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Thank you for your interest in and consideration of using our product, the POCKET FORM ISOLATOR®.

POCKET FORM ISOLATOR® is a formwork system that stays-in-place and becomes an integral part of a building structure. PFI® is the solution to a very old problem in construction and was designed with that specific application in mind. Since the 1920’s, isolation pockets have been commonly utilized in the construction of buildings which have the roof supported by columns. In PFI®’s typical application, the columns are supported by individual concrete footings. The isolation pockets are located at the bases of the columns and provide protection from moisture migration and its harmful effects on the anchor bolts, grout bed, base plate and lower segments of the column. Additionally, isolation pockets sometimes help a contractor when sequencing the various stages of a project in order that column fabrication doesn’t delay the slab-on-grade placement. Another function of isolation pockets is to provide a terminus for slab construction or control joints. Many engineers also utilize the weight advantage of a concrete filled isolation pocket as an additional source of dead load to resist the wind uplift forces, because concrete weighs considerably more than soil or gravel. Many architects and engineers feel that isolation pockets are imperative in the long life of a building structure for the reasons shown herein and also to allow an inspection portal if future problems occur.

In summary, isolation pockets are beneficial for a number of reasons to a wide variety of building structure types. When design professionals specify the use of isolation pockets, their design documents typically show plan and section views of what they expect to be performed by the contractor or sub-contractors doing the concrete flatwork.

STAY-IN-PLACE PLASTIC FORMWORK SYSTEM

POCKET FORM ISOLATOR® provides a simple and consistent method for a concrete worker to create a perfect isolation pocket without compromises to any of the expectations of an isolation pocket. The use of PFI® also enables workers to build an improved structure in an abbreviated time span, due to the inherent simplicity of the system and installation methods. Field workers also gain the benefits of reduced safety hazards on jobsites because form removal is unnecessary with this system. Increased sequencing flexibility is another benefit of the system, because the form size is not dependant on scheduling – as is often the case with temporary formwork and bracing. Jobsite waste cleanup and disposal is no longer a problem, because all PFI® formwork is designed to be left-in-place.
AVOIDING THICKENED SLAB EDGES AT ISOLATION POCKETS

When POCKET FORM ISOLATOR® is utilized, thickened slab edges are unnecessary – even though often not indicated within design drawings; a contractor very commonly will find need to thicken the edge of a slab-on-grade adjacent to isolation pocket (temporary) formwork so that loss of subgrade material does not occur when these temporary forms are removed. These thickened slabs are quite often the only way that the contractor can prevent this “avalanche” of soil and gravel when his temporary forms are removed. Unfortunately, these thickened slabs cause several problems. Thickened slabs require more concrete and, therefore, are not cost-effective. Thickened slabs also have tendencies toward random cracking because of their variable thickness. Restraint at the slab edge prevents it from being able to slide toward that segment’s centroid, and results in random cracking. Some contractors provide additional slab reinforcing steel in an effort to prevent this cracking, but usually only end up wasting more money. A concrete slab has predictable cracking only when it has a uniform thickness or when it has been designed with joints coinciding with changes in thickness.

SAFETY WITH PENETRATIONS

It is not uncommon for a project to include numerous penetrations into the isolation pockets. These penetrations may be for conduit needed for: electrical, communication or security wires. Penetrations may also be necessary for plumbing pipes in any number of situations. Large diameter pipes are also sometimes required for interior roof drainage. Whenever an isolation pocket is formed using temporary forming methods, a penetration is compromised when the temporary form material is removed. Since penetrations in (the permanent) POCKET FORM ISOLATOR® are easily made using ordinary wood-working tools and the PFI® is never removed – the penetration is never disturbed.

NO EXPANSION JOINT MATERIAL REQUIRED

POCKET FORM ISOLATOR® eliminates the need for expansion material strips to be installed around the top edges of isolation pockets – because the PFI® provides all of the necessary separation between the two volumes of concrete – even when both are cast simultaneously!
ZIP-STRIP COMPATIBILITY

Many projects require a caulk joint separating the concrete slab from the concrete infill of the isolation pocket, and PFI® makes this extremely easy to accomplish. Simply attach ZIP-STRIP® “Void-Cap” or another similar product atop of the edges of any PFI® configuration and set the unit at an elevation that brings the top surface of the “Void-Cap” to be at Finish Floor Elevation (FFE).

ANCHORAGE TO FOOTINGS

There are several ways to anchor POCKET FORM ISOLATOR® atop of footings. POCKET FORM ISOLATOR® units are available with two optional hardware packages for attachment of forming units to footings.

The first method we offer is the “Clip & Shim” method. The aluminum clip & EPDM shim package was the anchoring hardware package that we introduced in 2001, when the PFI® system first came on the market. This method is very effective, but has been replaced by a more time-effective product. The “Clip & Shim” method has an adjustment range of zero to ¾”.

The second method we offer is the “Locking Lift Bracket” method. The LLB package was introduced in mid 2003 as an optional item with additional costs. The LLB package became preferential in 2004 by everyone who tried it. In late 2004, we began manufacturing LLB’s in-house. There was an immediate price reduction, due to our more economical manufacturing and in 2005 the LLB package became our standard that is sent with all units unless specified otherwise. The LLB has an adjustment range from zero to 2 ½”.

Alternate methods of anchoring PFI® to footings include “wet-set” anchor bolts and powder-actuated fasteners. Several methods have been chosen by various contractors with similar results, but the LLB method is the most flexible.

ANCHORAGE AROUND PIERS

Often it is necessary for columns to bear atop of piers (pedestals, pilasters, etc.) which extend upward from footings or grade beams that may be positioned quite a distance below the FFE. Piers enable steel columns to be in fabrication while foundation work is taking place. Piers also allow for deviations of footing elevations to occur without changing steel fabrication. When piers are utilized, it is best if the PFI® unit is positioned low enough that the embedded steel items have a minimum of 3” of concrete cover. In this scenario, the PFI® can
be anchored by using permanent steel stakes driven to sufficient resistance into the soil and secured to interior faces of PFI® by utilizing wood-screws through the stakes and further into the plastic form walls. Alternately, if pier size is adequate, the PFI® unit may be secured atop of the concrete pier using any of the methods explained in the paragraph entitled, “ANCHORAGE TO FOOTINGS”.

ANCHORAGE AT SLAB EDGES

If a partial pocket is utilized at the perimeter of a slab, one of two methods of anchorage must be utilized.

In the case of a permanent form closing the slab’s edge, Sheet Metal Extensions (SME) must be utilized to anchor the extreme ends to the permanent form. The SME’s shall be attached using permanent fasteners driven in a direction toward the building’s exterior. Note: a permanent form may be a CMU (concrete masonry unit) wall, a tilt-up wall, a CIP (cast-in-place) wall, a precast concrete wall, etc.

In the case of a temporary form closing the slab’s edges, Sheet Metal Extensions (SME) must be utilized to anchor the extreme ends to the temporary form. The SME’s shall be attached using removable fasteners driven in a direction toward the building’s interior. Note: in cases where the temporary form may not be penetrated by a fastener, “C Clamps” must be utilized to secure PFI® unit to form until sufficient (slab side) concrete has been placed to hold said unit to the temporary form in a permanent position.

CAST CONCRETE APPEARANCE

Slabs utilizing POCKET FORM ISOLATOR® have neat, clean edges around all isolation pocket openings because no forms have been stripped! Since form removal (extraction) requires the use of heavy hand tools and tough physical labor, edges of slabs where form extraction has occurred tend to have damaged edges. In addition to being unsightly, repairs to these problem areas are often only temporary, because of their small size and high vulnerability to breakage. Since PFI® provides some contractors the option of casting slabs and isolation pockets simultaneously, it virtually eliminates the possibility of the slab concrete and the infill concrete from having a differing appearance.
CAST CONCRETE CONVENIENCE

There is never any compromise when PFI® is utilized! The only thing temporary forming materials can do that PFI® cannot do, is to make a jobsite nasty and hazardous! Since PFI® is manufactured using recycled plastic (HDPE), it prevents waste by actually diverting otherwise suitable discarded plastic items from the dump to an inert application such as forming concrete. This reduces the wasting of our precious wood resources and promotes the use of recyclable products in their place! In some other cases, PFI® prevents the use of environmentally harmful products (such as Styrofoam®) that must be discarded after their removal. There is no form removal with PFI®. There is no shame in using PFI®. Also PFI® is the only permanent product made specifically for forming isolation pockets.

USE FOR INTEGRAL PIER FORMS

Our customers have found another excellent application for our products! Many buildings utilize a pre-engineered steel structure. Often these buildings have piers above the footings that support the steel structure. These piers often require protruding reinforcing bars. If wooden, steel or fiberglass forms are used to form these piers, the piers are always cast prior to the casting of the slab, because the forms have to be removed. After removal of forms, which is difficult due to protruding bars, there is an earth moving phase – which is also complicated by these protruding bars. Our customers have discovered that they can form their piers with PFI®, backfill around the empty forms, place the protruding bars (no longer causing any problems) and cast the slab and piers simultaneously – saving a minimum of two days of construction time.

USE FOR REFRIGERATION LINE PULL BOXES

Our customers have also realized another way to utilize our products! Many food service and grocery stores have a need for a network of refrigeration lines to be routed below the slab. These under-slab refrigeration lines require junction boxes for connections to occur in. In order to comply with project specifications, we manufacture a product we call the Pull Box Adapter (PBA) to enable our plastic extension parts to be utilized as the walls for refrigeration line pull boxes. The screed edge is accomplished via the PBA – which additionally forms the “ledge” for the thin cover slab perimeter to bear on. Refrigeration line pull boxes have holes in the walls that allow for entry/exit of line sleeves, etc.
USE FOR CABLE RACEWAY JUNCTION BOXES

Similar to the paragraph entitled USE FOR REFRIGERATION LINE PULL BOXES, PFI® is commonly utilized for junction or outlet boxes with electrical, security or communication wiring. Typically, plastic pipe raceways are inserted into the PFI® walls thru holes which are drilled in our manufacturing facility or in the field. Often these junction boxes have drains thru the “floor” of the box – which is typically a thin concrete slab.

ORANGE SAFETY LIDS

We manufacture ORANGE SAFETY LIDS for our sizes 24” square and 28” square. Our Safety Lids are integrally colored Orange to maintain high visibility. The lids are capable of safely supporting loads well above the posted 150 PSF load limit. Our Orange Safety Lids are flush-fitting with the top edges of our PFI® unit via support on an integral ledge formed within the walls of all screed-edge parts. When PFI® units larger than our 28” square size are necessary, safety lids may be easily fabricated using dimensional lumber or plywood of an appropriate thickness to be flush with the FFE adjacent to the isolation pocket.

DROP-IN PLYWOOD TILT-UP LIDS

Many of our customers are tilt-up contractors! Most of our tilt-up customers utilize our Orange Safety Lids both as a safety cover and as a casting surface for their tilt-up panels; however, some of our customers have need for an evenly textured surface – exactly as the slab around the isolation pocket. In cases where the tilt-up wall panels must be cast on an entirely concrete surface, some of our customers utilize one course of plywood – which drops into the PFI® unit and bears atop of the integral ledge, thus leaving a depression of ¾” to 1” for a thin concrete topping slab. This thin topping slab becomes the temporary casting surface within said isolation pocket – and is very easily removed without sawing because it is entirely bounded by the surface-flush PFI® screed edge. Please see also the section entitled, “ZIP-STRIP COMPATIBILITY”.

HUGE LABOR SAVINGS

When PFI® is chosen as the preferential method of forming column isolation pockets, integral piers or under-slab junction boxes – the contractor will realize a tremendous labor savings.

- First of all, PFI® units are delivered to jobsites assembled as far as possible to enable economical freight charges.
Secondly, a carpenter is not required for assembly of these units – due to their inherent simplicity of design and assembly.

Thirdly, and very important, these units are intended for one-time use and are never intended for removal. This stay-in-place feature is possible because PFI® is made of materials (HDPE) that will never rust or deteriorate or stain adjacent materials. HDPE is completely uninviting to termites. HDPE also does not absorb water – so there is never a problem with swelling or buckling – as with some other materials. Truly, PFI® is a product designed with the single purpose of being a stay-where-it-is-used form for concrete. It is quite uncommon for PFI® units to require bracing; however, when bracing is recommended – units are delivered with recommendations for bracing, casting or backfilling to assist in an economical application.

HUGE SAFETY BENEFITS

When the contractor or sub-contractor utilizes the stay-in-place technology of the POCKET FORM ISOLATOR® product line, an automatic safety benefit is realized! Our products usually do not require field cutting – so saws are often not necessary. Field drilling for penetrations is easily accomplished without sparks, fumes or harmful dust. And, most of all – there is no removal step required! Temporary form materials are already difficult to install, but the removal step is what always causes the most problems. When temporary form materials are removed, wasted materials are everywhere! Flying debris, trip hazards and nail-filled lumber is a very common sight after temporary forms are removed! Why not eliminate all of these headaches and approve the use of POCKET FORM ISOLATOR®!

DISPOSAL PROBLEMS ELIMINATED

After temporary form materials are removed, they must be properly disposed of. Everyone who reads a newspaper or watches television or listens to a radio is aware of our country’s problem with waste disposal. Where to take it, how to store it and other associated problems haunt everyone with waste to dispose of. Some contractors burn as much debris as possible, but safety concerns and environmental issues cause restrictions on this activity. Disposal of Styrofoam® has been recognized as the cause for several health hazards and is actually illegal in some areas.

Please also visit our website at www.isolationpocket.com.