CRTi® & CRTe® Casing Running Tools

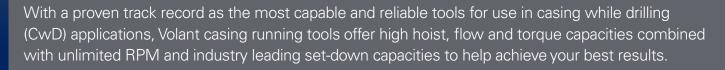


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STREAML NE SUCCESS FOLK

Eliminating the risk associated with safety and efficiency in the well construction process has never been easier. Since 2005, Volant's fully mechanical casing running tools with patented TAWG[™] torgue activated wedge grip have proven to be the safest and most efficient, reliable, and cost-effective means to successfully install casing and liner. From the largest surface sections to the longest, heaviest and most challenging laterals, Volant casing running tools continue to advance what's possible in casing and liner installation, both onshore and offshore.

Our internal grip CRTi[®] and external grip CRTe[®] tools empower the driller to take full control of the casing running operation while significantly reducing the on-site presence of people and equipment. Quickly installed to the top drive, tool operation is intuitive - set down and rotate to the right - utilizing top drive controls with no need for a third-party control panel, operator or external power unit. This all-in-one tool enables the driller to reliably make up and break out connections while providing on-demand functionality to hoist, circulate, reciprocate, fill and rotate casing and liner, ensuring the best chances of successfully landing the string as quickly and safely as possible. The tools can also be cemented through, allowing for a seamless transition from casing and liner installation to cementing operations.



BOTTOM LINE PERFORMANCE

From rig up to rig down and every step along the way, Volant CRTi[®] and CRTe[®] tools streamline operations and bring enhanced safety, efficiency, reliability, and effectiveness to the well construction process, reducing non-productive time and elevating your bottom line.

ON THE RIG

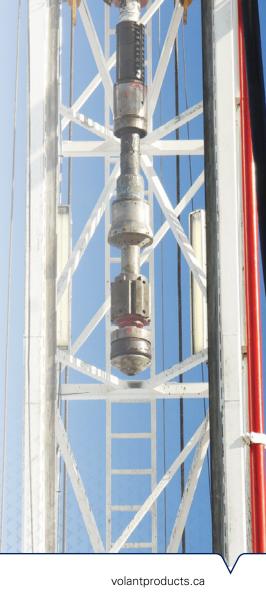
Operated by the driller, bringing efficiency and enhanced safety to the process.

This enables a step change in safety during casing and liner installation by removing people from the red-zone and eliminating dangerous equipment from the rig floor. Utilizing existing rig crews with minimal additional manpower and equipment minimizes scheduled downtime when transitioning to and from casing running operations and allows casing to be installed without the need of third party operations.

IN THE WELLBORE

Improving well construction efficiency and the quality of challenging wells.

When directional or horizontal wells are drilled into unstable formations, it is often necessary to circulate, reciprocate, and rotate the string during installation to advance the pipe. The Volant CRTi/CRTe with its torque activated wedge grip provides a mechanical interlock to prevent pipe slippage under changing load conditions, instilling confidence the tool will perform each time.



CAPACITY SUMMARY

ActiveSET[™] CRTi^{®*}

200 - 350 ton

(181 - 317 tonne) Max. Hoist

25,000 - 50,000 ft.lbs (33,800 - 67,700 N.m) Max. Torque

> **5.5 - 20.0 in.** (139.7 - 508.0 mm) Casing Sizes





CRTi® 120 - 1,250 ton (108 - 1,133 tonne) Max. Hoist

13,000 - 125,000 ft.lbs (17,600 - 169,400 N.m) Max. Torque

> **4.5 - 38.0 in.** (114.3 - 965.2 mm) Casing Sizes

CRTe® 500 ton (453 tonne) Max. Hoist

40,000 ft.lbs (54,200 N.m) Max. Torque

3.5 - 7.63 in. (88.9 - 193.8 mm) Casing Sizes Larg where

VariLINK™ Adjustable Bail Extensions

Enable easier and more consistent casing running tool stabbing for enhanced running efficiency.



High-capacity Mandrel

Increased casing running tool hoist capacity by using higher strength material



High-flow Mandrel Larger bore hole to support CwD applications where higher than standard flow rates are required.



Chrome Pipe Handling

Enables API 5CRA compliant handling of CRA tubulars by providing a low marking, contamination free, nonslip gripping option for Volant casing running tools.



Mudsaver Valve

Maintain a clean rig floor by stopping fluid flow during casing running operations.

Volant casing running tool hoisting capacities are supported by design verification testing, proof loading, full material traceability and meet API 8C requirements. Design verification testing has been approved by an independent 3rd party. Volant CRTi®/CRTe® tools come standard with CE conformity. DNV certification is available upon request.

PABI

HANCED

For more detailed information, visit our website for product specification summaries.



TRUE[™] Analysis Software

Accurately analyze key performance indicators during casing running to help improve in-slip running efficiency.



V-LOK™ Joint Clamp

Helps prevent unintentional connection back-off, suitable for mismatched tool joint O.D.



Tether Swivel

Fall arrest to secure the casing running tool to the top drive in case of accidental back-off above the tool.



Float, Compensation and Alignment Tools Tools designed to solve mis-alignment, set-down load and thread loss challenges.



The Volant ActiveSET[™] CRTi[®] is designed to further ease casing running operations. Tool activation is streamlined to a one-step process and simplifies operations while maintaining our industry leading load security. By eliminating the need to manage set-down load while simultaneously rotating to the right, the ActiveSET CRTi engages simply by stabbing into the casing joint. This allows the driller to immediately begin casing make-up without any additional actions.



Operational Complexity Redefined

- Simple tool activation.
- One-step process.
- Reduce driller training.
- Less equipment with fewer personnel.

Consistency Leads to Efficiency

- More repeatable actions, performed more quickly.
- Reduce in-slip cycle times.
- Increase running speeds.
- More consistency between drillers.
- Lower operating costs.





LIGHT FOOTPRINTTM. HEAVY IMPACT.



Our Light Footprint[™] tubular running solutions streamline operations by requiring as few people and as little equipment as possible while still delivering excellence.

Volant's CRTi[®] and CRTe[®] tools are well-designed in their simplicity resulting in highly effective, easy to use solutions. As mechanical tools installed on the top drive, they are fully controlled by the driller, require no one in the derrick, and present no pinch points at the rig floor. Our tools keep people out of harm's way, remove dangerous equipment from the rig floor and put control in the hands of the driller, eliminating the need for another full service and associated expense.

REDUCED CARBON FOOTPRINT

With a light operational footprint comes a reduced carbon footprint and an opportunity to increase environmental responsibility. Our fully mechanical system, while durable and robust, is compact in size and requires smaller vehicles and fewer loads to transport equipment and personnel. This leads to lower emissions and fewer resources required to support casing and liner running operations.

