

TORQ-SPOOL



TORQ-SPOOL RF



TORQ-SPOOL WIFI

CMI
CONCEPT

MEASUREMENT INC.

WWW.CONCEPT-CMI.COM

COMPLETE FORCE MEASUREMENT

The TorqSpool is an accurate and robust means of measuring torque on screw (helical) pile installations. We offer both the existing RF 2.4 GHz FHSS product – and our new, more economical WiFi version. This torque monitoring and data logging device can be fitted with drive and pile adapters - and easily placed between your anchor drive and pile being installed.

The TorqSpool reliably and accurately measures torque forces in either ft/lb or N-m values, as well as pile/ anchor inclination. Data is logged and can be transmitted as “bare” data in a csv file – or compiled into a PDF line chart report. Output is achieved through either email (WiFi connection to smartphone) – or USB (USB drive installed into port at rear of display).

RF 2.4 GHz FHSS System:

Suited for larger, longer range wireless transmission requirements. This option includes our 7” Windows® 10 based LCD touchscreen display, with cab mounts and power supply harness included. This display also transmits a WiFi signal to any mobile device with the CMI TorqApp installed – for viewing via the app, rather than the display.



RF Option
Range: 185 ft - 40 channels

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. Sealed, gasketed and cushioned to ensure maximum protection and long life.



WiFi System

Range: 85 ft - 13 channels

The CMI WiFi option allows you to use your own device. Our WiFi signal can be received by either iOS™ or Android™ devices - and displayed/ logged/ reported with our free TorqApp.

The shorter range, more economical WiFi version is offered for smaller installations. This option includes the measurements noted on the RF version (torque and angle), and also includes RPM measurement – and GPS location. This system communicates with the free CMI TorqApp (available on iOS™ or Google Play™) installed on a smartphone or tablet (Note: A device with cellular connection with a SIM card is required for emailing of reports from the job site).

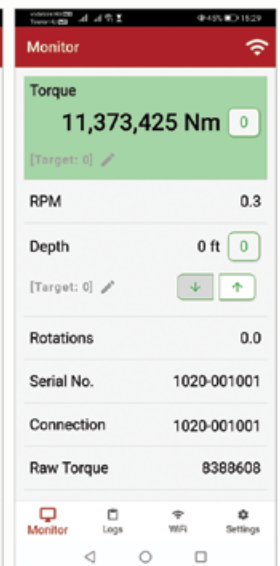
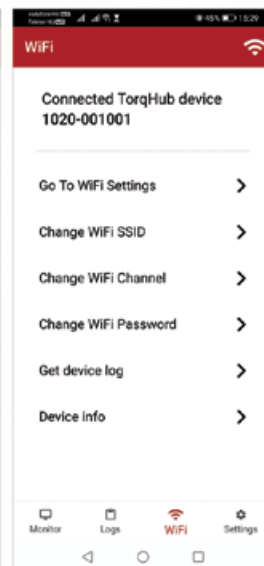
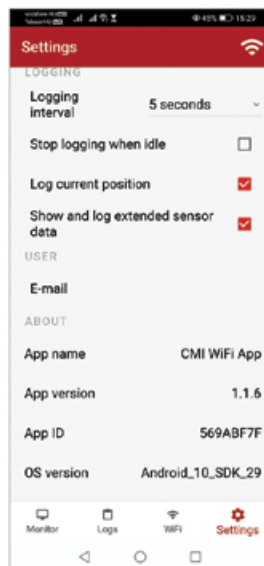
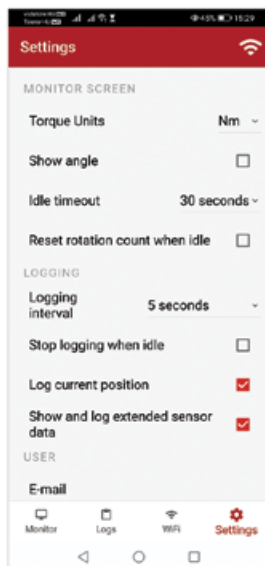


Smartphone Apps

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.

Internet connection is not required for WiFi Hub to function (unit does not need to be operating in cell coverage). Internet connection is only required to email reports.



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. The user can also choose to email or export via USB - a smaller .csv format file.
- ▶ Reports are exported as both bare data (.csv 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"

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

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

CMI Depth Trigger Wireless RF System option

Replaces standard power supply cable for CMI's RF display—adding a cable branching to plastic hand held cylinder with button on top surface.

Allows the user to easily press the button—to record depth mark—as they see graduations marked on the pile advance to meet the ground surface.

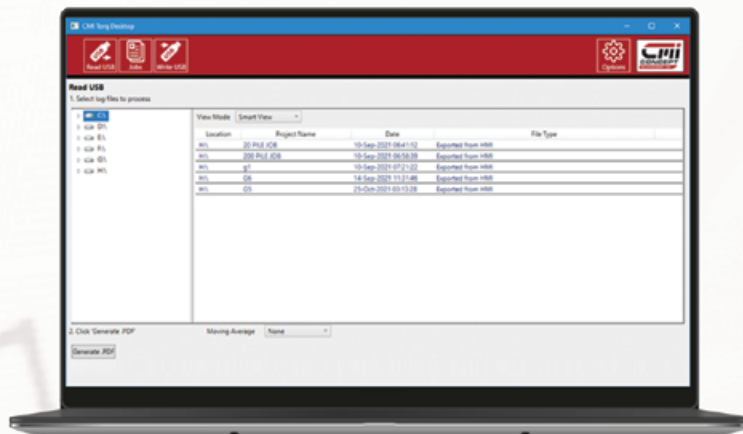
This option is a considerable time saving and comfort adding device for the operator. It can be mounted to machine control handles—and depth marks become an easy addition to machine operation.



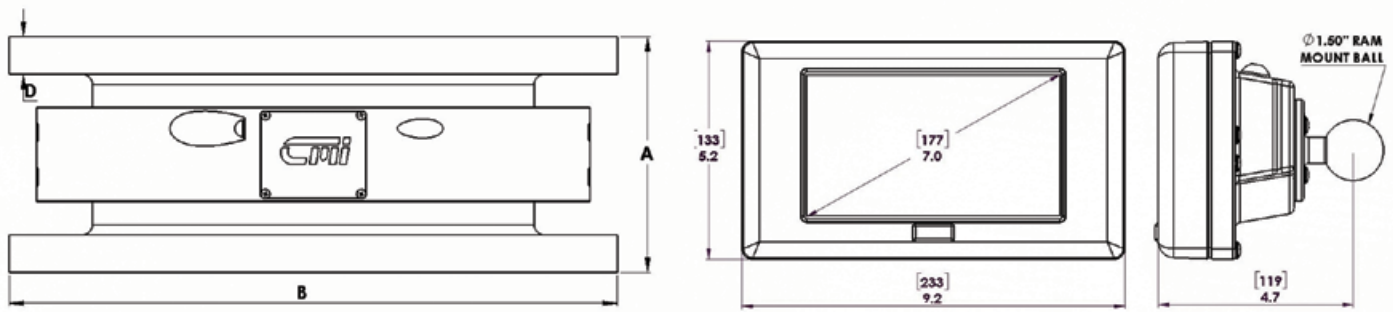
CMI Reporting

Our new offline Windows® 10 App is well suited to larger installation jobs with a large volume of piles to report. It is designed to offer unique and time-saving functions.

- ▶ Offline "Pre-Entry: Job variables (pile numbers, operator name, job site, client, etc.) can all be entered into the application prior to beginning a large job, saving your operator considerable time in the field.
- ▶ Offline PDF Report Generation: On projects with a large volume of piles, generating the PDF line chart on the small display can be time consuming. Simply export your data as the CSV file option, return or send this to a machine with our Windows 10 application installed. The generation of the PDF report is a quick operation.
- ▶ The Windows® 10 app is currently available for the RF 2.4 GHz FHSS system. It will be updated to interface with the new WiFi system in the near future.

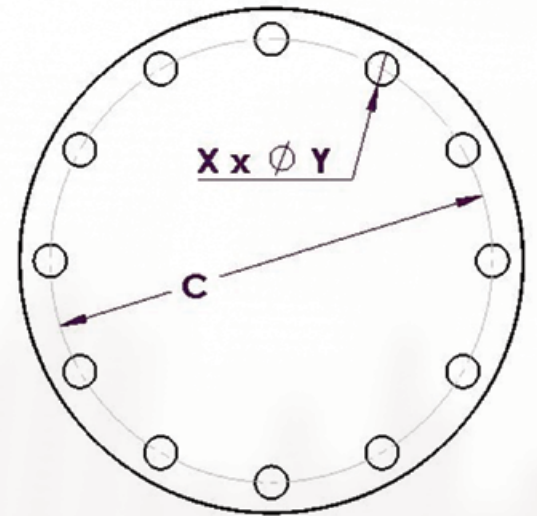


COMPLETE FORCE MEASUREMENT



Units:	ft/lb, N-m, Ft, Mt
Resolution:	Torque - 1 ft/lb; N-m – Depth 0.00 Ft; N-m
Accuracy	+/- 1.0% F.S.O.
Safe Temp. Range:	-40°C – +50°C
Excitation Voltage:	5 VDC
Safe Overload:	200% of R.O.
Batteries:	Gen A - 12V rechargeable Li-ion Battery Pack Gen B - 4 x 18650 rechargeable Li-ion Flat Top
Range	RF - 90m (295 feet), WiFi - 20m (66 feet)
Environmental Sealing	Designed to IP67 requirements

Recommended Studs/Nuts – for Torq Spools	
TQSP-30K	24 ea - 5/8"-11 UNC x 3-1/2" B7 w/ 48 ea - 5/8"-11 UNC 2H Nuts
TQSP-70K	24 ea - 3/4" -10 UNC x 4" B7 w/ 48 ea - 5/8"-11 UNC 2H Nuts
TQSP-150K	24 ea - 1" -8 UNC x 5" B7 w/ 48 ea - 1"-8 UNC 2H Nuts
TQSP-250K	24 ea - M30-3.5 x 150mm Class 12.9 w/ 48 ea - M30-3.5 Class 12 Nuts
TQSP-375K	32 ea - 1-1/8" -8 UN x 6" B7 w/ 64 ea - 1-1/8" -8 UN 2H Nuts



	PART NO.	TORQUE RATING (MAX)	"A"	"B"	"C"	"D"	"Y"	"X"	Weight
RF	TQSP-30K	30,000 ft-lb/	7.00"	9.00"	7.63"	0.75"	0.63"	12 Holes	62 lb
WIFI	TQSP-WF-30K	40,674 N-m	178mm	229mm	194mm	19.1mm	15.9mm	12 Holes	28.1 Kg
RF	TQSP-70K	70,000 ft-lb/	7.85"	10.24"	8.63"	1.05"	0.75"	12 Holes	104 lb
WIFI	TQSP-WF-70K	94,907 N-m	199.4mm	260mm	219mm	26.7mm	19mm	12 Holes	47 Kg
RF	TQSP-150K	150,000 ft-lb/	9.00"	14.0"	12.00"	1.25"	1.00"	12 Holes	200 lb
WIFI	TQSP-WF-150K	203,373 N-m	229mm	356mm	305mm	31.8mm	25.4mm	12 Holes	91 Kg
RF	TQSP-250K	250,000 ft-lb/	9.75"	17.52"	15.551"	1.38"	1.13"	12 Holes	356 lb
WIFI	TQSP-WF-250K	338,954 N-m	248mm	445mm	395mm	35mm	30mm	12 Holes	161 Kg
RF	TQSP-375K	375,000 ft-lb/	10.25"	23.75"	21.75"	1.50"	1.13"	16 Holes	630 lb
WIFI	TQSP-WF-375K	508,431 N-m	260mm	603mm	552.5mm	38.1mm	28.6mm	16 Holes	286 Kg



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