

# Construction & MEP Layout

Yes, it's that simple



**icon**  
intelligent CONSTRUCTION

- when it has to be **right**

**Leica**  
Geosystems

# Leica iCON trades

## Makes Your Daily Layout Tasks Simple



simple  
setup

**The small but powerful layout tool including accessories can be carried and operated by one person. Automated processes ensure that everything is ready for use quickly and reliably.**

The specially developed 'quick mount release' allows the device to be snapped to the tripod without needing to screw it on. Automated processes such as 'auto levelling' and 'auto set-up' ensure that the device is correctly set up and quickly ready for use, ensuring a high level of efficiency.

- One-person operation increases productivity
- Compact design that is easy to carry
- Fast set-up with 'quick mount' and 'auto levelling'
- Quickly ready for use due to the 'auto-setup' process
- Easy repositioning with 'auto-relocation' and Leica vTarget

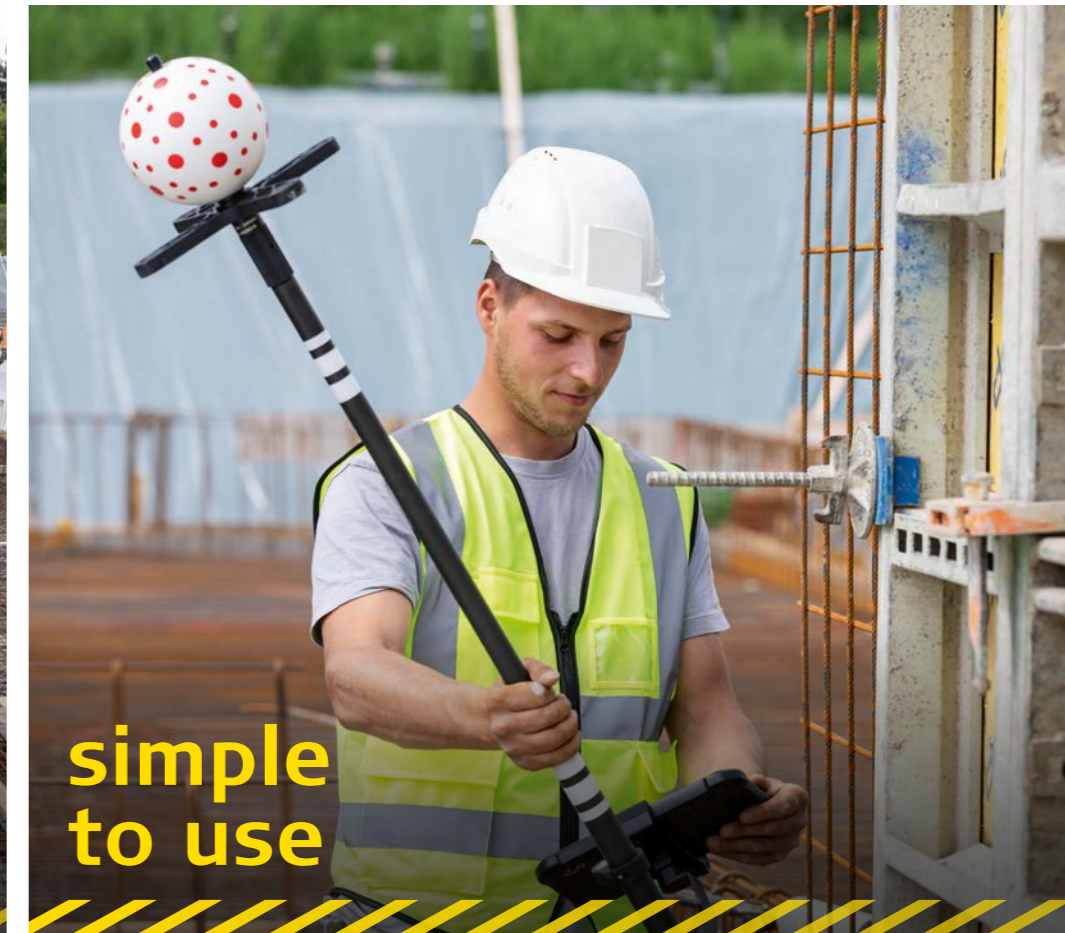


simple  
software

**Leica iCON trades supports layout and marking tasks. It is ideal for both simple layout tasks and complex projects. The handling is easy to learn and the device and software can be used immediately.**

The software follows the industry-specific workflows and supports many different file types, making time-consuming data preparation in the office a thing of the past. In addition it supports all common construction cloud services and ensures that the most up-to-date data is always available.

- Easy-to-use, segment specific and workflow-oriented software
- Standard Android app approach
- No time-consuming data preparation in the office
- Always up-to-date data available
- Statistics and reports to track layout progress and quality
- BIM support



simple  
to use

**The visual measurement technology always displays the current situation and prevents anything from being forgotten. Automated workflows also reduce measurement complexity to a minimum.**

It does not matter which direction you are moving. The unique pattern of the Leica vPole is always reliably detected by the Leica iCON iCS50, whatever the direction. It also automatically compensates for pole tilt and detects the pole height. This allows you to layout more points, including hidden points.

- Visual-based search and robust target lock on Leica vPole
- Leica vPole with tilt compensation and automatic pole height
- Flexible use of laser technology and Leica vPole
- Instrument movement alert to ensure consistent setup accuracy

# Layout More Points By Working Less!

## Leica iCON iCS20 Motorised Construction Tool

The Leica iCON iCS20 is perfect for projecting installation points for mechanical, electrical, and plumbing systems. Its laser-pointer automatically points to the layout points on ceiling, floor or wall.

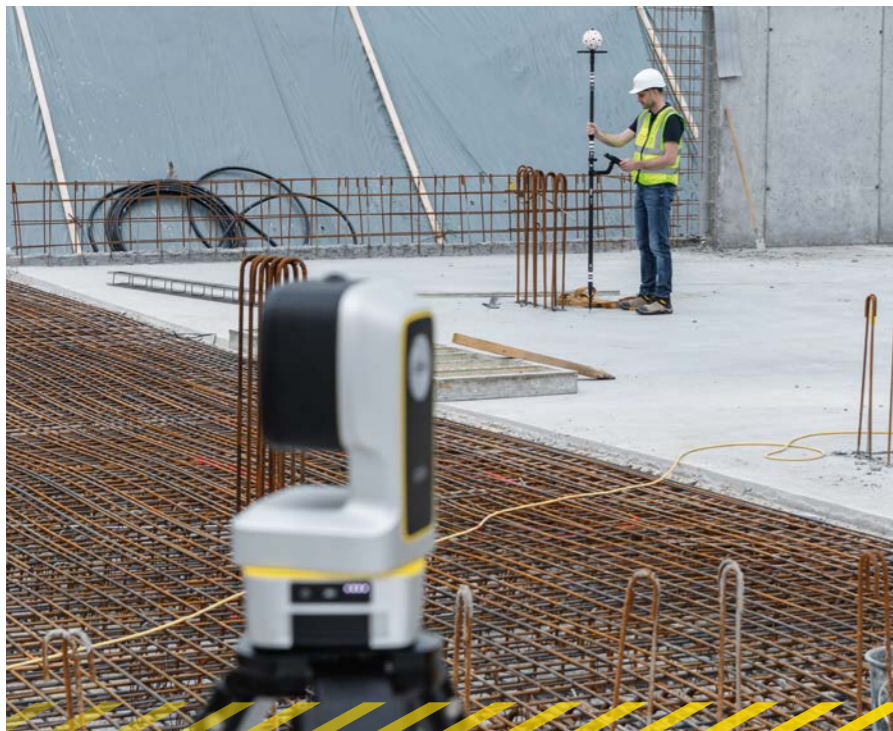
- One-person operation reduces staff resources and increases productivity
- Simplified laser layout process
- Quickly ready for use due to the 'auto-setup' process



## Leica iCON iCS50 Robotic Construction Tool

The Leica iCON iCS50 provides exceptional flexibility and efficiency. The Leica vPole allows you to layout points faster and mark even hidden points.

- Simplified layout process due to visual measurement technology
- Leica vPole with visual-based target tracking, automatic tilt compensation and auto-height detection
- Flexible use of laser technology and Leica vPole



# Optimise Your Layout Process Use Digital Workflows



## Efficient Data Preparation

Save the time-consuming data preparation in the office with a special office software. Simply import the data which you receive from the architecture, planning or surveying

office into the Leica iCON trades software. All common file types will be accepted: PDF, CSV, TXT, DXF, DWG and IFC.



## Office to Field with Flexible Data Access

You can access the data either via USB, e-mail or common construction cloud services such as Bricsys 24/7, Autodesk Construction Cloud, Procore, Bluebeam, Allplan BIMPLUS, Google

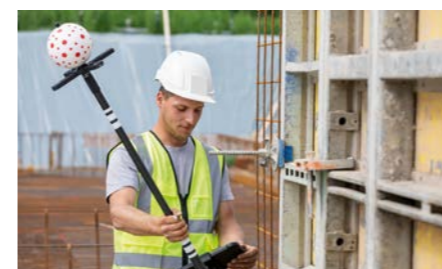
Drive, Dropbox, OneDrive. Always having the most recent data at hand enables you to react quickly to last-minute change requests with minimal efforts.



## Comfortable and Intuitive Set-Up Process

You can carry all the equipment to the construction site in one go as it is very compact. Thanks to the 'quick-mount' tripod, automated set-up

process and intuitive operation, it is immediately ready for use and the risk of inaccuracies or even errors is reduced to a minimum.



## Fast and Accurate Layout

Now you can layout the points. Depending on the application, decide whether you want to work only with the laser or with the Leica vPole. The Leica iCON iCS50 always stays reliably connected to the vPole, thanks to the

visual connection that is not interrupted by reflections. In addition, you no longer need to hold the tilted Leica vPole exactly plumb, which saves a lot of time and increases accuracy.



## Easy Relocation

The automated relocation process uses visual targets to quickly and easily relocate the Leica iCON iCS20/iCS50. Once the device is repositioned, it automatically finds and measures the vTargets, identifies

its new position and you can continue your layout process straight away. Use this benefit to work in a closer range to the device thus reducing line of sight issues. This increases the efficiency of your layout process.

# Scope of Delivery



## Leica iCON iCS20

### Laser Layout Package

- Leica iCON iCS20
- Leica iCON trades for Layout software
- Charger for indoor use
- Leica CSX8 tablet incl. pouch
- RC10 remote control
- GZM3 target plate
- vTarget plates incl. stands
- vTarget stickers
- Carry case incl. backstraps
- Leica wooden tripod
- Leica GAD122 quick mount adapter



## Leica iCON iCS50

### Robotic Layout Package

- Leica iCON iCS50
- Leica iCON trades for Layout software
- Charger for indoor use
- Leica CSX8 tablet incl. pouch and holder
- GZM3 target plate
- vTarget plates incl. stands
- vTarget stickers
- Carry case incl. backstraps
- Leica wooden tripod
- Leica GAD122 quick mount adapter
- Leica vPole incl. bipod



## Leica iCON iCS50

### Robotic Layout Pro Package

- Leica iCON iCS50
- Leica iCON trades for Layout Pro software
- Charger for indoor use
- Leica CSX8 tablet incl. pouch and holder
- GZM3 target plate
- vTarget plates incl. stands
- vTarget stickers
- Carry case incl. backstraps
- Leica wooden tripod
- Leica GAD122 quick mount adapter
- Leica vPole incl. pole tilt compensation and auto-height

# Technical Data

		iCON iCS20	iCON iCS50 Robotic
<b>3D POINT ACCURACY</b>			
Combination of angle and distance measurement	Laser	1.0 mm @ 10 m (0.04 in @ 33 ft) 2.5 mm @ 50 m (0.10 in @ 164 ft) 10.5 mm @ 250 m (0.41 in @ 820 ft)*	1.0 mm @ 10 m (0.04 in @ 33 ft) 2.0 mm @ 50 m (0.08 in @ 164 ft) 8.0 mm @ 250 m (0.31 in @ 820 ft)*
	vPen	1.5 mm @ 10 m (0.06 in @ 33 ft)**	1.0 mm @ 10 m (0.04 in @ 33 ft)
	vSphere	3.0 mm @ 50 m (0.12 in @ 164 ft)**	2.5 mm @ 50 m (0.10 in @ 164 ft)
	vPole tip	3.0 mm @ 50 m (0.12 in @ 164 ft)****	3.0 mm @ 50 m (0.12 in @ 164 ft)****
<b>ANGULAR MEASUREMENT</b>			
Accuracy Hz and V	Standard deviation ISO 17123-3	5" (1.54 mgon)	3" (0.93 mgon)
Working Range		horizontal (Hz): 360°, vertical (V): 290°	
<b>DISTANCE MEASUREMENT</b>			
Range	Reflectorless (Kodak White, 90% reflective)	0.3 to 50 / 250 m (0.98 - 164 / 820 ft)*	
	Reflectorless (Kodak Grey, 18% reflective)	0.3 to 50 / 120 m (0.98 - 164 / 394 ft)*	
	Standard prism (GPR1)	3.0 to 50 / 250 m (9.84 - 164 / 820 ft)*	
	Reflective tape (GZM31)	1.0 to 50 / 150 m (3.28 - 164 / 492 ft)*	
	vTarget (CVT3, CVT6)	1.2 to 40 m (3.94 - 131 ft)***	
	vPen	0.7 to 10 m (2.30 - 33 ft)**	
	vSphere	1.5 to 50 m (4.92 - 164 ft)**	
Accuracy Standard deviation ISO 17123-4	Non-Prism / Any surface	1.0 mm @ 10 m (0.04 in @ 33 ft)	< 1.0 mm @ 10 m (< 0.04 in @ 33 ft)
		1.5 mm @ 50 m (0.06 in @ 164 ft)	6.0 mm @ 250 m (0.24 in @ 820 ft)*
	Standard prism (GPR1)	1.5 mm @ 50 m (0.06 in @ 164 ft)	3.5 mm @ 250 m (0.14 in @ 820 ft)*
	Reflective tape (GZM31)	1.5 mm @ 50 m (0.06 in @ 164 ft)	2.5 mm @ 150 m (0.08 in @ 492 ft)*
Laser dot size	Coaxial, visible red laser (II class)	17.2 x 27.3 mm @ 50 m (0.68 in x 1.41 in @ 164 ft)	
<b>AUTOMATIC AIMING</b>			
Auto aiming range	Standard prism (GPR1)	3.0 to 250 m (9.84 to 820 ft)*	
	vTarget	1.2 to 40 m (3.94 to 131 ft)***	
<b>CAMERA</b>			
Field of view / Resolution	Overview camera (diagonal)	27.6° (4.91 m @ 10 m / 16 ft @ 33 ft) / 12.33 MP	
	On-Axis camera (diagonal)	7.5° (1.31 m @ 10 m / 4.29 ft @ 33 ft) / 12.33 MP	
	Fish-eye camera (circular)	~200° (circular) / 13.31 MP	
Zoom		16x	
<b>GENERAL</b>			
Instrument category		iCON Construction Tool	iCON Robotic Construction Tool
Motorization		Motorized (robotic upgrade possible)	Robotic
Direct drives		180°/s	
Tilt compensation range		±3°	
Interfaces		USB-C (2.0), WLAN	
Weight		3.37 kg	
Environmental Specifications	Dust / Water / Humidity	IP54	
	Operating temperature	-20°C to +50°C	
	Charging temperature	0°C to +60°C	
	Storage temperature	-25°C to +70°C	
<b>POWER MANAGEMENT</b>			
Battery		Rechargeable Li-Ion	
Operating time		> 8h	
Charging time		70% in 1h, 100% in 2h	

\* iCS 250 m option required.

\*\* iCS20 requires iCS Robotic option

\*\*\* With rough aiming with the camera. Fully autonomous detection from 2 m / 6.56 ft to 25 m / 82 ft.

\*\*\*\* Including tilt compensation with vSphere at H3.



Laser class 2 in acc. with IEC 60825-1

## Leica Geosystems – when it has to be right

With more than 200 years of history, Leica Geosystems, part of Hexagon, is the trusted supplier of premium sensors, software and services. Delivering value every day to professionals in surveying, construction, infrastructure, mining, mapping and other geospatial content-dependent industries, Leica Geosystems leads the industry with innovative solutions to empower our autonomous future.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 24,000 employees in 50 countries and net sales of approximately 5.2bn EUR. Learn more at [hexagon.com](http://hexagon.com) and follow us @HexagonAB.



Leica iCON build  
Brochure

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