DATASHEET

IES-H2-70 HYDROGEN VEHICLE H70 FAST FILL RETAIL DISPENSER

LIGHT-DUTY FCEV REFUELING WITH HIGH-RELIABILITY AND PERFORMANCE

Today's light-duty retail station and fleet operators demand cost effective and reliable hydrogen dispensing solutions for their operations. Our innovative, intelligent hydrogen dispensers deliver on that promise. We proudly **design and manufacture our products in the USA**.

OPTIMIZED USER EXPERIENCE

Ivys' proprietary dynamic flow control and intelligent software combine to provide the customer a peak refueling experience no matter the station, vehicle or climatic conditions. Strict adherence to published hydrogen codes and fueling standards ensure user, equipment and vehicle safety. V2X-ready affords station future proofing.

STATION FLEXIBILITY

Ivys hydrogen dispensers are designed to accept a wide variety of station configurations and hydrogen source pressures. This feature enables deployment with new stations or upgrades of existing stations. The ability to locate the dispenser next to the vehicles, up to 250 feet away from the hydrogen source, tailors to the forecourt and fleet operators.

KEY BENEFITS

- Dispense Rates up to 3.6 kg/min Maximum
- Back-to-Back Fill Capable up to 10kg Tanks
- Proprietary Dynamic Flow Control ensures Peak Performance at any Condition
- Readily Compatible to any Pressurized Hydrogen Source
- Remote Operation (up to 250 ft)
- V2X-Ready

IVYS Energy Solutions

ENABLING E-MOBILITY

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TECHNICAL SPECIFICATIONS

	IES-H2-70-FAST
PERFORMANCE	
Nominal Fill Pressure[1]	700 BAR at 15°C / 875 BAR MAXIMUM
Fueling Method[2]	SAE J2601 MC Method Precooled -20 to -40 °C
Vehicle Tank Categories Supported	2.4 to 10 kilogram
Fueling Connection	SAE J2600 Hydrogen Nozzle, Integral Break-Away and Hose Included; Standard SAE J2799 Data Interface, Option Without
Hydrogen Purity	Meets ISO I4687-2 and SAE J2719
Fueling Rates[1,3,4]	3.6 kg/min Maximum Fill Rate Includes Mass Flow Meter Accuracy Class 5.0 or Better
Dispenser User Interface	Standard Fleet Dispenser Housing with 10" Color Display Option: Fleet Card or RFID Tag Authorization Option: CRIND, EPP, Weights & Measures Compliance
Data Interfaces	Service Touchscreen HMI Provided at Remote Control Panel Modbus TCP/IP
Installation and Temperature Ratings	Outdoors Only -20 °C to 50 °C (-4 °F to 122 °F)
Noise Emissions[5]	< 70 dBA at 1-Meter
Service Life[6]	15-Years

Dispenser

POWER & UTILITIES	
Dispenser Electrical	120/208 or 240 VAC +/- 10%, 15 Amp, Single Phase + TN-S Ground, 60/50Hz
Dispenser Chiller Electrical	380 to 480 VAC +/- 10%, 60 to 100 Amps, 3-Phase Delta + TN-S Ground, 60/50Hz
N2 Supply	6-7 BAR Nitrogen, < 1 SCFH Maximum

PROCESS CONNECTIONS	
H2 Supply[7]	9/16" MP Cone and Thread
H2 Vent[7,8]	1" Compression Fitting
N2 Supply[7]	1/4" Push Connect

SAFETY AND APPROVALS	
Safety Equipment Provided	Flammable Gas Detector, UV/IR Hydrogen Calibrated Fire Detector, 2 Emergency Stop Buttons, Relay Contacts Provided for Site Fire and Site Emergency Stop, ASME Pressure Safety Valve
Design Standards	CSA HGV 4.1, CSA HGV 4.3, SAE J2601, NFPA-2 (Installation), ASME B31.3, UL-508 (Electrical Only), ETL Mark Available Upon Request
Hazardous Equipment Rating[9]	North America: Class 1, Division 2, Group B, Australia / Asia Pacific: IECEx IIC Gb T4, Europe: Ex IIC Zone 2 T4

Notes:
[1] Actual performance will vary based on upstream supply pressure and station storage capacity, vehicle tank volume, vehicle initial initial pressure, ambient temperature and station utilization. Performance is not guaranteed.
[2] T-class may increase to T20 as ambient temperature increases as allowed by SAE J2601 MC Method.
[3] Fill performance assumes a 6 kg vehicle capacity arriving at 20% state of charge at an ambient temperature of 15°C, a properly designed station, and 890 BAR supply pressure to the dispenser.
[4] Mass flow meter accuracy is +/- 4% Full Scale per requirements in NIST Handbook 44. Weights and Measures Certification available upon request.
[5] Excludes upset conditions such as safety valve activation and noise from low temperature chiller system.
[6] Assumes adherence to regular maintenance and installation in non-coastal area. Customer is responsible for performing regular preventative maintenance including equipment calibration, safety valve inspection, dispenser hose replacement and nozzle rebuild. Failure to maintain equipment properly may result in reduced performance or equipment damage.
[7] Supplied by customer.
[8] H2 vent systems shall be provided by the customer and designed in accordance applicable codes and standards for the local jurisdiction. Vents shall be minimum 10' above grade or 5' above impinging structures within 15' radius of discharge point.
[9] Hazardous equipment ratings apply to Dispenser System Only. Does not include remote electrical control panel. Refer to applicable area classification drawings for further information.

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