



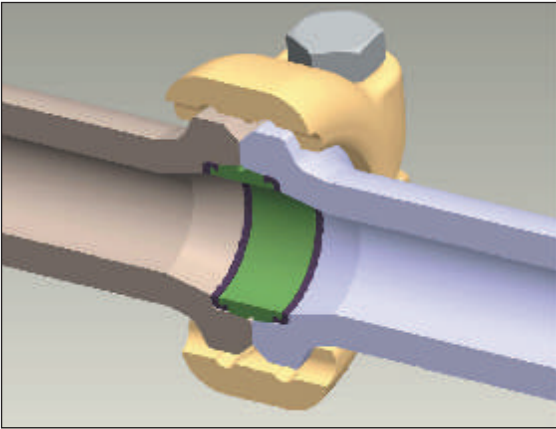
**Safety Iron™**

**Safety Iron™ is a clamp connection flow line iron system developed to provide an alternative to hammer union connections by reducing jobsite injuries and providing a more effective seal that is far less prone to leaking.**



U. S. Patent No 7,204,525

**Available for use  
in manifold trailers.**



The metal seal ring (green) and rubber seal (dark gray) freely slip into the tapered flange end. Sealing is accomplished by the end crush on the rubber seal and tapered metal contact from the clamp force.

### Benefits of Safety Iron™:

- A safer, more compact alternative to conventional hammer union connection products.
- Proven sealing performance produces a safer work environment.
- Durable connections that resist leaks and have superior vibration resistance.
- Much faster to disassemble than hammer union connections with comparable assembly.
- Universal ends eliminate male and female ends, preventing unbalanced flow wear.
- Eliminates the cost of refurbishing and replacing wing nuts.

### Safety Iron™ Products Available:

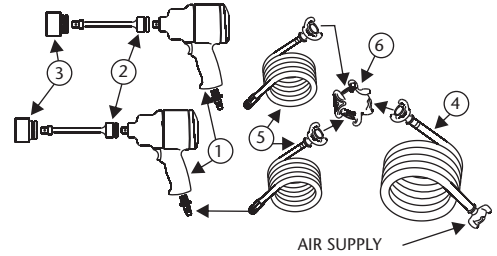
- Swivel Joints
- Check Valves
- Plug Valves
- Relief Valves
- Integrals
  - Tees, Wyes, Elles, Crosses, and Crossovers.
- Pipe
  - Available in 4', 60", 6', 90" and 114" lengths.
- FSR Anchor Assemblies
- Pump Discharge Manifold Configurations
- Manifold Trailers

Weir SPM offers Safety Iron Kits in 1 1/2" 15K, 2" 15K, 2" 20K, 3" 15K, 3" 20K, 4" 10K, and 4" 15K. Kits Include:

1. (2) Impact Wrenches - 3/4" Drive w/ 3/8" Plug
2. (2) Torque Stick - 3/4" Drive
3. (2) Hex Socket - 3/4" Drive
4. (1) Hose Assembly - 50' x 3/4" Hose w/ Crowsfoot Connection
5. (2) Hose Assembly - 50' x 1/2" hose w/Crowsfoot and 3/8" Coupler Connection
6. (1) Wye - 3/4" Crowsfoot
7. (7) Crowsfoot Washer Seal
8. (8) Crowsfoot Pin

#### MINIMUM AIR REQUIREMENTS

- 45 SCFM PER IMPACT WRENCH
- 90 PSI AT IMPACT WRENCH



\*The kits allow the use of two impact wrenches from one air supply source.

### A Safer More Reliable Connection

Weir SPM's Safety Iron™ gives users the opportunity to reduce the risk of accident incidents by allowing the user to "throw away the hammer." The durability of Safety Iron™ seals has been field proven in harsh pumping environments and has maintained its sealing properties despite the effects of extreme vibration and cavitation. Not only does Safety Iron™ result in a safer work environment on site, but also increases productivity as a superior performing flow line iron system compared to the traditional hammer union connections.

The product line is currently available in sizes 1 1/2" to 4" in pressure ratings up to 20,000 psi. Nearly every flow control product manufactured by Weir SPM is offered with Safety Iron™ connections, and DNV certification is also available.

For ultimate safety on site, Weir SPM suggests applying Safety Iron™ along with the Flow Line Safety Restraint System.



The use of the Weir SPM Torque Regulating Bar allows for consistent torque being applied to bolts. This ensures each connection is made up to its required torque rating, providing a safe, reliable seal.

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