

## APPLICATION STORY

# “TO SLEEP, PER CHANCE TO DREAM”

We spend nearly one-third of our lives on them and rarely give them a second thought. To most of us, the only time we think of a mattress is when we purchase one or our backs are suffering from them.

At Atlanta Attachment Company, sleep products are an integral part of their business. They design and manufacture advanced technology automated equipment for the sleep products industry. Their machinery manufactures some of the highest quality mattresses in the world, including Sealy, Serta and Simmons. Founded in 1969, they

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have grown to become the world's largest supplier of automated sewing equipment and custom laborsaving devices for this industry.

Part of their product line-up includes the Model 1345-2 Tape Edge Workstation, designed for stitching “tape” to the top and sides to close the mattress. The 1345-2 is comprised of three integral assemblies: the sewing head, the carriage, which houses the

drive train and controls, and the base and table top, upon which the mattress rests during the sewing process. Prior to stitching, mattress dimensions are programmed into the workstation and operator work height is adjusted. The operator then begins the process by bringing the side and top of the mattress together with the “tape” as the workstation follows, sewing the tape, sides and top. The sewing process continues on a straight, constant speed line until it reaches the mattress corners. Herein lays the dilemma which faced Atlanta Attachment.

As the head moves into the corners, speed may vary. To ensure a constant sew pattern, the operator might need to disengage the carriage from the track and operate the workstation manually. A tooth clutch was previously used to accomplish this disengagement. However, while the clutch was engaged around the corners, this varying speed would begin to chip teeth on the clutch until it eventually failed.



Model MDC5, multiple disk clutch

Knowing another tooth clutch would be unsuitable, Ogura worked with Atlanta Attachment to solve the situation while insuring a cost effective and retrofittable solution. While a single disk clutch could handle the application's torque



Mattress stitcher with multiple disk clutch

requirements, its size would prohibit usage in the existing carriage housing. Ogura's MD Series dry multiple disk electromagnetic clutches were the perfect solution. The MD Series delivers high torque rates in an extremely compact size. Output can be gear or belt driven or directly coupled to a shaft. Torque ratings range from 18 to 8,850 ft.lb. For Atlanta, the MDC 5 carries a 72 ft. lb. static torque rating in just under a 4-1/2 inch diameter while weighing less than 7 pounds. In choosing the MD Series, Atlanta recognized the benefit of push button operation to engage or disengage the clutch as well as the service and support from the world's largest producers of electromagnetic clutches and brakes.