You can now verify the THICKNESS of Concrete Slabs in CTG

1 Easy Step!

You no longer need to drill, core, or excavate to determine concrete slab thickness using Olson's product line of Concrete Thickness & Flaw Gauges!

60 Cores = 10 hrs on site

Job Cost = $3000

...and you still need to patch the holes!

VS.

60+ CTG Slab Tests = 1/2 hr on site

Job Cost = $100

...same results, no patching required!

TIME = $$$

CTG's save YOU a bundle!

CTG

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Concrete Thickness Gauges and Concrete Thickness/Flaw Gauges

The CTG line of instruments are hand-held, battery powered, nondestructive systems for measuring the thickness and integrity of concrete slabs, pavements, tunnel linings, walls and other plate-like structures using the Impact Echo principle. ***Requires no special knowledge or training*** – use it right out of the box with Olson's built-in default concrete parameters, or for greater accuracy, simply calibrate the CTG by testing a point of known concrete thickness as a reference for the speed of sound in that concrete and start testing!

Standard Model CTG-1TF (Thickness/Flaw Model)

Specifications

- **Thickness Range:** 3.2" to 6 ft (81 mm to 1.8 m)
- **Accuracy:** ± 2% at high resolution when calibrated on a known thickness location
- **Report Capability:**
  Numerical thickness summary table downloadable to spreadsheet
  Raw data downloadable to PC/Notebook for analyses using Olson's Windows based WinIE software
- **Power:** Internal reachargeable 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
- **Learning Curve:** Less than 10 minutes!
- **Frequency Resolution:** 44.5 (high) or 89 (low)
- **Number of Samples Acquired Per Test:** 256 (normal) or 512 (high resolution)
- **Processing Time for 1 Test:** ~ 3 seconds
- **Sampling Rate:** 45,600 samples/second
- **Maximum Signal Frequency:** 22,800 Hz
- **Weight:** 4.4 lbs (2.0 kg) combined for test head, gauge and batteries
- **Cable Length for Test Head:** 6 ft (2 m)

Features

- Ruggedized, hand-held test head with integrated displacement transducer and solenoid impactor
- No coupling agents required for use of test head on concrete
- Works on cured, hardened concrete in air or on grade
- Works through paint and most types of bonded tile (checks tile bonding too!)
- Easy to read LED display for outdoors and switchable backlight for indoors
- Switch between English (inches) or Metric (centimeters) units with the click of a button
- Easy velocity calibration at known thickness location, or use Olson's default parameters
- Download test time/date and results into your PC through serial port
- Thickness data table can be imported into most spreadsheet programs
- Save selected test time/date and spectral thickness results for later review

PAVEMENTS WALLS SLABS

Concrete Thickness/Flaw Gauges with Enhanced Features

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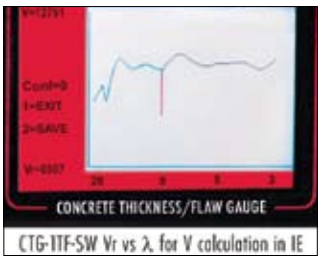
All of the specifications for the **CTG Models with enhanced features** below are common to the CTG-1TF Standard Model shown on the previous page. The CTG-1TF comes with Olson's WinIE software which will display phase, velocity, or modulus data vs. frequency or wavelength of a single test. The options of super thin (ST) for testing thin members, surface wave (SW) for obtaining velocity across a known distance, or both super thin and surface wave (ST-SW) can be added as indicated in the table below.

Telescoping Pole for use on flatwork or overhead

CTG Models with Enhanced Features

CTG-1TF-ST [Super Thin]	Components	Thickness Range	Report Capability
	» Test Gauge » Test Head with High Frequency Impactor » Telescoping Pole	» 1.5" to 6 ft (38 mm to 1.8 m)	Numerical Thickness Summary Table, downloadable to spreadsheet WinIE software for analyses
CTG-1TF-SW [Surface Wave Velocity]	Components	Thickness Range	Report Capability
	» Test Gauge » Standard Test Head » Telescoping Pole » SASW Detachable Arm with second transducer	» 3.2" to 6 ft (81 mm to 1.8 m)	Numerical Thickness Summary Table, downloadable to spreadsheet WinIE/WinSW software for analyses
CTG-1TF-ST-SW [Super Thin + Surface Wave Velocity]	Components	Thickness Range	Report Capability
 CTG-1TF-SW Vr vs λ for V calculation in IE	» Test Gauge » Test Head with High Frequency Impactor » Telescoping Pole » SASW Detachable Arm with second transducer	» 1.5" to 6 ft (38 mm to 1.8 m)	Numerical Thickness Summary Table, downloadable to spreadsheet WinIE/WinSW software for analyses

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CONCRETE THICKNESS & FLAW GAUGES [CTG]

Comparison Chart of CTG Models (Standard vs Enhanced Features)

Parameters »	Normal	Thick	Super Thin	Surface Wave
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/ channnel
Usable Thickness Range (nominal):	3.2" to 24" (81 mm to 610 mm)	12" to 72" (304 mm to 1.8 m)	1.4" to 6" (36 mm to 150 mm)	5" or greater (127 mm or greater)
Frequency Resolution:	44.5 Hz (high) or 89 Hz (normal)	14 Hz (high) or 28 Hz (normal)	113.5 Hz (high) or 227 Hz (normal)	113.5 Hz (high) or 227 Hz (normal)
Transducer Spacing:				8" (203 mm)
Measurable Velocity Range (P-Wave):				9,000 - 16,000 ft/ 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:

WinIE and WinSW

Notes:

» All waveform data collected with the CTG-1TF is saved and downloaded at high resolution regardless of the resolution setting on the CTG. Thickness cursors available on all modes of the CTG data display for secondary resonant echo peak depths.

» **CTG-1TF** Models output thickness summary tables and data for post-processing on a Windows PC using WinIE or WinSW software.

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