

CTX D-Type

The **CTX D-Type** automated coiled tubing Unit consists of a Super Capacity Reel Trailer maximizing the amount of tubing that can be brought to the wellsite, and a Command Center providing the perfect environment for collaborative control of operations. The entire CTX unit is controlled through an **XOS Operator station**, programmed with user-friendly graphics, operator assist functions and multiple auto functions. This is linked to the **ASX automation system** which makes the **RX Automated Reel** and **IHX130 Injector** operate seamlessly together, making the CTX system simpler, safer and more efficient.

The **CTX D-Type** unit works with the **IDEX software** suite to transform it into an integrated part of the company's digital workflow. Job modelling, remote operations oversight and support, combined downhole and surface data, monitoring and control based on real time decision support from experts in the organization, integration of intelligent prediction software, pre-assessment of runs and many other functions can now be part of operating the CTX.

Key benefits

- ✓ Designed for operating in the deepest and most demanding wells, running the toughest tubing – automatically
- ✓ Designed to optimize efficiency of operations by utilizing advanced control systems
- ✓ Includes automated functions such as auto milling, injector traction, constant speed, target depth, tension limits, automated run between two selected depths and auto spooling
- ✓ Includes a failsafe Emergency Stop system designed in accordance with SIL requirements
- ✓ Designed with the most advanced control system components to avoid any single point of failure for increased up-time in operations



TECHNOLOGY CORNER

The CTX **Control System** hardware is based on Siemens PLCs, industrial computers with full redundancy provided by a master slave configuration and an HMI interface with dual sensor joysticks and independent touchscreens to **avoid any single component failure** causing limited control or downtime.

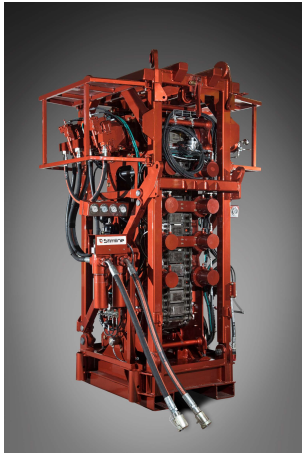
The CTX data exchange is built around a fault-tolerant **Profinet** solution, connecting the control system network nodes together. The data is transmitted on **fibre optic cables**, and terminated in redundant network switches at each node - ensuring high network bandwidth, galvanic isolation between different parts of the system, as well as noise immunity. The system contains all functions required to efficiently exchange large amounts of data between the defined nodes in a **safe and secure** way.

The CTX software uses Stimline's library of standard software objects for data exchange, alarm handling, reading analog inputs, closed loop control and communications exchange.

This is the **most advanced control system** deployed in Coiled Tubing Operations to date.

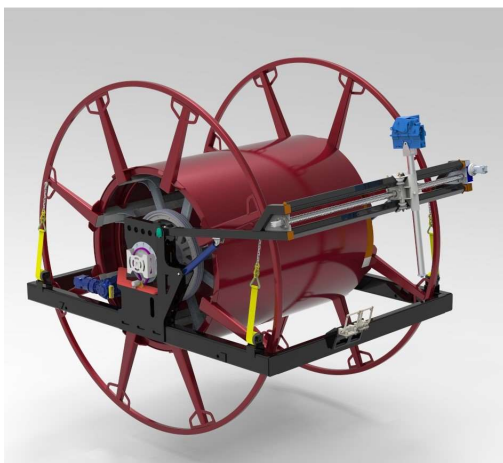
Intelligent Interventions

CTX Automated Coiled Tubing Unit



The CTX can be configured with either the IHX130 or IHX160 Injector Head. This new design focuses on addressing the key limitations and operational challenges of existing injectors to minimize coil fatigue and damage, reduce chances of operator errors and give increased performance.

The CTX uses Stimline's XOS Operator Station to bring new control and monitoring capabilities. With a highly graphical user interface based on touch screens and advanced control system technology, the XOS simplifies operations, displaying critical information in innovative formats and supports full implementation of all key control functions.



The CTX is fitted with Stimline's **RX Reel System**, a completely new design specifically for long life when hauling large size, **high grade pipe**. It is structurally optimized by advanced computer analysis to withstand the high crushing forces and bending flange moments seen when running high-grade tubing in ultra-deep wells. This is achieved at an extremely **low weight**, allowing you to maximize the amount of tubing it can carry to site.

The RX Reel System is available in three widths: 10 feet, 12 feet and 14 feet wide.

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