

Jupiter TDU Control System

Plus



Introduction

The Jupiter Tool Deployment Unit (TDU) Control System offers a powerful control system that integrates torque tool control & deployment functions into a single unit with sensor inputs, video & lighting control.

The system consists of a single valve pack with a fully integrated proportional control system. The compact & low cost unit is suitable for use with a variety of Subsea Intervention Tools operated from any Work Class ROV.

The control system is supplied with all the parts required to operate from a standard PC or laptop using the powerful Jupiter GUI software which allows total user control over the operation of the Jupiter system.

The system includes a Data-logger and features Automatic Calibration of the Torque Tool & Sensors, User Customisable Set-up and comprehensive Diagnostics.

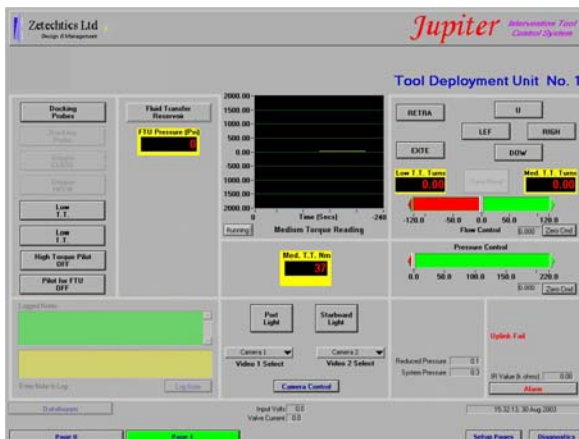


Advantages

- Deep Water (3000m) Rated
- Field Proven Worldwide
- Easily transferable between Tools & ROVs maximises return on investment
- Complete user control over Software Functionality & GUI
- Fully Secure Calibration & Setup
- Powerful User Accessible Software Tools
- Surface Software runs on PC or laptop
- Compact, Light Weight & Low Cost

Features

- Proportional Pressure & Flow Control 0-200 Bar, 0-24 lpm, Torque & Speed calibrated
- 10 x Bi-Directional Solenoid Valves (11 lpm) adjustable pressure & flow on each valve
- 6 x Analogue Sensor Inputs (12 Bit). 12 x Digital Sensor Inputs (24v). 2 x Differential Pressure Transducers. All inputs user configurable.
- Strain Gauge Interfaces accurate to 0.5%, designed to handle large strain gauge offsets
- Up to 8 Camera Inputs with Video Crosspoint 4 x 250W Dimmable Light Outputs with soft start and electronic fuseless protection.
- 2 x Pan & tilt operation integrated in software (includes Simrad OE14-102 & Benthos 4200)
- Calibration, user interface & operation held in secure set-up file which can be quickly changed for multiple tasks or tools
- Power - 115v AC 50/60 Hz or 24v Raw DC Data – Isolated RS485/232, 18 updates/sec.
- Size – 500L x 250W x 290H Weight – 36spkg (air), 24kg (water)



System Specification

Hyd. Valve Fit:	1 x Proportional Pressure Control 1 x Proportional Flow Control 10 x Bi-directional solenoid valves with externally adj. meter out throttles. Proportional Valve drives use 12 bit Constant Current Drive preventing voltage & temperature variation from affecting Pressure & Flow settings.
Optional Fit:	Ext. adj. pressure reducing valves for each bi-directional solenoid valve.
Digital Sense:	12 x 24v Digital Sensor Inputs with High Speed (20kHz) Counters for TT Turns count, etc.
Analogue Sense:	6 x Analogue Inputs 4-20mA, 0-10v, Strain Gauge, PT100, etc. 12 bit measurement resolution Auto Zero available on all inputs. Strain Gauge inputs feature Subsea auto zero to remove large scale offsets directly at the subsea input.
Pressure Sense:	2 x 250 Bar Pressure Sensors. External ports can be piped to any line requiring accurate & differential pressure measurement.
Hydraulic:	System I/P Pressure 315 bar max. Tool Pressure 11 - 200 Bar Tool Flow 0 - 24 lpm (cw & ccw) Solenoid ports 8/15 lpm, 5-210 Bar Externally Adjustable flow & press
Hyd. Ports:	Pressure & Tank – 3/8" BSP Torque Tool – 1/4" BSP Solenoid – 1/8" BSP Fill & Drain – 3/8" BSP Vent – 1/8" NPT
Material:	6082 Al Alloy Anodised to BS5599.
Power:	115 Volts ac, 45-66Hz, 250 Watts 24 Volts unsmoothed dc (Option)
Data:	RS485 / 232 fully isolated to 1500v, QTP/STP wire link or integrated into ROV data hub if available.
Diagnostics:	Monitoring of AC Input Volts AC Input Current Valve Volts Valve Current Electronic Supplies Volts Electronic Current Internal Oil Temperature Hours Run Meter Communication Protocol Alarm Data Logger Insulation Resistance

GUI:	The GUI is completely under the users control with custom graphics, mathematics to suit tool requirements. In addition; this display can be printed via the LPT1 port of the PC.
Software:	All calibration & settings fully password secured with security system that allows user to control which parts of the system are accessible to field technicians Jupiter System Software with comprehensive user settings for calibration, interlocks, semi-automatic control, Alarm Settings.
Mathematics	Using the integrated maths pack the user can quickly create new functions, interlocks or automatic procedures.
Datalogger:	Log job data to disk as required with job notes. All of the Datalogger fields are fully user definable.
Survey Interface	Jupiter can be integrated to external hardware or ROV using user-defined protocol over RS232 link to pass any data backwards or forwards.
Real Time Video:	Allows a PAL / NTSC video signal to be displayed in a window on the laptop screen.
Auto Calibrate:	Using a Torque Analyser with a serial output this feature allows rapid calibration of the Strain Gauge Sensor & Pressure Control valve. Fast calibration mode for rapid setup using ROV HPU

