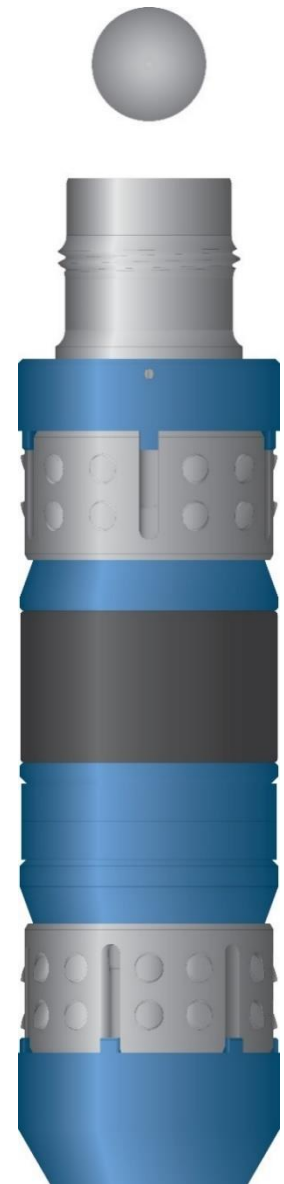


The Gryphon Echo series of dissolvable hydraulic fracturing plug technologies are specifically designed to provide a fully dissolvable multistage fracturing solution in the widest variation of applications. Developed with dissolvable magnesium alloys, dissolvable elastomers, and dissolvable high-strength metal-matrix material, the Echo dissolvable frac plugs are capable of withstanding pressures up to 10,000 psi (69 MPa) in temperatures up to 250° F (135° C). This range of performance is attainable due to Gryphon’s extensive research into advanced alloy technologies. The result is a creation of the ideal mix of both materials and product design focused on achieving the ideal downhole performance characteristics for all applications. The Echo series of dissolvable frac plugs are run on industry standard electric line setting tools. Wireline adapter kits are designed to optimize and increase flow area through the kit to maximize run in speed.

The field proven, traditional frac plug design ensures both exceptional performance and reliable dissolution in traditional brine conditions, extreme high temperature scenarios, or even fresh water environments.

Features and Benefits

- Material variations available to provide the right tool for the environment
- Proprietary dissolvable material available to suit a wide range of fracturing fluids, including fresh water
- Historically proven chassis design
 - Compact dual slips
 - Dissolvable packing element
 - Dual sealing backup rings
- Innovative shear mechanism eliminates need for shear screws
- Ball on seat running tool option
- Enables longer laterals not possible with composite plugs and coiled tubing
- Eliminates uncertainty, risk and inevitable costs associated with traditional plug milling and removal
- Accelerated dissolve assist feature available upon request



Specifications							
Casing		Dissolvable Fracturing Plug					Product
O.D.	Weight	I.D.	Max. O.D.	Pressure Rating	Temperature Rating	Length	
in mm	lb/ft kg/m	in mm	in mm	psi kPa	° F ° C	in m	
4-1/2 114.3	15.10 22.47	0.875 22.23	3.450 87.63	10,000 68,948	250 135	13.82 0.35	Echo CL Dissolvable Frac Plug Echo FRESH Dissolvable Frac Plug Echo FRESH+ Dissolvable Frac Plug
	11.60 - 13.50 17.26 - 20.09		3.650 92.71				
5-1/2 139.7	17.00 - 20.00 25.30 - 29.76	2.00 30.73	4.500 114.30	10,000 68,948	250 120		
	23.00 - 26.00 34.23 - 38.69		4.270 108.46				