



The force in torque management



CheckStar

Rotary Torque Transducers



The original CheckStar in-line rotary transducers set the standard for dynamic torque and angle measurements of all continuous drive and impulse tools, with proven reliable performance in thousands of applications worldwide.

CheckStar transducers fit in-line between the assembly tool and the fastener, measuring the actual torques applied as well as the angular rotation of the fastener, under production conditions.

Whatever the vibration and the shock loads experienced, the CheckStar's patented contact system ensures a connection is always maintained between the readout and the strain gauges. Inferior systems suffer from "brush bounce" that can lead to unreliable torque readings.

The low inertia design of the CheckStar ensures accurate and repeatable measurement of high speed transients, such as the point of shut-off on continuous drive tools and the pulsing of the impulse tools.

On board intelligence means the UTA CheckStar is automatically recognised by Crane readout devices, eliminating set-up errors and enabling the logging of the serial number against torque and angle measurements for complete traceability.

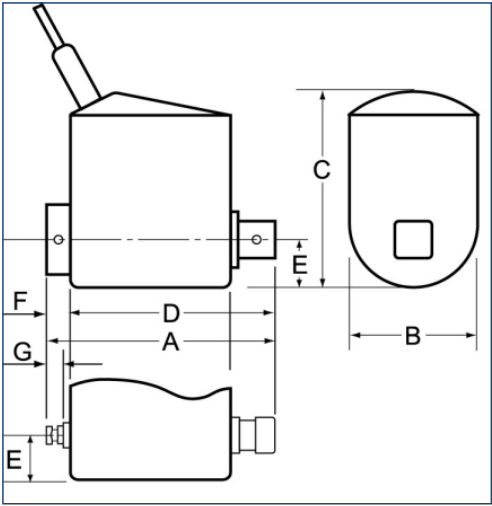
An Industry Standard (IS) version is also available where a user needs the advanced features of the CheckStar but already have a readout device from another manufacturer. Both versions can be specified to include an angle encoder with 0.5° resolution.



Key Features

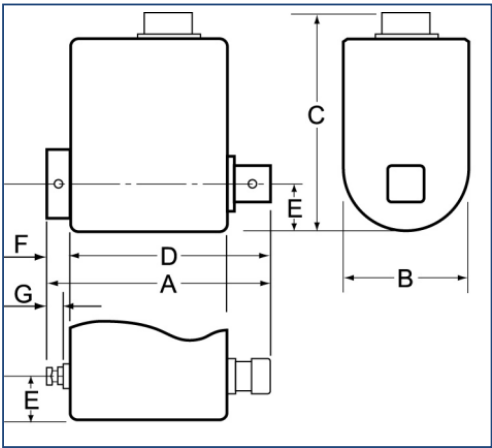
- Accuracy +/-0.25% of full scale
- Patented design ensures no "brush bounce", even when used with impulse tools
- Compatible with all continuous drive tools, impulse tools and torque wrenches
- Square and Hex drives available
- Industry Standard (IS) versions available (2mV/V; 1.475mV/V)
- Low inertia benefits accurate dynamic measurement
- Angle measurement option with no size increase (0.5° resolution)

Weight and Dimensions of the CheckStar - UTA



Dimensions (mm)								
Drive	A	B	C	D	E	F	G	Weight (Kg)
¼" Hex	116	30	56	56	13	39	25.5	0.49
¼" Sq.	71.5	30	56	56	13	6	-	0.50
⅜" Sq.	77	30	59.5	56	15	8	-	0.55
½" Sq.	87	42	70	58	21	12	-	0.73
¾" Sq.	106	52	81	60	26	21	-	1.05
1" Sq.	125	63	91.5	64.5	31.5	29	-	1.80
1 ½"	181	102	136	86.5	51	50	-	6.00

Weight and Dimensions of the CheckStar - IS (Industry Standard)



Dimensions (mm)								
Drive	A	B	C	D	E	F	G	Weight (Kg)
¼" Hex	116	30	68	56	13	39	25.5	0.21
¼" Sq.	71.5	30	71.5	56	13	6	-	0.20
⅜" Sq.	77	30	74	56	15	8	-	0.24
½" Sq.	87	42	82.5	58	21	12	-	0.43
¾" Sq.	106	52	93.5	60	26	21	-	0.76
1" Sq.	125	63	104	64.5	31.5	29	-	1.50
1 ½"	181	102	149	86.5	51	50	-	5.70

CheckStar - Technical Specifications

Plug & Play Transducer	UTA system indicators read the following information from the UTA chip incorporated in the transducer device Torque range, angle encoder data, serial number, calibration due date
Transducer Types	UTA: Incorporate data chip enabling automatic transducer recognition with compatible Crane readout devices and data collectors IS: 'Industry Standard' version; Bridge resistance: 350 Ohms
Calibration	Issued with a calibration certificate traceable to National & International standards
Standard Crane Calibration	10 points; single direction (clockwise unless otherwise requested); 10% to 100% of nominal torque. Recalibration is recommended every 12 months
Optional Calibrations:	
5% Crane Calibration	11 points; single direction (clockwise unless otherwise requested). 5% to 100% of nominal torque
Bi-Direction Crane	10 points; each direction; from 10% to 100% of nominal torque
Class 1 Crane Calibration	± 0.5% of reading for the primary classification range
UKAS Calibration	Calibration to BS 7882
Construction	Aluminium housing Stainless steel shaft Overload capacity: 125% rated torque Square drives to ANSI B107-4 – 1982; BS4006 – 1992; DIN 3121 – 1987 Male Square drive fitted with detent pin that may be removed if required Female Square drive supplied with retaining pin (may be removed if required) Female Hex drive fitted with ball and spring retainer
Connections	UTA version: 1m Integral curly cable with strain relief; 25-pin 'D' port (male) for connection to UTA Crane system readouts IS version: output connector to MIL-C 26482 / BS 9522 FOO 17
Zero Stability	< ± 0.1% FSD/°C
Static Accuracy	± 0.25% FSD
Operating Environment	+5 to +40°C (-10 to 60°C with reduced specification)
Temperature	Humidity: 10 to 75% non-condensing
IP Rating	Ingress protection rating: IP40
Patents Applicable	Slip-ring design protected by international patents
Warranty	2 years' parts and labour against faulty workmanship or materials. The second year of warranty is only valid if the unit has been recalibrated at an authorised Crane Electronics Service Centre after the first year

Product Code - UTA	Description
UT-449-01CR-1-0	1/4" Hex 1Nm CheckStar
UT-449-02CR-1-A	1/4" Hex 1Nm CheckStar w/Angle
UT-451-02CR-5-AP	44In/Lb 5Nm 1/4" Square Drive Transducer w/Angle
UT-451-06CR-5-0P	44In/Lb 5Nm 1/4" Square Drive Transducer
UTA-449-0002-0	18In/Lb 2Nm 1/4" Hex Transducer
UTA-449-0002-A	18In/Lb 2Nm 1/4" Hex Transducer w/Angle
UTA-449-0005-0	44In/Lb 5Nm 1/4" Hex Transducer
UTA-449-0005-A	44In/Lb 5Nm 1/4" Hex Transducer w/Angle
UTA-450-0010-0	88In/Lb 10Nm 1/4" Hex Transducer
UTA-450-0010-A	88In/Lb 10Nm 1/4" Hex Transducer w/Angle
UTA-450-0020-0	180In/Lb 20Nm 1/4" Hex Transducer
UTA-450-0020-A	180In/Lb 20Nm 1/4" Hex Transducer w/Angle
UTA-451-0010-0P	88In/Lb 10Nm 1/4" Square Drive Transducer
UTA-451-0010-AP	88In/Lb 10Nm 1/4" Square Drive Transducer w/Angle
UTA-451-0020-0P	180In/Lb 20Nm 1/4" Square Drive Transducer
UTA-451-0020-AP	180In/Lb 20Nm 1/4" Square Drive Transducer w/Angle
UTA-452-0025-0P	221In/Lb 25Nm 3/8" Square Drive Transducer
UTA-452-0025-AP	221In/Lb 25Nm 3/8" Square Drive Transducer w/Angle
UTA-452-0050-0P	442In/Lb 50Nm 3/8" Square Drive Transducer
UTA-452-0050-AP	442In/Lb 50Nm 3/8" Square Drive Transducer w/Angle
UTA-452-0075-0P	50Ft/Lb 75Nm 3/8" Square Drive Transducer
UTA-452-0075-AP	50Ft/Lb 75Nm 3/8" Square Drive Transducer w/Angle
UTA-677-0-75-0-0P	50Ft/Lb 75Nm 1/2" Square Drive Transducer
UTA-677-0-75-0-AP	50Ft/Lb 75Nm 1/2" Square Drive Transducer w/Angle
UTA-453-0180-0P	132Ft/Lb 180Nm 1/2" Square Drive Transducer
UTA-453-0180-AP	132Ft/Lb 180Nm 1/2" Square Drive Transducer w/Angle
UTA-454-0250-0P	184Ft/Lb 250Nm 3/4" Square Drive Transducer
UTA-454-0250-AP	184Ft/Lb 250Nm 3/4" Square Drive Transducer w/Angle
UTA-454-0500-0P	368Ft/Lb 500Nm 3/4" Square Drive Transducer
UTA-454-0500-AP	368Ft/Lb 500Nm 3/4" Square Drive Transducer w/Angle
UTA-455-0750-0P	553Ft/Lb 750Nm 1" Square Drive Transducer
UTA-455-0750-AP	553Ft/Lb 750Nm 1" Square Drive Transducer w/Angle
UTA-455-1400-0P	1032Ft/Lb 1400Nm 1" Square Drive Transducer
UTA-455-1400-AP	1032Ft/Lb 1400Nm 1" Square Drive Transducer w/Angle
UTA-477-3000-0P	2312Ft/Lb 3000 Nm 1 1/2" Square Drive Transducer
UTA-477-3000-AP	2312Ft/Lb 3000 Nm 1 1/2" Square Drive Transducer
UTA-477-01CR-5000-0P	3687Ft/Lb 5000Nm 1 1/2" Square Drive Transducer
UTA-477-5000-AP	3687Ft/Lb 5000Nm 1 1/2" Square Drive Transducer

Product Code - IS	Description
IS-448-0002-0	17in/lb 2Nm 1/4" hex drive transducer
IS-448-0002-A	17in/lb 2Nm 1/4" hex drive transducer w/Angle
IS-449-0005-0	44in/lb 5Nm 1/4" hex drive transducer
IS-449-0005-A	44in/lb 5Nm 1/4" hex drive transducer w/Angle
IS-451-0005-0P	5Nm SQ 1/4" drive transducer
IS-451-0005-AP	5Nm SQ 1/4" drive transducer w/Angle
IS-450-01CR-10-0	88in/lb 10Nm 1/4" hex drive transducer
IS-450-03CR-10-A	88in/lb 10Nm 1/4" hex drive transducer w/Angle
IS-451-01CR-10-0P	88in/lb 10Nm 1/4" drive transducer
IS-451-01CR-10-AP	88in/lb 10Nm 1/4" drive transducer w/Angle
IS-450-0020-0	180in/lb 20Nm 1/4" hex drive transducer
IS-450-0020-A	180in/lb 20Nm 1/4" hex drive transducer w/Angle
IS-451-0020-0P	180in/lb 20Nm 1/4" square drive transducer
IS-451-0020-AP	180in/lb 20Nm 1/4" square drive transducer w/Angle
IS-456-0025-0P	225in/lb 25Nm 3/8" square drive transducer
IS-456-01CR-25-AP	225in/lb 25Nm 3/8" square drive transducer w/Angle
IS-452-0050-0P	50Nm 3/8" square drive transducer
IS-452-0050-AP	50Nm 3/8" square drive transducer w/Angle
IS-452-0075-0P	50ft/lb 75Nm 3/8" square drive transducer
IS-452-0075-AP	50ft/lb 75Nm 3/8" square drive transducer w/Angle
IS-453-0180-0P	130ft/lb 180Nm 1/2" square drive transducer
IS-453-0180-AP	130ft/lb 180Nm 1/2" square drive transducer w/Angle
IS-687-0-250-0-0P	184ft/lb 250Nm 3/4" square drive transducer
IS-454-03CR-250-AP	184ft/lb 250Nm 3/4" square drive transducer w/Angle
IS-454-0500-0P	370ft/lb 500Nm 3/4" square drive transducer
IS-454-0500-AP	370ft/lb 500Nm 3/4" square drive transducer w/Angle
IS-455-1400-0P	1025ft/lb 1400Nm 1" square drive transducer
IS-455-1400-AP	1025ft/lb 1400Nm 1" square drive transducer w/Angle
IS-477-3000-0P	2212ft/LB 3000 Nm 1 1/2" square drive transducer
IS-477-02CR-3000-AP	2212ft/LB 3000 Nm 1 1/2" square drive transducer w/Angle
IS-477-01CR-5000-0P	3687ft/LB 5000Nm 1 1/2" square drive transducer
IS-477-5000-AP	3687ft/LB 5000Nm 1 1/2" square drive transducer w/Angle

All CheckStar's are supplied with a 12-month Calibration Certificate and if applicable, Angle Certification.

For pricing, availability or further technical information about the CheckStar Multi and RFm, please contact us online at www.crane-electronics.com or alternatively, email us at sales@crane-electronics.com.

The force in torque management

Locations

Crane Electronics Ltd

Watling Drive,
Sketchley Meadows
Hinckley LE10 3EY
United Kingdom
Tel: +44 (0) 1455 25 14 88
sales@crane-electronics.com

Crane Electronics Inc

1260 11th Street West,
Milan,
Illinois 61264
USA
Tel: +1 309-787-1263
salesusa@crane-electronics.com

Crane Electronics GmbH

Im Rank 5,
73655 Plüderhausen,
Germany
Tel: +49 (0)7181 9884-0
salesde@crane-electronics.com

Global

Crane Electronics has a worldwide network of dedicated distributors located across the globe. For your nearest official Crane distributor, please visit www.crane-electronics.com.



www.crane-electronics.com

