



green
GLUING

MATTRESS MANUFACTURING

From pocket spring unit to the finished mattress.

MANUFACTURING OF POCKET SPRING UNITS

Challenges

To meet the boom for pocket spring mattresses, it requires adhesive application systems that are flexibly adjusted to the machine speeds and the format of the pocket springs. The manufacturing of pocket spring units is a separate process and does not belong to the actual mattress production. Springs are pushed into individual separated fabric bags, which are interconnected. This is how strings of pocket springs are made.

Our Solution

After cutting, the finished strings of pocket springs are glued in the middle laterally to a pocket spring unit using intermittent hot-melt-adhesive bead application. Unlike a continuous adhesive application, the intermittent application reduces costs significantly without compromising on quality.

Depending on machine speed and pocket spring format, Robatech offers different application heads for maximum flexibility in production. Depending on the height of the pocket springs, the application head can be equipped with a different number of application nozzles or individual application nozzles can be flexibly switched on or off. With the help of angle nozzles, the exact application position can be adjusted easily and flexibly, depending on the format.

If a cover fleece is additionally desired on the pocket spring unit, it is bonded to the top and bottom using continuous bead application. For this purpose, the outer angle nozzles are easily turned up or down using a wrench.

The application heads excel with precise and reproducible adhesive application. Their CoolTouch insulation reduces the risk of burns for the operating personnel. The AMS adhesive measuring system monitoring optimum adhesive consumption can be integrated in the melter as an option. The system enables gluing with a minimum application amount and thus saves costs.

Your Advantages

- Flexibly adjustable application heads depending on production specifications
- Increased productivity through a fast format change
- Perfectly glued pocket spring units through precise and repeatable adhesive application
- Optimized adhesive consumption and reduced costs thanks to the

AMS adhesive measuring system

- Customer proximity through worldwide sales and service network



String of pocket springs



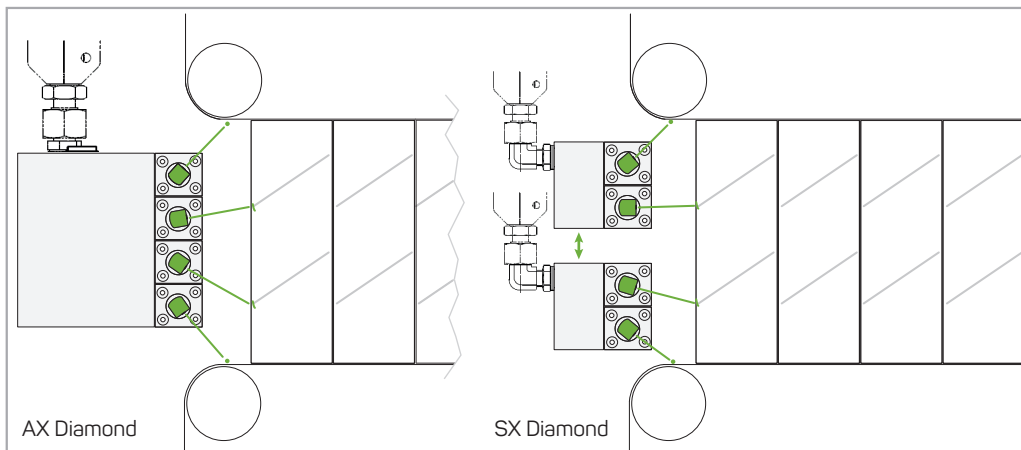
AX Diamond



SX Diamond



Adjustable angle nozzle



AX Diamond

SX Diamond

MATTRESS MANUFACTURING

Challenges

The bed is one of the most important pieces of furniture in the household. Comfort and quality play a big role when choosing the right mattress. Due to increasing demand and growth in the hotel industry, the mattress industry has become a very dynamic and lucrative market. In addition, online commerce and just-in-time production demand efficient, flexible, and cost-effective production processes without having to compromise on quality.

Thanks to successful cooperation with leading machine manufacturers in the mattress industry, Robatech has decades of experience and knows what is important. Whether automatic or manual gluing, bead or spray application, mattresses made of pocket spring, latex or foam cores, we offer suitable solutions.

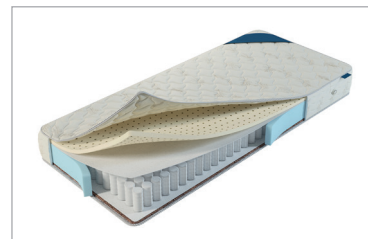
Automatic Adhesive Application

In a first step, several lines of hot melt adhesive are applied to the foundation of the mattress using a multi-application head. The outer adhesive lines are for the frame gluing to which the side padding is attached. The inner adhesive lines are for the mattress core, which is chosen individually according to the type of mattress. The adhesive lines for the core can be applied in straight or wavy lines. If the adhesive application should be even more widespread, a spray head is used.

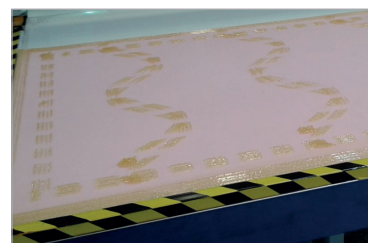
After attaching the side padding and inserting the core, additional foam and padding layers are glued using spray or bead application. Suitable application heads and systems are available, flexibly matched to customer requirements and machine speeds. Thanks to the optional AMS adhesive measuring system, the adhesive consumption can be monitored and reduced to a minimum. This significantly reduces costs and ensures a consistent and repeatable adhesive application.

Your Advantages

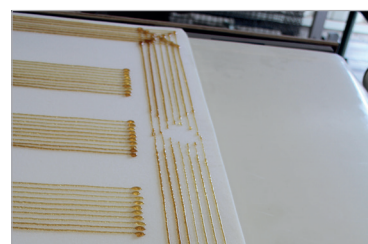
- Exact repeatability of the application pattern and the adhesive amount even at changing speeds
- Optimized adhesive consumption and reduced costs thanks to the AMS adhesive measuring system
- Range of application heads flexibly matched to your requirements
- Customer proximity through worldwide sales and service network



Mattress structure



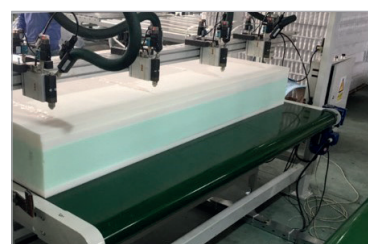
Wavy bead application



Straight bead application



Spray application on fleece

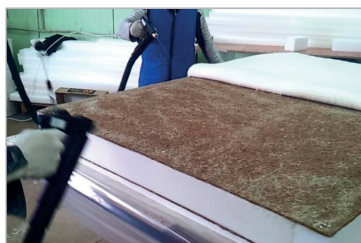


Spray application on foam

MATTRESS MANUFACTURING

Manual Adhesive Application

Hot melt hand applicators are used in conjunction with a melter for the manual gluing process. Depending on the requirements and work step, the hand applicators can be provided with nozzles for bead or spray application. To reduce the fatigue of the hand muscles during the adhesive application, the handles are ergonomically adjustable and can be operated without much effort. For an efficient and ergonomically designed workplace, Robatech offers special brackets and swivel system for the heated hoses. As a result, several hand applicators can be operated simultaneously from the same hot melt adhesive system.



Manual spray application



EasyStar hand applicator



Concept melter

Your Advantages

- Less fatigue of the hand musculature thanks to ergonomically adjustable hand applicators and little effort required for operation
- Easier work with hand applicators thanks to special brackets and swivel systems for the heated hoses
- Use of one melter for several workstations through flexible swivel systems

