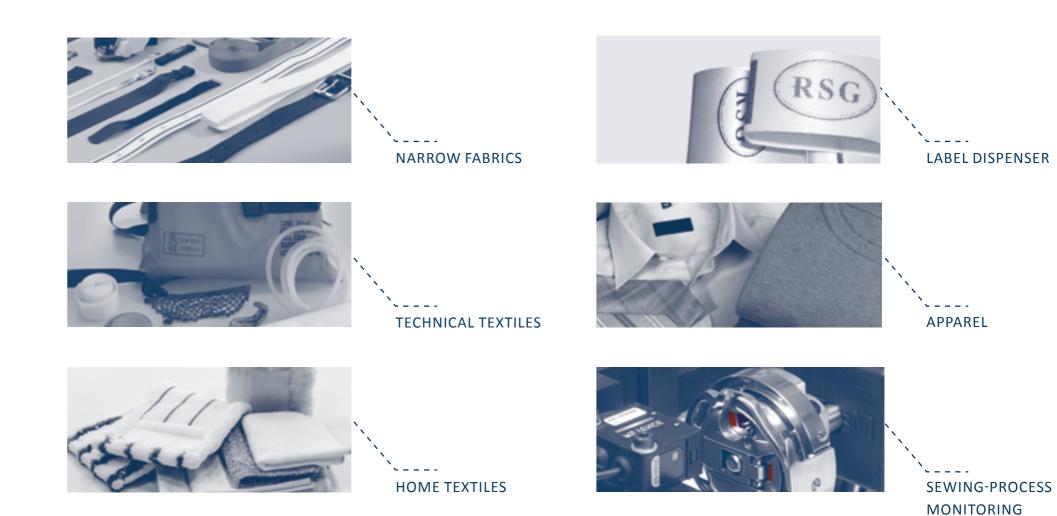


FULLY AUTOMATED PRODUCTION LINES FOR NARROW FABRICS
SEMI AUTOMATED WORK STATIONS FOR TEXTILES
PATENTED SEWING PROCESS MONITORING

... we make things better ...

OPEN YOUR MIND FOR PROCESS AUTOMATION





RSG owner and CEO Dr. Andreas Ecker and his management team.

From left: Markus Weingärtner (Vice Technical Director), Maik Eisenhardt (Director of Sales and Marketing), Dr. Andreas Ecker (CEO), Martin Brenner (Technical Director)

PROFIT FROM OUR UNIQUE CONCEPT

WHAT CAN YOU EXPECT FROM RSG?

- 1. ANALYZING OF EXISTING PRODUCTION PROCESSES
- 2. POSSIBLE PROCESS IMPROVEMENT SOLUTIONS
 - automation of the production process as far as possible
 - tailor made machine concepts
 - universal retrofitting possibilities

WHAT ARE YOUR BENEFITS?

- marked improvement in production capacity
- significant savings in labor and production costs
- avoidance of all process errors
- visible and constant product quality improvement



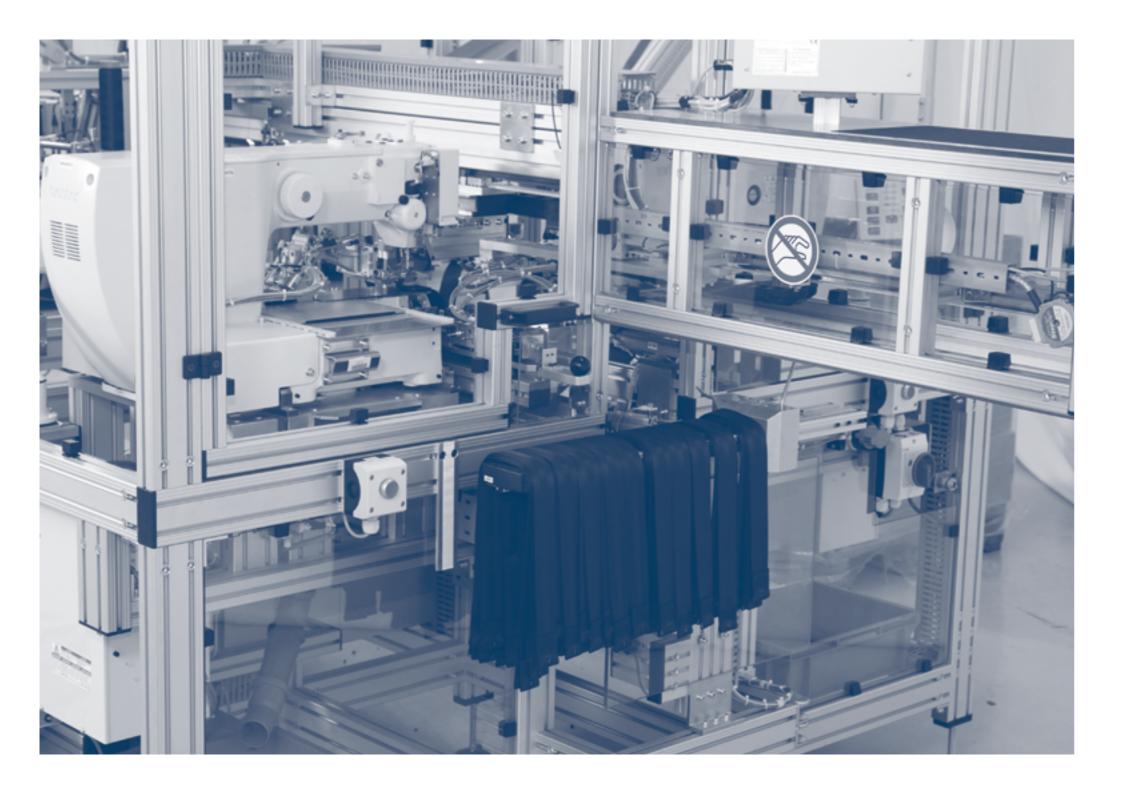
OUR HISTORY

- **1983** The company *Nähsysteme Rombold GmbH* was founded by Peter Rombold with main focus on label dispensers for apparel.
- **1992** Development of an own control system, the SAT-Controller for process automation.
- **1993** Delivery of the first floor wiper automaton.
- **1996** New company focus: Industrial automation of manufacturing processes in textile plants. Market launch in home and technical textiles.
- **2000** Sale of the 200th SAT-Controller.
- **2004** Launch and patent of seat belt production line.
- **2005** Company transfer Peter Rombold to Dr. Andreas Ecker. Company change to RSG Rombold System GmbH & Co. KG.
- 2006 New patents:
 - Thread-Hot-Cutter
 - Color-Thread-Monitoring System
 - First launch of POKA-YOKE technology (= fully automated elimination of all error types in production processes).

- **2007** First completely POKA-YOKE supported production line safety belt production (up to 70% labor cost savings possible compared to conventional production).
- **2009** New SAT-Flex Controller with CAN-BUS technology.
- **2010** New patents:
 - Fully automated bobbin-exchanger
 - Thread Puller
- **2011** Relocation to Bietigheim-Bissingen with new company name:

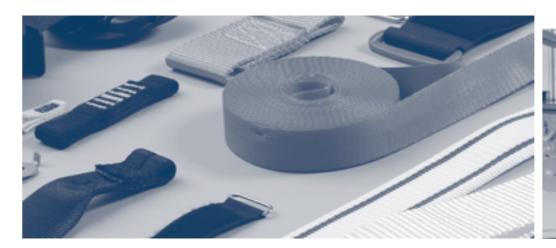
RSG Automation Technics GmbH & Co. KG

- **2013** New machine generation "Narrow-Matic" for fully automated sling or lashing processing.
- **2015** Currently 60% of all newly installed car safety belt production lines produced in Europe are running on RSG machines and technology.

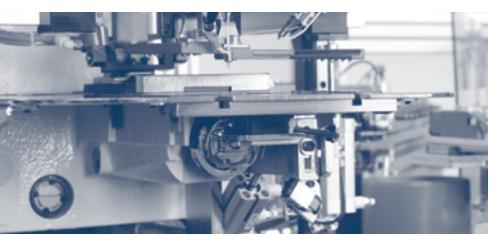


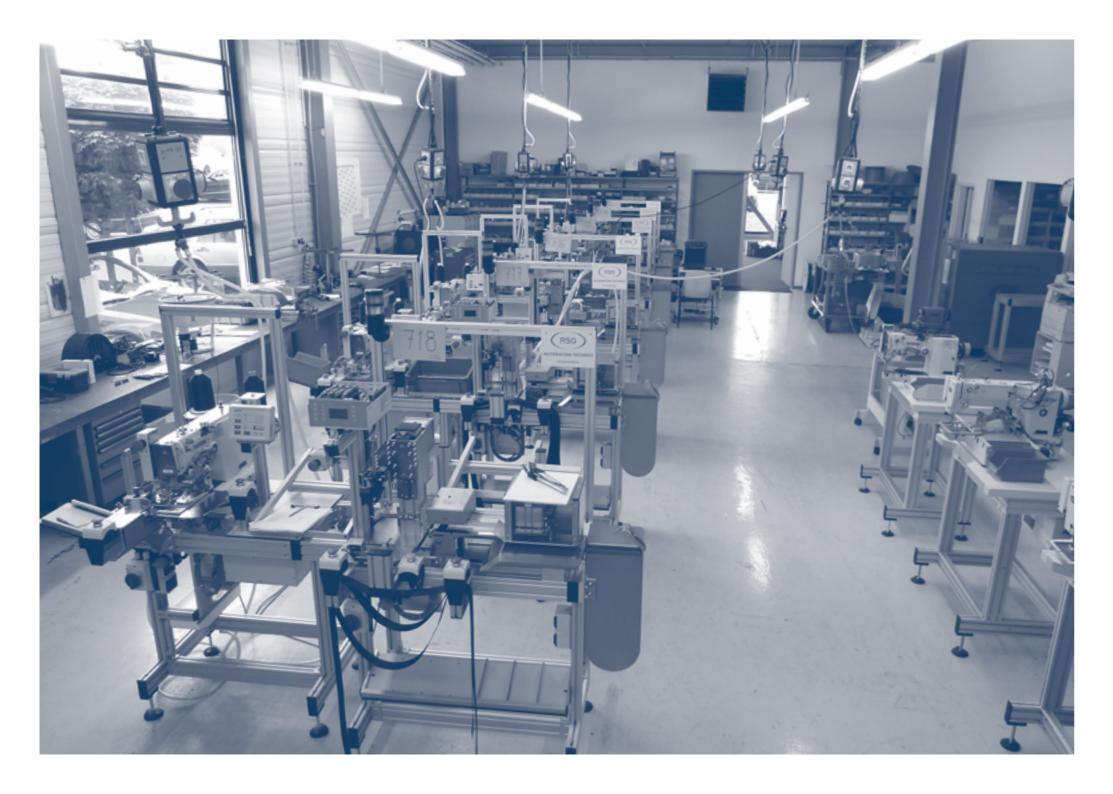
OUR CORE COMPETENCES. INNOVATIVE & PATENTED.

Fully-automated production-lines for the processing of Narrow-Fabrics:



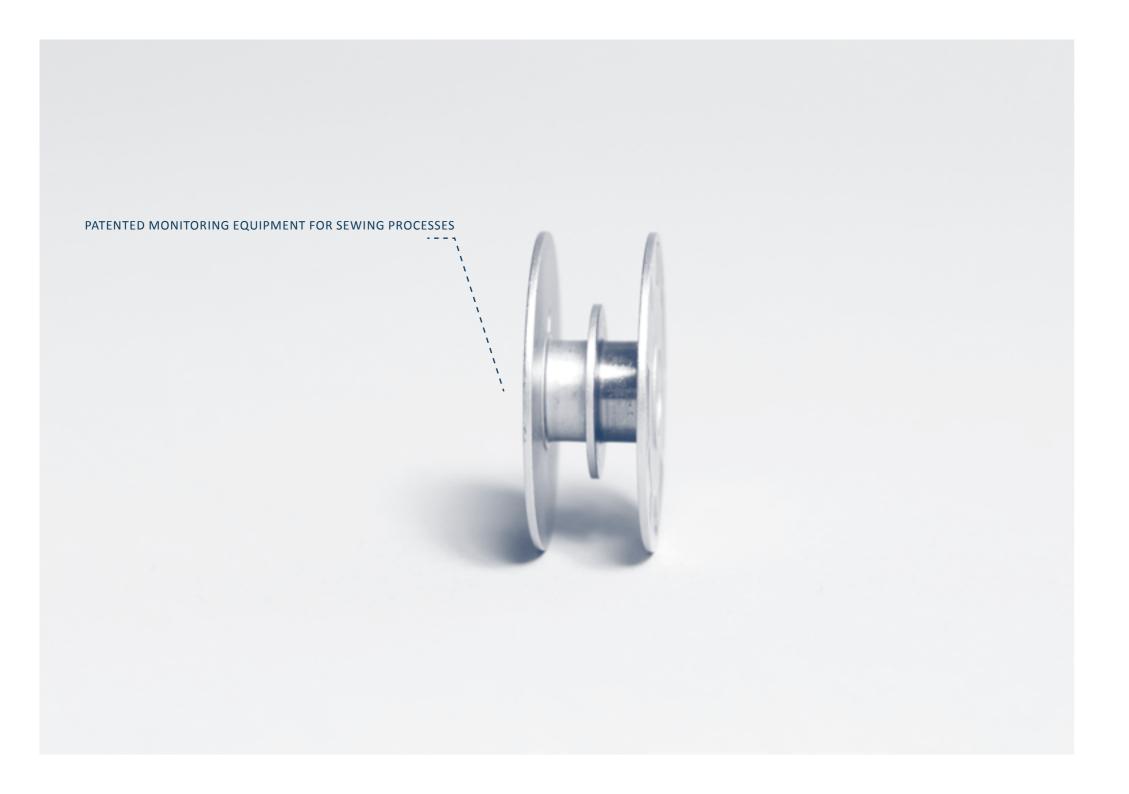
Unique accessories and monitoring equipment for sewing-machines:





AT A GLANCE

- privately held company
- over 30 years of market experience
- competent R&D department
- modular equipment
- tailor-made machine concepts according to customer needs
- design engineering with modern 3-D CAD software systems
- proprietary control and monitoring system "SAT" or alternatively Siemens S7
- individual software solutions with object-oriented programming
- »Made in Germany« manufacturing facility near Stuttgart
- high-end, world-wide available supply parts
- increased machine operator safety by extensive security analysis
- comprehensive and easy to understand machine documentation
- equipment design according CE standards



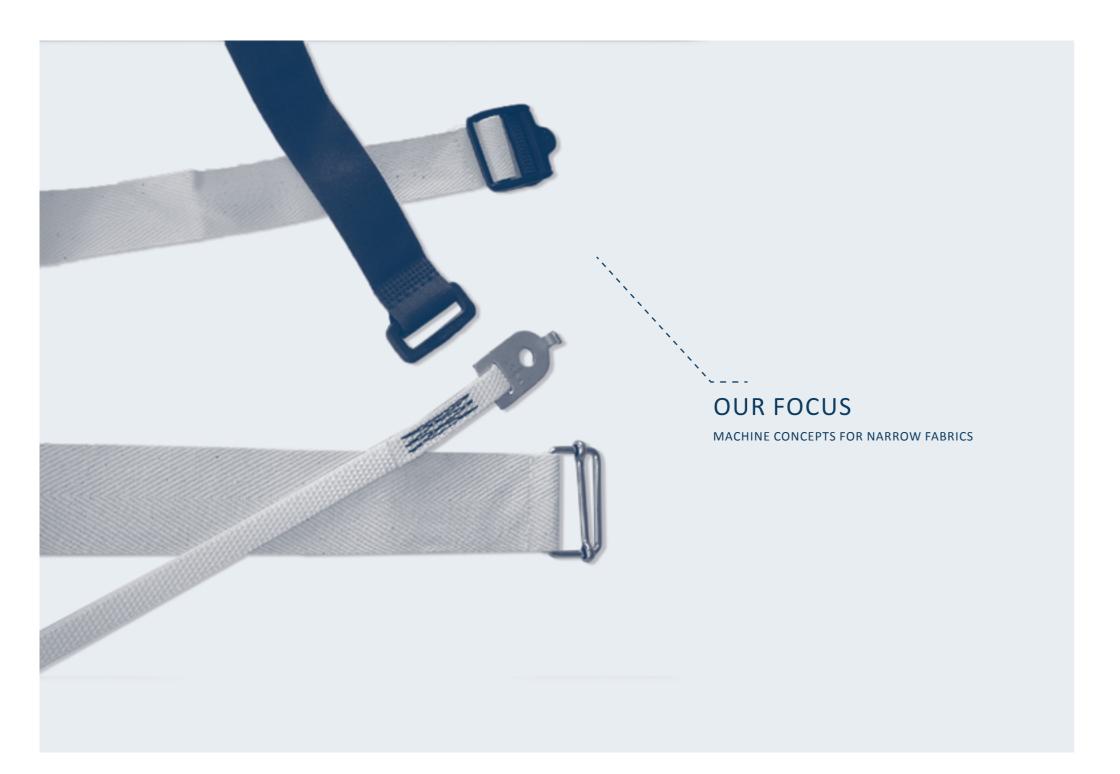
OUR FACILITY CONCEPTS

RSG IS A COMPETENT PARTNER FOR FULLY AND SEMI-AUTO-MATED PRODUCTION LINES AND WORK STATIONS FOR THE FOLLOWING MARKET SEGMENTS:

- narrow fabrics
- technical textiles
- automotive textiles
- home textiles
- apparel
- dispensers for labels & hook & loop
- patented monitoring equipment for sewing processes







NARROW FABRIC MACHINE CONCEPTS

RSG "NARROW-MATIC": MULTIFUNCTIONAL MANUFACTURING LINES FOR FULLY OR SEMI-AUTOMATED ASSEMBLY OF ALL NARROW FABRICS, SUCH AS:

- safety and security belts
- airbag straps
- lashings and tension straps / heavy duty belts
- endless flat slings / flat webbing slings / hoisting belts / lifting slings / loops

OUR LINES COMBINE DIFFERENT PRODUCTION STEPS AND THUS OFFER DRASTIC TIME SAVINGS AND PRODUCTION INCREASES

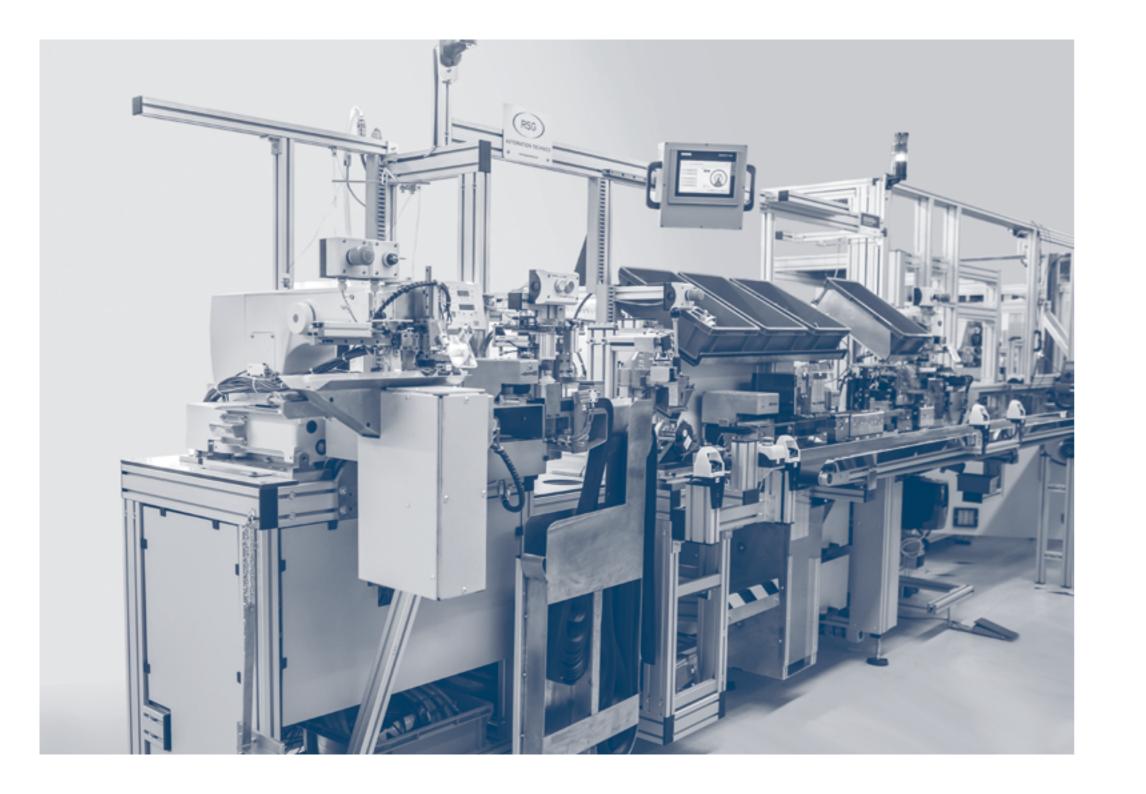
ALL PRODUCTION STEPS CAN BE DONE ENTIRELY AUTOMATIC

CHOOSE YOUR OPTIONS:

- automated unrolling, cutting, dispensing, folding, ultrasonic melting/welding, sewing, rolling, and batching of material
- automated feeding and processing of hooks, ratchets, and buckles in different sizes and variations
- marked errors in webbings can be recognized and cut out automatically
- completed parts can be packed automatically
- flexible machine concepts useable for all kinds of webbings, straps, belts of different materials, and all buckles, hooks, and ratchets available on the market





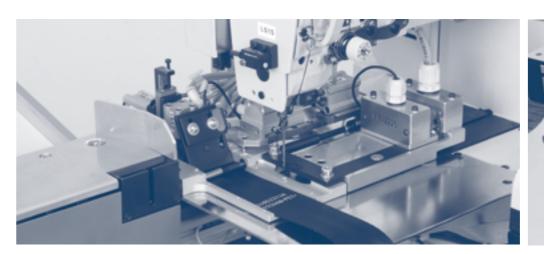


OUR FLAGSHIP — SEAT BELT MANUFACTURING CONCEPTS

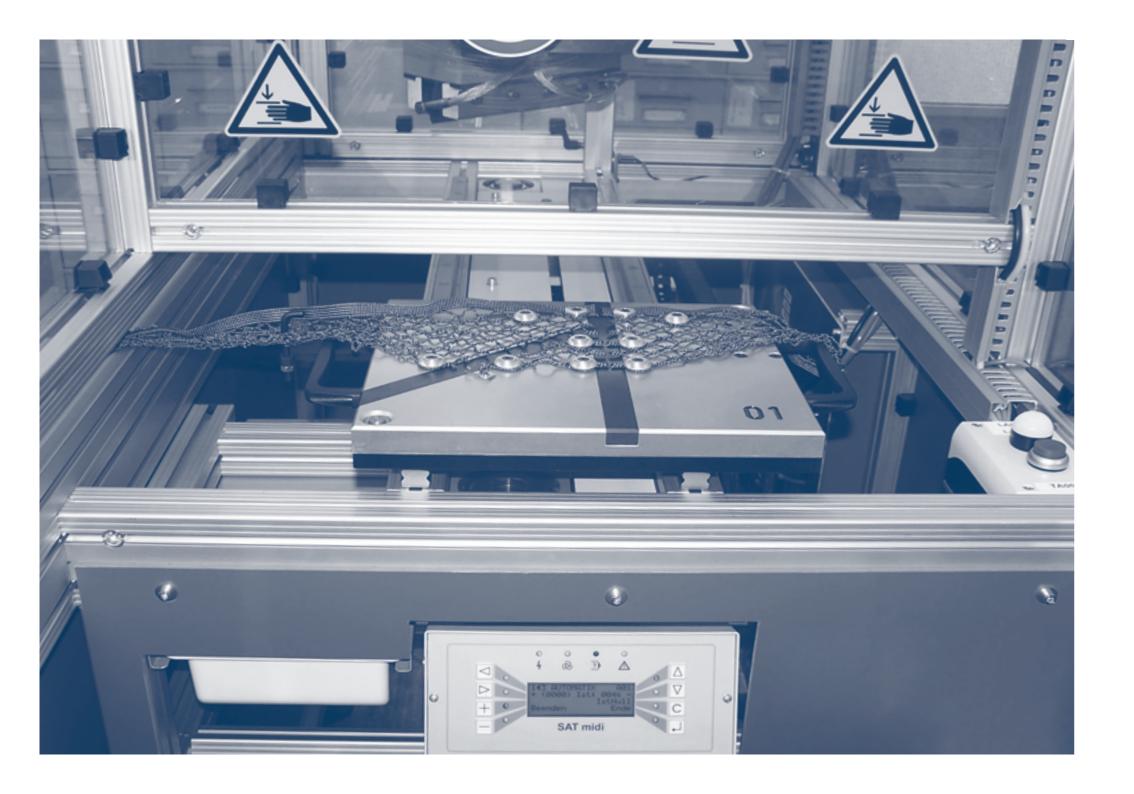
Our unique concepts offer unimagined possibilities for the automated manufacturing of seat and security belts for cars, trucks, busses or airplanes with POKA-YOKE safety measures in all variations.

These components can be integrated by modules into our patented assembly line:

• pin feeder, retractor unit, end bracket fitting, special folded webbing loops (silencer, butterfly), long and cross folder, rivet attachment, cliché printer, laser, barcode reader, etc.





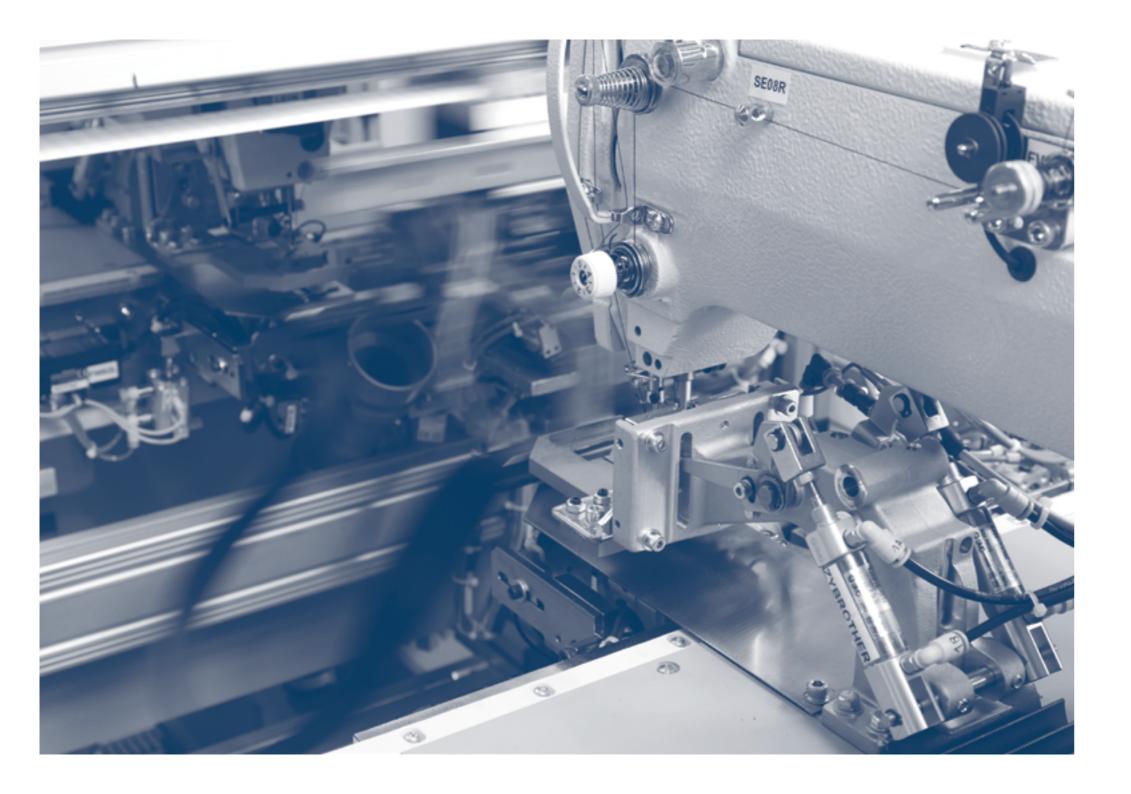


MACHINE CONCEPTS FOR TECHNICAL TEXTILES

RSG OFFERS SOLUTIONS FOR FULLY AND SEMI-AUTOMATED PRODUCTION OF:

- medical textiles (e.g. compression straps)
- filter materials
- mats and rugs of all kinds
- nets
- airbags





AUTOMOTIVE - UNIQUE RSG AIRBAG STRAP LINE

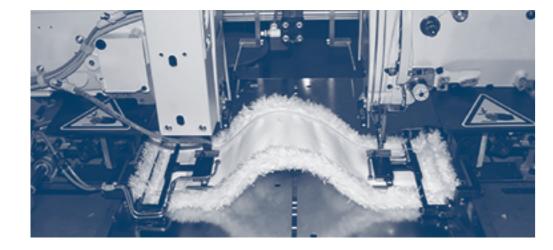
- The innovation: Fully automated process with a cycle time of **approx. 2 x 6 seconds** (with tandem line; depending on sewing pattern) for unrolling, correct length cutting, folding, sewing, and stacking!
- Optionally available: Automatic insertion of metal brackets!



MACHINE CONCEPTS FOR HOME TEXTILES

RSG OFFERS SOLUTIONS FOR FULLY AND SEMI-AUTOMATED PRODUCTION OF:

- cleaning wipes and floor mops
- curtains
- tablecloths / comforters
- upholstery / bed lines
- fringes

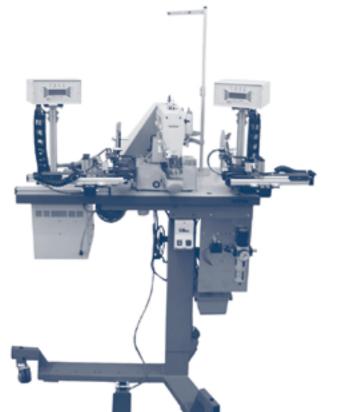


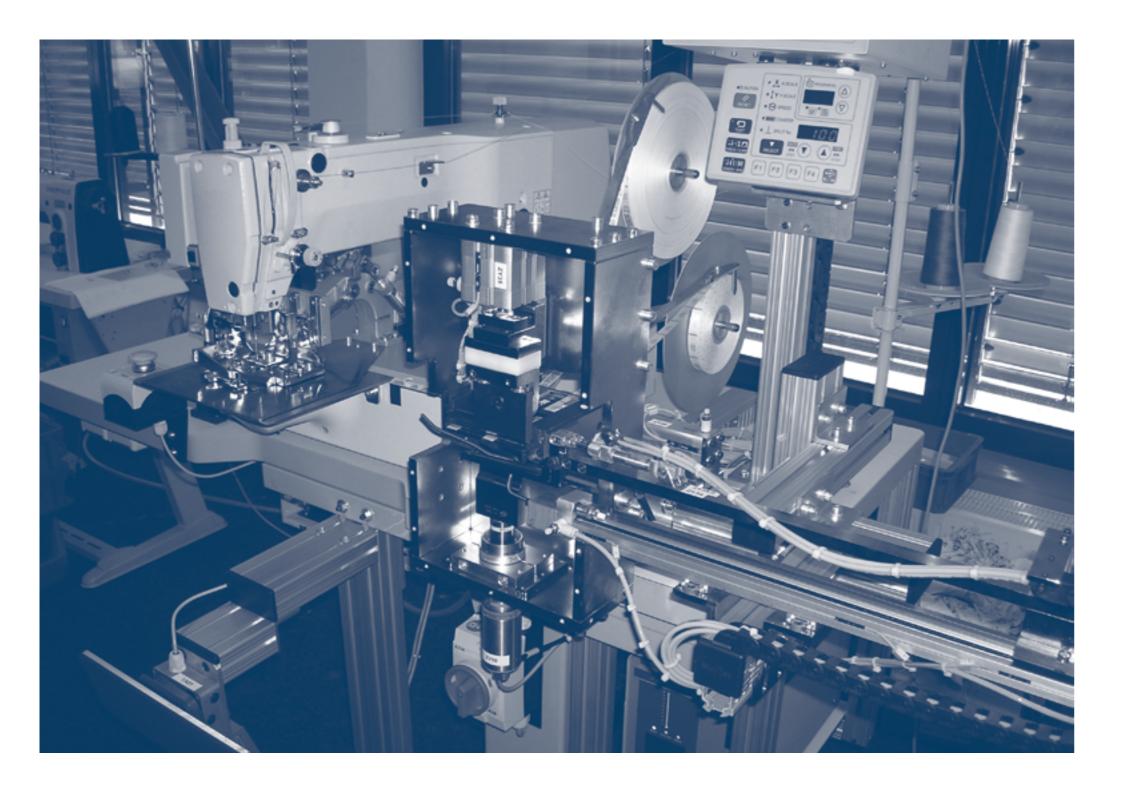
NEW: Fully automated production line for floor cleaners.

MACHINE CONCEPTS FOR APPAREL

RSG OFFERS SOLUTIONS FOR SEMI-AUTOMATED WORK STATIONS FOR:

- automated sewing on of labels (single, double, or triple labels)
- automated sewing on of elastics or lace
- automated sewing of hems and borders
- automated seam finishing
- automated sewing on of "hook and loop" straps





NEW GENERATION OF LABEL DISPENSERS

RSG OFFERS FLEXIBLE DISPENSERS FOR LABELS AND "HOOK & LOOP" MATERIALS:

- available for all label sizes
- various folding options are possible
- includes automatic unrolling, printing, cutting (even ultrasonic), dispensing, sewing and unloading
- simultaneous handling of up to three machines by one operator
- label processing from both sides of the sewing head by our patented "twin" concept
- our solution for the new labeling regulations: up to 6 labels can be sewn on top of each other





INNOVATIVE ACCESSORIES AND MONITORING EQUIPMENT FOR SEWING MACHINES

OUR PATENTED THREAD HOT CUTTER:

- patented hot cutting of upper and lower threads
- no fabric damage
- automatic sewing item height adaptation
- perfect work combination with RSG thread puller for minimal loose thread on fabric

OUR REVOLUTIONARY COLOR THREAD MONITORING SYSTEM:

- fully automated monitoring of upper and lower threads
- patented system with uniquely colored bobbins
- automatic detection of broken threads
- automatic monitoring of residual thread inside bobbin
- error prevention during sewing process by Poka-Yoke technology



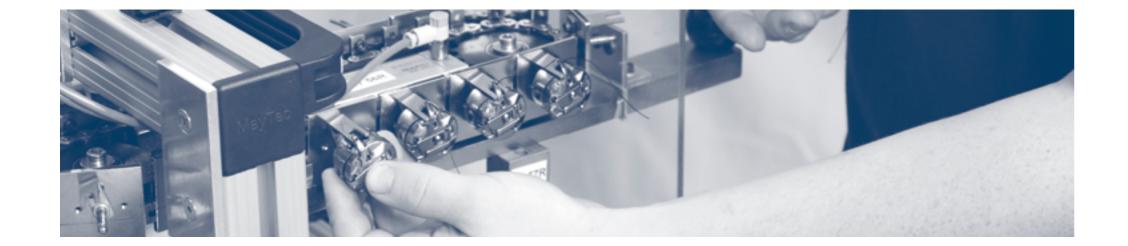
INNOVATIVE ACCESSORIES AND MONITORING EQUIPMENT FOR SEWING MACHINES

THE RSG BOBBIN CASE EXCHANGER:

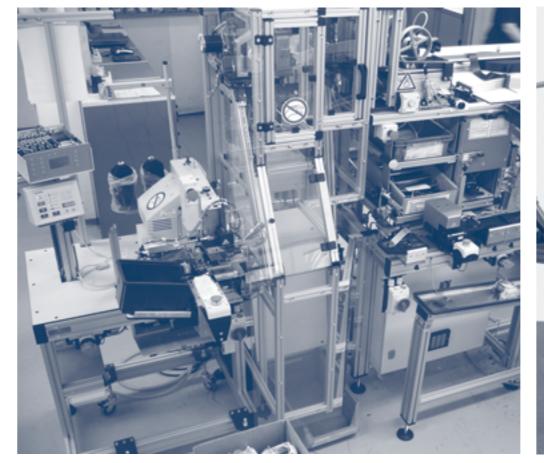
- Our bobbin case exchanger changes empty for full bobbins automatically within seconds.
- This unique combination permits substantial manufacturing increases!
- It is available as a single exchanger for one bobbin or as multiple exchanger for up to 22 bobbins.

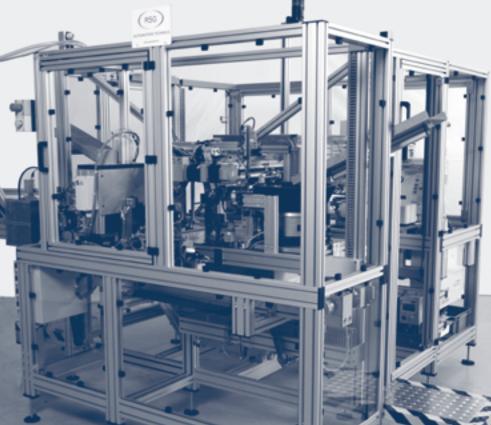
NEWLY AVAILABLE:

- modification of existing machines with new SAT mini
- integration to most Juki, Brother and Mitsubishi sewing machines possible, other brands upon request
- Upgrade your machines and benefit from the new advantages!



ONE PARTNER - OVER 1000 MACHINE CONCEPTS





ALWAYS CLOSE TO CUSTOMERS - AFTER SALES SUPPORT

FREE SERVICE HOTLINE DURING WARRANTY PERIOD

ON-SITE SUPPORT BY RSG SERVICE TEAM OR LOCAL PARTNERS WORLD-WIDE

SOLUTION FOR ALL SOFTWARE REQUIREMENTS:

• all customized adjustments and modifications are implemented rapidly and flexibly by our software team.

OUR SPARE PART SERVICE:

- standard parts are always on stock
- delivery service within 24 hours
- special parts are delivered as fast as possible

"CERTIFIED RSG OPERATOR" OFFER:

- training for all our machines, products, and software
- in-house training for machine operators
- on-site training directly with customers equipment

ASK FOR OUR SERVICE AND MAINTENANCE CONTRACTS!

...your novel advantages...

- considerable production time savings
- very short cycle times
- apparent production capacity increase
- constant quality improvements with our innovative sewing monitoring systems
- production process error avoidance
- manufacturing during breaks and after official production time termination
- unique automation concepts



RSG AUTOMATION TECHNICS

YOUR RELIABLE PARTNER FOR MODERN AND INNOVATIVE PROCESS AUTOMATION



RSG Automation Technics GmbH & Co. KG
Pleidelsheimer Straße 43
74321 Bietigheim-Bissingen

+49-(0) 71 42 99 36 90 sales@rsg-automation.de www.rsg-automation.de