

# POWERTAP™

## Hydrogen Generator



Nuvera Fuel Cells, Inc., has developed an on-site, outdoor hydrogen generator for customers consuming more than 25 kg per day. When combined with Nuvera's Hydrogen Station, PowerTap provides the most cost-effective fueling solution for fuel-cell-powered material-handling equipment.

### Product Features

#### Convenient On-Site Generation

Hydrogen is generated from natural gas on-site, eliminating costly transportation charges

#### Low-Cost Production

For typical fleets, steam reformation is the most cost-effective solution

#### Efficient and Smart

Remotely monitored and adjusted for optimal operation

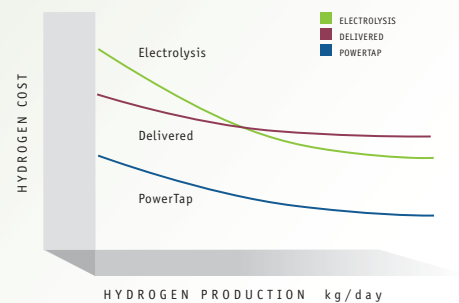
#### Low GHG Emissions

Compared to grid-charged batteries and internal combustion engines

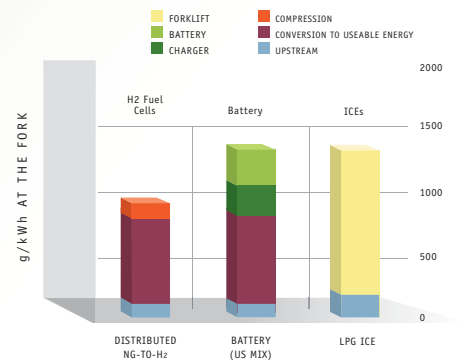
#### Customized for Your Fleet

Hydrogen production scaled depending on fleet size

COST OF HYDROGEN



GHG EMISSIONS FOR FORKLIFT TECHNOLOGIES



# POWER Tap™

## Applications and Specifications



**Remote Monitoring**  
Streamline operations with preventive maintenance and remote diagnosis.

**Natural Gas Steam Reformer**  
Lowest-cost hydrogen-generation technology.



**Water and Gas Purification Systems**  
Removes sulfur and assures long-term, trouble-free operation.

**Hydrogen Purification System**  
Compact and innovative design reduces footprint and service intervals.

**Low-Pressure System**  
Reduces upfront capital and maintenance costs.

**What About Refueling?**  
In addition to the PowerTap Hydrogen Generator, Nuvera has also created the PowerTap Hydrogen Station, which allows for quick and easy indoor or outdoor refueling. When used together, the PowerTap Hydrogen Generator and Hydrogen Station provide the most cost-effective hydrogen solution for typical fuel cell forklift fleets.

The Total Power Solution, featuring the PowerTap Hydrogen Generator and Hydrogen Station, along with Nuvera's PowerEdge fuel cell hybrid product for forklifts, is the first set of hydrogen products designed specifically for material handling. With only one vendor for both power systems and hydrogen infrastructure, the TPS offers ease of installation and service.

### PowerTap Hydrogen Generator

### Specifications

Rated Hydrogen Production	50 kg/day
Hydrogen Purity	99.995%
Natural Gas Consumption	7.5 MBTU/day 222 Nm <sup>3</sup> /day
Water Consumption	2400 l/day
Electrical Consumption	9 kW average
Size	12 ft x 4 ft x 9 ft 3.66 m x 1.22 m x 2.74 m
Operating Temperature	-4°F to 104°F (-20°C to 40°C)
Standards Compliance	Designed for CSA, CE
Environment	Outdoor
Emissions <sup>1</sup>	NOx: <15 ppm CO: <50 ppm SOx: undetectable

<sup>1</sup> @ 3% O<sub>2</sub>, 3-hr average  
All specifications subject to change.



### POWER Tap™

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