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## How does it work...

## ...with *WinPC-NC* ?

**Fixed surface probe and material  
thickness**

Light

✓ USB

✓ Professional





From version **V4.00/40** onwards, the **Z** zero point can be determined much more efficiently on the machine table or the workpiece and no longer requires a flying probe as before.

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## Background

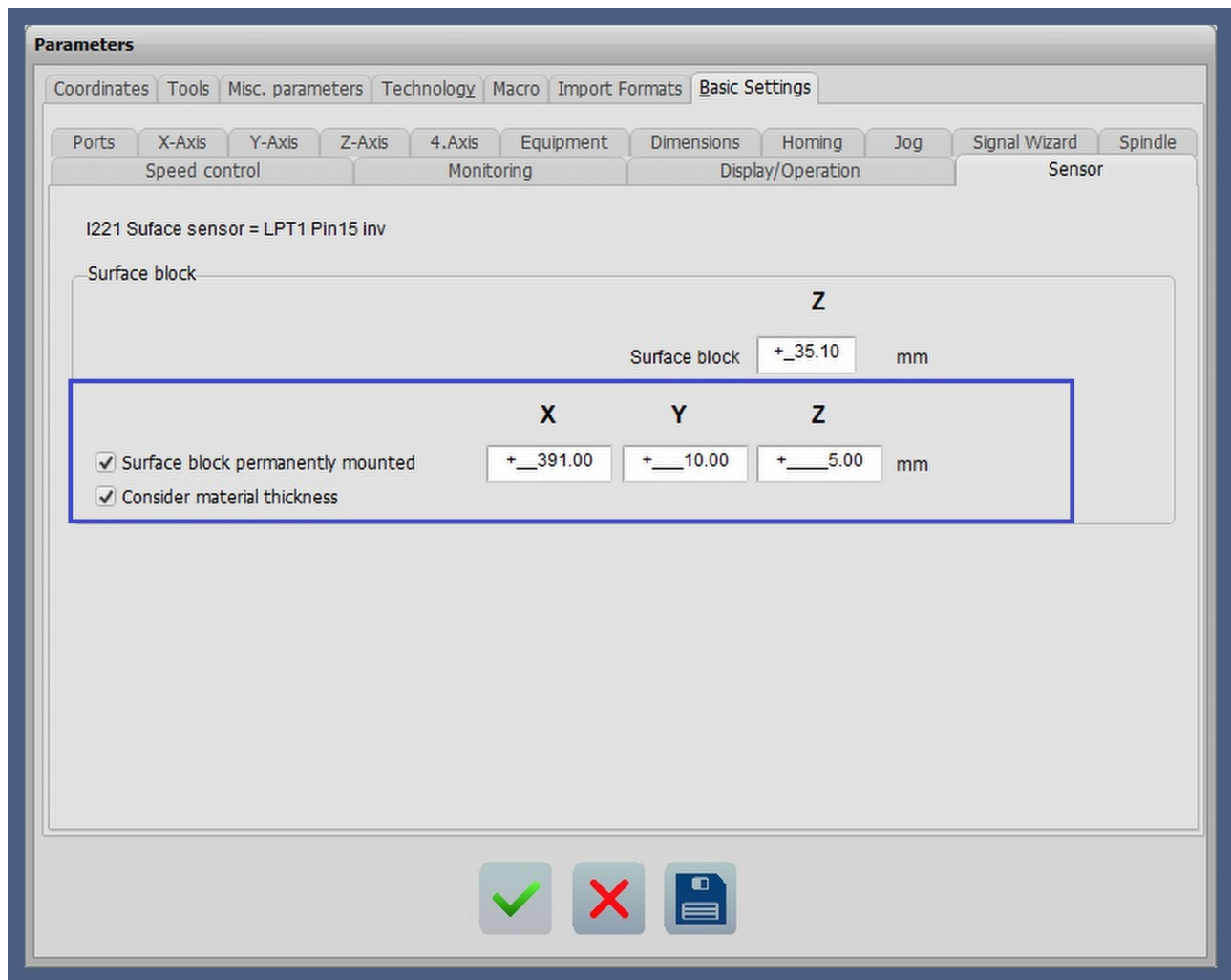
Until now, the Z zero point on the surface of a fixed workpiece could be determined without contact using a flying probe that was placed under the tool directly on the material.

**WinPC-NC** used this probe, added the set surface block dimension and calculated the exact height of the Z zero point. The disadvantage was that it had to be a flying probe that was always placed directly on the workpiece.

In the current version, this can also be a fixed probe, which is also used as a tool length sensor for example, and no longer has to be movable.

## New settings

In the parameter dialogue under **Basic Settings-Sensor**, you can now define that the surface block is permanently mounted and also specify the exact position on the machine table.



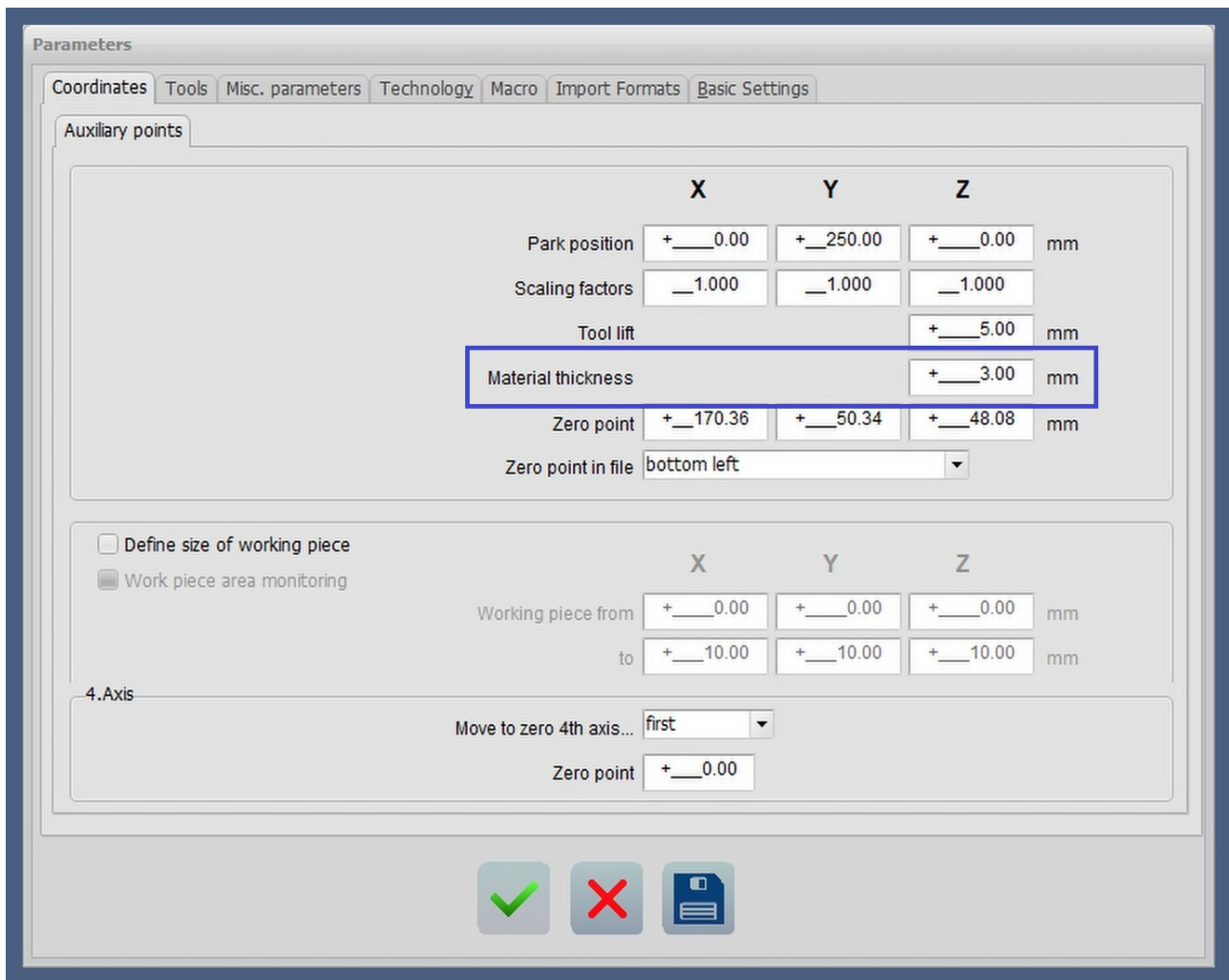
The surface block dimension determined here should ideally define exactly the height that a **Z zero point** determined over it lies exactly on the base plate of the machine table. Then the **Z zero point** can be measured very easily and quickly with tools of different lengths.

Instructions for determining an unknown probe block dimension are contained in the **Z zero point** adjustment instruction guide.

The position of the probe and the surface block dimension are system parameters and always remain defined the same, no matter which project and which material is being processed.

## Material thickness for each project

The checkbox for **Consider material thickness** and the value of material thickness itself are project parameters and are always saved as belonging to the current project. This allows different material thicknesses to be defined for each project.



The material thickness is defined under **Parameter-Coordinates-Auxiliary points** and normally defines the thickness of the workpiece to be processed. If a height is defined here and the checkbox **Consider material thickness** is activated, **WinPC-NC** subtracts this height when determining and measuring the **Z zero point**.

Until now, the **Z zero point** always had to be determined by scratching the surface or placing a flying probe as a surface probe.

With the new function, after entering the material thickness and starting the function **Probe Z zero point**, the machine moves to the permanently mounted probe. **WinPC-NC** calculates the new **Z zero point** depending on the probed tool length and the material thickness and positions the Z zero point automatically on the workpiece surface.

Manual jogging over the flying surface probe on the workpiece and positioning of the probe on the workpiece is no longer necessary.



## How does it work with *WinPC-NC* ?

### Fixed surface probe and material thickness

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When using the new function with material thickness and permanently mounted probe as well as activated **Length measurement and compensation**, make sure that the previous and recommended steps are still carried out separately.

First the inserted tool is measured via the tool change dialogue and then the **Z zero point** must be set once before the job start.

With this new function, the new Z zero point can also be determined very quickly and automatically when the tool is changed.