FAST FLOW™

INNOVATION REVEALED

The recent growth in modern stage frac completions presents new challenges that demand the very best solutions. Since 1985, Magnum Oil Tools has continuously engineered the most innovative and exciting completion equipment used. Seeing the ongoing need for improved efficiency, we have created a frac plug that completely eliminates the need for removal before production. As our introductory line of composite frac plugs, the Mill E-Z™ has been used all around the world since 2002. By innovating this time proven design in a new way, we have blended past experience with futuristic efficiency.

The new **Fast Flow™ System** follows a pedigree as tough as the oilfield itself. This tool is designed to remain securely set in the wellbore indefinitely after use, eliminating the need for mill up. Touting a large flow through area and dissolving Fastball™ technology, the well may be produced through the plugs mere hours after the final stage has been stimulated. Unlike others in the same class, where steel is used, the **Fast Flow™ System** retains the ability to be easily milled, if removal is desired.

FEATURES

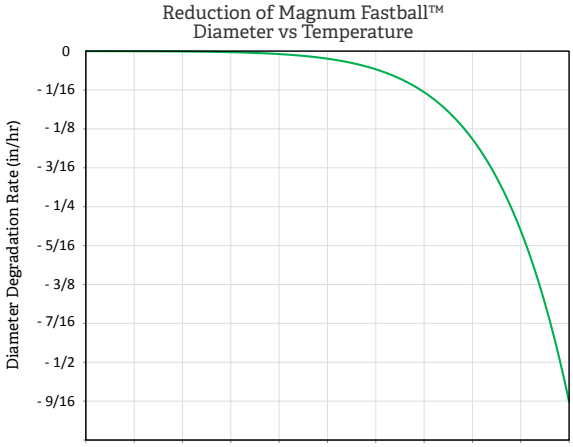
- No well interventions needed
- Easily milled with Coiled Tubing or Stick Pipe/15 to 20 minutes average mill time
- Plug design has been proven over time
- No Well bore intervention required prior to opening for production
- Constructed of flow erosion resistant material
- No special fluids required for degradation of Fastball™
- Rugged, reliable and field proven averaging 16,000 units sold per year
- Can be milled out if desired, no steel used in plug design
- Efficient wireline deployment speeds of up to 450 feet per minute
- Can be used the same way as conventional frac plugs
- Wide range of applications available

*Magnum Oil Tools recommends the use of the Extreme Single MagnumDisk™ for snubbing operations, as long as the pressure control company and/or operator have procedures in place to secure/control the well in the unlikely event of tool failure.

Composite Frac Plugs

CASING SPECS				PLUG SPECS				OPERATING RANGES			
O.D. inch (mm)	**Weight Range** lb/ft (kg/m)	**Min I.D.** inch (mm)	**Max I.D.** inch (mm)	**O.D.** inch (mm)	**I.D.** inch (mm)	**Length** inch (mm)	**Setting Tool**	**Low Temp/ Low PSI**	**Low Temp/ High PSI**	**Mid Temp/ High PSI**	**High Temp/ High PSI**
4 (101.6)	9.50-11.00 (14.1-16.4)	3.48 (88.4)	3.55 (90.1)	3.19 (81.0)	1.36 (34.5)	24.00 (609.6)	Magnum "A-1," Baker #10 or Owen	250°F 8K PSI (121°C) (55.2MPa) Green Composite/ HSN Elastomer	250°F 10K PSI (121°C) (68.9MPa) Yellow Composite/ HSN Elastomer	300°F 10K PSI (149°C) (68.9MPa) Blue Composite/ HSN Elastomer	400°F 10K PSI (204°C) (68.9MPa) Blue Composite/ Viton Elastomer
4-1/2 (114.3)	9.50-13.50 (14.1-20.1)	3.92 (99.6)	4.09 (103.9)	3.57 (90.7)							
	15.10-17.10 (22.5-25.4)	3.75 (95.4)	3.83 (97.2)	3.44 (87.4)							
	18.80-20.00 (28.0-29.8)	3.64 (92.5)	3.64 (92.5)	3.38 (85.7)							
5 (127.0)	23.20 (15.6)	4.04 (102.7)	4.04 (102.7)	3.57 (90.7)							
	11.50-18.00 (17.1-26.8)	4.28 (108.6)	4.50 (115.8)	3.92 (99.6)							
5-1/2 (139.7)	14.00 (20.8)	5.01 (127.3)	5.01 (127.3)	4.60 (116.8)	2.25 (57.2)	26.00 (660.4)	Magnum "A-1," Baker #20 or Owen				
	15.50-23.00 (23.1-34.2)	4.67 (118.6)	4.95 (125.7)	4.30 (109.2)							
	23.00-28.40 (34.2-42.3)	4.44 (112.8)	4.67 (118.6)	4.13 (104.8)							

Casing Specs are according to API Tubing/Casing Dimension Chart Information.



For more information, and to find a representative near you, visit **www.magnumoiltools.com.**

REV - January 8, 2018 4:20 PM