

Citrigon® 37

Elastomeric bearing for vibration isolation

Citrigon® 37 is a high-strength elastomeric bearing. It is suitable for vibration isolation of machines or for vibration protection of buildings. The permanently absorbable compressive stress from characteristic loads is 7 N/mm^2 .

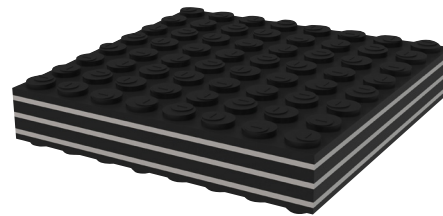
If Citrigon® 37 is to be installed as vibration protection on pile heads or on the rising structural elements, prefabricated modules can be supplied. This is an easy way to support larger areas. The modules consist of several Citrigon® 37 bearings and a lost formwork. After the butt joints have been taped and the entire surface area of the bearings has been covered with a construction foil, concrete can be poured directly on top of it.

Our technical department will be happy to assist you in finding the right solution.

Product information

DIMENSIONS AND WEIGHTS

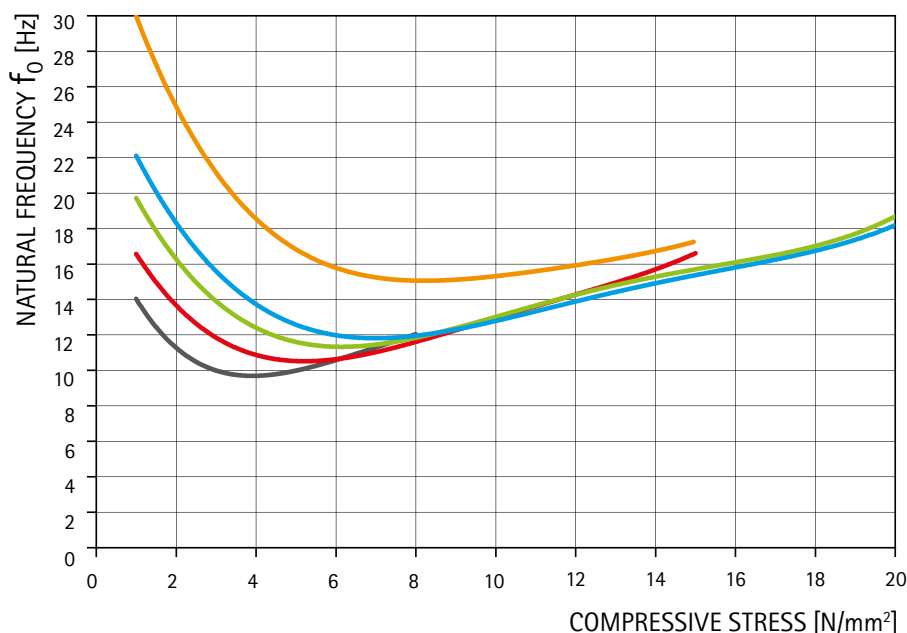
Available bearing sizes	80 mm x 80 mm
	120 mm x 120 mm
	160 mm x 160 mm
	200 mm x 200 mm
	240 mm x 240 mm
Thickness	37 mm
Weight	102 kg/m ²



PROPERTIES

Materials	NR rubber with reinforcement of weatherproof steel
Permanent load	$\leq 7 \text{ N/mm}^2$
Permanent load + dynamic load	$\leq 12 \text{ N/mm}^2$
Load peaks (occasional and short-term)	$\leq 16 \text{ N/mm}^2$
Thermal stability	$-30^\circ\text{C} + 60^\circ\text{C}$
Flammability	B2 acc. to DIN 4102 (normally combustible)
Water absorption	Practically no water absorption

Natural frequency at a bearing thickness of 37 mm



NATURAL FREQUENCY CURVE

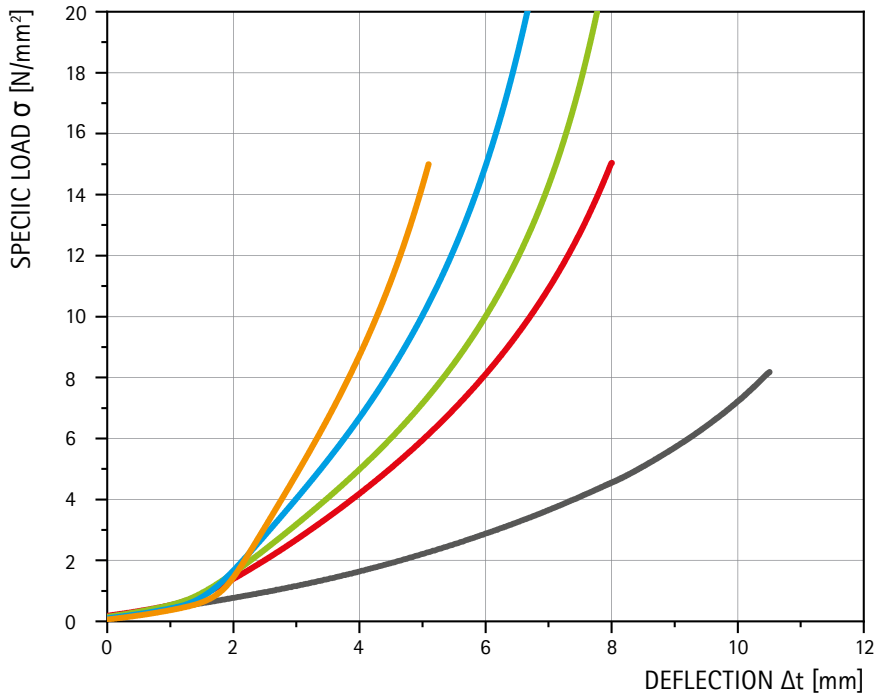
The natural frequency f_0 of an ideal single-mass oscillator mounted on Citrigon® 37 is an essential characteristic for the evaluation of the vibration damping effect. The figure shows the dependence of f_0 on the bearing format using square bearings of 37 mm thickness with two elastomer layers. As an approximation, it can be assumed that f_0 and the deformation are identical for bearings with the same shape factor S and the same number of elastomer layers.

- 80 x 80 x 37 mm
- 120 x 120 x 37 mm
- 160 x 160 x 37 mm
- 200 x 200 x 37 mm
- 240 x 240 x 37 mm

Citrigrón® 37

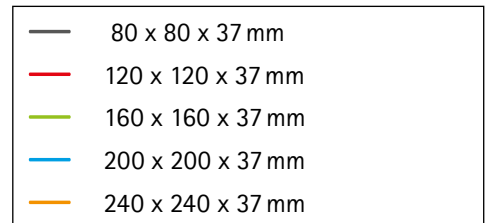
Elastomeric bearing for vibration isolation

Load deflection



LOAD DEFLECTION CURVE

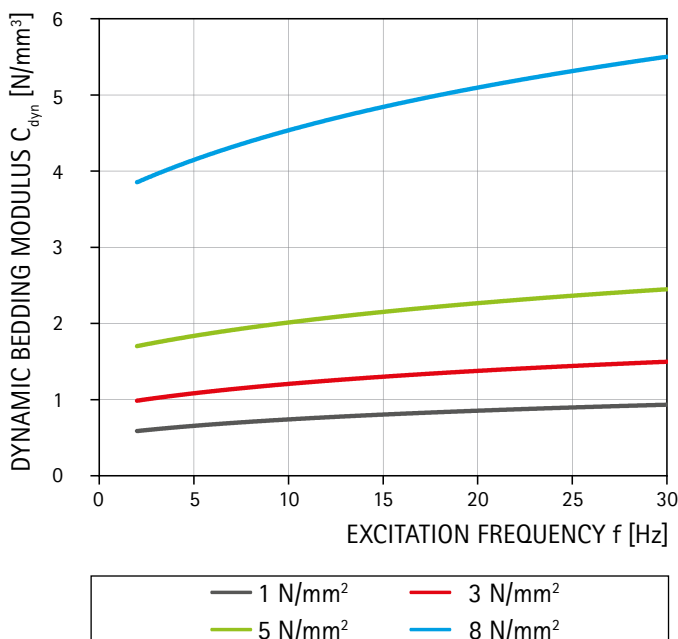
The figure shows the deflection load curves of 37 mm thick Citrigrón® 37 bearings with two elastomer layers and square footprint. For bearings with the same form factor and the same number of elastomer layers, the deformation is approximately the same regardless of the form.



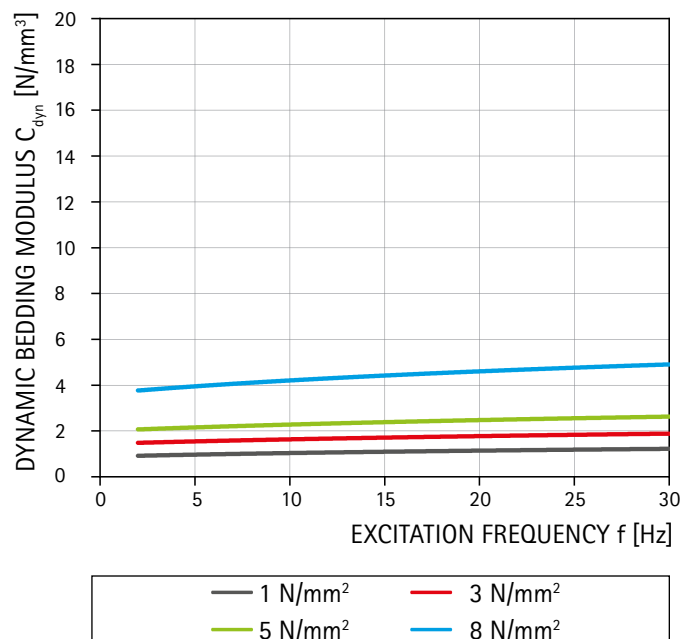
Dynamic bedding modulus

The dynamic bedding modulus C_{dyn} of Citrigrón® 37 depends on the excitation frequency f , the vertical compressive stress σ and the bearing dimensions. C_{dyn} is shown in the following orientation diagrams for several bearing formats with 37 mm thickness:

Bearing dimensions: 80 x 80 mm



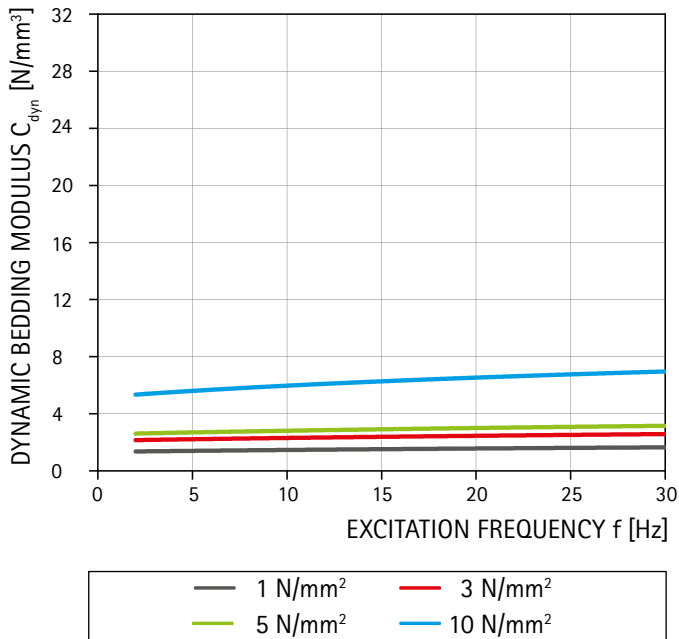
Bearing dimensions: 120 x 120 mm



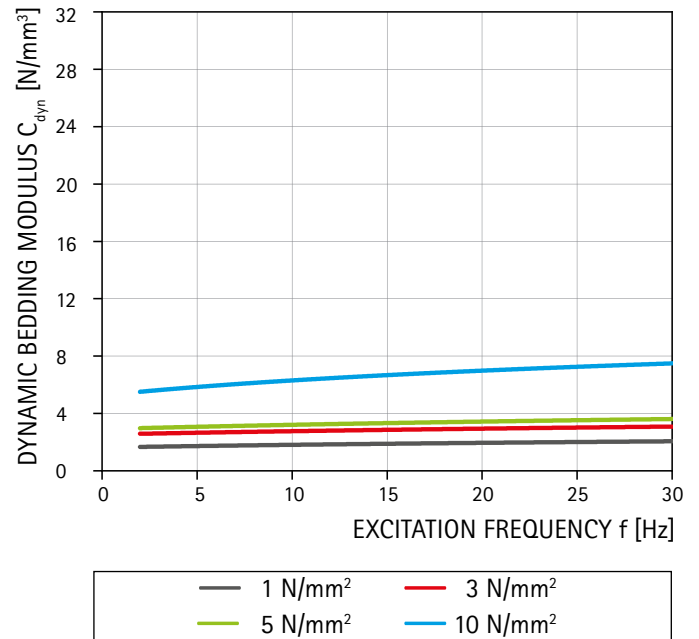
Citrigon® 37

Elastomeric bearing for vibration isolation

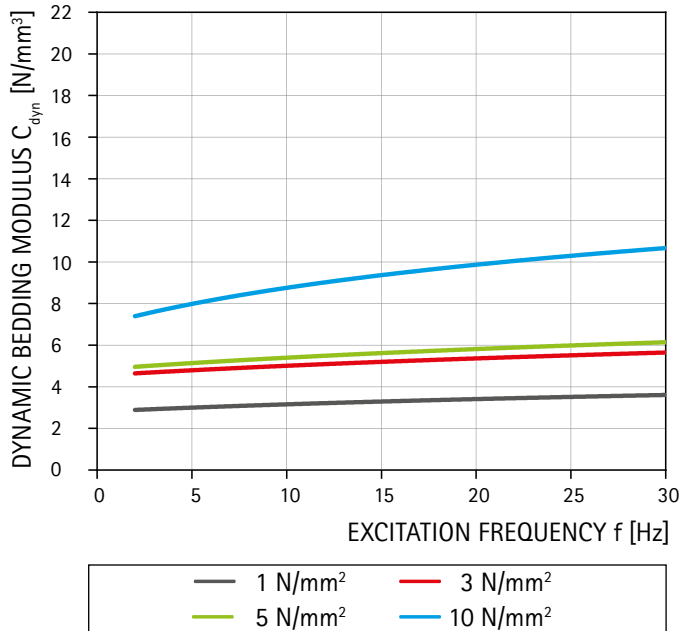
Bearing dimensions: 160 x 160 mm



Bearing dimensions: 200 x 200 mm



Bearing dimensions: 240 x 240 mm



The contents of this publication are the result of many years of research and experience gained in the application of this technology. All information is given in good faith; it does not represent a guarantee with respect to characteristics and does not exempt the user from testing the suitability of products and from ascertaining that the industrial property rights of third parties are not violated. No liability whatsoever will be accepted for damage – regardless of its nature and its legal basis – arising from advice given in this publication. We reserve the right to make technical modifications in the course of product development.

© Copyright – Calenberg Ingenieure GmbH – 2023