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GRAFIS CAD

GRAFIS
CAD Software

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GRAFIS CAD

You are looking for a CAD software for clothing or shoe production? You want ***maximum flexibility,*** grading to happen automatically and everything ***adjusted automatically*** in the event that you do want to make changes? Furthermore, your developments are to be style-independent and available again and again as a ***modular kit?***

Then, GRAFIS® is the ***optimum solution*** for your needs. This unique system is designed to be a perfect fit for both ***industry*** and the requirements of ***trade.***

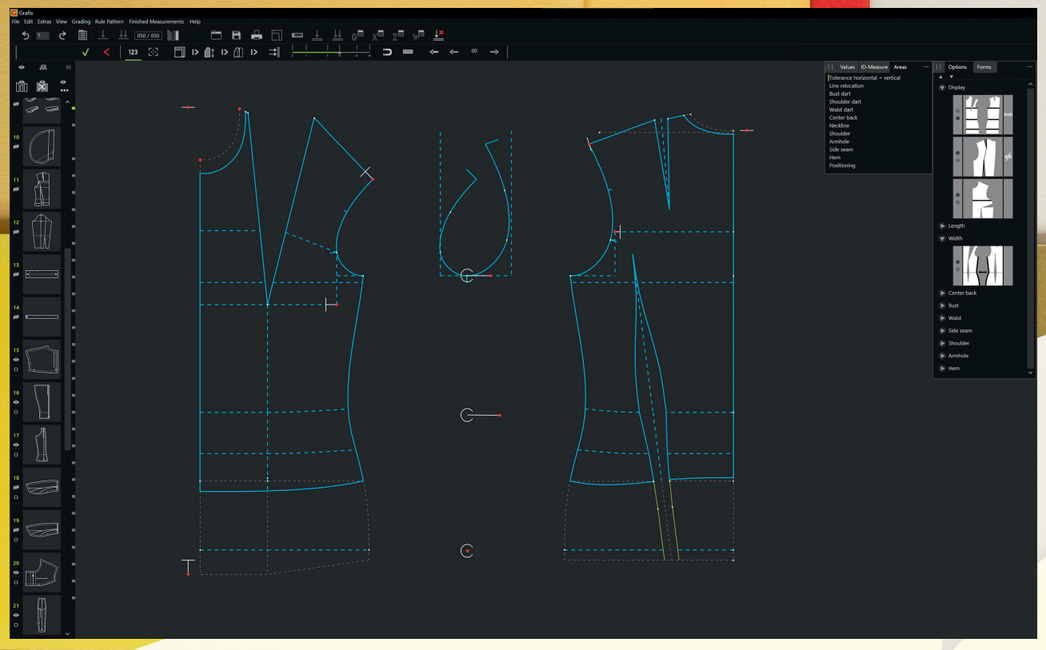
With the GRAFIS® CAD software you have an innovative software for construction of clothing / shoes and technical textiles at your fingertips.

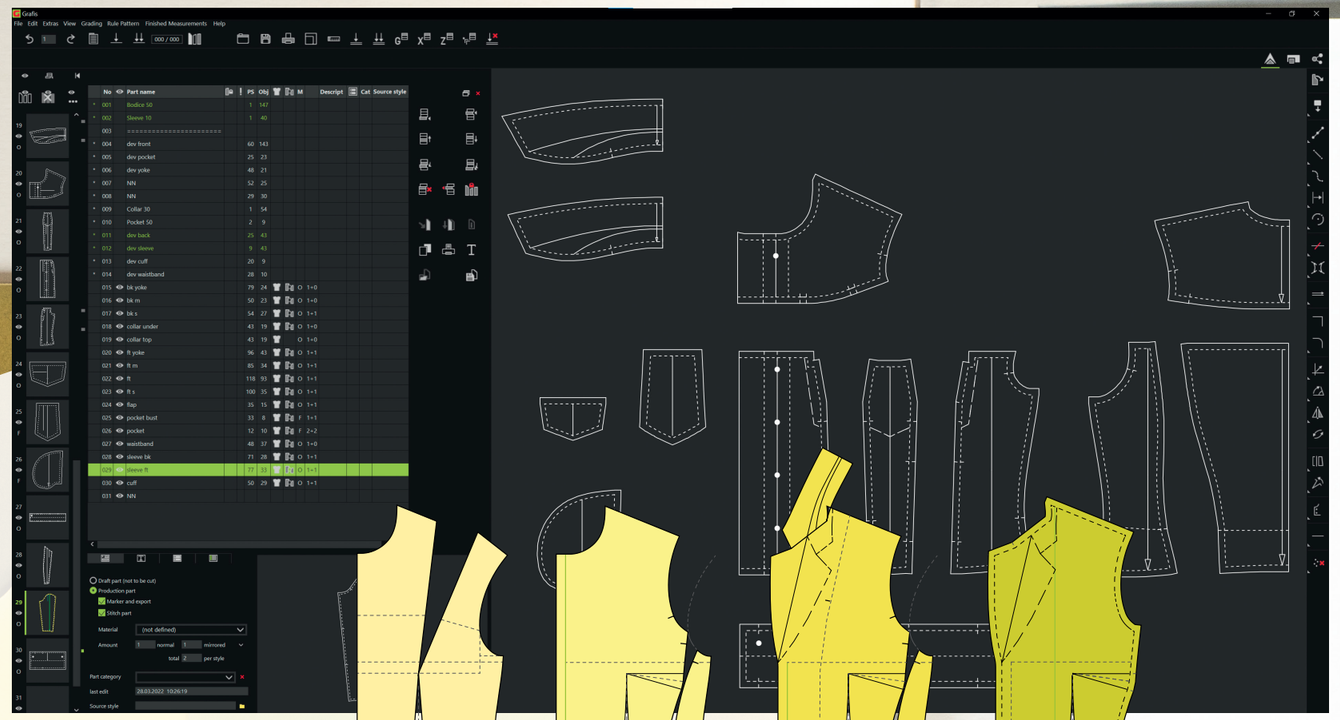
Thus, you combine traditional operations for generating professional patterns for the clothing and shoes industry with the advantages of digital, effective and intuitive processes.

The GRAFIS® CAD licence not only contains the ***construction programme*** but also a professional ***marker making programme*** and an import and export interface.

To ensure that all your requirements are met, GRAFIS® offers you a variety of connections to other programmes:

- ***CutterControl*** – for controlling single and multiple lay cutters for exact and paperless production
- ***Autonester*** – automatically generates the perfect marker
- ***Cut-Order Planning*** – simplifies and organises planning of markers and cutting stacks
- ***DigitalPrint*** – for printing graphics, colour fields and logos straight onto your pattern
- ***VStitcher®*** – in conjunction with GRAFIS®, the quickest and most versatile way of generating 3D styles
- ***ProfileFitPattern*** – taking body measurements and digitising with digital photos
- ***Pattern on Demand®*** – fully automated made-to-measure garments – from order to production





Pattern Construction Clothing

The software for generating professional clothing patterns for creatives and technologists

With GRAFIS® clothing construction, unlike other CAD systems, you have the advantage of the ***construction principle.*** Each step is documented in a construction record and can be utilised again and again with different ***measurement charts*** (body measurements or finished measurements) to give you maximum control over your style development.

Therefore, as a rule, ***grading*** in GRAFIS® is not carried out as standard grade rule grading but as a new calculation of the entire construction. Grading ensues automatically based on measurement charts. But, of course, we do not take away your freedom to actively grade according to your requirements through break-size dependent adjustment. Thus, the style is entirely in your hands.

If you want to grade finished patterns from other systems or digitised pattern pieces, you do not have to abandon grade rules. As an alternative to grading via the construction record, you have the option to work traditionally with ***grade rules*** at grade points.

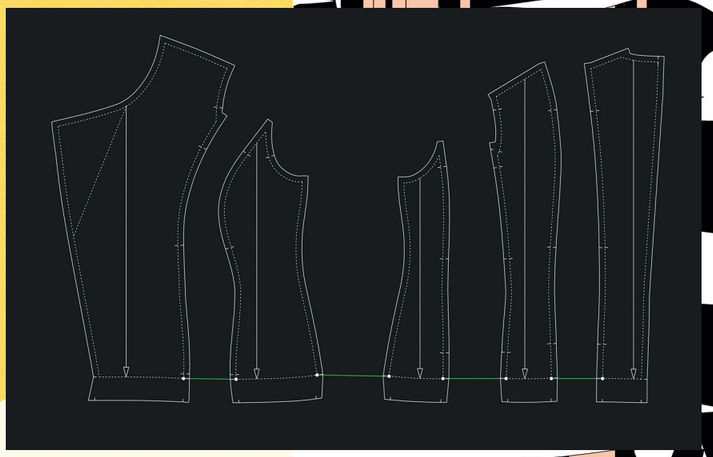
GRAFIS® automatically creates ***interdependencies*** between pattern pieces. Alteration to the development part automatically leads to adjustment of the dependent pattern pieces. Thus, no quality-reducing differences in seam length occur, no matter how unusual the pattern. These interdependencies also offer you fast and effective creation of style variations.

You also have the advantage of being able to create your styles based on the ***interactive basic constructions.*** These can be easily adjusted interactively or via value entry and offer a large variety of possibilities for fit optimisation and style modification. Interactive constructions are available not only for the standard scope of the clothing industry, but also for special products such as accessories. Thanks to a variety of new and further developed tools, you are even more flexible in your style design and can implement changes interactively at any time. Your style development is accessible to you at all times, even after completion. Subsequent corrections or modifications of the style development are possible via the adjustment of ***parameters.***

For data exchange with a number of other CAD systems, the ***import and export interfaces*** integrated in GRAFIS® are at your disposal, ensuring that you can work with production sites or freelancers without any problems.

Your advantages

- *Automatic grading, also for individual sizes*
- *Parameters ensure maximum flexibility*
- *Interdependencies of the pattern pieces simplify style alterations*
- *Interactive constructions for fit optimisation and style modification*
- *Integrated import and export interfaces*



The interactivity of the numerous basic blocks offers a high degree of flexibility and at the same time full control during pattern development. In addition, the hereditary automatic ensures unlimited pattern variability with the highest fit reliability at the same time.

Since we have been using Grafis, not only have the costs for the entire development process been significantly reduced. The time saved in preparing the styles, development patterns and grading is also enormous. And all this with an improvement in the quality of our samples.

What I like most about Grafis is the unique integration of practical cutting expertise into CAD processes. I would therefore also recommend it to any garment school as the best learning programme for pattern construction. The very efficient operation makes it possible to learn quickly.

Stylers
MADE TO MEASURE

Stylers made to measure GmbH
Michal Šmíd – Managing director

Marker Making

Save your material

Material calculation and effective use of materials are critical factors in the economic success of your products. The ***stand-alone marker making programme*** included in GRAFIS® CAD assists you in this. It offers you an uncomplicated transition from pattern construction to laying out your pattern pieces for ***cutting.*** The marker also helps you enormously in the ***pre-calculation*** of your material planning. Obviously, you have the possibility to use pieces from different styles when generating the marker to ensure even greater material savings. The marker making programme offers a ***multitude of adjustment possibilities for material, pieces and sizes.***

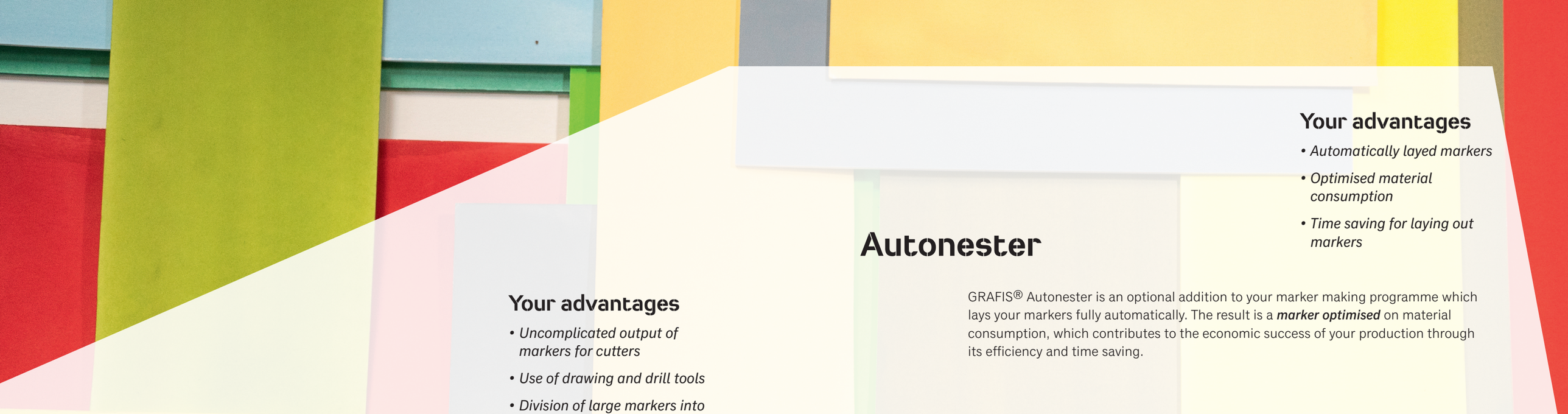
Apart from the usual functions for butting pieces together including settings for rotation, flip and buffers, GRAFIS® offers you functions for ***special requirements.*** These include repeat points for laying out on patterned material, use of template markers, automatic generation of fusing blocks, consideration of material flaws and shrinkage. Special marker options such as folded lays or tubular material are equally supported.

Your advantages

- *Markers for cutting*
- *Pre-calculation of materials*
- *Comprehensive adjustment possibilities for specific requirements*

DigitalPrint

With GRAFIS® DigitalPrint it is possible to display scans or photos of material and leather skins as a background image in the marker. This makes it easier for you to choose the positioning on your materials. You also have the ability to print ***graphics or coloured fields*** straight onto the pattern pieces. GRAFIS® DigitalPrint also enables you to position logos specifically and print them along with your pattern.



Your advantages

- *Uncomplicated output of markers for cutters*
- *Use of drawing and drill tools*
- *Division of large markers into segments*
- *Output in rough cut and fine cut*

CutterControl

Your cutting becomes particularly effective and precise when using a cutter. GRAFIS® offers you an optional uncomplicated interface for controlling ***single ply or multiple ply cutters.*** The GRAFIS® CutterControl interface supports your automated cutting of pattern pieces.

No compromises for cutting

Apart from controlling the knives for the cut contours, many further settings are available to adapt the ***cutter output*** to your requirements. You have the option to start cutter output automatically or to control each piece individually. You can also choose to determine the starting position, the cutting direction and the cut sequence manually.

Obviously, in addition to your cutting tools you can also control the ***drawing and drill tools*** of your cutter separately. Your advantage for cutter output is the ability to separate especially long markers into ***segments,*** enabling you to achieve great results even with a small cutter.

The use of ***fusing blocks*** is also accommodated during cutter control. For the fine cutting, a separate cutter file is generated within a marker, simplifying subsequent cutting of the small pieces. With the help of special text annotation, bundling devices can also be controlled.

Your advantages

- *Automatically layed markers*
- *Optimised material consumption*
- *Time saving for laying out markers*

Autonester

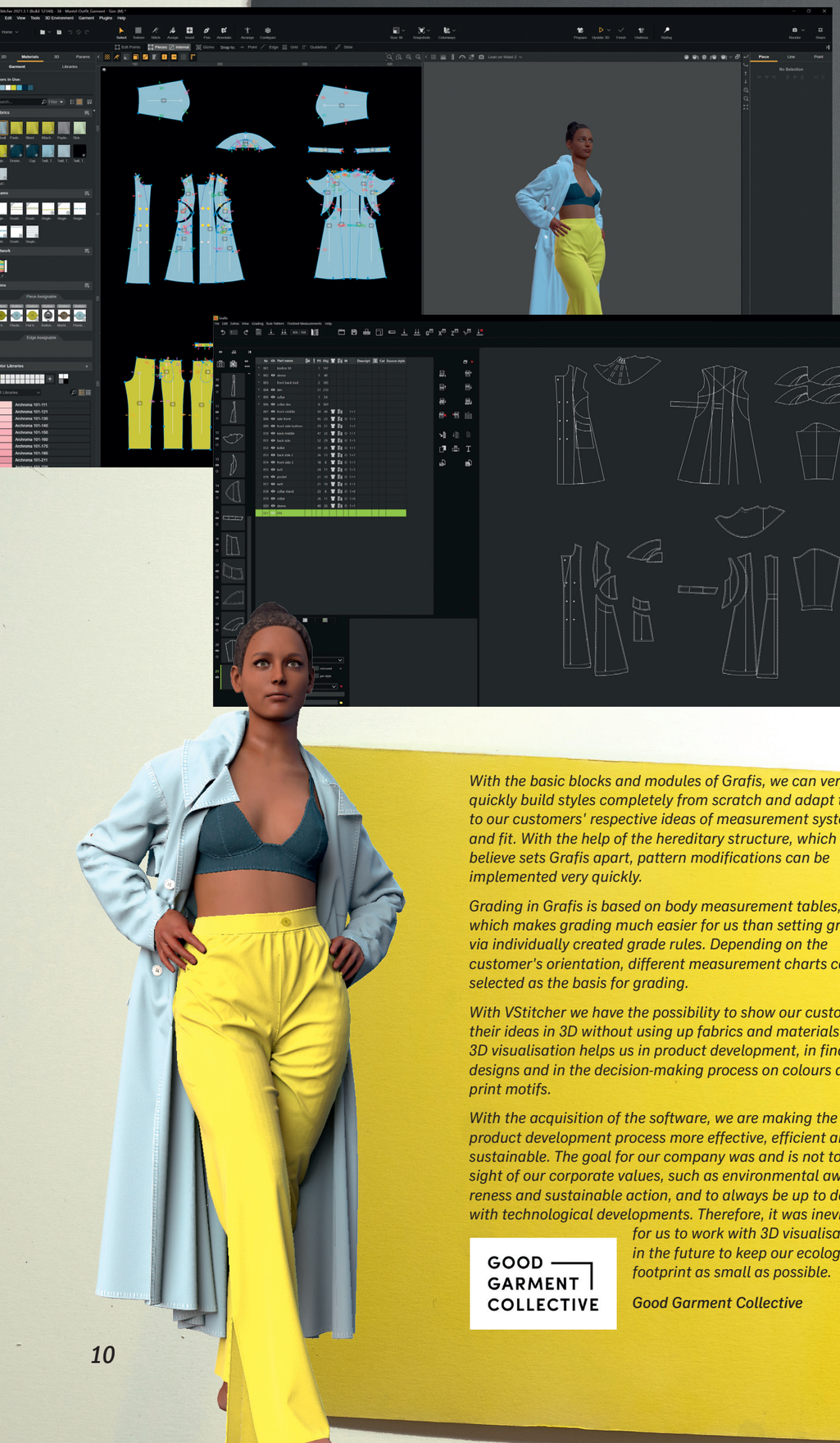
GRAFIS® Autonester is an optional addition to your marker making programme which lays your markers fully automatically. The result is a ***marker optimised*** on material consumption, which contributes to the economic success of your production through its efficiency and time saving.

Cut-Order Planning

Your sales department has signed a large number of orders. You are presented with a lot of figures: amounts, styles, sizes, colour variations, style variations. Now it is up to you to divide these orders onto markers and at the same time, consider the ***requirements of your production department.*** The new GRAFIS® Cut-order planner is the perfect tool for you. Ideally, you acquire the ***order information straight from your ERP system.*** Then, you ***plan your orders*** in clear dialogues and create your ***markers*** automatically. If you are already using GRAFIS® Autonester, you can have the markers layed directly. Then, GRAFIS® Cut-order Planner arranges the layed markers into cutting stacks, taking into account the maximum layer height and table length of your cutter. Finally, corresponding marker chains can be plotted and print forms can be printed, if desired.

Your advantages

- *Optimum and clear preparation of orders*
- *Transparent calculation*
- *Information transfer from ERP system*
- *Automatic distribution into cutting stacks*



With the basic blocks and modules of Grafis, we can very quickly build styles completely from scratch and adapt them to our customers' respective ideas of measurement system and fit. With the help of the hereditary structure, which we believe sets Grafis apart, pattern modifications can be implemented very quickly.

Grading in Grafis is based on body measurement tables, which makes grading much easier for us than setting grading via individually created grade rules. Depending on the customer's orientation, different measurement charts can be selected as the basis for grading.

With VStitcher we have the possibility to show our customers their ideas in 3D without using up fabrics and materials. The 3D visualisation helps us in product development, in finding designs and in the decision-making process on colours and print motifs.

With the acquisition of the software, we are making the product development process more effective, efficient and sustainable. The goal for our company was and is not to lose sight of our corporate values, such as environmental awareness and sustainable action, and to always be up to date with technological developments. Therefore, it was inevitable for us to work with 3D visualisation in the future to keep our ecological footprint as small as possible.

GOOD GARMENT COLLECTIVE

Good Garment Collective

Your advantages

- *Early prototype development – long before samples or materials are available*
- *Realistic 3D pattern visualisation in real-time*
- *Fast and precise 3D style development*
- *Improved communication and collaboration between designers and manufacturers*
- *Reduced development cost*

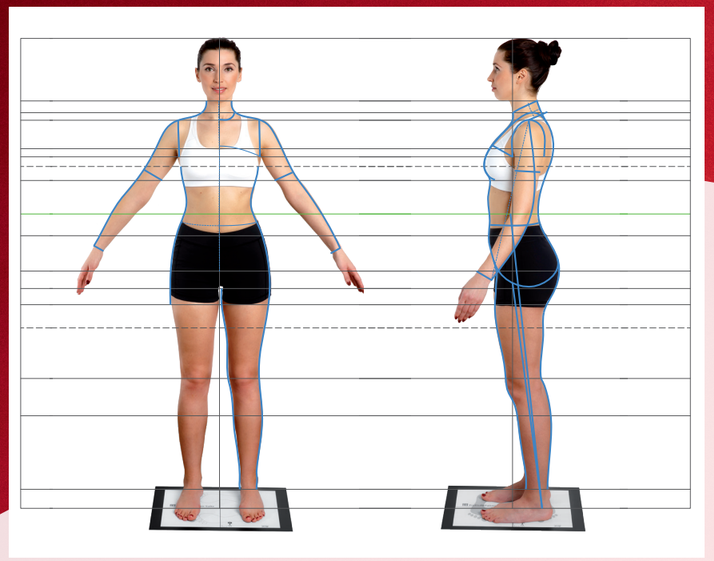
3D-Visualisation

The production of ***prototypes,*** which cost significant time and money, can be ***reduced*** to a minimum with VStitcher® from Browzwear and the GRAFIS® Plugin for VStitcher®. The amount of sample pieces can be significantly reduced, communication within your company is simplified and the simulation is perfectly suited for product presentation, marketing purposes or actual sales.

Shorten your product development phases and visualise your ideas

With GRAFIS® CAD Clothing Construction and VStitcher® from Browzwear you can illustrate and simulate all your styles in ***3D,*** so that you can finally check your fit instantly without expensive and timeconsuming ***samples. Preparation*** of your styles including all information required for the simulation ensues directly within GRAFIS® CAD. All pattern pieces can be virtually sewn in GRAFIS®. The positioning of the pieces, their alignment in 3D and manufacturing elements such as pleats, gathering, creases or folds become part of your ***production style***. The GRAFIS® Plugin enables a direct transfer of the style to VStitcher® with instant simulation possibility.

You now have the ability to simulate ***style modifications*** to fit and design directly without further preparation within seconds. ***Material and texture properties*** already assigned to material and seams in VStitcher® remain intact during each style update. Graded or made-to-measure pattern can also be visualised. Individual measurement tables created in GRAFIS® can be automatically transferred to the avatar in VStitcher®. Inspire your customers with this great potential ***for individual fittings.*** The realistic simulation enables you to tweak the fit directly. This close interaction between 2D pattern construction and 3D visualisation is unique.



Your advantages

- *Cost and space requirements for a 3D body scanner are omitted*
- *Photos can be generated by trained staff or directly by the customer*
- *Contactless professional measuring*
- *During style development you can take into account the posture and figure-specific characteristics of your customer*

ProfileFitPattern

Taking measurements contactless

Inspire your made-to-measure customers with the modern and comfortable way of ***taking measurements without tape measure.*** You save the cost and space requirements of a body scanner.

With ProfileFitPattern you are able to determine the body measurements of your specific customers ***with two digital photos.*** This opens completely new possibilities in the market of individualised clothing as you do not have to summon the customer for measuring or rely on measurements taken by the customer. ProfileFitPattern thus allows you to professionally determine customers‘ body measurements, world-wide, without the need for complex arrangements.

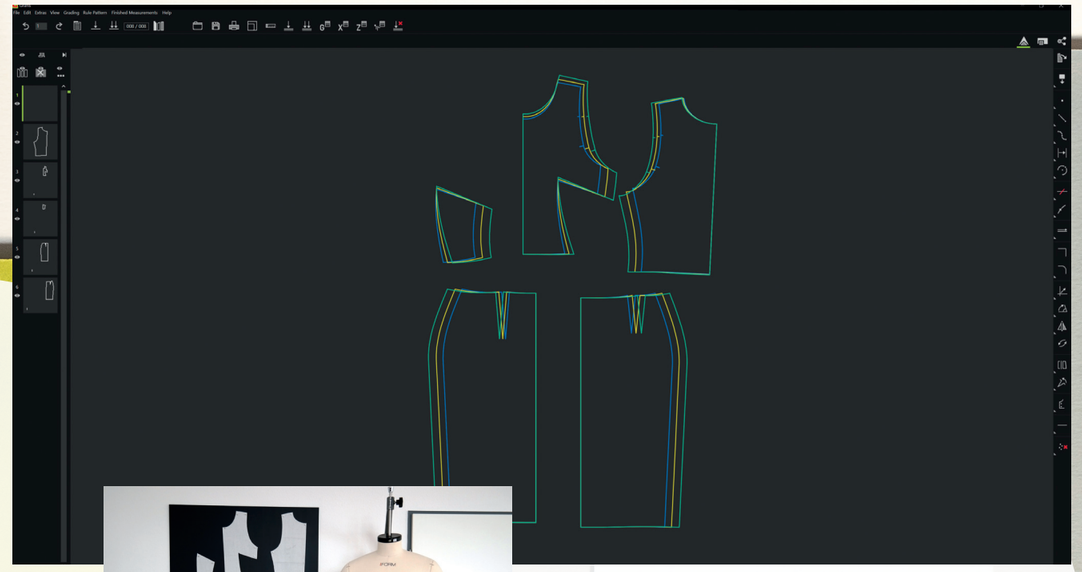
In future, simply take photographs of your customer in front and side view to obtain all body measurements required for pattern development. These photos can be ***generated by the customer,*** for example for made-to-measure orders from an online shop.

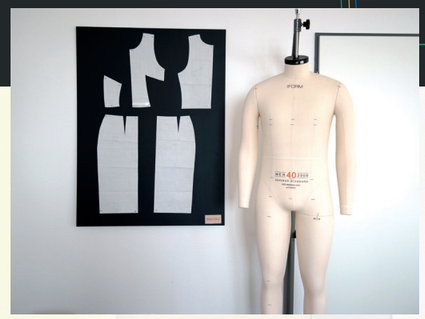
The photos are rectified, aligned and cropped with PFP Photo. The contours of the front and side can be captured and imported into GRAFIS® CAD together with the photos.

Through the photos, you will already be familiar with the posture and the ***figure-specific characteristics*** of your customer. This knowledge can be instantly incorporated into the style development. Through incorporation of the images into the style file, you have your customer in front of you at all times.

The images and contours serve in GRAFIS ® CAD as a template for a ***profile construction,*** with which the silhouettes of front and side view are ***semi-automatically*** traced.

GRAFIS ® CAD determines the ***length, width and circumference body measurements*** from this profile. These can be used as a measurement chart for style development, enabling you to realise existing styles directly for individual customers. Depending on your routine, you will have determined the customer measurements ***in a few minutes.***





Your advantages

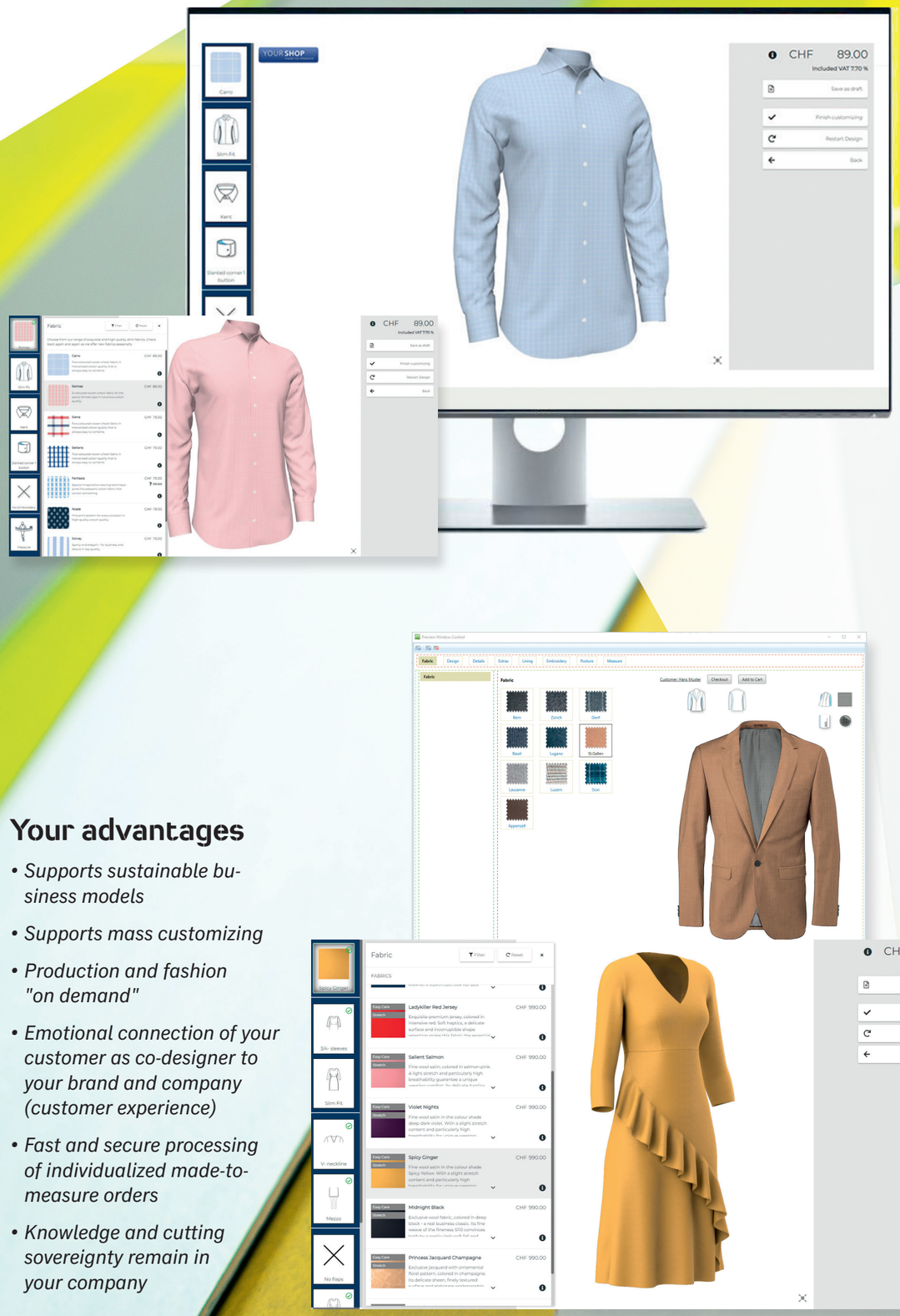
- *No expensive digitizer table required*
- *Space requirement for digitizer tablet omitted*
- *Flexible and location-independent digitizing*

Digitise space-saving and flexible

Transferring pattern pieces into a CAD system via a digitizer is tedious and frustrating. The result can only be evaluated after the ***digitizing process*** is finished which often leads to inaccuracies or untidy curve runs. The purchase of a digitizer tablet is expensive and requires a significant amount of space. Our ProfileFitPattern provides the solution!

ProfileFitPattern enables digitizing of paper patterns or sample pieces without a digitizer tablet. The pattern pieces are photographed ***with a digital camera,*** edited in PFP Photo and ***pattern piece contours*** are traced automatically. With only one photo you can process a number of pattern pieces.

The digitized outcome matches the ***accuracy of measurements*** of a result digitized with a digitizer tablet. As the digitized curves can be compared directly on-screen with the original, the curve accuracy is significantly greater. Grade rules for grading can be assigned to patterns available in the base size only. If the graded nest is available, digitize the basic contour and the grade rules at the grade points directly. In both cases, the result is a gradeable grade rule pattern. A photo processed with PFP Photo can also simply be used as a photo template for adjusting interactive constructions.



Your advantages

- *Supports sustainable business models*
- *Supports mass customizing*
- *Production and fashion "on demand"*
- *Emotional connection of your customer as co-designer to your brand and company (customer experience)*
- *Fast and secure processing of individualized made-to-measure orders*
- *Knowledge and cutting sovereignty remain in your company*

POD – Mass Customizing

End-to-end solution for manufacturers and suppliers of individualized customized clothing

With ***pod – Pattern on Demand®,*** you can offer your customers a unique shopping experience with an integrated configurator. The big challenge of how to convert the order reliably, quickly and easily into a cut order for production, which also remains reproducible for repeat orders, can now be faced with confidence! Because the scalable platform is designed to support mass customizing securely and easily.

E-Commerce

With the configurator ***Gertsch Consulting und Mode Vision*** developed, which is available as a plugin for WordPress/WooCommerce stores, your customers can act as co-designers and customize their product in terms of fabric, model variants and accessories. In doing so, you determine the scope of design that you want to offer the customer. A custom integration into your own web shop can also be done via an API interface. In the plugin itself you can determine whether you run a B2C or B2B web store. The business logic behaves accordingly. Body measurements can be determined via the connection of Body Scan Apps - to produce the product in the truest sense of the word tailor-made.

CAD Processing

The core task of the platform is the fast and, above all, fully automatic processing of web shop custom orders. The creation of the patterns or markers for the cutting room takes place in the CAD software GRAFIS®, which shows its special strengths especially in the production of made-to-measure cuts and in Made-to-Measure clothing. You can now determine whether you want to create one marker for each order - or whether you want to combine the orders of a certain period and with the same fabric into one marker. The control of the models by body measurements and parameters as well as the initiation of automated processes from the outside is carried out by ***pod – Pattern on Demand®.*** Enjoy the security of knowing that your Made-to-Measure orders will be processed reliably!

Production

The platform also accompanies your orders through production so that you and if necessary, your customer, are always informed. Because production papers and production tracking are further functionalities of the software. In addition, all order data can be made accessible to your ERP software with the achieved material consumption.

www.textilnet.ch
www.gertsch.ch

Pattern Construction Shoes

With GRAFIS® CAD Shoe Construction you have the possibility to generate ***patterns*** based on ***lasts*** according to the ***construction principle.*** Grading a ready-to-wear shoe in GRAFIS® is a combination of proportional increase of the upper basis and the subsequent style development. The special feature of GRAFIS® is that the construction steps are recorded during style development and are then automatically re-processed when ***grading*** other sizes. Influencing grading through size-dependent adjustments of individual parameters is also envisaged. Grading groups can thus be created and implemented quickly and efficiently in this way.

Optimise your upper development

Furthermore, GRAFIS® offers you the possibility of building your styles based on ***interactive upper constructions.*** These interactive upper constructions can be adjusted interactively or via value entry. They offer a multitude of possibilities for style modification and fit optimisation. For ***made-to-measure shoes*** and in particular ***orthopaedic shoes*** GRAFIS® offers special functions, as the upper constructions can easily be adjusted to individual ***lasts*** and asymmetric foot shapes. Subsequent corrections or modifications of the style development are possible at all times via the adjustment of ***parameters.*** Each style can be adjusted for a specific customer. This relates to the fit as well as to the styling.

GRAFIS brings order and structure to the upper construction and still allows a lot of freedom and creativity:

On the one hand, GRAFIS offers a large selection of tools and pre-constructed styles, on the other hand, practically all individualisations and the implementation of own ideas are possible. The construction via 3 interactive basic blocks for styles with e.g. open and closed lacing has special advantages. Within these basic blocks, an incredible number of variations can be set and used immediately. With a module function, recurring (also complex) construction steps (e.g. the complete lining construction, complex embellishments or a complex tongue construction) can be saved with a few clicks in a very time-saving way and used again and again in other styles.

One of the big advantages is the possibility to save the experience and also the construction knowledge in digital form with Grafis. This way we can also make it available to the next generation.

Kotzbeck´s Shoes´n´feet

Grafis is a reliable construction programme which is suitable for large-scale industrial production as well as for individual custom-made products. Due to the hereditary structure, complex styles can be altered quickly and easily or adapted to other shapes. Grading is also uncomplicated and easy to understand.

Very flexible interactive basic blocks, such as the shoe base or the orthopaedic style, relieve you of a lot of development work. The available modular basic blocks simplify the style development considerably. The option to create individual modules offers endless possibilities.

The purchase and upgrade prices are very attractive and the extensive support is a great help.

Leguano GmbH
Dipl.-Ing. Anna Onegow (research and development)

GRAFIS® automatically creates ***interdependencies*** between your pattern pieces. A modification of the development part automatically leads to adjustment of the dependent pattern pieces. Therefore, no undesirable differences in seam lengths occur. The interdependence also offers you an effective and fast creation of style variations.

For data exchange with a number of other CAD systems, the ***import and export interfaces*** integrated in GRAFIS® are at your disposal, ensuring that you can work with production sites or freelancers without any problems and generate DXF files for cutting systems.

Your advantages

- *Interactive constructions for fit optimisation and style modification*
- *Divergent adjustment for orthopaedic shoes*
- *Automatic grading*
- *Parameters ensure maximum flexibility*
- *Interdependencies of pattern pieces simplify the modification of styles*
- *Integrated import and export interfaces*

More customer testimonials

"I should have done this much earlier."

I've been saying that since the day I started using GRAFIS. I had already tried several fashion cad programs and I was a little afraid to invest in yet another software package.

But it has been worth every euro. GRAFIS not only saves me a lot of time, but also the annoyance of doing the same work over and over again when working manually. GRAFIS is very easy to learn and you can start working with it from day one. With the interactivity and the reusable modules, you create a pattern in no time, in standard sizes or made to measure. I even use it for tailor made items and tweak the base pattern to a perfect fit.

And since I started using 3D as well, I am totally enthusiastic. The seamless integration between GRAFIS and Browzwear makes it possible to go through the entire process from sketch to sample within a day. Speaking of saving time (and money and frustration).

Danielle Steemann
Pattern maker

Grafis is suitable for multi-level users. Huge speed in drawing a pattern. If you wish, you can use a basic construction based on the customer's dimensions, or master the construction for even the most demanding creation from start to finish. A wide range of basic constructions ready from gentlemen's collars to bras. Making a pattern for many different people is easy. Ability to save countless forms for later use. We have been using Grafis in the costume department of the Helsinki City Theater for more than 20 years.

Helsinki City Theater

What I like best about GRAFIS is that every complex pattern development can be changed again and gain with just a few entries. The time invested once can later be applied to countless other styles. Later, blocks of a development can be saved as modules and loaded into other styles, which is currently my greatest "fun" factor.

What I like about GRAFIS is the logic and the structure of the patterns, the hereditary automatic and the construction based on measurement tables, which make it possible to implement developments for men in the same way as for women. Or an industrial development can subsequently be implemented for a made-to-measure customer, thanks to the measurement charts in the background.

Different grading possibilities can be implemented all together in one pattern. Measurement chart-supported, proportional values, interactive values and/ or modular grading as with bags. Everything can be implemented logically or purely according to visual appearance. DXF export to other systems is simple and straightforward. In short, it is an ingenious system.

Sabine Ladwig
Pattern maker

Images:
background images – Clara Höfs
3D simulations – ***VStitcher®*** by Browzwear

Concept and design – Jutta Höfs
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GRAFIS
CAD Software

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