

S P E C I F I C A T I O N S

PHYSICAL PROPERTIES

DENSITY

SPECTIS products are made with high density polyurethane with an overall density similar to white pine at 14 to 18 pounds per cubic foot. The Spectis process provides a greater skin density than core density for increased durability.

SURFACE PROPERTIES AND FINISHES

All products are manufactured with a white or beige colour coating. Further, these products receive a primer finish coat before they are shipped to customers. The combination of the integral shell-like skin, the barrier coat, and the primer top coat provide an excellent substrate for durable finishes.

ULTRAVIOLET

Ultra violet rays do not affect properly coated products.

COMPRESSIVE STRENGTH

The compressive strength of polyurethane products falls within the 800-950 P.S.I. Range. *(The parts are not intended for structural use.)*

TENSILE STRENGTH

The tensile strength of polyurethane products falls within the 550-650 P.S.I. range. *(The parts are not intended for structural use.)*

FLEXURAL STRENGTH

The degree of flexibility of any given polyurethane product is determined by the size and shape of its cross section. However, due to the inherent flex characteristics of polyurethane products, they will follow some curvatures and uneven surfaces.

MOISTURE RESISTANCE

Spectis polyurethane has a closed cell structure which provides protection from most solvents and renders it almost completely hydrophobic. It will not rot!

MILDEW RESISTANCE

All Spectis polyurethane products resist the growth of mildew and fungus and provides no nutritional value for other organisms such as small rodents.

INSTALLATION

SPECTIS polyurethane products are handled in the same manner as wood millwork.

SPECTIS adhesives refer to PL Premium.

Fasteners refer to nails, screws, bolts etc.

SPECTIS adhesives and fasteners must be used for installing all SPECTIS products on concrete, metal, vinyl or wood. SPECTIS adhesive must be used on all bedding/butt joints to ensure the beauty of your installation for years to come.

FINISHING

Spectis products are supplied with a white or beige primer base coat, ready for finishing top coat. A good quality exterior latex or oil base paint may be used on rigid Spectis product. On Spectis flexible product use HQ Alkyd Enamel such as Sherwin Williams SuperPaint. The surface must be clean, dry, and free from all greases or waxes before all finish work is begun. See "Finishing" section (on page 233) for more information.

WARRANTY

SPECTIS MOULDERS INC. herein referred to as the "seller", warrants its products against defects in materials and workmanship for a period of five years from date of purchase, to the original end user, when used and installed under recommended conditions. If the product is not painted immediately following installation, the warranty will be for a period of 1 year from date of purchase.

Failure to follow the seller's storage and recommended installation instructions will void this warranty.

Purchaser and installer must inspect each piece prior to installation. Both parties waive all defects which could have been discovered by reasonable inspection prior to installation.

In the event claim is made under this warranty, the Seller reserves the right to inspect products claimed defective under warranty either at the Purchaser's location or at the Seller's plant, if returned, freight prepaid. Any product(s) proving defective due to faulty manufacturing within (5) years from date of shipment will be replaced or repaired free of charge or, at Seller's option, the purchase price will be refunded upon return of the product(s). The seller assumes no liability for labor charges incidental to the adjustment service, repairing, removal or replacement of the product, product(s) damaged by freight carriers, freight charges, installation, lost profits, lost sales, or other costs, or for the expense of repairs made outside of its factory except when made pursuant to the Seller's prior written consent. The Seller, at its option may ship a replacement or replacements immediately under standard billing and make warranty adjustment after inspection of the defective product by means of a credit memorandum.

No purchaser may take any deduction or credit against any amount owed to SPECTIS or make any charge back without the expressed written consent of SPECTIS.



PL PREMIUM

PREMIUM CONSTRUCTION ADHESIVE

PL Premium is a revolutionary new construction adhesive that provides superior results and is safe to use. It may be used inside or outside and will last as long as the surface joins together. Because the bonding strength of PL Premium is so strong, much less adhesive is required to complete your projects. PL Premium is very easy to use, is waterproof, paintable, and exhibits low odour.

APPLICATION:

- Surface temperatures above 5°C (40°F) are recommended.
- Surface must be completely dry, free of moisture, and clean.
- PL Premium comes ready to use. Do not open cartridges until preparatory work has been completed. Cut nozzle to desired size opening.
- Place the cartridge in caulking gun and puncture the seal inside the nozzle.
- Apply the adhesive with a steady pressure.
- Bond and support the assembly until the adhesive has set. (12 hours)
- Spray a mist of water in joints where thick cross sections are present to aide in cure.
- PL Premium has low toxicity, non flammable/non combustible - very low odour, it is environmentally safer than any other conventional adhesive.
- PL Premium works fast - up to three times faster than anything else on the market today and that means more productivity on the job.
- PL Premium is so strong that it offers twice the coverage of conventional adhesives. It is also waterproof and useable in all climate extremes. Bonds can be made in temperatures ranging from - 18°C (0°F) to 204°C (400°F).

SUPPORT IS REQUIRED UNTIL THE ADHESIVE HAS SET. SETTING TIME MAY VARY DEPENDING ON THE % OF HUMIDITY DURING THE CURING PERIOD AND THE TEMPERATURE.

"For best results use PL Premium Adhesive on all joints."



WORKING TIME:

You can work with the adhesives up to 45 minutes.

STORAGE:

After completion of your work, seal all openings tightly with aluminum foil. Wrap the foil tightly around nozzle and seal it with a piece of scotch tape or in the case of squeeze tubes, apply Vaseline around the cap area prior to replacing the cap.

COVERAGE:

A 300 ml. cartridge seals 24 lineal feet in a 1/4" X 1/4" joint.

A 825 ml. cartridge seals 66 lineal feet in a 1/4" X 1/4" joint.

CURES BY:

Reacting with moisture. At higher levels of moisture, the cure rate will be faster. At lower moisture levels the cure rate will be slower.

CURING RATE:

A 1/4 inch bead cures in approximately 16-24 hours at 25°C (78°F) and 50% relative humidity.

CLEAN UP:

Immediately after use, clean equipment with Acetone or Mineral spirits. Cured sealant can be removed by cutting with a sharp edged tool, thin films by abrading.

ADDITIONAL FEATURES:

Can be painted, sanded. PL Premium cures even in cold temperatures.

SHELF LIFE:

1 year in unopened tubes at 24°C (75°F), 50% relative humidity.

FOR THE BEST PERFORMANCE:

- Wear disposable gloves while using PL Premium or staining of the hands will occur because of moisture in the skin. Staining will disappear in about 3 days.
- Be very careful not to allow PL Premium to cure on a finished surface. It is next to impossible to remove without sanding. Solvents have little effect on PL Premium once cured.
- PL Premium does not bond well to certain Plastics. Test a piece for adhesion.

The information given and recommendations made herein are based on our research and are believed to be accurate but no guarantee of their accuracy is made. In every case we urge and recommended that purchasers before using any product in full scale production make their own test to determine to their satisfaction whether the product is of acceptable quality and is suitable for their particular purpose under their own operating conditions. The products discussed herein are sold without any warranty as to merchantability or fitness for a particular purpose or any other warranty, express or implied. No representative of ours has any authority to waive or change the foregoing provisions. Nothing contained herein shall be construed to imply the non-existence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

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1.01 SUMMARY

- A. Section Includes: Simulated wood trim, including entrance systems, large entrance features, specialty entrance features, mouldings, door and window trim, wall niches, window features, balustrades, columns, ornamentation and decorations, medallions, louvers and domes. Refer to the Drawings for details and locations.
- B. Relations Sections: Sections related to this section include:
 1. Section 06100, Rough Carpentry.
 2. Section 06200, Finish Carpentry.
 3. Section 06400, Architectural Woodwork.
 4. Section 09900, Paints and Coatings.

1.02 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 1. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials.

1.03 SUBMITTALS

- A. Product Data: Submit manufacturer's descriptive literature, specifications, installation instructions and limited warranty.
- B. Shop Drawings: Submit shop drawings showing layout, profiles and product components, including anchorage, accessories, finish colors and textures.
- C. Samples: Submit selection and verification samples for finishes, colors and textures.
- D. Quality Assurance Submittals: Submit the following:
 1. Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties.
 2. Manufacturer's Instructions: Manufacturer's installation instructions.
 3. Manufacturer's Field Reports: Manufacturer's field reports specified herein.
- E. Closeout Submittals: Submit manufacturer's standard warranty documents.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer experienced in producing moulded decorative millwork of the types required for this Project. Obtain all moulded decorative millwork from a single manufacturer.
- B. Installer Qualifications: Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.
- C. Mock-Ups: Install at project site a job mock-up using specified products and installation methods acceptable to the manufacturer and the Architect. Obtain Owner's and Architect's acceptance of finish color, texture and pattern, and workmanship.
 1. Mock-Up Size (Specify mock up size).
 2. Maintenance: Maintain mock-up during construction for workmanship comparison. Remove and legally dispose of mock-up when no longer required if not incorporated in the final work.

3. Incorporation: Mock-up may be incorporated into final work upon Owner's approval.

- D. Performance Requirements: Provide simulated wood trim units which have been manufactured, fabricated and installed to maintain performance criteria stated by manufacturer without defects, damage or failure.
- E. Fire Test Characteristics: Provide moulded units which pass ASTM E84 for Class A or Class B requirement by UL or other testing and inspecting agency acceptable to authorities having jurisdiction.
- F. Preinstallation Meetings: Conduct a preinstallation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions and manufacturer's warranty requirements.

1.05 DELIVERY, STORAGE & HANDLING

- A. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- C. Storage and Protection: Store materials protected from exposure to harmful weather conditions and at temperature and humidity conditions acceptable to manufacturer.

1.06 PROJECT CONDITIONS

- A. Temperature Requirements: Maintain air temperature in spaces where products will be installed for time period before, during and after installation within limits recommended by manufacturer.
- B. Field Measurements: Verify actual measurements and openings by field measurements before fabrication. Show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

1.07 WARRANTY

- A. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under the Contract Documents.
 1. Warranty Period: Manufacturer's 5 years limited warranty against defects in materials and workmanship. Warranty shall commence on Date of Substantial Completion.

1.08 MAINTENANCE

- A. Extra Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels.
 1. Quantity: Furnish quantity of (identify items) units equal to (Specify %) of amount installed.



SIMULATED WOOD TRIM - PART 2 - PRODUCTS

2. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra materials.

2.01 SIMULATED WOOD TRIM

- A. Manufacturer: Spectis Moulders Inc., Box 970, Niverville, Canada, MB. R0A 1E0, Telephone (204) 388-6700 and (800) 685-9981, Fax. (204) 388-6710. Substitutions not permitted.
- B. Standard SPECTIS:
 1. Material: High-density polymer comparable to kiln-dried white pine millwork, with higher skin density.
 2. Moisture Resistance: Non-water absorbing.
 3. Fire Rating: Optional ASTM E 84 Class B.
- C. SPECTIS Balustrade Systems:
 1. Material: High-density polymer cast around PVC pipe in baluster and around vinyl, aluminum or steel pipe in top and bottom rails and posts.
 2. Moisture Resistance: Durable and weather resistant.
 3. Fire Rating: Optional ASTM E 84 Class B.

- D. SPECTIS Poly/Steel/Aluminum Columns and Posts:

1. Material: High-density polymer cast around steel or aluminum pipe.
 2. Moisture Resistance: Durable and weather resistant.
 3. Fire Rating: Optional ASTM E 84 Class B.
- E. Shop Finish: Provide units with manufacturer's standard barrier coat and shop-applied primer to receive field applied coating.
 - F. Accessory Materials:
 1. Fasteners: As recommended by manufacturer, provide trim screws, drywall screws or finishing nails. Application using a pneumatic nail gun is acceptable. Application using a staple gun is not acceptable.
 2. Joint Compound: As recommended by manufacturer, provide spackle joint compound, ready-mixed, vinyl type, or two-component auto body type filler.
 3. Adhesive: Use manufacturer recommended adhesive for product installation.

SIMULATED WOOD TRIM - PART 3 - EXECUTION

3.01 INSTALLATION

- A. Site Verification of Conditions: Verify substrate conditions are acceptable for product installation in accordance with manufacturer's instructions. Do not proceed until unsatisfactory conditions are removed.
- B. Installation: Comply with requirements of manufacturer's product data and approved submittals, including product technical bulletins, product catalog installation instructions and product carton instructions for installation. Fill holes using compound recommended by the manufacturer and sand to prepare surface for field painting.
- C. Manufacturer's Field Services: Upon Owner's request, provide manufacturer's field service consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.

3.02 CLEANING AND PROTECTION

- A. Cleaning: Remove temporary coverings. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions. Remove construction debris from project site and dispose of legally.
- B. Protection: Protect installed product and finished surfaces from damage from construction operations.

END OF SECTION

Spectis Moulders products may be painted with either a latex or oil based paint. The following guidelines should be used when choosing and applying paint to Spectis Moulders products.

1. Surface Preparation: All Spectis Moulders products are shipped from the factory with two coats of paint applied, a barrier coat bonded directly to the polyurethane foam and a flat white primer coat.
Before applying any paint to the product, the surface must be free of any contaminants, especially any dirt, grease or oils that may have been transferred to the product surface during installation or in transit from the factory. Spectis Moulders recommends that all surfaces be wiped down with a mild water and ammonia solution (or equivalent) prior to painting to remove contaminants. See "Finishing" section on page 233.
2. Paint Selection: Most quality paints, either latex or oil based can be applied to the product. Latex is recommended since topcoat applied at the factory is a latex-based paint.
3. Color Selection: All Spectis Moulders products are subject to expansion and contraction. Darker colors specifically black, dark greens and dark blues absorb more of the sun's radiation than do lighter paints and cause substantially greater than normal expansion and contraction in materials, therefore, these finished colors are not recommended for rigid foam polyurethane products. These colors, if used on Spectis Moulders products, invalidate the Spectis Moulders' limited warranty.

Technical Support:

Specific concerns or questions regarding painting and installation of Spectis Moulders products should be directed to our technical support department at 800-685-9981.



INSTALLATION OF BALUSTRADE SYSTEMS

IMPORTANT: Be sure to mark the center point of each newel post's location prior to installation to insure proper spacing. All product interfaces must use PL Premium Adhesive (read directions before use) for warranty purposes and ensure lasting installation.

Spectis makes no guarantee as to the suitability of our rail systems, or any other product we sell, on any specific project or application. Before any balustrade, or any other product, is ordered and installed, Spectis recommends checking with local building code authorities to ensure relevant building code requirements are met. Most building codes dictate that the balustrade must be installed in accordance with the "4" ball rule". Further, most building codes specify top railing height be no lower than 36" on decks lower than 3' from grade, and 42" where the railing is to act as a guard rail. Usually, where the railing is to be purely decorative, there are no limitations.

All Spectis' railing systems are designed for termination at newel posts, walls, or some other load-supporting member. They cannot be joined to each other. Any installation where a railing section is not installed as recommended will void Spectis' warranty.

The following steps outline the procedure for installing Spectis' balustrade system. It may be necessary to modify this procedure for circumstances relevant to an individual installation.



2a



2b



3a



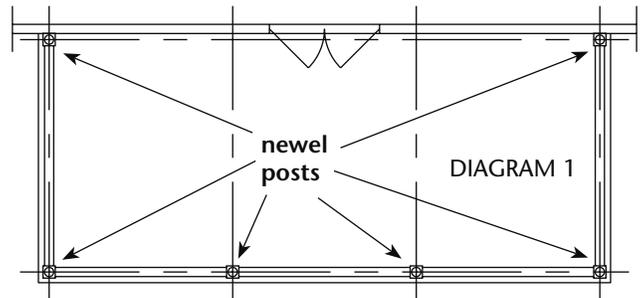
3b



3c

1. Determine location of newels:

- Before any work can begin, it is necessary to determine the exact layout of railing.
- When determining layout, use 12' as a maximum railing length and keep all railing lengths on a run equal. (See Diagram 1)
- Mark the center locations of all newel posts.



2. Install top angle brackets to newels

- Before installing the newels, it is necessary to install the top angle brackets to each newel post. (The bottom brackets are fastened to the bottom rails)
- Measure the combined heights of the bottom rail and baluster; this is the distance between angle brackets used to fasten railings to newels. Call this total measurement "X" inches.
- Determine and mark on the newel post the height, which the bottom rail will be located off the deck. This will be the location of the bottom rail bracket.
- Offset the top rail bracket "X" inches from the bottom bracket (See Photo 2a), mark and pre-drill a hole in the newel post for the center bracket hole.
- Install the top bracket at the location determined above using a bolt through the center hole of the angle bracket. (Use adhesive between bracket and newel)
- Install wood screws through the 2 outboard holes in the bracket. (If present)
- Note the top railing bracket can be mortised into the newel post for a cleaner installation. (See Photo 2b)

3. Installing Newel posts To Wood Decking

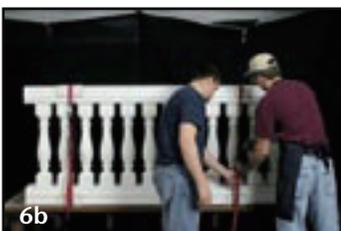
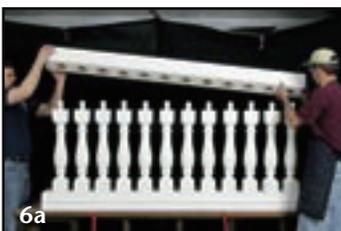
- Install blocking if required beneath the center of each newel post, fastening with screws or nails to deck joists. (Minimum requirement: 2" X 6" CCA treated Southern Pine)
- Center floor flange on top of center-mark of post location found in Step 1 and secure to decking and blocking with 3" lag screws. (See Photo 3a)
- Thread 1/2" rod into welded nut on floor flange and tighten with vise grips. (See Photo 3b)

4. Installing Newel posts To Concrete

- Drill 5/8" hole to minimum depth of 2 1/4" at center positions of newels determined in Step 1.
- Clear and insert anchors into holes, tapping the anchor in until flush with surface of concrete. Using a setting pin (metal pin or punch) strike with sharp blows until anchors are set. (See Photo 3c)
- Thread rod into anchor and tighten with vise grips.



INSTALLATION OF BALUSTRADE SYSTEMS



5. Securing Newel Post

- Place newel post over threaded rod and insert "C" channel (open side up) into mortised slot in the top of the newel post. (Be sure to use PL Premium between base of newel and deck material)
- Install lock washer and nut on to threaded rod.
- Orient newel post to final position and tighten up nut. (See Photo 3d)
- Cut excess threaded rod using reciprocating saw or cut off disk. (Rod can be no higher than top of newel)

6. Determine and cut railing lengths

- With the newel post installed, measure the spans between each set of newel posts and cut top/bottom rail sections to suit.
- Label each set of rails to their corresponding location.

7. Determine balustrade spacing and drill holes

- Prior to drilling holes, check with local building code authorities for minimum spacing of balusters. Most building codes dictate that the balustrade must be installed in accordance of the "4" ball rule." (See Photo 4a)
- The maximum spacing of balusters which comply with the 4" ball rule can be found in the Spectis catalogue or website.
- With the maximum spacing as a guideline, determine the best configuration of balusters, which provides for both consistent end and balustrade spacing. Note: It will likely be necessary to vary spacing slightly between sections to achieve good results.
- Drill holes in centerline of railings at locations determined above. Drill holes 1/4" larger than the pipe in balusters. Holes need to be 1" deep to accommodate pipe. (See Photo 4b)

8. Pre-assemble railing sections

- Place bottom rail on flat surface and apply adhesive around each hole drilled above. (See Photo 5)
- Insert balusters in holes, twisting slightly to set the adhesive.
- Apply adhesive around the tops of each baluster.
- Place top rail over ends of balusters, indexing each into the corresponding holes in top rail. Assistance will be needed to do this. (See Photo 6a)
- With all the balusters installed, loosely clamp the assembly together using load binding straps. (See Photo 6b)
- Once the assembly is loosely clamped, orient each baluster so it is sitting squarely and the spaces between each are consistent. (Using a spacer block as a guide is helpful)
- To ensure the balusters do not move while the adhesive cures, toe nail each into the bottom and/or top rail with brad nails. Tighten up clamps. (See Photo 6c)
- Set the entire assembly aside for 24 hours while the adhesive cures.
- Complete this procedure for the rest of the railing sections.

9. Install support blocks to bottom rails if necessary. (On spans over 8')

- Cut support blocks to the same height the bottom rail is to be located off the deck.
- Apply adhesive to the topside of support block and screw from the bottom side into the bottom rail. (See Photo 7)

10. Install bottom rail support bracket.

- The bottom rail brackets are installed on the end of the bottom rail prior to setting the railing assembly into place due to space limitations.
- Locate the bracket on the end of the underside of the bottom rail.
- Mark and pre-drill a 5/16" hole in the end of the rail.
- Install the bottom bracket (using adhesive) using the 5/16" bolts supplied in the hardware kit. (See Photo 8a and b)



INSTALLATION OF BALUSTRADE SYSTEMS



- e) Notch the underside of top rail to accommodate the fastening bracket hardware. (See Photo 8c)

11. Install railing sections

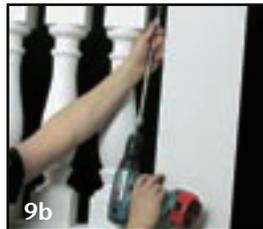
- a) Apply adhesive to the ends of the railings. (See Photo 9a)
- b) With assistance, place each entire railing assembly between the corresponding newel posts and rest on the top rail brackets installed in Step 2 above. (Use adhesive between brackets, railing, and newels)
- c) Center the railing section in place and use 2" wood screws to secure the top rail by screwing from beneath and into the bottom of the top rail. (See Photo 9b)
- d) Secure the bottom rail by screwing from the side into the newel post using 2" wood screws. (See Photo 9c)

Note: Make sure the ends of the rail are tight to the newels before fastening.

12. Install newel caps

- a) Apply adhesive to the tops of newels posts.
- b) Center newel caps on posts and secure using brad nails. (See Photo 10)

13. Finish the completed railing as per the "Finishing" section on page 233.

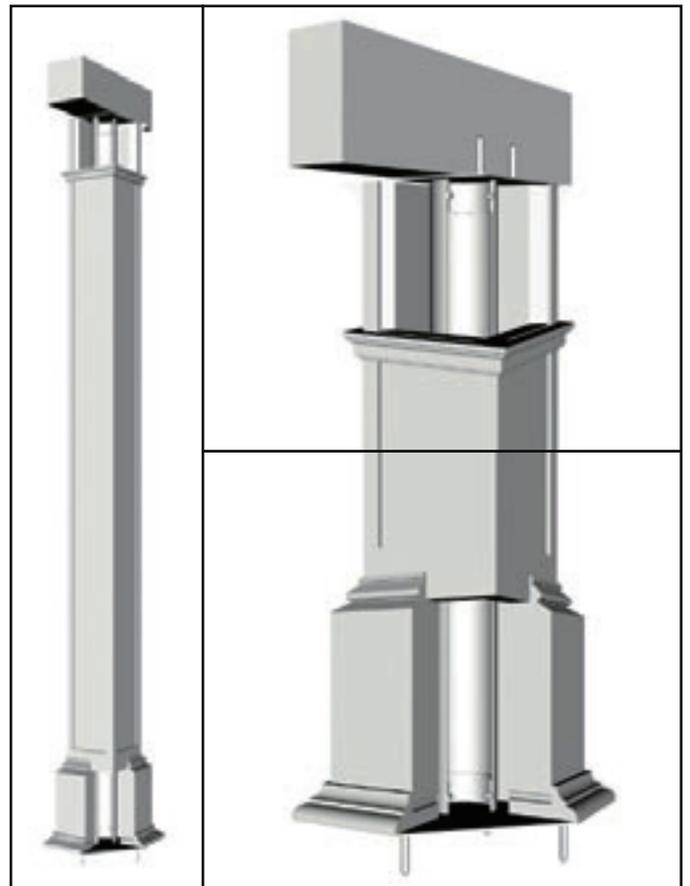


STRUCTURAL COLUMNS & PORCH POST INSTALLATION

Spectis' structural columns and porch posts can be used for load bearing and non-load bearing conditions and are installed by the same method. They can be installed by several different techniques depending on the circumstances. The following represent an acceptable method:

- A. Measure the total length necessary to fill the opening where the column is to be located.
- B. Cut the column shafts 1/4" shorter than the overall opening. This will accommodate the clearance necessary for the mounting hardware. Since the column has either an aluminum or steel internal shaft, it will be necessary to use a metal cutting saw.
- C. Slip the cap and base on the appropriate ends of the column and slide up/down the shaft.
- D. Locate the hardware into the ends of the columns.
- E. Slip the complete assembly into the opening. Make sure someone can assist to hold the column while fastening the hardware.
- F. Rotate the column 45 degrees from square and position the hardware.
- G. Secure the hardware to the deck and beam (making sure the column is plumb and level) by screwing directly through each corner of the hardware and into the deck and beam beyond using the appropriate fastener. Deck screw or masonry anchor. (Provided) Rotate column back into final position.

continued on page 232



STRUCTURAL COLUMNS & PORCH POST INSTALLATION (continued)

- H. Secure the column from uplift by cross screwing (pre-drill first) through both ends of the column shaft (see diagram on page 231) and into the hardware using the 4" self-tapping metal screws provided. (Select a location which will be covered by the cap/base)
- I. Apply PL Premium adhesive to the underside of the cap/base and slide into final position at the ends of the column shaft.
- J. Secure the cap/base in place by using brad nails or screws into the side of the column shaft.
- K. Finish the installation by filling the screw holes, caulking (see "Finishing" section on page 233) around the cap/base interface with the column shaft and if necessary, where the cap and base meet the floor/ceiling. You are now ready to paint the columns as per the "Finishing" section on page 233.

DECORATIVE COLUMN INSTALLATION

Spectis offers decorative columns, which can be either be ordered with a one-piece shaft that can be used alone as a non-load bearing member, or with the shaft split vertically to wrap around existing load bearing members. In addition, some column designs have the cap and base telescoping around the column shaft, while other designs have the cap and base attaching directly to the ends of the column shaft. (Non-telescoping) They can be installed using several different techniques depending on the circumstances. The following represent acceptable methods:

1. One Piece Shaft/telescoping cap and base:

- a. Measure the total length necessary to fill the opening where the column is to be located.
- b. Cut the column shaft approximately 1" shorter than the overall opening.
- c. Slip the cap and base on the appropriate ends of the column shaft and locate the assembly into the opening. Make sure someone can assist to hold the column while fastening the cap and base.
- d. Apply PL Premium adhesive to the underside of the base and secure to the floor by screwing directly through each corner of the base into the substrate beyond with the appropriate fastener. i.e. Plated deck or masonry screw.
- e. Apply adhesive to the underside of the cap and secure to the ceiling or beam by screwing directly through each corner of the cap into the substrate beyond with the appropriate fastener. i.e. Plated deck or masonry screw.
- f. Secure the column shaft from rotating in the cap and base by cross screwing through the base and into the column shaft. (Select a location which will be easily repaired).
- g. Finish the installation by filling the screw holes, caulking (see "Finishing" section on page 233) around the cap/base interface with the column shaft and if necessary, where the cap and base meet the floor/ceiling. You are now ready to paint the columns as per the "Finishing" section on page 233.

2. One Piece Shaft/Non-telescoping cap and base:

(Column shaft rests on cap/base)

- a. Measure the total length necessary to fill the opening where the column is to be located. (Include caps and bases.)
- b. Cut the column shaft so that when the cap and base are installed onto each end of the shaft, the complete assembly measures the same as the opening.
- c. With the shaft cut, apply PL Premium adhesive to the ends of the column shaft and screw both the cap and base to each end of the shaft from the underside of each using plated deck screws.
- d. Slip the completed assembly into the opening.

Secure the column in place (making sure it's plumb and level) by screwing directly through each corner of the cap/base and into the floor, deck, beam or ceiling beyond with the appropriate fastener. i.e. Deck or masonry screw

- e. Finish the installation by filling the screw holes, caulking (see "Finishing" section on page 233) around the cap/base interface with the column shaft and if necessary, where the cap and base meet the floor/ceiling. You are now ready to paint the columns as per the "Finishing" section on page 233.

3. Split Shaft Columns

- a. When installing a split column over an existing load bearing member, cut the cap and base in half, and cope them out, if necessary, to fit around the structural member.
- b. Reassemble the cap and base around the supporting member, using PL Premium between both halves of the cap/base and plated deck screws.
- c. Identify which type of cap/base configuration you are working with and cut the column shaft and fasten cap and base as per #1 or #2 above.
- d. Apply PL Premium adhesive to the aligning splines and dadoes in each column half. Reassemble the column shaft around the supporting member by aligning the two halves and clamping together. (Make sure adhesive is oozing from the seams when assembled.) Both plated deck screws and air nails can be used to hold the two halves together while the adhesive cures.
- e. Secure the cap, base, and column shaft as described in #1 or #2 above.
- f. Allowing 24-48 hrs for the adhesive to cure, the vertical seams in the column can be "seamed". (See "Finishing" section on page 233)
- g. After the shaft is completely seamed, finish the installation by filling the screw holes, caulking (See "Finishing" section on page 233) around the cap/base interface with the column shaft and if necessary, where the cap and base meet the floor/ceiling. You are now ready to paint the columns as per the "Finishing" section on page 233.



FINISHING

All of Spectis' products are shipped with 2 coats of paint. The second coat is an exterior product that acts as a primer for field finishing. Spectis' products require finishing to complete the installation procedure and to be fully covered under warranty. This procedure includes all steps necessary to repair any seams/joints in moulding installation as well as filling the screw/nail holes made during the installation.

The steps to be followed are the same for all of Spectis' products and are as follows:

1. Allow adhesive to dry 24-48 hours before beginning the finishing procedure.
2. Cut off any excess adhesive using a utility knife.
3. Clean and remove all dirt, oil and greases from the surface of the product using a wax and grease remover product such as Sherwin-Williams Pro-Clean Professional.
4. With 80 grit sandpaper, "rough up" the surface surrounding screw/nail holes made during installation. This will ensure good filler adhesion.
5. Sand all joint areas with 80 grit sandpaper to "rough up" and "blend in" any misalignment of the product during installation.
6. Once all the areas needing repair are "roughed up" and "blended in", remove all dust from the surface of the product, again using the wax and grease remover. Compressed air can be used to remove the excess sanding dust.
7. Apply filler to the areas needing repair. (Use a 2-component, light weight automotive filler, such as " Car Systems AutoFit, Eurosoft # CARS134458.") Apply the filler using thin coats, sanding between each coat with 120 or 180 grit sandpaper. Doing so will reduce the amount of material which will have to be sanded away. Generally it will be necessary to apply 2 or more coats of filler to get the desired results.
8. Prime all areas which have had filler applied. (Use an interior/exterior latex primer such as Sherwin-Williams A100)
9. Caulk seams along bedding edges of moulding, around ceiling medallions, around column shafts, around caps/bases, around the end of railings, around balusters, and in any other area necessary to provide a clean installation. (Use an exterior, paintable exterior Latex caulking such as Sherwin-Williams ProSelect 1100A)
10. Paint the product as desired. Do not use dark or glossy colors as they will accentuate any flaws left during the installation. (Use a product such as Sherwin Williams Interior/Exterior A100 or SuperPaint, flat or satin)

Primer: Sherwin Williams A100 or
PrepRite Classic Interior Latex Primer
Paint: Sherwin Williams A100 or SuperPaint
PreCleaner: Sherwin Williams Pro Clean Professional
Caulking: Sherwin Williams ProSelect 1100A
Deco Flex: Sherwin Williams SuperPaint

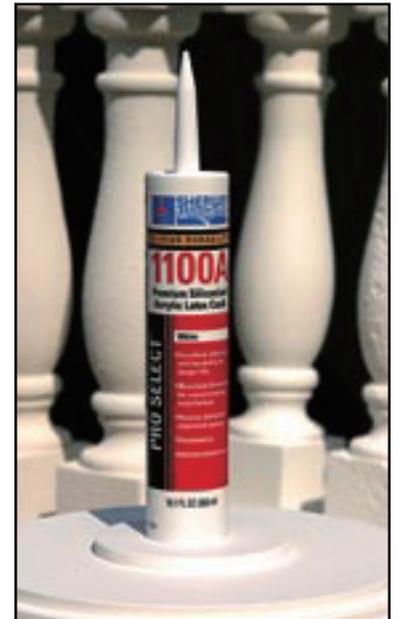


PL Premium Adhesive
PLP 100

S U P P L I E S



Auto-Fit Soft Fine Finishing Putty
AF 100



Sherwin Williams Premium
Siliconized Acrylic Latex Caulk
for interior and exterior use
SW 1100



Spectis' two standard trellis kits both measure 12' x 12' and incorporate pre-notched beams and crosses and columns with hardware for easy on-site assembly. Before beginning, make sure you have all the necessary components as listed below:

TR1212A Trellis Contains:

- 2 - 12' Upper Main Beams, 3" x 9"
- 2 - 12' Lower Main Beams, 3" x 9"
- 9 - 12' Cross Beams, 3" x 6"
- 4 - Columns
- 4 - Caps and Bases
- 4 - Column installation kits

TR1212B Trellis Contains:

- 2 - 12' Upper Main Beams, 4" x 10"
- 2 - 12' Lower Main Beams, 4" x 10"
- 9 - 12' Cross Beams, 3" x 9"
- 4 - Columns
- 4 - Caps and Bases
- 4 - Column installation kits

1. Start the installation by setting the columns on a 10' x 10' square area, ensuring that they are set plumb and at the same elevation.
2. Set the lower main beams on top of two sets of columns and fasten to the columns using the supplied hardware.
3. Apply PL Premium Construction adhesive to the notched areas of the lower main beams and set the upper main beams into the notches. Fasten using supplied screws through the lower beam into the upper.
4. Square the entire main beam assembly and secure to the supporting columns.
(Use plated fasteners and brackets if necessary)
5. Measure and mark the location of the cross beams.
6. Apply PL Premium adhesive to the notches on the Cross Beams.
7. Install cross beams on marks made in step #5.
8. Secure Cross beams to main beams using 4" plated deck screws.
9. Complete the installation by caulking all notch areas and screw holes and painting as outlined in the "Finishing" section.

SHUTTER / LOUVER / LOAD FRAME INSTALLATION

Spectis offers many styles of shutters, louvers, and wall panels. All of these elements are designed for installation flat onto a wall surface. Because of this, they are all installed using similar techniques.

The following represent acceptable methods:

1. Venting Louvers

- A. Position and mark product on wall in the final location.
- B. Cut the opening into the wall 2" smaller than the mark made above.
- C. Apply PL Premium adhesive to perimeter of the louver.
- D. Position the louver back on the wall and screw through the face of the brick mould and into the wall behind. Use the appropriate plated screw for the wall material. i.e. Wood or masonry.
- E. Finish the installation by filling the screw holes, caulking (see "Finishing" section on page 233) around the perimeter if necessary, and prime and paint as desired.

- D. Position the LOAD frame into the opening and screw through the face of the brick mould and into the wall behind. Use the appropriate plated screw for the wall material. i.e. Wood or masonry.
- E. Finish the installation by filling the screw holes, caulking (see "Finishing" section on page 233) around the perimeter if necessary, and prime and paint as desired.

2. LOAD Frames

- A. Position the product on the wall in the final location. Mark location of the jamb on the wall.
- B. Cut an opening into the wall 1/4" larger than the mark made above.
- C. Apply PL Premium adhesive to back side of the brick mould of the LOAD frame.

3. Closed Louvers, Window Panels, and Shutters

- A. Position the product on the wall in the final location to test for fit.
- B. Apply PL Premium adhesive to perimeter and center areas of the product.
- C. Position the product back on the wall and screw through the face of the product and into the wall behind. Use the appropriate plated screws for the wall material. i.e. Wood or masonry. Note: It may be necessary to install fasteners in the center area of the product to properly secure.
- D. Finish the installation by filling the screw holes, caulking (see "Finishing" section on page 233) around the perimeter if necessary, and prime and paint as desired.

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DECO FLEX MOULDING INSTALLATION (INDOORS USE ONLY!)

Spectis Moulders' Deco flex is installed by using a combination of solvent based contact cement and PL Premium Adhesive, applying the contact cement near the outer edges of the ceiling / wall interfaces, and the PL Premium in the interior contact areas. The use of the contact cement allows sufficient time to pass for the PL Premium to cure and take over bonding control.

Deco Flex can be installed using the following procedure:

Note: Deco Flex is best installed with assistance.

1. Pre-fit each section of product before application of adhesive. Apply contact cement to the contact areas of the moulding and wall/ceiling areas. Once the contact cement has been allowed to dry, apply the PL Premium to the interior contact edges of the moulding. Install beginning from one end of the moulding and working towards the other. Be sure to have some assistance while doing this. It may be necessary to use nails / screws to aide in supporting the moulding while the PL Premium cures. Make sure the contact cement is used on all running and butt joints.
2. Once the adhesive is cured, (approx. 2 days) the product can be filled, primed, and painted as per standard quality painting procedures. High quality oil base products only are recommended for good results. Be sure to use a matching primer and top-coat. Note that the oil base product requires more time than usual to become tack free due to the characteristics of the flexible product, but this is not a concern. Be sure not to put any weight on the moulding after it is patched and painted as it may crack the finish.

IRON FLEX MOULDING INSTALLATION (INTERIOR/EXTERIOR USE)

Spectis Moulders' Iron Flex is installed using similar methods used to install Spectis' Standard product.

Iron Flex can be installed using the following procedure:

1. Spectis' Iron Flex can be installed over almost any clean interior or exterior surface. It should not be installed over wallpaper as the paper may separate or the adhesive may stain the wallpaper.
 2. Moulding which has been stored in "hot" areas must be allowed to "acclimatize" to the location of installation for at least 48 hours prior to installation. (Just as wood requires) Do not install product that has been sitting in a hot trailer or the sun without allowing for this acclimation. Doing so may result in excessive shrinkage which could manifest itself as joint cracks. Moulding stored in cool areas can be installed without product acclimation.
 3. To begin, screw a support border on the wall for the moulding to sit on. (An experienced installer can use a chalk line as a reference) Apply copious amounts of adhesive (PL Premium) to all bedding edges of the moulding and all butt joints. Once the moulding is installed, remove the support border and fill the holes.
 4. Place the moulding on top of the support border and fasten the moulding to the wall and ceiling using #8 low root style wood deck screws, plated for exterior use, and long enough to penetrate well into the substrate. Continue installing lengths of crown using the same method, also applying copious amounts of adhesive on all butt joints and toe screwing the joints together, ensuring the moulding profiles are in alignment.
 5. On smaller mouldings, screw spacing can be as little as 24", but on mouldings over 8" face dimension, screw spacing should be approximately 12" on both the ceiling and wall interfaces. Make sure the screws are sunk in the surface of the moulding, as it is necessary to fill in the screw holes with exterior grade, non-shrinking, sandable, and paintable filling products such as automotive grade "bondo". (See "Finishing" Section on page 233)
- Recommendations
1. Before any adhesive is applied, cut and fit each piece of moulding. Use standard woodworking tools when working with Spectis' Iron Flex. The use of a miter box will ensure that the cuts are made with the correct angles and remove any guesswork trying to figure out table and blade angles on a miter saw. (See page 237 for How to Construct a Miter Box)
 2. It is possible to install moulding by two separate methods. The first is to begin installing moulding in the most inconspicuous corner, and work around the room in sequence until all the moulding is installed. (Keep in mind that the it may not be possible to have the pattern match at the last joint or corner) The second method is to install short, prefabricated corner elements and run straight moulding between them, which can reduce the difficulty in making good miter joints on long moulding sections. However, the latter procedure does not work well with mouldings which have repeating profiles.
 3. It may be necessary to install extra blocking behind the moulding for additional support, especially on large crowns, where it is not possible to screw directly to the wall.
 4. Although every attempt is made at the factory to ensure all mouldings match end to end, it is necessary to check all mouldings for thickness variations. It may be necessary to remove material on some edges or add wedges on other sections for good face alignment. Tighten screws in a sequence, which allows for good alignment.
 5. It may be necessary to "toe screw" moulding joints together for good alignment.
 6. Excess adhesive should be removed immediately. Once cured, it will be necessary to use a knife to remove the adhesive. Wedges can be trimmed or removed once the adhesive has stiffened.
 7. The product comes from the factory ready to accept primer and paint. (See "Finishing" section page 233) Once the adhesive is cured, (approximately 24-48 hours), finish the installation by filling all screw holes, caulking, priming and painting the product as per the "Finishing" section on page 233. Be sure to select the proper grade for the installation, exterior or interior. High gloss and dark colored products are not recommended since any imperfection in the installation or product will be easily visible.
 8. ***It is necessary to use copious amounts of PL Premium adhesive on all bedding edges and joints for warranty to be valid.***



Spectis' polyurethane cornice installation method can be easily applied by most skilled craftsmen. A quick, clean and very secure installation is achieved using PL Premium adhesive and low root style wood deck screws.

Spectis polyurethane cornice can be installed over almost any clean interior or exterior surface. It should not be installed over wallpaper as the paper may separate or the adhesive may stain the wallpaper.

Moulding which has been stored in "hot" areas must be allowed to "acclimatize" to the location of installation for at least 48 hours prior to installation. (Just as wood requires) Do not install product that has been sitting in a hot trailer or the sun without allowing for this acclimation. Doing so may result in excessive shrinkage which may manifest itself as joint cracks. Moulding stored in cool areas can be installed without product acclimation.

To begin, screw a support border on the wall for the moulding to sit on. (An experienced installer can use a chalk line as a reference) Apply copious amounts of adhesive (PL Premium) to all bedding edges of the moulding and all butt joints. Once the moulding is installed, remove the support border and fill the holes.

Place the moulding on top of the support border and fasten the moulding to the wall and ceiling using #8 low root style wood deck screws, plated for exterior use, and long enough to penetrate well into the substrate. Continue installing lengths of crown using the same method, also applying copious amounts of adhesive on all butt joints and toe screwing the joints together, ensuring the moulding profiles are in alignment.

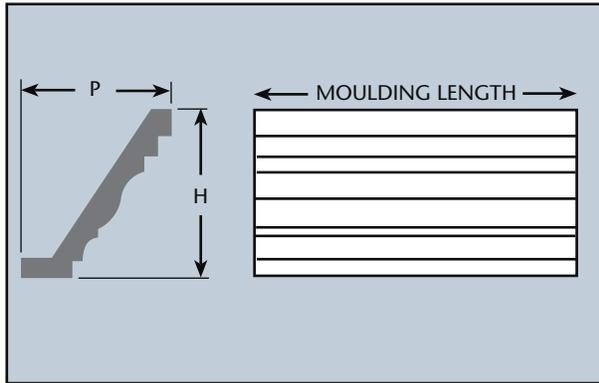
On smaller crowns, screw spacing can be as little as 2', but on crowns over 12" X 12", screw spacing should be approximately 16" on both the ceiling and wall interfaces. Make sure the screws are sunk in the surface of the moulding, as it is necessary to fill in the screw holes with exterior grade, non-shrinking, sandable, and paintable filling products such as automotive grade "bondo". See "Finishing" section on page 233.

RECOMMENDATIONS

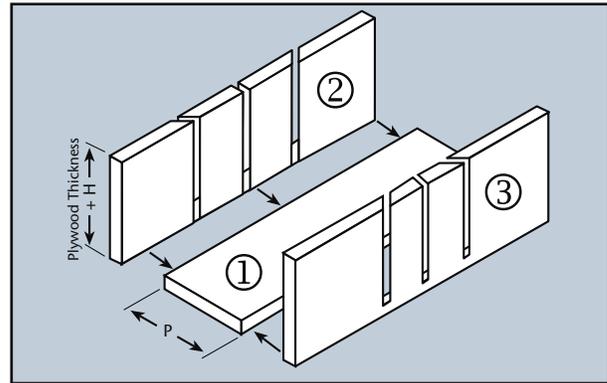
1. Before any adhesive is applied, cut and fit each piece of moulding. Use standard woodworking tools when working with Spectis High Density Polyurethane product. Although most of our smaller mouldings can be miter cut on a compound miter saw, it is recommended (on larger crowns it will be necessary) to construct a miter box and use a hand saw to make the cuts. (See page 237) This will ensure that the cuts are made with the correct angles and remove any guesswork trying to figure out table and blade angles on a miter saw. (See www.spectis.com for plans to construct miter box)
2. It is possible to install moulding by two separate methods. The first is to begin installing moulding in the most inconspicuous corner, and work around the room in sequence until all the moulding is installed. (Keep in mind that the it may not be possible to have the pattern match at the last joint or corner) The second method is to install short, prefabricated corner elements and run straight moulding between them, which can reduce the difficulty in making good miter joints on long moulding sections. However, the latter procedure does not work well with mouldings which have repeating profiles.
3. It may be necessary to install extra blocking behind the moulding for additional support, especially on large crowns, where it is not possible to screw directly to the wall.
4. Although every attempt is made at the factory to ensure all moulding match end to end, it is necessary to check all moulding for thickness variations. It may be necessary to remove material on some edges or add wedges on other sections for good face alignment. Tighten screws in a sequence, which allows for good alignment.
5. It may be necessary to "toe screw" moulding joints together for good alignment.
6. When installing the last piece of moulding on a run, cut the section long by 1/4" and "snap" it into place, to ensure a snug fit.
7. Excess adhesive should be removed immediately. Once cured, it will be necessary to use a knife to remove the adhesive. Wedges can be trimmed or removed once the adhesive has stiffened.
8. Screw holes, wedge gaps and joints can be filled only after the adhesive is cured, approximately 24-48 hours. Use exterior grade, non-shrinking, sandable, and paintable filling products for both interior and exterior applications, as they tend to be of higher quality. Be sure to apply the filler in a fashion, which make for easy sanding. i.e. do not apply more than is necessary. More than one coat may be needed to get satisfactory results.
9. The product comes from the factory with two coats of paint. The final coat is a UV stable primer, which is ready to receive a site applied finish. (See "Finishing" section page 233) Spot prime areas where necessary and paint the prepared product using high quality products, which are compatible with each other. Be sure to select the proper grade for the installation, exterior or interior. High gloss and dark colored products are not recommended since any imperfection in the installation or product will be easily visible.
10. *It is necessary to use copious amounts of PL Premium adhesive on all bedding edges and joints for warranty to be valid.*

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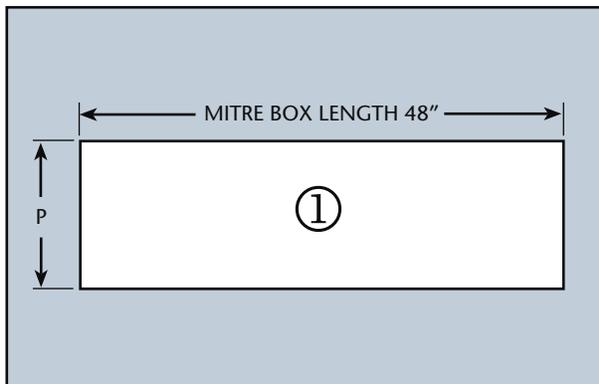




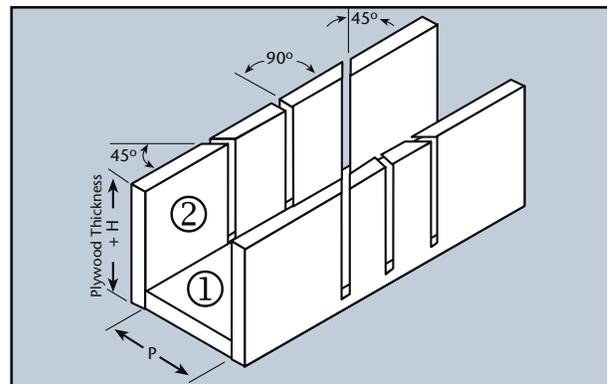
1. From the moulding, measure both projection (P) and height (H).



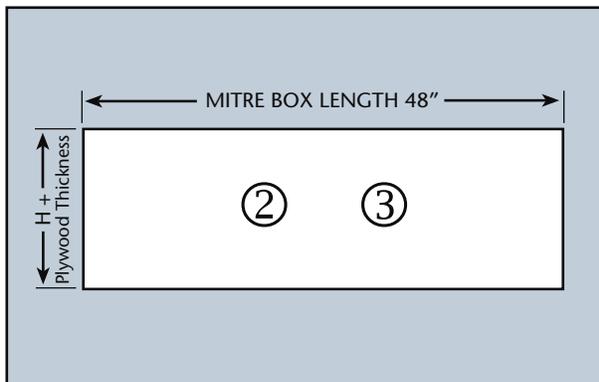
4. Pre-cut slots in board before assembling as shown in number 5. Place board ① lying flat, then fasten board ② and ③ vertically to the edge of board ①. Make sure all boards are cut and assembled "Square". Accuracy is important.



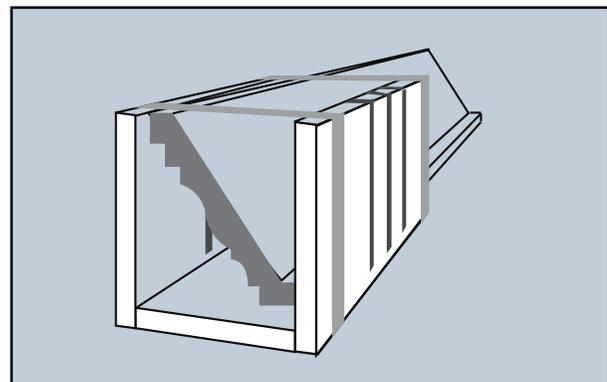
2. Cut one board out of plywood, measured by the projection x 48". Mark the board as ①.



5. Cut two 45° (Clockwise) and -45° (Counter Clockwise) for the 90° corners. A 90° cut will allow you to do perpendicular cuts if needed.



3. Cut two boards out of plywood, measured by the height + the thickness of the plywood x 48". Mark the boards as ② and ③.



6. Attach straps as needed to keep the mitre box, square and stable.

