

# Trimble C5 & C5 HP

## MECHANICAL TOTAL STATION



### KEY FEATURES

- ▶ Enjoy all of the features of Trimble® Access™ software from both faces with two color touchscreen displays
- ▶ Fully integrated with Trimble Business Center office software to manage, process, and create customer deliverables
- ▶ Keep your total station in sight, even if it goes off site with Trimble L2P
- ▶ Compact, lightweight and rugged

### Choose the model that works for you:

C5	C5 HP
Time of Flight / Pulse EDM	Phase Shift EDM
With Autofocus	Without Autofocus
<b>Prism</b>	<b>Prism</b>
Range 5,000 m	Range 3,000 m
Accuracy 2 mm + 2 ppm	Accuracy 1 mm + 1.5 ppm
<b>Reflectorless</b>	<b>Reflectorless</b>
Range 800 m	Range 500 m
Accuracy 3 mm + 2 ppm	Accuracy 2 mm + 2 ppm
Measuring interval in Standard mode 1.0 s	Measuring interval in Standard mode 1.6 s
60 mm beam divergence at 30 m	26 mm beam divergence at 30 m
12 h operating time*	18 h operating time*
Optical or laser plummet type	Optical plummet type

\* Measuring Angle and Distance Every 30 s.

Learn more: [geospatial.trimble.com/trimble-C5](https://geospatial.trimble.com/trimble-C5)

# Trimble C5 & C5 HP MECHANICAL TOTAL STATION

## DISTANCE MEASUREMENT

Range with specified prisms

Good conditions <sup>1</sup>	C5	C5 HP
With single prism 2.5 in (6.25 cm)	16,404 ft (5,000 m)	9,843 ft (3,000 m)
With reflector sheet 2 in x 2 in (5 cm x 5 cm)	984 ft (300 m)	886 ft (270 m)

Reflectorless mode

C5	Good <sup>1</sup>	Normal <sup>2</sup>	Difficult <sup>3</sup>
KGC (90%)	2,625 ft (800 m)	1,640 ft (500 m)	820 ft (250 m)
KGC (18%)	1,312 ft (400 m)	984 ft (300 m)	771 ft (235 m)

C5 HP	Good <sup>1</sup>	Normal <sup>2</sup>	Difficult <sup>3</sup>
KGC (90%)	1,640 ft (500 m)	1,312 ft (400 m)	820 ft (250 m)
KGC (18%)	1,148 ft (350 m)	820 ft (250 m)	656 ft (200 m)

Accuracy in standard measurement mode<sup>7</sup>

	C5	C5 HP <sup>4, 8</sup>
Prism <sup>4</sup>	± (2 mm + 2 ppm)	± (1 mm + 1.5 ppm)
Reflectorless	± (3 mm + 2 ppm)	± (2 mm + 2 ppm)

Measuring interval<sup>5</sup>

C5	Standard mode	Fast standard mode	Tracking mode
Prism mode	1.0 s	0.5 s	0.3 s
Reflectorless Mode	1.0 s	0.5 s	0.3 s

C5 HP	Standard mode	Fast standard mode
Prism mode	1.6 s	1.2 s
Reflectorless Mode	2.1 s	1.6 s

## ANGLE MEASUREMENT

Accuracy (Standard Deviation based on ISO 17123-3): 1" (0.3 mgon), 2" (0.6 mgon), 3" (1.0 mgon), 5" (1.5 mgon)

Reading system

Circle diameter ..... 2.4 in (62 mm)

Horizontal/Vertical angle ..... Diametrical/ Single

## TELESCOPE

Tube length ..... 5.0 in (128 mm)

Image ..... Erect

Magnification ..... 30x (19x/38x with optional eyepieces)

Effective diameter of objective

Trimble C5 ..... 1.77 in (45 mm)

Trimble C5 HP ..... 1.57 in (40 mm)

EDM Diameter

Trimble C5 ..... 1.97 in (50 mm)

Trimble C5 HP ..... 1.8 in (45 mm)

Field of view ..... 1° 25'

Resolving power ..... 3"

Minimum focusing distance ..... 4.9 ft (1.5 m)

Laser Pointer ..... Coaxial Red Light

Tracklight ..... Yes

Reticle Illumination ..... Yes, 4 steps

1 Good conditions (good visibility, overcast, twilight, low ambient light).

2 Normal conditions (normal visibility, object in the shadow, moderate ambient light).

3 Difficult conditions (haze, object in direct sunlight, high ambient light).

4 Standard Deviation based on ISO 17123-4

5 Measuring time may vary depending on measuring distance and conditions. Specification based on average of repeated measurements.

6 Battery life specification at 77 °F (25 °C). Operation times may vary depending on the condition and deterioration of the battery.

7 For both prism and reflectorless modes, EDM accuracy in fast standard mode is ± (10 mm + 5 ppm) for the C5, ± (5 mm + 5 ppm) for the C5 HP and tracking mode is ± (20 mm + 5 ppm) for the C5 only.

8 C5 HP accuracy in standard measurement mode to a prism less than 1000 m away is ± (1 mm + 1.5 ppm). At a range greater than or equal to 1000 m, the accuracy is ± (2 mm + 2 ppm).

## TILT SENSOR

Type ..... Dual-axis

Method ..... Liquid-electric detection

Compensation range ..... ±3'

## COMMUNICATIONS

Communication ports ..... 1 x serial (RS-232C), 2 x USB (host and client)

Wireless communications ..... Integrated Bluetooth®

## POWER

Internal Li-ion battery (x2)

Output voltage ..... 3.6 V

Operating time <sup>6</sup>	C5	C5 HP
Continuous angle-only measurement	14 h	19 h
Distance/ angle measurement/ AF every 30 s	12 h	18 h
Continuous distance / angle measurement	7 h	10.5 h

Charging time, full charge both batteries ..... approx. 6 h

## GENERAL SPECIFICATIONS

Autofocus

Trimble C5 ..... Yes

Trimble C5 HP ..... No

Level vials

Sensitivity of Circular level vial on tribrach ..... 10' / 2 mm

Tangent Clamps ..... Yes

Display face 1 ..... LCD back-lit (640 x 480 pixel)

Display face 2 ..... LCD back-lit (640 x 480 pixel)

Operating system ..... Windows® Embedded Compact 7

Processor ..... Dual Core 800 MHz

Point memory ..... 512 MB RAM, 4 GB flash memory

Internal Plummet ..... Optical or Class 2 Laser

Optical Plummet:

Magnification ..... 3x

Field of view ..... 5°

Minimum focusing distance ..... 0.5 m

Dimensions (W x D x H) ..... 8.1 in x 6.7 in x 12.5 in

(206 mm x 169 mm x 318 mm)

Weight (approx.)

1", 2", 3", 5" Main unit

Trimble C5 ..... 9.5 lb (4.3 kg)

Trimble C5 HP ..... 9.7 lb (4.4 kg)

Battery ..... 0.2 lb (0.1 kg)

Carrying case ..... 7.3 lb (3.3 kg)

## ENVIRONMENTAL

Operating temperature range ..... -4 °F to +122 °F (-20 °C to +50 °C)

Winterized ..... -22 °F to +122 °F (-30 °C to +50 °C)

Storage temperature range ..... -13 °F to +140 °F (-25 °C to +60 °C)

Winterized ..... -22 °F to +140 °F (-30 °C to +60 °C)

Atmospheric correction

Temperature range ..... -40 °F to +140 °F (-40 °C to +60 °C)

Barometric pressure ..... 15.8 inHg to 39.3 inHg (400 mmHg to 999 mmHg)

or (533 hPa to 1,332 hPa)

Dust and water protection ..... IP66

## CERTIFICATION

Class B Part 15 FCC certification, CE Mark approval. RCM Mark.

IEC60825-1 am 2007, IEC60825-1 am 2014, FDA notice 50

C5

Prism/Reflectorless mode ..... Class 1 laser

Laser Plummet/Laser Pointer ..... Class 2 laser

C5 HP

Prism mode ..... Class 1 laser

Reflectorless/Laser Pointer ..... Class 3R laser

Bluetooth type approvals are country specific.

Specifications subject to change without notice.



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