

QUANTUM System

High-performance gravel and frac-packing in sandface completions

APPLICATIONS

- Stand-alone screens, gravel packs, and frac packs
- Land and offshore environments, including deep water
- Open and cased holes
- Single-zone and multizone sand control completions

ADVANTAGES

- Field-proven design and extensive run history
- ISO-rated sealbore retrievable QUANTUM* packer
- QUANTUM circulating extension with port closure sleeve
- Variety of weight-down service tools: fullbore, check valve, QUANTUM PERFPAC* system, and MZ-Xpress* system
- QUANTUM accessories, including shear subs, seal units, latches, guide shoes, packer plugs, and fluid loss control devices

The QUANTUM system includes the field-proven Schlumberger gravel-pack and frac-pack sandface completion tools. The system is well suited for land, offshore, and deepwater operations, including operations on floating rigs.

The QUANTUM system is available in a variety of common oilfield casing sizes. Its flexible modular design—based on years of experience in completions and production engineering—allows the system to be operated in multiple configurations.

Because of the rugged, simple, field-proven design, the reliable system enhances handling of the dynamic conditions experienced during sand control treatments and throughout the life of the well. The pressure rating of all QUANTUM components is 6,000 psi at 250 degF.

Key components of the QUANTUM system include the seal-bore retrievable QUANTUM packer, a variety of robust QUANTUM service tools, the QUANTUM circulating housing extension, and QUANTUM accessories.

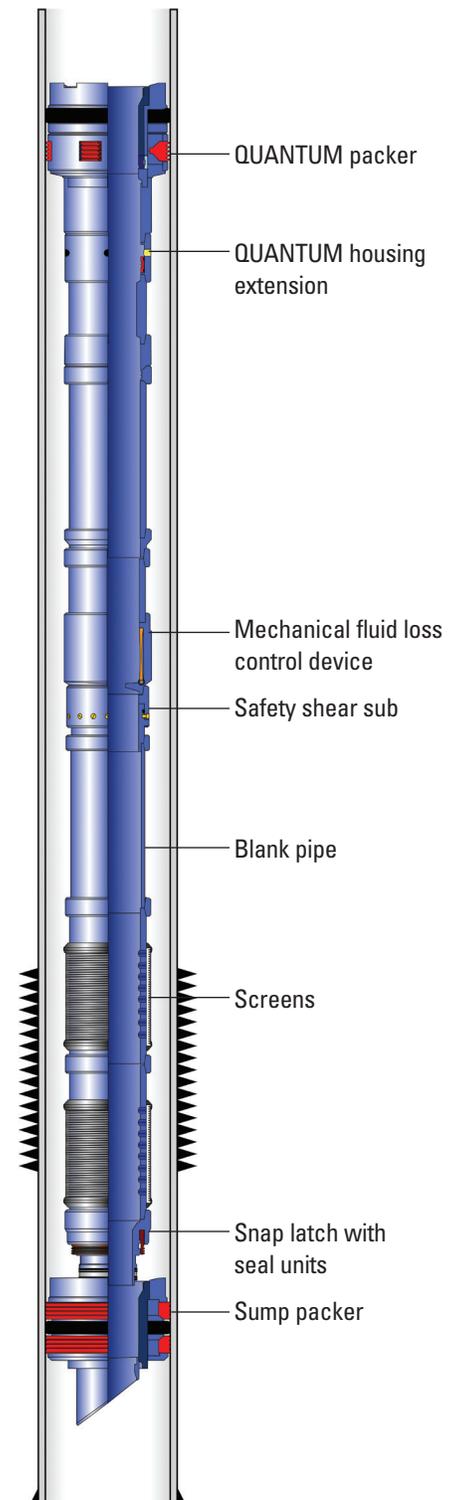
QUANTUM packer

The QUANTUM packer provides the platform for gravel- and frac-packing systems. Because of its reliable, field-proven design, the QUANTUM packer optimizes operations in critical performance parameters, including differential pressure and temperature, load bearing capability, torque-through rating, and sealing reliability.

The hydraulically set, sealbore retrievable QUANTUM packer design includes elastomers such as nitrile, hydrogenated nitrile butadiene rubber (HNBR), Viton® and Aflas®

QUANTUM circulating housing

The QUANTUM ported circulating housing supports sand control pumping operations by providing a pathway from the service tool crossover ports to the exterior of the screens. Erosion and collapse resistant, the QUANTUM housings are particularly suited for high-rate gravel and frac packs. A collar in



QUANTUM system.

QUANTUM System

the circulating housing supports the weight-down functionality of the QUANTUM service tools. The port closure sleeve is closed while the service tool is retrieved.

QUANTUM service tool

The QUANTUM service tool is available in a variety of configurations for cased hole and openhole sandface completions. The tool is used to set the QUANTUM packer and establish necessary gravel-pack and frac-pack treating positions, including weight-down circulating, weight-down squeeze, and reverse-out operations. The field-proven QUANTUM fullbore set-down service tool permits reverse-out operations while preventing fluid loss to the formation and maintaining well control.

QUANTUM accessories

Numerous accessories are available to complement the QUANTUM system:

- snap latch, anchor latch, and shearable anchor latches
- guide shoes, including mule shoes and self-aligning guide shoes
- bonded production seal units
- safety shear subs and quick connects
- mechanical fluid loss control devices: QUANTUM large-bore flapper valve; bidirectional formation isolation valves, including FORTRESS* isolation valve; DFAV dual-flow annular valve and HDFAV hydraulic dual flow annular valve; and three-way subs with inner isolation sleeve and sliding sleeves.
- QUANTUM BA packer plug.

www.slb.com/chsc