HYDRAULIC

DESCRIPTION

The **AMC-MECANOCAUCHO® Hydraulic mounts** combine a spring and a hydraulic damper in a single compact unit that allows tuning of the spring and damper independently.

This provides flexibility in matching the dynamic characteristics of the isolator to the requirements of the application.

The internal architecture of the mount is composed of a new system that bonds the rubber to the metal parts in order to eliminate any leakage of the dampening fluid when the mount is submitted to high magnitude shocks.

For good isolation, low damping is required. For motion control, high dampening is required. The Mecanocaucho® hydraulic mounts accommodate these conflicting requirements. The fluid cavity is divided into two chambers with an orifice in between, so that motion of the elastomeric element causes fluid to flow from one chamber to the other, dissipating energy and thus creating damping in the system.

These mounts are particularly interesting for those installations that require a soft isolator for good isolation but still require motion control under transient (shock) inputs or when operating close to the isolation system's resonant frequency.

Picture of an engine application

TECHNICAL CHARACTERISTICS

•The AMC-MECANOCAUCHO® Hydraulic mounts have an interlocking metal component that provides a fail-safe protection for mobile applications. This device limits the ascending vertical movement when the mounting is submitted to shocks at traction.

•The thickness of the metal parts are robust and are suitable for off road applications.The metal parts have a suitable anticorrosive treatment for outdoor applications. RoHs compliant.

APPLICATIONS:

The AMC-MECANOCAUCHO® Hydraulic mounts have been primarily designed as engine and operator cab isolator in vehicular off highway and agricultural applications.

It is particularly interesting for those engines that operate on a variable rotating speed that must pass the natural frequency of the system during its normal functioning. Examples of this may be engines of 1,2,3 or 4 cylinders used on construction or agricultural equipment.

It is also interesting for cabins where vibration isolation is required for operator comfort purposes but as well stability when the cabin is submitted to transient shocks.

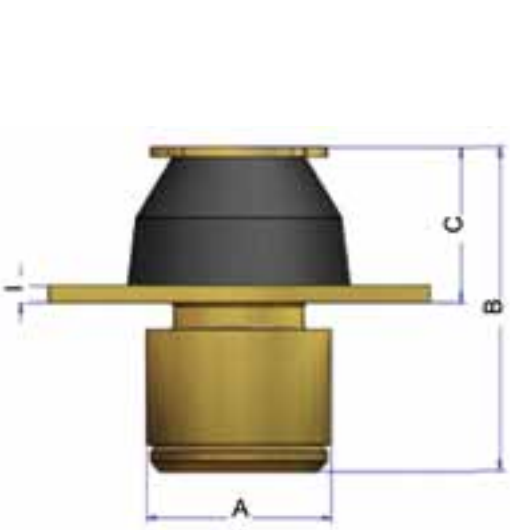
HYDRAULIC MOUNT

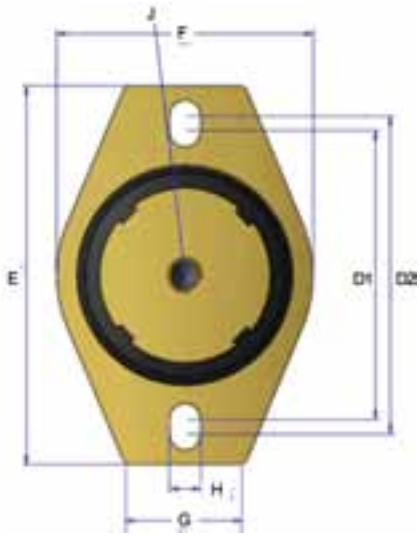
Picture of vibration measurements tests

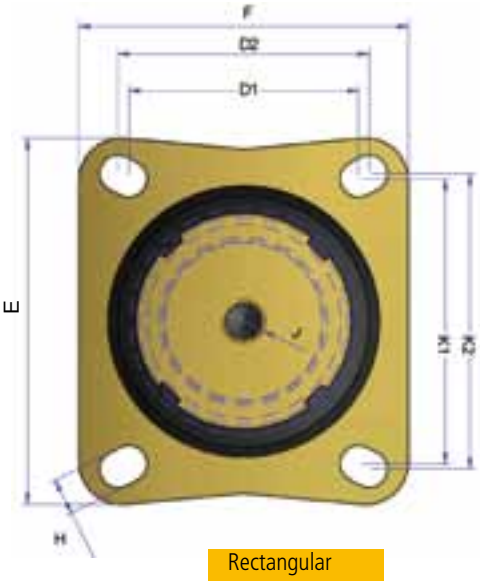
Picture of an engine application

Picture a cabine application

TYPE	A	B	C	D1 (min)	D2 (máx)	K1 (min)	K2 (máx)	E	F	G	H	I	J	AMC	CODE 40 Sh	50 Sh	60 Sh	70 sh	WEIGHT (Kg.)
MINI	45	60	30	64	73			88	56		8,2	3	M10	Ref	177031	177032	177033	177034	
														Máx. Load (kg.)	20	30	50	70	
SMALL	63	88	36	99	109			132	90	40	11	5	M10	Ref	177001	177002	177003	177013	
														Máx. Load (kg.)	60	100	145	180	
MEDIUM	63	96	46	99	109			132	90	40	11	5	M12	Ref	177004	177005	177006	177011	
														Máx. Load (kg.)	100	150	200	250	
MEDIUM RECTANG.	63	96	46	64	70	79,5	82,5	102	92		10,2	5	M12	Ref	177022	177021	177023	177024	
														Máx. Load (kg.)	100	150	200	250	
LARGE	105	115	55	130	145			175	108	49	13	10	M16	Ref	177007	177008	177009	177014	
														Máx. Load (kg.)	235	295	345	410	
LARGE RECTANG.	105	115	55	110	110	110	110	130	130		12	10	M20	Ref	177041	177042	177043	177044	
														Máx. Load (kg.)	235	295	345	410	







Rectangular

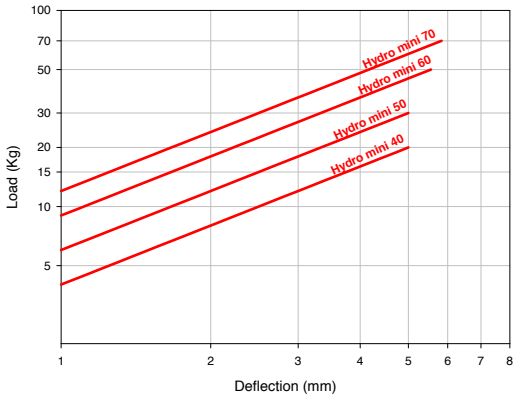
HYDRAULIC MOUNT

LOAD DEFLECTION

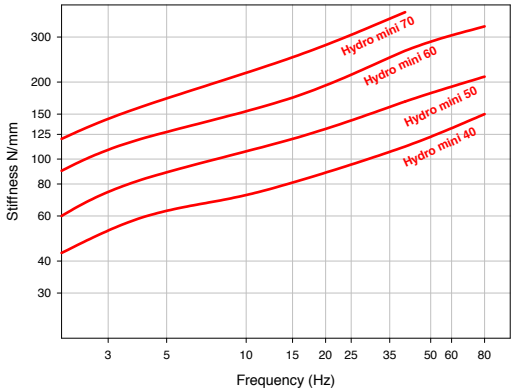
DYNAMIC STIFFNESS

MINI

Load deflection
MECANOCAUCHO® hydraulic mount

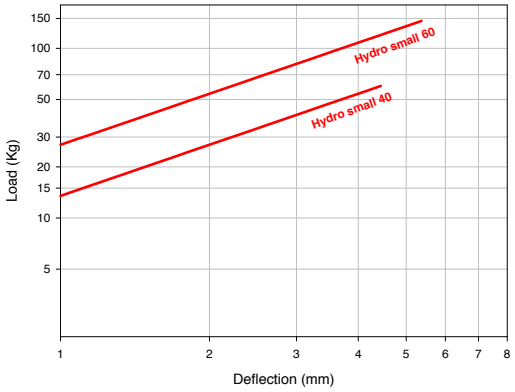


Dynamic behaviour
MECANOCAUCHO® hydraulic mount

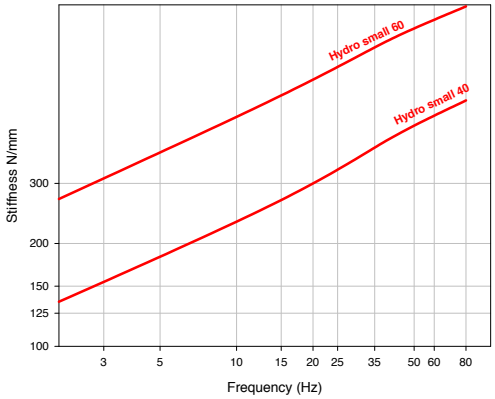


SMALL

Load deflection
MECANOCAUCHO® hydraulic mount

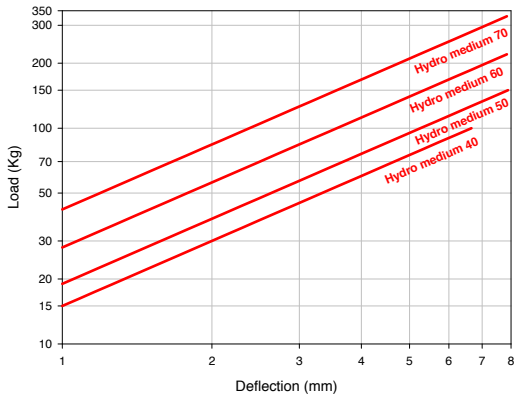


Dynamic behaviour
MECANOCAUCHO® hydraulic mount

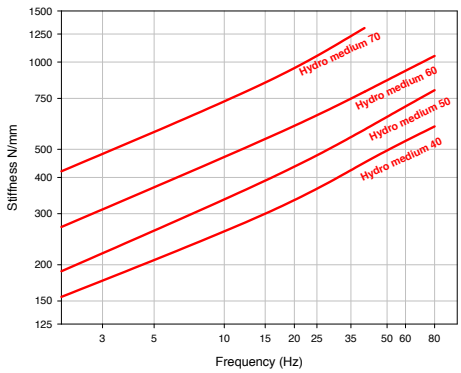


MEDIUM

Load deflection
MECANOCAUCHO® hydraulic mount

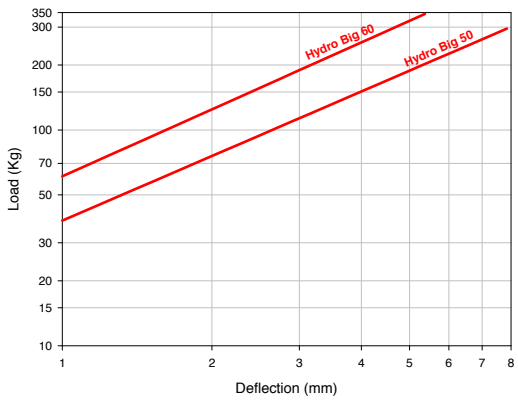


Dynamic behaviour
MECANOCAUCHO® hydraulic mount

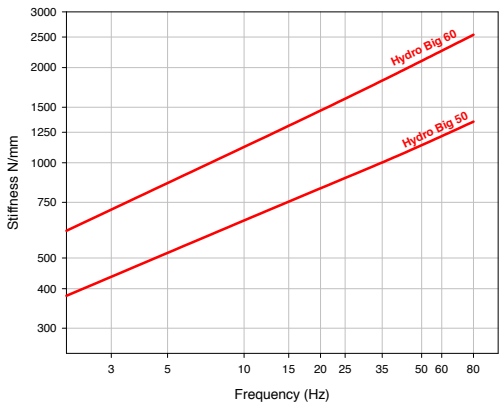


LARGE

Load deflection
MECANOCAUCHO® hydraulic mount



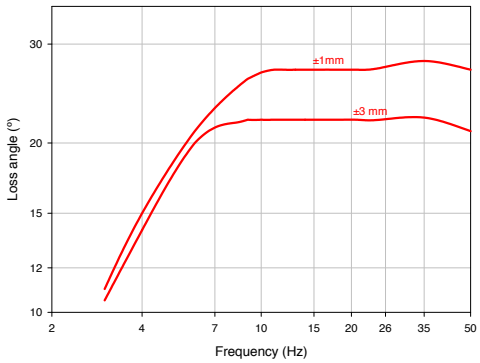
Dynamic behaviour
MECANOCAUCHO® hydraulic mount



DAMPING COEFICIENT

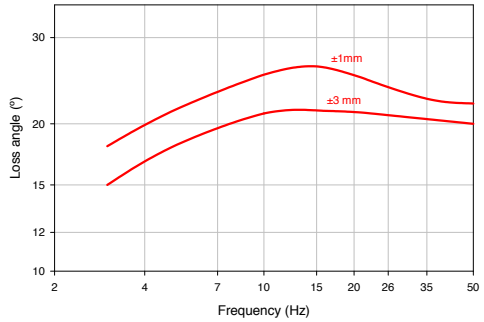
MINI

Dynamic behaviour
MECANOCAUCHO® hydraulic mount mini



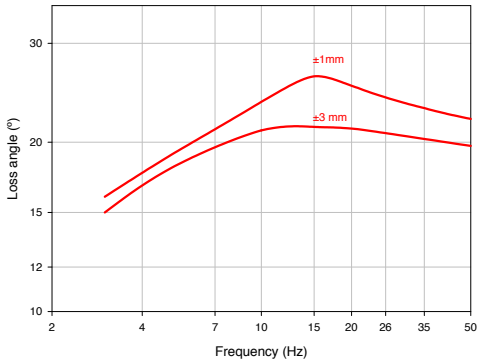
SMALL

Dynamic behaviour
MECANOCAUCHO® hydraulic mount small



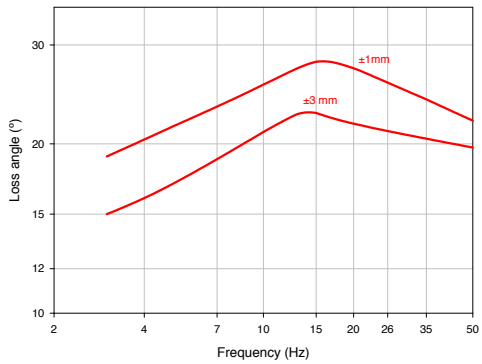
MEDIUM

Dynamic behaviour
MECANOCAUCHO® hydraulic mount medium



LARGE

Dynamic behaviour
MECANOCAUCHO® hydraulic mount Big



TECHNICAL ADVICE FOR FOPS ROPS APPROVAL

AMC-MECANOCAUCHO's technical department will be pleased to offer you advice on correct installation procedures to achieve FOPS/ROPS tests approvals.

These pictures show a typical traction test om a rectangular hydraulic medium subjected to loads upto 4 Tonnes without destruction of the part.

For more information on this topic, please contact our technical dpt.

Static Graph for hydro tracc Tested on: 5/10/2007 at 10.47.55