WERKLICHT Pro L - The Laser Template

WERKLICHT PRO L

WERKLICHT Pro L is a dynamic 3D laser projector for high-precision tasks in prototyping, assembly and quality assurance.

Bridge the gap between your digital data and the real world! Support labor-intensive manual operations in assembly and QA by bringing the positions of studs, brackets, etc. or any contours from your CAD model directly onto the workpiece, aligned in 3D.
Complex 2D drawings, expensive templates, jigs, and unflexible coordinate measurement machines become a thing of the past. Prevent errors before they even develop, speedup your operations and simplify your entire process chain.
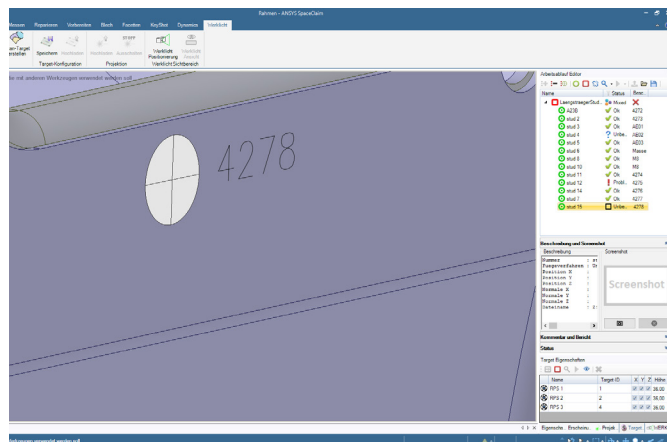
WERKLICHT Pro L is suited for tailored manufacturing and variant production all across to serial production. Among others, it is used by customers from these industries: automotive, aerospace, transportation, marine, mechanical engineering, or the construction of special vehicles.

APPLICATIONS

- Marking stud positions in automotive preproduction development (instead of unflexible horizontal arm machines)
- Quality assurance in automotive joining technology (instead of expensive templates)
- Painting in aviation and marine industry
- Positioning of assembly parts in steel construction (instead of expensive templates)
- Bracket assembly in aviation
- Design and construction of tools and jigs
- … and a lot more!

■ made
■ in
■ Germany

YOUR ENVIRONMENT

WERKLICHT Pro L has been designed as an IP 64 product to work in production environments such as welding shops. It can be used effectively in all indoor scenarios and it is flexible enough to be used also in the office, in a design center, or a measuring room.

Due to the high contrast of our green class 2M laser, it even works under daylight conditions. Depending on the situation, WERKLICHT Pro L is installed in the environment rigidly or operated more flexibly using a swivel arm, a studio stand, or a tripod.

Only one click from CAD to a projection onto your object. Less than 10 minutes setup time

Display of the part number or assembling order

YOUR WORK ITEM

Planar 2D surfaces are supported as well as arbitrarily curved 3D surfaces. The more complex your work item becomes, the more you will benefit from using WERKLICHT Pro L. Areas occluded from one perspective can be reached easily by moving the device to another perspective or alternatively by rotating the work item. WERKLICHT Pro L keeps track of the perspective automatically using its built-in stereo-camera-system and state-of-the-art Dynamic Referencing algorithms. They keep track of identifiable 3D reference positions (holes, long holes, corners) or other features (planes, edges) to automatically update the projection to the current perspective. WERKLICHT Pro L meets the accuracy standards that you can expect from the innovation leader for dynamic Augmented Reality projection systems. It works on all kinds of materials used in modern manufacturing, in particular steel, aluminum, carbon, and all painted surfaces even if they are highly reflective. Due to the mobility of the device and the high contrast of the class 2M laser, the device can cover areas of 20 m² and more.

SAVE TIME
BOOST QUALITY
MAXIMIZE PROFIT

with WERKLICHT

Technical Data WERKLICHT Pro L	
Dimensions	655 x 265 x 215 mm
Weight	7.5 kg
Sensors	Stereo-optic
Markerbased Tracking	3D / 6D targets uncoded & coded, based on 3D reference positions or RPS features according to 3-2-1 principle (hole, long hole, plane, edge, corner)
Markerless Tracking	Model-based edge detection, scan-based refinement
Working distance	1.3 to 3 m
Projection accuracy	0.1 mm/m
Projection area	60°
Ambient conditions	10° C - 30° C
Beam size at focus (1/e²)	≤ 0.9 mm
Laser class	2M (can be used without safety glasses) / optional 3R
Laser type, wavelength	Diode, 520 nm
Laser power	< 5 mW, optional max. 50 mW
Control unit	PC or Laptop
Power supply	110-240 V
Interface	Ethernet
Supported data formats	IGES, STEP, DWG, DXF, CATIA V5, JT, NX, Parasolid, Pro/E, STL, OBJ, ...