



TRUMPF software

Improve
transparency
through digital
networking



More cost-effective production with digital networking

Lot sizes are becoming ever smaller, and jobs are becoming increasingly complex. As a result, it is more and more difficult to react quickly to changes. To react quickly, you need an overview of your production system in real time. How can you gain the necessary transparency?

Software solutions from TRUMPF will help you to program more effectively, increase your machine utilization rate, and make the best possible use of your resources. You benefit from clear and cost-effective processes, from the initial customer enquiry right through to delivery of the finished parts.

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MATERIAL AND INFORMATION FLOW

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Networking ensures utmost transparency in your production systems. It enables you to plan jobs better, and you always know the exact status of each order. By selecting the right software you can automate indirect processes – so you can speed up production and increase your flexibility.

If you successfully manage to adjust the time and effort required for indirect processes to suit ever-smaller lot sizes, you will soon find that even the smallest jobs can be profitable.

Fit for the future

Whether you're already making great progress toward networked production or still need to take your first steps, your goal is clear: you need to be able to tackle the steadily increasing competition and customer requirements, complexity, and variety of products in sheet metal processing.

Faster

The conventional process for preparing quotes is very time-consuming. The customer sends the request via e-mail, you run the calculations, the customer phones you to check on progress, and finally you send them the quote. With networking, you can easily speed up this process – and gain time for more important tasks by using TRUMPF web shop.



Closer to
customers

More profitable

Whether you are bending, punching, or laser cutting, you can handle the CAD processing and programming for your TRUMPF machines with a single software program: TruTops Boost. With integrated automatic functions, your programming will be more efficient and more profitable than ever.



Faster
programming

More transparent

Gain total transparency with regard to your machine productivity. With the digital enhancement of your machines, you will always have the most important key figures at a glance. Best of all, the enhancement is already included in the new TRUMPF machines as standard.

4.0

TruConnect
Your Smart Factory



**Software sharpens your competitive edge
along the entire value chain.**

Get on track with your co-pilot

You'll find it much easier to set a course to networked production with an experienced co-pilot at your side. As mechanical engineers, we have been developing software for sheet metal processing for more than 40 years, enabling us to provide the best possible combination of software and machines at all times. You can rely on:

95 years

of mechanical engineering expertise and secure investments with the market leader

Software with integrated

technological expertise

1 full-service provider

offering the perfect combination of machines, software, automation, and services

> 40 years

of experience in developing and optimizing software

> 60 countries

with support right across the globe, thus ensuring a quick local response

> 100 software developers

who are focused on one thing:
efficient sheet metal processing

What do sheet metal processors need today?

Programmer

"It would be so handy if I could program using the same user interface in the office and the workshop."



CEO

"A component spends only 60 seconds on the laser machine. Yet my throughput time is an average of ten days – we have to speed things up!"



Logistics planner

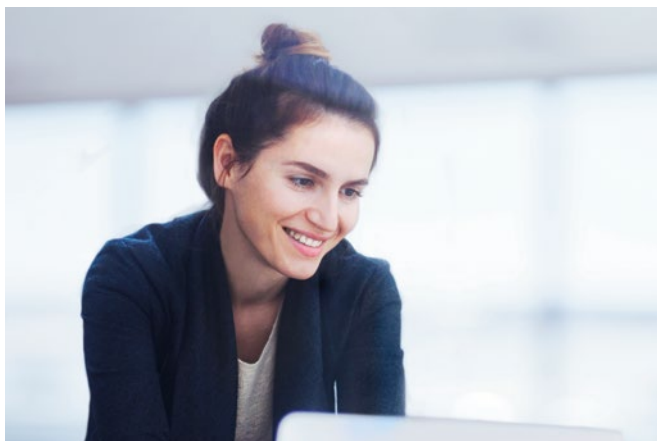
"It would be extremely helpful to know where my parts are at all times. After all, customers expect information in real time."





Sales employee

"It takes far too long to prepare a quote because it's so complicated. My customers expect an immediate response. Otherwise, they'll switch to my competitors."



Production planner

"The standard planning no longer meets my needs. I need to be able to respond with flexibility to unforeseen events, such as urgent orders, without my entire planning needing to be reworked."

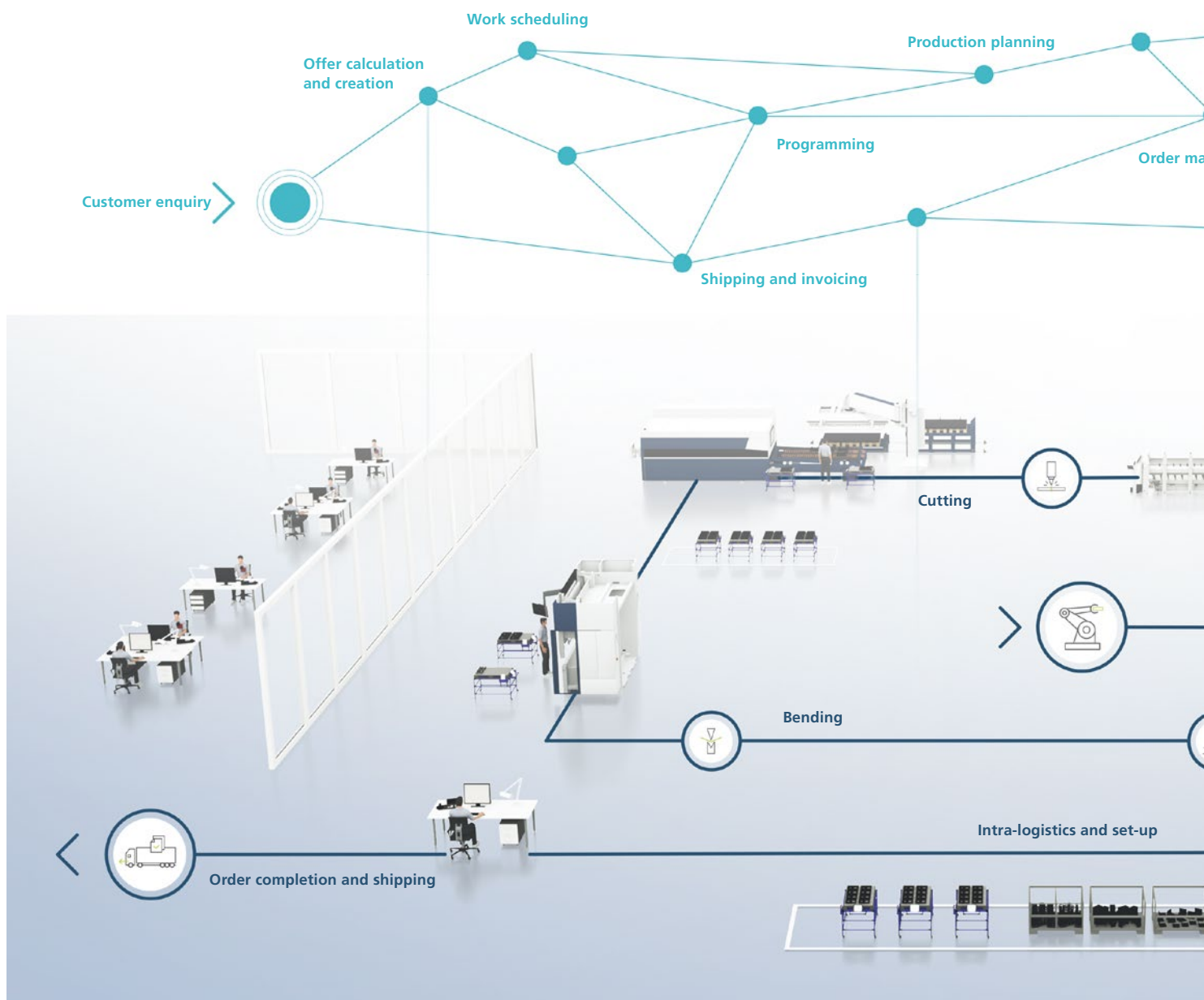


Production manager

"I have digitalized virtually all my processes. But I am still missing certain interfaces which means I need to revert to printouts."

Transparency and speed

A revolution is currently under way in industrial manufacturing – machines and components communicate with one another using sensors and codes. The software in production solutions records, bundles, and analyzes the information and uses it to optimize production processes. Clarity, shorter throughput times, and a continuous flow of material and information in production are just some of the many benefits. Take advantage of them to sharpen your competitive edge along the entire value chain.



Material flow



Automation

Automated processes take the strain off the operator and eliminate waiting times.



Intralogistics and setup

The operator becomes the process manager: they maintain an overview and manage the material flow.



Dispatch and order completion

Your networked production system automatically assigns the parts to the right order. You can also prepare shipping papers and invoices at the touch of a button.

Information flow



Quote preparation

The system automatically calculates your quotes – saving time, money and effort.



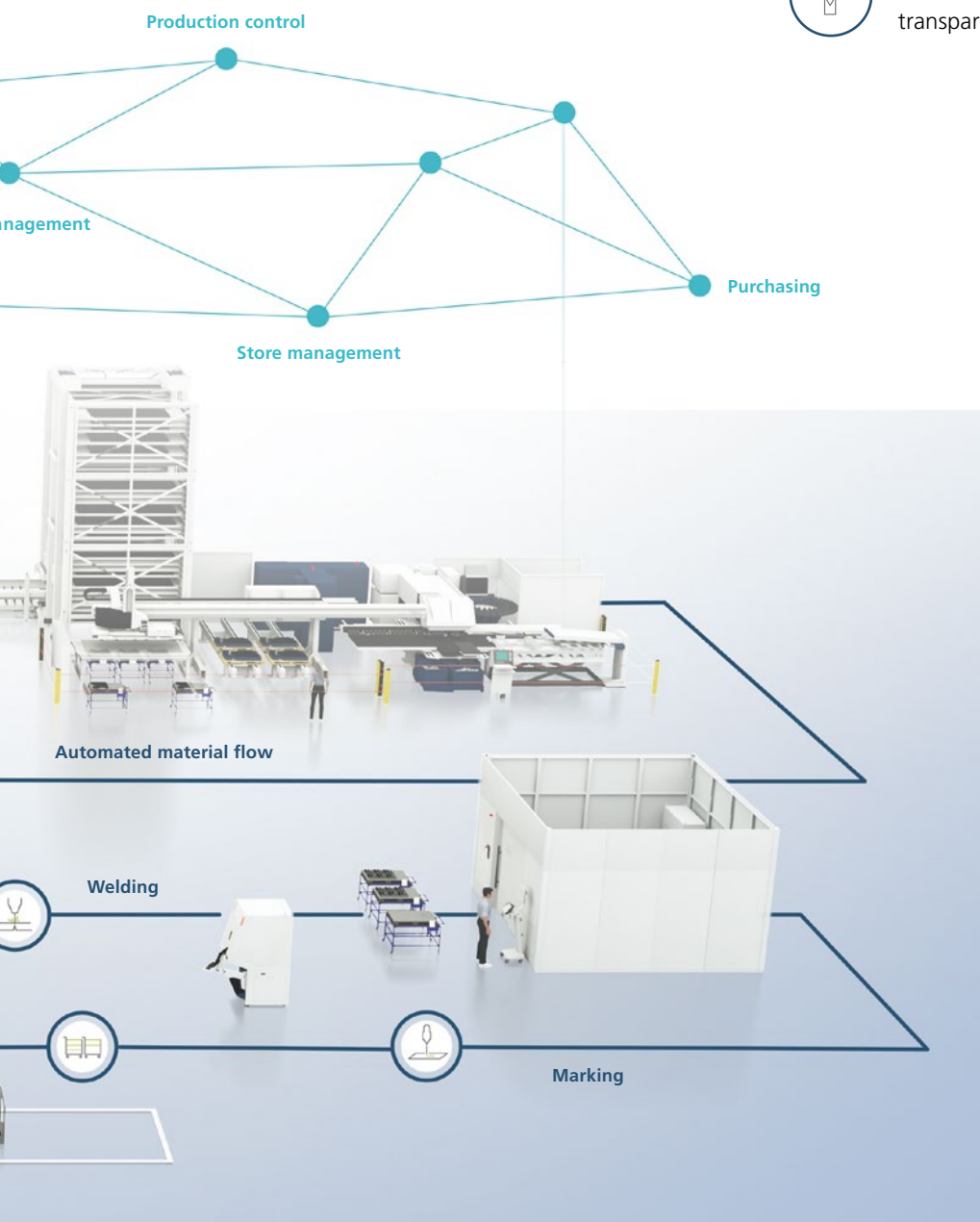
Production planning and programming

Your orders are perfectly coordinated, nested, and added to the production plan for your machines.



Production- Cutting, bending, welding, marking

Machines and components communicate with one another using sensors and codes. Software solutions collate machine data for analysis, deliver transparency so you can optimize your production.



● Information flow

○ Material flow

Step right into your Smart Factory

Due to the TRUMPF Machine Apps for your machine, getting started with the Smart Factory is easier than ever. It all comes without extra costs for you, as they are already part of your new machine's standard scope of delivery. With the TRUMPF Machine Apps you gain total transparency of your machine performance and the most important key performance indicators. Data becomes a valuable asset.

Apps for your daily routine

Take advantage of the TRUMPF Machine Apps to analyze your machine data. A web application provides secure access on all end devices. Whether you are a machine operator or the production manager – everyone receives the information they need to work even more efficiently.

"What is the current status of my machine?"

Simply take a look in the Live Status App. It shows the remaining runtime, so that the operator can organize his working day more efficiently. They are informed immediately if the machine comes to a standstill.

"I want to produce more efficiently!"

With the Machine Analytics App you can evaluate specific machine data, giving you a solid basis from which to take appropriate measures and determine their impact and success.

➤ **Live Status**

➤ **Machine Analytics**



Visit us on
YouTube:
[www.trumpf.info/
bv9c18](http://www.trumpf.info/bv9c18)

Quote preparation

Planning/Programming

Production

Automation

Intralogistics and setup

Dispatch/Order completion

"Which tools do we use to punch most frequently?"

The Punching Tool Analytics App shows the number of strokes per tool class and creates a ranking. This makes it easier to reorder tools and set up the right standard tools.

"How much material do we really need?"

The Material Analytics App analyzes the actual material consumption. This makes planning easier and shows the user which material they need most often on which machine and should, therefore, be stored in the vicinity.

"Which problems with the programs can we avoid in future production runs?"

With the Program Analytics App, programmers and production managers obtain valuable information about completed production programs. They can also identify stable programs and plan them in for certain shifts.

 **Punching Tool Analytics**

 **Material Analytics**

 **Program Analytics**

Prepare quotes in next to no time

Regardless of how small the lot size is, the number of upstream and downstream work steps remains the same. As such, more orders mean more time and effort required to prepare the quote, manage the order, and purchase the material. Through digital networking you can easily speed up these administrative processes and gain time for more important tasks – all you need is the right software from TRUMPF.

Web shop

Efficient quote preparation: your customers can simply run the calculations themselves.

Save time when preparing quotes by offering your customers the option to calculate quotes themselves online at any time – quickly, reliably, and according to their individual needs.

■ Fast

You minimize your reaction time to customer inquiries and always stay one step ahead of the competition.

■ Reliable

Your calculation is based on reliable technological values from TRUMPF. The integrated user-management system enables your customer to determine who is allowed to run calculations.

■ Individual

The software takes into account your personal requirements and parameters in the calculation.

TruTops Calculate

Reliably calculate times and costs.

Easily and quickly plan your processes: you can calculate the times and costs of both individual parts and complete assemblies for the entire process.

■ Swift

The program calculates the time and costs for your entire production process.

■ Comprehensive

TruTops Calculate takes into account all relevant factors when calculating your part costs.

■ Reliable

Integrated technology data from TRUMPF provides a sound basis for the calculations.

■ Simple

Run calculations without the need for production drawings: easily go over sketches, vectorize raster images, and describe contours.

TruTops Fab Customer Module

Process customer orders from A to Z in a single software program.

Control and manage customer orders from quote preparation right through to the delivery note and invoice – all in a single software program. As such, you can always keep an eye on every transaction.

■ Accounting interface

Create reminders and credit memos if required.

■ Generate reports

You can generate reports with just a few clicks, for example to analyze how many of your quotes have been successful.

■ Customized templates

You can tailor printing templates for quotes, shipping documents, and invoices to suit your needs.

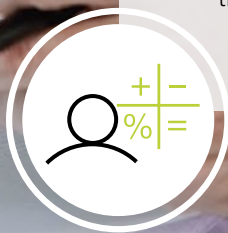
■ Excellent delivery reliability

You can prevent deadline problems and bottlenecks through the interaction with the TruTops Fab Storage, Quickjob or Purchase modules.

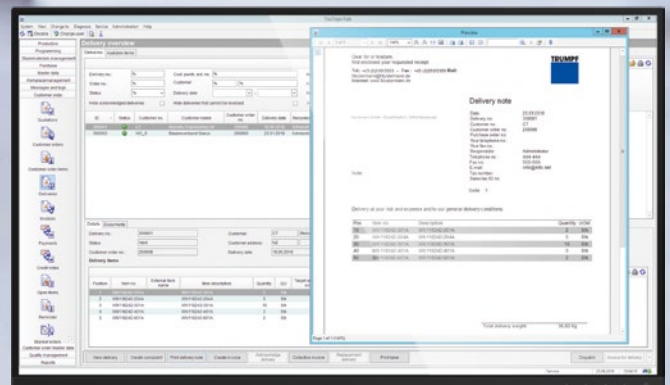
CEO

"More orders mean more time and effort: quotes need to be prepared quickly and accurately and order data needs to be carefully maintained."

The web shop enables customers to prepare quotes themselves – online and at any time. The TruTops Fab Customer Module also significantly simplifies your order management processes, from quote preparation right through to the delivery note and invoice.



TruTops Fab Customer Module
Overview of deliveries.



Production planner

"I need to apply my customer's order data quickly and reliably."

Use the automatic data import in the TruTops Fab Quickjob Module. The PPC interface allows you to input the order data of each customer with no mistakes. The program calculates your orders and shows you all available production capacities at a glance. You also obtain an overview of all orders.



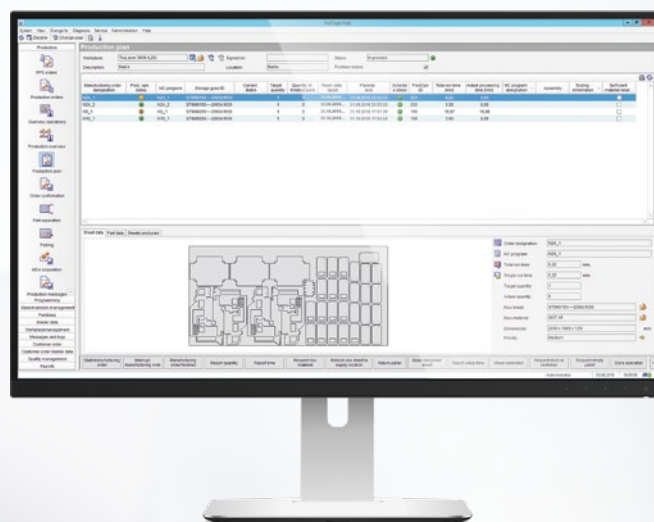
Make optimum use of your production

Precise planning is the key to optimizing your machine utilization rate and ensuring quick deliveries to customers. The TruTops production software is designed to take care of many tasks for you.

TruTops Fab Quickjob Module

Manage your production orders and machine jobs with utmost transparency while doing away with paper.

- The TruTops Fab Quickjob Module imports your customer orders and plans your machine utilization to suit your workstations, capacity, and shift times.
- You can reschedule your production capacity in the blink of an eye, for example if you need to accommodate urgent jobs.
- The capacity overview automatically applies the times set in your programming.
- The module transfers the production packages directly to the machine's production plan and manages all machine jobs.



Production plan
in the TruTops Fab
Quickjob Module



You save time while improving process reliability. The parts times and material consumption for each manufacturing order are sent to you automatically, so you can plan orders with the greatest possible peace of mind.

Programmer

“Programming is becoming increasingly complex and elaborate – and the time pressure is increasing, too.”

With TruTops Boost, you can unfold complex 3D parts and dismantle assemblies into single parts. This enables you to create unfolding and bending programs in a single operation. You can also use this information to program cutting solutions for punching machines. As a result, you save time and avoid errors.



Fire up the turbo

How can you master a large number of increasingly complex jobs involving small lot sizes? By programming faster and avoiding errors. If you want to reduce your material costs, you not only need to optimally nest your parts, you also require anticipatory planning for your store. TruTops Boost features automated processes that can be used with all technologies – and that will revolutionize and speed up your work processes.

TruTops Boost

With the Boost button, you can move from the geometry to the NC program faster than ever. Boost your performance at the click of a mouse using the unique software for 3D design and for programming laser, punching, and bending machines.

Save time and clicks

The intuitive software significantly increases your productivity. You can choose to program automatically or interactively. You can keep an eye on the order status at all times, regardless of the technology used. Orders and sheet layouts reported as complete can now be archived or deleted in TruTops Boost either manually or automatically.

Link your sheet metal processing workflows

TruTops Boost intelligently links your processes, from the order right through to production. The program is able to detect dependencies between geometry creation, bending, and cutting, and optimizes the interplay with the machine. If changes are made to the process sequence, it automatically adjusts upstream and downstream work steps, thus ensuring optimum processes and reliable workflows.



■ Optimum organization

You can concentrate on the key orders and keep an eye on their status at all times.

■ Save material

Make more efficient use of your material through a shared order pool and the Boost nesting algorithm.

■ Ready for Industry 4.0

Automatically identify your parts with dynamic values to track your parts and manage your production.

■ Continue to grow

Easily expand TruTops Boost into a complete production system using additional options.

■ Simplify assemblies

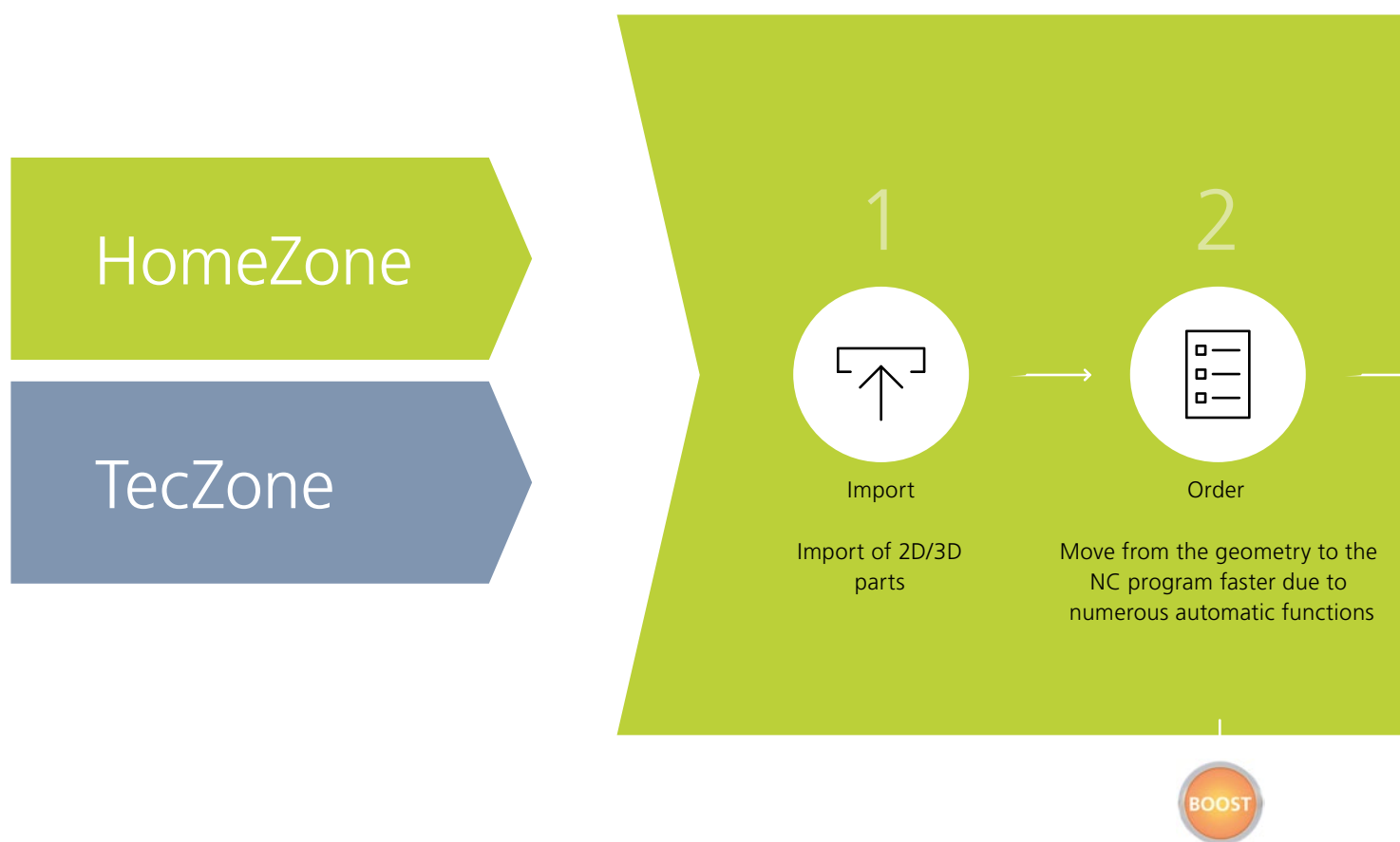
Import and dismantle 3D assemblies with the automatic Boost function.

Programming tailored to your needs

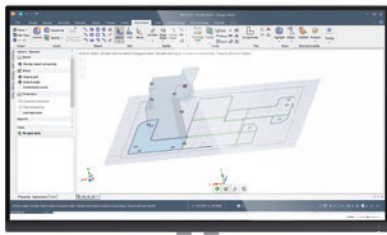
With TruTops Boost you can work fully automatically in the HomeZone, or can apply all your expertise as part of interactive programming in the TecZones. You benefit from utmost flexibility in this regard, as you can choose between automatic or interactive programming for each project.

HomeZone or TecZone

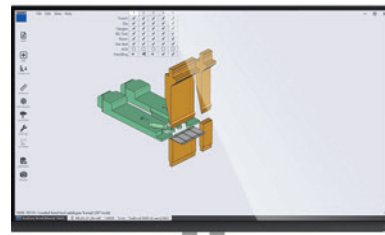
Whether you opt for automatic or interactive operation, the two operating levels make it clearer, easier, and faster than ever to process orders. 3D design and programming are simplified due to intuitive operating elements and operating modes that run in parallel.



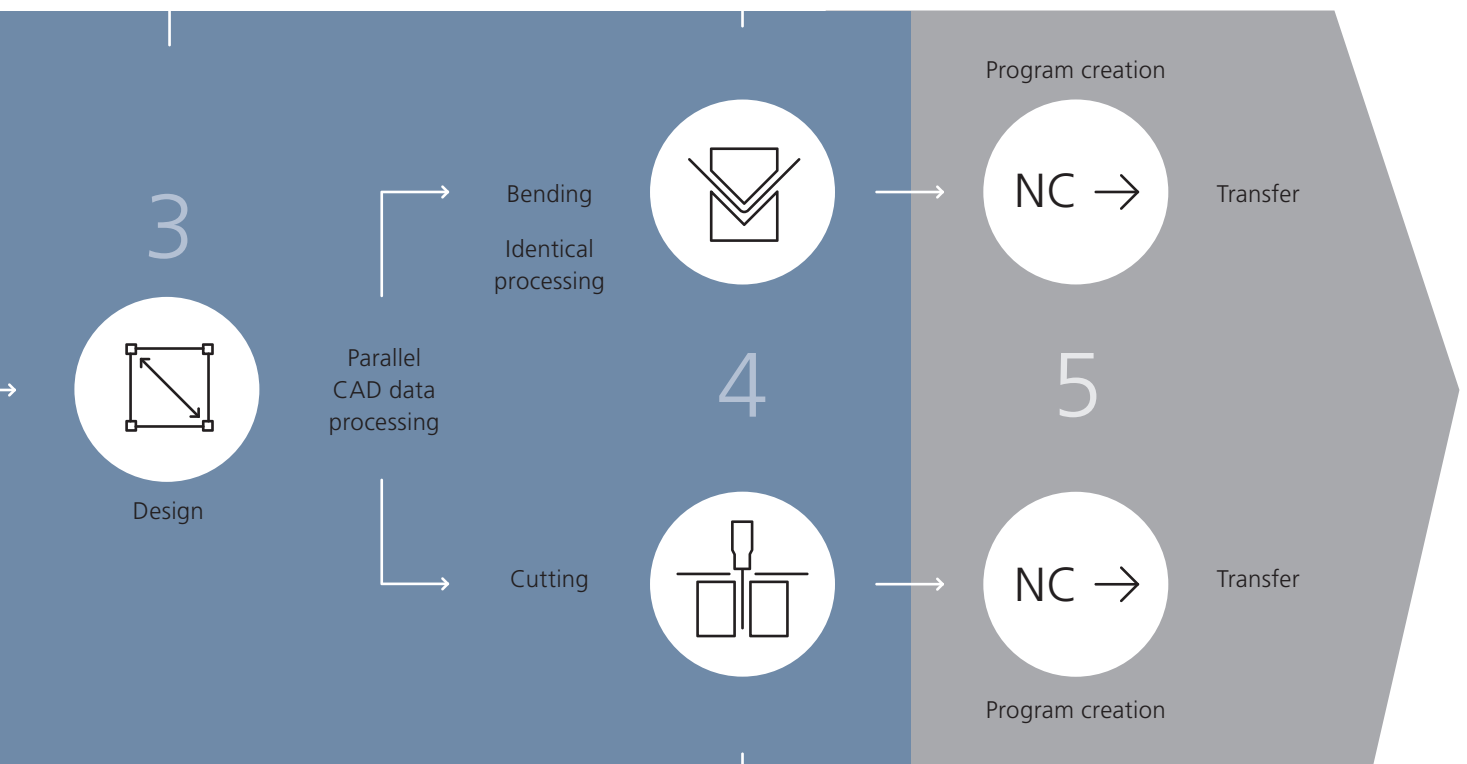
- You save time and clicks.
- The software is intuitive and fast to use.
- Due to task-based processing workflows, you reach the NC program faster than ever.
- You can decide whether to program automatically or interactively.
- You can always keep an eye on the current order status, regardless of the technology used.
- You can archive and delete orders and sheet layouts which have been reported as complete either manually or automatically.



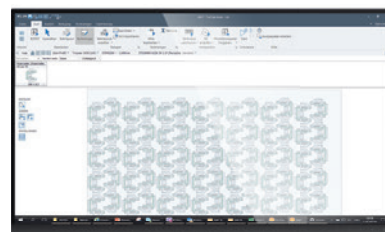
Dependencies between the bending and cutting program are identified



Interactive programming like on the machine



Manual adjustments,
e.g. formed sections and tools.



HomeZone

- **Centralized:** HomeZone is your centralized management level. You can keep an eye on all transactions and orders at all times, even when working in a team.
- **Independent:** Whether you are working with 2D or 3D – you can easily use customer-specific data formats directly. Mass imports and assembly imports are also possible. As such, you benefit from being able to work regardless of the file format.
- **Order-based:** All steps in an order are clearly identifiable with a status, from the 3D design and unfolding, the bending program and nesting, right through to the cutting or punching program.

TecZone

- **Part quality:** Due to the integrated 3D CAD system, you can design even complex sheet metal parts in line with production requirements. TRUMPF's technological expertise is already incorporated in the design. The system intelligently links your technologies and takes into account dependencies between Design, Bend, and Cut, thus improving process reliability and part quality.
- **TecZone Cut (Laser, Punch, Nest):** The working area for punch and laser technology is combined in a single window. As a result, nesting jobs can easily be optimized. You benefit from fewer clicks and an improved overview.
- **TecZone Bend:** Benefit from the intuitive operation in the bending technology's working area, and easily change tools or the bending sequence for an automatically generated bending program.

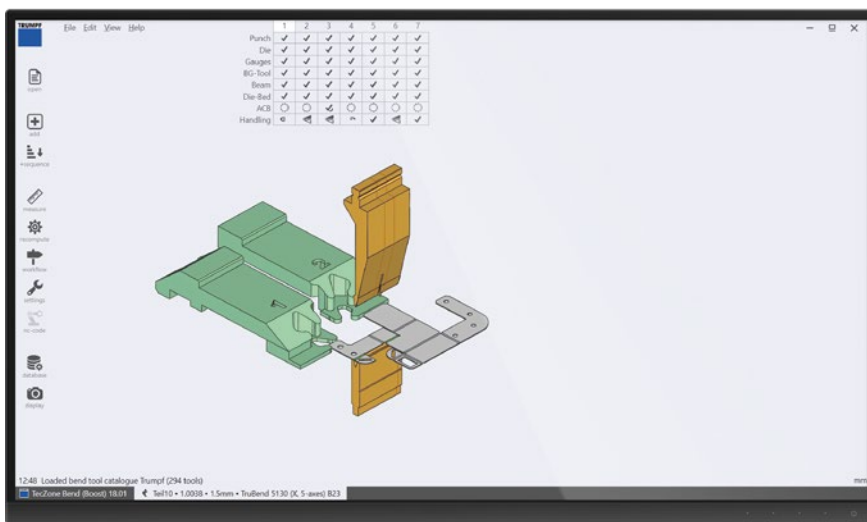
Grow with TruTops Boost

By choosing suitable options, you can turn TruTops Boost into a complete production system. The shared order, parts, and material data management offered by TruTops Boost and the TruTops Fab Quickjob Module form the basis for this.

Selectively expand your TruTops Boost system

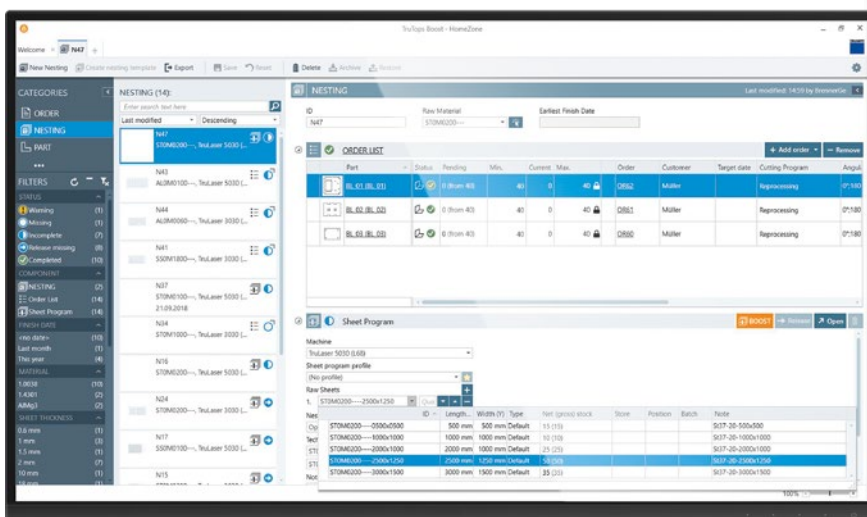
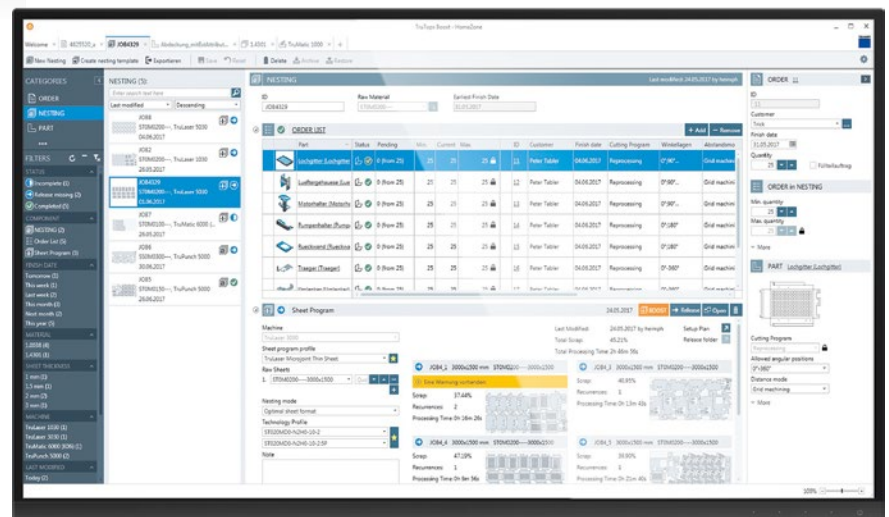
- The (remaining) sheet stock management function enables you to keep an eye on your sheet stocks at all times.
- The part separation function enables you to sort parts on the laser machine faster.
- If you select configuration stages such as the TruStore compact store and TruTops Fab Storage Module, you can transform your programming system into a complete production management system covering all steps, from quote preparation and production management right through to stock-keeping and delivery.

 **Get more out of your system and continue to grow.**



The combination of TruTops Boost and TecZone Bend enables you to calculate bending programs in next to no time.

TecZone Cut optimizes your nesting jobs, for example, with just a few clicks.



Easily get started with production management through joint management of your order, parts, and material data from TruTops Boost and the TruTops Fab Quickjob Module.

Bend more easily and quickly than ever

Which bending software is the perfect fit for you? Whether you need to combine different technologies such as cutting, punching, and bending, or are a specialist in panel bending or die bending, TRUMPF's software portfolio has the perfect solution for easy, flexible, and clear programming for your bending machines – both online and offline.

Program in the office

TruTops Boost

Flexible integration

Due to the integrated solution comprising TruTops Boost and TecZone Bend, you can create unfolding and bending programs in a single operation. You can also use this information to program cutting solutions for punching or punch laser machines. As a result, you can enjoy utmost flexibility in your production planning.

Automatic adjustments

Part changes which are caused during the program due to tool changes, for example, are applied for the design and are also automatically available to the cutting solution. This means you have total peace of mind for your production.

➤ If you have a TruTops Boost service agreement, you will receive the latest software release in the form of a service pack.

TruTops Bend for automated bending

TruTops Bend supports your processes by applying all of TRUMPF's bending expertise. The software enables you to intuitively create bending programs for automated bending cells. One particularly practical highlight is that TruTops Bend not only enables you to program on the machine, you can also program offline – i.e. at a workstation, parallel to production. This considerably reduces nonproductive time, thus increasing your machine availability.

Fast setup

Setup plans created using TecZone Bend can be used for many different programs. Prioritization of tools reduces work outlay and increases the productive operating time of your machine.

➤ If you need to program automated bending cells, look no further than TruTops Bend.



More information can be found here:
www.trumpf.info/3uwcdz

Program in the workshop

TecZone Bend

The TecZone Bend programming system is the ideal individual solution for TRUMPF bending machines. The software automatically generates program proposals, including NC programs, based on 2D and 3D data. It is ideal for intuitively programming your TruBend Series 5000 and 7000 in the workshop.

Lightning-fast programming

TecZone Bend automatically calculates programs in a flash, even for multiple parts. With the aid of a graphical user interface and collision monitoring, this means you can carry out even complex work steps safely, quickly, and precisely on the machine.

TecZone Fold

Our user-friendly programming system is already included in the basic machine. TecZone Fold automatically creates bending programs as well as 3D simulations, including collision monitoring, in next to no time. This makes TruBend Center 5030 and TruBend Center 7030 very cost-effective, even when handling small lot sizes and custom products.

➤ **Are you a specialist in bending sheet metal? Then take advantage of the individual solution or the integration in TruTops Boost for the office and the workshop alike.**

➤ **Panel benders use TecZone Fold as an individual solution.**



More information can be found here:
www.youtube.com/watch?v=jJdZdMSejEI

Master the world of tubes

The TruTops Tube programming system enables you to create innovative tube and profile designs. Due to the integrated 3D tube construction function, even beginners can master complex components comprising multiple tubes or profiles. Standard cases such as intersections are already saved, and automatic functions help you when processing corners, for example.

TruTops Tube

Data import

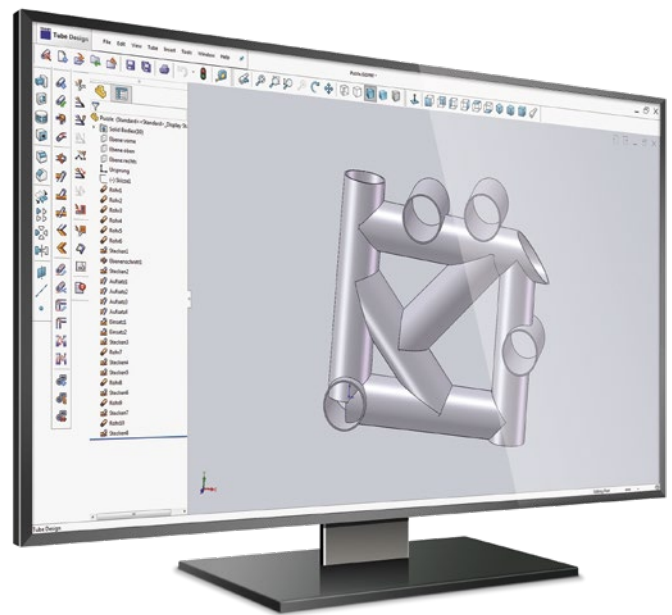
In the 3D tube interface you can import 3D data in all common formats. You benefit as the program detects tube profiles and can automatically prepare data in line with production requirements.

Positioning aids

TruTops Tube enables you to design positioning aids with just a few clicks of the mouse. They are used to simplify downstream work steps such as mounting or welding, and help to reduce rejects.

Bend connections

Corner connections made from two tubes? It would be much easier and faster to simply bend one tube. This also increases the productivity of your assembly team.



■ Complex constructions

The integrated 3D tube construction function enables you to create tube designs made from multiple tubes.

■ Fast programming

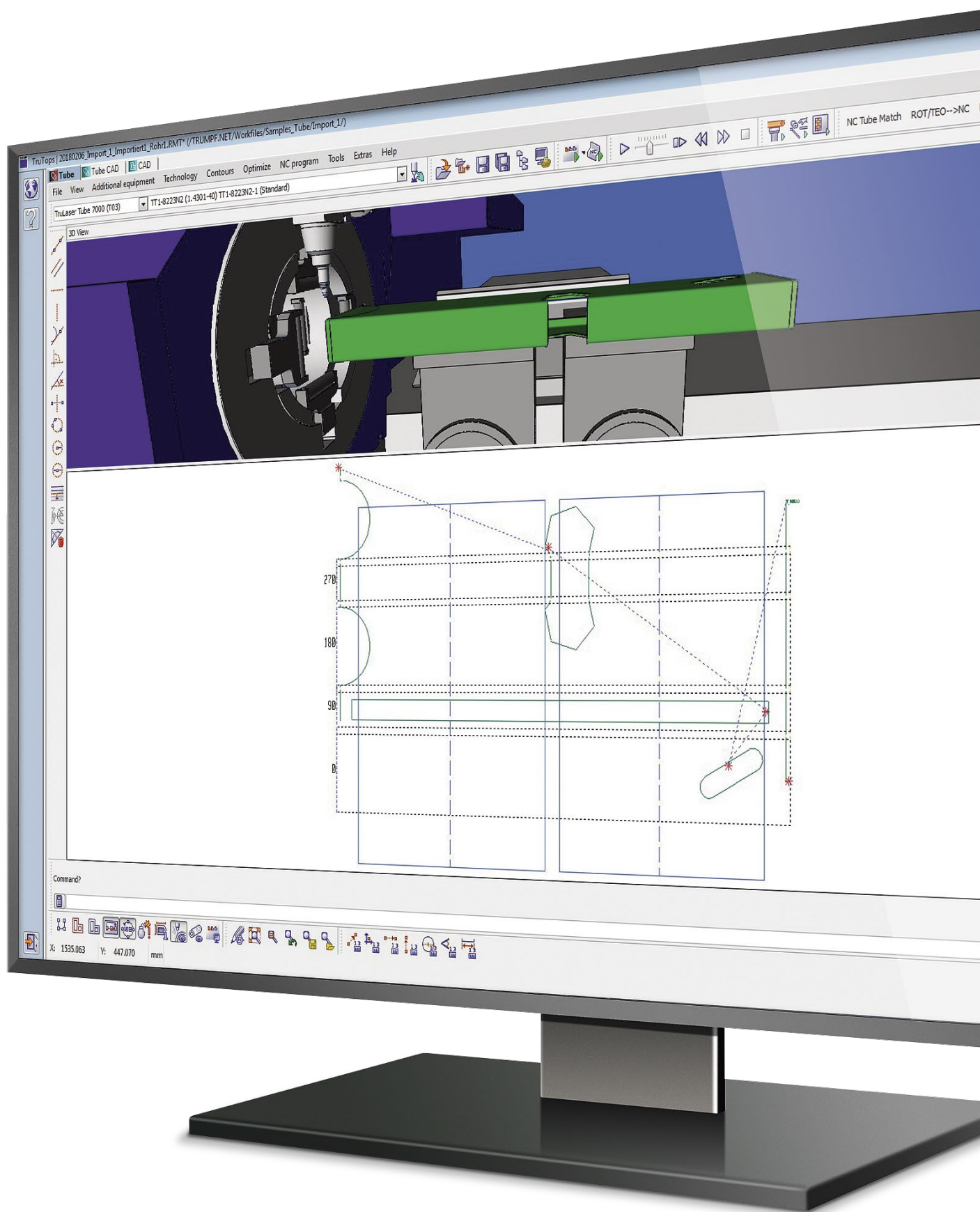
Automatic functions help you with challenging tasks such as corner processing.

■ Flexible imports

Apply your existing CAD data in all common file formats.

■ Integrated expertise

All of TRUMPF's technological expertise has been incorporated into the software.



More information can be found here:
www.trumpf.info/5htxgl

Quote preparation

Planning/Programming

Production

Automation

Intralogistics and setup

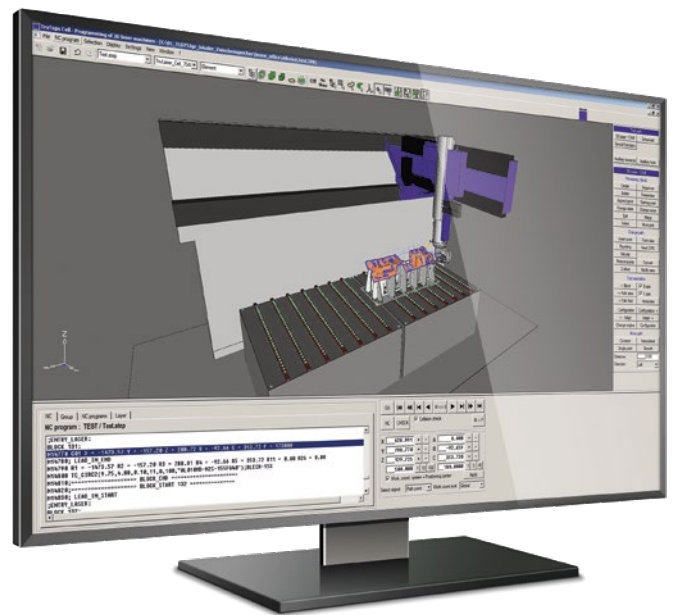
Dispatch/Order completion

Master the third dimension of programming

Whether you are cutting, welding, or using laser metal deposition, with TruTops Cell you can use your 3D machines and robots to their full extent.

TruTops Cell

Easily program complex 3D geometries with the technology tables and rules integrated into TruTops Cell for all types of processing. The offline programming system is a true all-round solution for your day-to-day work as it supports all common file formats and incorporates all of TRUMPF's technological expertise.



■ Save time with offline programming

While the machine is producing parts, you can create programs parallel to production.

■ Use simulations to prevent malfunctions

You can run collision checks and optimize the paths directly in the programming system.

■ Benefit from technological expertise

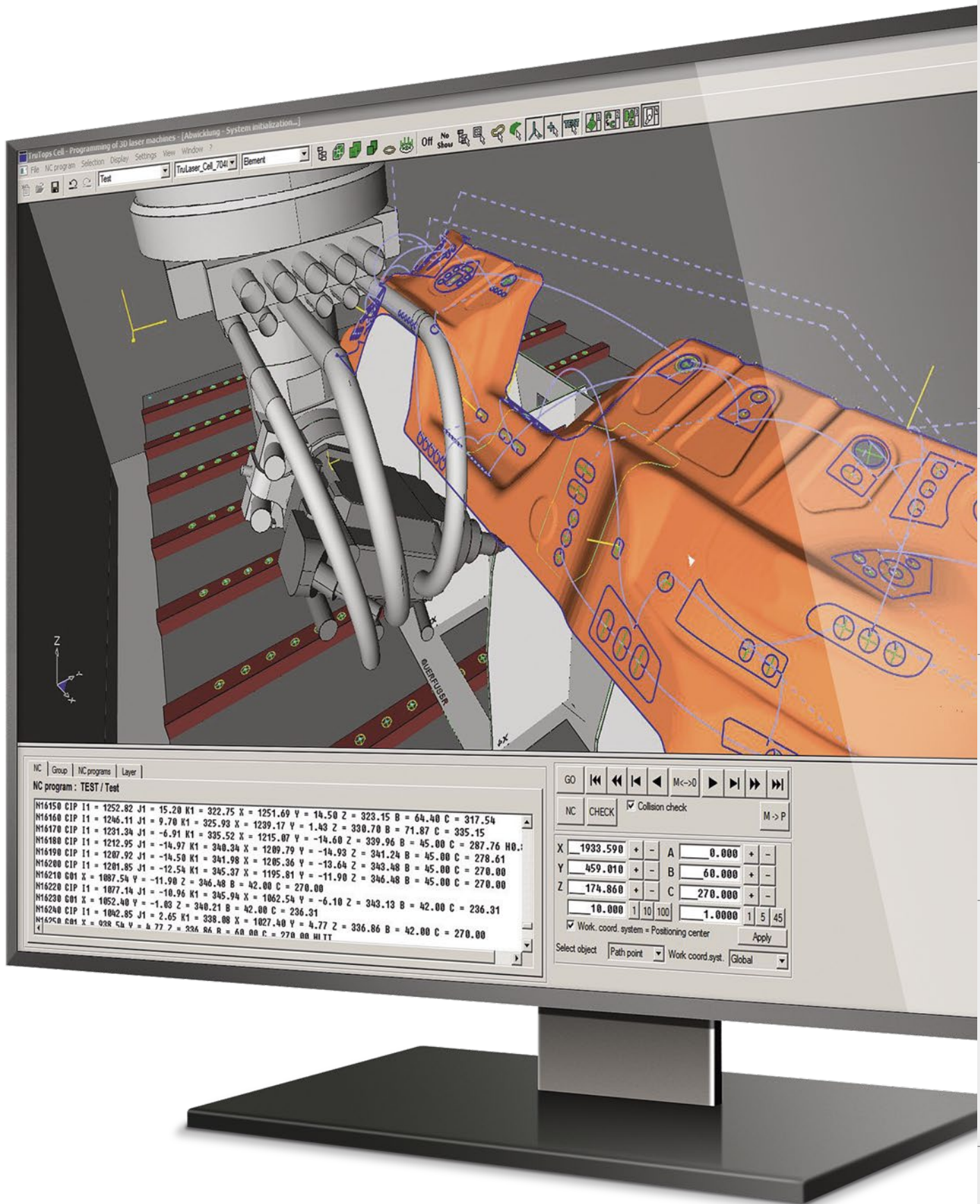
Simply choose the suitable technology setting and take advantage of the integrated expertise.

■ Simplify your work with an all-round solution

Quickly create and optimize programs for all your 3D machines and robots.

■ Imports made easy

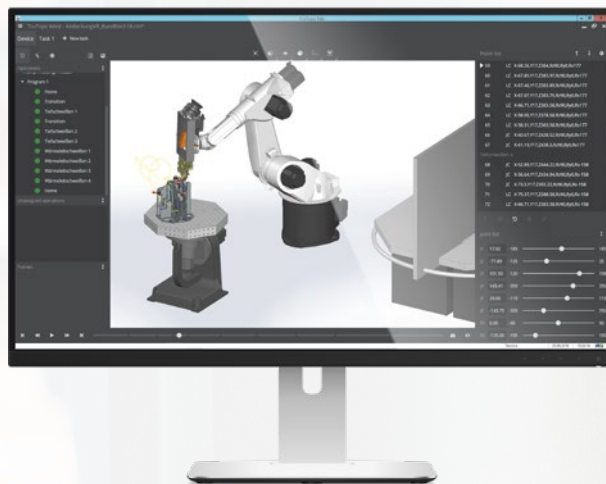
TruTops Cell supports all common file formats, which reduces the time and effort required for conversion.



**Complex 3D processing
made easy.**

The smarter way to weld

A GPS in your car helps you to reach your destination safely. Wouldn't it be good to have a navigation system for laser welding, too? The TruTops Weld programming system meets this need. You can program offline on your computer while you continue producing on your machine. Adapt the program at the machine simply using TeachLine or by reteaching to the actual position of the component.



TruTops Weld.

Your advantages:

Just four steps from the CAD model to the welding program.

1. What do you want to weld?

Load your component into TruTops Weld and mark the seams to be welded. The software is easy to use and packed full of TRUMPF expertise, such as welding parameters and processing angles. You select only the necessary values, and the program is created automatically – offline on the computer, reducing your nonproductive time.

You program faster and reduce nonproductive time.

2. How do you want to weld?

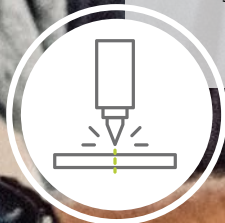
Select the welding parameters that fit your material and desired result for heat conduction welding, deep penetration welding, or FusionLine. Programming is performed on the computer in the office, and operation carried out at the machine – one person can be responsible for this, or a team of operators and programmers.

Deploy staff in a targeted way.

Programmer

"Programming is time-consuming and blocks my machine."

With TruTops Weld, the world looks very different. The software is full of welding parameters and creates your program almost automatically, and also offline on the computer in the office. You can easily adjust it on the machine with functions such as TeachLine or through reteaching.



3. Where do you want to weld?

Position the component virtually on the desired component positioner. Due to TruTops Weld, you can quickly detect possible collisions and adapt the program. The software makes suggestions and makes checking the accessibility easier for complex components.

You simplify time-consuming tasks.

4. The desired result fast

Load the program created offline onto your precisely calibrated TruLaser Weld 5000. TeachLine detects the actual position of your component and automatically adapts your program. This reduces the outlay for reteaching substantially. Alternatively, you can retrain the program conventionally.

You can even produce small quantities profitably.

Stay in the loop

The challenge of producing ever-smaller series with utmost flexibility can often result in a hectic working pace and time pressure. This also increases the risk of errors. Using digital networking, you can take steps to address this by making your order management transparent. The TruTops Fab Quickjob Module enables you to control your production and manage all production orders. Your machines follow the production plan automatically and regularly report the order status. As a result, you avoid errors and delays while staying in the loop at all times.

Control production orders

Generate production orders automatically from the ERP/PPC system, or Excel. A plausibility check ensures that the orders are complete.

Create nesting jobs and NC programs

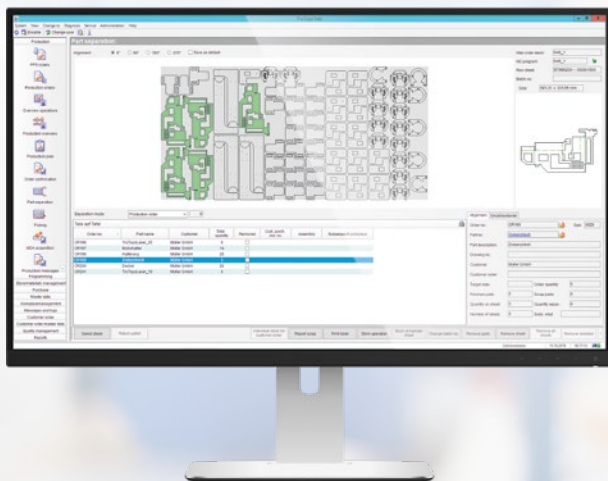
Programming systems such as TruTops Boost, allow you to automatically generate nesting jobs and NC programs, using existing production orders.

Keep an eye on workstations and machines

You can see the operating status of your workstations and machines in the production overview at all times – by request the system will also inform you of problems via e-mail or text message.

Separate parts graphically

A useful function for 2D laser machines is that the TruTops Fab Quickjob Module marks parts from the same production order with the same color in the overview – this prevents errors and makes sorting easier.



Part separation in the TruTops Fab Quickjob Module.

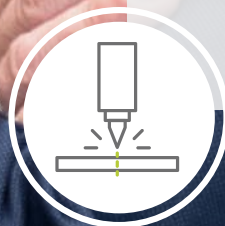
**A simple entry
point to production
control.**



Production manager

“Customers expect that I can notify them of the order status at any time, and that I will deliver flawless quality punctually.”

Take command: By combining the TruTops Fab Quickjob and Production Modules, you can integrate all operations in your production from programming through to laser cutting, bending, welding, or mounting, all the way to Quality Assurance. You can control your entire production process, prevent idle states, and eliminate sources of error.



Integrate all production steps

Wouldn't it be great to always know the exact status of your manufacturing orders? The TruTops Fab Production Module enables you to keep an eye on all production steps, such as assembly, painting, or external production. It does not matter whether you are using manual or automatic work stations – you can manage the task sequence and work plans for every part or assembly. The TruTops Fab Production and Quickjob modules work hand in hand for this purpose.

Produce in multiple stages

Produce parts or assemblies using any number of production stages and workstations, for example programming, cutting, bending, welding, mounting, and packing.

Create work plans

You can compile your work plans from a variety of different operations. You can also easily manage and monitor external production for individual operations.

Combine assemblies

You can combine parts that belong together to form an assembly. The corresponding production order provides an overview of the production status of the individual parts.

Keep an eye on everything

The program shows you the status and outstanding operations for each part in an assembly. This enables you to manage every operation in your production system.

Process parts in full.

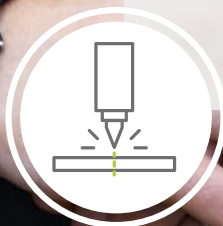


- Data is transferred automatically, which saves time.
- Gain permanent transparency regarding the order status.
- Optimally nest parts while taking into account variable criteria.
- Receive automatic feedback for individual orders.
- Benefit from cost transparency by receiving feedback on the material consumption and processing time.
- Eliminate search times to boost efficiency and save time and money.

Junior production manager

"We outsource certain work steps to external producers. It's a real challenge to coordinate them seamlessly."

The TruTops Fab Quickjob and Production Modules work closely together, which allows you to see exactly which operations are still outstanding. You receive automatic feedback for individual orders, including from external suppliers, which usually reduces follow-up queries.



Monitor your production

Digital networking can transform your production into a Smart Factory. You can link all production areas using a range of interfaces. Individual components exchange information intelligently and work as a team. You benefit from a high level of transparency, allowing you to optimize processes and machine productivity. In concrete terms this means you prevent errors, can produce faster, and can produce more profitably.

TruTops Monitor

You can automatically record and analyze the status of your machines, including idle states, error messages, fault causes, breaks, and maintenance periods. This is possible around the clock and for all workstations in your production system. In this way, you can respond quickly via remote access if required, and minimize idle times.

Condition Guide

One glance is all you need with the Condition Guide function, as you always know the status of your machine. A traffic-light system indicates the status of important elements that affect the cutting capability of your machine. If required, the function can also provide recommendations on how to proceed. This enables you to plan maintenance work more effectively.

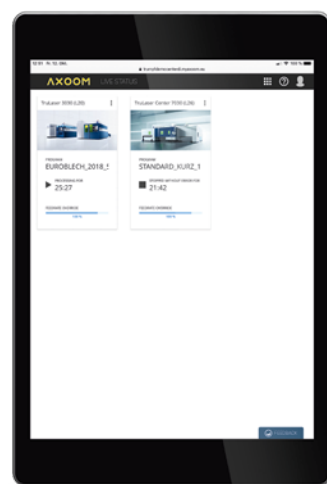
Live Status App

Take advantage of the digital enhancements of your machine with the Live Status App, which provides an overview of your machines and programs. If idle states occur, you are notified and can respond faster. The app also shows the remaining runtime, which makes it easier for operators to organize themselves.

➤ **If you know more, you can make informed decisions.**



Overview of production in TruTops Monitor.



The Live Status App.

Operator

"We often lose valuable time searching for the cause of a malfunction. It would be great to have a software program that could tell me exactly what was wrong."

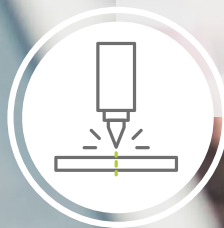
TruTops Monitor immediately notifies you about idle states, error messages, and other causes of a malfunction. In this way, you can respond quickly and prevent idle times.



Production manager

"While production is running, my day is never truly finished. It would be so handy to be able to carry out my inspection round virtually."

With the TruTops Fab App, you can keep an eye on your production anywhere and at any time. It transforms your smartphone into a mobile information center. It is only when you know that everything is running according to plan that you can truly switch off.



Mobile working made easy

Digital networking gives you a great deal of freedom: You can operate machines and keep an eye on your production while on the move, saving you time and making you more independent. TRUMPF provides pragmatic solutions to make this a reality.

MobileControl App

It's no longer the case that you need to be physically at the machine to operate it. The app transfers the interface of the standard control panel to the touch screen on your tablet. You can monitor and control multiple machines and systems with a single app. There is no need to integrate it into your company network, and the data transmission is secure.

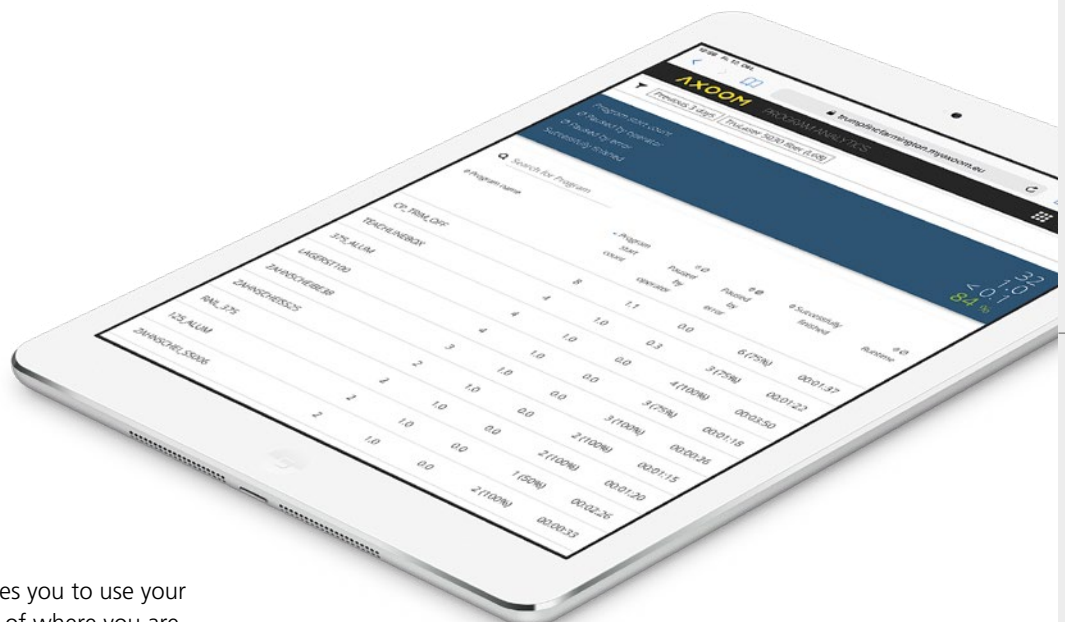
TruTops Fab App

The mobile production control enables you to save time and maintain an overview of your production at all times. The app transfers the machine statuses and error messages to your iOS devices in real time. In combination with the TruTops Fab Quickjob, Storage, and Production Modules, you can also see the status of your production orders and your inventory, and can obtain feedback about any work step.

Program Analytics App

Take advantage of the digital enhancements of your machine with the Program Analytics App, which provides valuable information about completed production programs. It shows the number of run-throughs, the average runtime, and the status. You can also identify stable programs and plan them for unmanned shifts.

➤ **Obtain a complete overview – anytime and anywhere.**



The Program Analytics App enables you to use your data around the clock, regardless of where you are.

Keep your production moving

Weak points in the material flow often slow down order processing. With a high level of transparency, you can respond quickly to errors and optimize your material logistics.

Planner

“When I need to pick orders, I often first need to search for the material I need. The manual bookings also slow me down as they are time-consuming and complicated.”

The intuitive search function in the TruTops Fab Storage Module and the automatic picking lists make it easier to pick orders. You can easily book and rebook storage locations using the mobile web client.





The right software for every store

Whether you merely want to find out your inventory of sheets and remainder sheets, manage your store manually, or are using an automatic large-scale storage system, the TruTops Fab Storage Module takes care of all store management steps for you. It is also possible to combine several stores. The modular software can expand to meet your growing requirements.

Manage your store intelligently

Whether it's stock management for your sheets and remainder sheets, a manual store, or an automatic large-scale store, you can easily and automatically manage and monitor your material flow and control your inventory. The TruTops Fab Storage Module provides everything you need for this in the way of software.

The TruTops Fab Storage Module in practice

You can simply connect your machines and storage systems with the software module. With just a few clicks of the mouse, you can obtain material master data, additions and withdrawals, and the current stock levels. The Storage module also monitors your minimum stock. Inventory lists and standard reports enable you to optimize your stock movements.

■ Access your inventory with TruTops Boost

The TruTops Fab Storage Module identifies your material requirements, which were already taken into account during the programming with TruTops Boost.

■ Manage remainder sheets efficiently

Manage your remainder sheets and use them for new programs, thus saving resources.

■ Your store management grows with you

Whether it's sheet and remainder sheet stock management, manual store management, or even automatic large-scale stores – you need just one software program to keep everything under control over the long term.

■ Reliably track batches

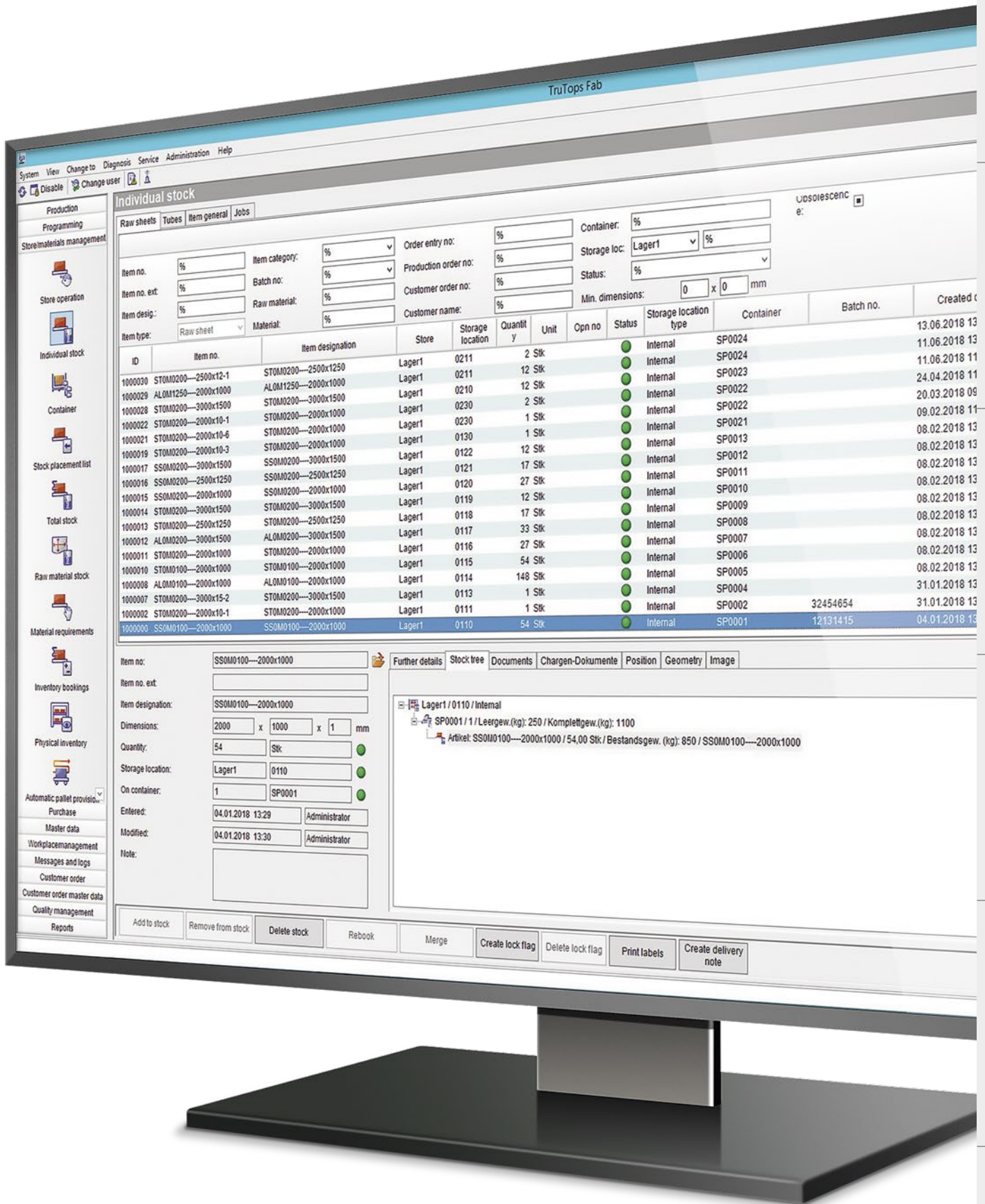
The software automatically applies the batch of your material, enabling you to respond directly in the event of an error.

■ Book locations and store materials when on the move

With the web client, the storekeeper can also use the TruTops Fab Storage Module when they are on the move. This reduces the need to walk to the operating terminal and avoids errors by simple material scanning.

■ Store management for tubes

We have enhanced the management of master data and individual stock items of your tubes in the TruTops Fab Storage Module. As a result, you can now also connect your TruLaser Tube machines to your store automatically.



Getting started.
Improving gradually.

Do away with searching

How much time do your employees lose searching for orders and items on the shop floor? Say good-bye to expensive search times with Track&Trace, the intelligent indoor localization system for your production. After all, many customers want to know the status of their order at all times – just like they are used to from shopping online.

How Track&Trace works

Track&Trace is an indoor localization solution based on ultra-wide band technology (UWB). It determines the position of the markers three-dimensionally, through satellites in the room using radio. The included software makes the information immediately available to the operator. The markers can be added to parts stacks, or attached to charge carriers or forklift trucks. This allows you to follow urgent orders in real time, for example.

Track&Trace starter kit

Get started easily with the Track&Trace starter kit, which contains 12 satellites, 50 markers including charging station and mounting set as well as a pre-installed industrial computer. If you have a larger hall, you can simply expand the starter kit.





■ Plug & play

It is as easy to install as it is to operate. Everything is included in the scope of delivery: after installing the electrics and the assembly you can start immediately.

■ Intuitive visualization

The search result can be conveniently displayed on a PC or mobile end device.

■ Ideal for day-to-day industry

Ultra-wide band technology makes the solution extremely precise, fast, and robust.

➤ **With Track&Trace, nothing gets misplaced on the shop floor anymore.**



More information can be found here:
www.trumpf.info/5htxgl

Simplify your purchasing and customer administration

Handling a large number of orders with small lot sizes poses a challenge in terms of purchasing and management. Take advantage of tailored support with the TruTops Fab Purchase Module, which simplifies your raw materials management and purchasing processes. In the TruTops Fab Customer Module you can process your customer orders from the quote right through to the invoice.

Purchaser

"The increasing number of small orders is complicating our purchasing processes."

With the Purchase software module you can easily and consistently control your purchasing processes. You can send queries to suppliers, trigger orders, and manage invoices, payments, and credit memos.



TruTops Fab Purchase Module

Order automatically

If the stock of material in the store drops, the program automatically creates purchase order proposals on request.

Manage suppliers

The integrated supplier management function shows you which suppliers are able to meet your conditions.

Optimize purchasing processes

- You can create and manage orders in the system – this creates transparency and saves time during purchasing.
- Manage your inquiries, orders, purchase invoices, and associated outgoing payments. Is the order on time or overdue? The Purchase module shows you the current status of every order.
- In order to optimize your purchasing processes, you can analyze your order history and all orders over defined periods of time.

TruTops Fab Customer Module

Prepare quotes, process customer orders

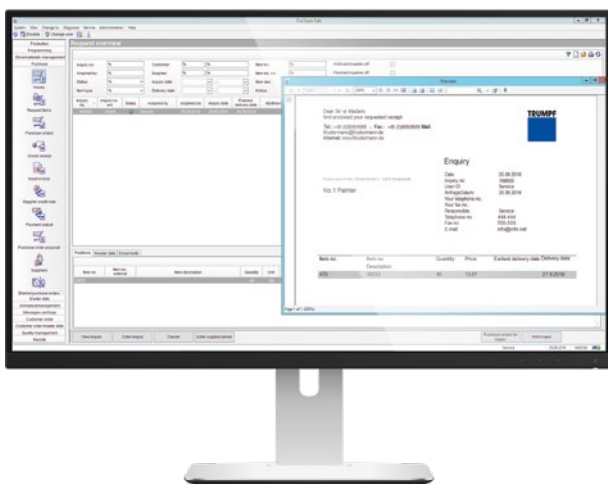
- You can create deliveries directly for completed orders.
- An overview shows you which parts have already been manufactured and delivered.
- You can obtain the shipping documents in an instant.

Issue invoices and monitor payments

- Post incoming payments to the relevant invoice, grant a discount, or automatically trigger a reminder.
- Keep an eye on outstanding items.
- Transfer posting records to an external accounting system via a financial accounting interface.

Manage customer data

- Manage customer data, delivery conditions, shipping data, payment terms, and reminders.



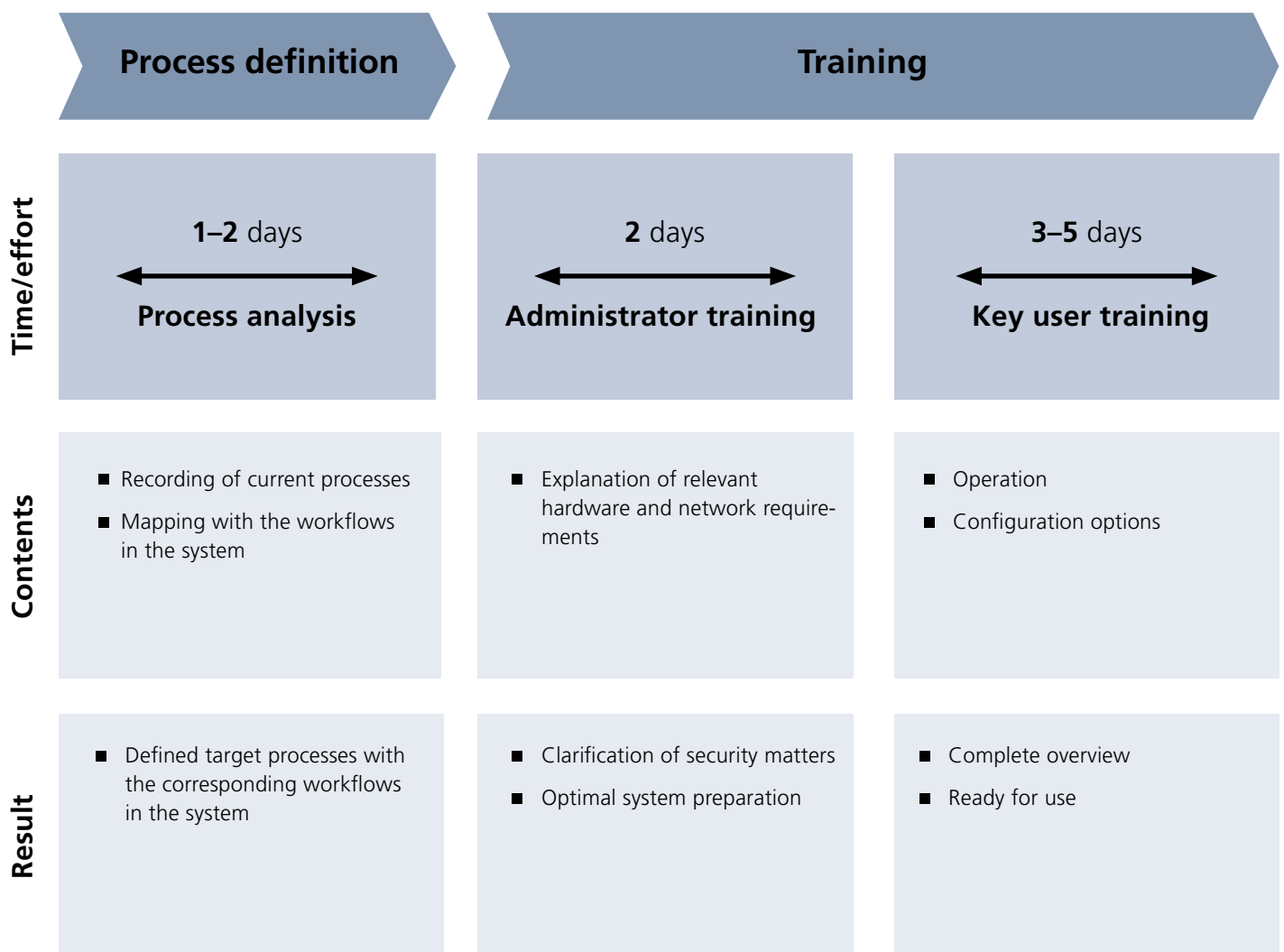
All inquiries are clearly arranged in the TruTops Fab Purchase Module.



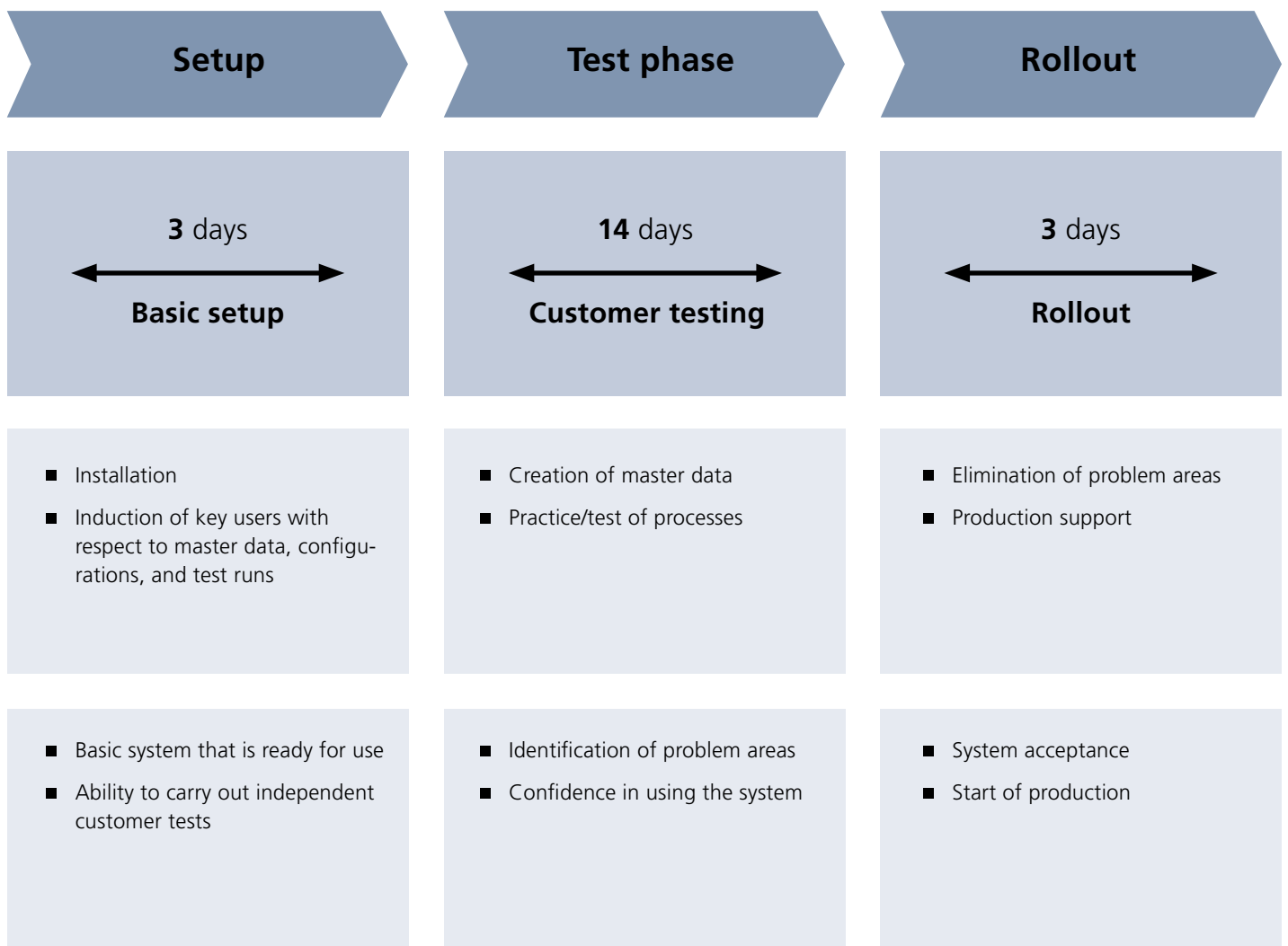
Simplify purchasing and administration.

Your path to a successful solution

How can you take advantage of a suitable software solution without delay? When implementing the solution you need a well rehearsed process, which we will tailor to suit your specific requirements. It covers the selection of suitable modules to training, installation, and test phases, right through to successful introduction. Experienced TRUMPF advisers will be by your side to ensure the software becomes an integral part of your production system as soon as possible.



Depending on the project scope, the implementation will take approx. 3 to 6 months.



Questions to safeguard your future

How can you cope with ever-changing market conditions? To maintain your competitive edge, it is essential to take a consistent approach to challenges. The following questions are intended to help you determine your requirements and identify your goals.

CEO

"How much manual time/effort do you spend on indirect processes?"

Production planner

"To what extent do you actively plan your production – or do you merely react?"

Production manager

"How can you create the transparency required to plan your entire production system with flexibility?"

Programmer

"Do you program your systems online or offline? Or both?"

Storekeeper

"Which automatic logic do you use for stock management?"

Operator

"What type of feedback do you receive after each machine run, and how do you use it?"

Product overview

Which software is the right fit for which process step? This table shows you the software modules presented in this brochure at a glance.

		TruTops Calculate	Web shop	TruTops Fab Customer Module	TruTops Fab Quickjob Module	TruTops Boost	TruTops Bend (Auto)	TruTops Cell	TruTops Tube	TruTops Weld	TecZone Bend/TecZone Fold	Digital enhancement of machine apps	TruTops Fab Production Module	TruTops Monitor	TruTops Fab App	Condition Guide	MobileControl App	TruTops Fab Storage Module	TruTops Fab Purchase Module	Track&Trace
Customer inquiry/ Quote preparation	Calculate quote																			
	Prepare quotes																			
	Enter customer order																			
Production plan- ning and program- ming	Production planning																			
	Create internal order																			
	Import/design part																			
	Order programming																			
	Assign job to machine																			
Networked production – Cutting – Bending – Welding – Marking	Monitor machine data																			
	Measure production efficiency																			
	Visualize machine status																			
	Control machines when on the move																			
	Call up production info when on the move																			
	Assembly handling																			
	Notifications in the event of a malfunction																			
	Report job as complete																			
	Analytics: tools, material, performance, programs																			
Automation	Control automatic store																			
	Manage manual store																			
	Manage large-scale store																			
Intralogistics and setup	Prioritize and track orders																			
Dispatch and order completion	Order material																			
	Create delivery note																			
	Create invoice																			
	Credit memos and reminders																			

Passion is what drives us

Whether it's production and manufacturing technology, laser technology, or material processing – we develop highly innovative products and services which are suitable for industry and absolutely reliable. We put everything we've got into giving you a compelling and competitive edge – expertise, experience, and a lot of passion.

Industry 4.0 – solutions to safeguard your future

The fourth industrial revolution is changing the manufacturing world. How can you stay competitive internationally? Benefit from the opportunities digital networking can present: We accompany you step by step on the way to your networked production with pragmatic solutions, and help you to make your processes more transparent, more flexible and, above all, more economical. In this way you can make full use of your resources and set up your production for the future.

TruConnect is synonymous with Industry 4.0 at TRUMPF. The range of solutions links man and machine with information. It covers all steps in the production process – from the offer right through to the shipping of your parts.



TruConnect
Your Smart Factory



Visit us on YouTube:
[www.youtube.com/
TRUMPFtube](https://www.youtube.com/TRUMPFtube)



Lasers for manufacturing technology

Whether on a macro-, micro-, or nanolevel – we have the right laser and the right technology to produce innovatively and cost-efficiently in every industrial application. Beyond the technology itself, we support you with system solutions, application knowledge, and consulting.



Power supplies for high-tech processes

From semiconductor manufacturing to solar cell production – with our RF and MF generators, the current for induction heating, plasma and laser excitation is given a defined frequency and power – with high reliability and repeatability.



Machine tools for flexible sheet metal and tube processing

Whether it's laser cutting, punching, bending, or laser welding – we offer tailor-made machines and automation solutions, including consulting, software, and services for all processes in flexible sheet metal processing – so you can reliably manufacture your products to exacting quality standards.



TRUMPF is certified to ISO 9001
(Find out more: www.trumpf.com/s/quality)



TRUMPF Werkzeugmaschinen GmbH + Co. KG
TRUMPF Laser- und Systemtechnik GmbH
www.trumpf.com