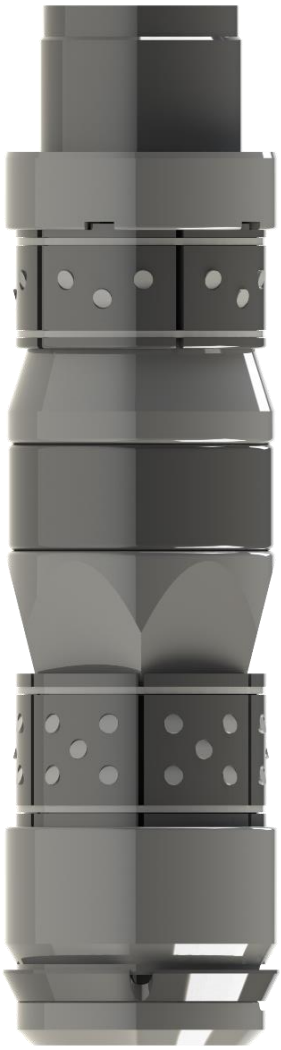
Knight™ Frac Plug

Royal's Knight™ Frac Plug is a well isolation device used to separate stages in horizontal wells during fracturing operations. The Knight™ Frac plug has been engineered to reach wellbore depths efficiently, seal properly, anchor in place, and mill out easily. Designed with seven different material types, each serving a specific purpose for load type and application seen during the setting event and frac treatment. The Knight™ Frac Plug can be ran with either the ball-in-place or dropped from surface prior to the frac job and set with either standard setting tools or disposable setting tools.



Features and Benefits

Run-in Characteristics:

- Shear pinned components to prevent movement in case of impact
- Diversion feature to transfer impact load away from slips and into BHA
- Designed to be able to take multiple high-speed impacts
- Controlled, accurate, and aligned slip break up with maximized preset resistance
- Element engineered for high deployment pump rates
- Optional Pump Down Ring for fluid reduction and more efficient deployment
- Setting Sleeve on WLAK designed with wear gauge for indication
- Industry leading offset between slip buttons and Plug OD
- Ability to run ball-in-place or drop ball from surface, with 1.3 and 1.8 SG offerings
- Can be used with standard or disposable setting tools

Ease of Mill Out Due to:

- Fully composite and elastomer makeup
- Multiple anti-rotation features built-in for easier mill out
- Engineered button technology with stress risers built in allowing small pieces from mill out
- High quality resin system to prevent composite break down over time and better debris size

Knight™ Frac Plug Specification Guide

Casing (in)	Weight Range (lb/ft)	Max Pressure Rating (psi)	Max Temperature Rating (°F)	Tool Specs				Setting Tool
				Size	Length (in)	Max OD (in)	Min ID (in)	
5.5"	17	10,000	225°	438	16.5"	4.375"	1.00"	E4-#20 or Compact
	20 - 23		250°					
5.5"	26	10,000	250°	428	16.5"	4.275"	1.00"	E4-#20 or Equivalent
5"	18 – 21.4	8,000	250°	385	17.3"	3.850"	0.75"	E4-#10 or Equivalent