Washers with Antivibration Gel
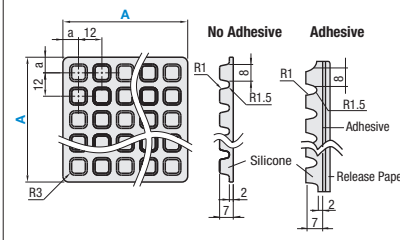
Sheets / Rubber Covered Type

Antivibration Gel Sheets

RoHS10

kgf=N×0.101972

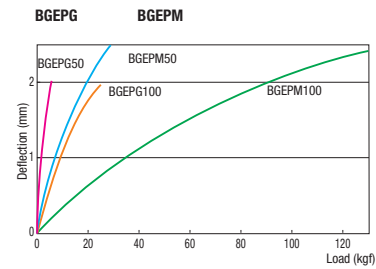| Type		A	a	Proper Load N{kgf}	Deflection Property N/mm {kgf/mm}	Applied Frequency Hz	Protrusions	Color
No Adhesive	Adhesive							
BGEPG	BGEPGA	50	7	19.6–49 {2–5}	22 {2.25}	40~	4 x 4 =16 Pcs.	Milky White
BGEPM	BGEPMA			49–294 {5–30}	93 {9.5}			Light Green
BGEPG	BGEPGA	100	8	98–196 {10–20}	98 {10}		8 x 8 =64 Pcs.	Milky White
BGEPM	BGEPMA			196–1225 {10–125}	431 {44}			Light Green

- Can be cut with a utility knife between protrusions.
- Adhesive Type has an operating temperature between -40 and 100°C.
- Reference: Adhesive Strength (180° Peeling Strength) 14.5 N/25 mm Width (When affixed to 304 Stainless Steel)
- As pres sure sensitive adhesive is used, be sure to apply sufficient pressure so that the joint sections may firmly adhere to each other.
- Adhesive Type uses 75 μm PET film base material.
- Oil may ooze out to the backing paper.

Type		Material		Hardness	
No Adhesive	Adhesive	No Adhesive	Adhesive	Asker C	Penetration
BGEPG	BGEPGA	Silicone	Silicone	—	55
BGEPM	BGEPMA			30	—

- The values of hardness are reference values.

Vibration Transmissibility Data
BGEPG   BGEPM

▲: Tr=1/30
■: Tr=1/10
●: Tr=1/3

BGEPG50 — BGEPM50 — BGEPG100 — BGEPM100

Load Deflection Data
BGEPG   BGEPM

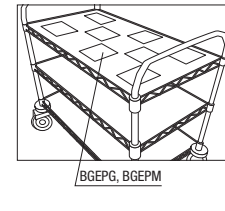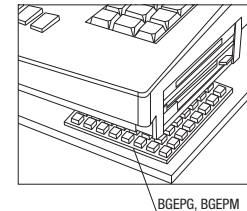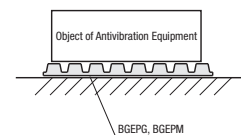BGEPG50, BGEPM50, BGEPG100, BGEPM100
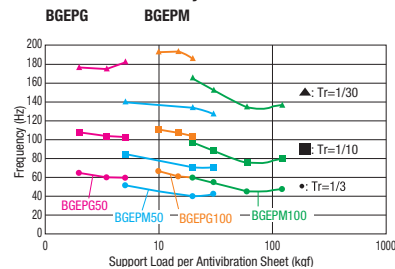
- Values in the graph are nominal for each type.
- The above values are an example of measured values and are not guaranteed.

Application Example

Prevents Vibration to Measuring Equipment

Avoids Vibration and Buffering of Cart for Precision Parts

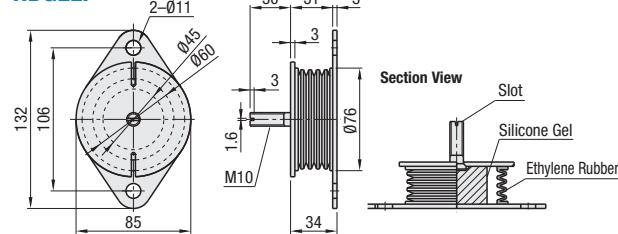**Part Number Example** | Part Number |
BGEPG50

Object of Antivibration Equipment
BGEPG, BGEPM

Antivibration Gel Rubber Covered Type

RoHS10

HBGELP

2–Ø11
Ø45
Ø60
Ø76
M10
132 / 106
85
30 / 31 / 3
3 / 3 / 3
1.6
34

Section View
Slot
Silicone Gel
Ethylene Rubber

Material:
Body: Silicone
Coating: EPDM Synthetic Rubber Synthetic Rubber(EPDM Synthetic Rubber)
Attaching Portion: 304 Stainless Steel Equivalent
Accessories:
Hexagon Nut: 304 Stainless Steel Equivalent
Spring Washer: 304 Stainless Steel Equivalent
1 pc. each

kgf=N×0.101972

| Part Number		Working Load N{kgf}	Frequency Used Hz
Type	Nominal		
HBGELP	300	245.1–343.2 {25.0–35.0}	13~

Part Number Example | Part Number |
HBGELP300

Features
- Low frequency vibration absorbing gel with working load limit of 25–35 kgf (when 1pc. is used) and lowest usable frequency of 13 Hz.
- The main silicone gel body is ethylene rubber covered, and has good environmental resistance. Outdoor use is possible.

Load Deflection Data
HBGELP300 Load Deflection Measurement
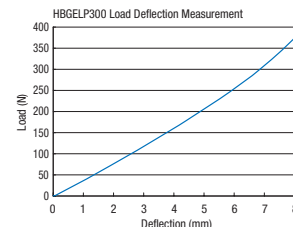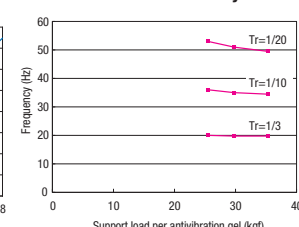
Vibration Transmissibility Data
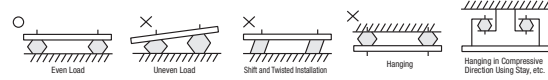
Tr=1/20
Tr=1/10
Tr=1/3

- Values in the graph are nominal for each type.
- The above values are not guaranteed values but an example of measured values.
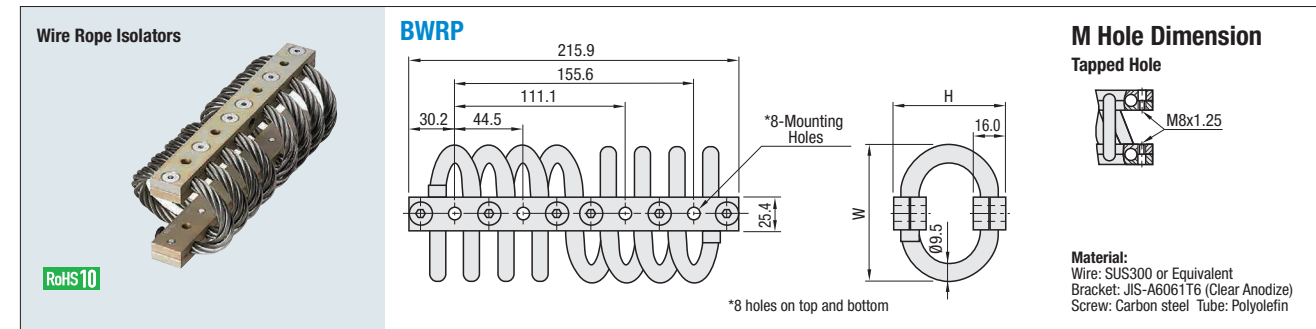
How to Mount
- Attach so that load is applied evenly.
- Antivibration Gels can be used only on perpendicular loads.
- Shifted or twisted installation drastically lowers performance and durability.
- Do not use in tension.

Even Load / Uneven Load / Shift and Twisted Installation / Hanging / Hanging in Compressive Direction Using Stay, etc.

Cautions
- The height becomes lower due to being compressed when loaded.
- Do not remove the rubber burrs around the studs as the burrs prevent separations of studs and antivibration materials.
- Antivibration Gel/Rubber are designed to be used in compression.

Wire Rope Isolators

Wire Rope Isolators

RoHS10

BWRP

215.9
155.6
111.1
30.2 / 44.5
25.4
*8-Mounting Holes
H
16.0
W
Ø9.5
*8 holes on top and bottom

M Hole Dimension
Tapped Hole
M8x1.25

Material:
Wire: SUS300 or Equivalent
Bracket: JIS-A6061T6 (Clear Anodize)
Screw: Carbon steel Tube: Polyolefin

| Part Number		H	W	Mass (kg)	Working Load N{kgf}	Spring Constant N/mm{kgf/mm}	Used Frequency Hz
Type	No.						
BWRP	1220M	71	84	1.1	800–1500 {81.6–153.1}	222 {22.6}	12~
	1240M	76	105	1.2	500–1000 {51–102}	148 {15.1}	12~
	1260M	89	108	1.3	350–700 {35.7–71.4}	118 {12.0}	12~
	1280M	108	140	1.5	200–400 {20.4–40.8}	56 {5.7}	12~

Part Number Example | Part Number |
BWRP1220M

#### Features of Wire Rope Isolators
- Vibration/shock absorber that converts vibration into heat energy using friction and deflection of wire ropes.
- Made of all metal components, it is more resistant to corrosion, environment and chemicals than other anti-vibration parts (gel, rubber) and usable in a broader operating temperature (-100–260°C).
- Vibration insulation effect is expected for low frequency as low as 12 Hz, to which it is difficult for rubber to respond to.
- Excellent in vibration reduction, with resonance magnification low at 3.5 (see vibration characteristic chart below).
- Superior in impact resistance, which does not belong to other anti-vibration parts. Best used for protection of transportable equipments (see vibration transmissibility chart).
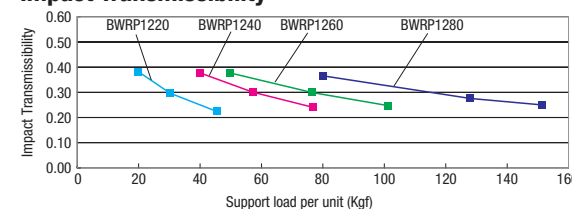
Vibration Transmissibility Data

BWRP1280 / BWRP1260 / BWRP1240 / BWRP1220
Tr=1/30 / Tr=1/10 / Tr=1/3
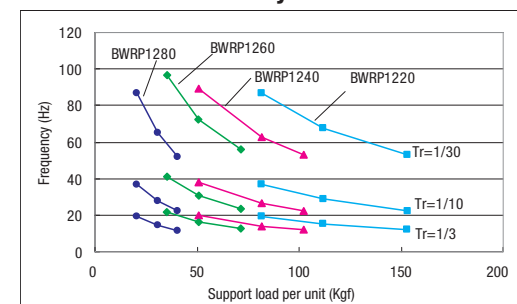
- The above values are not guaranteed values but an example of measured values.

Vibration Characteristics

Transmissibility vs Frequency ratio (input frequency / character frequency)
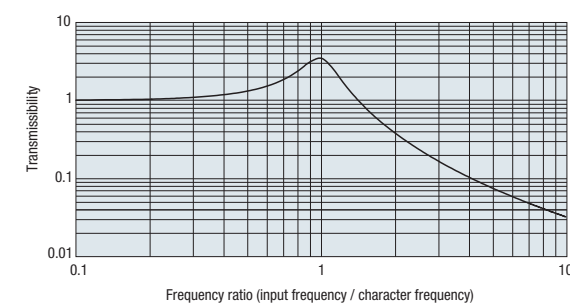
- The above values are not guaranteed values but an example of measured values.

Impact Transmissibility

BWRP1220 / BWRP1240 / BWRP1260 / BWRP1280

- The above values are not guaranteed values but an example of measured values.

Shock Parameters
- The figure to the left shows the impact transmissibility under a half-sine with a peak acceleration of 150 m/S² and a pulse duration of 11 ms.
- Under above condition, 60–75% of impact is expected to be absorbed.

Mounting Orientation

In Compression / 45° Inclined / In Shear / In Roll

Hanging Mount
- This product is not suitable for hanging mount. Please mount in compression.
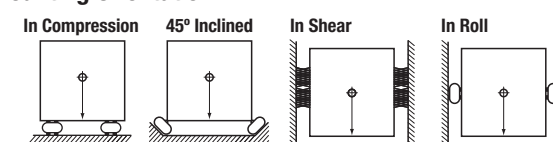
Application Example
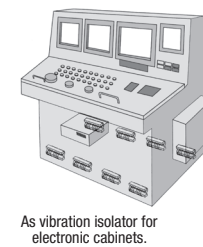
As vibration isolator for electronic cabinets
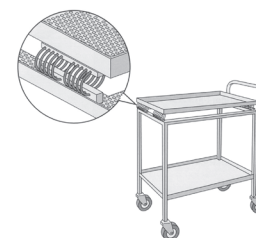
Recommended for vibration countermeasures for precision parts hand trucks.