



Down Hole Gauge

Canada Tech Quartz (CTQ) II . . . QM200

Canada Tech has improved our Canada Teck Quartz (CTC) II Tool to provide you with the same highly accurate pressure and temperature data in a new housing.

The integration of QuartzDyne hybrid digital transducer with our industry leading electronics has transpired into an extremely durable 3.6 Volt Quartz tool. The CTQ II utilizes a 2CC Cell Lithium Battery resulting in increased battery efficiency.

Designed to withstand the harshest downhole environments. The CTQ II is low in maintenance and is cost effective because of its advanced construction and smaller size.

The Canada Tech Quartz II delivers data with accuracy, resolution and long term stability that is unmatched by competitors.

The 200°C version offers a disposable electronic controller module.



Features	Applications	Accessories	Part No.
30.5" in length	Interference Testing	Shipping case assembly	101980
Low Maintenance	Production Testing	Shipping Kit	100208
3.6 Volt Electronics	Well Testing	USB Int. Box	101821
0.02% Full Scale Accuracy Level	Well Stimulations	Serial Int. Cable**	101059
Low Cost		Serial Int. Box**	101848
		Serial Int. Cable**	102139
		Serial Int.Power Supply**	102141
		Battery Tester	102142
		2CC Cell Lithium	Varies depending on temperature rating

**only to be use with 150°C electronics

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General Specifications		Data Acquisition Specifications	
Approximate Length	30.5"	Memory Capacity	500,000 records
Diameter	1 1/4"	Record Contents	Time/Pressure/Temperature
Thread	3/4 - 16 UNF	Sample Interval	1 second - 1 hour
Circuit	Hybrid	Program Segments	15
Housing Material	Inconel 718	Communications	Standard PC USB or RS 232 Port
Diaphragm Material	Inconel Bellows	Software	Windows compatible
O-Rings	Viton 90 Durometer Aflas or Chemraz		

Pressure Specifications			
Sensors	Thickness Shear	Mode Quartz Resonator	
Standard Ranges	0 - 10,000 psi	0 - 16,000 psi	30.5
Available Calibration Temp. Ranges	25°C - 150°C	25°C - 150°C 177°C - 200°C	25°C - 150°C 177°C - 200°C
Accuracy ² (% FS)	0.015	0.02	0.02
Typical Accuracy	0.012	0.015	0.015
Achievable Resolution ³ (psl/sec)	<0.006	<0.008	<0.008
Repeatability (% FS)	<0.01	<0.01	<0.01
Nominal Sensitivity (Hz/psi)	2.8	2.5	2.5
Drift at 14 psi and 25°C (% FS/year)	Negligible	Negligible	Negligible
Drift at Max. Pressure & Temp. (% FS/year)	0.02	0.02	0.02

Temperature Specifications		
Standard Ranges	25°C - 150°C	25°C - 150°C
Accuracy (°C)	0.6	0.6
Typical Accuracy c	0.15	0.15
Achievable Resolution ³ (°C/sec)	<0.005	<0.005
Repeatability °C	<0.01	<0.01
Average Sensitivity (Hz/°C)	180	180
Frequency Output Range (kHz)	10 - 70	10 - 70
Drift at 177°C (°C/year)	<0.1	<0.1

Power Specifications	
Source	2CC Cell Lithium Battery
Voltage	3.6 VDC
Current	2.8 µAh per sample
Battery Life	Temperature Dependent

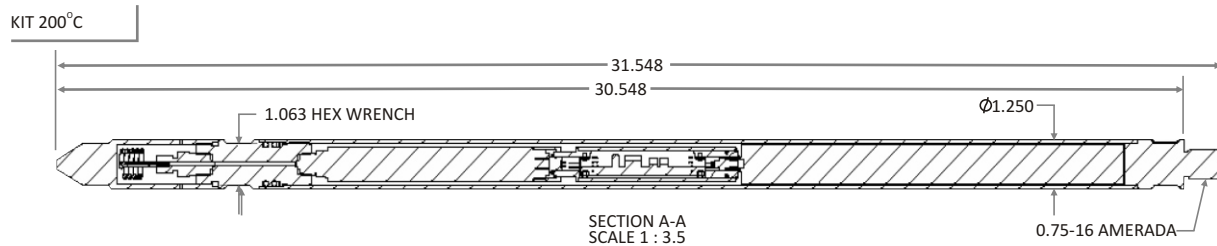
1. Units calibrated with bellows meet performance specifications from 200 psi to full scale. Operating range is from 0 to FS. 2. Accuracy is the combined effects of repeatability, hysteresis and corrected linearity over the calibrated temperature range 3. Achievable Resolution assumes a 7.2 MHz reference is used as the clock in a period-based counter. *Please note that specifications & drawings are subject to change without notification.*

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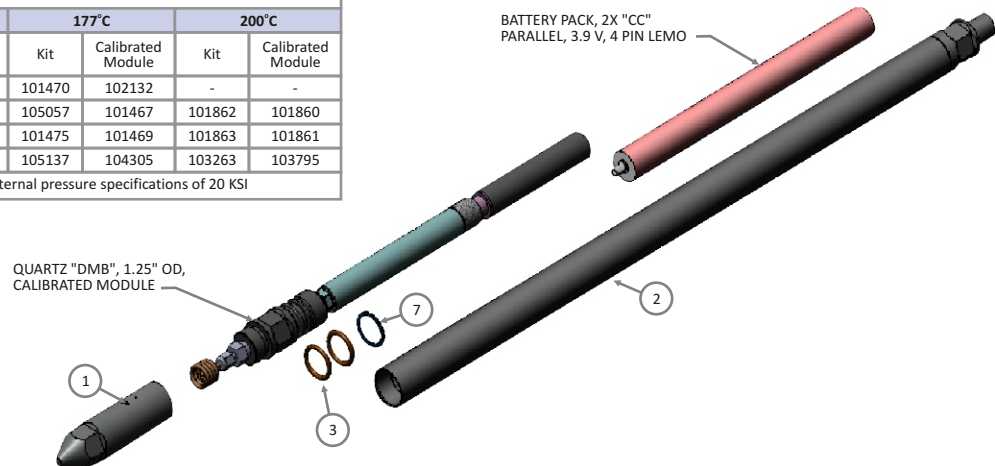
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QUARTZ "DMB" 1.25" OD, INCONEL 718						
Kit includes a calibrated module, memory module, battery barrel, bullnose and standard Viton o-rings with PEEK back-up						
Pressure (ksi)	150°C		177°C		200°C	
	Kit	Calibrated Module	Kit	Calibrated Module	Kit	Calibrated Module
10	101040	101039	101470	102132	-	-
16	101473	101467	105057	101467	101862	101860
20	-	-	101475	101469	101863	101861
25*	-	-	105137	104305	103263	103795

* Do not exceed maximum external pressure specifications of 20 KSI



KIT CONTENTS				
ITEM NO	PART NO	DESCRIPTION	QTY	
1	101037	QUARTZ "DMB", 1.25" OD, BULLNOSE	1	
2	100273	QUARTZ "DMB", 1.25" OD, BATTERY BARREL, 2X "CC", INCONEL 718	1	
3	100356	O-RING, 2-212, VITON, 90 DURO	2	
7	105226	BACK-UP, 8-212, CUSTOM, PEEK, SPLIT, 0.922" ID X 1.130"	1	

NAME		DATE
DRAWN	dcs	07/20/07
CHECKED	-	-
COLLAPSE (psi)	TENSILE	BURST (psi)
	(lbs)	(lbs)

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NOT TOPSCALE SHEET 1 OF 1

QUARTZ "DMB", 1.25" OD, KIT INCONEL 718

SIZE	PART NO.	DRAWING NO.	REV.
A	SEE TABLE	D0000263	-

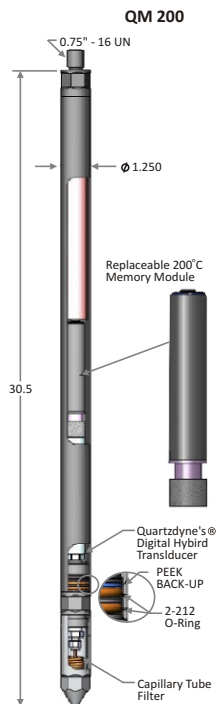
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Canada Tech Quartz (QM-200)

Quartz, "DMB", QM 200, 1.25" OD

20060425



SPECIFICATIONS	
Pressure	
Maximum External Pressure	20 ksi
Sensor type	Quartz
Accuracy	± 0.02% full scale
Long term stability	0.015% full scale
Drift	0.02% full scale per year
Resolution	< 0.008 % psi/second
Temperature	
Maximum temperature	200oC
Accuracy	± 0.15°C
Prepeatability	<0.01°C
Resolution	< 0.01°C per second
Power	
Battery type	2 CC Lithium
Operating voltage	3.2 to 3.6 v
Memory	
Sampling interval	One sec. to one hour
Capacity	1,000,000 samples in sequential mode or 500,000in redundant memory mode
Record contents	Time, pressure, temp.

The QM 200 measures pressure and temperature and includes Canada Tech's replaceable 200°C memory module (part no. 101864)

CAUTION: Use of the memory module for more than three temperature cycles is not recommended by Canada Tech. (one temperature cycle is defined as going from ambient temperature to above 165°C & back to ambient)

QUARTZ "DMB" QM 200, 1.25" OD, INCONEL 718, 200°C						
Kit includes a calibrated module, memory module, battery barrel, bullnose and standard Viton o-rings and PEEK back-up						
Pressure (ksi)	150°C		177°C		200°C	
	Kit	Calibrated Module	Kit	Calibrated Module	Kit	Calibrated Module
10	101040	101039	101470	102132	-	-
16	101473	101467	105057	101467	101862	101860
20	-	-	101475	101469	101863	101861
25*	-	-	105137	104305	103263	103975

* Do not exceed maximum external pressure specifications of 20 KSI

Accessories (customer-replaceable parts)

DESCRIPTION	
BATTERY TESTER (4 PIN/5 PIN)	102195
MEMORY TOOL, CUSTOM LOGO APPLICATION	104886
QUARTZ "DMB", 1.25" OD, BATTERY BARREL, 1 "CC", INCONEL 718	102140
QUARTZ "DMB", 1.25" OD, BATTERY BARREL, 2 X "CC", INCONEL 718	100273
QUARTZ "DMB", 1.25" OD, BULLNOSE	101037
QUARTZ "DMB", 1.25" OD, CROSSOVER TO DST	104732
QUARTZ "DMB", 1.25" OD, REPLACEABLE MEMORY MODULE, 200°C MAX	101864
QUARTZ "DMB", 1.25" OD, SHIPPING CASE, ASSEMBLY	101980
QUARTZ "DMB", 1.25" OD, TANDEM ADAPTER	101038*
SOFTWARE CD, MEMORY TOOL	101928
TORQUE KIT, 80 FT LB TORQUE WRENCH, 17 MM CROWFOOT	105221
USB, EMBEDDED DOWNLOAD CABLE, 4 PIN LEMO CONNECTOR	104311

* Used for connecting tools together; one tandem adapter is free with the purchase of a set of two gauges.

Consumables

DESCRIPTION	Part No.
BACK-UP, 8-212, CUSTOM, PEEK, SPLIT, 0.922" ID X 1.130" OD	105226
FITTING, REMOVEABLE SEAL CONE, AUTOCALVE M-250-C	44886
KOPR-KOTE 225 ML - BRUSH TOP	100409
O-RING, 2-212, VITON, 75 DURO	100688
O-RING, 2-212, VITON, 90 DURO	100356

Lithium Battery Pack Description (Sorted on Temperature)

Qty.	Type	Voltage	CAP (Ah)	Temp (°C)	OAL (inch)	Cennector	Part No.
1	2 C (PARALLEL) For short battery barrel only	3.9	12.4	150	6.6875	4 PIN LEMO	102122
1	2 C (PARALLEL)	3.9	26	165	10.8	4 PIN LEMO	101059
1	2 C (PARALLEL)	3.6	242	180	10.8	4 PIN LEMO	104793
1	4 C (PARALLEL)	3.6	18	200	10.8	4 PIN LEMO	101925

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