



Fom Industrie



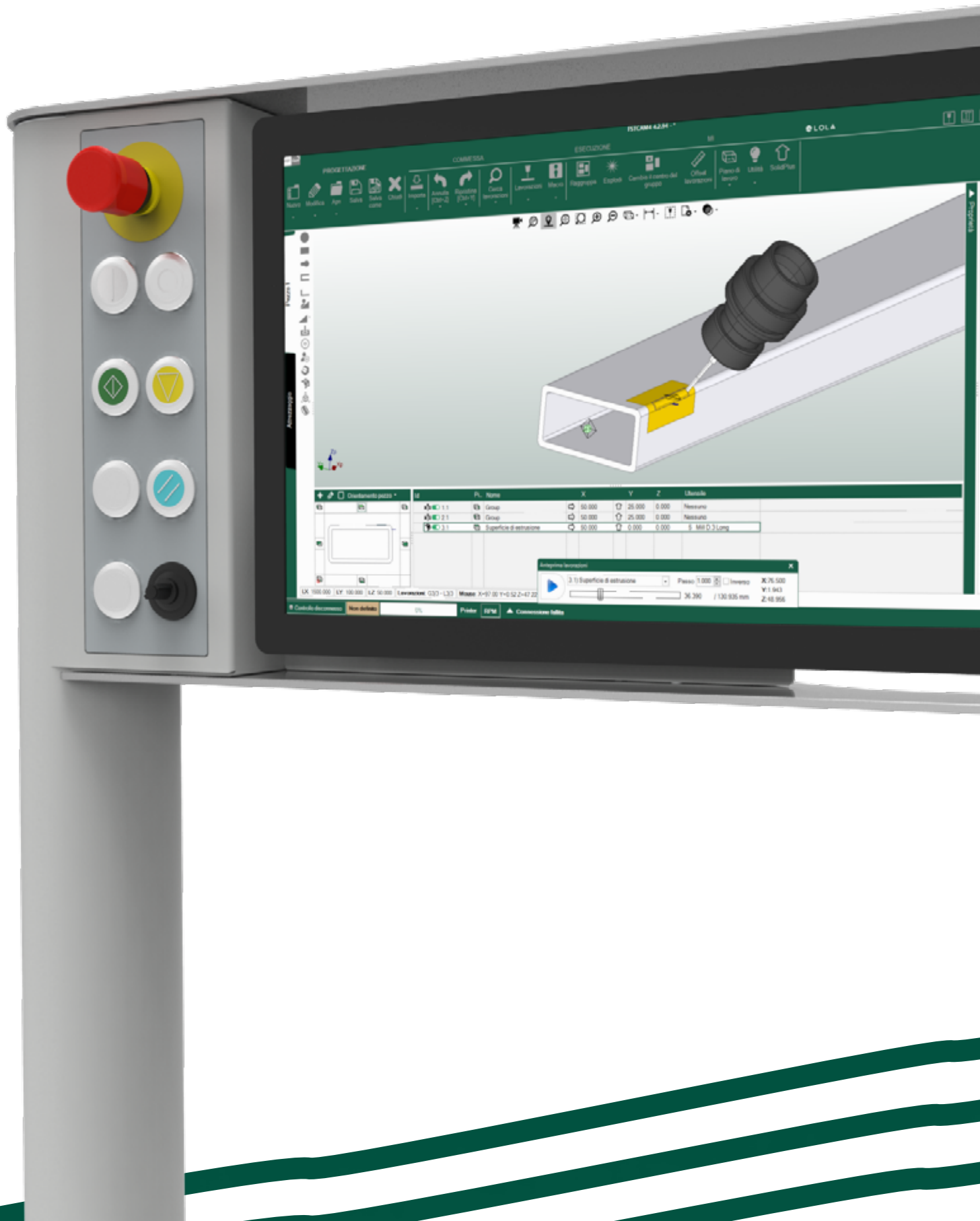
SOFTWARE

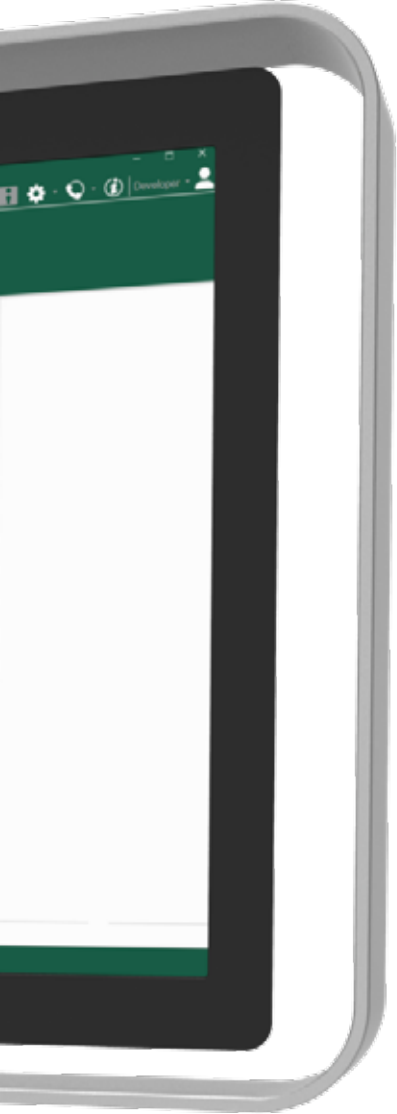






SOFTWARE for the door and window





Fom Software Tecnology

Fom Software Technology, FST, develops software solutions for doors and windows and for aluminium and PVC processing machines. Fom Group's software house creates its products in close co-operation with users, machine manufacturers, extrusion specialists and trade associations to offer complete, easy to use programs.

FST software optimise processes to guarantee efficiency and accuracy, from configuration and planning to generation of data for the machine tool.



FSTLine4



Specially developed to control Fom Industrie production lines, FSTLine4 allows users to complete all phases of machine programming from the one application, from planning of machining operations through to work list management, end trimming and labelling of the pieces.

To adapt the software to the needs of individual customers, FSTLine4 can be integrated with additional software packages, for example allowing machining operations to be imported from 3D files (Solid+), or integrating the machine in an Industry 4.0 manufacturing process (Statistics). FSTLine4 is divided into two

parts that can be accessed from the home page: a run section that shows the loaded bars, and an editing section in which it is possible to edit and review the bars to be loaded. This allows the cutting list to be modified very easily even while it is running. The software contains a profiles archive with the sections and information required for loading into the machine, an archive with the machining operations that can be carried out on each piece and an archive of offcuts, which are residual pieces of bar left after previous machining operations. The program optimises cutting lists to reduce the use of material, also making use of offcuts that are available in store

INDUSTRY 4.0



Advantages of FSTLine4

- Management of cutting lines and cutting and machining lines.
- Cutting list and work list import from the office
- 3D display of the bar and pieces
- Modification of a cutting and machining list during running
- Profiles archive in DXF format
- Guided insertion of profile pick-up and management data
- Machining operations archive
- Graphic tools archive
- Optimisation of cutting list with offcuts and damaged areas
- Offcuts magazine
- Printout of piece labels and re-usable offcut labels
- Remaking of a piece by reading the barcode
- Loading of an offcut by reading the barcode
- Management of the automatic label applicator
- Operator login with different authorisation levels



and avoiding any damaged areas on the bar.

3D depiction and simulation mean that the operations inserted on every piece and bar can be viewed easily.

Input of all the profile pick-up data is guided by explanatory text and images.



FSTCam4



FSTCam4 is the only CAM package processing extruded aluminium elements that manages design, start of manufacture, work list and running.

Installed on FMC and Axel series machining centres, FSTCam4 uses advanced machining strategies to optimise times and final quality, automatically inserting connectors and calculating the depth plans.

To adapt the software to the needs of individual customers, FSTCam4 can be integrated with

additional software packages, for example allowing machining operations to be imported from 3D files (Solid+), or integrating the machine in an Industry 4.0 manufacturing process (Statistics).

INDUSTRY 4.0



Advantages of FSTCam4

- Fully integrated drawing environment, simulation, work list and HMI
- Ability to work with 4 interpolating axes and carry out machining operations following curved surfaces
- Use of advanced machining strategies to optimise times and final machining quality, automatic insertion of connectors and automatic calculation of depth plans
- Automatic positioning of vices, or manual positioning using “drag and drop”
- Machining times estimate
- Integrated HMI interface and simulation during running



Integrated management in a single environment of design and start of manufacture

With FSTCam4 it is possible to design the piece and control the machine in a single working environment. Once the piece has been designed it can be positioned on the vices. A work list can then be created and run.

- Immediate availability of standard parametric figures: hole, slot, pocket, key cylinder, drain, end milling, cuts, curve, etc.
- Ability to resort to advanced modes with several levels of use, according to need and the experience of the operator
- Ergonomics: all the elements/points requiring input of data do not overlap the working area

Simple to use, accessible interface

A strong point of FSTCam4 is its simplicity of use. The user interface is greatly simplified, with all the parameters that are important to the operator being more easily accessible and visible.

- Interface design with highly accessible commands

Optimised machining strategies

In FSTCam4, machining strategies have been optimised to give the best quality and machining speed:

- Automatic insertion of connectors for better quality

- machining
- Automatic calculation of depth plans to reduce running times
- Strategies for reduced tool wear
- Improved concentric or parallel slot milling
- Advanced cut management (extension of options at cutting diagram level and selection of the lead-in point)
- Option of 4/5 axis interpolation to follow a surface during the machining operation
- Detailed simulation of the machine to position the vices close to the machining operation

Fully 3D design environment

- Piece, machining operations, tools and tool paths visible in 3D
- 3D definition of the position of machining operations by selecting the points directly on the piece: ends, mid-points, chambers, fins, etc.
- Ability to enter the dimension of a machining operation by selecting 3D points
- Integration with the FSTSolid software. When a STEP file is imported the 3D model is analysed and imported into the CAM

Improved, more advanced machining phase set-up

- Management of several machining phases with vices or with the piece in different positions
- Automatic calculation of the machining phases and the position of vices
- Manual adjustment of vice position with drag & drop
- Ability to machine several pieces simultaneously
- Detection of the piece measurement and correction of the machining operation position

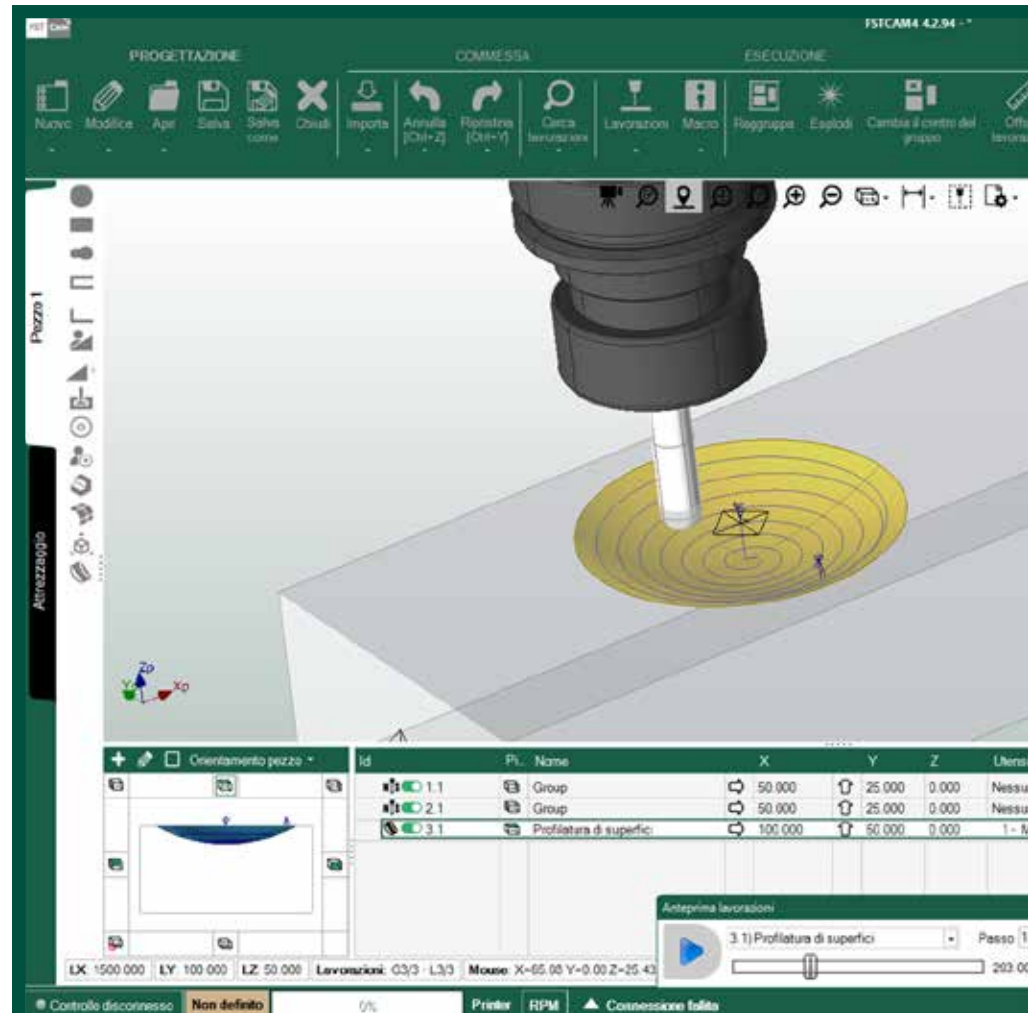
Full management of tools

- Simple or multi-cylinder bits and mills
- Shaped mills and T milling cutters
- Blade disc
- Drill tap, tapping bit, comb, flowdrill, countersink bit
- Angular heads
- Machining time estimate

Advanced management of machining operations and machining units

FSTCam4 provides new machining options:

- Custom machining operations



- defined both in 2D and in 3D
- Machining operations whose shape changes based on parametric values
- Creation of machining units or macros
- Machining units and macros can be transferred in block from one piece to another and from one profile to another
- Ability to enter both linear, two-dimensional or circular repeats
- Insertion of text

Creating and managing parametric work lists

FSTCam4 allows parametrisation of the pieces directly from a list: the same piece can be added to the list multiple time, changing the parameters alone. Different parameters can be used for each

row of the list, so that different parts can be created very easily from the same program.

Management of the tracer and of the measurement detector

Management of the tracer facilitates control of deformities in the piece, so as to correct the position of the machining operation on the extruded element if necessary. When more measurements are taken, the system is able to correct the position of the machining operation with respect to the reference point on the set profile. FSTCam4 also supports management of the device (optional) used to measure the bar length and correct the position of the machining operation.

Can be integrated with automation (Industry 4.0)

The Machine Interface part (Industry 4.0) and the statistic package are integrated in FSTCam4, to return machine production data directly from the program.

OPTIONAL

2D CUSTOM MILLING module functions:

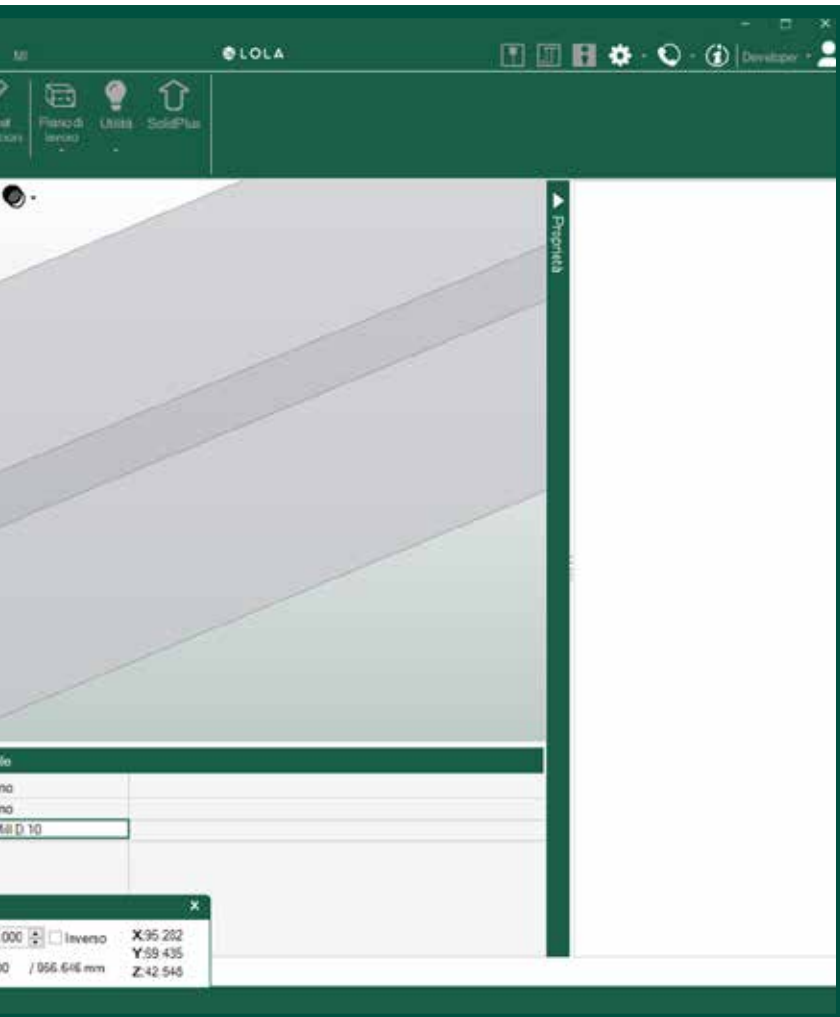
- 1) Import of machining outlines starting from a DXF file
- 2) Import of text from files in DXF format. Includes the editor to create text
- 3) Creation of parametric user machining operations. Once the standard machining operation has been created the module allows it to be replicated with the required dimensions simply by assigning the parameters
- 4) Performing a customised cutting path for the profile

3D CUSTOM MILLING module functions:

- 1) Management of machining operations on non-flat surfaces.
 - 4 axis interpolation
- 2) Definition of customisable machining paths
- 3) Profiling of surfaces starting from an STL file

CLOCK module functions:

- 1) Estimate of run times



FomCam

FomCam

FomCam is a Cad/Cam specialising in the machining of pieces obtained from extruded elements. FomCam software is easy to use and allows all kinds of operations to be programmed and performed.

A 2D and 3D user interface plus a practical summary list of programmed machining operations make learning how to use this intuitive software extremely easy.

Parametrised Machining Operations

Machining operations on the piece can be parametrised and modified, moved or repeated. Simply modify the numerical values in the model and the program will update all the machining operations in real time.

Run optimisation

To speed up the machining process, the program automatically minimises the number of tool changes and spindle movements.

Archives

FomCam manages the archive of profiles in DXF format, the tool archive and an archive of machining operations (macros) that can be applied to the pieces.

Insertion of stored machining units

Inserting machining operations relating to an accessory is very quick: simply call up the code for the accessory, indicating



Advantages of FomCam

- 3D simulation of pieces, tools and machining operations
- Viewing of the piece position in the machine
- Management of machining on multiple working areas
- Representation of the clamping used
- Archive of machining operations for accessories
- Archive of bars that can be generated from DXF
- Optimised calculation of vice position
- Automatic recognition of pieces to be machined using a barcode reader



the position of the bar along the X axis, and all the machining operations connected to that accessory, including the tool data, will be inserted automatically.

Control of the centre during running

The machining centre can be controlled directly by FomCam, which transmits to the CNC via the M.I. module and controls running without leaving the program.

Production automation

The work cycle for each piece can be started when its bar code is read. According to the code, the centre will carry out the machining operations defined for that given piece. The software allows the work list to be stopped and restarted and displays the information on the current status of each piece, such as the total

number of repeats required and how many have currently been performed.

Machining on two working areas in masked time

FomCam allows for further time savings, as the vices can be transmitted and positioned in one machining area while the machine works on the other one.

Simulation

All phases of the piece can be simulated before it is machined, using the intuitive and realistic FomCam interface. Viewing of the piece and the machine, including the head and tools, is in 3D. During graphic representation of the simulation the user can turn the viewing angle or select a pre-set view simply by clicking with the mouse. The different clamping systems used are also displayed, with one or more

pieces installed simultaneously.

Calculation of the “Clock” module run times

The FomCam simulator allows the run times for a program to be calculated in advance, showing the user a graph with the estimated time subdivided into the various piece machining phases.

The simulation can be carried out on a whole list of pieces, in order to estimate the production times for an entire job.

FSTCut4



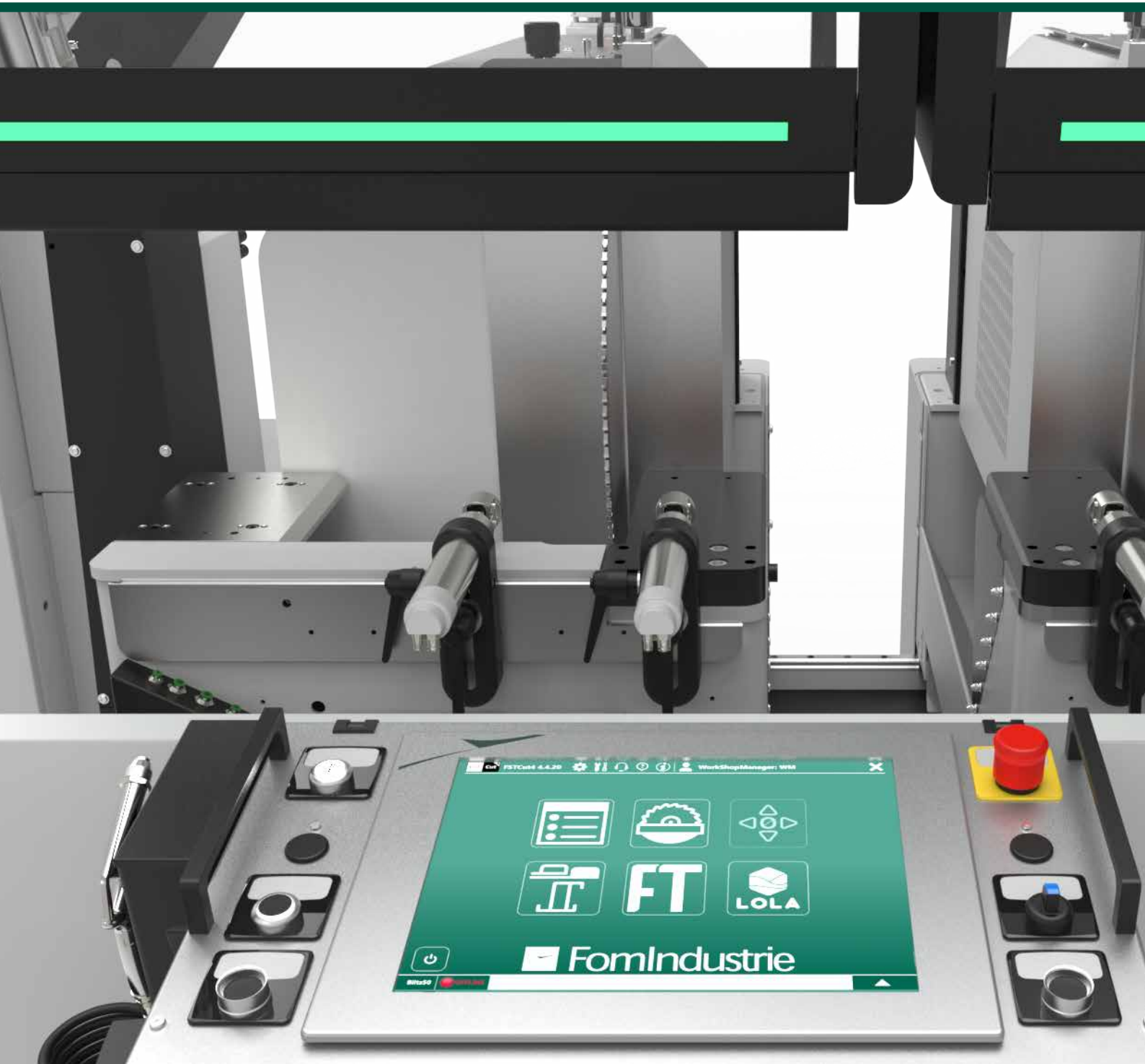
Specially developed to control FOM Industrie two-head sawing machines, FSTCut4 allows users to make the best possible use of the machine's touch-screen monitor and to manage all the operations of which the machine is capable. A simple, intuitive interface guides users through the programming of cuts and the execution of cutting lists, including those received from the office.

The Statistics software can be included on request, in order to integrate the machine in an Industry 4.0 production process.

INDUSTRY 4.0



LOLA
READY



Advantages of FSTCut4

- Touch screen user interface
- Reception of company network data via Ethernet with Windows interface
- On board machine cutting optimisation with the use of offcuts
- Profile archive display in DXF/DWG
- Advanced management of trim cuts
- Automatic feed management (“step-by-step”) at variable angles
- Use of barcode reader
- Remote assistance on board the machine



Elimination of errors

In order to prevent errors, when FSTCut4 receives the cutting list from the office, it displays the section of the profile to position on the machine. A profile archive in DXF (or DWG) format is loaded directly into the sawing machine, with indications of piece positioning in the machine.

Customisable graphic labels

FSTCut4 prints customisable labels in any language, including those with non-western fonts. When the office software supports it, the label can also display the location of the piece in the window.

Execution in automatic movement mode (also known as “step-by-

step”)

Mitre fence cutting: simply by entering the quantity, FSTCut4 calculates the number of pieces that can be obtained from the bar.

List cutting: using a suitable unloading belt, FSTCut4 can execute piece cutting lists with different angles and sizes using the mobile head as a bar pusher.

Saving material

FSTCut4 is provided with a cut optimisation function. By selecting a particular number of pieces to cut, the software optimises the cut and instructs the machine on how to place the pieces inside the bar in order to save material. The cut

optimisation also provides the option of using re-usable offcuts: a profile remaining from previous cut can be reloaded by entering the dimensions or by reading the barcode (FSTCut4 prints a barcode with the data of each piece produced and each offcut).

Taking full advantage of machine capacity

FSTCut4 supports the cutting of pieces that are longer or shorter than the nominal maximum and minimum cutting length. It also allows trim cuts to be made at any angle.

The only software with advanced barcode management

FSTCut4 is the only software for double-head sawing machines with advanced barcode management: the barcode reader can be used to call up a cutting list for machining a piece or for the re-use of an offcut.

Versatility, efficiency and simple integration in the company management system

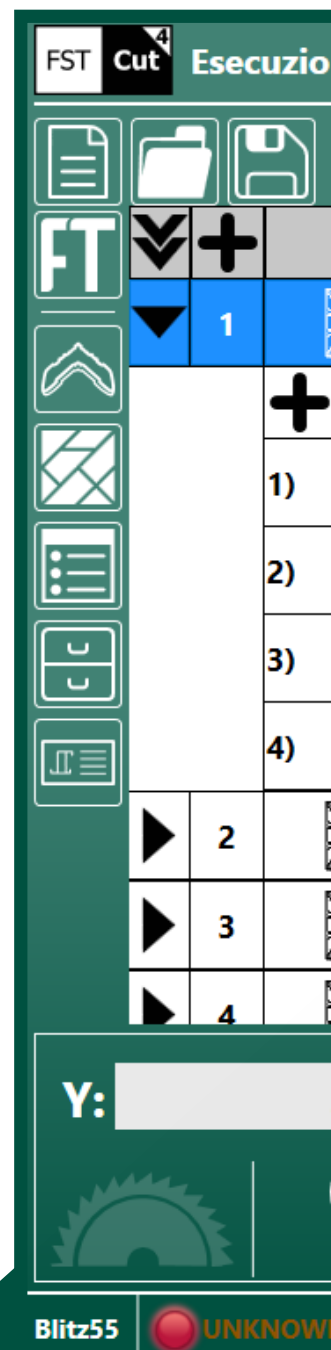
Thanks to FSTCut4, the sawing machine can also work with data input directly by the management system. In this way, it automatically receives a cutting list so that the operator knows what he needs to load and performs the cut without having to manually call up a file containing the list.

Parametric articles








The software supports the creation of parametric articles that can be configured inside the sawing machine and then executed, cut and optimised. These parametric articles can be selected and the value of the parameters defined: this produces a cutting list that is optimised to produce the articles directly on the machine.

Perfect measurements every time






FSTCut4 manages the gauge: if there are extrusion variations (i.e. the profile is not at its nominal height) the profile height measurer corrects the dimensional errors that would occur during the cut.



Lista.xml

		Profilo / Colore	Lungh.		
		R62C25	6500,00 [137,00]	<input type="checkbox"/>	  
Pezzo	Y	Z	Qt.		
2100,0	90.0	45.0	0/1	<input type="checkbox"/>	
2100,0	90.0	45.0	0/1	<input type="checkbox"/>	
1120,0	45.0	45.0	0/1	<input type="checkbox"/>	
1000,0	45.0	45.0	0/1	<input type="checkbox"/>	
		R62C25	6500,00 [137,00]	<input type="checkbox"/>	
		R62C25	6500,00 [137,00]	<input type="checkbox"/>	
		R62C25	6500,00	<input type="checkbox"/>	

0 X: 0 Z: 0

FSTCut4 offers all the advantages of Industry 4.0: it receives data from the office and returns production data. Integrated with the LOLA system at Cloud level. Can be perfectly integrated into the company network via Ethernet adopting Windows parameters. The software provides more advanced barcode reader management. It offers greater automatic bar feed management capacity and advanced cutting control. It allows remote management of the remote assistance service.

PRODUCTION PLUS



Production Plus creates cutting and machining lists quickly and simply, directly from the technical office. This software is ideal to draw up a cutting list, entering the measurements and any machining operations with production rules, or by creating parametric articles.



Advantages

- Simplicity: it does not require a complex data and archive structure
- Material is optimised, reducing waste to a minimum
- 3D graphic display
- Allows the machining list to be carried out on multiple machines
- When connected to a suitably configured 4.0 ready machine it can allow implementation of a 4.0 manufacturing cycle

SOLID PLUS

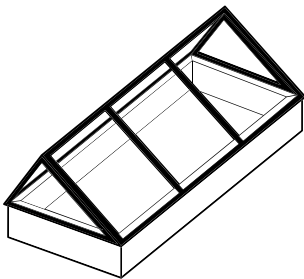
Solid Plus

SolidPlus imports the 3D drawings generated with 3D CAD programs, allowing the concept of dimensioned drawing to be overcome. The software recognises and processes all the data (profiles, cutting lengths and angles, machining operations, tools), before transferring them automatically to the machine CAM. A series of functions allow even greater time savings, so that production can start quickly. It is possible to standardise production and any possible changes, and it is always under the control of the technical department before the file is sent to the machine.

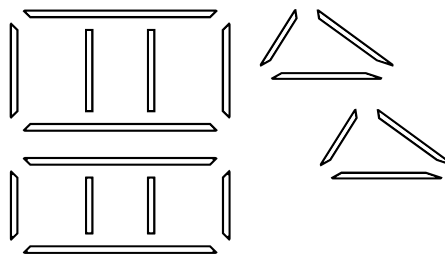
Advantages

- Automation of data transfer from the 3D technical drawing to the workshop (Industry 4.0)
- Macro management to save selections made on the machining operations and re-use them quickly at need
- Multi-machine management
- Measuring tracer management to facilitate checking of any faults
- 3D simulation of material removal

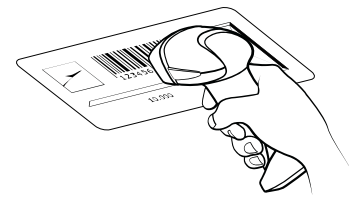
3D drawing with cutting angles and machining operations



Recognition of profiles, cutting lengths, machining operations



Creation of cutting and machining lists and their execution on sawing machines and CNCs



Pro F2 Suite

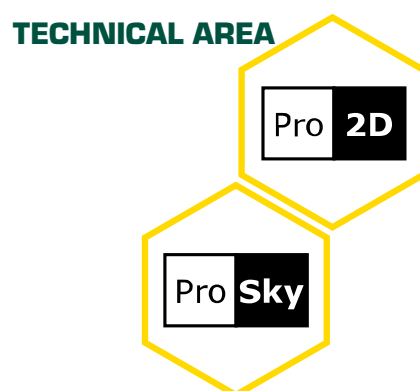
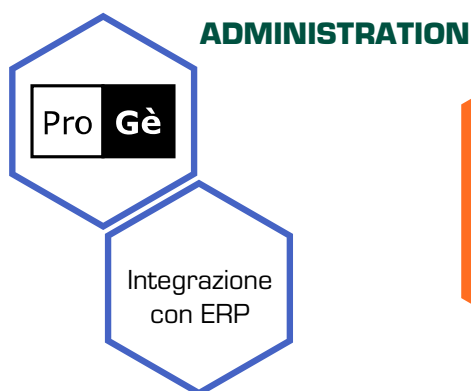


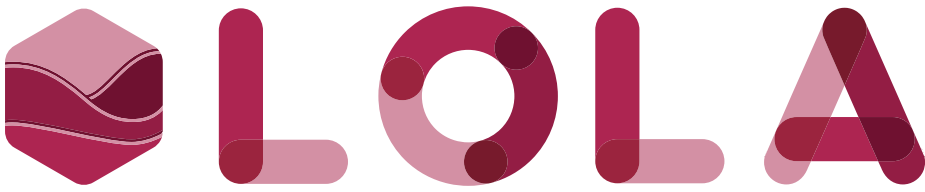
ProF2 Suite is the unique solution for doors, windows and facades.

ProF2 Suite is the solution to all the needs of the door and window industry. The Suite is made up of nine integrated products, which can be used for design management, creation of estimates, assembly, production control, CE marking, calculation of cutting lists and machining operations.

The only solution to control and manage:

- commercial area
- technical area
- production and
- administration





Log On Live Automation

Our cloud based platform viewable from PC or mobile phone allows monitoring of:

- machine status
- process statistics
- state of machine components
- periodic and predictive maintenance

User friendly graphics, transparent and instantaneous information are some of the characteristics that make LOLA the ideal partner to manage your digital factory.



Certain functions depend on the machine's mechanical and software configuration. The data and images provided in this catalogue are merely indicative. FomIndustrie therefore reserves the right to make changes without prior notice at any time, for technical or commercial reasons.



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