156



# Applications

# Isolation of Vibrations From External Sources

 Isolates transmission of vibrations from external sources such as to precision measuring instruments, inspection equipment, and machining tools.

Suppression of Vibrations Transmitted to External Devices

 Suppresses vibrations from vibrations sources such as pumps and generators from being transmitted to external devices.



# Built-in Vibration Isolation Mounts (Midweight Type)

Material Plate: SPHC Bolt/nut: SWRCHIOR Surface Treatment Trivalent chrome plating

This mount is for incorporation into other equipment and uses expanded polyurethane vibration isolation material which offers excellent vibration isolation.

# Features

## This is able to isolate low-frequency vibrations

 Able to isolate low-frequency vibrations by using expanded polyurethane, which surpasses rubber-based vibration isolation materials.

Suitable for a Wide Range of Loads

Suitable for a wide range of loads from 100 N to 3,100 N.

# Wide Variety of Vibration Isolation Materials

 2 to 4 different types of vibration isolation materials are available for each size. This allows you to minimize differences in size even for different loads.

# Freely selectable combinations of connection methods

 For the midweight type, you can choose a combination of male and female screws.



#### Base Elements

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Clamp Units

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Clamping Parts

## Mechanical Parts

Machine Vises

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Surface Plates and
Measurement Instruments
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Index











\* The bolt for fixing should fit within the DP dimensions.

## Selection Points

Read the resonant frequencies of the mounts depending on the load from the table on the left and select the mount where the resonant frequency is 1/2 (0.5 times) or less the frequency of the vibration you want to isolate.

- 5 Sel If you want to isolate the vibrations from a pump running at 1,800 rpm with a load of 300 N on each mount
- The vibration frequency generated by the pump is 1,800 rpm/60 seconds = 30 Hz. Therefore, select mounts that have a resonant
- frequency of 30 Hz/2 = 15 Hz or less. The BBM75D013 (resonant frequency of approx. 13 Hz with a 30 N load) or BBI 50D030 (resonant
- 13 Hz with a 30 N load) or BBL50D030 (resonant frequency of approx. 15 Hz with a 300 N load) are suitable for this case.

# Characteristic Data





Jig Set-up Systems (Q-lock)

Base Elements

Clamp Units Clamping Parts

Machine Vises

Surface Plates and Measurement Instruments

Index

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#### Specifications

Order No.	No.	Vibration Isolation Material Color	Туре	Size [mm]					Maximum	Resonant frequency	Target Vibration Frequency	Vibration Isolation Material Deformation	Weight	ight			
				А	Н	d (Coarse Thread)	L	DP	N	[Hz]*1	[Hz]*2	[mm]*3	(g)				
109414	BBM50D013NB	Dark yellow	Bolt Nut	53	34.0	M8 × 1.25	30.5	8	100 - 240	11	22 -	2	250				
109415	BBM50D030NB	Dark green							240 - 550	10	21 -	3	260				
109416	BBM50D060NB	Dark blue							480 - 1000	10	21 -	3	270				
109417	BBM50M097NB	Dark magenta							650 - 1400	10	20 -	4	270				
109418	BBM75D013NB	Dark yellow		78	46.5	M12 × 1.75	50.5	12	250 - 560	9	17 -	4	590				
109419	BBM75D030NB	Dark green							560 - 1200	8	17 -	4	620				
109420	BBM75D060NB	Dark blue							1000 - 2400	8	17 -	4	650				
109421	BBM75D130NB	Purple							1300 - 3100	9	18 -	4	670				
109422	BBM50D013BB	Dark yellow	Bolt Bolt	53	34.0	M8 × 1.25	30.5	_	100 - 240	11	22 -	2	260				
109423	BBM50D030BB	Dark green							240 - 550	10	21 -	3	270				
109424	BBM50D060BB	Dark blue							480 - 1000	10	21 -	3	280				
109425	BBM50M097BB	Dark magenta							880 - 1900	10	20 -	4	280				
109426	BBM75D013BB	Dark yellow		78	46.5	M12 × 1.75	50.5	_	250 - 560	9	17 -	4	630				
109427	BBM75D030BB	Dark green							560 - 1200	8	17 -	4	660				
109428	BBM75D060BB	Dark blue							1000 - 2400	8	17 -	4	690				
109429	BBM75D130BB	Purple							1300 - 3100	9	18 -	4	720				
109430	BBM50D013NN	Dark yellow	w e Nut Nut nut	53	34.0	M8 × 1.25	—	8	100 - 240	11	22 -	2	240				
109431	BBM50D030NN	Dark green							240 - 550	10	21 -	3	250				
109432	BBM50D060NN	Dark blue							480 - 1000	10	21 -	3	260				
109433	BBM50M097NN	Dark magenta							880 - 1900	10	20 -	4	260				
109434	BBM75D013NN	Dark yellow		78	46.5	M12 × 1.75	_	12	250 - 560	9	17 -	4	540				
109435	BBM75D030NN	Dark green							560 - 1200	8	17 -	4	580				
109436	BBM75D060NN	Dark blue							1000 - 2400	8	17 -	4	610				
109437	BBM75D130NN	Purple							1300 - 3100	9	18 -	4	630				



 If the resonant frequency of the mount is 1/√2 (0.7) times or higher than the vibration frequency you want to eliminate, damping effect will not act and the vibrations will be amplified. The mount should be used loaded under compression.

It cannot be used with a tensile or shear load. (Refer to the examples above)

You should also ensure that the mounts are not loaded with tensile or shear loads during transport and storage. The mount may become damaged if subjected to tensile or shear loads.

#### Usage Examples

