

Item Insulating Plates

for vibration and structure-borne noise isolation

Product Description

BILZ insulating plates are highly developed materials designed to solve problems caused in many industrial sectors by vibrations and structure-borne noise. Made from a precise combination of nitrile rubber, cork particles and cross-linked polyester-fibre, this high-grade compound material possesses excellent physical and mechanical properties. One major advantage of this new compound material is its resistance to modern cooling lubricants; the mountings can thus also be used in oil sumps without any loss of physical properties. Particularly worth mentioning are the superb "compression set" values. These are extremely important, for example, if modern machine tools are to be insulation-mounted while ensuring long-term geometric position. 8 different types of plates provide the technically optimal solution to almost any vibration problem. The primary aim in the development of these was to provide specific solution for a wide range of machinery for e.g. lathes, milling machines and grinding machines, as well as presses and feed presses!

Lubricants

Roller and friction bearing greases, gear lubricant grease

Synthetic lubricants

Polyalkylenglycols, ester of a carbonic acid, radiator antifreeze

Fuels and motor fuels

Petrol (gasoline), diesel, heating fuel, aviation gasoline, special motor fuels

Fire resistant pressure liquids

Oil in water emulsions, water in oil emulsions, water polymeric solutions

Resistance to Aging

The service life of these mounting plates is nearly unlimited if the load values are observed. No permanent deformation.

Resistance to Chemicals

Extremely high degree of resistance to conventional oils, grease, acids, etc.

Completely resistant to cooling emulsions, thus allowing machine mounting in oil sumps.

Resistance to Temperature

+ 120° to - 20° Celsius

Mineral Oils

Cooling lubricants mixable with water, ATF (Automatic Transmission Fluid), cooling lubricants, water mixable anticorrosive oils, sliding belt oils, compressed air oils, lubricants, thermal oils, filter oils, rolling oils, gear lubricant oils for cars, brake fluids and mineral oil basis

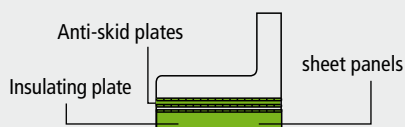
Purifiers

Chlorinated hydrocarbons, petroleum ether/benzene, cold purifiers

Purifiers (watery solutions)

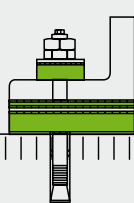
Washing and Rinsing agents, wetting agents, dilute acids, dilute alkaline solutions, salt solutions

Application Technology 1



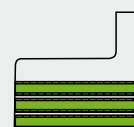
Machine mounting on BILZ insulating plates for machines that don't require a high degree of mounting precision. Floor unevenness can be compensated for by using shim plates, etc. The plates are normally geometrically positioned. Size is determined on the basis of machine weight and available contact area.

Application Technology 2

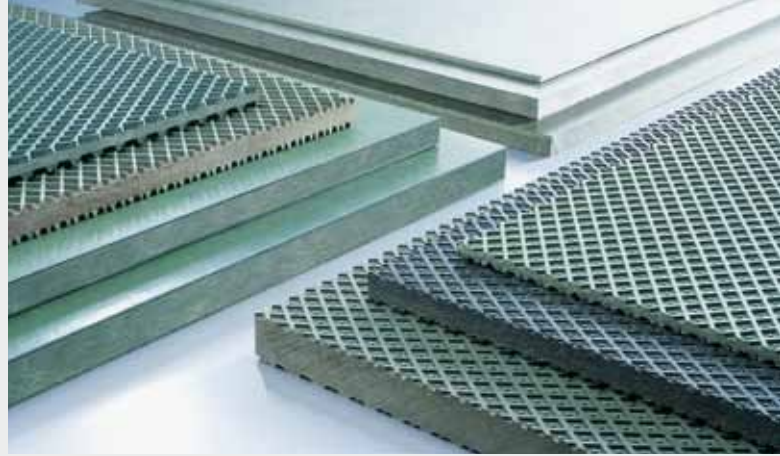


Schematic illustration of floor anchorage using insulator plate and washer. In some cases, it is necessary to anchor the object to be insulated to the floor. The use of insulator washers prevents vibrations being transmitted via the screw connection. In particularly difficult cases, it is advisable to use adjusted disc springs. Size, etc. is determined by BILZ.

Application Technology 3



Highly effective impact and vibration insulation using BILZ insulator plate sets. When insulating pulsating forces (presses, hammers, feed presses), BILZ plates are in this case combined to form sets. This helps to achieve extremely low natural vibration frequencies. Their great advantage over steel springs is in the very high attenuation capacity.



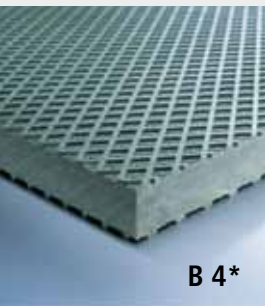
square

size of plates mm	surface area cm ²	size of plates mm	surface area cm ²
1000 x 500	5000	150 x 100	150
500 x 500	2500	150 x 75	112
500 x 250	1250	100 x 100	100
250 x 250	625	100 x 50	50
200 x 200	400	75 x 75	56
200 x 100	200	50 x 50	25
150 x 150	225		

round

size of plates mm	surface area cm ²
50 Ø	20
75 Ø	44
110 Ø	95
130 Ø	133
150 Ø	176
200 Ø	314
238 Ø	450
300 Ø	710

Important Notice: BILZ Plates can be cut with any circular or band-saw. If requested we shall be pleased to supply you with special dimensions.

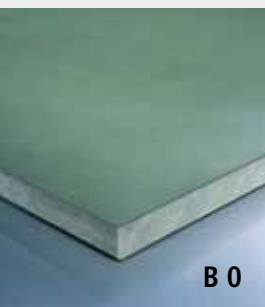
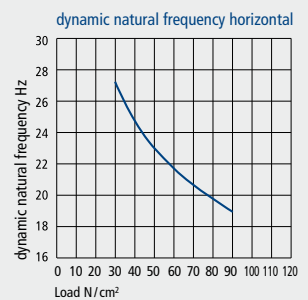
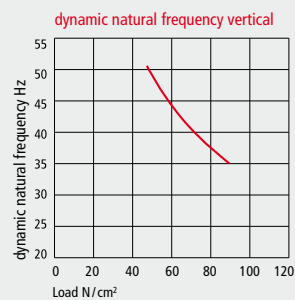


B 4*

Range of application:

Very universal. Can be used for machine tools, plastic and printing machines. Extremely well suited to machines with a tendency to "migrate".

Type	Load N/cm ²	Thickness mm	Coefficient of friction η^{**}
B 4*	30–100	15	0,8

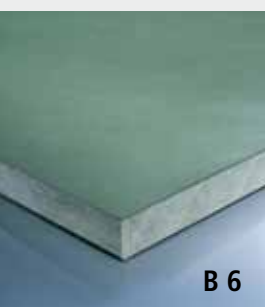
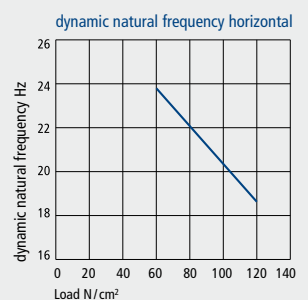
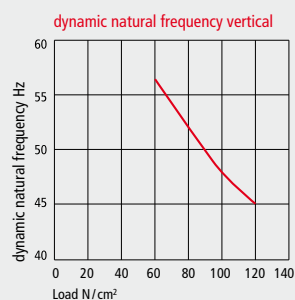


B 0

Range of application:

Without profile. Very high level consistency. Particularly for machines with little rigidity such as: lathes, machining centers, transfer lines etc.

Type	Load N/cm ²	Thickness mm	Coefficient of friction η^{**}
B 0	50–120	15	0,6

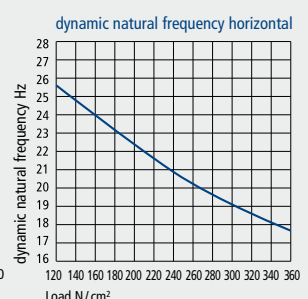
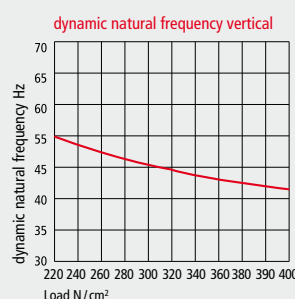


B 6

Range of application:

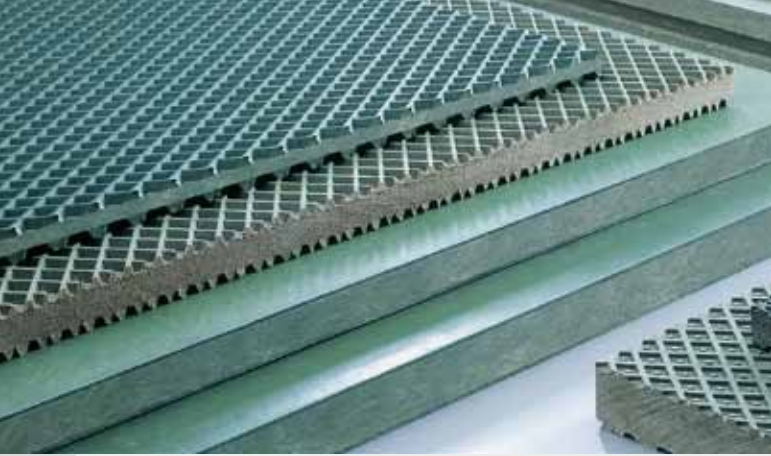
Insulating plate with extremely high loadability coupled with maximum level consistency. E.g. for very heavy and long bedded machining centers, transfer lines etc.

Type	Load N/cm ²	Thickness mm	Coefficient of friction η^{**}
B 6	100–400	15	0,6



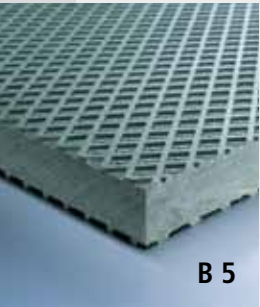
* Can be supplied also with profile on one side only! Designation e.g. B4 - 1.

** Coefficient of friction compared to industrial floor pavement.



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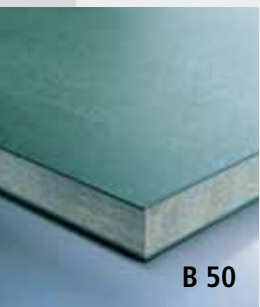
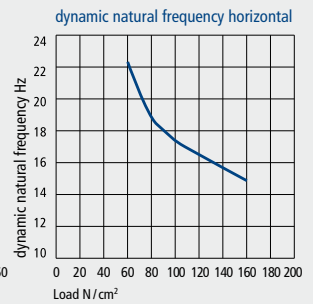
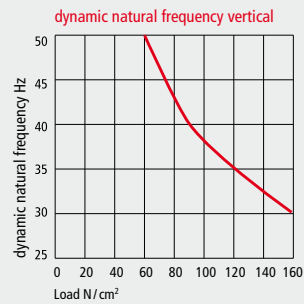
for vibration and structure-borne noise isolation



Range of application:

For machines with high dynamic disturbance properties and only a small support plate, e.g. presses, stamping presses, shears etc.

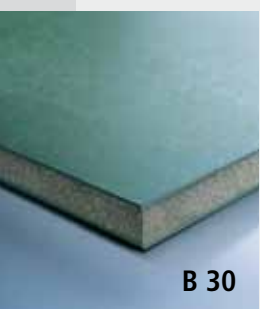
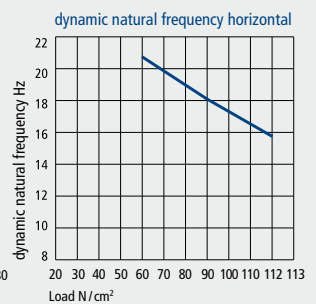
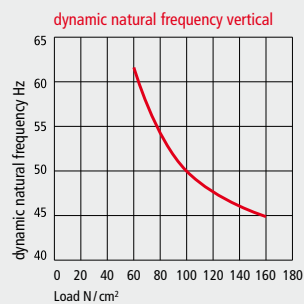
Type	Load N/cm ²	Thickness mm	Coefficient of friction η^{**}
B 5	50–160	25	0,8



Range of application:

For machines with high dynamic disturbance properties and only a small support plate, e.g. presses, stamping presses, shears etc.

Type	Load N/cm ²	Thickness mm	Coefficient of friction η^{**}
B 50	50–200	25	0,8

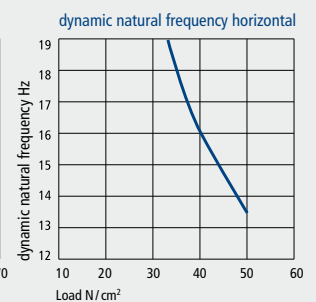
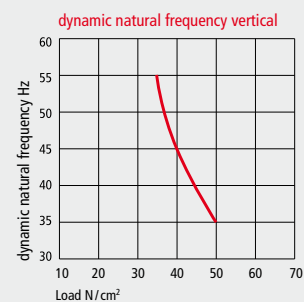


Range of application:

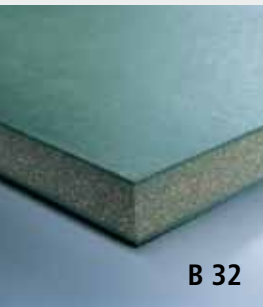
Soft kind without any profile.

Specially suited for effective insulation of lighter presses, punching machines etc. on upper floors.

Type	Load N/cm ²	Thickness mm	Coefficient of friction η^{**}
B 30	20–50	18	0,8



** Coefficient of friction compared to industrial floor pavement.

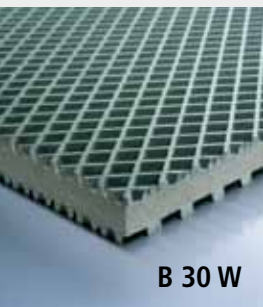
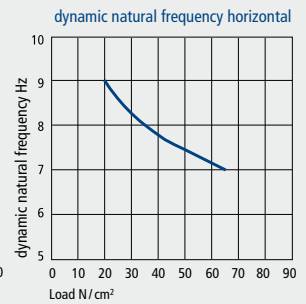
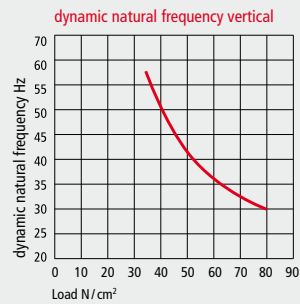


B 32

Range of application:

Soft kind similar to B 30, but with higher load capability. For medium to big presses, punching presses etc. Very high insulation!

Type	Load N/cm ²	Thickness mm	Coefficient of friction η^{**}
B 32	20–80	25	0,8

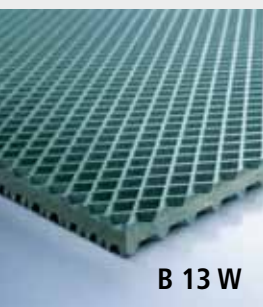
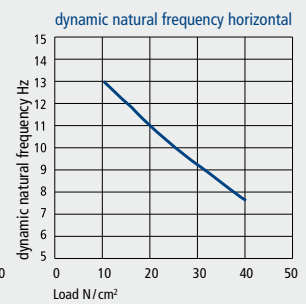
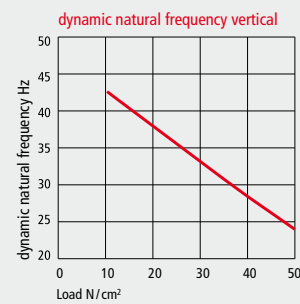


B 30 W

Range of application:

Very soft kind for mainly passive insulation. High insulation effect due to low frequency tuning. E.g. for measuring and testing machines, scales, microscopes and grinders.

Type	Load N/cm ²	Thickness mm	Coefficient of friction η^{**}
B 30 W*	5–40	18	0,8

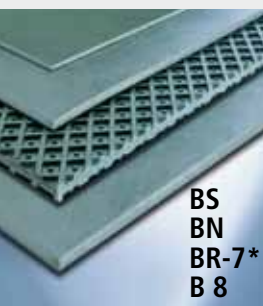
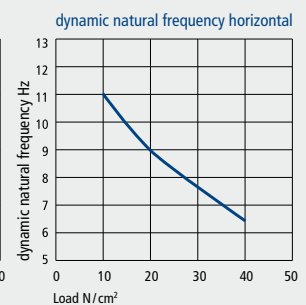
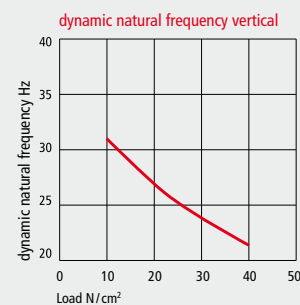


B 13 W

Range of application:

Special kind for highest insulation values, can be stacked up to 5 times. Tuning up to approx. 8 Hz. Recommended as so-called plate-set for foundation insulations.

Type	Load N/cm ²	Thickness mm	Coefficient of friction η^{**}
B 13 W	5–35	13	0,8



**BS
BN
BR-7*
B 8**

Range of application:

BILZ anti-skid and spacer plates. No vibration insulation!

Type	Load N/cm ²	Thickness mm	Coefficient of friction η^{**}
BS	10–400	2	0,9
BN	10–300	5	0,6
BR-7*	10–100	7	0,8
B 8	5–35	8	0,8

* Can be supplied also with profile on one side only! Designation e.g. B4 - 1
 ** Coefficient of friction compared to industrial floor pavement.