

# Leica Geosystems TruStory

## 3D Disto connects living spaces



**"We have been looking for a device which meets all our requirements for a long time. Having tried various types we finally came across the 3D Disto at the SwissBau – and it proved to be simply perfect."**

*Matthias Luginbühl (Project Manager, Gyger Metallbau AG)*

Stairs are a passion at Gyger Metallbau AG, but one also encounters metal and glass in many variations. Steel windows and steel doors, glass roofs, handrails, façades and steel furniture are also part of the expertise of the team of 18. With swissstairs® they are setting new trends in modern staircase construction. All staircases and installations are individual projects which are developed from scratch together with the customer.

In our example a staircase to the upper top floor apartment plus a handrail in the stairwell for several apartments are planned in an old farmhouse.

The old building is combined with new elements and this is where the major challenge begins. Many angles and dependencies are simply in the air but thanks to the 3D Disto they are still able to be measured.

Planned is a quarter-turn spiral staircase with a parapet-high steel railing which is combined together with the return rail in one piece. The staircase is mainly manufactured in steel with winders of wood fitted at the end.

Using the 3D Disto, the starting point is measured first and then

**GYGER**  
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### ■ Company

Gyger Metallbau AG  
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www.gygerstair.ch  
www.swissstairs.com

### ■ Challenge

Surveying of old building for planning stringer stairs. The walls are uneven and full of nooks and crannies.

### ■ Location

Urdorf (Switzerland)



### ■ Solution

Measure the run of the stairs point by point with the 3D Disto using the slant scanning function.

### ■ Result

- Efficient measurement
- Angles and irregularities of walls are included
- Accurate surveying
- Easy transfer of measurement data to CAD. Creation of plans plus programming of CNC miller



#### ■ Product highlights

- Accuracy 1 mm
- Slant scanning function for automatic measurement on the wall
- Measuring from one position
- Output in DXF format



#### ■ Matthias Luginbühl, Management, Quotations, Project Manager Metal Construction

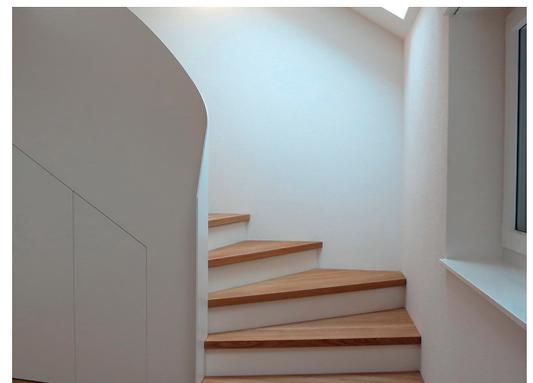
the finishing point of the run of the stairs is measured. The individual points of the staircase are subsequently measured using the slant scanning function (from SW version 3.0). The distance between scanned points can be selected freely. Depending on project the metal worker measures up to 300 points.

“The new slant scanning function is a dream”, says Matthias Luginbühl enthusiastically. “These days we measure almost everything with the 3D Disto because it is simply practical and above all, accurate.”

The 3D Disto is in action at Gyger Metallbau around twice a week. Five employees regularly use the 3D Disto for taking measurements. They find it relatively easy to use and are of the opinion that if one is computer literate and used to this kind of equipment one soon gets the hang of it. Every staircase project completed by Gyger is executed with the 3D Disto and in the meantime all the metalworking too.

The components prefabricated in the workshop simply have to fit. The major challenge is the measuring itself. Fitting is carried out by our own fitters. As early as the measurement stage, consideration is given to what will be required for the construction later on. Due to the fact that everything is digital the defect rate is almost zero. The measurement data can be directly transferred to the CAD.

Formerly everything had to be measured with the line and dot laser, distance meter, and naturally with the conventional folding rule. The main difficulty was avoiding reading off or recording a wrong dimension or making a mistake when transferring everything to the computer. All this is belongs to the past now.



Matthias Luginbühl, Project Manager