

Reclosable Radial Flow Valve (X-RFV)

Superior Completion Services’ patented X-RFV system is used to provide flow path isolation between the annular area created by the concentric isolation string inside the screen and the blank assembly during stimulation treatments. This valve can also help maintain zonal isolation during upper-zone stimulation treatments. The X-RFV provides the added benefit of being reclosable to isolate the productive interval. The valve is in the closed position and run-in to provide positive isolation.

The valve is opened hydraulically by pressuring up on the tubing ID to create a differential from the valve ID to the valve OD. At a predetermined pressure differential, the valve will shift to an unlocked condition. Returning the pressure across the valve to a near-balanced condition allows the valve to move to the open position, permitting flow into the production tubing.

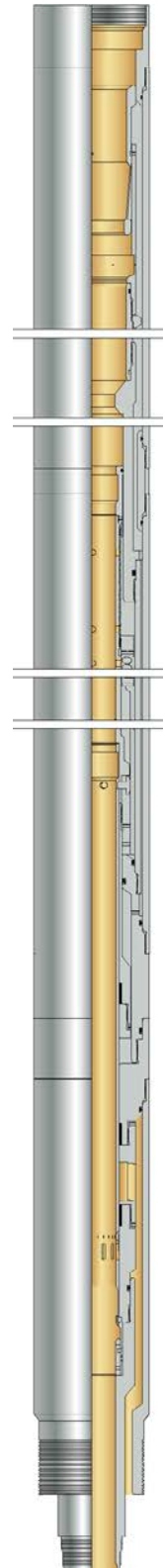
The valve is commonly used to isolate the lower zone of a dual completion or the lower zone of a intelligent well completion.

APPLICATIONS

- Interventionless zonal isolation and production initiation
- Fluid loss control
- Deviated wellbores
- Completion designs with limited tubing ID access
- Intelligent and multizone completions

Features and Benefits

- Optimized flow areas for maximum production
- Interventionless actuation reduces operational risk and overall project cost
- Balanced design prevents premature actuation until seals are in place
- Provides positive bidirectional zonal isolation
- Redundant lock open system
- Unlocked position maintains pressure integrity
- Can be used in 7 to 10 3/4 in. (177.8 to 273.1 mm) casing sizes
- Tubing-pressure actuated
- Ideal for use in deepwater intelligent completions where mechanical access is not possible



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TECHNICAL DATA

Reclosable Radial Flow Valve (X-RFV)																			
Nominal OD		Minimum ID		Flow Area Through Valve		Flow Area Through ID		Sealbore Size		Frac Mode Pressure		Temp Rating		Differential Pressure		Nominal Shear Range		Type B Shifting Profile	
inch	mm	inch	mm	inch ²	mm ²	inch ²	mm ²	inch	mm	psi	MPa	°F	°C	psi	MPa	psi	MPa	inch	cm
5.58	141.6	2.19	55.6	3.93	25.4	3.76	24.3	3.25	82.6	15,000	103.4	350	177	15,000	103.4	1,189-8,325	8.2-57.4	2.188	55.6
6.64	168.7	2.56	65.0	5.20	33.5	5.16	33.3	82.6	101.6	15,000	103.4	350	177	15,000	103.4	916-6,411	6.3-44.2	2.56	65.0
6.64	168.7	2.813	69.9	6.40	41.3	6.21	40.1	4.00	101.6	10,000	69.0	350	177	15,000	69.0	916-6,411	17.2-33.8	2.81	71.4

REFERENCES

- ComPlete™ system data sheets (FP, FPDZ)
- ISO isolation system data sheet
- SHARP well completion system data sheet