APPLICATION PROFILE

MATTRESS MANUFACTURING

Pneumatics

Challenge: **HIGH SPEED AUTOMATED GLUE DISPENSING MACHINERY**

Location: **GEORGIA/FLORIDA**

> Flodraulic's Atlanta team was challenged by a manufacturer of high speed automated glue dispensing machinery to reduce pneumatic package weight and size on its equipment.

This was in response to their customers specifications for a mattress manufacturer's new Florida plant.

The existing machinery incorporated a bulky competitive ten-station valve manifold assembly and ten individual pressure regulators. Flodraulic redesigned the circuit incorporating a compact SMC SY3000 series ten-station valve assembly on a 25 pin D-sub bar manifold along with SMC's compact ARM ten-station regulator manifold.

The result was a much neater package with significantly reduced size and weight that met the customer's envelope requirements.

The customer was also in development of a new system to be located on the end of a robotic arm tooling. Again, size and weight of the existing competitive equipment was unacceptable.

Flodraulic came up with two SMC SV1100R-5W1U valves with M12 connectors on a 2-station aluminum bar stock manifold. One valve utilized an individual supply spacer while the other used an individual exhaust spacer sandwiched between the valves and the base. The two B ports, P, EA, and EB were plugged on the right side of the manifold. EA and EB ports were plugged on the left side. This way one valve would be the constant pressure supplied by the P port, and the other valve for multiple pressures would be supplied in the individual supply spacer port.

The constant pressure was regulated into the P port with an AR20 for the first valve. The second valve was then fed with SMC's ITV electro-pneumatic regulator which allowed the customer to send multiple pressures at different times as needed to mix with the constant pressure for various spray patterns.