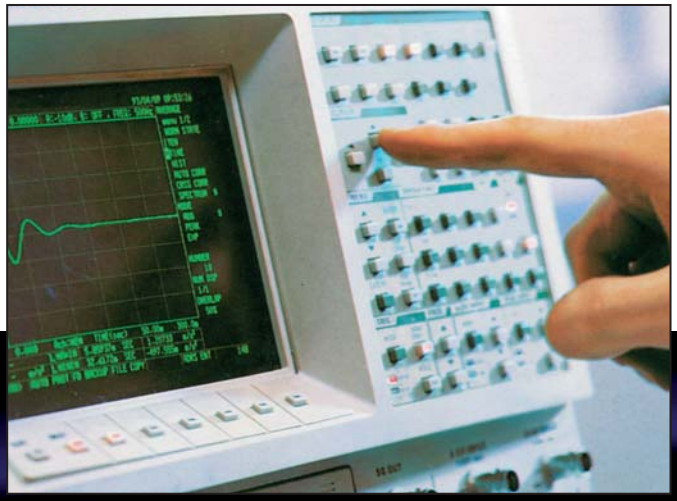






Typical behaviour in compression





THE ADVANTAGES OF THE VIBRABSORBER+ Sylomer® SUPPORTS ARE:

• The Sylomer mat that these dampers incorporate isolates the mid-high frequency vibrations which are transmitted through the coils of metal springs.

• These high and mid-range frequencies, if they are not isolated, are spread throughout the buildings or structures, generating noise.

FAST FOURIER TRANSFORM (FFT) TEST ON FAN WITH VIBRABSORBER+Sylomer®

With the aim to confirm the advantages of applying Sylomer® on our spring system, an analysis of FFT was carried out on fan system of a known international make.

OBJECTIVE OF THE TEST

The objective of this test is to compare the isolation which the Vibrasorber springs offer with or without Sylomer.

MEASURES USED.

Reference of the Machine: FAN Power 20 Kw
Supports used: 1 AMC 250+ Sylomer® P12
Measuring equipment: FFT Pulse, Bruel & Kjaer multi analyser. The spectrums shown in the graphics demonstrate that they are within a frequency range of 0-1000Hz and 1600 lines, represent the vibratory speed.

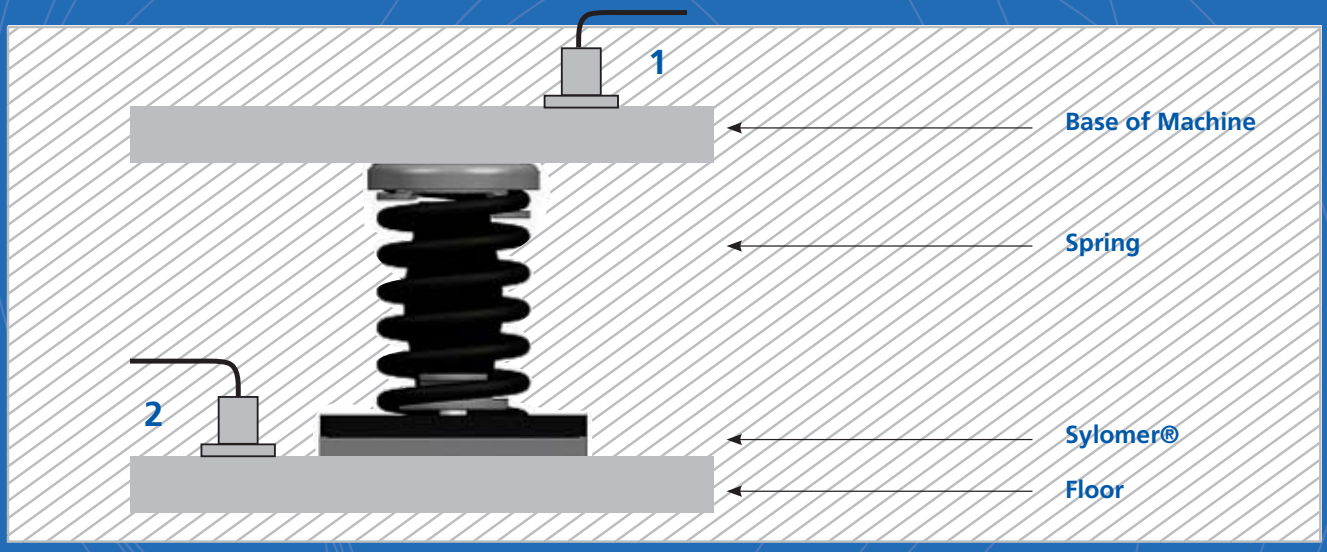
TEST METHOD:

So as to know the isolation of the vibrations for each anti-vibratory phase, the sensors were placed in the following positions:

Position of the sensors:

1.- Machine: The objective is to know the nature of the vibrations of the machine, both their magnitude as well as frequency.
2.- Base of the support: The objective is to know the vibratory isolation achieved by the spring.
3.- Floor: The objective is to know the vibratory isolation achieved by Vibrasorber + Sylomer®.

Fast Fourier Transform Test



PHOTOGRAPHS OF FFT TEST:

1AMC 250

1AMC 250 + Sylomer® P12

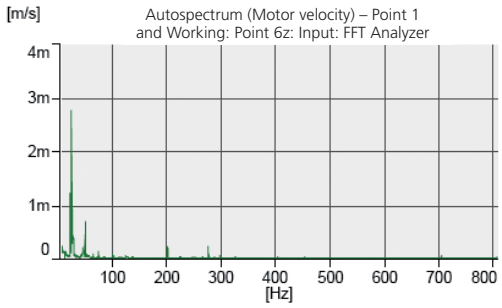
FAST FOURIER TRANSFORM (FFT) TEST ON A CONDENSER UNIT WITH VIBRABSORBER+Sylomer®

RESULTS:

FFT Pulse, Bruel & Kjaer multi analyser. The spectrums shown in the graphics demonstrate that they are within a frequency range of 0-1000Hz and 1600 lines, represent the vibratory speed.

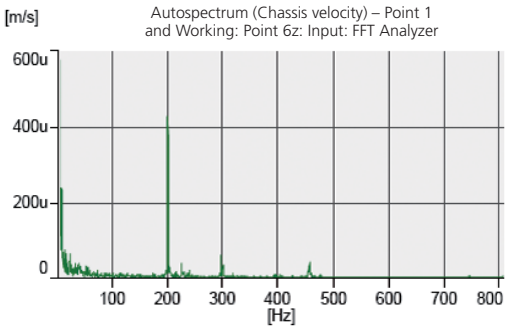
1.- Results on the Machine POINT 1:

The maximum vibration rms velocity is situated at 25Hz followed by another of lesser magnitude at around 50 Hz. High frequency vibrations are also observed which correspond to harmonics and structural frequency responses from the machine.



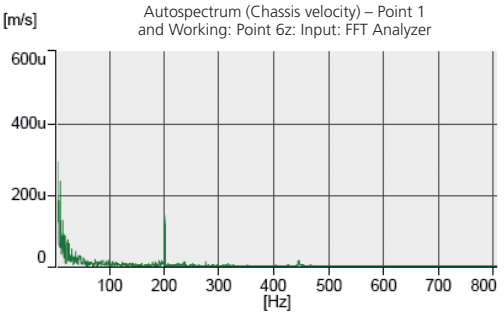
2.- Results on the Machine POINT 2 without Sylomer®:

In this graphic, a reduction can be observed in the predominant peaks. What is most noticeable is that frequencies above 200Hz are transmitted through the coils of the spring. These frequencies from 100 to 500 Hz are considered "audible" frequencies, meaning noise.



3.- Results on the Machine POINT 2 with Sylomer® :

In this graphic, a reduction can be observed in all the peaks. The transmission of "noise" through the coils of the spring is reduced.



CONCLUSION:

The air conditioning machines generate vibrations in a wide frequency spectrum (base frequencies). It is vital that the anti-vibration supports are cable of isolating the low medium or high frequencies to the maximum. The Spring of the Vibrabsorbers is very effective for the low frequencies while Sylomer® is especially interesting to reduce medium and high vibration frequencies also called "structural noise"".

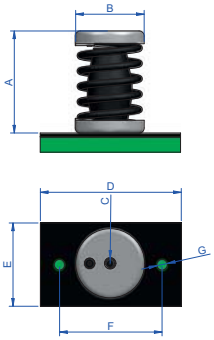
VIBRABSORBER

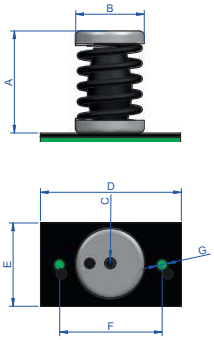
by getzner
+ sylomer®

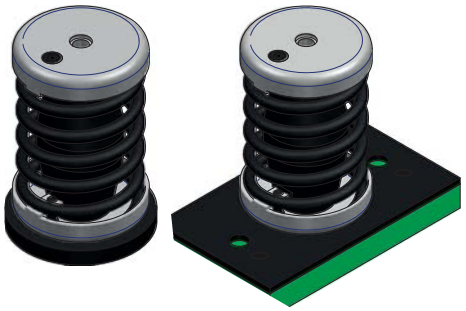
VIBRABSORBER
+ SYLOMER

Vibrabsorber

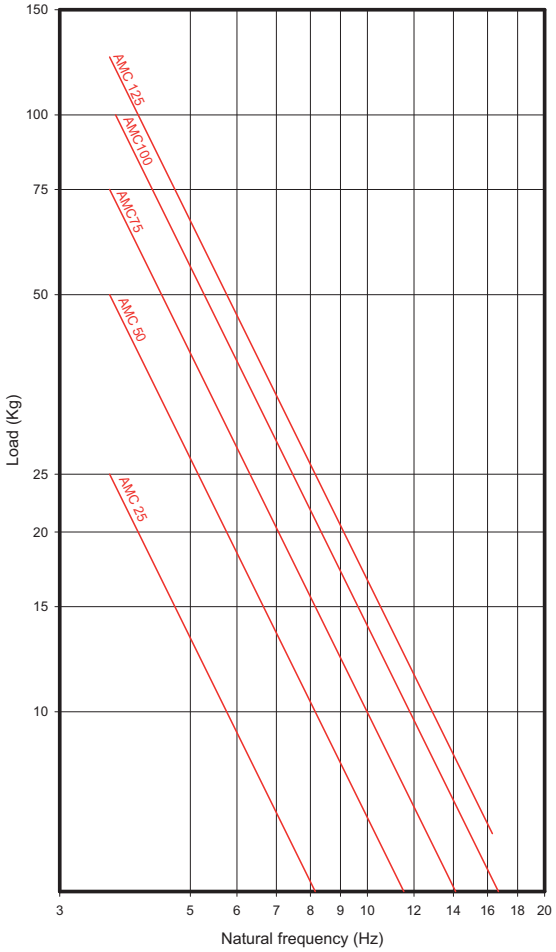
TYPE	A	B	C	D	E	F	CODE
AMC 25	80	54	M-8	0	0	0	20101
AMC 50	80	54	M-8	0	0	0	20103
AMC 75	80	54	M-8	0	0	0	20105
AMC 100	80	54	M-8	0	0	0	20107
AMC 125	80	54	M-8	0	0	0	20300
Round rubber base	0	0	0	0	0	0	20109
Rectangular base	0	0	0	0	0	0	612014
Rectangular base+Sylomer®	0	0	0	0	0	0	20106



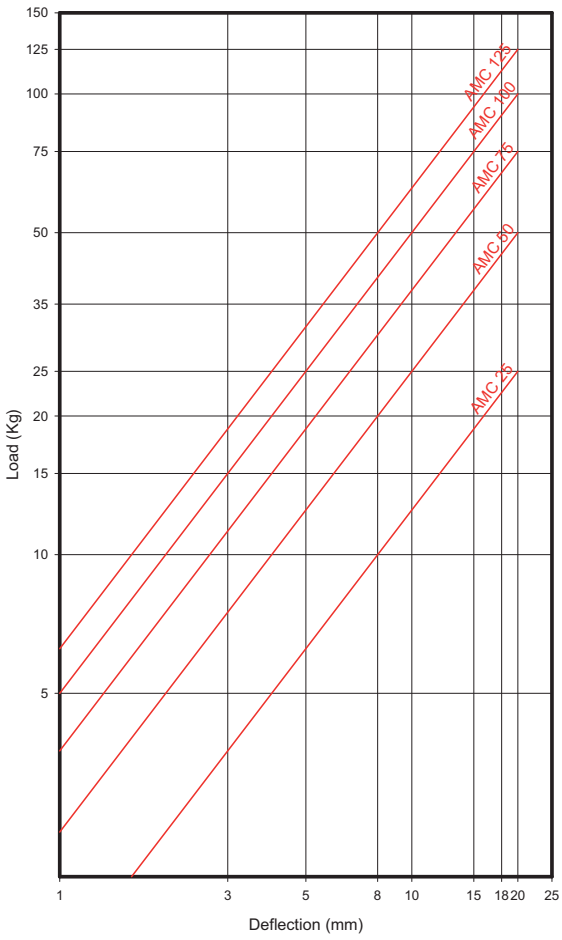




AMC Dynamic Natural Frequency range
MECANOCAUCHO Medium Series type



AMC LOAD DEFORMATION
MECANOCAUCHO Medium Series type



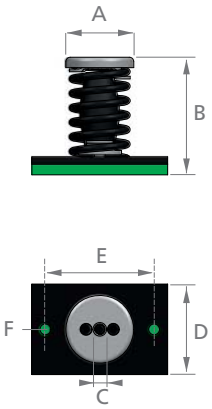
To find out about the advantages of Sylomer in the vibrabsorber® system, go to pages 14,15,16

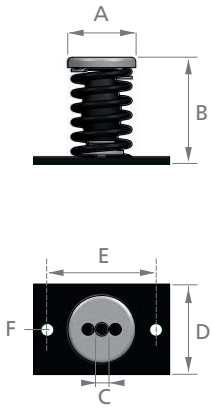
Vibrabsorber + Sylomer

TYPE	A	B	C	D	E	F	CODE
1 AMC 150+Sylomer®	75	132	M-12	75	87	10	20371
1 AMC 200+Sylomer®	75	132	M-12	75	87	10	20372
1 AMC 250+Sylomer®	75	132	M-12	75	87	10	20373
1 AMC 350+Sylomer®	75	132	M-12	75	87	10	20374
1 AMC 500+Sylomer®	90	132	M-14	100	120	12	20375
1 AMC 750+Sylomer®	90	132	M-14	100	120	12	20376

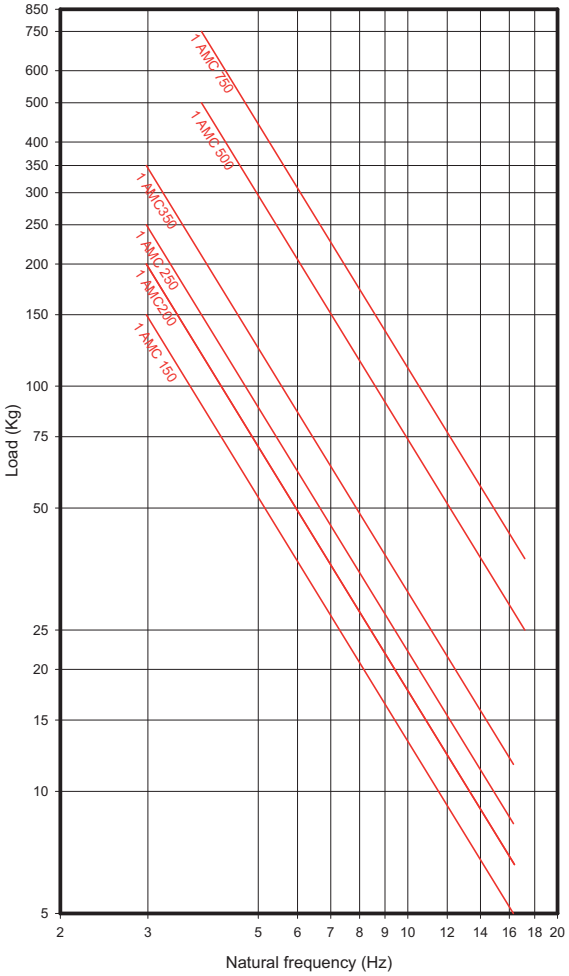
Vibrabsorber

TYPE	A	B	C	D	E	F	CODE
1 AMC 150	75	120	M-12	75	87	10	20301
1 AMC 200	75	120	M-12	75	87	10	20311
1 AMC 250	75	120	M-12	75	87	10	20321
1 AMC 350	75	120	M-12	75	87	10	20331
1 AMC 500	90	120	M-14	100	120	12	20341
1 AMC 750	90	120	M-14	100	120	12	20351

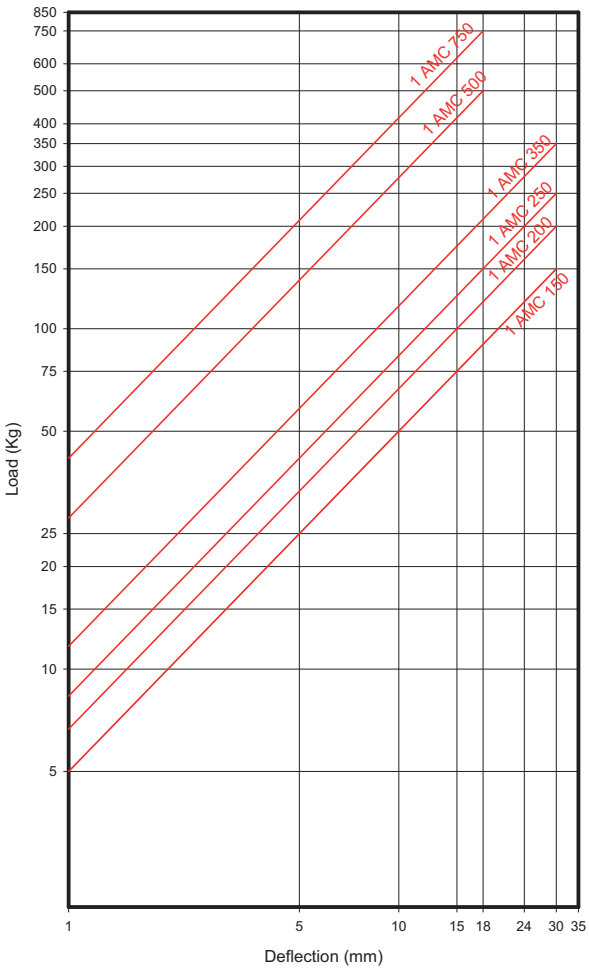




AMC Dynamic Natural Frequency range
MECANOCAUCHO Type 1 AMC



AMC LOAD DEFORMATION
MECANOCAUCHOO Type 1 AMC



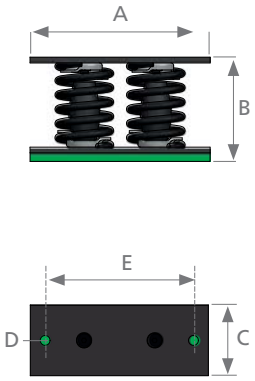
To find out about the advantages of Sylomer in the vibrabsorber® system, go to pages 14,15,16

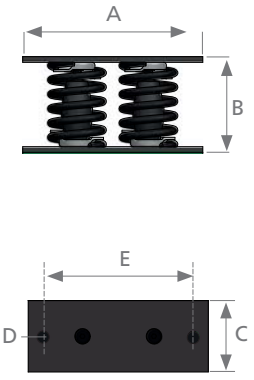
Vibrabsorber + Sylomer

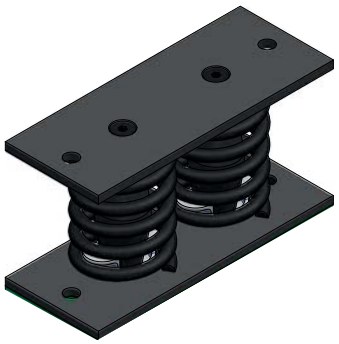
TYPE	A	B	C	D	E	F	CODE
2 AMC 300+Sylomer®	200	136	75	12	170	0	20471
2 AMC 400+Sylomer®	200	136	75	12	170	0	20472
2 AMC 500+Sylomer®	200	136	75	12	170	0	20473
2 AMC 700+Sylomer®	200	136	75	12	170	0	20474
2 AMC 1000+Sylomer®	250	136	100	14	210	0	20475
2 AMC 1500+Sylomer®	250	136	100	14	210	0	20476

Vibrabsorber

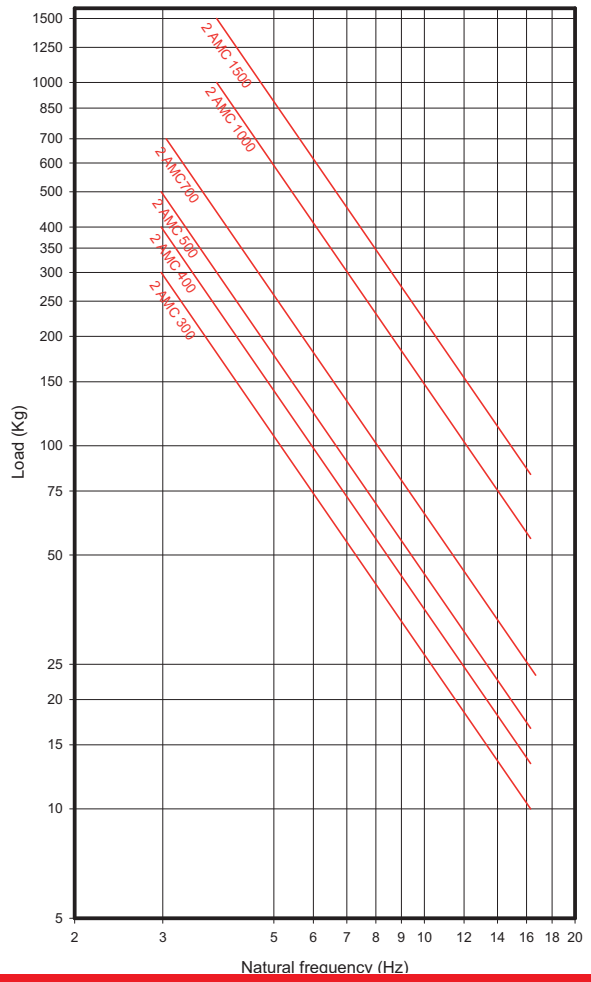
TYPE	A	B	C	D	E	F	CODE
2 AMC 300	200	124	75	12	170	0	20401
2 AMC 400	200	124	75	12	170	0	20411
2 AMC 500	200	124	75	12	170	0	20421
2 AMC 700	200	124	75	12	170	0	20431
2 AMC 1.000	250	124	100	14	210	0	20441
2 AMC 1.500	250	124	100	14	210	0	20451



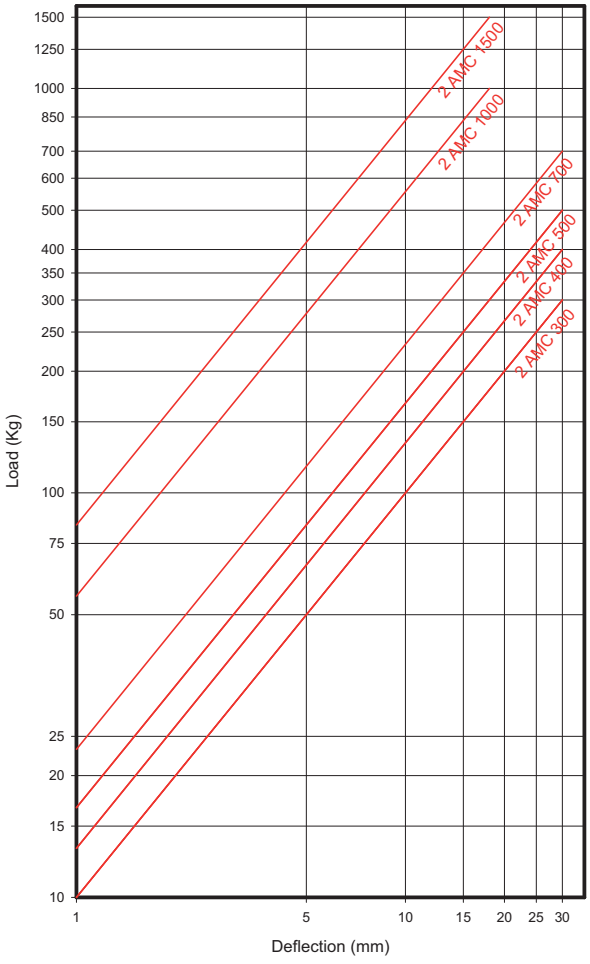




AMC Dynamic Natural Frequency range
MECANOCAUCHO Type 2 AMC



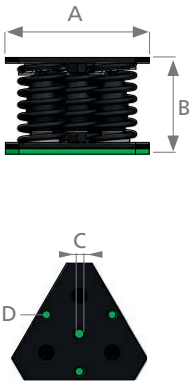
AMC LOAD DEFORMATION
MECANOCAUCHOO Type 2 AMC



To find out about the advantages of Sylomer in the vibrabsorber® system, go to pages 14,15,16

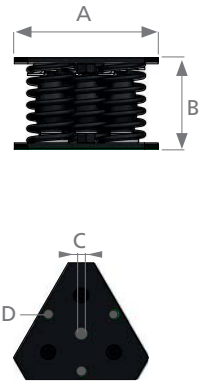
Vibrabsorber + Sylomer

TYPE	A	B	C	D	E	F	CODE
3 AMC 450+Sylomer®	190	136	M - 16	12	0	0	20571
3 AMC 600+Sylomer®	190	136	M - 16	12	0	0	20572
3 AMC 750+Sylomer®	190	136	M - 16	12	0	0	20573
3 AMC 1050+Sylomer®	190	136	M - 16	12	0	0	20574
3 AMC 1500+Sylomer®	242	136	M - 20	14	0	0	20575
3 AMC 2250+Sylomer®	242	136	M - 20	14	0	0	20576

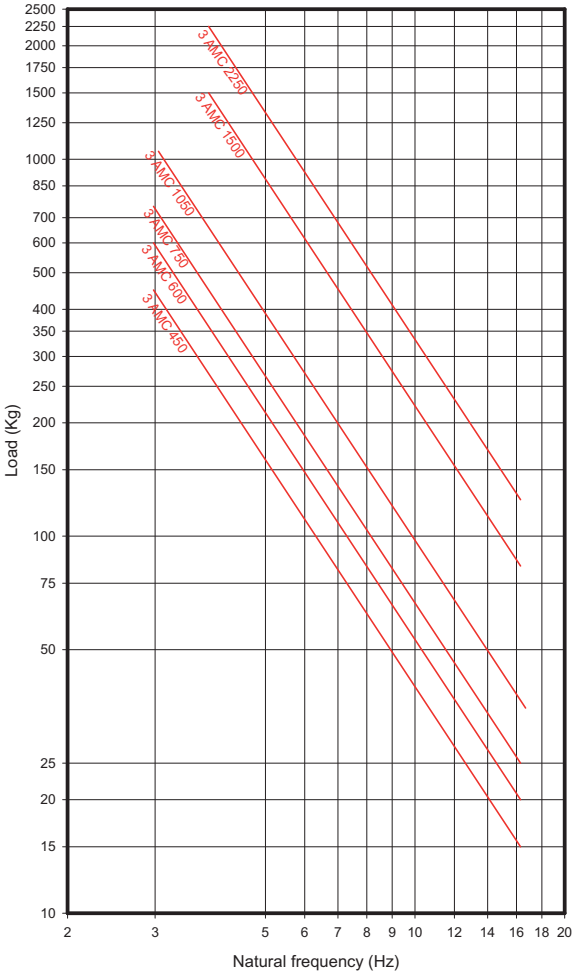


Vibrabsorber

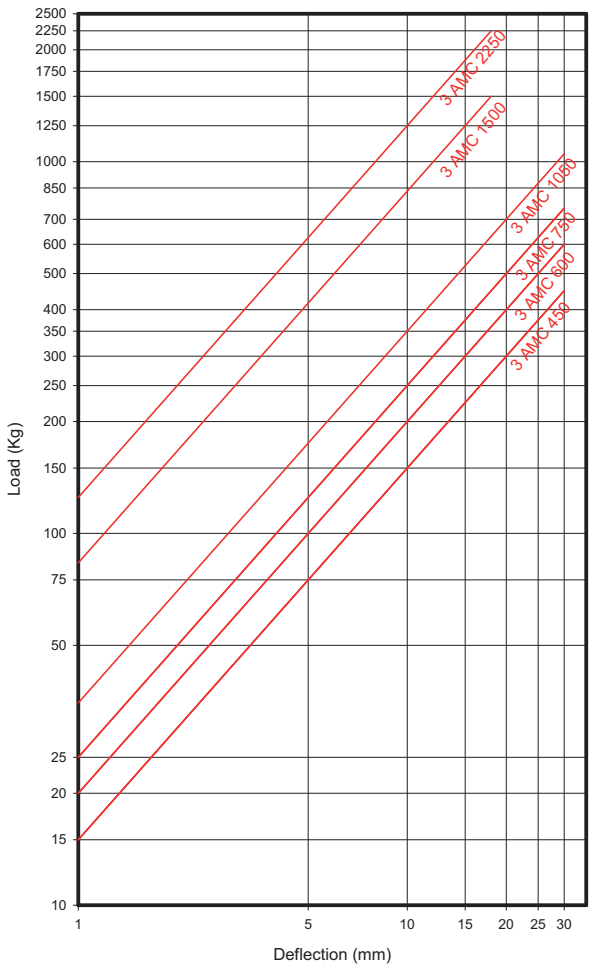
TYPE	A	B	C	D	E	F	CODE
3 AMC 450	190	124	M - 16	12	0	0	20501
3 AMC 600	190	124	M - 16	12	0	0	20511
3 AMC 750	190	124	M - 16	12	0	0	20521
3 AMC 1050	190	124	M - 16	12	0	0	20531
3 AMC 1500	242	124	M - 20	14	0	0	20541
3 AMC 2250	242	124	M - 20	14	0	0	20551



AMC Dynamic Natural Frequency range
MECANOCAUCHO Type 3 AMC



AMC LOAD DEFORMATION
MECANOCAUCHOO Type 3 AMC



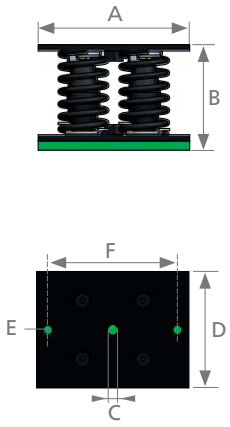
To find out about the advantages of Sylomer in the vibrabsorber® system, go to pages 14,15,16

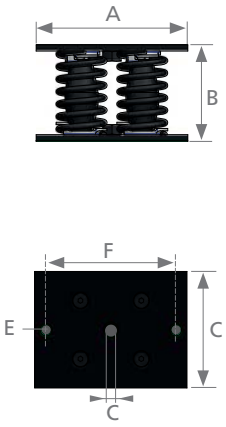
Vibrabsorber + Sylomer

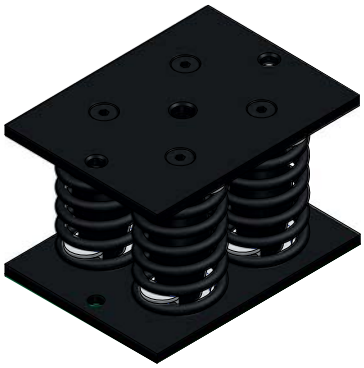
TYPE	A	B	C	D	E	F	CODE
4 AMC 600+Sylomer®	200	136	M - 16	150	12	170	20671
4 AMC 800+Sylomer®	200	136	M - 16	150	12	170	20672
4 AMC 1000+Sylomer®	200	136	M - 16	150	12	170	20673
4 AMC 1400+Sylomer®	200	136	M - 16	150	12	170	20674
4 AMC 2000+Sylomer®	250	136	M - 20	200	14	210	20675
4 AMC 3000+Sylomer®	250	136	M - 20	200	14	210	20676

Vibrabsorber

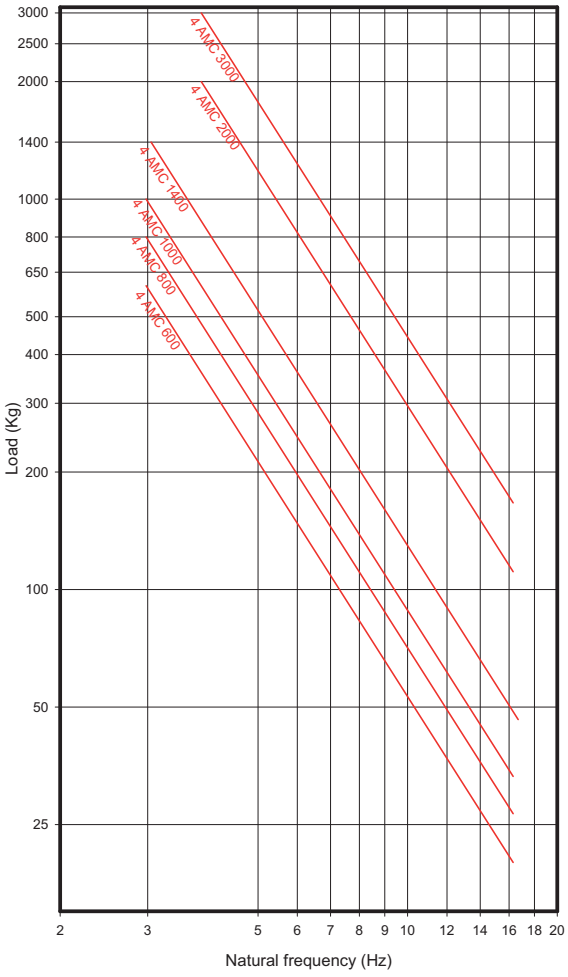
TYPE	A	B	C	D	E	F	CODE
4 AMC 600	200	124	M - 16	150	12	170	20601
4 AMC 800	200	124	M - 16	150	12	170	20611
4 AMC 1000	200	124	M - 16	150	12	170	20621
4 AMC 1400	200	124	M - 16	150	12	170	20631
4 AMC 2000	250	124	M - 20	200	14	210	20641
4 AMC 3000	250	124	M - 20	200	14	210	20651



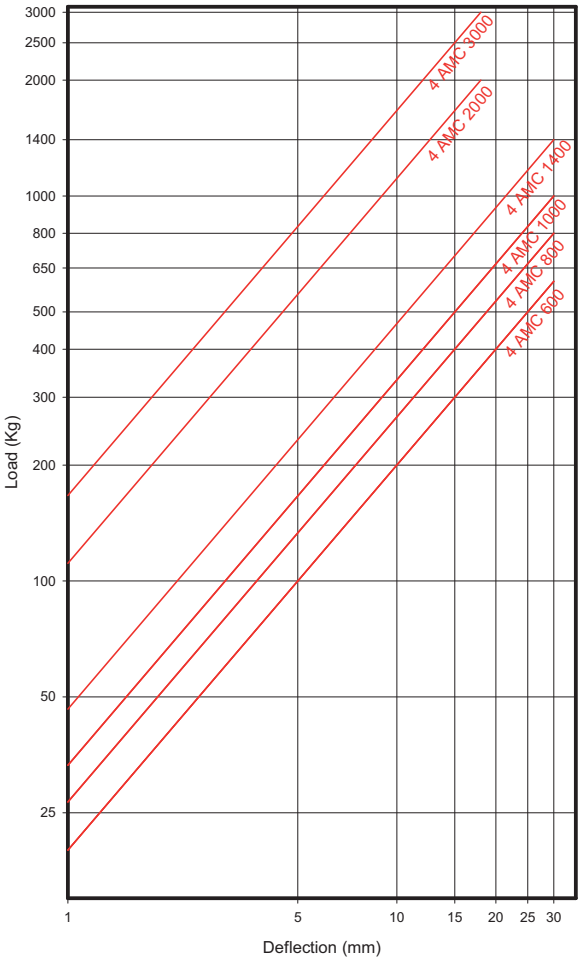




AMC Dynamic Natural Frequency range
MECANOCAUCHO Type 4 AMC



AMC LOAD DEFORMATION
MECANOCAUCHOO Type 4 AMC



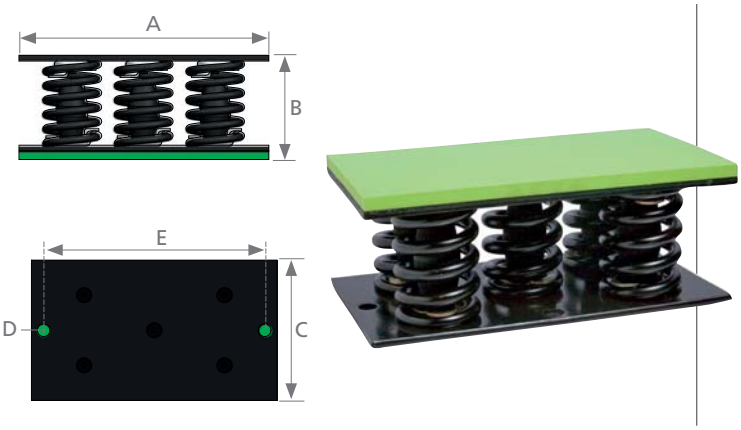
To find out about the advantages of Sylomer in the vibrabsorber® system, go to pages 14,15,16

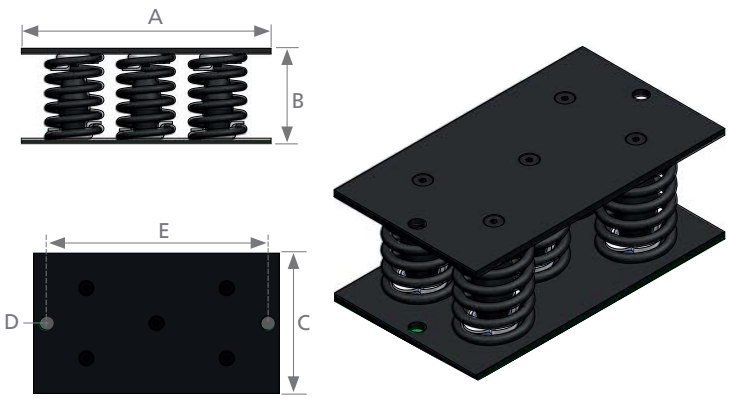
Vibrabsorber + Sylomer

TYPE	A	B	C	D	E	F	CODE
5 AMC 750+Sylomer®	280	136	150	16	248	0	20771
5 AMC 1000+Sylomer®	280	136	150	16	248	0	20772
5 AMC 1250+Sylomer®	280	136	150	16	248	0	20773
5 AMC 1750+Sylomer®	280	136	150	16	248	0	20774
5 AMC 2500+Sylomer®	350	136	200	18	300	0	20775
5 AMC 3750+Sylomer®	350	136	200	18	300	0	20776

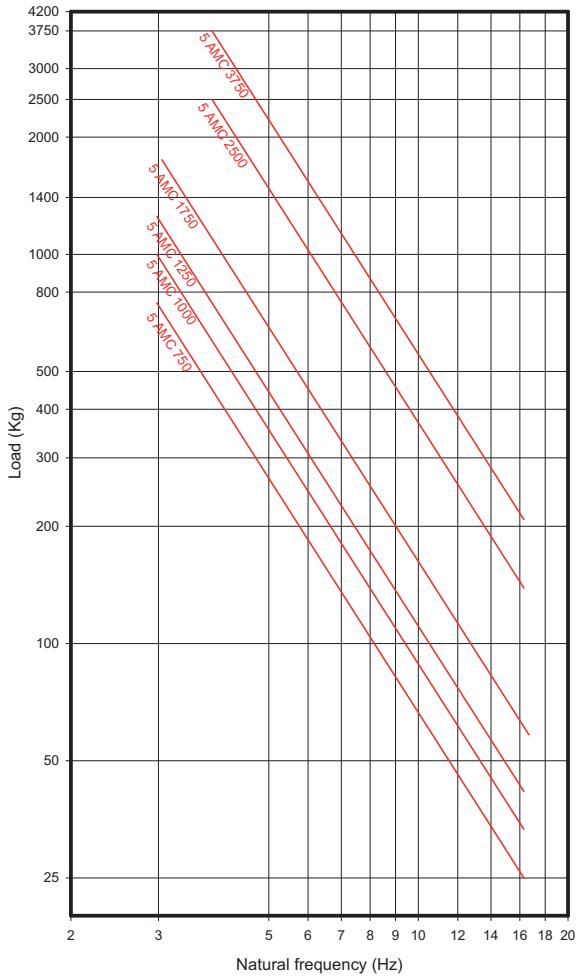
Vibrabsorber

TYPE	A	B	C	D	E	F	CODE
5 AMC 750	280	124	150	16	248	0	20701
5 AMC 1.000	280	124	150	16	248	0	20711
5 AMC 1.250	280	124	150	16	248	0	20721
5 AMC 1.750	280	124	150	16	248	0	20731
5 AMC 2.500	350	124	200	18	300	0	20741
5 AMC 3.750	350	124	200	18	300	0	20751

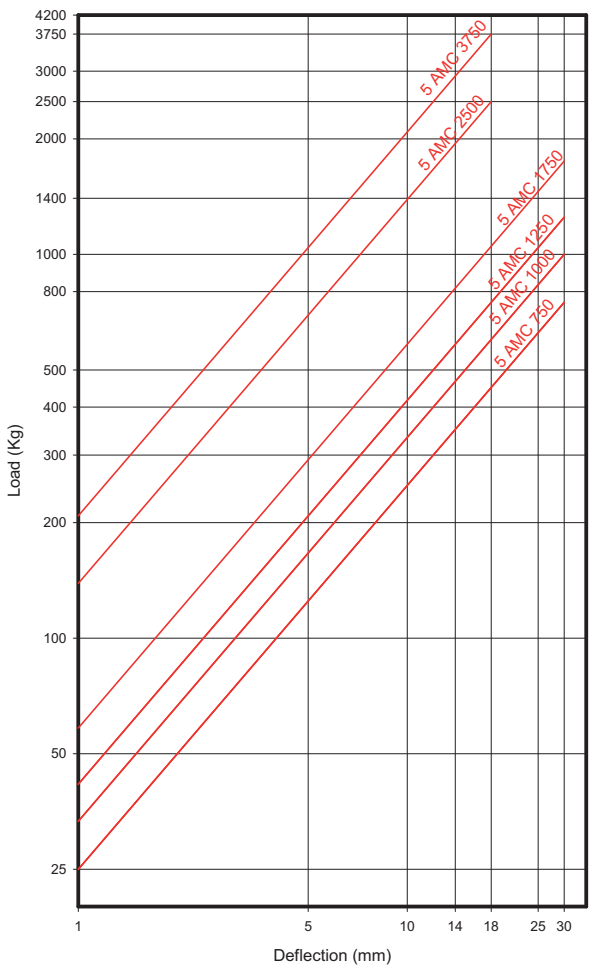




AMC Dynamic Natural Frequency range
MECANOCAUCHO Type 5 AMC



AMC LOAD DEFORMATION
MECANOCAUCHOO Type 5 AMC



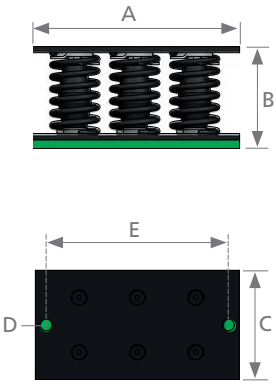
To find out about the advantages of Sylomer in the vibrabsorber® system, go to pages 14,15,16

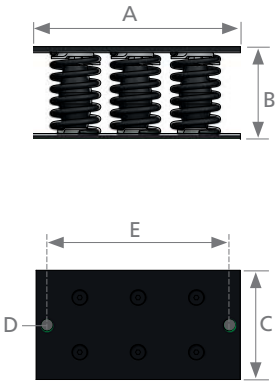
Vibrabsorber + Sylomer

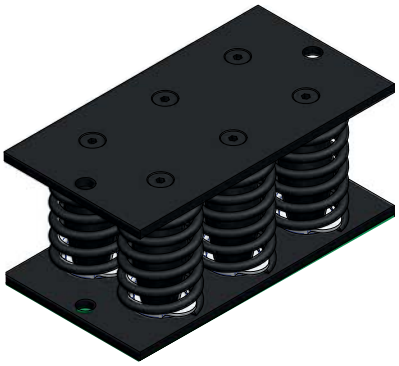
TYPE	A	B	C	D	E	F	CODE
6 AMC 900+Sylomer®	280	136	150	16	248	0	20871
6 AMC 1200+Sylomer®	280	136	150	16	248	0	20872
6 AMC 1500+Sylomer®	280	136	150	16	248	0	20873
6 AMC 2100+Sylomer®	280	136	150	16	248	0	20874
6 AMC 3000+Sylomer®	350	136	200	18	300	0	20875
6 AMC 4500+Sylomer®	350	136	200	18	300	0	20876

Vibrabsorber

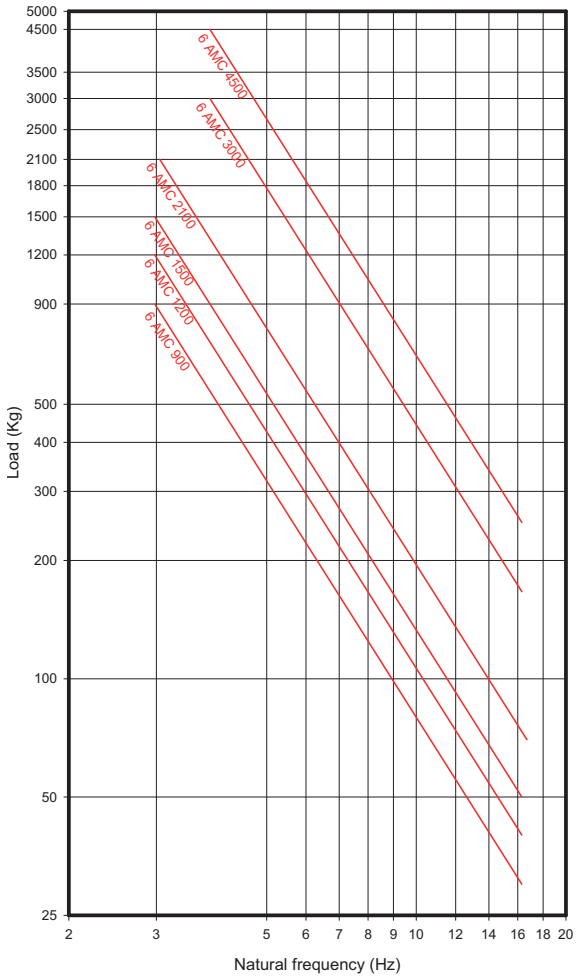
TYPE	A	B	C	D	E	F	CODE
6 AMC 900	280	124	150	16	248	0	20801
6 AMC 1.200	280	124	150	16	248	0	20811
6 AMC 1.500	280	124	150	16	248	0	20821
6 AMC 2.100	280	124	150	16	248	0	20831
6 AMC 3.000	350	124	200	18	300	0	20841
6 AMC 4.500	350	124	200	18	300	0	20851



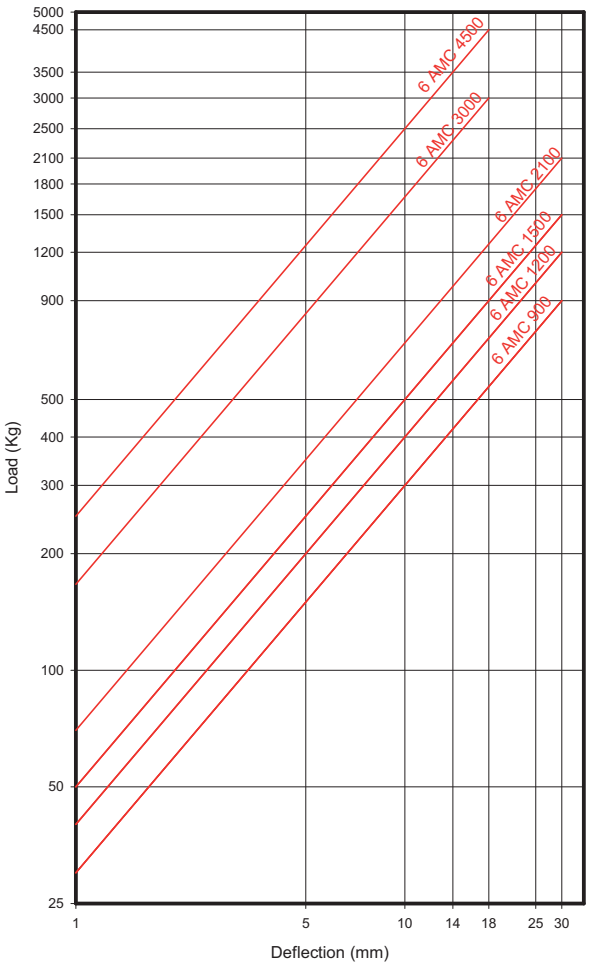




AMC Dynamic Natural Frequency range
MECANOCAUCHO Type 6 AMC



AMC LOAD DEFORMATION
MECANOCAUCHOO Type 6 AMC



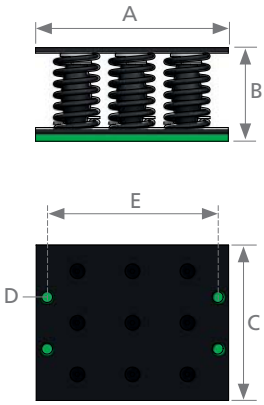
To find out about the advantages of Sylomer in the vibrabsorber® system, go to pages 14,15,16

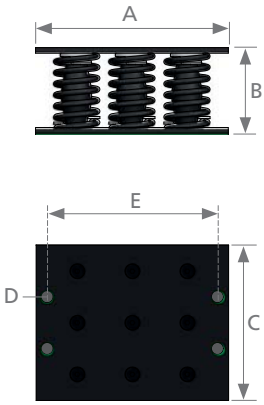
Vibrabsorber + Sylomer

TYPE	A	B	C	D	E	F	CODE
9 AMC 1350+Sylomer®	280	136	226	16	248	0	20971
9 AMC 1800+Sylomer®	280	136	226	16	248	0	20972
9 AMC 2250+Sylomer®	280	136	226	16	248	0	20973
9 AMC 3150+Sylomer®	280	136	226	16	248	0	20974
9 AMC 4500+Sylomer®	350	136	300	18	300	0	20975
9 AMC 6750+Sylomer®	350	136	300	18	300	0	20976

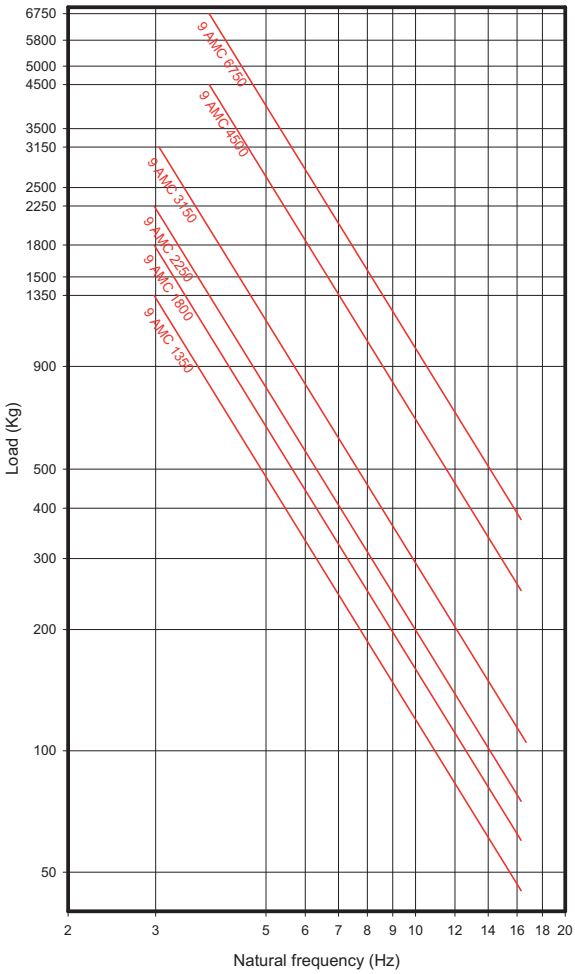
Vibrabsorber

TYPE	A	B	C	D	E	F	CODE
9 AMC 1.350	280	124	226	16	248	0	20901
9 AMC 1.800	280	124	226	16	248	0	20911
9 AMC 2.250	280	124	226	16	248	0	20921
9 AMC 3.150	280	124	226	16	248	0	20931
9 AMC 4.500	350	124	300	18	300	0	20941
9 AMC 6.750	350	124	300	18	300	0	20951

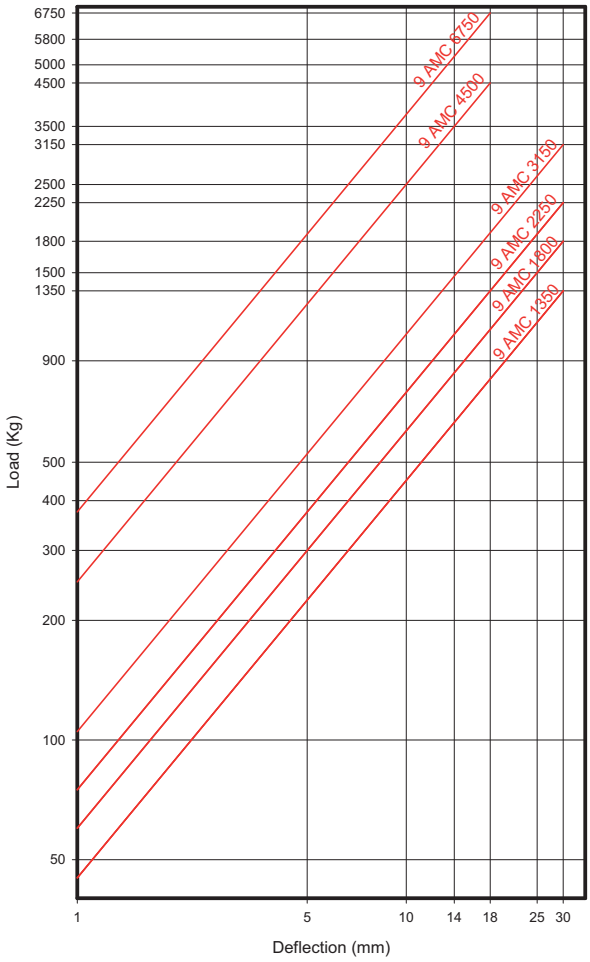




AMC Dynamic Natural Frequency range
MECANOCAUCHO Type 9 AMC



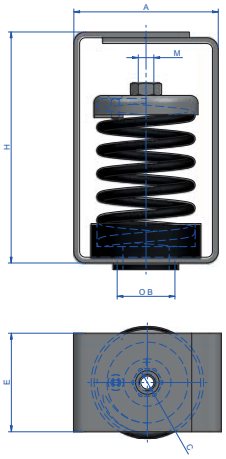
AMC LOAD DEFORMATION
MECANOCAUCHOO Type 9 AMC

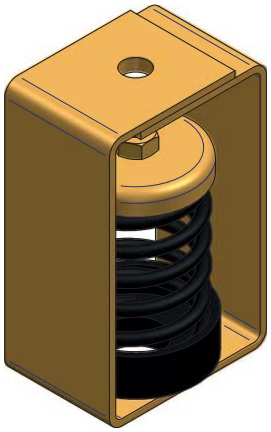


To find out about the advantages of Sylomer in the vibrabsorber® system, go to pages 14,15,16

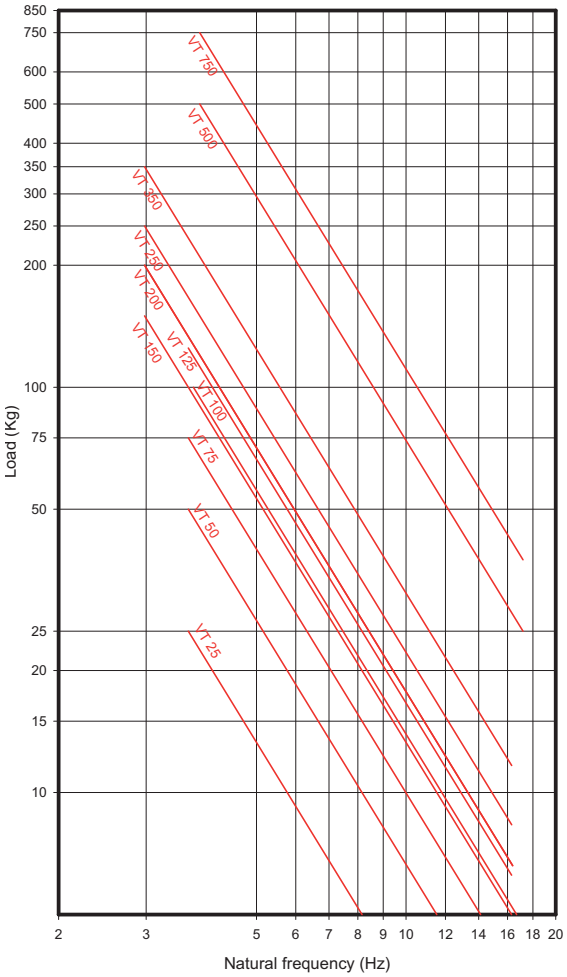
Vibrabsorber

TYPE	A	H	B	C	E	M	CODE
VT 25	75	120	30	12	50	M-8	20201
VT 50	75	120	30	12	50	M-8	20202
VT 75	75	120	30	12	50	M-8	20203
VT 100	75	120	30	12	50	M-8	20204
VT 125	75	120	30	12	50	M-8	20211
VT 150	120	160	30	16	80	M-12	20205
VT 200	120	160	30	16	80	M-12	20210
VT 250	120	160	30	16	80	M-12	20206
VT 350	120	160	30	16	80	M-12	20207
VT 500	140	180	30	16	100	M-14	20208
VT 750	140	180	30	16	100	M-14	20209

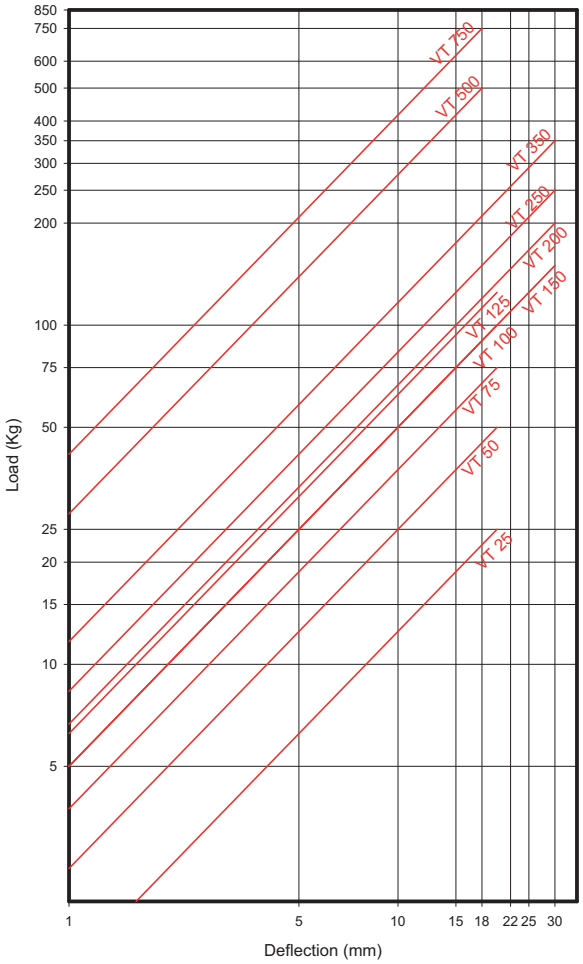




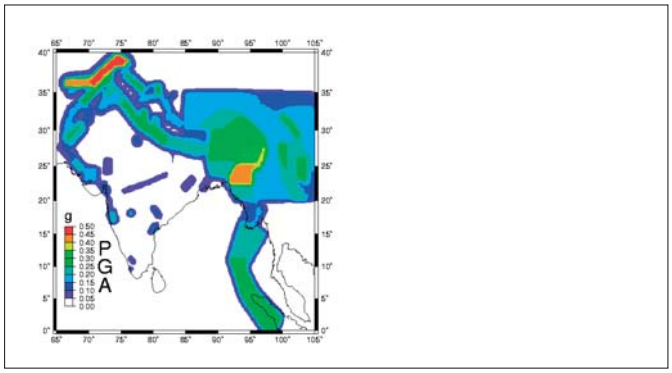
AMC Dynamic Natural Frequency range
MECANOCAUCHO Type VT



AMC LOAD DEFORMATION
MECANOCAUCHOO Type VT



To find out about the advantages of Sylomer in the vibrabsorber® system, go to pages 14,15,16

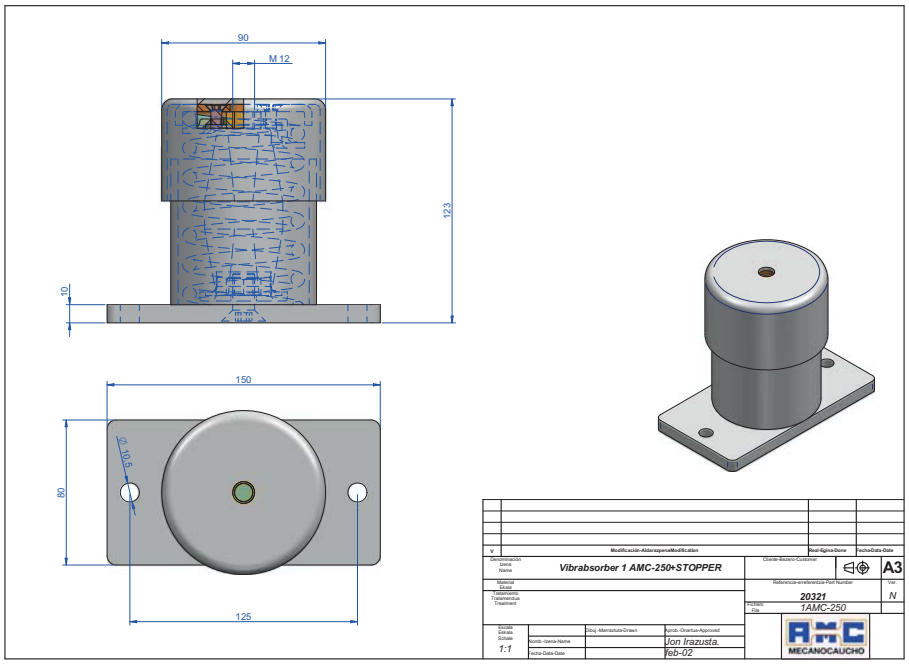


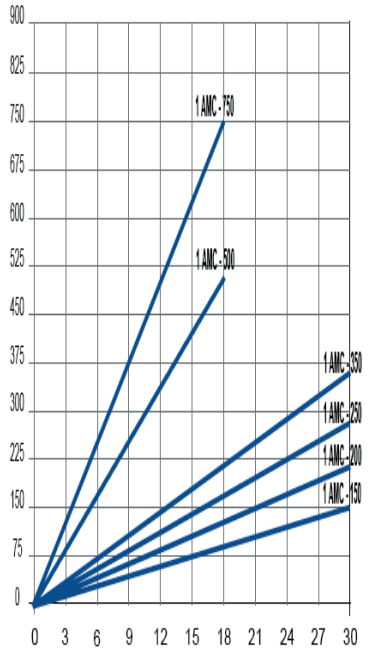
For over 26 years AMC MECANOCAUCHO has manufactured supports made of springs called VIBRABSORBER.

These supports are manufactured with mechanical anchoring systems which allow to assure its union in static applications and offers great reliability in the isolation of low frequency vibrations.

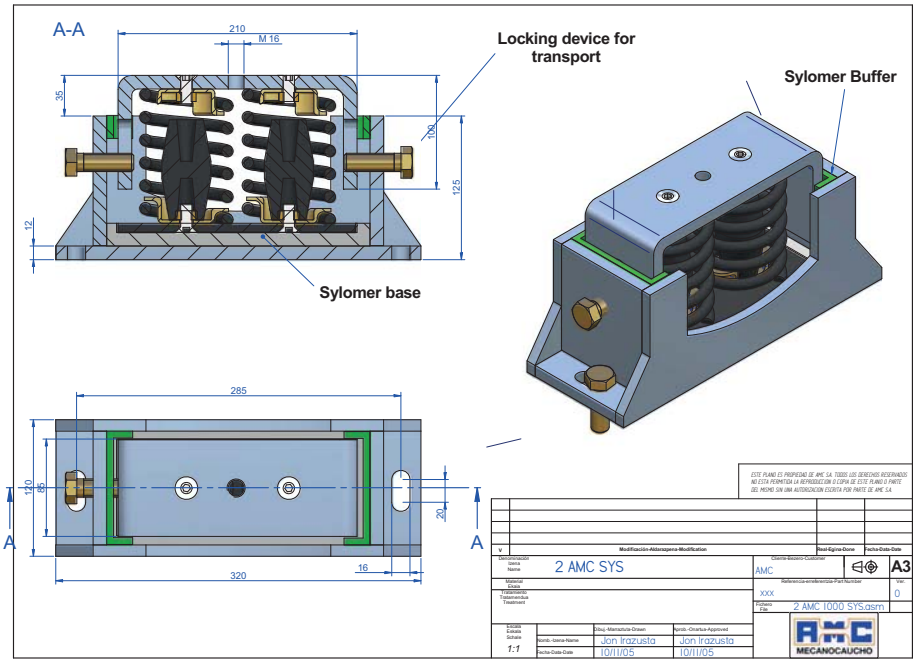
With the objective of improving its performance in seismic applications, the AMC-MECANOCAUCHO technical department has designed a new internal architecture which

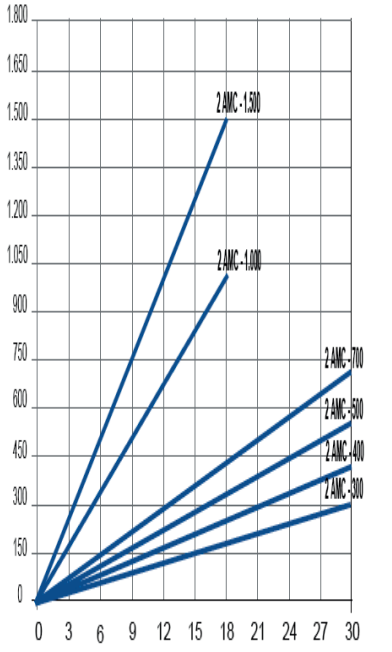
1 AMC WITH ANTI-SEISMIC RESTRAINT DEVICE WEIGHT OF THE PART: 3KG





2 AMC WITH ANTI-SEISMIC RESTRAINT DEVICE WEIGHT OF THE PART: 15KG



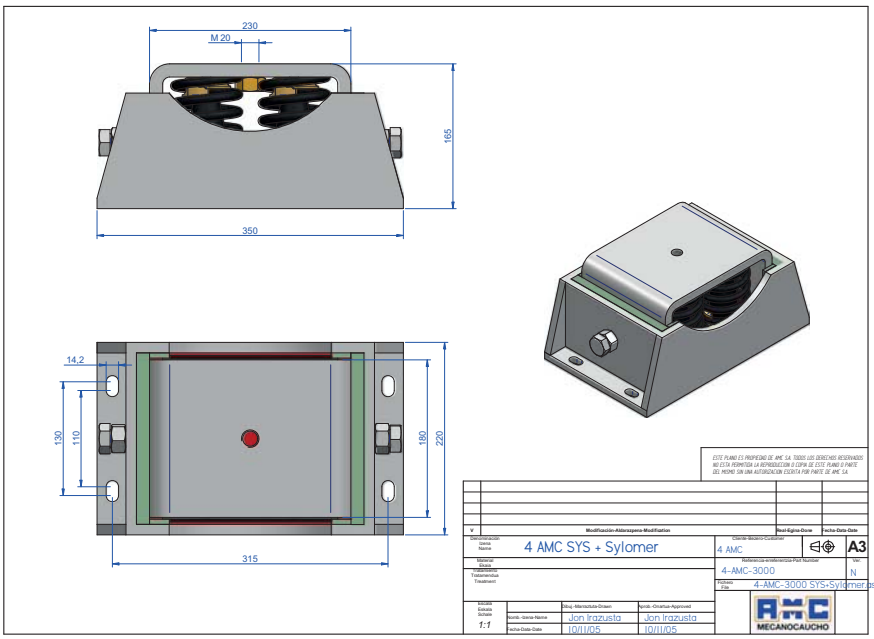


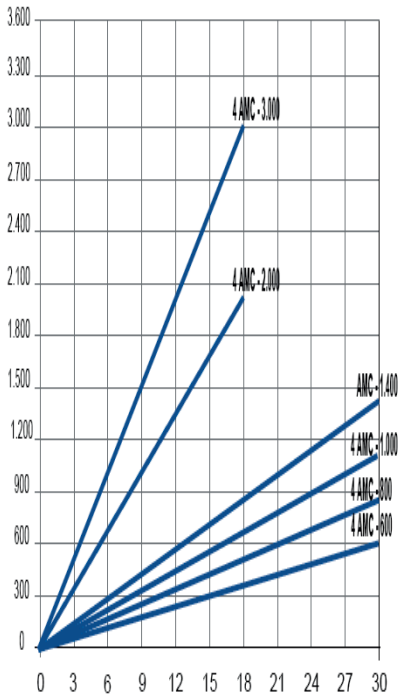
allows it to resist said environments. In addition to their resistance, these pieces offer the following advantages.

• **SAFETY IN TRANSPORTATION:** The anti-seismic Vibrabsorber supports have a blocking mechanism, so that the supports can be blocked during the transportation of the machinery.

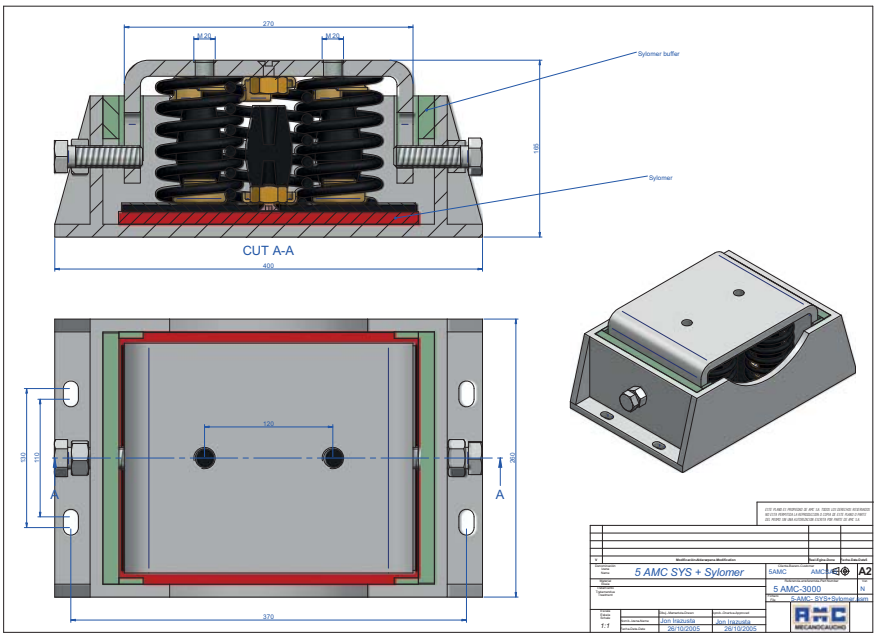
• **STRUCTURAL NOISE ISOLATION:** The **anti-seismic vibrabsorber supports** have **Sylomer ®** in their interior, this microcellular polyurethane isolates medium and high frequencies that are transmitted through the spring.

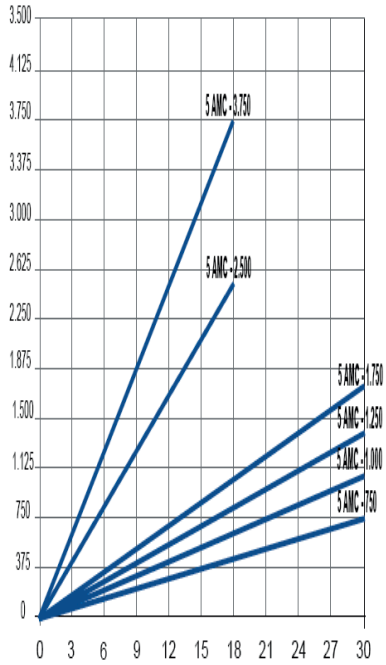
4 AMC WITH ANTI-SEISMIC RESTRAINT DEVICE WEIGHT OF THE PART: 30KG





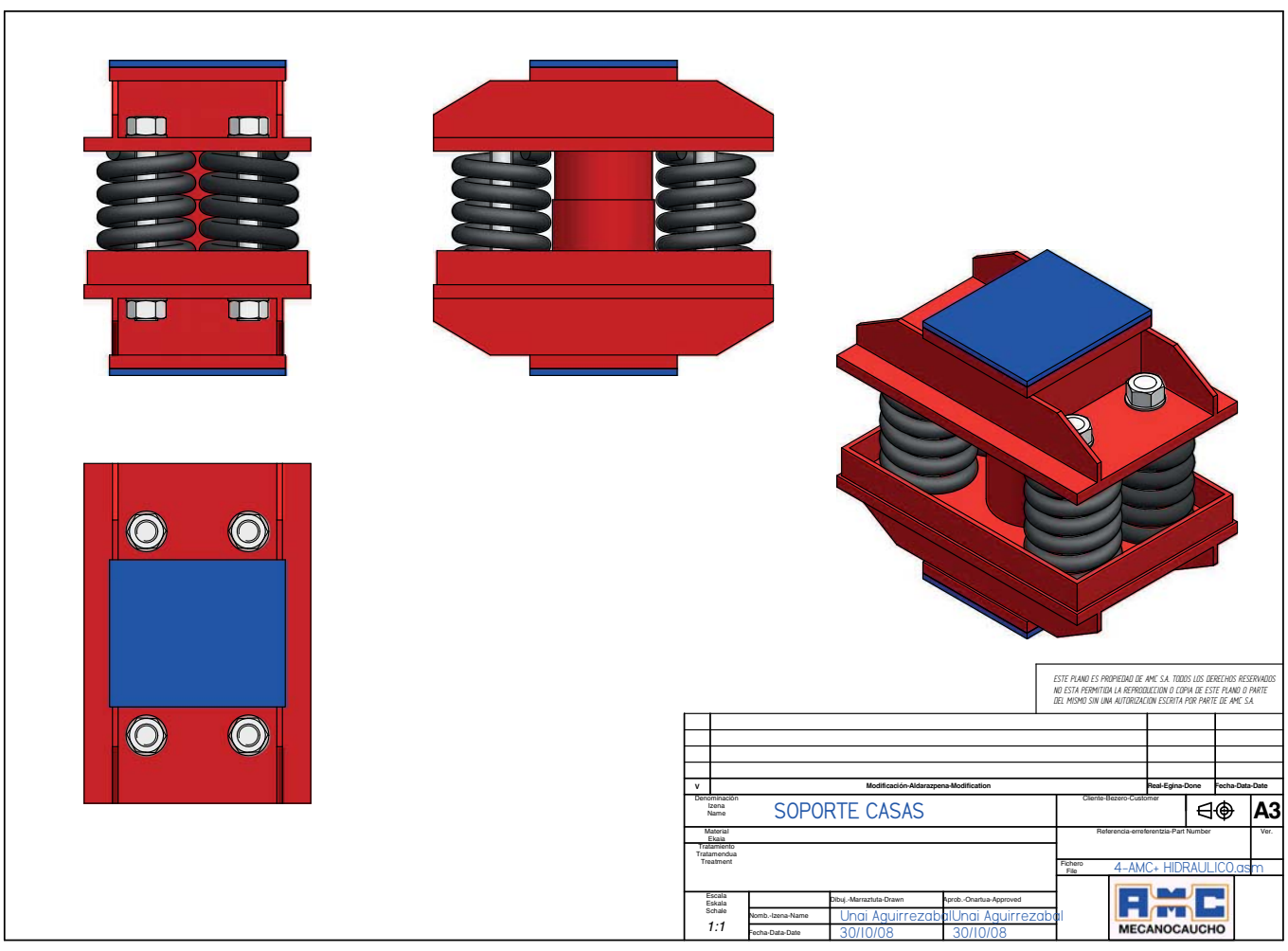
5 AMC WITH ANTI-SEISMIC RESTRAINT DEVICE WEIGHT OF THE PART: 35KG





VIBRABSORBER HYDRAULIC DAMPENING

For those applications where an elevated rate of dampening is necessary, a study of hydraulic dampening can be conducted. In this case we advise that you consult with our technical department.



AMC-MECANOCAUCHO SUPPORTS

Reliability and savings in machinery isolation

Machinery, which, by virtue of its design has reciprocating or rotating parts, creates vibration to some degree through imbalance of the moving parts.

This vibration produced by a machine leads to different problems, such as a reduction in the machine's useful life through part wear, plus the transmission of this vibration to other non-insulated adjacent structures, giving rise to problems of noise and vibration transmission.

For more than 40 years, AMC MECANOCAUCHO® has been developing the "AMC MECANOCAUCHO®" range of rubber-metal anti-vibration supports which can solve problems like the ones described above in all types of machinery, mobile or static. Thus protecting people and the environment from the harmful effects of noise and vibration.

AKUSTIK

The acoustics professionals

Rubber, spring and rubber-spring anti-vibratory supports designed to isolate noise transmitted in soundproof spaces.

All external connections to the equipment should be of a flexible nature to prevent noise and vibration transmission to other parts of the installation. If we leave any rigid connection, it would act as an acoustic transmission connection and would cancel the effectiveness of the rest of the acoustic elements, Anti-vibratory, Absorbent, Fibre, Drywall, Concrete, etc… installed.

There exist elements designed to isolate ceilings, walls and floors.

AKUSTIK + sylomer®

The anti-vibratory solution for the isolation of buildings and machinery by placing the material under the concrete slab

AKUSTIK+SYLOMER® is the trademark of a new solution for the anti-vibration mountings of false ceilings or vibrating elements that have to be suspended. They are used for the attenuation of vibrations, reducing structure-borne noise.

The AKUSTIK+SYLOMER® ceiling supports are made of SYLOMER®, the material is microcellular polyurethane especially conceived for vibration isolation. This material produces a grade of reduction which is superior to the elastomers traditionally used for this purpose.

sylomer®

The acoustics professionals*

SYLOMER® is the best solution to isolate vibrations and noise spread by solid structures. Made of an exceptionally adaptable, economical and very effective elastic material. SYLOMER® is quickly installed.

It is resistant to oils, diluted acids and bases and maintains its elasticity at low temperatures. Frequencies of 8-12 Hz are obtained with SYLOMER® and isolations of 30-35 dB can be reached by way of the structure.

It is an anti-vibration material that has been applied for 28 years, 4.8 million m2 have been manufactured, 1330 railway constructions, 602 isolated buildings and over 2 million isolated machines.

*Distributors for Spain and Portugal

GRANAB with sylomer®

Acoustic and technical floor for building*

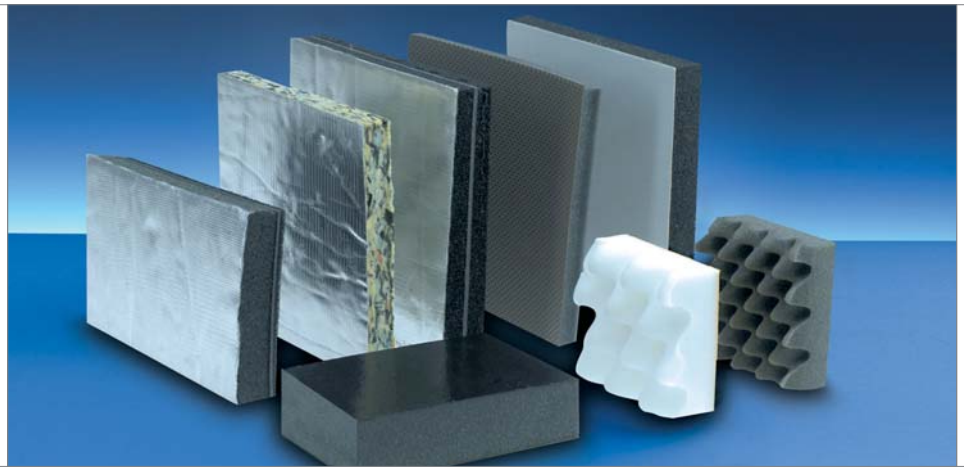
GRANAB® TECHNICAL FLOOR SYSTEM, for comfortable and ecological floors with good acoustic properties. For new constructions, refurbishments and renovations of homes, offices, hotels, schools, and public spaces.

• Approved. • Absorption of impact noise and isolation of air-borne noise. • It is directly installed directly onto the beam and is laid out in a quick and ergonomic fashion. The height of the installation is from 30-280 mm. Special height of up to 600 mm. • Dry installation.

By not using levelling methods with liquids, there is no risk of humidity. Without the costly drying times. • The system guarantees comfortable floors that offer an atmosphere that is more comfortable both in the home and work. • Floors that do not creak. • Flexibility in the installation of conduits between the base of the floor and the surface. • The components included comply with the ecological guidelines and are made of inorganic materials which collect humidity. • THE GRANAB® TECHNICAL FLOOR SYSTEM is patented and approved.

AKUSTIKABSORBER

Technical Absorbents



The AKUSTIKABSORBER® Foams have been studied to solve noise problems in the industry with the possibility to supply products in stock.

The AKUSTIKABSORBER® composites are made of:

• A P type polyurethane absorbent foam. This material has a density of 30Kg/m3, and has great absorption power.

• A heavy mass that provides great supplementary isolation.

• Different types of coverings that give the product the capacity to be resistant to vapours produced by machinery.

• Self-adhesives which aid in the quick installation of the product.

* Distributors for Spain and Portugal

MECANOCAUCHO

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