The New H2Station®

Proven Technology
New Compressor Dedicated to Hydrogen – Developed by Nel Innovative Solutions
Compact, Flexible and Reliable

The H2Station represents the next generation in hydrogen fueling for fuel cell cars, buses, trucks and trains. It offers fast fueling with the world’s most compact footprint. The design is based on years of R&D and operational experience, and is renowned for providing high fueling reliability. It features the world’s first dedicated hydrogen compressor, the most efficient and contamination free hydrogen compressor on the market today.

H2Station Key Features

- Daily capacity of up to 2,500 kg per day
- Maximum capacity: 120 kg/h
- Hydrogen storage dimensioned to fit any preferred capacity and supply source ranging from on-site production to truck delivery
- Modular and flexible placement of H2Station modules at site
- Compact dispenser for easy integration at existing station
- Dispenser with new user interface to optimize customer experience
- Standard module developed through years of R&D
- Lean volume manufacturing capability of up to 300 stations/year
- Safe by design and functionally safety compliant with IEC 61511

H2Station Services

- One stop shop for all service related to H2Station
- Handling installation of H2Station from shipment to start of operation
- Full operation and maintenance for high reliability
- Spare parts for standard modules in stock
- 24/7 operation monitoring and technical hotline
- KPI monitoring with online client access
- Site risk assessment and site layout
- Site elements for easy and cost effective installation of modules

Specifications

Station Modules

<table>
<thead>
<tr>
<th>Station Types</th>
<th>Maximum Capacity</th>
<th>Dispenser Connections</th>
<th>Dispenser Options</th>
<th>Inlet Pressure Range</th>
<th>Dimensions – Weight</th>
<th>Approvals</th>
<th>Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM</td>
<td>65 kg/h @ 70MPa</td>
<td>2 (one of each below)</td>
<td>70MPa</td>
<td>2-70MPa – Multiple Hydrogen source</td>
<td>3.3m L x 2.2m W x 3.6m H – 17.5 ton</td>
<td>CE marked or UL listed (comply to all modules)</td>
<td>Available in galvanized steel for resistance to corrosion</td>
</tr>
<tr>
<td>HP Duplex</td>
<td>120 kg/h @ 70MPa</td>
<td>Up to 3 (from below)</td>
<td>70MPa</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LP Duplex</td>
<td>120 kg/h @ 35MPa</td>
<td>Up to 3 (from below)</td>
<td>35MPa</td>
<td></td>
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</tr>
</tbody>
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Dispensers

<table>
<thead>
<tr>
<th>Dispenser Types</th>
<th>Fueling Protocol</th>
<th>Nozzle Design</th>
<th>Metering</th>
<th>Payment</th>
<th>Dimensions – Weight</th>
<th>Placement</th>
<th>Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>70MPa</td>
<td>SAE J2601-1 v2016</td>
<td>In accordance with SAE J2600 and SAE J2799 (IR)</td>
<td>Coriolis mass flow meter</td>
<td>Compatible with APP/POS/Credit Card via built-in communication protocols</td>
<td>0.52m L x 0.52m W x 2.5m H (integration on existing gas-station)</td>
<td>Up to 50m from Station Module</td>
<td>Available in galvanized steel or customer trade dress by quote</td>
</tr>
<tr>
<td>35MPa</td>
<td>SAE J2601-2 Optifill™</td>
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</tbody>
</table>

Fueling Storage

<table>
<thead>
<tr>
<th>Storage Pressure</th>
<th>Storage Capacity</th>
<th>Valves and Safety</th>
<th>Dimensions</th>
<th>Placement</th>
<th>Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal 43-95MPa – Maximum 50-100MPa</td>
<td>Up to 106 kg of hydrogen in each rack</td>
<td>Double block and bleed – Jet flame protection</td>
<td>3.4m L x 1.2m W x Flexible H up to 2.8m</td>
<td>Up to 30m from Station Module</td>
<td>Available in galvanized steel for resistance to corrosion</td>
</tr>
</tbody>
</table>

Supply Storage

<table>
<thead>
<tr>
<th>Storage Pressure</th>
<th>Storage Capacity</th>
<th>Valves and Safety</th>
<th>Dimensions</th>
<th>Placement</th>
<th>Option</th>
<th>Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal 20MPa – Maximum 24MPa</td>
<td>50-500kg hydrogen in each rack</td>
<td>Optional multiple racks – Upgradable after installation</td>
<td>6.5-12.3m L x 2.4m W x Flexible H up to 3.0m</td>
<td>Up to 100m from Station Module</td>
<td>Supply Cabinet for fast Hydrogen unloading to Supply Storage</td>
<td>Available in galvanized steel with white tubes</td>
</tr>
</tbody>
</table>
H2Station Solutions
Configurations and Examples

H2Station

**Light Duty Vehicle Dispenser**
70MPa @ T40 (SAE J2601-1 v2016)

Supply Cabinet
Supply Storage – Small
Station Module and Fueling Storage
70 MPa

Underground

H2Station

**Light Duty Vehicle and Heavy Duty Vehicle Dispensers**
70MPa @ T40 (SAE J2601-1 v2016) and 35MPa (SAE J2601-2 with Optifill)

Nel Alkaline AC150 or Proton® PEM MC150
Supply Cabinet
Supply Storage – Large
Station Module and Fueling Storage
70 MPa 35 MPa

Underground

H2Station HP Duplex

**Light Duty Vehicle and Heavy Duty Vehicle Dispensers**
70MPa @ T40 (SAE J2601-1 v2016) and 35MPa (SAE J2601-2 with Optifill)

Supply Cabinet
Supply Storage – Large
Station Module and Fueling Storage
70 MPa 70 MPa 35 MPa

Underground

H2Station LP Duplex

**Heavy Duty Vehicle Dispensers**
35MPa (SAE J2601-2 with Optifill) – 20 kg/5 minutes back-to-back

Nel Alkaline A485
SWAP Trailer
Station Module and Fueling Storage
35 MPa 35 MPa 35 MPa

Underground
Nel Hydrogen is a publicly listed hydrogen company which builds on more than 90 years of combined experience within hydrogen production and hydrogen fueling technology.

A Benchmark within Hydrogen Production and Fueling

With more than 3,500 electrolysers delivered around the globe, Nel Hydrogen is the world’s leading company for alkaline and proton exchange membrane (PEM) water electrolysis. Nel Hydrogen fueling stations have the highest reported availability in the world, and were the first to comply with the latest standards for refueling.

www.nelhydrogen.com