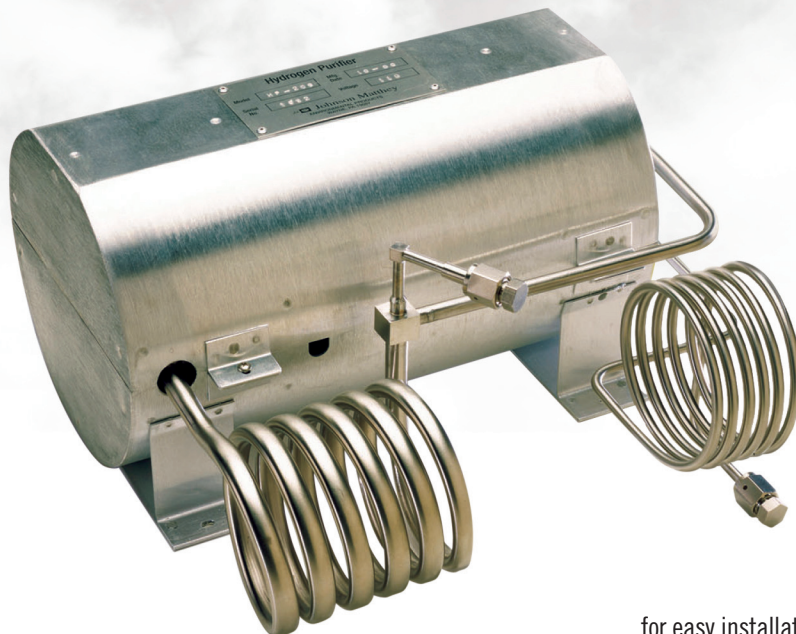


Palladium Membrane Diffusion Cells



Replacement cells for use in MOCVD reactors or with JM-supplied control system

Palladium alloy diffusion cells can be used as replacements in Johnson Matthey HP Series units or coupled with a control system. Cells are available for every size corresponding to our HP Series model numbers. Each cell includes the heaters and thermocouples.

The palladium membrane technology provides 99.999999% purity for semiconductor and photovoltaic manufacturing. These replacement cells are available in standard and custom piping configurations. The compact, single-cell design allows

for easy installation in MOCVD reactors or other limited-space locations. Heater and thermocouple connections are included to allow connection to JM or customer-supplied control systems.

Piping connections for feed H₂, pure H₂ and bleed vent line are included. Cell sizes are available for 1 to 220 slpm. The HP-200 and larger cells use a unique passive preheater design to pre-heat the gas at these higher flows. This design ensures that the gas is already at operating temperature before it enters the palladium membrane tubes. This improved palladium cell helps allow rapid flow changes with no loss of pressure.

If you are interested in replacement palladium cells for Aixtron, Thomas Swan, Emcore, Veeco or other OEM MOCVD tools, be sure to provide the original serial number to assure compatibility.

Applications:

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



Johnson Matthey
Gas Purification Technology

Palladium Membrane Diffusion Cells

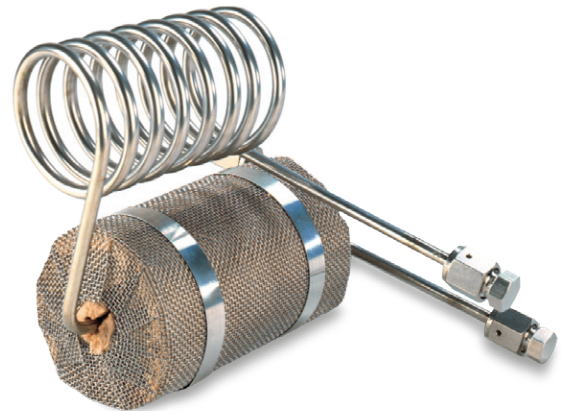
Specifications

Model	Max Flow ¹ (SLPM)	Cell Body ²	Heater Type (120 or 240V)	Connections (MVCR)
HP-2	1	D—1 5/8", L—2 1/2"	75 watt	Feed—1/4", Bleed—1/4", UPH—1/4"
HP-10	5	D—1 5/8", L—5 1/4"	150 watt	Feed—1/4", Bleed—1/4", UPH—1/4"
HP-25	12	D—2 1/2", L—4 1/2"	400 watt	Feed—1/4", Bleed—1/4", UPH—1/4"
HP-50	24	D—2 1/2", L—4 1/2"	400 watt	Feed—1/4", Bleed—1/4", PH—1/4"
HP-100	47	D—5 1/8", L—5 3/4"	500 watt	Feed—1/2", Bleed—1/4", UPH—1/4"
HP-150	71	D—4 1/8", L—8 3/8"	500 watt	Feed—1/4", Bleed—1/4", UPH—1/4"
HP-200	94	D—8", L—13 1/2"	1500 watt (passive preheater)	Feed—1/2", Bleed—1/4", UPH—1/4"
HP-230	108	D—8", L—13 1/2"	1500 watt (passive preheater)	Feed—1/2", Bleed—1/4", UPH—1/4"
HP-400	188	D—8", L—22"	1500 watt (passive preheater)	Feed—1/2", Bleed—1/4", UPH—1/4"
HP-480	225	D—8", L—22"	1500 watt (passive preheater)	Feed—1/2", Bleed—1/4", UPH—1/4"

Dimensions are for standard cells. Other configurations are available.

¹@200 psig inlet pressure and 0 psig outlet pressure

²Includes insulation



HP-100C Pd cell for use in HP-100 Purifier.



Johnson Matthey
Gas Purification Technology

Johnson Matthey USA

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Japan, Singapore