

Inertia Base Frames

1. Compliance:

1.1 Designed according to ASHRAE guidelines

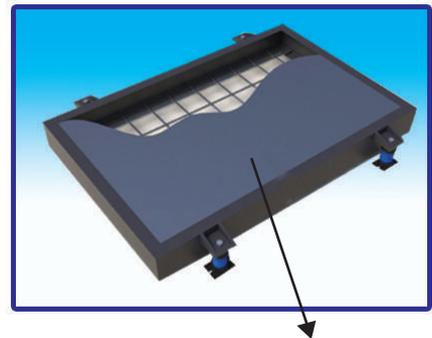
2. Application:

2.1 Inertia Base Frames are recommended for installation under pumps, compressors, large fans, open type centrifugal chillers, IC Engines, Generators and other equipments likely to have high imbalance forces and large amplitude of vibrations. Inertial Bases:

- 2.1.1 Reduce amplitude of vibrations and thereby ensure smoother working, reduced noise and vibration.
- 2.1.2 Lower the centre of gravity of supported equipment and thereby reduce equipment sway.
- 2.1.3 Minimize motion of equipment during startup and shut down.
- 2.1.4 Provide a means for mounting equipment on vibration isolators.

3. Product Features:

- 3.1 Rigid welded steel pouring frames with reinforcement bars and isolator brackets for concrete inertia bases. Supplied in rectangular or T-shape, complete with vibration isolators.
- 3.2 Fabricated using formed steel channel. Optionally available in Structural Steel Channel construction.
- 3.3 The frame height shall be minimum 8- 10% of longest span between isolators with minimum height of 150mm. Standard Heights : 150, 200, 240 and 300 mm. Higher frames can be supplied for special applications.
- 3.4 Available for any equipment dimension. Rectangular shape supplied as standard. T-shape offered where it is required to support elbows of horizontal split casing pumps on the base itself.
- 3.5 Reinforced with 12 mm OD welded in steel bars each way at approximately 200 mm spacing.
- 3.6 Provided with height saving isolator fixing brackets. External brackets are supplied as standard. Recessed brackets are offered in case of space constraints.
- 3.7 Painted with NC Grey Primer.
- 3.8 Supplied together with Isolators. Selection of mount type / models forms part of design process to provide a complete vibration isolation solution. Frames are compatible with open, cased and restrained mounts. These springs are designed with a horizontal stiffness equal to vertical stiffness to assure stability. Also spring will have capacity to over load 50% beyond rated capacity. Depending on isolation frequency, amplitude and location, any spring deflection can be provided.
- 3.9 Pre-located anchor bolts shall be placed inside base frame.
- 3.10 Snubbers shall be provided as standard accessory.



Concrete filling by others

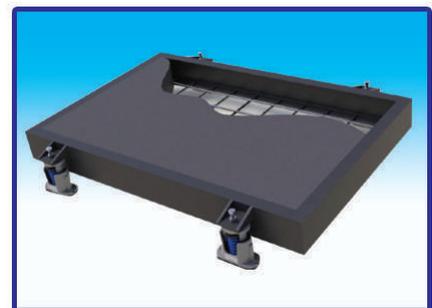


Fig. 1: Rectangular base with external brackets (supplied as standard)

Inertia Base Frames

4. Installation Guide lines:

- 4.1 Place the frame on marine ply or plastic sheet and pour concrete. Position and fix the equipment on the concrete inertia base.
- 4.2 Raise the inertia base with attached equipment over the vibration isolators, maintaining a house keeping gap of about 50 mm under the base. Follow standard spring mount installation procedure.

5. Ordering:

- 5.1 Concrete inertia bases are custom made for specific installations. Our Staff will propose the optimal frame design and vibration isolator selection for the application. Provide details of :
 - 5.1.1 Equipment to be mounted (dimensions, total weight, weight distribution, imposed loads, motor rating, pipe connection sizes etc..)
 - 5.1.2 Location of equipment in building.
 - 5.1.3 Project specifications for vibration isolation.

6. General Design Guidelines followed:

Inertia Base Frames comply fully with the design recommendations made by ASHRAE for Type C - Concrete Inertia Bases. The broad design guidelines followed are:

- 6.1 Frame height is at least 8 to 10% of longest span between isolators, with a minimum of 150 mm. ASHRAE recommendations relating height to motor ratings are followed where applicable. Height in excess of 300 mm is rarely proposed.
- 6.2 For pumps, if space permits and elbow offset from flange is exactly known, it is preferable to size the base to support elbows. If elbows overhang the base, it is crucial to provide isolation below them.
- 6.3 While ASHRAE states that mass of the concrete inertia base is not usually a design consideration, we recommend it should be at least equal to the supported load. Frames are designed accordingly.
- 6.4 Rectangular frames with external brackets are supplied as standard. Other designs are proposed if needed.

7. Notes:

- 7.1 Mounts shown with each base are for illustration only. Open, Cased or Restrained Mounts may be used as required.
- 7.2 Large bases may have more than four isolator fixing brackets.

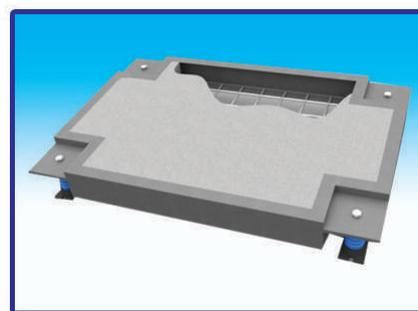


Fig 2: Rectangular base with recessed brackets (add suffix 'RB' to model)

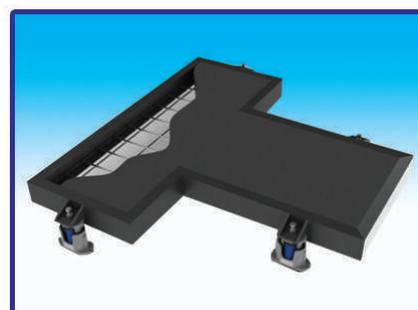


Fig 3: T-Shape base with external brackets (add suffix 'T' to model)

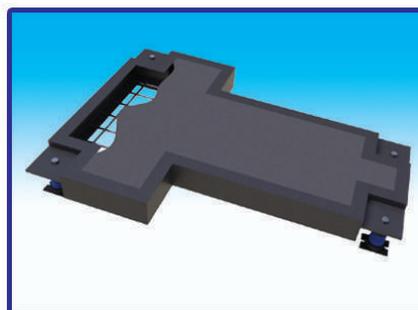


Fig 4: T-Shape base recessed brackets (add suffix 'T-RB' to model)

