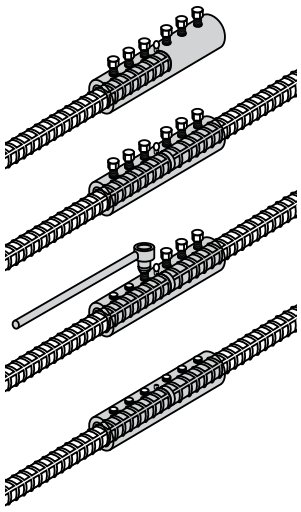
Typical Bar Lock® Coupler Installation



Bar Lock couplers are easy to install and normally do not require any special training or rebar preparation. A typical installation procedure is as follows:

A. Procedure:

1. **Insert end of the first bar halfway into the coupler to the center pin. Hold bar in place and hand-tighten all bolts.**
2. **Insert end of the second bar halfway into the coupler to the center pin. Hold bar in place and hand-tighten all bolts.**
3. **In a random alternating pattern, tighten all bolts to approximately 50% of the specified bolt torque value.**
4. **In a random alternating pattern, tighten all bolts to approximately 75% of the specified bolt torque value.**
5. **Tighten all bolts in a random alternating pattern until all bolt heads shear off.**

IMPORTANT NOTES:

a. **Prior to bolt tightening the serrated rails MUST remain aligned in the same position as they were manufactured. If damaged or knocked out of alignment while positioning, installation MUST cease and a new coupler used to replace damaged coupler.**

b. **Bolt tightening MUST be done in a random alternating pattern similar to tightening the lug nuts on an automobile wheel (i.e., 2-4 then 1-3).**

B. Installation Tools:

A high-quality 1"-drive pneumatic impact wrench is required for sizes #8 thru #18. The requirements for air flow is 100 psig of operating pressure and 185 cfm of delivered air to the impact wrench through a ¾" - 1" air hose. Sizes #4 thru #7 may be installed with smaller impact wrenches.

C. Answers to frequently asked questions:

1. **Approvals: Bar Lock couplers exceed the requirements of the International Building Code and state DOTs and are Listed by IAPMO UES - ER-319.**
2. **Center-pin: Bar Lock couplers are manufactured with a removable center pin for easy reference to the center of the coupler. As each bar is inserted into the coupler it will butt against the center pin providing the confirmation the the rebar is inserted the proper distance within the coupler. The bar ends might not actually butt against one another.**
3. **Serrated rails: The internal grip rails are held into place by a simple "positional weld" only. During bolt tightening it is common this position weld may break loose, but this will not affect performance.**
4. **Shear bolts: The shearing of the bolt-heads simply confirms adequate torque has been achieved.**
5. **Bar-ends: The rebar may be shear cut, flame cut or sawn and generally require no special bar-end preparation for use with Bar Lock couplers. Transportation: Assembled coupler samples must be restricted from rotation when transporting to a testing facility. It is recommended that samples be strapped to a skid lined with damping material like packing or egg crate foam.**

D. Epoxy-Coated Rebar Applications

Bar Lock Couplers can be used in conjunction with epoxy-coated rebar. When used with epoxy-coated, Grade 60 rebar, Bar Lock L-Series couplers develop 135% Fy strength and Bar Lock S/CA-Series Couplers develop 125% Fy strength. To achieve the standard performance strengths of 100% Fy, the epoxy must be completely removed from the rebar in the region where the coupler engages the rebar.

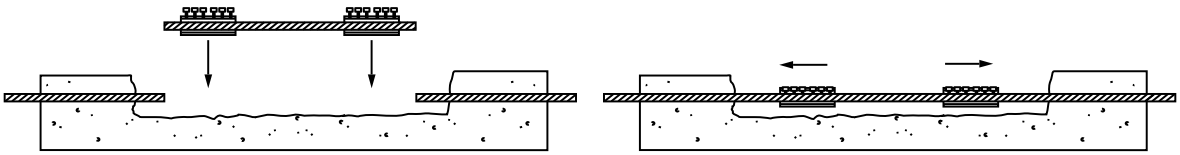
Laboratory test results

Bar Lock couplers are designed to exceed industry requirements for splicing Grade 60, 75 and 80 rebar of both A615 and A706 designation including the specification requirements of the International Building Code (IBC), ACI, Caltrans, the City of Los Angeles, and all other state departments of transportation. Bar Lock couplers are test-certified to qualify as:

S/CA-Series: ACI/IBC - Type 1 splice; Meet 125% Fy Grade 60

L-Series: ACI/IBC - Type 2 splice; Meet 100% Fu and 125% Fy Grade 60

XL-Series: ACI/IBC - Type 2 splice, Meet 100% Fu of specified strength of rebar, and 125% Fy Grade 60, 75, and 80



Typical replacement of corroded or damaged rebar in existing concrete.