



pattern design
 3-D fitting control
 material optimisation
 cut optimisation
 bale storing
 feeding, spreading
 autom. cutting
 data conversion

CAD / CAM / PDM

FOR APPAREL

APPLICATIONS

APPAREL.ASSYST

PATTERN DESIGN

PRODUCT DATA MANAGEMENT

apparel.assyst

apparel.assyst is the name of a WINDOWS-based CAD software suite specifically tailored to the needs of the garment industry. The scope of applications ranges from the development of the initial product conception to the cutting room table. Data flow is comprehensively organised to meet global production location requirements; data and information is available via internet access. The visualisation of ideas, product data management, 2-D cut design with extensive automatic features, realtime 3-D fit checking, marker optimisation - also available worldwide on the Internet - optimised cutting programs, magazing, transport systems, spreader technology and a broad range of automatic cutters are all contained in the comprehensive range of the assyst/bullmer Group of companies.

pdm.assyst

The software for product data management coordinates and documents the entire development path of a model, from the initial concept to the prototype and on to readiness for production. Irrespective of the stage that new product data is developed, it can be added to the program at point of origin and is available to the team for immediate use. Collection calendars, sketches, parts lists, work records, descriptions, measurement tables and reports in a network plan are made available worldwide on the Internet via our own Remote Client. Collection planning and work schedules become transparent, cost-controlled and always up to date, organised in a user-friendly workflow interface. Problems that arise owing to incorrect information are restricted to a minimum, thus ensuring product quality. Data organisation and management are supported by an Oracle database. Standard interfaces to industry-related merchandise management systems such as INTEX or SAP facilitate system-integrative data processing. The (optional) reporting system links **pdm.assyst** and merchandise management to form an inter-system application with shared research and data evaluation. The software is suitable for small businesses as well as groups. An attractively priced introduction to product data management is available with **cdm.assyst**, a proven, readymade modular solution.

cad.assyst

Software that sets the standard in 2-D design, grading and pattern design with regard to scope of performance and ease of operation. Program navigation using icons and hotkeys constitutes a readily accessible operator interface and enables an intuitive approach. With the support of the **smart.pattern** program even complicated pattern alterations can be implemented with a single mouse click. The basic version of the program provides over 180 standardised, automatic processes (macros). Customized macros can be constructed and collected to ensure consistent pattern development quality and integrity. The (optional) Oracle database ensures optimal data management by applying pattern attributes. Oracle backs up all user data to be found in the system, links the data to each other and provides an extensive reporting system. Compatibility with the AAMA, ASTM and DXF file formats enables the exchange of data with third-party systems from the world of CAD.

mtm.assyst (made.to.measure)

A program designed exclusively for the apparel industry, **mtm.assyst** automatically modifies standard patterns to meet specific customer requirements. Individual measurements are collected and stored in clearly defined measurement tables, and then applied to the respective pattern pieces. Markers containing **mtm**-modified pieces can be quickly and comfortably created with **automarker.com**.

vidya

The new software module, **vidya**, opens up the way into 3-D realtime simulation via a direct link to the **cad.assyst** 2-D design. **vidya** automatically adopts the two-dimensional model patterns and places them on an Avatar (virtual dummy) whose dimensions conform to a table of measurements. Until now the fit of the garment and the fall of the material used could only be examined when an elaborate first garment was created for a living model. **vidya** now makes it possible to test the prototype in realtime, thus accelerating the development process. The pattern maker is shown both the visual quality of the material and its drape, including the distance from the body (distance mode, stretch mode), with colour differentiation. Seam types and material stiffenings, e.g. by means of inserts, are also taken into account. The mode-maker implements any pattern alterations that are required in 2-D mode and the results are displayed on the Avatar for checking without any time delay. A database supports the various material and processing parameters. With the introduction of **vidya** not only does prototyping take place in a fast-motion process, **vidya** also eliminates preliminary pattern and alteration costs.

APPAREL.ASSYST

CUT ORDER PLANNING

MATERIAL OPTIMISATION

create.marker

The **create.marker** tool makes it possible to generate marker requirements for the automatic, semi-automatic and manual creation of markers.

lay.assyst

A flexible and user-friendly program for creating material and cut-optimised markers. Efficient functions enable materials to be utilised optimally. The use of functions for automatically positioning pieces and the ability to optimise existing markers make it possible to save time and realize significant productivity improvements.

automarker.com

Automatic marker creation as an Internet service. The accumulated power of 33 high performance computers generates markers that optimally exploit materials in a matter of seconds, 365 days a year. **automarker.com** functions as a portal for distributing production data to global production locations. In addition to assyst CAD data, **automarker.com** edits and processes formats such as AAMA and DXF. By outputting a variety of data formats, apart from a company's own cutting systems, it is also possible to control the cutters of other manufacturers. No investment is required in order to use **automarker.com**; charges are applied only to the service that has been utilized.

plot.entry

plot.entry facilitates the central administration and prioritisation of all drawing and cutting orders (e. g. also master patterns) for the entire CAD system. Batch files ensure rapid, convenient output. Various plotter types and categories are supported for marker production.

apparel.assyst is supplemented by the following additional programs:

digi.assyst

Existing master patterns (cardboard, paper) are easily digitized and the contour data and cut information is entered into the **cad.assyst** system. The complete freedom regarding the order and composition of the digitalised information is the crux. This makes it possible to digitize only parts of contours and to apply them to an existing part of a pattern instead of recreating the entire pattern.

cut.assyst

A module for optimising cutting data. When integrated with the **assyst/bullmer** cutters, this application enables the time and quality optimisation of the entire cutting process.

cost.assyst (Cut Order Planning)

Based on an extensive set of model and operation-specific parameters the minimum number of markers in the optimum size combinations is calculated, taking all secondary requirements from cutting orders (sizes, colours, quantities) into account. The system offers a maximum amount of control over material, unit planning and costs for both in-house cutting and third-party ready-made contractors and suppliers. Automatic optimisation allows in some cases double-digit savings in terms of material and labour costs. A precise preliminary calculation results in an initial material requirement reduction. The comprehensive system solution is rounded off by a seamless online integration to **pdm.assyst**, **cad.assyst** and by the control of spreaders, plotters and cutters.

data.packer

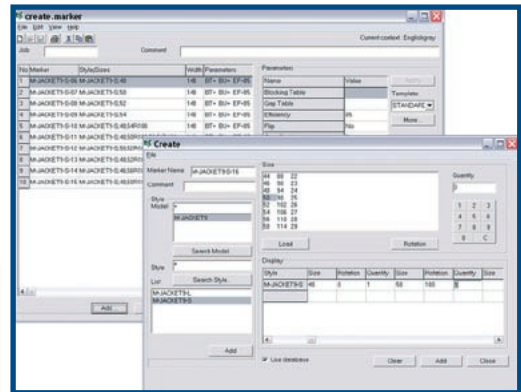
A program for the convenient exchange of CAD/CAM files between **assyst/bullmer** systems.

data.conv

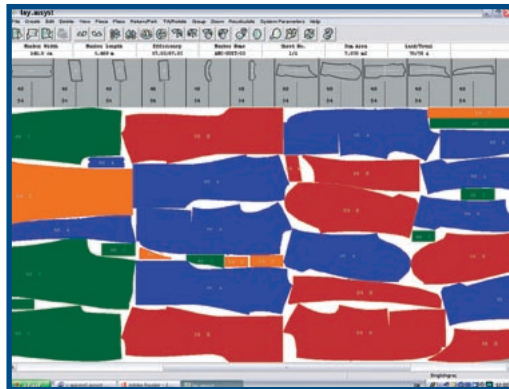
data.conv is a program for converting interfaces from the CAD systems of other providers. Using **data.conv** it is simple to download data from outside sources and then process them in **cad.assyst**.

APPAREL.ASSYST CUT ORDER PLANNING MATERIAL OPTIMISATION

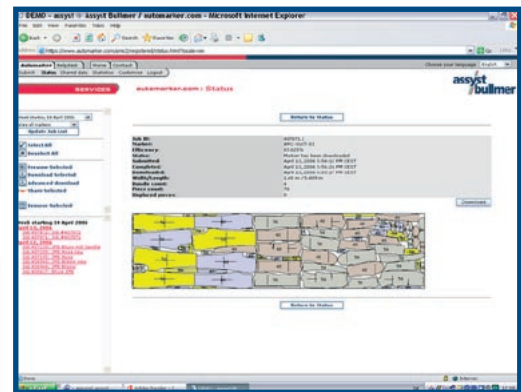
create.marker



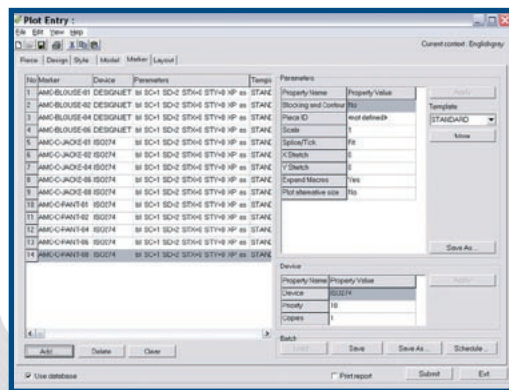
lay.assyst



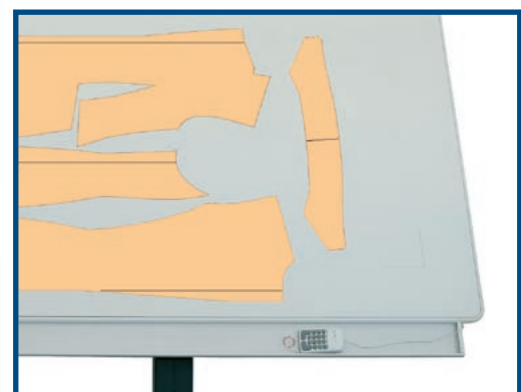
automarker.com



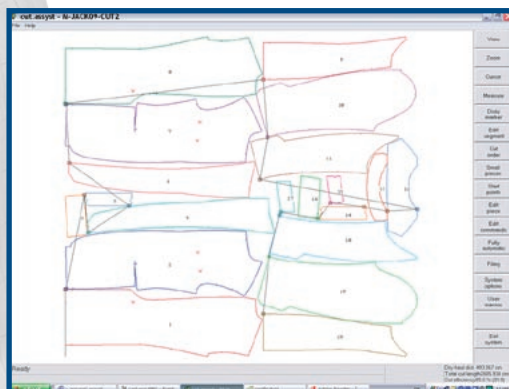
plot.entry



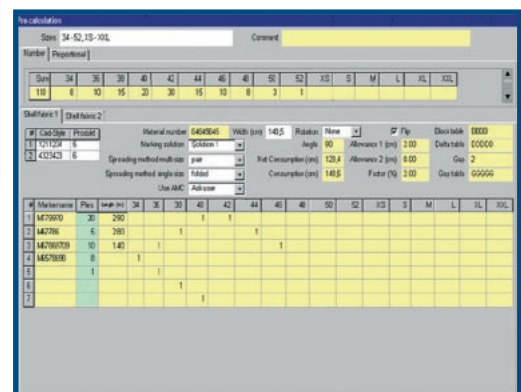
digi.assyst



cut.assyst



cost.assyst



SPREADWARE

SPREADING AND FEEDING

TECHNOLOGY

Compact E 100-400

The **Compact E100** is a modular, configurable basic spreader of compact and extremely low design with bar-controlled cloth roll feed and a rigid unwind pallet. The intentionally simple control system (CANBUCON1), the fast threading, secure cutting off and the excellent spreading actions accessible to a wide variety of materials guarantee user-friendly and economical operation. The following versions permit the machine to be extended for a variety of requirements.

The **Compact E 200** also has the so-called air-threading technology.

The **Compact E 300** is equipped with a swivelling unwinding pallet for spreading in pairs.

The **Compact E 400** contains all the options of models 100 – 300.

Compact E600 with the D and S design versions

The multipurpose, rapid automatic spreader, Compact E600 (120 m/min) operates with a peripheral bale unwinder using a cradle with a cradle extension as a loading and unloading aid. It is designed for cloth rolls weighing up to 100 kg and with a bale diameter of 500 mm. The operator conveniently sets the lateral guide for the cloth rolls. Its precise sensor control system automatically controls the entire cloth guidance, threading in and out (air-threading), edge control and cloth spreading. Control and parameter assignment are performed using CANBUCON3, a state-of-the-art controller with a touch screen. It enables the machine to read-in pre-optimised spreading orders via an interface. The automatic spreader has numerous options such as a zigzag unit, various catchers, and so on; these options make it possible to adapt it to the user's specifications.

The **Compact D 600** was designed for the benefit of simple, affordable application. To achieve this goal, the model does without convenience functions like the air-threading system, the loading aid and the lateral guidance, which can be adjusted by the operator.

The **Compact S 600** in terms of its concept, the Compact S600 corresponds to the Compact E600, but has been cost-optimised with regard to many components and has a lower construction design to enable easier loading. The modern and very smooth-running machine, which performs at spreading speeds of 90m/min and can accept bales of up to 60 kg and with diameters up to 500 mm, provides a competitive cost/benefit ratio.

COMPACT E 1700-1800

This is a series of high tech automatic bar-driven spreaders with a rigid unwinding pallet that provides an almost unlimited range of applications. The machine is capable of all normal types of spreading from firm fabrics to lightweight and stretchable materials.

The **COMPACT E 1800** with its driven, swivelling unwinding pallet (paired spreading) even sets new spreading technology standards.

Both design variants are distinguished by the bullmer air-threading system, positively driven unwinding bar and dancer control for tension-free spreading.

COMPACT E 1300

This is a series of high-tech automatic spreaders offering a virtually unlimited range of applications. The bales run over a roller-driven bar control system and a rigid unwinding pallet. The machine is capable of all the normal types of spreading from firm cloths to lightweight and stretchable materials.



SPREADWARE SPREADING AND FEEDING TECHNOLOGY

Compact E 400



Compact E 600



Compact E 1800



Compact E 1300



SPREADWARE

SPREADING AND FEEDING

TECHNOLOGY

The following feed devices were developed for continuous single-ply cutting...

AWM (automatic unwinding cradle) and

AWV (automatic, bar-driven unwinding device)

Both automatic systems loosen the beginning end of the material, thread the flat material by means of sensor control and automatically bring it to the cutter conveyor belt in the correct position for conveyance. During conveyance sensors monitor the material ensuring evenness and tension-free flow. The end of the cloth roll is automatically identified and the feed process stopped if necessary. The rolls can be exchanged parallel to the cutting process. The automatic material feed makes it possible for the cutter to be operated by one person.

Optionally, a material feed can be extended by means of an additional double-roll unwinding appliance. This would give the option of keeping two different materials available and feeding them directly to the cutter.

The standard version of the **STAE 40/W50** cloth roll magazine has 17 storage spaces to load the integrated rapid roll-changer by way of a paternoster-type operation. The rolls can be stored in random order under process control without causing a delay to their availability. The actual cloth roll feed is program-controlled in conjunction with the spreading order. Interventions to the program sequence can be made at any time via a terminal. The rapid cloth roll exchange (unload spreader, reload) in only 10 seconds considerably reduces idle times when spreading piles. The magazine can be modularly dimensioned according to customer specifications. For the production of small series and for fast model changes the **STAE 40/W50** offers great potential for rationalisation.

Transmodul

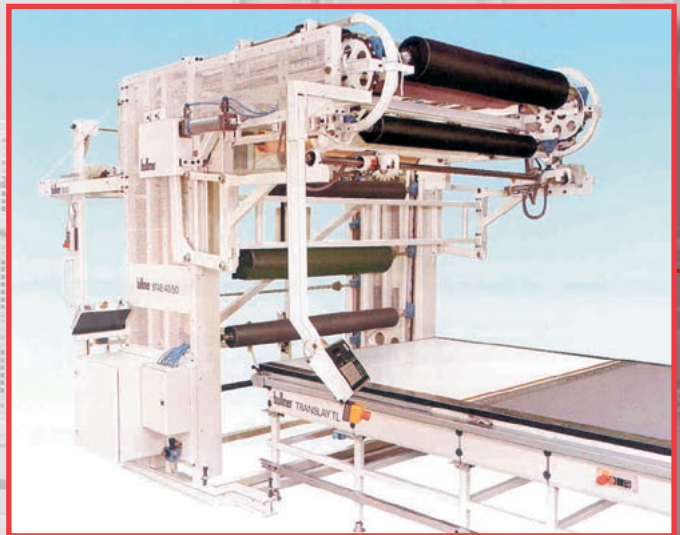
Transmodul is a modularly (length, width) structured pile transport system for the cutting section. It has been developed specifically for all peripheral automatic cutting facilities. Up to 5 pile stacks can be magazined here. The distinguishing features of the system are: no lateral drift, absolute directional stability and uncritical transitions from one facility to another.

SPREADWARE SPREADING AND FEEDING TECHNOLOGY

Feeder AWM 2000



Bale Magazin STAE 40/W50



Transmodul



CUTWARE

AUTOMATED CUTTING OF

LOW, MEDIUM AND HIGH PLIES

premium.cut2

The single and low-pile cutter was developed for the requirements of cutting widely varied materials, in some cases with special demands. Its scalable equipment makes it suitable not just for high throughput rates; it is also excellent for applications in sample and prototype production. The variety and combination of different cutting heads and six tools for insertion (as well as punching tools), it can deal with the requirements for cutting a wide range of different types of fabric and flat materials. It is only necessary to invest in the actual tool required. When new requirements arise another tool can be bought later at a reasonable price. Versions with working widths of 160 cm to 320 cm are available graded in 20 cm stages as standard equipment. The standard length of the cutting window is 2 m; special lengths are available on request (static version up to 12 m). The continuous and process-overlapping flow of materials (feeding, cutting, sorting off) is supported by the integrated conveyor belt of the **premium.cut2** as well as by an optional, automatic material feed attachment. The integrated control software optimises the performance of the cutter while at the same time providing simple menu navigation.

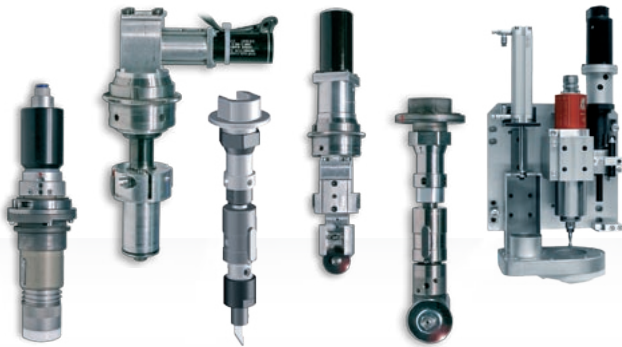
turbo.cut S 2501 CV

The **turbo.cut** works with a chisel blade technology and was designed for the medium pile range. With regard to the beam and the cutting head, the development was designed for maximum speeds (skeleton construction and high frequency blade guide). This permits linear cutting speeds of up to 90 m/min, making the turbo.cut the fastest in its class. The compact construction with its conveyor concept keeps the entire technology including the pump and electronics underneath the table, thus saving space and reducing noise. The cutter has an integrated cleaning aid for the bristles. With its versatility and universal applicability, the cutter has proven its worth, particularly in the clothing industry. Special cutting widths and table lengths are available on request. For mini-series and for doubling collections the **turbo.cut** is also available as a compact, static configuration (XS 501 ST) with an integrated cloth-unwinding device.

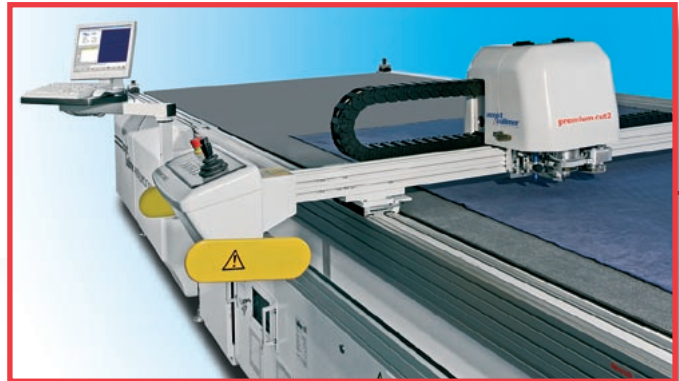
pro.cut L 5001 and pro.cut XL 7501

This high-ply cutter is designed for cutting heights of 5 or 7.5 cm at high speeds. It was therefore designed to be particularly robust and heavy duty. Nevertheless, it offers low maintenance and cost-effective operation. Both versions are built compactly with a static table and are available as conveyor systems. In the case of the LV version the cutter can be supplied with bristle conveyor belts up to 12 m in length. Special cutting widths and table lengths are available on request. The cutter possesses an integrated cleaning aid for the bristles. The **pro.cut** has been able to prove its consistent high performance in many production facilities for cutting denim material as well as for high-ply cutting of shirts and blouses.

CUTWARE AUTOMATED CUTTING OF LOW, MEDIUM AND HIGH PLIES



POZ EOZ TZ ARM TRM F
Modular Tool System (MTS)



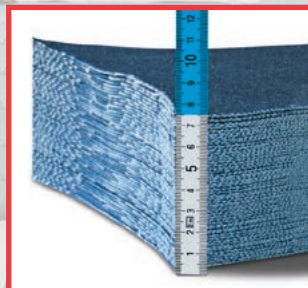
premium.cut2, single ply cutter



turbo.cut S 2501 CV, medium ply cutter



pro.cut L 5001 u. XL 7501 CV, high ply cutter



CAD / CAM

APPAREL

APPLICATIONS

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