TECHNICAL DATA SHEET

VibraFlex® VM 220

Bramming Plast-Industri A/S
Vardevej 9 DK-6740 Bramming
www.bpi.dk

Technical details

Max. static load

0,220 N/mm²

Max. dynamic load

0,4 N/mm²

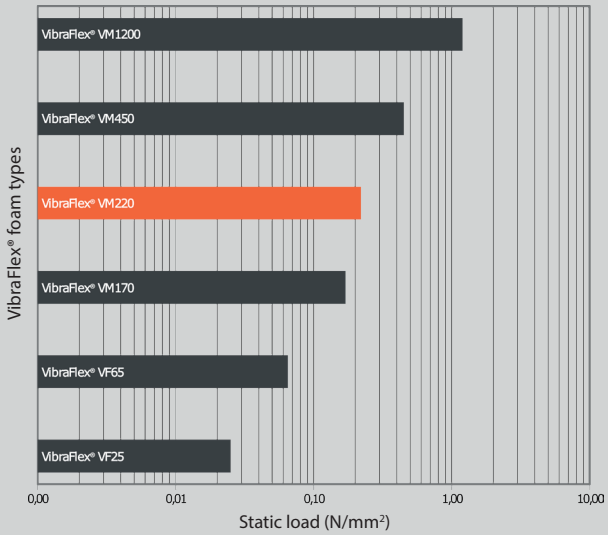
Load peaks

0,53 N/mm²

(Short term load peaks)
Values depending on shape factor and apply to shape factor q = 3

Material	Mixed-cell PU elastomer
Colour	Orange
Length	1000 mm
Width	500 mm
Thickness	12.5 mm or 25 mm
Converting options	Cut to size, moulding 3D or other upon request

Range of use



Material properties	Value	Test method	Comment
Mechanical loss factor	0,1	DIN 53513	At specific load of 0,22 N/mm², 10 Hz, 25 mm. For more see figure "loss factor".
Compression hardness	0,37 N/mm²	ISO 3386-2	At 25% linear compression, 3rd load cycle.
Compression set	< 10 %	ISO 1856	50% / 23 °C / 70h
Static modulus of elasticity	1,88 N/mm²	DIN 53513	Tangential modulus at specific load of 0,22 N/mm², 25mm see figure "Modulus of elasticity".
Dynamic modulus of elasticity	3,07 N/mm²	DIN 53513	At specific load of 0,22 N/mm², 10 Hz, 25mm
Static stiffness	0,075 N/mm³	DIN 53513	
Dynamic stiffness	0,13 N/mm³	DIN 53513	
Tensile strength	3,4 N/mm²	ISO 1798	
Elongation of break	> 300 %	ISO 1798	
Hardness	60-65	Asker C	
Angle tear	> 10 N/mm³	DIN 53515	
Pendulum rebound	> 60 %	Internal	
Electrical conductivity	> 1000 Mohm·cm	Internal	
Thermal conductivity	0,06 - 0,09 W (m·K)	Internal	
Water absorption	< 10 %	Internal	Volume swell 7 days.
Fire properties	Class B2 Class E	DIN 4102 ISO 13501-1	
Temperature	-30 to +60 °C	Internal	Operating temperature. For more see figure "DMTA".

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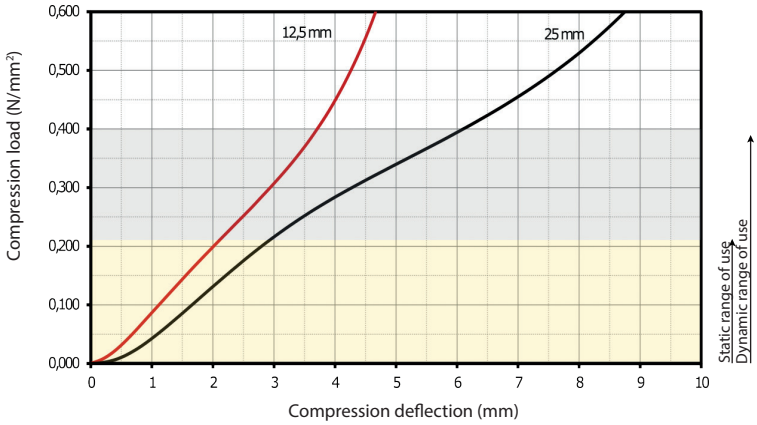
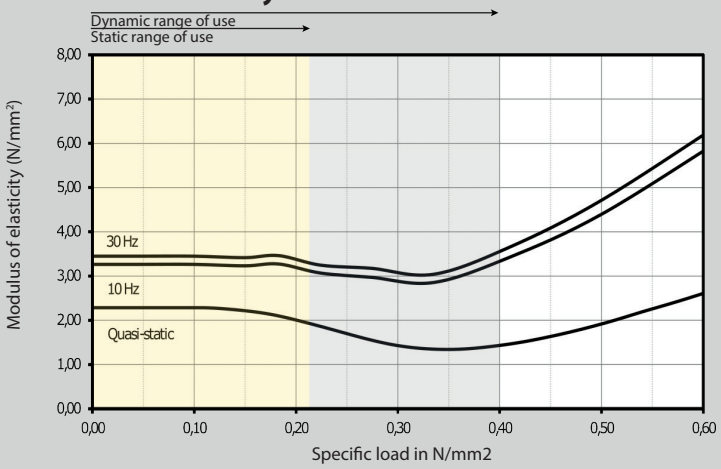
Compression load deflection



Static compression load deflection of 3rd load occurrence. Testing between flat and plane-parallel steel plates.

Shape factor q = 3

Modulus of elasticity



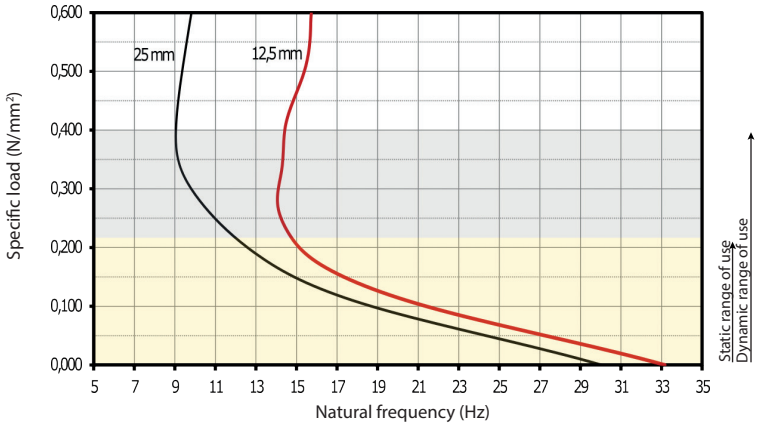
Dynamic modulus of elasticity for a sinusoidal excitation at a constant mean load and an amplitude of ± 0,25 mm.

Quasi-static modulus of elasticity as a result of tangent modulus of the spring characteristic.

Tested according to DIN 53513.

Shape factor q = 3

Natural frequencies



Natural frequency of a single degree-of-freedom system (SDOF System) consisting of a mass and an elastic bearing made of VibraFlex® VM220 on a rigid base.

Tested according to DIN 53513.

Shape factor q = 3

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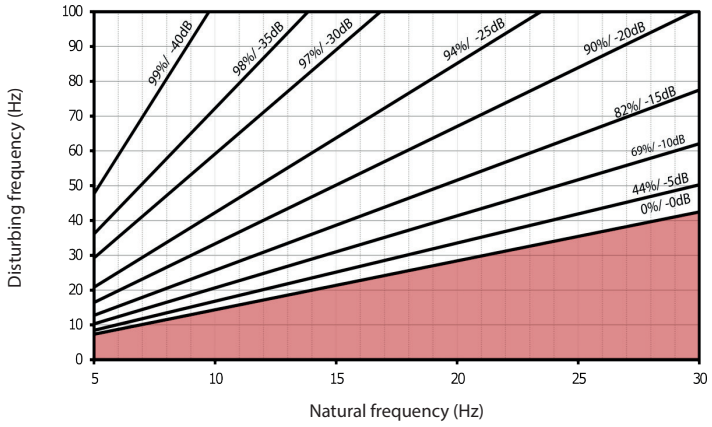
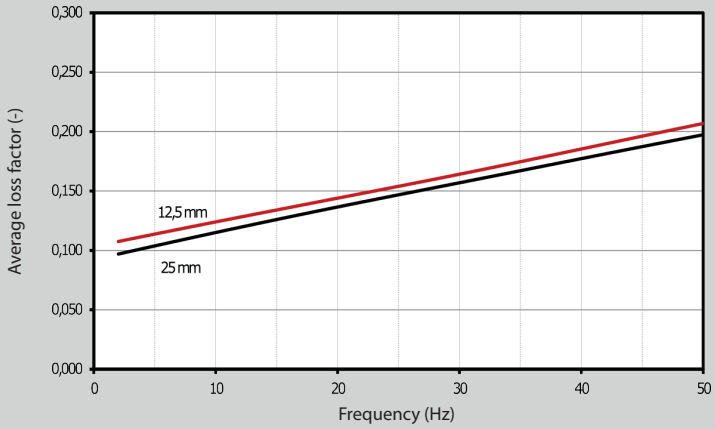
Vibration isolation efficiency



Vibration isolation efficiency by implementation of an elastic bearing made of VibraFlex® VM220 on a rigid base.

Parameter: Isolation factor in %, factor of transmission in dB.

Mechanical loss factor



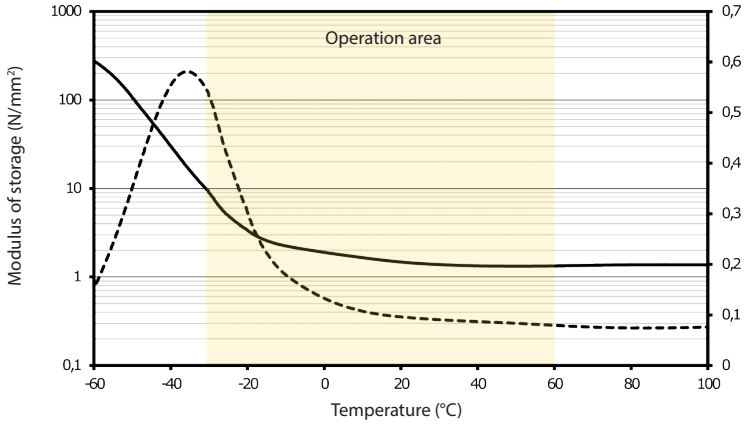
Mechanical loss factor is measure for energy loss per cycle in an oscillating system.

The values shown in the diagram are valid for an excitation with a vibration velocity of 1 mm/s.

Tested according to DIN 53513.

Shape factor q = 3

DMTA



DMTA graph shows the relation between storage modulus and tan delta over temperature.

Storage modulus describes the elastic response of the material.

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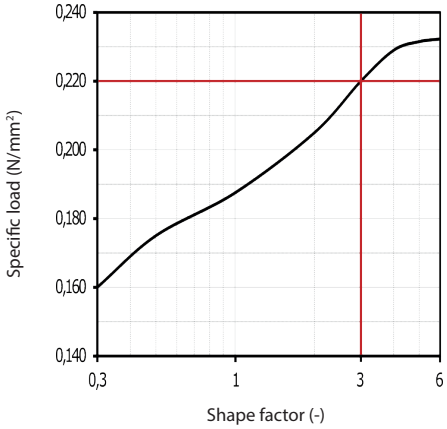
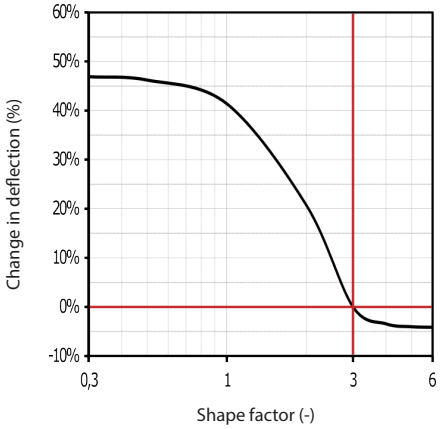
Shape factor influence



Relation between static range and shape factor.

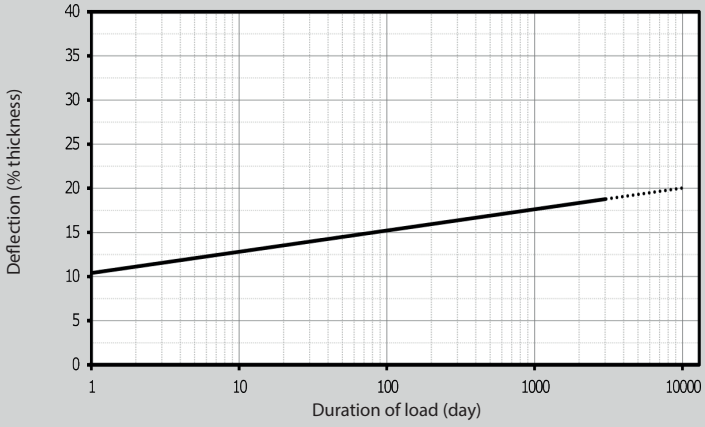
Reference values: specific load 0,22 N/mm², shape factor q = 3.



Relation between static deflection and shape factor.

Reference values: specific load 0,22 N/mm², shape factor q = 3.

Long-term creep



Long term creep effects occurring under long time load under room temperature.

The graph shows the typical behaviour of the elastomer under maximum static load, relative to the unstreesed specimen.

Subject to alterations

BPI reserves the right to update product data information without prior notice. The information submitted in this datasheet is based on our current knowledge and experience. It does not imply any legally binding assurance.

Whenever used, the special conditions of the particular application must be taken into consideration, particularly those regarding physical, technical and legal aspects concerning construction.