INCORPORATED
Leader in
Pump Mount Technology

Isolation Mounts

REDUCES VIBRATION, SHOCK, NOISE

Isolation mounts incorporate E.A.R. C-1002 material, a highly efficient energy absorbing material. The E.A.R. C-1002 materials' excellent damping ability can be evaluated from the equation -

$$\text{Damping Ratio } (\zeta) = \frac{C}{C} = \frac{\text{Damping present in the system}}{\text{* Damping present in a critically damped system}}$$

For E.A.R. C-1002, ζ will average approx. 0.50
For Natural Rubber, ζ will average approx. 0.05
For Pressed Cork, ζ will average approx. 0. 1 0
For Concrete, will average approx. 0.02
For Steel Spring, ζ will average approx. 0.005

The above comparison of damping ratios indicates that E.A.R. C-1002 material has a most effective damping impedance ability, and thus represents an exceptional material to absorb vibrational energy.

The isolation mounts high damping ratio enables the mount to reduce mechanically induced vibrations at an extremely rapid rate as well as helping to avoid additive effects with incoming impacts.

Isolation mounts are effective in damping frequencies above 35 vibrations per second. The higher frequency vibrations are isolated without serious amplification of lower frequency vibrations under resonant conditions.

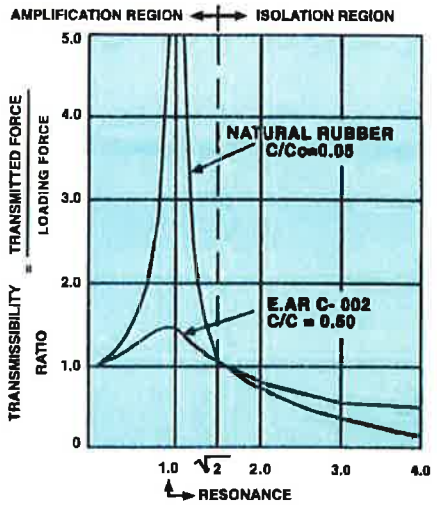
Isolation mounts feature economy, simple design, ease of installation, easy replacement, elimination of necessity for periodic adjustment, minimum weight and size.

Isolation mounts can be painted; are water, oil, weather and flame resistant; have anti-skid properties; and are designed for temperatures to 15O°F.

When system loading frequency and material natural frequency (resonant frequency) are in the same range, the E.A.R. C-1002 materials' damping ability will greatly reduce the transmitted force. If the system accelerates or decelerates slowly through the resonant range, the transmitted force may become very large with undamped isolators such as natural rubber.

The effectiveness of E.A.R. C-1002 material to keep this transmitted force to a minimum is shown in the graph below.

TRANSMITTED FORCE AS A FUNCTION OF FREQUENCY RATIO



$$\text{FREQUENCY RATIO} = \frac{\text{LOADING FREQUENCY}}{\text{NATURAL (Resonance) FREQ.}}$$

The graph above shows the high damping ratio of E.A.R. C-1002 to be valuable at higher frequencies where it tends to reduce the effect of (standing wave) resonances in the actual isolator, thus helping to reduce the transmitted force.

*NOTE: *A critically damped system when displaced from its equilibrium position will return to its equilibrium position in the least amount of time without vibrating.*

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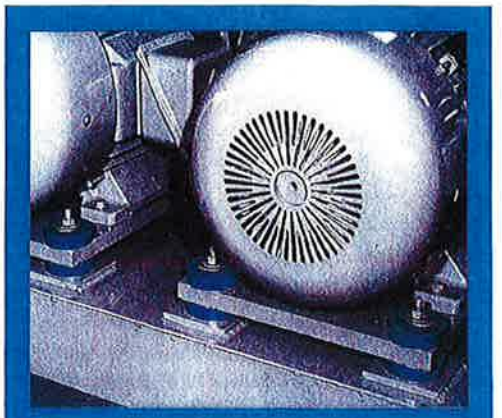
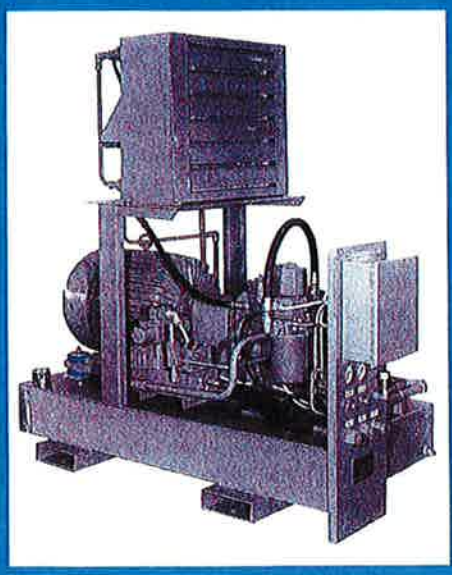
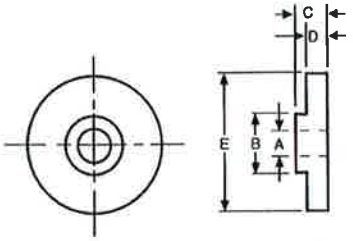




NEWTON

Isolation Mounts

REDUCE: VIBRATION, SHOCK, NOISE

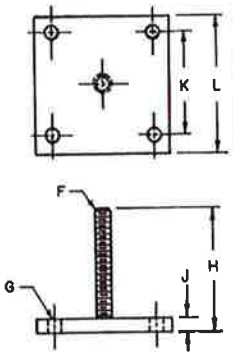


MATERIAL – E•A•R®C-1002
DENSITY – 80# PER CU. FT.
MAX. TEMP – 150º F
DUROMETER – 64/59 SHORE A
NAT.FREQ – APPROX. 22HZ AT LOAD CAPACITY

ISOLATION MOUNT

ISOLATOR NUMBER	IDEAL LOAD POUNDS PER ISOLATION	MOUNTING BOLT SIZE	A	B	C	D	E
4250	50	1/4	5/16	1/2	5/8	1/2	1-11/64
42100	100	3/8	7/16	3/4	13/16	5/8	1-21/32
42200	200	1/2	9/16	1	1	3/4	2-21/64
42500	500	1/2	9/16	1	1-3/8	1	3-39/64
421000-A	1000	3/4	7/8	1-3/8	1-1/8	9/16	5-1/4
421000-B	–	3/4	7/8	N/A	N/A	9/16	5-1/4
421500	1500	1	1-1/16	1-3/4	1-3/4	1-1/4	6-7/16
421500-A	–	1	1-1/16	1-3/4	1-1/8	5/8	6-7/16

NOTE: 421000-A, 421500-A are to be used as top or non-load bearing isolator only.



MOUNTING BRACKET ASSEMBLY

ISOLATOR NUMBER	F	G	H	H_1	J	K	L
4250–MB	1/4 – 20	1/4	2-3/4	4	1/4	1-3/4	2-1/2
42100–MB	3/8 – 16	1/4	3-3/8	5	3/8	2-1/8	3
42200–MB	1/2 – 13	3/8	5	6-1/2	1/2	3-1/8	4
42500–MB	1/2 – 13	3/8	5	6-1/2	1/2	4	5
421000–MB	3/4 – 10	1/2	6	7-1/2	5/8	5	6-1/2
421500–MB	1 – 8	5/8	7	8-1/2	5/8	5-3/4	7-1/2

NOTE: H_1 dimensions are used for leveling kit.

Mounting assembly consists of: 2 pieces of Newton Isolation Mounts, mounting bracket, steel washer, and lock nut. Add (-L) to Mounting Bracket Assembly number for leveling nut and heavy duty steel washers.

TYPICAL BASE MOUNTINGS