Digital Templating
Yes, it's that simple

- when it has to be **right**

Leica
Geosystems

Leica iCON trades
Makes Your Daily Templating Tasks Simple

simple setup

simple software

simple to use

The small but powerful measuring device 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' 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'
- Easy repositioning with 'auto-relocation' and Leica vTarget

Leica iCON trades is tailored to quickly create and process accurate digital templates from simple to complex shapes. The handling is easy to learn and the device and software can be used immediately.

The software follows the digital templating-specific workflows and ensures a seamless data flow, from capturing 2D and 3D measurement data, to the completion of drawings on site with powerful CAD tools, and the transfer of CNC-ready files directly to production.

- Easy-to-use, segment specific and workflow-oriented software
- User-friendly, visual workflow
- Standard mobile app approach
- Finalisation of drawings on site with powerful CAD tools
- Export of production-ready DXF files to programme CNC machinery
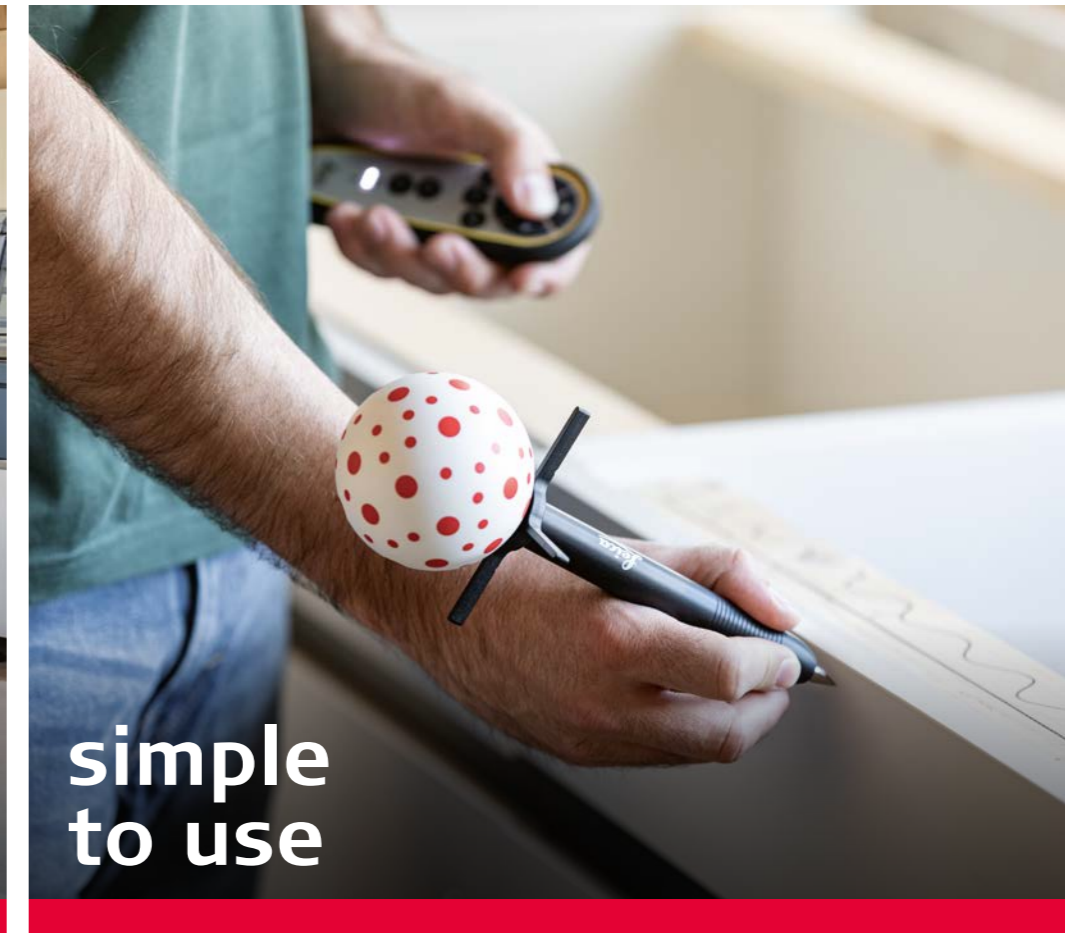
The visual measurement technology always displays the current situation and prevents anything from being forgotten. Automated workflows also reduce measurement complexity to a minimum.

The unique solution combines multiple measurement technologies to ensure precise and reliable data collection via wireless Leica vPen, laser, line or area scans. In addition it does not matter which direction you are moving the Leica vPen. Its unique pattern is always reliably detected by the Leica iCON iCS50.

- Fast and efficient data capturing in 2D and 3D
- Unique wireless vPen for high flexibility and accuracy
- Simply touch and capture the measurement points with the Leica vPen
- Visual-based search and robust target lock on Leica vPen
- Flexible use of laser technology and Leica vPen
- Clear documentation with automatically generated photos
- Instrument movement alert to ensure consistent setup accuracy

Just Touch and Measure
Unique Wireless vPen

Leica iCON iCS50
Robotic Construction Sensor

The Leica iCON iCS50 robotic construction sensor provides exceptional flexibility and efficiency. For measurements on reflective or glossy surfaces, the unique, wireless Leica vPen serves as an excellent addition to capture accurate measurement data.

- Leica vPen, the unique wireless measuring pen
- Touch and measure – no aiming
- Simplified measurement process
- Measure on any surface
- Easily switch from Leica vPen to laser measurements for best results

Leica iCON iCS20
Motorised Construction Sensor

The Leica iCON iCS20 motorised construction sensor is perfect for capturing 2D and 3D measurement data for prefabrication. Easily aim at measurement points using the high-resolution camera or the laser-point.

- High-resolution cameras for precise targeting
- Simplified 2D and 3D measurements, enabled by visual measurement technology
- Quickly ready for use due to the automated set-up process

Optimise Your Production
Use Digital Workflows

Accurate Digital Measurements
With Leica iCON trades you can capture high-precision measurement data even from hard-to-access locations. The software is easy to use. You see the measurement results immediately as a 2D plan or 3D model on your tablet. This way you can be sure that you haven't forgotten any measuring point.

Easily Capture Complex Contours
The unique wireless measuring pen Leica vPen is extremely precise. Use it to measure on any surface, even glass, by simply touching the point to be measured. You can also measure edges without having to set up target plates. The visual-based target tracking ensures that the Leica iCON iCS50 stays connected to the Leica vPen. Automated relocation process ensures a quick and easy relocation of the device.
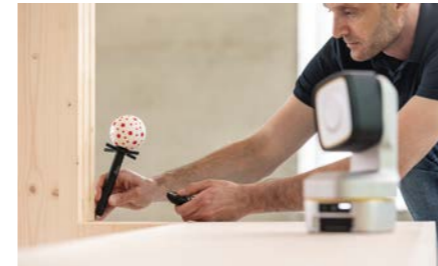
Efficient Digital Template Creation
Create the production data directly on site with the powerful CAD tools of Leica iCON trades. Connect lines or polylines and add offsets, layers, profiles, dimensions and cut-outs, e.g. for stove, sink, water tap, sockets, holes and notches. The digital templates created in this way are extremely accurate because they are based on the original site dimensions.

Field to Machine
Save the DXF file for post-processing into your preferred CAD/CAM software or import it directly to the CNC machine. You can access the data via cable, e-mail, or cloud services. Automated production processes based on precise CAD data save time, money and reduce material waste as errors are minimised. This lowers the environmental footprint of a project.
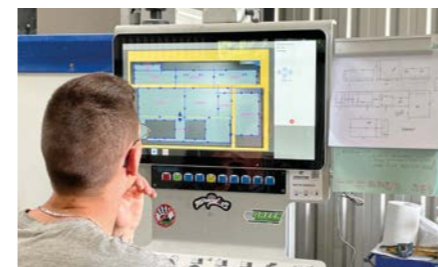
ALPHACAM Software
ALPHACAM can automate sending your job to your CNC machinery. Simply use the out-of-the-box ALPHACAM export with pre-installed layer set available in the Leica iCON trades software. ALPHACAM does the rest automatically using the 'Leica iCON' macro.
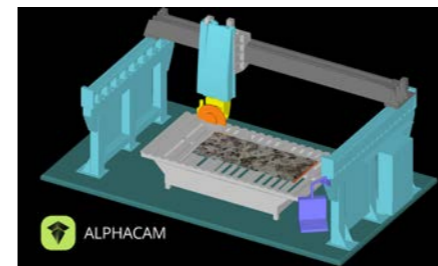
Scope of Delivery

Leica iCON iCS50
vPen Templating Package

- Leica iCON iCS50
- Leica iCON trades for Templating software
- Leica vPen
- Charger for indoor use
- Leica CSX8 tablet incl. pouch

- RC10 remote control
- GZM3 target plate
- vTarget plates incl. stands
- vTarget stickers
- Carry case
- Leica CTP108 Carbon tripod

Leica iCON iCS20
Laser Templating Package

- Leica iCON iCS20
- Leica iCON trades for Templating software
- Charger for indoor use
- Leica CSX8 tablet incl. pouch

- GZM3 target plate
- vTarget plates incl. stands
- vTarget stickers
- Carry case
- Leica CTP108 Carbon tripod

Technical Data

		iCON iCS20	iCON iCS50 Robotic
3D POINT ACCURACY			
Combination of angle and distance measurement	Laser	1.0 mm @ 10 m (0.04 in @ 33 ft)	1.0 mm @ 10 m (0.04 in @ 33 ft)
		2.5 mm @ 50 m (0.10 in @ 164 ft)	2.0 mm @ 50 m (0.08 in @ 164 ft)
		10.5 mm @ 250 m (0.41 in @ 820 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)****
ANGULAR MEASUREMENT			
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°	
DISTANCE MEASUREMENT			
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)*	
	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)*	
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)	
AUTOMATIC AIMING			
Auto aiming range	vTarget	1.2 to 40 m (3.94 to 131 ft)***	
CAMERA			
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	
GENERAL			
Instrument category		iCON Construction Sensor	iCON Robotic Construction Sensor
Motorization		Motorized (robotic upgrade possible)	Robotic
Direct drives		180°/s	
Tilt compensation range		±3°	
Interfaces		USB-C (2), 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	
POWER MANAGEMENT			
Battery		Rechargeable Li-Ion	
Operating time		> 8 h	
Charging time		70% in 1 h, 100% in 2 h	

* 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 2

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 and follow us @HexagonAB.

Leica iCON trades for Interior Finishing
Brochure

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