

FUEL CELL

PYROLYSIS GAS

Do you want the purest hydrogen at the best recovery rate?

RECOVERY

TAIL GAS

BIOGAS

AMMONIA SYNTHESIS

DEBLENDING

METHANOL

REFORMATION

PSA POLISHING

WOOD WASTE

MEMBRANE

MUNICIPAL WASTE

CRACKED AMMONIA

HYDROGEN

NATURAL GAS

PLASMALYSIS

PALLADIUM

DECARBONIZATION

PURIFICATION

SMR/ATR

E-FUELS

SEPARATION TECH

HMT's thin-film Palladium membrane separator could be your answer

SYNGAS

METHANE



HYDROGEN
MEM-TECH

Discover what we can achieve together

Palladium has the unique property and ability to only allow hydrogen molecules to move across it while blocking all others. This allows us to efficiently separate hydrogen from all other gases with ultra high purity of up to 99,999+ % and recovery factors up to 99 %. We increase both your quality and product volumes for increased revenue opportunities.

Our proprietary thin-film membrane configuration has a high flux and productivity making for a cost effective and compact product. That compactness and the modular nature enables simple installation on a lower footprint, lowering installed capex. Flexible and scalable a system can readily adapt to your changing needs over your plants lifetime. With multiple units operating in an N+1 configuration, online maintenance is an option which can maximise your plant uptime.

With continuous and stable gas flow, we require none of the controls, switching valves or buffers required for sequencing or flow control. This simplicity offers an un-matched reliability.

We find applications in process improvement, as retrofits to existing processes, and in new plant deployments where our benefits are desirable to our customers. Tolerant to a wide range of gas species, the membrane can be successfully applied in many syngas, methanol and ammonia based applications. What is your application?

Lets talk.

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A small frame separator mounted on a frame with insulation.

SYSTEM PERFORMANCE

Feed rate range for a single separator	up to	10.000 Nm ³ /hr
Hydrogen Recovery Rate *	up to 99 %	dependent on process conditions
Hydrogen Purity *	up to 99,999+ %	or fuel cell quality
Overhaul Service Interval *		42.500 op.hours

PROCESS CONDITIONS

Design Pressure	up to	50 Bar
		725 psi
Max differential pressure #		25 Bar
		362 psi
Hydrogen Outlet Pressure	up to	7 Bar
		101,5 psi
Recommended Operating Temperature	300 to 350	deg C
	572 to 660	deg F
Design Temperature		450 deg C
		842 deg F

* Dependent on process parameters and inlet gas composition

Across membrane

