

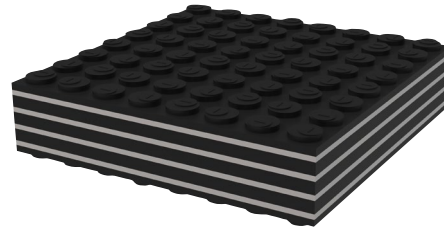
## Citrigon®

Elastomeric bearing for vibration isolation

### 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 <sup>2</sup>



#### PROPERTIES

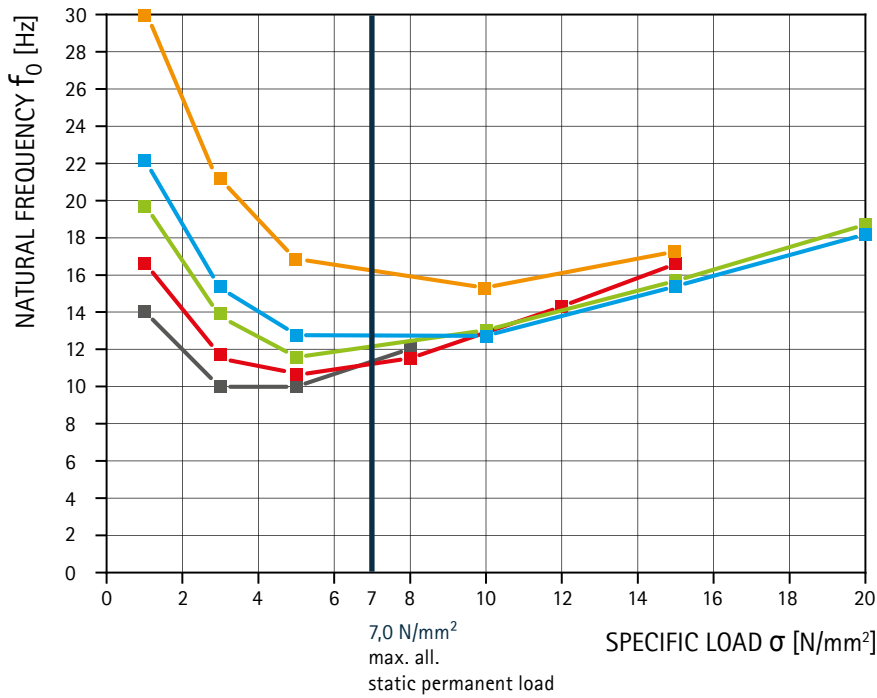
Materials	NR rubber with reinforcement of weatherproof steel
Permanent load	≤ 7 N/mm <sup>2</sup>
Permanent load + dynamic load	≤ 12 N/mm <sup>2</sup>
Load peaks (occasional and short-term)	≤ 16 N/mm <sup>2</sup>
Thermal stability	-30°C + 60°C
Flammability	B2 acc. to DIN 4102 (normally combustible)
Water absorption	Practically no water absorption

The elastomeric bearing Citrigon® is used for vibration damping at very high loads. The steel-reinforced bearing is made of a durable elastomer based on natural rubber. The thickness is 37 mm. Depending on the format of the respective bearing, natural frequencies of 10 Hz can be achieved for the system mounted on Citrigon®. The bearing can, also depending on the format, absorb a compression stress of up to 15 N/mm<sup>2</sup>.

**Citrigon®**

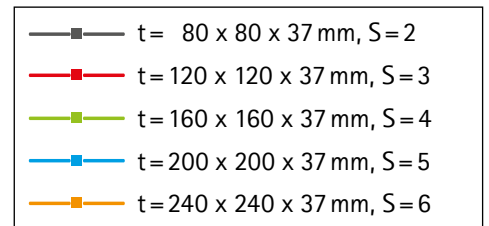
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**Natural frequency at a bearing thickness of 37 mm**

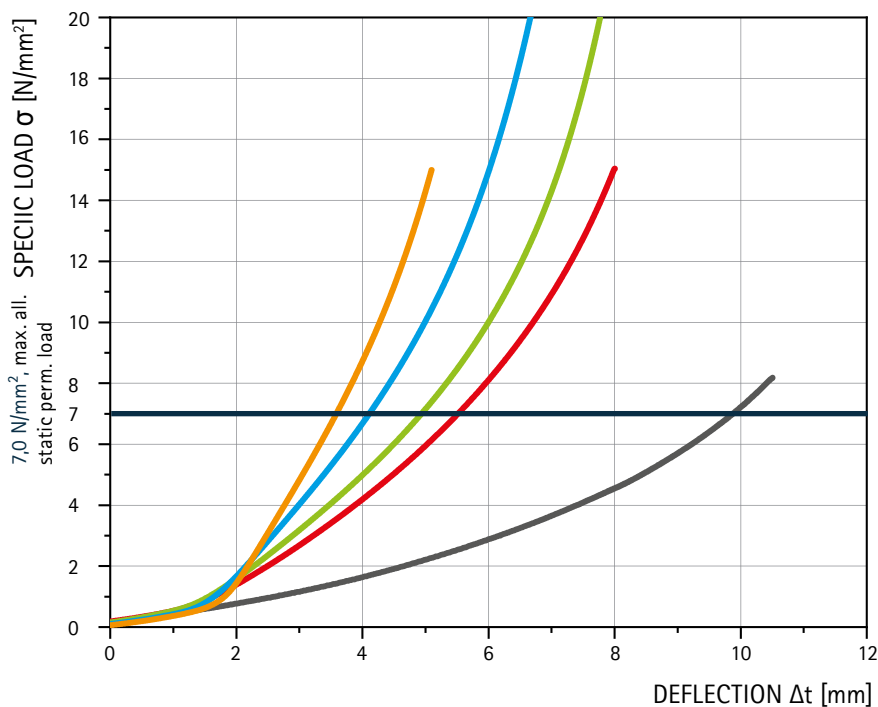


**NATURAL FREQUENCY CURVE**

The natural frequency  $f_0$  of an ideal single-mass oscillator mounted on Citrigon® 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.

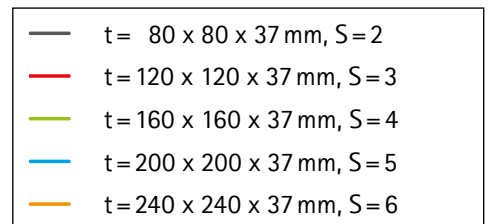


**Load deflection**



**LOAD DEFLECTION CURVE**

The figure shows the deflection load curves of 37 mm thick Citrigon® 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.



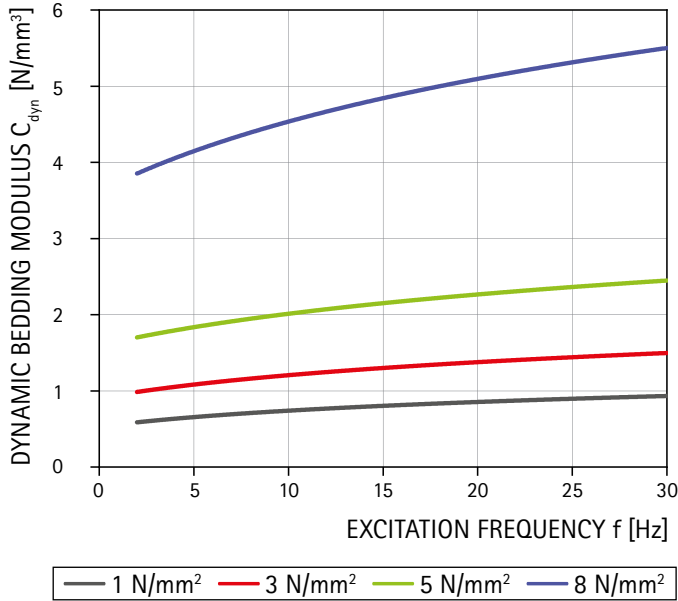
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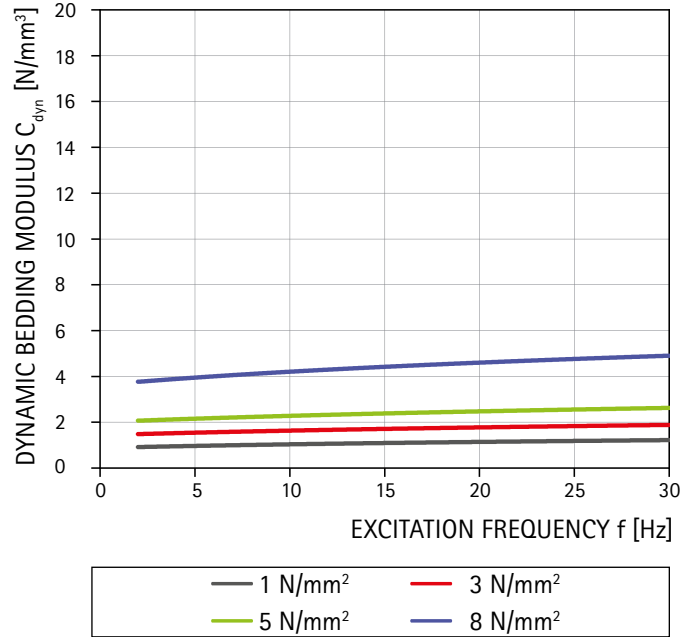
**Dynamic bedding modulus**

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

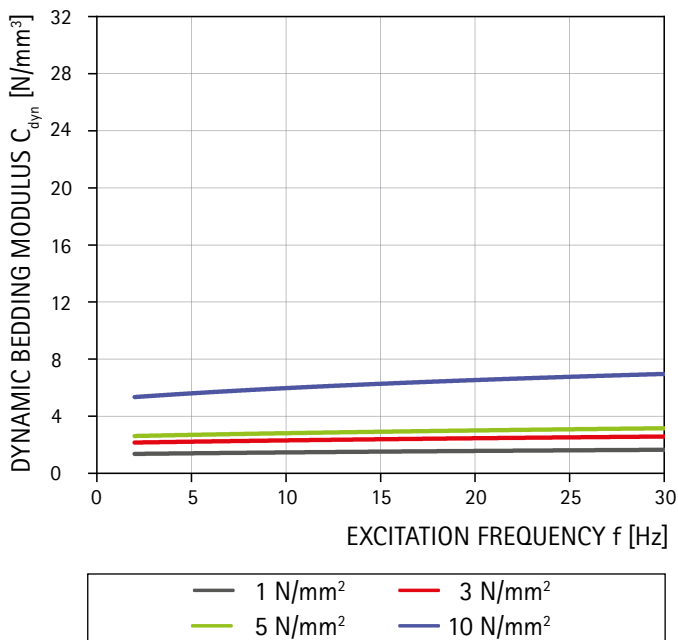
Bearing dimensions: 80 x 80 mm



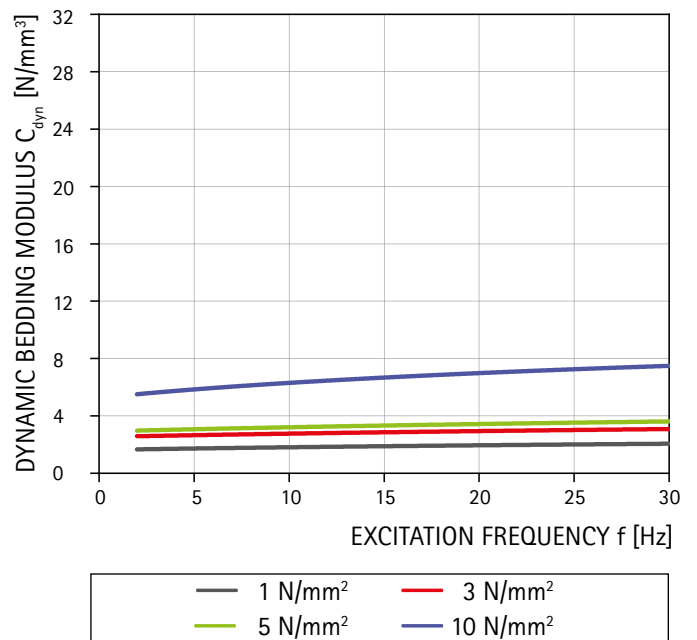
Bearing dimensions: 120 x 120 mm



Bearing dimensions: 160 x 160 mm



Bearing dimensions: 200 x 200 mm

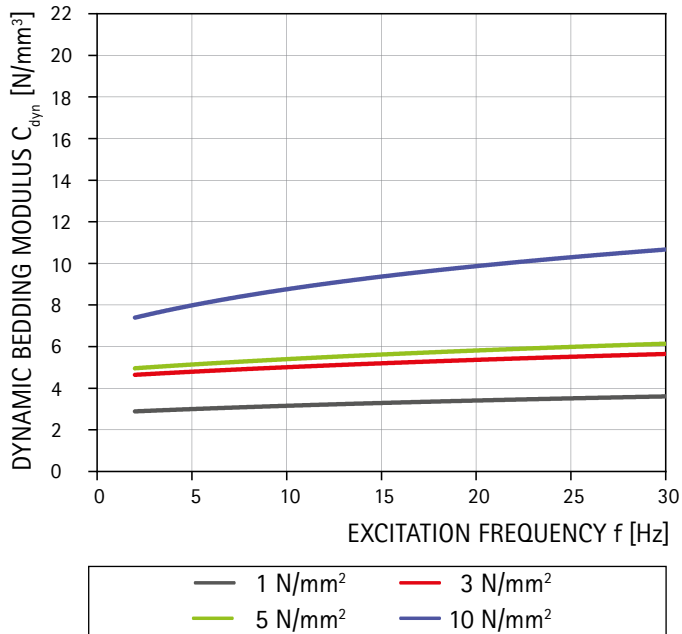


**Citrigon®**

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**Dynamic bedding modulus**

Bearing dimensions: 240 x 240 mm



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