

Veritas VeriShield® Installation Guide



**Typical VeriShield Installation –
Individual Module Placement (non-VPAC®)
and Swing-Style SmartDoor**

veritas
Medical Solutions

Erection/Construction Requirements

Veritas' subcontractors are responsible for providing all necessary tools to complete the room installation. A tool for splitting block is greatly beneficial both in time and in accuracy of the size of the split block. Three types of tools are customarily used: a block splitter with a 30-ton capacity bottle jack, a 30-ton capacity log-splitter, and a diamond-tipped saw. It is the discretion of the installation subcontractor as to the tool utilized.

Other tools found to be of benefit are block lines, whisk hand-brooms, chalk lines, laser level, six-foot bubble level, torpedo level, and heavy-duty leather gloves.

Plant and Material Requirements

The following list describes typical equipment and materials that are typically the responsibility of the owner/general contractor, although this is not always the case. It is the owner/general contractor's responsibility to verify material requirements with the Veritas project manager. All materials must be available onsite prior to the arrival of the installation crew.

Plant Requirements

Forklift with side shift - 2,268kg (5,000 lb.) capacity, to be used at foundation level of the VeriShield room for constructing walls and general material handling duties. Note: General Contractor will need to crane or lift ceiling shielding up onto the steel beams after the beams are rigged into place. Depending on site conditions, delivered block will need to be stored in proximity to the crane for the ceiling shielding.

- Large two-bag concrete mixer
- Large cement mixer (for mortar)
- Tele-handler boom lift
- Block splitter
- 200 linear meters of scaffold 3m high with sufficient planking - coordinated with subcontractor
- Two Hilman equipment rollers or equivalent - 453kg (1,000 lb.) capacity each
- Oxygen/acetylene cutting torch
- 225 amp welder
- Electric pallet jack - 2,268kg (5,000 lb.) capacity (Note: electric, battery driven with charger.)
- Manual pallet jack - 2,268kg (5,000 lb.) capacity
- Crane or LOL for lifting and setting I-beams and ceiling shielding materials
- "Hilti" shot gun w/ charges
- Hammer drill with 19mm (3/4") bore
- Trash dumpster for used pallets and debris
- Ladders - types and specifications to be determined
- Wheelbarrows for transporting mortar and grout
- Electrical power access for hand tools, power saws, etc.





Site Preparation

Newly poured concrete floors or foundations must be cured and capable of supporting forklift and palletized block. Veritas assumes no responsibility for the adequacy of concrete, routing paths, etc. It is the customer's responsibility to ensure proper foundations are available at time of installation of VeriShield vault.

Reasonable access to the site must be provided, and assumes that palletized VeriShield material weighing approximately 1,814kg (4,000 lbs.), with skid dimensions of 1219 x 1219 x 762mm (48" x 48" x 30"h), may be transported through corridors, doorways, elevators, etc., using conventional material handling (carts, electric pallet lift, forklift, etc.) equipment as necessary.

Where special rigging problems may be encountered, such as lowering materials to a basement level through an elevator shaft, cutting holes in existing floors or walls, etc., a separate quotation (after a field inspection is made) shall be provided to cover rigging costs, etc.

Unless directed in writing by Veritas, the VeriShield block installer is to install Veritas' products to the specifications and dimensions as shown on the issued Veritas installation drawings. Should conflicts or questions arise, Veritas is to be notified immediately before continuing further with the installation.

Prior to starting the installation, the installer shall verify that all impediments to the shielding installation have been removed from the work area. Any impediments or penetrations that have not been removed shall be reported immediately to the Veritas project manager.

The VeriShield installation subcontractor shall verify all dimensions as shown on the Veritas installation drawings prior to commencing the installation.

All demolition work is the responsibility of the owner/general contractor, who will also handle all street offloading permits (if applicable) and supply all necessary special equipment, such as cranes, etc.

Temporary lighting, heat, water, electrical service for mixers, welders, etc., (110v, 30A & 220v, 75A) must be supplied by owner/general contractor. Access routing may require pallets be transported through hospital corridors utilizing propane or electric powered handling equipment. Protection of floors, carpets, tile, etc., is the responsibility of owner/general contractor.

Vertical Height Requirements: All existing pipes, ductwork, electrical conduits, clips and other items located above or around the VeriShield vault area must be removed. Consult with Veritas regarding any questions concerning existing items that may interfere with installation.

Where existing beams or columns fall within the shielding ceiling or walls, all fireproofing materials must be removed to allow proper grouting around beams to maintain shielding integrity.

The owner's structural engineer must check any beams that need to be grouted around and incorporated into the ceiling shielding system. VeriShield ceiling support beams are only designed to carry shielding loads. If building loads are to be transferred to the VeriShield Accelerator Room system, the owner's structural engineer must provide details, engineering, etc., as required to comply with all building codes. Note: This information must be provided during the design development stage of the project so Veritas Design Department can account for the necessary loads in the overall shielding design.

Customer is responsible for pre-delivery inspection of construction zone and for providing or preparing:

- Layout of isocenter of each room and other agreed upon boundaries or layout lines
- Column locations
- Properly sized and fully cured footings
- Floor slab - poured and cured
- Covering of any open trenches that would prevent the
- Movement of forklifts/pallet jacks to the jobsite
- A clear delivery path
- No steps (can use elevators if properly coordinated and sized)
- Forklift accessibility
- Temporary heat, power and water

Material Requirements to be Obtained Locally by Owner/General Contractor

- 50 sheets of 1219 x 2438 x 19mm (4'0" x 8'0" x 3/4") rough exterior grade plywood
- Welding rods - 22.7kg (50 lb.) box
- 50 pieces 51 x 76 x 2438mm (2" x 3" x 8') long subgrade timber
- 4 boxes masonry wall ties (500 per box)
- 5,443kg (6 tons) of Type 1 Portland cement
- 4,535kg (5 tons) of masonry sand
- 300 linear meters of #6 rebar (reinforcing rod)
- 1,500 "Hilti" gun nails 38mm (1-1/2")
- 1,500 "Hilti" gun shots

Crews

Installation crews should be skilled mason(s) with 5+ years of construction experience and shall be trained in the proper installation of VeriShield. Individual work crews will generally consist of 3 to 4 masons, 3 to 4 laborers and 1 forklift operator.

Veritas shall provide a field supervisor/project manager periodically during the course of installation to ensure proper placement of the Veritas materials and the integrity of radiation shielding. Frequency and duration of site reviews/visits are at the discretion of Veritas project management.

Administrative Responsibilities

Reports and Paperwork: Veritas requires that the Veritas Daily Progress Report be completed and faxed to Veritas' home office (484-991-8521) after completion of each day's installation work.

Each day's progress should be clearly represented on a plan view sketch. Indicated elevations or courses of block installed on the various walls or ceiling by the end of the day's work should also be delineated. Any problems or difficulties encountered in the course of the day's work should be described in full on the Daily Progress Report.

Any onsite project meetings attended by Veritas' installation subcontractor should be reported in full on the Daily Progress Report.

When material is delivered to the project, signed and dated copies of the bills of lading are to be faxed (484-991-8521) to Veritas' home office within twelve hours of the completion of the day's deliveries.



Layout

It is the owner/general contractors responsibility to determine and mark the isocenter. Based on that location, layout lines will be marked out for the shielding locations and other room structure such as the door frame, etc., as indicated on the issued Veritas design drawings.

Surface is to be flat, plumb and level within 6.35mm (1/4") in all directions.

Prior to the start of shielding placement, all layout lines will be clearly marked and labeled. All dimensions (vertical and horizontal) of the project area are to be confirmed by direct measurement, in more than a single location, prior to the start of work.

Materials are then positioned for convenience to begin construction. Provide proper access routes to the installation area. Proper coordination between trades must be established in order to transport VeriShield materials to the installation site. Provide an adequate storage/staging area.

First Course

The initial layer of VeriShield block is to be mortared in place. A maximum of 9mm (3/8") bed of mortar shall be laid to start the installation of VeriShield. Block will be laid in a modified running bond pattern with staggered seams between each respective wythe of block.

Mortar must be freshly mixed and be proportioned with 1 part cement, 1 part lime and 6 parts sand (Type N Mix). Mortar shall comply with ASTM C270 specification for Type N Mix.

Should the block require more than 9mm (3/8") of mortar due to the floor not being level, the condition must be reported to the Veritas representative immediately.

It is important to ensure the first course is plumb and level and each block is securely mated with its neighboring block. No gaps should be left between blocks.



The space for the second wythe of block is left open to become the bond beam. The third and all subsequent wythes of block (if necessary when specified by the shielding design) are installed in the mortar. It is important to fit block together as tightly as possible to avoid any gaps between wythes of block or the individual blocks themselves.



Depending upon the overall shielding design, additional wythes of block may be left out for the placement of additional bond beams. High seismic zones will incorporate a large number of bond beams throughout the shielding.



Corners are constructed by butting staggered blocks together as shown, with first layer blocks set in mortar. Multiple corners can be constructed simultaneously with care given to maintaining accurate alignment of the wythes of block running between the corners.



Empty wythe spaces for the first level of bond beams are left according to Veritas supplied drawings. This high-density grouted bond beam shall consist of steel reinforcing bar laid in accordance with installation drawings with grout materials placed and properly compacted.





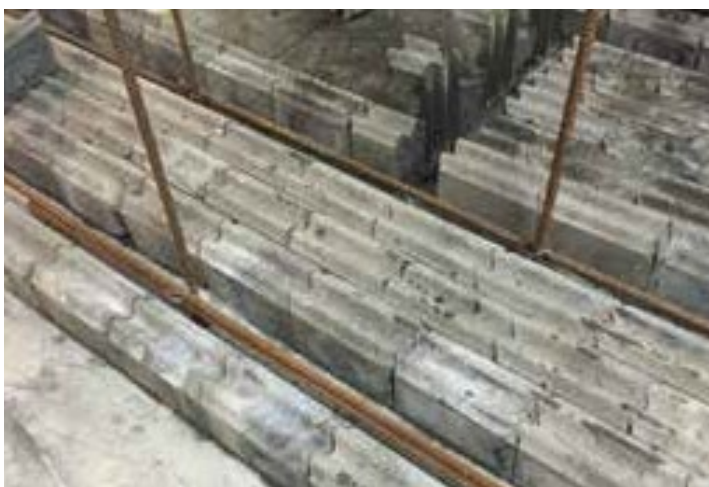
Locations for vertical rebar placement are measured out and clearly marked according to the drawings. Size and type of rebar will be specified (typically #6 rebar).



Holes of the required diameter are drilled to a depth of 228mm (9"), and all debris blown out of the holes.



2,268kg (5,000 lb.) non-shrink epoxy is installed into the holes and filled to the top. Care should be taken to avoid air pockets.



Vertical rebar is inserted into the holes and set as deeply as possible. Allow epoxy to cure prior to attaching horizontal rebar. Sections of rebar shall be oriented in the middle of the horizontal bond beam.



Once the vertical rebar is set, additional rebar is added horizontally to reinforce the horizontal bond beams. Where sections of rebar overlap, a minimum of two feet of overlap is required and overlapping sections of rebar must be tightly wired together every 12 inches in distance. All corners and intersections shall have a minimum two-foot rebar overlap.

Horizontal rebar is tied wherever possible to the vertical rebar using wire ties. All overlapping sections of rebar must be tightly wired together every 305mm (1') in distance.



Following rebar installation, VeriShield grout is poured into the empty spaces left between blocks and filled to the level of the shoulder of the block (just below the start of the sine wave curves located on the top of the VeriShield blocks). A screed may be used to ensure the correct elevation and levelness of the VeriShield grout in the bond beam.



Grout should not extend above the sine wave curves of the block as this will prevent the curves on the bottom of the next layer of block from fitting precisely with the curves on the top of the first layer. Grout materials must be placed and properly compacted to avoid voids in the bond beam.

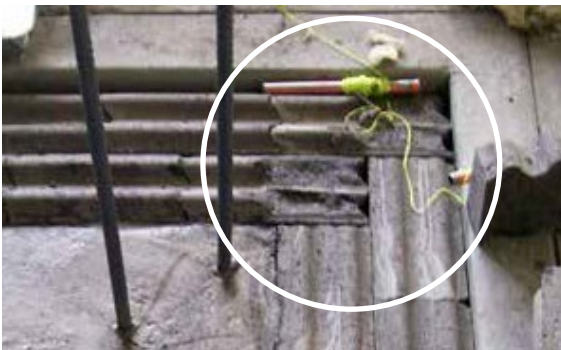


Bond beam grout installation continues around the perimeter of the room until all first course bond beams are filled. Bond beam sections require a minimum 24- hour curing period before erecting additional block layers. For safety, install high visibility cushioned safety covers on top ends of all rebar.



Once the grout is set, the second layer of block can be placed, leaving an open area around the projecting vertical rebars. This space will be filled later with grout to form the vertical bond beams. This and subsequent layers of block are dry fit, with care given to placing all block as tightly as possible. Remove any debris as necessary prior to placing blocks. Gaps between blocks should not exceed 3mm (1/8").





Additional Courses

Place all VeriShield block in a modified running bond pattern. The first two courses are placed in a stack bond. The third course is offset to form a standard running bond pattern. The fourth course resumes the stack bond. Subsequent courses of VeriShield continue this four course bond pattern. All block is to be installed as tightly as possible, and all wythes of block are to be installed within 6mm (1/4") of the preceding wythe of block. VeriShield grout may be used to level block between any/all courses of block if necessary to maintain the level and plumb of the block and walls. All walls should be laid plumb, level, and true to line. Finished walls are to be plumb within 6mm (1/4") in ten feet.

Intersecting block (e.g., corners) is installed in the same manner as normal masonry block corner construction. However, in order to permit intersecting VeriShield block to be installed properly, the curves on one-half of the top face of the block beneath the course being installed must be removed completely to the level of shoulder of the block. Failure to remove the teeth on the lower block will keep the upper course of block from being installed level. When the upper overlapping block is installed, a small amount of VeriShield grout is installed on the surface of the bottom block to completely fill the void created by the upper block's teeth laying on the flat surface of the bottom block.

Block is laid to provide space around the vertical rebar. Typical opening is 127mm x 127mm (5" x 5"). Drawings will specify if additional space is required for a larger bond beam. Where horizontal and vertical bond beams intersect, rebar must be wire tied together.

Spacing of block is repeated for upper level bond beams, rebar is placed and tied as before, and VeriShield grout is poured into the spaces. Grout should be vibrated to ensure complete filling of all voids.

Block may be dry stacked up to 5 courses. At every 5th course of block (63 cm high), a mortar joint will be required between the horizontal joint in order to keep walls level. At every 5th course, VeriShield HT half-thickness blocks are also added to the layer in order to offset the full blocks, enabling them to span across the lower blocks. This serves to lock the vertical wythes together without the use of wall ties or other attachments.

Every fifth course of block is to be leveled with mortar as necessary. Leveling bed should be kept to a minimum thickness as large quantities of mortar will affect the shielding integrity. Maximum thickness of leveling bed should be no more than 6mm (1/4"). If any VeriShield units are displaced after mortar has stiffened, remove and reinstall the block. Strike flush all joints. Ensure the curved interlocking edges are fully intact and flush with adjacent VeriShield block.

Other than every fifth course, all block is normally dry stacked.

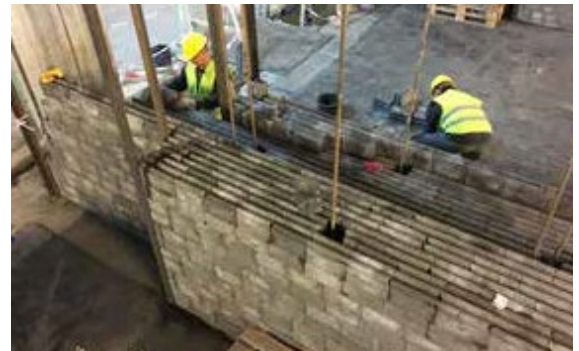
All walls of VeriShield block at the level of the fourth course must be installed to the same elevation. The regular use of a laser level to verify the level of each fourth course of wall block is strongly suggested. VeriShield grout joints shall be kept as small as possible. Once block are laid to a height of 1270 mm high (approx. 4'), scaffolding with planking is erected on the inside of the room. Safety railing must be installed where required. Block to be stacked on approved scaffolding using an appropriate forklift.

Any and all voids (such as are found at the ends of a row of block) are to be packed solid for their entire length with VeriShield grout. Spaces between wythes of block are to be filled and packed solid with VeriShield grout only if directed by a Veritas representative.

Door Frame

The Veritas Swing-Style SmartDoor consists of a single leaf, swing-style shielding door supported by a radial/thrust pivot bearing, surface mounted to the concrete and top radial bearing installed into a steel frame support. The door is hinged from the spine edge of the door and provides a 1219mm x 2133mm (4' x 7') clear opening when positioned at the 90 degree position.

The door frame is delivered separate from the door shell and mechanical equipment, and is installed during the wall construction.





To ensure the door frame is level and plumb it is strongly suggested that the door width be measured at a least three points – the bottom, the middle and the top as shown in the diagram below. The frame should be square and plumb.



At the top of the mechanical penetrations opening (also termed the duct opening), a steel header lintel is installed. Usually, this header lintel is a steel channel that is installed with the flat side of the channel downward. The upper section of the channel then becomes the form into which VeriShield grout and VeriShield block is installed.



Door frame(s) shall be bolted to floor slab according to Veritas drawings. Typical embedments are 19mm (3/4") dia. HILTI H.A.S. min. 152mm (6") embed. After drilling mounting holes, fill with HILTI HY200 injection adhesive and insert bolts. Allow 24 hours. for curing before securing frame to anchors.



VeriShield block is laid up to the door frame and grout added to fill any voids. Subsequent layers are laid leaving space around the embedment studs welded to the frame. These spaces are filled with grout, firmly embedding the studs within the wall shielding

After the door sub-frame has been installed, and all adjacent walls constructed to the level of the opening of the top flange of the door sub-frame, the area above the door sub-frame is to be grouted solid with VeriShield grout to the top of the flange.

One continuous length of rebar shall be in the grouted area over the door sub-frame. It shall have a minimum 914mm (3') overlap with, and be wired to the vertical rebar in the vertical grout cells located to each side of the door sub-frame.

In the header lintel, VeriShield block is installed on a base of VeriShield grout. VeriShield grout is installed in the channel trough to an elevation permitting the subsequent courses of block to resume at the same level as those above each side of the penetrations opening. VeriShield block is installed directly in the top of the VeriShield grout. The teeth on the lower side of VeriShield block are embedded in the VeriShield grout when the grout is installed.



Dosimetry Penetrations

Dosimetry pipe penetrations are constructed by positioning the dosimetry pipe in the wall and adding block layers up to and around the pipe. Care should be taken to angle the pipe as directed in the Veritas drawings.





Voids are then filled with grout to fully encase the pipe within the shielding.



After the grout has hardened, the pipe can be cut flush with the face of the wall.



Walls are constructed of multiple layers of VeriShield block, a lift of blocks approximately 1270mm (4') high will be laid to a bunker, then appropriately designed scaffold will be erected within the footprint of the bunker. Once the scaffold is handed over the next 1270mm (4') high lift of blocks will be installed.



This sequence will continue until the bearing plate level for the roof steelwork has been reached. Bearing plates will be grouted in with high density grout and left to cure for 24 hours.



Bearing Plates

Once the bearing plate level has been reached, additional bond beams with steel embedded bearing plates shall be constructed.

Rebar shall be installed in center of bearing plate horizontal bond beam. Overlap rebar and wire-tie firmly every 305mm (12"). Overlap corner rebar as per drawings and tied to vertical rebar as indicated.



Form as required to contain grout during installation of bearing plates and header plates as per drawings and ensure the proper bearing heights as indicated on the drawings.





The grout is smoothed and readied for the insertion of the bearing plate anchor bolts.



Ensure that the bearing plates and header plates are installed level in both axes.



Ensure that grout has been installed and tamped firmly to remove all voids.



Ceiling Structure

Prior to any and all steel headers and steel beams, insure that grouted bearing plates and header plates have been allowed to cure for a minimum of 18 hours prior to setting any steel headers or steel beams. Structural steelwork will then be installed spanning between bearing plates on opposites of bunker walls. One to three steel beams will be placed at correct positions starting from one end of the room and working outward. Beam(s) will then be loaded with appropriate block thickness as called for on drawings.



Begin by installing first beam, insure beams and lengths being installed are the correct beams as indicated on the Veritas drawings.



Space out the beams as indicated on the drawings working your way out of the room. Beams are to be installed per the actual spacing as shown on Veritas' installation drawings. Beam spacing is to be strictly held to $\pm 3\text{mm}$ ($1/8"$) as measured from the first installed and welded beam.



After a few beams have been lifted and set roughly in place insure they have been spaced per the drawings and weld in place per the drawings. Continue this process until all ceiling beams and header beams are in place. This process may be adjusted in field to allow for an easier installation of the ceiling blocks.



Beams are to be installed with the full bearing as shown on the Veritas installation drawings. The full amount of bearing surface is to be kept to a tolerance of $\pm 4.5\text{mm}$ ($3/16"$) to the dimension shown on Veritas' drawings.



Once steel beams have been installed per drawings, they will be tack welded to bearing plates to hold them in position. A solid weld the length of end of the beam and a 76mm (3") weld along the side of each beam are required for welding the beam to the bearing plate. If steel plate is to be installed in the beam webs, a tack weld is to be placed on the exposed ends of the steel plates to maintain their position relative to the other plates of steel. Welding to be performed by a certified welder and all welds are to be completed as per drawings.





After the beams are positioned, place block to fill the areas between the beams above the bearing plates.



Add grout as needed to fill any remaining voids.



Build the surrounding block walls up to the level of the steel support beams.



Where vertical space is limited, shielding may sometimes be placed within the beam webs of the steel I-beams. Shielding is then placed above the beams filling the remaining space.



In instances where it is not possible to place all the support beams at once and then add the shielding blocks, it may be necessary to start at a point farthest away from the delivery area, and continually build the ceiling shielding until you are out of the area.

Several beams would be placed into position, welded and then the required thickness of shielding block placed on top. Once the area is complete, additional beams would be placed and the process repeated until the ceiling is complete.

After working across the room, once the last beam and ceiling block has been placed, the front shielding wall can be completed.



Perimeter areas surrounding the support beams may be filled with grout, tamped and screeded flat to the top of the beams. This provides a flat surface on which to lay the ceiling shielding blocks.



Once the grout has hardened, VeriShield blocks are laid on their sides and slid into position. Care should be taken to ensure tight block-to-block contact, avoiding any gaps between blocks.



Block is packed as tightly as possible with staggered joints. No mortar or leveling bed is typically necessary, but VeriShield grout should be used to fill any unforeseen gaps or holes.





Install VeriShield block in the locations and thicknesses as indicated on the Veritas drawings.



Ceiling shielding block layers should be offset one-half block on each axis to stagger joints.



Levels of roof shielding and walls should match (unless otherwise specified in Veritas drawings), and all gaps filled with VeriShield grout.

Use VeriShield grout to fill any perimeter gaps and infill any remaining voids.



All ceiling support steel beams are again welded to the steel bearing plates from within the room interior.



Duct/Penetration Shielding

It is important that the penetration shielding support system be installed at the correct location and elevation as shown on the Veritas installation drawings and that the support system is level on both horizontal axes.

The shielding of the mechanical penetrations opening is critical to the total overall shielding of the project. It is important that the shielding material be installed so that no gaps exist between the shielding materials.

Note: The duct/penetration opening is typically located above the room entrance. The shielded door system must be installed prior to the installation of any duct/penetration shielding.

VeriShield block is laid on its side on top of the support steel at a thickness specified in the shielding drawings. Grout is not typically required in this area, however no voids in the shielding are acceptable.





The bottom teeth of the VeriShield block to be installed in the grouted area over the door sub-frame are to be embedded in the VeriShield grout formed by the door sub-frame top flange. The appropriate courses of VeriShield block are then installed to the level of the bottom of the mechanical penetrations opening (also termed the duct opening). At that point, block is installed on the sides of the mechanical penetrations opening to form said opening. Close adherence to the dimensions of the mechanical penetrations opening size is critical.



Completed duct shielding will fully shield all penetrations through the room's wall shielding. There should be no gaps or straight line passages from the duct or services opening through the duct shielding.

Door Installation



The door is shipped on top of the front door skid and the interior of the door is used to contain associated components. In addition, there may be supplemental boxes. Please go over the packing list and make sure that everything on this list has arrived. If any items are missing or damaged contact the Veritas Service Department immediately.



If space allows, the shell may be delivered into the room space prior to the completion of the wall shielding and stored until required. Care must be taken to protect the associated components that are shipped with the door.



Note: For complete door installation instructions, please refer to the Veritas door installation manual available from the Veritas Project Management or Door Departments. The following is a brief synopsis of the major elements of installation, which is typically handled by Veritas personnel.

To lift the door shell into position it is necessary to attach a 453kg (1/2 ton) capacity chain hoist to the steel beams above the door opening.

Measure the door opening to ensure the door frame is level and plumb by measuring the door width in at least three points – the bottom, the middle and the top. After checking the door frame, the Lower Bearing Subplate is positioned and bolted to the floor. After the Lower Bearing Subplate is bolted in position, the Upper Bearing Subplate is positioned using a self-leveling alignment laser.

The laser beam should hit the dimples at the center of both the lower and upper bearing subplates. The cropped corner of the upper bearing subplate should be aligned with the rounded corner of the lower bearing subplate. Once aligned properly, the upper bearing subplate is clamped down and welded into position on the door header.

Once the lower and upper bearing subplates are in position the bearings are inserted and the upper and lower bearing retainer plates are bolted in position. Next position the hinges for attachment to the door. After putting together the lower hinge block assembly put the axle into the bottom bearing assembly but do not bolt the bottom hinge assembly to the wood hinge spacer at this time. Next put together the upper hinge block assembly and bolt it to the wood hinge spacer using 152mm (6") bolts and nuts. Then using the wood hinge spacer, lift the upper hinge block assembly and insert it into position in the upper bearing and then bolt the wood spacer to the bottom hinge assembly to keep the hinges in position. Rotate the wood spacer hinge assembly to the door's 45 degree position and roll the door shell assembly in place using 25mm (1") outside dimension pipes (19mm (3/4") inside dimension). These pipes are used to move the door into position.

Tighten all 8 bolts with 38mm (1 1/2") ratcheting or socket wrench. Insert the grease fittings and plugs into the ports on both the lower and upper hinge blocks.

Remove the cover of the door to allow access to the interior for loading of the shielding.





While the door remains on the pipes, or other support at the middle and ends of the frame, begin loading block starting on the strike side of the door starting with a full block. Keep block tight to door shell. Stagger pattern every two courses, keeping block tight together. Cut blocks as necessary to fill door shell as completely as possible.



Top course of block will have to be cut horizontally to fill door completely. Ensure a tight fit. Any voids from top of shielding to inside of door shell should be filled with V250 grout mixture. Any leftover grout should be used to skim coat the face of the shielding to fill voids.



Place the door skin on the pipes and align countersunk holes with threaded holes in door and insert all screws. Using the slotted holes on the bottom of the skin may be helpful for alignment. A pry bar may also be useful for this task.



Reinstall door cover and hand tighten all bolts. Remove pipes from under door and verify all door reveals are minimum 25mm (1") and even throughout.

Veritas personnel will install and attach the motor drive, hinge coupler gearbox motor assembly and all other drive and operating components following the shielding installation. Decorative finish panels will also be supplied and installed.



Electrical Rough-In

The electrical rough-in to supply power to the Veritas SmartDoor shall be provided by the General Contractors. The electrical rough-in locations shall be coordinated with the GC to insure proper locations. The Veritas PM shall provide the Veritas drawing indicating the required electrical locations for the Veritas Door. GC is to provide said electrical rough-in to these locations.



Interior Finishes

For installations that include the Veritas SmartSuite™ Interior Finish Package, once the room shielding is complete, interior finish components will be delivered and installed.



Typical interior packages include Veritas' pre-engineered wall panels and other pre-manufactured components.



For complete installation information please refer to the Veritas SmartSuite installation manual, available from the Veritas Project Management Department.





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