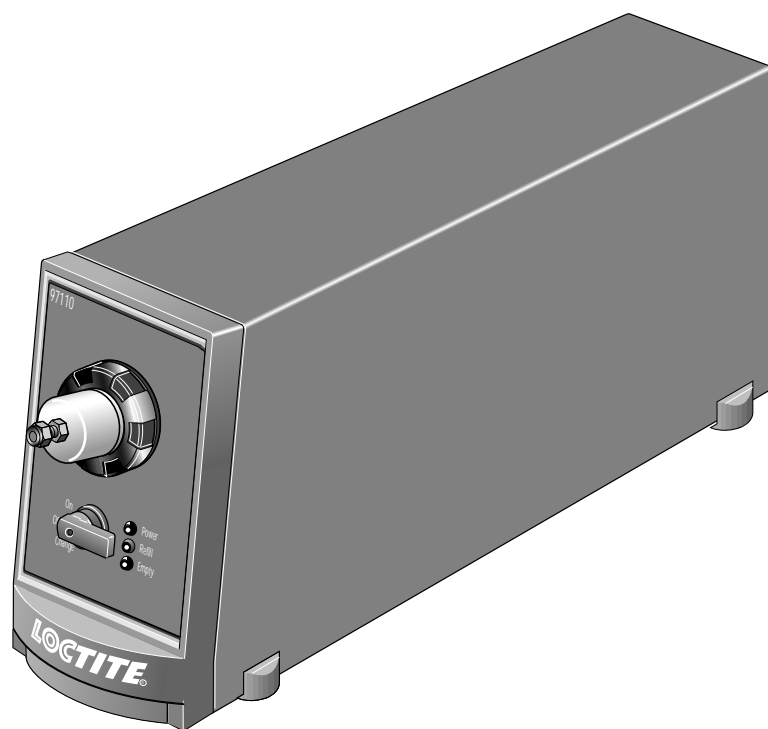




# **LOCTITE<sup>®</sup>**

# **WORLDWIDE EQUIPMENT**

OPERATION MANUAL

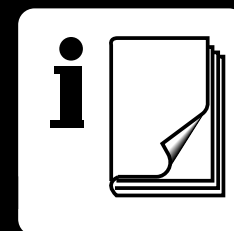


## **300ml Cartridge Reservoir**

**97109/97110**

**GLOBAL AVAILABILITY**

**GLOBAL SERVICE**





# 300ml Cartridge Reservoir

## 97109/97110

AN INTEGRATION OF ADHESIVE AND EQUIPMENT TECHNOLOGY

### FEATURES

- Adaptable to the Manual, Semi-Automatic and Automatic Controllers to build needed dispensing systems
- Optional product level sensing version is available to fulfill process control requirements
- Dispenses Instant Adhesive Gel packaged in a 300ml semco cartridge
- Worldwide Availability
- 10-Year Warranty
- Worldwide Service
- Application support for integrating both the adhesive and equipment interface

For additional information on Loctite® Worldwide Adhesives and Equipment, please contact your local Loctite representative for a copy of the Loctite Design Handbook.

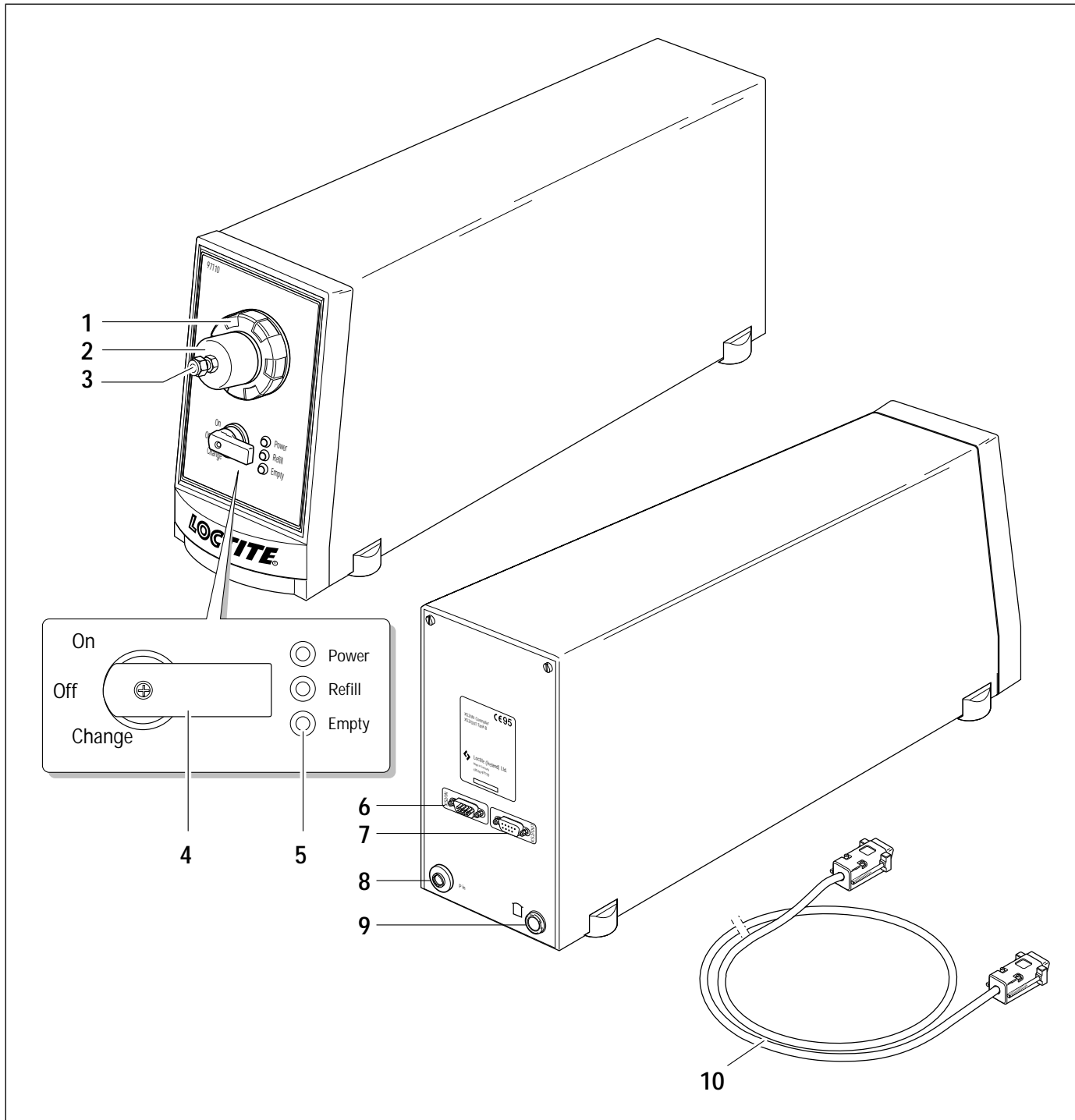
inner  
flaps  
on  
front  
and  
back  
covers  
crop  
3/4"  
shorter  
(at this  
hairline  
rule)

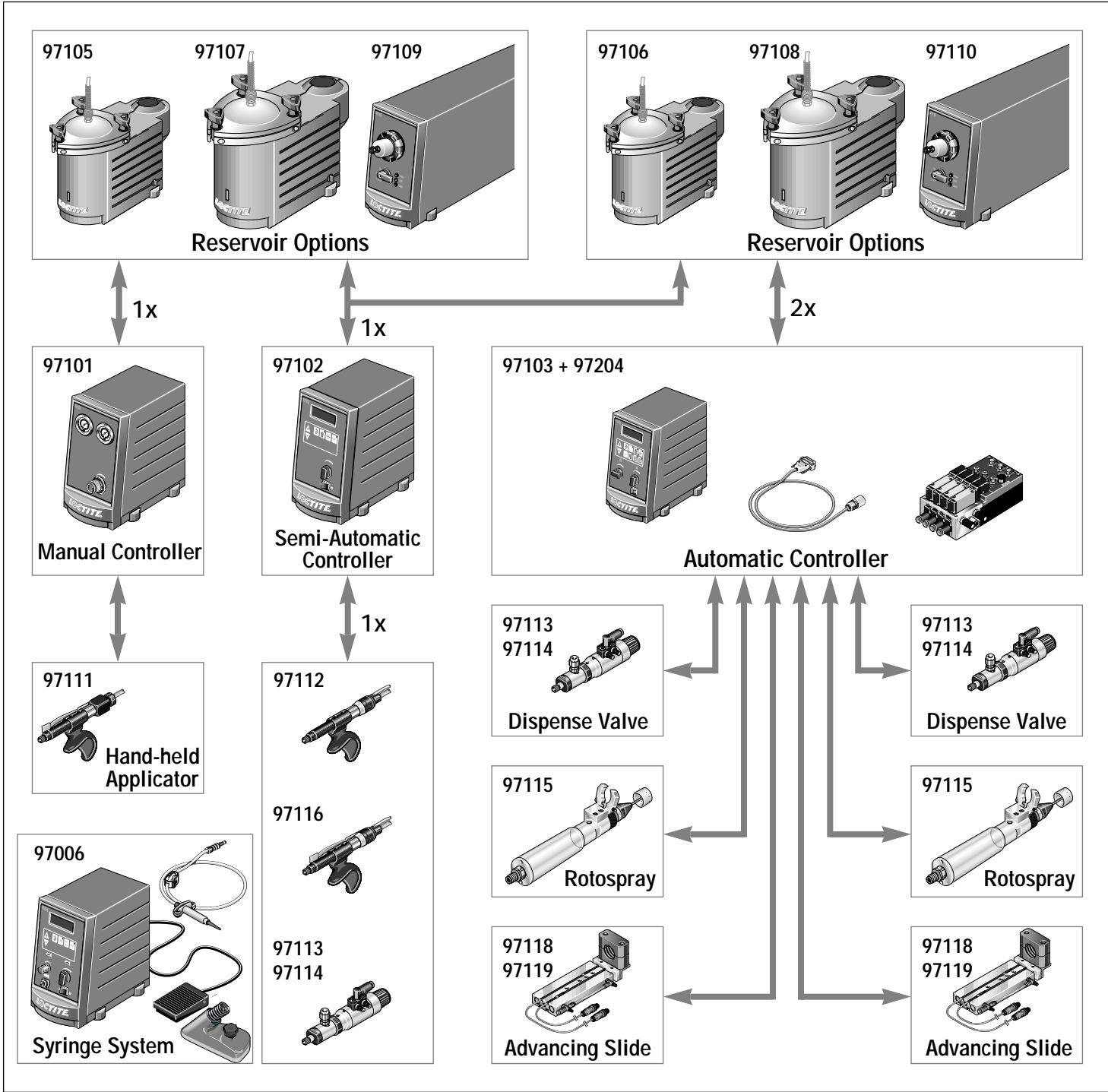


AVAILABILITY

SERVICE

inner flaps on front and back covers crop 3/4" shorter (at this hairline rule)





Loctite expressly warrants that all products referred to in this Instruction Manual under Cartridge Reservoir 97109 or 97110 (hereafter called "Products") shall be free from defects in materials and workmanship. Loctite's liability shall be limited, at its option, to replacing those Products which are shown to be defective either in materials or workmanship or to credit to the purchaser the amount of the purchase price thereof (plus freight and insurance charges paid therefore by the user). The purchaser's sole and exclusive remedy for breach of warranty shall be such replacement or credit.

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No Products shall be returned to Loctite for any reason without Loctite's prior written approval. Products shall be returned freight prepaid, in accordance with Loctite's instructions.

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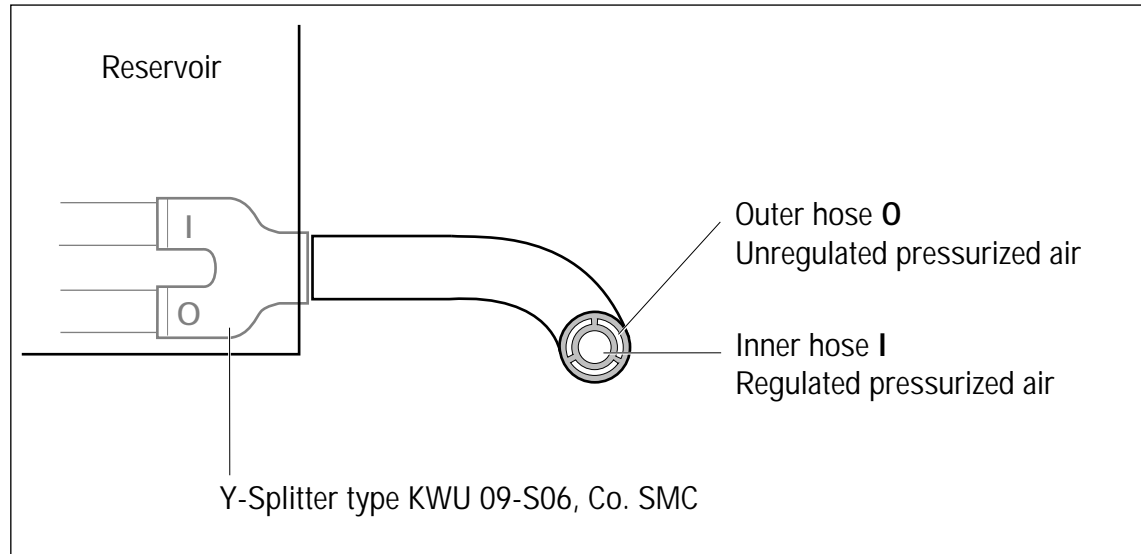
|   | Page No. |
|---|----------|
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## 8 Documentation

### 8.1 Accessories and Spare Parts

| Pos. No. | Description                        | Loctite Order No. |
|----------|------------------------------------|-------------------|
| 1        | Cartridge Connection Adapter ..... | 97255             |
| 2        | Tank Cord, 2 m .....               | 97213             |
| 3        | Filter Regulator .....             | 97120             |

### 8.2 Pneumatic Connection ☐, coaxial



# 1

## Please observe the following

### 1.3 For Your Safety



For safe and successful operation of the unit, read these instructions completely.  
If the instructions are not observed, the manufacturer can assume no responsibility.



- Observe general safety regulations for the handling of chemicals!
- Observe manufacturer's instructions! Request a safety data sheet for the product used!
- When working with pressurized air, wear protective glasses!

### 1.4 Usage

Loctite's Cartridge Reservoir is used to dispense Instant Adhesive Gel packaged in a 300ml semco cartridge.

The reservoir is used in conjunction with various Dispensing Valves and a Manual, Semi-Automatic or Automatic Controller depending on the customer's process method.

Two versions of the Cartridge Reservoir are offered, a standard or a product level sensing version is also available.

# 2

## Description

### 2.1 Displays, Operating Functions and Connections



- Fold out the illustration inside the front cover!

#### 1 Retaining Ring

#### 2 Cartridge Connection Adapter

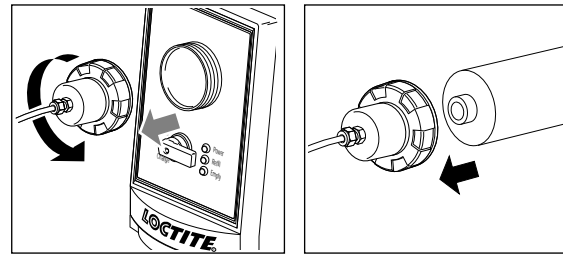
Connected to the retaining ring 1 by a securing ring.




#### 3 Product Feedline Connection

Can be connected optionally in the 6.3mm and 9.5mm sizes.

### 5.1 Inserting the 300ml Cartridge

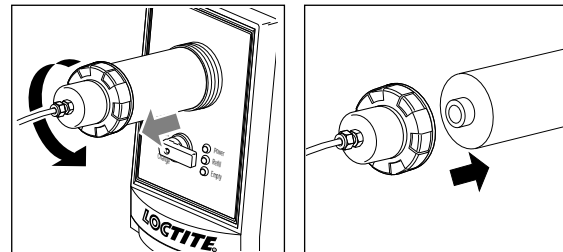
- Set the hand lever valve **4** to position **Change** (replace cartridge).
- Check that the dispensing valve is correctly connected according to its operating instructions.
- Unscrew the retaining ring **1** and cartridge connection adapter **2**.
- Remove the nozzle cap from the cartridge.
- Apply silicone grease to threads of cartridge.



- Insert the cartridge with the connection adapter **2** and tighten the retaining ring **1**.
- Set the hand lever valve **4** to position **On**.
- On the 97102 Controller, switch the reservoir on with the button .
- On the 97103 Controller, switch the reservoir on with button  or .
- On the 97101 Controller, use pressure regulator for setting the cylinder pressure.

### 5.2 Replacing the 300ml Cartridge

- Set the hand lever valve **4** to position **Change**.
- Unscrew and remove the retaining ring **1** and cartridge connection adapter **2**.
- Pull the cartridge from the connection adapter **2**.



- Insert a new cartridge according to Section 5.1.
- Set the hand lever valve **4** to position **On**.

## 2

## Description

The amount of product dispensed is controlled by three main factors:

1. Amount of pressure pushing on the piston
2. Length of time the shut-off valve remains open
3. Dispensing Needle size

### Level Sensoring Cartridge Only:

When connected to a Controller 97102 or 97103, the cartridge reservoir is pressurized automatically when the controller is switched on and depressurized automatically when the controller is switched off:



The hand lever valve **4** must be in position **On**.

No "empty" error message can be present.

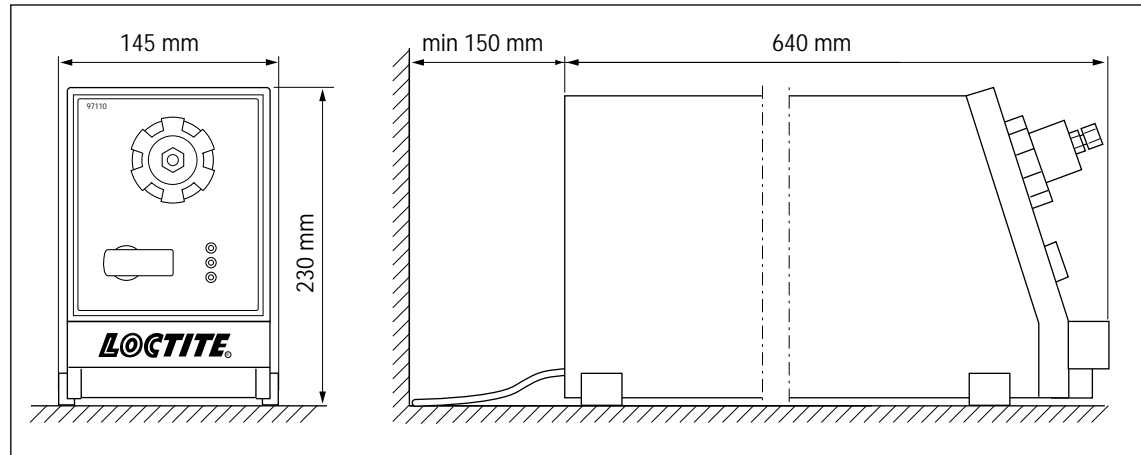
The indications "refill" or "empty" are visible on the LED's **5** and also appear as blinking text on the digital display of the controller. In addition, the "empty" error message is signaled with a beeping tone by the controller (see operating instructions of the controller). After the "empty" error message, the level sensing reservoir is automatically depressurized by the controller 97102 or 97103. The return travel of the piston is performed manually on the hand lever valve (see Section 5.2).

## 3

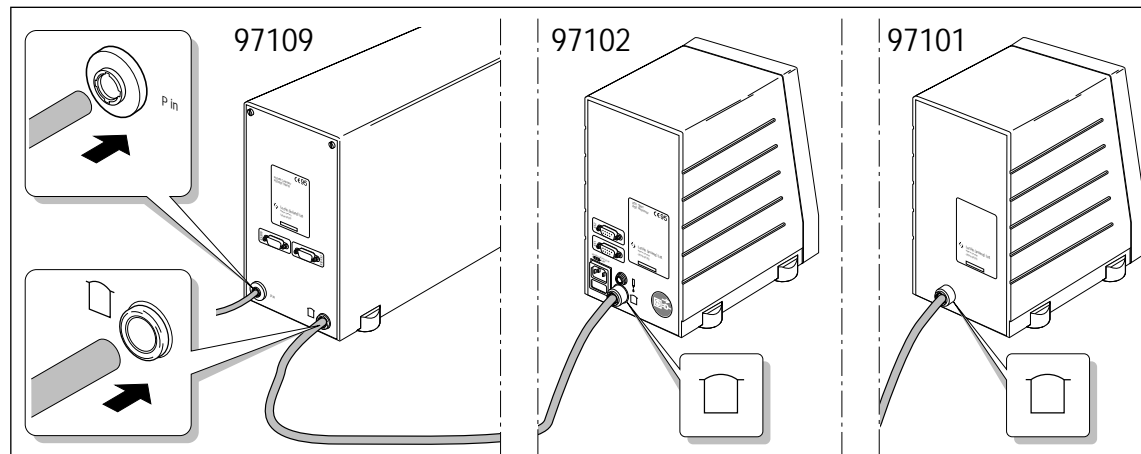
## Technical Data

|   |   |
|---|---|
| Pneumatic supply  | min. 4 bar (58 psi); max. 8 bar (116 psi)                       |
| Quality   | Filtered 10 µm, oil-free, non-condensing                        |
| If the required quality is not achieved,<br>install a LOCTITE® filter regulator | Accessory Order No. 97120                                       |
| Over-pressure valve   | Preset to 4 bar (58 psi)  |
| Pneumatic hose size   | External dia. 6 mm $\begin{matrix} +0.05 \\ -0.10 \end{matrix}$ |
| Pneumatic hose size □ , coaxial   | External dia. 9.5 mm, TW09 B-20, Co. SMC                        |
| Dimensions  | W x H x D: 145 x 230 x 640 mm                                   |
| Operating temperature   | +10° C to +40° C (+50° F to +104° F)                            |
| Storage temperature   | -10° C to +60° C (+14° F to +140° F)                            |
| Weight 97109 / 97110  | 8.2 kg / 8.6 kg   |

## 4.1 Space Requirements



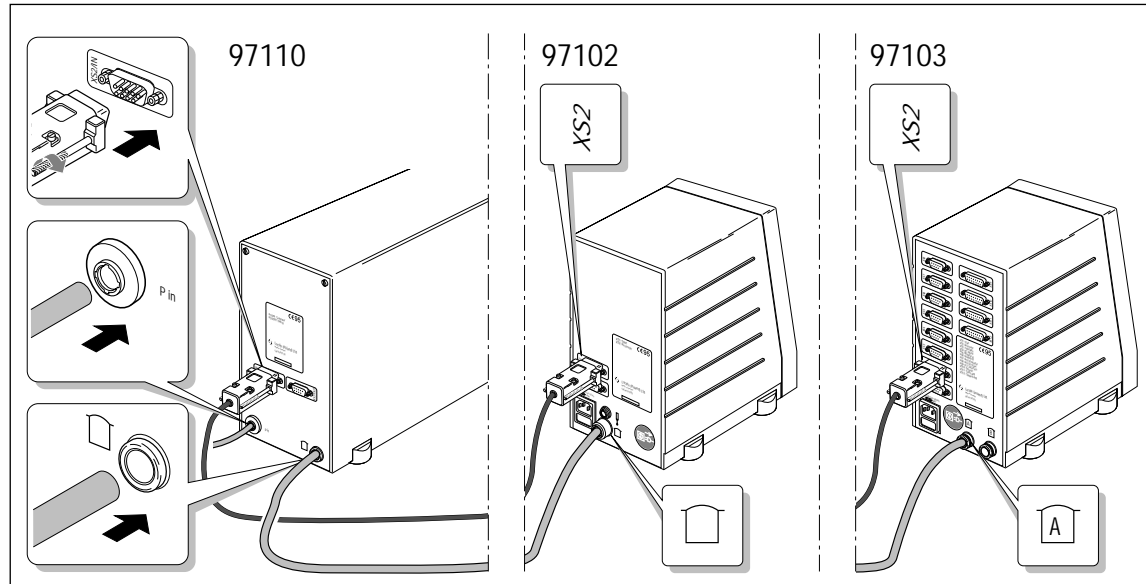
## 4.2 Connection of the Cartridge Reservoir 97109 to Controller 97101 &amp; 97102



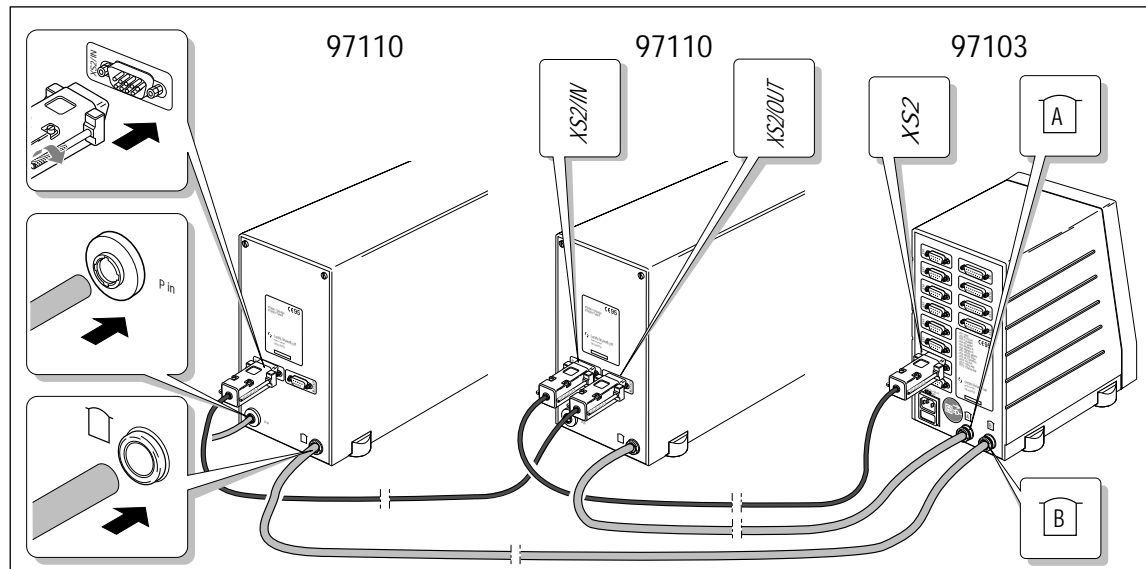
## 4

## Installation

### 4.3 Connection of the Level Sensing Reservoir 97110 to the Controller 97102 or 97103



### 4.4 Connection of Two Reservoirs 97110 to the Controller 97103



## 4 Hand Lever Valve

| Position                   | Action                                    |
|----------------------------|---|
| On                         | = Cylinder (piston) forward.              |
| Off                        | = Cylinder depressurized (pressure-free). |
| Change (replace cartridge) | = Cylinder (piston) back.                 |

## 5 LED Indicators (Level Sensing Only)

**Power** (green) = Lights for position **On** of the hand lever valve.

**Refill** (yellow) = If this LED lights, the next cartridge should be prepared for use.

**Empty** (red) = If this LED lights, the cartridge cylinder is depressurized automatically by the controller 97102 or 97103. The return travel of the piston is performed manually on the hand lever valve (see Section 5.2).

## 6 Equipment Connector XS2/IN (Level Sensing Only)


The controller 97102 or 97103 is connected here.

## 7 Socket XS2/OUT (Level Sensing Only)

With the connection of two cartridge reservoirs on a Controller 97103, the reservoir B is connected here.

## 8 Pneumatic Connection (P in)

Connection for the external pneumatic supply.

9 Pneumatic Connection , Coaxial

The coaxial pneumatic hose to the controller 97101, 97102 or 97103 is connected here.

Outer hose **O** – Supplies the controller with unregulated pressurized air  
(for connections, see Section 8.2).

Inner hose **I** – Supplies the product reservoir with regulated pressurized air from the controller.

## 10 Tank Cord (Level Sensing Only)

## 2.2 Theory of Operation

A 300ml Cartridge of Instant Adhesive Gel is loaded into the sleeve of the reservoir.

The Reservoir is then pressurized from a Loctite® Controller using clean, filtered dry air. The piston of the pneumatic cylinder presses the product out of the cartridge and forces it through the product feedline to the shut-off valve.

## 5

## Dispensing

### 5.3 Shutdown

- Move hand lever valve **4** into the “off” position.
- Place a protective cap on the dispensing needle.




## 6

## Care, Cleaning and Maintenance

- If prolonged product shutdown is anticipated, shut total system down and remove 300ml cartridge from sleeve of reservoir.
- Replace recommended spare dispense valve assembly as stated in its appropriate instruction manual.

## 7

## Troubleshooting

| Type of malfunction  | Possible causes   | Correction   |
|--|---|--|
| No adhesive is dispensed.                                    | <ul style="list-style-type: none"> <li>– Product reservoir is empty.</li> <li>The red LED on the automatic reservoir is lit.</li> <li>– Product reservoir is not switched on.</li> <li>– Reservoir is not activated.</li> </ul> | <ul style="list-style-type: none"> <li>● Refill the product reservoir (Section 5.2)<br/>On the automatic reservoir, the yellow LED was previously lit.</li> <li>● Set hand lever valve <b>4</b> to position <b>On</b>.</li> <li>● Controller 97102: Press button .</li> <li>Controller 97103: Press button  or .</li> <li>Controller 97101: pressure with regulator.</li> </ul> |
| Product emerges at the product connection <b>3</b> .         | <ul style="list-style-type: none"> <li>– Union nut on the product connection <b>3</b> is not tightened.</li> </ul>  | <ul style="list-style-type: none"> <li>● Carefully tighten union nut.</li> </ul>   |
| Pressurized air escapes in the reservoir housing.            | <ul style="list-style-type: none"> <li>– Hand lever valve <b>4</b> in position <b>Off</b> or <b>Change</b> (replace cartridge).</li> </ul>  | <ul style="list-style-type: none"> <li>● Set hand lever valve <b>4</b> to position <b>On</b>.</li> </ul>   |
| LED indicator <b>5</b> does not light. (level sensing only!) | <ul style="list-style-type: none"> <li>– Loose plug or socket of the tank cord on the product reservoir.</li> <li>– Tank cord defect.</li> </ul>  | <ul style="list-style-type: none"> <li>● Switch the power switch (controller) to the <b>O</b> (OFF) Position. Tighten the plug or socket of the tank cord. Switch the power switch to the <b>I</b> (ON) position.</li> <li>● Replace the tank cord.</li> </ul>   |

### 1.1 Emphasized Sections

#### Warning!



Refers to safety regulations and requires safety measures that protect the operator or other persons from injury.

#### Caution!



Emphasizes what must be done or avoided so that the unit or other property is not damaged.

#### Notice



Gives recommendations for better handling of the unit during operation or adjustment as well as for service activities.

The numbers printed in bold in the text refer to the corresponding position numbers in the illustration on the front fold-out page (see Section 2.1).

Instruction steps in the illustrations are indicated with arrows.

When several instruction steps are indicated in an illustration, the shading of the arrow has the following meaning:

Black arrow = 1st step

Grey arrow = 2nd step

White arrow = 3rd step



### 1.2 Items Supplied

- 1 300 ml Cartridge Reservoir 97109 or  
300 ml Cartridge Reservoir 97110 (Level Sensing Version);
- 1 Tank Cord (only 97110);
- 1 Reservoir Tubing Set;
- 1 Instruction Manual.



As a result of technical development, the illustrations and descriptions in this instruction manual can deviate in detail from the actual unit delivered.

## 8.3 Pin Connections Tank Cord (Level Sensing Version)

|                               |   |  |   |  |
|-------------------------------|---|--|---|--|
| Sub-D 9pol. female            | 1 | TANK 1 FILL  | 1 | Sub-D 9pol. male   |
| PROVERTHA                     | 2 | TANK 1 EMPTY   | 2 | PROVERTHA  |
| Solder Pot Version            | 3 | TANK 2 FILL  | 3 | Solder Pot Version                                       |
| With Contacts Machined        | 4 | TANK 2 EMPTY   | 4 | With Contacts Machined                                   |
| male SDT 09 61 G3             | 5 | GND  | 5 | male SDT 09 51 G3  |
| Plastic Hood with Side        | 6 | TANK 1 AERA / EVA  | 6 | Plastic Hood with Side                                   |
| Screw Locks                   | 7 | TANK 2 AERA / EVA  | 7 | Screw Locks  |
| Metalized Hood                | 8 | THERMO_ERROR   | 8 | Metalized Hood   |
| 17 09 OM 38T 001              | 9 | +24VDC   | 9 | 17 09 OM 38T 001   |
| <b>Prod. Reservoir XS2/IN</b> |   | 9x 0,25 qmm<br>length: 2 m<br>type: shield, flexi<br>approved: VDE, CA, UL |   | <b>Controller XS2<br/>or<br/>Prod. Reservoir XS2/OUT</b> |

## CE – Declarations of Conformity

### Declaration of Conformity

In accordance with the EC Machine Regulations 89/392/EWG, Appendix II A


Manufacturer



**Loctite Corporation**

**Loctite (Ireland) Ltd.**  
Tallaght Business Park  
Whitestown  
Tallaght, Dublin 24, Ireland  
**North American Group**  
1001 Trout Brook Crossing  
Rocky Hill, CT USA 06067

declares that the unit designated in the following is, as a result of its design and construction, in accordance with the European regulations, harmonized standards, national standards and technical specifications listed below.

|                                  |  |
|----------------------------------|--|
| Designation of the unit          | Cartridge Reservoir  |
| Unit number                      | 97109 / 97110  |
| Applicable EC Regulations        | EG-Machine Regulations 89/392/EWG, version 93/68/EWG                                     |
| Applicable harmonized standards  | DIN EN 292 Part 1 11.1991; DIN EN 292 Part 2 11.1991                                     |
| Date / Manufacturer's signature  | 1995  |
| Information regarding the Signer | President – Worldwide Manufacturing (Peter G. Dowling)                                   |

**For changes to the unit that were not approved by Loctite, this declaration loses its validity.**



**Loctite  
Corporation**

**Loctite (Ireland) Ltd.**  
Tallaght Business Park  
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**North American Group**  
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