

# Reservoir 125

---

*110-100*



***HERNON***®  
***MANUFACTURING, INC.***  
**High Performance Adhesives, Sealants and  
Precision Processing Solutions**

121 Tech Drive  
Sanford, FL 32771  
[www.Hernon.com](http://www.Hernon.com)  
Phone: (407) 322-4000 Fax: (407) 321-9700  
3/25/2014

## About This Manual

Thank you for selecting Hernon's R125 for your application. The R125 was developed with your needs in mind. Your R125 has been calibrated and tested to ensure optimal performance and long life.

To ensure safe and trouble-free operation, please review the procedures and warnings contained in this manual before setting up or operating your R125. While safety is paramount, proper handling and operation of R125 will also serve to produce quality product yield.

Hernon Manufacturing designs and builds a wide range of custom manufacturing and packaging machines. Hernon Manufacturing machines are built only with high quality components of proven reliability.

This Manual is published by Hernon solely as a guide for Operators, Design Engineers, OEM Customers, and Maintenance Personnel. Liability for difficulties arising from unknown or unforeseen technical limitations is disclaimed, and Hernon makes no representation as to the thoroughness of this manual.

**Hernon reserves the right to revise this manual at any time without notice, for any reason.**

If you have any problems or concerns, please contact Hernon Technical Support at (407) 322-4000. Trained Hernon professionals are standing by to serve you.

## IMPORTANT

**These instructions are general. Specific gel times should be evaluated and recommended by Hernon's Lab. Please contact Hernon's Technical Department (407)322-4000 for specific instructions.**

**Table of Contents**

Reservoir 125 ..... 1

About This Manual ..... 2

Table of Contents ..... 3

Unpacking and Inspection ..... 4

Safety ..... 5

Specifications ..... 6

Reservoir Assembly ..... 7

Installation ..... 8

    Tube Installation ..... 8

Low Level Switch (Optional) ..... 9

    Sensor Installation ..... 9

    Sensor ..... 9

    Adjustment of the Sensor Potentiometer: ..... 10

        NPN ..... 10

        PNP ..... 10

    Fill/Refilling Set-Up Procedure ..... 11

    Start-Up pressurize Procedure ..... 11

Maintenance ..... 11

Replacement Parts List ..... 12

Warranty ..... 13

Notes ..... 15

## **Unpacking and Inspection**

Carefully remove all contents from the boxes and check for damage. **Hernon is not responsible for damage from shipping – all claims for shipping damage should be made with carrier.**

Check all boxes for contents and document any serial numbers for further reference. You may wish to retain original shipping cartons in case you need to repackage any item for return.

If you observe or experience any problem with your equipment, notify Hernon Customer Support, your authorized distributor, or your Hernon representative immediately.

*NOTE: REPORT ANY SHORTAGE TO HERNON CUSTOMER SERVICE*

**Phone: (407) 322-4000 Fax: (407) 321-9700 Email: sales@hernon.com**

Before continuing with unpacking and installation, please read the following chapters of this manual for safety recommendations and installation, running, and troubleshooting instructions.



**WARNING! Always observe safety requirements!**

**Safety**

Please, read all safety specifications before performing any procedures such as checking products on delivery, storage and transportation, installation, wiring, operation and inspection, or disposal. Be sure to always observe these precautions thoroughly.

<i>GENERAL WARNINGS</i>
<ul style="list-style-type: none"><li>• All operators and maintenance personnel are required to read this safety instruction list before attempting to operate, adjust or repair machine.</li><li>• <b>Do not</b> attempt to open lid/cover until air pressure has been released</li><li>• <b>Never</b> operate machine with electrical enclosures open.</li><li>• <b>Do not</b> operate this or any other machine without all protective guards and covers in place.</li><li>• <b>Do not</b> operate this machine until reading and understanding the operator’s procedures in this manual.</li><li>• Any electrical servicing or adjustments requiring access to electrical enclosures on the machine should be performed only by qualified personnel with both fluid and electrical power disconnected and locked out.</li><li>• <b>Safety glasses</b> must be worn by the operator and any one in the area of operation.</li><li>• Hands should never be placed near moving parts.</li><li>• Disconnect and lock out electrical power, hydraulic power, air pressure and water before performing machine or tooling adjustment and or maintenance.</li><li>• Keep area around machine clear of all debris, water, oil, etc.</li><li>• Use only genuine OEM Hernon replacement parts when servicing this machine tool. Ignoring this warning could cause unintended operation and possible injury.</li></ul>

**This equipment is designed to be used properly set up, with components correctly connected, and operated in accordance with relevant instructions. Its design was developed to maximize operator safety.**

## General

The R125 is a pressurized material reservoir. It is specially designed to work with Hernon products, and is offered in the following dispense tube sizes:

- 1/4" O.D. (Standard)
- 1/8" O.D.
- 3/8" O.D.

## Specifications

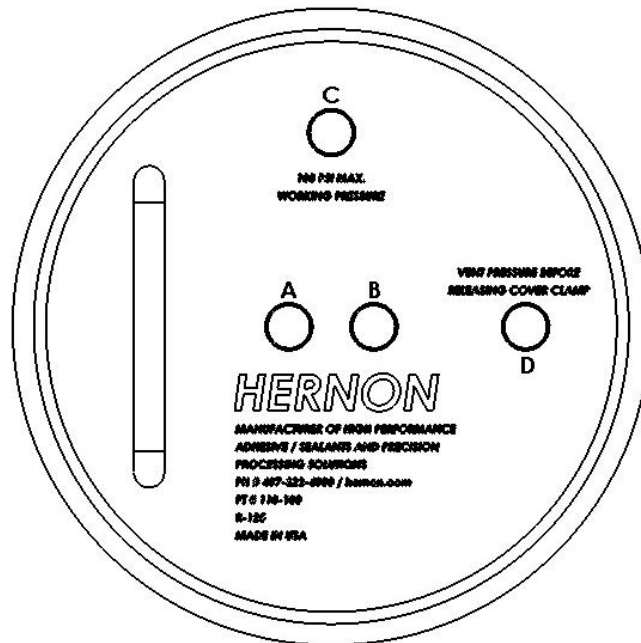
System Part Number	110-065
Power Requirements	110 or 220VAC NOTE: This system in NOT auto Switching
Internal Power Supply Voltage	24V and 48V
Air Pressure	0-100 PSI (Maximum)
Chamber Dimensions	5.75" (146mm) I.D. x 10" (254mm) Depth
Internal Volume	1 Gallon (3.8 Liters)
System Warranty	1 year from purchase
Weight (approx.)	13lb (5.89kg)

NOTE: For additional replacement parts see page 13.

## Reservoir Assembly

The following directions show how to assembly and prep the R125 for usage after unpacked. All Components will be in their own plastic bag, each bag will have a name and a part number labeled on it.

1. The layout for respective locations for fittings to thread into is shown below.



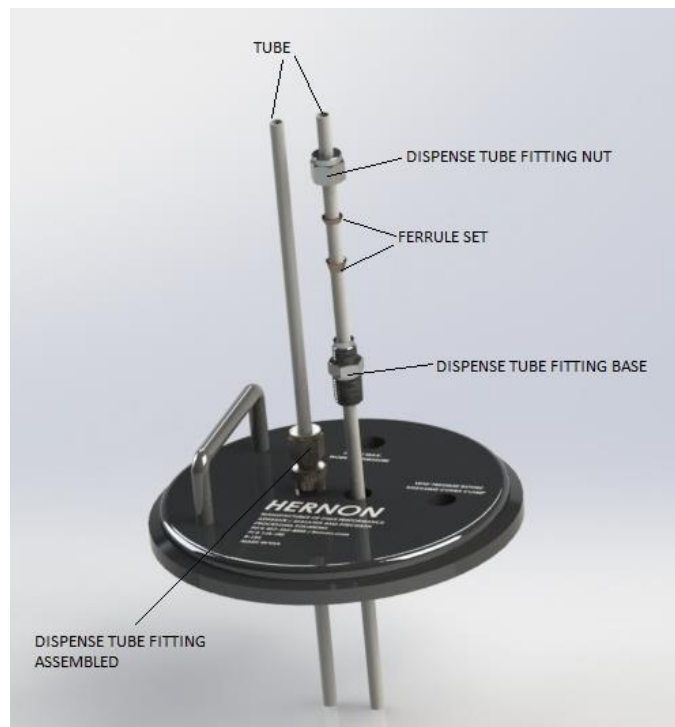
- A: Plug (101-014), or Thermocoupler (101-028, 101-053, 101-055)
  - B: Plug (101-014), or Thermocoupler (101-028, 101-053, 101-055)
  - C: 100 PSI Safety Valve (103-003)
  - D: Regulator Assembly
2. First, thread the Regulator Assembly into Port D.
  3. Next, thread the 100 PSI Safety Valve into Port C.
  4. Next, thread the Plug (101-014), or Thermalcoupler (101-028, 101-053, 101-055) into Port B.
  5. Finally, thread the Plug (101-014) or Thermocoupler (101-028, 101-053, 101-055) into Port A.

## Installation

Contained in this section are the recommended procedures for setting up and maintaining various aspects of the R125 Pressure Reservoir. Strict adherence to these procedures will ensure safe and smooth operation and maximum sealant life.

### Tube Installation

1. Assemble the ¼" NPT dispense tubing / compression connector into the pressure reservoir lid. For initial assembly convenience the ¼" NPT threads on the tubing connector should be prepared with pre-applied pipe sealant.
2. Assemble tubing through the nut and the back / front parts of the compression ferrule assembly as detailed below.
3. Insert the tubing assembly end into the male ¼" NPT connector body and loosely screw the nut onto the connector body.
4. Place the reservoir cap on the reservoir and push tubing through thermocoupler until the tube touches the bottom of the reservoir then retract the tubing about ¼" from the bottom.
5. Lightly tighten the nut on the ¼" NPT connector body to lock and seal dispense feed tubing and ferrule. Pull on the tube to verify ferrule is holding the tube. **NOTE:** Over tightening ferrule can close soft dispense tube.
6. Trimming the end of this tube at an angle will assure uninhibited liquid flow in case tube end contacts liquid container.
7. Connect the dispense end of the tube as required to a normally closed dispense valve or equal.





## Low Level Switch (Optional)

Low level sensor is used to detect sealant, adhesive or self-leveling fluid in low level, or almost empty condition. This can be then be programmed into an existing PLC to indicate as required. Low level indication is provided via a specialized sensor. The sensor / holder has been design for use with Heron standard one liter containers. Smaller containers can be used however the user must make sure that the container of fluid is positioned against (touching) the sensor housing.

### Sensor Installation

The sensor must be threaded and assembled into the supplied plastic holder so that the sensor face touches the inside bottom of the threaded sensor holder and lock in place with supplied sensor nut. The plastic sensor holder assembly is then threaded into the sensor port of the reservoir side wall. The sensor holder utilizes an O-ring seal.



Assembly w/ sensor option

Assembly w/o sensor option

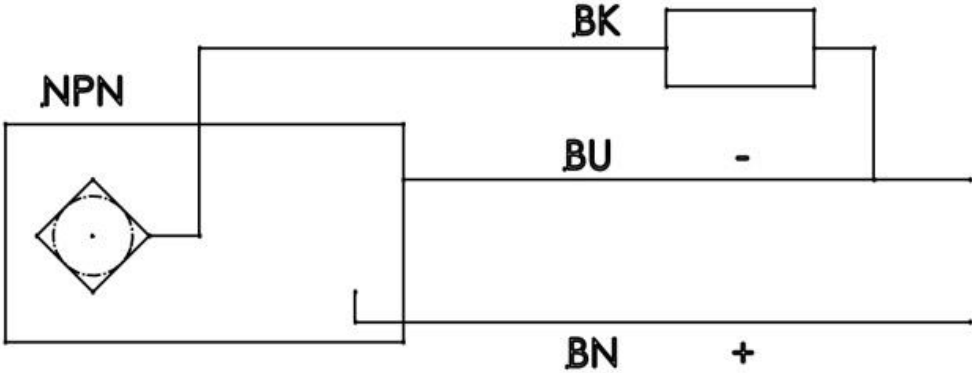
### Sensor

The sensor provides a solid-state NPN or PNP normally-open signal. Sensor should be installed by qualified personnel only. Maximum load current is 200mA. Heron does **NOT** recommend driving mechanical relays directly from the low level sensor. Incorporate a device that opto-electrically isolates the sensor from the relay coil if a relay is unavoidable in your circuitry. Please contact Heron Technical Support if you have any questions regarding the integration of this sensor into your controls circuitry. The sensor's factory installation information has been included. Keep it in a safe location for reference.

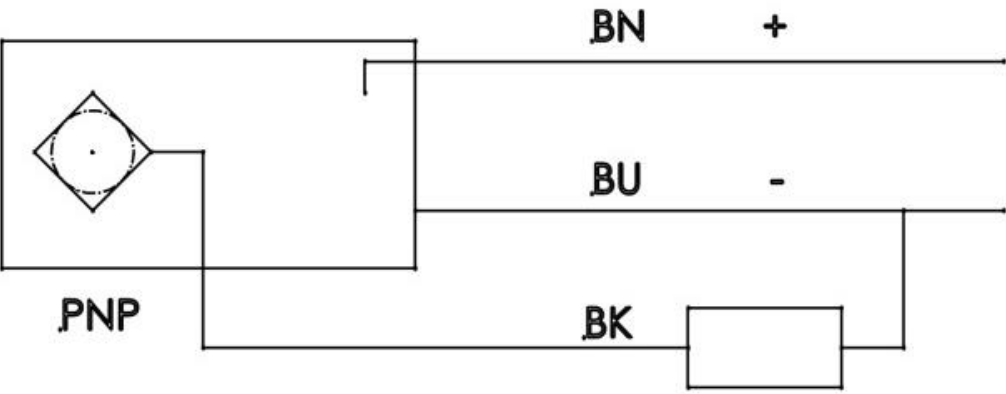
**Adjustment of the Sensor Potentiometer:**

Turning the potentiometer in a clockwise direction increases the sensitivity of the sensor. The potentiometer is factory-set for an operating distance of 0.7 to 0.8 Sn to a grounded standard target. It should be adjusted in increments of no greater than a quarter-turn. Increasing the sensitivity results in a greater operating distance to both conductive and non-conductive targets.

*NPN*



*PNP*



## Fill/Refilling Set-Up Procedure

**Note: For compatibility purposes, avoid placing sealant in reservoir without some sort of isolation barrier. Heron recommends the use of reservoir liners (see replacement parts list) or placement of original sealant container directly in reservoir. Do not place liquid directly into Reservoir or wet internal surfaces.**

1. Ensure pressure regulator is set for zero (0) PSI. Pull locked regulator knob out to unlock knob and turn counter clockwise to relieve air pressure to zero (0) PSI.
2. Turn clamp ring star nut counter clockwise and loosen clamp ring T-bolt. Once sufficiently loose the T-bolt can be turned 90 degrees and free clamp tie. Open clamp band slightly and lower ring just below cap clamp area.
3. Remove cap from pressure vessel using the handle on top and carefully set it aside.
4. Put liquid container inside pressure reservoir or use polyethylene bag as a liner (107-013) and fill liquid to be dispense into bag lined reservoir. **Do not pour liquid directly into pressure vessel this can contaminate the Reservoir.**
5. Insure that the O-ring stays in the groove of the cover. A light film of vacuum grease periodically wiped on the O-ring will prevent adhesives and sealants from adhering to the sealing surfaces. **NOTE:** Use only a small amount of vacuum grease on sealing surfaces. Excessive grease may migrate and contaminate dispense liquid.
6. Install cover on the pressure reservoir making sure to direct dispense tube end into container with dispense material / liquid.
7. Engage the reservoir cap clamp ring into clamp position, lock in T-bolt and tighten clamp as required for seal.
8. Connect dry filtered air supply to reservoir regulator input (¼" NPT) / quick disconnect.

## Start-Up pressurize Procedure

1. Pull pressure regulator knob out slightly and turn clockwise to increase air pressure. Never exceed 100 PSI maximum. Listen for possible air leaks and or any signs of dispense liquid / fluid leaking for connections. Start with lowest pressure and gradually increase as required.

## Maintenance

- Equipment should be checked periodically for loose nuts bolts and fasteners.
- Keep machine tool clean and free from oil and debris.
- A light coat of vacuum grease inhibits bonding of unseen sealants to reservoir seal flange, reservoir O-ring and safety valve assembly.
- Periodically verify safety valve is functioning properly.
- This machine tool requires dry filtered air.

**Replacement Parts List**

Below is a list of recommended replacement parts that should be kept on hand in order to minimize machine downtime due to normal wear or unexpected failure.

<b>Part Number</b>	<b>Description</b>	<b>Lead Time</b>	<b>Price (Each)</b>
<b>110-095</b>	NPN Level Sensor Kit W/ Adaptor Port	1 week	\$540.00
<b>101-096</b>	PNP Level Sensor Kit W/ Adaptor Port	1 week	\$540.00
<b>110-097</b>	No sensor option plug w/ O-ring	1 week	\$48.00
<b>101-055</b>	THERMOCOUPLE 1/4" NPT MALE x 1/8" TUBE	1 week	\$21.00
<b>101-028</b>	THERMOCOUPLE 1/4" NPT MALE x 1/4" TUBE	1 week	\$21.00
<b>101-053</b>	THERMOCOUPLE 1/4" NPT MALE x 3/8" TUBE	1 week	\$21.00
<b>109-074</b>	3/8" I.D. 2PC FERRULE SET	1 week	\$4.78
<b>109-073</b>	1/4" I.D. 2PC FERRULE SET	1 week	\$4.78
<b>109-061</b>	1/8" I.D. 2PC FERRULE SET	1 week	\$4.78
<b>101-033</b>	Tubing (1/4" Teflon)	1 week	\$5.82 / foot
<b>101-034</b>	Tubing (3/8" Teflon)	1 week	\$6.76 / foot
<b>101-035</b>	Tubing (1/8" Black Nylon)	1 week	\$1.04 / foot
<b>101-036</b>	Tubing (1/4" Black Nylon)	1 week	\$2.55 / foot
<b>CALL FOR PART #</b>	Tubing (3/8" Black Nylon)	1 week	CALL FOR PRICE
<b>109-004</b>	O-Ring	1 week	\$30.87
<b>101-019</b>	Regulator (0-30 PSI) Standard	3 weeks	CALL FOR PRICE
<b>101-016</b>	Regulator (0-100 PSI) Standard	3 weeks	CALL FOR PRICE
<b>101-021</b>	Regulator (0-30 PSI) Precision	3 weeks	CALL FOR PRICE
<b>101-022</b>	Regulator (0-100 PSI) Precision	3 weeks	CALL FOR PRICE
<b>109-003</b>	Clamp (includes T-bolt)	3 weeks	\$58.00
<b>106-020</b>	Star Knob	3 weeks	\$58.00
<b>107-013</b>	Reservoir Liners	1 week	\$6.00 / 5 liners

## Notes

- Product ships disassembled some assembled required.
- Use caution tightening Thermocoupler on tubing, over tightening can cause a stop of flow.
- If Star Nut is tight or squeaky apply white lithium grease or vacuum grease to the threads to mitigate problem.
- Make sure a Stainless Steel Washer is in front of the Start Nut whenever tightening the cap clamp.

## **Warranty**

### **CAUTION!**

HERNON CORPORATION RESERVES THE RIGHT TO INVALIDATE ANY WARRANTIES, EXPRESSED OR IMPLIED, DUE TO ANY REPAIRS PERFORMED OR ATTEMPTED ON HERNON EQUIPMENT WITHOUT WRITTEN AUTHORIZATION FROM HERNON. THOSE CORRECTIVE ACTIONS LISTED BELOW ARE LIMITED TO THIS AUTHORIZATION.

Hernon offers a one-year warranty against defects in material and workmanship on all system components, except the bulb, with proof of purchase date. Unauthorized repair, modification, or improper use of equipment may void warranty. The use of aftermarket replacement parts not supplied or approved by Hernon will void any effective warranties and may result in damage to the equipment.

The data contained in this bulletin is furnished for information only and is believed to be reliable. We cannot assume responsibility for results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any product or methods mentioned herein and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use thereof. Nothing in this bulletin is to be interpreted as a representation of freedom from domination of patents owned by others or a license under a Hernon patent. We recommend that each prospective user test his proposed application before repetitive use, using the data as a guide.

Reference Guide

