

i-Tech Services  
**FEATURED  
PRODUCT**  
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## TORQUE TOOLS

When it comes to tooling and interface design for ROV valve operations – we set industry standards. Having built over 100 Torque Tool products, you can be assured of excellent operational capability, optimised time-frames and cost savings.

Read about how we do it, *overleaf*.

We're a global provider of integrated engineering services and products throughout the oil and gas field life cycle. We focus on what matters most to you: reducing complexity, improving performance and lowering costs. We're all about using innovation and technology to unlock value.

Whether your interfaces are ISO-13628-8 Figure 14 (API-17H First Edition), ISO-13628-8 Figure 18 (formerly API 17D) or Petrobras style interfaces, we have designed a range of tools to meet your subsea requirements.

## TORQUE TOOLS

Our tools have the added benefit of full torque and turn count feedback, when connected to a suitable control system. This allows you to accurately set and measure the torque applied to each valve in real time, enabling precise measurement of the number of turns to an accuracy of 1/20th of a turn. All tools can be deployed by Manipulator, Flying Lead Orientation Tool (FLOT) or by a Tooling Deployment Unit (TDU).

### MULTI-TORQUE TOOL (ISO-13628-8 Figure 14)

The latest offering in our product range, the Multi-Torque Tool combines up to five different torque tool requirements. As a progression from the Class 1-4 Tool, the Multi-Torque Tool benefits from a retractable socket arrangement. This unique product can seamlessly switch between valves with 35mm square, 35mm hexagonal and paddle stems. Our standardised drive system, used across our Torque Tool range, allows the Multi-Torque Tool to operate across the same range of torque outputs as the other tools, this gives an extra 711Nm of torque - in excess of most other tools available.

The Multi-Torque Tool also benefits from a quick release mechanism on the Paddle End Effector. This allows you to remove this socket if required. The mechanism further allows for the retro-fitting of bespoke design end-effectors designed to your specific requirements.

### CLASS 1-4 Torque Tool (ISO-13628-8 Figure 18)

The original design in our range of Torque Tools, this unit covers the entire Class 1-4 Torque Tool range in a single tool. With its clever retractable socket design, the tool can interface with 17.5mm, 28.6mm and 38.1mm valve stems. The remotely selectable gear ratio on the tool allows you to vary the torque output of the tool, with torque values ranging from 27Nm-2711Nm (20-2,000 ft/lbs).

The robust latching system can withstand high loading to deal with the rigours of deployment. It also features an emergency failsafe, allowing for ease of recovery from the interface.

### PETROBRAS STYLE TORQUE TOOL

This tool has all of the benefits and features of our Class 1-4 Torque Tool with the exception of the retractable socket arrangement. However it is supplied with a range of interchangeable end-effectors to cover all necessary interface needs.

### REDUCING COST THROUGH INNOVATION

Our new Multi-Torque Tool was recently used by a major North Sea customer. Deployed to the rig at short notice, the Multi-Torque Tool replaced a standard torque tool, manipulating a stubborn subsea valve on the first attempt. The ROV then went on to operate another valve in the field, at a significantly lower torque. Traditionally, Torque Tools require the ROV to return to deck to change out the tool, whereas our Multi-Torque Tool continued operations optimising ROV efficiency and reducing overall cost to the customer.

### Want to know more about our Torque Tools?

Contact: [itechservices.clientenquiry@subsea7.com](mailto:itechservices.clientenquiry@subsea7.com)

[www.i-tech7.com](http://www.i-tech7.com)

i-Tech Services is a Subsea 7 company



- Torque tools for all subsea requirements
- No need to recover ROV to surface for tool or setting changes
- Significant cost and time savings achieved through reduced vessel time
- Comfort of topside feedback on torque and turns as well as safety of torque limiting function.

