The Drive & Control Company

Rexroth
Bosch Group

Solomatic A/S uses Rexroth planetary screw assemblies

Higher flexibility and efficiency in machine engineering

Solomatic A/S from Silkeborg, Denmark, designs, constructs, and manufactures special-purpose machines for industries requiring functionality, design and comprehensive documentation. In a machine, which cuts, punches, and bends sealing strips as well as rubber seals and mounts them onto aluminum rails, Solomatic A/S utilizes Rexroth planetary screw assemblies. The result: more flexibility, less floor space requirement, and significant resource savings during operation.

Solomatic A/S develops and designs individually tailored machines in close cooperation with the customer. The assembly and the programming of the control system also take place at Solomatic's factory. Specifically in machine engineering, it is necessary to adapt flexibly and quickly to new requirements, today. In the present case, Solomatic therefore chose planetary screw assemblies with servo motors instead of a conventional hydraulic solution. The motors are very powerful, can be controlled individually and impress with their extraordinarily compact design.

Maximal power, minimal space requirement

Planetary screw assemblies require less space than conventional ball screws, yet are able to provide the same force transmission. Inside the planetary screw assemblies, rotating thread rolls (planets) are used instead of balls. They are revolving axially parallel around a screw shaft inside a threaded nut. The numerous large contact areas increase the load capacity. The eight spindles have diameters of only 48 mm and press 10 tons each. In order to further reduce the floor space requirement of the machine, Solomatic uses the highly dynamic compact drive IndraDrive Cs in combination with a synchronous servo-motor IndraDyn MSK071. The former supports all common Ethernet-based communication interfaces.

Extremely versatile and resource-efficient

In a hydraulic machine, 2,500 liters of hydraulic oil would have been required for the operation of the eight cylinders. Rexroth's solution based on planetary screw assemblies is much more resource-efficient. Extraordinarily effective seals also help to reduce the lubricant consumption.

Tough application

Powerful and space-saving machine with individually controllable spindles; quickly and flexibly adaptable to new production requirements

Ingenious solution

Compact planetary screw assemblies with high load capacities

Exactly

"In many cases we do not know the exact form of the final product when we start to design the machine. With our present system, it is easy to adapt the machine to changing requirements."

Jørgen Pedersen, Solomatic A/S

Solved with

- Rexroth planetary screw assemblies
- Compact drive IndraDrive Cs
- Synchronous servo-motor IndraDyn MSK071
- Integrated "Safety on Board" features