

# EXPERTS IN PRESSURE & FLOW CONTROL SOLUTIONS

FOR THE HYDROGEN ECONOMY



# INNOVATIVE, INDUSTRY-LEADING SOLUTIONS

Hale Hamilton offers a broad range of system and valve technologies that provides you the solutions needed to solve gas handling challenges in the new hydrogen economy.

#### FIND YOUR HYDROGEN APPLICATION

APPLICATION				
	Isolation Valves	Pressure Regulators	Pressure Control Accessories	Panels & Skid Solutions
Power to Hydrogen				
Electrolysis	х	х		
Hydrogen to Power				
Fuel cells	х			
Gas turbines	х	х	х	х
Gas engines	х	х	х	х
Transport & Storage – Gases Hydrogen				
Tube trailers	х	х	х	х
Static Storage	х	x	x	х
Hydrogen Storage to Process				
Trailer Loading	х	х	х	х
Trailer Decanting (Pressure / Flow Control)	x	х	x	x
Hydrogen Distribution Systems	Х	Х	Х	Х

For further information visit www.circor.com/hale-hamilton

## **CASE STUDY**

Supplying High Pressure
Primary Isolation Valves and
Pressure Control Technologies
Enabling the Supply of
Hydrogen to Fueling Stations

#### **CHALLENGE**

Our client, a supplier of Hydrogen Trailers required valves qualified in accordance with the latest European Transportable Pressure Equipment Directive which applies to all valves used to isolate transportable hydrogen storage modules. The valves were required to be used at pressures up to 700 bar(g), at temperatures as low as -40°C with very tight limits on leakage. Without valves qualified to this standard, the trailer could not be certified and put into operation.

#### **SOLUTION**

Hale Hamilton engineers working diligently to establish a valve capable of meeting these highly demanding requirements. The Series Pneumatically Actuated Stop Valve Series is based on Hale Hamilton's highly reliable balanced valve concept but includes sealing technologies capable of performing across the range of pressures temperatures and leak rates required setting a new standard for high pressure balanced valve design.

#### **CIRCOR IS YOUR PARTNER**

Hale Hamilton has a broad range of pressure and flow control components for Hydrogen Storage applications including Manual Stop Valves, Regulators, Slam Shut Valves, Residual Pressure Valves, Check Valves, Filters and can build complete Trailer Fill Cabinets for its clients saving space, cost and client engineering resources.



**ASV700** 

### **EXPERTS IN PRESSURE AND FLOW CONTROL SOLUTIONS**

Our standard and custom engineered gas-handling solutions support a wide range of mission critical applications and are essential for the reliable and safe operation of all types of industrial systems.



#### **PANEL & SKID SOLUTIONS**

- Hydrogen trailer cabinets systems for 380 to 700 Barg pressures. Featuring Hale Hamilton TPED Primary Isolation Valves, Regulators, Filters, Slam shut and Residual Pressure valves
- > Equipment Rated for temperatures down to -40 Degree Celsius
- > Fully configurable systems to customer requirements



# BACK-PRESSURE MAINTAINING VALVES

- > DN15 Maximum Inlet 700 Barg
- > Residual pressure applications such as ensuring a minimum pressure is maintained in high-pressure type 4 cylinders
- Ease of maintenance via replaceable cartridge design



#### **ISOLATION VALVES**

- > DN15, TPED Rating up to 700 BARG
- > Pneumatically Actuated or Manual Shutoff
- > Product that conforms to PED & TPED (2014/68/EU & 2010/35/EU)
- Supplied with threaded and welded connections



#### **OVER-PRESSURE PROTECTION**

- > DN15 Maximum Inlet 700 Barg
- > Automatic shut-off operation, independent of control systems
- > Exceptionally good leak integrity with low H2 emissions



#### PRESSURE REGULATORS

- > DN 15- Maximum inlet 840 Barg
- > (DN25, DN40 & DN50 Models Maximum 420 Barg)
- Complete solution integrating filters, pilot regulator and external feedback
- > Maintenance via factory tested cartridge inserts
- > Wide range of models available including proportional pressure regulators



#### **CONTROL ACCESSORIES**

- > DN15 Maximum Inlet 840 Barg
- > A large range of accessories for gas control, isolation and filtration
- Provided with a range of connections (threaded ports, brazed or weld stub)





Hale Hamilton is part of the Circor Group. CIRCOR is a market-leading, global provider of hydrogen tube trailer engineering solutions, integrated flow control solutions, specializing in the manufacture of highly engineered valves, instrumentation, pipeline products and services, and associated products, for critical and severe service applications in the oil and gas, power generation, industrial, process, maritime, aerospace, and defense industries.

Asia | Europe | Middle East | North America

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