Together Around the World

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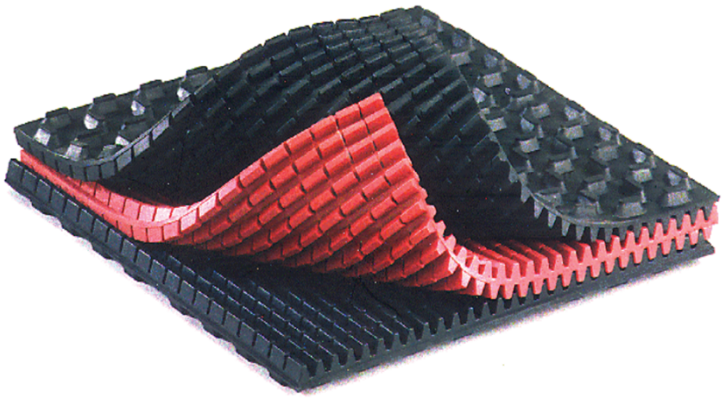
TECHNICAL INFO



STABREN INDUSTRY

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STABREN INDUSTRY

] Product Description

DESCRIPTION

Stabren® anti-vibration structures are composed of 3 plates of different hardness which fit together according to precisely designed sinusoids.

COMPOSITION

They are made up of :

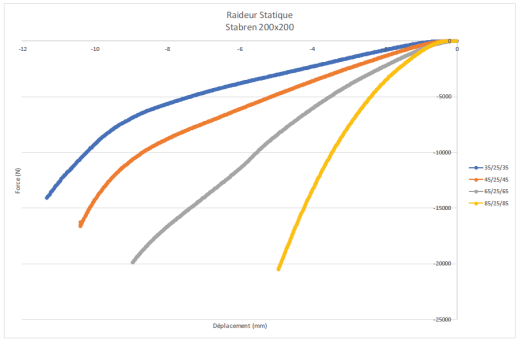
- two black synthetic elastomer-based elastomer plates with 4 hardness levels standard (35 Sh, 45 Sh, 65 Sh, 85 Sh).
- an intermediate plate based on a low-hardness synthetic elastomer wich is colored red (25 Sh).

USE

Easy, quick, and economical to use. The structures can be cut into squares, circles, or strips while maintaining their original performance.
Weight of a 3-plate structure: 580 g

DIMENSION	THICKNESS (overall)	COLOR
200x200 mm	**27 mm**	**Black + Red**

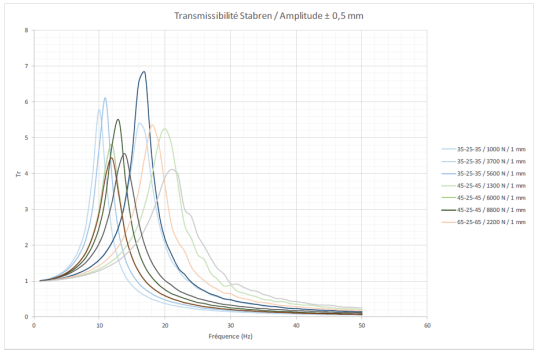
] Technical Characteristics



Filtration from 15 Hz for the lowest hardness levels

STATIC

Static stiffness that varies according to the chosen hardness.



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] Product Description

Flexibility of the intermediate plate

The very low hardness of the central plate allows STABREN to absorb vibrations even at very low frequencies.

Thanks to its composite structure, STABREN possesses, through the skin effect of the outer plates, excellent mechanical properties and good resistance to industrial environmental conditions.

Sinusoidal geometry

The complex geometry of STABREN provides a second source of vibration absorption.

When a vibrating system is placed on STABREN structures, the vibration wave must pass through media of varying natures (materials of different hardnesses) and discontinuous surfaces (because the three plates are not bonded). Furthermore, the vertical displacements of the black and red peaks during the vibration's passage create friction at the contact areas of the plates. This friction helps dissipate some of the vibrational energy and further enhances the anti-vibration effect of STABREN Industry.

This principle also helps to reduce noise.

Benefits :

- Automatic leveling
- Simple installation (no fixings, no tools required)
- Non-slip exterior surfaces
- Effective even at low frequencies and for low loads
- Low height
- Protection against active vibration or passive
- Environmental protection (for people and machines)
- Improving the quality of work with precision
- Increased lifespan of machines
- Reduction in maintenance work
- High resistance to the industrial environment
- Reduction of noise propagation phenomena

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STABREN INDUSTRY

] Choosing the right Stabren INDUSTRY

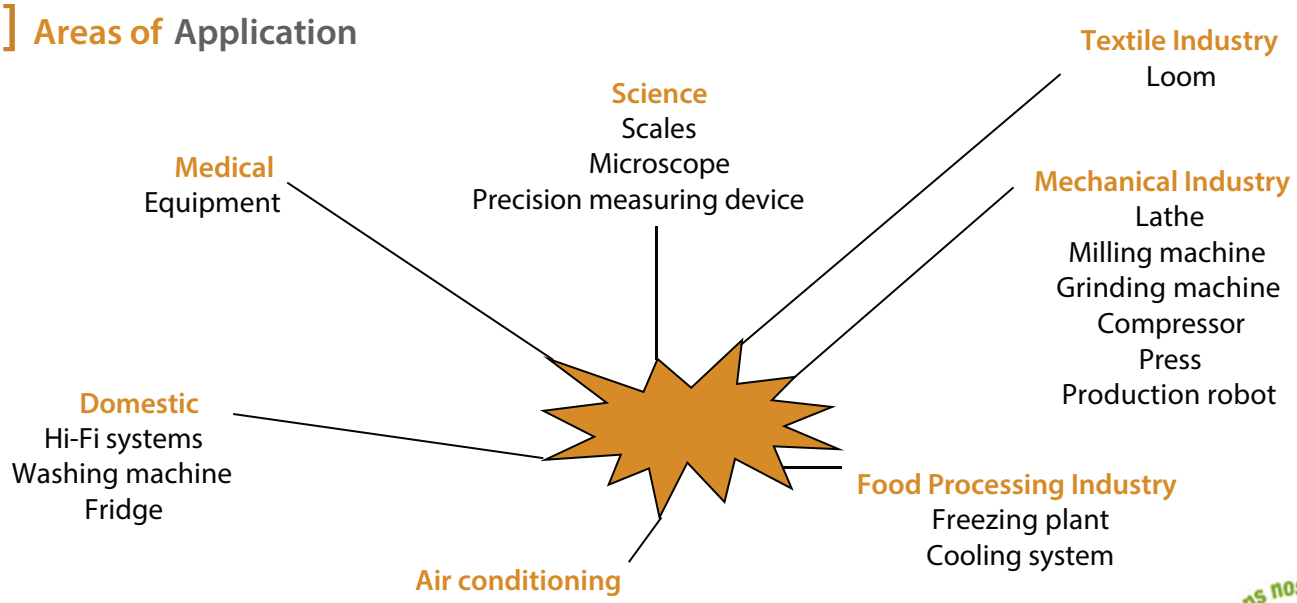
The choice of structures is very simple, taking into account only a limited number of parameters.

- The mass of the system to be isolated.
- The distribution of the load (number and area of support points, position of the center of gravity of the system to be isolated).
- In the case of isolating a press, the impact force must be taken into account by considering that the mass of the system to be isolated is the mass of the press + 1/3 of the impact force.
- For detailed analyses, the disruptive frequency(ies).
- Environmental conditions.

The table below gives the maximum loads tolerated by STABREN Industry structures.

Hardness (ShA)	Maximum load
35/25/35	0 to 2 kg/cm^2
45/25/45	2 to 6 kg/cm^2
65/25/65	6 to 12 kg/cm^2
85/25/85	more than 12 kg/cm^2

] Areas of Application



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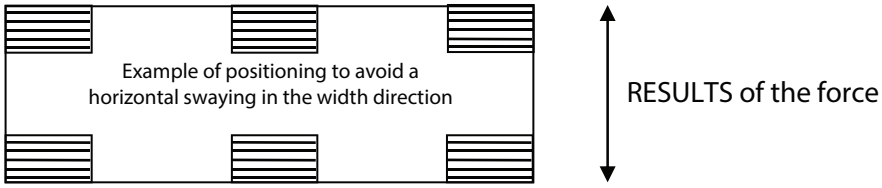
] Product Implementation

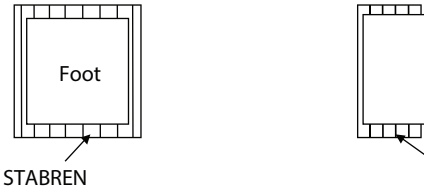
The implementation of STABREN Industrie structures should, if possible, comply with certain rules.

- The structures must be positioned so that the internal grooves are perpendicular to the horizontal swing direction of the machine, in order to improve the shear stiffness of the suspension.

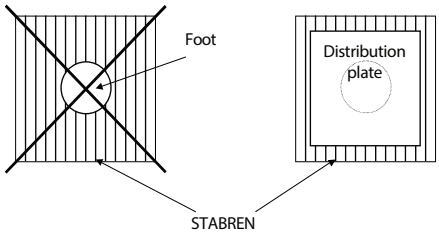
  In the case of looms, this swinging occurs in the direction of the width; therefore, the grooves must be parallel to the length.



- It is preferable to leave a slight overhang of the structures outwards (≈ 1 cm).



- Structures should not be placed with small support points, as this poses a risk of damage (punching) from the structure. Load distribution plates can be used; these must be securely attached (welded, bolted) to the system being isolated.



- It is possible to mix different external hardnesses (45/25/65 or 65/25/85). In this case, the plate with the lowest hardness should be placed towards the source of the vibrations.

  Thus, when isolating a scale from external vibrations (passive vibrations), the plate with the lowest hardness should be positioned on the ground.

When isolating a machine tool to protect the environment from vibrations (active vibrations), the plate with the lowest hardness should be placed against the machine.

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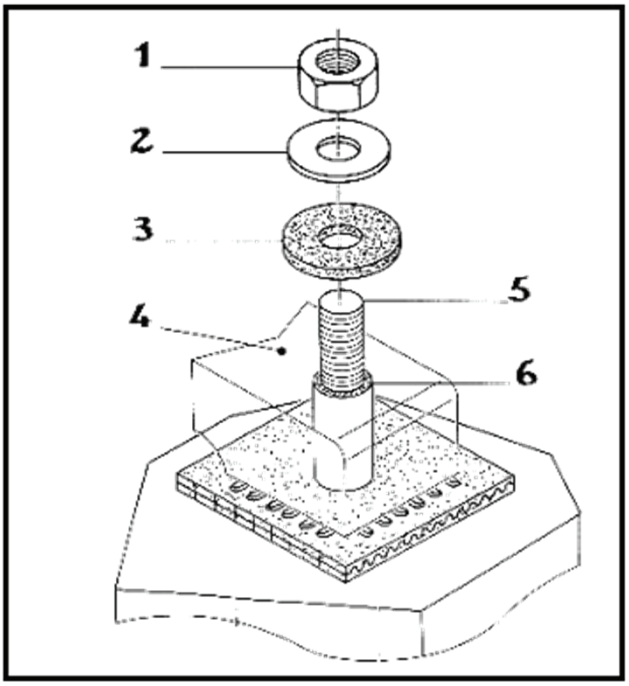
] Product Installation

In some cases, it is necessary to secure the system to the floor to be isolated (very tall machine, etc.). In this case, ensure that this securing does not interfere with the anti-vibration effect of the STABREN. Caution: if a rigid element, such as a bolt, is used, it will act as a vibration bridge and there will be no reduction in vibration.

The diagram below gives an example of how to install a fastener.

A rubber sleeve is used around the screw and a rubber washer is placed under the nut to prevent vibrations from being transmitted through the bolt.



1 - Nut

2 - Metal washer

3 - Rubber washer

4 - Machine foot

5 - Sealed bolt

6 - Rubber insulating sheath