



5" & 5 1/2" Plugs Technical Data Sheet

LONG RANGE SLIM-LINE DISSOLVABLE FRAC PLUGS

Metal Seal Long-Range dissolvable plug is the most versatile dissolvable frac plug. It is a long-range frac plug which can be used to cover wider range of casing sizes without sacrificing its pressure rating. It can be also used under complex conditions such as deformed casings, restrictions or casing patches. Full metal seal eliminates the use of elastomers and enables up to 15,000psi pressure rating, which minimizes pump down risks, providing reliable performance under high pressure and high temperature.



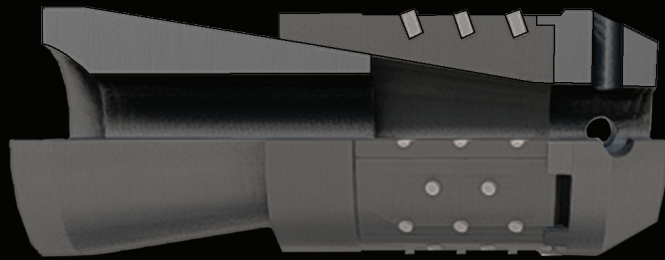
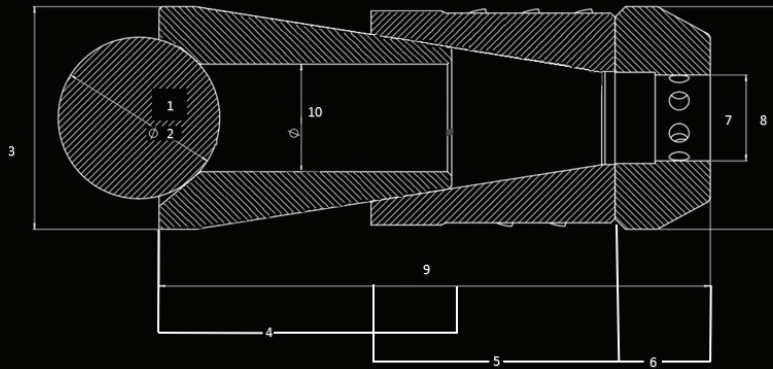
- Slim OD, NO elastomers, wider casing cover range.
- Full metal seal, 10,500psi and 8,500psi pressure rating, reliable under HPHT downhole environment.
- Designed with maximum simplicity, improved robustness reduce pump down risks, improve operation efficiency.
- 33,000 + run history globally.
- Special 2.99" OD for casing restrictions.
- Slim line OD standard plugs sizes.
- For casing restrictions, casing patches or casing collapse issues.
- Metal to metal seal provides a better dissolvable performance and provides proven isolation.
- Ball in place or drop ball from surface.
- High elongation magnesium alloy allows materials to expand and relax with casing expansion.
- Up to 52% without losing any yield or tensile strength.
- With no rubber element, deploy at higher speeds.

5.0" Casing Dissolvable Plug

PN	Dimensions					Ratings		Setting Tool	Material	Casing Range
	Max OD (")	Min ID (")	Length (")	Weight (lb)	Ball-in-Place / Drop ball	Pressure (psi)	Temperature (F°)	Standard Power Charge	Expandible	#PPF
Standard	3.7	1.57	9.13	3.05	2.25" Drop Ball	10,500	85 - 303	E4 #10 or #20	Magnesium Alloy	18-23.5
Slim	3.346	1.30	11.45	4.25	2.25" Drop Ball - 1.50" Ball in Place	10,500	85 - 303	E4 #10	Magnesium Alloy	18-23.5
High Expansion	3.188	1.25	9.33	3.08	2.00" Drop Ball - 1.40" Ball in Place	10,500	85 - 303	E4 #10	Magnesium Alloy	18 - 23.5
Xtreme	2.99	1.0	9.33	3.06	1.75" Drop Ball - 1.25" Ball in Place	8,500	85 - 303	E4 #10	Magnesium Alloy	18-23.5

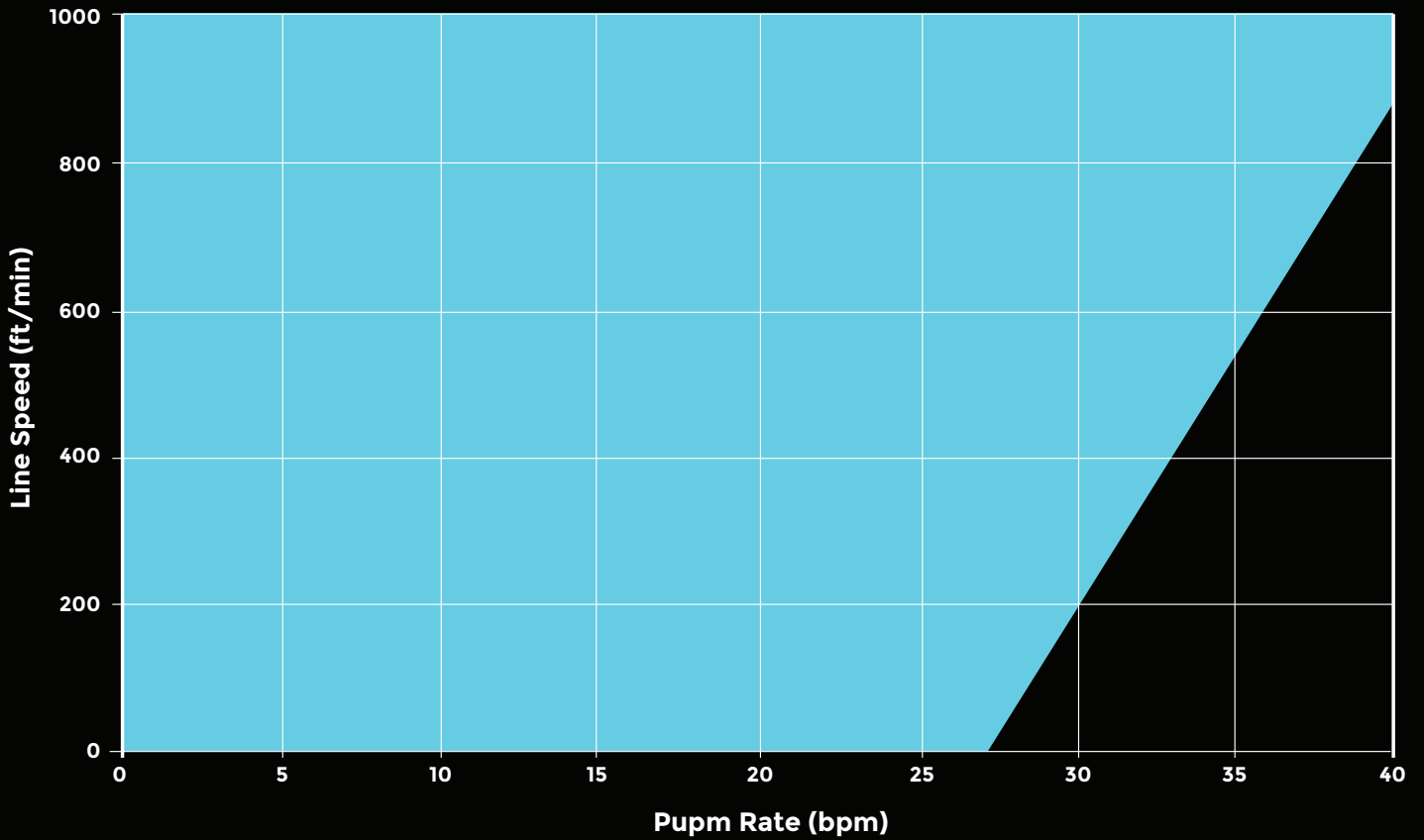
5" Plug Measurements

PN	Dimensions								
	Ball Size	Plug OD	Cone Length	Slip Length	Setting Sub Length	Setting Sub ID	Bottom/Settin Sub	Plug Over-all Length	Plug ID
	#1 & #2	#3	#4	#5	#6	#7	#8	#9	#10
Standard	#1 2.50"	3.7"	5.54"	4.7"	2.30"	1.57"	3.700"	9.13"	1.57"
Slim	#1-1.50" #2-2.25"	3.346"	4.35"	3.85"	1.85"	1.25"	3.346"	11.45"	1.30"
High Expansion	#1-1.40" #2-2.00"	3.188"	4.25"	3.85"	1.85"	1.025"	3.188"	9.33"	1.25"
Xtreme	#1-1.25" #2-1.75"	2.990"	3.98"	3.50"	1.80"	0.99"	2.990"	9.01"	1.00"



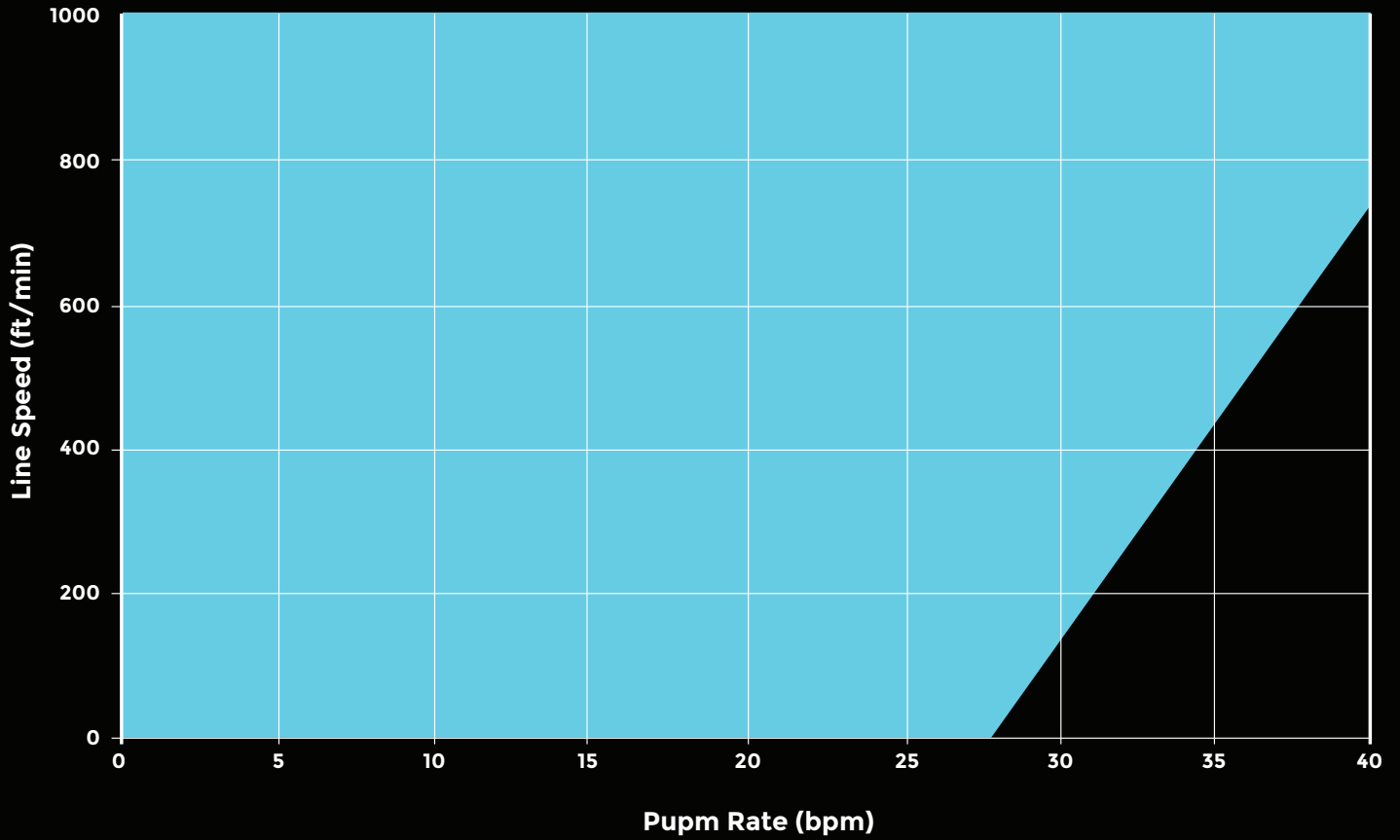
Casing ID = **4.126**

Plug OD 3.346



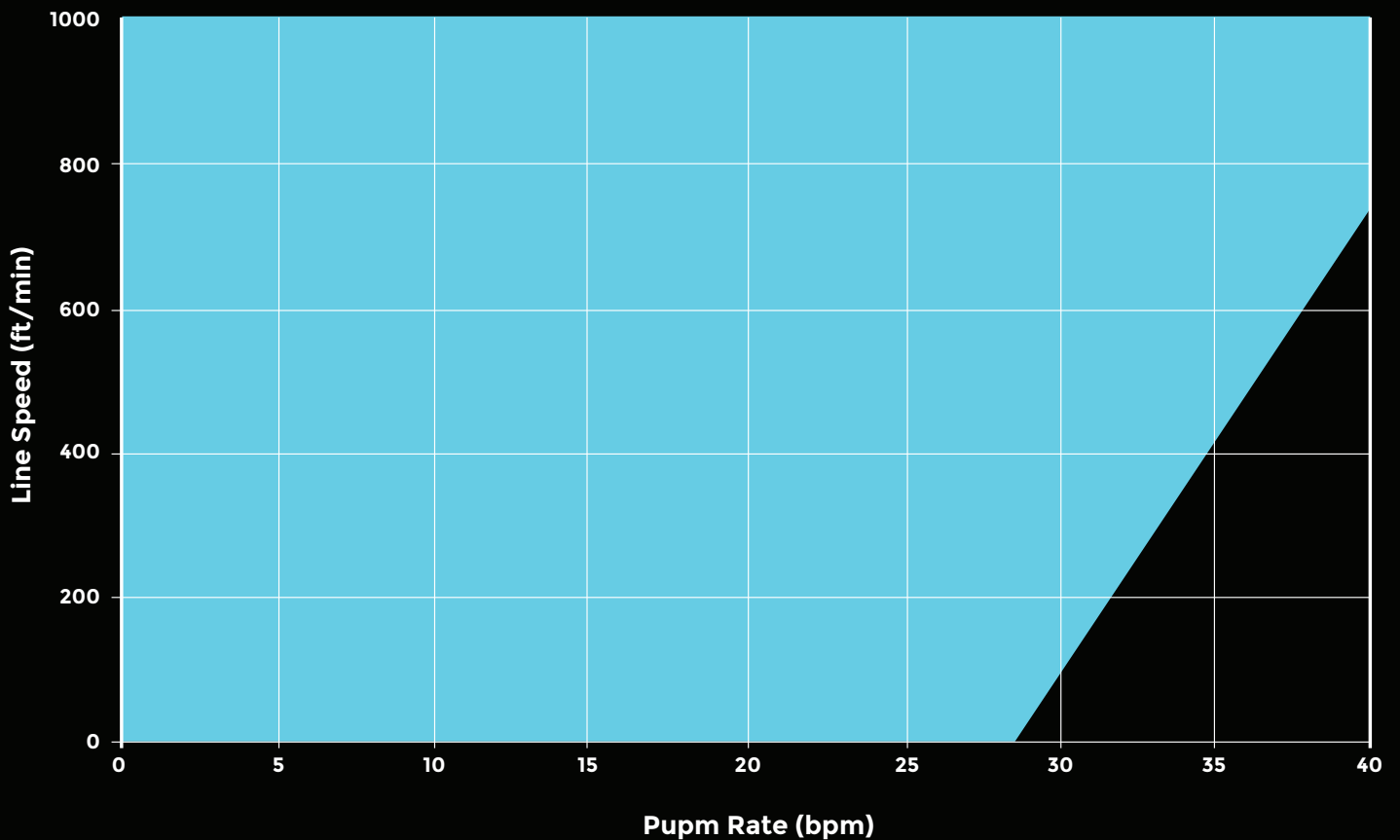
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Plug OD 3.188



Casing ID = 4.126

Plug OD 2.99

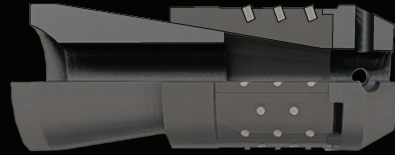
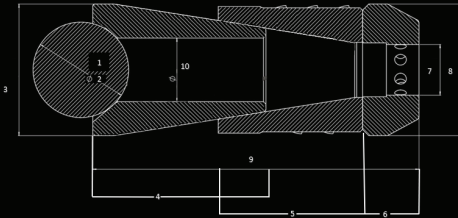


5.5" Casing Dissolvable Plug

PN	Dimensions					Ratings		Setting Tool	Material
	Max OD (")	Min ID (")	Length (")	Weight (lb)	Ball-in-Place / Drop ball	Pressure (psi)	Temperature (F°)	Standard Power Charge	Expandible
Slim	3.46	1.25	11.93	4.61	1.45"/2.5"	10,500	85 - 303	E4 #10	Magnesium Alloy
Standard	4.134	1.5	10.13	4.25	1.75"/2.5"	10,500	85 - 303	E4 #20	Magnesium Alloy

5.5" Plug Measurements

PN	Dimensions									Plug ID
	Ball Size	Plug OD	Cone Length	Slip Length	Setting Sub Length	Setting Sub ID	Bottom/Setting Sub	Plug Over-all Length		
	#1 & #2	#3	#4	#5	#6	#7	#8	#9		
Slim	1-1.45" 2-2.50"	3.46"	5.92"	4.7"	2.30"	1.25"	3.70"	11.98"		
Standard	1-1.45" 2-2.50"	4.13"	4.35"	3.85"	2.30"	1.50"	4.13"	10.31"		



Casing ID = **4.67**

5-1/2" Casing Bypass Rate (BPM)

