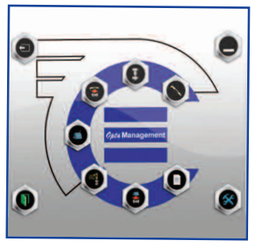
IQVu

Torque Datacollector

CheckStar Multi

- ✔ In line transducer with optional angle measurement
- ✔ Accuracy +/– 0.25% of full scale



OMS

- ✔ Single database to store torque information from all departments
- ✔ All data completely traceable and secure

IQWrench2 *Opta*

- ✔ Point of load insensitive
- ✔ Interchangeable head attachments with auto ID and calibration

Static Transducer

- ✔ In line transducer with optional angle measurement
- ✔ Accuracy +/– 0.25% of full scale

IQVu

- ✔ Torque or force indicator and data collector
- ✔ Simple readout to comprehensive audit tool

tJRS *Opta*

- ✔ A joint simulator using a threaded fastener and nut
- ✔ Fully automatic quick release of fastener

TorqueStar *Opta*

- ✔ Torque or force indicator and data collector
- ✔ Simple readout to comprehensive audit tool

Service Centres

- ✔ Centres throughout the world
- ✔ Fully traceable calibration and repair service

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The force in torque management

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IQVu

Torque Datacollector

Key Features

- ✔ Torque data collector and audit tool
- ✔ Rugged and Robust
- ✔ Tempered “Gorilla” Glass
- ✔ High resolution 7” colour display
- ✔ Interfaces to existing Crane products
- ✔ Track, peak, click, pulse, move on and yield measurement modes
- ✔ Torque, angle and impulse count plus RPM
- ✔ Choice of measurement units
- ✔ User selectable frequency response
- ✔ Bi-directional measurement of torque and angle
- ✔ Upper and lower specification limits, plus control limits for torque and angle
- ✔ Display of realtime torque curves
- ✔ Time and date stamped readings
- ✔ Automatic transducer recognition
- ✔ Icon based clear and easy read display
- ✔ User selectable language options
- ✔ 8 hours battery life with external charger
- ✔ Password protection for user security
- ✔ Easily backed up
- ✔ Software secure and protected
- ✔ Communicates with your PC system

Product Overview

IQvu is the most revolutionary torque data collector in the world. It combines all of the features of the established TorqueStar with a market leading, robust Tablet to give a modern and familiar product. It provides the ideal solution for the measurement and collection of torque, angle, and pulse data in the manufacturing and quality environment.

The Tablet is sleek, thin, but tough, certified to a MIL-STD810G six foot drop rating along with IP65 dust and water protection. It has been carefully engineered, down to the chassis, to be protected against drops, shocks, spills, vibration and more. The screen of the IQVu uses Tempered Glass and features LumiBond™ optical bonding. This results in a display that is not only extremely robust and scratch resistant, but also very durable and easy to read in most lighting conditions.

Product Overview - continued

Picture of glove on IQVu

By using ultra-sensitive multi-touch technology the screen has been developed to respond effortlessly to touch, press, drag – even from an input from a gloved hand.

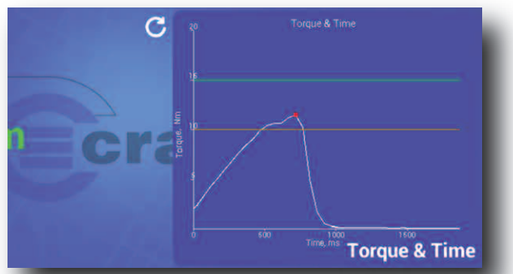
The comprehensive audit tool performs bi-directional measurement in track, peak, click, pulse, move on and yield measurement modes. The “Quick Check” function allows the operator to take measurements as required. Work can be scheduled using Rounds and Jobs to allow a planned approach to collecting any data.
Input of any information is either via the soft keypad on the screen or downloaded from OMS or Opta Comms.

The IQVu works with existing Crane products and all new Crane products, including the increasing range of Crane wireless devices, allowing further flexibility when collecting data.

The high resolution 7” screen clearly displays all relevant information, using colour to enable the operator to easily view and interpret the information. Throughout the measurement process relevant measurement values are displayed along with a realtime graph of the tightening trace if required.

Measurement readings and associated information are stored on the IQVu. In addition detailed individual readings of traces are stored. All of this information can then be saved to a USB stick or emailed directly from the device.

PDFs of documents, work instructions, photographs, and comments can be loaded onto the IQVu and stored against Jobs. As well as being loaded from a USB stick, photographs can also be taken using the 5 mega pixel auto focus camera built into the IQVu. This enables the operator to take photographs of applications to store against relevant readings, if required for later analysis.



Picture of Readings

IQVu
Torque Datacollector

IQVu - with compatible/Crane family products

With the addition of an external barcode reader or optional integrated barcode reader or RFID reader, the operator is able to scan information into the IQVu. This includes product or part identifiers, user details and comments and references.

Security of the IQVu and any data collected is a priority for users. All IQVu software, including master data, input data or collected data can easily be backed up to an external source with minimal key presses. Equally such data can be restored to the IQVu with the same ease.

The integrity of the IQVu is protected by a world leading software security package, installed on the IQVu before shipping. This ensures that no software can be loaded onto the IQVu without authorisation and email traffic is strictly controlled.

With WiFi, R.F, Bluetooth and 3G available, the IQVu can be connected 24/7 wherever you are, allowing you to improve productivity.

The IQVu works with existing Crane products and all new Crane products, including the increasing range of Crane wireless devices, allowing further flexibility when collecting data.

IS Static

CheckStar Multi

CheckStar

PC

www.crane-electronics.com

IQVu
Torque Datacollector

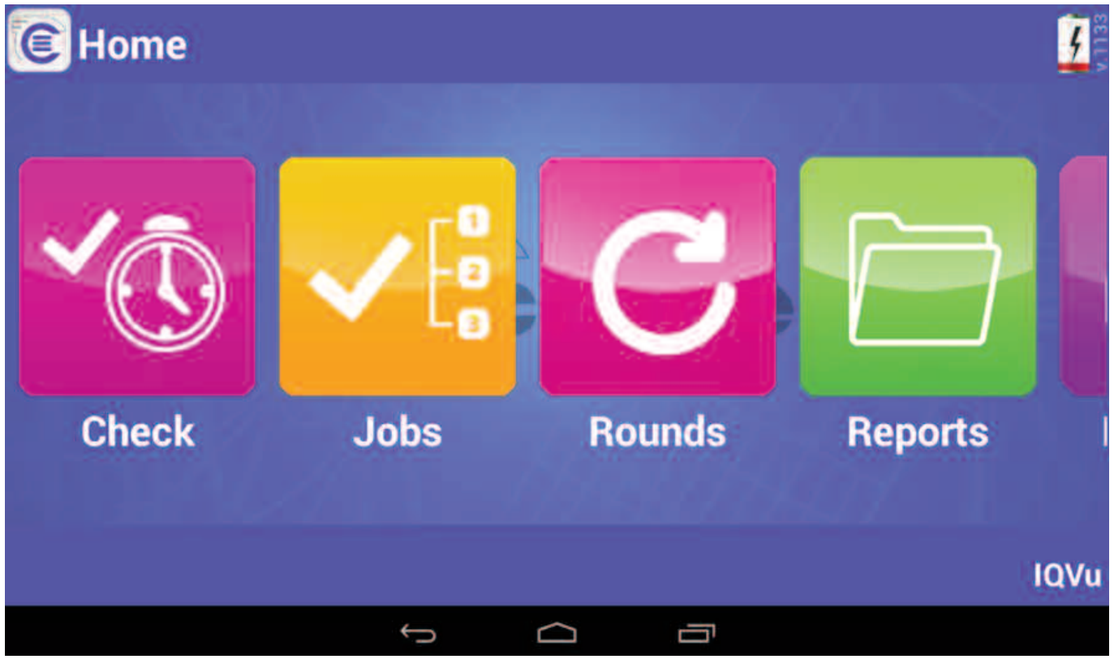
IQVu - Screen Shots

Tranducers

- ✔ Easy-read display with simultaneous display of all relevant information
- ✔ Tailored to your requirements – from simple readout to comprehensive audit tool and more
- ✔ Communicates with your PC system
- ✔ Interchangeable transducer units with vertical or horizontal axis
- ✔ Software shared with TorqueStar Opta

Main Screen Shot (Name?)

- ✔ Easy-read display with simultaneous display of all relevant information
- ✔ Tailored to your requirements – from simple readout to comprehensive audit tool and more
- ✔ Communicates with your PC system
- ✔ Interchangeable transducer units with vertical or horizontal axis



Check Measure

- ✔ Easy-read display with simultaneous display of all relevant information
- ✔ Tailored to your requirements – from simple readout to comprehensive audit tool and more
- ✔ Communicates with your PC system
- ✔ Interchangeable transducer units with vertical or horizontal axis
- ✔ Software shared with TorqueStar Opta

Jobs

- ✔ Easy-read display with simultaneous display of all relevant information
- ✔ Tailored to your requirements – from simple readout to comprehensive audit tool and more
- ✔ Communicates with your PC system
- ✔ Interchangeable transducer units with vertical or horizontal axis

Users

- ✔ Easy-read display with simultaneous display of all relevant information
- ✔ Tailored to your requirements – from simple readout to comprehensive audit tool and more
- ✔ Communicates with your PC system
- ✔ Interchangeable transducer units with vertical or horizontal axis

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IQVu - Technical Specification

Physical measurements	Bi-directional torque and angle*; pulse count, pulse rate; RPM* (*when using a rotary transducer with angle encoder in Track Mode).
Measurement units	Nm, Ncm, lb ft, lb in, oz in, kNm, klb ft, kg m, kg cm
Measurement modes	Track – real time torque Peak – capture of highest torque value during the cycle. Click – capture of peak torque before click mechanism operates to limit. Pulse – special measurement algorithm for use with impulse tools, incorporating pulse count and pulse rate. MoveOn – special audit algorithm that detects the torque at the point where already fastened joint starts to turn. Yield – special production algorithm that detects the torque at the point where fastener starts to stretch.
Plug & Play transducer data:	The following information is read memory incorporated in the UTA transducer or CheckStar Multi: Torque range (span), angle encoder PPR, Transducer serial number, Calibration due date. In addition the Torque@2mV/V will be read from the CheckStar Multi.
Types of Transducer:	CheckStar Multi (rotary IS plug and play) UTA (Rotary, Static, and Wrenchmaster) automatically work. Industrial Standard (can be manually pre-set).
PC Compatibility:	Will communicate with OMS and Opta Comms.
Data Storage:	16Gbyte storage Micro SDHC (up to 32GBytes) slot.
Processor:	1GHz Dual Core Processor
Operating System:	Android 4.1
Statistics:	Statistics for primary measurement: Count of readings Mean (average) Standard Deviation (sigma) Range (max-min)
Print:	Wi-Fi printer (TBC)
Display:	7.0” TFT LCD WSVGA Resolution 1024 x 600 pixels Brightness is adjustable Touch sensitive with gloves worn. Special damage resistant tempered glass, which is both tough and scratch resistant.
Fastening Status:	Colour (user definable) Sound (user definable) Vibration (user definable) External Light ring indication on CheckStar Multi Definable for specification and control limits.
Graph of Tightening Trace:	Available in realtime. Resolution down to 1mS. Can zoom in to see features. Can display torque vs time (default), and angle versus time, and torque versus angle if angle transducer used. Can measure x-y value on graph.
Data Entry:	Numeric and Alphanumeric Via soft keypad on screen. Actions by moving finger, tapping screen, tapping icons and soft buttons on screen. User interface is via graphical icons that are language independent.
Operating Language:	English, French, German, Spanish, and Chinese Can toggle between languages when log in.
Transducer Calibration Date:	Warned if transducer out of calibration.
Construction:	Protective rubberised trim and soft engineering material, with rounded corners to alleviate damage to goods being tested. Tablet will survive 1.8m drop
Torque Measurement:	5 digit display Resolution to 0.006% of transducer span. Sampled every 20 micro seconds (50,000 per second).

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IQVu - Technical Specification continued

Zero Stability:	< 0.1% FSD / °C
Static Accuracy:	+/-0.25% FSD of connected transducer.
Angle Measurement:	Display angle to 0.01 degrees. Sample every 1000 micro seconds (1,000 per second). Automatically adapts to PPR of angle transducer using quadrature phase measurement.
Security:	App protected by SOTI MobiControl, which limits which apps can be accessed by the user. Multiple users are supported with User login with password and individual level of access.
Frequency Response:	A low pass Bessel Filter is employed for conditioning the transducer signal to eliminate ‘noise’ from the tool measurement. User selectable from 75Hz to 5000Hz.
Power:	International Charger 12V @ 2 A from 100-240VAC; 50/60Hz 6 hours to fully charge batteries.
Batteries:	Internal Lithium Polymer battery pack. Capacity 7600mAh Useable battery life 8 hour shift with normal usage.
Stand:	Can lie flat or be angled on desk for ease of viewing with built in stand.
Carrying:	Can be held in either hand and comes with hand and wrist straps.
Power Management:	Selectable time for going to sleep and dimming the screen to save power.
Ports:	25 pin female D-type for connecting to transducers. DC Power port for running off mains and charging batteries. USB port to accept connection to PC or USB memory stick. SD card slot.
Communications:	USB ver 2.0 (host and client) Bluetooth (v2.1+EDR class 2) WLAN 802.11 b/g/n
Camera:	5 Mega pixels auto focus camera. Photos can be attached to job or individual readings.
GPS:	GPS position can be associated with reading.
Time:	Realtime clock. Date and Time stamp for each reading.
Barcode:	Optional Reader available.
Operating Temperature:	-20C to +50C
Humidity:	10-75% non-condensing
IP Rating:	IP40 (indoor use only). Tablet is MIL-STD-810G and IP65 certified.
Warranty:	TBC
Dimensions:	218mm x 162mm x 43mm
Weight:	1040gm (including handstrap)
Work Instructions:	Work instructions in form of jpg image or pdf file can be associated with job.
Readings:	Readings can be organised into subgroups, jobs and rounds. A trace of the fastening can be associated with all readings or just those that are NOK. Readings and Traces are stored and can be viewed later
Job specifications:	Jobs be specified for specific, similar or any transducer. Control limits are possible. Check is a simple way of setting up the IQVu to perform a set of torque measurements. The Check specification can be converted into a job to save the results. Jobs can be copied.
DC Tool connection:	The IQVu can talk to DC Tool Controller using Open Protocol over WIfi and associate the tool reading with a reading from transducer.
Export:	Torque Readings can be exported as CSV file so can be used in Excel template to generate user reports.

IQVu - Product Codes

IQVC1-0TT1-CRXXRX	IQVu Torque (IQVu Unit and Module combined)

IQVu - Accessories

IQVU1-0001-CRXXRX	IQVu Unit
IQVT1-0T00-CRXXXX	IQVu Torque Module
IQVUS-0000-CRPXXX	IQVu Power Supply

IQVu - Packing List

IQVu Unit (x1)
IQVu Torque Module (x1)
PSU and country specific interchangeable plugs (x1)
GETAC handle accessory (x1)
Stylus (x1)
Spare Stylus tips (x2)
Neck Lanyard (x1)
Wrist lanyard (x1)
IQVu Quick Start Guide (x1)
IQVu User Manual (CD) (x1)
IQVu Carry Case (x1)