

KINETICS®

Light-Duty Spring Vibration Isolation Hangers Model SHAA and SHAB

Application

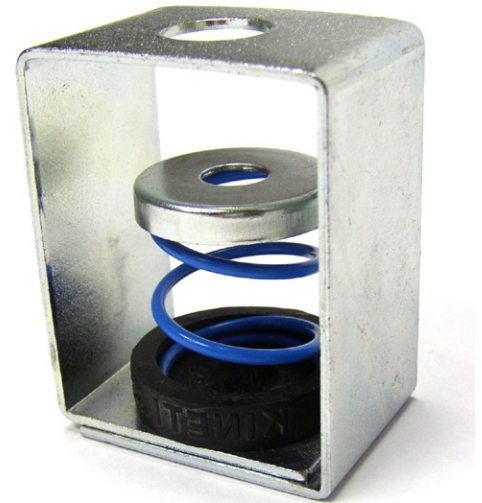
- Fan coil boxes
- Light-duty fans
- Piping
- Duct work

With lighter weight construction materials used in office buildings, schools and hospitals today, it does not take much energy to generate annoying vibration problems. The SHAA and SHAB rubber and spring vibration isolation hangers are designed to provide high-efficiency isolation from structure-borne vibration for lighter point load applications.

It is important the spring is adequately loaded to achieve the desired natural frequency. The SHAA provides 1" (25 mm) deflection at loads of 17 to 71 pounds (8 to 32 kg) and the SHAB provides deflection of 0.5" (13 mm) under loads of 15 to 70 pounds (7 to 32 kg).

The SHAA and SHAB vibration isolation hangers are complete with molded neoprene rubber bottom caps which hold the spring in place, provide protection against short-circuiting due to rod misalignment, and isolate against high frequency vibration from fan blade passage noise.

These vibration isolation hangers are shipped completely assembled and are designed to be used with threaded rod through 3/8" (10 mm) in diameter.



Description

Model SHAA and SHAB spring hangers consist of freestanding, laterally stable steel springs in series with a molded elastomeric element assembled into a stamped and welded hanger bracket.

The hanger brackets are zinc plated and incorporate color-coded spring elements. To assure stability, the spring element has a minimum lateral spring stiffness of 1.0 times the rated vertical stiffness. They will carry a 500% overload without failure.

The spring hangers are available in deflections from 0.5" to 1" (13 mm to 25 mm) and in capacities from 15 to 71 pounds (7 to 32 kg).

Type	Standard Ratings				Spring Coil					Dimensions							
	Load		Deflection		Color	Free HT.		O.D.		H		W		A		Dmax	
	lbs	kg	in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
SHAA-1-17	17	8	0.97	25	Blue	2.50	64	1.23	31	3.97	101	2.15	55	1.50	38	0.38	10
SHAA-1-25	25	11	1.04	26	Black	2.50	64	1.23	31	3.97	101	2.15	55	1.50	38	0.38	10
SHAA-1-45	45	20	1.00	26	Brown	2.50	64	1.23	31	3.97	101	2.15	55	1.50	38	0.38	10
SHAA-1-55	55	25	0.92	23	Orange	2.50	64	1.23	31	3.97	101	2.15	55	1.50	38	0.38	10
SHAA-1-71	71	32	0.82	21	Red	2.50	64	1.23	31	3.97	101	2.15	55	1.50	38	0.38	10
SHAA-1-90	90	41	0.78	20	Beige	2.50	64	1.23	31	3.97	101	2.15	55	1.50	38	0.38	10
SHAA-1-130	130	59	0.61	15	White	2.50	64	1.23	31	3.97	101	2.15	55	1.50	38	0.38	10
SHAA-1-270	270	122	0.50	13	Purple	2.50	64	1.23	31	3.97	101	2.15	55	1.50	38	0.38	10
SHAB-15	15	7	0.47	12	Blue	1.50	38	1.23	31	2.72	69	2.15	55	1.50	38	0.38	10
SHAB-30	30	14	0.56	14	Gray	1.50	38	1.23	31	2.72	69	2.15	55	1.50	38	0.38	10
SHAB-50	50	23	0.46	12	Silver	1.50	38	1.23	31	2.72	69	2.15	55	1.50	38	0.38	10
SHAB-70	70	32	0.45	11	Green	1.50	38	1.23	31	2.72	69	2.15	55	1.50	38	0.38	10

Specifications

Vibration isolators for suspended equipment with minimum static deflection requirement exceeding 0.3" (7.5 mm), and where both high and low frequency vibrations are to be isolated, shall be hangers consisting of a laterally stable spring in series with an elastomer spring bottom cap and assembled in a stamped and welded steel bracket.

The stamped and welded bracket shall be finished with an electro-zinc plating. The elastomer insert shall be molded from oilresistant compounds and shall be selected to operate within its published load range.

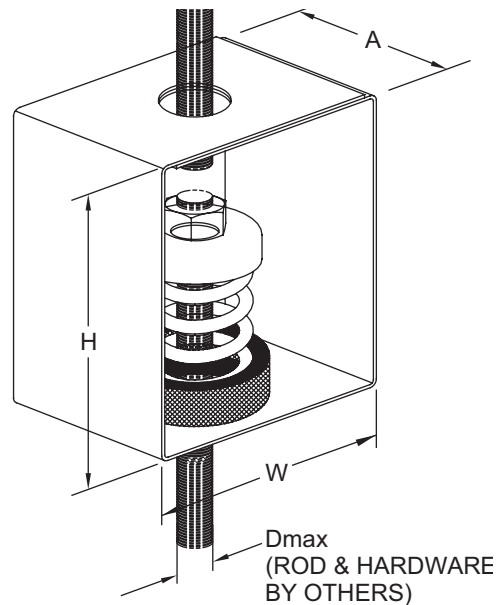
The spring element shall have a minimum lateral stiffness of 1.0 times the rated vertical stiffness.

Springs shall be color coded or otherwise identified to indicate load capacity.

The hanger bracket shall be designed to carry a 500% overload without failure.

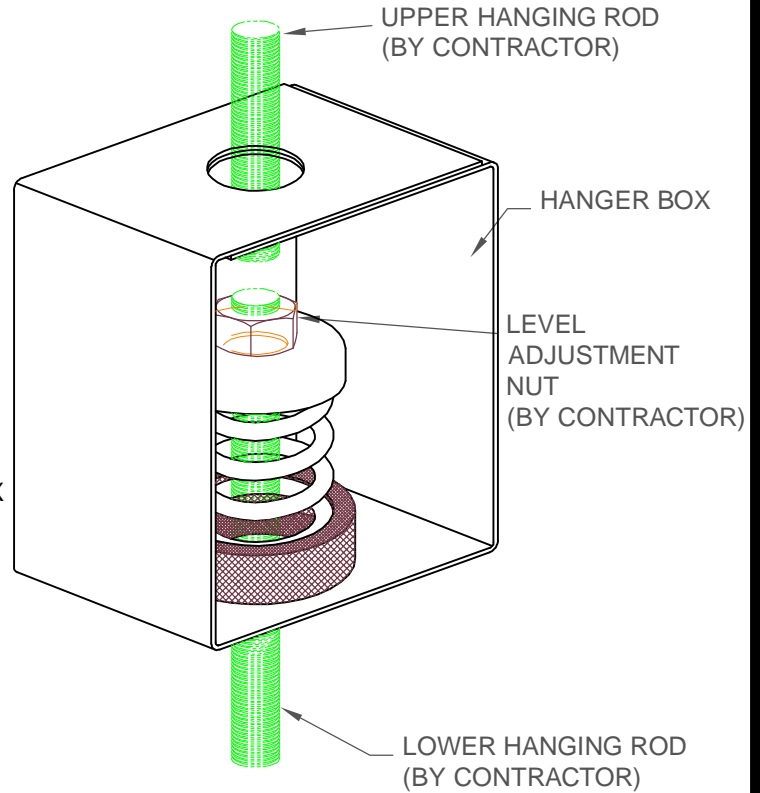
Isolation hangers shall be selected by the manufacturer for each specific application to comply with deflection requirements as shown on the Vibration Isolation Schedule or as indicated on the project documents.

The combination isolation hanger assembly with neoprene insert shall be Model SHAA or SHAB, as manufactured by Kinetics Noise Control, Inc.

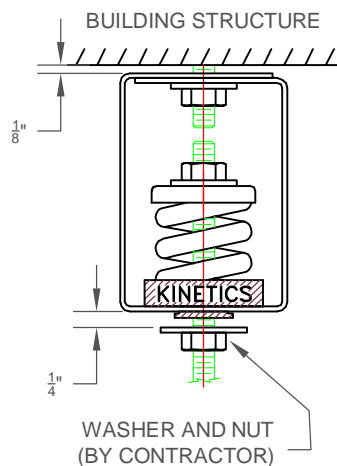


INSTALLATION INSTRUCTIONS FOR SHAA & SHAB HANGER

- 1) LOCATE EACH HANGER INTO POSITION BASED ON SUBMITTAL DRAWING USING COLOR CODED SPRINGS AS IDENTIFICATION.
- 2) ATTACH HANGER BOX TO UPPER HANGING ROD AS SHOWN IN SKETCH.
- 3) ATTACH EQUIPMENT TO LOWER HANGING ROD AS SHOWN IN SKETCH.
- 4) IF NECESSARY, ADJUST EQUIPMENT LEVEL BY THE LEVEL ADJUSTMENT NUT ON THE TOP OF THE COIL SPRING AS SHOWN IN THE SKETCH.
- 5) CHECK TO ENSURE ADEQUATE ALIGNMENT BETWEEN THE LARGE HOLE IN THE HANGER BOX (AT THE BASE OF THE SPRING) AND THE LOWER HANGING ROD.



FOR SEISMIC APPLICATIONS



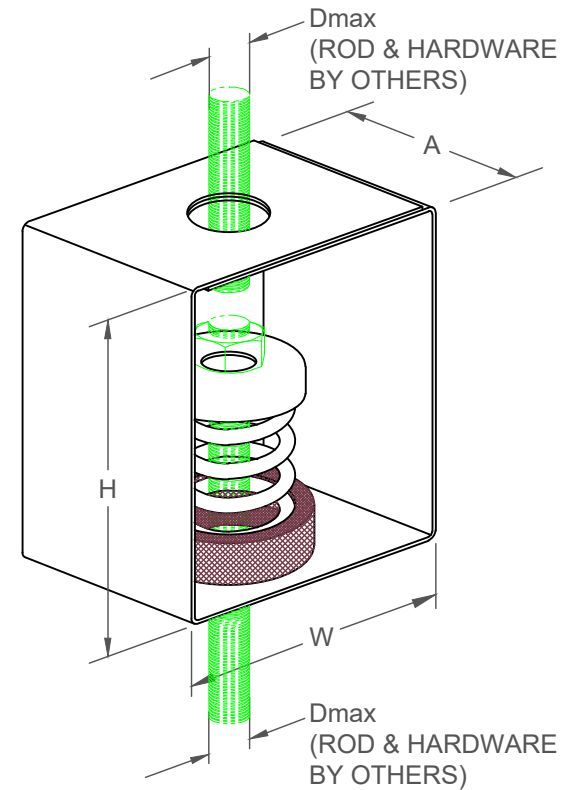
- A) HANGER BOX MUST BE ATTACHED WITH APPROX. $\frac{1}{8}$ " CLEARANCE BETWEEN HANGER BOX AND BUILDING STRUCTURE.
- B) INCLUDE AN ADDITIONAL WASHER AND NUT ON THE LOWER HANGER ROD BELOW THE HANGER BOX.
- C) THE WASHER O.D. MUST BE LARGER THAN THE ROD HOLE IN THE BOTTOM OF THE HANGER BOX.
- D) WHEN THE SYSTEM IS AT OPERATING WEIGHT, ADJUST THE LOWER NUT UNTIL THE WASHER IS $\frac{1}{4}$ " OFF THE BOTTOM OF THE HANGER BOX.

SHAB 13 mm DEFLECTION ISOLATION HANGERS

S-I UNITS (mm AND kg)

TYPE	H	W	A	Dmax
15/70	69	55	38	10

STANDARD RATINGS				SPRING COIL		
TYPE	SIZE	LOAD	DEFL.	COLOR	FREE HT.	O.D.
SHAB	15	7	12	BLUE	38	31
SHAB	30	14	14	GRAY	38	31
SHAB	50	23	12	SILVER	38	31
SHAB	70	32	11	GREEN	38	31



SPECIFICATIONS:

- POWDER COATED SPRING ELEMENTS.
- BRACKETS AND HARDWARE ARE BRIGHT ZINC PLATED.
- ISOLATION HANGERS HAVE A TYPICAL OVERLOAD OF 50%.
- ISOLATION HANGERS HAVE A MINIMUM K_x/K_y RATIO OF 1.2.
- SPRING ELEMENTS ARE SAFE AT SOLID LOADING.
- HANGER BRACKETS WILL CARRY (5) TIMES OVERLOAD WITHOUT FAILURE.
- ISOLATION HANGERS HAVE A NEOPRENE BOTTOM SPRING CUP.



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Model:
SHAB
15/70

By:	BB
Date:	04/29/05
Revised:	12/07/05 / BB

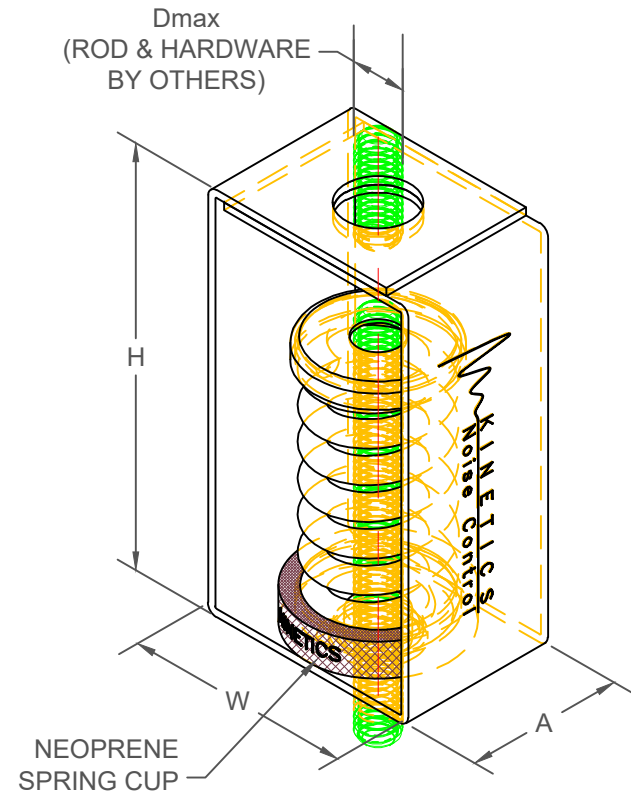
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METRIC

SHAA ISOLATION HANGERS

S-I UNITS (mm AND kg)

TYPE	H	W	A	DMAX
17/270	101	55	38	10

STANDARD RATINGS				SPRING COIL			OVERLOAD @ RATED DEFLECTION %
				COLOR	FREE HT.	O.D.	
TYPE	SIZE	LOAD	DEFL.				
SHAA	17	8	25	BLUE	64	31	91
SHAA	25	11	26	BLACK	64	31	55
SHAA	45	20	26	BROWN	64	31	58
SHAA	55	25	23	ORANGE	64	31	56
SHAA	71	32	21	RED	64	31	52
* SHAA	90	41	20	BEIGE	64	31	47
* SHAA	130	59	15	WHITE	64	31	40
* SHAA	270	122	13	PURPLE	64	31	40



SPECIFICATIONS:

- SPRING ELEMENTS ARE POWDER COATED.
- LOAD PLATES AND BRACKETS ARE BRIGHT ZINC PLATED.
- ISOLATION HANGERS HAVE A TYPICAL OVERLOAD OF 50% TO SOLID EXCEPT AS INDICATED (*).
- SPRING ELEMENTS ARE SAFE AT SOLID LOADING.
- HANGER BRACKETS WILL CARRY (5) TIMES OVERLOAD WITHOUT FAILURE.
- ISOLATION HANGERS HAVE A NEOPRENE BOTTOM SPRING CUP.



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Model:
**SHAA
-17/270**

By: BB
Date: 12/07/05
Revised: 02/13/17/BB

Drawing No:
**S-03.42-11
METRIC**