

# Helium Mass Spectrometer Leak Detector

Models: HMS-M-300F (Manual), HMS-A-300F (Auto) & HMS-A-300T (Turbo Version)



High Vacuum Technology has been finding uses in increased number of industrial applications. Especially so, in the case of development of nuclear components which calls for a high degree of vacuum tightness and a reliable leak detection method which can detect minutest leak paths.

The technique adopted in this spectrometer and the selection of helium gas as the tracer, compliments each other. Helium is known for its nontoxic, non-hazardous, nondestructive, available plentiful, relatively inexpensive and its presence in the atmosphere is a negligible 5 ppm and has a low atmospheric partial pressure which enables helium to present a low background signal. These special characters enables helium to go through smallest leak paths without effecting parts or process and thus be able to leak detect easily, reliably and economically. The leak detectors can be used for testing and measuring vacuum integrity in products like: Automotive parts, Bellows, Beverage can and food containers, Pressurized fluids, Vacuum packed solids, Electronic Feedthroughs, Electron tubes, Glass to metal seals, Heat Exchangers, Hermetic seals, Medical devices, Nuclear components, Quartz crystal packages, Refrigeration parts, Relays, Semiconductor packages, Tanducers, Vacuum Hardware, Vacuum switches and in Systems like Electronic microscopes, Evaporation coils, Freeze dryers, Ion implanters, Nuclear reactors, Vacuum evaporators and Vacuum furnaces.

HINDHIVAC's Mass spectrometer leak detector is a complete system used for locating and measuring the size of the leak either into or out of a device or a container. In operation, this method of leak detection is initiated when the tracer gas, helium, is introduced to a test job which is connected to the HMSLD system. The helium from the test job leak travels through to system, its partial pressure is measured and results are displayed on the measurement meter. The HMSLD operating principle consists of ionizing gases in a vacuum and accelerating various ions through an electric and magnetic field. The helium ions are separated and collected and the resulting ion current is amplified and measured as a leak in m.bar lits/sec.

## Special features:

- Short response and clean-up time
- Auto/manual versions available
- Laminated top for clean work space
- LN2 Trap holds charge for 12 hours

## TECHNICAL SPECIFICATIONS

Parameters	Model: HMS 001	Model: HMS 003 (Auto)
<b>Sensitivity (atm.cc/sec.)</b>	$2 \times 10^{-11}$	$2 \times 10^{-11}$
<b>Leak range (9 ranges)</b>	From $1 \times 10^{-5}$ to $2 \times 10^{-11}$ atm.cc/sec. presented in two dial setting	From $1 \times 10^{-5}$ to $2 \times 10^{-11}$ atm.cc/sec. presented in two dial setting
<b>Resolution</b>	Resolving power of 14 at mass 4 with a response time of 1.0 sec.	Resolving power of 14 at mass 4 with a response time of 1.0 sec.
<b>Power</b>	220V AC, 50Hz, 15 amps, 3 meters long cable with 15 amps 3 pins plug	220V AC, 50Hz, 15 amps, 3 meters long cable with 15 amps 3 pins plug

HIND HIGH VACUUM CO. PVT. LTD.

Site No.17, Phase 1, Peenya Industrial Area, Bangalore - 560 058, India.Ph: 080-8394518, 8394615, 8394617, 8394640. Fax: 080-8394874. E.Mail : info@hindhivac.com

SALES OFFICE

Baroda: Ph: 33178, 359039. Fax: 0265-331505. Calcutta: Ph: 4661462, 4649182. Fax: 033-4662830. Chennai: Ph: 4891061. Fax: 044-4891061. Hyderabad: Ph: 3235504, 3234609. Fax: 040-3235504. Mumbai: Ph: 5550003, 5587219. Fax: 022-5563724. New Delhi: Ph: 6282410,6282411. Fax: 011-6282412. Pune: Ph: 5466095, 5442426. Fax: 020-5466095.