HydroPull™ Extended Reach

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Motor Gas Separator (MGS™)

•

HydroPull™ SC Tool (Stimulation and Cleanout)

•

Water Bypass AV Sub (WBS)

•

High Pressure Rotary Jet (JetRotor™)

•

Job Planning Software

•

Engineering Services

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Custom Tool Development

U.S. Patents 7,677,308.

Tempress Motor Gas Separator (MGS™) Tool

The Tempress Motor Gas Separator (MGS™) is the most effective downhole phase separator in the industry and is used to ensure good circulation in depleted wells. This tool incorporates a rotary drum separator that removes the gas from the commingled flow allowing the fluid to operate the downhole motor at the designed flow rate.

The MGS tool incorporates a gas orifice size that can be customized as needed to suit your well profile. This tool is commonly run in tandem with the Tempress HydroPull™ to accommodate a wide range of applications. **The tool reduces or eliminates damage to the motor stator during commingled operations.**

Applications

- Fishing
- Coiled and Jointed tubing
- Composite bridge plug milling
- Ball seat milling
- Sand cleanout
- Valve shifting
- Extended-reach well service
- Acidizing
- Chemical placement
- Screen and perforation cleaning
- Scale removal
- Depleted well service

Feature	Benefit
High-efficiency gas separation	• Removes free nitrogen from the commingled flow through the motor for depleted well service • Reduces or eliminates nitrogen damage to stators • Prevents motor over-speed • ***Extends motor life***
Compact length	• Simplifies make-up of the bottom hole assembly
Wellbore adaptability	• Accommodates severe doglegs and multilateral completions • Compatible with common well service fluids • Sour gas compatible
High reliability	• Multiday extreme-reach jobs without tripping • ***Over 99% downhole success rate***

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Specifications

Tool Diameter	1.69-in. (42.9 mm)	2.12-in. (54.0 mm)	2.88-in. (73.0 mm)	3.12-in. (79.3 mm) 3.38-in. (85.7 mm)
Flow capacity (max commingled flow equivalent)	2.1 bpm (340 lpm)	2.1 bpm (340 lpm)	6.0 bpm (950 lpm)	6.0 bpm (950 lpm)
Water Flow Capacity	1.8 bpm (290 lpm)	1.8 bpm (290 lpm)	5.0 bpm (790 lpm)	5.0 bpm (790 lpm)
Maximum operating pressure	5,300 psi (37 MPa)	10,000 psi (67 MPa)	4,000 psi (28 MPa)	5,100 psi (28 MPa)
Maximum particle size	.125-in. (3.2 mm)	.125-in. (3.2 mm)	.156-in. (4.0 mm)	.156-in. (4.0 mm)
Typical Pressure loss through tool at max water flow	< 160 psi (<1.1 MPa) @ 1.8 bpm		≈300 psi (2.1 MPa) @ 5.0 bpm	
Temperature (maximum)	400°F (200°C)			
Max gas fraction at inlet	80%			
Typical gas cut at outlet	0.5%			

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Case Histories

The MGS tool is consistently displacing the competition in depleted well service. Please contact us or visit our website for the most recent MGS Case Histories.

CONTACT INFORMATION:

Tempress Technologies Inc.

2200 Lind Avenue SW
Building A, Suite 108
Renton, WA 98057
Phone: 425.251.8120

www.tempresstech.com

Two-Phase Flow

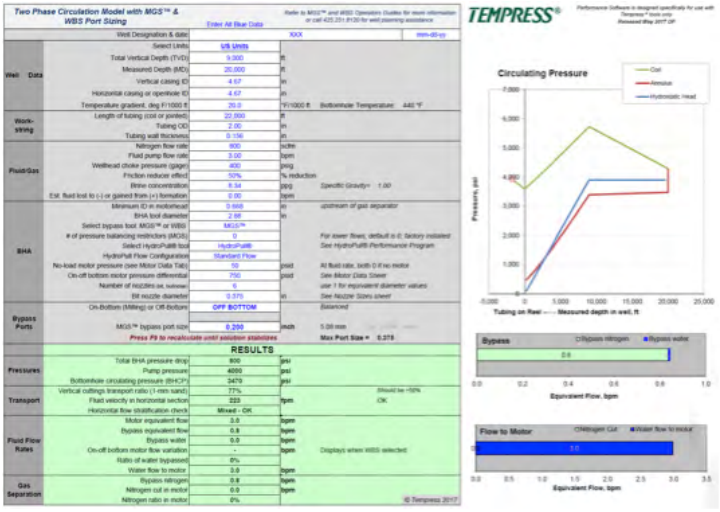
The Motor Gas Separator (MGS™) tool is commonly run with a Tempress HydroPull™ tool. The HydroPull tool may also be run downhole with straight gas, if required. The HydroPull tool is designed to operate on two-phase flow. The presence of nitrogen dampens the pulse.

MGS™ Operation Guide

An operation guide is included with the MGS tool that provides operating instructions and job reporting requirements. These guides are also located within our Client Login site on our website.

MGS™ Performance Software

A proprietary software program is available for MGS tool job planning. The software evaluates the best separator performance range for the job. The software outputs circulating pressures in the well, the transport of sand and cuttings in the horizontal and vertical sections of the well, equivalent fluid flow rates, and the amount of gas separation based on a set of input parameters. This software is located within our Client Login site on our website.



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