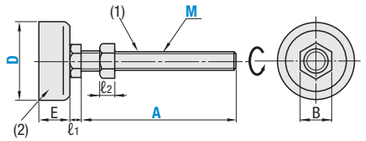
Anti-Vibration Mounts

Light Load / Heavy Load Anti-Vibration Pads

Leveling Mounts – Light Load Anti-Vibration Pad

RoHS10

FBF
FBFM
FBFS
Stainless Steel



Type	(1) Body		(2) Rubber Part	
	Material	Surface Treatment	Material (Color)	Hardness
FBF	1018 Carbon Steel or Equivalent	Trivalent Chromate	Chloroprene Rubber (Black)	Hs70
FBFM			Non-Staining Chloroprene Rubber	
			Electrically Conductive Rubber (Black)	
FBFS	304 Stainless Steel	—	Chloroprene Rubber (Black)	

*Electrically conductive rubber has an identification mark on the back side.

Part Number Type	D	M (Coarse)	A	FBFM Rubber Material	ℓ_1	ℓ_2	E	B	Vertical Load Range (kN)	Static Compression Spring Constant (kN/mm)
FBF FBFM FBFS Stainless Steel	33	8	30 50	C Non-Staining Chloroprene Rubber, Gray	4.5	6.5	12	13	0.4–0.59	0.49±15%
		10	30 50 70		6.0	8.0		17		
	40	10	30 50 70				15		0.44–0.88	0.69±15%
		12	50 70 100	D Conductive Rubber, Black	8.0	10.0		19		

Rubber type is not selectable for FBF and FBFS. (Chloroprene rubber only)

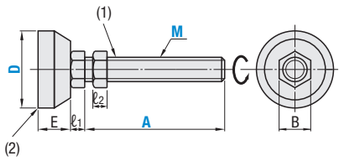
Part Number Example

Part Number	-	M	-	A	-	Rubber Material
FBF33	-	10	-	50	-	
FBFM40	-	12	-	100	-	C

Part Number Type	D	M (Coarse)	Available Types A30 FBF	A30 FBFM	A30 FBFS	A50 FBF	A50 FBFM	A50 FBFS	A70 FBF	A70 FBFM	A70 FBFS	A100 FBF	A100 FBFM	A100 FBFS
FBF FBFM FBFS Stainless Steel	33	8	•	•	•	•	•	•	—	—	—	—	—	—
		10	•	•	•	•	•	•	•	•	•	—	—	—
	40	10	•	•	•	•	•	•	•	•	•	—	—	—
		12	—	—	—	•	•	•	•	•	•	•	•	•

Leveling Mounts – Heavy Load Anti-Vibration Pad

FBR
FBRM
FBRS
Stainless Steel



Type	(1) Body		(2) Rubber Part	
	Material	Surface Treatment	Material (Color)	Hardness
FBR	1018 Carbon Steel or Equivalent	Trivalent Chromate	Chloroprene Rubber (Black)	Hs70
FBRM			Non-Staining Chloroprene Rubber	
			Electrically Conductive Rubber (Black)	
FBRS	304 Stainless Steel	—	Chloroprene Rubber (Black)	

*Conductive rubber has an identification mark on the back side.

Part Number Type	D	M (Coarse)	A	FBRM Rubber Material	ℓ_1	ℓ_2	E	B	Vertical Load Range (kN)	Static Compression Spring Constant (kN/mm)
FBR FBRM FBRS Stainless Steel	60	12	70 100 130	C Non-Staining Chloroprene Rubber, Gray D Conductive Rubber, Black	8	10	25	19	1.47–2.94	2.94±15%
		16	70 100 130 150 180		10	13		24		
		20	100 130 150 (180)		13	16		30		
	70	16	70 100 (130) 150 (180)		10	13	29	24	2.45–4.41	4.41±15%
		20	100 (130) (150) (180)		13	16		30		
	90	16	(70) 100 130 (150) (180)		10	13	32	24	2.94–6.37	6.37±15%
		20	100 130 (150) (180)		13	16		30		
FBR FBRM	100	16	70 100 130 150 180		10	13	35	24	3.43–6.86	7.35±15%
		20	100 130 150 180		13	16		30		
	120	16	70 100 150 180		10	13	37	24	5.88–11.76	10.29±15%
		20	100 130 150 180		13	16		30		

A dimension in ( ) are not available for FBRS. M12 is available for FBR only. Conductive rubber type is not selectable for FBR and FBRS. (Chloroprene rubber only) kgf (Load)=Nx0.101972

Part Number Example

Part Number	-	M	-	A	-	Rubber Material
FBR60	-	16	-	100	-	
FBRM60	-	16	-	100	-	C

Part Number Type	D	M (Coarse)	Available Types A70 FBF	A70 FBRM	A70 FBRS	A100 FBF	A100 FBRM	A100 FBRS	A130 FBF	A130 FBRM	A130 FBRS	A150 FBF	A150 FBRM	A150 FBRS	A180 FBF	A180 FBRM	A180 FBRS
FBR FBRM FBRS Stainless Steel	60	12	•	•	—	•	•	—	•	•	—	—	—	—	—	—	—
		16	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		20	—	—	—	•	•	•	•	•	•	•	•	•	•	•	•
	70	16	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		20	—	—	—	•	•	•	•	•	•	•	•	•	•	•	•
	90	16	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		20	—	—	—	•	•	•	•	•	•	•	•	•	•	•	•
FBR FBRM	100	16	•	•	—	•	•	—	•	•	—	•	•	—	•	•	—
		20	—	—	—	•	•	•	•	•	—	•	•	—	•	•	—
	120	16	•	•	—	•	•	—	—	•	—	•	•	—	•	•	—
		20	—	—	—	•	•	—	•	•	—	•	•	—	•	•	—

Anti-Vibration Mounts

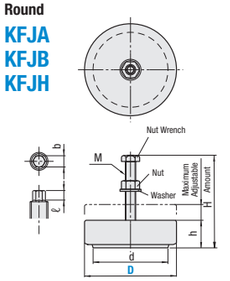
Standard / Economy

Anti-Vibration Mounts – Standard / Economy

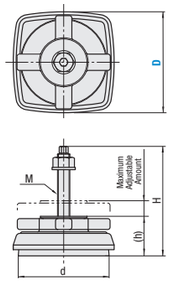
RoHS10

Type	Housing Material	Housing Surface Treatment (Color)	Bolt Material	Bolt Surface Treatment	Antivibration Rubber Material (Color)	Antivibration Rubber Hardness
KFJA KFJB KFJH	Low Carbon Steel	Baked Melamine Finish (Black)	1018 Carbon Steel or Equivalent	Trivalent Chromate	Chloroprene Rubber (Black)	Shore A75 (Shore A55 for KFJA only)
KFJM	Cast Iron Class No.35					

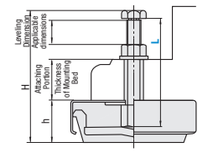
Round
KFJA
KFJB
KFJH



Square
KFJM



Application Example



Type	Part Number Type	Part Number D	L	Vertical Load Range (kN) Min.	Vertical Load Range (kN) Max.	H	(H)	d	M	Tip Dimension of Screw B	Tip Dimension of Screw ℓ	Max Adjustable Amount (mm)	Mounting Flange Thickness (mm)	Spring Constant (kN/mm)
Round	KFJA Light Load	100	90 120 200	1.55	3.1	L+31	39	78	12	8	7.5	18	L-48	1.2
		140		3.1	6.3	L+37	47	114	16	10	8.5	19	L-55	2.4
		190	120 200	6.3	12.5	L+44	56	158	20	12		25	L-69	4.8
	KFJB Medium Load	100	90 120 200	3.15	6.3	L+28	39	78	12	8	7.5	18	L-51	4.6
		140		6.3	12.5	L+37	47	114	16	10	8.5	19	L-55	9.2
		190	120 200	12.5	25.0	L+44	56	158	20	12		25	L-69	18.3
	KFJH Heavy Load	100	90 120 200	7.5	15.0	L+17	35	78	12	8	7.5	22	L-62	23.0
		140		15.0	30.0	L+21	42	114	16	10	8.5	24	L-71	46.0
		190	120 200	20.0	40.0	L+28	54	158	20	12		27	L-84	62.0
Square	KFJM	110	85 200	1.4	2.8	L+30	47	97	12	8	7.5	15	L-40	3.7
		130	110 200	2.8	6.0	L+31	51	117	16	10	8.5	20	L-50	7.4
		160	110 200	6.0	12.0	L+41	65	146				24	L-55	14.7
		200	130 220	12.0	18.0	L+47	76	185	20	12		27	L-65	23.0

Part Number Example

Part Number	-	L
KFJH140	-	120

How to Select

(1) Calculate applied load per antivibration mount.
Ex) When an object of 40 KN load is supported by 4 supporting points
40 kN/4 = 10 kN

(2) Calculate frequency for supported object

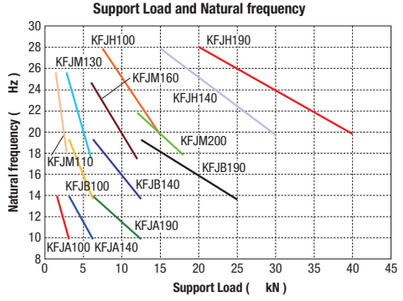
As the frequency is the number of vibration per second,
Ex) when motor speed is 3,000 rpm
3,000/60(s)=50 Hz

Select an antivibration mount with natural frequency less than 1/2 the frequency of vibration sources (motors, etc.).
50/2=25 Hz

If the vibration is square root of 2x or less, it is within the range of resonance. Please select again.

(3) The natural frequency can be found by following along the mount's applied load axis to reach the intersections with the graph lines of respective part numbers.
Ex) In the case of motor with 10 KN and 50 Hz, when KFJM160 is selected, the natural frequency will be 20 Hz. In the case KFJH100 is selected, the natural frequency will be 25 Hz.

Support Load and Natural frequency

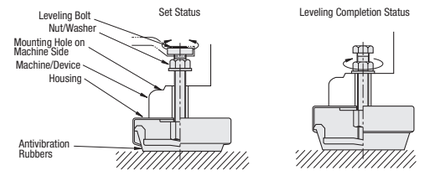


Installation Method

1. Jack up the machines and devices (sling up) to place the Mounts under the holes. (For KFJM type, place a level washer on the Mounts, and lower the machines and devices.)
2. Insert leveling bolt after attaching the nut and washer into the mount from top side.
3. Turn the leveling bolt with a wrench to adjust the level of the machine. (For KFJM turn the handle with a tool to adjust level of the machine.)
4. After horizontal level has been obtained, tighten the nut and washer.

To prevent concentration of load, adjust each mount in sequence in small amounts to level.
For KFJM, the leveling will be smoother if grease is applied on the contact surface of the handle and the level washer.

KFJA Type
KFJB
KFJH



KFJM Type