



# Membrane Gas Separation and Permporometry System (MGSPS)

The membrane industry is one of the growing ones in the field of gas separation which is the key sectors of various industries including petroleum, petrochemical and natural gas industries. Permporometry is a method by which the characteristics of the interconnecting active pores of membrane that are responsible for the actual membrane performance, can be measured. Permporometry is a relatively new characterization method to evaluate the active pores of membrane. It is based on the controlled stepwise blocking of pores by condensation of a vapor, present as a component of a gas mixture and the simultaneous measurement of the gas flux through the membrane. MGSPS device as the first Iranian apparatus for testing the membrane, has taken a major step in meeting the membrane industry requirements.



### Features and facilities:

- Gas flow controller
- Electric and manual control valves
- Manual/ automatic control of flow
- Max furnace temp: 500°C
- Temperature controllers
- Cold trap chamber
- Babblers flowmeter
- Back pressure regulator
- Saturator
- Pressure monitoring
- Membrane processes test module
- Pressure transducer

### Capability

- Gas separation membranes.
- Review and analysis of the gaseous component in feed gas penetration, and exhaust
- The ability to combine various amounts of gases using MFC
- Separation measurement at various pressures
- Equipped with oven and temperature controller
- Used for tubular microporous membranes, mesoporous membranes
- Measurement of pore size distribution of all kind of porous membrane
- Capable of working at low pressure

### SPECIFICATION

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Membrane Test	Max Pressure:7 bar - Max Temperature: 500°C
Permporometry Test	2-50 nm
Dimension	80×45×80 cm