
ANTIVIBRANTI CAMPANA COMPONIBILI MODULURA ANTI-VIBRATION BELL MOUNTS



 **Soleco**
engineering s.r.l.

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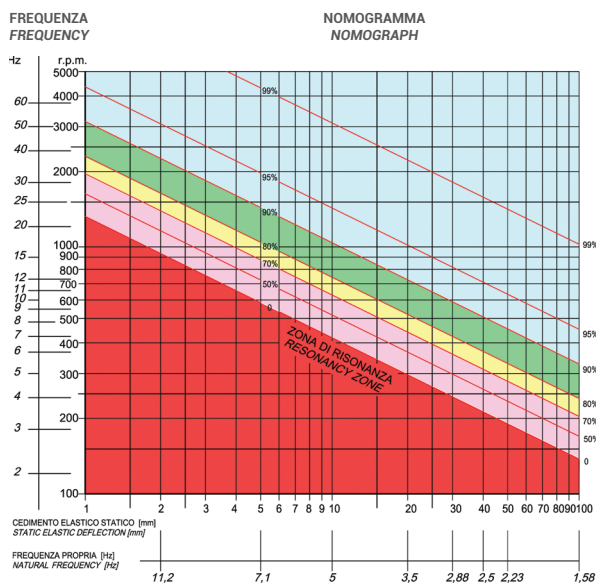


PER SCEGLIERE IL SUPPORTO ANTIVIBRANTE CORRETTO BISOGNA CONOSCERE:

1. PESO STATICO della macchina e NUMERO DEI PUNTI DI APPOGGIO con rispettivo carico gravante.
2. FREQUENZA ECCITANTE determinata dal corpo rotante con r.p.m. più bassa.
3. LUOGO D'INSTALLAZIONE: se la macchina viene installata in una zona sismica, in copertura, se è soggetta alle forze del vento o in una zona con elevata presenza di nebbie saline o altri agenti aggressivi.
4. TEMPERATURA D'IMPIEGO: bisogna tenere in considerazione le temperature alle quali saranno soggetti i supporti antivibranti.

L'INSTALLAZIONE È CORRETTA QUANDO TUTTI I SUPPORTI INSTALLATI PRESENTANO LA STESSA FRECCIA ELASTICA.

Se le basi di appoggio dei diversi supporti antivibranti non sono tra loro a livello, è necessario compensare tale mancanza utilizzando appositi registri (MARTINETTI).



ESEMPIO DI SCELTA DI UN SUPPORTO ANTIVIBRANTE:

Si supponga di dover isolare un gruppo frigorifero di 6.234 kg con una frequenza pari a 1800 r.p.m. (30 Hz). L'unità ha 6 punti di appoggio, su ogni punto d'appoggio gravano 1039 kg (il carico è uniformemente distribuito). Per ottenere un isolamento del 90% ca. è necessaria una deflessione (freccia) di ca. 4 mm. Nella scelta del supporto antivibrante controllare che il carico massimo consigliato sia superiore al carico applicato. Per la corretta installazione consultare l'apposita guida tecnica. Soleco engineering s.r.l. non si assume responsabilità nei casi dove si evidenzia l'errata installazione del supporto.

TO CHOOSE THE CORRECT ANTI-VIBRATION MOUNT, YOU MUST KNOW:

1. The **STATIC WEIGHT** of the machine and the **NUMBER OF SUPPORT POINTS** with their respective loads;
2. The **EXCITATION FREQUENCY** determined by the rotating body at the lowest r.p.m.
3. **INSTALLATION SITE:** if the machine is installed in a seismic area, on the roof, if it is subject to wind forces or in an area with high presence of saline mists or other aggressive agents.
4. **WORKING TEMPERATURE:** the temperatures to which the anti-vibration mounts will be subject must be taken into consideration.

THE INSTALLATION IS CORRECT WHEN ALL THE INSTALLED MOUNTS HAVE THE SAME ELASTIC DEFLECTION.

If the support bases of the different anti-vibration mounts are not among them at level, it is necessary to compensate for this lack using special registers (JACKS).

Il diagramma degli isolamenti, riassume graficamente, le relazioni intercorrenti tra la freccia elastica espressa in mm, il regime vibrante in r.p.m. o i cicli/mm e il grado di isolamento espresso in %.

The insulation diagram shows graphically the ratios between the elastic deflections in mm, the vibration speed in r.p.m. or cycles/mm and the degree of insulation as a %.



EXAMPLE OF CHOICE OF ANTI-VIBRATION MOUNT:

Suppose you need to isolate a 6234 kg refrigeration unit with one frequency equal to 1800 r.p.m. (30 Hz). The unit has six resting points with 1.039 kg resting on each point (the load is evenly distributed). To achieve about 90% insulation, a deflection of about 4 mm. is necessary. When choosing the anti-vibration mount, check that the maximum recommended load is higher than the load applied. Please consult the technical guide for correct installation. Soleco Engineering S.r.l. declines all responsibility in cases where the incorrect installation of the support is detected.

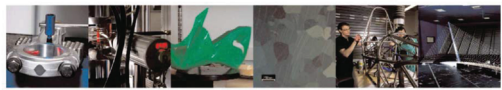




POLITECNICO
MILANO 1863



DIPARTIMENTO DI MECCANICA



097/16PC test on anti-vibration supports according to ANSI/ASHRAE 171-2008 (Prove su supporti antivibranti secondo ANSI/ASHRAE 171-2008)

Committente: SOLECO Engineering Srl
Via Masaccio, 12
20096 - Poglieto (MI)

DATA 13 aprile 2017

☒ Witnessed ☐ Monitored ☐ Reviewed 

Matteo Pansani
 Milan Office
 Lloyd's Register EMEA
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 Via G. La Masa, 1 ■ 20156 Milano ■ EMAIL (PEC): pecmecc@cert.polimi.it
<http://www.mecc.polimi.it>
 DM/INC0.12.055 agg.3

TESTATI,
CERTIFICATI E
BREVETTATI IN
ITALIA E NEL MONDO

BUSSOLA
ANTISTRAPPO
DI SERIE.
NESSUN RISCHIO DI
RIBALTAMENTO

TESTED, CERTIFIED
AND PATENTED
IN ITALY AND
WORLDWIDE

STANDARD
ANTI-TEAR
PROTECTION.
NO RISK OF
OVERTURN

ANTIVIBRANTE
COMPONIBILE.
NESSUNA
VULCANIZZAZIONE
FRA GOMMA
E METALLO

IDENTIFICAZIONE
VISIVA DELLA
DUREZZA DEL
CORPO ELASTICO
DAL COLORE DEL
CUSCINETTO

MODULAR
ANTI-VIBRATION MOUNT.
NO VULCANIZATION
BETWEEN RUBBER
AND METAL

SHORE HARDNESS
VISUAL
IDENTIFICATION
FROM THE COLOUR
OF THE PAD

SERIE CAMPANA

BELL SERIES

MODELLI

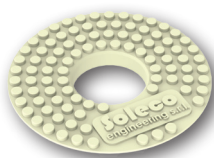
Disponibile in 4 grandezze per supportare carichi elevati e dotati di fori asolati per adattarsi alle più comuni misure di fissaggio. Ogni modello può essere fornito standard in 3 diverse durezze che vengono identificate dal colore del cuscinetto posto sulla parte superiore del supporto:

- 45 ShA - BEIGE
- 60 ShA - ROSSO
- 70 ShA - NERO

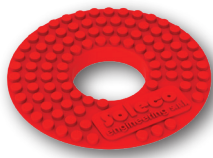
A richiesta possiamo fornire mescole con durezza 35 ShA (VERDE) per la versione in elastomero termoplastico adattabile su tutte le grandezze e 80 ShA (AZZURRO) per la versione in gomma naturale per il modello più grande a catalogo.

Il cuscinetto è dotato di rilievi deformabili antiscivolo che consentono all'antivibrante caricato di stazionare per attrito e nel contempo di ridurre la trasmissione di rumori.

45 ShA



60 ShA



70 ShA



35 ShA



80 ShA



GOMMA NATURALE indicata per applicazioni in ambienti con temperature comprese fra -40°C e $+80^{\circ}\text{C}$ (a richiesta disponibile in mescole speciali NBR, HNBR e EPDM).

ELASTOMERO TERMOPLASTICO ideale per applicazioni in ambienti con temperature di impiego da -45°C a $+110^{\circ}\text{C}$ per i 35, 45 e 70 ShA e da -55°C a $+135^{\circ}\text{C}$ per il 60 ShA.

La mescola, in termoplastica riciclabile, presenta una elevata resistenza all'invecchiamento, alle sostanze inquinanti, agli idrocarburi, nebbie saline, raggi UV e detergenti.

MODELS

Available in 4 sizes to support high loads and equipped with slotted holes to adapt to the most common fixing measures. Each model can be supplied in 3 standard different hardnesses which are identified by the color of the bearing placed on the upper base of the support:

- 45 ShA - BEIGE
- 60 ShA - RED
- 70 ShA - BLACK

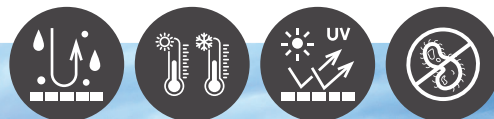
On request we can supply compounds with hardness 35 ShA (GREEN) for the thermoplastic elastomer version adaptable to all sizes and 80 ShA (LIGHT BLUE) for the natural rubber version for the largest model in the catalog.

The pad has slip-proof, flexible embossing which allow the charged anti-vibration mount to stand by friction and at the same time reduce the transmission of noise.

NATURAL RUBBER suitable for applications in environments with temperatures between -40°C and $+80^{\circ}\text{C}$ (available on request in special NBR, HNBR and EPDM compounds).

THERMOPLASTIC ELASTOMER ideal for applications with temperatures ranging from -45°C to $+110^{\circ}\text{C}$ for the 35, 45 and 70 ShA version and from -55°C to $+135^{\circ}\text{C}$ for the 60 ShA version.

The compound, in recyclable thermoplastic, has a high resistance to ageing, pollutants, hydrocarbons, salt mist, UV rays and detergents.



CERTIFICATI E BREVETTATI *CERTIFIED AND PATENTED*

BUSSOLA ANTISTRAPPO DI SERIE NESSUN RISCHIO DI RIBALTAMENTO

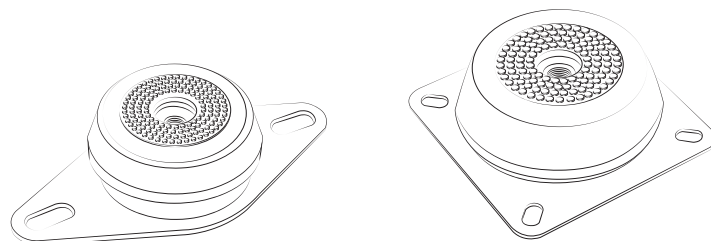
I supporti a CAMPANA Soleco sono stati testati presso il Politecnico di Milano e hanno soddisfatto in modo eccellente le aspettative assicurando il raggiungimento dei più alti standard qualitativi.

I supporti a CAMPANA Soleco sono protetti da BREVETTO in ITALIA e all'ESTERO.

STANDARD ANTI-TEAR PROTECTION NO RISK OF OVERTURN

Soleco BELL mounts have been tested at the Politecnico di Milano and have successfully met all the requirements, guaranteeing the highest standards of quality.

Soleco BELL mounts are protected by PATENT in ITALY and ABROAD.



STRUTTURA METALLICA

ACCIAIO ZINCATO UNI EN 10111 DD13 con superficie zincata UNI ISO 2081 Fe/Zn 15c1A bianca.

ACCIAIO INOX AISI 316 adatto per il settore OFFSHORE, alimentare e sanitario.

Inoltre, utilizzato in combinazione con l'elastomero termoplastico, è la soluzione ideale per applicazioni in ambienti con TEMPERATURE ESTREME.

METAL STRUCTURE

GALVANIZED STEEL UNI EN 10111 DD13 steel with UNI ISO 2081Fe/Zn 15c1Awhite galvanized coating.

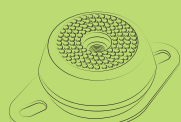
AISI 316 STAINLESS STEEL suitable for OFFSHORE, food and health sectors.

In addition, used in combination with thermoplastic elastomer, it is the ideal solution for applications in environments with EXTREME TEMPERATURES.

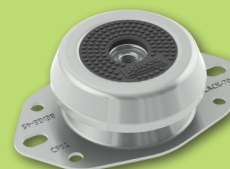
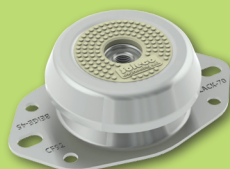
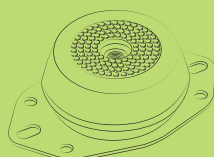


MODELLI MODELS

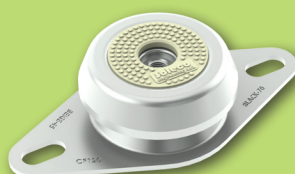
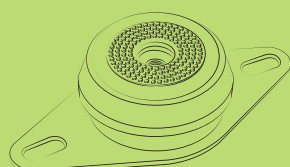
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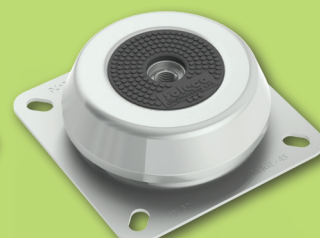
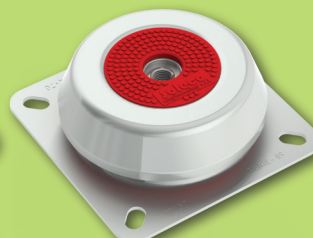
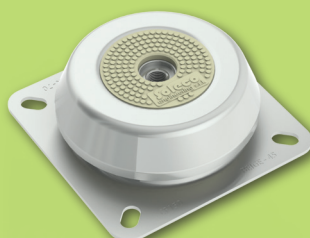
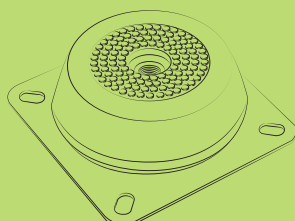
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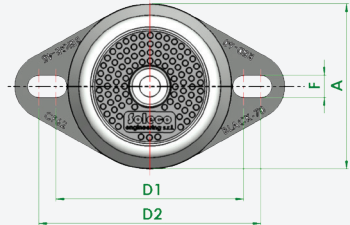
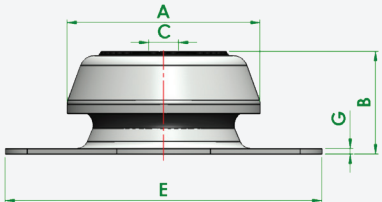
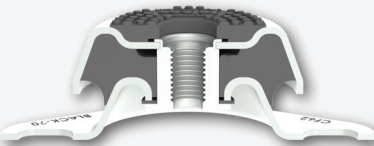


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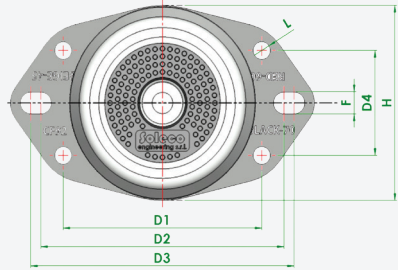
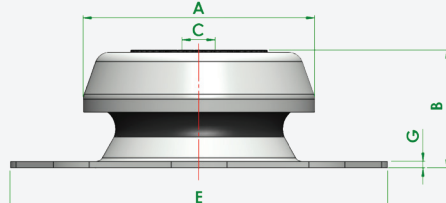
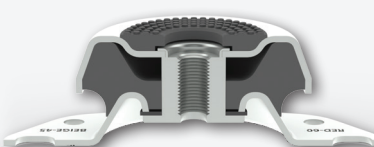


DIMENSIONALI
DIMENSIONS

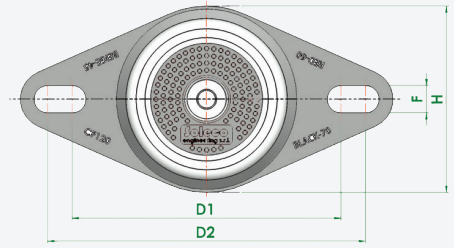
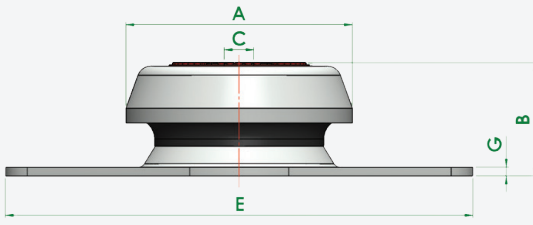
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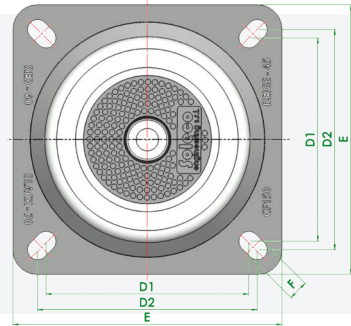
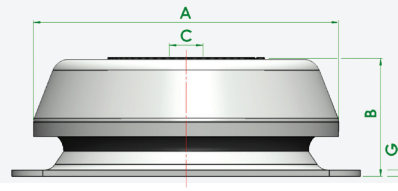
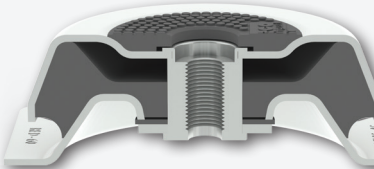
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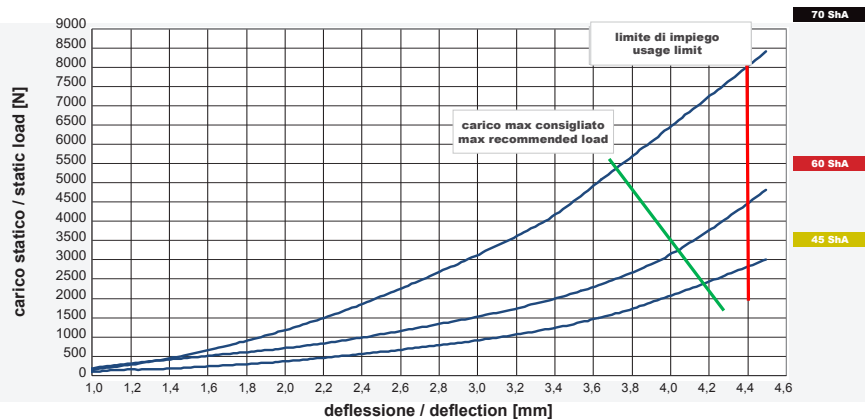
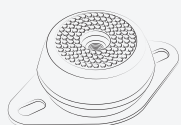
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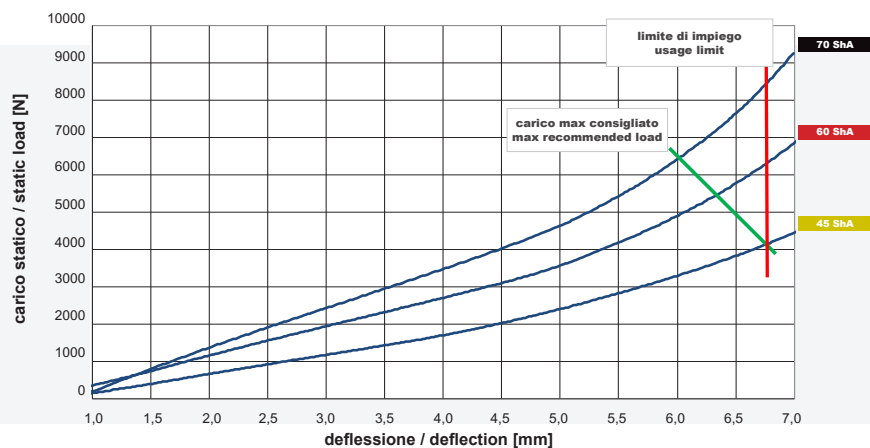
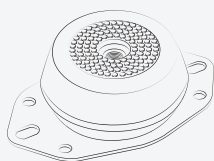
DIMENSIONS	C	A mm	B mm	D1 mm	D2 mm	D3 mm	D4 mm	E mm	F mm	G mm	H mm	L mm	WEIGHT kg
6231	M10 M12	67	34	76.5	90.5			110	9.0	2			0.25
9245	M12 M16	92	44	98	120	130	50	150	10.5	2.5	93	8.5	0.60
12045	M12 M16	92	45	137	162			190	14.0	3.5	95		0.72
15050	M16 M20	147	56		138			168	12.5	3			1.84

GOMMA NATURALE NATURAL RUBBER

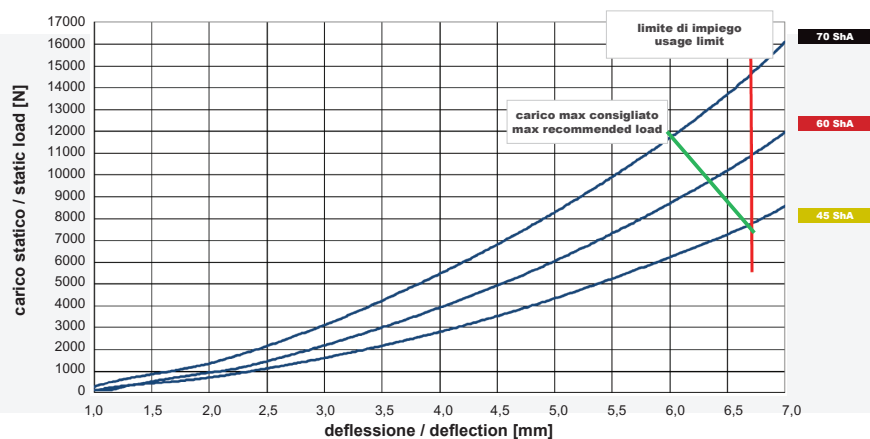
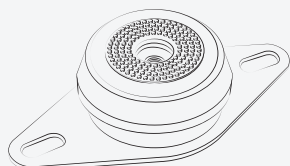
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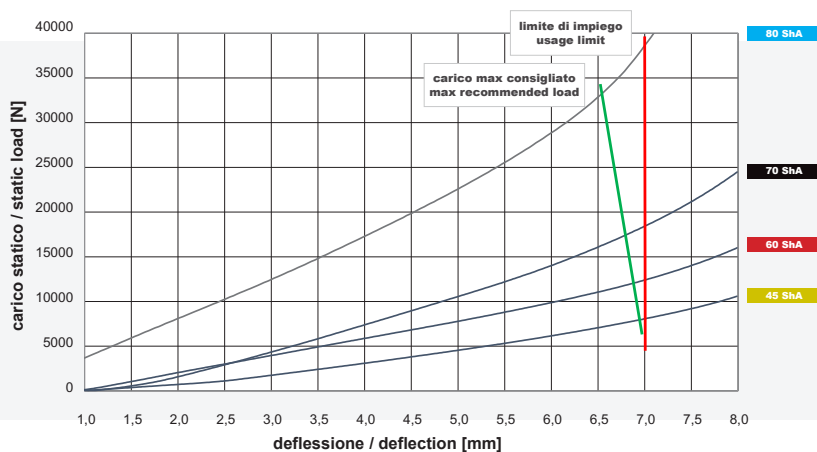
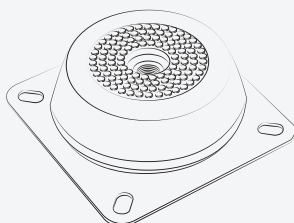
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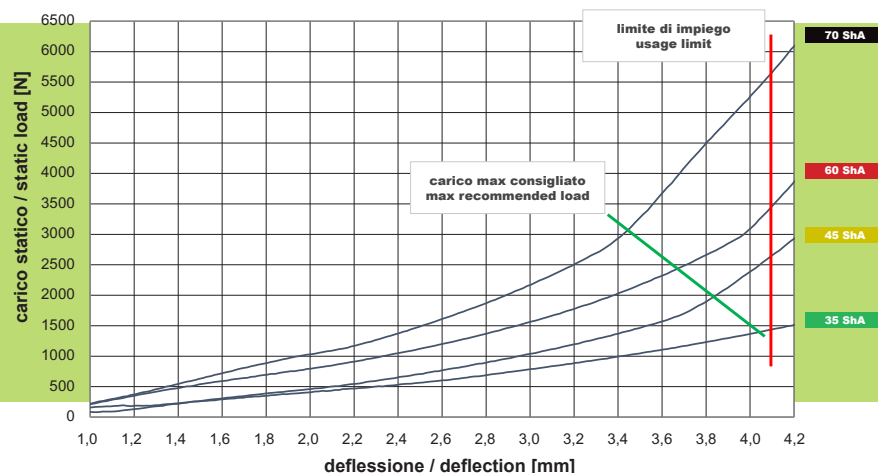
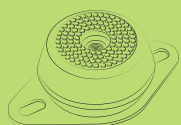
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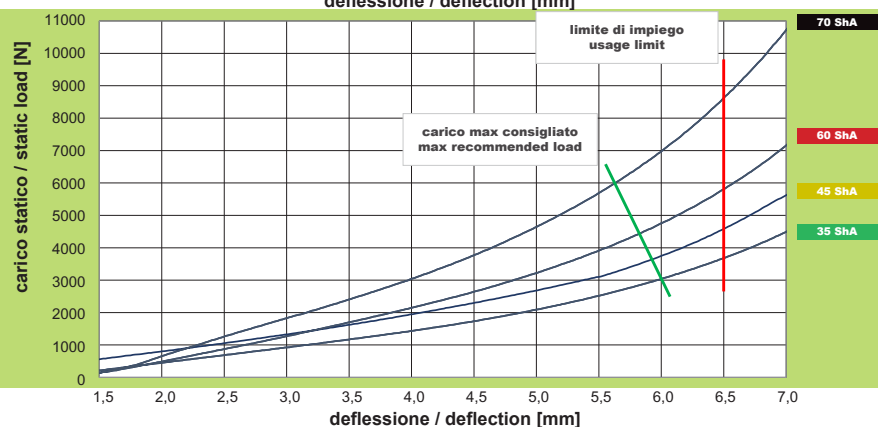
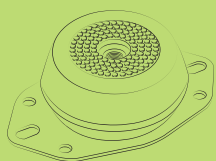
ELASTOMERO TERMOPLASTICO THERMOPLASTIC ELASTOMER



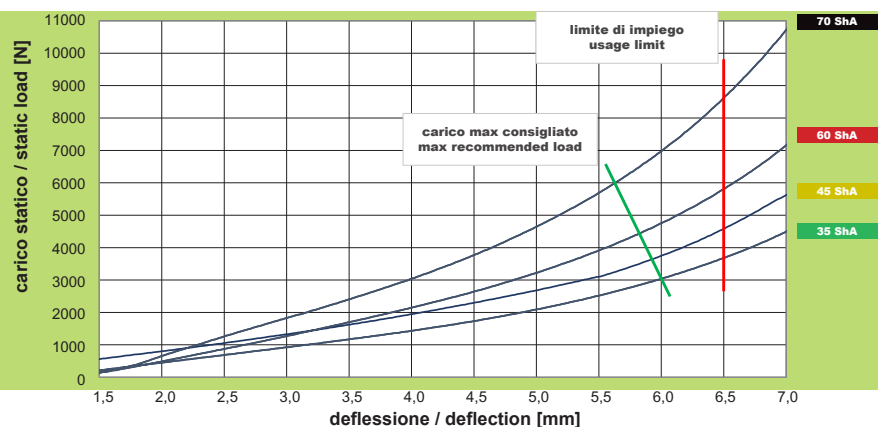
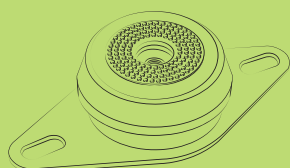
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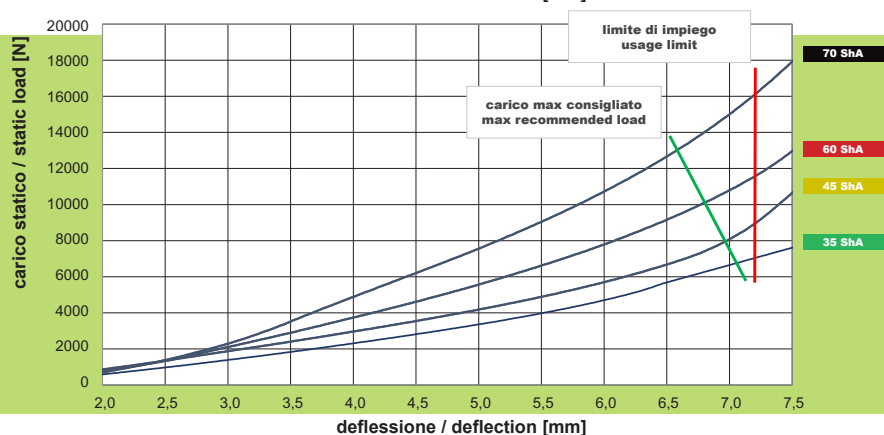
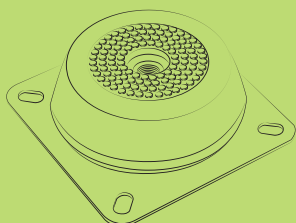
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COMBINAZIONI POSSIBILI

POSSIBLE COMBINATIONS

6231



MODELLO / MODEL	STRUTTURA METALLICA / METAL STRUCTURE	CORPO ELASTICO / ELASTIC BODY
CFNRNR6231	ACCIAIO ZINCATO / GALVANIZED STEEL	GOMMA NATURALE / NATURAL RUBBER
CFNRNRX6231	ACCIAIO INOX AISI 316 / AISI 136 STAINLESS STEEL	GOMMA NATURALE / NATURAL RUBBER
CFNE6231	ACCIAIO ZINCATO / GALVANIZED STEEL	ELASTOMERO TERMOPLASTICO / THERMOPLASTIC ELASTOMER
CFNEX6231	ACCIAIO INOX AISI 316 / AISI 136 STAINLESS STEEL	ELASTOMERO TERMOPLASTICO / THERMOPLASTIC ELASTOMER

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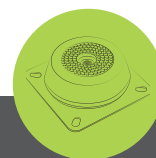
MODELLO / MODEL	STRUTTURA METALLICA / METAL STRUCTURE	CORPO ELASTICO / ELASTIC BODY
CFNRNR9245	ACCIAIO ZINCATO / GALVANIZED STEEL	GOMMA NATURALE / NATURAL RUBBER
CFNRNRX9245	ACCIAIO INOX AISI 316 / AISI 136 STAINLESS STEEL	GOMMA NATURALE / NATURAL RUBBER
CFNE9245	ACCIAIO ZINCATO / GALVANIZED STEEL	ELASTOMERO TERMOPLASTICO / THERMOPLASTIC ELASTOMER
CFNEX9245	ACCIAIO INOX AISI 316 / AISI 136 STAINLESS STEEL	ELASTOMERO TERMOPLASTICO / THERMOPLASTIC ELASTOMER

12045



MODELLO / MODEL	STRUTTURA METALLICA / METAL STRUCTURE	CORPO ELASTICO / ELASTIC BODY
CFNRNR12045	ACCIAIO ZINCATO / GALVANIZED STEEL	GOMMA NATURALE / NATURAL RUBBER
CFNRNRX12045	ACCIAIO INOX AISI 316 / AISI 136 STAINLESS STEEL	GOMMA NATURALE / NATURAL RUBBER
CFNE12045	ACCIAIO ZINCATO / GALVANIZED STEEL	ELASTOMERO TERMOPLASTICO / THERMOPLASTIC ELASTOMER
CFNEX12045	ACCIAIO INOX AISI 316 / AISI 136 STAINLESS STEEL	ELASTOMERO TERMOPLASTICO / THERMOPLASTIC ELASTOMER

15050



MODELLO / MODEL	STRUTTURA METALLICA / METAL STRUCTURE	CORPO ELASTICO / ELASTIC BODY
CFNARNR15050	ACCIAIO ZINCATO / GALVANIZED STEEL	GOMMA NATURALE / NATURAL RUBBER
CFNARNRX15050	ACCIAIO INOX AISI 316 / AISI 136 STAINLESS STEEL	GOMMA NATURALE / NATURAL RUBBER
CFNAE15050	ACCIAIO ZINCATO / GALVANIZED STEEL	ELASTOMERO TERMOPLASTICO / THERMOPLASTIC ELASTOMER
CFNAEX15050	ACCIAIO INOX AISI 316 / AISI 136 STAINLESS STEEL	ELASTOMERO TERMOPLASTICO / THERMOPLASTIC ELASTOMER

A RICHIESTA ON REQUEST

VERSIONE CON BUSSOLA FILLETATA ANTISTRAPPO

Consente al Cliente di acquistare i componenti e assemblarli successivamente secondo la reale necessità elastica.

Questa versione è disponibile per tutti i modelli della serie, in tutte le combinazioni previste per la versione standard.

VERSION WITH ANTI-TEAR THREADED BUSHING

The Customer can purchase the components and assemble them later based on actual elastic requirements.

This version is available for all models in the series, in all the combinations provided for the standard version.



MARTINETTO

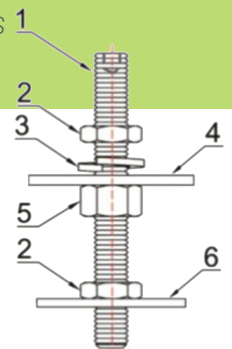
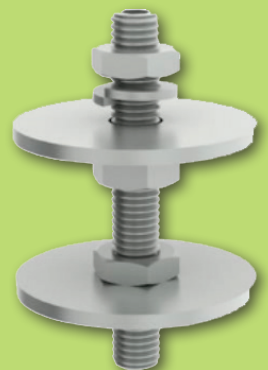
1. grano filettato con sede per chiave a brugola,
2. dado basso UNI 5589,
3. rondella elastica spaccata UNI 1751,
4. disco in acciaio per sostenere la macchina,
5. dado alto UNI 5587 per registrare il livello della macchina,
6. disco in acciaio per distribuire il carico sull'antivibrante.

Disponibile in M10, M12, M16 o M20 in acciaio zincato UNI ISO 2081 Fe/Zn o in ACCIAIO INOX AISI 316.

JACK

1. threaded set screw with slot for allen key,
2. UNI 5589 low hexagon nut,
3. UNI 1751 split elastic washer,
4. steel disc to support the machine,
5. UNI 5587 high hexagon nut to level the machine,
6. steel disc to distribute the weight on the anti-vibration mount.

Available in M10, M12, M16 or M20 in galvanized steel UNI ISO 2081 Fe/Zn or in AISI 316 STAINLESS STEEL.







 **Soleco**
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