

PRO-SOFT 5

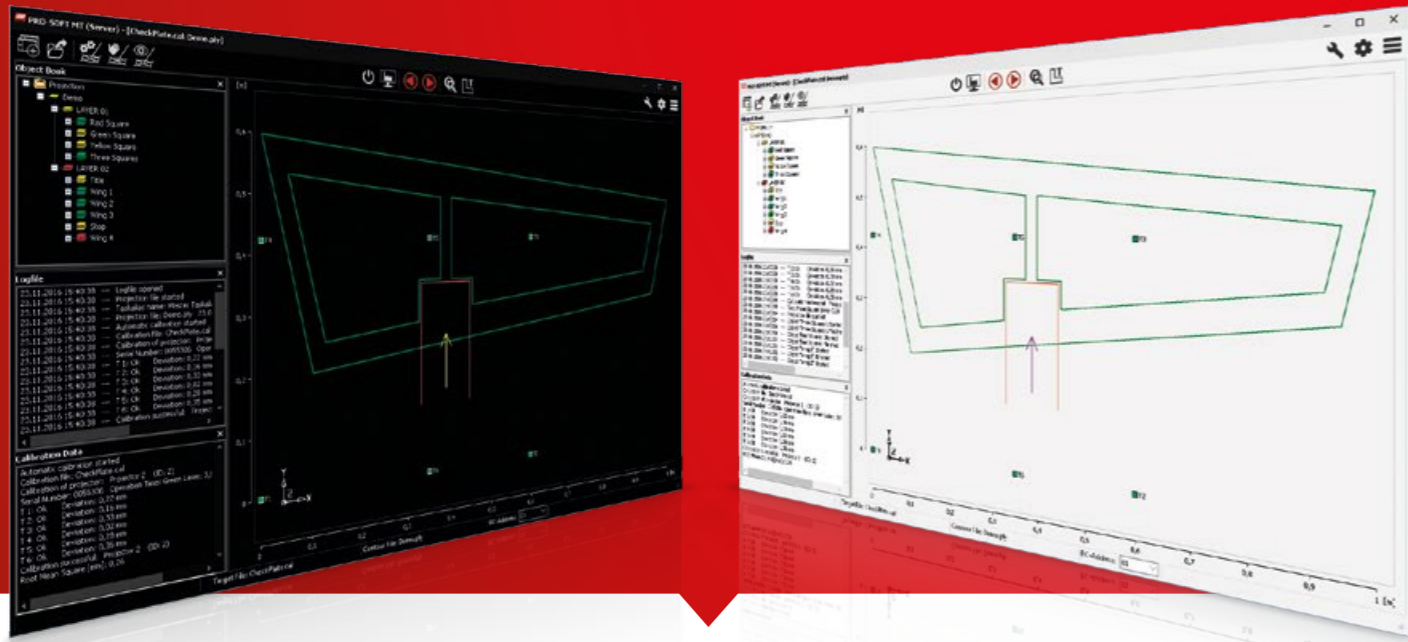
SOFTWARE FOR LASER PROJECTION

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SOFTWARE TO OPERATE
LAP CAD-PRO LASER PROJECTORS





PRO-SOFT FROM CAD DATA TO PROJECTION – AND BACK AGAIN

LAP PRO-SOFT guides you from the import of CAD data to be projected to the projection itself – and back to a CAD-file if required.

There are 4 different versions that offer solutions for the workflows in your production:

PRO-SOFT TP

the basic version for all tasks on flat surfaces with additional height coordinates

PRO-SOFT UT

the version supporting the Unitechnik format for production of concrete pre-cast elements

PRO-SOFT ST

the version for projection on 3D surfaces and single workflows

PRO-SOFT MT

for multiple workflows operating simultaneously on 3D surfaces (multi-tasking)

PRO-SOFT 5

PRO-SOFT is the user-friendly operating environment for your laser projection system. The new look and feel of the graphical user interface is easy to learn and easy to handle as it follows the current WINDOWS® 10 design. In addition, you may change parts of the configuration, the scaling and the skin individually.

The usability has been improved by organizing the functions' visibility in accordance with the amount of use: frequently used functions are always visible, only occasionally used settings are found in submenus. This way the workers can focus on the most important parts of the processes - as few functions as possible, but as many as necessary.

INTEGRATED HELP

Context sensitive help offers a short explanation and a link to the requested topic in the manual.

INTEGRATION OF BARCODE READERS

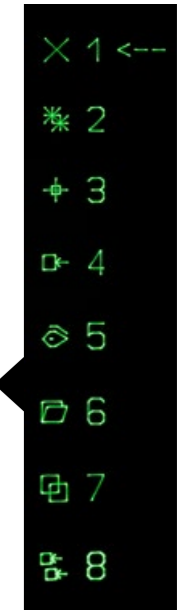
You may use a barcode reader to easily fill input fields of the software – from user-ID and order number to the ID of the object to be displayed.

REPORTS

Logfiles and the configuration of variable system data and settings may be stored as a PDF report.

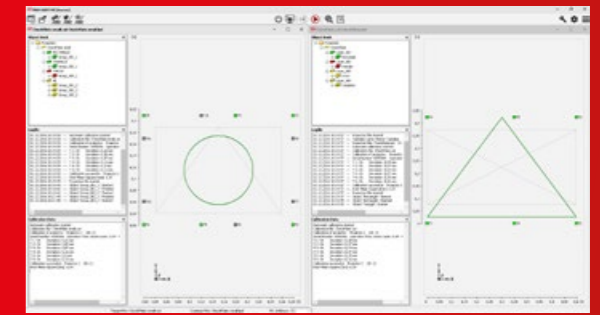
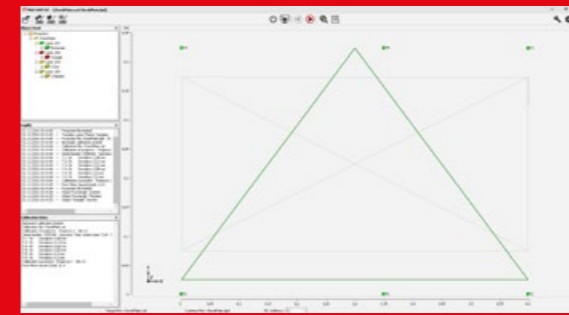
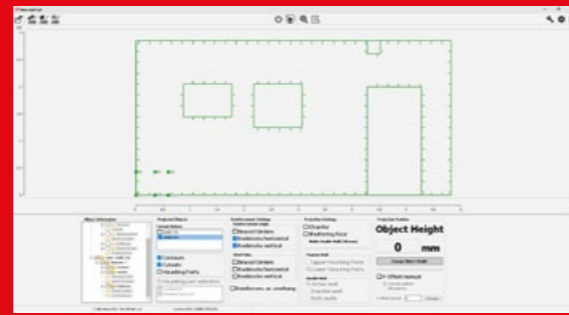
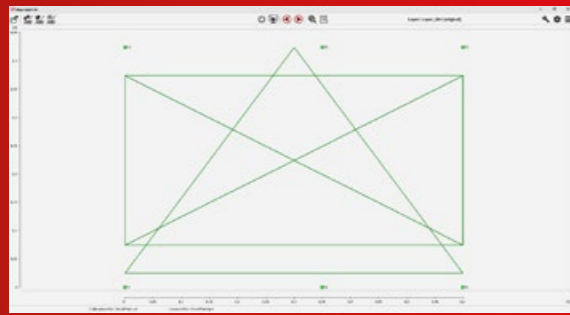
OPERATION BY PROJECTED LASER MENU

Some important functions that up to now couldn't be addressed by remote control can now be handled directly on the workpiece surface using a projected laser menu. No need to walk to the PC.



FUNCTIONS OF ALL SOFTWARE VARIANTS

- User management
- Switching metric/imperial
- Editor for display of text and icons
- Testing mode, additional simulation mode for ST and MT
- Viewport: brighter display of selected projection areas
- Weighting of projection parameters in favor of speed or precision
- Load-balancing: in systems with several projectors and overlapping projection areas, display is not distributed by area only, but also by load.



PRO-SOFT TP

dx, HPGL, IGES, lpd, ...

PRO-SOFT TP is the standard software for all works on a plane surface in combination with height coordinates.

HEIGHT CHANGE The height level of the projection (z-coordinates) can be changed manually. For recurrent height values you may easily create buttons in the tool bar.

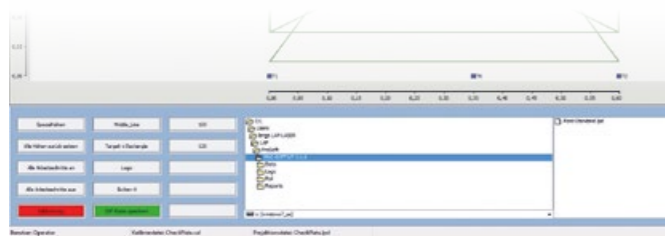
NESTING Single elements of the projection data may be selected, moved and/or turned. Offset and angle can be written back to the file.

DIGITIZING You may create and save polylines in dx format by using a projected crosshair and a "rubberband" function.

MULTI-TABLE For machines with two or more work areas, projection data can be calculated with offset or angle, or even be mirrored.

DISPLAY OF OBJECT NAME You can display the name of the currently projected element as laser text by remote control.

TCP-IP CONTROLLER Laser projection may be controlled from the outside, e.g. by PLC, using a TCP/IP controller. This way, the operators of the machine can handle the laser projection from their familiar GUI without learning a new program.



You can switch to a user interface with touch screen elements.

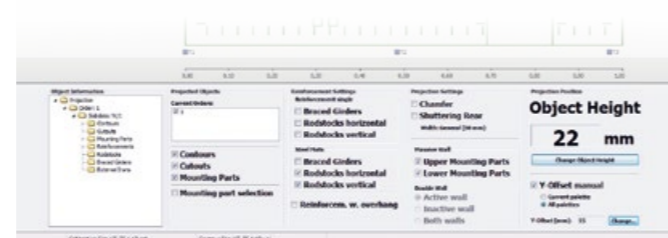
PRO-SOFT UT

Unitechnik-Format 4.0 - 7.0

This software has been optimized for users in the concrete industry. It can import and display data in Unitechnik format. Unitechnik data is displayed in the lower part of the screen. PRO-SOFT UT is mainly used for production of concrete precast elements. It supports production of double-wall elements. Position of reinforcements also can be shown.

HEIGHT CHANGE The height level of the projection (z-coordinates) can be changed manually. For recurrent height values you may easily create buttons in the tool bar. The height of the object can be projected.

CHANGE OF Y COORDINATES You may change the y-coordinates of the projected elements manually. This comes in handy when aligning the two parts of a double-wall element.



With checkboxes you can select which elements of the whole object should be projected. If you move the mouse pointer over single items in the tree structure, you will get a pop-up window with detailed Unitechnik data of this item.

PRO-SOFT ST

lpd, ply, IGES, dx ... CATIA optional

For projection on 3D surfaces PRO-SOFT ST is the right choice. The single tasking version can control complex work areas with up to 16 projectors. More projectors can be connected with customized solutions. Projectors may be placed with offset to each other, turned by 90°, facing each other or crosswise to cover contorted or twisted shapes.

CALIBRATION WITHOUT TARGETS Calibration may be handled by selecting single prominent coordinates on the surface of the object. There is no need for drill holes or glued-on reflectors.

TARGET CHECK Target positions are scanned in freely selectable intervals. If deviations are detected, a warning is displayed and the projection is stopped. Alternatively, an automatic re-calibration is triggered.

CHOICE OF VIEW Projection data can be displayed on the monitor in 7 views: front/behind, right/left, above /below and isometric. For overview, all contours may be shown simultaneously. For details or relations you may zoom in or out.

OPERATING MODES There are three operating modes available:

- production mode: projection data is displayed strictly in the predetermined order. Skipping steps or preview of later steps is not possible.
- simulation mode: displayed elements can be selected freely, simultaneous projection of different data is possible.
- testing mode: software is operated without projection hardware. This mode is for preparing the CAD data. Items to be projected can be checked for consistency and compliance with calibration data.

PRO-SOFT MT

lpd, dx, IGES, ply, apt ... CATIA optional

If you want to manage several independent work processes from one PC, you need the multi-tasking abilities of PRO-SOFT MT. LAP is the only company offering projection software with a real client-server architecture. You may open several instances or connect several clients. Clients may be additional PCs, tablet PCs or handhelds, connected directly or via WLAN. Every client may start several instances of the software.

VIEWPORT The visibility in a selected part of the projection area can be increased by marking this area on screen.

DOCUMENTATION If selected, all worksteps can be saved to a logfile.

EDITOR You may create additional projection elements like icons or text. Order, color and name of CAD-elements may be changed, but not the coordinates themselves.

DISPLAY OF OBJECT NAME You can display the name of the currently projected element as laser text by remote control.

CATIA IMPORT An optional import module directly handles data in CATIA format. No format change is necessary.

AUTOMATIC LOAD OF UPDATED FILES With connection to the operator's network, updates of projection files are detected and automatically loaded.

PRO-SOFT 5 MT: MAXIMUM FLEXIBILITY

- REAL CLIENT-SERVER STRUCTURE
- VARIABLE SYSTEM DESIGN
- DIFFERENT OPERATION CONCEPTS

CABINET WITH INDUSTRIAL PC

An IPC in a cabinet is the typical basic control tool and server. All functions may be accessed using mouse and keyboard. You may start several instances (tasks) to independently project data. For each task you may connect an individual remote control, able to open a related laser menu.

For larger projection areas it may be time-consuming and laborious to handle all work on one IPC. To avoid this, you may connect several clients to the server. These may be other IPCs or portable devices like tablets or handhelds.

PORTABLE CLIENT

Each client also offers server functionality: you may start several independent tasks, each connected with an individual RC and able to project a laser menu.

This way, you may organize work places with several teams working on separate tools or separate areas of the same tool.

REMOTE CONTROL

You may assign an individual RC to each task. The remote control can open a laser menu that offers additional functions and visual feedback. Example: after using the laser menu to initiate a recalibration the result „Success“ or „Error“ is projected.



PRO-SOFT 5, QUALITY SOFTWARE BY LAP

For more than 30 years, LAP has been developing, manufacturing and distributing laser measurement systems, line lasers and laser template projectors for industrial and medical applications. LAP products are high-precision devices *Made in Germany*. Using LAP laser systems, our customers improve performance and increase the quality of their products as well as the effectiveness of their processes.

As a result of continuous product innovation, LAP has become a world leader in lasers for projection and measurement. LAP products are setting the standards in a wide range of markets from manufacturing to heavy industrial environments and medical applications.

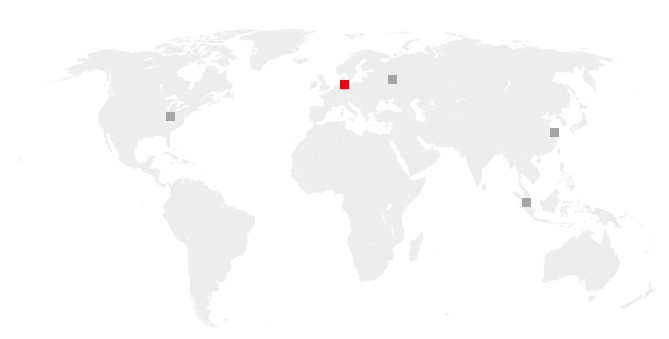
Environmental protection is important to us. We use solar panels, green electricity and roofs planted with grass. Our production is planned by standards of sustainability.

Quality has always been part of our commitment. We are content if you are. We know your high demands. To meet your requirements, the quality management of LAP is certified by DIN EN ISO 9001:2008 for industrial products and by EN ISO 13485:2007 for medical engineering products.

www.lap-laser.com/PRO-SOFT



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