

# Valkyrie™ Abandonment System

Technical  
Summary

The *Valkyrie*™ abandonment system is part of a comprehensive well abandonment strategy that can help you safely and efficiently abandon a well. Using high-frequency hydraulic pulses, the tool vibrates free-hanging production tubing to consistently propagate cement around the annulus.

Cement samples tested in the lab have confirmed that pumping cement through the *Valkyrie* abandonment system improves its rheology, and this solution has been proven to provide higher quality cement bonds, minimizing channeling and microannulus development.

With the *Valkyrie* abandonment system, you can reduce the amount of pipe that must be retrieved from the well, create a positive environmental impact, and minimize costs without sacrificing the integrity of the abandoned well.

## Benefits

- **Innovative design** – Based on our industry-leading *Agitator*™ systems that have been used more than 50,000 times around the world
- **Improved rheology** – Lab-tested and proven to improve cement rheology
- **Higher quality cement bonds** – Better propagation of cement, minimizing channeling and microannulus development

## Technical Specifications

<b>Tool size (OD)</b>	3 ½ in.
<b>Length</b>	52 in.
<b>Weight</b>	114 lbs
<b>Recommended mud weight</b>	8-12 ppg
<b>Recommended flow rate</b>	110-210 gpm
<b>Temperature range</b>	150°-320°F
<b>Operational frequency</b>	7.7 Hz @ 210 gpm
<b>Pressure rating (static)</b>	10,000 psi
<b>Operational pressure drop generated</b>	300-750 psi
<b>Stator/sub makeup torque (@62.5% of yield)</b>	6,060 ft-lbs
<b>Max tensile</b>	190,800 lbs
<b>Rig connections</b>	2 ¾ in. API Reg
<b>Rig connections makeup torque (@62.5% of yield)</b>	5,300 ft-lbs
<b>Rotor type</b>	Chrome plate

