

Product Bulletin



**SAFELY REMOVE
THE HAMMER
FROM THE EQUATION**

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The SaferUnion™ is a superior alternative to the conventional hammer unions that provides greater safety in dangerous working environments. It requires the use of less energy. Instead of hitting a union with a sledgehammer to tighten the connection, the new design uses SaferUnion™ Bar or SaferUnion™ Torque Wrench with a long moment arm, that is capable of providing sufficient torque on the SaferUnion™ Nut to either tighten or loosen the connection.

SaferUnion™ makes the process of tightening and loosening a connection easier, more convenient, more cost-saving, and safer.

Safer Union Models

Pressure Rating, psi, bar

Standard Service		Sour Environment		Nomimal Pipe Sizes	
Series	Working Pressure	Test Pressure	Working Pressure		Test Pressure
100	1000, 69	1500, 103	n/a	n/a	2, 2.5, 3, 4, 6, 8
200	2000, 138	3000, 207	n/a	n/a	1, 1.25, 1.5, 2, 2.5, 3, 4
206	2000, 238	3000, 207	n/a	n/a	1, 1.25, 1.5, 2, 2.5, 3, 4, 6, 8, 10
207	2000, 138	3000, 207	n/a	n/a	3, 4, 6, 8, 10
211	2000, 138	3000, 207	n/a	n/a	1, 1.25, 1.5, 2, 2.5, 3, 4
400	2500, 172	3750, 259	2500, 172	3750, 259	5, 6, 8, 10, 12
400	4000, 276	6000, 414	4500, 310	6000, 414	2, 2.5, 3, 4
600	6000, 414	9000, 621	n/a		1, 1.5, 2, 2.5, 3, 4
602	6000, 414	9000, 621	6000, 414	9000, 621	1, 1.25, 1.5, 2, 2.5, 3, 4
1002	10000, 690	15000, 1034	7500, 517	11250, 776	1, 1.25, 1.5, 2, 2.5, 3, 4, 5, 6
1003	15000, 134	15000, 1034	7500, 517	11250, 776	2, 3, 4, 5
1502	15000, 1034	22500, 2068	10000, 690	15000, 1034	1, 1.5, 2, 2.5, 3, 4

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SaferUnion™ Bar

This bar can easily be inserted and removed from one of the 8 openings that are available at every 45 degrees of the SaferUnion™ nut. The bar handle is equipped with a detachable connector piece on one end, where the clearance between the connector and the handle allows the application of additional torque without any damage to the bar. The opposite side of the bar consists of Pup valve tool.

The SaferUnion™ bar handle connector has a slot on the end which engages the union, which matches pins inside the openings on the nut. When the bar tip is inserted into the handle slot, the nut pin locks the handle in place, which prevents unintentional detachment.

The surface of the handle is knurled to provide an exceptional grip.

The sizes
48" and 24"

SaferUnion™ Torque Wrench

The SaferUnion™ Torque Wrench is designed to repeatedly provide SaferUnion™ assemblies with a predefined torque value. This allows to consistently provide unions with sufficient torque values.

Consists of 4 main component groups:

- the handle
- the torque arm
- the torque-limiting group
- the adjustment group

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Make the SaferUnion™ Choice

SAFETY

- No hammer hitting is needed thus avoiding generation of sparks which can cause accidents in explosive environments
- Clear, obvious design identifications of the SaferUnion™ Nut, which include color coding, reduce risk of sub and nut mismatching
- No flying metal chips
- No equipment overtightening and hammer misuse
- No danger due to deformed and sharp wing union lugs
- Personnel stay out of the liquid spray zone by using the long moment arm
- No bodily injuries from missing hammer strikes or due to hammer slipping out of worker's hands
- The surface of the SaferUnion™ Bar is knurled to provide an exceptional grip
- Reduction in crew injuries and further mistakes due to the fatigue due to using a hammer
- Crew injuries and other longer term effects of repeated sledgehammer use are eliminated
- Strain on the operator's joints and back is greatly reduced, resulting in better work conditions
- Eliminates the hammer from the equation due to absence of any wing to strike upon

TECHNICAL ASPECTS

- Can, on average, be supplied with 18% more torque compared to the conventional hammer unions (1240 lbs – ft vs. 1052 lbs – ft)
- Increases accessibility, with 8 points located every 45° due to its unique design and can be handled by a single crew member
- Safe to use in sour environments due to material used for manufacturing
- Equal torque application ensures proper seal on connections
- SaferUnion Nut comes in the most common sizes such as 2", 3", and 4" diameters
- Its design was evaluated and validated by a professional engineering firm, Lynch Engineering

According to their study, the SaferUnion™ has a minimum safety factor of 3. This was validated when the union was tested under hydrostatic pressure of 50 ksi by a third party (H. Lorimer Corporation). The rated pressure of that unit was 15 ksi, so it withstood a little above 3 times its designated load

QUALITY

- Traceability provides an extra measure of quality control to increase the tool safety and reliability
- API Q1 compliant processes used by R&H Machine ensure high quality and reliability of the tool
- SaferUnion™ is compliant with API Recommended Practice 7HU1

SAVINGS

- Saves time during the rig up/rig down processes by eliminating the need to take off and putting back the pressure gauges, electronic pressure gauges and other gauges, which come loose due to vibration caused by a sledgehammer
- Since a hammer strike is not used, the cracking of the SaferUnion™ Nut due to fatigue is greatly reduced
- SaferUnion™ Nut is 100% compatible with existing products, reducing the cost of moving to the new technology
- It allows one person installation and removal, saving up to 50% of pipe servicing crew expenses
- SaferUnion™ Nut fits on existing storage racks reducing cost of field conversion

OTHER

- Anticorrosion coating is available upon customer request
- Custom coating and sizes are available
- Installation or disconnect is an intuitive, understandable procedure
- No special PPE required
- Short delivery times
- Made in the U.S.A.

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SaferUnion™ is manufactured In the U.S.A. by R&H Machine.

With more than 25 years of experience, a highly qualified team, and a stringent QMS in place, the quality of SaferUnion™ will be insured with every production mint for the foreseeable future.



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