

Leica iCON iCR70 & iCR80

Data sheet



iCON build Software

Laying out intricate designs is a difficult task construction crews face every day. Complex geometries must be simplified by converting them to lines and rectangles, which means the staked point will not represent the true design when brought to the field. With iCON build Layout Objects app integrated into the solution, users can lay out straight from 3D models by selecting an object, like a column or pipe, simply by tapping on it in the controller and benefit from the flexible creation of layout work packages for effective work progress management.



Infinitely bridging the field to the office

While Leica iCON build captures and models data in the field, Leica Infinity processes the information back in the office. A smooth data transfer ensures the project stays on track. Leica iCON build and Leica Infinity work in conjunction to join previous survey data and edit projects faster and more efficiently.

ACC»

Customer care is only a click away

Through Active Customer Care (ACC), a global network of experienced professionals is only a click away to expertly guide you through any problem. Eliminate delays with superior technical service, finish jobs faster with excellent consultancy support, and avoid costly site revisits with online service to send and receive data directly from the field. Control your costs with a tailored Customer Care Package, giving you peace of mind you're covered anywhere, anytime.

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- when it has to be **right**

Leica
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Leica iCON iCR70 & iCR80 Total Stations



Leica iCON iCR70



Leica iCON iCR80

ANGULAR MEASUREMENT

Accuracy ¹ Hz and V	Absolute, continuous, diametrical	2" (0.6 mgon), 5" (1.5 mgon)	1" (0.3 mgon), 2" (0.6 mgon) 5" (1.5 mgon)
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DISTANCE MEASUREMENT

Range ²	Prism (GPR1, GPH1P) ³ Non-Prism / Any surface ⁴	1.5m to 3500m R500: 1.5m to >500m	1.5m to 3500m R30: 1.5m to 30m, R1000: 1.5m to >1000m
Accuracy / Measurement time	Single (prism) ^{2,5} Single (any surface) ^{2,4,5}	1mm + 1.5ppm / typically 2.4s 2mm + 2ppm / typically 3s	1mm + 1.5ppm / typically 2.4s 2mm + 2ppm / typically 3s ⁶
Laser dot size	At 50m	8mm x 20mm	
Measurement technology	System analyser	Coaxial, visible red laser	

AUTOMATIC AIMING

Target aiming type		ATR	ATRplus
Target aiming range ² / Target locking range ²	Circular prism (GPR1, GPH1P) 360° prism (GRZ4, MPR122)	1000m / 800m 800m / 600m	1500m / 1000m 1000m / 1000m
Accuracy ^{1,2} / Measurement time	ATR angle accuracy Hz, V	2" (0.6 mgon), 5" (1.5 mgon) / typically 3-4s	1" (0.3 mgon), 2" (0.6 mgon), 5" (1.5 mgon) / typically 3-4s

PRISM FAST SEARCH

Prism search type		SpeedSearch	PowerSearch
Range / Search time	360° prism (GRZ4, MPR122)	300m / typically 7s	300m / typically 5s

GUIDE LIGHT (EGL)

Working range / Accuracy	5-150m / typically 5cm @ 100m		
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GENERAL

Field software	Leica iCON field software	iCON Field Software running on field controller (CC80) connected via Radio or cable.	iCON Field Software running on the instrument
Machine Control capability	With optional Machine Control App	No	Yes
Display & keyboard		4 button keyboard with status LEDs	5" (inch), WVGA, color, touch, face I standard /face II optional, 22 keys, illumination
Processor	TI OMAP4430 1GHz Dual-core ARM® Cortex™ A9 MPCore™ Operating system – Windows EC7		
Power management	Exchangeable Lithium-Ion battery	Operating time 8–10h	Operating time 6–8 h
Data storage	Internal memory Memory card	2 GB SD card 1 GB or 8 GB	
Interfaces	RS232, USB, Bluetooth®, WLAN		
Weight	Total station including battery	5.0kg	5.3kg
Environmental specifications	Working temperature range –20°C to +50°C Dust / Water (IEC 60529) / Humidity IP55 / 95%, non-condensing		

¹ Standard deviation ISO 17123-3

² Overcast, no haze, visibility about 40 km, no heat shimmer

³ 1.5m to 2000m for 360° prisms (GRZ4, GRZ122)

⁴ Object in shade, sky overcast, Kodak Gray Card (90% reflective)

⁵ Standard deviation ISO 17123-4

⁶ Distance > 500m: Accuracy 4mm + 2ppm, Measurement time typically 6s

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Laser radiation, avoid direct eye exposure. Class 3R laser product in accordance with IEC 60825-1:2014.



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