

CATALOG



DUNLOP
DRIVING TO THE FUTURE

VIBRATION ISOLATORS



CIRCULAR | CUSHYFOOT | CUP MOUNT | UU SHEAR
SANDWICH MOUNTS | BOBBINS & BUFFERS | RUBBER MATS



What is Vibration ?

Basically, it is the effect of imbalance or out of balance in any rotating or reciprocating equipment that repeats itself cyclically. Out-of-balance forces occur in the operation of almost any machine. Whilst designers of most modern machines try to reduce this to as low a level as possible, it is very often physically impossible to eliminate these out of balance forces altogether. Further, it has been found that with wear & tear of equipment over long period of time, the out of balance forces and consequently the level of vibration tend to increase substantially.

Vibration in its simplest form may be considered as the motion of a machine or part of a machine, back & forth, from its position of rest. The total distance of movement is the peak to peak displacement of the vibration. The number of cycles of this movement for a given period of time is known as the frequency of the vibration.

Vibration Isolation

In discussing vibration isolation, it is useful to identify the three basic elements of all vibrating systems :

- ▶ The object to be isolated (equipment unit, machine, motor, instrument, etc.)
- ▶ The isolation system (resilient isolation mounts or isolators)
- ▶ Base (floor, base plate, concrete foundation, etc)

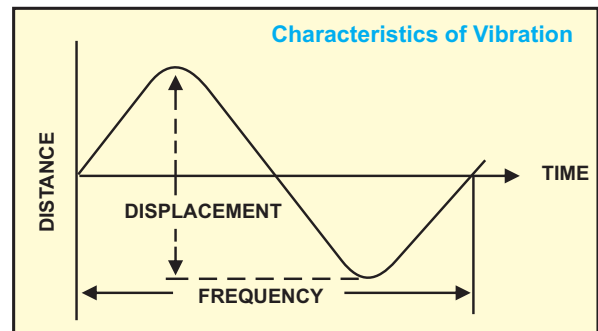
The isolators (rubber pads, springs, etc.), are interposed between the object and the base.

If the object is the source of vibration, the purpose of vibration isolation is to reduce the force transmitted from the object to the base.

If the base is the source of vibration, the purpose of isolation is to reduce the vibratory motion transmitted from the base to the object.

In both cases, the principle of vibration isolation is the same. The isolators are resilient elements. They act as a time delay and as a source of temporary energy storage, which evens out the force or motion disturbance on one side of the vibration mounts and transmits, if properly selected, a lesser disturbance to the other end (to the base in case of force isolation, to the object in case of motion isolation).

A judicious design of the vibration isolation system insures that this effect is achieved. Conversely, a **poorly designed isolation system**, not having proper frequency characteristics, **can be worse than no isolation at all.**



CIRCULAR MOUNTS



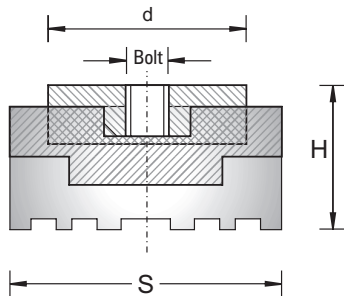
Dunlop Circular Mounts are suitable for high speed rotating machines having small or no axial forces. These mountings are ideally suitable for Machine tool presses & equipment with low base area (about 1 sq mtr) but height more than 1.5 mtr. It also acts as leveling device for un-even flooring.



HEAVY DUTY (HD)
CIRCULAR MOUNTING



LIGHT DUTY (LD)
CIRCULAR MOUNTING



TYPICAL APPLICATIONS

- ▶ Compressors
- ▶ Tool Room Machines
- ▶ Lathe & CNC Machines
- ▶ Stamping Machines
- ▶ Power Presses
- ▶ Turning Centres
- ▶ Milling Machines
- ▶ Precision Grinding Machines
- ▶ Textile Machines
- ▶ Injection Moulding Machine
- ▶ Printing Machines

DESIGNS FEATURES

- ▶ Have Plain holes in the base. Machine leveling is done by turning the bolt which lifts the cover plate. (HD models)
- ▶ The circular mounts are placed between the machine feet and the floor. The machine feet rests on top of the circular mounts and vibrations are isolated based on the vibration frequency generated by the machine and natural frequency of the circular mounts.
- ▶ These mountings use rubber in shear and compression. Ideal for where fail safe mounting is essential.

Part No.	Rubber Shore Hardness	Max. Load (kg)	D mm	H mm	d mm	Levelling Adjustment mm	Natural Frequency at Max. Load (Hz)	Bolt
50 HD	65	100	50	36	32	10	7	M12
80 HD	65	200	80	46	45	12	7	M12
120 HD	65	800	120	52	60	12	7	M16
160 HD	65	2500	160	56	90	15	8	M16
200 HD	65	6000	200	65	120	15	8	M25
80 LD	65	100	80	25	-	-	7	M12
120 LD	65	400	120	35	-	-	7	M16
160 LD	65	1000	160	38	-	-	8	M16

In the interest of continual development, the company reserves the right to make modifications to these details without notice.

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