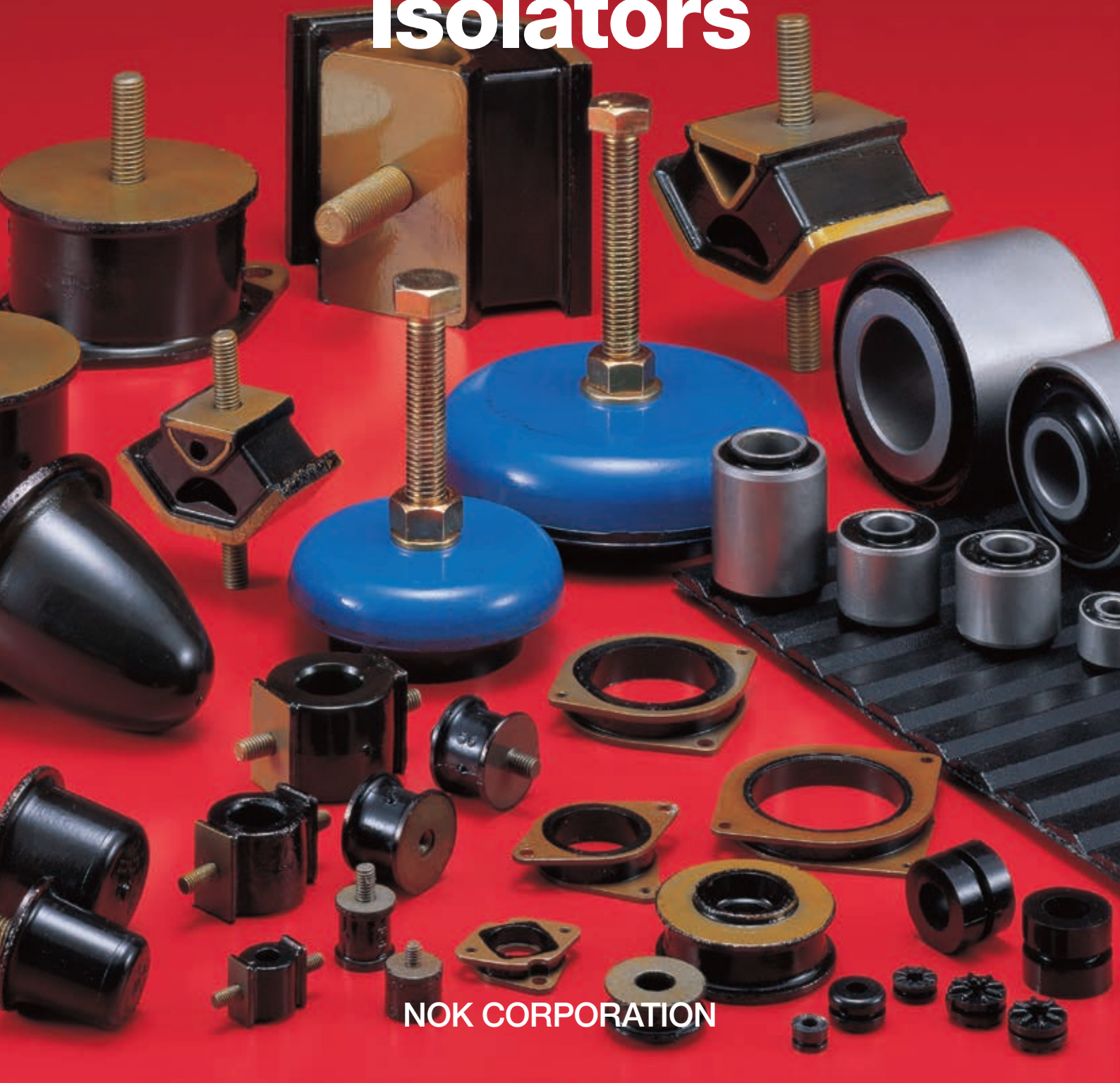
Cat. No. 519E・10-2024

Rubber Vibration Isolators



NOK CORPORATION

[Contents]

1. S Type Mount (for General Use)

◆NOK Part Number Description

NOK Part No.

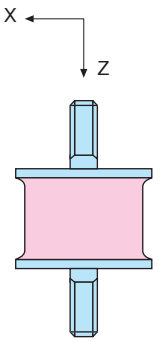
RS1 025 A5

- RS1 — Type
- 025 — Nominal number
- A5 — Rubber Specification (Hardness, Material)

Features

●Small mounting space

The high static stiffness ratein the compression direction (Z direction) allows smaller size mounts to support heavy equipment.



●Wide variations

There are many size variations, and two types of rubber hardness are available for each type.

●Versatility

It is compact and can be used as various anti-vibration mounts as shown in the following figure.

Examples of use

●For Engine-driven vehicles, construction equipment, generators

Engine mounts, auxiliary equipment mounts, cabins, seat mounts

●For Commercial air conditioners, railway vehicles

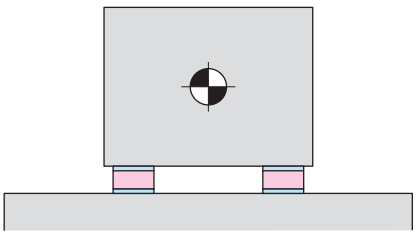
Various large to small compressors, vacuum pump mounts

●For Medical Devices

Analytical liquid feed pump Mount, etc.

For compression support

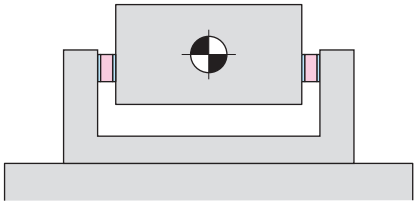
Place the mount under the supporting object



●With this mount system, there will be a good vibration isolation effect in the longitudinal and lateral directions.

For shear support

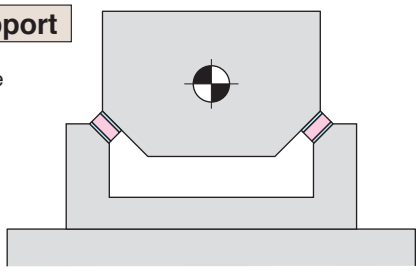
Place the mount on the side of the supporting object



●With this mount system, there will be a good vibration isolation effect in the vertical and longitudinal directions.

For inclined support

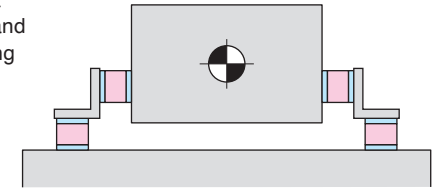
Place the mount with the elastic center of the mount aligned with the center of gravity of the support object.



●With this mount system, there will be a good vibration isolation effect in the rotation and longitudinal directions.

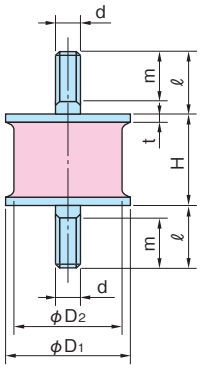
For composite support

Place the mount with a combination of shear and compression supporting object

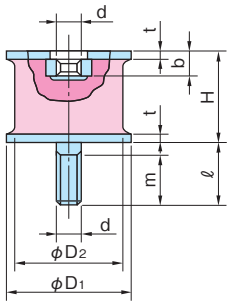


●With this mount system, there will be a good vibration isolation effect in any direction.

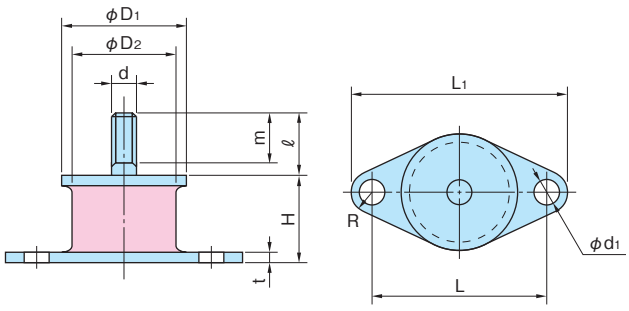
S Type Mount



Type A



Type B



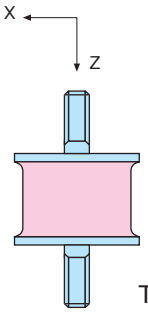
Type D

◆Dimension Table, See the symbol in the figure above

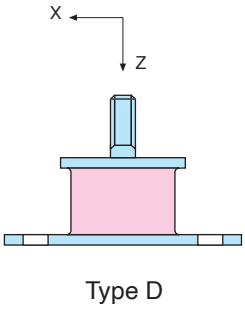
Part No.			Dimension (mm)											
Type A	Type B	Type D	D_1	D_2	H	t	d	m	ℓ	b	L	d_1	R	L_1
RS1001	**RS2001**	—	8	8	9	1	M3	2	3	3.5	—	—	—	—
RS1000	**RS2000**	—	10	9				5	6		—	—	—	—
—	**RS2002**	—		10				2	3		—	—	—	—
—	**RS2003**	—	14	14	11.2		M4	4	5		—	—	—	—
RS1005	**RS2005**	—	15	13	15	2	M5	13	15	4.5	—	—	—	—
RS1010	**RS2010**	—			24						—	—	—	—
—	**RS2011**	—		15	15						—	—	—	—
RS1012	—	—	18	18				11	12	—	—	—	—	—
RS1015	**RS2015**	**RS5015**	20	16	16	1.6	M6	12	15	5.8	36	7	6.5	(49)
RS1020	**RS2020**	—			21						—	—	—	—
—	**RS2021**	—		20	15						—	—	—	—
RS1025	**RS2025**	**RS5025**	25		18						42	7	7	(56)
RS1030	**RS2030**	—			30			16	18.5		—	—	—	—
—	**RS2031**	—		25	20			12	15		—	—	—	—
RS1035	**RS2035**	**★RS5035**	30		18	2.3	M8	20/★15	23/★17.7	7.4	48	7	7	(62)
RS1040	**RS2040**	—			20						—	—	—	—
RS1045	**RS2045**	—			26						—	—	—	—
RS1050	**RS2050**	**★RS5050**	35	30							53	7	7	(67)
RS1055	**RS2055**	—			36						—	—	—	—
RS1060	**RS2060**	**★RS5060**	40	34	25			24/★15	27.5/★17.7		60	9	9	(78)
RS1065	**RS2065**	—		35	33						—	—	—	—
RS1070	**RS2070**	—			40						—	—	—	—
RS1075	**RS2075**	—	45	40	45	3.2					—	—	—	—
RS1080	**RS2080**	**RS5080**	50	42	30		M10	24		10	73	9	10	(93)
RS1085	**RS2085**	—			41						—	—	—	—
RS1090	**RS2090**	**RS5090**	55	47	40						78	9	10	(98)
RS1095	**RS2095**	—	60	52	45						—	—	—	—
RS1100	**RS2100**	**RS5110**	65	57	34		M12	33	37	10.5	92	11.5	12	(116)
RS1105	**RS2105**	—			50						—	—	—	—
RS1110	**RS2110**	—	75	67	40						—	—	—	—
RS1115	**RS2115**	**RS5115**			42						102	11.5	12	(126)
RS1120	**RS2120**	—			55						—	—	—	—
RS1125	**RS2125**	—	80	72	47	4					—	—	—	—
RS1130	**RS2130**	**RS5130**	90	80	50						117	11.5	12	(141)
RS1135	**RS2135**	—	100	90	40		M16	42	46	15.8	—	—	—	—
RS1140	**RS2140**	—			55						—	—	—	—

Note) Bolt strength is 4.6 (JIS B 1051).

Regarding to Screw of **RS5035, RS5050, RS5060**: Dimension m and R are ★ dimensions in the table.



Type A



Type D

◆Characteristic Table 1 (Type A) See the symbol in the figure above

Numbers are in SI units. (9.8N ≈ 1kgf)

Part No. Type A		X Direction K (N/mm)	X Direction P (N)	X Direction P_{max} (N)	Z Direction K (N/mm)	Z Direction P (N)	Z Direction P_{max} (N)
RS1001	A2	3.9	2.9	5.9	20	18	36
	A5	6.9	4.9	9.8	38	33	67
RS1000	A2	4.9	3.9	6.9	28	25	50
	A5	8.8	5.9	13	50	45	89
RS1005	A2	7.8	5.9	12	48	44	89
	A5	14	9.8	21	86	80	160
RS1010	A2	4.9	7.8	16	23	46	93
	A5	7.8	13	25	35	70	140
RS1012	A2	13	14	28	70	95	190
	A5	25	27	54	130	175	350
RS1015	A2	13	9.8	20	80	78	155
	A5	23	18	35	125	120	240
RS1020	A2	8.8	12	25	40	68	135
	A5	16	22	43	65	110	220
RS1025	A2	14	15	29	80	110	220
	A5	24	25	51	145	195	390
RS1030	A2	6.9	16	31	36	100	200
	A5	13	29	58	65	185	370
RS1035	A2	25	21	41	185	195	390
	A5	44	37	74	335	350	700
RS1040	A2	21	22	43	140	180	360
	A5	37	39	77	255	330	660
RS1045	A2	14	23	45	80	165	330
	A5	25	42	83	150	300	600
RS1050	A2	20	32	65	120	240	480
	A5	35	58	120	215	440	880
RS1055	A2	13	33	68	70	230	460
	A5	24	62	120	130	420	840
RS1060	A2	25	39	78	165	320	640
	A5	47	73	150	305	585	1170
RS1065	A2	20	46	92	110	330	660
	A5	35	83	160	200	585	1170

Part No. Type A		X Direction K (N/mm)	X Direction P (N)	X Direction P_{max} (N)	Z Direction K (N/mm)	Z Direction P (N)	Z Direction P_{max} (N)
RS1070	A2	16	48	95	85	315	630
	A5	27	83	170	150	575	1150
RS1075	A2	18	59	120	100	410	820
	A5	32	110	220	180	760	1520
RS1080	A2	34	57	110	235	485	970
	A5	63	100	210	420	875	1750
RS1085	A2	23	62	120	130	455	910
	A5	41	110	230	240	825	1650
RS1090	A2	29	78	160	175	585	1170
	A5	53	140	280	320	1055	2110
RS1095	A2	30	96	190	180	715	1430
	A5	56	180	350	330	1295	2590
RS1100	A2	54	100	200	390	910	1820
	A5	97	180	360	710	1650	3300
RS1105	A2	33	120	230	195	845	1690
	A5	60	210	410	350	1525	3050
RS1110	A2	59	150	290	410	1265	2530
	A5	110	270	530	755	2320	4640
RS1115	A2	56	150	300	380	1255	2510
	A5	100	270	550	685	2280	4560
RS1120	A2	40	160	320	240	1185	2370
	A5	74	290	580	435	2160	4320
RS1125	A2	58	170	350	390	1450	2900
	A5	110	320	650	705	2645	5290
RS1130	A2	66	220	430	445	1840	3680
	A5	120	390	780	815	3355	6710
RS1135	A2	110	130	260	965	1445	2890
	A5	200	240	470	1765	2645	5290
RS1140	A2	74	200	400	500	1685	3370
	A5	130	360	710	910	3060	6120

◆Characteristic Table 2 (Type D) See the symbol in the figure above

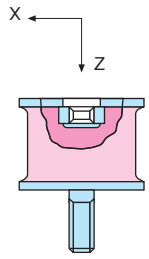
Part No. Type D		X Direction K (N/mm)	X Direction P (N)	X Direction P_{max} (N)	Z Direction K (N/mm)	Z Direction P (N)	Z Direction P_{max} (N)
RS5015	A2	13	9.8	20	80	95	190
	A5	23	18	35	145	180	360
RS5025	A2	14	15	29	80	130	260
	A5	24	25	51	145	235	470
RS5035	A2	25	21	41	210	285	570
	A5	44	37	74	335	450	900
RS5050	A2	20	32	65	120	275	550
	A5	35	58	120	215	505	1010
RS5060	A2	25	39	78	165	370	740
	A5	47	73	150	305	680	1360

Part No. Type D		X Direction K (N/mm)	X Direction P (N)	X Direction P_{max} (N)	Z Direction K (N/mm)	Z Direction P (N)	Z Direction P_{max} (N)
RS5080	A2	34	57	110	235	590	1180
	A5	63	100	210	420	1055	2110
RS5090	A2	29	78	160	175	585	1170
	A5	53	140	280	320	1055	2110
RS5110	A2	54	100	200	390	1130	2260
	A5	97	180	360	705	2035	4070
RS5115	A2	56	150	300	380	1465	2930
	A5	100	270	550	685	2665	5330
RS5130	A2	66	220	430	445	2090	4180
	A5	120	390	780	815	3815	7630

A2: Hs=45, A5: Hs=60

K: Static stiffness rate, P: Allowable support load, P_{max}: Maximum input load

S Type Mount



Type B

◆Characteristic Table 3 (Type B) See the symbol in the figure above

Numbers are in SI units. (9.8N ≈ 1kgf)

Part No. Type B		X Direction K (N/mm)	X Direction P (N)	X Direction P_{max} (N)	Z Direction K (N/mm)	Z Direction P (N)	Z Direction P_{max} (N)
RS2001	A2	9.8	2.9	5.9	49	20	40
	A5	15	4.9	9.8	88	36	73
RS2000	A2	12	3.9	7.8	55	22	44
	A5	19	5.9	12	108	44	89
RS2002	A2	15	4.9	9.8	65	26	53
	A5	23	7.8	15	135	55	110
RS2003	A2	26	9.8	20	85	39	79
	A5	40	15	29	205	95	190
RS2005	A2	18	7.8	17	75	43	86
	A5	27	13	25	135	75	150
RS2010	A2	5.9	7.8	17	25	44	87
	A5	8.8	13	25	40	68	135
RS2011	A2	17	11	23	100	58	115
	A5	26	17	34	225	130	260
RS2015	A2	29	13	25	215	115	230
	A5	45	20	38	330	175	350
RS2020	A2	12	13	25	52	65	130
	A5	19	20	38	80	100	200
RS2021	A2	46	20	39	225	120	240
	A5	71	30	61	410	220	440
RS2025	A2	27	20	39	100	85	170
	A5	41	30	61	175	160	320
RS2030	A2	9.8	20	39	40	90	180
	A5	16	30	61	70	170	340
RS2031	A2	33	30	62	130	150	300
	A5	51	47	94	210	240	480
RS2035	A2	77	30	62	500	250	500
	A5	120	47	94	765	380	760
RS2040	A2	51	30	62	265	195	390
	A5	78	47	94	470	350	700
RS2045	A2	25	30	62	90	135	270
	A5	39	47	94	165	250	500
RS2050	A2	37	44	88	130	190	380
	A5	57	68	140	230	345	690
RS2055	A2	21	44	88	75	200	400
	A5	30	68	140	135	365	730
RS2060	A2	52	57	110	175	235	470
	A5	79	87	170	315	430	860
RS2065	A2	31	61	120	115	270	540
	A5	49	92	190	210	495	990
RS2070	A2	24	61	120	85	280	560
	A5	35	92	190	155	510	1020
RS2075	A2	27	78	160	100	370	740
	A5	41	120	240	185	670	1340
RS2080	A2	74	87	170	245	360	720
	A5	110	130	270	440	655	1310
RS2085	A2	38	87	170	135	385	770
	A5	58	130	270	245	700	1400
RS2090	A2	50	110	220	175	480	960
	A5	76	170	330	325	885	1770
RS2095	A2	50	130	270	185	615	1230
	A5	75	200	410	335	1120	2240
RS2100	A2	120	160	320	400	645	1290
	A5	190	250	490	725	1170	2340
RS2105	A2	56	160	320	195	705	1410
	A5	85	250	490	355	1285	2570
RS2110	A2	120	220	440	420	995	1990
	A5	180	340	680	765	1805	3610
RS2115	A2	110	220	440	385	995	1990
	A5	160	340	680	695	1810	3620
RS2120	A2	66	220	440	240	1015	2030
	A5	100	340	680	435	1845	3690
RS2125	A2	100	260	510	392	1190	2380
	A5	160	390	780	715	2165	4330
RS2130	A2	120	320	630	450	1535	3070
	A5	180	480	970	820	2790	5580
RS2135	A2	440	400	800	1000	1125	2250
	A5	680	610	1200	1765	1985	3970
RS2140	A2	170	400	800	510	1525	3050
	A5	250	610	1200	930	2780	5560

A2: H_s=45, A5: H_s=60

K: Static stiffness rate, P: Allowable support load, P_{max}: Maximum input load

2. O Type Mount (NOK Original)

◆NOK Part Number Description

NOK Part No.

RE1 005 A4

- RE1 — Type
- 005 — Nominal number
- A4 — Rubber Specification (Hardness, Material)

Features

●Good vibration isolation performance for lightweight equipment

Since the static stiffness rate in each direction is low, it is suitable for vibration isolation of lightweight equipment. The spring constant in the X direction is particularly low and can be used in various applications. NOK provides a low static stiffness by means of a rubber profile. (NOK original shape)

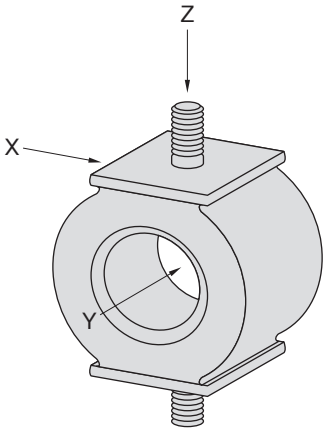
Examples of use

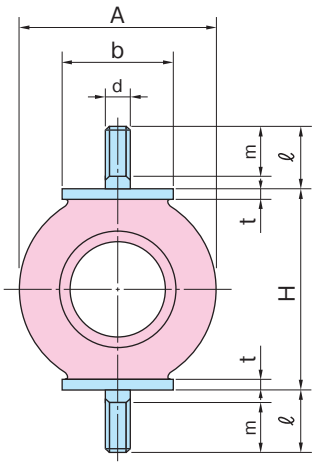
●Controllers for equipment control devices

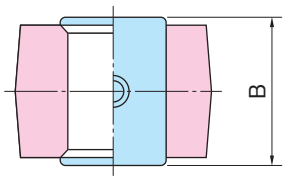
Mounts for controllers (Various machine tools, robot controls, instruments in construction machine cabins, etc.)

●Commercial air conditioners, railcars

Compact compressors, mounts for vacuum pumps, mounts for Analytical liquid feed pump







◆Dimensions and Characteristic table, See the symbol in the figure above

Numbers are in SI units. (9.8N ≈ 1kgf)

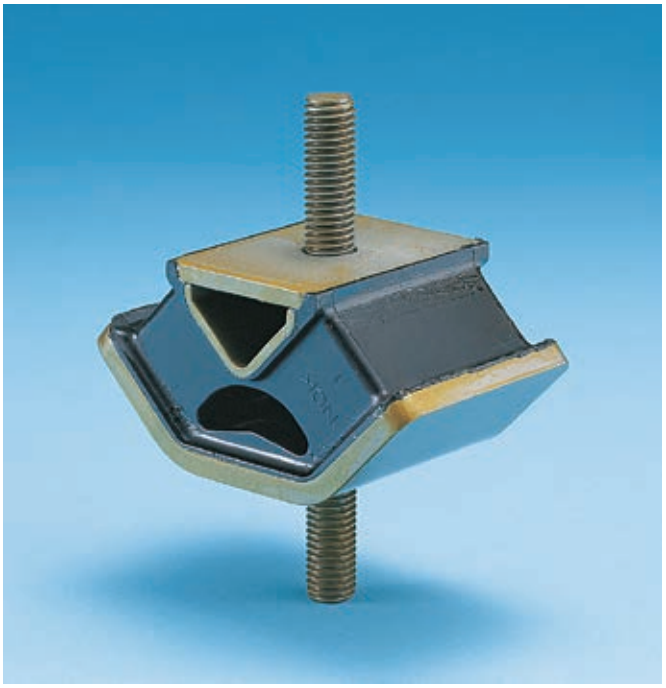
Part No.		Dimension (mm)								Characteristic								
										X Direction			Y Direction			Z Direction		
		A	H	B	t	b	d	m	ℓ	K (N/mm)	P (N)	P_{max} (N)	K (N/mm)	P (N)	P_{max} (N)	K (N/mm)	P (N)	P_{max} (N)
RE1000	A2	14	18	15	1.6	9	M4	6	7	1.5	1.2	2.5	3.9	2.5	5	10	6	12
	A4									3.6	1.7	3.4	7.6	4	8	14	7.5	15
	A6									9.5	2.5	5	19	5	10	21	10	20
RE1005	A2	25	30	22	1.6	14	M5	9	10	1.5	5	10	3.5	10	20	8	7.5	15
	A4									2.5	6.5	13	6.1	15	30	13	11	23
	A6									4.5	9	18	10	20	40	20	15	30
RE1010	A2	36	38	28	2	20	M6	8.5	9.5	2.5	9	18	5.4	20	40	13	20	40
	A4									4.6	12.5	25	10	27	54	20	27	54
	A6									10.8	17	34	21	37	74	37	37	74

A2: Hs=45, A4: Hs=55, A6: Hs=65

K: Static stiffness rate, P: Allowable support load, P_{max}: Maximum input load

Bolt strength is 4.6 (JIS B 1051).

3. V Type Mount



Features

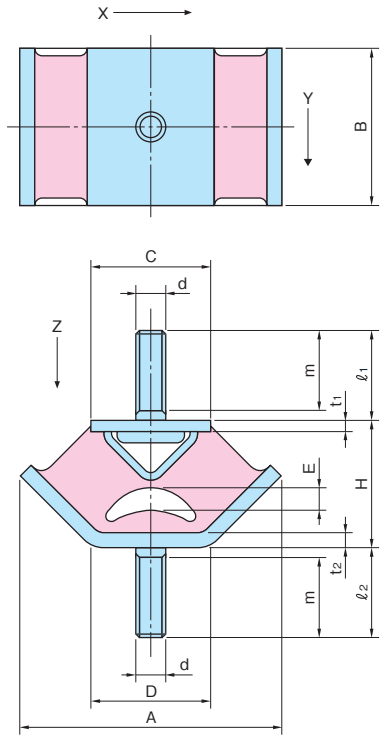
●Supports vibration from various directions

The inclined arrangement of the rubber provides both high support load and anti-vibration performance. In addition, it has different static stiffness in front and rear, right and left, and up and down, and has different anti-vibration performance in the vibration direction.

Examples of use

●Engine-driven construction equipment (Cranes, trucks, etc.)

Mounts for engines, reduction gears, and various tanks



◆NOK Part Number Description

NOK Part No.

RE6 010 A2

RE6	010	A2
Type	Nominal number	Rubber Specification (Hardness, Material)

◆Dimension Table, See the symbol in the figure above

Part No.	Dimension (mm)											
	A	B	C	D	E	H	t_1	t_2	d	m	ℓ_1	ℓ_2
RE6000	63	30	28	28	6	35	3.2	4.5	M8	18	21.8	20.5
RE6005	98	60	46	45	8.5	50	4.5	6	M12	33	35.5	34
RE6010	123	90	60	50	10.5	70	6	8	M16	41	44	42

Bolt strength is 4.6 (JIS B 1051).

◆Characteristic table, See the symbol in the figure above

Numbers are in SI units. (9.8N ≈ 1kgf)

Part No.		Characteristic								
		X Direction			Y Direction			Z Direction		
		K (N/mm)	P (N)	P_{max} (N)	K (N/mm)	P (N)	P_{max} (N)	K (N/mm)	P (N)	P_{max} (N)
RE6000	**A2**	67	87	170	28	48	96	85	180	370
	A5	120	160	320	53	92	180	150	330	650
RE6005	**A2**	170	350	690	69	180	370	250	850	1700
	A5	320	640	1300	140	370	750	400	1300	2700
RE6010	**A2**	280	660	1300	110	340	680	440	1700	3500
	A5	550	1300	2600	250	780	1550	800	3200	6300

A2: H_s=45, A5: H_s=60

K: Static stiffness rate, P: Allowable support load, P_{max}: Maximum input load

4. T Type Mount (hanging mount)

◆NOK Part Number Description

NOK Part No.

RE5 010 A5

- RE5 — Type
- 010 — Nominal number
- A5 — Rubber Specification (Hardness, Material)

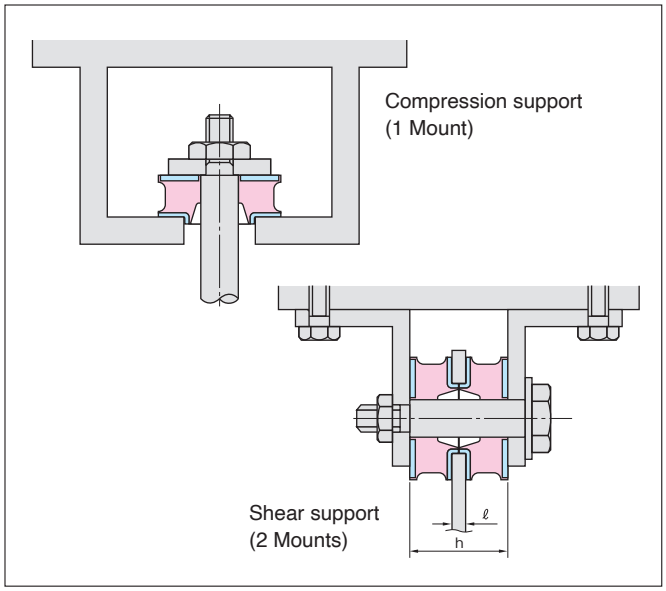
Features

- **Compact, high-performance (Durability, anti-vibration, fail-safe structure)**
  Compact and with a relatively high static stiffness, it is applicable to large support loads and cyclic loads. It has a fail-safe structure.
- **Two Mounts can be used facing each other for even higher performance**
  High vibration isolation is achieved by shear direction support. High compression-tension input can be accommodated when vertically opposed.

Examples of use

- **Electrical components for construction machinery**
  Mounts for controllers (Various machine tools, robot controls, instruments in construction machine cabins, etc.)
- **Various buildings**
  Suspension mount for various types of piping for building utilities

◆Examples of use

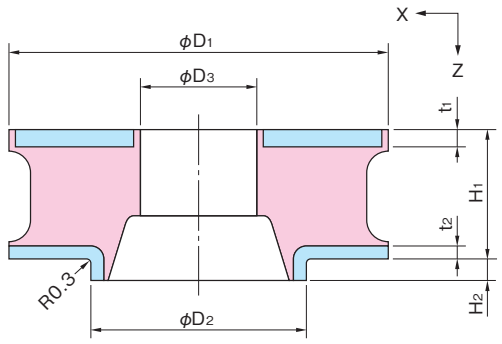


◎Notes on Use

Note (1): When the two mounts are used in combination, set the tightening section dimension: h within the following range.

Part No.	"h" in the left figure (mm)
RE5000	(16.6~17.3) + Plate Thickness "I"
RE5005	(22.1~23) + Plate Thickness "I"
RE5010	(27.6~28.8) + Plate Thickness "I"

Note (2): Use a plate thickness R of 4.5 mm or more.



◆Dimensions and Characteristic table, See the symbol in the figure above

Numbers are in SI units. (9.8N ≈ 1kgf)

Part No.		Dimension (mm)							Characteristics of 1 Mount					
									X Direction			Z Direction		
		D_1	$D_2{}^{0}_{-0.2}$	D_3	H_1	H_2	t_1	t_2	K (N/mm)	P (N)	P_{max} (N)	K (N/mm)	P (N)	P_{max} (N)
RE5000	**A2**	25	17	9	9	2	1	1	19	10	20	150	80	160
	A5								53	28	56	300	160	320
RE5005	**A2**	35	20	11	12	2	1.6	1	34	24	48	270	190	380
	A5								90	65	130	500	350	710
RE5010	**A2**	45	25	14	15	2	2	1	40	36	72	310	280	560
	A5								120	110	220	620	550	1100

A2: H_s=45, A5: H_s=60

K: Static stiffness rate, P: Allowable support load, P_{max}: Maximum input load

5. M Type Mount

◆NOK Part Number Description

NOK Part No.

RE3 005 A6

RE3	005	A6
Type	Nominal number	Rubber Specification (Hardness, Material)

Features

●Vibration isolation of machine tools, etc.

Vibration generated by the machine prevents vibration transmission to other machine tools and measuring instruments It also has an excellent effect on preventing machine misalignment due to vibration.

●Easy floor installation of machines

Since anchor bolts are not used, installation and movement are easy. The bolts to be fixed to the machine can also be used as leveling bolts, allowing the machine to be leveled easily.

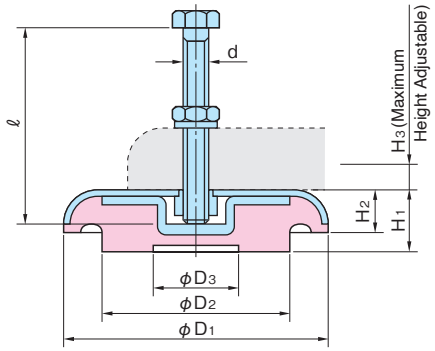
●Excellent oil resistance

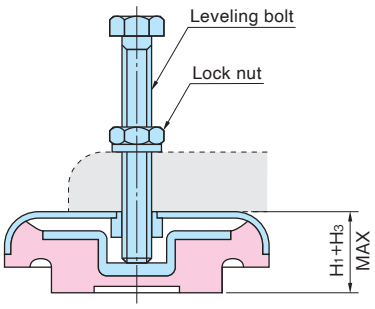
The rubber material of the M mount is nitrile rubber with excellent oil resistance, and the bottom is shaped to fit well to the floor.

Examples of use

●Production machines and measuring instruments installed on factory floors

Mount for precision machining facility or press machines, etc. Installation table Mount for measuring shapes or measuring instruments, etc.





◆Dimensions and Characteristic table, See the symbol in the figure above

Numbers are in SI units. (9.8N ≈ 1kgf)

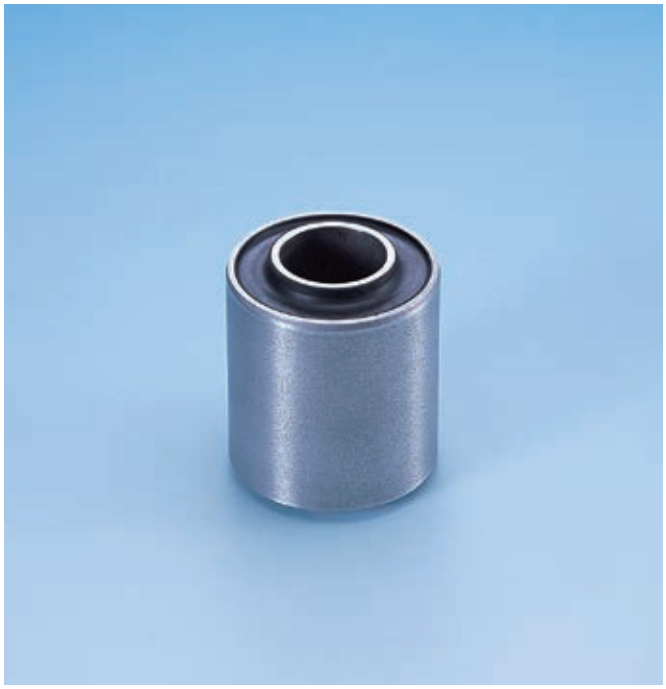
Part No.		Dimension (mm)								Characteristic		
		D_1	D_2	D_3	H_1	H_2	max H_3	d	ℓ	K (N/mm)	P (N)	P_{max} (N)
RE3000	A2	80	57	33	30	15	8	M12	80	270	500	1000
	A5									500	900	1800
	A7									830	1500	2900
	A8									1200	2000	4100
RE3005	A2	120	88	43	37	24	12	M12	100	1400	3000	5900
	A4									1900	3900	7800
	A6									2300	5000	10000
RE3010	A2	160	114	52	41	28	12	M16	120	2300	5000	10000
	A6									3600	7500	15000
	A7									4800	10000	20000
RE3015	A8	185	150	65	48	28	8	M20	160	7000	12000	25000
	A0									10000	17000	34000

A2: H_s=45, A4: H_s=55, A5: H_s=61, A6: H_s=65, A7: H_s=70, A8: H_s=75, A0: H_s=84 (NBR)

K: Static stiffness rate, P: Allowable support load, P_{max}: Maximum input load

Bolt strength is 4.6 (JIS B 1051).

6. Ultra Bush (for General Use)



◆NOK Part Number Description

NOK Part No.

RB5 095 A5

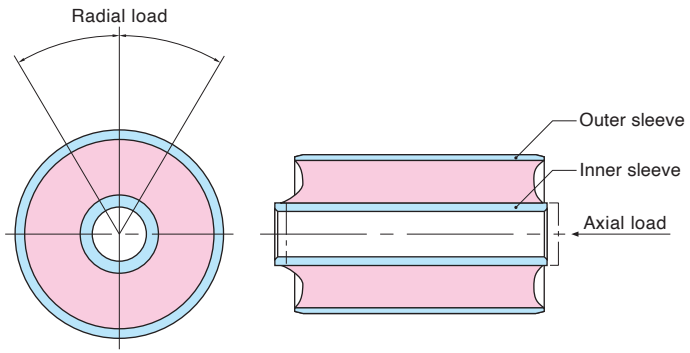
- RB5: Type
- 095: Nominal number
- A5: Rubber Specification (Hardness, Material)

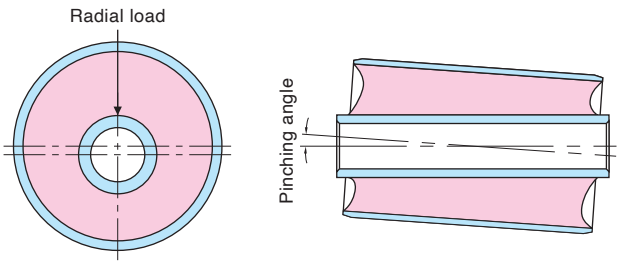
Features

- **Radially large static stiffness rate and allowable support load.**
- **High vibration isolation performance in torsion and axial direction**
- **Fail-safe structure**
- **Versatility**
  Wide size variations are available.

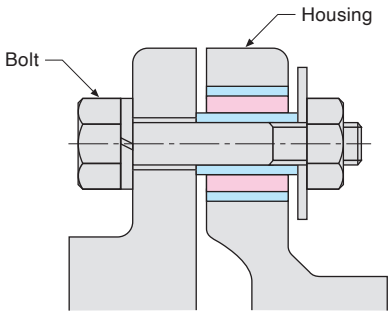
Examples of use

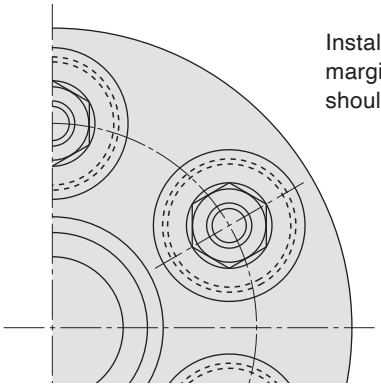
- **Controllers for equipment control devices**
  Mounts for controllers (Various machine tools, robot controls, instruments in construction machine cabins, etc.)
- **Suspensions and engines for two- and four-wheel vehicles**
  Suspension rod, arm bushing, shock absorber end bushing, etc.
- **Bushing for electric motor and compressor mount**
- **Bushing for Coupling (see figure below)**





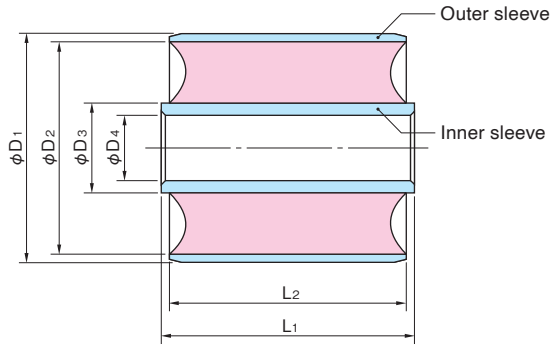
◆Examples of use



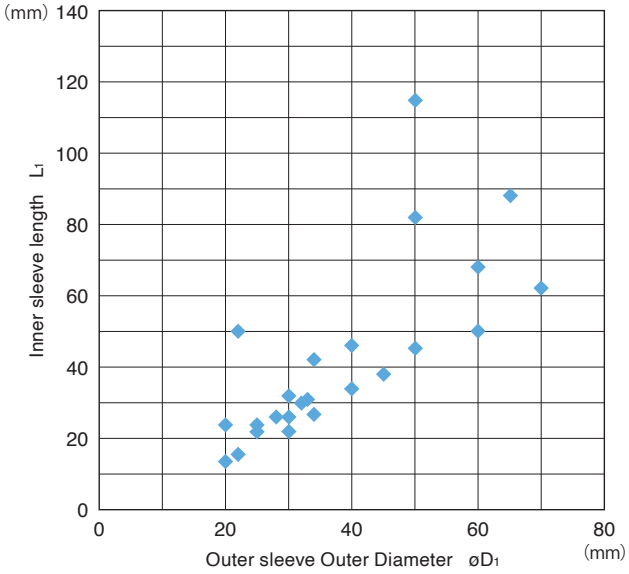


Installation items such as the clamping margin of the bushing and housing should be set by the customer.

- **Example of mounting bushing in coupling**
  The outer sleeve of the bush is fixed by pressing into the housing hole.
  The inner sleeve of the bush is fixed by tightening both ends of the inner ring with Bolts and Nuts.



Ultra bush product line-up



◆Dimension Table, See the symbol in the figure above

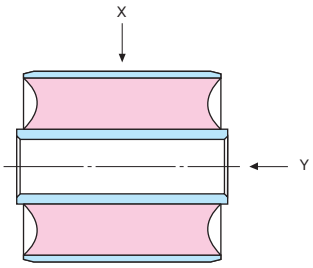
Part No.	Dimension (mm)					
	D_1 ±0.1	D_2	D_3	D_4 $^{+0.3}_{0}$	L_1 ±0.3	L_2 ±0.5
RB5000	20	18	12	8	14	12
RB5005	20	17	14	10	24	20
RB5010	22	19	14	10	16	15
RB5015	25	22	14	10	24	20
RB5020	22	20	14	10.2	50	47
RB5025	25	22	16	12	22	21
RB5030	28	25	16	12	26	20
RB5035	30	27	16	12	26	22
RB5040	30.1	27.5	17	12	22	20
RB5045	34.1	31.5	17	12	27	25
RB5050	30	27	18	14	32	28
RB5055	33	30	18	14	31	25
RB5060	32	28	22	16	30	25
RB5065	40	37	22	16	34	30
RB5070	34	31	22	18	42	36
RB5075	40	36	25	20	46	40
RB5080	50	46	27	22	45	38
RB5085	45	41	28	24	38	34
RB5090	50	46	29	24	82	76
RB5095	50	46	29	24	115	102
RB5100	60	56	32	28	50	45
RB5105	60	55	35	30	68	60
RB5110	70	66	40	35	62	55
RB5115	65	60	46	40	88	80

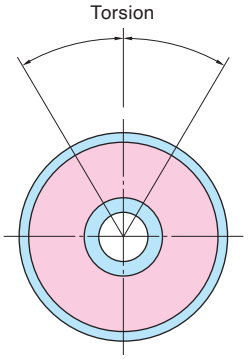
●Inner and outer sleeve material is equivalent to STKM.

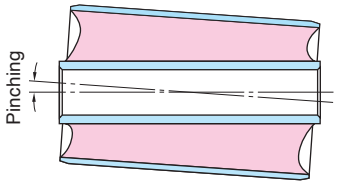
Numbers are in SI units. (9.8N≈1kgf)

◆Characteristic table, See the symbol in the figure to the left

Part No.		Characteristic								
		X Direction			Y Direction			Torsion Direction		Pinching Direction
		K (N/mm)	P (N)	P_{max} (N)	K (N/mm)	P (N)	P_{max} (N)	K (N·cm/rad)	T_{max} (N·cm)	α rad{deg}
RB5000	A2	800	120	240	110	32	65	560	37	0.087
	A5	1200	180	360	180	55	110	1100	75	{5}
RB5005	A2	5500	400	800	370	55	110	2200	79	0.026
	A5	8500	620	1240	620	95	190	4500	160	{1.5}
RB5010	A2	2000	250	490	180	44	88	1100	59	0.052
	A5	2900	360	720	290	75	150	2200	120	{3}
RB5015	A2	1500	300	600	160	60	120	1100	82	0.070
	A5	2200	440	880	260	100	200	2200	160	{4}
RB5020	A2	1300	200	400	470	140	280	3400	200	0.017
	A5	2000	300	600	790	240	480	6700	400	{1}
RB5025	A2	3100	460	920	240	70	140	2200	120	0.044
	A5	4500	700	1400	400	120	240	4500	250	{2.5}
RB5030	A2	1300	300	600	160	70	140	1700	120	0.070
	A5	2000	450	900	270	120	240	3400	240	{4}
RB5035	A2	1100	320	630	150	85	170	1700	140	0.079
	A5	1700	470	930	250	140	280	3400	270	{4.5}
RB5040	A2	1100	280	560	150	75	150	1700	130	0.087
	A5	1600	420	840	250	130	260	3400	260	{5}
RB5045	A2	960	350	700	150	100	200	1700	160	0.087
	A5	1400	500	1000	250	180	350	3900	360	{5}
RB5050	A2	2900	650	1300	250	110	220	3400	220	0.052
	A5	4200	950	1900	420	190	370	6200	410	{3}
RB5055	A2	1400	420	830	180	100	200	2200	180	0.079
	A5	2000	600	1200	290	180	350	4500	360	{4.5}
RB5060	A2	5700	850	1700	370	110	220	6200	260	0.035
	A5	8400	1300	2500	620	190	370	12000	510	{2}
RB5065	A2	1600	600	1200	210	150	300	4500	360	0.079
	A5	2300	900	1800	350	260	520	8400	680	{4.5}
RB5070	A2	5500	1200	2400	380	170	340	6700	390	0.035
	A5	8200	1800	3600	630	290	570	13000	750	{2}
RB5075	A2	5300	1400	2800	400	220	440	9000	550	0.044
	A5	7800	2100	4200	660	370	730	18000	1100	{2.5}
RB5080	A2	1900	900	1800	250	240	480	7900	650	0.056
	A5	2900	1300	2600	430	410	810	16000	1300	{5.5}
RB5085	A2	3100	1000	2000	320	210	420	9500	600	0.061
	A5	4600	1500	3000	530	350	690	19000	1200	{3.5}
RB5090	A2	9700	4100	8200	600	500	1000	20000	1500	0.035
	A5	14000	6000	12000	990	850	1700	39000	2900	{2}
RB5095	A2	17000	7500	1500	800	700	1400	28000	2000	0.026
	A5	26000	11000	22000	1300	1200	2300	53000	3900	{1.5}
RB5100	A2	2100	1200	2400	290	350	690	13000	1100	0.087
	A5	3000	1800	3600	490	600	1200	26000	2200	{5}
RB5105	A2	5300	2600	5200	480	480	960	24000	1700	0.052
	A5	7900	3900	7800	800	800	1600	45000	3300	{3}
RB5110	A2	3100	2000	4000	400	500	1000	26000	2100	0.079
	A5	4700	3000	6000	660	850	1700	51000	4000	{4.5}
RB5115	A2	23000	8000	16000	1100	750	1500	79000	3700	0.026
	A5	33000	12000	23000	1800	1300	2500	150000	7100	{1.5}







A2: H_s=45, A5: H_s=60

K: Static stiffness rate, P: Allowable support load, P_{max}: Maximum input load,

T_{max}: Maximum torsion torque, α: Allowable Pinching angle

7. NOK High Damping Rubber Stopper

◆NOK Part Number Description

NOK Part No.

RE4 010 A5

- RE4 — Type
- 010 — Nominal number
- A5 — Rubber Specification (Hardness, Material)

Features

- **Reduces collision noise by absorbing and mitigating large impact forces**

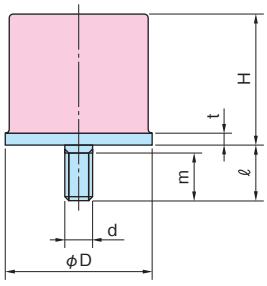
  Soft when in contact and hard when loaded, it can absorb and mitigate large impact forces. It also reduces collision noise.

- **High durability**

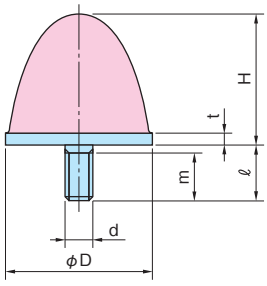
  Withstands large load and deformation with a relatively small stopper.

- **Impact absorption by High Damping Rubber**

  By using High Damping Rubber, the amount of object bounce can be reduced.



Type A

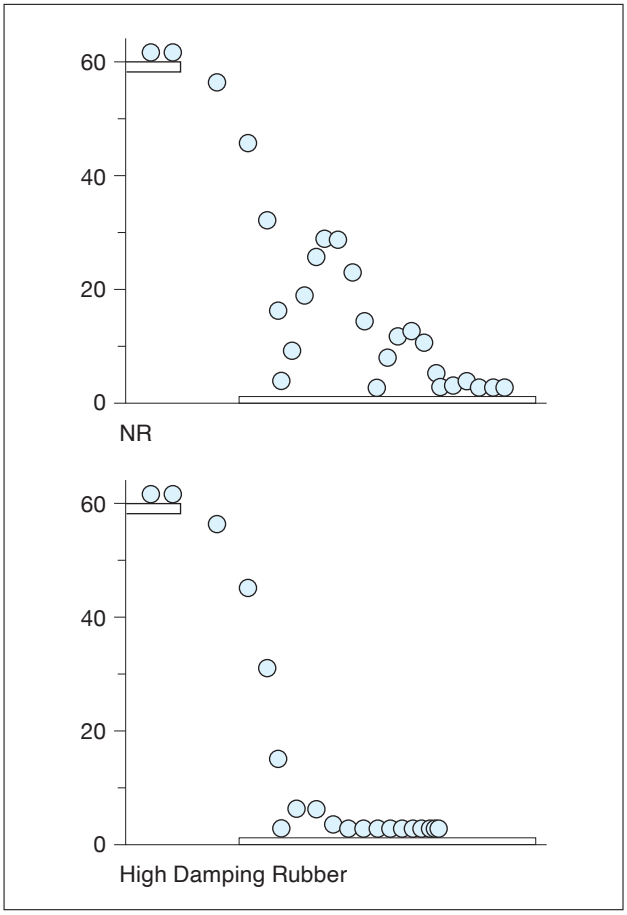


Type B

◆Dimensions and Characteristic table, See the symbol in the figure above

Part No.		Type	Dimension (mm)						Allowable load	Allowable energy
			D	H	t	d	m	ℓ	Pmax (N) {kgf}	Umax (J) {kgf・m}
RE4000	A5	A	30	30.5	2.3	M8	15	17.5	650{66}	2.4{0.24}
	K5								550{56}	2.1{0.21}
RE4005	A5	A	40	30	2.3	M10	24	27.5	1300{130}	5.1{0.52}
	K5								1100{110}	4.1{0.42}
RE4008	A5	B	20	20	1.6	M6	13	15	150{15}	0.4{0.04}
	K5								130{13}	0.3{0.03}
RE4009	A5	B	40	40	2.3	M8	24	27.5	550{56}	2.5{0.26}
	K5								470{48}	2.2{0.22}
RE4010	A5	B	70	67	3.2	M10	14	17	1800{180}	15{1.5}
	K5								1500{150}	13{1.3}
RE4011	A5	B	100	90	4.0	M16	42	46	3700{380}	39{4.0}
	K5								3200{330}	33{3.4}

A5: Hs=60(NR), K5: Hs=60(High Damping Rubber)
Bolt strength is 4.6 (JIS B 1051).



Comparison of the bounce of a steel ball with NR and High Damping Rubber

Note: (1) Trajectory of a steel ball dropped from a height of 60cm
(2) Initial steel ball speed is 300mm/s
(3) rubber sheet thickness is 5mm

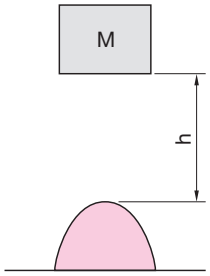
Stopper selection procedure

1. Calculates the collision energy of an object.

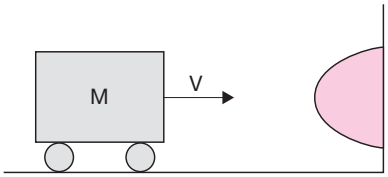
(1) Case of free fall ... $E = M \times h \times g$

(2) Case of horizontal motion ... $E = \frac{1}{2} \times M \times v^2$

E : Collision energy (J)
(9.8J ≒ 1kgf•m)
h : Drop height (m)
g : Gravitational acceleration (9.8m/s²)
M: Mass of the object (kg)
v : Velocity (m/s)



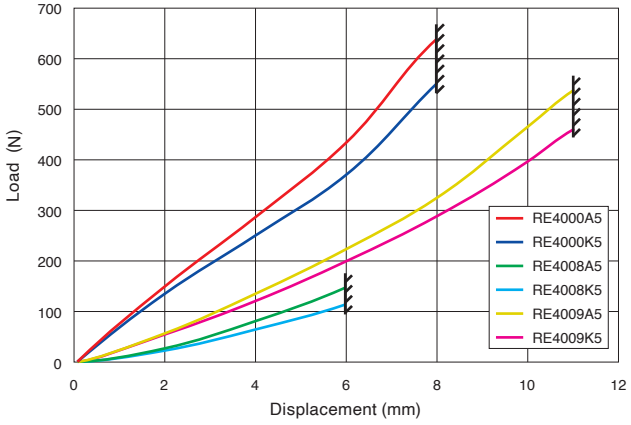
Free fall

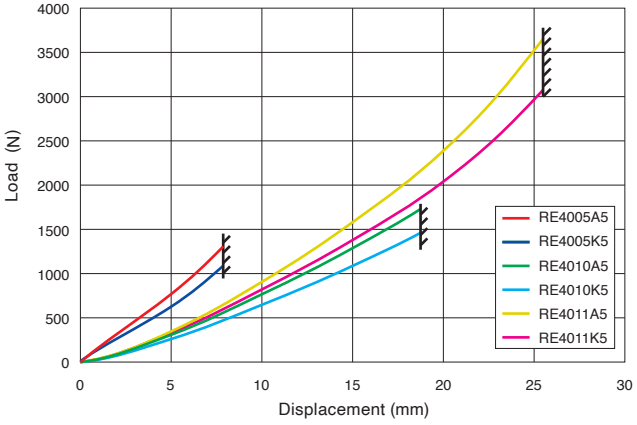


Horizontal motion

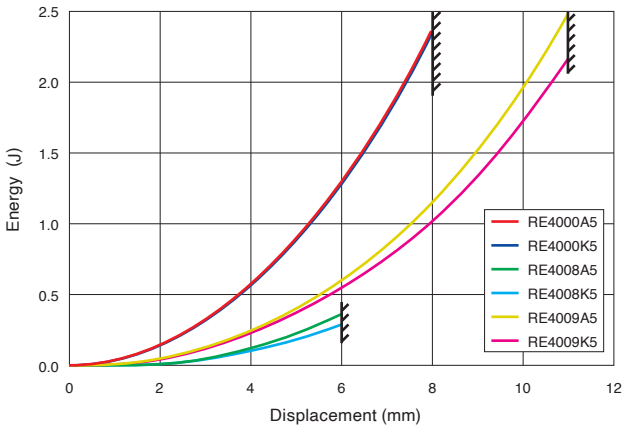
2. Select the stopper by comparing the calculated energy value with the allowable energy.

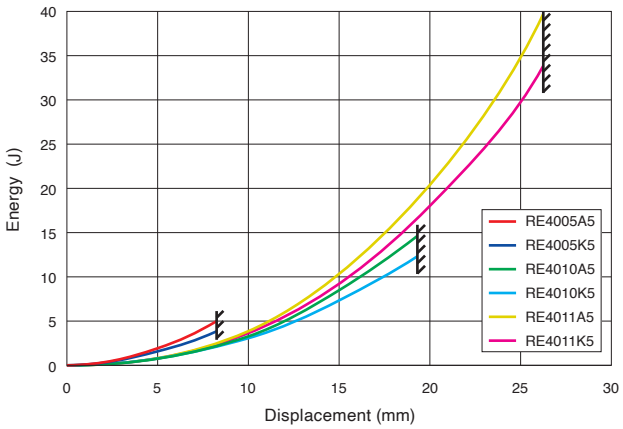
Load — Displacement Characteristic





Energy — Displacement Characteristic





8. Stepping motor mount

◆NOK Part Number Description

NOK Part No.

RF2 400 A2

RF2	400	A2
Type	Nominal number	Rubber Specification (Hardness, Material)

Features

●Wide variations

In addition to the mounts for the various stepping motors, there are grooved type for positioning the motors and mounts, and small mounts for 35 mm sizes.

●Large vibration reduction effect

Transmission of stepping motor vibration is greatly reduced. In addition, step-out phenomena occurring in the specific rotational speed range of the stepping motor are suppressed.

Examples of use

●Office equipment (printers such as MFPs)

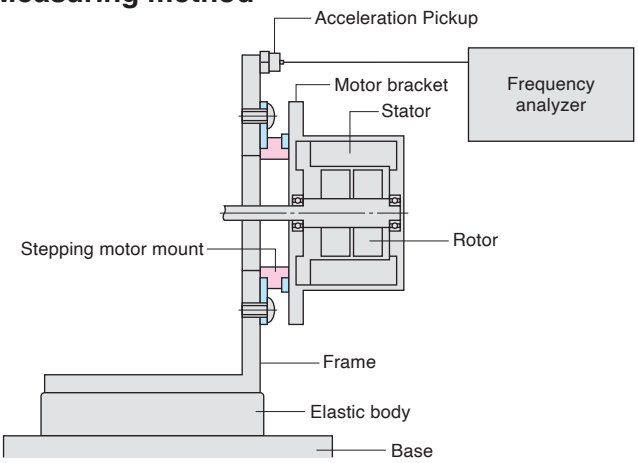
Mounts for stepping motors for driving paper feeds, copy drums, scanners, etc.

●Work conveyors for production machines, analytical equipment, etc.

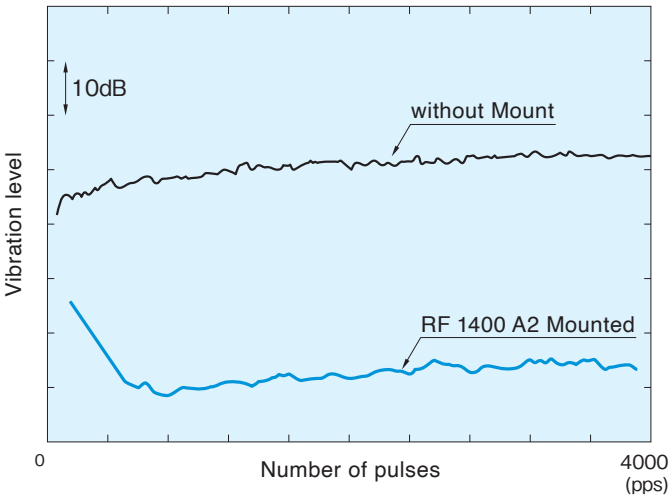
For conveyors and material handling drive motors requiring positioning

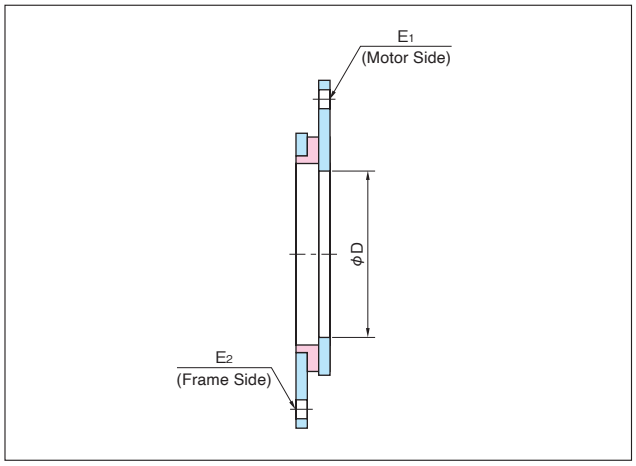
◆Vibration reduction effect

Measuring method

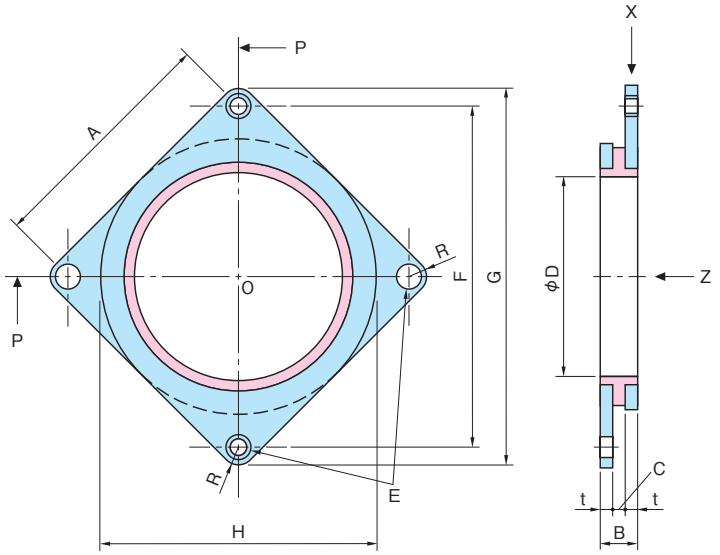


Measurement result





Grooved type



POP Section

◆Dimensions and Characteristic table, See the symbol in the figure above

Numbers are in SI units. (9.8N ≈ 1kgf)

Motor Size	Part No.		Dimension (mm)										Characteristics			
													X Direction			Z Direction
			A	B	t	C	F	D	E	G	H	R	K (N/mm)	P (N)	Pmax (N)	K (N/mm)
35mm	RF01300	A2A	(26)	7	1.6	(3.8)	36.8	ø22.5	M3 – ø3.5	(46.2)	※(29)	(R5)	32	18	36	230
		A5A											52	30	60	340
42mm	RF1400	A2	(31)	8.8	1.6	(5.6)	43.8	ø23	M3 – ø3.5	(51.8)	(32)	(R4)	30	25	50	160
		A5											49	42	84	260
	RF2400	A2							M3 – M3				30	25	50	160
		A5											49	42	84	260
	RF1401	A2		6		(2.8)			M3 – ø3.5				59	25	50	440
		A5											100	42	84	780
	RF2401	A2							M3 – M3				59	25	50	440
		A5											100	42	84	780
	＊RF1402	A2						ø22 +0.07 0	E1 (Example of a motor) E2 (Example Frame) ø3.5 – M3	(51.8)	(35)		76	32	64	530
		A5											130	55	110	940
50mm	RF1700	A2	(41)	10	2.3	(5.4)	58	ø36	M4 – ø4.5	(66)	(52)		72	60	120	520
		A5											120	95	190	830
	RF2700	A2							M4 – M4				72	60	120	520
		A5											120	95	190	830
56mm	RF1500	A2	(47.2)	10	2.3	(5.4)	66.7	ø40	M4 – ø5	(74.7)	(56)		80	65	130	440
		A5											120	95	190	690
	RF2500	A2							M4 – M4				80	65	130	440
		A5											120	95	190	690
	RF1501	A2		8	1.6	(4.8)			M3 – ø3.5				100	70	140	720
		A5											170	120	240	1200
	＊RF1502	A2			2.3	(3.4)		ø38.1 +0.12 +0.05	E1 (Example of a motor) E2 (Example Frame) M4 – ø4.5				100	50	100	860
		A5											180	90	180	1400
	＊RF1503	A2		6	1.6	(2.8)			M4 – ø4.5				140	59	118	1230
		A5											180	75	150	1600
60mm	RF1600	A2	(50)	10	2.3	(5.4)	70.7	ø40	M4 – ø4.5	(78.7)	(58)		80	65	130	440
		A5											120	95	190	690
	RF2600	A2							M4 – M4				80	65	130	440
		A5											120	95	190	690

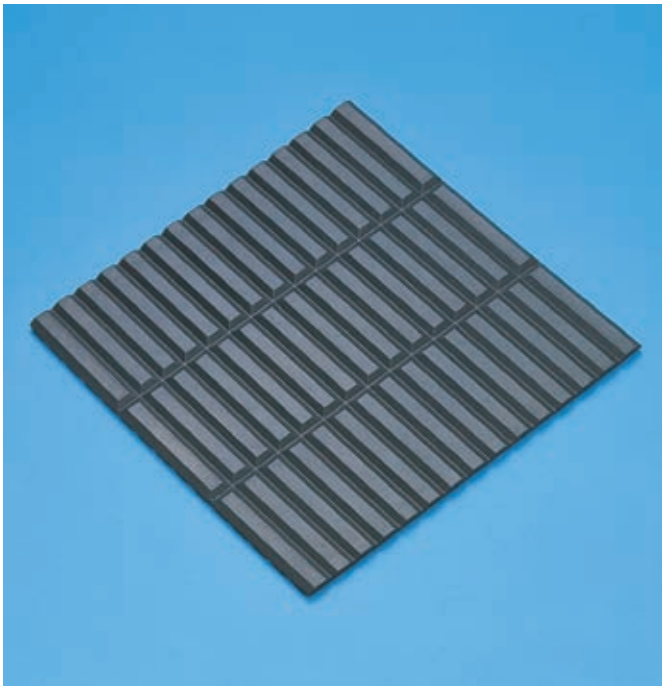
A2, A2A: H_s=47 (NBR), A5, A5A: H_s=60 (NBR)

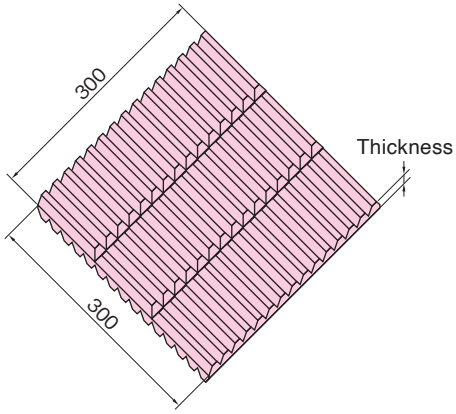
K: Static stiffness rate, P: Allowable support load, P_{max}: Maximum input load

＊The product with the part number marked is an groove type that can be aligned with the motor.

※**RF01300** is not an arc shape as shown, but is a parallel plane and shows its width dimension.

9. NOK High Damping Rubber Anti-vibration pad





◆Dimension Table, See the symbol in the figure above

Part No.		Dimension (mm) Height × Width × Thickness	Pmax : Allowable Surface Pressure (MPa) {kgf/cm²}
RE7000	K3	300×300×20	0.24 {2.4}
	B3		0.29 {3.0}
RE7001	K3	300×300×8	0.43 {4.4}
	B3		0.57 {5.8}

K3: Hs=50(High Damping Rubber)
B3: Hs=50(NBR)

Following sizes are also available.

◆Dimension Table, See the symbol in the figure above

Part No.		Dimension (mm) Height × Width × Thickness
RE7010	K3	110×220×1
RE7011	K3	110×220×2
RE7012	K3	200×300×3
RE7013	K3	200×300×5

The static stiffness rate of the rubber sheet varies greatly depending on the conditions, so the characteristic values are not shown.
K3: Hs=50(High Damping Rubber)

◆NOK Part Number Description

NOK Part No.

RE7 010 K3

- RE7: Type
- 010: Nominal number
- K3: Rubber Specification (Hardness, Material)

Features

●Excellent anti-vibration effect

High Damping Rubber is used to reduce resonance transmission over a wide frequency range.

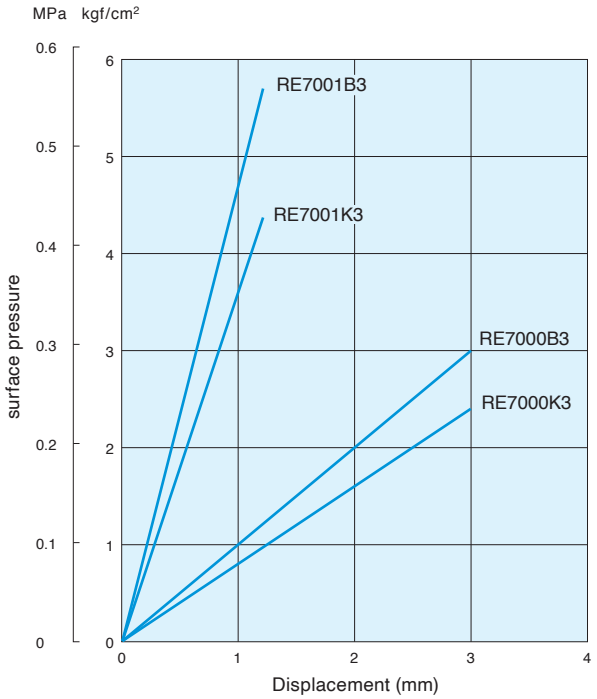
●Easy to install

High Damping Rubber sheet can be placed under a machine to prevent vibration.

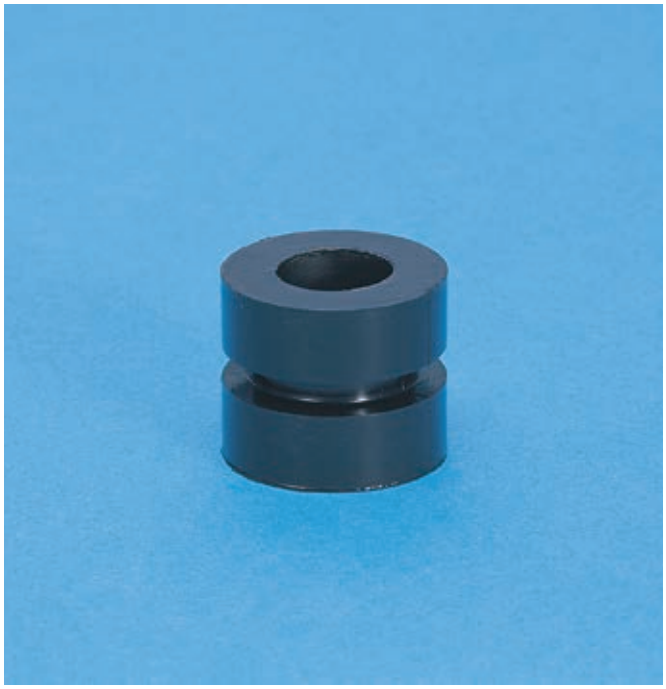
●Perfect for trial use

Cut to fit the slit and use as a sheet of the required size. Determine the size of the rubber sheet referring to the following dimension table Pmax: Allowable surface pressure value.

Characteristics



10. NOK High Damping Rubber Grommet



◆NOK Part Number Description

NOK Part No.

RF7 037 L2

RF7	037	L2
Type	Nominal number	Rubber Specification (Hardness, Material)

Features

●Optimal mount for lightweight devices

High Damping Rubber grommets reduce vibration transmission over a wide range of frequencies and significantly reduce vibration at resonance. There are also four types with different spring constants in each direction.

●Compact and Versatility

It is compact shape and can be used as various mounts

Examples of use

●Automobile mounted electrical unit, small motor

Electrical unit, mount for electronic circuit board, mount for electronically controlled small motors such as EV and HEV

●Home appliances, air conditioners, refrigerators, washing machines, etc.

Mount for compressor, blower fan, etc.

●Office equipment, personal computer

Mount for memory media and HDD unit

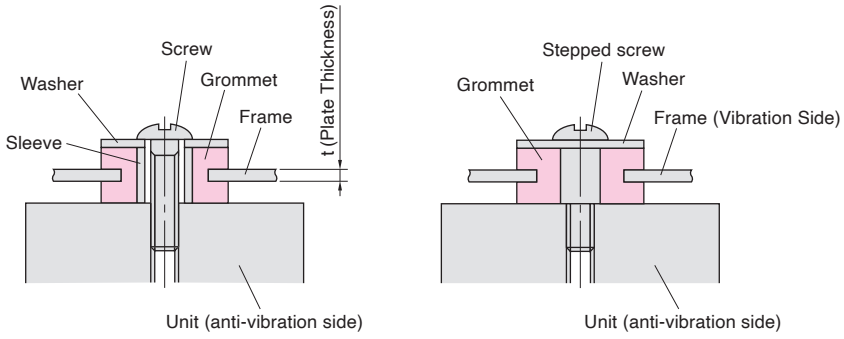
Mounting procedure

①Insert the grommet (Fig.-2) into the hole of the frame (Fig.-3).

②A metal sleeve (Fig.-4) or stepped screw is attached to the inner diameter øD3 of the grommet. (Fig.-5).

*The tightened height L is dimensioned so that the rubber is 10% compressed.

③Fix the unit and grommet with screws. (Fig.-1)



a Sleeve + Screw Installation　b Installation of stepped screws

Fig.-1 Installation example

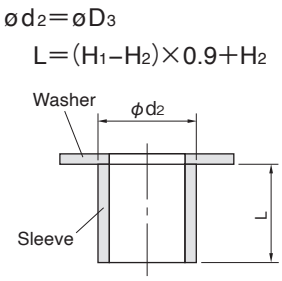


Fig.-4 Sleeve Dimensions
(Customer Supplies)

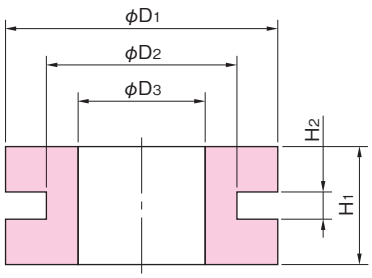


Fig.-2 Grommet

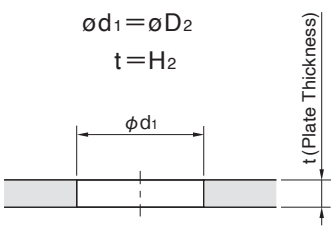


Fig.-3 Frame Shape

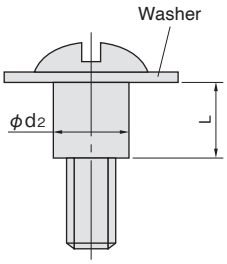
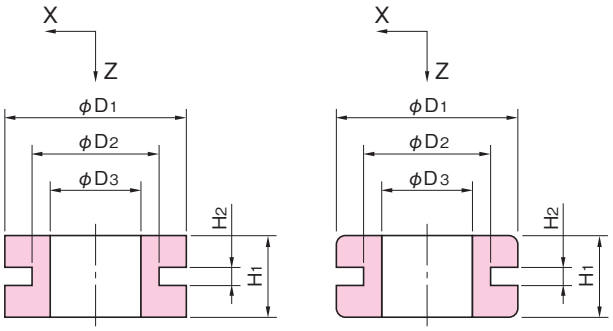
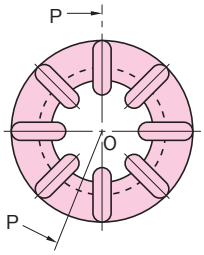


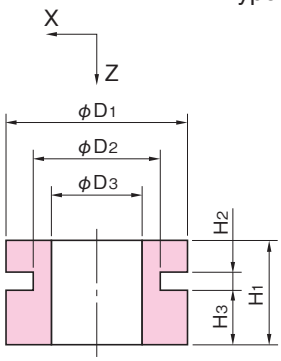
Fig.-5 Stepped screw dimension
(Customer Supplies)



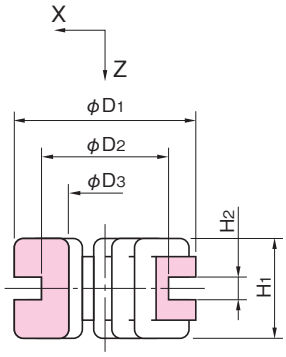
Type A

Type B

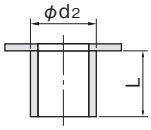




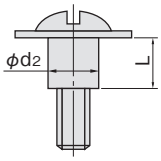
Type C



POP Section
Type D



Sleeve (Customer Supplies)



Stepped Screws (Customer Supplies)

Sleeve washers and stepped screws are not handled by NOK.
For recommended dimensions, please refer to the following Dimension table.

◆Dimensions and Characteristic table, See the symbol in the figure above

Numbers are in SI units. (9.8N ≈ 1kgf)

Type	Part No.		Dimension (mm)						Characteristic						Sleeve, stepped screw Dimensions (mm)	
									X Direction			Z Direction				
			D_1	D_2	D_3	H_1	H_2	H_3	K (N/mm)	P (N)	P_{max} (N)	K (N/mm)	P (N)	P_{max} (N)	d_2	L
A	RF7084	L2	8	5	3.5	2.6	1	—	70	2.5	5	340	14	27	3.5	2.4
	RF7005	L2	9	5.8	4	4.5	1.3	—	80	3.5	7	150	12	24	4	4.2
	RF7065	L2	9	6.4	4.4	8.4	2	—	75	3.5	7.5	65	11	21	4.4	7.8
	RF7067	L2	9	6.4	4.4	6.3	2	—	100	5	10	110	12	24	4.4	5.9
	RF7086	L2	12.5	8.5	6.5	5.1	1.1	—	120	6	12	220	22	44	6.5	4.7
	RF7052	L2	16	12	8	15.6	1.6	—	80	8	16	90	32	64	8	14.2
	RF7014	L2	22	16	11.5	17.2	3.2	—	220	25	50	200	70	140	11.5	15.8
	RF07229	L2A	14	10	8	4	1.6	—	200	10	20	470	28	56	8	3.8
	RF07230	L2A	18.2	14.2	9.8	13.7	3.3	—	220	22	44	210	55	110	9.8	12.7
	RF07231	L2A	20	12	7.6	16.9	2	—	105	12	24	170	63	126	7.6	15.4
	RF07232	L2A	20	12	7.6	18.1	3.2	—	145	16	32	175	65	130	7.6	16.6
	RF07233	L2A	25	19.5	13	14.2	3.6	—	170	27	54	270	72	144	13	13.1
B	RF7077	L2	9	6	4	3.2	1.2	—	110	5.5	11	260	13	26	4	3.0
	RF7039	L2	9.5	6.5	5	4.2	1.2	—	100	3.5	7.5	170	13	26	5	3.9
	RF7045	L2	9.5	6.5	5	4.2	1.8	—	120	4.5	9	240	15	29	5	4.0
	RF7023	L2	11	8	6	6	1.4	—	100	5	10	130	15	30	6	5.5
	RF7011	L2	11.2	8	4.6	5.1	1.2	—	70	6	12	140	14	27	4.6	4.7
	RF7042	L2	14	10	5.5	8	1.6	—	75	8.5	17	140	23	45	5.5	7.4
C	RF7009	L2	※7/8	5	3.8	4	1	2	75	2	4.5	95	9.5	19	3.8	3.7
	RF7008	L2	9	7	4	5.2	1.2	2.7	60	4.5	9	60	8	16	4	4.8
D	RF7035	L2	11	8	4.2	4.7	1.7	—	25	2	4.5	55	4	8	4.2	4.4
	RF7037	L2	14.3	9.5	4.8	8	1.6	—	25	2.5	5.5	45	7	14	4.8	7.4
	RF7038	L2	14.3	9.5	4.8	8	1.8	—	25	3	6	50	7.5	15	4.8	7.4
	RF7072	L2	14.3	9.5	4.8	8	0.9	—	20	2	4.5	40	7.5	15	4.8	7.3

L2: H_s=45 (High Damping Rubber), L2A: H_s=45 (High Damping Rubber)
K: Static stiffness rate, P: Allowable support load, P_{max}: Maximum input load

※see the figure on the right
RF7009