

# TORQ-HUB

**99%**  
**Accurate Torque Readings**



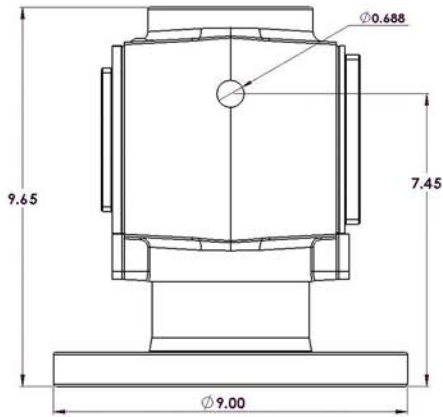
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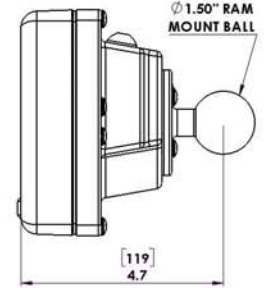
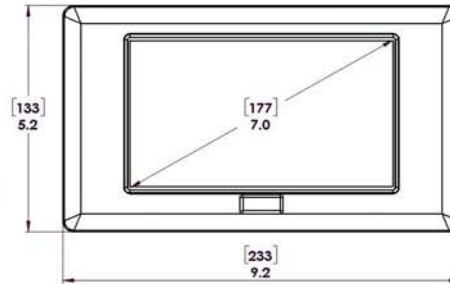


**[WWW.CONCEPT-CMI.COM](http://WWW.CONCEPT-CMI.COM)**



### 2", 2-1/2" & 2-5/8" Torq Hubs

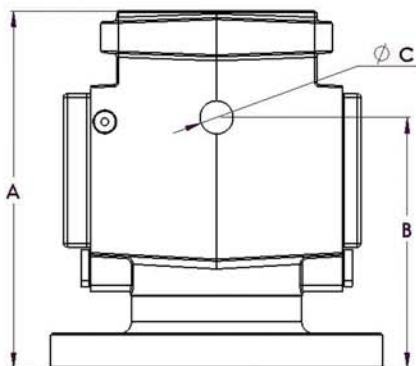
are offered Double-drilled to accommodate either the 5-1/4" or 7-5/8" bolt circle on the same hub. Torque ratings remain limited by bolt capacity (10,000 or 15,000 FT/LB). 3" are offered with the larger 7-5/8" pattern only.



|                                 |                   |
|---------------------------------|-------------------|
| <b>Rated Output (R.O.):</b>     | 2 mV/V nominal    |
| <b>Nonlinearity:</b>            | 0.1% of R.O.      |
| <b>Hysteresis:</b>              | 0.1% of R.O.      |
| <b>Nonrepeatability:</b>        | 0.05% of R.O.     |
| <b>Zero Balance:</b>            | 1.0% of R.O.      |
| <b>Compensated Temp. Range:</b> | 60° to 160° F     |
| <b>Safe Temp. Range:</b>        | -65° to 200° F    |
| <b>Temp. Effect on Output:</b>  | 0.005% of Load/°F |
| <b>Temp. Effect on Zero:</b>    | 0.005% of R.O./°F |
| <b>Terminal Resistance:</b>     | 350 ohms nominal  |
| <b>Excitation Voltage:</b>      | 5 VDC             |
| <b>Safe Overload:</b>           | 150% of R.O.      |

| FLANGE BOLT CIRCLE DIA. | HEX SHAFT SIZE | PART NUMBER | TORQUE RATING (MAX.)                                 |
|-------------------------|----------------|-------------|--|
| 5-1/4" & 7-5/8"         | 2"             | TQHB-2      | 10,000 ft-lb (5-1/4" BC)<br>20,000 ft-lb (7-5/8" BC) |
| 5-1/4" & 7-5/8"         | 2-1/2"         | TQHB-212    | 10,000 ft-lb (5-1/4" BC)<br>20,000 ft-lb (7-5/8" BC) |
| 5-1/4" & 7-5/8"         | 2-5/8"         | TQHB-258    | 10,000 ft-lb (5-1/4" BC)<br>20,000 ft-lb (7-5/8" BC) |
| 7-5/8"                  | 3"             | TQHB-3      | 20,000 ft-lb (7-5/8" BC)                             |

| PART NO.     | SHAFT  | BOLT CIRCLE  | TORQUE RATING (MAX.)   | "A"            | "B"            | "C"             | WEIGHT          |
|--------------|--------|--|--|----------------|----------------|-----------------|-----------------|
| TQHB - 75mm  | 75mm   | 6 ea-1/2" on 5.25" B.C.<br>12 ea-5/8" on 7-5/8" B.C.   | 13,558 Nm/ 10,000 ft-lb (5-1/4" BC)<br>27,116 Nm/ 20,000 ft-lb (7-5/8" BC) | 9.65"<br>245mm | 6.78"<br>172mm | 0.97"<br>24.6mm | 74lb<br>33.6Kg  |
| TQHB - 100mm | 100mm  | 12 ea-5/8" on 7-5/8" B.C.<br>12 ea-3/4" on 8-5/8" B.C. | 27,116 Nm/ 20,000 ft-lb (7-5/8" BC)<br>94,907 Nm/ 70,000 ft-lb (8-5/8" BC) | 11.4"<br>290mm | 8.03"<br>204mm | 1.06"<br>26.9mm | 97.5lb<br>44Kg  |
| TQHB - 4IN   | 4 inch | 12 ea-5/8" on 7-5/8" B.C.<br>12 ea-3/4" on 8-5/8" B.C. | 27,116 Nm/ 20,000 ft-lb (7-5/8" BC)<br>94,907 Nm/ 70,000 ft-lb (8-5/8" BC) | 12.2"<br>310mm | 8.03"<br>204mm | 1.06"<br>26.9mm | 101lb<br>45.8Kg |



### 75mm, 100mm & 4" Torq Hubs

All square shaft Torque Hubs are offered double-drilled to accommodate either 5-1/4", 7-5/8" or 8-5/8" bolt circle on the same hub. Torque ratings remain limited by bolt capacity (10,000, 20,000 or 70,000 FT/LB).

# Improved Reporting



CMI is pleased to introduce our vastly improved reporting capabilities.

- Reports are exportable directly from the display, either via email using a smartphone with its' hotspot enabled, or through the onboard USB port connected to a flash drive.
- Reports are exported as both bare data (.dat file – open with Excel), and as a PDF line chart as shown below. One cover page for the job and a page for each individual pile is generated.
- Additionally, the PDF line chart will show depth as it is entered during the job. This will give the engineer a view of depth vs. torque on each pile. An optional hand held trigger is available which allows the operator (or his helper) to depress it when the pile/ anchor reaches a marked depth, allowing a more accurate (and more continuous) representation of torque vs. time”

**UTILCON Torque Report**

Job: UTILCON

| Pile  | Date Entered | Target Torque | Actual Torque | Page |
|-------|--------------|---------------|---------------|------|
| JIM 1 | 15-Dec-2016  | 25,000lb-ft   | 33,895ft-lb   | 2    |

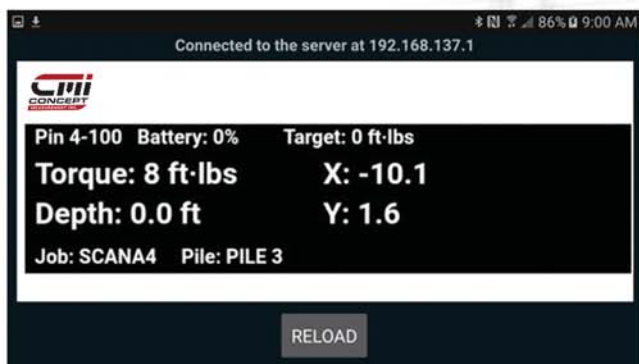
**User customizable client name and job information (Client logo's can easily be added with any 3rd party PDF editor software)**

**UTILCON Torque Report**

|                 |                             |
|-----------------|-----------------------------|
| Job Name:       | JIM 1                       |
| Target Torque:  | 25,000 (N·m) 33,895 (ft·lb) |
| Maximum Torque: | 26,278 (N·m) 35,027 (ft·lb) |
| Target Depth:   | 15 (ft) 3.1 (m)             |
| Maximum Depth:  | 5 (ft) 1.5 (m)              |
| Latitude:       | 0                           |
| Longitude:      | 0                           |
| Date:           | 15-Dec-2016                 |
| Notes:          |                             |

**Simple to review look for torque data exceeding user preset threshold.**

## Smartphone Apps



CMI is now offering a free smartphone app for both iOS (Apple) and Android (Samsung, etc) users.

- Available for FREE download from either the Apple App Store or Google Play.
- Allows a user to remotely monitor torque and inclination data for piles/ anchors as they are installed via a WiFi connection between their smartphone and our display.

# 99% Accurate Torque Readings



Concept Measurement Inc. is pleased to announce their latest product, the Torq Hub. Utilizing the same patented technology as our Torq Pin product, it delivers over 99% accurate torque readings. Data is sent over a robust 2.4 GHz RF FHSS signal to the handheld display/datalogger.

The Torq Hub reliably and accurately measures torque forces in either ft/lb or N-m, as well as pile/ anchor inclination.

This torque monitoring and data logging device is intended to replace the Kelly Bar Adaptor or mount directly onto the drive head output shaft. It is available in 2", 2-1/2", 2-5/8" & 3" hex kelly shaft sizes.

Wireless signal is 2.4 GHz FHSS RF. Outdoor range – up to 2.5 miles (4 km) Frequency Hopping Spread Spectrum technology

7" Window OS LCD touchscreen in a rugged ABS casing. Designed to IP67 ingress protection.

Circuit boards, firmware and software all designed by CMI specific to the application. Fully potted, sealed, gasketed and cushioned to ensure maximum protection and long life.



The heart of the Torq Hub is the PCB containing a microprocessor which converts the analog strain gage input to a digital signal which is transmitted over a robust 2.4 GHz RF Signal

Available with 2", 2-1/2", 2-5/8" & 3" hex input shafts



Available with 5-1/4" & 7-5/8" bolt circle flange types

## Now Offering Square Output Shaft Hubs

Concept Measurement Inc. is pleased to announce their latest products, larger, square shaft versions of our successful and trusted Torq Hub. Utilizing the same patented technology as our Torq Pin product, it delivers over 99% accurate torque readings. Data is sent over a robust 2.4 GHz RF FHSS signal to the handheld display/ datalogger.

The Torq Hub reliably and accurately measures torque forces in either ft/lb or N-m, as well as pile/ anchor inclination.

This torque monitoring and data logging device mounts directly beneath anchor drive units—on the larger, square drive output shaft. Offered in 75mm, 100mm & 4" square output shaft versions. CMI is currently developing a Torq Spool product line for output shaft sizes larger than these.



75mm Hub

100mm Hub