assyst bullmer

INTELLIGENT SOLUTIONS

tech.assyst

SOFTWARE & CUTWARE

Data import
Design
Material optimization
Cut optimization
Data export
Spreading technology
Cutting technology

CAD/CAM

TECHNICAL

TEXTILES

TECH.ASSYST

FORM, DATA AND PLAN CREATION

ADMINISTRATION

tech.assyst
is a WINDOWS®-based CAD-CAM software suite compiled predominantly for employment within the technical textiles industries where the demand for automatic cutters requires a dedicated solution. The application scope ranges from Business-to-Business WEB Services to cad.assyst-supported 2-D Pattern Construction, to the generation and refinement of production processing forms developed from 3-D models, to marker cut optimization interfaced to planning systems, diverse plotting and cutting systems (CAM), all combined in an integrated data administration system.

The **tech.assyst** product portfolio consists of the following programs:

digi.assyst - Quick pattern entry with the digitizing process.

cad.assyst - The ultimate software for 2-D pattern construction and modification and the generation and administration of markers, style and model groups. The optional module smart.pattern uses macros for the automatic construction and modification of pattern pieces. The automation of common, repetitive construction practices via **smart.pattern** ensure that uniform, high quality results are achieved at an enhanced level of efficiency. The module is compatible with the standard DXF, AAMA and ASTM data formats and supports the exchange of data with foreign systems.

Oracle data management – a high performance tool used for data organization and report generation.

create.marker – Marker calculation tool; efficient generation from predefined requirements to initiate automatic, semi-automatic or manual marker production.

lay.assyst - A flexible and user-friendly program for the construction of efficient, optimized markers or nests. The productivity-oriented functions facilitate the best utilization of the fabric. Significant throughput timesavings and increased productivity can be realized from the employment of functions such as automatic piece placement as well as the further optimization of existing markers.

automarker.com Automatic marker generation using the internet. The collective operation of 33 high performance computers produce markers of the highest level of fabric utilization in seconds. automarker.com also serves as a portal for the distribution of production data to manufacturing facilities throughout the world.

plot.entry – Central management and task prioritization of all cut and plot jobs for the entire CAD system.

cut.assyst - The module for cut optimization; with an assyst/bullmer cutter the module facilitates the utilization of integrated optimization of the cutting process.

Additional options available with tech.assyst

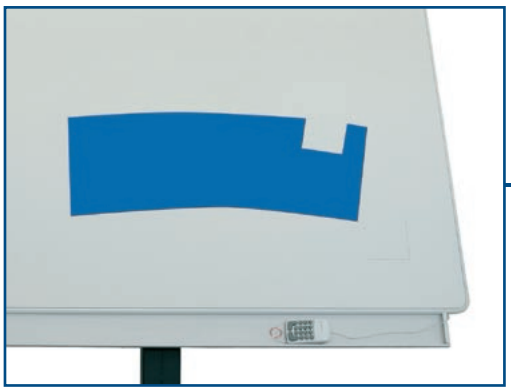
plan.assyst - The tool to create comprehensive task, throughput and fabric allocation calculations and to generate product layout schematics.
data.packer – The program designed to facilitate the exchange of CAD/CAM data between assyst systems.
data.conv - Software that enables the exchange of CAD/CAM data in native format with other CAD systems.

TECH.ASSYST

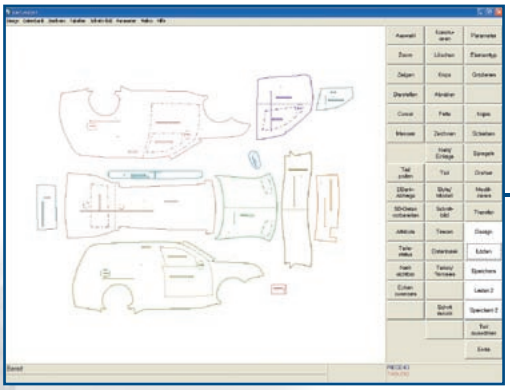
FORM, DATA AND PLAN CREATION

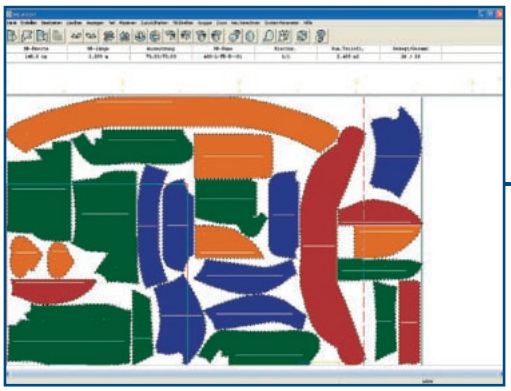
CUTTING DATA AND NESTING

digi.assyst



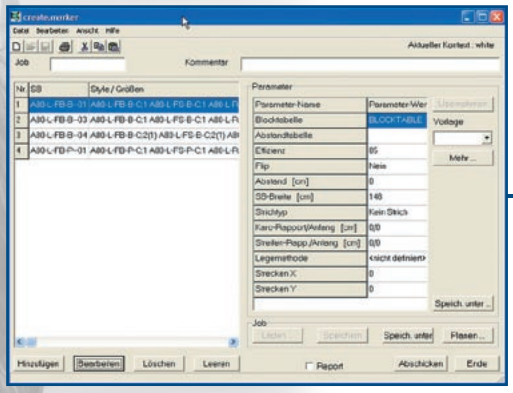
cad.assyst



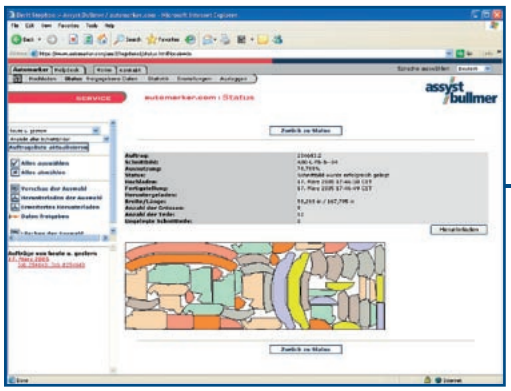


lay.assyst

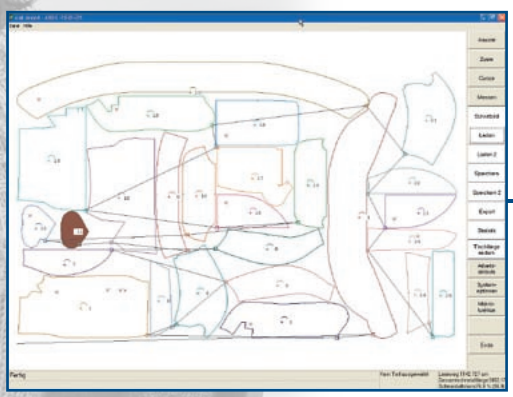
create.marker

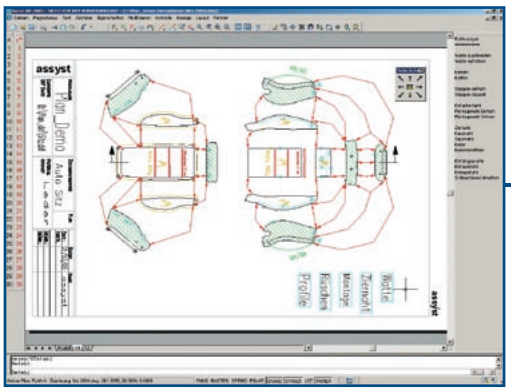


automarker.com



cut.assyst





plan.assyst

SPREADWARE

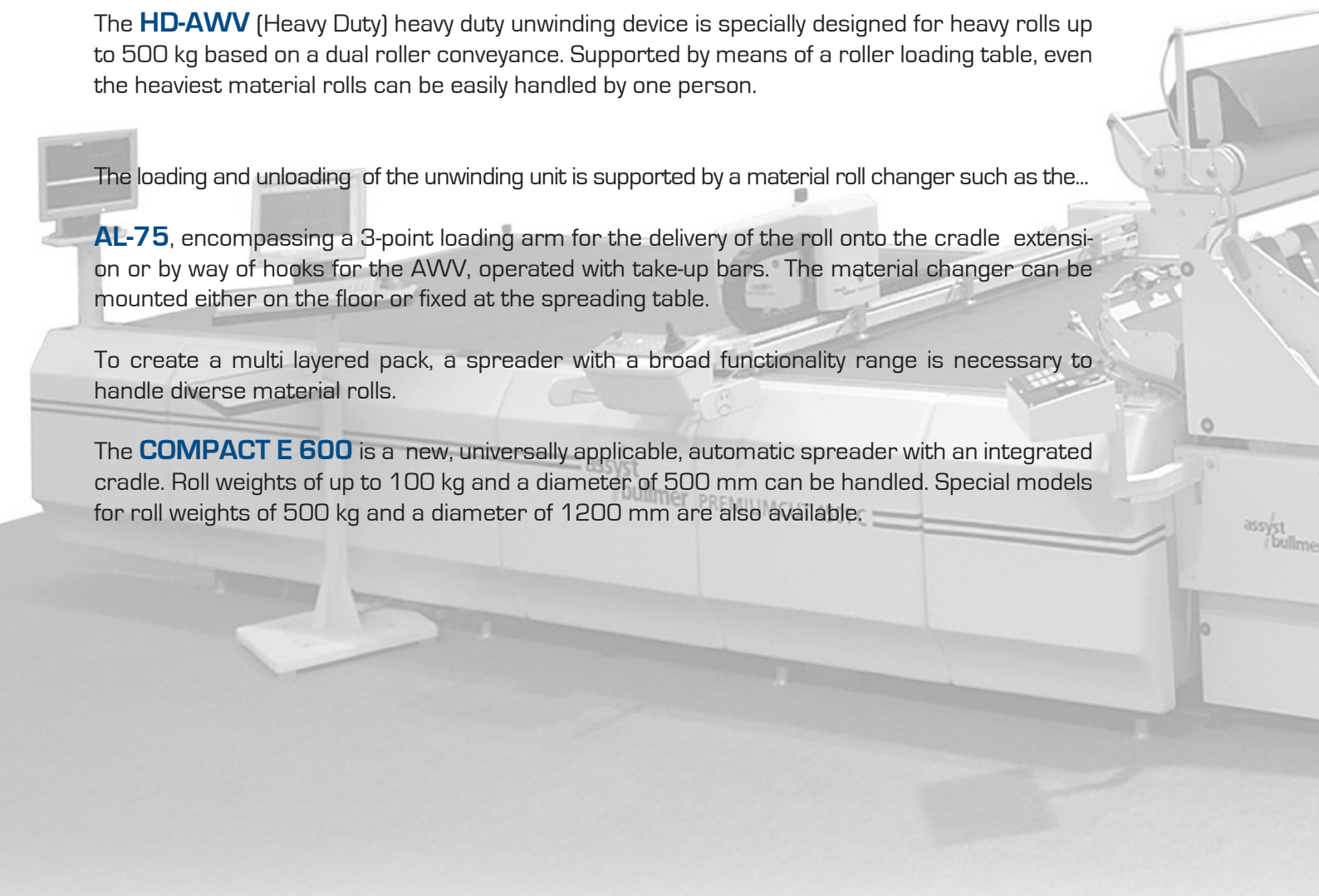
MATERIAL SPREADER AND FEEDER (LOADING)

The spreading and loading system is significantly involved in the cutting process of technical textiles. It exerts a tremendous influence on production efficiency, primarily regarding single ply cutting. The productivity and the cutter capacity depends very much on a fast loading and unloading system particularly with heavy materials. Only an optimised material feeder enables an optimal process flow. The following machines from the assyst/bullmer product range are used mainly in processing of technical textiles:

For the continuous single ply cutting...

AWM (automated cradle) and the
AWV (automatic unwinding device by means of a bar) was designed.
Both automated devices release and feed, under sensor control, the beginning of the material onto the cutter conveyor belt at the start position of the cutter. Sensors monitor the material feed and ensure it is tensionless and aligned.
The material feed stops automatically when the end of the material is detected. The roll change can be performed simultaneously during the cutting process. The automatic material feed enables operation of the cutter with just 1 operator.
Optionally, the material feeder incorporates a dual roller unwinding device; this allows the operator to maintain a selection of two variable materials for direct feeding to the cutter.

The **HD-AWV** (Heavy Duty) heavy duty unwinding device is specially designed for heavy rolls up to 500 kg based on a dual roller conveyance. Supported by means of a roller loading table, even the heaviest material rolls can be easily handled by one person.



The loading and unloading of the unwinding unit is supported by a material roll changer such as the...

AL-75, encompassing a 3-point loading arm for the delivery of the roll onto the cradle extension or by way of hooks for the AWV, operated with take-up bars. The material changer can be mounted either on the floor or fixed at the spreading table.

To create a multi layered pack, a spreader with a broad functionality range is necessary to handle diverse material rolls.

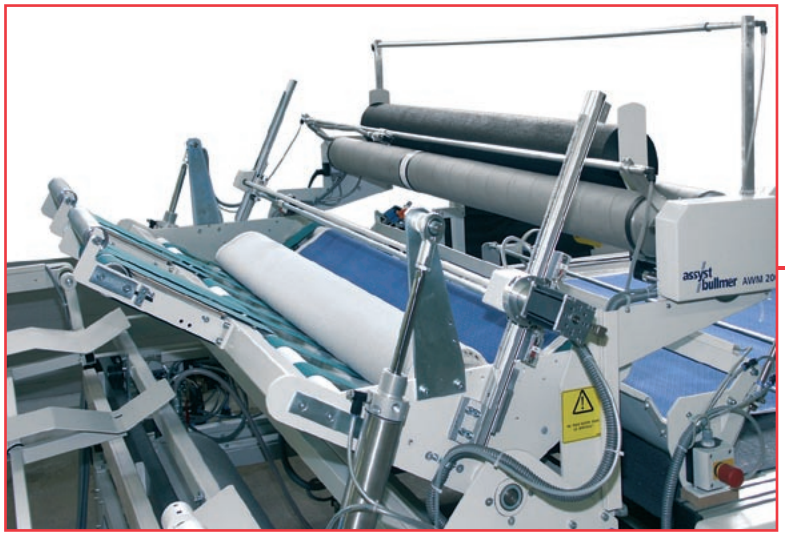
The **COMPACT E 600** is a new, universally applicable, automatic spreader with an integrated cradle. Roll weights of up to 100 kg and a diameter of 500 mm can be handled. Special models for roll weights of 500 kg and a diameter of 1200 mm are also available.

SPREADWARE

MATERIAL SPREADER AND FEEDER (LOADING)

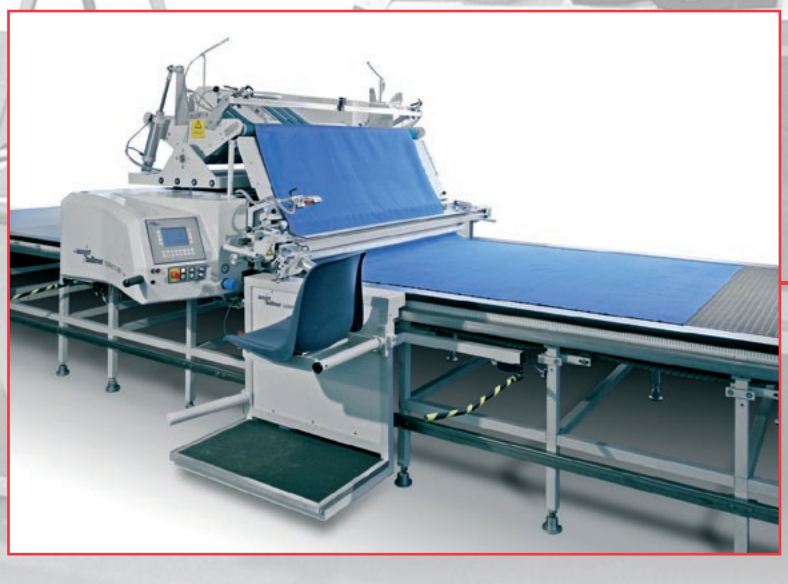
Loading, AWM with AL-75

Unwinding device
AWV-A 200 with arm-loader



Automatic cradle AWM with dual roller unwinding device

Heavy-Duty unwinding device (HD-AWV)



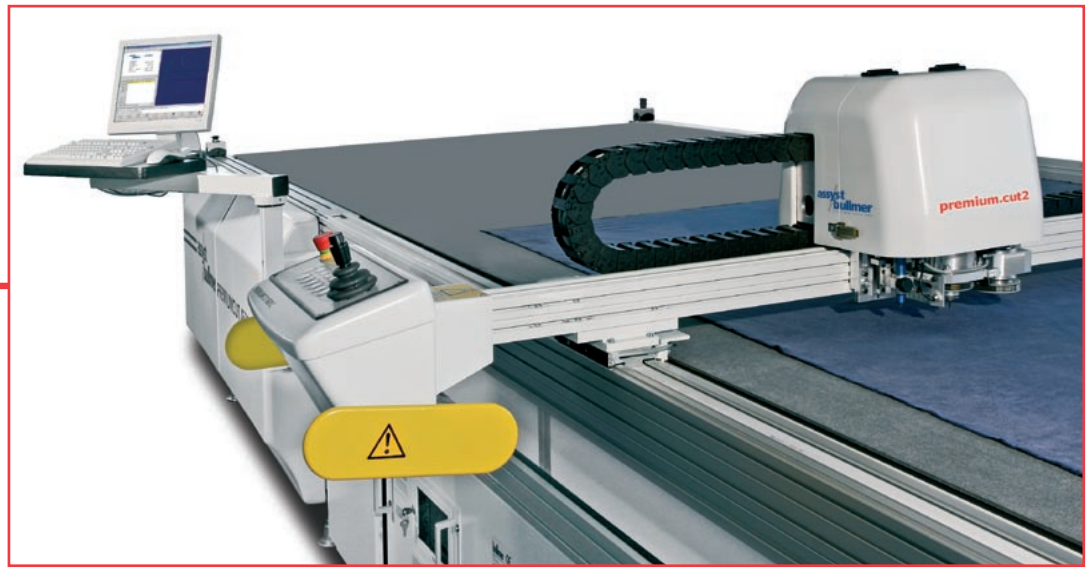
COMPACT E 600, universally applicable, automatic spreader

CUTWARE

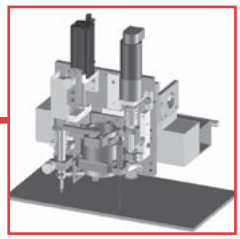
PREMIUMCUT II

MODULAR TOOL SYSTEM

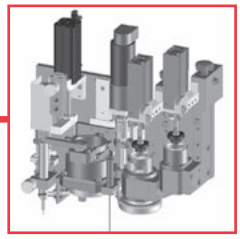
If you cut textiles, flexible materials or composites to form part of your product you need guaranteed accuracy, optimized material usage and the ability to cut on demand. Your material might be heavy or wide, shapes to be cut might be awkward or large and the traditional methods of manual cutting or press knife cutting force compromises between material use and speed. The **PREMIUMCUT II** cuts your components straight from the roll in whatever quantity you require when you cut. The Premiumcut II is a high performance cutter that includes all the benefits for which assyst/bullmer is well known; excellent engineering and reliability coupled with the lowest possible running costs. Models with a working width from 1600 mm up to 3200 mm in 200 mm steps are available as standard. Standard length of the cutting window is 2000 mm on the conveyorised Premiumcut, special lengths on request (Static bed cutting up to 12000 mm also available). The continuous process of material flow (feeding, loading, cutting, sorting) is supported by the integrated conveyor belt of the PREMIUMCUT II as well as by an optional automatic material feeding device. The control software is simple to operate and optimizes the capability of the cutter.



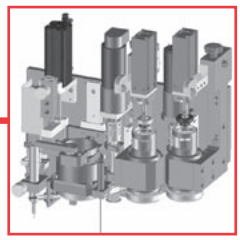
Tools / Materials (Sector index)	
Spacer fabrics	(S)
Aramid fibres	(B,S)
Floor covering	(S)
Rubber blankets	(S)
Gasket materials	(A)
Felt	(T)
Glass fibre	(A)
Rubber, Neoprene	(B)
Cardboard,Alucarton	(A,B)
Carbon fibre (dry)	(A)
Cork	(A)
Leather	(A,B,L)
MDF	(S)
Nylon-, PES fabrics	(S)
Acrylic glass	(S)
Press board	(A,P)
PU hardfoam	(A)
PVC laminated	(A)
PVC, PES, PC, PP	(A,S)
Soft foam	(S)
Plywood	(A)
Fabrics	(P,B)
Carpeting	(A)
Composites	(A)
Vinyl	(A)
Nonwovens	(A,P,B)
Soft PVC	(A,T)



The **standard equipment** of the PREMIUMCUT II includes a base module cutting head which independently supports the most important inserts such as pneumatic high stroke tool, electric high vibration tool and electric rotary tool. The exchange can be executed very easily by hand without using any auxiliary tools. A Pen and Laserpointer are part of the base module-configuration. Depending on the application there are 7 additional module extensions available, i.e.:



Base module with extension to configuration type D
The configuration D is the base module plus 2 additional toolholders suitable for the selective insert of
a) drag knife insert
b) wheel knife insert and
c) a notch or hole punch insert.

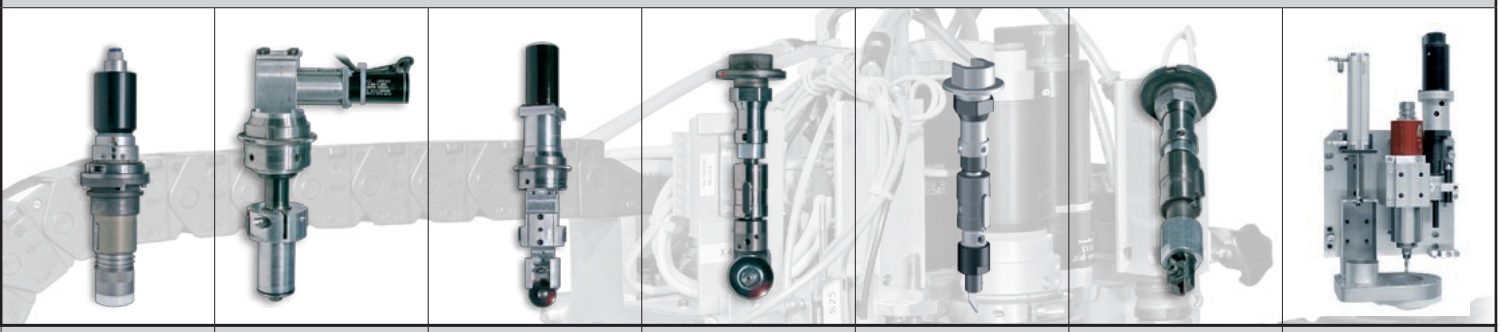


Base module with extension to configuration type F
The configuration F is the base module suitable for two additional knife inserts or one knife plus a notch or drill tool insert.

More information about the Modular Tool System on request.

CUTWARE TOOLS OF PREMIUMCUT II

Modular Tool System



High stroke tool (pneumatic)	High vibration tool (electric)	Rotary blade (electric)	Wheel knife insert	Drag knife insert	Notch-/Punch-insert (turning, rotating)	Milling spindle (electric)
●	●	○		○		
○	●	●				
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Sector index: A=Aeronautical (Aviation) and Aerospace/Car/Ship building; B=Apparel/Home textiles; P=Upholstery; L= Leather/Leather goods; T=Technical textiles; S=others (miscellaneous). ● = Recommended; ○ = Recommended after cutting test

tech.assyst

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