




TECHNICAL SPECIFICATIONS OF THE HANDYPROBE


November 2013

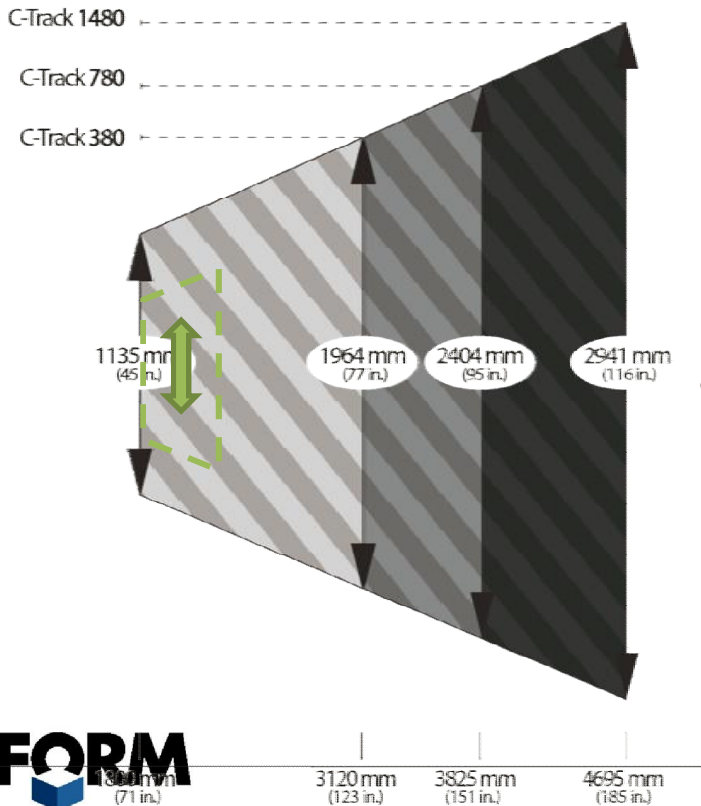
TECHNICAL SPECIFICATIONS		C-TRACK 380	C-TRACK 780	C-TRACK 1480	HANDY PROBE
ACCURACY ⁽¹⁾		Up to 0.022 mm (0.0009 in.)	Up to 0.025 mm (0.0010 in.)	Up to 0.030 mm (0.0012 in.)	n/a
SINGLE POINT REPEATABILITY ⁽³⁾	3.80 m ³ (135 ft ³)	0.045 mm ⁽²⁾ (0.0018 in.)	0.050 mm ⁽²⁾ (0.0020 in.)	0.055 mm ⁽²⁾ (0.0022 in.)	n/a
	7.80 m ³ (275 ft ³)	n/a	0.055 mm ⁽²⁾ (0.0022 in.)	0.065 mm ⁽²⁾ (0.0026 in.)	n/a
	14.8 m ³ (525 ft ³)	n/a	n/a	0.095 mm ⁽²⁾ (0.0037 in.)	n/a
VOLUMETRIC ACCURACY ⁽⁴⁾	3.80 m ³ (135 ft ³)	0.075 mm ⁽²⁾ (0.0029 in.)	0.080 mm ⁽²⁾ (0.0031 in.)	0.090 mm ⁽²⁾ (0.0035 in.)	n/a
	7.80 m ³ (275 ft ³)	n/a	0.085 mm ⁽²⁾ (0.0033 in.)	0.095 mm ⁽²⁾ (0.0038 in.)	n/a
	14.8 m ³ (525 ft ³)	n/a	n/a	0.170 mm ⁽²⁾ (0.0067 in.)	n/a
VOLUMETRIC ACCURACY (with MaxSHOT 3D or C-Link) ⁽⁵⁾		0.075 mm if L ⁽⁶⁾ ≤ 1.2 m (0.0029 in. if L ⁽⁶⁾ ≤ 4 ft)	0.085 mm if L ≤ 1.2 m (0.0033 in. if L ≤ 4 ft)	0.170 mm if L ≤ 3.0 m (0.0067 in. if L ≤ 4 ft)	n/a
		0.045 mm + 0.025 mm/m if L > 1.2 m (0.0018 in. + 0.0003 in./ft if L > 4 ft)	0.055 mm + 0.025 mm/m if L > 1.2 m (0.0022 in. + 0.0003 in./ft if L > 4 ft)	0.095 + 0.025 mm/m if L > 3.0 m (0.0037 in. + 0.0003 in./ft if L > 4 ft)	n/a
MEASUREMENT SPEED		30 Hz	30 Hz	30 Hz	30 Hz
WEIGHT		5.5 kg (12 lbs.)	5.5 kg (12 lbs.)	5.5 kg (12 lbs.)	450 g (1 lb.)
DIMENSIONS		1035 x 189 x 140 mm (40.8 x 6.8 x 5.5 in.)	1035 x 189 x 140 mm (40.8 x 6.8 x 5.5 in.)	1035 x 189 x 140 mm (40.8 x 6.8 x 5.5 in.)	204 x 159 x 97 mm (8 x 6.28 x 3.8 in.)
OPERATING TEMPERATURE RANGE		15 - 40 °C (59 - 104 °F)	15 - 40 °C (59 - 104 °F)	15 - 40 °C (59 - 104 °F)	15 - 40 °C (59 - 104 °F)
OPERATING HUMIDITY RANGE (NON CONDENSING)		10 - 90%	10 - 90%	10 - 90%	10 - 90%
CERTIFICATIONS		EN 301 489-1, EN 301 489-3, EN 300 220-1	EN 301 489-1, EN 301 489-3, EN 300 220-1	EN 301 489-1, EN 301 489-3, EN 300 220-1	EN 301 489-1, EN 301 489-3, EN 300 220-1

ACCURACY

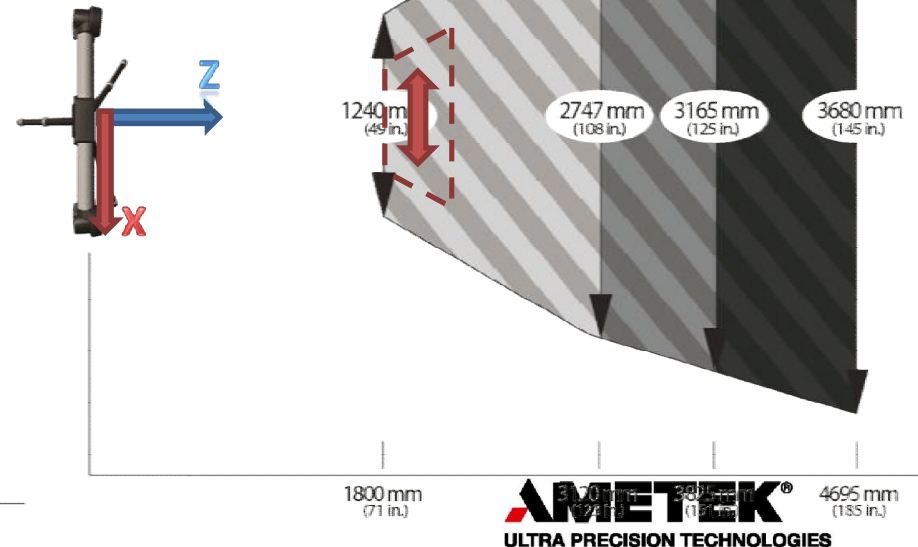
ACCURACY ⁽¹⁾	Up to 0.022 mm	Up to 0.025 mm	Up to 0.030 mm
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 = Artefact of 500mm long

 = Measurement area



CREAFORM



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ULTRA PRECISION TECHNOLOGIES

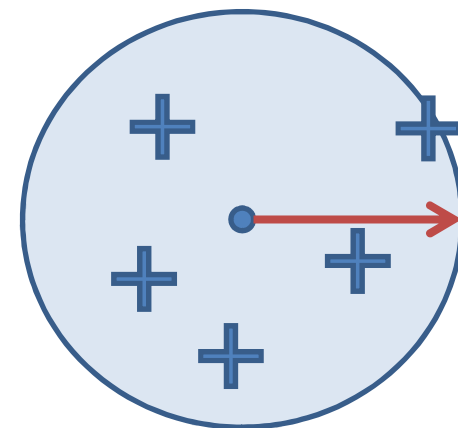
SINGLE POINT REPEATABILITY

SINGLE POINT REPEATABILITY ⁽³⁾	3.80 m ³	0.045 mm ⁽²⁾	0.050 mm ⁽²⁾	0.055 mm ⁽²⁾
	7.80 m ³	n/a	0.055 mm ⁽²⁾	0.065 mm ⁽²⁾
	14.8 m ³	n/a	n/a	0.095 mm ⁽²⁾

- +** = Measured points
- = Mean of measured points

→ = Sphere radius centered on the mean encompassing all the points

Repeatability = Sphere radius / 2
(Distance method / 2)

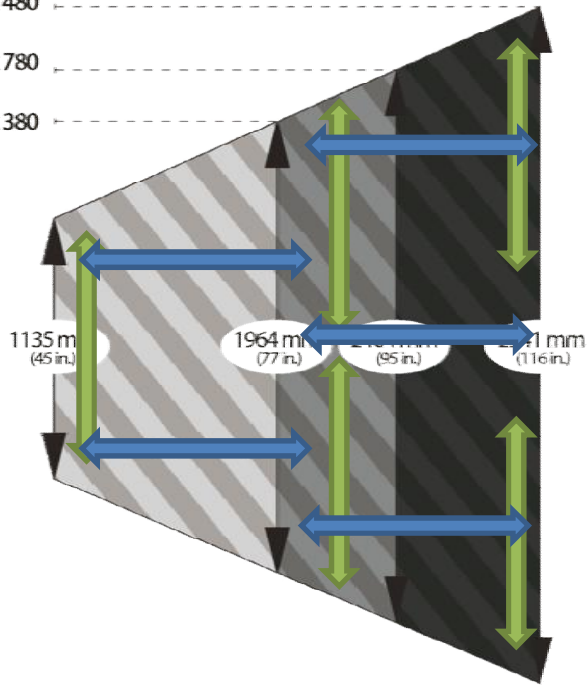
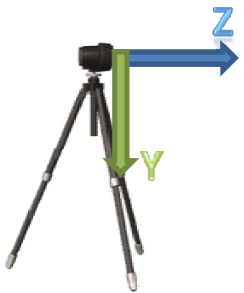


VOLUMETRIC ACCURACY

	3.80 m ³	0.075 mm ⁽²⁾	0.080 mm ⁽⁵⁾	0.090 mm ⁽⁵⁾
VOLUMETRIC ACCURACY ⁽⁴⁾	7.80 m ³	n/a	0.085 mm ⁽²⁾	0.095 mm ⁽⁵⁾
	14.8 m ³	n/a	n/a	0.170 mm ⁽²⁾

↑ = Artefact of 1m long (cone bar)

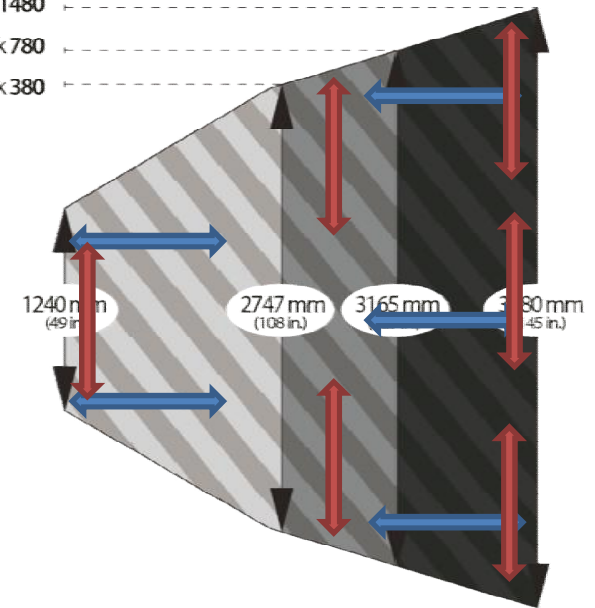
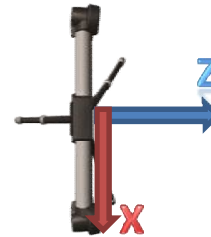
C-Track 1480
C-Track 780
C-Track 380



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1800 mm (71 in.) 3120 mm (123 in.) 3825 mm (151 in.) 4695 mm (185 in.)

C-Track 1480
C-Track 780
C-Track 380



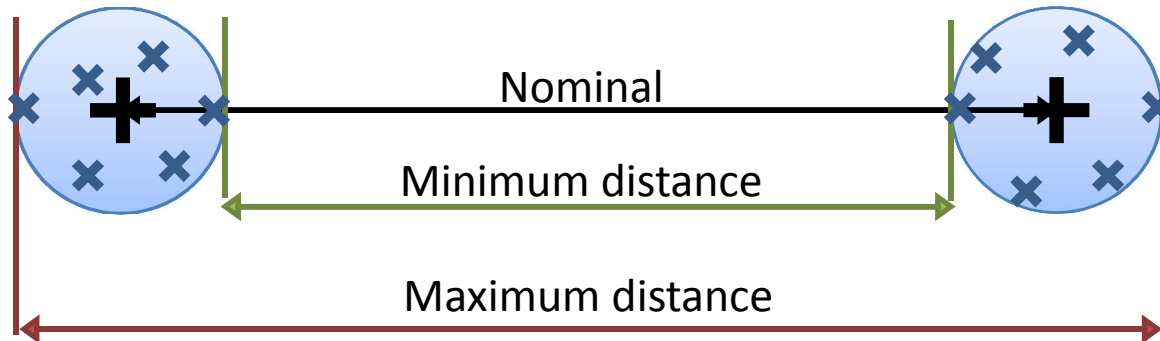
1800 mm (71 in.) 3120 mm (123 in.) 3825 mm (151 in.) 4695 mm (185 in.)

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ULTRA PRECISION TECHNOLOGIES

VOLUMETRIC ACCURACY

	3.80 m ³	0.075 mm ⁽²⁾	0.080 mm ⁽²⁾	0.090 mm ⁽²⁾
VOLUMETRIC ACCURACY ⁽⁴⁾	7.80 m ³	n/a	0.085 mm ⁽²⁾	0.095 mm ⁽²⁾
	14.8 m ³	n/a	n/a	0.170 mm ⁽²⁾

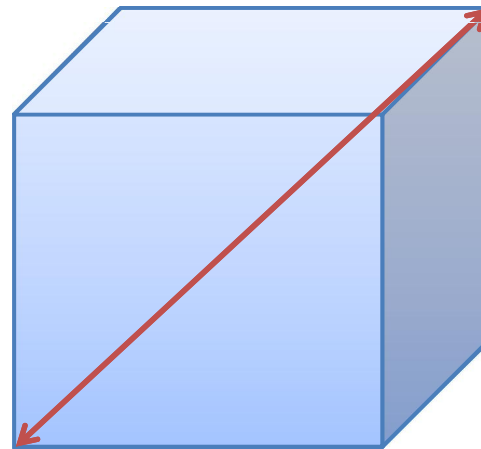
$$\text{Volumetric Accuracy} = \frac{\text{Max distance} - \text{Min distance}}{2}$$



VOLUMETRIC ACCURACY WITH MAXSHOT 3D

VOLUMETRIC ACCURACY (with MaxSHOT 3D or C-Link) ⁽⁶⁾	0.075 mm if L ⁽⁶⁾ ≤ 1.2 m	0.085 mm if L ≤ 1.2 m	0.170 mm if L ≤ 3.0 m
	0.045 mm + 0.025 mm/m if L > 1.2 m	0.055 mm + 0.025 mm/m if L > 1.2 m	0.095 + 0.025 mm/m if L > 3.0 m

L=Longest quantity measured



MEASUREMENT SPEED

MEASUREMENT SPEED	30 Hz	30 Hz	30 Hz
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- Acquisition at 30Hz
 - 30 images per camera per second. (Synchronous)
 - Measuring all the optical reflectors at each image. (up to 100 optical reflectors)
- Measurement of a point
 - 1 point per second
 - Each point is a sampling of 30 measures

TEMPERATURE RANGE

OPERATING TEMPERATURE RANGE	15 - 40 °C (59 - 104 °F)	15 - 40 °C (59 - 104 °F)	15 - 40 °C (59 - 104 °F)
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- Temperature range - 15-40°C (59-104°F)
 - The system must be calibrated at the temperature it will be used
 - The system must be re-calibrated after a change in temperature of $\pm 10^{\circ}\text{C}$ ($\pm 18^{\circ}\text{F}$)

CREAFORM



www.creaform3d.com