

## HP Series Hydrogen Purifiers



The Johnson Matthey HP Series palladium membrane hydrogen purifier has provided highly reliable point-of-use purification for over 30 years. These units are particularly effective in the compound semiconductor industry and applications where ultra-high purity hydrogen is required, achieving purity levels of 99.999999%.

### Features of the HP Series include:

- “Outside In” diffusion cell design
- Electropolished, orbitally welded 316L stainless steel construction
- Digital process temperature controller
- Overtemperature indication and solid state relays
- Manual outlet valve
- Bleed gas flowmeter
- Hydrogen leak detector (optional)
- Outlet impurities: <1 ppb O<sub>2</sub>, H<sub>2</sub>O, CO, CO<sub>2</sub>, N<sub>2</sub>, THC

An optional hydrogen purifier purge system can be built into a cabinet. The purge system automatically purges the hydrogen purifier cell during normal start-up, shutdown and emergency shutdown in the event of a power failure, or when operating temperatures fluctuate above or below predetermined set points. In case of any malfunction, it automatically exhausts the hydrogen and purges the system to protect it from damage.

### Applications:

- MOCVD epi
- Silicon semiconductor processes
- Lab instrumentation
- SiC crystal growth
- Gas chromatographs
- SiGe epi



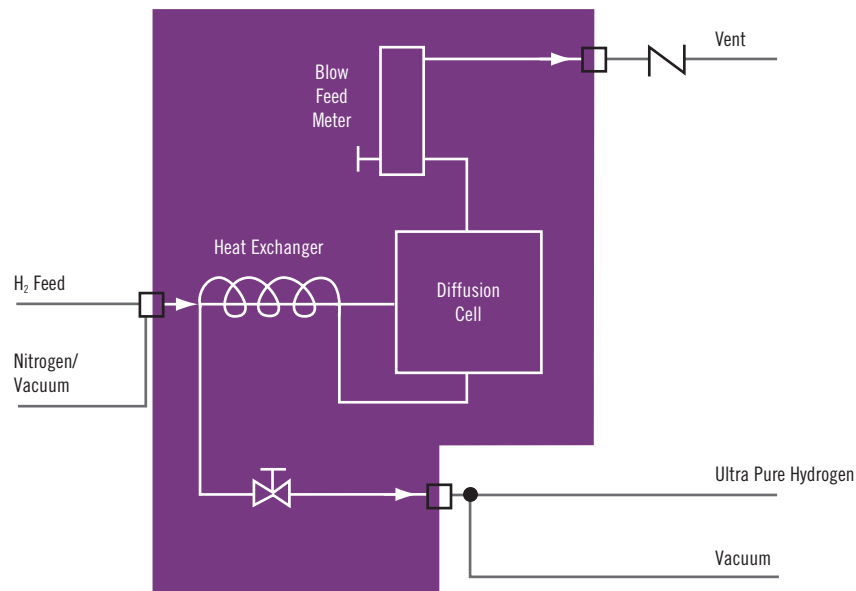
# HP Series Hydrogen Purifiers

## Specifications: HP Series Palladium Membrane Hydrogen Purifier

Model	Max Flow <sup>1</sup> (SLPM)	Dimensions in inches (mm)			Power (amps)		Connection Size (MVC)		
		Width	Height	Depth	110 VAC	220 VAC	Inlet	Outlet	Bleed
HP-2-VCR	1	11 (279)	8 1/4 (210)	11 1/8 (283)	3	1.5	1/4"	1/4"	1/4"
HP-10-VCR	5	11 (279)	8 1/4 (210)	11 1/8 (283)	3	1.5	1/4"	1/4"	1/4"
HP-25-VCR	12	11 (279)	8 1/4 (210)	11 1/8 (283)	3	1.5	1/4"	1/4"	1/4"
HP-50-VCR	24	11 (279)	8 1/4 (210)	11 1/8 (283)	3	1.5	1/4"	1/4"	1/4"
HP-100-VCR	47	11 (279)	10 (254)	15 (381)	6	3	1/4"	1/2"	1/4"
HP-150-VCR	71	11 (279)	10 (254)	15 (381)	8	4	1/4"	1/2"	1/4"

<sup>1</sup> 200 psig inlet pressure and 0 psig outlet pressure

## Flow Diagram HP Series



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