

## Spring Isolator Type FU

for Vibration Isolation and Structure-Borne Noise Reduction

**Load capacity 20 up to 630 kN**  
**Vertical natural frequency 1.8 up to 5.3 Hz**  
**with and without damping**

### Mode of function

The transmission of intermittent periodic impact force is considerably reduced by vibration isolated bedding of machines and plants on G+H bearing elements.

### Advantages

- Steel screw-pressure springs acc. to DIN EN 13906 block fixed to absorb overloads (e.g. during erection).
- Adhesive sheet at bottom and on top. The adhesive sheets are for mounting and fixing purposes as well as for levelling uneven surfaces at place of installation. Due to their good adhesive features, the adhesive as well as the structure-borne noise damping sheets, are in most cases suitable (not using additional screws).
- Horizontal spring stiffness nearly the same as vertical spring stiffness.

### Design

- Steel casing
- Casing coated
- Steel screw pressure springs in compliance with DIN EN 13906
- Steel screw pressure springs with anticorrosive coating

### Spring Isolators with Viscosity Damping: -Vi

For reducing the vibration amplitudes and power transmissions during start-up and shut-down of the machine (resonance flow) as well as for shortening the vibration process when impulse are triggered. Setting the required system damper properties (damping ratio) is possible by combining spring isolators with and without dampers.

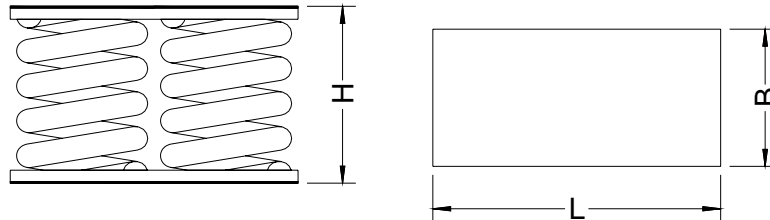
The viscosity dampers are maintenance-free. The installation of separate dampers is not required.



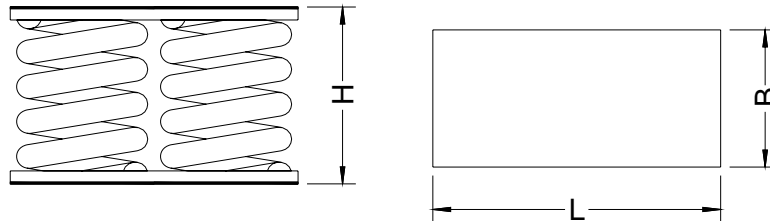
### Accessories

- **Structure-Borne-Noise Damping Plate -K:**  
at bottom, for the additional improvement of structure-borne noise damping. Thickness: 15 mm
- **Height adjustment -H:**  
For levelling possibly uneven surfaces at erection site and for adjusting the height of the machine and plant respectively
- **Gemak®-Glue:**  
To glue spring isolators to surfaces.

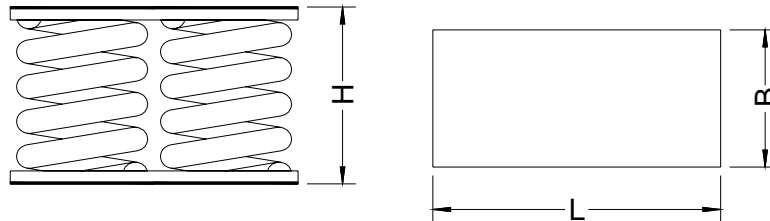


**Spring isolator FU .-26-N**
**Maximum load capacity: 405 kN**
**Natural frequency, minimum: 3.5 Hz**

**Technical data, Dimensions, Weight**

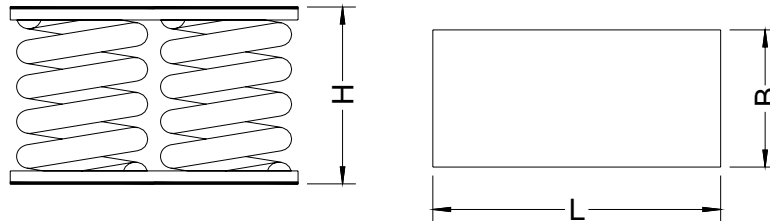
Type	Material-Number	Load Capacity		Spring Constant		Natural Frequency		Height			Dimensions		Weight [kg]
		from	to	vertical	horizontal	from	to	un-loaded	loaded	L	B		
		$F_{zul}$ [kN]		$C_v$ [N/mm]	$C_h$ [N/mm]	$f_0$ [Hz]		H [mm]			[mm]		
FU 1-26-N	H5610340	0	27	1381	1296	-	3.5	153	153	133	110	110	6.1
FU 2-26-N	H5610341	0	54	2762	2592						220	110	12.2
FU 3-26-N	H5610342	0	81	4143	3888						330	110	18.3
FU 4-26-N	H5610343	0	108	5524	5184						220	220	24.4
FU 4-26-NL	H5610344	0	108	5524	5184						440	110	24.3
FU 5-26-N	H5610345	0	135	6905	6480						330	220	32.8
FU 5-26-NL	H5610346	0	135	6905	6480						550	110	30.4
FU 6-26-N	H5610347	0	162	8286	7776						330	220	36.5
FU 7-26-N	H5610348	0	189	9667	9072						330	350	48.7
FU 7-26-NL	H5610349	0	189	9667	9072						440	220	45.0
FU 8-26-N	H5610350	0	216	11048	10368						330	350	52.4
FU 8-26-NL	H5610351	0	216	11048	10368						440	220	48.7
FU 9-26-N	H5610352	0	243	12429	11664						330	350	56.1
FU 9-26-NL	H5610353	0	243	12429	11664						550	220	57.2
FU 10-26-N	H5610354	0	270	13810	12960						440	350	67.4
FU 10-26-NL	H5610355	0	270	13810	12960	550	220	60.9					
FU 11-26-N	H5610356	0	297	15191	14256	440	350	71.1					
FU 12-26-N	H5610357	0	324	16572	15552	440	350	74.8					
FU 13-26-N	H5610358	0	351	17953	16848	550	350	86.1					
FU 14-26-N	H5610359	0	378	19334	18144	550	350	89.8					
FU 15-26-N	H5610360	0	405	20715	19440	550	350	93.5					

**Spring isolator FU .-26-W**
**Maximum load capacity: 405 kN**
**Natural frequency, minimum: 1.9 Hz**

**Technical data, Dimensions, Weight**

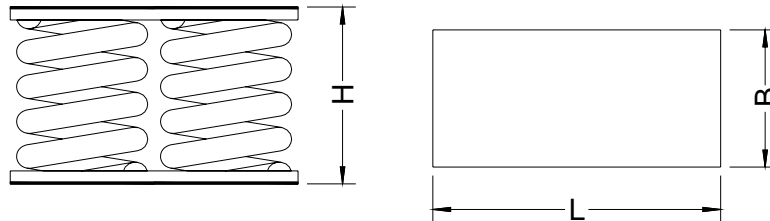
Type	Material-Number	Load Capacity		Spring Constant		Natural Frequency		Height			Dimensions		Weight [kg]
		from	to	vertical	horizontal	vertical		un-loaded	loaded	L	B		
		F <sub>zul</sub> [kN]		C <sub>v</sub> [N/mm]	C <sub>h</sub> [N/mm]	from	to	H [mm]			[mm]		
						f <sub>0</sub> [Hz]							
FU 1-26-W	H5610370	0	27	407	386	-	1.9	240	240	74	160	160	15.6
FU 2-26-W	H5610371	0	54	814	772						330	160	31.5
FU 3-26-W	H5610372	0	81	1221	1158						500	160	47.4
FU 4-26-W	H5610373	0	108	1628	1544						330	340	65.0
FU 4-26-WL	H5610374	0	108	1628	1544						670	160	63.3
FU 5-26-W	H5610375	0	135	2035	1930						500	340	87.3
FU 5-26-WL	H5610376	0	135	2035	1930						840	160	79.2
FU 6-26-W	H5610377	0	162	2442	2316						500	340	97.8
FU 7-26-W	H5610378	0	189	2849	2702						500	500	123.2
FU 7-26-WL	H5610379	0	189	2849	2702						670	340	120.1
FU 8-26-W	H5610380	0	216	3256	3088						500	500	133.8
FU 8-26-WL	H5610381	0	216	3256	3088						670	340	130.7
FU 9-26-W	H5610382	0	243	3663	3474						500	500	144.3
FU 9-26-WL	H5610383	0	243	3663	3474						840	340	153.0
FU 10-26-W	H5610384	0	270	4070	3860						670	500	171.7
FU 10-26-WL	H5610385	0	270	4070	3860	840	340	163.5					
FU 11-26-W	H5610386	0	297	4477	4246	670	500	182.2					
FU 12-26-W	H5610387	0	324	4884	4632	670	500	192.7					
FU 13-26-W	H5610388	0	351	5291	5018	840	500	220.1					
FU 14-26-W	H5610389	0	378	5698	5404	840	500	230.6					
FU 15-26-W	H5610390	0	405	6105	5790	840	500	241.2					

**Spring isolator FU .-40-H**
**Maximum load capacity: 630 kN**
**Natural frequency, minimum: 3.6 Hz**

**Technical data, Dimensions, Weight**

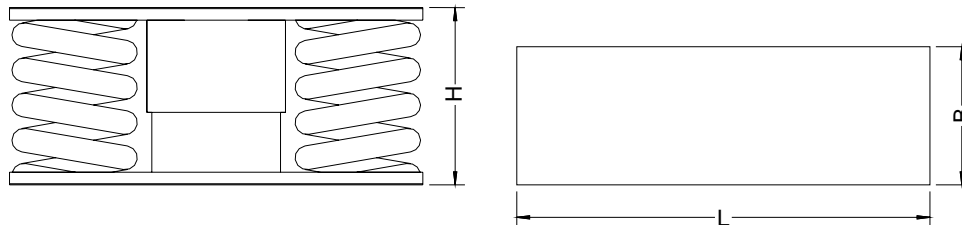
Type	Material-Number	Load Capacity		Spring Constant		Natural Frequency		Height			Dimensions		Weight [kg]
		from $F_{zul}$ [kN]	to	vertical $C_v$ [N/mm]	horizontal $C_h$ [N/mm]	vertical from [Hz]	to	un-loaded	loaded from H [mm]	to	L [mm]	B [mm]	
FU 1-40-H	H5610250	0	42	2224	2285	-	3.6	188	188	169	140	140	13.5
FU 2-40-H	H5610251	0	84	4448	4570						290	140	27.3
FU 3-40-H	H5610252	0	126	6672	6855						430	140	40.7
FU 4-40-H	H5610253	0	168	8896	9140						300	290	56.0
FU 4-40-HL	H5610254	0	168	8896	9140						580	140	54.5
FU 5-40-H	H5610255	0	210	11120	11425						430	300	74.9
FU 5-40-HL	H5610256	0	210	11120	11425						720	140	68.0
FU 6-40-H	H5610257	0	252	13344	13710						430	300	83.6
FU 7-40-H	H5610258	0	294	15568	15995						430	450	108.1
FU 7-40-HL	H5610259	0	294	15568	15995						580	300	103.3
FU 8-40-H	H5610260	0	336	17792	18280						430	450	116.7
FU 8-40-HL	H5610261	0	336	17792	18280						580	300	111.9
FU 9-40-H	H5610262	0	378	20016	20565						430	450	125.4
FU 9-40-HL	H5610263	0	378	20016	20565						720	300	130.9
FU 10-40-H	H5610264	0	420	22240	22850						580	450	150.6
FU 10-40-HL	H5610265	0	420	22240	22850	720	300	139.6					
FU 11-40-H	H5610266	0	462	24464	25135	580	450	159.3					
FU 12-40-H	H5610267	0	504	26688	27420	580	450	167.9					
FU 13-40-H	H5610268	0	546	28912	29705	720	450	192.1					
FU 14-40-H	H5610269	0	588	31136	31990	720	450	200.7					
FU 15-40-H	H5610270	0	630	33360	34275	720	450	209.4					

**Spring isolator FU .-40-M**
**Maximum load capacity: 630 kN**
**Natural frequency, minimum: 2.5 Hz**

**Technical data, Dimensions, Weight**

Type	Material-Number	Load Capacity		Spring Constant		Natural Frequency		Height			Dimensions		Weight [kg]
		from $F_{zul}$ [kN]	to	vertical $C_v$ [N/mm]	horizontal $C_h$	vertical from $f_o$ [Hz]	to	un-loaded	loaded from H	to	L [mm]	B [mm]	
FU 1-40-M	H5610280	0	42	1101	1120	-	2.5	232	232	194	170	180	20.8
FU 2-40-M	H5610281	0	84	2202	2240						340	180	41.6
FU 3-40-M	H5610282	0	126	3303	3360						520	180	62.9
FU 4-40-M	H5610283	0	168	4404	4480						340	340	81.6
FU 4-40-ML	H5610284	0	168	4404	4480						690	180	83.7
FU 5-40-M	H5610285	0	210	5505	5600						520	340	109.9
FU 5-40-ML	H5610286	0	210	5505	5600						870	180	105.0
FU 6-40-M	H5610287	0	252	6606	6720						520	340	123.3
FU 7-40-M	H5610288	0	294	7707	7840						520	550	163.2
FU 7-40-ML	H5610289	0	294	7707	7840						690	340	150.7
FU 8-40-M	H5610290	0	336	8808	8960						520	550	176.6
FU 8-40-ML	H5610291	0	336	8808	8960						690	340	164.1
FU 9-40-M	H5610292	0	378	9909	10080						520	550	190.0
FU 9-40-ML	H5610293	0	378	9909	10080						870	340	192.4
FU 10-40-M	H5610294	0	420	11010	11200						690	550	226.1
FU 10-40-ML	H5610295	0	420	11010	11200	870	340	205.8					
FU 11-40-M	H5610296	0	462	12111	12320	690	550	239.5					
FU 12-40-M	H5610297	0	504	13212	13440	690	550	252.9					
FU 13-40-M	H5610298	0	546	14313	14560	870	550	290.4					
FU 14-40-M	H5610299	0	588	15414	15680	870	550	303.8					
FU 15-40-M	H5610300	0	630	16515	16800	870	550	317.2					

**Spring isolator FU .-40-W**
**Maximum load capacity: 630 kN**
**Natural frequency, minimum: 1.8 Hz**

**Technical data, Dimensions, Weight**

Type	Material-Number	Load Capacity		Spring Constant		Natural Frequency		Height			Dimensions		Weight [kg]
		from $F_{zul}$ [kN]	to	vertical $C_v$ [N/mm]	horizontal $C_h$	vertical from [Hz]	to $f_o$	un-loaded	loaded from H	to	L [mm]	B [mm]	
FU 1-40-W	H5610310	0	42	552	546	-	1.8	293	293	217	200	200	29.7
FU 2-40-W	H5610311	0	84	1104	1092						410	200	59.9
FU 3-40-W	H5610312	0	126	1656	1638						620	200	90.1
FU 4-40-W	H5610313	0	168	2208	2184						450	410	124.8
FU 4-40-WL	H5610314	0	168	2208	2184						830	200	120.3
FU 5-40-W	H5610315	0	210	2760	2730						620	450	167.9
FU 5-40-WL	H5610316	0	210	2760	2730						1040	200	150.4
FU 6-40-W	H5610317	0	252	3312	3276						620	450	187.8
FU 7-40-W	H5610318	0	294	3864	3822						620	650	238.1
FU 7-40-WL	H5610319	0	294	3864	3822						830	450	230.8
FU 8-40-W	H5610320	0	336	4416	4368						620	650	258.0
FU 8-40-WL	H5610321	0	336	4416	4368						830	450	250.7
FU 9-40-W	H5610322	0	378	4968	4914						620	650	277.9
FU 9-40-WL	H5610323	0	378	4968	4914						1040	450	293.8
FU 10-40-W	H5610324	0	420	5520	5460						830	650	331.2
FU 10-40-WL	H5610325	0	420	5520	5460	1040	450	313.7					
FU 11-40-W	H5610326	0	462	6072	6006	830	650	351.1					
FU 12-40-W	H5610327	0	504	6624	6552	830	650	371.0					
FU 13-40-W	H5610328	0	546	7176	7098	1040	650	424.4					
FU 14-40-W	H5610329	0	588	7728	7644	1040	650	444.3					
FU 15-40-W	H5610330	0	630	8280	8190	1040	650	464.2					

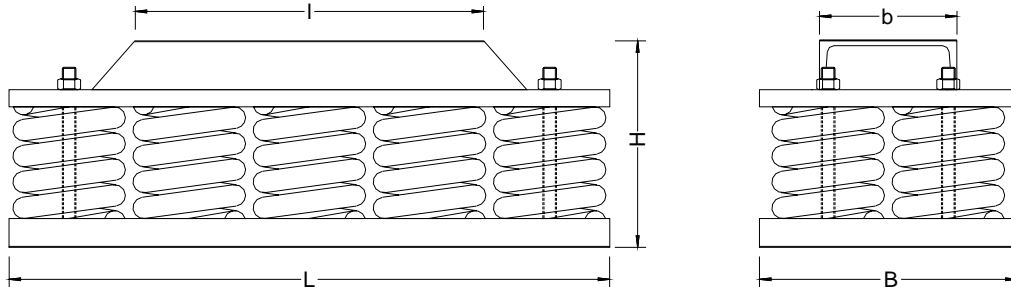
**Spring isolator FU .-Vi with Viscosity Damping**
**Maximum load capacity: 84 kN**

**Technical data, Dimensions, Weight**

Type	Material-Number	Load Capacity		Spring Constant		Damping Ratio		Natural-Frequency		Height			Dimen-sions		Weight
		from	to	vertical	hori-zontal	from	to	vertical	un-loaded	loaded	from	to	L	B	
		F <sub>zul</sub> [kN]		C <sub>v</sub> [N/mm]	C <sub>h</sub> [N/mm]	D [-]		f <sub>0</sub> [Hz]	H [mm]			[mm]		[kg]	
Combinable with Spring isolator FU 40:															
FU 2-40-H-Vi	H5611826	40	84	4448	4570	0.05	0.80	5.2	3.6	188	179	169	480	180	43.1
FU 2-40-M-Vi	H5611827	40	84	2202	2240	0.05	0.80	3.7	2.5	232	214	194	540	180	55.2
FU 2-40-W-Vi	H5611828	40	84	1104	1092	0.05	0.80	2.6	1.8	293	257	217	610	210	77.0
Combinable with Spring isolator FU 26:															
FU 2-26-N-Vi	H5612101	27	54	2762	2592	0.05	0.80	5.0	3.5	153	143	133	340	120	22.0
FU 2-26-W-Vi	H5612102	27	54	814	772	0.05	0.80	2.7	1.9	240	207	174	400	150	37.0

Other load capacities and dimensions on request.

Spring isolator FU .-26-Vo Prestressed

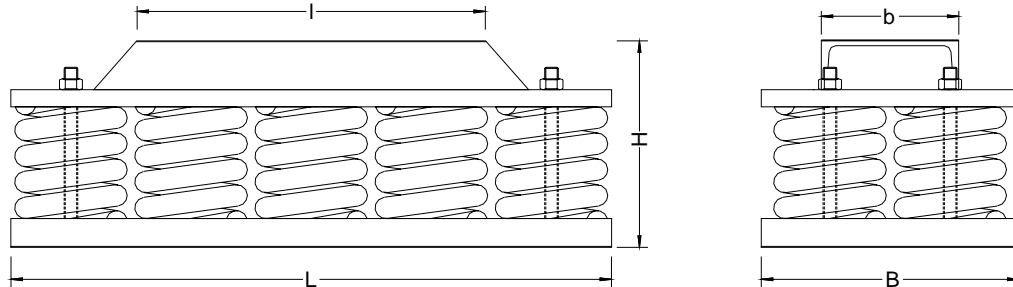
Maximum load capacity: 270 kN



Technical data, Dimensions, Weight

Type	Material-Number	Load Capacity		Spring Constant		Natural-Frequency		Height		Dimensions				Weight [kg]	
		from	to	vertical	horizontal	from	to	un-load	loaded	L	B	I	b		
		F <sub>zul</sub> [kN]		C <sub>v</sub>   C <sub>h</sub> [N/mm]		f <sub>o</sub> [-]		H [mm]		[mm]					
Natural frequency, minimum: 3.6 Hz:															
FU 1-26-N-Vo	H5612080	0	27	1381	1296	-	3.5	219	219	199	190	180	65	120	17
FU 2-26-N-Vo	H5612081	0	54	2762	2592			219	217	199	280	170	120	120	25
FU 4-26-N-Vo	H5612082	0	108	5524	5184			229	229	209	300	280	140	110	46
FU 6-26-N-Vo	H5612083	0	162	8286	7776			229	229	209	420	240	160	120	60
FU 8-26-NL-Vo	H5612084	0	216	11048	10368			239	239	219	610	220	270	160	88
FU 10-26-NL-Vo	H5612085	0	270	13810	12960			254	254	234	720	220	270	180	119
Natural frequency, minimum: 2.0 Hz:															
FU 1-26-W-Vo	H5612090	0	27	407	386	-	1.9	311	311	245	240	180	110	140	27
FU 2-26-W-Vo	H5612091	0	54	814	772			306	306	240	400	200	240	120	50
FU 4-26-W-Vo	H5612092	0	108	1628	1544			311	311	245	390	380	120	320	100
FU 6-26-W-Vo	H5612093	0	162	2442	2316			316	316	250	510	340	270	140	130
FU 8-26-WL-Vo	H5612094	0	216	3256	3088			346	346	280	680	340	440	240	188
FU 10-26-WL-Vo	H5612095	0	270	4070	3860			341	341	275	860	340	480	180	250

Other load capacities and dimensions on request.

**Spring isolator FU .-40-Vo Prestressed**
**Maximum load capacity: 420 kN**

**Technical data, Dimensions, Weight**

Type	Material-Number	Load Capacity		Spring Constant		Natural-Frequency		Height			Dimensions				Weight [kg]
		from	to	vertical	horizontal	from	to	un-loaded	loaded		L	B	l	b	
		$F_{zul}$ [kN]		$C_v$	$C_h$	$f_o$ [-]		H [mm]			[mm]				
Natural frequency, minimum: 3.6 Hz:															
FU 1-40-H-Vo	H5612050	0	42	2224	2285	-	3.6	248	248	229	210	200	90	120	25
FU 2-40-H-Vo	H5612051	0	84	4448	4570			263	263	244	350	200	150	140	47
FU 3-40-H-Vo	H5612052	0	126	6672	6855			278	278	259	500	220	230	180	85
FU 4-40-HL-Vo	H5612054	0	168	8896	9140			303	303	284	650	280	350	260	138
FU 4-40-H-Vo	H5612053	0	168	8896	9140			288	288	269	300	300	100	240	76
FU 6-40-H-Vo	H5612055	0	252	13344	13710			283	283	264	540	300	200	240	117
FU 8-40-HL-Vo	H5612056	0	336	17792	18280			283	283	264	700	300	350	180	174
FU 10-40-HL-Vo	H5612057	0	420	22240	22850			318	318	299	880	300	350	220	270
Natural frequency, minimum: 2.5 Hz:															
FU 1-40-M-Vo	H5612060	0	42	1101	1120	-	2.5	292	292	255	240	190	100	120	30
FU 2-40-M-Vo	H5612061	0	84	2202	2240			322	322	285	400	240	250	200	73
FU 3-40-M-Vo	H5612062	0	126	3303	3360			322	322	285	570	220	280	180	105
FU 4-40-ML-Vo	H5612064	0	168	4404	4480			337	337	300	750	280	440	220	170
FU 4-40-M-Vo	H5612063	0	168	4404	4480			322	322	285	350	350	110	200	108
FU 6-40-M-Vo	H5612065	0	252	6606	6720			317	317	280	550	350	160	180	165
FU 8-40-ML-Vo	H5612066	0	336	8808	8960			327	327	290	700	350	310	200	230
FU 10-40-ML-Vo	H5612067	0	420	11010	11200			372	372	335	900	350	415	260	372
Natural frequency, minimum: 1.8 Hz:															
FU 1-40-W-Vo	H5612070	0	42	552	546	-	1.8	358	358	282	280	240	130	140	47
FU 2-40-W-Vo	H5612071	0	84	1104	1092			373	373	297	480	220	290	140	90
FU 3-40-W-Vo	H5612072	0	126	1656	1638			398	398	322	700	260	350	200	170
FU 4-40-WL-Vo	H5612074	0	168	2208	2184			408	408	332	890	300	550	240	245
FU 4-40-W-Vo	H5612073	0	168	2208	2184			388	388	312	470	450	225	220	168
FU 6-40-W-Vo	H5612075	0	252	3312	3276			383	383	307	630	450	210	220	250
FU 8-40-WL-Vo	H5612076	0	336	4416	4368			393	393	317	840	450	410	220	350
FU 10-40-WL-Vo	H5612077	0	420	5520	5460			428	428	352	1050	450	610	240	551

Other load capacities and dimensions on request.

The data given in this product information correspond to the state-of-the-art and our know-how and is subject to alterations. Guarantees are only valid on individual contracts when executed by G+H Akoestiek b.v.