

NEW STAINLESS HAND TOOLS HAVE HIGH STRENGTH, TOUGHNESS FOR SERVICE IN CORROSIVE OR CLEAN ROOM ENVIRONMENTS

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A new line of high-performance, stainless steel hand tools offers a unique combination of attributes that have been considered useful to the medical, biomedical, biotech, pharmaceutical, food, nuclear, marine and other industries concerned with clean room sterility and/or exposure to corrosive environments.

SteriTool™, Div. Of Nautitool, Inc., Brooklyn, NY, specializing in stainless steel tools, has introduced a line of conventional screwdrivers, L- and T-pattern hex keys, and ball-end L-pattern hex keys. All of the tools have been made from [Custom 465® stainless](#), a specialty alloy recently developed for aerospace applications by Carpenter Technology Corp. (NYSE: CRS)

Tools made from the Carpenter stainless are reported to combine high strength, high hardness, high toughness, and the torque capability of the most suitable carbon steels, with superior resistance to both general corrosion and stress corrosion cracking. The corrosion resistance exhibited by [Custom 465 stainless](#) approaches that of [Type 304](#) stainless steel.

All of the tools are autoclaveable and totally resistant to surface oxidation in a steamy environment. This characteristic eliminates the possibility of contaminating the atmosphere with fine particulates that are sometimes generated when autoclaving plated carbon steel or chrome-vanadium steel tools.

[Custom 465 stainless](#) is a premium-melted, martensitic, age hardenable alloy. In the solution annealed and aged (H900) condition, this alloy is capable of about 260 ksi (1793 MPa) ultimate tensile strength. In this condition it has excellent notch tensile strength and fracture toughness.

In small diameters (less than 0.750"), Carpenter also produces this alloy in the solution annealed and strain hardened (ANL SH) condition. When this material (ANL SH) is aged to the H900 condition, the ultimate tensile strength approaches 300 ksi (2069 MPa), while the 0.2% offset yield strength approaches 290 ksi (2000 MPa). Because the yield strength and the tensile strength are so close together, the tool will bend before it breaks. This tendency makes the tool safer to use.

SteriTool, which reports that the stainless machines well, centerless grinds eight different sizes of screwdrivers and hex keys, from 0.100 in. to 0.393 in. (2.5 mm to 9 mm) from stainless bar stock. The screwdrivers are offered with nylon handles and flat, Phillips and Robertson square drives.

The L-hex and T-hex keys also come in the same size range.

The tool manufacturer says he is the only one who has made [Custom 465 stainless](#) steel ball-end hex keys that are available worldwide. These tools are available in sizes of 1/16 in. to 3/8 in. (3 mm to 8 mm) measured across the flats of the hexagon.

SteriTool's tools that have been made with [Custom 465 stainless](#) meet all manufacturing standards established by the FDA. They also meet all AISI specifications for tools in the United States, and DIN specifications for tools in Europe.

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Carpenter Technology, based in Wyomissing, PA, USA, is a leading manufacturer and distributor of stainless steels, specialty alloys, titanium and various engineered products. Carpenter had sales of \$1.1 billion in fiscal 2000 (ended June 30,2000). More information about Carpenter is available at www.carttech.com.

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