

# SOLENOID VALVE WITH MEDIA-SEPARATION FOR DIALYSIS DEVICES

Special valve and key component in the hydraulic cycle of dialysis devices - precise and safe fluid management in dialysis systems

The solenoid valve type DV114 is a special valve with media separation, which RAPA Healthcare manufactures and has further developed exclusively for the market leader in dialysis, Fresenius Medical Care, especially according to specifications. RAPA has been active in the medical technology sector since the mid-1980s and has since then developed various valves for Fresenius Medical Care. Through constant technical advancements, the new solenoid valve DV114 has been supplied in different variants since 2016. RAPA Healthcare has developed a fully automated assembly and production line for the fabrication of these valves.

The design of the 2/2-way solenoid valve DV114 takes into account the special requirements for medical devices and reliably performs safety-related functions. Especially in the medical sector, a faulty process can have unpleasant to life-threatening consequences for the patients. The DV114 is designed in such a way, that a rubber bellows safely separates the medium from the solenoid part of the valve. Therefore, the entire valve chamber can be cleaned. The wetted parts, bellows and valve body, are highly resistant to aggressive media. Due to the biocompatible, physiologically inert, high-performance plastics and sealing materials used, the design enables a very long service life in dialysis machines. The valve can be controlled in an energy-saving manner as well as operates in a fail-safe and low-noise manner.



Single Valve Type DV114

## TECHNICAL DATA

Type	2/2 way solenoid valve
Construction	media-separated
Function	2/2 NC
Mounting position	variable
Medium	Air, dialysis liquids, water, disinfectant, antifreeze, neutral and aggressive liquids
Nominal width	up to 4 mm
Hydraulic connection	Hose barb, flange gasket
Electric connection	6,3 mm Tab connectors
Operation voltage	24 VDC
Pressure range	-0,9 bar to 6 bar relative
Switching time	< 50 ms
Environmental temperature	+5 °C to + 75 °C
Wetted parts	Physiologically safe acc. to DIN ISO 10993 Part 5 and 12
Protection class	IP54 ISO 20653
Size	approx. 71 mm height x Ø 34 mm

All information is without guarantee. Misprints, errors and technical changes are reserved.

### EXCLUSIVE DEVELOPMENT

- Media-separated
- High lifetime > 90 Mio. Switching cycles
- All materials fulfill the chemical requirements
- Easy integration due to a compact design
- Reliable function at high temperatures
- Minimum internal volume with good flushing capability
- Short switching times
- High flow performance
- Low dead-space housing
- Suitable for pressure- and vacuum operation

### CUSTOMIZED SOLUTIONS

- Valve body interfaces
- Flow rates (Nominal widths)
- Energy-saving, electrical control

### APPLICATION

- Dialysis Devices

### REFERENCE CUSTOMER

- Fresenius Medical Care