



# iComplete™

Frac different: Faster. Safer. Smarter.



# iComplete™

Get to first oil faster, safer and smarter with iComplete™. Our integrated system enables you to frac differently by leveraging flexible pipe, automation and digital efficiency to minimize complexity and eliminate intervention in the red zone.

Our fully integrated iComplete™ system gets to first oil faster by doing things differently. We leverage flexible pipe, automation and advanced digital capabilities to deliver greater efficiency with 80 percent fewer connections. This means an elimination of human intervention in the red zone, making your frac pad faster, safer and smarter. iComplete™ offers more service capability, greater reliability and fewer emissions with the simplicity of one pad, one supplier and one invoice. From pump to casing, iComplete™ minimizes complexities so you can focus on one thing: Getting to first oil faster with 30 percent lower costs.

## System integration

- ▶ Operational efficiency
- ▶ Compatibility
- ▶ Lower costs
- ▶ Less NPT

## Next level HSE

- ▶ Safer
- ▶ Easier rig up
- ▶ Reduced risk
- ▶ Fewer emissions

## Technology

- ▶ Flexible pipe
- ▶ Fatigue resistant connections
- ▶ Remote wireline operation
- ▶ Proprietary erosion resistant materials

## Digital automation

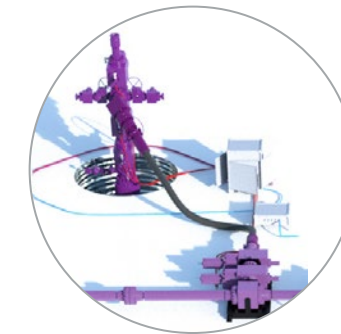
- ▶ Data capture
- ▶ Positive predictability
- ▶ Remote operations
- ▶ Eliminate red zone intervention



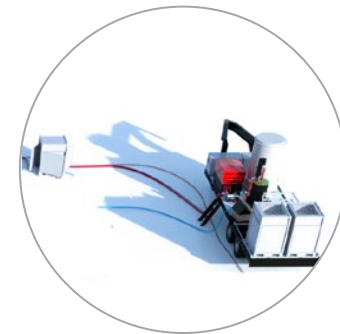
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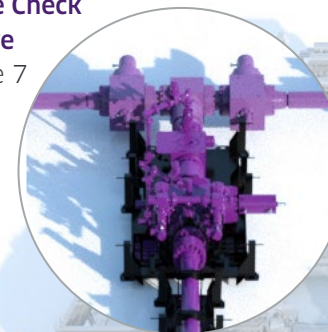


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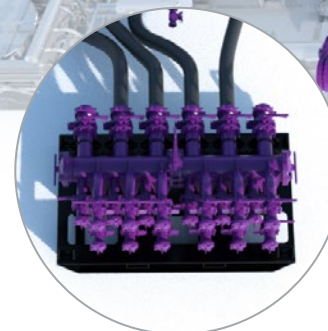
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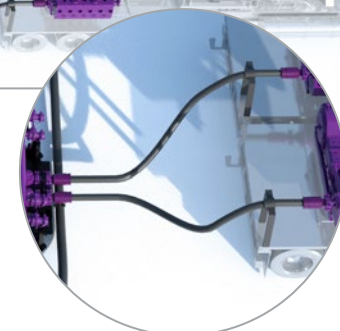
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80% fewer connections + 50% fewer components

> 50% faster rig up + 30% lower costs





# SAFlex™ – PumpFlex™

**80% fewer connections, leading to 50% faster rig up and eliminating iron management**

PumpFlex™ is the small bore size of our iComplete™ SAFlex™ portfolio. Providing OEM high-pressure flexibles to the oil and gas industry since 1979, the iComplete™ SAFlex™ onshore flexibles enhance completion project economics. SAFlex™ flowlines are offered in small and large bore sizes and deliver higher flow rates, improving slurry delivery and reducing connections, operational costs and downtime. Abrasion and corrosion resistant, SAFlex™ offers flexibility in rig ups, absorbs vibration and reduces head loss and turbulence.



**System features**  
3-inch, 15,000 psi, robust end fitting with proprietary sealing technology, armor sheathing, visual inspection for wear, market leader in weight per foot.

SAFlex™ Portfolio	3" PumpFlex
Length	20 ft
Flowrate (max)	21 bpm
End Connections	Clamp (C-Hub)
MBR (in service)	2.3 ft
Pressure - Design	15.0 ksi
Weight (empty)	27.6 lbs/ft



- Durable**
- ▶ Erosion and corrosion resistant liners
  - ▶ High flow rate flexibles that lock in place while pressurized
  - ▶ Dissipation of pump cavitation and system vibration



- Faster**
- ▶ Faster rig ups by reducing connections and multiple lifts
  - ▶ Hammer union removal
  - ▶ Improved flow rates



- Flexible**
- ▶ Improves missile and zipper placement
  - ▶ Facilitates proper connection makeup
  - ▶ Removes fatigue



# SuperFrac™

Modular, single-line high-pressure missile system



## Reduce pump cavitation, rig up quickly, transition faster from pad to pad

TechnipFMC's proven iComplete™ SuperFrac™ System is a modular, single-line, high-pressure hydraulic fracturing missile system with superior low-pressure distribution. Our proprietary low-pressure blender distribution design provides equal frac fluid supply to well service pumps, thus reducing pump cavitation and ensuring optimal pump performance. Ready to rig up on location, our SuperFrac™ System reduces iron connections and is configured to most easily fit your frac pad design. On high-pressure inlets, the SuperFrac™ System is terminated with Weco 1505 wing union or Grayloc® C-hub clamp connections to reduce fatigue cracking. It can be configured with plug valves and/or check valves.

For additional performance, the SuperFrac™ system can be combined with our 7-inch check valve utility skid system and Ground Level Frac System (GLFS) compact manifold or other manifold systems, thereby providing a seamless single-line big bore system to the frac tree. The iComplete™ SuperFrac™ System minimizes NPT and reduces time on pad while lowering total cost of ownership.

### System specifications

API flange connections; 15k psi; Up to 120 BPM; 1505 wing unions or Grayloc® C-hub clamp connections; single-line outlet option with **7-inch check valve and utility skid**; Four pump trucks per pod.

## Large bore check valve system

**A 90% reduction in connections, reducing flowline maintenance and management costs**



TechnipFMC's proven iComplete™ SuperFrac™ Large Bore Check Valve System is a modular, single-line, high-pressure hydraulic fracturing check valve with superior low-pressure sealing capabilities. Ready to rig up on location, our SuperFrac™ Large Bore Check Valve System reduces iron connections and is easily configured to fit your frac pad design.

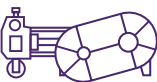
The system includes 7-inch, 15K API flanges, enabling flanges, enabling a full bore, single-line design to the zipper manifold and trees. The iComplete™ SuperFrac™ Large Bore Check Valve System minimizes NPT and reduces time on the pad while lowering total cost of ownership.

### Check Valve specifications

API studded connection; 15k; 120 BPM rated; proprietary sealing technology; multiple upstream and downstream accessible ports.

### System options

Large bore gate valve; pressure relief valve; utility skid; hydraulic controls; greasing; CyberFrac™



### Well service pump

- ▶ Reduced pump cavitation with unique low-pressure distribution design
- ▶ Less frequent pump maintenance



### Operational efficiency

- ▶ Ready on site for fast rig up and pad-to-pad transitions
- ▶ Specifically designed to eliminate NPT vibration issues



### Safety

- ▶ 85% fewer iron connections in most pad configurations
- ▶ Single-line system



### Cost savings

- ▶ Set it and forget it- no critical path intervention required
- ▶ Eliminate flowline maintenance and management
- ▶ Fewer iron connections



### Operational efficiency

- ▶ Ready onsite for fast rig up
- ▶ Easier pad-to-pad transitions
- ▶ 120 barrels a minute, 500+ stages without rebuild

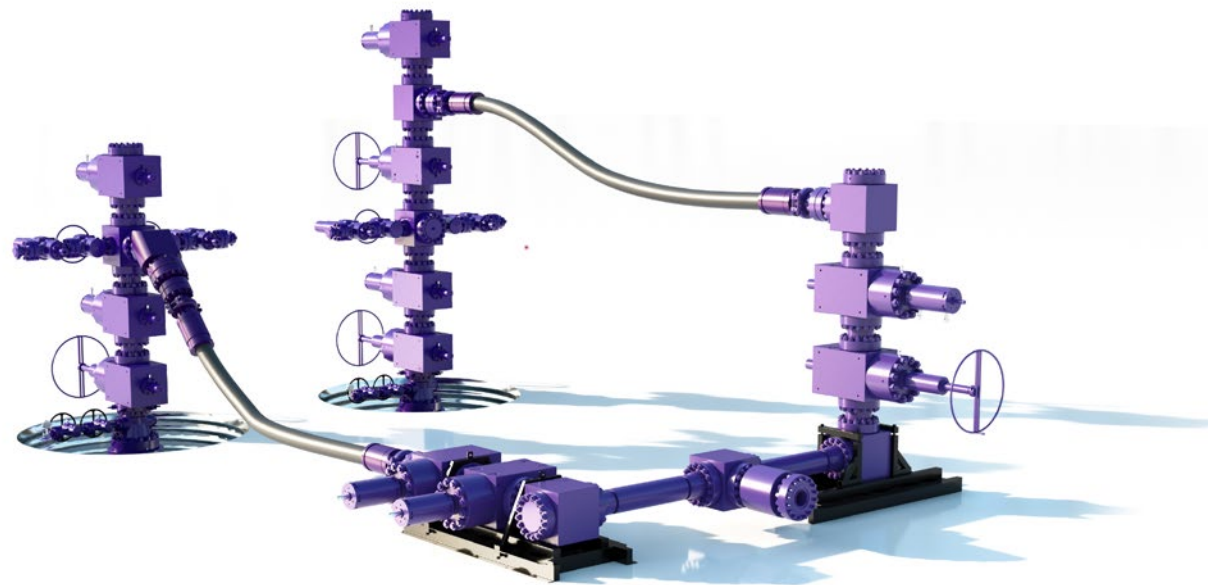


### Modular

- ▶ Fit-for-purpose hydraulic fracturing operations
- ▶ Customizable to location and specific frac needs
- ▶ Single-line system



# Tree and Manifold Systems



**Any pump rate. Any pressure. Anywhere.**

As a pioneer in the unconventional shale market since 2004, TechnipFMC's iComplete™ Tree and Manifold System is tailor-made for complete full-bore delivery through a rigid system or WellFlex™ solution. Our flexible modular system is delivered, installed and connected to multiple frac trees before the pumping crew arrives. The manifold isolates each well to safely allow simultaneous operations (SIMOPs).

**Ground Level (GL) System**

Developed directly through a customer partnership, the GL System delivers additional safety and efficiency benefits by lowering the overall height. This ground level system is an essential tool for unconventional operators who use SIMOPs to reduce development costs.



**Reliable**

- ▶ 99% valve reliability, especially when coupled with iComplete™ products
- ▶ Erosion resistant with proprietary technology
- ▶ Robust maintenance intervals



**Modular**

- ▶ Manual to hydraulic operation without retest
- ▶ Multiple vertical and horizontal configurations
- ▶ Continuous pumping on multi-well stimulation



**Streamlines**

- ▶ Simplified and organized frac spread
- ▶ Safer installation and operation
- ▶ Fewer connections

**Time and Efficiency (TE) Vertical System**

TE Vertical System offers you time savings and pumping efficiencies while stimulating multiple wells on a single pad. The vertical system configuration not only allows you to frac more stages per day, but also provides you with a cost-effective compact footprint

**System specifications:** Multi-well pad stimulations; designed and maintained in accordance with API 6A guidelines





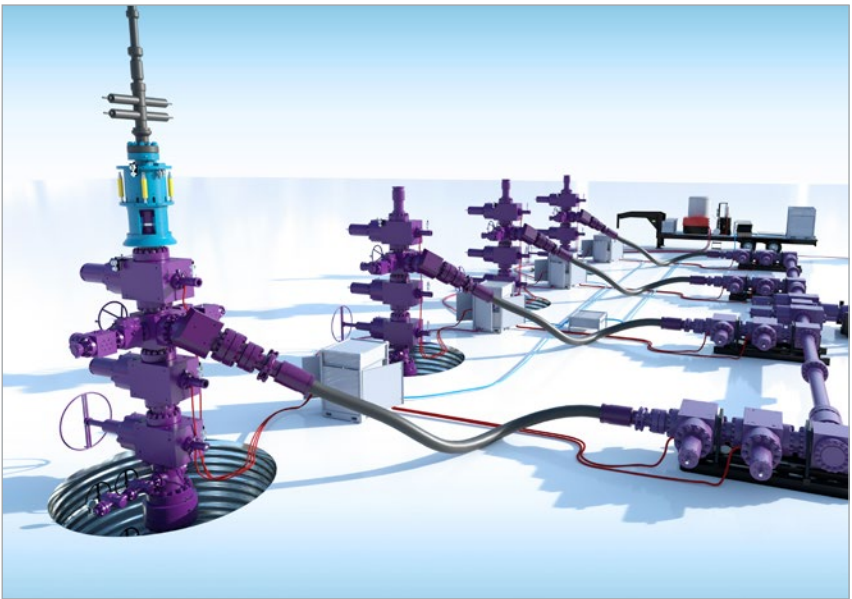


# SAFlex™ – WellFlex™

**80% fewer connections, leading to 50% faster rig up and eliminating iron management**

WellFlex™ is the mid-to-large bore sizes of our iComplete™ SAFlex™ onshore flexibles portfolio. WellFlex™ flowlines deliver higher flow rates, improving slurry delivery and reducing operational costs and downtime. WellFlex™ enhances completion project economics with two simple connections, eliminating several iron connections between the manifolds and trees. With industry standard clamp connections, WellFlex™ offers flexibility in rig ups and significantly reduces rig-up time.

**System features**  
4-inch , 5-inch and 5.5-inch 15,000 psi, robust end fitting with proprietary sealing technology, armor sheathing, visual inspection for wear, market leader in weight per foot



SAFlex™ Portfolio	4" WellFlex	5" WellFlex	5.5" WellFlex
Length	24 ft	25 ft	25 ft
Flowrate (max)	60 bpm	110 bpm	135 bpm
End Connections	4in-15K FLG	Clamp (5-Hub)	Clamp (5.5-Hub)
MBR (in service)	3.5 ft	4.5 ft	4.5 ft
Pressure - Design	15.0 ksi	15.0 ksi	15.0 ksi
Weight (empty)	58.3 lbs/ft	67.3 lbs/ft	72.0 lbs/ft



- Durable**
- ▶ Erosion and corrosion resistant liners
  - ▶ High flow rate flexibles that lock in place while pressurized
  - ▶ Dissipation of pump cavitation and system vibration



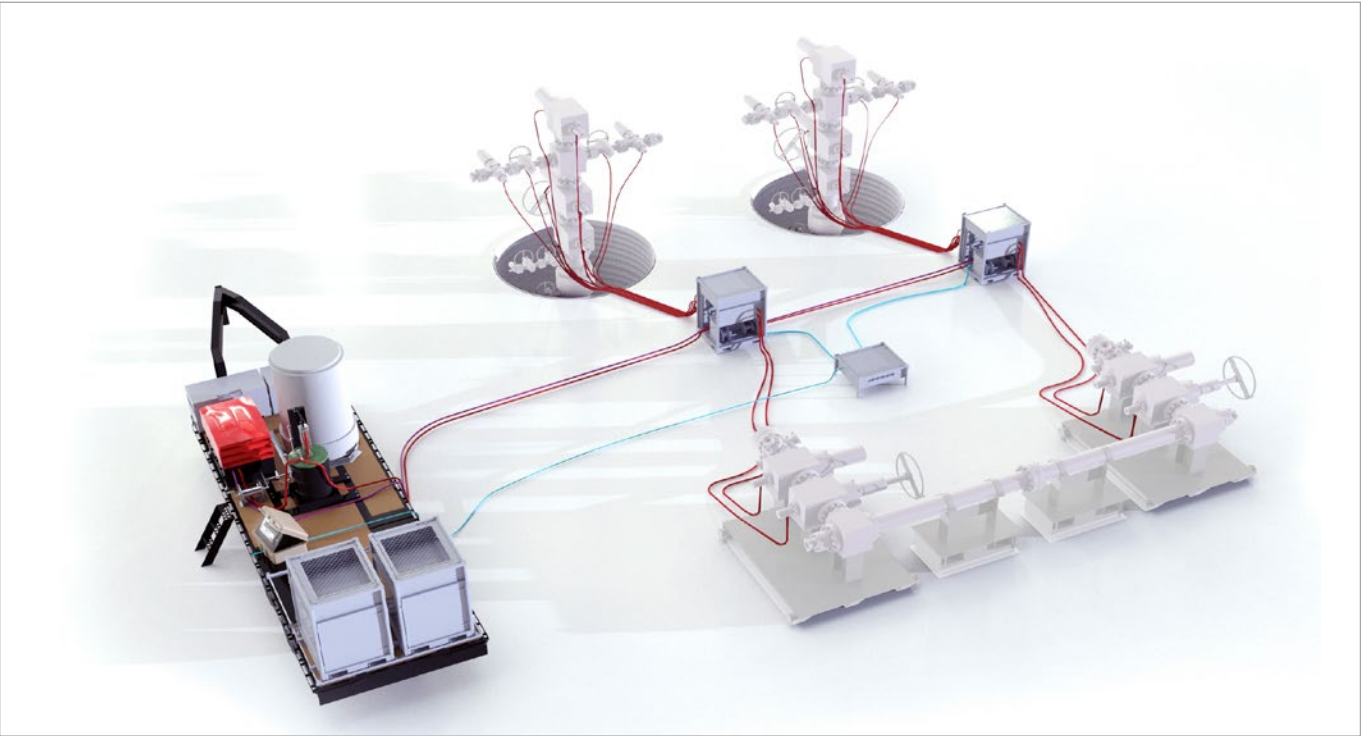
- Faster**
- ▶ Faster rig ups by reducing connections and multiple lifts
  - ▶ Hammer union removal
  - ▶ Improved flow rates



- Flexible**
- ▶ Improves missile and zipper placement
  - ▶ Facilitates proper connection makeup
  - ▶ Removes fatigue



# Auto Greasing System



## Grease on demand

TechnipFMC’s Auto Greasing System eliminates costly manual greasing operations and red zone exposure, allows faster transition time between stages and takes greasing operations out of the critical path. Our Auto Greasing System is easily scalable and can accommodate any pad configuration. This digital system comes standard with real-time data logging, system safeguards, manual overrides and HMI or smart device operation.



### Operational efficiency

- ▶ Reduced NPT
- ▶ Faster transition means extra frac stages per day
- ▶ 75% reduction in greasing time
- ▶ Compact footprint
- ▶ Manual override



### Cost reductions

- ▶ 10 – 15% less grease per job
- ▶ Operated by single technician



### Remote operations

- ▶ No red zone exposure
- ▶ Real-time data log
- ▶ HMI with smart device interface
- ▶ Direct integration with TechnipFMC’s full CyberFrac™

### System specifications:

- ▶ Intrinsically safe (Class 1 Div 1)
- ▶ Rated to 20K working pressure
- ▶ Cold weather capable
- ▶ Able to grease valves under pressure

# Speedloc™-XT

## Fast track to first oil and the next pad, while preventing both overpressurizing and cutting wireline equipment during completions

TechnipFMC’s Speedloc™-XT system is a fully digitized, hydraulic connector to remotely and safely connect and disconnect wireline pressure control equipment from the frac tree during wireline and coil tubing operations.

The Speedloc™-XT system was developed from field proven subsea technology to eliminate manual operations, while improving focus on safety, operational efficiency and predictability. Manual intervention is prone to errors, leading to delays; automation will improve reliability, saving time and money.

### System specifications:

5"-15,000 psi, integrated smart system providing controls, lockouts, system healthvmonitoring, connector and valve position verification, system seal verification, wireless and wired option

## CyberFrac™

- ▶ CyberFrac™ - Integrated smart connector/frac tree control system
- ▶ Data sensing and logging:
  - Pressure: frac tree, XTconnector, HPU
  - Position: XTconnector, frac valves
  - XT connector lock/unlock verification
  - Alerts
  - Interlocks



### Technology safeguards

- ▶ Prevents cutting wireline
- ▶ Technological safeguards with CyberFrac™ smart digital system



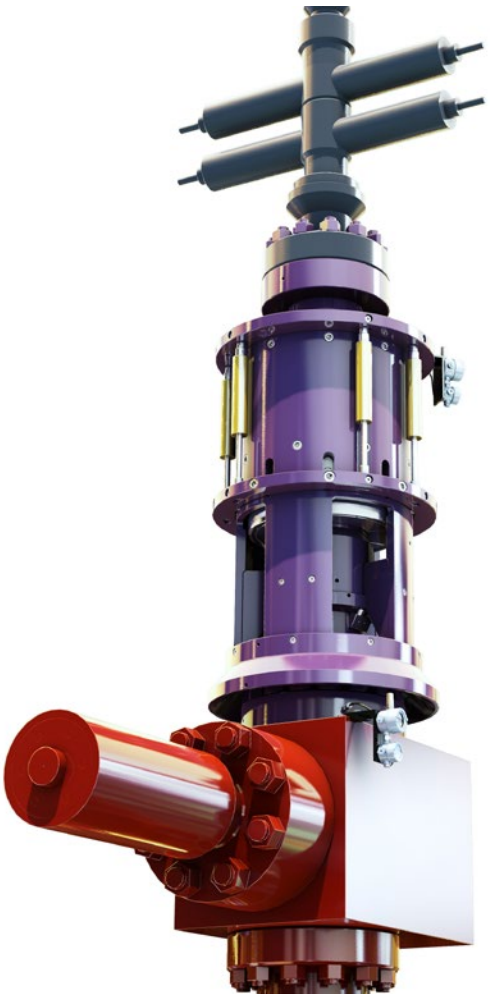
### Follow process

- ▶ Process compliance:software reflects SOP and guides operations
- ▶ Digital Handshake™: creates accountability, predictability, and efficiency

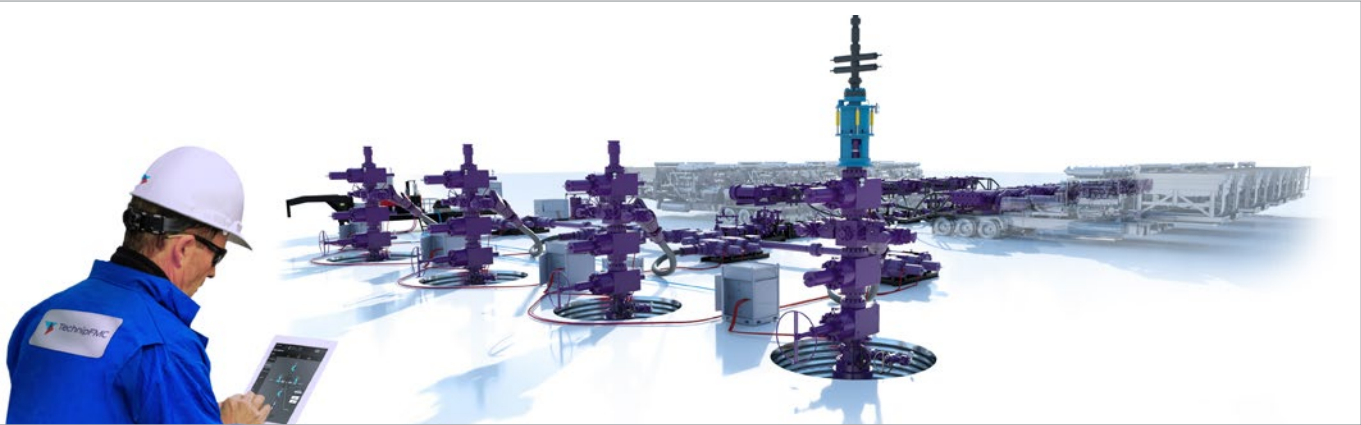


### Safety

- ▶ Removes personnel from red zone
- ▶ Prevents system overpressurization and inadvertent valve operation



# CyberFrac™



## Control your frac pad: De-risk. Digitize. Command.

TechnipFMC’s iComplete™ CyberFrac™ system is a fully automated solution for controlling equipment operations during hydraulic fracturing. Our system enables well site managers and their teams to follow approved procedures and establish sitewide operational awareness through the Digital Handshake™ while reducing manual errors.

### System Components

**UCOS Master Control Station:** TechnipFMC’s proprietary software control of CyberHub™, SAFSense™, Speedloc™-XT (wireline quick connect) and Auto Greasing System under one system. The control station provides operational safeguards and enforces standard operational procedures and data logging.

**CyberHub™:** Modular valve control package with field-proven hydraulic control valve technology provides reliable operation in the field while reducing HPU’s on location.

**SAFSense™:** Wireless transmitter enables critical data capture such as valve positioning, pressure sensing and equipment monitoring, and more.



### De-risk

- ▶ Prevent wireline cutting
- ▶ Eliminate red zone activity
- ▶ System health checks
- ▶ Enhance human performance



### Digitize

- ▶ Process compliance software: Reflects SOP and guides operations
- ▶ Digital Handshake™: Creates accountability, predictability and efficiency
- ▶ Configurable: Easily fits your frac pad design
- ▶ HMI: smart device enabled



### Command

- ▶ Enable remote operations
- ▶ Maximize pump time
- ▶ Reduce labor
- ▶ Log data real time



## FracWatch

TechnipFMC’s FracWatch services put customers first by providing full-scope support from fluid end to casing. Our field service technicians are highly skilled and proficient in all services, ensuring your automated pad runs smoothly with no risk or worry.

### Service and support:

- ▶ Automation and digitalization – Optimum performance and operational efficiency backed by virtual support
- ▶ LinkNow™ - Digital interface glasses with direct SME visibility
- ▶ Engineering support – Predictive performance modeling, 3D and OrcaFlex dynamic analysis software
- ▶ One job ticket - Simplicity and peace of mind of one pad, one supplier and one invoice



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