

Helical Coil Wire Rope Mounts (Cavoflex)

These mounts are a development of the original helical coil mounts developed in the USA in the 1950s. Originally designed for Military use, these are now much more widespread in their application and are still used by NATO and other Defence organisations.

Cavoflex are commonly used for both shock and vibration management, and excel in both requirements.

Our standard range covers wire diameters from 1.5 to 32mm, however bespoke options can be made.

Standard products have been heavily tested to generate performance data. Due to the non-linear nature of the product performance, actual vibration and shock results are much more reliable than theoretical models.



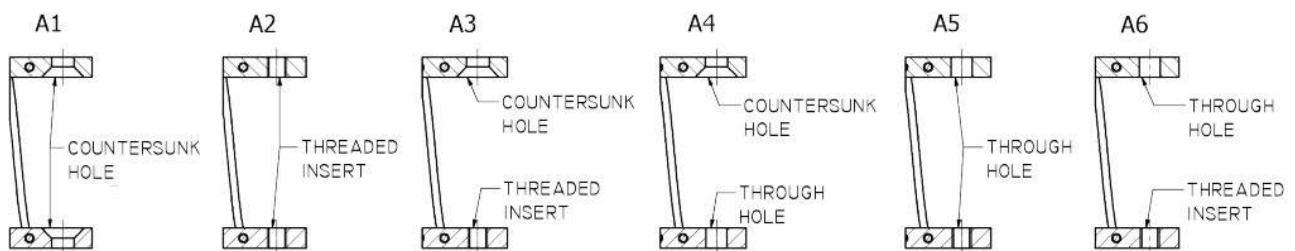
Key features across this range include:

- Multi-direction anti-vibration and anti-shock
- Exceptional reliability, long life, and low aging
- High damping; transmissibility at resonance is lower than 3.
- Non magnetic and corrosion resistant
- Temperature range of -100°C to +260°C
- Mounts are typically offered with 8 or 10 wire rope loops, however fewer loops are available. If only 4 loops are used, shorter mounting bars are also used.

Materials:

- Cable: Stainless steel (316)
- Bars: Aluminium Alloy (6000) with SURTEC 650 surface treatment.
 - Stainless steel is optional
- Screws and inserts: Stainless steel

Helical Coil Wire Rope Mounts – Mounting options



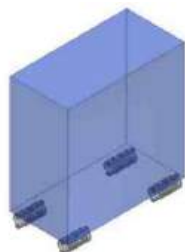
All products must be specified with fixtures which are added to the end of the product number (e.g. “-A4”):

- A1: Countersunk holes on both sides.
- A2: Threaded inserts on both sides.
- A3: Countersunk holes on one side, threaded inserts on the other.
- A4: Countersunk holes on one side, through-holes on the other.
- A5: Through-holes on both sides.
- A6: Through-holes on one side, threaded inserts on the other.

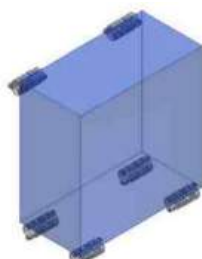
Helical Coil Wire Rope Mounts – Basic model selection

We have given the default Cavoflex models for certain simple scenarios on this page. Model selection is for guidance only, please contact us with any enquiries or alternative scenarios, if required.

These mounts should be loaded in compression either with or without stabilising mounts, as per the diagrams below. These assume that shock or vibration loads are in line with the weight of the isolated equipment (vertical).



Base mounting



Base mounting with stabilisers

Cavoflex for Shock Management			
Load per mount (Kg)		Suggested Mount*	
Min	Max	2.0 m/s	3.0 m/s
0.5	1	V-H-15-40	V-H-25-46
1	2	V-H-25-43	V-H-30-52
2	3	V-H-30-52	V-H-40-64
3	5	V-H-40-53	V-H-50-80
5	7	V-H-50-80	V-H-60-96
7	10	V-H-60-90	V-H-70-108
10	15	V-H-70-90	V-H-80-109
15	21	V-H-80-92	V-H-100-108-4S
21	28	V-H-100-105-4S	V-H-100-108-6S
28	37	V-H-100-105-6S	V-H-100-108
37	49	V-H-100-105	V-H-130-133-4S
49	66	V-H-130-105-4S	V-H-130-133-6S
66	87	V-H-130-105-6S	V-H-130-133
87	110	V-H-130-105	V-H-160-135-6S
110	150	V-H-160-120-4S	V-H-160-135
150	190	V-H-160-120-6S	V-H-190-160-6S
190	240	V-H-160-120	V-H-190-160
240	320	V-H-190-145-6S	V-H-220-178-6S
320	430	V-H-190-145	V-H-220-178
430	570	V-H-220-165-6S	-
570	760	V-H-220-165	-

* suggested Cavoflex mount for given input shock (m/s)

Cavoflex for Vibration Management		
Load per mount (Kg)		Suggested Mount*
Min	Max	
1	2	V-H-15-38
2	4	V-H-25-43
4	8	V-H-40-61
8	15	V-H-50-80
15	22	V-H-60-96
22	35	V-H-70-90
35	60	V-H-80-92
60	90	V-H-100-108-6S
90	130	V-H-100-108
130	170	V-H-130-133-6S
170	220	V-H-130-133
220	280	V-H-160-135-6S
280	370	V-H-160-135
370	500	V-H-190-145-6S
500	650	V-H-190-145
650	800	V-H-220-165-6S
800	1000	V-H-220-165
1000	1250	V-H-290-241-6S
1250	1550	V-H-290-241

* suggested mounts for forcing frequencies over 1,400 RPM (23.3 Hz)

Shocks with instantaneous variation of velocity:

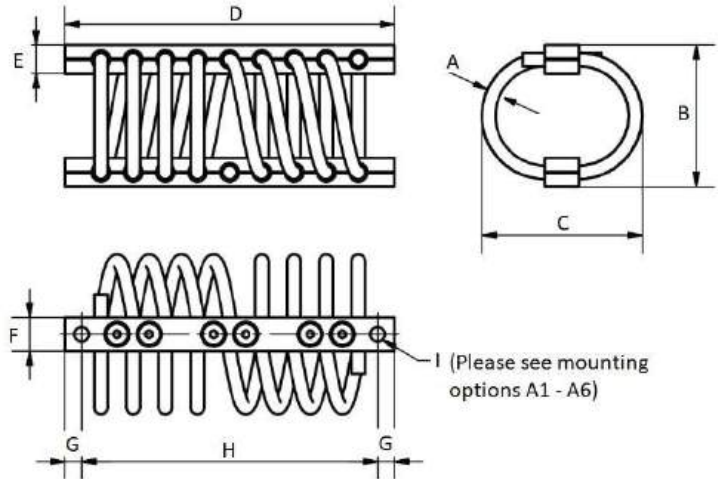
- 2.0m/s: heavy commercial grade shock or standard military grade. For example:
 - 40g x 11ms triangular pulse
 - 60g x 6ms semi-sinusoidal pulse
 - 30g x 11ms semi-sinusoidal pulse
- 3.0m/s: heavy military grade. For example:
 - 60g x 11ms triangular pulse
 - 100g x 6ms triangular pulse
 - 50g x 11ms semi-sinusoidal pulse

For more information on each model, please see the following pages.

Helical Coil Wire Rope Mounts (Cavoflex) – 1.5-8.0mm ϕ wire

We have intentionally not given load and deflection data here as we recommend asking for advice when selecting these mounts.

Note: The drawing is a schematic designed to give key information on the design. Minor details (e.g. screws holding the bars together) might not be relevant or precise to the selected product.



Further products are on the next page.

Product	Dimensions (mm)									Product Weight (Kg)
	A (Dia)	B	C	D	E	F	G	H	I (Dia)	
V-H-15-25	1.5	18	25	80	4	10	5.85	68.3	M4/ 4.2 ϕ	0.021
V-H-15-28		20	28							0.021
V-H-15-30		25	30							0.022
V-H-15-33		28	33							0.023
V-H-15-35		30	35							0.024
V-H-15-38		33	38							0.025
V-H-15-40		35	40							0.026
V-H-15-43		38	43							0.026
V-H-25-28	2.5	23	28	112	5	12	6	100	M5/ 5.25 ϕ	0.06
V-H-25-30		25	30							0.06
V-H-25-33		28	33							0.06
V-H-25-38		33	38							0.07
V-H-25-41		36	41							0.07
V-H-25-43		38	43							0.07
V-H-25-46		40	46							0.07
V-H-25-49		44	49							0.08
V-H-30-41	3.0	33	41	127	8.3	15	6.35	114.3	M6/ 6.5 ϕ	0.11
V-H-30-43		36	43							0.11
V-H-30-46		38	46							0.12
V-H-30-48		41	48							0.12
V-H-30-52		44	52							0.13
V-H-30-62		52	62							0.13
V-H-30-72		54	72							0.14
V-H-30-86		72	86							0.15

Remember to add the mounting option (e.g "-A4") to the end of the part number!

Helical Coil Wire Rope Mounts (Cavoflex) – 1.5-8.0mm ϕ wire (continued)

We have intentionally not given load and deflection data here as we strongly recommend asking for advice when selecting these mounts.

Note: The drawing is a schematic designed to give key information on the design. Minor details (e.g. screws holding the bars together) might not be relevant or precise to the selected product.

Product	Dimensions (mm)									Product Weight (Kg)
	A (Dia)	B	C	D	E	F	G	H	I (Dia)	
V-H-40-43	4.0	34	43	127	8.4	15	6.35	114.3	M6/ 6.5 ϕ	0.14
V-H-40-45		37	45							0.15
V-H-40-48		39	48							0.16
V-H-40-50		42	50							0.16
V-H-40-53		45	53							0.17
V-H-40-61		51	61							0.18
V-H-40-64		54	64							0.19
V-H-50-43	5.0	38	43	127	10.5	15	6.35	114.3	M6/ 6.5 ϕ	0.22
V-H-50-46		41	46							0.22
V-H-50-58		51	58							0.26
V-H-50-63		52	63							0.27
V-H-50-80		57	80							0.29
V-H-50-107		81	107							0.33
V-H-60-57	6.0	48	57	146	12.6	15	7.5	131	M6/ 6.5 ϕ	0.31
V-H-60-64		54	64							0.32
V-H-60-72		59	72							0.35
V-H-60-81		63	81							0.38
V-H-60-90		63	90							0.39
V-H-60-96		67	96							0.41
V-H-60-109		82	109							0.47
V-H-70-63	7.0	54	63	146	16.6	15	7.5	131	M6/ 6.5 ϕ	0.45
V-H-70-71		59	71							0.49
V-H-70-80		63	80							0.53
V-H-70-89		63	89							0.55
V-H-70-90		70	90							0.58
V-H-70-108		82	108							0.63
V-H-80-64	8.0	54	64	146	16.6	15	7.5	131	M6/ 6.5 ϕ	0.53
V-H-80-72		59	72							0.58
V-H-80-81		63	81							0.63
V-H-80-90		65	90							0.66
V-H-80-92		70	92							0.69
V-H-80-109		82	109							0.80

Remember to add the mounting option (e.g "-A4") to the end of the part number!