



Leica 3D Disto

Ships and Boats

- when it has to be **right**

Leica
Geosystems

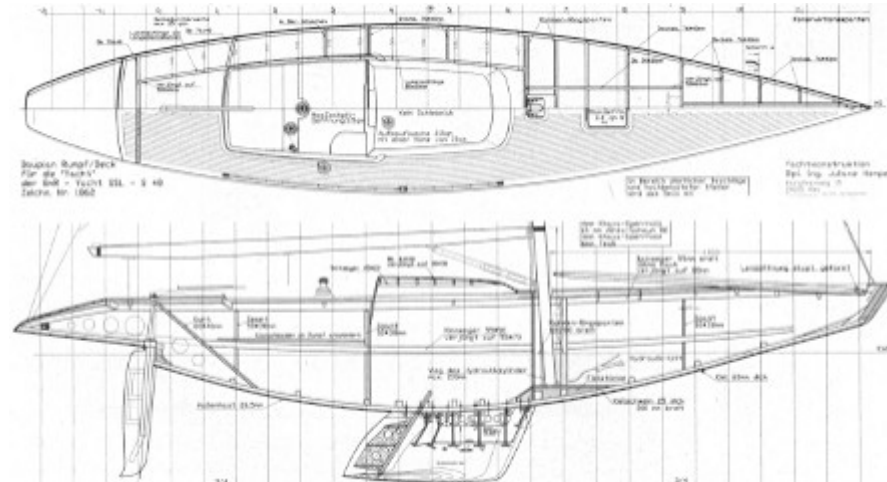
Leica 3D Disto on Ships and Boats

Content

The exceptional and individual geometry of ships and boats makes high demands on installations and measurements.

Get a general idea of the Leica 3D Disto's competent answers to a few difficult measurement jobs relating to...

- Curved surfaces & difficult geometries
- Measurements on rolling ships and boats (waterborn)
- Measurements on tilted ships and boats (ashore)
- Scans
- Covers and sails



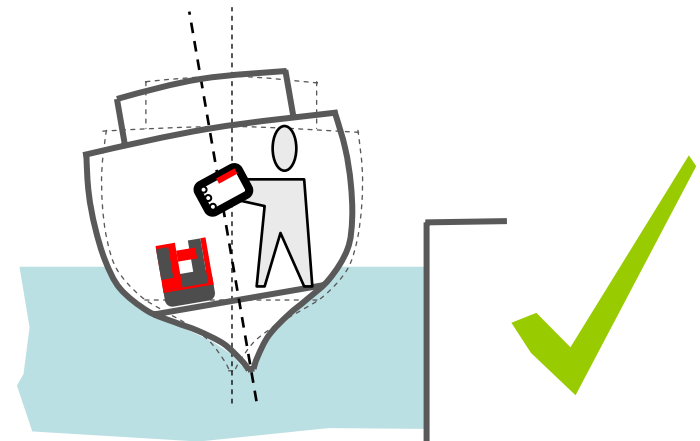
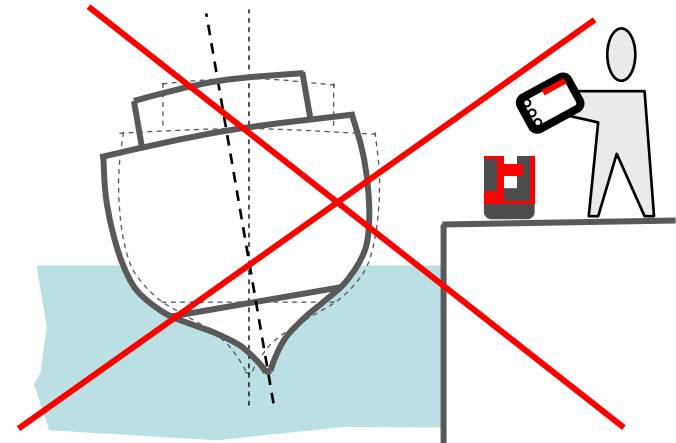
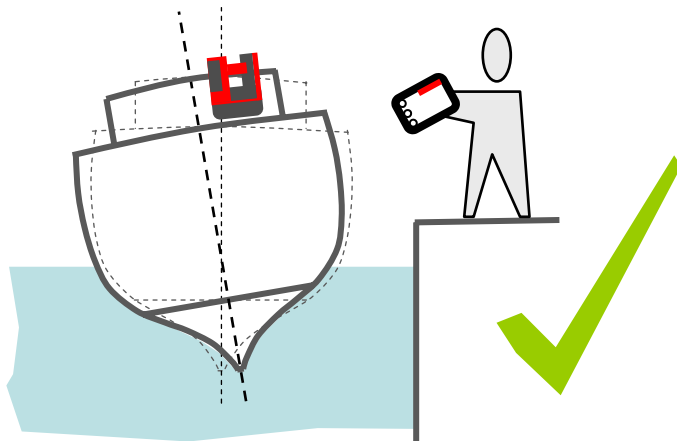
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Position of the 3D Disto

→
You would not be able to point the laser to a rolling object. Even if you would, results would be inaccurate.

Step 1:

Put the 3D Disto on the boat

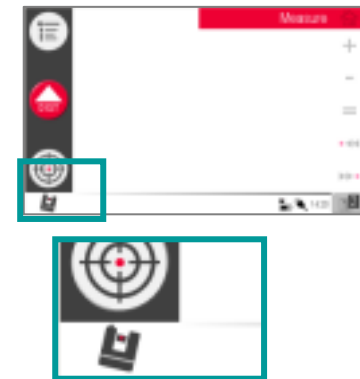
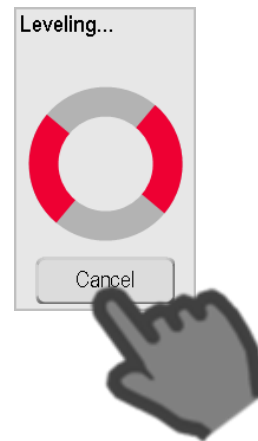
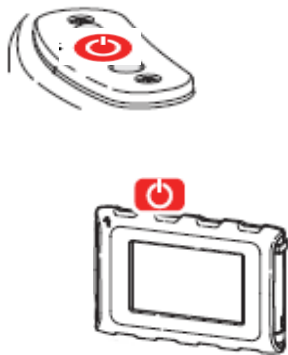


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Disabling the Tilt Sensor

If the underground is not stable, the Tilt Sensor can't level the 3D Disto and must be disabled:



Step 2:
Start and connect
3D Disto like usual.

Step 3:
Cancel the levelling in
upcoming popup

Icon in lower left corner
appears. Tilt Sensor is
now disabled.

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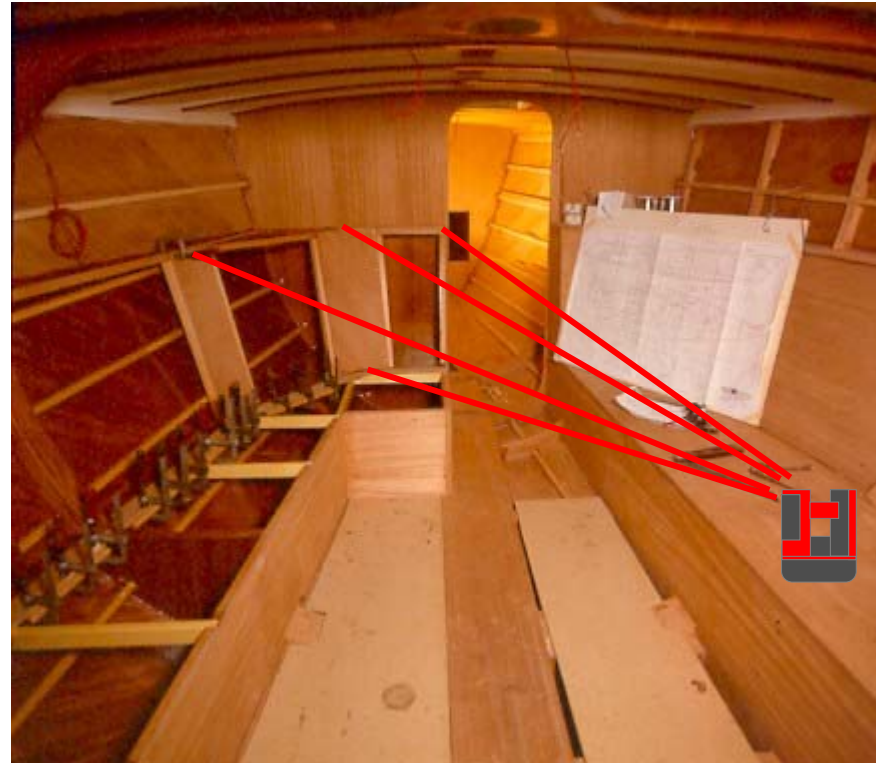


Measurements

Step 4:
Start „Menu – Applications
- Room Scan“

Measure all points of interest like you are used to do - target and measure manually or let the 3D Disto do the scans. Further helpful tools of the application:

- changing perspectives (foot print or face view) on the screen
- CAD tools (line intersection etc.) for inaccessible points
- photo function for documentation
- immediate results



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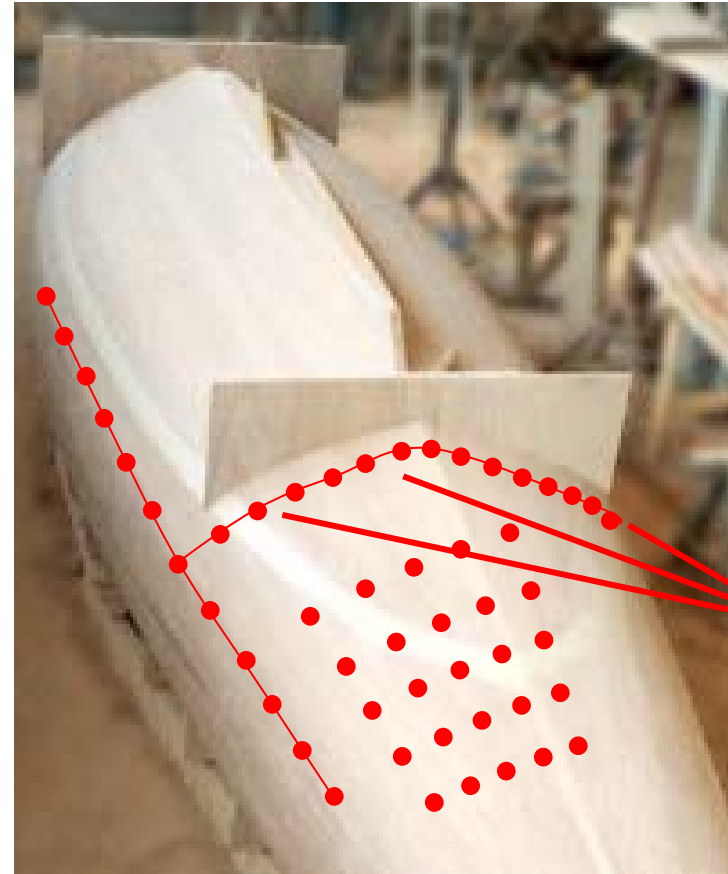
Scans



Execute line scans or surface scans if necessary.

- point intervals between 1 cm and 50 cm
- scans run automated
- accuracy = 1mm/10m
- scan is 3-dimensional
- scale = 1:1

Use the Windows version of the 3D Disto software on a PC, laptop or tablet PC for large scans.



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Data Export

Step 5:
Save and export the data

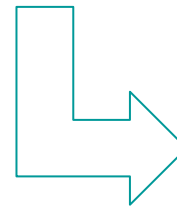
Press Home key
and save the
measurement.



Plug a USB stick
into the Control
Unit and press
EXPORT key.



Your
measurements
and photos are on
the stick now.



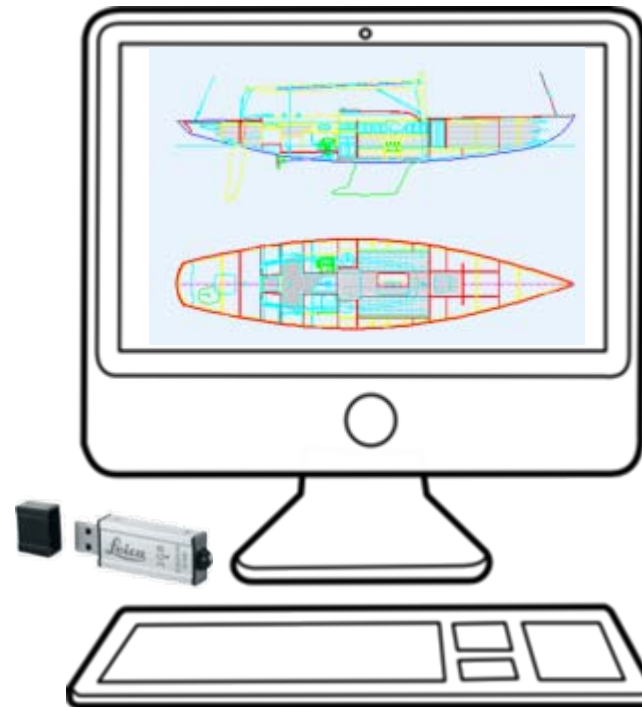
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Post processing

The following data formats are ready for import to your computer:

- DXF 3-dimensional, 1:1
- DXF 2-dimensional (foot print); 1:1
- DXF sketch for printout, scaled 1:n
- CSV (comma separated text file; for EXCEL and others)
- TXT
- JPG (photos)

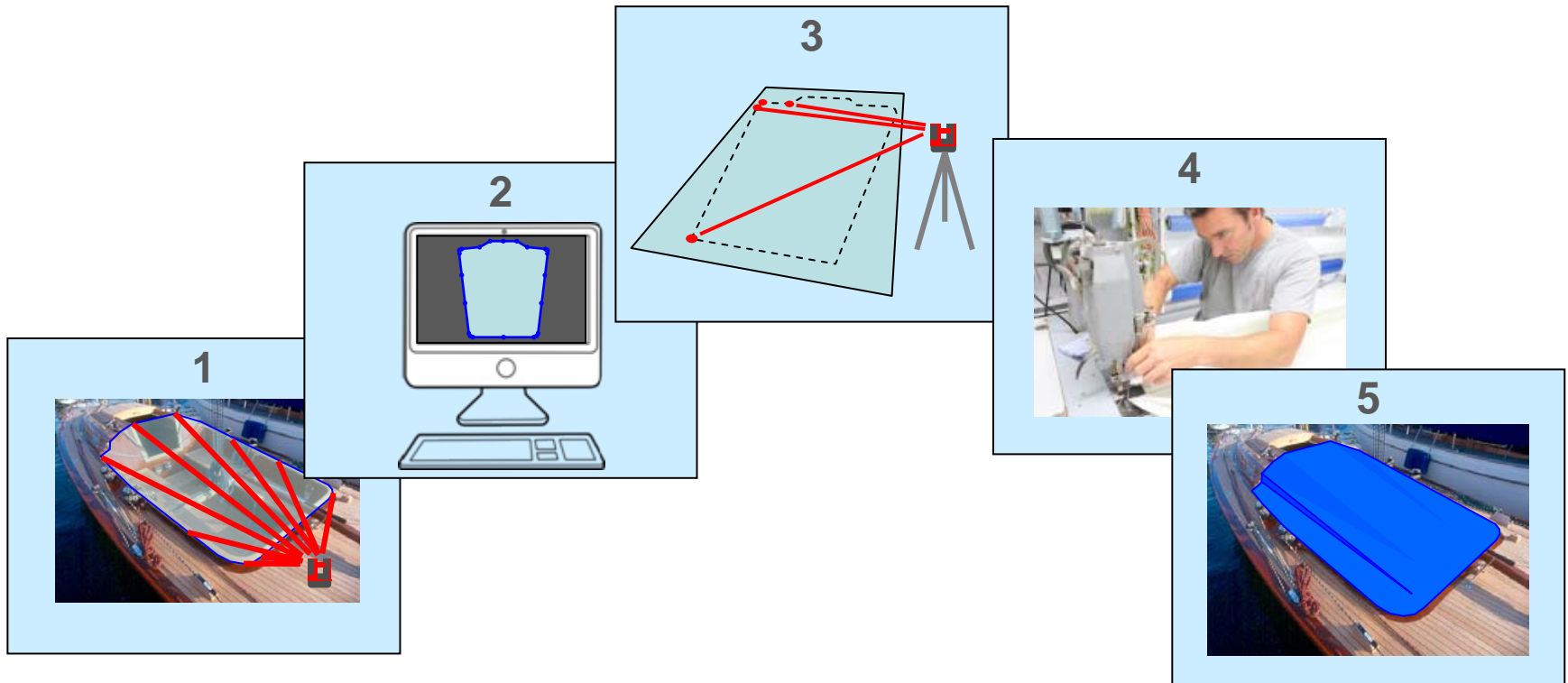


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Option: The cover

In case it's impossible to work with templates - use the 3D Disto's performance! Measure all points of interest for the cover, design it on CAD, project it on the carpet with the 3D Disto's PROJECTOR application and finally cut and sew.



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Worth knowing about the Tilt Sensor

The Tilt Sensor is a high-tech component of the 3D Disto. It compensates a tilt of the device up to 3°.

On the following pages advanced users find helpful advices how to measure regardless tilts over 3° or unstable undergrounds.



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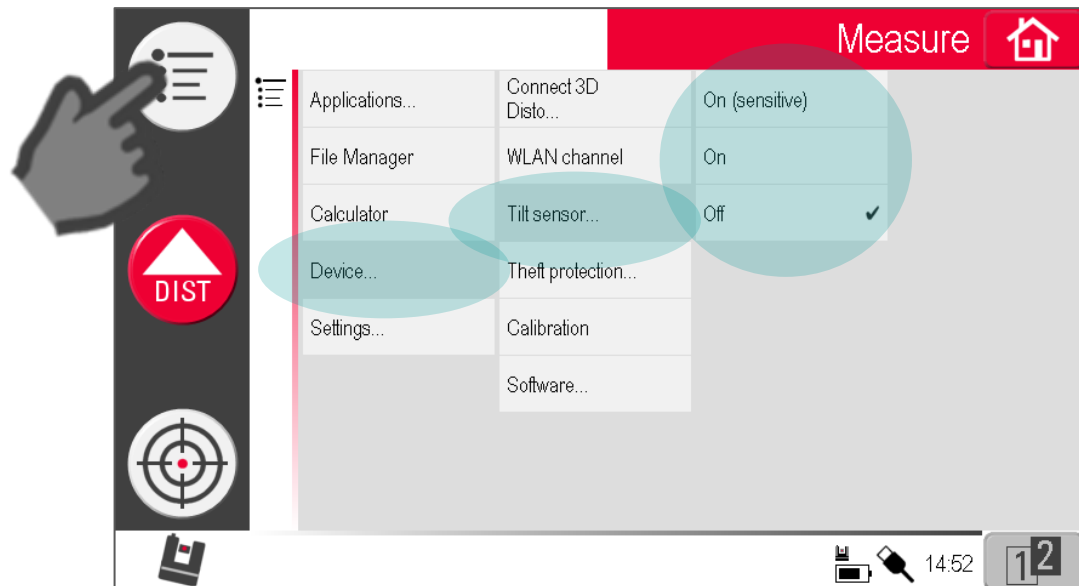


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Worth knowing about the Tilt Sensor

The Tilt Sensor can be enabled or disabled in the menu at any time.

Status „On“ has the same accuracy like „On (sensitive)“, but it accepts slight instabilities without giving an error message.



Advice:

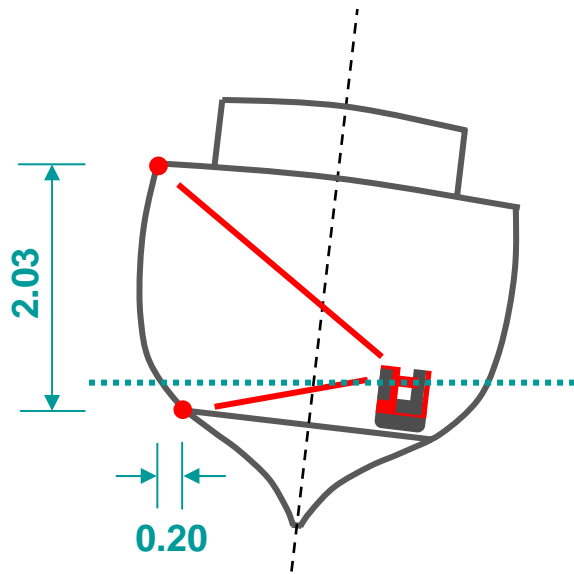
Save your measurements and start a new file if you change the state of the Tilt Sensor.

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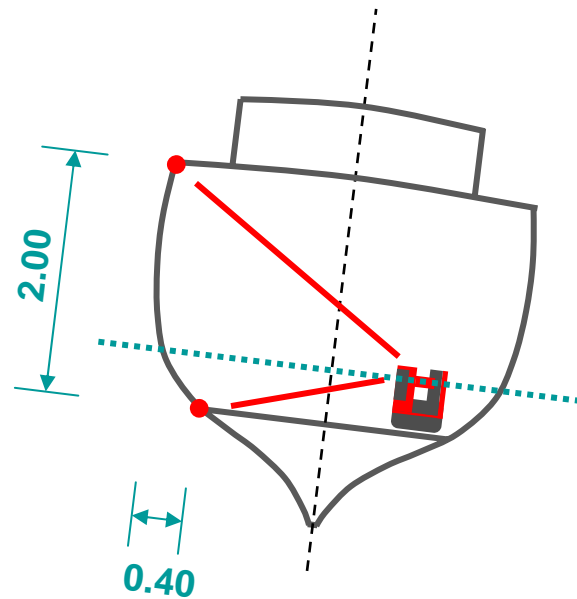
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Worth knowing about the Tilt Sensor

The state of the Tilt Sensor has impact on horizontal distances and vertical dimensions/heights.



Tilt Sensor ON



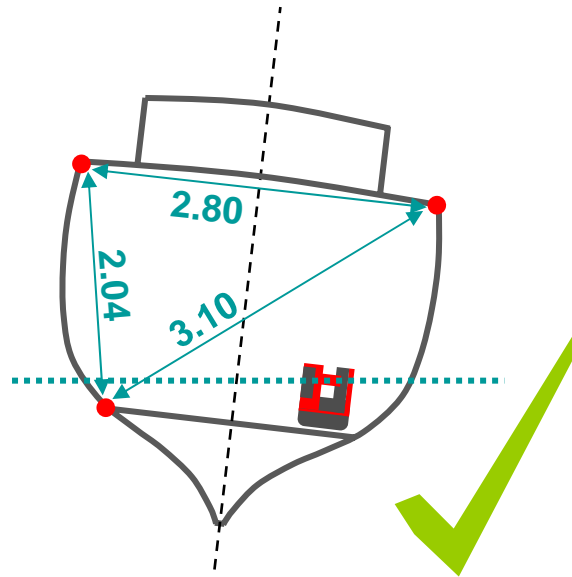
Tilt Sensor OFF

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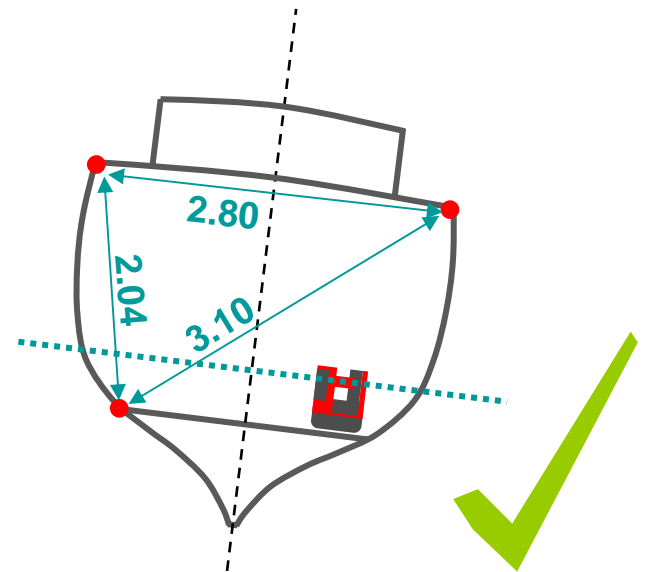
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Worth knowing about the Tilt Sensor

No matter if the Tilt Sensor is ON or OFF: all the tie distances are error-free
→ 3D export data are correct!



Tilt Sensor ON



Tilt Sensor OFF

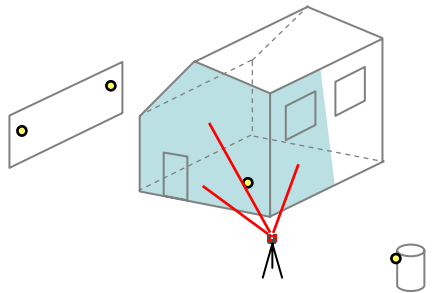
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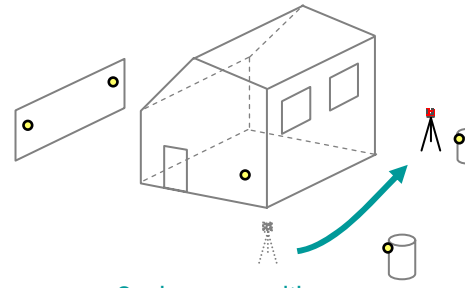
Worth knowing about the Tilt Sensor

Under normal conditions (stable underground, Tilt Sensor ON) the “Location” tools help to change the 3D Disto’s position during a measurement.

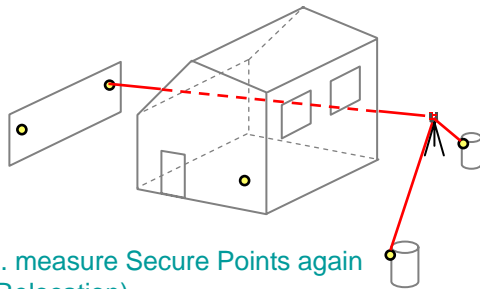
Tilt Sensor ON



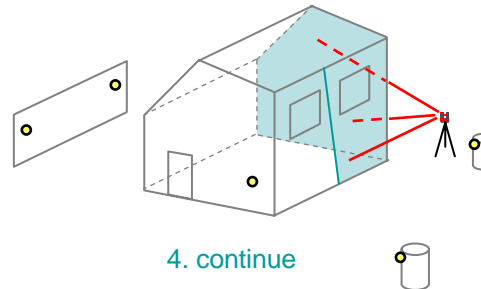
1. measure Secure Points and object (Secure Location)



2. change position



3. measure Secure Points again (Relocation)



4. continue

These tools don't work if the Tilt Sensor is OFF!

See next page for solution
→

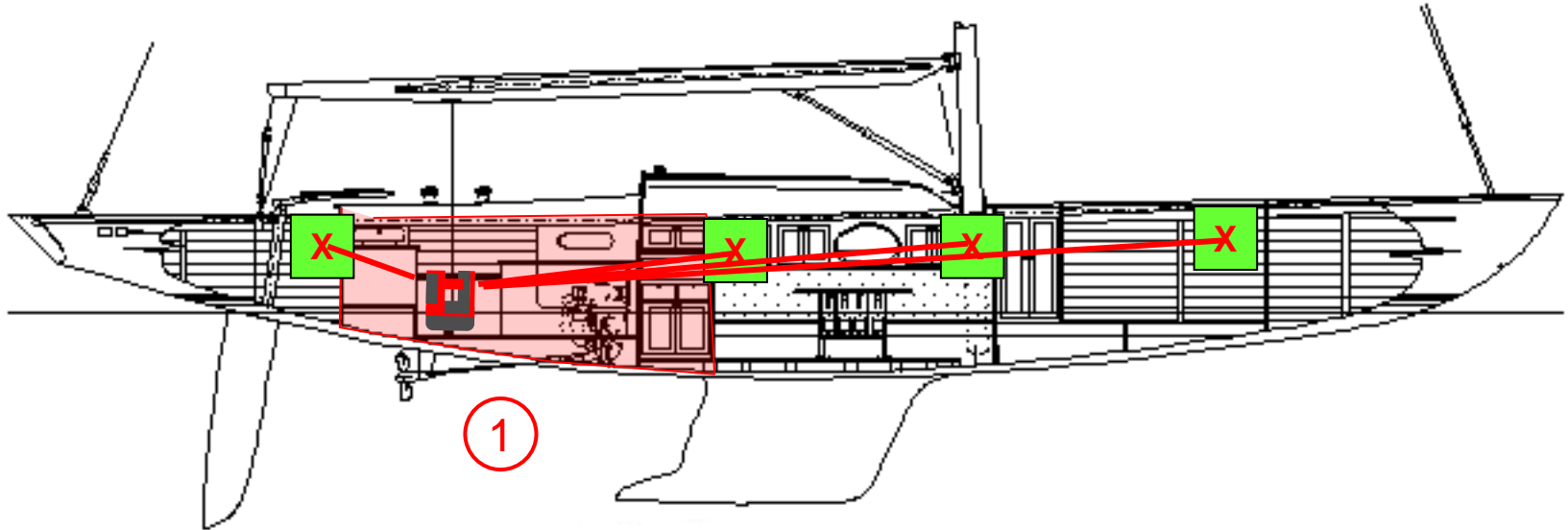
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Worth knowing about the Tilt Sensor

Tilt Sensor OFF

→ How to change the 3D Disto's position:



Step 1:

Measure all you need. Then mark some points all over the working area and measure them, too. Do not use Location tools. Save the file.

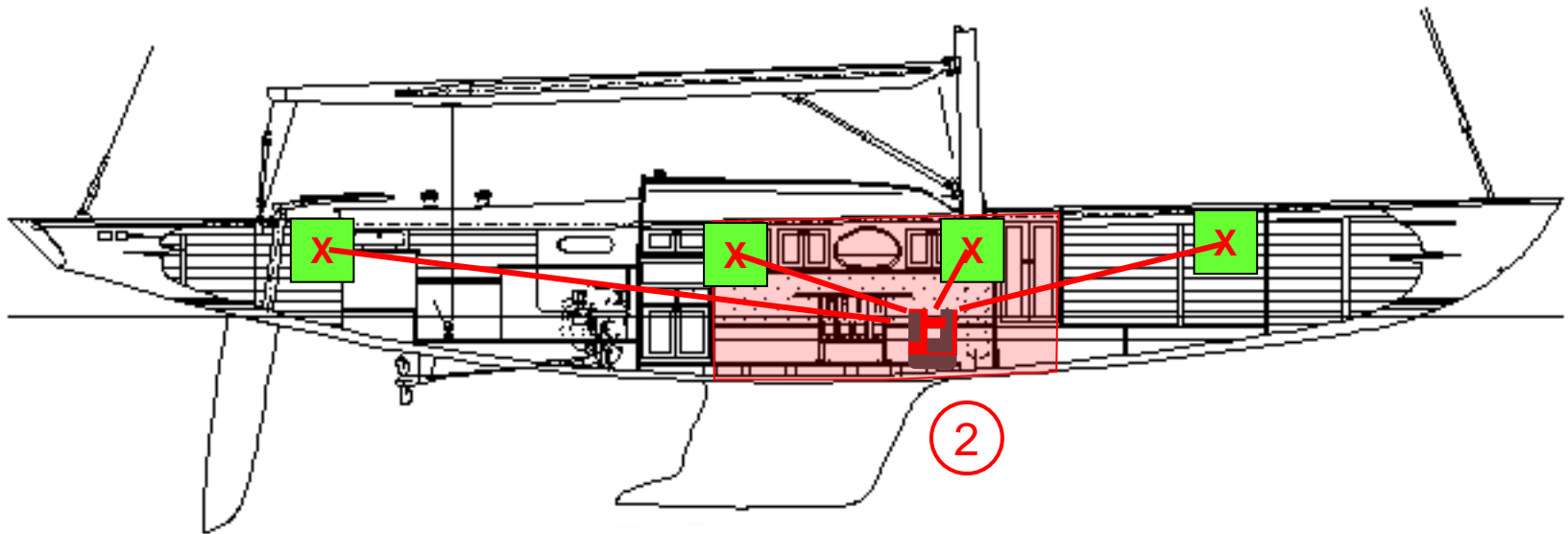
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Worth knowing about the Tilt Sensor

Tilt Sensor OFF

→ How to change the 3D Disto's position:



Step 2:

Change position of the 3D Disto. Start a new measurement with empty screen, measure all you need and measure 3 or more of the marked points. Do not use Location tools. Save the file.

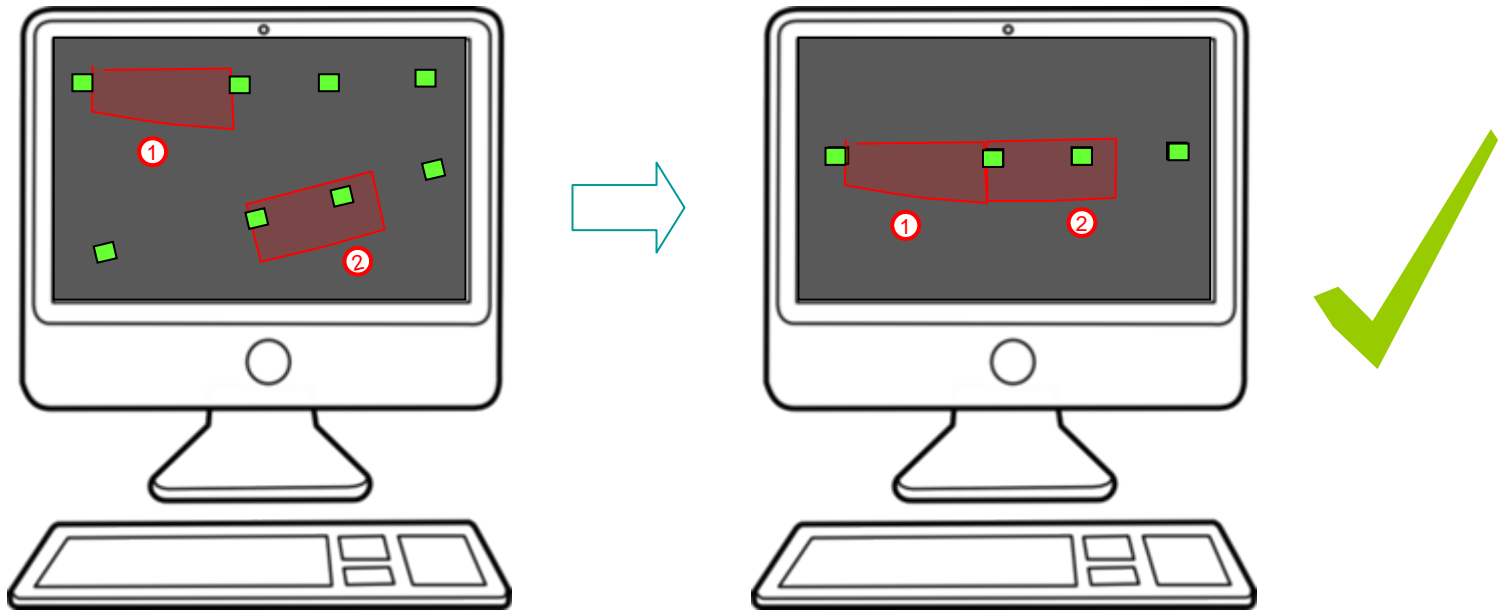
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Worth knowing about the Tilt Sensor

Tilt Sensor OFF

→ How to change the 3D Disto's position:



Step 3:

Export both files and import to your CAD system. Use the marked points to coincide both measurements.

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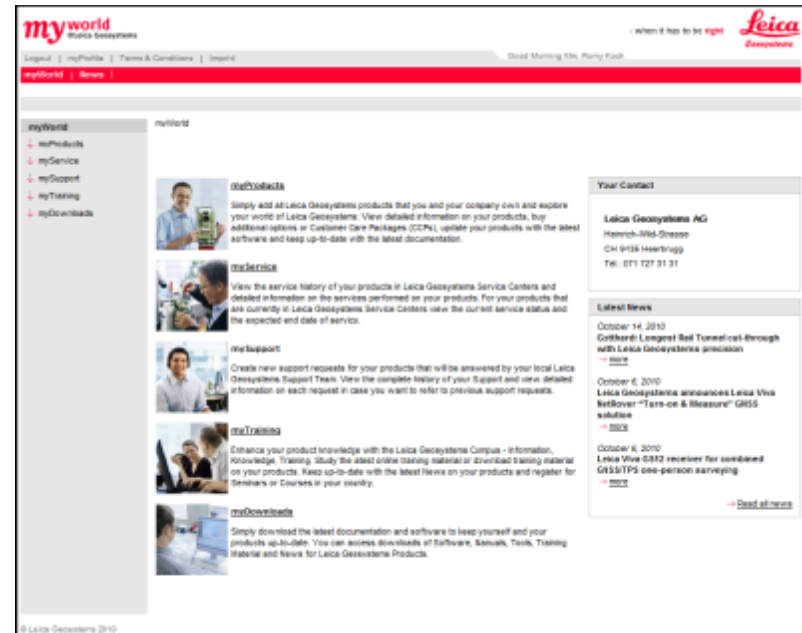
myworld

Further tutorials for download

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- tutorials
- software updates
- support
- manuals
- ...
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