

# 12" Balustrade System

## PARTS LIST

ITEM	QTY
<b>(SEE FIG. EX1)</b>	
<b>A</b> Newel Post Top (PST13X13F, PST13X13P, PST14X14P, PST14X14F)	
<b>B</b> Newel Post Top Section (NP12X48)	
<b>C</b> Newel Post Center Section (NP12X48)	
<b>D</b> Newel Post Bottom Section (NP12X48)	
<b>E</b> Baluster Top Rail (BTR12X96 or BTR12X120)	
<b>F</b> Baluster Bottom Rail (BBR12X96 or BBR12X120)	
<b>G</b> Baluster	
<b>BALUSTER RAIL INSTALLATION KIT (BRK12) (SEE FIG. EX2)</b> <i>Parts for mounting rails to wall (See Page 176)</i>	
Bear Claw Bracket	4
5/16" - 18 Clip Nut	4
#12 x 3/4" Pan Head Screw	16
5/16" - 18 x 5" Hex Head Cap Screw	4
5/16" x 1 1/2" Fender Washer	4
1/4" - 20 x 2" Flat Head Self Tapping Screw	4
<b>NEWEL POST INSTALLATION KIT (NPK12) (SEE FIG. EX3)</b>	
3/8" - 16 Hex Nut	2
3/8" Lock Washer	2
3/8" USS Flat Washer	2
Corner Bracket	2
3/8" - 16 x 39" Threaded Rod	2
#10 x 3/4" Flat Head Self Tapping Screw	8
1/4" x 7" x 7" Steel Base Plate (See Fig. EX1) <i>Note: Fasteners to mount Steel Base Plate to floor surface not provided.</i>	1

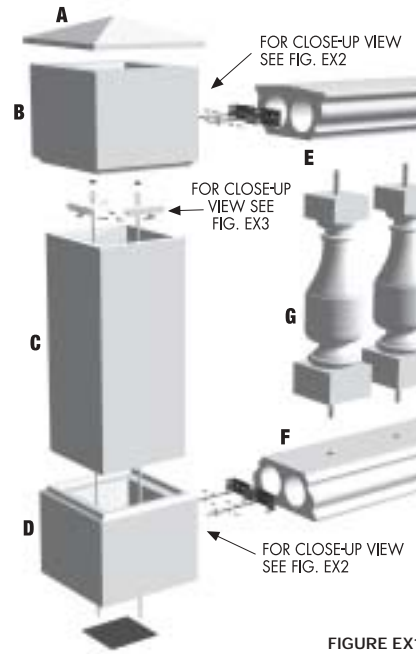


FIGURE EX1



FIGURE EX2



FIGURE EX3

**CHECK APPLICABLE BUILDING CODES** since this procedure may require alterations to meet applicable building code regulations. The manufacturer does not, under any circumstances, warrant the **INSTALLATION** of its products. The installation guidelines are to be used as suggestions for successful installation.

### USING CORROSION-RESISTANT FASTENERS AND PL PREMIUM ADHESIVE

Always use corrosion-resistant mechanical fasteners (nails or screws) and PL Premium Adhesive when installing Pacific Columns products. This combination provides a secure, long lasting bond. Countersink all fasteners about 1/8 inch and fill with exterior grade white spackle. If desired, sand any minor imperfections and topcoat with a quality exterior latex or oil base paint. Pacific Columns exterior millwork installations should be finished using a quality, exterior grade silicone caulk to prevent water infiltration behind siding, windows and doors. Some exterior millwork installations, in particular new construction (before siding is applied) may require a J-channel and/or flashing to prevent water infiltration. Installers must determine which installation technique is best for the specific situation.

### IMPORTANT:

Please read these installation guidelines thoroughly before beginning installation. Please note that these guidelines are provided only to assist with the installation of Pacific Columns mouldings and millwork products. Modified procedures may be required in order to meet specific situations, unique applications and local building codes. The manufacturer does not under any circumstances warrant the installation of its products. Be sure to wear appropriate protective clothing, gloves and safety glasses when working with any tools. Installer should check for and relocate all electrical wiring within the proposed installation area, as needed (be sure to disconnect all electric power before working with any electrical wiring and follow all applicable local electrical codes and safety procedures).

# 12" Balustrade System

## INSTALLATION INSTRUCTIONS

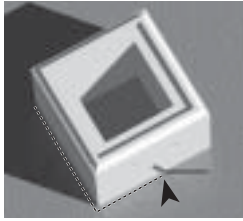


FIGURE 1A

### 1. INITIAL LAYOUT

**A)** Temporarily position NEWEL POST BOTTOM SECTIONS and mark layout lines on floor surface (**FIG. 1A**). This positioning is important in order to get accurate measurements between the NEWEL POST BOTTOM SECTIONS.

*NOTE: This will give you the actual cut lengths of the BALUSTER TOP and BOTTOM RAILS.*

**B)** Measure the distance between each of the NEWEL POST BOTTOM SECTIONS (**FIG. 1B**), and cut respective lengths of BALUSTER RAILING to be installed between the NEWEL POST BOTTOM SECTIONS.

*NOTE: While measuring and cutting BALUSTER BOTTOM RAILS, cut matching length BALUSTER TOPRAILS to be installed in a later step.*

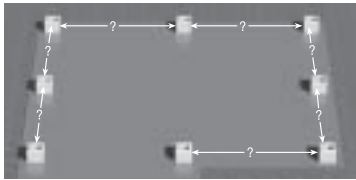


FIGURE 1B

### 2. ANCHORING STEEL BASE PLATES

Center STEEL BASE PLATES inside layout lines from Step 1A above, and anchor each STEEL BASE PLATE to an adequate mounting surface (**FIG. 2A**). These will anchor the NEWEL POSTS.



FIGURE 2A

### 3. INSTALLING BEAR CLAW BRACKETS

Select a cut-to-length BALUSTER BOTTOM RAIL.

Install 5/16" - 18 CLIP NUTS on BEAR CLAW BRACKETS. (**SEE FIG. EX2 ON PAGE 171 FOR DETAILED VISUAL.**) Position BEAR CLAW BRACKETS flush with the of the BALUSTER BOTTOM RAIL, and predrill 5/32" holes. Fasten BEAR CLAW BRACKETS using #12 x 3/4" PAN HEAD SCREWS provided. Position the screws as close as possible to the front of elongated slots in the BEAR CLAW BRACKETS (**FIG. 3A**).

*NOTE: Repeat this step for corresponding BALUSTER TOP RAILS.*



FIGURE 3A

### 4. MOUNTING BOTTOM RAIL

**A)** Temporarily thread a 5/16" - 18 x 5" HEX HEAD CAP SCREW into center of the BEAR CLAW BRACKET and record the indicated center line measurements (**FIG. 4A**).

**B)** Transfer the measurements onto the NEWEL POST BOTTOM SECTION that will come in contact with the BALUSTER BOTTOM RAIL (**FIG. 4B**), and drill 1/2" holes, which are oversized, in the NEWEL POST BOTTOM SECTION.

*NOTE: The position of these holes will determine the height that the BALUSTER BOTTOM RAIL will be raised above the mounting surface.*

**For installations where BALUSTER BOTTOM RAIL is raised off of mounting surface, blocking is recommended with a RAIL SUPPORT BLOCK (RSB4X4X6) every 4' or less.**

NEWEL POST components can be trimmed to achieve custom NEWEL POST heights.

*Note: The BALUSTER height is not adjustable.*

**C)** Apply a 1/4" bead of urethane base adhesive on each end of the BALUSTER BOTTOM RAIL (**FIG. 4C**).

**D)** Position the BALUSTER BOTTOM RAIL between the NEWEL POST BOTTOM SECTIONS and align the 5/16" - 18 x 5" HEX HEAD CAP SCREWS with the BEAR CLAW BRACKETS (Fig. 4D). Be sure to check that the BALUSTER BOTTOM RAIL is level. Tighten 5/16"-18 x 5" HEX HEAD CAP SCREWS to 75 in./lbs. torque. Repeat Step 4 around the entire balustrade layout.

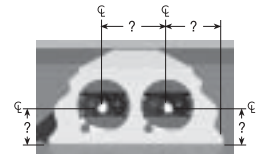


FIGURE 4A

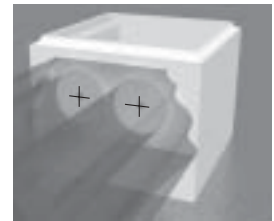


FIGURE 4B

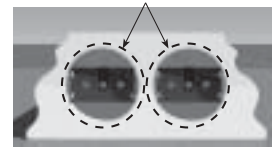


FIGURE 4C



FULL NEWEL POST HEIGHT WITH RAIL RAISED OFF MOUNTING SURFACE  
TRIMMED NEWEL POST HEIGHT WITH RAIL FLUSH WITH MOUNTING SURFACE

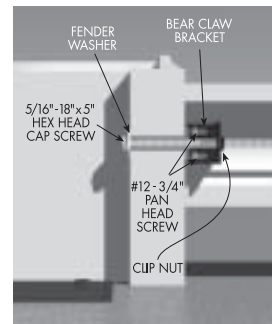


FIGURE 4D

**INSTALLATION INSTRUCTIONS CONTINUED ON FOLLOWING PAGE.**

### USING CORROSION-RESISTANT FASTENERS AND PL PREMIUM ADHESIVE

Always use corrosion-resistant mechanical fasteners (nails or screws) and PL Premium Adhesive when installing Pacific Columns products. This combination provides a secure, long lasting bond. Countersink all fasteners about 1/8 inch and fill with exterior grade white spackle. If desired, sand any minor imperfections and topcoat with a quality exterior latex or oil base paint. Pacific Columns exterior millwork installations should be finished using a quality, exterior grade silicone caulk to prevent water infiltration behind siding, windows and doors. Some exterior millwork installations, in particular new construction (before siding is applied) may require a J-channel and/or flashing to prevent water infiltration. Installers must determine which installation technique is best for the specific situation.

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# 12" Balustrade System (continued)

## INSTALLATION INSTRUCTIONS



### 5. PREPARING RAILS FOR BALUSTERS

*NOTE: Check applicable building codes concerning regulations on distance between BALUSTERS.*

With the BALUSTER BOTTOM RAIL in place, lay out and mark center lines for the BALUSTERS. After marking BALUSTER positions, drill 1 1/8" holes to 3" deep to accept BALUSTERS (**FIG 5A**).

**TIP:** While laying out and drilling BALUSTER BOTTOM RAIL system, also lay out and drill matching BALUSTER TOP RAILS.



FIGURE 5A

### 6. PREPARING NEWEL POST FOR BALUSTERS

**A)** Install and tighten the two 3/8" - 16 x 39" THREADED RODS into the STEEL BASE PLATE assemblies (Fig. 6A).

**B)** Install the two STEEL CORNER BRACKETS inside the NEWEL POST TOP SECTION using the #10 x 3/4" FLAT HEAD SELF TAPPING SCREWS provided (Fig 6B). **NOTE:** Align diagonally to match THREADED RODS.

**C)** Temporarily position BALUSTERS on each end of BALUSTER BOTTOM RAIL. Temporarily position BALUSTER TOP RAIL and the remaining NEWEL POST components to visualize and determine height of the NEWEL POST (Fig. 6C). If the NEWEL POST is too high, the TOP SECTION, CENTER SECTION and/or BOTTOM SECTION of the NEWEL POST can be trimmed.

*NOTE: The BALUSTER height is not adjustable.*

**D)** Once the height of the NEWEL POST has been determined, trim (if required) all the NEWEL POST SECTIONS to the same height.

**E)** As in Step 4B, lay out and drill the 1/2" holes into each NEWEL POST TOP SECTION where they will contact the BALUSTER TOP RAIL.



FIGURE 6A



FIGURE 6B

### INSTALLATION INSTRUCTIONS CONTINUED ON FOLLOWING PAGE.

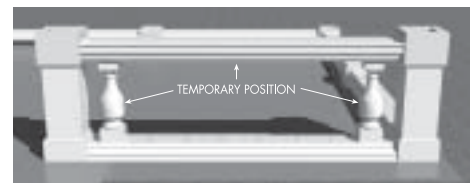


FIGURE 6C

### USING CORROSION-RESISTANT FASTENERS AND PL PREMIUM ADHESIVE

Always use corrosion-resistant mechanical fasteners (nails or screws) and PL Premium Adhesive when installing Pacific Columns products. This combination provides a secure, long lasting bond. Countersink all fasteners about 1/8 inch and fill with exterior grade white spackle. If desired, sand any minor imperfections and topcoat with a quality exterior latex or oil base paint. Pacific Columns exterior millwork installations should be finished using a quality, exterior grade silicone caulk to prevent water infiltration behind siding, windows and doors. Some exterior millwork installations, in particular new construction (before siding is applied) may require a J-channel and/or flashing to prevent water infiltration. Installers must determine which installation technique is best for the specific situation.

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# 12" Balustrade System (continued)

## INSTALLATION INSTRUCTIONS



FIGURE 7A

### 7. FINAL ASSEMBLY

With all NEWEL POSTS prepared for correct height you are ready for the final assembly.

**A)** Position the NEWEL POST BOTTOM SECTION in final alignment with the floor layout lines marked in Step 1A. Apply a 1/4" bead of urethane base adhesive to the channel in NEWEL POST BOTTOM SECTION, and stack NEWEL POST CENTER SECTION onto NEWEL POST BOTTOM SECTION.

**B)** Working with one section at a time, apply a 1/4" bead of urethane base adhesive on both ends of each BALUSTER (**FIG. 7A**).

**C)** Position a BALUSTER into each predrilled hole in the BALUSTER BOTTOM RAIL assembly. Align and cap off with predrilled BALUSTER TOP RAIL assembly (**FIG. 7B**).

**TIP:** To keep all the BALUSTERS in alignment during assembly, clamp a temporary straight edge on one edge of the BALUSTER BOTTOM RAIL.

**D)** Apply a 1/4" bead of urethane base adhesive to BALUSTER TOP RAIL ends and to the channel in NEWEL POST TOP SECTION. Carefully stack NEWEL POST TOP SECTION onto NEWEL POST CENTER SECTION.

**E)** Fasten the 5/16" - 18 x 5" HEX HEAD CAP SCREWS into the BEAR CLAW BRACKETS in the BALUSTER TOP RAIL and tighten to 75 in./lbs. torque.

**F)** Install a 3/8" USS FLAT WASHER, a 3/8" LOCK WASHER and a 3/8" - 16 HEX NUT onto the THREADED ROD assembly. Tighten the entire assembly to 100 in./lbs. torque (**FIG. 7C**). This step may be completed after entire assembly process, or as each section is completed.

**G)** Apply caulk to seam in channels of NEWEL POST assembly to prevent moisture infiltration (**FIG. 7D**).

**H)** Apply a 1/4" bead of urethane base adhesive to NEWEL POST TOP SECTION, and then install NEWEL POST TOP (**FIG. 7D**).

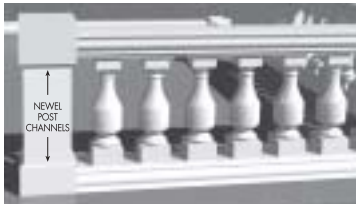


FIGURE 7B



FIGURE 7C

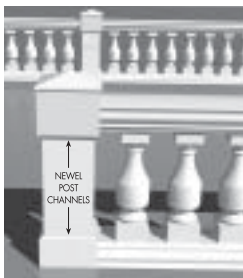


FIGURE 7D



FIGURE 7E

*TIP: How to dress up that NEWEL POST. Mouldings such as MLD601, MLD602, MLD610 and MLD611 may be applied to NEWEL POST CENTER SECTION as a decorative treatment. Just miter corners and fasten with a 1/4" bead of urethane base adhesive and noncorrosive fasteners (Fig. 7E).*

INSTALLATION INSTRUCTIONS CONTINUED ON FOLLOWING PAGE.

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# 12" Balustrade System (continued)

## INSTALLATION INSTRUCTIONS



### WALL INSTALLATION

*NOTE: The fasteners for mounting BEAR CLAW BRACKETS to the wall are not included in the BALUSTER RAIL INSTALLATION KIT.*

- A) Determine position of BALUSTER BOTTOM RAIL and mark layout on wall. Locate position of center of BEAR CLAW BRACKETS on wall. Mount BEAR CLAW BRACKETS securely to wall (fasteners for this are not included in hardware pack). See illustration above for orientation of BEAR CLAW BRACKET.
- B) Apply a 1/4" bead of urethane base adhesive on the end of BALUSTER BOTTOM RAIL and position BALUSTER BOTTOM RAIL over BEAR CLAW BRACKETS and flush with the wall. Drill a 7/32" pilot hole from the top of the BALUSTER BOTTOM RAIL into center of each BEAR CLAW BRACKET. Secure with 1/4" - 20 x 2" FLAT HEAD SELF TAPPING SCREWS (provided with BALUSTER RAIL INSTALLATION KIT).
- C) Position and install BALUSTERS using the steps described previously in these guidelines. Use above procedures to attach BALUSTER TOP RAIL to wall.

*NOTE: When working with wall installations, fasten the BALUSTER RAILS to the wall first, then assemble away from wall sections!*



The 12" Balustrade System has been tested and meets the following BOCA National Building Code/1993 Criteria if assembled according to manufacturer's guidelines:

1615.8.2 Guard Design and Construction • 1615.8.2.1 In-Fill Areas

**CHECK APPLICABLE BUILDING CODES** since this procedure may require alterations to meet applicable building code regulations. The manufacturer does not, under any circumstances, warrant the INSTALLATION of its products. The installation guidelines are to be used as suggestions for successful installation.

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## GENERAL INFORMATION

Before installation, please keep in mind that Pacific Columns products:

- Should be used for decorative purposes only, not to provide structural support (except Structural Columns, Balustrade Systems and Porch Posts).
- Should never be installed with mechanical fasteners only. For best results always use non-corrosive fasteners along with urethane base PL Premium Adhesive.
- Are easy to repair. Use wood filler or automotive filler to quickly fill dents or gashes of any size. Broken moulding can be successfully rejoined with urethane base PL Premium Adhesive.
- Should not be stored in extreme heat. Acclimate before installation. Due to urethane's high insulating value, this may take up to 10 hours.
- Will resist the elements, except for direct sunlight to the yellowish (unpainted) underside of the millwork. It is important to fill damaged or cut surfaces with putty, caulk, and/or paint within a few days.
- Can withstand temperatures of about 140°F (60°C). However, the millwork should never be placed in an area subject to solar temperature buildup, such as behind a storm door.
- Can be used safely in accordance with SBCCI, BOCA, CABO and NFPA rulings. There are no official independent laboratory fire test results for Pacific Columns products. The products are equivalent to any decorative urethane products not specifically formulated for fire resistance.
- May require altered installation procedures to meet local specifications. Check local building codes.

**The installation suggestions in this catalog are to be used only as a guideline. Pacific Columns, Inc. assumes no liability for any damages, including but not limited to personal, property, incidental, or consequential damages, resulting from the installation of its products. Pacific Columns, Inc.'s sole responsibility in connection with the sale and installation of its products is the limited warranty set forth below.**

### PACIFIC COLUMNS LIMITED WARRANTY

Pacific Columns, Incorporated warrants to the original consumer purchaser that our exterior white primer paint finish will be free from UV ray degradation, blistering, and paint peeling under normal use for a period of one (1) year from the date of purchase.

We further provide a LIFETIME WARRANTY to the original purchaser on the urethane material. This LIFETIME WARRANTY provides that the urethane material will be free from defects in material and workmanship under normal use.

If a defect is found in a Pacific Columns product and the above conditions have been met, a customer should notify Pacific Columns in writing within thirty (30) days of discovering the defect. The customer may be required to return the product to Pacific Columns (at his or her expense) for evaluation. Pacific Columns will then review the situation and determine if replacement, repair or refund of the product is appropriate. This warranty does not include labor, transportation costs or any other expenses of any kind incurred in connection with the purchase, use or installation of the product. Replacement, repair or refund is the sole and exclusive option under this limited warranty.

This limited warranty does not cover damage resulting from mishandling in transit (if within the customer's control), acts of God, customer alteration, vandalism, misuse, abuse, improper maintenance, unreasonable care or other causes not arising from defects in workmanship and materials. THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, WRITTEN OR ORAL, INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PURPOSE, OTHER THAN AS EXPRESSED HEREIN. No person, agent, distributor, dealer, service facility, or company is authorized to change, modify or amend the terms of this limited warranty in any manner or fashion whatsoever, except to the extent provided in this limited warranty. Pacific Columns, Inc. shall not be liable to the customer or to any other person for any incidental or consequential damages or loss of profit resulting from any defect in the product.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so that the above limitation or exclusion may not apply. This warranty gives you specific legal rights. You may also have other rights which vary from state to state.