




# CONCRETE THICKNESS & FLAW GAUGES [CTG™]

If you currently own one of the standard "thickness only" CTG Models, it can be reconfigured/modified at Olson Instruments to handle a broader range of tests and thicknesses as shown on page 2, or you can purchase any Model already configured with the necessary components.






<b>Specifications</b>	
<b>CTG Standard Model CTG-1T™ (Thickness) + CTG-1TF™ (Thickness &amp; Flaw)</b>	
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p><b>Test Gauge [All Models]</b></p> </div> <div style="text-align: center;">  <p><b>Standard Test Head</b></p> </div> </div> <div style="margin-top: 20px; text-align: center;">  <p><b>Telescoping Pole</b> for use on flatwork or overhead</p> </div>	<ul style="list-style-type: none"> <li>» <b>Thickness Range:</b> 3.2" to 6 ft (80mm to 1.8 m)</li> <li>» <b>Accuracy:</b> ± 2% at high resolution when calibrated on a known thickness location</li> <li>» <b>Report Capability:</b>  <b>CTG-1T:</b> Numerical thickness summary table downloadable to spreadsheet  <b>CTG-1TF:</b> Raw data downloadable to PC/Notebook for analyses using Olson's Windows based WINTFS-IE software</li> <li>» <b>Power:</b> internal rechargeable NiMH battery pack (~7 hrs of operation per charge); external battery charger (AC power unit, overnite charging), can use 10 - AA size alkaline batteries or run on the AC power unit</li> <li>» <b>Learning Curve:</b> less than 10 minutes!</li> <li>» <b>Weight:</b> 4.4 lbs (2.0 kg) including test head and gauge with batteries</li> <li>» <b>Sampling Rate:</b> 45,600 samples/second</li> <li>» <b>Maximum Signal Frequency:</b> 22,800 Hz</li> <li>» <b>Frequency Resolution:</b> 44.5 (high resolution) or 89 (low resolution)</li> <li>» <b>Number of Samples Acquired Per Test:</b> 256 (normal) or 512 (high resolution)</li> <li>» <b>Maximum Number of Tests Stored:</b> 300</li> <li>» <b>Processing Time for 1 Test:</b> ~3 seconds</li> <li>» <b>Cable Length for Test Head:</b> 6 ft (2 m)</li> </ul>
<b>Features</b>	
<ul style="list-style-type: none"> <li>» Ruggedized handheld test head with integrated displacement transducer and solenoid impactor</li> <li>» No coupling agents required for use of test head on concrete</li> <li>» Works on cured, hardened concrete in air or on grade</li> <li>» Works through paint and most types of bonded tile (checks tile bonding too!)</li> <li>» Easy to read LED display for outdoors and switchable backlight for indoors</li> </ul>	<ul style="list-style-type: none"> <li>» English (inches) or Metric (centimeters) thickness and spectral echo signals can be displayed by just a click of a button at top of test gauge</li> <li>» Easy velocity calibration at known thickness location</li> <li>» Download test time/date and results into your PC through serial port</li> <li>» Thickness data table can be imported into most spreadsheet programs</li> <li>» Save selected test time/date and spectral thickness results for later review</li> </ul>

## CONCRETE THICKNESS & FLAW GAUGES [CTG]



All of the specifications for the CTG Models shown below are common to the CTG-1T Standard Model shown on page 1 except for the items listed in the 4 columns. If you choose to purchase any of our **FLAW GAUGES**, you will receive all the components of the Thickness Only Models (1T) with the addition of Olson's WINTFS-IE software for analyses. For the SW Models, the WINTFS -IE/WINTFS-SASW software package will display phase, velocity or modulus data vs. frequency or wavelength of a single test.

CTG MODELS with Enhanced Features			
CTG-IT-ST [Super Thin]	Components	Thickness Range	Report Capability
	<ul style="list-style-type: none"> <li>» Test Gauge</li> <li>» Test Head with High Frequency Impactor</li> <li>» Telescoping Pole</li> </ul>	<ul style="list-style-type: none"> <li>» 1.5" to 6 ft (38mm to 1.8 m)</li> </ul>	Numerical Thickness Summary Table, Downloadable to Spreadsheet
CTG-IT-SW [Surface Wave Velocity]	Components	Thickness Range	Report Capability
	<ul style="list-style-type: none"> <li>» Test Gauge</li> <li>» Standard Test Head</li> <li>» Telescoping Pole</li> <li>» SASW Detachable Arm with second transducer</li> </ul>	<ul style="list-style-type: none"> <li>» 3.2" to 6 ft (80mm to 1.8 m)</li> </ul>	Numerical Thickness Summary Table, Downloadable to Spreadsheet
CTG-IT-ST-SW [Super Thin + Surface Wave Velocity]	Components	Thickness Range	Report Capability
	<ul style="list-style-type: none"> <li>» Test Gauge</li> <li>» Test Head with High Frequency Impactor</li> <li>» Telescoping Pole</li> <li>» SASW Detachable Arm with second transducer</li> </ul>	<ul style="list-style-type: none"> <li>» 1.5" to 6 ft (38mm to 1.8 m)</li> </ul>	Numerical Thickness Summary Table, Downloadable to Spreadsheet

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## Comparison Chart

Parameters	Normal	Thick	Super Thin	SASW
Sampling Rate:	45,600 samples/second	14,400 samples/second	116,000 samples/second	45,600 samples/second (2 channels)
Maximum Signal Frequency:	22,800 Hz	7,200 Hz	58,000 Hz	22,800 Hz per channel
Usable Thickness Range (nominal):	3.2" to 24" (81 mm to 610 mm)	12" to 72" (36 mm to 150 mm)	1.4" to 6" (36 mm to 150 mm)	5" or greater (36 mm to 150 mm)
Frequency Resolution:	44.5 Hz (high resolution) or 89 Hz (normal resolution)	14 Hz (high resolution) or 28 Hz (normal resolution)	113.5 Hz (high resolution) or 227 Hz (normal resolution)	113.5 Hz (high resolution) or 227 Hz (normal resolution)
Transducer Spacing:				8" (203 mm)
Measurable Velocity Range (P-Wave):				9,000 - 16,000' per second (2,750 - 4,900 m/s)

## General Specifications:

### Downloaded Parameters (data table) Per Record:

Test Number, Measured Thickness, Velocity Used, Maximum Thickness Setting, Q Value (echo peak sharpness), Units, Test Mode, Test Date, Test Time

### Software Used for Post-Data Processing:

WINTFS-IE and WINTFS-SASW

### Notes:

- » All downloaded waveform data for CTG-1TF download is saved and downloaded at high resolution regardless of the resolution setting on the CTG by padding data with zero's digitally
- » Thickness cursors available on all modes of the CTG data display for secondary resonant echo peak depths
- » **CTG-1T** Models only output thickness summary tables
- » **CTG-1TF** Models output thickness summary tables and data for post-processing on a Windows 2000 or newer PC using WINTSF-IE or WINTFS-SASW

SPECIFICATIONS