VIBRANON® F80

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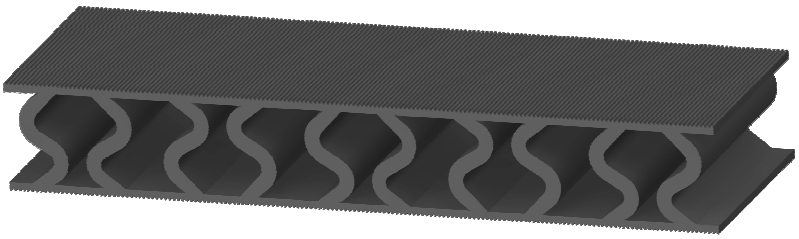

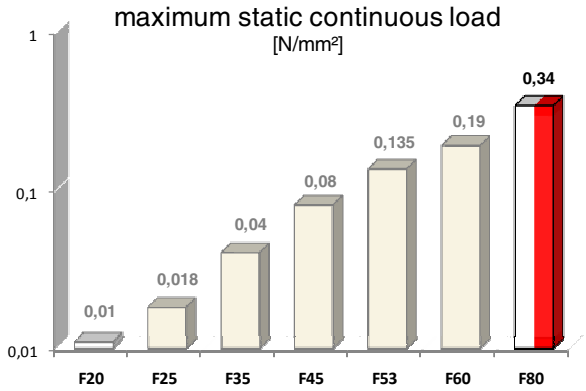

INTENDED USE

VIBRANON® F80 is designed for the laminary vibration-insulating bearing of buildings, of machinery and for the elastic support of transport infrastructure.

TYPE OF BEARING

VIBRANON® F80 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 0.34 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:	White 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 laminar 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® F80
Thickness: 25 (50) _____mm
Natural frequency f_0: ___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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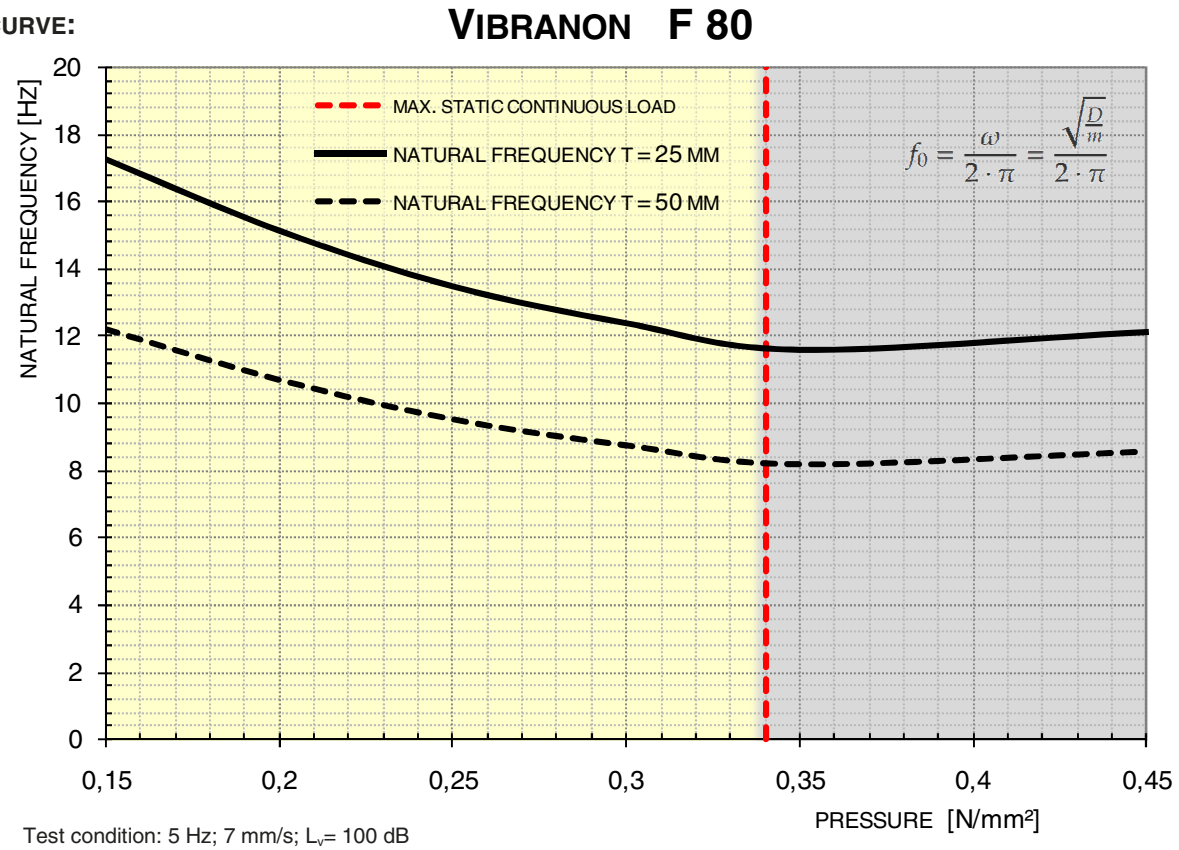
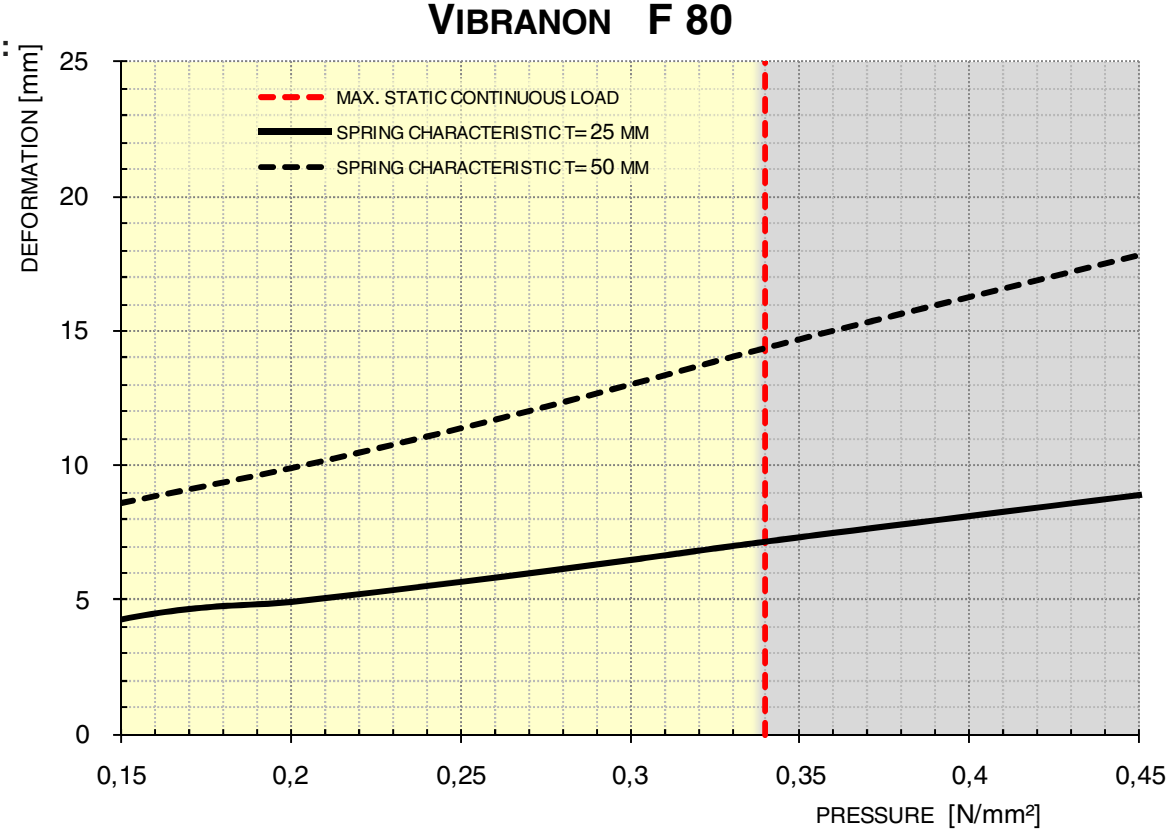
DATA FOR NATURAL FREQUENCY AND SPRING CHARACTERISTIC

1. FREQUENCY CURVE:



Test condition: 5 Hz; 7 mm/s; L_v= 100 dB

2. SPRING CHARACTERISTIC:



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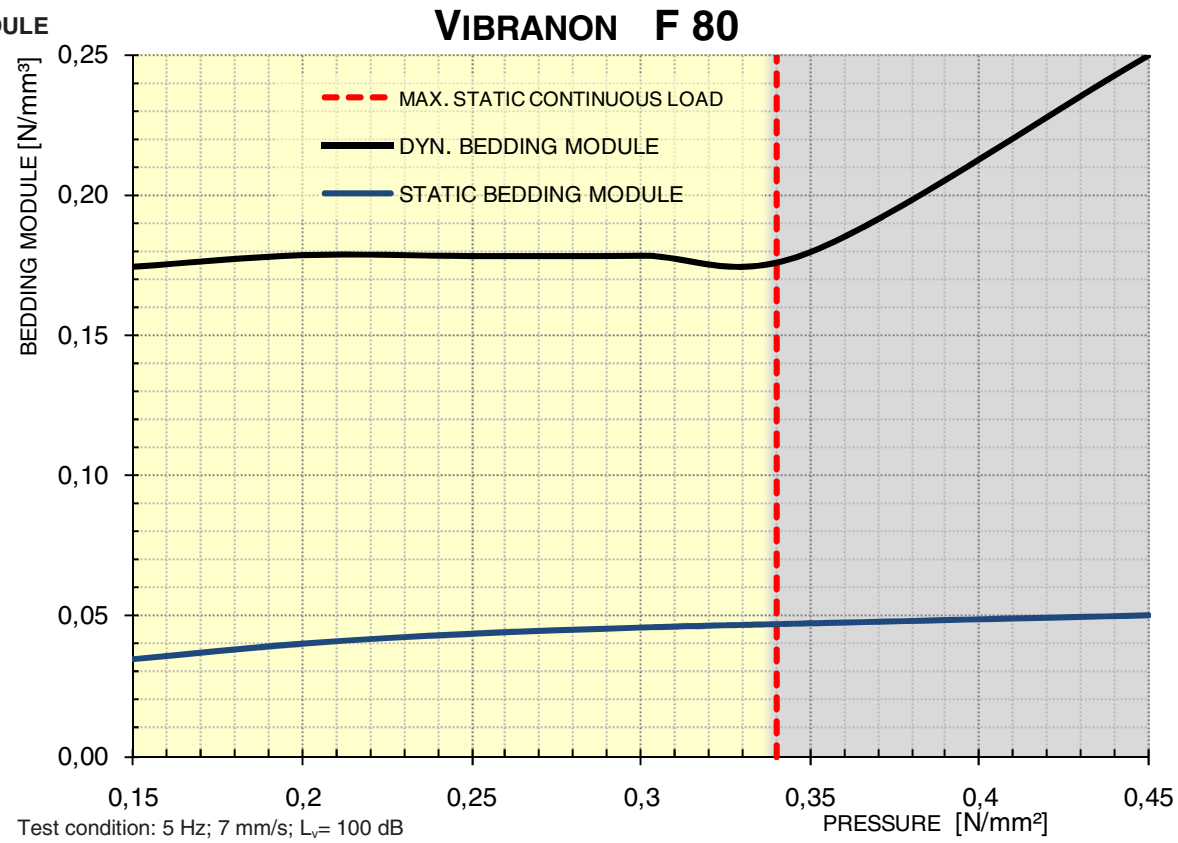
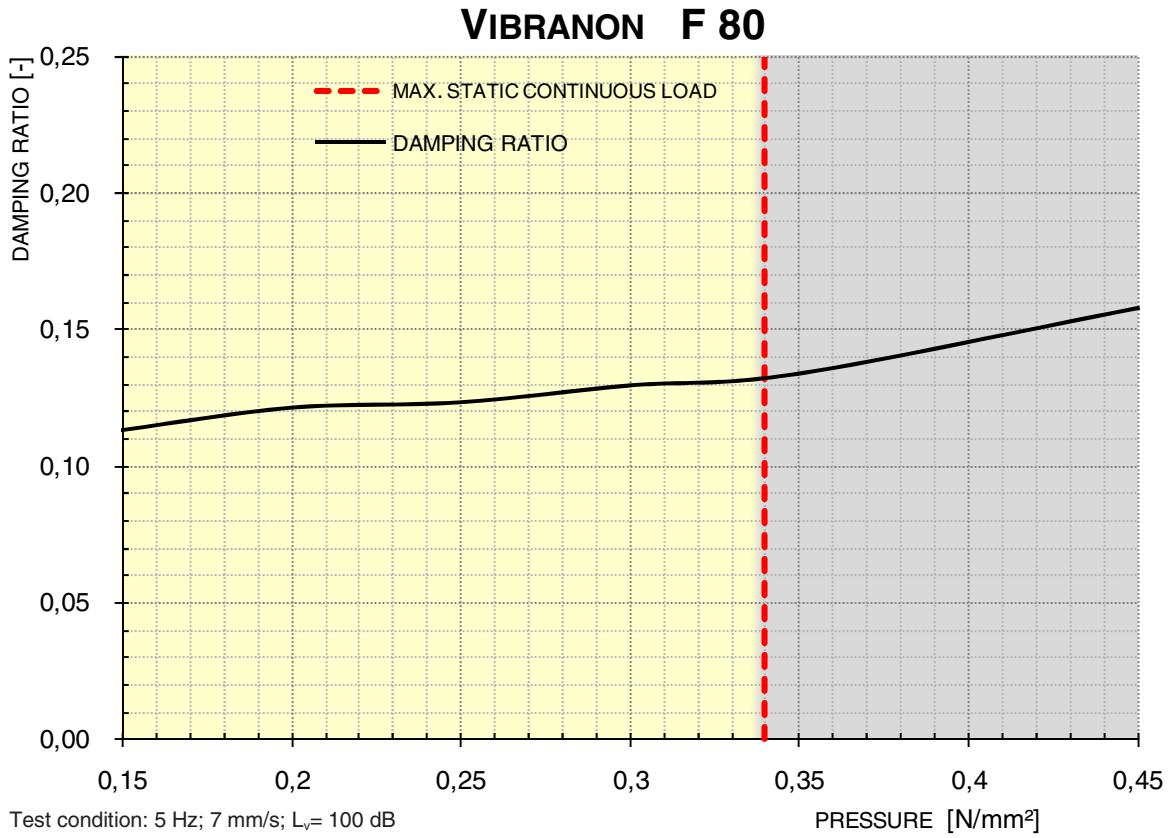
DATA FOR BEDDING MODULE AND DAMPING

3. BEDDING MODULE



Test condition: 5 Hz; 7 mm/s; L_v= 100 dB

4. DAMPING



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DATA FOR RESONANCE BEHAVIOUR AND INSULATION EFFECT

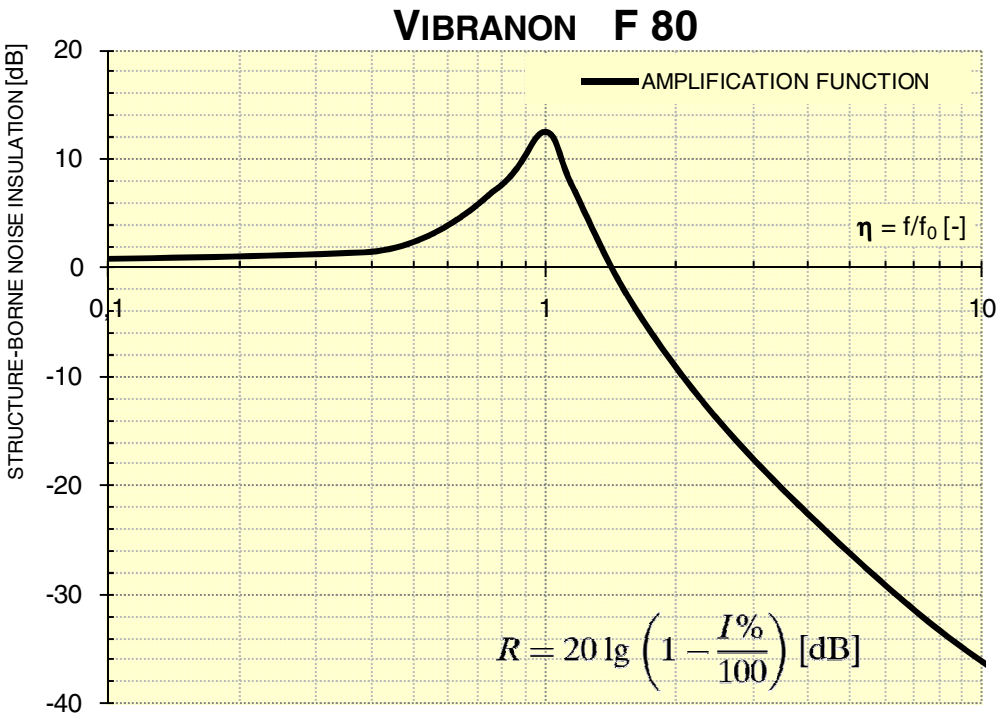
5. STRUCTURE-BORNE NOISE INSULATION:

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 η =1 the level assumes the following value:

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

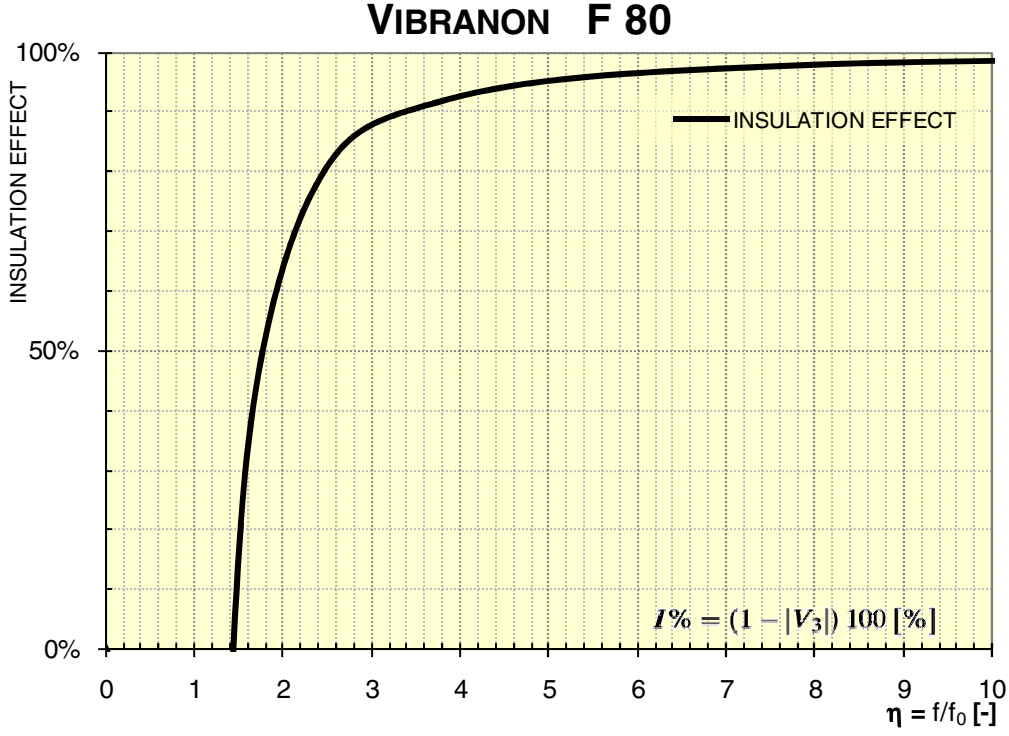


6. INSULATION EFFECT:

The amplification function V3 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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