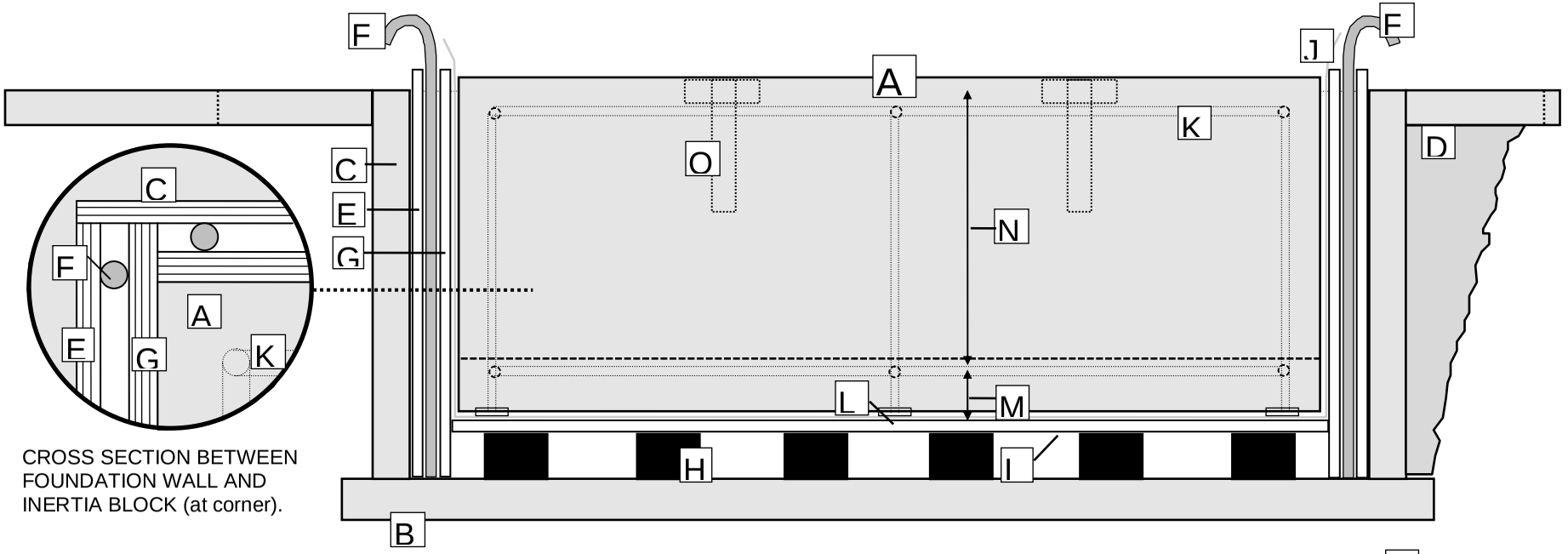
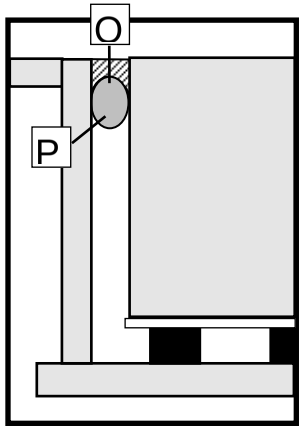
Inertial Block Foundation Isolation

Side View – All Elements



CROSS SECTION BETWEEN FOUNDATION WALL AND INERTIA BLOCK (at corner).



DETAILS

A INERTIA BLOCK B MUD SLAB C FOUNDATION WALLS D BACK FILL / FINISHED FLOOR
E 1/2" PLYWOOD F 1/2" DIA. RODS G 3/4" PLYWOOD H ISOLATION PADS OR BLOCKS
I 3/4" PLYWOOD J HEAVY DUTY POLY SHEETING K REBAR L BLOCKS UNDER REBAR
M INITIAL CONCRETE POUR FOR INERTIA BLOCK N FINAL PORTION OF CONCRETE POUR
O ANCHORING OR LEVELING DEVICES P FOAM BACKER ROD Q V-100 EPOXY JOINT FILLER

To realize the potential of some production machinery, it is necessary to create an isolated environment that performs a dual function of absorbing the machine's own work-generated energy while preventing transmissions of ambient vibration to the machine itself. The inertia block provides mass to assure the optimum performance of the isolation material and the rigid anchoring base required for the permanent alignment of the machine being installed.

Follow these steps for a proven and effective installation:

1. Determine inertia block dimensions / mass A and type & spacing of isolation pads or blocks. Technical assistance and reference for individual applications available through Wilrep Ltd.
2. Dig to required depth.
3. Pour mud slab – 5 to 6 inches thickness. B
4. Form and pour walls. C
5. Back fill (compact well) and finish floor to shop level. D
6. Install 1/2 in. plywood against wall. E

Install 1/2 in. dia. rods on approx. 16 in. centres. F Hold in place with duct tape.

Install 3/4 in. plywood against rods. G Secure in place.

To prevent concrete pressure from causing plywood to gape at corners, position additional rods close to edges for support.

7. Install vibration isolation pads or blocks as required. H
8. Install 3/4 in. plywood on top of isolation material. I Tape all joints.
9. Line form with heavy duty poly sheeting. J Tape all joints.
10. Add required rebar. K Place small blocks under vertical rebar members to prevent the poly sheeting from being punctured. L
11. Pour 6 to 10 inches of concrete in base. M Let stand with rough surface for 6 to 8 hours. This initial pour prevents form base from sagging between isolation materials.
12. Finish pouring concrete block. N Be sure to consider the finished required height. Isolation material will deflect under weight of inertia block and machinery – refer to separate calculations and technical data for isolators.

Locate anchoring and leveling devices as required. O

Allow inertia block adequate curing time to suit machinery installed.

13. Remove rods and plywood. Remove as much of the poly sheeting as possible.
14. Insert foam backer rods into the space between the isolation block and the foundation (just below floor level). P
15. Fill remaining gap with Unisorb V-100 Epoxy Grout Joint Filler. Q
16. Install machinery and/or equipment to required specifications.

ALL PLYWOOD SECTIONS USED TO FORM SIDES AND BOTTOM OF ISOLATION BLOCK MUST BE INSTALLED AND TAPED VERY SECURELY. THIS WILL PREVENT CONCRETE FROM MIGRATING OUT OF THE ENCLOSED FORM AND 'SHORT-CIRCUITING' THE INERTIA BLOCK ISOLATION.

Do not use nails. Nails could cause a mechanical bridge if not removed. Their use could also make it difficult to remove the plywood.

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