



Tuff Breed®  
Well Service Packing Products



Precision. Engineered. Performance.



**CDI** ENERGY  
PRODUCTS

# Delivery. Expertise. Reliability.



## MAKING YOUR TOUGH JOBS EASY.

Whatever abrasive, high-pressure, high-volume operation you have planned for your wellbore, we have you covered. Our Tuff Breed® well service products enhance pumping performance on multiple fronts:



## DELIVERY

### **The shortest lead times in the industry**

As development costs rise, reducing downtime is critical. With the shortest lead times in the industry, we make fast delivery a priority to ensure your job proceeds smoothly, efficiently, and on schedule.

## EXPERTISE & RELIABILITY

### **Engineered solutions for demanding applications**

Well conditions continue to grow increasingly extreme as greater depths, higher pressures, more intense temperatures, and longer laterals present their own distinct challenges to exploration and completions.

Backed by superior engineering and more than 35 years in the sealing business, our oilfield technical experts bring the most advanced materials, technologies, and design knowledge to your application. We understand the technical and environmental demands on our customers and work as a partner to solve complex oilfield equipment challenges.

## ON-SITE TRAINING

### **Installation training for enhanced performance**

Located in major plays throughout the United States, our seasoned team of experts is available to facilitate training at your site. Educating your field personnel on the proper installation and replacement of Tuff Breed® products can not only decrease your packing costs, but also extend the life of your plungers and fluid ends.

## TUFF BREED® WELL SERVICE PACKING PRODUCTS.

Tuff Breed® well service packing products are available in a variety of materials to meet your specific requirements. Our engineering and design expertise results in a diverse range of well service packing with the capacity to support your urgent needs and meet high-volume demand.

### Pressure Ring Material

- GENERAL SERVICE 449  
NBR on polyester/cotton fabric  
Used in a variety of fracturing and cementing applications
- HIGH-PRESSURE WSP01  
High-performance modified PTFE  
Used where high pressures, chemical fracs, and CO2 exist
- EXTREME SERVICE WSP3  
NBR on proprietary aramid fabric  
Used where high pressures and high levels of abrasive proppants are required

### Header Ring Material

- 886  
Lubricated HNBR
- CHR  
Composite HNBR
- 909LF  
Low Friction FKM

### Wiper Ring Material

- 80485  
Proprietary HNBR—Double-lip wiper design with added resilience and enhanced sealability

### Suction Discharge Cover Seals

**(D-Rings).** Available in a variety of sizes and designs to meet a broad range of pressure ratings, Tuff Breed® suction and discharge cover seals, also known as D-Rings, are engineered to address the most demanding challenges in the oil field. Our proven design expertise and material compounding were leveraged to create a unique D-shape seal design that meets tight tolerances and prevents leakage. These critical sealing elements are manufactured for most major pump models. Custom sizes can be machined to meet your exact dimension requirements and size specifications. Depending on your pump model and service requirements, the suction and discharge cover seals we offer are available with and without back-up rings.

## YOUR MOST DEMANDING JOBS ARE OUR PROVING GROUND.

Replacing parts reduces productivity and can even shut down production completely, resulting in costly delays. To address these issues, we provide reliable, high-quality products for pressure pumping and enhanced oil recovery systems and equipment.

Because we know the toughest challenges sometimes require solutions that are application specific, we leverage years of engineering expertise and innovation to provide quick turnaround. Even in the most extreme pressure pumping applications worldwide, our performance objective is zero product related downtime.

Our team collaborates with clients to produce an optimal solution fully capable of addressing their unique needs. Our materials, designs, and engineering ensure a reliable, responsible partner for success.

### LaSalle County, Texas Eagle Ford Shale



Pumps: PFP 2500Q/4.5 inch plunger  
12,000 - 14,000 psi  
18 stages/2-3 hours per stage/70 bpm  
Proppant: 100 mesh sand  
Fluid system: Gelled water

Installed WSP3 extreme service aramid blend packing to replace washed-out stuffing box and scored plunger. Replacement resulted in the completion of 18 stages at a rate of 3-4 stages per day.

### Red River Parish, Louisiana Haynesville Shale



Pumps: GD 2500Q/4 inch plunger  
12,000 - 13,500 psi  
14 stages/2.5-4 hours per stage/75 bpm  
Proppant: 100 mesh sand  
Fluid system: Gelled water

Our WSP3 extreme service aramid blend packing was installed to replace packing that failed at stage 6 of 14 stages. After installment, all 14 stages were pumped to completion at a rate of 2-3 stages per day.

### Hobbs, New Mexico Permian Basin



Pumps: HT 400/4.5 & 4 inch plungers  
7,800 psi  
16 stages/16 hour pump time/80 bpm  
Proppant : 40/70 mesh sand

WSP01 high-pressure packing installed after previous packing failed following 2 hours of operation. After using WSP01 packing set S6216-450 and S6216-400, all 16 stages were successfully completed.



To learn how CDI Energy Products can improve performance in your operations, please visit our website at: [CDIproducts.com/tuffbreed](http://CDIproducts.com/tuffbreed)

Or talk with our experts at 281.446.6662

8103 Rankin Road  
Humble, TX 77396

### In-depth Solutions

CDI Energy Products is a designer and manufacturer of custom plastic and elastomeric products, seals and ancillary metal components. As part of the global group Fenner, our multiple locations enable us to partner with clients worldwide to produce unique, high-performance solutions for the energy industry.



**Disclaimer:** The descriptions, design and performance information, and recommended uses for the products described herein are based on our design and manufacturing experience, product testing in specific conditions, and industry standards. As such, this information is for general guidance only. Our products are accompanied with their own warranty which is given in writing at the time of sale.

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