

ACTive MHA

Optical motorhead assembly

APPLICATIONS

- Standard CT interventions in oil, gas, and injector wells
- Sweet and sour services according to NACE standards
- Perforating
- Jarring/impact hammers
- Isolation packer

ADVANTAGES

- Provides standard contingency components with preset configurations including
 - Check valves
 - Disconnect
 - Circulation port
- Enables longer ACTive* real-time downhole coiled tubing services toolstrings and new services, such as downhole flow measurement and ACTive Perf* CT real-time perforating service
- Enables logging with CT tractor, disconnect above tractor, and ACTive PS* CT real-time production logging service toolstring below
- Enables PTC shut-in pressure below check valves during zonal isolation
- Replaces CT multicycle disconnect in ACTive PS service toolstring
- Compatible with
 - ACTive TC* CT real-time tension and compression tool
 - ACTive PS service
 - ACTive GR* CT real-time gamma ray logging tool
 - ACTive Profiling* CT real-time production logging and distributed temperature sensing services
- Increased protection for fiber-optic connection integrity
- Interchangeable with ACTive services tools
- Eliminates need for separate mechanical disconnect

As a compact form of all the standard bottomhole contingency components typically run for every CT operation, the ACTive MHA* optical motorhead assembly minimizes toolstring complexity and simplifies rig up.

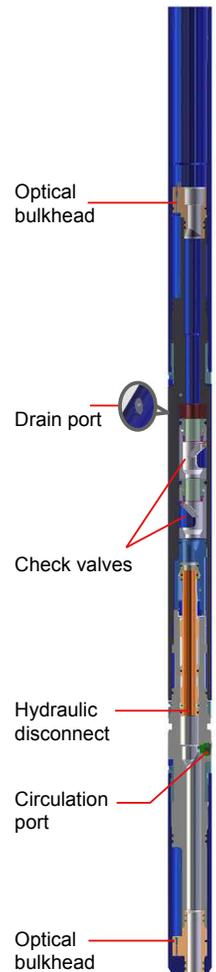
The ACTive MHA assembly was designed to withstand the heavy demands of milling, jarring, impact hammers, perforating, and CT applications that involve high shock or vibration loading.

Downhole equipment

The ACTive MHA assembly is comprised of the following main components:

- Optical bulkheads—Pin and socket bulkheads allow the ACTive MHA assembly to be placed between the CT head and the ACTive services BHA. Note that this reduces the system optical margin by adding one more flat polished connection.
- Drain port—A drain port allows for fluid trapped above the check valves to be removed before the ACTive MHA assembly is removed from the CT head, helping to ensure that fiber connections are not contaminated and that environmental and spill policies are followed.
- Check valves—Dual-flapper check valves provide a double barrier to prevent wellbore fluid from returning up the CT to the surface.
- Hydraulic disconnect—A piston in the ACTive MHA assembly supports lugs that connect the upper and lower sections. A ball pumped from surface is used to shift the piston, which drops the lugs and allows the tool to separate. An external JDC-style fishing profile is left exposed after the upper section is retrieved.
- Circulation port—The ACTive MHA assembly allows for a burst disc to be installed below the disconnect piston. In the event that there is no circulation through the toolstring, the burst disc can be ruptured to allow flow to the annulus in order to pump down the disconnect ball. If the burst disc is not needed, it can be replaced with a blank plug.

As ACTive services toolstrings have grown in length due to the addition of new measurements, it is not always accepted to place a conventional MHA below the ACTive services toolstring. The 2½-in ACTive MHA assembly provides standard contingency features at the top of the ACTive services toolstring.



Cross-section of ACTive MHA assembly showing main components.

ACTive MHA

2 1/8-in ACTive MHA Assembly

Equipment Specifications

Diameter	2 1/8 in [5.4 cm]
Make-up length	38.2 in [97.0 cm]
Flow path diameter (min.) ID	0.563 in [1.43 cm]

Operational Specifications

Operating temperature	20 to 329 degF [-7 to 165 degC]
Pressure rating (absolute)	12,500 psi [86.3 MPa]
Tensile strength	45,000 lbf [200,170 N]
Set down strength	10,000 lbf [44,482 N]
Torque	800 ft.lbf [1080 N.m]
Flow rate	2 bbl/min [0.318 m ³ /min]

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