

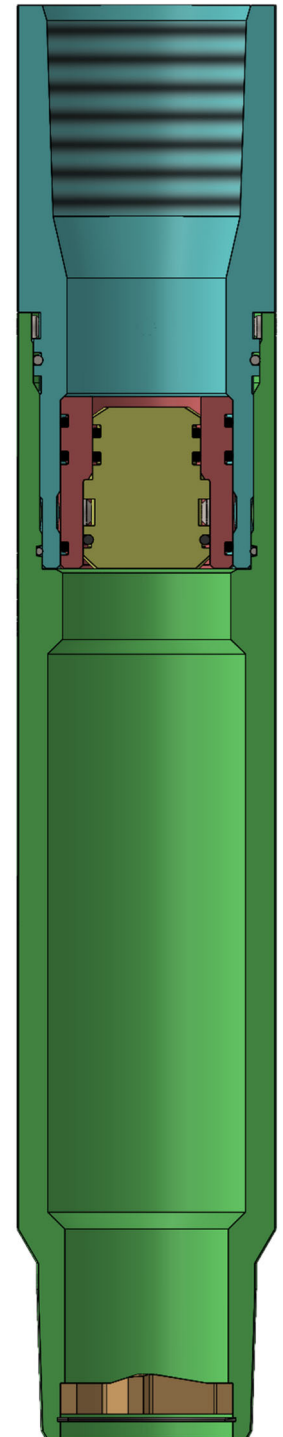
## Dissolvable Pump Out Plug

Republic Oil Tools' Dissolvable Pump Out Plug utilizes a two-part system to form a temporary barrier in the tubing string in order to safely install Permanent Magnet Motor (PMM). Once the PMM is installed and all electrical connections are completed, the inner plug is pumped out allowing a flow path for the ESP to be commissioned. The outer shroud remains in the housing and dissolves in place leaving a near full I.D.

The Dissolvable Pump Out Plug sub is equipped with redundant o-rings and features one set of magnesium shear pins to adjust the value at which the inner sleeve will be expended. During installation, the Dissolvable PoP is made up above the discharge of the ESP and run-in hole. Once at depth, the electrical connections are made up and isolated. At this point, hydraulic pressure is applied to the tubing string to a value above the shear pin settings to release the inner sleeve. At this point, the inner sleeve and the outer shroud will begin to dissolve. Regardless of dissolve rate, the ESP can be commissioned.

The Dissolvable PoP offers a low cost safety barrier to prevent the wellbore from taking a kick during the installation process of a PMM. By having a positive barrier in place, it is easy to verify that no rotation is possible and will allow all field personnel to return home at the end of every day.

Size	2-3/8"	2-7/8"	3-1/2"
Housing Metallurgy	4140 w/ Black Oxide		
Thread Size	2-3/8" EUE 8rd	2-7/8" EUE 8rd	3-1/2" EUE 8rd
Outside Diameter (in)	3.06	3.67	4.5
Inside Diameter (in)	1.87	2.31	2.75
Length (in)	17.83	20.37	22.44
Maximum Working Pressure (psi)	7500	7500	7500
# of Pins	6	6	10
Pressure/Pin (psi, +/- 10%)	1000	750	400
Min Shear Pressure (psi, +/- 10%)	2000	1500	800
Max Shear Pressure (psi, +/- 10%)	6000	4500	4000
Shear Pin Material	RM22		
Plug & Sleeve Material	RM16		
Catcher Material	4140 or RM16		
Max Pull Force (lb)	55000	65000	70000
MU Torque (ft-lbs)	1760	2300	2280
Temp Rating (F)	250F		



For more information, please contact your Republic Oil Tools representative at [info@republicoiltools.com](mailto:info@republicoiltools.com) or visit [www.republicoiltools.com](http://www.republicoiltools.com)