



Tomahawk



Spring Hangers

3-inch Rated Deflection

- SH-E
- SHDD-E

SH-E and its **SHDD-E** outgrowth are Tomahawk's design of 3-inch (75 mm) rated deflection spring hanger series for exceptional vibration isolation efficiency than that of the normal 1-inch (25mm) and 2-inch (50mm) types.

Each spring of SH-E50 to SH-E240*(Fig.1) (also their SHDD-E's) is mounted in rubber cup, with projecting bushing passing through and holding firm in place with grommet to the lower support washer of hanger frame. The rubber cup serves as noise and vibration damper and prevents "short-circuiting" of hanger rod with hanger frame. A steel spring cap will carry the load to the spring. The hanger frame is constructed from thick gauge steel plates with large load bearing safety factor embedded in the design. SH-E300 (also SHDD-E300) onwards will be steel frame with a cast iron spring cup, with a big centre hole for hanger rod to pass through, a color coded epoxy painted spring, and spring cap (cast iron or steel.)*(Fig.2)

For lateral stability the criteria of the ratio, spring outside diameter to loading operating height is equal to or greater than 0.80 is being adhered to and the spring is optimally designed for safe load stress and a 50% overload capacity. *(see note)

Combination of Spring & Hanger (Neoprene) element

SHDD-E is the combination of **SH-E** spring hanger and Duo-Deflection hanger (neoprene) element respectively. The Duo-Deflection hanger element is 0.25 inch to 0.3 inch average rated and helps isolate most of noise and vibration above 900 RPM (15Hz) range while the spring is isolating main range of disturbing frequencies of vibration. Recommended in more critical applications where both 1 and 2-inch deflection types is not meeting higher performance.

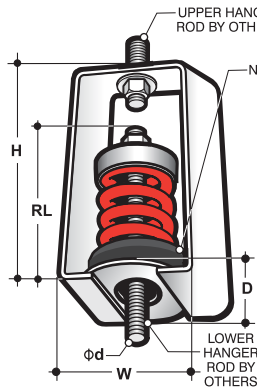


Fig. 1
SH-E30 to SH-E100

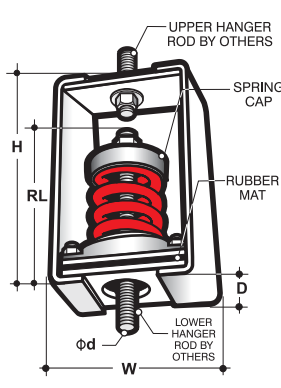


Fig. 2
Models SH-E150 and onwards

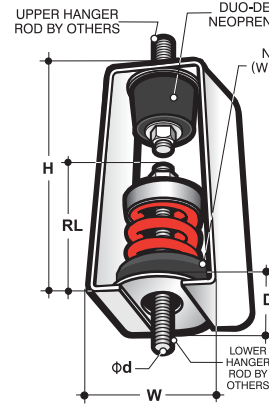


Fig. 1
SHDD-E30 to SHDD-E100

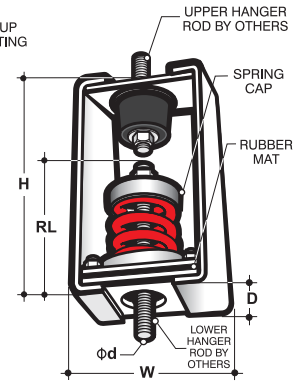


Fig. 2
Models SHDD-E150 and onwards

MODEL	IMPERIAL UNITS				COLOR CODE	METRIC UNITS				DIMENSION (mm)				
	Rated Load (lbs.)	Rated Defl. (in.)	Total Rated Defl. (in.)	Spring Rate (lbs./in.)		Rated Load (kg)	Rated Defl. (mm)	Total Rated Defl. (mm)	Spring Rate (kg/mm)	H	W	D	RL*	φ d
SH-E50	50	3.20		15.63	red	22.69	81.3		0.28					
SH-E75	75	3.10		24.19	yellow	34.03	78.7		0.43					
SH-E100	100	3.00		33.33	black	45.37	76.2		0.60					
SH-E150	150	3.00	-	50.00	orange	68.06	76.2	-	0.89	270	115	110	200	M16
SH-E200	200	3.00		66.67	green	90.74	76.2		1.19					
SH-E240	240	3.00		80.00	dark blue	108.89	76.2		1.43					
SH-E300	300	3.00		100.00	white	136.12	76.2		1.79					
SH-E400	400	3.00		133.33	dark green	181.49	76.2		2.38					
SH-E450	450	3.00		150.00	yellow	204.17	76.2		2.68					
SH-E500	500	3.00		166.67	red	226.86	76.2		2.98					
SH-E600	600	3.00	-	200.00	black	272.23	76.2	-	3.57					
SH-E700	700	3.00		233.33	grey	317.60	76.2		4.17					
SH-E800	800	3.00		266.67	green	362.98	76.2		4.76					
SH-E1150	1150	3.00		383.33	orange	521.78	76.2		6.85					
SH-E1400	1400	3.00		466.67	black	635.21	76.2		8.34					
SH-E1600	1600	3.00		533.33	brown	725.95	76.2		9.53					
SH-E1900	1900	3.00		633.33	dark green	862.07	76.2		11.31					
SH-E2500	2500	3.00	-	833.33	blue	1134.30	76.2	-	14.89	373	212	192	280	M24
SH-E2800	2800	3.00		933.33	red	1270.42	76.2		16.67					
SH-E3000	3000	3.00		1000.00	dark blue	1361.16	76.2		17.86					
SH-E3500i	3500	3.00		1166.67	d.blue+ yellow	1588.02	76.2		20.84					
SH-E4000	4000	3.00		1333.33	brown	1814.88	76.2		23.82					
SH-E4500	4500	3.00		1500.00	black	2041.74	76.2		26.79					
SH-E5000	5000	3.00	-	1666.67	brown	2268.60	76.2	-	29.77	450	250	222	320	M27
SH-E5500	5500	3.00		1833.33	tan	2495.46	76.2		32.75					
SHDD-E50	50	3.20	3.45	15.63	red	22.69	81.3	87.6	0.28					
SHDD-E75	75	3.10	3.35	24.19	yellow	34.03	78.7	85.1	0.43					
SHDD-E100	100	3.00	3.25	33.33	black	45.37	76.2	82.6	0.60					
SHDD-E150	150	3.00	3.25	50.00	orange	68.06	76.2	82.6	0.89	310	115	110	200	M16
SHDD-E200	200	3.00	3.25	66.67	green	90.74	76.2	82.6	1.19					
SHDD-E240	240	3.00	3.25	80.00	dark blue	108.89	76.2	82.6	1.43					
SHDD-E300	300	3.00	3.25	100.00	white	136.12	76.2	82.6	1.79					
SHDD-E400	400	3.00	3.25	133.33	dark green	181.49	76.2	82.6	2.38					
SHDD-E450	450	3.00	3.25	150.00	yellow	204.17	76.2	82.6	2.68					
SHDD-E500	500	3.00	3.25	166.67	red	226.86	76.2	82.6	2.98					
SHDD-E600	600	3.00	3.25	200.00	black	272.23	76.2	82.6	3.57					
SHDD-E700	700	3.00	3.25	233.33	grey	317.60	76.2	82.6	4.17					
SHDD-E800	800	3.00	3.25	266.67	green	362.98	76.2	82.6	4.76					
SHDD-E1150	1150	3.00	3.25	383.33	orange	521.78	76.2	82.6	6.85					
SHDD-E1400	1400	3.00	3.25	466.67	black	635.21	76.2	82.6	8.34					
SHDD-E1600	1600	3.00	3.25	533.33	brown	725.95	76.2	82.6	9.53					
SHDD-E1900	1900	3.00	3.25	633.33	dark green	862.07	76.2	82.6	11.31					
SHDD-E2500	2500	3.00	3.25	833.33	blue	1134.30	76.2	82.6	14.89	400	212	192	280	M24
SHDD-E2800	2800	3.00	3.25	933.33	red	1270.42	76.2	82.6	16.67					
SHDD-E3000	3000	3.00	3.25	1000.00	dark blue	1361.16	76.2	82.6	17.86					
SHDD-E3500i	3500	3.00	3.25	1166.67	d.blue+ yellow	1588.02	76.2	82.6	20.84					
SHDD-E4000	4000	3.00	3.25	1333.33	brown	1814.88	76.2	82.6	23.82					
SHDD-E4500	4500	3.00	3.25	1500.00	black	2041.74	76.2	82.6	26.79					
SHDD-E5000	5000	3.00	3.25	1666.67	brown	2268.60	76.2	82.6	29.77	460	250	222	320	M27
SHDD-E5500	5500	3.00	3.25	1833.33	tan	2495.46	76.2	82.6	32.75					

*RL : Rod length of lower rod φ d : Recommended rod diameter