



FAQ – BOLT STAR®

Q: How many reuses will I get from the product?

A: Like any construction tool, the answer depends on how well you take care of it. Some contractors coat the tool with a release agent or non-stick spray before the pour and wash it down after every pour. These contractors report getting a dozen or more reuses from BOLT STAR. Avoid using any harsh chemicals, such as acid-based concrete clean up solutions.

Q: Is BOLT STAR strong enough for the rigors of concrete construction given that it's made of ABS plastic?

A: Yes. The average person perceives steel or wood to be stronger than BOLT STAR's high strength ABS. This is a misperception. In extreme stress testing designed to simulate the downward forces on BOLT STAR during a cast-in-place pour, product engineers hung a whopping 1,000-lbs off a 7-foot rebar cage wired to the cage tie slots at the end of BOLT STAR's arms. This is so much weight that the rim of the concrete forming tube collapsed at 800-lbs, not BOLT STAR! In further testing, the tool was driven over by a 6,000-lb SUV and it popped back up without damage. Check out the videos at: www.bolt-star.com

Q: Can I fit two 2" conduits through the center opening?

A: The center opening is 4 1/8" inside diameter and each 2" conduit is approximately 2 3/8" in outside diameter. Thus, two 2" conduits will not fit through the opening, but there is a suggested work around. There is a minimum 1 1/2" vertical space from top of form to bottom of the BOLT STAR template, so it is possible to cut the conduits about 1/2" below the bottom of the template. Next, tape the conduit openings. Conduits should still project at least 1" above the top of finished base.

Q: Is BOLT STAR adjustable?

A: Bolt Star arms accept 5/8" to 1" diameter bolts and adjust to a range of bolt circle diameters or patterns, from 7" to 14". The arms themselves do not slide in or out to fit smaller or larger round concrete forming tubes. Product engineers ruled out a sliding arm in the early design stages due to the requirement for maximum strength and reusability. An adjustable sliding arm exposed to the rigors of cast-in-place concrete has increased risk of jamming after a few pours.

Q: Our field crew cuts the forming tube onsite. Will Bolt Star still work if the rim of the tube is uneven, i.e., not a clean and level cut?

A: We recommend always setting forming tube in the hole with the machine cut edge up. Cutting forming tube in the field is asking for problems. No need to increase the risk of bolts

out of alignment and/or the top of base being finished on a slant. Use Bolt Star's bubble levels to ensure straight bolts and level bases. However, if the rim of the tube is cut at a slant, all bets are off – and that applies to the old wood template method as well!

Q: It seems expensive compared to the old fashioned method of making bolt templates out of wood?

A: Actually, the tool typically pays for itself on the first job and keeps paying dividends thereafter. Do the math. The amount of labor and materials expended in building a wood template for each pole base can vary from \$50 to \$100 or more depending on labor rates. BOLT STAR cuts the labor portion in half, and no additional materials are required to build future bolt templates since BOLT STAR is reusable. Factor in a 57% more efficient process, consistent quality and a lower risk of bolts shifting during finishing and BOLT STAR's value proposition far outweighs the conventional method. With BOLT STAR, the days spent building wood templates are finally over!

Q: Will BOLT STAR fit on the outer diameter of nested round concrete forming tubes?

A: Yes, using the Xtender™ adaptor accessory. Manufacturers of round concrete forming tubes in some regions ship a nominal or larger outer diameter tube that is “nested” or slipped over the outside of standard-sized tubes to save on freight and storage costs. For example, larger outer tube diameters are as follows for 18”, 24” and 30” respectively: from 19” to 19.4” when slipped over the standard 18” tube; between 25.2” to 25.5” when slipped over the standard 24” tube; and between 31.6” to 31.8” when slipped over the standard 30” tube. The Xtender snaps on to the end of each BOLT STAR arm and extends it to fit these larger outer diameter nested tubes. Xtender is interchangeable between the 18”, 24” and 30” BOLT STAR and is available as an accessory item from authorized distributors.

Q: Does Construction Innovations make a 14”, 16” or 20” BOLT STAR?

A: No, these are not very common sizes. For the 14” or 16” round concrete form, some contractors have upsized the foundation to the 18” BOLT STAR. For the 20” spec., consider upsizing to a 24” BOLT STAR. The savings in time and reusability more than offset the added cost of concrete in the hole.

Q: Do you make a 30” or 36” BOLT STAR?

A: A 30” street and parking lot version is under development for release in 2016. Heavier duty Roadway and Traffic Signal 30” & 36” versions are in the design stage. No official release date yet.

Q: How many BOLT STAR templates do I need?

A: The answer varies with the number of poles and how quickly you wish to finish the job. Unlike wood templates, you do not need one BOLT STAR for every base since the product is reusable. Contractors who have a large parking lot full of bases will typically pour 8 to 10 pole bases a day – roughly the amount of concrete that is delivered in a 10-yard ready-mix truck. For example, if a project had 24 light pole bases to build and you desired to complete the job in

3 days, you would need only 8 Bolt Star to setup, pour, wash down and move to the next 8 bases each day until all light poles were completed.

Q: What assembly is required?

A: Very minor. Assembly involves inserting a bolt through each of BOLT STAR's four arms and threading a nut on the other end. The bolts come with each BOLT STAR and keep the arms secured to the hub. Instructions in English and Spanish are provided with every BOLT STAR. The Xtender adaptor slips up and snaps on to the end of each arm with no fasteners required.

Q: What type of warranty comes with the product?

A: 90-day warranty from date of purchase on defects only that are not due to ordinary wear and tear.

Q: Where is BOLT STAR made?

A: In the USA! BOLT STAR is manufactured in Milwaukee, Wisconsin, and then parts are shipped to Sacramento, California for kitting, packaging and shipping. The Xtender accessory product is manufactured in Sacramento, California.

Q: What is the BOLT STAR story?

A: BOLT STAR is the first new product of Sacramento-based Construction Innovations. The inventors are electricians and engineers who refined the idea for this innovative product over a ten-year period, all the time knowing that "there had to be a better way." The product underwent an intensive two-year period of development and testing through a collaborative effort with Rex Moore Electrical Contractors & Engineers, a Top 50 electrical contractor.

Q: Who is the manufacturer of BOLT STAR?

A: Construction Innovations, LLC with headquarters in Sacramento, California.

- Founded in 2012 by former construction company owners and industry professionals
- A manufacturing company dedicated to improving the construction industry through the creation of innovative products, tools, methods and services
- Construction Innovations has four distinct lines of products and services:
 - Construction tools design and manufacturing;
 - Manufacturing and kitting services for UL Listed electrical products;
 - Construction BIM modeling and layout services; and
 - Consulting services in Lean manufacturing processes for construction companies.
 - Websites: www.ConstructionInnovations.com or www.bolt-star.com
- Contact: **1-855-725-9555**