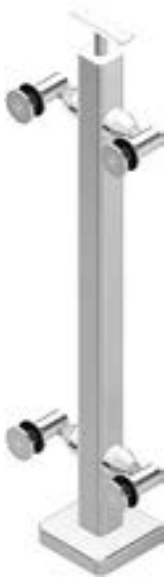


INSTALLATION INSTRUCTIONS

CRL P-SERIES STAINLESS STEEL POST GLASS RAILING SYSTEM



P1 Series



P2 Series



P3 Series



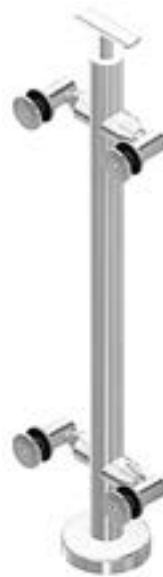
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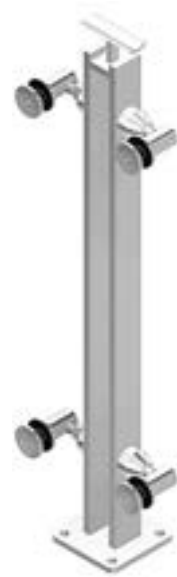
P5 Series



P6 Series



P7 Series



P8 Series



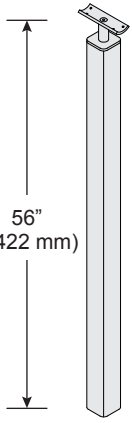
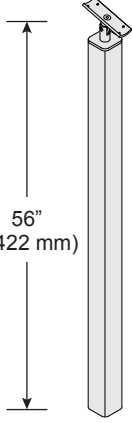
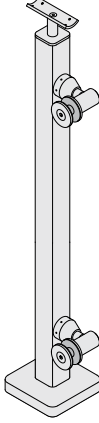
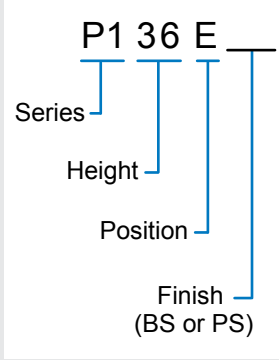
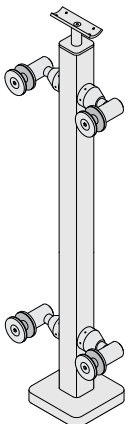
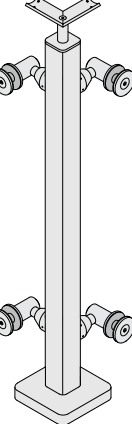
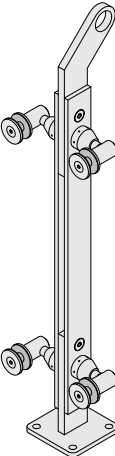
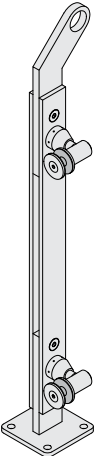
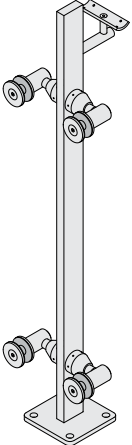
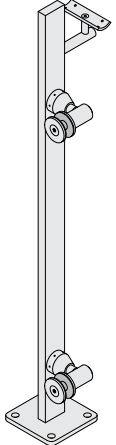
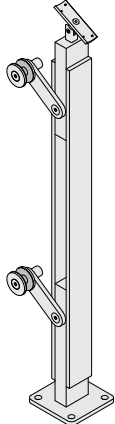
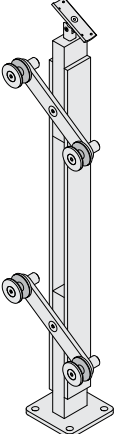
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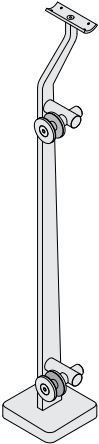
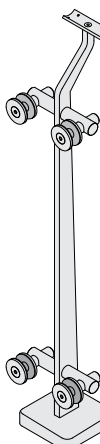
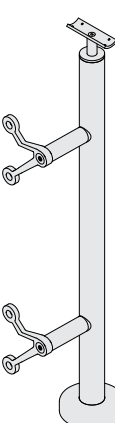
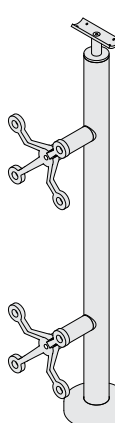
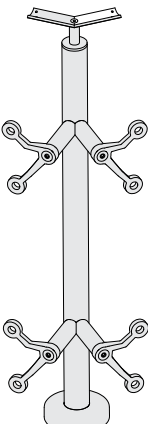
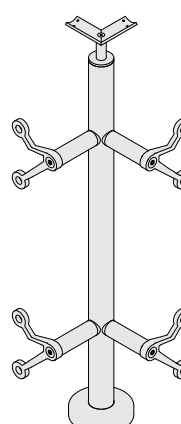

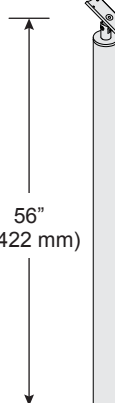
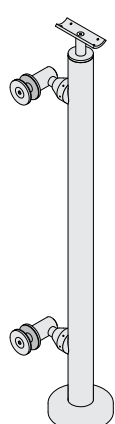
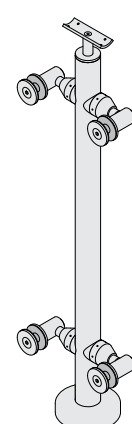
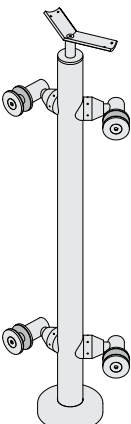
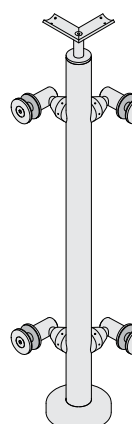
PARTS LIST

Post Kits

<p>P1 Series Blank Fixed Post Kit</p>  <p>P1BPF_ 56" (1422 mm) Height</p> <p>56" (1422 mm)</p>	<p>P1 Series Blank Swivel Post Kit</p>  <p>P1BPS_ 56" (1422 mm) Height</p> <p>56" (1422 mm)</p>	<p>P1 Series End Post Kit</p>  <p>P136E_ 36" (914 mm) Height</p> <p>P142E_ 42" (1067 mm) Height</p>	<p>PART NUMBER NOMENCLATURE</p> 
<p>P1 Series 180 Degree Center Post Kit</p>  <p>P136C_ 36" (914 mm) Height</p> <p>P142C_ 42" (1067 mm) Height</p>	<p>P1 Series 90 Degree Corner Post Kit</p>  <p>P136L_ 36" (914 mm) Height</p> <p>P142L_ 42" (1067 mm) Height</p>	<p>P2 Series End Post Kit</p>  <p>P236E_ 36" (914 mm) Height</p> <p>P242E_ 42" (1067 mm) Height</p>	<p>P2 Series 180 Degree Center Post Kit</p>  <p>P236C_ 36" (914 mm) Height</p> <p>P242C_ 42" (1067 mm) Height</p>
<p>P3 Series End Post Kit</p>  <p>P336E_ 36" (914 mm) Height</p> <p>P342E_ 42" (1067 mm) Height</p>	<p>P3 Series 180 Degree Center Post Kit</p>  <p>P336C_ 36" (914 mm) Height</p> <p>P342C_ 42" (1067 mm) Height</p>	<p>P4 Series End Post Kit</p>  <p>P436E_ 36" (914 mm) Height</p> <p>P442E_ 42" (1067 mm) Height</p>	<p>P4 Series 180 Degree Center Post Kit</p>  <p>P436C_ 36" (914 mm) Height</p> <p>P442C_ 42" (1067 mm) Height</p>

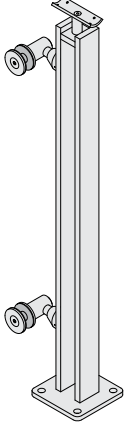
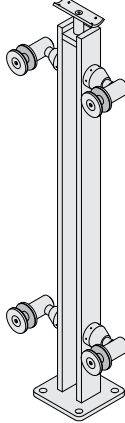
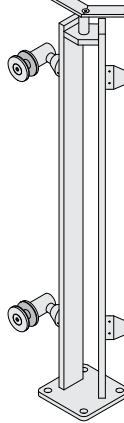
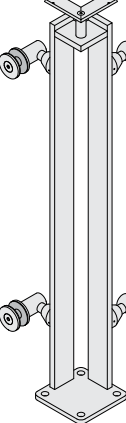
PARTS LIST (CONTINUED)

Post Kits (Continued)

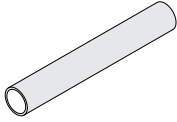
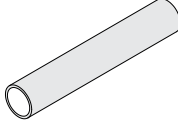
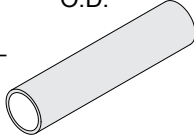
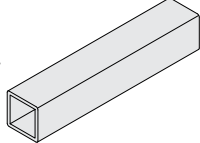
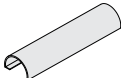
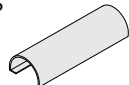
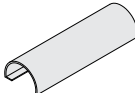
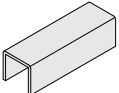




<p>P5 Series End Post Kit</p>  <p>P536E_ 36" (914 mm) Height</p> <p>P542E_ 42" (1067 mm) Height</p>	<p>P5 Series 180 Degree Center Post Kit</p>  <p>P536C_ 36" (914 mm) Height</p> <p>P542C_ 42" (1067 mm) Height</p>	<p>P6 Series End Post Kit</p>  <p>P636E_ 36" (914 mm) Height</p> <p>P642E_ 42" (1067 mm) Height</p>	<p>P6 Series 180 Degree Center Post Kit</p>  <p>P636C_ 36" (914 mm) Height</p> <p>P642C_ 42" (1067 mm) Height</p>
<p>P6 Series 135 Degree Angle Post Kit</p>  <p>P636A_ 36" (914 mm) Height</p> <p>P642A_ 42" (1067 mm) Height</p>	<p>P6 Series 90 Degree Corner Post Kit</p>  <p>P636L_ 36" (914 mm) Height</p> <p>P642L_ 42" (1067 mm) Height</p>	<p>P7 Series Blank Fixed Post Kit</p>  <p>P7BPF_ 56" (1422 mm) Height</p> <p>56" (1422 mm)</p>	<p>P7 Series Blank Swivel Post Kit</p>  <p>P7BPS_ 56" (1422 mm) Height</p> <p>56" (1422 mm)</p>
<p>P7 Series End Post Kit</p>  <p>P7F36E_ 36" (914 mm) Height</p> <p>P7F42E_ 42" (1067 mm) Height</p>	<p>P7 Series 180 Degree Center Post Kit</p>  <p>P7F36C_ 36" (914 mm) Height</p> <p>P7F42C_ 42" (1067 mm) Height</p>	<p>P7 Series 135 Degree Angle Post Kit</p>  <p>P7F36A_ 36" (914 mm) Height</p> <p>P7F42A_ 42" (1067 mm) Height</p>	<p>P7 Series 90 Degree Corner Post Kit</p>  <p>P7F36L_ 36" (914 mm) Height</p> <p>P7F42L_ 42" (1067 mm) Height</p>

PARTS LIST (CONTINUED)

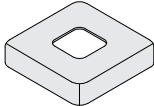
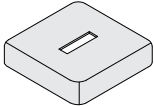
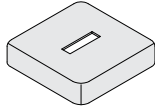
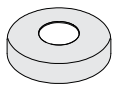
Post Kits (Continued)

<p>P8 Series End Post Kit</p>  <p>P8F36E_ 36" (914 mm) Height</p> <p>P8F42E_ 42" (1067 mm) Height</p>	<p>P8 Series 180 Degree Center Post Kit</p>  <p>P8F36C_ 36" (914 mm) Height</p> <p>P8F42C_ 42" (1067 mm) Height</p>	<p>P8 Series 135 Degree Angle Post Kit</p>  <p>P8F36A_ 36" (914 mm) Height</p> <p>P8F42A_ 42" (1067 mm) Height</p>	<p>P8 Series 90 Degree Corner Post Kit</p>  <p>P8F36L_ 36" (914 mm) Height</p> <p>P8F42L_ 42" (1067 mm) Height</p>
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Railing Options

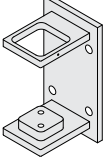
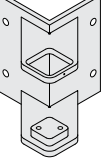
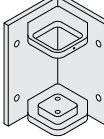
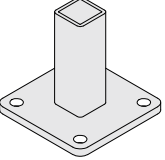
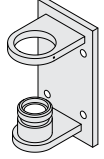
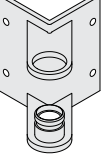
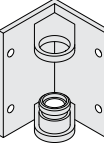
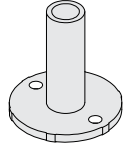
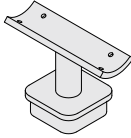
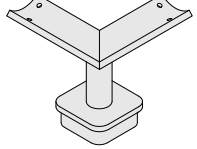
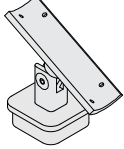
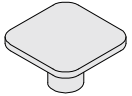
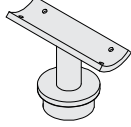
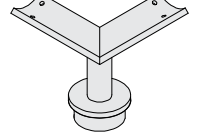
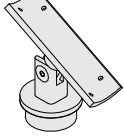
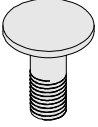
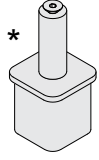
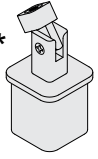
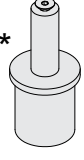
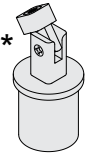
<p>1-1/4" (32 mm) Schedule 40 Pipe Railing Tubing</p>  <p>PR12_</p>	<p>1-1/2" (38 mm) Schedule 40 Pipe Rail Tubing 1.9" O.D.</p>  <p>PR15_</p>	<p>1-1/2" (38 mm) Diameter Hand Railing Tubing 1.5" (38 mm) O.D.</p>  <p>HRH15_</p>	<p>2" (51 mm) Square Outside Diameter Pipe Tubing</p>  <p>PR2_</p>
<p>Splice Connector for 1-1/4" (32 mm) Schedule 40 Pipe Railing Tubing</p>  <p>PR16CSS</p>	<p>Splice Connector for 1-1/2" (38 mm) Schedule 40 Pipe Rail Tubing</p>  <p>PR19CSS</p>	<p>Splice Connector for 1-1/2" (38 mm) Diameter Hand Railing Tubing</p>  <p>GR15CSS</p>	<p>Splice Connector for 2" (51 mm) Square Pipe Railing Tubing</p>  <p>PR20CSS</p>
<p>1-1/4" (32 mm) Schedule 40 End Cap</p>  <p>PR12EC_</p>	<p>1-1/2" (38 mm) Schedule 40 End Cap</p>  <p>PR15EC_</p>	<p>1-1/2" (38 mm) Diameter Hand Railing End Cap</p>  <p>HRH15EC_</p>	<p>2" (51 mm) Square End Cap</p>  <p>PRS2EC_</p>

Mounting Options and Accessories

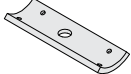
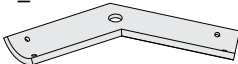
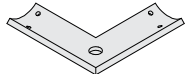
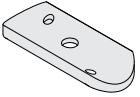
<p>Base Flange Cover for P1 Series Posts</p>  <p>CR16SPC_</p>	<p>Base Flange Cover for P3 Series Posts</p>  <p>CR17SPC_</p>	<p>Base Flange Cover for P5 Series Posts</p>  <p>CR18SPC_</p>	<p>Base Flange Cover for P6 and P7 Series Posts</p>  <p>CR15SPC_</p>
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PARTS LIST (CONTINUED)

Mounting Options and Accessories (Continued)

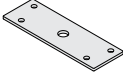
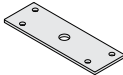
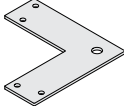
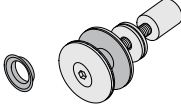
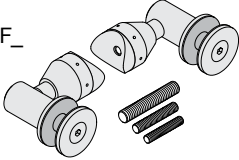
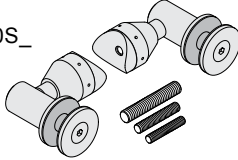
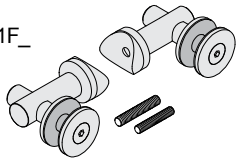
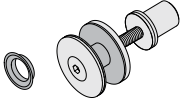
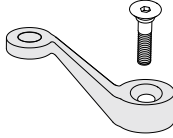
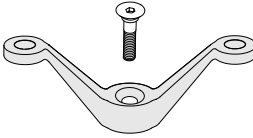
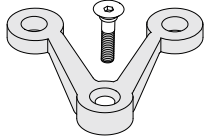
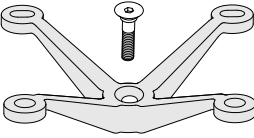
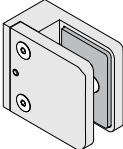
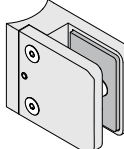
<p>2" (51 mm) Square Standard Fascia Mount Bracket</p> <p>CR2FB_ </p>	<p>2" (51 mm) Square Outside Corner Fascia Mount Bracket</p> <p>CR20FB_ </p>	<p>2" (51 mm) Square Inside Corner Fascia Mount Bracket</p> <p>CR21FB_ </p>	<p>P1 Series Post Surface Mount Stanchion</p> <p>P1BFS </p>
<p>1-1/2" (38 mm) CRS Standard Fascia Mount Bracket</p> <p>CR15FB_ </p>	<p>1-1/2" (38 mm) CRS Outside Corner Fascia Mount Bracket</p> <p>CR150FB_ </p>	<p>1-1/2" (38 mm) CRS Inside Corner Fascia Mount Bracket</p> <p>CR151FB_ </p>	<p>P6 and P7 Series Post Surface Mount Stanchion</p> <p>P7BFS </p>
<p>2" (51 mm) Square Post P-Series 180 Degree Fixed Standoff Saddle</p> <p>P1FS_ </p>	<p>2" (51 mm) Square Post P-Series 90 Degree Fixed Standoff Saddle</p> <p>P1F9_ </p>	<p>2" (51 mm) Square Post P-Series 180 Degree Fixed Standoff Saddle</p> <p>P1FS_ </p>	<p>P1 Series Top Post Cap</p> <p>P1CAP_ </p>
<p>1.9" (48 mm) Round Post P-Series 180 Degree Fixed Standoff Saddle</p> <p>P7FS_ </p>	<p>1.9" (48 mm) Round Post P-Series 90 Degree Fixed Standoff Saddle</p> <p>P7F9_ </p>	<p>1.9" (48 mm) Round Post P-Series Swivel Standoff Saddle</p> <p>P75S_ </p>	<p>P6 and P7 Series Top Post Cap</p> <p>P7CAP_ </p>
<p>P1 Series Vertically Adjustable Post Cap</p> <p>P1VF_  *</p>	<p>P1 Series Vertically Adjustable Post Cap Swivel Head</p> <p>P1VS_  *</p>	<p>P7 Series Vertically Adjustable Post Cap</p> <p>P7VF_  *</p>	<p>P7 Series Vertically Adjustable Post Cap Swivel Head</p> <p>P7VS_  *</p>

* NOTE: Apply 81120 to Stand-off Threads on Adjustable Post Caps during installation.


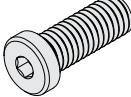

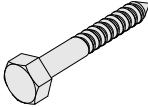
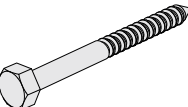
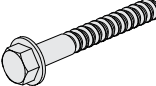
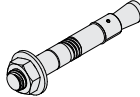
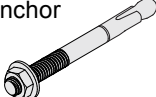
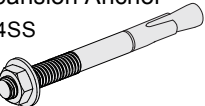
<p>180 Degree Radius Replacement Saddle</p> <p>PRS1_ </p>	<p>135 Degree Radius Replacement Saddle</p> <p>PRS3_ </p>	<p>90 Degree Radius Replacement Saddle</p> <p>PRS9_ </p>	<p>Low Profile 180 Degree Replacement Saddle</p> <p>PRSL1_ </p>
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PARTS LIST (CONTINUED)

Mounting Options and Accessories (Continued)

<p>180 Degree Flat Replacement Saddle</p> <p>PFS1_ </p>	<p>135 Degree Flat Replacement Saddle</p> <p>PFS3_ </p>	<p>90 Degree Flat Replacement Saddle</p> <p>PFS9_ </p>	<p>Rigid Head Combination Glass Attachment</p> <p>RRF10_ </p>
<p>Double Arm Fixed Fitting for 1/2" (12 mm) Glass</p> <p>RB50F_ </p>	<p>Double Arm Swivel Fitting for 1/2" (12 mm) Glass</p> <p>RB50S_ </p>	<p>Double Arm Fixed Fitting for 1/2" (12 mm) Glass</p> <p>RB51F_ </p>	<p>Swivel Head Combination Glass Attachment</p> <p>RSF10_ </p>
<p>Single Arm Post Mounting Fitting</p> <p>GRP1_ </p>	<p>Double Arm Post Mounting Fitting</p> <p>GRP2_ </p>	<p>Double Arm "V" Post Mounting Fitting</p> <p>GR2PV_ </p>	<p>Four Arm "V" Post Mounting Fitting</p> <p>GRP4_ </p>
<p>Flat ZP-Series Clamp for 1/2" and 9/16" (12 and 14 mm) Glass</p> <p>ZP912_ </p>	<p>Radius ZP-Series Clamp for 1/2" and 9/16" (12 and 14 mm) Glass</p> <p>ZP712_ </p>		

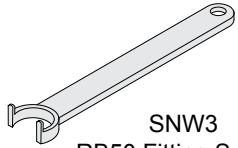
Fasteners

<p>Stainless Steel #10-32 x 3/4" Undercut Flat Phillips Top Rail Connecting Screw</p> <p>PRS1032TC </p>	<p>Z - Clamp Bolt 3/8" - 16 x 5/8"</p> <p>ZBOLT38 </p>	<p>Stainless Steel 1/2-13 x 3/4" Socket Head Cap Screw</p> <p>SHCS12X34 </p>	<p>3/8" x 3-1/2" Lag Bolt</p> <p>LB350 </p>
<p>3/8" x 6" Lag Bolt</p> <p>LB600 </p>	<p>3/8" x 4" Carbon Steel Kwik HUS-EZ Anchor</p> <p>WBA38X4 </p>	<p>M8 3-7/8" Long HSL-3 Expansion Anchor</p> <p>EBA334 </p>	<p>Kwik Bolt Carbon Steel TZ 3/8" x 3-3/4" Concrete Expansion Anchor</p> <p>CA38X334 </p>
<p>Kwik Bolt TZ 304 Stainless Steel 3/8" x 3-3/4" Concrete Expansion Anchor</p> <p>CA38X334SS </p>			

TOOLS REQUIRED



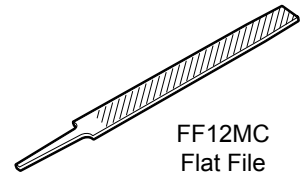
24231
Loctite® Threadlocker



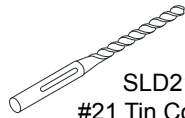
SNW3
RB50 Fitting Swivel
Nut Wrench



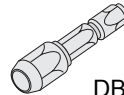
WS140
Tube Wax



FF12MC
Flat File



SLD21
#21 Tin Coated
Drill Bit



DBH1
Drill Bit Holder



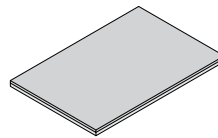
G78
Center Punch



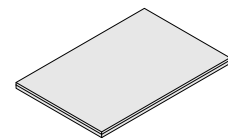
32629
Loctite® Metal
Contact Cement



7649
Loctite® 60 Second Primer
for Metal Contact Cement



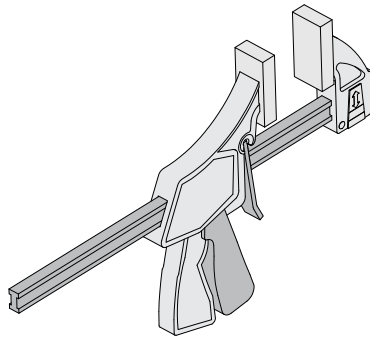
SB7447F
3M® Scotch-Brite™ Pad
Fine Grade



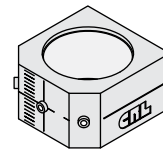
SB7440C
3M® Scotch-Brite™ Pad
Coarse Grade



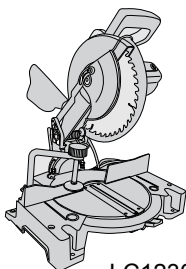
81120
Clear Loctite® Poxy-Pak™
Two-Part Epoxy



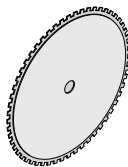
506QC
6" Quick Grip Clamps



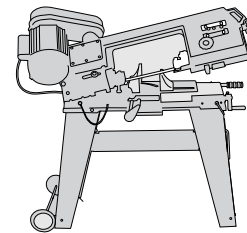
P7J1G
P7 Post Drill Jig



LC1230
Makita® 12" Cold Cutting
Metal Chop Saw



A91039
Arbor60 Tooth Carbide
Saw Blade



BNDSW1
HP Horizontal/Vertical
Metal cutting Band Saw

IMPORTANT: READ THIS MANUAL THOROUGHLY BEFORE BEGINNING INSTALLATION

SYSTEM LIMITATIONS

Maximum Spacing Between Posts

Steel Mounted: 60" (1524 mm) On Center

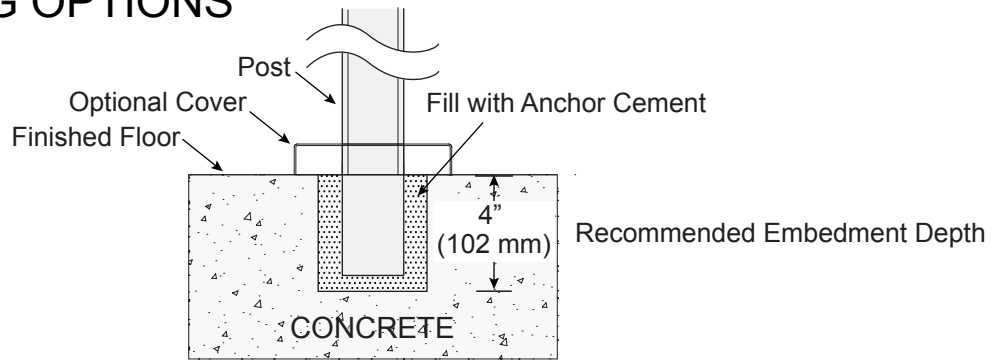
Wood or Concrete Mounted: 48" (1219 mm) On Center

ORDER OF ASSEMBLY AND INSTALLATION

PARTS LIST	2 - 6
Post Kits	2 - 4
Railing Options	4
Mounting Options and Accessories	4 - 6
Fasteners	6
TOOLS REQUIRED	7
SYSTEM LIMITATIONS	7
POST MOUNTING OPTIONS	9 - 10
Core Mount	9
Base Mount	9
Stanchion Mount : For P1, P6 and P7 Series Posts Only	9
Fascia Mount : For P1, P6 and P7 Series Posts Only	10
SADDLE HEIGHT ADJUSTMENT	11
POST INSTALLATION	11
TOP RAIL INSTALLATION	12
Splice Sleeve Installation	12
Rail Attachment	12
GLASS INSTALLATION	13
Glass Clamp Installation	13
Glass Fabrication for RB50 and RB51 Fittings	13
Glass Panel Installation	13
ZP-SERIES CLAMP INSTALLATION	14 - 15
Glass Fabrication for ZP-Series Clamps	14
ZP-Series Clamp Preparation	14
Attachment to Post	15
Glass Installation	15

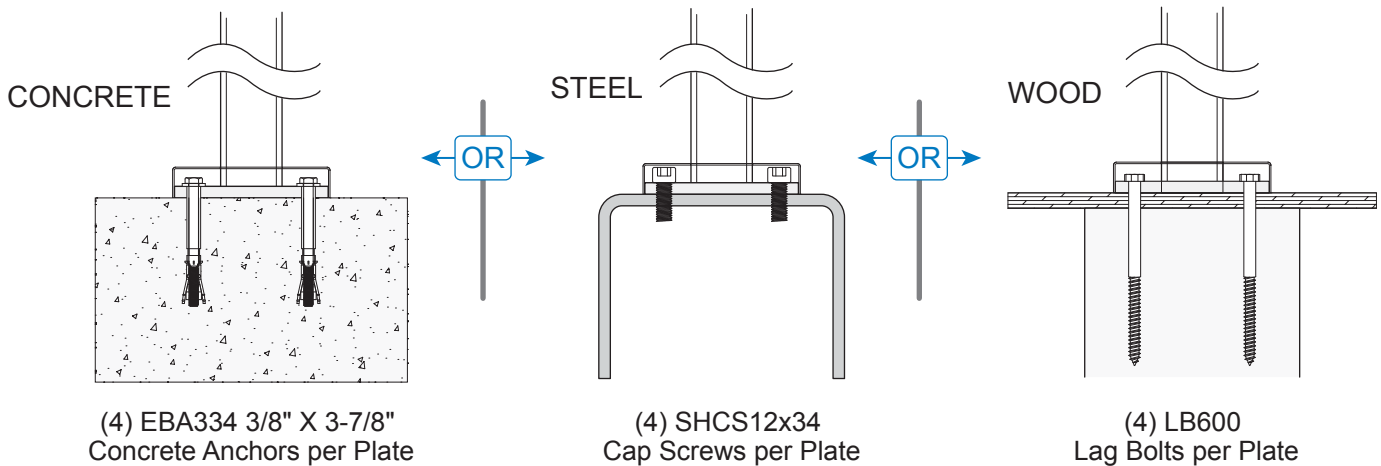
POST MOUNTING OPTIONS

Core Mount



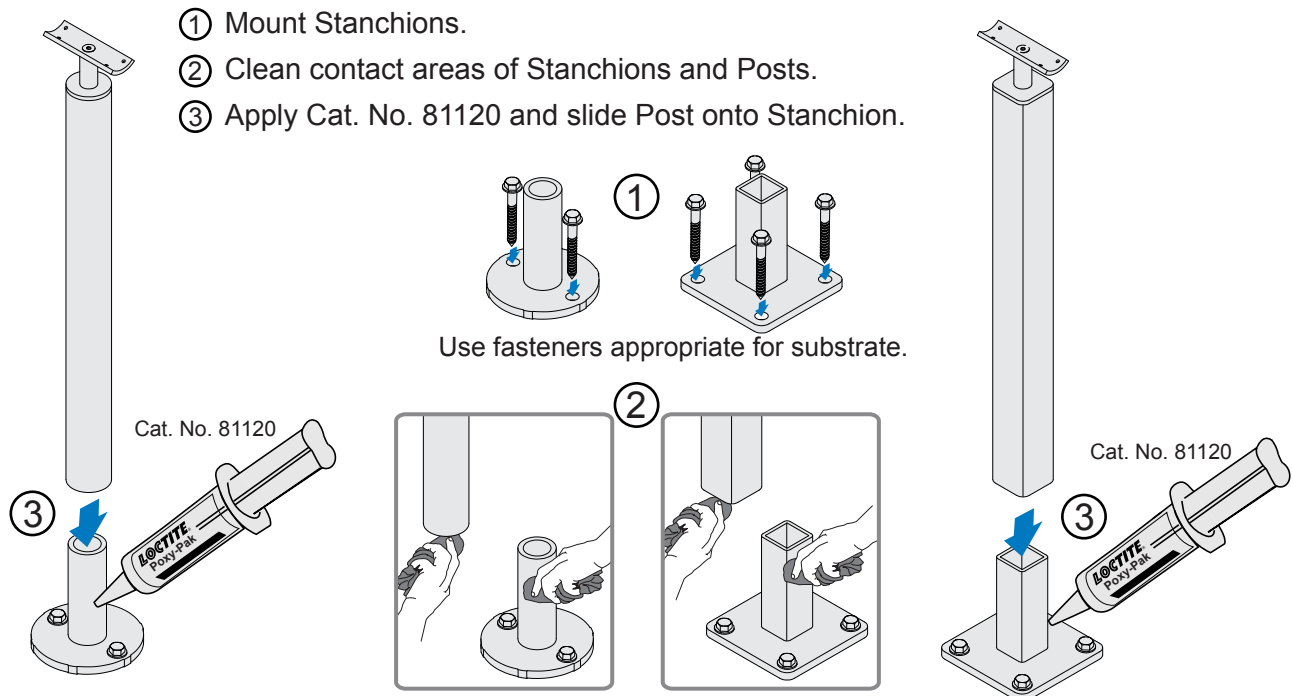
Base Mount

NOTE: When mounting Series P-6 and P-7 to wood be sure to use a four-hole base plate.



Stanchion Mount : For P1, P6 and P7 Series Posts Only

Follow Base Mount details above to determine proper fasteners for Stanchion Mounts.

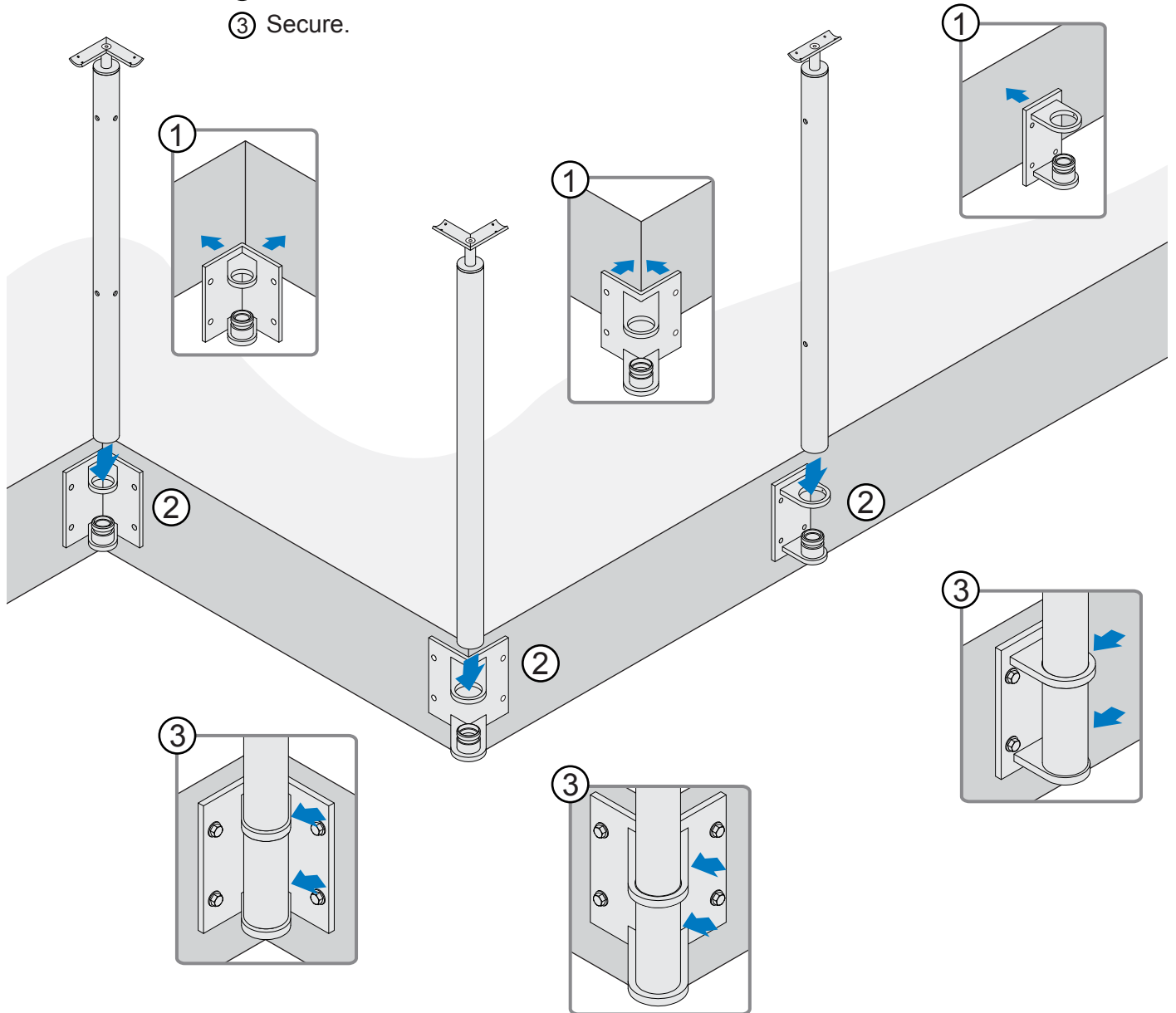


POST MOUNTING OPTIONS (CONTINUED)

Fascia Mount : For P1, P6 and P7 Series Posts Only

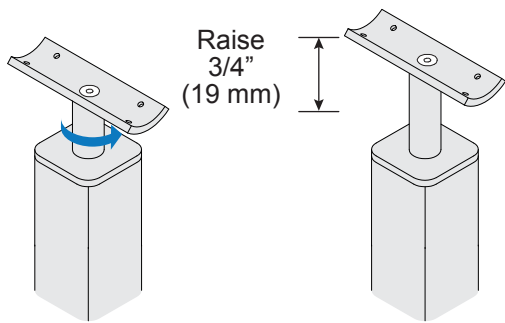
NOTE: P2, P3, P4,P5 and P8 Post Kits require double posts at corners.

- ① Mount using fasteners appropriate for substrate.
- ② Slide Post into Bracket.
- ③ Secure.

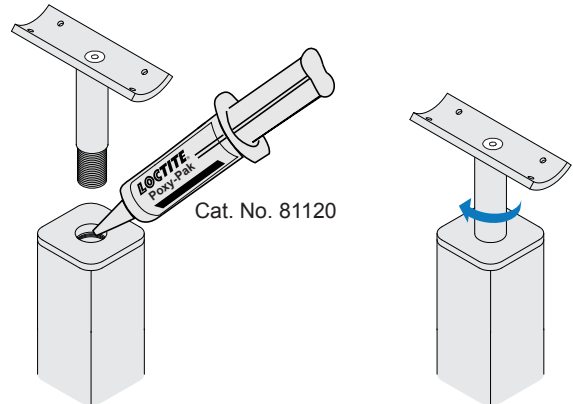


SADDLE HEIGHT ADJUSTMENT

Turn Stem counter-clockwise to raise Saddle up to 3/4" (19 mm) higher.



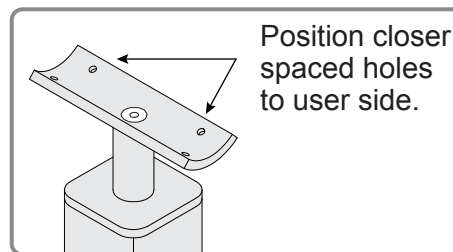
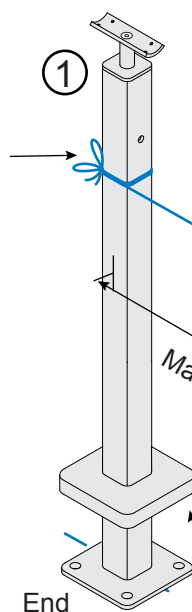
NOTE: For added security, remove Stem and apply epoxy to threads. Then screw to desired height.



POST INSTALLATION

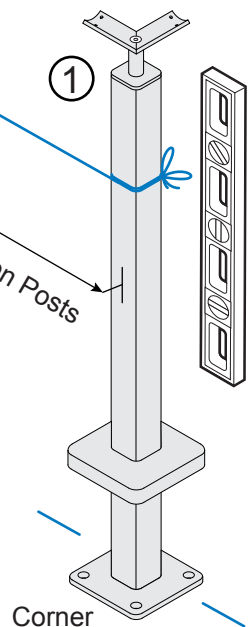
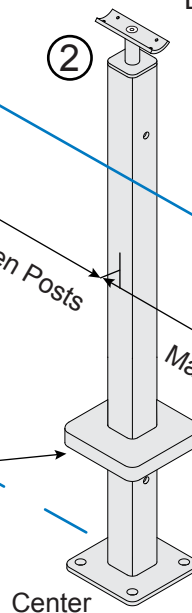
- ① Install End and Corner Posts first.
- ② Install Center Posts.

Use String Line to ensure Posts are in a straight line.



Ensure Posts are Level and Plumb.

Raise Base Plate Cover to install.

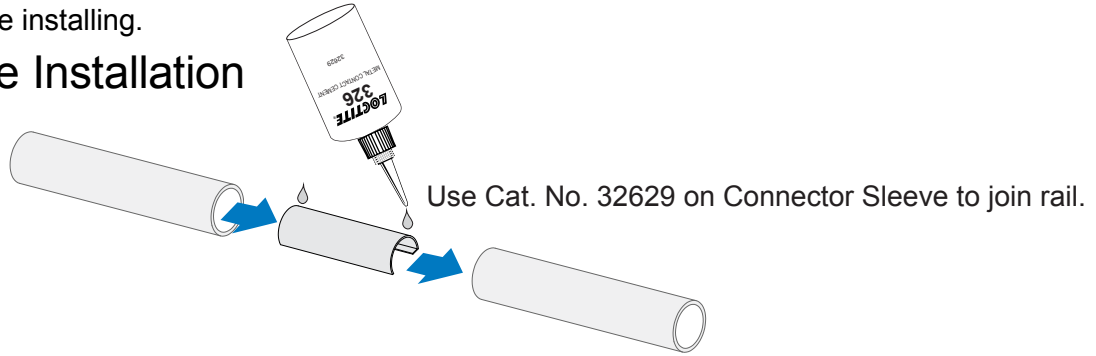


NOTE: Maximum spacing between posts is between 48" (1219 mm) and 60" (1524 mm) and is determined by the post style. Reference CRL's Engineering Report for Post Style and Post Spacing Limitations.

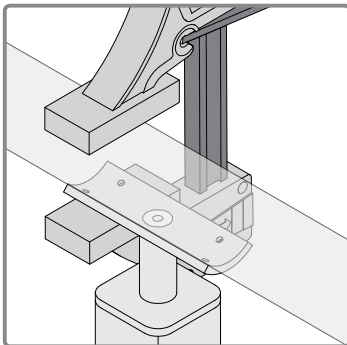
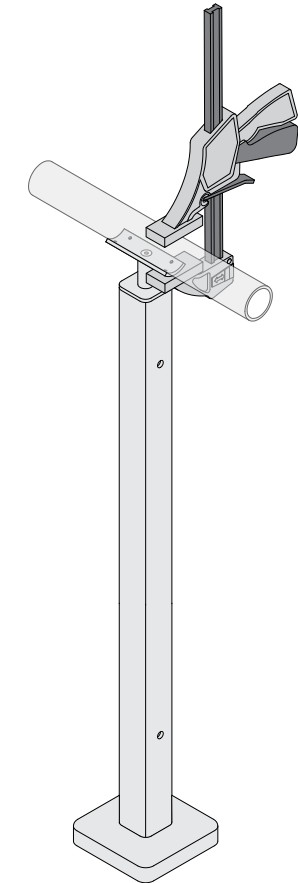
TOP RAIL INSTALLATION

Dry fit the rail before installing.

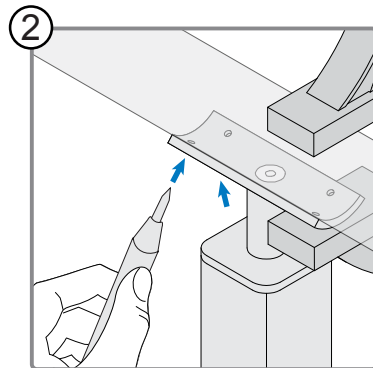
Splice Sleeve Installation



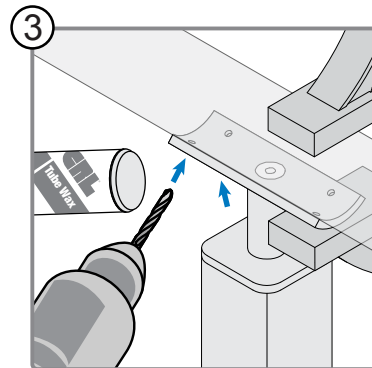
Rail Attachment



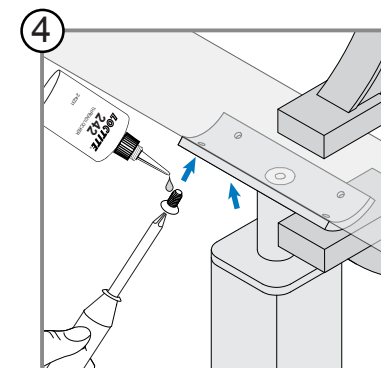
① Hold Tube in place with Cat. No. 506QC Quick Grip Clamps.



Mark CENTER of each hole.



Apply Tube Wax and drill pilot hole using #21 drill bit at each hole in saddle.



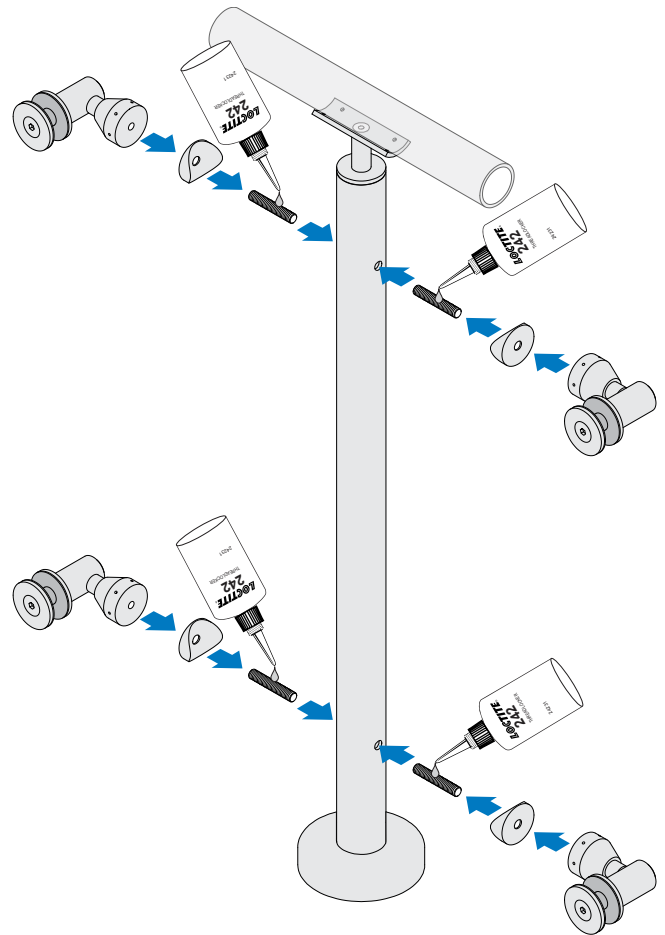
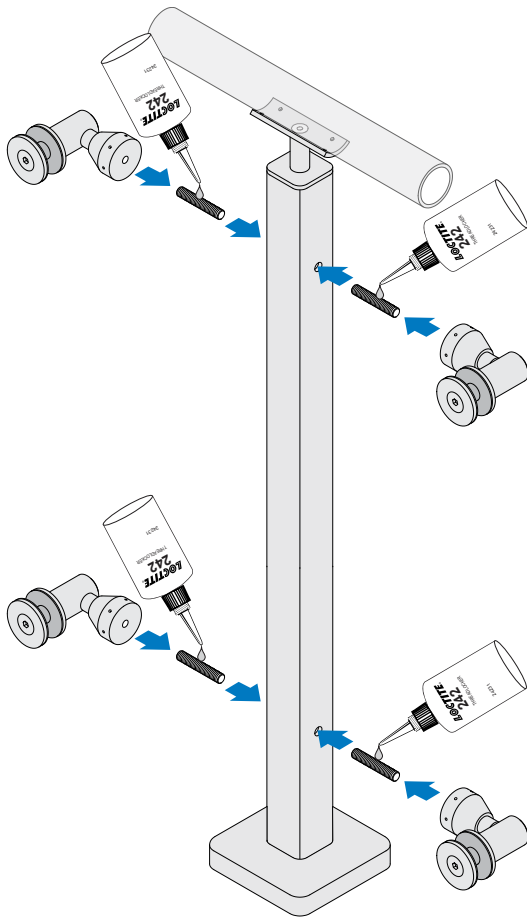
Use Cat. No. PRS1032TC self tapping screws with Cat. No. 24231 to secure.

⑤ Move Quick Grip Clamps to other side and repeat Steps 2 through 4.

* Loctite® is recommended on all screw threads during final assembly.

GLASS INSTALLATION

Glass Clamp Installation



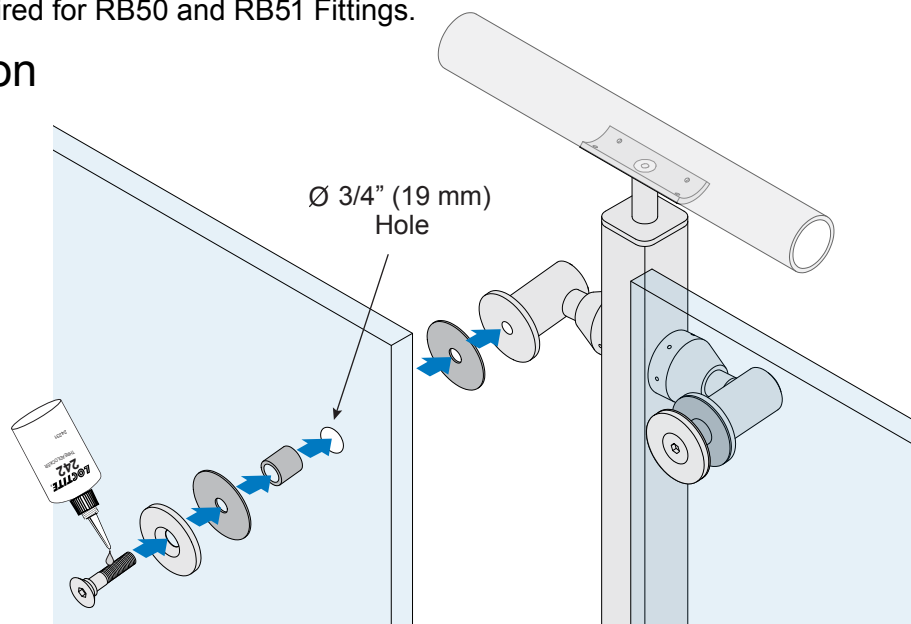
Use curved adapter to mount to round posts.

Glass Fabrication for RB50 and RB51 Fittings

3/4" (19 mm) diameter hole Required for RB50 and RB51 Fittings.

Glass Panel Installation

Disassemble Glass Clamps to install glass.



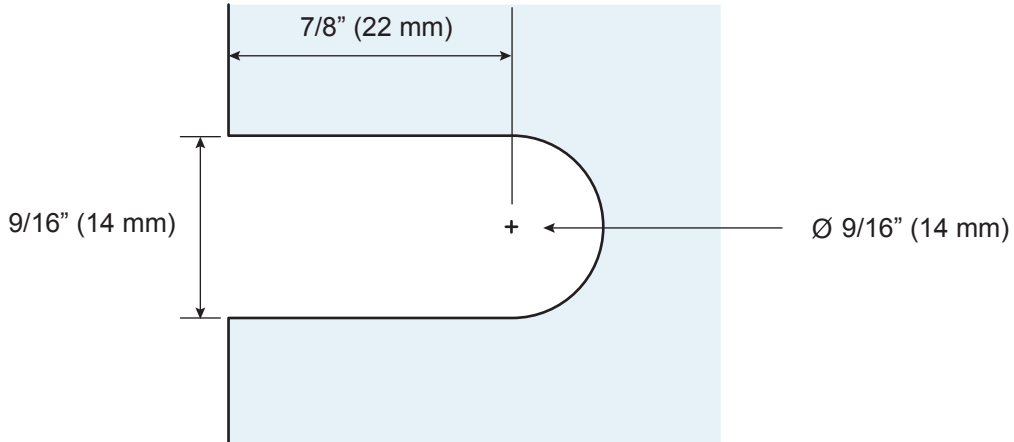
* Loctite® is recommended on all screw threads during final assembly.

ZP-SERIES CLAMP INSTALLATION

Glass Fabrication for ZP-Series Clamps

For use with 1/2" (12 mm) or 9/16" (14mm) Glass.

Finger slot glass fabrication required at each clamp location.

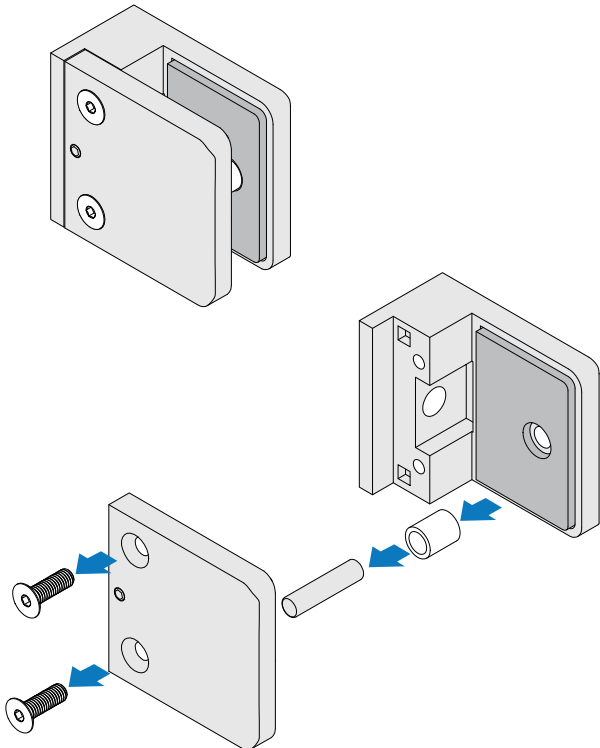


ZP-Series Clamp Preparation

Disassemble ZP-Series Clamp and place small parts in safe place.

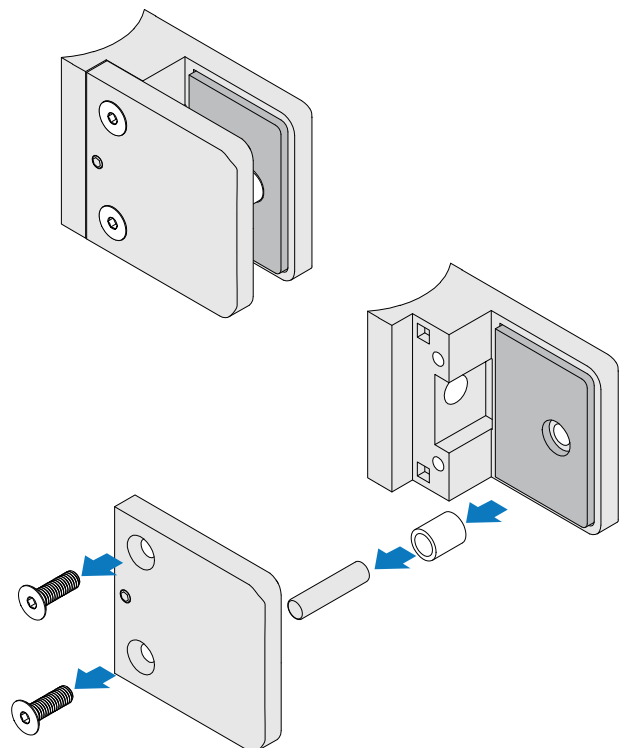
ZP912_Clamp

Use with P1, P2, P3 and P8 Series Posts



ZP712_Clamp

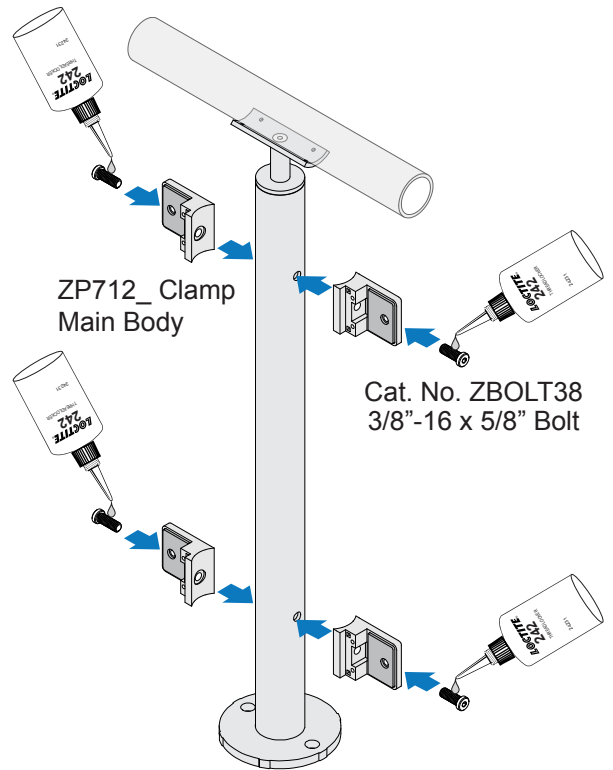
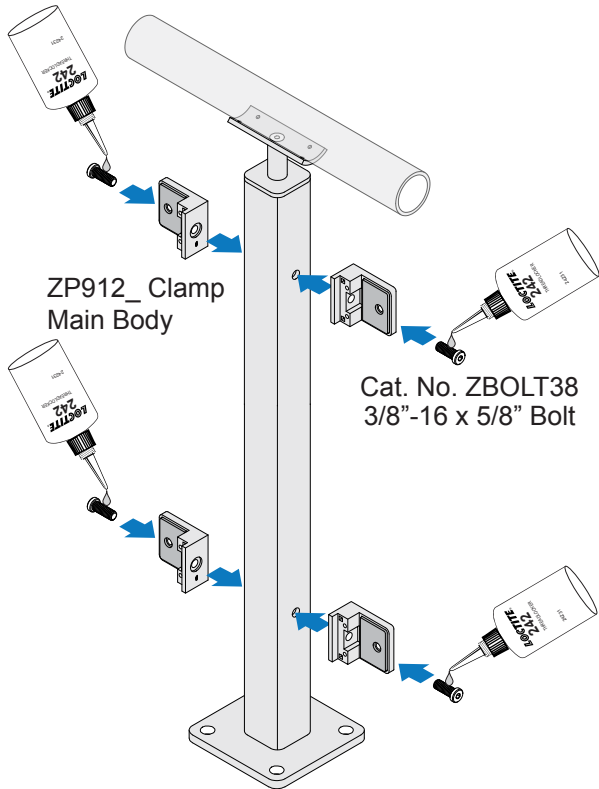
Use with P7 Series Posts



ZP-SERIES CLAMP INSTALLATION (CONTINUED)

Attachment to Post

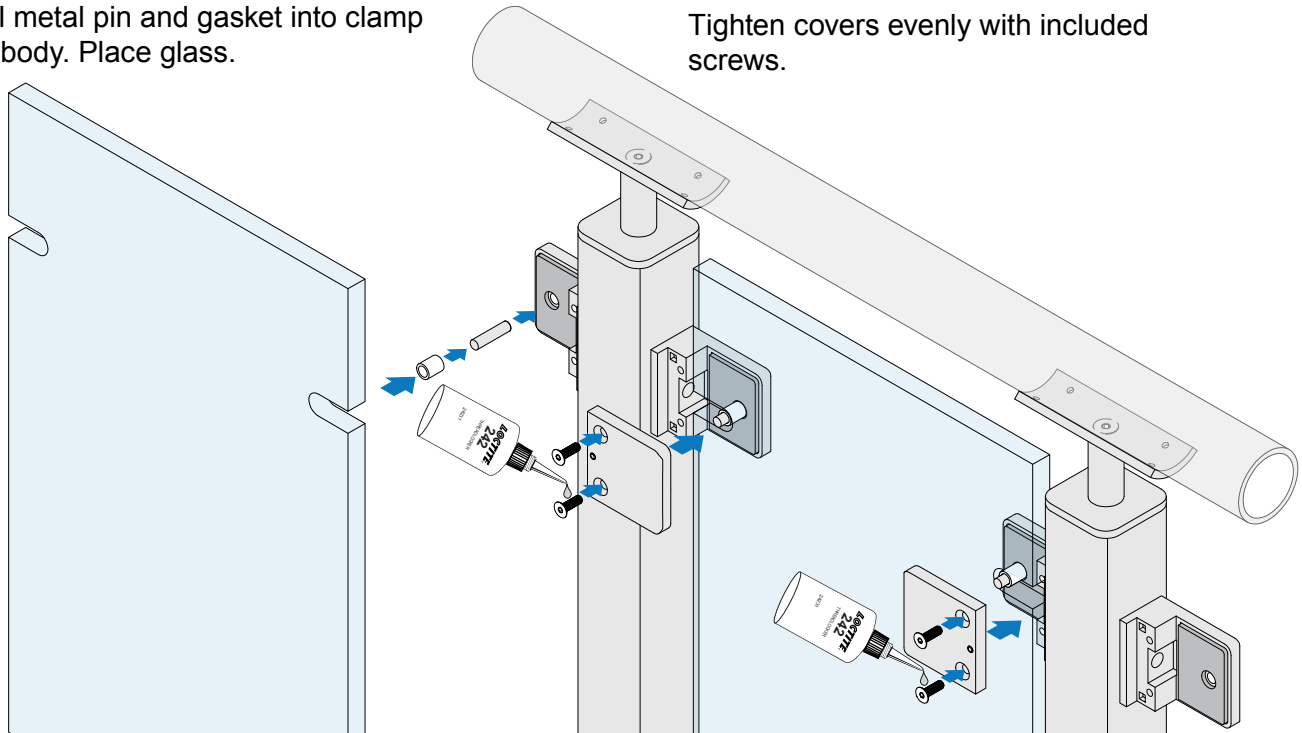
Use Cat. No. ZBOLT38 3/8"-16x 5/8" Long Bolt to attach clamp main body to posts.



Glass Installation

Install metal pin and gasket into clamp main body. Place glass.

Tighten covers evenly with included screws.



* Loctite® is recommended on all screw threads during final assembly.