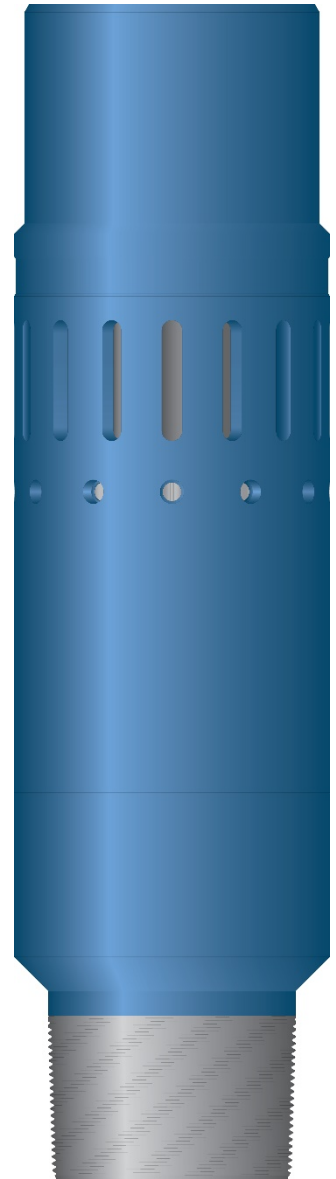


The SUREstack™ RT Retrievable Valve is a ball-activated fracturing sleeve, designed to allow for multiple frac stages in a horizontal well bore. Once the well has been fractured, it can either be shut in or flowed back depending on customer preference. Using a service rig or coiled tubing unit and a Gryphon retrieving tool, the seats are retrieved with a simple tag and release method.

With its patented design, up to 36 seats can be retrieved in a single trip. Utilizing a designated shifting tool, the sleeve(s) can then be closed to shut-off water producing intervals or for interval production evaluation. This system utilizes low specific gravity balls which encourage flow back when the well is put on production.

**Features and Benefits**

- No milling or drilling
- Full drift inner diameter after seat retrieval
- Decrease post frac, pre-production time by up to 40%
- Flow port area designed to prevent screen out and reduce solids inflow
- Compact design for ease of handling (no pup joints required)
- Available in 3-1/2 and 4-1/2 inch (88.9 and 114.3 mm) sizes
- Available in 0.050 and 0.100 inch (1.27 and 2.54 mm) ball seat increments allowing for increased interval density to optimize production and to permit greater achievable fracturing pump rates
- Locking design ensures sleeve cannot prematurely shift closed
- Up to 37 stages in 4-1/2 inch (114.3 mm) size
- Closable sleeve feature for production optimization
- Adjustable activation pressure
- Circulation capability during retrieval improves wellbore clean-out
- 10,000 psi (69 MPa) rated
- Rated to 400° F (204° C) with standard trim
- Premium threads and elastomers available on request



Specifications											
Size	Weight	Max. O.D.	Min. I.D. Post Retrieval	Seat Increment	Max. Ball Size	Max. Seat I.D.	Min. Ball Size	Min. Seat I.D.	Max. Stages		
in mm	lb/ft kg/m	in mm	in mm	in mm	in mm	in mm	in mm	in mm			
3-1/2 88.9	9.30 13.84	4.625 117.48	2.867 72.82	0.050 1.27	1.750 44.45	1.715 43.56	0.850 21.59	0.815 20.70	20		
	12.95 19.27	4.500 114.30	2.625 66.68		1.400 35.56	1.365 34.67			13		
4-1/2 114.3	11.60 17.26	5.750 146.05	3.875 98.43	0.100 2.54	2.600 66.04	2.565 65.15	0.850 21.59	0.815 20.70	37		
	13.50 20.09		3.795 96.39							2.500 63.50	2.465 62.61
	15.10 22.47		3.700 93.98								