

# Monoline

## Flanged-connection fracturing fluid delivery technology

### APPLICATIONS

- Hydraulic fracturing

### BENEFITS

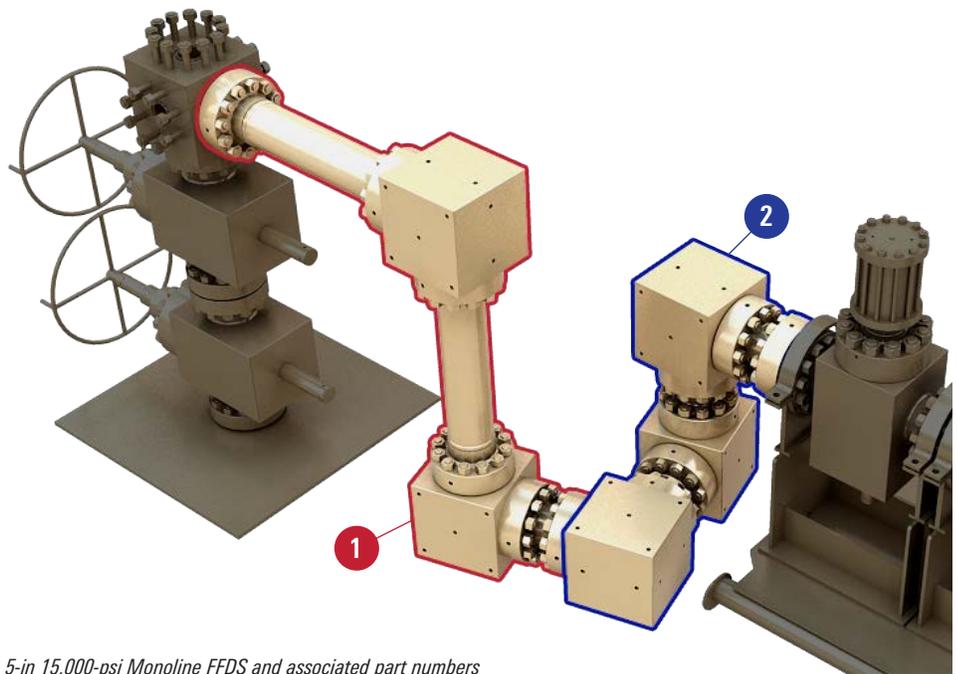
- Eliminates non-sturdy, unsafe connections
- Minimizes leak paths and failure points
- Improves structural integrity of the wellhead/tree
- Reduces HSE risk exposure due to a cluttered wellsite, use of sledge hammers or unreliable connections
- Eliminates the hazards of mismatched connectors to wellsite personnel
- Robust, flexible design for any wellpad layout requirements
- Reduces opex and NPT by greatly reducing assembly, rig up, and rig down (from 12 hours with traditional hammer union connections to 2 hours with the Monoline technology)
- Reduces wellsite footprint

### FEATURES

- API 6A flanged connection with a single, dedicated flowline
- Uses controlled bolted connections promoting a higher level of system integrity and safety
- Articulates using swivel flanges to make up for deviations in distance between frac tree and manifold
- Utilizes BX-type ring gaskets
- Uses API 6A flanged connections with conventional tools and known recommended torque values
- Erosion-resistant
- Fit for service in demanding service conditions (up to 15,000 psi at 92 bbl/min)
- Field proven in the US and Canada

Flowline connection integrity can greatly impact the wellsite operational performance. The patented Monoline\* flanged-connection fracturing fluid delivery technology presents a safer, faster, cleaner solution than the industry's traditional frac iron method where increasing proppant volumes and flow rates continue to challenge and impact the life cycle and reliability of conventional fluid delivery. The Monoline technology features a robust design of high-pressure pipe segments which are joined together with 90° elbows and swivel flanges. This configuration allows for the full three degrees of freedom needed to accommodate vertical and horizontal misalignment between the frac tree and the frac manifold.

The Monoline technology is available in nominal sizes 4- to 7-in OEC connectors to pressure ratings up to 15,000 psi with single or dual hookups.



5-in 15,000-psi Monoline FFDS and associated part numbers

Item	Part Number	Description	Qty
1	2372084-55-02-01	5-in 15K Monoline technology tree section	1
2	2372084-55-03-01	5-in 15K Monoline technology manifold section	1

5-in 15K monoline upper assy P/N 2372084-55-01-01  
Ref RP-003467 rev 02