



***Guardian Wellhead Protection & Rentals***



**Greene's**  
Energy Group™



## Guardian Wellhead Isolation Tools

Guardian specializes in three different types of wellhead isolation tools: the Tree Saver, the Casing Saver and the Stage Tool. Whether your need is for a single wellhead or multiple wells in a plugging, fracking or perforating operation, Guardian can provide the equipment and the experienced personnel to safely and efficiently provide a solution.

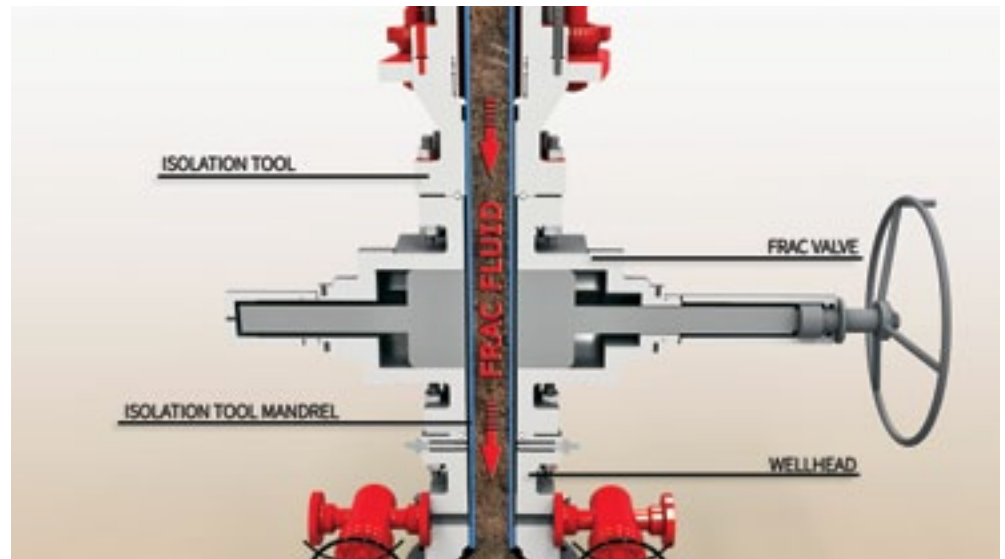


## Why Use Wellhead Protection?

With the emergence of horizontal drilling and multi-stage fracturing techniques in the shale regions, equipment is exposed to more abrasive sand and fluids than ever before.

**Guardian isolation tools are the safest method for protecting all surface wellhead equipment.**

High-pressure, high-volume well stimulation requires the best wellhead isolation equipment and experienced personnel to operate it. Wellhead isolation and protection tools shield the wellhead from higher pressures and abrasive materials which are being pumped during well stimulation operations.



**Eliminate the need to kill the well.**

The corrosive nature of the fluids and sand which flow through the wellhead not only reduce the life and efficiency of the equipment, but can create serious safety hazards if washouts occur during pumping.

Isolating your wellhead from these elements protects your well, your ancillary equipment, your people, and your profits by minimizing non-productive time and pressure related incidents. Our tools allow you to frac directly through the existing wellhead (as seen above), eliminating the need to kill the well and reducing the possibility of valves failing during the operation due to sand and erosion.

In an industry where things are rarely simple, the concept and execution of wellhead isolation is, simply put, the most logical, cost-effective, and safe method for protecting your wellhead during high pressure stimulation operations.



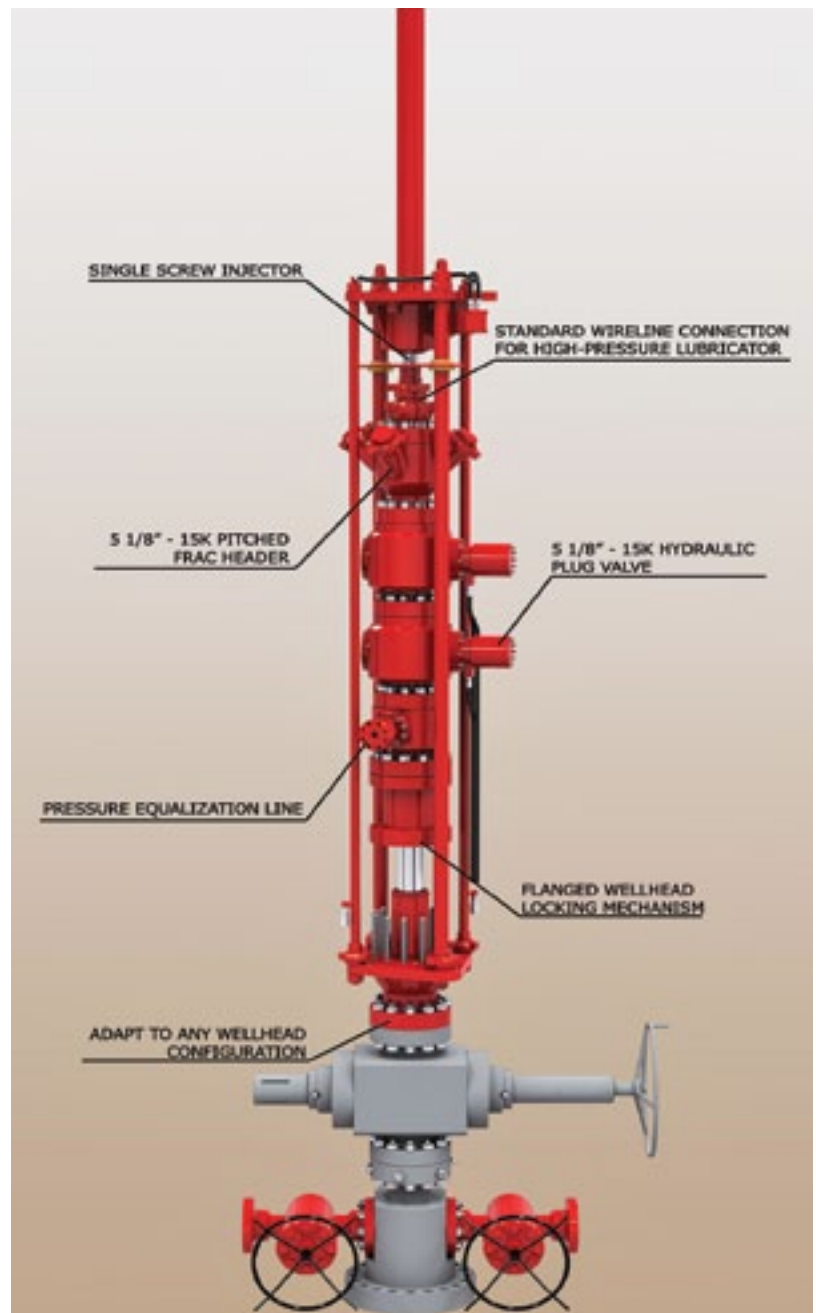
### Manufacturing

Manufacturing our own tools, including equipment designed to isolate high-pressure oil and gas wells, customers reap the benefits through cost savings and the assurance that all of our personnel in the field have full product knowledge and training. Customers have immediate availability to most products and the ability to have Guardian custom-design solutions for particular problems faced by the customer in the field.

Our equipment is manufactured in accordance with API standards. All of our mandrels, extensions and cup subs are made from 4140 heat-treated material. In addition, Guardian operates under ISO 9001 guidelines.

## Guardian Wellhead Protection & Rentals Stage Tools

- Single screw injection tool inserts the main mandrel through the tree and into the wellhead bore
- Sealing occurs in the ID of the wellhead
- Full bore ID accommodates perforating guns and plugs without obstructions
- Can remain rigged up on the wellhead during entire frac job
- Adapts to any type wireline or coiled tubing connectors



# You Require. We Respond.



## Rental Tools

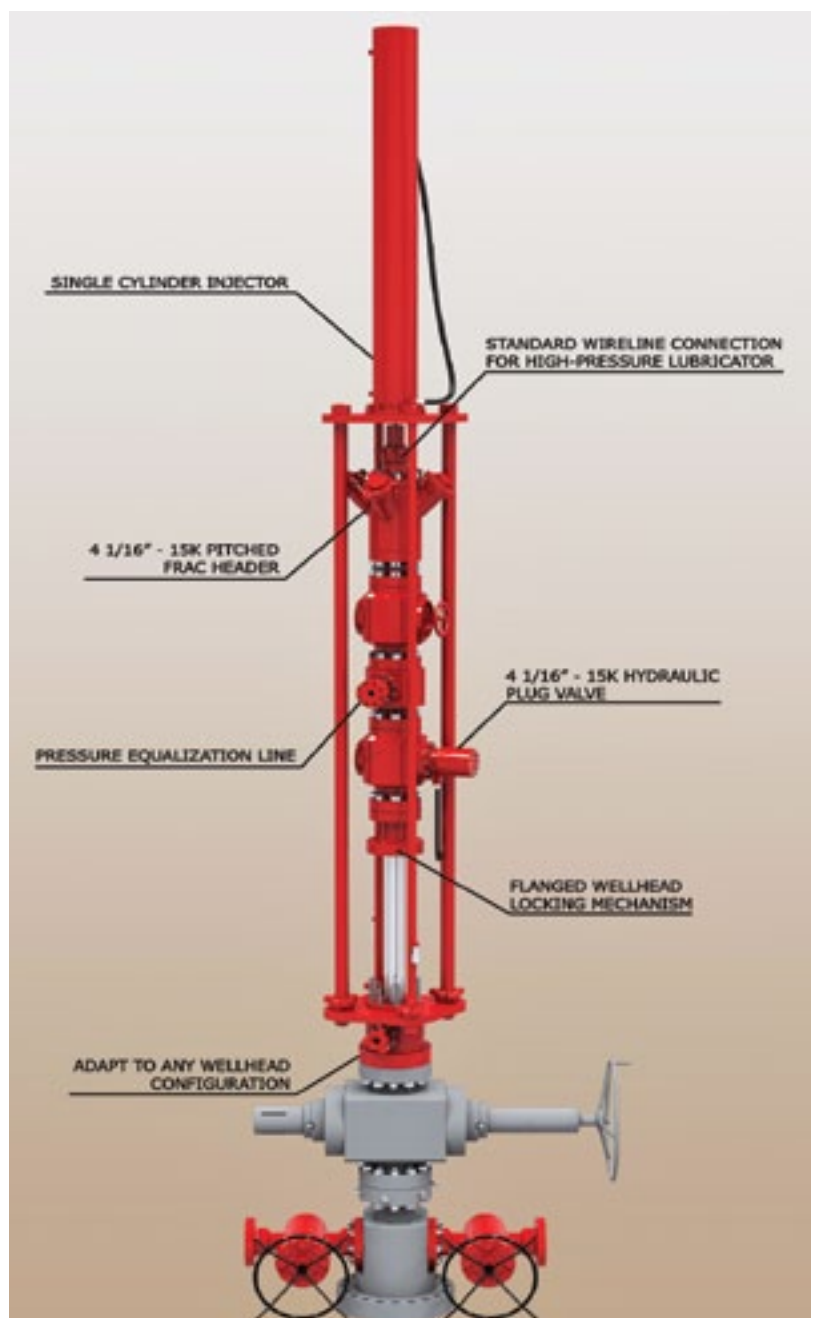
Renting your equipment and the qualified personnel to operate them from Guardian allows customers to focus on oil and gas production.

Guardian's broad inventory of well intervention support equipment includes:

- Frac Stacks
- Thru-tubing Frac Stacks
- Ground Frac Missile Manifolds
- Man Lifts
- Hydraulic BOPs
- Flowback Manifolds and Plug Catchers
- API Spacer Spools, Double Stud Adapters
- ESP Control Line Spooling Trailers
- Wellhead Valve Flushing and Greasing Trailers
- Work String Rental Tubing

## Casing Savers

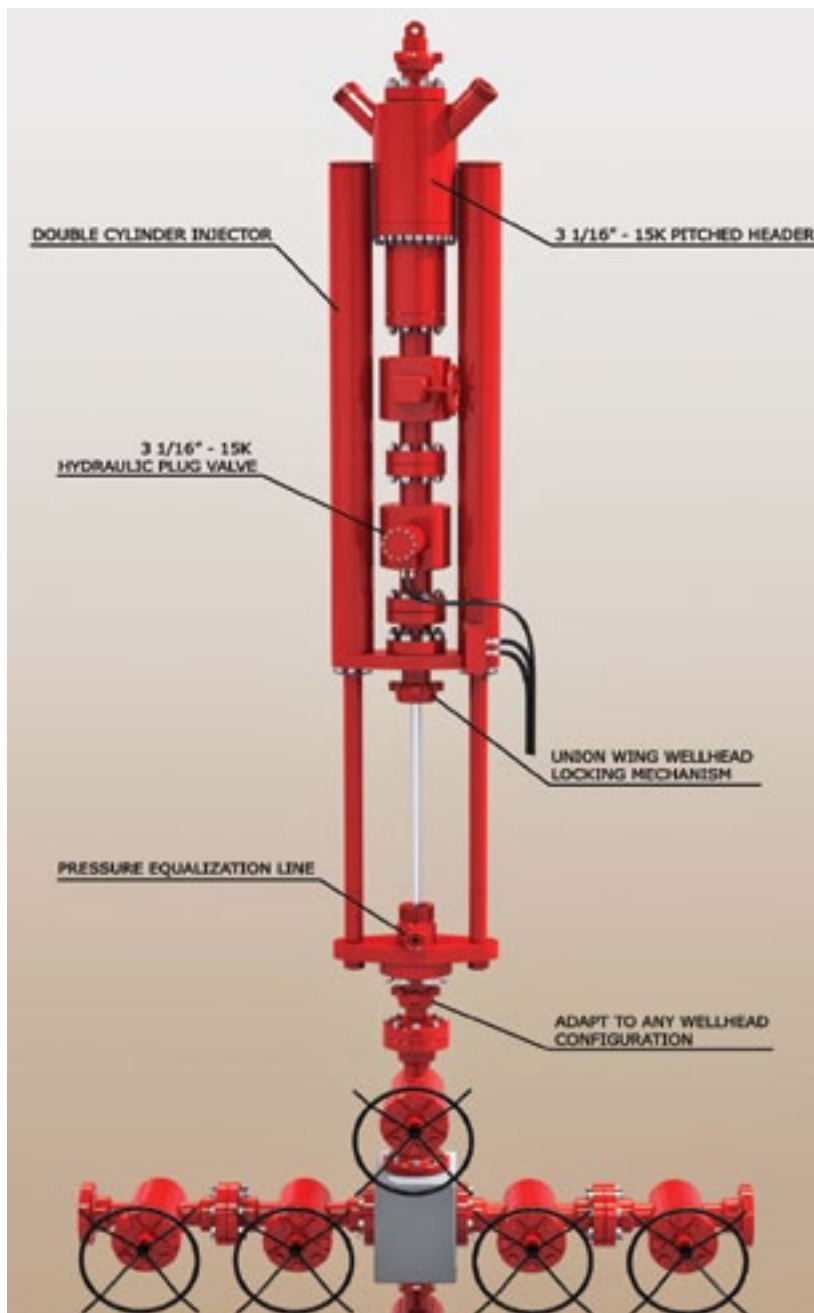
- Single or double piston hydraulic cylinder inserts the main mandrel through the tree and into the wellhead bore
- Sealing occurs in ID of the production casing
- Average installation or removal time: 45 minutes
- Can be installed or removed while under pressure, allowing the well to remain energized





## Tree Savers

- Double piston hydraulic cylinder inserts the main mandrel through the tree and into the wellhead bore and tubing hanger
- Sealing occurs in the ID of the production tubing
- Average installation or removal time: 30 minutes



## Guardian's Focus on Safety

At Guardian, safety is our top priority. Having an inherent familiarity with each aspect of wellhead isolation and the products we use gives the Guardian team an advantage when it comes to identifying and avoiding potential problems. Sometimes it's something as simple as having master and safety valves hydraulically actuated and remotely operated from the truck to remove the hazard of personnel being at the wellhead during a stimulation procedure.



Guardian applies safety, health and environmental protection through the values we instill in our personnel as well as our interaction with clients, suppliers and the public. This means compliance with all regulations, governmental legislations and clients' mandates at every operation site; maintaining safety, health and environmental protection training and coaching programs for all personnel; and ensuring that both employees and suppliers comply with Guardian's safety policy by making it an integral part of their work activities.

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