© Fresenius Medical Care

REFERENCE STORY
Dual Sourcing with RAPA HEALTHCARE

Selb-based Company Supplies Key Component For Fresenius Medical Care

One out of every two dialysis machines manufactured worldwide is produced by Fresenius Medical Care. Fresenius Medical Care is a global technology and market leader in dialysis therapy. Dialysis machines consist of around 8,000 components. A few key components are solenoid valves, which must work with precision and reliability in the hydraulic system. They must do so over a long period of around 5,000 operating hours per year with and average service life of 10-12 years. They must be robust against high temperatures, acids, and bases. Depending on the device, approximately 30 to 50 valves are installed per unit.

Although Fresenius Medical Care has its own in-house solenoid valve production, the company brought another valve specialist on board: RAPA Healthcare.

Fully automated production and assembly line at the RAPA site in Selb, Germany

FRESENIUS MEDICAL CARE

Fresenius Medical Care is one of the world's leading German providers of dialysis products and dialysis care, delivering life-saving medical care for people with chronic and acute kidney failure.

COMPONENT

Solenoid valve with media separation and patented technology

APPLICATION

Hydraulic cycle in dialysis machines, precise media control, and regulation of the dialysate solution

INITIAL SITUATION

- Increased demand for dialysis valves
- Higher quality requirements and guarantee of quality level

SOLUTION & RESULTS

- Optimized valve version: 100% compatible with Fresenius own production
- Customer requirement for service life exceeded (> 90 million switching cycles)
- Fully automated production line with end-of-line (EOL) testing
- Guaranteed availability of valves even in the event of un-planned interruptions
- Zero-defect production
- Perfect supplier integration into the Fresenius supply chain

This enables Fresenius to guarantee security of supply, which can be a lifesaver, especially in times of crisis. The multi-track approach makes the Group's supply chain much more robust.

Since RAPA produces exclusively to order, the valve specialist was predestined for this task. The company, based in Selb, Franconia, was able to further develop and produce the product according to Fresenius' specifications and in the desired quality. The base of the cooperation, which has existed since the early 1980s, is exclusive development and production.

Key component for dialysis machines: Media-separated valve from RAPA

In 2016, RAPA started the second generation production of valves on a new, fully automated, in-house developed production line. In seven stations, the plant manufactures around 500,000 valves per year, and has reserve capacity. Since then, the new DV114 dialysis valve – in different variants – has been supplied by RAPA in series production. The DV114 media-separated solenoid valve was developed specifically for use in dialysis machines and especially for use in the dialysate cycle, where it is exposed to aggressive liquids.

Demand is growing rapidly: kidney disease is on the rise worldwide, and with it the need for dialysis therapy. This is also reflected in the rising production figures for dialysis machines at Fresenius Medical Care. While approximately 100,000 machines were built between 1979 and 1999, the 500,000th machine rolled off the production line at the Schweinfurt site in 2012. Of the estimated 90,000 machines installed worldwide in 2020, around 48% were produced by Fresenius Medical Care. Therefore, the demand for valves is increasing. The valves as well as the entire machines, must be optimized on a regular basis. Production processes also have to be continuously adapted to meet rising demand and high requirements placed on medical devices. Due to the high pressure on costs in the healthcare sector, RAPA Healthcare is faced with the demand from Fresenius for increasing flexibility and cost-effectiveness.

RAPA's technical team meets the customer's increased quality requirements and demanding specifications for functional reliability, maintenance-free operation, and fail-safe performance. The long service life of the component clearly demonstrates this reliability. Only selected materials are used in the DV114 media-separated solenoid valve. The robust and compact construction as well as the design offer savings potentials for material and spatial capacities. Together with Fresenius, RAPA is working on optimizing the processes and structures to make them as compatible as possible. The result: a functioning integration of RAPA Healthcare into the process chain at Fresenius offering cost-savings for efficient cooperation. The ultimate goal of the corporate partnership is 100% delivery, reliability, and zero-defect production.

© Fresenius Medical Care
Hemodialysis System 6008

> The solenoid valves jointly developed by RAPA Healthcare and Fresenius Medical Care, which are produced by RAPA, fit perfectly for our commitment to provide high-quality products and services to deliver the best possible care to our patients.
>
> Thomas Peter, Senior Commodity Buyer
> Fresenius Medical Care

Contact

RAPA Healthcare
Tim Schmidt
Albert-Pausch-Ring 1 | 95100 Selb | Germany
T. +49 9287 884-0 | healthcare@rapa.com

www.rapa.com