

Radial Flow Valve

Superior Completion Services' patented **Radial Flow Valve** is used to provide selective isolation of a flow path between the annular area created by a concentric isolation string inside the screen and liner assembly and the ID of the concentric isolation string. 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.

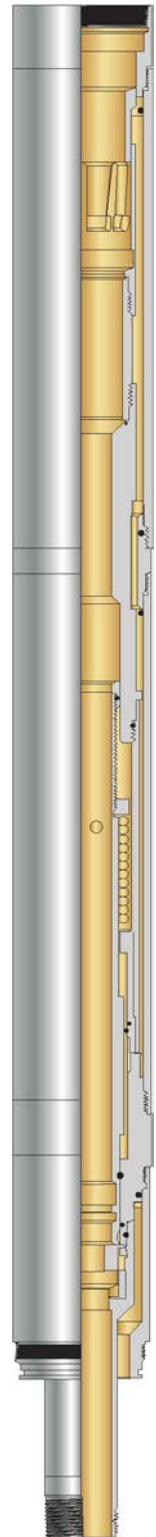
The valve is commonly used to isolate the lower zone of a dual completion or the lower zone of a intelligent well completion.

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 cost of completion
- 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 limited



Radial Flow Valve

TECHNICAL DATA

Available in 6-, 10-, 20-, 30- and 40-ft (1.8-, 3.0-, 6.1-, 9.1- and 12.2-m) sealbore lengths

Temperature rating 350°F (177°C)

| Radial Flow Valve | | | | | | | | | | | | | | | | | |
|-------------------|-------|------------|------|-------------------------|-------|----------------------|-------|---------------|-------|-------------|-----|------------------------------|------|-------------------------|-------|------|------|
| Nominal OD | | Minimum ID | | Flow Area Through Valve | | Flow Area Through ID | | Sealbore Size | | Shear Range | | Differential Pressure Rating | | Type B Shifting Profile | | | |
| inch | mm | inch | mm | inch | mm | inch | mm | inch | mm | psi | MPa | psi | MPa | psi | MPa | inch | cm |
| 5.13 | 130.3 | 2.31 | 58.7 | 5.90 | 149.9 | 4.19 | 106.4 | 3.25 | 82.6 | 938 | 6.5 | 6,568 | 45.3 | 10,000 | 69.0 | 2.31 | 58.7 |
| 5.56* | 141.2 | 2.19 | 55.6 | 5.40 | 137.2 | 3.76 | 95.5 | 3.25 | 82.6 | 1,186 | 8.2 | 8,325 | 57.4 | 15,000 | 103.4 | 2.19 | 55.6 |
| 6.64 | 168.7 | 2.68 | 68.1 | 7.50 | 190.5 | 5.64 | 143.3 | 4.00 | 101.6 | 900 | 6.2 | 7,200 | 49.6 | 10,000 | 69.0 | 2.56 | 65.0 |
| 6.64 | 168.7 | 2.38 | 60.5 | 7.50 | 190.5 | 4.45 | 113.0 | 4.00 | 101.6 | 900 | 6.2 | 7,200 | 49.6 | 10,000 | 69.0 | 2.31 | 58.7 |
| 6.64 | 168.7 | 2.87 | 72.9 | 7.50 | 190.5 | 6.47 | 164.3 | 4.00 | 101.6 | 900 | 6.2 | 7,200 | 49.6 | 10,000 | 69.0 | 2.81 | 71.4 |
| 6.64* | 168.7 | 2.56 | 65.0 | 5.30 | 134.6 | 5.16 | 131.1 | 4.00 | 101.6 | 916 | 6.3 | 6,411 | 44.2 | 15,000 | 103.4 | 2.56 | 65.0 |

* Pressure rating 15,000 psi (103.42 MPa).

REFERENCES

ComPlete™ system data sheets (FP, FPDZ)

ISO isolation system data sheet

Intelligent well completion system data sheet