



LHSP04



LHSP07

Description

HELIUM SPRAY PROBE DESCRIPTION			
P/N	Description	Assembly	Helium Source
LHSP04	Helium Spray Probe Gun with Regulator	<ul style="list-style-type: none"> • Spray probe with rigid tip • 10' - ¼" OD poly hose with ¼" NPT end fitting • 6" long flexible probe • User manual 	High pressure helium bottle with 0-100 psi max outlet regulator
LHSP07	Helium Spray Probe Gun with Regulator and Reservoir	<ul style="list-style-type: none"> • Spray probe with 4" rigid tip • 10' - ¼" OD poly hose with ¼" NPT end fitting x CPC quick connect • 6" long flexible probe • 620cc refillable aluminum reservoir with gauge and 160 psig pressure relief valve (maximum pressure is 150 psig) • Fill adapter fitting (male CPC x male CPC) • User manual 	High pressure helium bottle with 0-100 psi max outlet regulator or Portable 620cc reservoir (to be filled by customer)

LACO's helium spray probes are designed for use in maintenance or production leak detection applications.

Safety



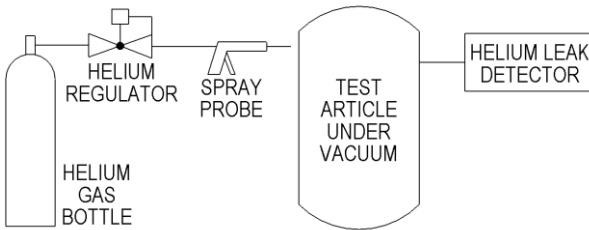
WARNING

- Do not inhale helium gas. Helium is non-toxic but may cause suffocation. Lack of enough oxygen can cause serious injury or death. Refer to Safety Data Sheet (SDS).
- Never connect the spray probe directly to a high-pressure helium gas cylinder, even with the spray probe model LHSP04 which includes a regulator. Always use regulator (i.e., P/N: LHREG-01) attached to the gas cylinder with a maximum output of 100 psig.

Installation

High Pressure Helium Gas Cylinder Method

1. Follow the diagram shown below, commonly known as outside-in leak testing.

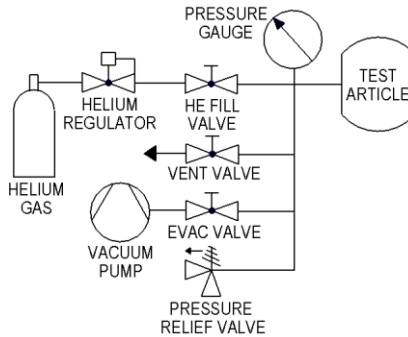


2. Ensure main gas cylinder valve is closed during installation.
3. Connect spray probe to hose and then connect hose end to regulator output. Turn regulator valve to closed position and then open main bottle valve.
4. Adjust regulator output knob pressure to between 10-60 psig. Do not increase pressure over 80 psig.

Filling Portable 620cc Reservoir with Helium Gas (see figure below)

Equipment needed:

- Helium gas cylinder with 0-150 psig regulator
- Gas charge manifold (see following schematic)
- Evacuation pump and hose
- LHSP07 Portable 620cc Aluminum Reservoir



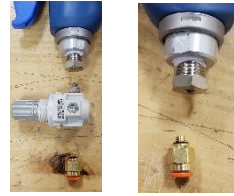
Assembly Steps

1. Connect adapter fitting to reservoir. Run 10' poly line from reservoir to gas charge manifold.
2. Connect helium line from helium fill valve on manifold to helium bottle regulator.
3. Set pressure to 150 psig on regulator output. The maximum pressure rating of the LHSP07 Reservoir is 150 psig.
4. Connect evacuation pump to the evacuation valve using hose. Turn on evacuation pump.
5. Open evacuation valve to evacuate inside of reservoir for 20 seconds. Close evacuation valve.
6. Open helium fill valve. Ensure pressure stays at 150 psig on manifold for at least 20 seconds. Close helium fill valve.
7. Disconnect reservoir. Ensure pressure is stable in reservoir.
8. Vent excess helium from manifold using the vent valve.

Operation

1. Adjust regulator on bottom of handle to desired flow rate.
2. To observe gas flow, depress trigger handle and place probe tip into small container of water to observe relative bubble rate.
3. For gross leak testing, the helium spray pressure can be higher (1-3 psig or 5-15 bubbles per second). To determine if overall assembly is leak tight, spray initially with a higher flow rate over the entire test object.
4. If leaks are present, adjust regulator on bottom of handle to achieve a smaller flow of helium (1-2 psig or 1-4 bubbles per second).

5. The LHSP07 can be connected to the supplied aluminum reservoir or can be directly connected to a helium source via the supplied 10' hose. A refill adaptor is supplied for filling the reservoir from the helium source.
6. The LHSP04 can be used without regulator by directly connecting push tube fitting to spray gun.
 - a. Remove push tube fitting from regulator.
 - b. Remove regulator and hex nipple from adapter.
 - c. Install push tube fitting to adapter.



Leak Testing Best Practice

- To assist in pinpointing a leak location, spray the suspect leak location in short spurts. Note the response time of the leak detector as well as the magnitude of the signal that appears. A fast response time with large signal indicate a location close to the spray point.
- When leak testing a part with multiple potential leak locations, start by spraying locations at the top of the part and work down to the bottom of the part.
- Compressed air or a fan can be used on the test part to dissipate the helium trapped on or near the part and reduce helium background.

Maintenance and Accessories

HELIUM SPRAY PROBE ACCESSORIES AND SPARE PARTS	
P/N	Description
LMSA0193	Plastic Carry Case (13" W x 7" H), black
LMSA0194	Large Plastic Carry Case (16" W x 9" H), black
LHREG01	Regulator, CGA580 connection, 0-100 psi output, ¼" tube
LMGC-60	Gas Charge Manifold Assembly, 60 psig, 3/8" OD tubing
LMGC-150	Gas Charge Manifold Assembly, 150 psig, 3/8" OD tubing
LMSA96628	Additional Portable 620cc Aluminum Reservoir for LHSP07
LMSA92107	Flexible Tip Assembly, 8" L
LMSA92025	Rigid Tip Assembly
LMSA5982	Mini Regulator, 0-30 psi output