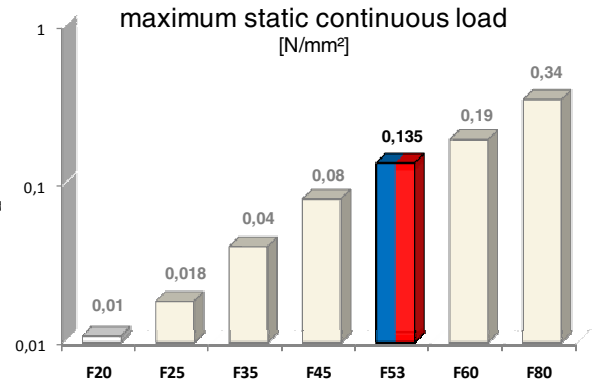
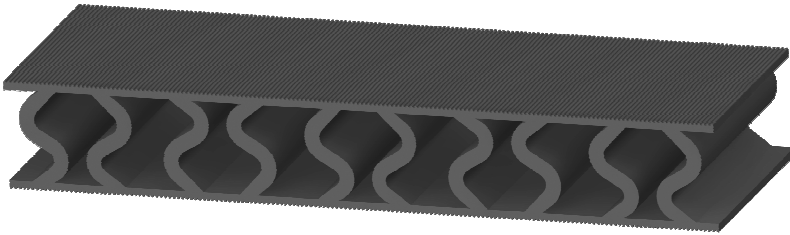




VIBRANON® F53

ESZ W. Becker GmbH | Weilerhöfe 1 | D-41564 Kaarst-Büttgen | Tel.: 02131 - 75 81 00 | Fax: 02131 - 75 81 11
E-Mail: info@esz-becker.de | Internet: www.vibranon.de



INTENDED USE

VIBRANON® F53 is designed for the laminary vibration-insulating bearing of buildings, of machinery and for the elastic support of transport infrastructure.

TYPE OF BEARING

VIBRANON® F53 is an unreinforced elastomer bearing made from high-quality **EPDM-rubber**. The formula has been developed and optimised with regard to the application area. The geometry has been adapted to the special requirements.

RESISTANCE TO WATER AND FROST

VIBRANON® is characterised by high resistance to water and frost. The vibration characteristics remain unchanged even in contact with water. Based on water and frost resistance test in accordance with E DIN 45673-5: 2008-07 6.4.3.

AREA OF APPLICATION

The maximum permissible continuous load is 0.135 N/mm². Permissible usage temperature range -30°C to +70°C, briefly up to +90°C

TESTS

These planning documents are based on examinations carried out by the IBAC at the RWTH Aachen. The tests were performed on the basis of E DIN 45673-5: 2008-07.

PROCESSING

It is essential to follow the ESZ installation manual in order to achieve the full functional capability.

FORM OF DELIVERY

Standard dimensions:

Thickness: t = 25 mm

Width: w = 166 mm

Roll length: 10 metres

Colour marking: Blue and red. Off cuts possible

TENDERING TEXTS

Supply and laying of VIBRANON® laminary bearings based on non-reinforced, unmixed EPDM rubber, to obtain insulation of vibration and structure-borne noise.

The vibration characteristics of the laminary bearings must not change in contact with water and/or frost and must be proved by a certificate based on a water and frost resistance test in accordance with E DIN 45673-5 6.4.3. The bearings must be installed according to the manufacturer's installation manual.

Additional expenditure resulting from this, such as the execution of lateral closures or cut-outs as well as the blending are to be included in the unit price.

Bearing Type: ESZ VIBRANON® F53

Thickness: 25 (50) _____ mm

Natural frequency f₀: ____ Hz at _____ N/mm²

Bedding modulus C_{dyn}: _____ N/mm³

Bedding modulus C_{stat}: _____ N/mm³

Quantity: _____ m²

Verification of source of supply:

ESZ Wilfried Becker GmbH/ Weilerhöfe 1/ D-41564 Kaarst/ +49-2131-758100/ www.esz-becker.de

All data correspond to extensive research results and practical findings. Unless expressly agreed upon, however, they do not represent a guarantee in a legal sense.



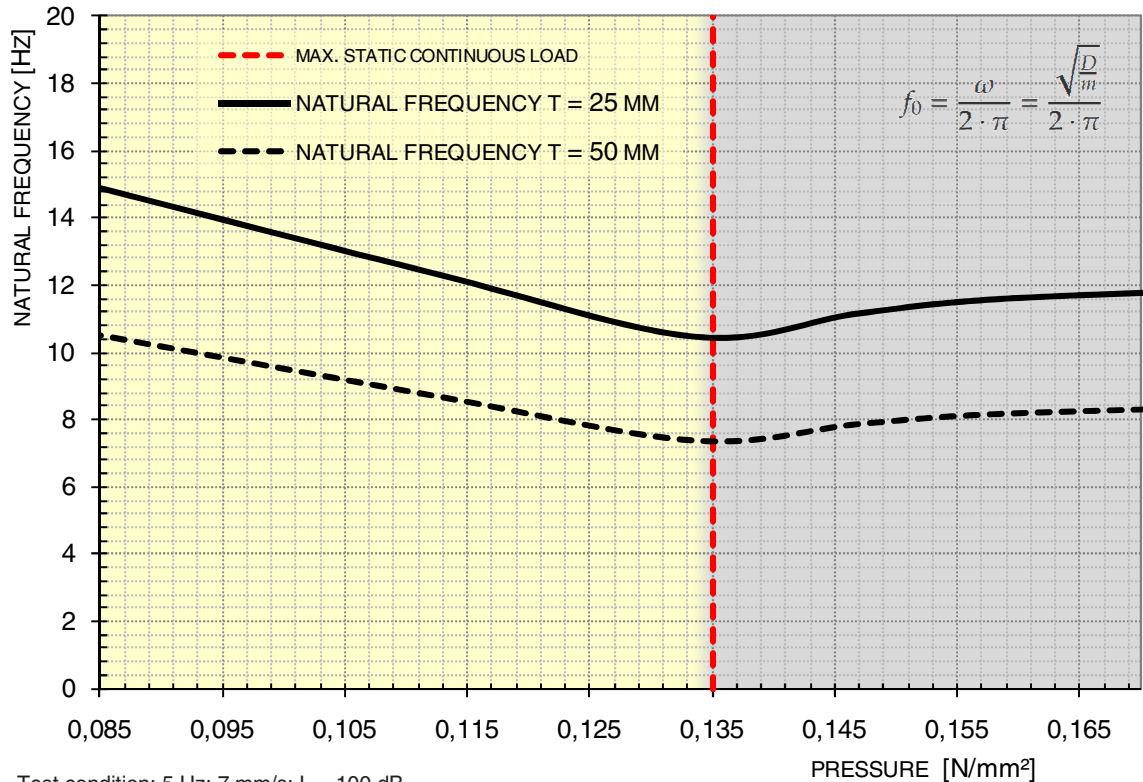
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DATA FOR NATURAL FREQUENCY AND SPRING CHARACTERISTIC

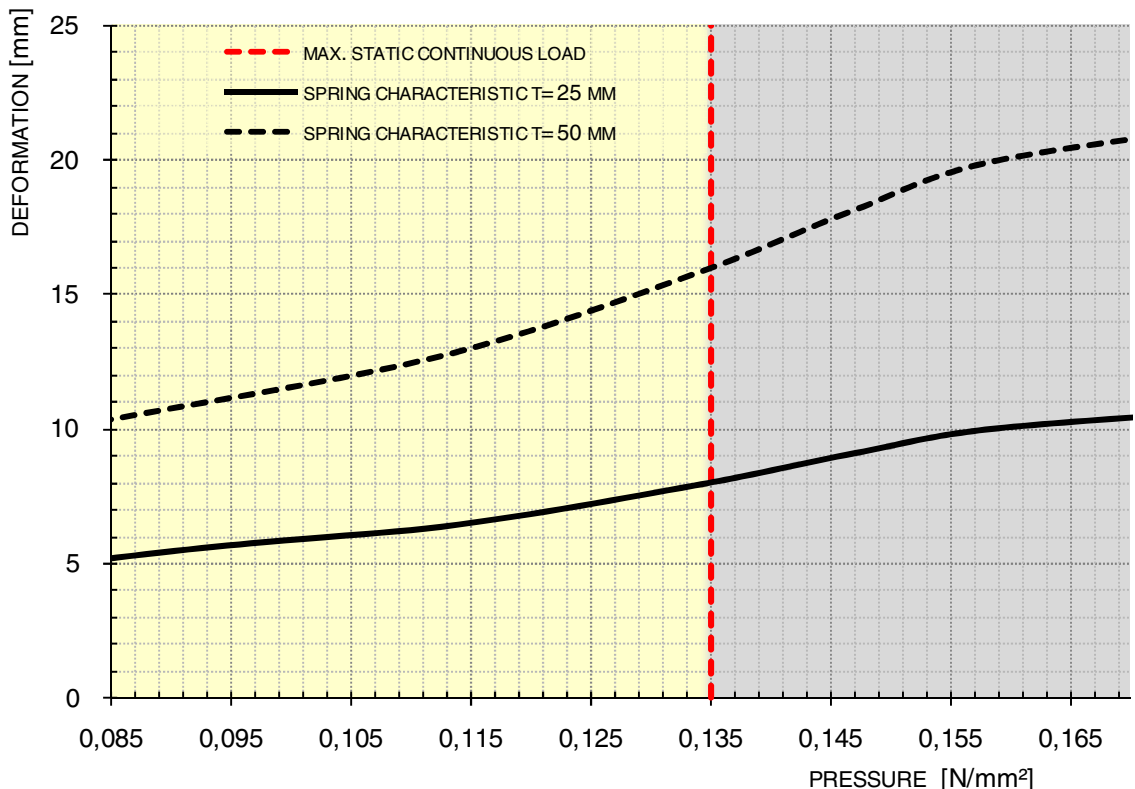
1. FREQUENCY CURVE:

VIBRANON F 53



2. SPRING CHARACTERISTIC:

VIBRANON F 53



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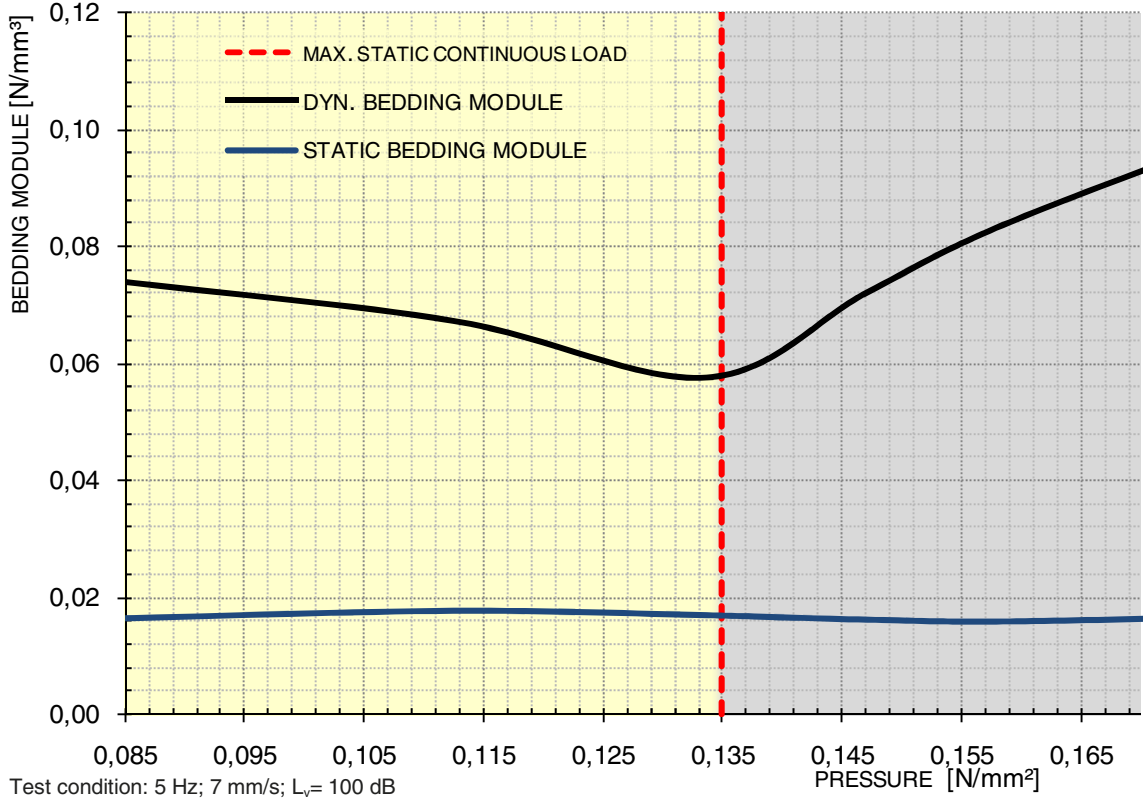
VIBRANON® F53

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DATA FOR BEDDING MODULE AND DAMPING

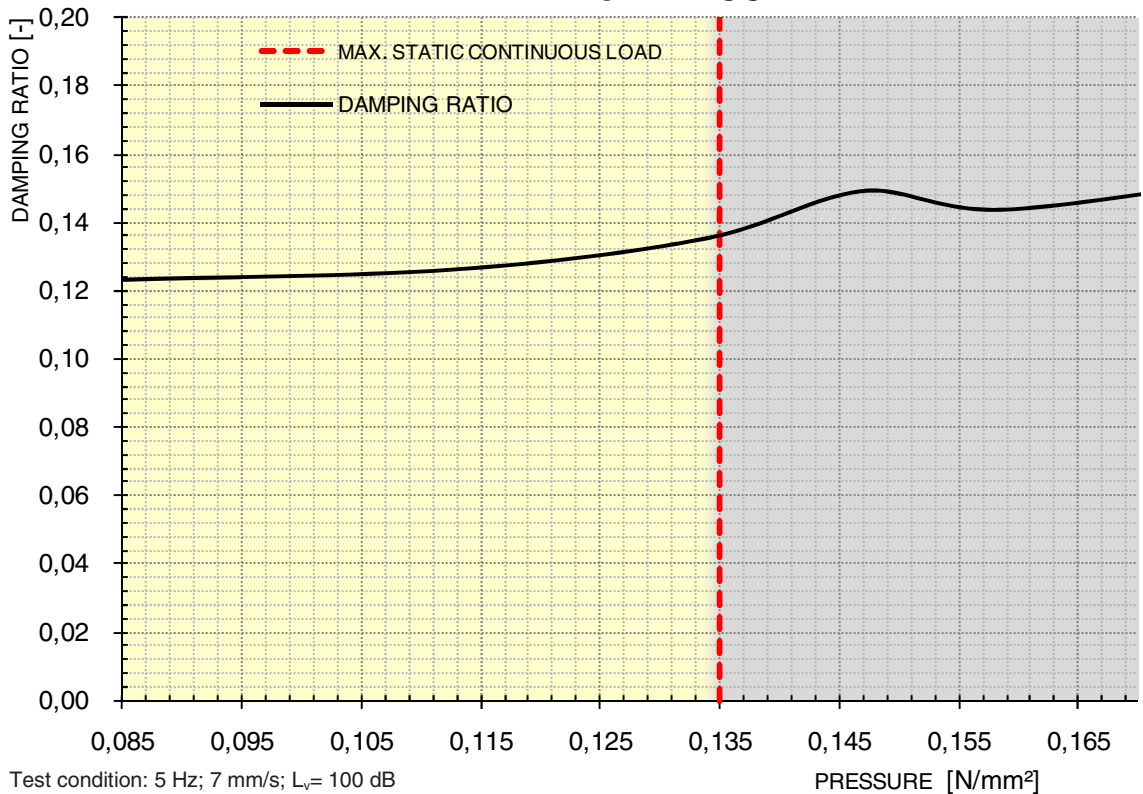
3. BEDDING MODULE

VIBRANON F 53



4. DAMPING

VIBRANON F 53



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DATA FOR RESONANCE BEHAVIOUR AND INSULATION EFFECT

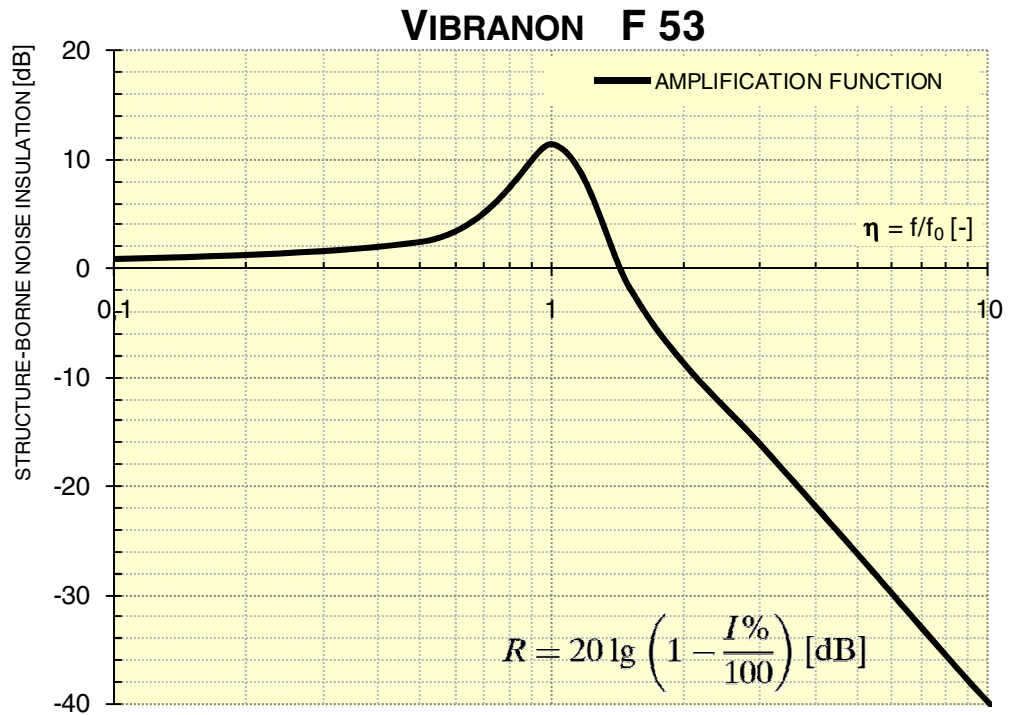
5. STRUCTURE-BORNE NOISE INSULATION:

R is the level of the amplification function (the structure-borne noise insulation) in [dB] Where $R > 0$ the vibration amplitude increases; where $R < 0$ the vibration amplitude decreases. The limit value between amplitude reinforcement and amplitude reduction is

$$\eta = \sqrt{2}$$

At resonance $\eta = 1$ the level assumes the following value:

$$R = 20 \log \frac{1}{2D} \text{ [dB]}$$

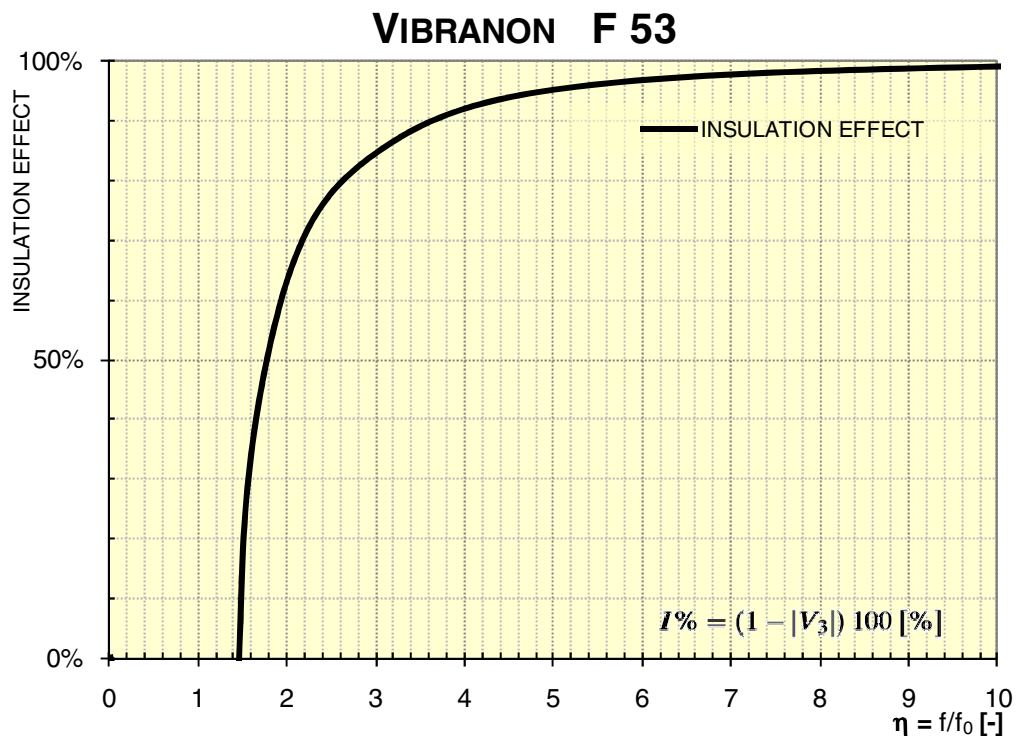


6. INSULATION EFFECT:

The amplification function V_3 applies to constant and square excitation for both active and passive vibration insulation. The quality of an elastic bearing is expressed by the insulation efficiency, which is defined as:

$$I\% = \frac{\hat{s}_0 - \hat{s}_F}{\hat{s}_0} \cdot 100$$

The difference between the amplitude introduced at the foot and that at the foundation is placed in relation to the amplitude introduced.



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