

# Tensioning System Technologies



## Blackhawk™ Hydraulic Nuts for ASME Section III and Commercial Applications

### INNOVATIVE TECHNOLOGY FOR CRITICAL BOLTED ASSEMBLIES

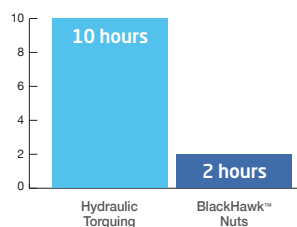
A breakthrough technology that drastically speeds up turnaround maintenance on your critical equipment. Installed on applications throughout the nuclear industry, such as Reactor Vessels and Heat Exchangers, breakout of large, high pressure flanges can be slashed to less than two hours, using half the manpower. By providing the highest level of **Certainty of Outcome**, BlackHawk™ Nuts enable you to predictably shorten the critical path schedule for the total turnaround project.

#### PROVEN BENEFITS

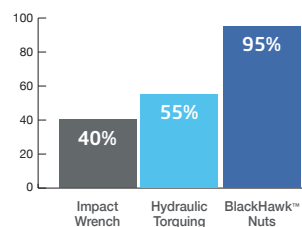
- ✓ Reduce task duration by up to 80%
- ✓ Eliminate unnecessary delays caused by thread galling
- ✓ Substantially improve bolt load accuracy for leak-free outcomes

#### Significant Benefits of BlackHawk™ Nuts Versus Alternative Methods

##### DISASSEMBLY & REASSEMBLY 24 - 2.75" STUDS



##### BOLT LOAD ACCURACY



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## Blackhawk™ Hydraulic Nuts

### Technical Specifications

Sizing	Custom designed to fit the application
Load	Requirement is specified by customer and application
Operating Pressure	21,750 psi to 33,000 psi
Stroke	3/8" is the typical stroke
Maximum Pressure	850°F
Seals	Custom designed for the application
Material	Equivalent to studs being used



Energy Steel is the exclusive supplier of Integra Technologies Blackhawk™ High Performance Hydraulic Nuts, and is a supplier of the Velocity Washer™, for ASME Section III and commercial applications for the nuclear industry.

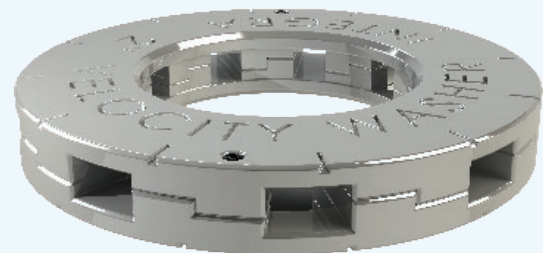


Velocity Washer™ is a patented technology designed to give you 30x faster breakouts.

**NO SEIZED NUTS MEANS LESS COST AND MORE UPTIME.**

Installed just like a normal washer, the Velocity™ Washer increases production and lowers labor cost with its ultra-fast breakout speed. A simple 12-degree turn to the left allows the washer to pop and the load to be removed.

Its symmetric design increases safety, with no hot bolting, torching, machining, or nut splitting required. It fits anywhere a hardened washer fits, and no special tools are needed to install it.



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