

LEVELLING ELEMENTS

THE COST-EFFECTIVE COMBINATION OF PRECISE LEVELLING ADJUSTMENT AND EFFECTIVE INSULATION FROM DISRUPTIVE VIBRATIONS IN MACHINE INSTALLATIONS



All information about our levelling elements is also available on our website.

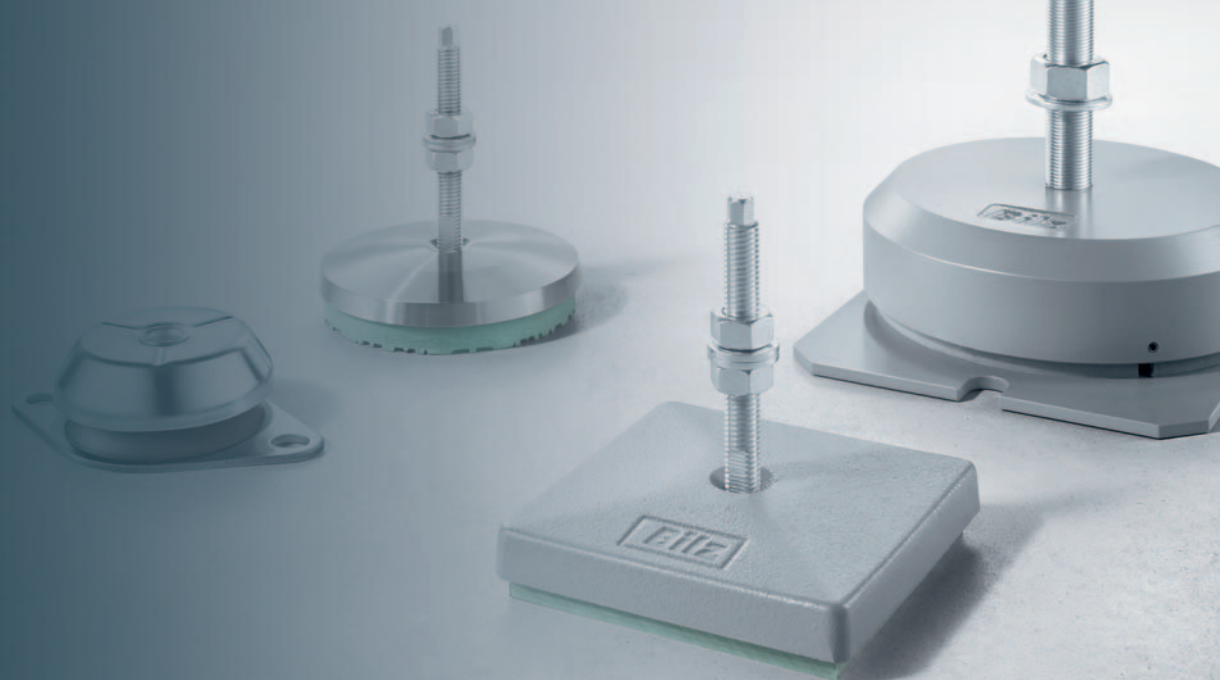
Bilz levelling elements are used for vibration and structure-borne noise insulated machine installation.

The maintenance-free machine feet ensure simple and precise levelling of machines and are available in many versions.

The appropriate size and insulation pads are selected according to the application and load. The levelling range can be adjusted depending on the selected bolt length and according to individual requirements (except for BNSH / BNSHA).

NOTES

- The specified maximum load is composed of the static and dynamic load of the machine. The optimum insulation effect is achieved at approx. 80-90 % of the specified maximum load.
- You will find the specified insulation pad type in the type designation: BNSH 80/50 is equipped with insulation pad B50, BNSHA 120/32 with B32 etc.
- Permissible temperature range: -20 °C to +80 °C
- Details on the characteristics of the insulation pads used can be found on pp.10-12.
- Tables for the selection of available bolts can be found on pp. 20-21. Nuts and washers are included. Please specify the size when ordering.
- Please contact us, if the suitable dimension, colour, pad fitting or bolt connection required for your application is not listed. We also have numerous special solutions available besides our standard solutions and colours. We are always happy to offer our advice.



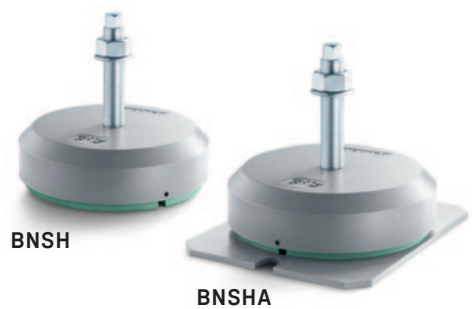
SERIES BNSH | BNSHA

Round levelling element, specifically for high demands on horizontal stability, e.g. injection moulding machines, presses, punches.

BNSH: without bolt-on floor mounting | **BNSHA:** with bolt-on floor mounting

- Specially developed levelling element for the bearing of injection moulding machines, presses, punches, etc.
- Optimum load distribution due to the proven pressure pad design.
- Very high horizontal stability over the entire levelling range.
- The BNSHA levelling element with bolt-on floor mounting is particularly suitable for all machines that tend to 'wander'.
- The floor mounting is not designed as a safeguard against tipping.

Colour: RAL 7037, dusty grey



BNSH | BNSHA

Type BNSH / BNSHA	Item no. BNSH	Item no. BNSHA	max. load N/Stk.	H BNSH mm	H BNSHA mm	Ø D mm	Adjustment range mm	Fine thread G	Pitch
70/0	12-0042	12-0016	5.000	31	36	80	+6	M10	1,25
80/50	12-0047	12-0020	9.500	43	48	96	+18	M12	1,5
120/50	12-0024	12-0003	20.000	51	56	133	+18	M16	1,5
160/50	12-0028	12-0006	40.000	52	57	175	+17	M20	1,5
175/50	12-0032	12-0009	45.000	56	64	193	+17	M20	1,5
200/50	12-0036	12-0012	65.000	63	71	229	+16	M24	2,0
250/50	12-0040	12-0015	90.000	67	75	270	+15	M30	2,0
70/30	12-0043	12-0017	2.400	34	39	80	+6	M10	1,25
80/32	12-0045	12-0018	4.800	43	48	96	+18	M12	1,5
120/32	12-0022	12-0001	9.600	51	56	133	+18	M16	1,5
160/32	12-0026	12-0004	17.000	52	57	175	+17	M20	1,5
175/32	12-0030	12-0007	20.800	56	64	193	+17	M20	1,5
200/32	12-0034	12-0010	29.000	63	71	229	+16	M24	2,0
250/32	12-0038	12-0013	41.000	67	75	270	+15	M30	2,0

Properties of the insulation pad:

B50:

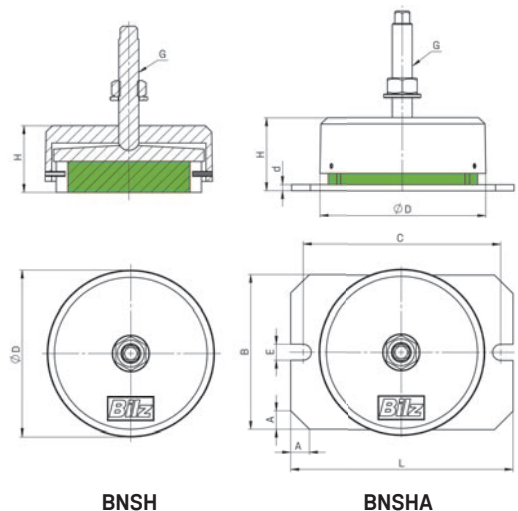
- Good insulating effect when machines are installed on natural ground.
- Very well suited for machines with high dynamic forces.

B32:

- Very good insulating effect.
- Specially developed for use on upper floors or on insufficiently stable ground.

BNSHA DIMENSIONS FLOOR PAD

Type	L mm	A mm	B mm	C mm	E mm	d mm
BNSHA 70	125	15	75	105	8	5
BNSHA 80	140	15	90	120	8	5
BNSHA 120	180	15	125	160	13	5
BNSHA 160	220	15	170	200	16	5
BNSHA 175	260	20	185	230	20	8
BNSHA 200	300	20	225	270	20	8
BNSHA 250	330	20	265	300	20	8

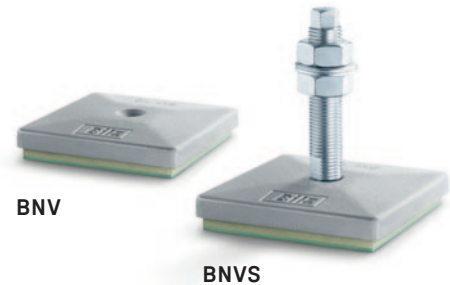


SERIES BNV | BNVS

Square levelling element with compensation of angular differences by means of movable levelling bolt.
BNV: optionally with movable levelling bolt | **BNVS:** connected with movable levelling bolt

- Proven and highly effective pad elements, preferably for light to medium-heavy machines with corresponding locating holes or threads in the machine base.
- The BNVS element is used wherever a rigid connection between element and machine is required.
- The movable levelling bolt can compensate for any unevenness of the floor or angular differences of up to $\pm 3^\circ$.

Colour: RAL 7037, dusty grey



BNV | BNVS

Type BNV / BNVS	Item no. BNV	Item no. BNVS	max. load N/Stk.	L mm	B mm	H mm
50/4	08-0030	10-0013	2.000	60	60	22
80/4	08-0034	10-0023	4.700	85	85	24
110/4	08-0004	10-0004	12.000	123	123	28
115/4	08-0008	10-0026	11.400	163	88	29
150/4	08-0016	10-0009	18.000	147	147	32
200/4	08-0020	10-0025	37.000	264	165	44
50/0	08-0028	10-0011	4.000	60	60	22
80/0	08-0032	10-0021	9.500	85	85	24
110/0	08-0002	10-0002	24.000	123	123	28
115/0	08-0006	10-0027	22.800	163	88	29
150/0	08-0014	10-0007	36.000	147	147	32
200/0	08-0018	10-0028	74.000	264	165	44
50/30W	08-0029	10-0012	950	60	60	25
80/30W	08-0033	10-0022	2.300	85	85	27
110/30W	08-0003	10-0003	5.000	123	123	31
115/30W	08-0007	10-0029	4.500	163	88	32
150/30W	08-0015	10-0008	7.300	147	147	35
200/30W	08-0019	10-0030	15.000	264	165	47

Properties of the insulation pad:

B4:

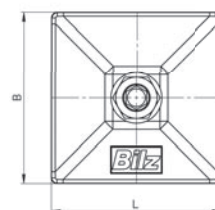
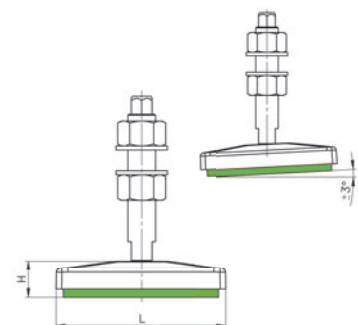
- Medium-hard insulation pad with good vibration and structure-borne sound insulation.
- Suitable for universal use.

B0:

- Insulation pad without profile and with high level consistency, e.g. for lathes, processing centres, etc.

B30W:

- Soft tuning for very good insulating effect, e.g. for grinding machines, testing equipment, measuring machines, etc.



BNVS

SERIES BNR | BNRS

Round levelling element with compensation of angular differences by means of movable levelling bolt.
BNR: optionally with movable levelling bolt | **BNRS:** connected with movable levelling bolt

- Proven and highly effective pad elements, preferably for light to medium-heavy machines with corresponding locating holes or threads in the machine base.
- The BNRS element is used wherever a rigid connection between element and machine is required.
- The movable levelling bolt can compensate for any unevenness of the floor or angular differences of up to $\pm 3^\circ$.

Colour: RAL 7037, dusty grey



BNR | BNRS

Type BNR / BNRS	Item no. BNR	Item no. BNRS	max. load N/Stk.	Ø D mm	H mm
50/4	09-0035	11-0014	1.700	60	21
70/4	09-0048	11-0019	3.600	79	29
80/4	09-0045	11-0023	4.200	85	23
110/4	09-0006	11-0004	9.100	120	31
150/4	09-0016	11-0009	17.000	162	34,5
200/4	09-0025	11-0026	31.000	213	42
50/0	09-0033	11-0012	3.400	60	21
70/0	09-0049	11-0017	7.200	79	29
80/0	09-0042	11-0024	8.400	85	23
110/0	09-0002	11-0002	18.200	120	31
150/0	09-0012	11-0007	34.000	162	34,5
200/0	09-0021	11-0027	62.000	213	42
50/30W	09-0034	11-0013	700	60	24
70/30W	09-0050	11-0018	1.400	79	32
80/30W	09-0043	11-0025	1.600	85	26
110/30W	09-0003	11-0003	3.500	120	34
150/30W	09-0013	11-0008	6.900	162	34,5
200/30W	09-0022	11-0028	12.000	213	42

Properties of the insulation pad:

B4:

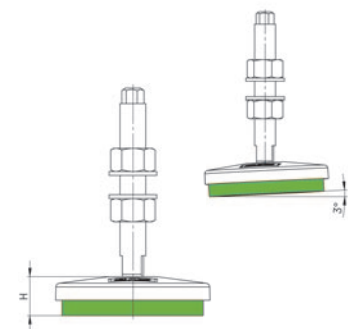
- Medium-hard insulation pad with good vibration and structure-borne sound insulation.
- Suitable for universal use.

B0:

- Insulation pad without profile and with high level consistency, e.g. for lathes, processing centres, etc.

B30W:

- Soft tuning for very good insulating effect, e.g. for grinding machines, testing equipment, measuring machines, etc.



BNRS

SERIES BNRV | BNRSV

Round, stainless steel levelling element with compensation of angular differences by means of movable levelling bolt. Specially designed for applications in the food, pharmaceutical and clean room industries.

BNRV: optionally with movable levelling bolt | BNRSV: connected with movable levelling bolt

- For machines with corresponding locating holes or threads in the machine feet used in the food, luxury food, packaging, chemical and pharmaceutical industries, as well as for clean room applications.
- BNRSV elements are used wherever a rigid connection between element and machine is required.
- The movable levelling bolt can compensate for any unevenness of the floor or angular differences of up to $\pm 3^\circ$.

Colour: Stainless steel



BNRV

BNRSV

BNRV | BNRSV

Type BNRV / BNRSV	Item no. BNRV	Item no. BNRSV	max. load N/Stk.	Ø D mm	H mm
50/4	30-0031	30-0014	1.700	54	24
70/4	30-0035	30-0018	3.600	76	25
110/4	30-0023	30-0007	9.100	116	27,5
150/4	30-0027	30-0011	17.000	156	29,5
50/30W	30-0030	30-0013	700	54	27
70/30W	30-0034	30-0017	1.400	76	28
110/30W	30-0022	30-0006	3.500	116	30,5
150/30W	30-0026	30-0010	6.900	156	32,5
50/BR7	30-0032	30-0016	2.800	54	16
70/BR7	30-0036	30-0020	5.800	76	17
110/BR7	30-0024	30-0009	14.500	116	19,5
150/BR7	30-0028	30-0012	27.500	156	21,5

Properties of the insulation pad:

B4:

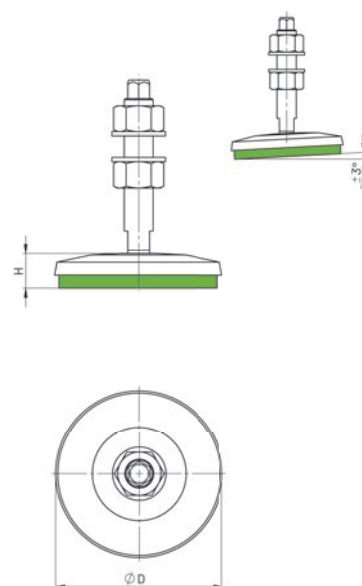
- Medium-hard insulation pad with good vibration and structure-borne sound insulation.
- Suitable for universal use.

B30W:

- Soft tuning for very good insulating effect, e.g. for grinding machines, testing equipment, measuring machines, etc.

BR-7:

- Anti-slip pad without vibration insulation.



SERIES BFE

Cost-effective round, stainless steel levelling element with compensation of angular differences by means of movable levelling bolt. Specially designed for applications in the food, pharmaceutical and clean room industries.

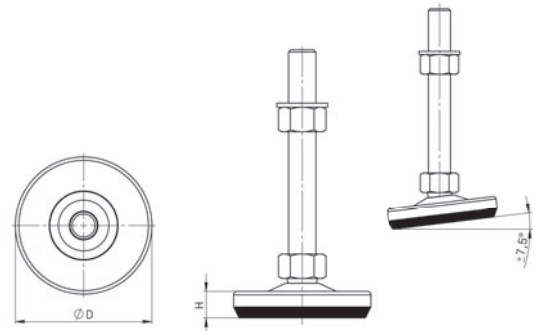
BFE: round, stainless steel version, with flexible levelling bolt

- Cost-effective stainless steel design for machines with corresponding locating holes or threads in the machine feet in the food, packaging, chemical and pharmaceutical industries.
- The movable levelling bolt can compensate for any unevenness of the floor or angular differences of up to $\pm 7.5^\circ$.
- BFE levelling elements cannot be used in combination with Bilz insulation pads.

Colour: Stainless steel



Isolierplatte: NBR70



BFE

Type BFE	Item no. BFE	max. load N/Stk.	$\varnothing D$ mm	H mm
50	30-0003	3.000	50	14
80	30-0004	8.500	80	17
100	30-0001	20.000	100	19
125	30-0002	30.000	125	19

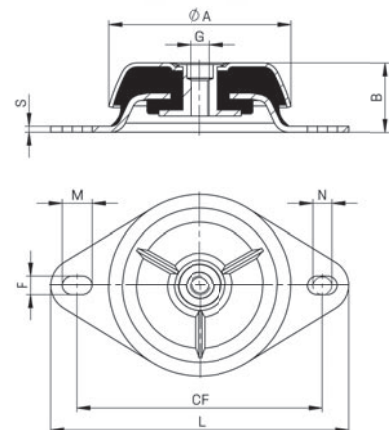
SERIES GMA

Cost-effective rubber-metal element, designed specifically for robust vibration and structure-borne noise insulation of machines and aggregates in outdoor areas.

GMA: Bolt-on rubber-metal parts

- Stationary and mobile use of machines, equipment and aggregates, e.g. engines, machine tools, woodworking machines, screens, rolling mills, pumps, compressors, air conditioning and ventilation systems.
- Natural frequency approx. 25 Hz
- These elements are supplied without bolts.

Colour: Galvanised steel



GMA

Type GMA	Item no.	$\varnothing A$ mm	B mm	F mm	M mm	N mm	CF mm	L mm	S mm	max. Pressure load N/Stk.	max. Springing mm	Thread G
83	13-0009	83	36	11,5	15	15	110	135	3	2.300	3,5 \pm 1,5	M10
92	13-0010	92	34	10	15	10	123	150	3	3.000	5,0 \pm 1,5	M10
106	13-0011	106	41	13	19	19	143	169	4	4.200	3,5 \pm 1,5	M12
150	13-0012	150	54	14	18	18	182	218	4	10.000	3,5 \pm 1,5	M16

SERIES BNL

Cost-effective levelling element for machines with high vertical and horizontal dynamic forces.
 BNL: Steel, with levelling bolt

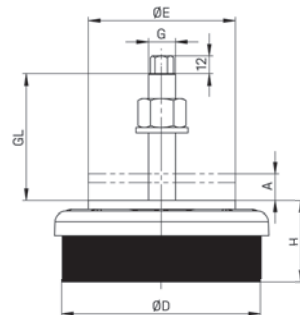
- Sufficient insulation from vibrations and structure-borne sound.
- Precise levelling pressure pad for optimum weight distribution.
- The rubber element is resistant to commercial acids, alkalis and lubricating oils.
- Matching levelling bolts, each with a nut and washer, are included.
- Cannot be used in combination with Bilz insulation pads.

Colour: Galvanised steel



BNL

Type BNL	Item no. BNL	max. load N/Stk.	Ø D mm	Ø E mm	H mm	Adjustment range A	G	GL mm
80	14-0027	5.000	80	60	45	+12	M12 × 1,5	86
120	14-0028	11.000	120	60	45	+15	M16 × 1,5	80
160	14-0029	21.000	160	70	56	+20	M20 × 1,5	125
200	14-0030	40.000	200	70	68	+20	M20 × 1,5	122



ACCESSORIES

A large range of different bolts are available for each type of levelling element. You will find the appropriate bolts in the following tables. The bolt type must be selected according to the static and dynamic load in the application. We are happy to help you with this.

LEVELLING AND FIXING BOLTS

BNSH | BNSHA

Thread	Pitch	Material	Length 80 mm	Length 100 mm	Length 125 mm	Length 150 mm	Length 200 mm
M10	1,25	verzinkt	19-0282	19-0283	19-0284		
M12	1,5	verzinkt	19-0039	19-0032	19-0034	19-0036	
M16	1,5	verzinkt		19-0076	19-0261	19-0081	19-0083
M20	1,5	verzinkt		19-0156	19-0162	19-0167	19-0172
M24	2,0	verzinkt				19-0219	19-0221
M30	2,0	verzinkt				19-0242	19-0245

The galvanised levelling and fastening bolts for the elements mentioned on the left are included and are supplied with one nut and one washer each. Please specify the size when ordering.

BNV | BNVS BNR | BNRS BNRV | BNRSV

Thread	Material	Length 70 mm	Length 100 mm	Length 125 mm	Length 150 mm	Length 200 mm	Length 250 mm	Length 300 mm
M10	verzinkt	19-0025	19-0020					
	Edelstahl	18-0012	18-0006					
M12	verzinkt		19-0042	19-0045	19-0048			
	Edelstahl		18-0017	18-0068	18-0020			
M16	verzinkt		19-0086	19-0092	19-0095	19-0099	19-0102	
	Edelstahl		18-0031	18-0061	18-0034	18-0037	18-0056	
M18	verzinkt		19-0131	19-0134	19-0137	19-0140	19-0143	
M20	verzinkt		19-0179	19-0183	19-0186	19-0189	19-0192	
	Edelstahl		18-0042	18-0063	18-0045	18-0048		
M24	verzinkt				19-0215	19-0224	19-0227	19-0230
	Edelstahl				18-0053	18-0064	18-0065	

The levelling and fixing bolts for the elements mentioned on the left have a standard thread and are supplied incl. 2 nuts and washers each. Please specify the size when ordering.

BNV | BNVS:
galvanised or stainless steel

BNR | BNRS:
galvanised or stainless steel

BNRV | BNRSV:
Stainless steel

ALLOCATION OF LEVELLING BOLT SIZE TO LEVELLING ELEMENT SIZE

BNRS

Thread	BNRS 50	BNRS 70	BNRS 80	BNRS 110	BNRS 150	BNRS 200
M10	●					
M12	●	●	●			
M16		●	●	●	●	
M18			●	●	●	●
M20				●	●	●
M24					●	●

We recommend the combinations marked with a dot.

BNVS

Thread	BNVS 50	BNVS 80	BNVS 110	BNVS 115	BNVS 150	BNVS 200
M10	●					
M12	●	●	●			
M16		●	●	●	●	
M18			●	●	●	●
M20				●	●	●
M24					●	●

BNRSV

Thread	BNRSV 50	BNRSV 70	BNRSV 110	BNRSV 150
M10	●			
M12	●	●	●	
M16		●	●	●
M18			●	●
M20				●
M24				●

STAINLESS STEEL BOLTS

BFE

Thread	Length 50 mm	Length 80 mm	Length 100 mm	Length 120 mm	Length 150 mm	Length 180 mm	Length 200 mm	Length 250 mm	Length 300 mm
M8	18-0213	18-0214	18-0215	18-0216	18-0217	18-0218	18-0219		
M10	18-0220	18-0221	18-0222	18-0223	18-0224	18-0225	18-0226		
M12	18-0227	18-0228	18-0229	18-0230	18-0231	18-0232	18-0233		
M16	18-0234	18-0235	18-0236	18-0237	18-0238	18-0239	18-0240	18-0241	18-0242
M20	18-0243	18-0244	18-0245	18-0246	18-0247	18-0248	18-0249	18-0250	18-0251
M24	18-0252	18-0253	18-0254	18-0255	18-0256	18-0257	18-0258	18-0259	18-0260
M30	18-0261	18-0262	18-0263	18-0264	18-0265	18-0266	18-0267	18-0268	18-0269

The stainless steel bolts for the elements mentioned on the left have a standard thread and are suitable for all element sizes. They are supplied with 2 nuts and washers each and are available in numerous combinations.