

PHONOLASTIK-plates with difference thicknesses

PHONOLASTIK-plates

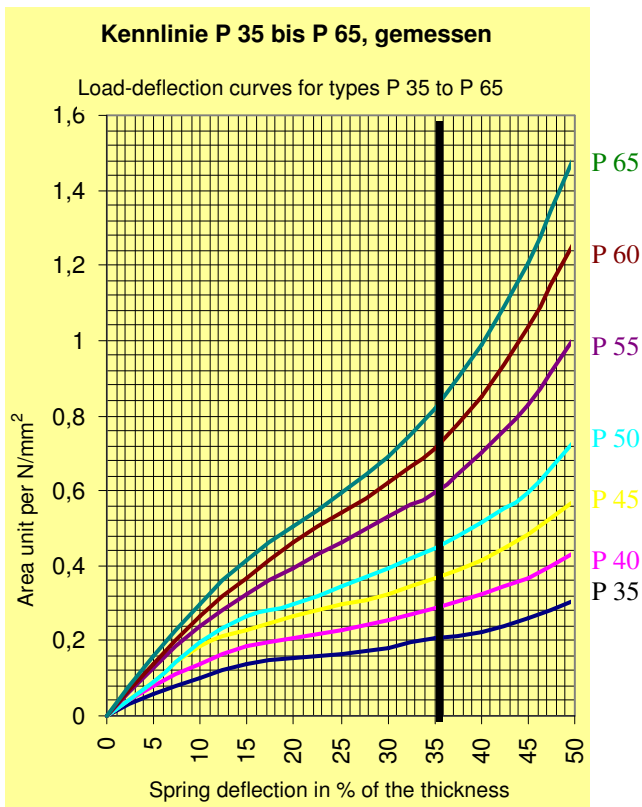
The actual isolation-element of PHONOLASTIK-vibration-plates are the PHONOLASTIK-plates of micro-cellular polyurethan fixed beyond the steel-plates. PHONOLASTIK-plates are available in different qualities of P 35 (unit weight 350 kg/m³) P 40, P45 etc, up to P 65 (unit weight 650 kg/m³).

Manufacture

The PHONOLASTIK-plates are manufactured in blocks of 500 mm x 250 x 60 mm and then splitted to corresponding thickness up to 5 mm.

Load-deflection behaviour

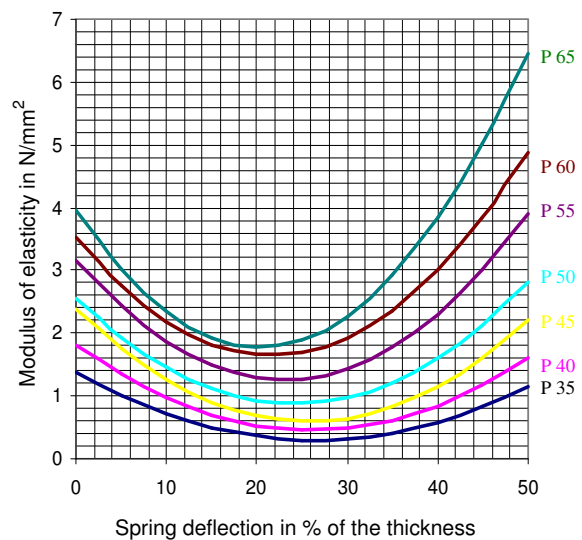
The deflection on test-body with the measures of 35 mm diameter x 40 mm thickness in percent of thickness under load for PHONOLASTIK-plates of type P35 up to P 65 are illustrated.



Modulus of elasticity

One cannot say that PHONOLASTIK-plates are a modulus of elasticity in the classic-sense, as normally a modulus is a constant figure. If however one is using the modulus of elasticity being valid at the operating-point, the vibration-technical calculations can be done this way with faultless results. The diagram shows the calculated modulus of elasticity of the loading-diagram, dependant on the static travel of the spring system.

Modulus of elasticity for types P 35 to P 65



The chemistry

Constancy and moisture expansion

PHONOLASTIK is resistant against oils, fats and other aliphatic hydrocarbons. When storing within the stated materials, normally no or only a very small moisture expansion can be observed.

Ozone causes a brown-colouring of the originally light-yellow material up to strong, dark brown-shades, without that by this any disadvantages concerning the constancy or the physical characteristics will result in.

Unsuitable chemical materials are:

Hot water, steam, strong concentrated acids and alkaline solutions.

The influence of chemical unsuitable materials will lead to moisture expansion with change of elastic characteristics, in extreme cases even to decomposition of the material.

Moisture expansion of PHONOLASTIK-plates

	Moisture Expansion	Resistance
Alcohols	strong	+
Glycols	strong	+
Glycol ether	low	+
Ketone	strong	+
Ether	low	+
Chlorinated hydrocarbons	very strong	+
Mineral oils and fats	low	+
Aromatic hydrocarbons	low	+
Aliphatic hydrocarbons	low	+
Water	low	+
Acids	low	-
Alcaline solutions	low	-
Salt solutions	low	-