



TorqueStar *Opta*

Torque indicator and data collector

Key Features



- ✓ Torque or force indicator and data collector
- ✓ Simple readout to comprehensive audit tool
- ✓ Display of torque curves and specialist measurement routines
- ✓ Torque, angle and impulse count
- ✓ Track, peak, 1st peak (click) and pulse measurement
- ✓ User selectable frequency response
- ✓ Choice of measurement units
- ✓ Bi-directional measurement of torque and angle
- ✓ Upper and Lower Specification limits, plus Control Limits for torque and angle
- ✓ Time and date stamped readings with selectable autoprint
- ✓ 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
- ✓ Communicates with your PC system

Product Overview

TorqueStar Opta is the equipment of choice for the measurement and collection of torque data in the manufacturing environment.

TorqueStar Opta's range of software features can be individually specified to give a configuration most suited to the requirement, from a simple no-frills readout to a comprehensive audit tool with display of torque curves and specialist measurement routines.

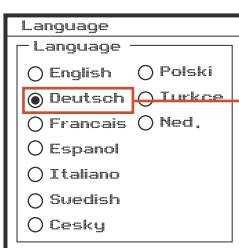
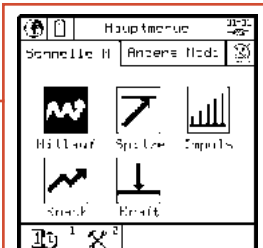
The basic TorqueStar Opta performs bidirectional measurement of torque, angle and pulse count in track, peak, 1st peak (click) and pulse measurement modes. For additional information, cycle time duration and tool speed can also be displayed. Force can be measured independently. Time and date stamped readings can be set to print automatically. The easy to read display gives a simultaneous view of all relevant information during the measurement process, while the simple alphanumeric keypad enables fast data entry when required.

Light enough for carrying on a neckstrap, yet robust to withstand the rigours of the factory environment, TorqueStar Opta also sports integrated rubber bumpers to protect finished product from accidental damage.

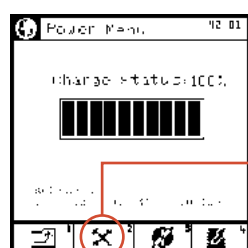

Menu / Screen Examples

Change Language

Accessible from most screens


Power Management

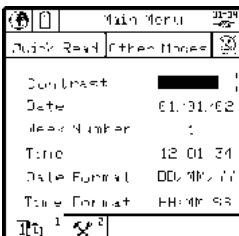
Press Cancel (red) to cancel

Select items using arrow keys

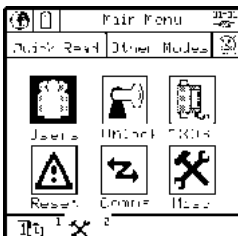
Press Enter (green) to activate



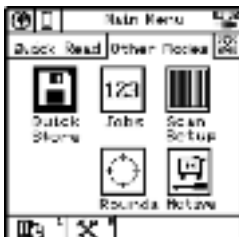
Change time and date



Access tools menu

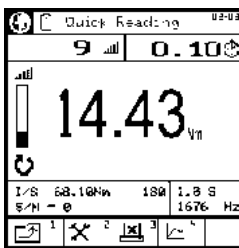


Access other modules



Quick Measurements

1. Connect transducer
2. Select measurement mode
3. Press Enter to activate
4. Ready to measure!



TorqueStar Family



tJRS Opta
Fully automated threaded joint simulator



Transducerised wrenches and screwdrivers
For monitoring application, or inspection techniques



Stationary Transducer
Off-line torque management



Joint Kits
Used with stationary transducers and CheckStars to simulate production joint conditions



CheckStar rotary transducer
In-line torque management

TorqueStar *Opta* Technical Specification

Special features:	Upgradeable via enablement of software modules to add multiple traces (torque vs time or 2nd parameter, 2nd parameter vs time), data storage, audit scheduling, and other options. Quick measure enabling measurements to be taken following a simple key press. Auto return to previous used screen following power-on. Text attributes are also possible in Advanced modules. Upgradeable software.
Physical measurements:	Bi-directional torque; angle*; pulse count; RPM*; cycle time duration (*when using rotary transducer with angle encoder; in track mode)
Measurement units:	Torque: N m, N cm, kg cm, kg m, kN m, Klb ft, N mm, oz in, lb in, lb ft Force: kg, kkg, lb, klb, N, kN
Measurement modes:	Track – real time torque Peak – capture of highest torque value during the cycle 1st peak (click) – capture of instantaneous torque value as torque limiting wrench mechanism operates Pulse – special measurement algorithm for use with impulse tools, incorporating pulse count Force – capture of peak force during the cycle
Plug & Play transducer data:	The following information is read from the chip incorporated in the UTA transducer device: Torque range, angle encoder data, serial number, calibration due date Other transducers: Compatible with industry standard transducers. Up to 9 IS transducers can be pre-set to enable easy selection
PC compatibility:	Via OptaComms PC communication software or Opta Management software
Data storage:	Not available on basic model – see comparison table
Statistics:	Not available on basic model – see comparison table
Auto-print:	Switchable autoprnt to compatible printer and RS232 Terminal Emulator
Cycle status indication:	Tri-colour LED HI/OK/LO torque status with appropriate upgrade module Audible buzzer
Graphic analysis:	Zoom, Change Axis, Average, Resize, Move
Operating language:	Czech; Dutch; English; French; German; Italian; Spanish; Swedish; Polish; Turkish Can toggle between languages at virtually all menu points without need to exit operating mode
Transducer Calibration Date:	Visible indication of transducer calibration date
Construction:	High strength injection moulding Protective rubberised trim to alleviate secondary damage to products
Display:	62 x 62mm beklit graphic LCD display, 160 x 160 pixel resolution, with high quality optical screen protection, 4 digit display of torque value
Keypad:	Easy clean membrane keypad with alphanumeric keys for ease of data entry
Frequency response (Hz):	A low pass frequency filter is employed for conditioning the transducer signal to eliminate 'noise' from the tool measurement This is user selectable from the following discrete values: 4608, 3072, 2304, 1536, 1024, 921, 768, 542, 384, 307. 256, 151, 75

Power:	Universal 15V charger
Battery pack:	Nickel Metal Hydride
	Useable battery life: 8 hours* (standard) 6 hours* (fast charge)
	Charge time: 16 hours (standard) 3 hours (fast charge)
Power management:	User selectable auto power-off: Never, 1, 2, 5, 10, 20, 30, 40, 60 minutes or 16 hours
	Screen contrast adjustment
Input/output ports:	25 pin 'D' type transducer port (female) 9 pin RS232 port (female)
Printer compatibility:	Serial Printer; 40/80 columns; 9600 baud rate; 8 data bits; 1 stop bit; no parity
Processor:	Hitachi embedded processor
Zero stability:	<± 0.1% FSD/ °C
Static accuracy:	± 1% FSD of connected transducer
Operating environment:	Temperature: 5 – 40 °C
	Humidity: 10 – 75% non-condensing
	Ingress protection rating: IP40 – Designed for indoor use only
Angle measurement:	Quadrature phase to give 0.5°C resolution
Warranty:	12 months parts and labour against faulty workmanship or materials
Dimensions:	225 x 165 x 122mm (8 7/8" x 6 1/2" x 4 7/8")
Shipping list:	TorqueStar Opta unit with basic operating software
	Charging unit with appropriate power cable
	Neckstrap

*Backlight on, transducer connected, 50% duty cycle

Accessories List

✓	TorqueStar Opta carry case*	TO-890-07CR-0-0
✓	Opta accessory pack	TO-890-08CR-0-0
✓	TorqueStar Opta to PC cable	CBL-757-0-0-0-0
✓	TorqueStar Opta to printer cable	CBL-758-01CR-0-0
✓	OptaComms	OM-900-01CR-0-0
✓	Opta upgrade modules	CALL CRANE

*Included free of charge if any Opta software modules are bought at the same time as the base unit

TorqueStar *Opta* Comparison Chart

Additional functionality offered by 'data storage' upgrade modules

Function	Basic Storage & Statistics module	Advanced Storage *
Measurement Modes		
Upper and Lower Specification and Control Limits	✓	✓
Storage of up to 200 date and time stamped readings	✓	✓
Basic statistical analysis - average (mean), range, standard deviation (sigma)	✓	✓
Audible and visual indication of torque status	✓	✓
Assign cause and action flags to measurement	✓	✓
Transducer serial number stored with measurement record	✓	✓ <small>(with Subgroups)</small>
Serial printout of stored readings with set-up parameters and transducer serial number	✓ ✓	✓ ✓
Predefined Jobs with target torque and 2nd parameter measurement	Single	Multiple
Definable number of Subgroups with Job		
Definable number of readings within Subgroup		✓
Organise Jobs into Rounds for audit scheduling		
Detailed statistical analysis per Job and Subgroup - average (mean), range, standard deviation (sigma); Capability ratios Cp, Cpk, Cm, Cmk		✓
Serial printout of Subgroup readings with set-up parameters and transducer serial number		✓
Job comment - up to 30 characters (with/without prompt)		✓
Subgroup comment - up to 30 characters (with/without prompt)		✓
Reference comment - up to 30 characters (with/without prompt)		✓
Password protection for user and administrator		✓
Compatibility with OptaComms for data transfer between PC and Opta unit		✓

***NOTE:** Advanced Storage module also required Basic Storage module to be enabled. Therefore Advanced Storage includes the Basic Storage module functions.

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