

Annular Flow Valve

Superior Completion Services’ patented Annular Flow Valve is used to isolate a concentric flow path normally created between the inner concentric production tubing and an outer screen and blank assembly.

The Annular Flow Valve is utilized in the upper interval of a multi-zone completion to provide positive isolation after stimulation treatments have been completed. The valve is hydraulically actuated by creating a pre-set ID to OD differential across the actuating piston. The valve includes a balancing feature, which prevents treating pressure from prematurely shearing and shifting the actuating piston until the production seals are landed. Formation pressure has no effect on valve actuation.

The valve is commonly used to isolate the upper zone of a dual completion or the upper 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
- Post-completion zonal isolation

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 bi-directional 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

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

Annular Flow Valve																			
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

12,500 psi (86.1 MPa) frac mode available.

REFERENCES

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