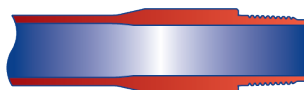


FRAC STRING SOLUTIONS LLC



Sales 303.478.7119

Engineering 713.703.5399

	Down tube	Down Annulus
BPM	26	5
GPM	1092	210
CFS	2.43	0.47

Rev.	15	12/1/2020
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Frac String Connection				5.5 x 23 lb				FPS Down Tube @ 26 BPM	FPS Down Annulus @ 5 BPM	Max Torque
Name	ID	ID Area	OD	Drift	Annular Area	Annular/ID Ratio	ID/Annular Ratio			
3-1/2, 12.95, S135 FSS-338	2.562	5.1552	4.125	4.545	2.8599	55%	180%	68	24	15,100
2-7/8, 7.90, P110, Two Step	2.265	4.0293	3.438	4.545	6.9407	172%	58%	87	10	4,400

Frac String Connection				5.5 x 20 lb				FPS Down Tube @ 26 BPM	FPS Down Annulus @ 5 BPM	Max Torque
Name	ID	ID Area	OD	Drift	Annular Area	Annular/ID Ratio	ID/Annular Ratio			
3-1/2, 12.95, S135 FSS-338	2.562	5.1552	4.125	4.653	3.6402	71%	142%	68	19	15,100
2-7/8, 7.90, P110, Two Step	2.265	4.0293	3.438	4.653	7.7209	192%	52%	87	9	4,400

Frac String Connection				5.5 x 26 lb				FPS Down Tube @ 26 BPM	FPS Down Annulus @ 5 BPM	Max Torque
Name	ID	ID Area	OD	Drift	Annular Area	Annular/ID Ratio	ID/Annular Ratio			
3-1/2, 12.95, S135 FSS-338	2.562	5.1552	4.125	4.423	2.0006	39%	258%	68	34	15,100
3-1/2, 12.95, S135 FSS-329	2.500	4.9087	4	4.423	2.7983	57%	175%	71	24	13,400
2-7/8, 7.90, P110, Two Step	2.265	4.0293	3.438	4.423	6.0814	151%	66%	87	11	4,400
2-7/8, 10.40, S135, PTECH28+	2	3.1416	3.625	4.423	5.0441	161%	62%	112	13	12,200

FSS-338 Working Parameters		
With max MUT of	15,100	Ft-Lbs
The max tensile load* =	260,000	Lbs
With recommended MUT of	13,000	Ft-Lbs
The max tensile load* =	412,000	Lbs
Working Pressure	15,000	psi
Test Pressure	22,500	psi

FSS-329 Working Parameters		
With max MUT of	13,400	Ft-Lbs
The max tensile load* =	241,000	Lbs
With recommended MUT of	11,500	Ft-Lbs
The max tensile load* =	378,000	Lbs
Working Pressure	15,000	psi
Test Pressure	22,500	psi

NCS-30 thread compound required

* Tensile load including pressure end load