

Achieving fast refueling for hydrogen-powered vehicles

Thanks to the high flow rate of the HyValve products from Eugen Seitz AG, this is no longer wishful thinking but a reality.



Starting position

As a filling station operator, Richard Schuler is keen to satisfy his customers. When his regular customer Laura Maier discovers on her way to work that her hydrogen-powered vehicle is running low on fuel, she regularly visits Richard's filling station. Since time is short to get to her first meeting, she hopes there won't be a crowd, and that the refueling process will not take long.

But there is much more hiding behind Richard Schuler's fuel pump than Laura is aware of. The "priority panel" brings the hydrogen in gaseous form from the storage banks to the fuel pumps. The valves fitted in the panel are substantially responsible for the speed with which Laura can fill her tank and drive on to her workplace.

The challenge

The challenge for every filling station operator – and thus also for Richard Schuler – is now to install valves in their priority panel that are as efficient as possible, so that the flow rate is adequate and Laura Maier can complete the refueling process as quickly as possible. The flow rate specified in SAE standard J2601 is currently 60g/s; in future 120 to 300g/s.

Solution

Thanks to their low pressure loss, the HyValve valves from Eugen Seitz AG deliver a flow rate of up to 300g/s. Filling a regular automobile fuel tank at 700 bar CGH2 usually takes between three and five minutes. A full tank is enough for up to 600 km. Trucks, buses and construction site equipment also benefit from fast refueling. The refueling process is comparable to that of fossil fuels.

Implementation

As a filling station operator, Mr. Schuler can contact Eugen Seitz AG under no obligation. The team of H2 sales experts provides him with comprehensive advice. The experts concentrate specifically on working out the individual benefits for Richard Schuler, providing specialist training expertise and taking into account personal preferences. In choosing a highly efficient HyValve valve, Richard Schuler provides his customers with a fast refueling experience, wins customer satisfaction and improves his profitability.

Benefits

- High-quality product, delivering reliability and safety
- Faster refueling than with other alternative drive technologies
- Availability of the filling station is guaranteed
- Supports the expansion of the hydrogen economy and can contribute to the achievement of climate targets (net zero)
- Creating a fast refueling experience and achieving customer satisfaction

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