

Open Spring Mounts Type XD / XDR

50mm Static Deflection, Cup Located

APPLICATION

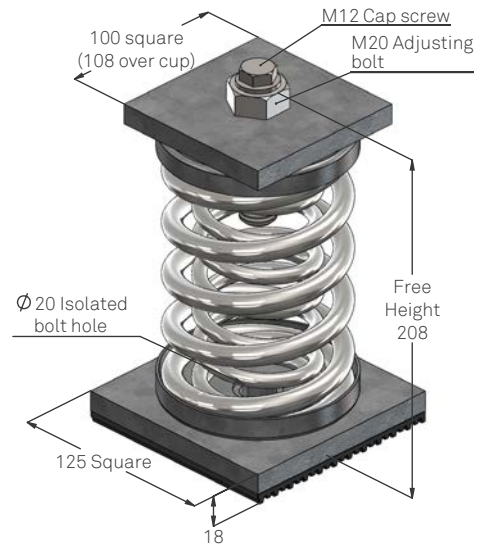
For high efficiency isolation of equipment vibration requiring a low cost, easily installed, medium deflection spring mount in which the spring maybe quickly interchanged. Typically used on fans, pumps, packaged air conditioners, floor piping supports, compressors, etc. The vertically restrained XDR mount is especially useful on cooling towers.

FEATURES

- Heavy duty stable steel spring
- Built-in leveling bolt with locking cap screw, capable of compensating for full static deflection
- Separate top and bottom location cups
- Rubber isolated bolt hole in base
- Moulded, noise absorbing rubber base with non-skid surface

OPTIONS

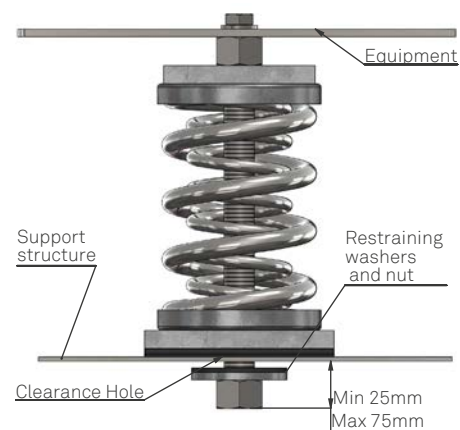
- Combined leveling bolt and adjustable vertical restraining rod in place of normal leveling bolt (type XDR)



XD DIMENSIONS

XD / XDR PRODUCT GUIDE

Type	Max Load kg	Static Deflection mm	Spring Constant kg/mm	Spring Colours	
				Outer	Inner
XD-50	65	50	1.3	Blue	-
XD-51	125	50	2.5	Black	-
XD-510	195	50	3.9	Black	Blue
XD-52	225	50	4.5	Red	-
XD-520	295	50	5.9	Red	Blue
XD-521	350	50	7.0	Red	Black
XD-53	450	50	9.0	Green	-
XD-530	520	50	10.4	Green	Blue
XD-531	575	50	11.5	Green	Black
XD-55	650	50	13.0	Grey	-
XD-551	775	50	15.5	Grey	Black
XD-552	900	50	18.0	Grey	Red
XD-553	1,000	50	20.0	Grey	Green
XD-593	1,115	45	24.8	Orange	Green



XDR FOR VERTICAL RESTRAINT

DESIGN

All type XD 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 spring is located in a detachable cup at the top and bottom which allows for easy interchange if required. A single bolt hole in the base cup allows for quick alignment and fastening when necessary; and allows conversion to a vertically restrained mount (XDR) where structure permits.

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 XD mounts, the standard base has a theoretical effectiveness of 95% to 98% in isolating such transmissions.

If greater 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 (also lower restraining nuts and washers on the XDR).
2. XDR only: Drill a clearance hole in the support structure for the restraining rod.
3. Locate mount under hole in equipment leg or base (see note below).
4. Replace cap screw and washer but do not tighten.
5. Raise equipment to desired elevation and level by turning adjusting bolt anticlockwise to raise.
6. 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.

TYPE XDR – VERTICALLY RESTRAINED MOUNT

Install as described previously. When the mount is under load and equipment is level and height is correct, the lower restraining nut and washer is replaced and adjusted until an operating clearance of about 1mm is obtained between the rubber washer and support structure.

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.

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 may be inspected on request.

SPECIFICATION

Spring mounts shall be free standing and laterally stable without any housing, with up to 50mm rated static deflection, incorporating upper and lower spring locating cups at least one of which must be capable of isolating acoustical frequencies even when bolted down. 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 XD as supplied by Embelton.