

# PE9000C Series Hydrogen Gas Purifiers

## The Purest Hydrogen on the Planet



### APPLICATIONS

- LED device manufacturing
- Silicon Carbide (SiC) epitaxy
- Crystal growth
- Photovoltaic production
- III/V and II/VI MOCVD processes
- Polysilicon manufacturing
- Carbon nanotubes
- LCD display processes
- Silicon & compound semi
- Fuel cells

Power + Energy micro-channel palladium purifiers produce the purest hydrogen on the planet. All P+E purifiers use patented micro-channel palladium membrane technology to remove all impurities to parts per trillion levels. The PE9000C gas purifiers provide a durable purifier for any flow and any inlet gas source. This compact design can be wall-mounted to provide the purest hydrogen for point-of-use or area gas purification.

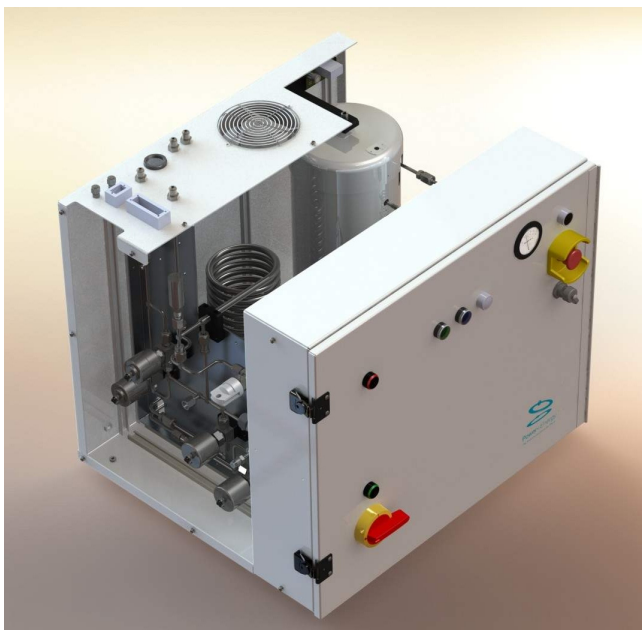
### KEY FEATURES

- Ultra-pure hydrogen from any source
- High flow capacity up to 1,400 slpm (88 Nm<sup>3</sup>/hr.)
- < 100 ppt O<sub>2</sub>, H<sub>2</sub>O, CO<sub>2</sub>, CO, N<sub>2</sub>, CH<sub>4</sub>, NMHC
- Patented palladium micro-channel technology
- Lowest power consumption
- Lowest H<sub>2</sub> vent flow rate—only 2%
- Smallest footprint—minimal side/back clearance
- Wall or table mount
- 25 different sizes to match your flow rate and pressure specifications

### Palladium Advantages

- Only hydrogen passes through to the pure side—the purest gas
- Every impurity is removed—no exceptions
- Unlimited lifetime—no regeneration or vessel replacement
- Separates pure H<sub>2</sub> from source gas with ppm or % level impurities

# PE9000C Series Hydrogen Gas Purifiers



## STANDARD FEATURES

- PLC automated control
- Type-Z purge
- Class I, Div 2 compliant
- CE and ATEX compliant
- ASME U-stamp pressure vessel
- Automatic N<sub>2</sub> purge
- H<sub>2</sub> sensor with alarm
- Inlet and outlet pressure sensor
- Alarm history and data storage
- RJ-485 Ethernet connection
- Helium leak test ports

## OPTIONAL FEATURES

- Inlet 0.5μ H<sub>2</sub> particle filter
- Deoxo catalyst pre-purifier
- HMI color touchscreen
- Inlet mass flowmeter
- Manual bypass
- Separate control power
- China SELO/SQL licensed pressure vessel

Feature	Specification
Flow Rate	78-1,400 slpm (5–85 Nm <sup>3</sup> /hr.)
Maximum Inlet Pressure	300 psig (20.4 Barg)
Inlet Purity	99.95% typical
Outlet Purity	99.9999999% < 100 ppt O <sub>2</sub> , H <sub>2</sub> O, CO, CO <sub>2</sub> , N <sub>2</sub> , CH <sub>4</sub> , NMHC
N <sub>2</sub> Purge	70-90 psig (4.8-6.2 Barg)
Instrument Air & Z-Purge	Air or N <sub>2</sub> 70-90 psig (4.8-6.2 Barg)
Power	200-240 VAC 50/60 Hz 2-16 kW Peak (startup) 0.7–4 kW average
Dimensions	29.6"W x 26.6"D x 26.3"H (751 x 675 x 668mm)
Weight	250-300 lb (113-136 kg)

Model Number	Maximum Flow Rate (slpm)	Maximum Flow Rate (Nm <sup>3</sup> /hr.)
PE9005C	78	5
PE9015C	233	15
PE9025C	388	25
PE9035C	543	35
PE9045C	698	45
PE9055C	853	55
PE9065C	1,008	65
PE9075C	1,163	75
PE9085C	1,318	85

*Selected sizes shown above, other models available to closely match required flow rate*