



## Description

The Jupiter Subsea Intelligent Torque Tool - Class 1 - 4 Rotary Docking interfaces with subsea production systems, including project specific interfaces where only the end effector socket is different, and is capable of producing torque up to 2,711N.m (2,000 lbf-ft)

The tool comprises a hydraulic motor, planetary gear box and sprung loaded, nested, multi-class sockets.

The tool also provides torque feed-back, turns count, torque range sensing & visual indication of motor turns.

The tool is designed to allow seamless integration with Zetechtics manufactured Jupiter Subsea Control System, however the tool is capable of operating with other systems with suitable hydraulic and electrical interfaces.

When used with a Jupiter 2 Subsea Control System, with the correct software version and configuration, it is possible to determine direction of rotation from the internal quadrature sensors. This is encoded on the single turns count output using Zetechtics' proprietary turns count electrical interface, together with gear box status.

## The leaders in subsea control

Zetechtics are world leaders in subsea control systems for ROV Intervention tooling to the oil and gas energy markets, providing proven industry solutions many of which are continually working in high integrity applications.

## Features & Benefits

- Standard Interface: Class 1-4 Rotary Docking interfaces to BS EN ISO 13628-8:2006 with a range of sockets up to 38.1mm (1.5") square stem (Class4)
- Modified client specific interfaces available
- Provides torque feedback, output turns count, optional docking latches and a visual indication of motor turns
- Seamless integration with Zetechtics manufactured Jupiter Subsea Control Systems
- Capable of operating with other systems with suitable hydraulic and electrical interfaces
- Maximum Working Torque: 2,711N.m (2,000lbf-ft)
- Maximum Working Speed: 25 RPM (Low Gear)
- Hydraulic: Max. Motor Supply: 160 Bar (2320 PSI) (Recommended)
- For Technical Specification and correct Operational Procedures, please refer to manual



## System Specification

<b>Interface (Standard):</b> (Modified client specific interfaces available)	Class 1 - 4 Rotary Docking interfaces to BS EN ISO 13628-8:2006	
<b>Maximum Working Torque:</b>	<b>Low Torque Gear:</b> 500 N·m (369 lbf-ft)	<b>High Torque Gear:</b> 2,711N.m (2,000 lbf-ft)
<b>Socket to Suit Square Shaft:</b>	Class 1 (67N.m) & Class 2 (271N.m)	17.5mm (0.0687")
	Class 3 (1,355N.m)	28.6mm (1.125")
	Class 4 (2,711N.m)	38.1mm (1.5")
<b>Typical Working Speed:</b>	5RPM (High Torque Gear)	25RPM (Low Torque Gear)
<b>Torque Feedback(typical):</b>	<b>Sensitivity:</b>	0.8mV/V @ 3,000 N·m
	<b>Accuracy:</b>	±1.5% of Full Scale (10% to 100% FS) ±10N.m (from 30N.m to 300N.m) Typ. better than ±1% of FS when used with Jupiter Subsea Control System
	<b>Zero Torque Variation:</b>	Better than ±1% FS (0 – 3,000 msw)
<b>Output Turns Count:</b>	18 pulses/ rev of output socket 72 pulses/rev of output socket using Zetechtics proprietary turns count electrical interface Ratio of visual motor turns indicator to output socket turns = 5:1 (High Torque Gear) / 1:1 (Low Torque Gear)	
<b>Material:</b>	Anodised Aluminium, 316 Stainless Steel with Steel Motor	
<b>Size:</b>	568 x 226 x 231mm	
<b>Weight:</b> (Modified client specific interfaces may differ)	<b>Air:</b>	47.1kg 48.9kg (inc. hydraulic fittings and comp oil)
	<b>Water:</b>	37.1kg (inc. hydraulic fittings and comp oil)
<b>Lift Capability</b>	1 Tonne (Axial)	
<b>Temperature:</b>	<b>Operational:</b>	-10 to +50°C
	<b>Storage:</b>	-20 to +60°C
<b>Maximum Working Depth:</b>	3,000 msw	
<b>Hydraulic:</b>	<b>Max Motor Supply:</b>	160 Bar (2320 PSI)
	<b>Max Latch Supply:</b>	210 Bar (3045 PSI)
	<b>Max High Gear Supply:</b>	210 Bar (3045 PSI)
	<b>Max Motor Case:</b>	2 Bar (29 PSI)
	<b>Recommended Fluids:</b>	Shell Tellus 22 or 32 Castrol Hyspin® AWS 22 or 32 (or equivalent)
<b>Compensation:</b>	<b>Volume &amp; Pressure:</b>	1.2 Litre (0.26 Gallon), up to 10 psi
	<b>Recommended Fluid:</b>	As recommended hydraulic fluid above
<b>Electrical Interface:</b>	Burton 55 Series 1508	