

# Open Spring Mounts Type AD-2, 4, 6 & 9

50mm Static Deflection, Multiple Springs

## APPLICATION

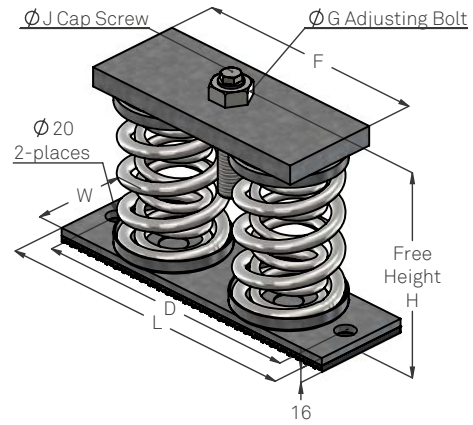
A range of heavy duty spring mounts for loads up to 10,035kg. Mounts provide a high degree of isolation and flexibility in system design. Typically used on cooling towers, large generator sets, building structures and heavy machinery.

## FEATURES

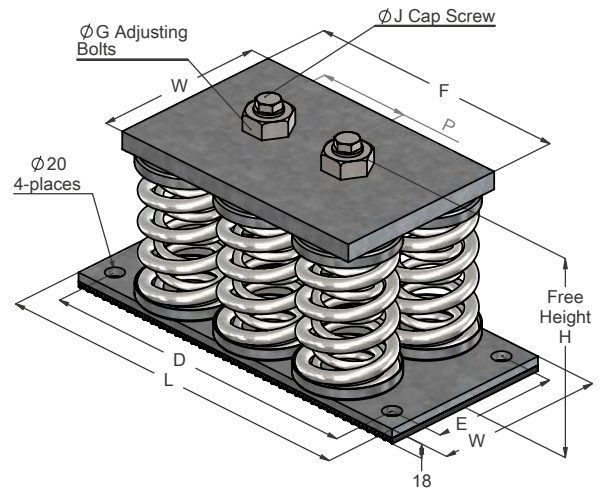
- Heavy duty stable steel springs
- Built-in leveling bolt with locking cap screw, capable of compensating for full static deflection
- Steel cup located springs allowing complete interchangeability
- Noise absorbing, non-skid ribbed pad bonded to base

## OPTIONS

- Additional layers of pad under the base



**AD2,4**



**AD6,9**

### AD-2, 4, 6, 9 Dimensions

Type	H mm	L mm	W mm	F mm	D mm	E mm	P mm	G Dia.	J Dia.
AD-2	220	330	108	250	290	-	-	M24	M12
AD-4	230	300	216	216	260	-	-	M30	M16
AD-6	235	430	216	310	380	150	108	M30	M16
AD-9	245	510	324	400	460	216	154	M36	M16

**AD-2, 4, 6, 9 PRODUCT GUIDE**

Type	Max Load kg	Static Deflection mm	Spring Constant kg/mm	Spring Colours	
				Outer	Inner
AD-2-521	700	50	14	Red	-
AD-2-53	900	50	18	Green	-
AD-2-531	1,150	50	23	Green	Black
AD-2-532	1,400	50	28	Green	Red
AD-2-551	1,550	50	31	Grey	Black
AD-2-552	1,800	50	36	Grey	Red
AD-2-553	2,000	50	40	Grey	Green
AD-2-593	2,230	45	50	Orange	Green
AD-4-521	1,400	50	28	Red	Black
AD-4-53	1,800	50	36	Green	-
AD-4-531	2,300	50	46	Green	Black
AD-4-532	2,800	50	56	Green	Red
AD-4-551	3,100	50	62	Grey	Black
AD-4-552	3,600	50	72	Grey	Red
AD-4-553	4,000	50	80	Grey	Green
AD-4-593	4,460	45	99	Orange	Green
AD-6-521	2,100	50	42	Red	Black
AD-6-53	2,700	50	54	Green	-
AD-6-531	3,450	50	69	Green	Black
AD-6-532	4,200	50	84	Green	Red
AD-6-551	4,650	50	93	Grey	Black
AD-6-552	5,400	50	108	Grey	Red
AD-6-553	6,000	50	120	Grey	Green
AD-6-593	6,690	45	149	Orange	Green
AD-9-521	3,150	50	63	Red	Black
AD-9-53	4,050	50	81	Green	-
AD-9-531	5,175	50	104	Green	Black
AD-9-532	6,300	50	126	Green	Red
AD-9-551	6,975	50	140	Grey	Black
AD-9-552	8,100	50	162	Grey	Red
AD-9-553	9,000	50	180	Grey	Green
AD-9-593	10,035	45	223	Orange	Green

## DESIGN

All type AD spring mounts are designed with a horizontal to vertical stiffness ratio between 0.9 and 1.1 at rated load; ratio of spring diameter to loaded height minimum 0.8; and a rated maximum operating deflection of 2/3 deflection to solid.

The springs are located in steel cups welded to the top and bottom plates. This design allows quick changeover of springs if actual loads on mounts are at variance with estimates.

## ACOUSTICAL ISOLATION

Steel spring mounts provide effective isolation of mechanical vibration. However, the spring itself has its own inherent surge frequency depending on its physical geometry and material properties. As such, it is possible to transmit certain audible level frequencies.

To minimise these audible level transmissions, all mounts are fitted with a resilient rubber base. For type AD mounts, the standard cup has a theoretical effectiveness of 95% to 97% in isolating such transmissions.

If even better high frequency isolation is required, a second layer of pad is attached to the base, separated from the first by a 1.5mm metal shim plate.

## MOUNT SELECTION

When selecting mounts, it is recommended that a safety factor of 10-20% is applied to the calculated mass of equipment to avoid overloading of mounts. If maximum rated deflections are required, then equipment should be weighed and an accurate assessment of point loads made.

For equipment using more than four mounts, endeavour to distribute them so that each mount has equal loading. If this cannot be done, mount selection must be made on the basis of matching static deflections as closely as possible.

## INSTALLATION

1. Remove cap screw and washer.
2. Locate mount under hole in equipment leg or base (see note below).
3. Replace cap screw and washer but do not tighten.
4. Raise equipment to desired elevation and level by turning adjusting bolt anticlockwise to raise.
5. Tighten cap screw to lock assembly.

### NOTE:

1. It may be necessary to lift or block up equipment to place mount in position.
2. The equipment is supported on the head of the bolt.

## BOLTING DOWN

If bolting is required, the lower plate must be located and fastened to the floor before equipment is placed on its mounts. Bolts must only be tightened a half turn more than hand tight. An isolation sleeve should be used to prevent the transmission of acoustical frequencies by metal to metal contact between the bolt and the mount, see Datasheet IS for details.

## RECOMMENDED FASTENINGS

- All mounts: M12

Refer to Datasheet IS for type IS Isolating Sleeve kits for full rubber isolation of the bolt fastening.

## TECHNICAL ASSISTANCE

All Embelton offices can provide detailed technical assistance on the use of this product in specific applications.

## CONDITIONS OF SALE

These products are sold subject to the published Embelton General Conditions of Sale, copies of which maybe inspected on request.

## SPECIFICATION

Spring mounts shall be free standing and laterally stable without any housing, capable of up to 50mm static deflection and incorporating a 6mm minimum ribbed non-skid acoustical base pad. Mounts shall have an inbuilt leveling facility capable of compensating for the rated spring design deflection and of being locked into position. Springs shall have a minimum additional travel of 50% rated deflection to solid and a diameter not less than 0.8 of loaded height; they shall be type AD2, 4, 6 or 9 as supplied by Embelton.