

## CT EXPRESS

### Rapid-deployment coiled tubing unit

#### APPLICATIONS

- CT services for land-based rigless wells

#### ADVANTAGES

- Two tractor trailer units that have the power of four trucks
- Improved rollover stability
- Elimination of need to work under suspended load or to climb on unit
- Improved logistics that reduce risks and costs
- Elimination of onsite hose and cable makeup and breakdown
- Small environmental footprint
- Weight compliant with US and Canadian road laws
- Tubing stabbed during transport
- Assembly and pressure-testing of BHAs up to 6 ft long prior to leaving base
- Onsite BOP pressure testing
- 30-min rig up, including pressure test
- Constant checks on critical job parameters through process control
- Automated emergency procedures for pipe slip and runaway detection and control
- Real-time data monitoring using CoilCAT\* coiled tubing computer-aided treatment
- User-friendly, ergonomic work environment



*CT EXPRESS rapid-deployment CT unit.*

The CT EXPRESS\* rapid-deployment CT unit operates with two trucks and a three-person crew. Innovative unit layout and effective use of technology enable quick rig up and rig down and eliminate the need to climb on the unit or work under suspended loads. Process control of all pertinent CT and pumping functions improves job efficiency, economics, and operational safety. During field tests, CT EXPRESS units performed more than 200 jobs without a single lost-time incident. The simple design provides a high degree of reliability over rough terrain and in extreme climate conditions.

The CT unit carries a 40,000-lbf injector and 10,000-psi wellhead pressure control equipment on a 42-ft mast. The unit can be used on wellheads up to 20 ft high, with 6-ft or shorter BHAs. Longer BHAs can be accommodated on shorter wellheads. Tubing remains stabbed during transportation, and BHAs as long as 6 ft can be made up and pressure tested before arriving on location. No hydraulic or electrical connections are made on location, which makes rig up safer and more efficient. The drop-in drum reel and innovative BOP pressure-test stand also make job preparation faster and safer.

A combination-pump tractor carries the fluid pumping and liquid-additive systems and provides electrical and hydraulic power for the unit. The trailer carries the nitrogen pumping system and liquid nitrogen storage tank. The entire system is designed to complement CT operations where pump rates are relatively low, pressures are moderate, and pumping operations continue nonstop for long periods.

Although the combination pumper is designed to be operated remotely from the cab of the CT unit, local controls are also provided for standalone operation. Operational design of the CT EXPRESS unit is entirely electric over hydraulic. The operator controls both the CT unit and the pumps from the control chair, enabling better use of manpower and eliminating communication problems among operators of different units.

The CT EXPRESS unit uses proven Schlumberger CoilCAT treatment for real-time data acquisition to provide information for making onsite decisions.

# CT EXPRESS

## Features and Specifications

### Coiled Tubing Unit

Tubing diameter	1¼ in [3.2 cm], 1½ in [3.8 cm], 1¾ in [4.4 cm]
Max. tubing length	14,500 ft of 1½-in [4,420 m of 3.8 cm] tubing
Mast height	42 ft [12.8 m]
Injector	40,000-lbf [177,929-N] pull
Gooseneck radius	72 in [1.83 m]
BOP	3¼-in [7.78-cm] bore, 10,000-psi [68.95-MPa] rating
Sidedoor stripper	2¾-in bore, 10,000-psi [68.95-MPa] rating
Lubricator	6 ft [1.8 m] tall, 3¼-in [7.8-cm] diameter, 10,000-psi [68.95-MPa] rating

Integrated universal tubing length monitor

Universal tubing integrity monitor

Drop-in drum reel

Integrated BOP pressure test stand

Integrated fall arrestor and man lift

### Combination Pumper

Continuous-service liquid pump	0.1–2.0 bbl/min [0.02–0.32 m³/min], 10,000-psi [68.95-MPa] rating
Liquid additive pump	0.1 to 0.6-galUS/min [0.38 to 2.3 L/min] with 60-galUS [227 L] reservoir
Nitrogen pump	150–1,500-ft³/min [4.25–42.5 m³/min], 5,000-psi [34.47-MPa] rating
Liquid nitrogen tank	3,000 galUS [11.4 m³]

Diesel-fired vaporizer

Micromotion nitrogen flowmeter

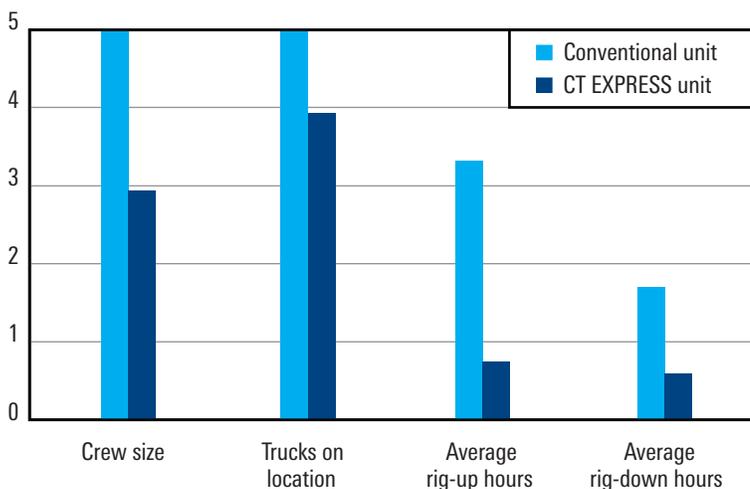
### Control System

Fly-by-wire electric over hydraulic controls

Central controls for coiled tubing and pumper inside cab of CT unit

Local controls for standalone operation of combination pumper

Redundant hydraulic controls for CT



Comparison between conventional and CT EXPRESS unit.

[slb.com/CoiledTubing](http://slb.com/CoiledTubing)