

DAMPERS

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Design

VIBRAGOM[®] dampers are composites made of rubber and metal. The metal parts cured onto the elastic rubber part are equipped with internal threads or stud bolts. This makes it easy to attach them to other structural components. The transfer of mechanical and/or acoustic vibrations is effectively prevented, because no metallic contact between the mounting hardware exists.

Use

- For permanent spring mounting of moving masses
- To isolate vibration generators from their surrounding
- To protect auxiliary equipment from irritating vibrations
- To accommodate temperature-induced changes in the shape of structural parts

Application

Basically, all work machines and prime movers that generate mechanical or acoustic vibrations should be spring mounted. This largely prevents the transfer of inertia forces or imbalances and/or structure-borne noise to the environment.

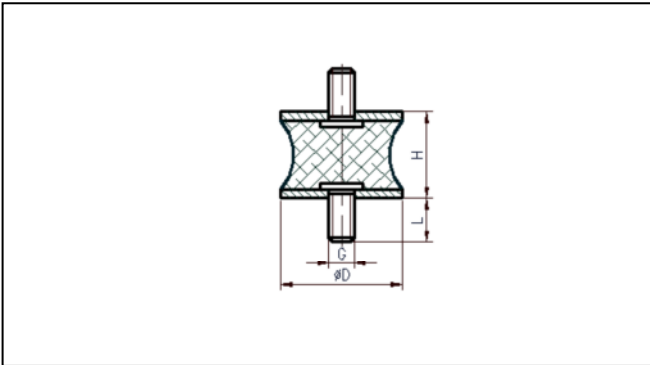
It is important to ensure that the structural design of spring mounted machine parts is not prone to bending or deformation. Feed lines and pipe connections to the elastically mounted auxiliary equipment must be flexible.

Types of loads

VIBRAGOM[®] dampers can be subjected to compressional, shear and torsional loads. Tensile loads must be avoided. To ensure a long service life, compressional loads should be given preference. To achieve large deflections (softer cushioning and lower natural frequency), springs can be placed one above the other and bolted together. Larger deflections can also be achieved by tilting the main direction of loading.

DAMPER LACED Type 1

Bolt/bolt



Order photo: VR 2018-1-145

Dimensions Damper laced, Type 1

Dimensions				Load Pressure		Load Shear		Article ID	Mat. Hardn.
D	H	G	L	daN	f mm	daN	f mm		
15	15	M5	10	3,6	1,5	1,2	2,5	VR 1987 -1	145
				5,2		1,6			155
				8,5		2,6			165
15	25	M5	10	3,8	3,5	0,9	5,5	VR 6127-1	145
				5,6		1,3			155
				8,4		2,1			165
25	20	M6	10	16,0	2,0	3,6	2,5	VR 1697-1	145
				21,0		4,6			155
				35,0		8,5			165
25	35	M6	20	10,0	4,5	2,2	7,0	VR 2018-1	145
				14,5		3,3			155
				22,0		5,0			165
30	20	M8	20	30,0	2,0	6,5	2,5	VR 1786-1	145
				40,0		8,5			155
				60,0		13,5			165
30	25	M8	20	30,0	3,0	9,5	5,0	VR 1884-1	145
				43,0		13,0			155
				65,0		20,0			165
30	30	M8	20	17,0	3,5	5,1	6,0	VR 6896-1	145
				25,0		7,4			155
				40,0		12,3			165
30	41	M8	20	14,5	5,0	3,6	8,0	VR 6037-1	145
				21,0		5,5			155
				34,0		9,0			165
35	20	M8	20	51,0	2,5	10,0	3,0	VR 6900-1	145
				75,0		15,0			155
				125,0		22,0			165
40	25	M10	20	46,0	2,5	15,5	5,0	VR 1675-1	145
				67,0		22,5			155
				110,0		37,0			165
40	50	M10	25	35,0	7,0	9,0	11,0	VR 2260-1	145
				50,0		13,0			155
				82,0		20,0			165

Technical specifications are subject to errata and mistakes. Changes to product designs remain reserved.

Dimensions

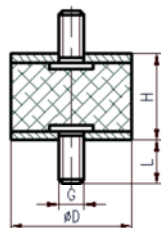
Damper laced, Type 1

Dimensions				Load Pressure		Load Shear		Article ID	Mat. Hardn.
D	H	G	L	daN	f mm	daN	f mm		
69	52	M12	40	85,0		22,0		VR 109a-1	145
				120,0	6,0	32,0	9,0		155
				198,0		54,0			165
70	55	M10	25	98,0		25,0		VR 109-1	145
				140,0	7,0	35,0	10,0		155
				231,0		60,0			165
70	50	M10	25	147,0		40,0		VR 1912-1	145
				205,0	7,0	58,0	11,0		155
				325,0		90,0			165
85	60	M12	37	290,0		65,0		VR 6021-1	145
				380,0	10,0	88,0	15,0		155
				600,0		140,0			165

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DAMPER CYLINDRICAL Type 1

Bolt/bolt



Order photo: VR 1421-1-165

Dimensions

DAMPER cylindrical, Type 1

Dimensions				Load Pressure		Load Shear		Article ID	Mat. Hardn.
D	H	G	L	daN	f mm	daN	f mm		
10	16	M4	8	3,0		0,9		VR 6268-1	145
				4,6	2,0	1,5	4,0		155
				7,2		2,4			165
13	12	M6	10	6,0		1,6		VR 1421-1	145
				9,5	1,5	2,5	2,0		155
				15,0		3,7			165
15	7	M4	8	18,0		3,0		VR 6190-1	145
				25,0	1,0	4,5	1,5		155
				40,0		7,5			165
15	10	M5	10	8,0		1,9		VR 2082-1	145
				12,0	1,5	2,8	2,0		155
				20,0		4,8			165
15	15	M4	12	6,0		1,4		VR 1874-1	145
				8,5	1,5	2,0	2,0		155
				14,0		3,5			165
20	10	M6	20	24,0		6,2		VR 6048-1	145
				35,0	1,0	9,5	2,0		155
				57,0		16,0			165
20	15	M6	20	13,0		4,0		VR 2094-1	145
				20,0	1,5	5,8	2,5		155
				32,0		9,7			165
20	25	M6	20	12,0		3,3		VR 2056-1	145
				17,0	3,0	4,8	5,0		155
				28,0		8,0			165
25	10	M6	20	48,0		11,0		VR 1951-1	145
				70,0	1,0	16,0	2,5		155
				114,0		26,0			165
25	15	M6	20	23,0		6,0		VR 1952-1	145
				33,0	1,5	8,5	1,0		155
				55,0		14,0			165
25	20	M6	20	22,0		6,5		VR 1953-1	145
				33,0	2,5	9,5	4,0		155
				54,0		16,0			165

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Dimensions DAMPER cylindrical, Type 1

Dimensions				Load Pressure		Load Shear		Article ID	Mat. Hardn.
D	H	G	L	daN	f mm	daN	f mm		
25	25	M6	20	16,5	3,0	5,0	5,0	VR 1954-1	145
				24,0		7,0			155
				40,0		12,0			165
25	30	M6	20	16,0	4,0	4,0	6,0	VR 1955-1	145
				24,0		6,0			155
				40,0		10,0			165
30	15	M8	12	40,0	1,5	10,0	14,0	VR 6189-1	145
				58,0		2,5			155
				95,0		22,0			165
30	20	M8	25	30,0	2,0	7,5	11,0	VR 2096-1	145
				43,0		3,0			155
				70,0		19,0			165
30	30	M8	25	27,0	3,5	6,0	9,0	VR 2095-1	145
				39,0		4,5			155
				64,0		15,0			165
40	30	M8	25	62,0	4,0	18,0	26,0	VR 1875-1	145
				90,0		6,5			155
				148,0		43,0			165
40	35	M10	25	43,0	4,0	12,7	18,7	VR 6182-1	145
				62,0		6,5			155
				101,0		31,2			165
40	40	M8	25	50,0	5,0	14,5	20,0	VR 6300-1	145
				70,0		8,0			155
				115,0		34,0			165
50	20	M10	30	125,0	2,0	31,0	48,0	VR 1876-1	145
				185,0		4,0			155
				300,0		75,0			165
50	30	M10	35	110,0	4,0	27,0	40,0	VR 1877-1	145
				160,0		6,0			155
				262,0		66,0			165
50	40	M10	35	110,0	6,0	28,0	42,0	VR 2019-1	145
				160,0		9,0			155
				262,0		70,0			165
50	45	M10	35	80,0	6,0	24,0	35,0	VR 1835-1	145
				115,0		10,0			155
				188,0		58,0			165
60	43	M12	35	145,0	6,0	38,0	50,0	VR 1310-1	145
				195,0		9,0			155
				310,0		84,0			165
70	45	M10	35	220,0	6,0	65,0	90,0	VR 2020-1	145
				310,0		10,0			155
				500,0		140,0			165
75	40	M12	37	230,0	5,0	58,0	85,0	VR 2021-1	145
				310,0		8,0			155
				490,0		142,0			165

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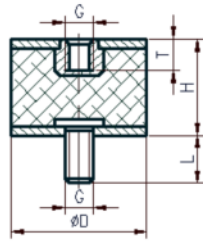
Dimensions DAMPER cylindrical, Type 1

Dimensions				Load Pressure		Load Shear		Article ID	Mat. Hardn.
D	H	G	L	daN	f mm	daN	f mm		
75	50	M12	37	184,0		53,0		VR 2022-1	145
				270,0	7,0	78,0	11,0		155
				440,0		130,0			165
100	55	M16	40	455,0		115,0		VR 2081-1	145
				670,0	8,0	170,0	12,0		155
				1120,0		270,0			165
100	60	M16	40	336,0		96,0		VR 6444-1	145
				508,0	7,0	145,0	11,0		155
				760,0		217,0			165
100	75	M16	40	480,0		112,0		VR 6227-1	145
				600,0	12,0	144,0	16,0		155
				852,0		205,0			165
120	60	M16	40	462,0		115,0		VR 6246-1	145
				630,0	7,0	140,0	11,0		155
				980,0		230,0			165

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DAMPER CYLINDRICAL Type 2

Bolt/nut



Order photo: VR 1874-2-155

Dimensions

DAMPER cylindrical, Type 2

Dimensions		G	L	T	Load Pressure		Load Shear		Article ID	Mat. Hardn.
D	H				daN	f mm	daN	f mm		
10	16	M4	8	4	2,7		0,6		VR 6268 -2	145
					4,2	1,5	1,0	2,0		155
					6,6		1,6			165
15	15	M4	12	4	6,0		2,3		VR 1874-2	145
					9,0	1,0	4,0	2,0		155
					15,0		6,0			165
20	25	M6	20	6	13,0		4,0		VR 2056-2	145
					19,0	3,0	5,8			155
					31,0		9,7			165
25	15	M6	20	6	30,0		8,5		VR 1952-2	145
					42,0	1,0	12,0	2,0		155
					70,0		20,0			165
25	20	M6	20	6	24,0		7,0		VR 1953-2	145
					34,0	2,0	10,0	3,0		155
					56,0		17,0			165
25	25	M6	20	6	16,0		5,0		VR 1954-2	145
					23,0	2,5	7,0	2,0		155
					38,0		12,0			165
25	30	M6	20	6	19,0		5,0		VR 1955-2	145
					28,0	4,0	7,5	6,0		155
					46,0		12,0			165
30	20	M8	25	8	20,0		7,5		VR 2096-2	145
					30,0	1,0	11,0	2,0		155
					50,0		19,0			165
30	30	M8	25	8	18,0		5,0		VR 2095-2	145
					26,0	2,5	7,5	3,5		155
					44,0		12,0			165
40	30	M8	25	8	48,0		18,0		VR 1875-2	145
					70,0	3,0	27,0	6,0		155
					115,0		45,0			165
40	35	M10	25	10	38,0		15,0		VR 6182-2	145
					55,0	3,0	22,0	6,0		155
					90,0		36,0			165
40	40	M8	25	8	42,0		14,5		VR 6300-2	145
					60,0	4,0	20,0	3,0		155
					98,0		32,0			165

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Dimensions DAMPER cylindrical Type 2

Dimensions		G	L	T	Load Pressure		Load Shear		Article ID	Mat. Hardn.
D	H				daN	f mm	daN	f mm		
10	16	M4	8	4	2,7		0,64		VR 6268-2	145
					4,2	1,5	1,0	2,0		155
					6,6		1,6			165
15	15	M4	12	4	6,0		2,30		VR 1874-2	145
					9,0	1,0	4,0	2,0		155
					15,0		6,0			165
20	25	M6	20	6	13,0		4,00		VR 2056-2	145
					19,0	3,0	5,8	5,0		155
					31,0		9,7			165
25	15	M6	20	6	30,0		8,50		VR 1952-2	145
					42,0	1,0	12,0	2,0		155
					70,0		20,0			165
25	20	M6	20	6	24,0		7,00		VR 1953-2	145
					34,0	2,0	10,0	3,0		155
					56,0		17,0			165
25	25	M6	20	6	16,0		5,00		VR 1954-2	145
					23,0	2,5	7,0	2,0		155
					38,0		12,0			165
25	30	M6	20	6	19,0		5,00		VR 1955-2	145
					28,0	4,0	7,5	6,0		155
					46,0		12,0			165
30	20	M8	25	8	20,0		7,50		VR 2096-2	145
					30,0	1,0	11,0	2,0		155
					50,0		19,0			165
30	30	M8	25	8	18,0		5,00		VR 2095-2	145
					26,0	2,5	7,5	3,5		155
					44,0		12,0			165
40	30	M8	25	8	48,0		18,00		VR 1875-2	145
					70,0	3,0	27,0	6,0		155
					115,0		45,0			165
40	35	M10	25	10	38,0		15,00		VR 6182-2	145
					55,0	3,0	22,0	6,0		155
					90,0		36,0			165
40	40	M8	25	8	42,0		14,50		VR 6300-2	145
					60,0	4,0	20,0	3,0		155
					98,0		32,0			165
50	30	M10	35	10	100,0		26,00		VR 1877-2	145
					145,0	3,0	40,0	5,0		155
					220,0		66,0			165
50	40	M10	35	10	97,0		28,00		VR 2019-2	145
					140,0	5,0	42,0	8,0		155
					230,0		70,0			165

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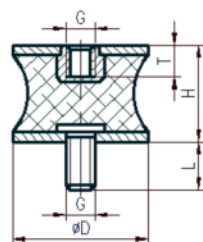
Dimensions DAMPER bevelled Type 2 Bolt

Dimensions					Load Pressure		Load Shear		Article ID	Mat. Hardn.
D	H	G	L	T	daN	f mm	daN	f mm		
50	45	M10	35	10	86,0		27,0		VR 1835-2	145
					125,0	6,0	40,0	10,0		155
					205,0		67,0			165
60	43	M12	35	12	125,0		37,0		VR 1310-2	145
					170,0	5,0	50,0	8,0		155
					280,0		82,0			165
70	45	M10	35	10	180,0		68,0		VR 2020-2	145
					260,0	5,0	100,0	10,0		155
					426,0		167,0			165
75	40	M12	37	12	210,0		70,0		VR 2021-2	145
					260,0	4,0	80,0	7,0		155
					400,0		130,0			165
75	50	M12	37	12	160,0		50,0		VR 2022-2	145
					235,0	6,0	74,0	10,0		155
					385,0		123,0			165
100	55	M16	40	16	353,0		98,0		VR 2081-2	145
					512,0	6,0	145,0	10,0		155
					855,0		250,0			165
100	60	M16	40	16	240,0		74,0		VR 6444-2	145
					362,0	5,0	113,0	8,0		155
					550,0		168,0			165
100	75	M16	40	16	304,0		102,0		VR 6227-2	145
					400,0	8,0	132,0	14,0		155
					568,0		190,0			165
120	60	M16	40	16	330,0		92,0		VR 6246-2	145
					450,0	5,0	122,0	8,0		155
					700,0		190,0			165

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DAMPER LACED Type 2

Bolt/nut



Order photo: VR 2018-2-145

Dimensions Damper laced, Type 2

Dimension					Load Pressure		Load Shear		Article ID	Mat. Hardn.
D	H	G	L	T	daN	f mm	daN	f mm		
15	15	M5	10	5	4,5		2,3		VR 1987-2	145
					6,0	1,0	3,2	2,5		155
					9,5		5,0			165
15	25	M5	10	5	3,4		0,8		VR 6127-2	145
					4,5	2,5	1,2	4,0		155
					6,8		2,0			165
25	20	M6	10	6	21,0		4,7		VR 1697-2	145
					27,0	2,0	6,2	2,5		155
					46,0		11,0			165
25	35	M6	20	6	10,0		2,4		VR 2018-2	145
					14,0	4,0	3,6	6,5		155
					21,0		5,3			165
30	20	M8	20	8	70,0		11,0		VR 1786-2	145
					88,0	2,0	14,0	2,5		155
					130,0		22,0			165
30	25	M8	20	8	27,0		10,0		VR 1884-2	145
					35,0	2,0	14,0	4,0		155
					54,0		21,0			165
30	30	M8	20	8	14,5		4,4		VR 6896-2	145
					21,0	2,5	6,4	4,0		155
					34,0		10,6			165
30	41	M8	20	8	12,5		3,6		VR 6037-2	145
					18,0	4,0	5,4	7,0		155
					30,0		9,0			165
40	25	M10	20	10	43,0		19,0		VR 1675-2	145
					63,0	1,5	28,0	4,0		155
					103,0		46,0			165
40	50	M10	25	10	26,0		7,5		VR 2260-2	145
					38,0	5,0	11,0	8,0		155
					62,0		17,0			165

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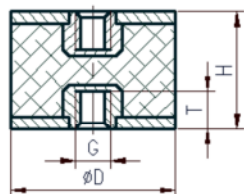
Dimensions Damper laced, Type 2

Dimensions					Load Pressure		Load Shear		Article ID	Mat. Hardn.
D	H	G	L	T	daN	f mm	daN	f mm		
69	52	M12	40	12	70,0		21,0		VR 109a-2	145
					100,0	5,0	30,0	8,0		155
					165,0		50,0			165
70	55	M10	25	10	86,0		26,0		VR 109-2	145
					126,0	6,0	38,0	10,0		155
					200,0		63,0			165
70	50	M10	25	10	130,0		36,5		VR 1912-2	145
					178,0	6,0	54,0	10,0		155
					280,0		90,0			165
85	60	M12	37	12	210,0		55,0		VR 6021-2	145
					290,0	8,0	72,0	12,0		155
					455,0		180,0			165

Technical specifications are subject to errata and mistakes. Changes to product designs remain reserved.

DAMPER CYLINDRICAL Type 3

Nut/nut



Order photo: VR 6268-3-145

Dimensions

DAMPER cylindrical, Type 3

Dimensions				Load Pressure		Load Shear		Article ID	Mat. Hardn.
D	H	G	T	daN	f mm	daN	f mm		
10	16	M4	4	2,5		1,0		VR 6268-3	145
				3,7	1,0	1,5	2,0		155
				5,8		2,4			165
20	25	M6	6	12,5		4,0		VR 2056-3	145
				18,0	2,5	6,3	4,0		155
				30,0		10,2			165
25	25	M6	6	17,0		5,0		VR 1954-3	145
				25,0	2,0	7,5	3,0		155
				40,0		12,5			165
25	30	M6	6	16,0		5,0		VR 1955-3	145
				23,0	3,0	7,5	5,0		155
				36,0		12,0			165
30	30	M8	8	16,0		5,5		VR 2095-3	145
				23,0	1,5	8,0	2,5		155
				38,0		13,0			165
40	30	M8	8	52,0		19,0		VR 1875-3	145
				75,0	2,5	28,0	5,0		155
				123,0		47,0			165
40	35	M10	10	36,0		17,0		VR 6182-3	145
				52,0	2,0	26,0	5,0		155
				85,0		44,0			165
40	40	M8	8	33,0		14,5		VR 6300-3	145
				48,0	3,0	20,0	6,0		155
				75,0		30,0			165
50	30	M10	10	82,0		28,0		VR 1877-3	145
				120,0	1,5	42,0	4,0		155
				190,0		66,0			165
50	40	M10	10	80,0		28,0		VR 2019-3	145
				130,0	4,0	44,0	7,0		155
				210,0		73,0			165
50	45	M10	10	65,0		28,0		VR 1835-3	145
				88,0	4,0	37,0	8,0		155
				135,0		58,0			165
60	43	M12	12	115,0		69,0		VR 1310-3	145
				160,0	4,0	50,0	7,0		155
				290,0		97,0			165

Technical specifications are subject to errata and mistakes. Changes to product designs remain reserved.



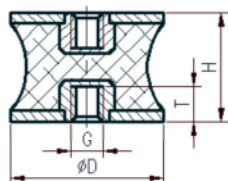
Dimensions DAMPER cylindrical, Type 3

Dimensions				Load Pressure		Load Shear		Article ID	Mat. Hardn.
D	H	G	T	daN	f mm	daN	f mm		
70	45	M10	10	155,0		60,0		VR 2020-3	145
				220,0	4,0	85,0	8,0		155
				350,0		140,0			165
75	40	M12	12	140,0		65,0		VR 2021-3	145
				200,0	2,5	90,0	6,0		155
				270,0		125,0			165
75	50	M12	12	170,0		44,0		VR 2022-3	145
				220,0	5,0	74,0	8,0		155
				320,0		110,0			165
100	55	M16	16	241,0		88,0		VR 2081-3	145
				350,0	4,0	130,0	8,0		155
				600,0		210,0			165
100	60	M16	16	192,0		63,0		VR 6444-3	145
				290,0	4,0	99,0	6,5		155
				440,0		142,0			165
100	75	M16	16	228,0		95,0		VR 6227-3	145
				300,0	6,0	122,0	12,0		155
				426,0		172,0			165
120	60	M16	16	260,0		78,0		VR 6246-3	145
				360,0	4,0	105,0	6,5		155
				560,0		170,0			165

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DAMPER LACED Type 3

Nut/nut



Order photo: VR 2018-3-145

Dimensions Damper laced, Type 3

Dimensions				Load Pressure		Load Shear		Article ID	Mat. Hardn.
D	H	G	T	daN	f mm	daN	f mm		
15	25	M5	5	2,3	1,5	0,7	2,5	VR 6127-3	145
				3,2		1			155
				4,8		1,6			165
25	35	M6	6	8	3	2,2	5	VR 2018-3	145
				12		3,2			155
				18		4,7			165
30	25	M8	8	45	1	14	2,5	VR 1884-3	145
				60		17			155
				70		25			165
30	30	M8	8	12	1,5	3,8	2,5	VR 6896-3	145
				17		5,5			155
				27		9,2			165
30	41	M8	8	11	3	3,7	6	VR 6037-3	145
				15,5		5,5			155
				25		9			165
40	50	M10	10	22,5	4	7,5	7	VR 2260-3	145
				33		10,5			155
				54		17,5			165
69	52	M12	12	50	3	14,5	5	VR 109a-3	145
				72		21			155
				118		35			165
70	55	M10	10	72,5	5	22,5	8	VR 109-3	145
				107		32			155
				170		52			165
70	50	M10	10	110	5	32	8	VR 1912-3	145
				152		47			155
				250		78			165
85	60	M12	12	190	7	48	10	VR 6021-3	145
				255		67			155
				400		100			165

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