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**Section Six**

**Special Designs**

Quality development is the key to creating specialty clamps and components to meet your needs. From discussions about function to final manufacture of clamps, National Utilities retains world class staff to make engineering designs a smooth process. With technology to ensure you receive the component you need, you'll find great value in returning to National Utilities for miscellaneous clamps to meet your needs.



## Design Data

The data given in this section of the NUCO catalog applies directly to two or more of the preceding sections.

### Nut Selection Guide

Unless otherwise specified, MS21045 nut will be furnished. To avoid galling, CRES nuts are automatically furnished with CRES T-bolts, all other clamp components are furnished in CRES. CRES nuts should be specified for high temperature or corrosive application environments.

Code	Description	Temperature Rating	Material
S	Self-Locking	250°F	Alloy Steel, Cad Plated <a href="#">[INSERT PHOTO]</a>
SH	Self-Locking	550°F	Alloy Steel, Cad-Plated <a href="#">[INSERT PHOTO]</a>
R	Self-Locking	550°F	Alloy Steel, Cad-Plated <a href="#">[INSERT PHOTO]</a>
N	Self-Locking	450°F	A-286 CRES <a href="#">[INSERT PHOTO]</a>
ST	Self-Locking	800°F	A-286 CRES <a href="#">[INSERT PHOTO]</a>
M2	Self-Locking	1200°F	A-286 CRES <a href="#">[INSERT PHOTO]</a>
SS	Self-Locking	800°F	CRES, Silver Plated <a href="#">[INSERT PHOTO]</a>
DS	Plain Hex, Drilled	800°F	CRES, Silver Plated <a href="#">[INSERT PHOTO]</a>
M1	Self-Locking	1200°F	CRES, Silver Plated <a href="#">[INSERT PHOTO]</a>

### T-Bolt Specifications

Standard T-bolts, both alloy and stainless steel (CRES), are forged to meet the requirements of NASM6821.

Material: 8740 alloy bolts per AMS6322, 431 CRES bolts per MIL-S-18732 and A-286 bolts per AMS5731 or AMS5732

Finish: Alloy bolts are cad plated per AMS-QQ-P-416. CRES bolts are passivated only. CRES bolts are automatically furnished when a CRES nut is called out in the part number.

On smaller diameters, T-bolt is curved to facilitate latching.

### Standard Loops vs. Tangential Loops

Some clamp designs are furnished with standard loops for weight saving purposes. However, for most clamps, especially those operating over 800°F, specify tangential loops to maintain desired clamping loads at elevated temperatures.

[\[INSERT PHOTO\]](#)

### Spotwelds vs. Rivets

Spotwelds are a reliable, economical method of joining sheetmetal products. Rivets can be added in place of spotwelds where more strength is needed, such as in high vibrational environments.

[\[INSERT PHOTO\]](#)

### Safety Features

Safety Latches [\[INSERT PHOTO\]](#)

Tamper-Evident Wire [\[INSERT PHOTO\]](#)

Locking Inserts [\[INSERT PHOTO\]](#)

Safety Wire [\[INSERT PHOTO\]](#)

**Finishing Processes**

Dry Lube [INSERT PHOTO]

Paint [INSERT PHOTO]

Plating [INSERT PHOTO]

**Clamp Accessories**

Lugs [INSERT PHOTO]

Clips [INSERT PHOTO]

Pads [INSERT PHOTO]

Handles [INSERT PHOTO]