

## 1. Influence of the shape factor

The stiffness of elastomers depends on the geometry of the bearings.

The shape factor  $q$  is defined as the ratio of the loaded area to the surface area of the bearing.

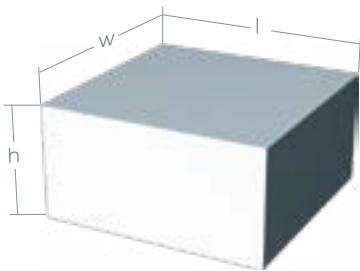
In our technical data sheets, we refer in detail and graphs on a valid form factor.

For other form factors, correction values must be taken into account for the information.

These correction values can be found on our product data sheets on page 3.

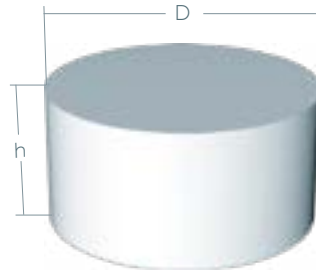
### Determination of the shape factor $q$ for:

#### Cuboid



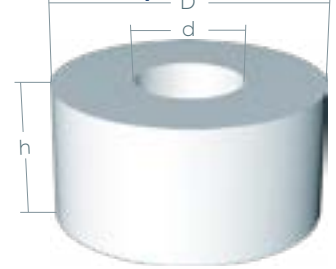
$$q = \frac{w \cdot l}{2 \cdot h \cdot (l + w)}$$

#### Cylinder



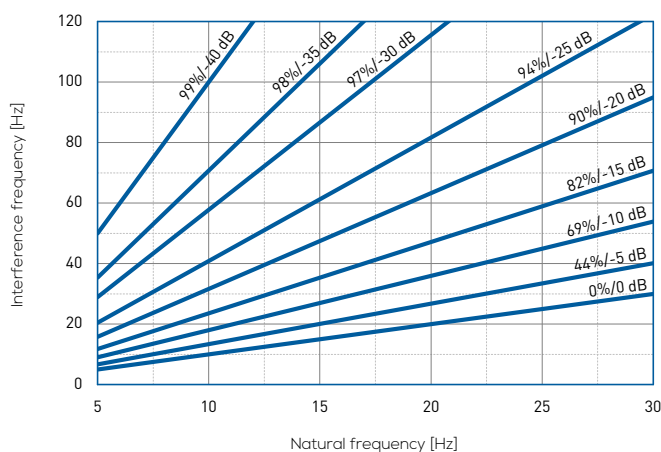
$$q = \frac{D}{4 \cdot h}$$

#### Hollow cylinder



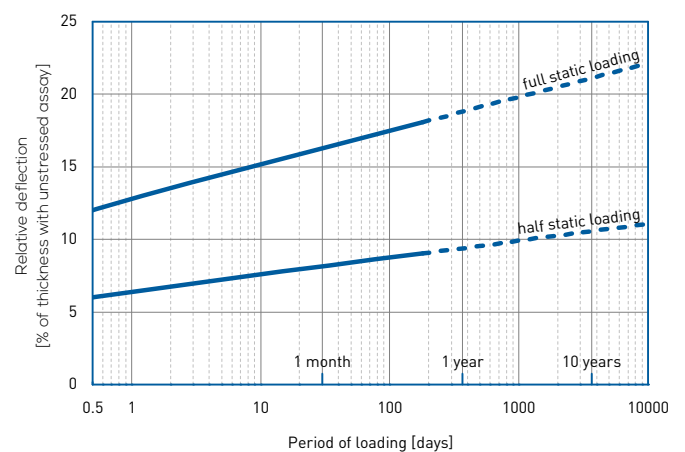
$$q = \frac{D - d}{4 \cdot h}$$

## 2. Vibration isolation



Isolation efficiency percentage and sensitivity level in decibels for an elastic bearing on a rigid substrate.

## 3. Creep behaviour



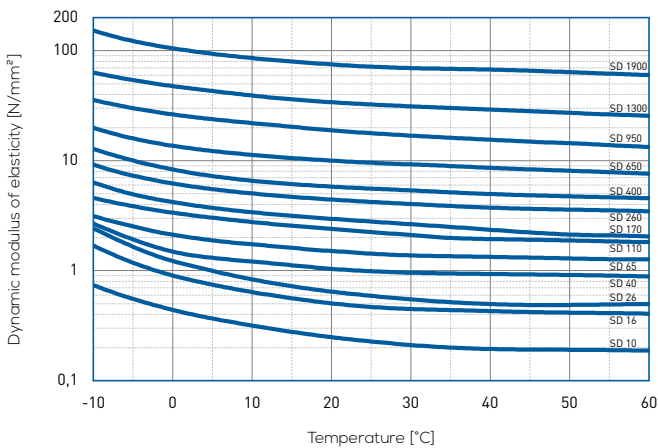
Under consistent loading, the deformation of elastomers increases. The static load ranges of PURASYS Vibrafoam/ Vibradyn have been chosen in that way that all types have the same creep behaviour.

All information and data is based on our current knowledge. The data are subject to typical manufacturing tolerances and are not guaranteed. We reserve the right to amend the data.

## 4. Influence of the temperature

DMA studies (Dynamic Mechanical Analysis) in the linear range of the spring characteristic

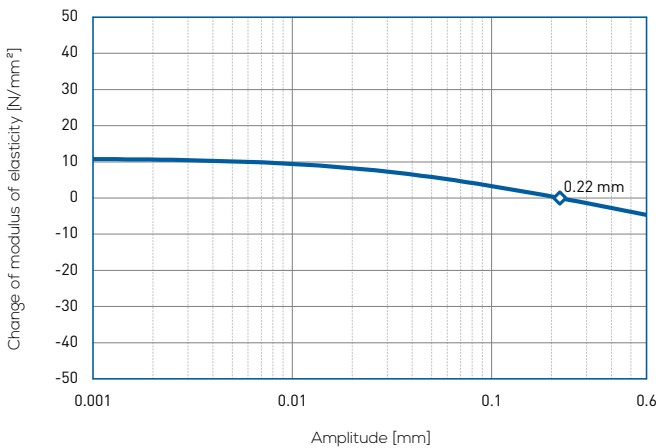
Temperature dependence of the dynamic modulus of elasticity:



Temperature dependence of the loss factor:

	-10 °C	0 °C	10 °C	23 °C	30 °C	40 °C	50 °C	60 °C
SD 10	0.57	0.45	0.35	0.25	0.22	0.19	0.17	0.15
SD 16	0.65	0.48	0.35	0.24	0.21	0.18	0.17	0.15
SD 26	0.54	0.43	0.33	0.22	0.18	0.15	0.14	0.13
SD 40	0.37	0.29	0.22	0.15	0.12	0.10	0.09	0.09
SD 65	0.44	0.30	0.22	0.18	0.17	0.15	0.14	0.13
SD 110	0.26	0.18	0.15	0.12	0.11	0.10	0.10	0.09
SD 170	0.34	0.22	0.16	0.13	0.12	0.11	0.10	0.10
SD 260	0.29	0.19	0.14	0.11	0.10	0.09	0.08	0.08
SD 400	0.28	0.18	0.13	0.10	0.09	0.08	0.07	0.07
SD 650	0.28	0.18	0.13	0.10	0.09	0.08	0.08	0.07
SD 950	0.23	0.16	0.12	0.10	0.09	0.08	0.08	0.08
SD 1300	0.19	0.13	0.11	0.09	0.08	0.08	0.07	0.07
SD 1900	0.24	0.15	0.11	0.09	0.08	0.07	0.07	0.06

## 5. Amplitude dependence



The graph indicates a typical curve of the dependence of the dynamic modulus of elasticity of the vibration amplitude.

The reference value is 0.22 mm.

In comparison with other elastic materials, such as e.g. bound rubber granules, one can neglect the amplitude dependence in PURASYS Vibrafoam/Vibradyn products.