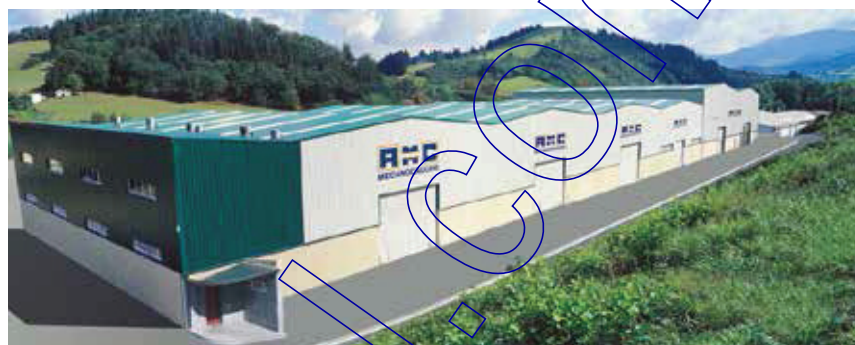




NOISE AND VIBRATION SOLUTIONS FOR HVAC



SOLVING VIBRATION PROBLEMS ON HVAC SINCE 1969



Factory 1



Factory 2

Since 1969 **AMC-MECANOCAUCHO** has pioneered the manufacture and design of antivibration mountings for the reduction of vibrations in multiple applications.

With this purpose, **AMC-MECANOCAUCHO** has developed a width range of products focused in the **HVAC** equipment isolation. This supports are manufactured using rubber, springs or a microcelular polyurethane material specially conceived for vibration isolation called **Sylomer®**.

AMC MECANOCAUCHO® PROCESS



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. In this sense, **AMC MECANOCAUCHO®** has been developing for over 40 years different ranges of anti-vibration mounts that can solve problems like the ones described above.

Taking into account some data of the machine such as weight, mount positions, type of machine, Center of Gravity, frequency of excitation, etc., **AMC MECANOCAUCHO®** does vibration calculations in order to suggest the most appropriate anti-vibration mount solution for each case. The proposed solutions are commonly taken using following types of anti-vibration mounts: **AMC BRB, AMC BSB and AMC DRD mounts** (Rubber-Metal solution), **AMC Vibrabsorber mounts** (spring mounts solution), **Sylomer®** and **FZ+Sylomer®** mounts.

QUALITY CONTROL

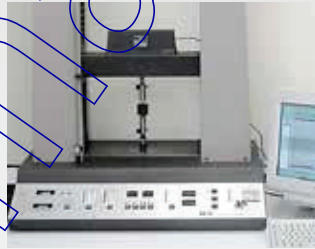
AMC-MECANOCAUCHO® is a ISO 9001 certified company by DET NORSKE VERITAS DNV. **AMC-MECANOCAUCHO®** is officially approved by NATO under the id number **NCAGE 0230B**- compliant supplier.

Rubber curing properties are controlled by **Rheometrical** instruments as well as extensometers, dynamometers and durometers.

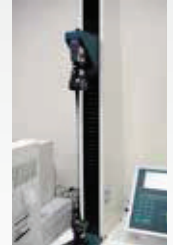
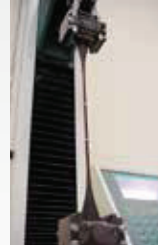
Elastical properties are measured with several axial and radial dynamometers as well as with a servohydraulic dynamic test bench from **Instron-Schenck®**.

Marine type approval

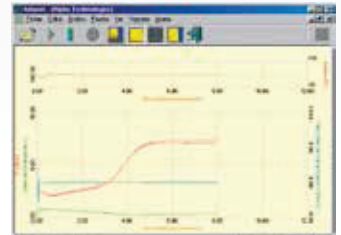
Adhesion test



Extensometer



Rheometer



FATIGUE AND ENDURANCE TESTS

AMC-MECANOCAUCHO® has certificates of external laboratories that have tested gearbox mountings to know the alteration of the stiffness properties during a representative life cycle of a wind turbine.

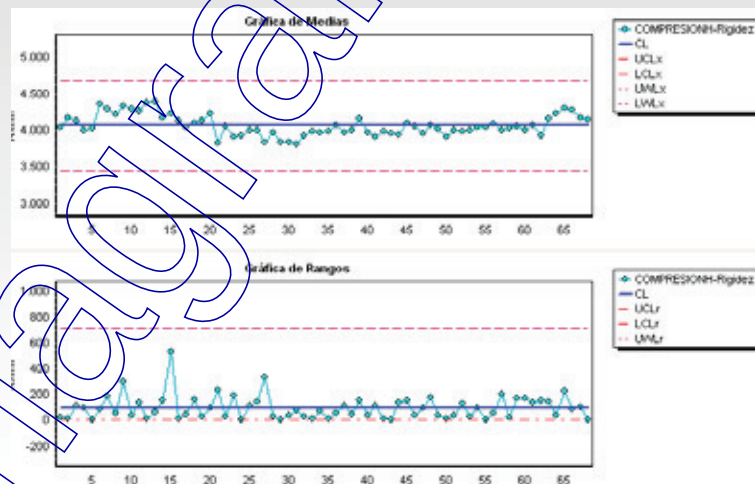
AMC-MECANOCAUCHO® uses Instron Schenck® servohydraulic dynamic test benches to measure stiffness variation for generator mountings during a representative life cycle of a wind turbine.



PROCESS CONTROL

AMC-MECANOCAUCHO® realizes a process control of the mountings made manufactured. The % of sampling is according to customer requirement.

On the graph beneath, stiffness values of a generator mount is shown while production is taking place.



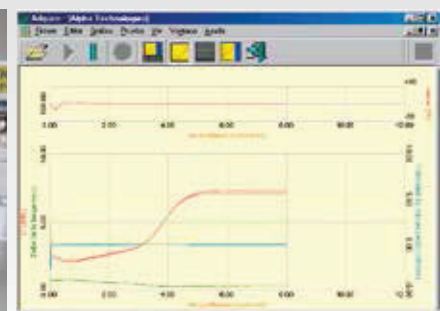
TRACEABILITY

AMC-MECANOCAUCHO® can keep track of the finished goods for those customers that require traceability on their products.

Rheometrical tests are linked to each batch of production. This allows to verify the vulcanization properties of the rubber mix used.

Foundry castings can incorporate the date of manufacturing.

Finished goods can incorporate a **serial number**. This allows us to check stiffness values of the mounts as well as other complementary information.

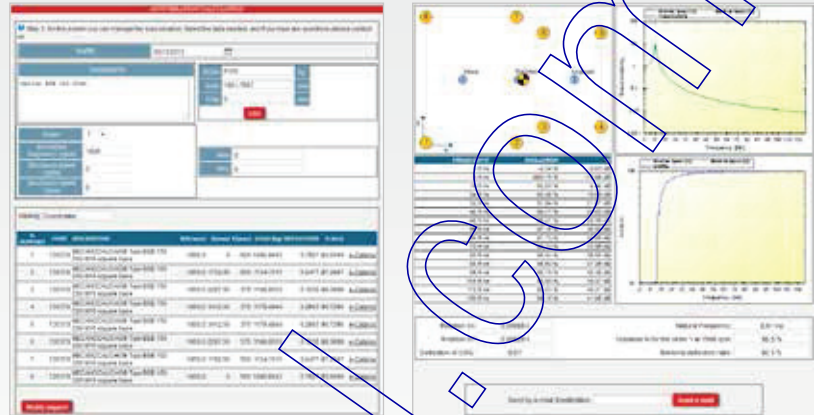


AMC ENGINEERING SERVICES

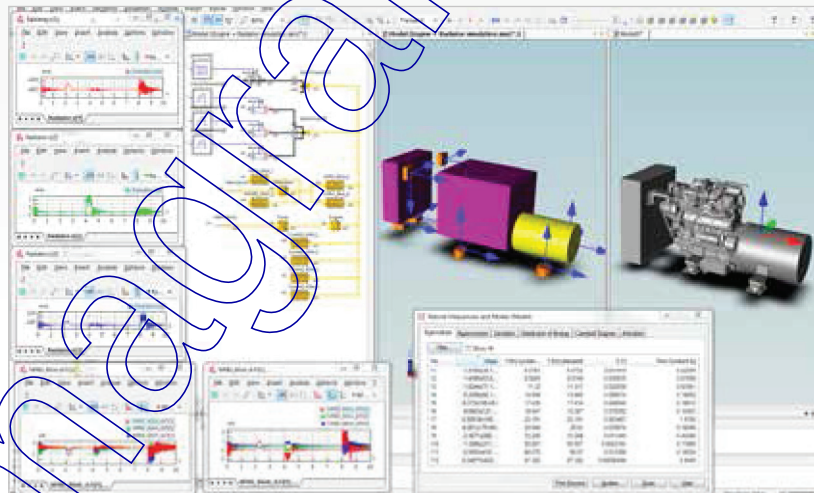
CALCULATION

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...

One degree of freedom calculation



Anti-vibration calculation with more than one degree of freedom.

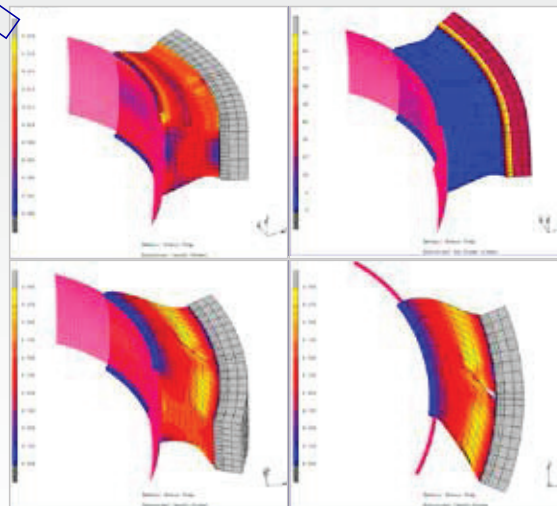


DESIGN

After studying client specific needs for the application and the isolation performance required.

AMC MECANOCAUCHO ® can produce a new design if standard products are not suitable.

Analysis of stress by non-linear FEM



Modeling of products in 3D



AMC ENGINEERING SERVICES

TEST AND DYNAMIC CHARACTERISATION

AMC MECANOCAUCHO ® can offer customers a wealth of experience and know how in measuring noise and vibration to effect optimum solutions to those problems.



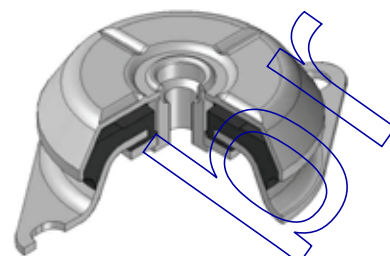
MEASUREMENTS

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



AMC MECANOCAUCHO RANGE OF PRODUCTS FOR HVAC EQUIPMENTS

These mounts work the rubber in shear and compression. Thanks also to their section that produce large deflections, these BRB, BSB and DRD mounts achieve low natural frequencies and excellent vibration isolation values.



BRB



Natural frequency: 5-11 Hz

TYPE	AMC	Hardness	Hardness	Hardness	Hardness
		40 Sh	50 Sh	60 Sh	70 Sh
BRB 50	Max. Load (Kg.)	20	40	50	80
BRB 60	Max. Load (Kg.)	30	45	65	75
BRB 65	Max. Load (Kg.)	50	75	120	140
BRB 70	Max. Load (Kg.)	50	75	120	140
BRB 80 M10	Max. Load (Kg.)	80	130	175	235
BRB 80 M12	Max. Load (Kg.)	80	130	175	235
BRB 100 M12	Max. Load (Kg.)	200	305	420	450
BRB 100 M12	Max. Load (Kg.)	200	305	420	450
BRB 110 M12	Max. Load (Kg.)	200	305	420	450
BRB 110 M16	Max. Load (Kg.)	200	305	420	450
BRB 125	Max. Load (Kg.)	310	450	700	900
BRB 150	Max. Load (Kg.)	450	570	800	1000
BRB 180	Max. Load (Kg.)	875	1110	1700	2630
BRB 220	Max. Load (Kg.)	1600	2400	3400	4200

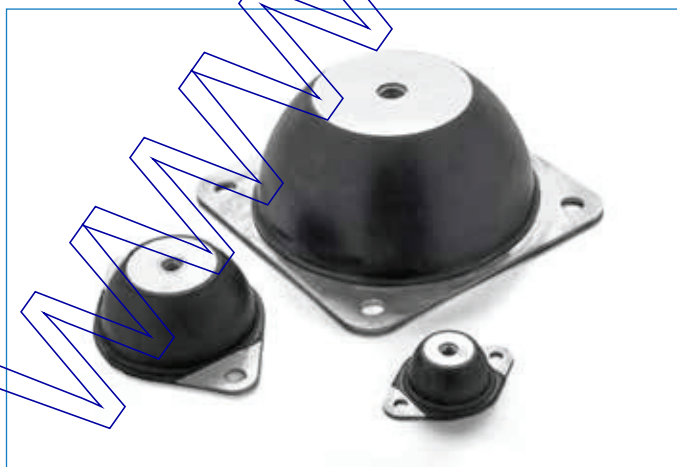
BSB



Natural frequency: 5-11 Hz

TYPE	AMC	Hardness	Hardness	Hardness	Hardness
		40 Sh	50 Sh	60 Sh	70 Sh
BSB 60	Max. Load (Kg)	70	130	170	245
BSB 80 M10	Max. Load (Kg)	110	161	231	300
BSB 80 M12	Max. Load (Kg)	110	161	231	300
BSB 95 M10	Max. Load (Kg)	180	230	270	330
BSB 95 M12	Max. Load (Kg)	180	230	270	330
BSB 110 M12	Max. Load (Kg)	250	350	450	550
BSB 110 M16	Max. Load (Kg)	250	350	450	550
BSB 125	Max. Load (Kg)	450	550	690	900
BSB 150	Max. Load (Kg)	750	950	1300	1650
BSB 160	Max. Load (Kg)	900	1200	1600	2300
BSB 180	Max. Load (Kg)	1300	1750	2100	2900
BSB 220	Max. Load (Kg)	2500	3200	4000	5000

DRD



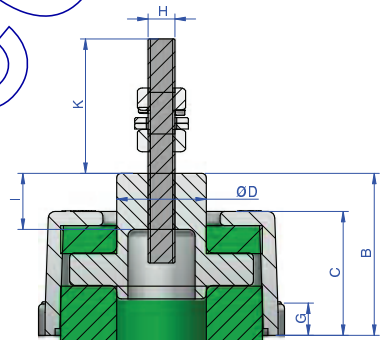
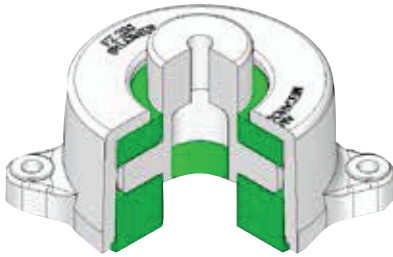
Natural frequency: 5-11 Hz

TYPE	AMC	Hardness	Hardness	Hardness	Weight (grs)
		45 Sh	60 Sh	75 Sh	
DRD 45	Max. Load (Kg.)	20	50	-	-
DRD 65	Max. Load (Kg.)	40	75	-	170
DRD 85	Max. Load (Kg.)	75	120	185	303
DRD 90	Max. Load (Kg.)	130	220	275	430
DRD 130	Max. Load (Kg.)	280	500	625	1080
DRD 170	Max. Load (Kg.)	380	750	930	2390
DRD 250	Max. Load (Kg.)	1400	2500	3150	10400

FZ+ sylomer[®] by getzner **MOUNTS**


The AMC-MECANOCAUCHO[®] FZ mounts are composed by two metal parts surrounded by a high resiliency Sylomer[®] polyurethane compound that offers a high isolation capacity with a small static deformation in all MEDIUM-HIGH frequency range.

They have also an interlocking metal component that provides a fail-safe protection. The Sylomer[®] polyurethane compound is oil resistant and the temperature range of the FZ mounts is -30°C +70°C.



CORTE A-A

Natural frequency: 7-14 Hz

CODE	MAX. LOAD		DIMENSIONS									
	TYPE	Max. Load (Kg.)	A	B	C	ØD	ØE	F	G	H	I	K
176301	FZ-100-57-M12 + Kit Niv.	200	80	56	48	25	6,5	67	8	12	40	60
176311	FZ-200-51-M12 + Kit Niv.	170-280	108	72	55	40	8,5	90	10	12	25	60
176321	FZ-200-57-M12 + Kit Niv.	280-400	108	72	55	40	8,5	90	10	12	25	60
176323	FZ-200-57-M14 + Kit Niv.	280-400	108	72	55	40	8,5	90	10	14	25	60
176331	FZ-400-51-M14 + Kit Niv.	460-800	155	95	80	65	12,5	125	15	14	28	60
176341	FZ-400-57-M16 + Kit Niv.	800-1000	155	95	80	65	12,5	125	15	16	28	60
176351	FZ-600-51-M18 + Kit Niv.	1000-1200	175	95	80	65	14	140	15	18	28	60
176361	FZ-600-57-M20 + Kit Niv.	1200-1500	175	95	80	65	14	140	15	20	28	60
176371	FZ-1000-57-M20 + Kit Niv.	1500-2000	205	95	80	65	16	162	15	20	28	60

CODE	MAX. LOAD		DIMENSIONS									
	TYPE	Max. Load (Kg.)	A	B	C	ØD	ØE	F	G	H	I	
176302	FZ-100-57-M12	200	80	56	48	25	6,5	67	8	12	40	
176312	FZ-200-51-M12	170-280	108	72	55	40	8,5	90	10	12	25	
176322	FZ-200-57-M12	280-400	108	72	55	40	8,5	90	10	12	25	
176324	FZ-200-57-M14	280-400	108	72	55	40	8,5	90	10	14	25	
176332	FZ-400-51-M14	460-800	155	95	80	65	12,5	125	15	14	28	
176342	FZ-400-57-M16	800-1000	155	95	80	65	12,5	125	15	16	28	
176352	FZ-600-51-M18	1000-1200	175	95	80	65	14	140	15	18	28	
176362	FZ-600-57-M20	1200-1500	175	95	80	65	14	140	15	20	28	
176372	FZ-1000-57-M20	1500-2000	205	95	80	65	16	162	15	20	28	

VIBRABSORBER + ^{by getzner} sylomer®

The main characteristic of these mounts is their own capacity to isolate very low frequencies.

VSR+ ^{by getzner} sylomer® MOUNTS Natural frequency: 2-5 Hz

The mounts are manufactured using steel springs that can provide very high deflections up to 50 mm. The base plate is glued to a 12,5 mm Sylomer® pad in order to avoid sliding and improve the isolation of the element, mainly at mid-high vibration frequencies that could be transmitted by the spring coil.

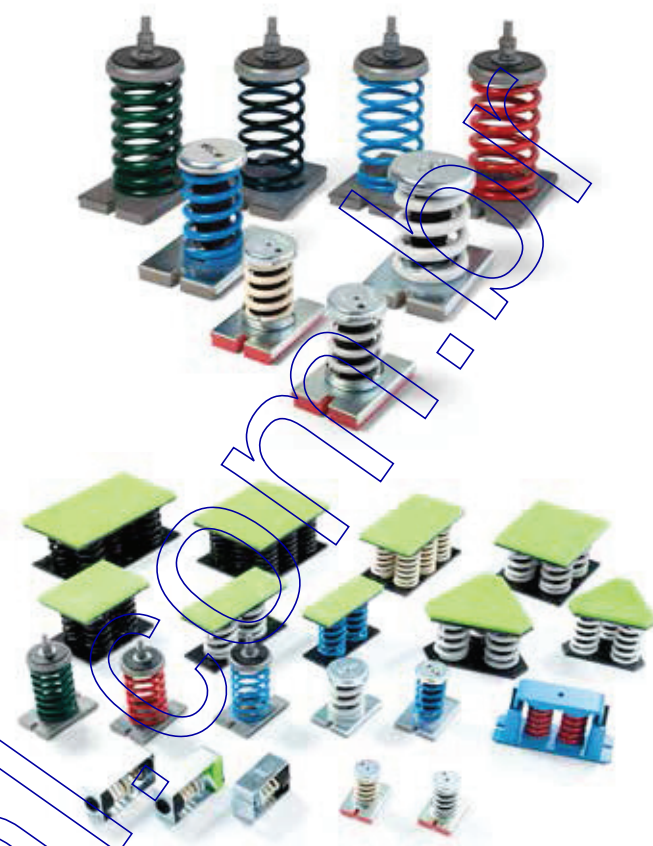
The different maximum load capacities of the mounts are identified by different spring colors. These springs are coated with an epoxy paint that provides excellent corrosion properties.

APPLICATIONS

This mounts are specially interesting for applications where high isolation is demanded. The steel spring combined with the Sylomer® pad, provide an excelent isolation for low, medium and high frequencies. Specially interesting for rotating machinery in buildings like air-conditioning, fans, ventilators, compressors, pumps, generating sets etc.

ANTISEISMIC SPRING MOUNTS

These spring mounts incorporate an ANTISEISMIC device to protect the spring from earthquakes.



1 AMC ANTISEISMIC + RUBBER

Natural frequency: 3-5 Hz

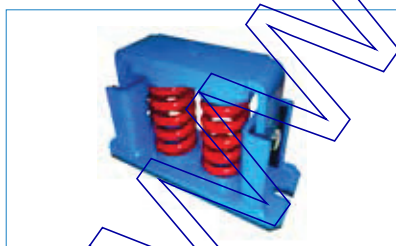
AMC CODE	MOD.(N°Springs)	SPRING COLOR	MAX.LOAD(kg.)	DEFLECTION(mm)
20409	1	PURPLE	305	22
20381	1	GREEN	405	22
20382	1	GREY	540	22
20383	1	WHITE	612	22
20384	1	RED	803	22



1 AMC ANTISEISMIC + ^{by getzner} sylomer®

Natural frequency: 3-5 Hz

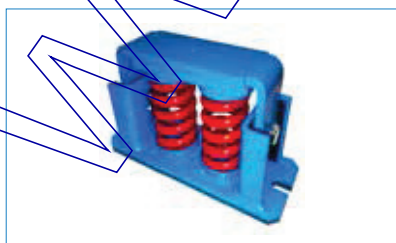
AMC CODE	MOD.(N°Springs)	SPRING COLOR	MAX.LOAD(kg.)	DEFLECTION(mm)
20413	1	PURPLE	305	22
20377	1	GREEN	405	22
20378	1	GREY	540	22
20379	1	WHITE	612	22
20380	1	RED	803	22



2 AMC ANTISEISMIC + RUBBER

Natural frequency: 3-5 Hz

AMC CODE	MOD.(N°Springs)	SPRING COLOR	MAX.LOAD(kg.)	DEFLECTION(mm)
20494	2	PURPLE	610	22
20496	2	GREEN	815	22
20497	2	GREY	1080	22
20498	2	WHITE	1225	22
20500	2	RED	1610	22



2 AMC ANTISEISMIC + ^{by getzner} sylomer®

Natural frequency: 3-5 Hz

AMC CODE	MOD.(N°Springs)	SPRING COLOR	MAX.LOAD(kg.)	DEFLECTION(mm)
20480	2	PURPLE	610	22
20487	2	GREEN	815	22
20488	2	GREY	1080	22
20489	2	WHITE	1225	22
20490	2	RED	1610	22



4 AMC ANTISEISMIC + RUBBER

Natural frequency: 3-5 Hz

AMC CODE	MOD.(N°Springs)	SPRING COLOR	MAX.LOAD(kg.)	DEFLECTION(mm)
20700	4	PURPLE	1220	22
20696	4	GREEN	1620	22
20697	4	GREY	2160	22
20698	4	WHITE	2448	22
20699	4	RED	3220	22



4 AMC ANTISEISMIC + sylomer[®]

Natural frequency: 3-5 Hz

AMC CODE	MOD.(N°Springs)	SPRING COLOR	MAX.LOAD(kg.)	DEFLECTION(mm)
20687	4	GREEN	1620	22
20688	4	GREY	2160	22
20689	4	WHITE	2448	22
20690	4	RED	3112	22



6 AMC ANTISEISMIC + RUBBER

Natural frequency: 3-5 Hz

AMC CODE	MOD.(N°Springs)	SPRING COLOR	MAX.LOAD(kg.)	DEFLECTION(mm)
20761	6	PURPLE	1830	22
20762	6	GREEN	2430	22
20763	6	GREY	3240	22
20764	6	WHITE	3670	22
20765	6	RED	4820	22



6 AMC ANTISEISMIC + sylomer[®]

Natural frequency: 3-5 Hz

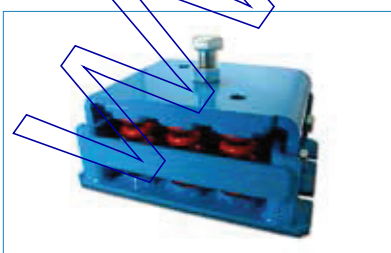
AMC CODE	MOD.(N°Springs)	SPRING COLOR	MAX.LOAD(kg.)	DEFLECTION(mm)
20766	6	PURPLE	1830	22
20767	6	GREEN	2430	22
20768	6	GREY	3240	22
20769	6	WHITE	3670	22
20770	6	RED	4820	22



9 AMC ANTISEISMIC + RUBBER

Natural frequency: 3-5 Hz

AMC CODE	MOD.(N°Springs)	SPRING COLOR	MAX.LOAD(kg.)	DEFLECTION(mm)
20961	9	PURPLE	2745	22
20962	9	GREEN	3645	22
20963	9	GREY	4860	22
20964	9	WHITE	5508	22
20965	9	RED	7227	22



9 AMC ANTISEISMIC + sylomer[®]

Natural frequency: 3-5 Hz

AMC CODE	MOD.(N°Springs)	SPRING COLOR	MAX.LOAD(kg.)	DEFLECTION(mm)
20992	9	PURPLE	2745	22
20993	9	GREEN	3645	22
20994	9	GREY	4860	22
20995	9	WHITE	5508	22
20996	9	RED	7227	22

VIBRABSORBER + ^{by getzner} **sylomer®** HANGERS SOLUTIONS

SRB & SRS



These Spring type mounts, are thought for ducts and air conditioning units that are set to ceilings. They have the same characteristics as the VIBRABSORBER spring range mounts.

Natural frequency: 3-5 Hz

TYPE	AMC	Max.Load(Kg.)
SRB 25	Max. Load (Kg.)	25
SRS 25 + Sylomer®	Max. Load (Kg.)	25
SRB 50	Max. Load (Kg.)	50
SRS 50 + Sylomer®	Max. Load (Kg.)	50
SRB 75	Max. Load (Kg.)	75
SRS 75 + Sylomer®	Max. Load (Kg.)	75
SRB 100	Max. Load (Kg.)	100
SRS 100 + Sylomer®	Max. Load (Kg.)	100
SRS 125 + Sylomer®	Max. Load (Kg.)	125
SRS 150 + Sylomer®	Max. Load (Kg.)	150

VT



Natural frequency: 5 - 11 Hz

TYPE	AMC	Max.Load(Kg.)
VT 25	Max. Load (Kg.)	30
VT 50	Max. Load (Kg.)	30
VT 75	Max. Load (Kg.)	60
VT 100	Max. Load (Kg.)	60
VT 125	Max. Load (Kg.)	100
VT 150	Max. Load (Kg.)	150
VT 200	Max. Load (Kg.)	200
VT 250	Max. Load (Kg.)	250
VT 350	Max. Load (Kg.)	350
VT 500	Max. Load (Kg.)	500
VT 750	Max. Load (Kg.)	750

AKUSTIK + ^{by getzner} **sylomer®**



Natural frequency: 10 a 13,6 Hz

TYPE	AMC	Max.Load(Kg.)
Akustik 4 A-45	Max. Load (Kg.)	30
Akustik 4 High A-45	Max. Load (Kg.)	30
Akustik 4 B-60	Max. Load (Kg.)	60
Akustik 4 High B-60	Max. Load (Kg.)	60
Gran Akustik 2 A-45	Max. Load (Kg.)	100
Gran Akustik 2 B-60	Max. Load (Kg.)	150
Springtec ST-10 Type 2	Max. Load (Kg.)	10
Springtec ST-20 Type 2	Max. Load (Kg.)	20
Springtec ST-30 Type 2	Max. Load (Kg.)	30
Springtec ST-40 Type 2	Max. Load (Kg.)	40

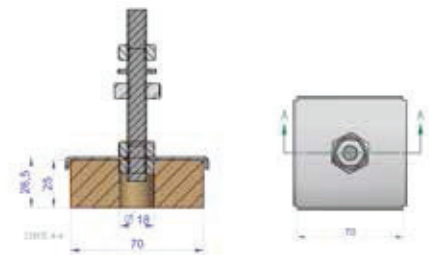
LEVELING ANTIVIBRATION MOUNTS SOLUTIONS

TSR + by getzner **sylomer**[®]

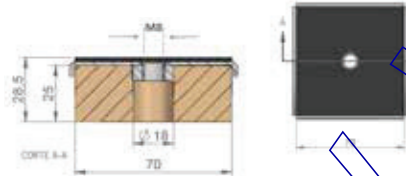
These mounts add up the good characteristic of the SYLOMER material to the typical leveling mount.



TSR with leveling KIT

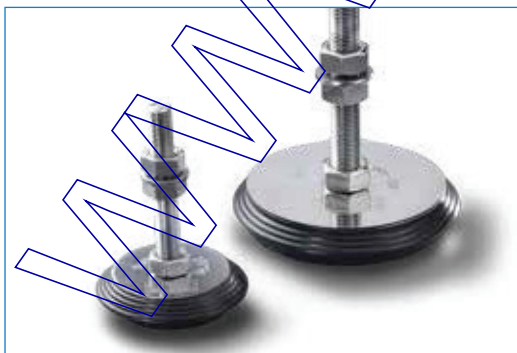


TSR without leveling KIT



TYPE	Min. load (Kg.)	Máx.load (Kg.)	Freq. for min. load (Hz)	Freq. for max. load (Hz)	CODE
TSR - 55 M8	10	25	25	12,5	157001
TSR - 110 M8	25	50	18,3	11	157002
TSR - 220 M8	50	75	16	12	157003
TSR - 450 M8	75	150	16,4	11,2	157004
TSR - 850 M8	150	250	15,7	12,1	157005
TSR - 1200 M8	250	420	12,6	11,1	157006
TSR - 55 M10	10	25	25	12,5	157008
TSR - 110 M10	25	50	18,3	11	157009
TSR - 220 M10	50	75	16	12	157010
TSR - 450 M10	75	150	16,4	11,2	157011
TSR - 850 M10	150	250	15,7	12,1	157012
TSR - 1200 M10	250	420	12,6	11,1	157013
TSR - 55 M12	10	25	25	12,5	157014
TSR - 110 M12	25	50	18,3	11	157015
TSR - 220 M12	50	75	16	12	157016
TSR - 450 M12	75	150	16,4	11,2	157017
TSR - 850 M12	150	250	15,7	12,1	157018
TSR - 1200 M12	250	420	12,6	11,1	157019
TSR-55 M8+ Kit Niv. M8x55	10	25	25	12,5	157101
TSR-110 M8+ Kit Niv. M8x55	25	50	18,3	11	157102
TSR-220 M8+ Kit Niv. M8x55	50	75	16	12	157103
TSR-450 M8+ Kit Niv. M8x55	75	150	16,4	11,2	157104
TSR-850 M8+ Kit Niv. M8x55	150	250	15,7	12,1	157105
TSR-1200 M8+ Kit Niv. M8x55	250	420	12,6	11,1	157106
TSR-55 M10+ Kit Niv. M10x90	10	25	25	12,5	157107
TSR-110 M10+ Kit Niv. M10x90	25	50	18,3	11	157108
TSR-220 M10+ Kit Niv. M10x90	50	75	16	12	157109
TSR-450 M10+ Kit Niv. M10x90	75	150	16,4	11,2	157110
TSR-850 M10+ Kit Niv. M10x90	150	250	15,7	12,1	157111
TSR-1200 M10+ Kit Niv. M10x90	250	420	12,6	11,1	157112
TSR-55 M12+ Kit Niv. M12x100	10	25	25	12,5	157113
TSR-110 M12+ Kit Niv. M12x100	25	50	18,3	11	157114
TSR-220 M12+ Kit Niv. M12x100	50	75	16	12	157115
TSR-450 M12+ Kit Niv. M12x100	75	150	16,4	11,2	157116
TSR-850 M12+ Kit Niv. M12x100	150	250	15,7	12,1	157117
TSR-1200 M12+ Kit Niv. M12x100	250	420	12,6	11,1	157118

SV & LOW SV



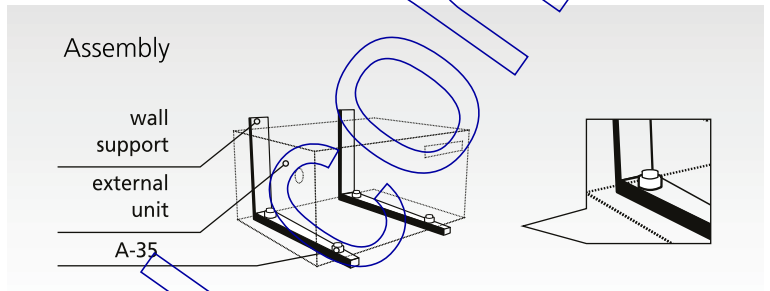
TYPE	AMC	Max.Load (kg)
SV 000	Max. Load (Kg.)	80
SV 00 / LOW SV 00B	Max. Load (Kg.)	120
SV 0 / LOW SV 0B	Max. Load (Kg.)	160
SV 1 / LOW SV 1B	Max. Load (Kg.)	350
SV 2 / LOW SV 2B	Max. Load (Kg.)	600
SV 3 / LOW SV 3B	Max. Load (Kg.)	900
SV 4 / LOW SV 4B	Max. Load (Kg.)	1.200
SV 5 / LOW SV 5B	Max. Load (Kg.)	1.750
SV 6	Max. Load (Kg.)	2.500
SV 7	Max. Load (Kg.)	3.750

LEVELING ANTIVIBRATION MOUNTS SOLUTIONS.

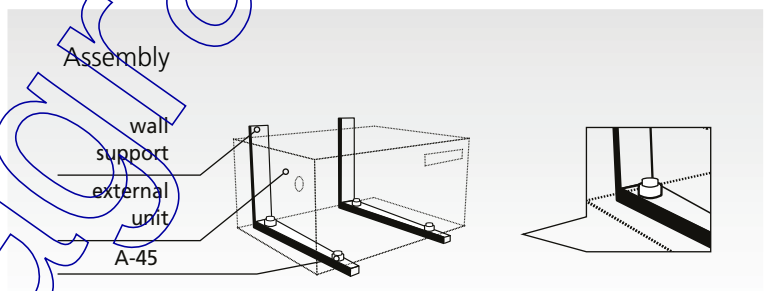
TRAPEZOIDAL SUPPORT KIT

TYPE	Max. Load (Kg.)	Code
A-35	50	649009
A-45	85	649016
S-40	45	649017
S-60	150	649043

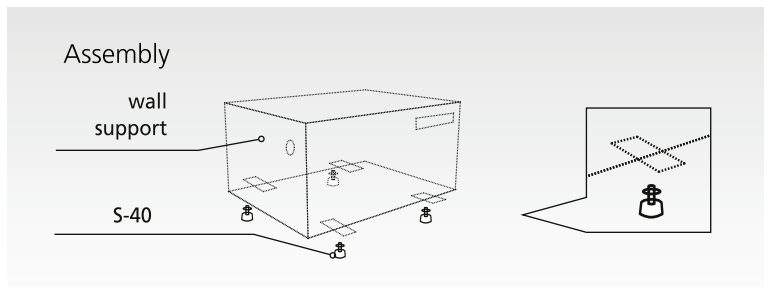
A35



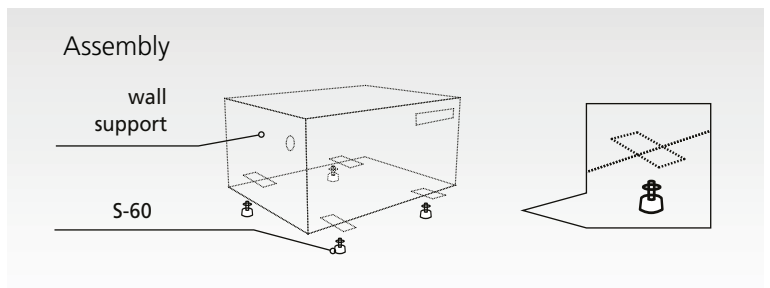
A-45



S-40



S-60

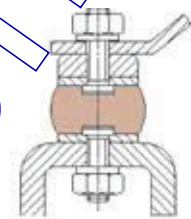
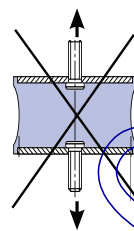


SIMPLE MOUNTS FOR AIR CONDITIONING INTERNAL COMPONENTS:

MECANOCAUCHO BOBBINS



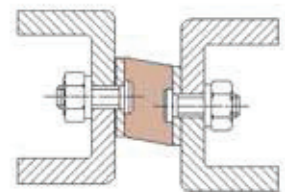
The AMC Mecanocaucho® bobbins are particularly suitable for installation on small motor-pumps, motor-ventilators, driers, sieves, compactors, washing machines, electrical motors, on-board control panels, measuring apparatuses, control cabinets, microphones, fluorescent tubes, etc.



Compression



Compression-shear



Shear

RECOMMENDATIONS FOR THE CYLINDRICAL MOUNTS

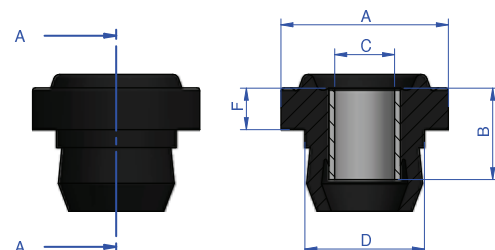
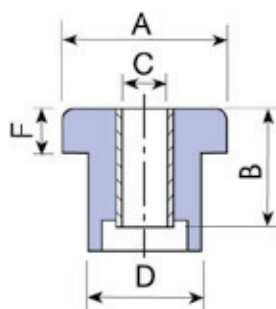
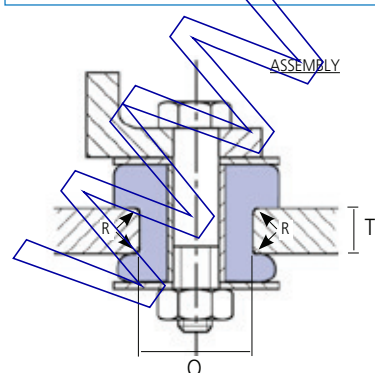
The cylindrical mounts should never work at traction. They should be used on a compression basis. To obtain greater deflection, use them at shear or shear /compression, although the maximum loads indicated in our catalogue for shear use should never be exceeded.

This applies to our bobbins, diabolos, trapezoidal or annular mounts.

SCB



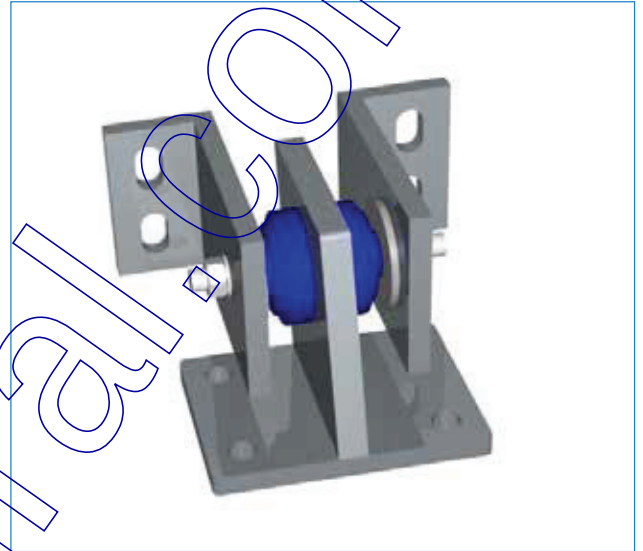
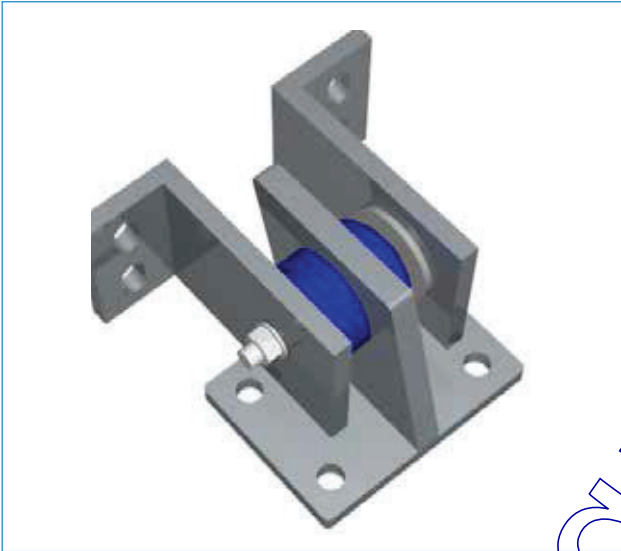
TYPE	Max. Load (Kg.)
SCB 25	50
SCB 35	25
SCB 38	50
SCB 40	75
SCB 42	75
SCB 45	100
SCB 50	200
SCB 60	250
SCB 65	250
SCB 95	1000



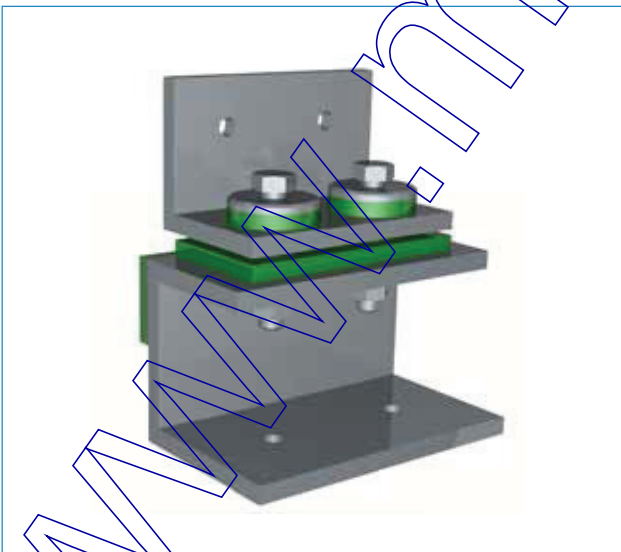
AMC SNUBBERS FOR SEISMIC APPLICATIONS

These type of mounts are designed for use in locations subject to earthquakes or other external forces which could displace equipments. These two models are intended to limit lateral and vertical machine movements.

AMC SNUBBER + CB



AMC SNUBBER + by getzner **sylomer**



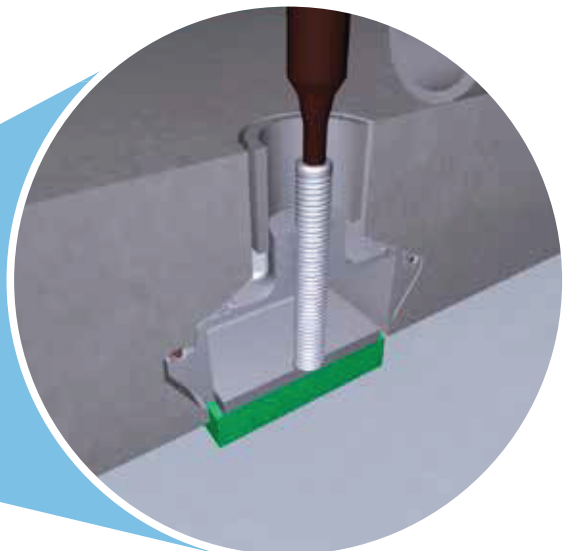
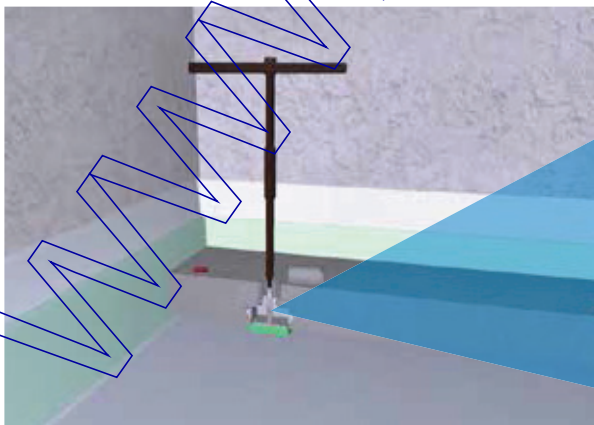
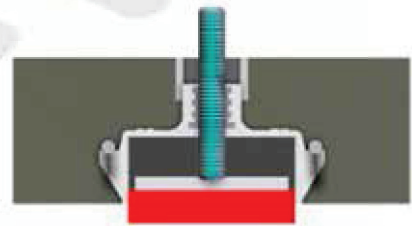
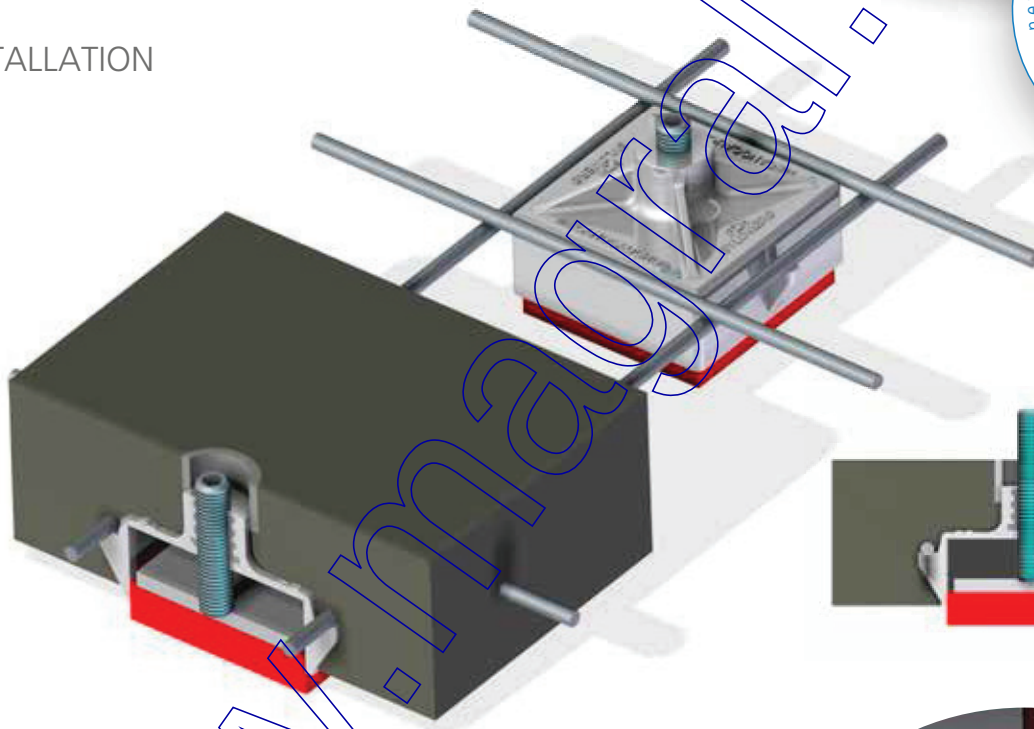
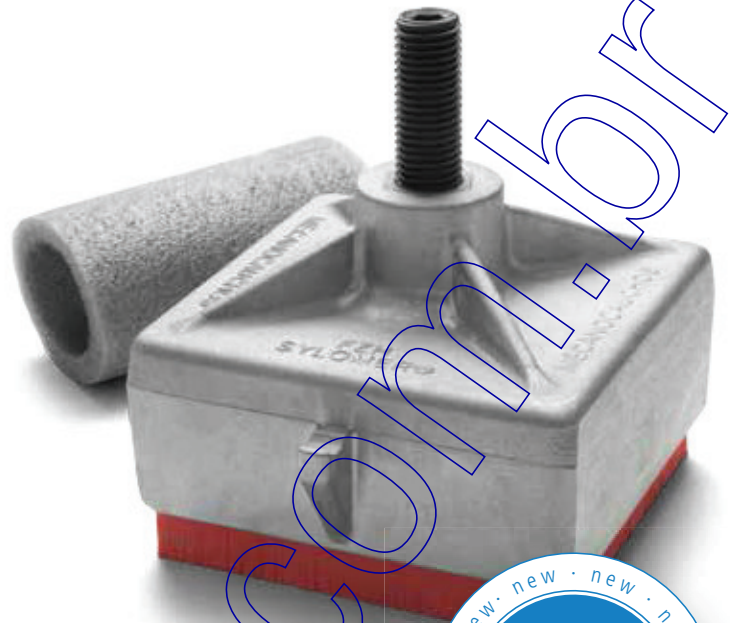
FLOOR MOUNTS

FZH + by getzner **sylomer®**

The goal of the system is to avoid the structure borne noise installing elastical mounts that are embedded in the concrete floating floor. The process of elevation is done once the concrete is dry. The AMC-MECANOCAUCHO® type FZH mounts incorporate a polyurethane elastomer called Sylomer®. This material offers optimal elastic and mechanical properties for the application.

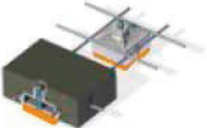
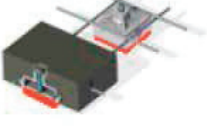
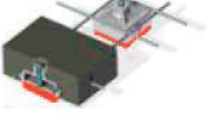
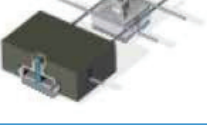
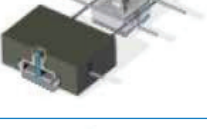
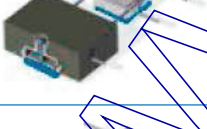
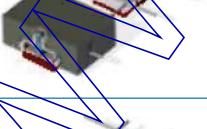
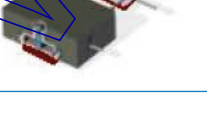
The AMC-MECANOCAUCHO® type FZH mounts can be manufactured in different densities of Sylomer® to match the natural frequency needed on the application. The process of leveling is simple and effective. The density of mount per m2 is 1.12 and the distance between the mounts is 0,9m.

INSTALLATION





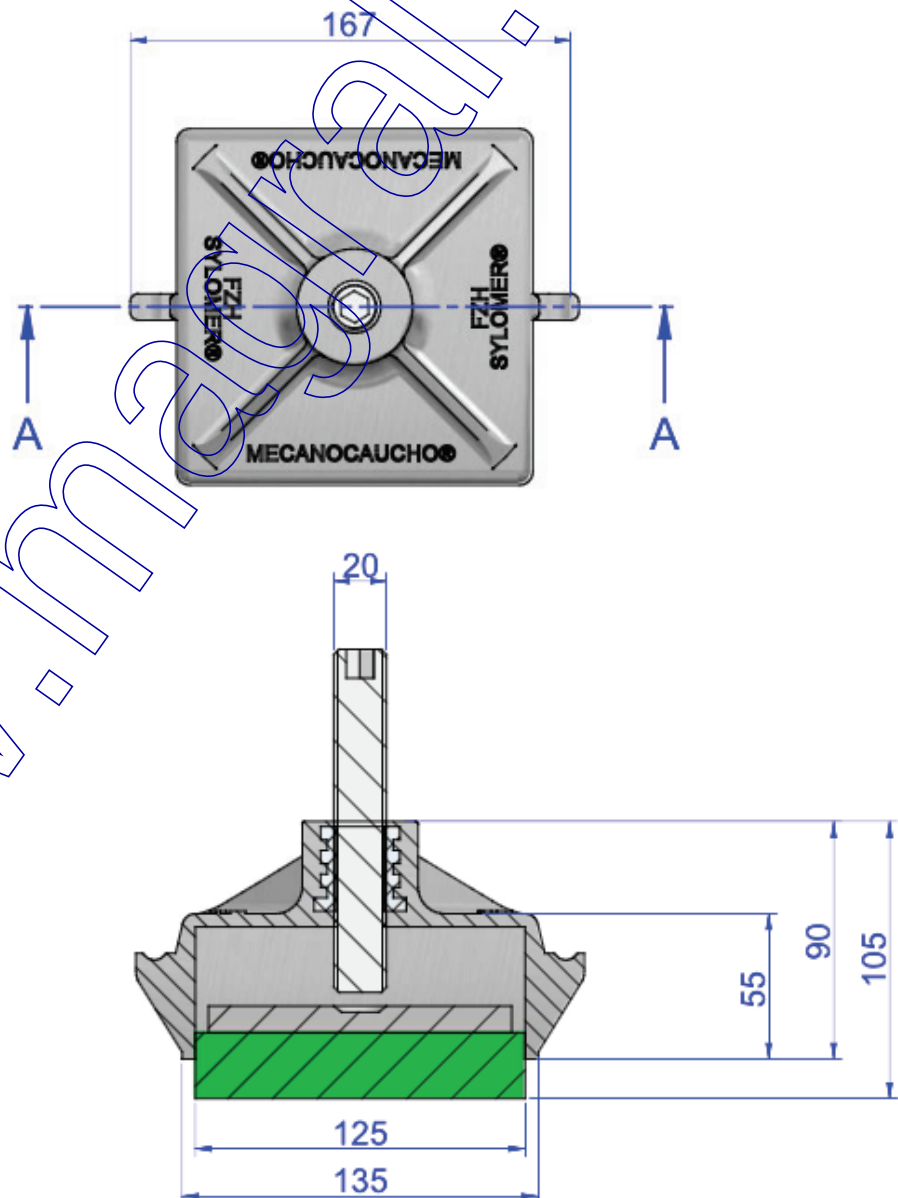
SYLOMER® TYPES

TYPE	SUMMARY	MAX. LOAD Kg.	FREQ. MAX. LOAD (Hz)	CODE
	FZH-33-25 Soporte diseñado para su colocación en suelos flotantes.	140	11	176511
	FZH-33-37 Soporte diseñado para su colocación en suelos flotantes.	140	8,6	176512
	FZH-39-25 Soporte diseñado para su colocación en suelos flotantes.	240	11,1	176513
	FZH-39-37 Soporte diseñado para su colocación en suelos flotantes.	240	8,5	176514
	FZH-45-25 Soporte diseñado para su colocación en suelos flotantes.	490	10,4	176515
	FZH-45-37 Soporte diseñado para su colocación en suelos flotantes.	490	8,1	176516
	FZH-51-25 Soporte diseñado para su colocación en suelos flotantes.	800	11,8	176517
	FZH-51-37 Soporte diseñado para su colocación en suelos flotantes.	800	9,1	176518
	FZH-57-25 Soporte diseñado para su colocación en suelos flotantes.	1260	10,2	176519
	FZH-57-37 Soporte diseñado para su colocación en suelos flotantes.	1260	7,3	176520

ADVANTAGES

- **LOW-LEVEL**, optimum efficiency damped screeds without much height is achieved. Given that the available height is severely limited in many cases, the entire available height becomes concrete slab system and adding mass to lower the natural frequency getting.
- **High insulation**, anti-vibration characteristics thanks to the Sylomer and used in tacos, very low natural frequencies that provide optimum insulation are achieved.
- **Quick installation** without placing board or joints between boards.
- **Economy**, save assembly time, we do not need boards or tacos.
- **Safety**, avoid the appearance of acoustic bridges, as when lifting the slab we are 100% sure that there has been no error in making the slab.
- **Easy and simple assembly**, it does not take a specialist to perform this ground.

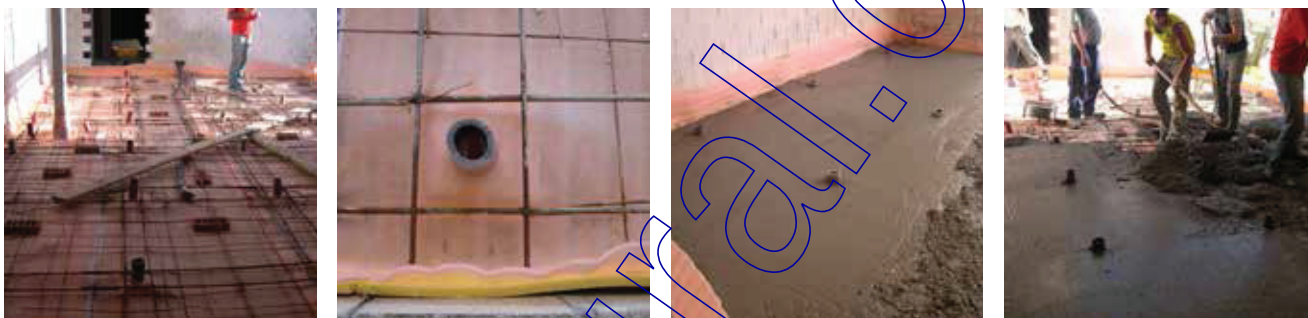
DRAWINGS



INSTALLATION STEPS



Conditioning the premise and installation of the mounts.



Installation of reinforced concrete.

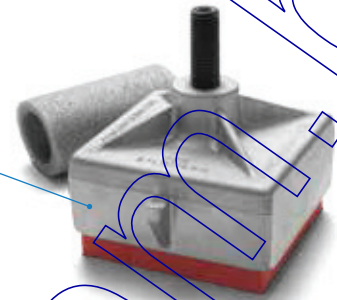
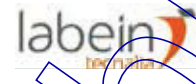
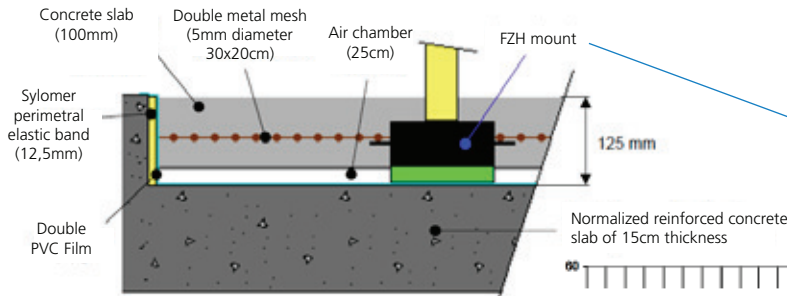


Levelling.



Height adjustment.

COMPARATIVE TESTS AT THE LABEIN TECHNOLOGY CENTRE



Reduction of impact noise on normalized slab according to UNE en ISO 140-8:1998

Weighted gain according to UNE-EN ISO 717-2:1997

$\Delta L_w (C_{1,2})$: 34 (-11) dB

These results rely on the realized tests under an artificial source under Laboratory conditions (engineering method)
* $L_n \leq$ indicated value and $\Delta L \geq$ indicated value (measurement limits)

Laboratory measurements

Test specimen: Floating reinforced concrete slab of 100 mm. thickness, elevated at 25 mm with a system of antivibration mounts as described on the above picture.

Employed supporting slab: Reinforced concrete slab of 15cm thickness, tested in 26/06/09 ($L_n, 0$)

Volume of the receiving room: 64.7 m³

Volume of the source room: 53.6 m³

Surface of the test specimen: 13.86 m² (3.3x4.2m)

Estimated specific mass: 250 Kg / m²

Chamber temperature: 17.3 C°

Chamber Hygrometry: 77%

Airborne insulation according to UNE EN ISO 140-16:2007

Laboratory measurements according to UNE ISO 140-3:1995

Test specimen: Floating reinforced concrete slab of 100 mm thickness, elevated at 25 mm with a system of antivibration mounts as described on the above picture.

Employed supporting slab: Reinforced concrete slab of 15cm thickness, tested in 26/06/09 (R_{WITHOUT})

Volume of the receiving room: 64.7 m³

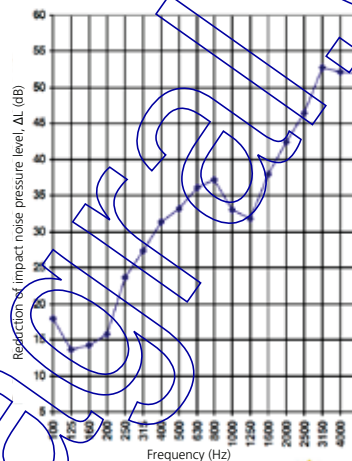
Volume of the source room: 53.6 m³

Surface of the test specimen: 13.86 m² (3.3x4.2m)

Estimated specific mass: 250 Kg/m²

Chamber temperature: 17.3 C°

Chamber Hygrometry: 77%



f (Hz)	L_n (dB)	$L_{n,0}$ (dB)	ΔL (dB)
100	47,2	65,1	17,9
125	46,9	60,5	13,6
160	53,2	67,5	14,3
200	49,5	65,3	15,8
250	41,8	65,4	23,6
315	37,3	64,7	27,4
400	34,5	65,9	31,4
500	34,3	67,5	33,2
630	31,9	68,0	36,1
800	32,9	70,1	37,2
1000	37,3	70,4	33,1
1250	38,9	70,7	31,8
1600	32,5	70,5	38,0
2000	27,8	70,3	42,5
2500	22,9	69,3	46,4
3150	15,3	69,1	52,8
4000	14,1	66,2	52,1
5000	11,6	63,6	52,0
$L_{n,w} / L_{n,0,w}$	41	76	

Isolation gain indexes:

ΔR_A : 13 dBA

ΔR_w : 13 dB

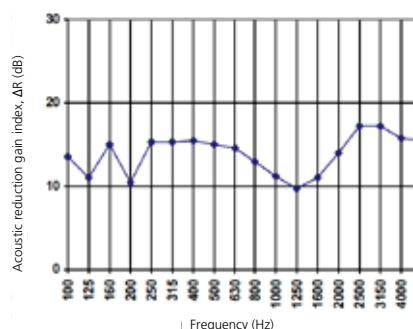
$\Delta(R_w+C)$: 13 dBA

$\Delta(R_w+C_{tr})$: 13 dBA

:

Evaluation based in laboratory measurements according to engineering method.

* R_{with} and $\Delta R \geq$ indicated value (measurements limits).



f (Hz)	R_{with} (dB)	R_{without} (dB)	ΔR (dB)
100	48,4	34,8	13,6
125	53,7	42,6	11,1
160	54,6	39,6	15,0
200	58,1	47,6	10,5
250	63,0	47,7	15,3
315	67,6	52,3	15,3
400	70,4	54,9	15,5
500	71,0	56,0	15,0
630	72,3	57,7	14,6
800	72,8	59,8	13,0
1000	72,0	60,8	11,2
1250	71,9	62,2	9,7
1600	74,9	63,8	11,1
2000	80,8	66,8	14,0
2500	87,5	70,3	17,2
3150	91,2	74,1	17,1
4000	91,9	76,1	15,8
5000	92,3	76,9	15,4
$R_w (C; C_2)$	72 (-2; -7)	58 (-2; -7)	
R_A	70,9	57,5	

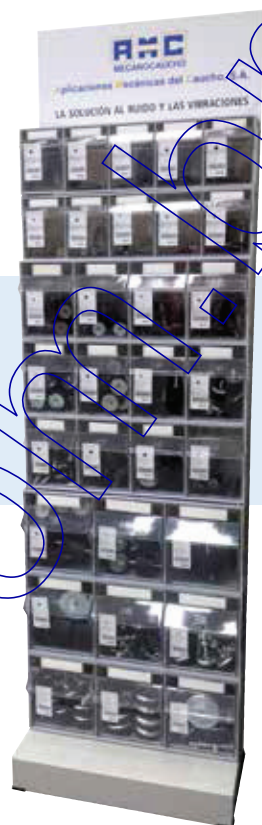
EXHIBITION TOOLS



LITTLE
DISPLAY



MEDIUM
DISPLAY



TRANSPARENT
DISPLAY

TSR
DISPLAY



BIG
DISPLAY



www.magraal.com.br

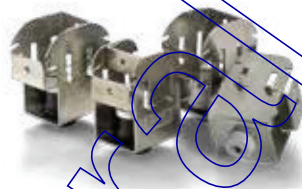
OTHER AMC CATALOGUES



ANTI-VIBRATION MOUNTINGS
MECANOCAUCHO.COM
Rubber Metal suspensions.



VIBRABSORBER + sylomer[®] by getzner
Spring mounts catalogue.



AKUSTIK + AMC
MECANOCAUCHO
AKUSTIK structure borne
noise decoupling systems
for architectural acoustics.



**AKUSTIKABSORBER
COMPOSITES**
Akustikabsorber products
are materials designed to
reduce reverberation and
increase the attenuation
between chambers.



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When 2 dB at low frequencies
make the difference.
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