



# PROVA Systems

## Installation Guidelines

Thank you for choosing PROVA for your new railing system. The following guidelines will help you to ensure that your railing is installed as designed. Failure to follow these guidelines could result in failure of building official inspections, voiding of warranty, or loss of structural integrity. As local building codes can vary, always consult your local officials for specific requirements. All components are packaged separately, and have instructions on the back.

### 1. Fasteners

Use only PROVA fasteners for installing posts, fittings, or hand rails.



PROVA Heavy Duty Post Anchor For Concrete (PA23)

These anchors are 2 3/4" compression anchors for a 3/8" diameter pilot hole. Do not install within 1" of the edge of the concrete. Use only in solid concrete, not veneers. Always insure adequate backing is in place.



PROVA Hex Screws For Posts- Wood (PA22)

These 2 5/8" screws are for a 5/16" pilot hole. All screws are required to be anchored in solid wood backing. (ie: lateral bracing, blocking, or framing.) Do not install within 3/4" of the edge of backing lumber. Always insure adequate backing is in place.

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## 2. Top Mount Posts



Top Mount Posts (PA1) can be used with any of the PROVA in fills. (Acrylic glass, stainless steel cable, or stainless steel tubes.) Always use all of the provided mounting screw holes. Never cut or drill new holes in your post base. For uneven surfaces, use the post leveler (PA14, sold separately). Set posts no more than 4' on center.

## 3. Side Mount Posts



Side Mount Posts (PA2) can be used with any of the PROVA in fills. (Acrylic glass, stainless steel cable, or stainless steel tubes.) Always use all of the provided mounting screw holes. Never cut or drill new holes in your post base. For uneven surfaces, use the post leveler (PA14, sold separately). For stair treads that extend, use the spacers (1 7/8" PA12 or 2 7/8" PA13, sold separately). Set posts no more than 4' on center.

## 4. In Fills



Stainless Steel Cable (PA29) can be secured to your posts with PA26 Cable Post Adjustment Terminals, or to your wall with PA27 Cable Wall Adjustment Terminals, sold separately. Install cable sleeves provided with your cable into the post fittings. Then thread cable through, from post to post. Cut cables with an angle grinder or heavy duty cable snips. Insert your cable ends into terminals, and tighten set screws securely. Install handrails prior to installing cables. This will allow less post movement when tensioning the cable. When installing your cable, loosen the adjustment

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terminals by approximately ½” each to allow for proper tightening. If necessary, cables can be spliced together in mid field by using Cable Connectors (PA28, sold separately).



Cable post adjustment terminals (PA26) are installed at each end of a run of cable in fill. Separate the 2 sections, slide ball joint end through fitting on post, then reassemble terminal, keeping approximately ½” of thread exposed for tightening of cables. Carefully thread cable into each end of connector while cable is slack. (Your cable should already be semi tight on your terminals with the ½” thread exposed.) **Hint: Slowly twist fitting onto cable as you thread into hole, and hold cable end very closely to fitting.** At this point you’re ready to tighten. Using an open ended wrench (not supplied) tighten each fitting evenly until cables are taught.



Wall cable adjustment terminals (PA27) are installed at each end of a run of cables when terminating at a wall. Mount plate onto wall. **Important: Solid wood backing material must be in place. (Framing, blocking, etc.) Do not use drywall anchors.** Install terminal onto plate using pin supplied. Carefully thread cable into each end of connector while cable is slack. (Your cable should already be semi tight on your terminals with the ½” thread exposed.) **Hint: Slowly twist fitting onto cable as you thread into hole, and hold cable end very closely to fitting.** At this point you’re ready to tighten. Using an open ended wrench (not supplied) tighten each fitting evenly until cables are taught.



Cable connectors (PA28) are used to connect two runs of cable in mid field, between posts. Carefully thread cable into each end of connector while cable is slack. **Hint: Slowly twist fitting onto cable as you thread into hole, and hold cable end very closely to fitting.** Once cable is inserted, tighten set screws securely and tighten cables with post or wall adjustment terminals.

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Stainless Steel Tubes (PA5) are installed through the fittings provided on your posts. Loosen set screw on each fitting to slide your tubes through, then tighten each set screw securely. For seamless tube to tube connections, splice them at the post fittings. Use the plastic caps provided to finish tube ends. It is recommended that an angle grinder be used to cut tubes.



Steel tube connector/ elbows (PA10) are installed into the ends of the steel tube in fill. They can be used in straight runs or for going around corners. Using a small amount of construction adhesive, insert connector into end of tube and turn a full circle to spread adhesive around inside of tube. Once you have your angle established and set, tighten set screw securely. Allow 24 hours for adhesive to dry. **Remember to wipe off excessive adhesive right away.**



Wall terminals for tube filling (PA11) connect your steel tubes individually to a perpendicular wall. Line up your tubes against the wall to mark connection points. Use the screws provided to secure fittings to wall. While securing handrail connector with backing material in place is strongly recommended, if adequate backing material is not in place, a toggle bolt or heavy duty drywall anchor can be used. (Sold separately). Then slide tubes into fittings and tighten set screws securely.

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90° corner for tube or cable (PA25) can be installed from post to post in the fittings provided, to finish corners. Loosen set screws on fittings and install in the same manner as steel tubes. Tighten set screws securely. When using cable, after installing, thread cable through corners, and continue cable to next post.



Acrylic glass is installed with glass post brackets (PA32), sold separately. Acrylic glass cannot be installed on stairs. Use the drilling template (PA32), sold separately, for mistake free bracket mounting locations. Remove the supplied fittings from the post, and install chrome cap screws (supplied with brackets) into fitting holes. **Important: Install glass panels onto posts before you mount posts. Posts are required to be set at 1 meter on center for acrylic panels.** Keep protective film on until installation is complete.



Drilling template for acrylic glass (PA33) slides onto posts for mistake free hole locations. Remove fittings from posts. On flat surface, lay out acrylic panels. Using existing holes in post, line up bracket holes in acrylic glass panel with post. Using a set screw from post fittings, secure drilling template to post. **Important: Use care when drilling. Hole must be straight through post for proper bracket installation.** You will need to remove and flip drilling template during drilling process to properly line up all holes. A 5/16" metal drill bit is required. (Not supplied.)

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## 5. Hand Rails



Beech hand rails (finished PA3a or raw PA3) can be installed on your posts or on your wall (PA9 Wall fitting, sold separately). Beech handrails are for indoor use only. Remove the plate from the post top bracket to screw handrail to post. **Note: Pilot holes required.** Connect railings together in a straight line with Handrail Connections (PA8, sold separately), or at any angle from 0- 90° with Handrail Junctions (PA6, sold separately). Use Handrail Endcaps (PA7, sold separately), to finish your handrail run.



Aluminum handrails (PA4) can be installed on your posts, or on your wall (PA9 Wall fitting, sold separately). Loosen the plate from the post top bracket to slide handrail onto post, then tighten set screws securely. Connect railings together in a straight line with Handrail Connections (PA8, sold separately), or at any angle from 0- 90° with Handrail Junctions (PA6, sold separately). Use Handrail Endcaps (PA7, sold separately), to finish your handrail run. For best finished results, if cutting handrails is necessary, it is recommended that you have your aluminum handrails professionally cut.



Handrail endcaps (PA7) are installed to finish your run of wood or aluminum handrails. Using an allen wrench (not supplied), remove the plug from the end cap. Drill pilot hole (in wood handrails) or use existing hole (in aluminum handrail), and mount plug onto handrail with screw provided. Then replace the cap, and tighten set screw securely. For wood handrails, it is recommended that you use a drilling template (PA21, sold separately) to drill 1/8" pilot holes on center.

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Handrail Junction (PA6) can be installed on wood or aluminum handrails for any angle from 0- 90°, or going around corners. For wood handrails, it is recommended that you use a drilling template (PA21, sold separately) to drill 1/8" pilot holes on center. Using an allen wrench (not supplied), remove the plugs from handrail connection. Drill pilot holes (in wood handrails) or use existing holes (in aluminum handrails), and mount plugs onto handrails with screws provided. Reinstall plugs on handrails into ends of connector and tighten set screws securely. Once you have your angle established and set, tighten set screw on connector securely.



Handrail connection/ wall terminal (PA8) can be installed on wood or aluminum handrails to either join handrail to handrail in a straight line, or attach handrail to wall. For wood handrails, it is recommended that you use a drilling template (PA21, sold separately) to drill 1/8" pilot holes on center. Using an allen wrench (not supplied), remove the plug from handrail connection. Drill pilot holes (in wood handrails) or use existing holes (in aluminum handrails), and mount plug onto handrail with screw provided. Repeat this process with the body 1/2 of the connector. Reinstall plug on handrail into end of connector and tighten set screw securely. While securing handrail connector with backing material in place is strongly recommended, if adequate backing material is not in place, a toggle bolt or heavy duty sheetrock anchor can be used. (Sold separately).

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