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The Quiet Strength and Hidden Benefits of 300 Series Stainless Steel Construction Fasteners

The use of stainless steel as a construction material is relatively new; but it has created dramatic changes across the skylines of many major cities around the world.

- Chicago's Millennium Park
- Bank Boston in San Paulo, Brazil
- The Chrysler Building in New York City
- Minneapolis' Frederick R. Weissman Art Museum
- The Gateway Arch in St. Louis
- The pedestrian bridge at Cheung Kong Center in Hong Kong

All of these impressive buildings feature stainless steel exterior finishes. This stunning use is obvious visually; but stainless steel is also being used in many new construction projects in a manner that is not immediately noticeable. The same features and benefits that make stainless steel an excellent choice for building exteriors also make stainless steel an excellent choice for construction fasteners. Often designers and engineers overlook the value of stainless steel due to its initially higher cost. However, upon closer consideration, 300 series stainless steel may be the best value available today.

What exactly is stainless steel?

- Basic stainless steel is a low-carbon steel combined with a minimum of 11% chromium. The addition of chromium provides a corrosion resisting, "stainless" property. The chromium content forms an invisible oxide film on the surface which is self-healing if damaged either chemically or mechanically, as long as there is oxygen present.
- Stainless steel is classified into 60 separate grades, identified by the additional elements combined with the basic steel. Other elements which may be added include carbon, nitrogen, manganese, nickel, and/or molybdenum.
- 300 series stainless steel is also referred to as "austenitic" steel. This grade of stainless steel will contain a maximum of 0.15% carbon, a minimum of 16% chromium and sufficient manganese and/or nickel to retain its inherent structure and strength when subjected to extremely high or extremely low temperatures.

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The many advantages of stainless steel are now available to the construction industry when selecting construction fasteners through the variety and versatility of the family of SCRAIL® 300 series stainless steel fasteners.

- **Resistant to Heat and Fire.** SCRAIL® stainless steel fasteners will retain their strength at high temperatures. Additionally, stainless steel offers minimal [heat transfer](#) and emits no toxic fumes.
- **Resistant to Corrosion.** SCRAIL® stainless steel fasteners are available in grades which will resist corrosion in pure water and/or atmospheric environments; and in grades which are designed to resist corrosion when exposed to chlorine, acids, alkali, and other environmental pollutants.
- **Strong and Tough.** Austenitic grade stainless steel offers added strength without added weight. SCRAIL® 300 series stainless steel fasteners provide significant strength and toughness for use in environments with elevated temperatures or those far below freezing.
- **Extended Life Cycle.** SCRAIL® stainless steel construction fasteners offer a longevity that adds value and extends the life of any project. When this extended life is taken into consideration, stainless steel will often be the most effective and cost-efficient option.
- **Reduced Maintenance.** In outdoor applications, stainless steel staples, brads/finish nails, nails or SCRAIL® fasteners will not rust; preventing staining and streaking which would necessitate re-painting or re-staining. Stainless steel fasteners will last as long as the lumber or other material they are anchoring. This rust-resistance is also important should a fastener ever need to be removed without damaging the surface material.
- **No Protection Necessary.** Studies of nail and staple finishes have shown Electro Galvanized ranks as good, Hot Dipped Galvanized is better, and Stainless Steel is best. Stainless steel does not require a protective coating for corrosion resistance. Minute damage to plain steel, plated, or galvanized fasteners may lead to corrosive failure. This damage may be caused by a wrench or nailer, or by the simple action of thread against thread. In contrast, SCRAIL® fasteners are available in high-quality 304 and 316 collated varieties. SCRAIL® also offers [FasCoat™](#) finish which is ranked even higher with up to 2,000 hours and more corrosion resistance in salt spray tests.
- **Environmentally Friendly.** Stainless steel does not require additional systems such as paint be applied to the surface to achieve its natural corrosion resistance or for protection from outside elements. And it does not require harsh cleaners for cleaning. These features, along with being 100% recyclable, make the use of stainless steel very environmentally sound. Presently more than 50% of new stainless steel is produced from re-melted stainless steel scrap.

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Fasco America, Inc. is proud to offer the widest selection of stainless steel staples, brads, finish nails, collated nails, and SCRAIL® construction fasteners in the industry. SCRAIL® fasteners are an important part of the construction industry "fastener revolution" not only for their availability in 300 series stainless steel, but for their [versatility](#), speed of application and project-cost reduction. The ability to provide the quality and value of stainless steel is a major advantage of working with Fasco America and the BECK Fastener Group®, a leader in stainless steel fasteners with the pioneering capability to manufacture virtually any stainless steel fastener a customer may require.

Fasco America's SCRAIL® products offer an assortment of collated nail screw hybrid fasteners. These construction fasteners provide dramatically increased holding power when compared to nails, plus they can be used with most brands of pneumatic nailers. SCRAIL® collated fasteners, when applied with a pneumatic tool, are driven in at twice the speed of collated screws and eight times faster than manually installed bulk screws. SCRAIL® fasteners are engineered to drive in fast, but also to allow for easy adjustment or removal if necessary.

SCRAIL® fasteners can be utilized virtually anywhere ordinary screws are used. They are available in wire coil, plastic sheet coil, or plastic strip collation and in phillips, square, star or posidrive head types. The SCRAIL® versadrive head type is a combination #2 phillips and #2 square head. SCRAIL® stainless steel fasteners can be used throughout many construction projects and the SCRAIL® lineup includes numerous unique fasteners designed specifically for a wide variety of applications.

- **Framing:** The strength of the frame-work within any building is crucial to its long-term stability. It is essential there are no missing fasteners, and that all fasteners are sufficiently sunk into studs and/or joists. Collated construction fasteners powered by a pneumatic tool help ensure the frame is sturdy and stable, and SCRAIL® nail screw hybrids provide substantially greater holding power.
- **Stairs and Steps:** Currently, most steps and stairs are built using nails, and almost all will begin to squeak and/or creak as they are used. SCRAIL® nail screw fasteners sunk into the wood can not only be adjusted to prevent and/or alleviate creaking, but will also provide a cleaner surface once wood filler has been applied.
- **Subflooring:** In the past, most subflooring was also applied with nails. As with stairs and steps, these nails in the subflooring eventually produced squeaking. By using SCRAIL® collated nail screw fasteners, [squeaks](#) are reduced significantly.
- **Drywall:** Wood studs are naturally prone to swelling and warping. This can create a significant problem with drywall installation when fasteners loosen from this movement. A pneumatically driven collated SCRAIL® construction fastener is driven farther into the wood, thereby reducing the possibility of it becoming loose.

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- **Furniture:** With anything that is built with the intention of supporting weight, you want the nail screw fasteners set as firmly and as deeply into the wood as possible. Using SCRAIL® nail screw fasteners increases load capacity and creates sturdier furniture.
- **Decking and Fencing:** Deck and fence construction can be very time-consuming and physically demanding. Using the InvisiDeck® hidden SCRAIL® clip system rather than bulk screws eliminates back breaking work and significantly speeds construction.
- **Light Gauge Steel Construction:** Fastening drywall, wood, gypsum, or deck boards to steel can be problematic and often results in damage to the surface material.

SCRAIL® fasteners are distributed by [Fasco America, Inc.](#), the American distribution arm for BECK Group products. The BECK Fastener Group® has been in business for more than 100 years and continues their tradition of focusing on consistent quality and innovative thinking to satisfy each customer's unique needs. The Fasco America catalog featuring SCRAIL® collated fasteners and systems is available online or in a [PDF format](#), and includes the full range of 300 series stainless steel construction fasteners, parts and tool products of the BECK Fastener Group®. Each SCRAIL® construction fastener has been precisely engineered to fit most common brands of pneumatic nailers.

Fasco America is located in Muscle Shoals, Alabama, and employs an experienced staff of regional sales managers located throughout North America. Fasco America is proud to be an active member of the ISANTA and NADRA trade associations. We are pleased to provide the following link to [The DesignerHandbook, Stainless Steel Fasteners](#), produced by The Specialty Steel Industry of North America (SSINA)

The use of SCRAIL® stainless steel construction fasteners is a good choice for a variety of practical reasons. To learn more about SCRAIL® 300 series stainless steel construction fasteners, [contact](#) our main office or the regional manager serving your area. You can find additional information on the SCRAIL® [Facebook page](#) or on [YouTube](#). SCRAIL® is transforming the ordinary into the extraordinary with its line of versatile and innovative construction fasteners.

[Fasco America](#)

105 Industrial Park

P. O. Box 2389

Muscle Shoals, Alabama 35662

Phone Toll Free 800-239-TOOL (8665) or fax 256-381-6659

www.fascoamerica.com

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