

# **Bürkert launches specialised solenoid valves for hydrogen fuel cells**

**27 February 2024**

**Providing dedicated solutions for hydrogen fuel cell systems, Bürkert has launched its new Type 6440 safety shut-off and Type 6020 proportional control valves. Specialised for use with hydrogen, both valves are ready-made for the decarbonisation of stationary power, automotive and transport applications.**

*Visitors to the Hydrogen UK Annual Conference at the National Conference Centre, Solihull, can view the Type 6440 and 6020 with Bürkert experts on Stand 53 on 12th March 2024.*

## **Specialised for hydrogen**

Bürkert customers have been able to specify customised valves for hydrogen for a while now, but the new Type 6440 and 6020 feature all the required specialisations in standardised products, simplifying procurement. Highlights include a 316 stainless steel body to combat hydrogen embrittlement, a reduced leak rate and a higher operational pressure range. These features mean excellent suitability for Proton Exchange Membrane (PEM) fuel cell systems or Alkaline Fuel Cell (AFC) systems utilising either an active or passive recirculation loop.

Furthermore, along with IP65 cable plugs, both valves are available with IP6K9K electrical connections, ideal for automotive applications. In terms of process integration, each valve can be supplied with either a threaded, flange or cartridge process connection to help with system integration.

For customers looking to mount solenoid valves on manifolds for mass production, the design has been optimised to speed up installation with fewer larger mounting holes and no need to remove the coil, reducing the number of manufacturing steps, expediting installation. Three coil sizes are offered, with or without ATEX and IEC EX certification.

### **Providing safe shut-off**

The Type 6440 is a servo-assisted 2-way piston valve that provides safe shut-off without using fluid pressure. This allows it to support pressures up to 40 barg (PN40) and larger orifice sizes for higher flow rates and less pressure drop. An EPDM seal and a high seat tightness ensure a low leakage rate of 10-4mbar l/sec, while the valve has a media temperature range from -40°C up to 120°C.

Maximum ambient temperature ratings reach up to 75°C and 85°C for stationary power and mobile power applications respectively. The Type 6440 is available in DN6, DN8 and DN12 sizes, covering a wide range of applications. Operators looking to save energy can also specify the Type 6440 with Kick & Drop coils. In this double coil design, a high electrical impulse opens the valve, and 500 milliseconds later, it switches to a power saving mode, greatly reducing energy consumption.

### **Accurate control for fuel cell performance**

A direct acting proportional control valve, the Type 6020 optimises the performance and efficiency of fuel cells by regulating hydrogen supply to the stack. Suitable for closed control loops, with automatic setpoints for flow or pressure, fine control can be achieved thanks to the large setting range of 1:100. Designed to withstand a differential pressure of 25 barg (PN25), it also has an elastomer seal allowing for a tight shut-off. Media temperature ranges from -40°C to 90°C with an EPDM seal, with ambient temperatures of up to 85°C are supported depending on coil selection. Sizes are available from DN2.5 to DN8.

## **Full system support in-house**

As a flow control specialist, Bürkert can provide its customers with complete system solutions under a single part number. The company's Systemhaus develops entire systems, allowing customers to reduce leakage paths, optimise operations and shrink the footprint of hydrogen fuel cells. Working closely with customer engineering teams, Bürkert experts can tailor solutions to meet application requirements, greatly simplifying projects and improving the performance of gas control systems.

*For more information on the products and support available from Bürkert for the hydrogen value chain, visit:*

[www.burkert.co.uk/en/industries-solutions/industries/energy/innovative-solutions-for-a-clean-future-with-hydrogen](http://www.burkert.co.uk/en/industries-solutions/industries/energy/innovative-solutions-for-a-clean-future-with-hydrogen)

**Image captions:**



**Image 1:** Bürkert's latest valves are specialised for hydrogen fuel cells.



**Image 2:** Burkert's Type 6440 safety shut-off valve is ideal for PEM and AFC systems.



**Image 3:** The Type 6020 proportional control valve can be quickly installed, saving time for OEMs.

The image(s) distributed with this press release are for Editorial use only and are subject to copyright. The image(s) may only be used to accompany the press release mentioned here, no other use is permitted.

## About Bürkert

Bürkert Fluid Control Systems is one of the leading manufacturers of control and measuring systems for fluids and gases. The products have a wide variety of applications and are used by breweries and laboratories as well as in medical engineering and space technology. The company employs over 2,200 people and has a comprehensive network of branches in 35 countries world-wide.

### Press contact:

#### **Bürkert Fluid Control Systems**

Kirsty Miller

Marketing Manager

Tel.: +44 (0)1285 648761

[kirsty.miller@burkert.com](mailto:kirsty.miller@burkert.com)

### PR agency:

#### **DMA Europa**

#### **Philip Howe**

Progress House, Great Western Avenue, Worcester,  
WR5 1AQ, UK

Tel.: +44 (0) 1905 917477

[philip.howe@dmaeuropa.com](mailto:philip.howe@dmaeuropa.com)

[news.dmaeuropa.com](http://news.dmaeuropa.com)