

Description

The OmniFrac™ Ball-Actuated Frac Valve is an integral component of the Superior Energy OmniFrac Multistage Open Hole System. The valve is a sliding sleeve type and is used for selective stage stimulation in horizontal, deviated and vertical wells. Multiple valves can be installed in a liner, each placed between open hole packers or cemented in place. The number of valves used is determined by the number of stages to be treated.

The valves are actuated by dropping from surface, a specific size of ball which lands on a respective size of seat. The valves are pinned to shift open with differential pressure above the ball. Once the valve opening pressure is reached, the sleeve shifts down and opens the frac ports.

The ball and seat combination is engineered to minimize the unseating pressure of the ball during flowback. This will minimize the risk of the ball getting stuck on seat and hindering production of the well.

The Ball-Actuated Frac Valve remains open due to a locking device. The balls may be flowed back to surface if production flow is sufficient.

Applications

» Horizontal, deviated and vertical wells where multi-stage frac operations are required.

Features and Benefits

- » Minimal pressure to unseat ball on flowback
- » Maximized flow through ID ports
- » Compact design and minimal number of parts increases reliability
- » Opening pressure can be adjusted on location
- » Simple efficient design allows multiple stages to be stimulated continuously
- » Inner sleeve shifts completely past flowports minimizing erosion and maximizing area for production



Closed



Open

Technical Data

OmniFrac™ Ball Actuated Frac Valve									
Liner Size		Model	Maximum OD		Minimum ID		Working Pressure	Temp	Tensile
in.	mm		in.	mm	in.	mm	psi	°F	lbs
4.5	114.3	BAV-450-01	5.625	146.05	3.815	99.57	18,000	350	310,000

OmniFrac™ Ball and Seat		
Assembly No.	Ball Size/in.	Seat ID/in.
450-01	3.750	3.446
450-02	3.416	3.138
450-03	3.108	2.856
450-04	2.826	2.597
450-05	2.567	2.258
450-06	2.328	2.139
450-07	2.109	1.938
450-08	1.908	1.753
450-09	1.723	1.583
450-10	1.553	1.427
450-11	1.397	1.284
450-12	1.254	1.152
450-13	1.122	1.031
450-14	1.000	0.920

Frac Balls and Seats - 32 Zones		
Assembly No.	Ball Size/in.	Seat ID/in.
1	3.641	3.527
2	3.500	3.390
3	3.364	3.258
4	3.231	3.130
5	3.103	3.006
6	2.980	2.886
7	2.860	2.770
8	2.744	2.657
9	2.631	2.549
10	2.522	2.443
11	2.417	2.341
12	2.315	2.242
13	2.216	2.147
14	2.121	2.054
15	2.028	1.964
16	1.939	1.878
17	1.825	1.794
18	1.768	1.712
19	1.687	1.634
20	1.608	1.557
21	1.532	1.483
22	1.458	1.412
23	1.386	1.343
24	1.317	1.276
25	1.250	1.211
26	1.185	1.148
27	1.123	1.087
28	1.062	1.029
29	1.003	0.972
30	0.946	0.916
31	0.891	0.863