Baker Hughes

Micro CT coiled tubing service

Reduce expenses by minimizing NPT and boosting workover efficiency

The Baker Hughes **Micro CT™ service** incorporates all the benefits and capabilitiesof a conventional offshore coiled tubing (CT) unit, in a compact, lightweight, small-footprint system. This new service permits offshore interventions on wells where it was previously economically unfeasible due to low production, the lack of available workover vessels, and/or deck-space/lifting-capacity limitations. The Micro CT service provides operators with a flexible, cost-effective intervention solution for offshore wells.

By eliminating the need for an onsite support vessel to deploy coiled tubing, the Micro CT service offers significantly more service opportunities for wells that are either shut in or awaiting service. This allows operators to transform idle assets into cash-flow contributors quickly and efficiently.

The Micro CT service package incorporates specifically designed modular Baker Hughes CT equipment that meets DNV lifting standards, Zone II specifications, and API Pressure Control standards. The CT equipment can run $^{5}/_{8}$-in., ¾-in., and 1-in. coiled tubing and can be customized to run larger conventional reels and injectors.

With the Micro CT service package, operators can apply the right solution for specific well conditions:

- Milling and cleanout operations
- Stimulation treatments
- Fluid lifts with nitrogen
- Fishing operations
- Scale removal
- Hydrate removal
- Asphaltene removal
- Other remedial and intervention procedures

Baker Hughes engineers have redesigned a standard CT unit into smaller and lighter modules. The unit breaks down into small components that are easily and quickly rigged up to reduce downtime and increase efficiency. The unit runs $^{5}/_{8}$-in., ¾-in., and 1-in. work strings with a 17,000-lbf pull injector head capacity. It can also be customized to run larger coiled tubing, injector heads, and reels if necessary.

The Micro CT equipment can be deployed at any offshore wellsite without the additional logistical challenges typically experienced with CT operations supported by supply

Applications

- Offshore and onshore locations with lifting, space, or weight limitations, and restricted access
  - Perforating, stimulation, cementing, and gas lifting
  - Logging operations
  - Mechanical intervention

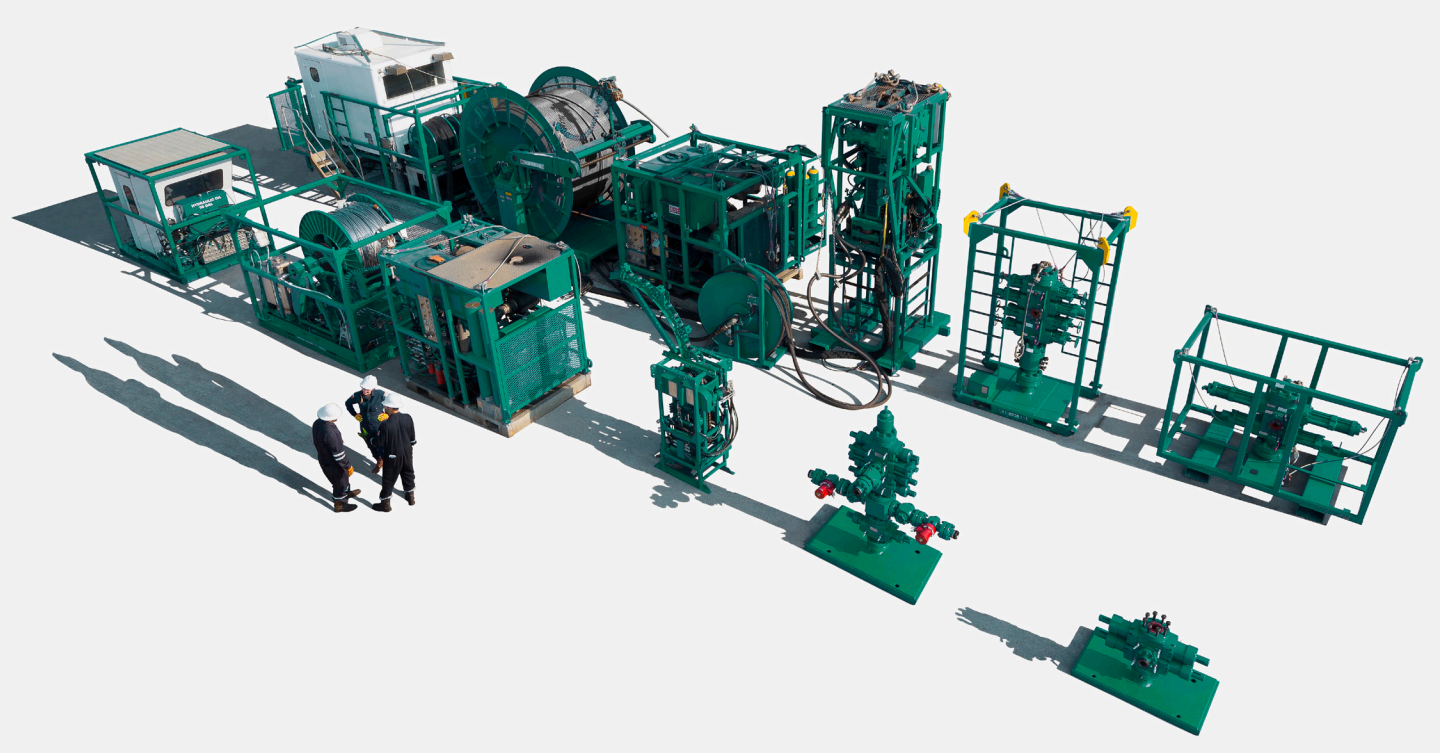
Benefits

- Lightweight, modular configuration
  - Delivers a better, safer, and more versatile way to service marginal offshore wells
  - Reduces logistics and onboard personnel
  - Transports easily and can be quickly rigged up
- Minimal exposure to heavy lifts
  - Increases efficiency, reduces footprint, and lowers risk
  - Breaks down into small modular components
- DNV lifting standards and Zone II specifications
  - Offers full compliance for the most stringent of operations
- CIRCA Real-Time modeling software
  - Uses field data to update operational parameters, dramatically enhancing safety, improving efficiency, and increasing certainty of success

vessels and barges. The intervention and remediation work can be performed as often as required without the operator having to depend on the availability of expensive workover barges, rigs, or self-erecting cranes. This saves on both nonproductive time (NPT) and workover time, resulting in significant cost savings for the operator. Similarly, the Micro CT unit can be deployed on land locations where available roads might limit the ability to safely deploy a conventional coiled tubing unit.

Proprietary Baker Hughes friction reducers significantly improve the pumping capabilities of smaller strings by minimizing the fluid friction in restrictions through the flow path down hole. As part of the operational support, the proprietary **CIRCA™ Real-Time modeling software** dynamically updates safe operating guidelines, situational advice, and warnings based on real-time data. The software displays a virtual weight gauge, clearly delineating safety and operational limits as they correspond to the exact depth and time, and continuously calculates the remaining fatigue life of the coiled tubing string.

Description	Length	Width	Height	Weight
Control cabin	6.0 ft (1.8 m)	8.0 ft (2.4 m)	8.0 ft (2.4 m)	6,600 lb (3 000 kg)
Coiled tubing reel	7.4 ft (2.3 m)	6.0 ft (1.8 m)	7.4 ft (2.3 m)	22,000 lb (10 000 kg)
Power pack	6.0 ft (1.8 m)	6.0 ft (1.8 m)	6.0 ft (1.8 m)	5,500 lb (2 500 kg)
Injector package and stand	6.0 ft (1.8 m)	6.0 ft (1.8 m)	6.0 ft (1.8 m)	6,600 lb (3 000 kg)
BOP package	6.0 ft (1.8 m)	4.0 ft (1.2 m)	7.0 ft (2.1 m)	6,000 lb (2 700 kg)



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