



Equipment
Operation Manual



Loctite® EQ PU20 Digital Peristaltic Dispenser

Part Number: 2265279

Table of Contents

1	<i>Please Observe the Following</i>	3
1.1	<i>Emphasized Sections</i>	3
1.2	<i>For Your Safety</i>	3
1.3	<i>Safety Precaution</i>	4
1.4	<i>Item Supplied</i>	4
2	<i>Description</i>	5
2.1	<i>Overview</i>	5
2.2	<i>Theory of Operations</i>	7
3	<i>Technical Data</i>	7
4	<i>Setup Operation</i>	9
4.1	<i>Environmental Conditions</i>	9
4.2	<i>Connecting the Unit</i>	9
5	<i>Setup and Operation</i>	12
5.1	<i>Mounting the feedline to the dispenser</i>	12
5.2	<i>Mounting the Feedline to the Applicator</i>	13
5.3	<i>Mounting the Feedline to the Product Bottle</i>	13
5.4	<i>Dispensing Quantity Setup</i>	14
5.4.1	<i>Program</i>	15
5.4.2	<i>Manual Mode</i>	15
5.4.3	<i>Time Mode</i>	15
5.4.4	<i>Cycle Mode</i>	16
5.4.5	<i>Vacuum Mode</i>	16
5.4.6	<i>Continue Mode</i>	16
5.5	<i>Shutdown</i>	17
6	<i>Cleaning and Changing</i>	17
7	<i>Diagrams</i>	18
8	<i>Accessories and Spare Parts</i>	19
9	<i>Declaration of Conformity</i>	20
10	<i>Equipment Warranty</i>	22

1 Please Observe the Following

1.1 Emphasized Sections

 **WARNING!**

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

 **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.

1.2 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. Be sure to retain this manual for future reference.

 **WARNING!**

Never remove the cover of the unit without first switching the power off and unplugging the power cord.

 **WARNING!**

Damage to the power cord or the housing can result in contact with live electrical parts. Check the power cord and housing before each use. If the power cord or unit is damaged, do not operate.

The unit may be repaired only by a Loctite® authorized service technician.

1.3 Safety Precaution

- Make sure the dispenser is connected to a properly grounded power source before operating.
- Changing of tubes must be done with the power source disconnected.
- The PU20 Digital Peristaltic Dispenser should only be operated in an environment between 5 and 50 degrees Celsius with humidity under 80 percent and no visible condensation.
- Do not store or setup the dispenser in an area where it is directly exposed to sunlight.
- Do not operate the dispenser where electrical noise is present.
- Only use a neutral chemical for cleaning the dispenser. Do not use alcohol, benzene or thinner as it may damage the paint on the dispenser.

1.4 Item Supplied

1 PU20 Digital Peristaltic Dispenser

1 Manual Applicator

1 Operation Manual

1 Tip Adapter 1.6mm

1 Tip Adapter 2.0mm

1 Tip Adapter 2.5mm

1 Tip Adapter 3.2mm

Tubing, Black, ID 1.7 x 0.4 mm (OD 2.5), 1 m

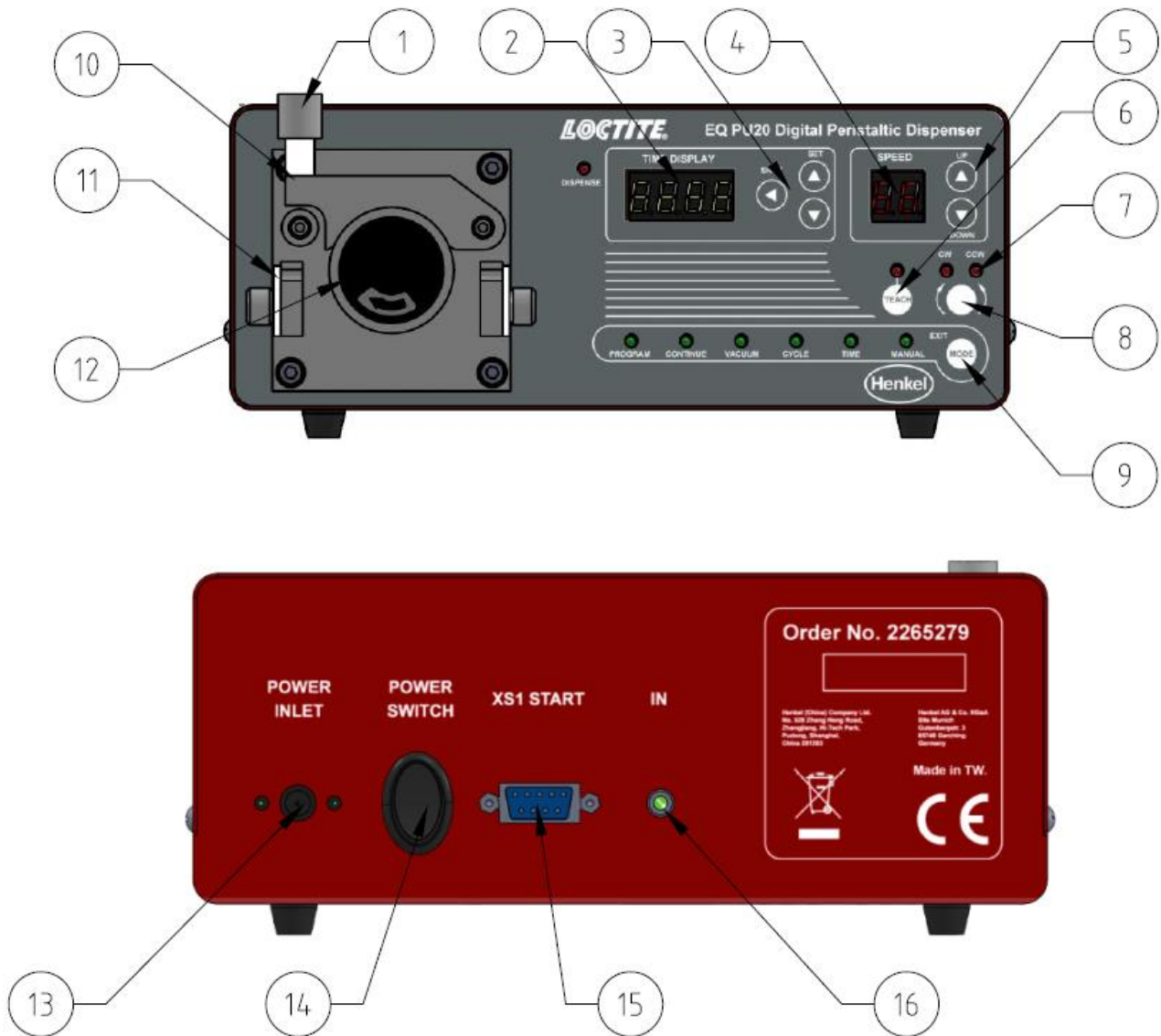
Tubing, Black, ID 2.4 x 0.4 mm (OD 3.2), 1 m

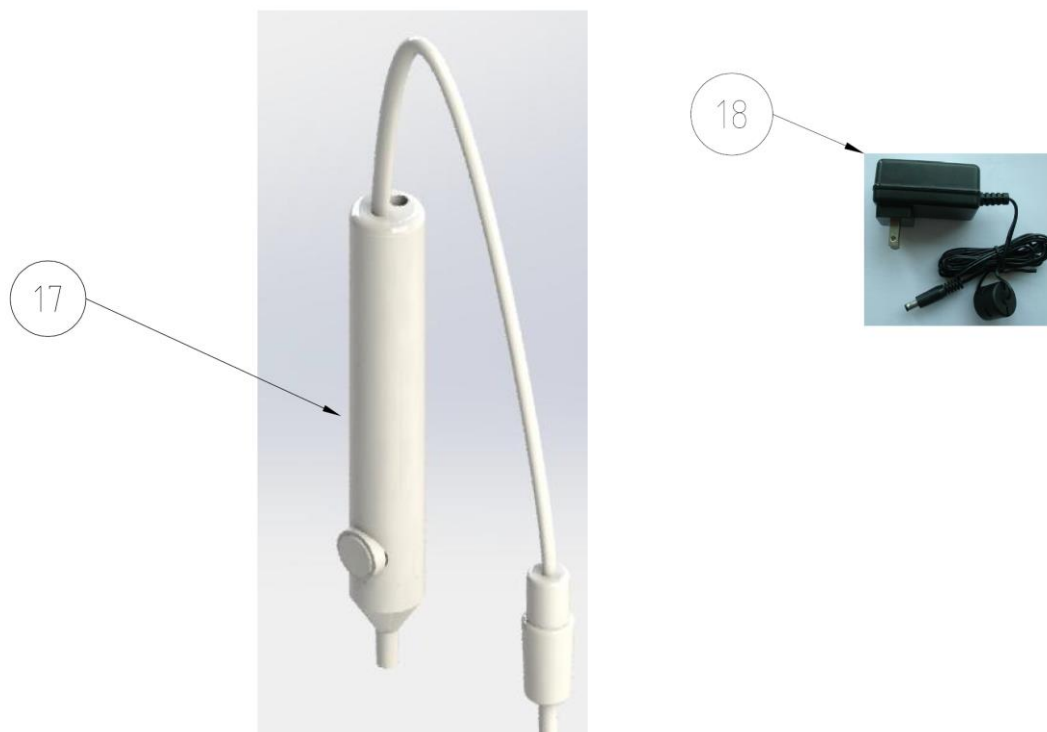
Tubing, Clear, ID 1.4 x 0.3 mm (OD 2.0), 1 m

Tubing, Clear, ID 1.0 x 0.3 mm (OD 1.6), 1 m

2 Description

2.1 Overview





1. Guide Lock
2. TIME Display
3. Timer Buttons-To adjust dispense time from 0.01 ~ 99.99 sec.
Shot Button- Tigger dispensing
4. Speed Display
5. Speed adjust buttons-To adjust dispensing speed
6. Teach Button
7. CW/CCW Indicator
8. CW/CCW Button
9. Mode Button
10. Tube Guide
11. Tube Holder
12. Pump Head
13. Power Inlet
14. Power On/Off Switch
15. XS1 Port
16. Manual Applicator Connection
17. Applicator
18. Power Adapter

2.2 Theory of Operations

The EQ PU20 Digital Peristaltic Dispenser transfers low viscosity liquids by pressure displacement applied by a turning rotor against a tube carrying the material. Usually these pumps are chosen because the liquids are hazardous or difficult to work with and it is advisable to limit operator contact. Another reason is that peristaltic pumps are air free.

Dispense outputs can be timed from 0.01 - 99.99 seconds with flow speeds from 0.01-6 ml/min using PTFE tubing. The pump is bi-directional allowing suck-back after dispense to prevent dripping of the fluid. When dispensing UV adhesives use only black tubing. This avoids curing of the adhesive in the tube.

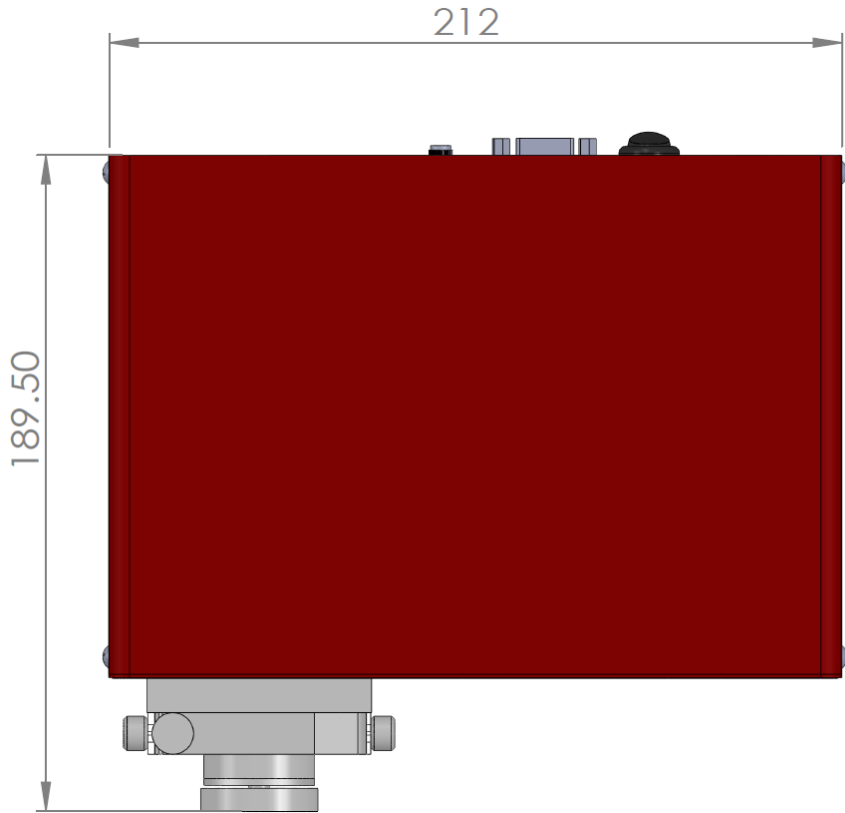
The amount of product dispensed is controlled by:

- Dispensing time
- Feedline size
- Motor speed
- Needle size

Various sizes of PTFE tubes, the corresponding applicator nozzles and dispensing needles are available, see section 5.1

3 Technical Data

Power supply	100-240 V AC, 50/60 Hz
Dispensing time range	0.01 - 99.99 sec
Rotor speed	Up to max. 120 rpm (CW/CCW)
Flow rate	0.01 - 6 ml/minute with feedline
Direction of rotation of the drive	Clockwise (CW) - Counterclockwise (CCW)
Motor Repeatability	+/-5%
Timer Repeatability	+/-10ms
Operating Temperature	+5°C - +50°C (+41°F -122°F)
Relative Humidity	Max. 80%
Weight	~3.5 kg



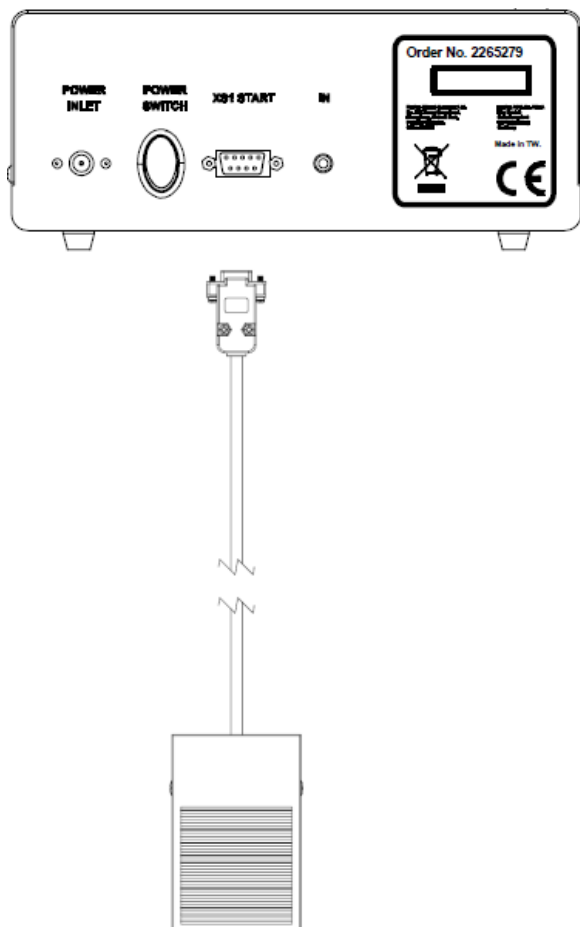
4 Setup Operation

4.1 Environmental Conditions

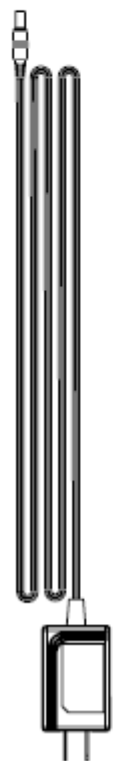
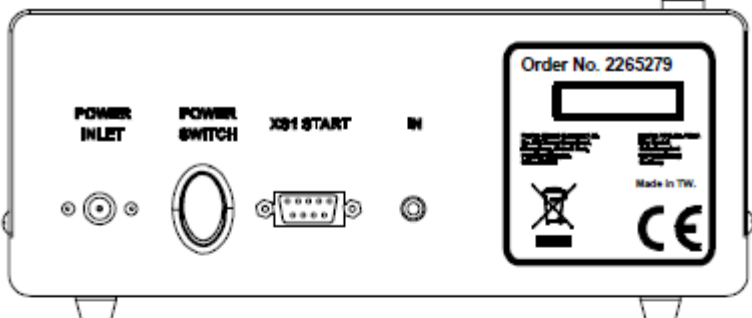
- No direct sunlight; no UV light!
- No condensing humidity.
- No splashing water.
- Indoor use only.
- Use in areas of an altitude up to 2000 m (6,550 ft).

4.2 Connecting the Unit

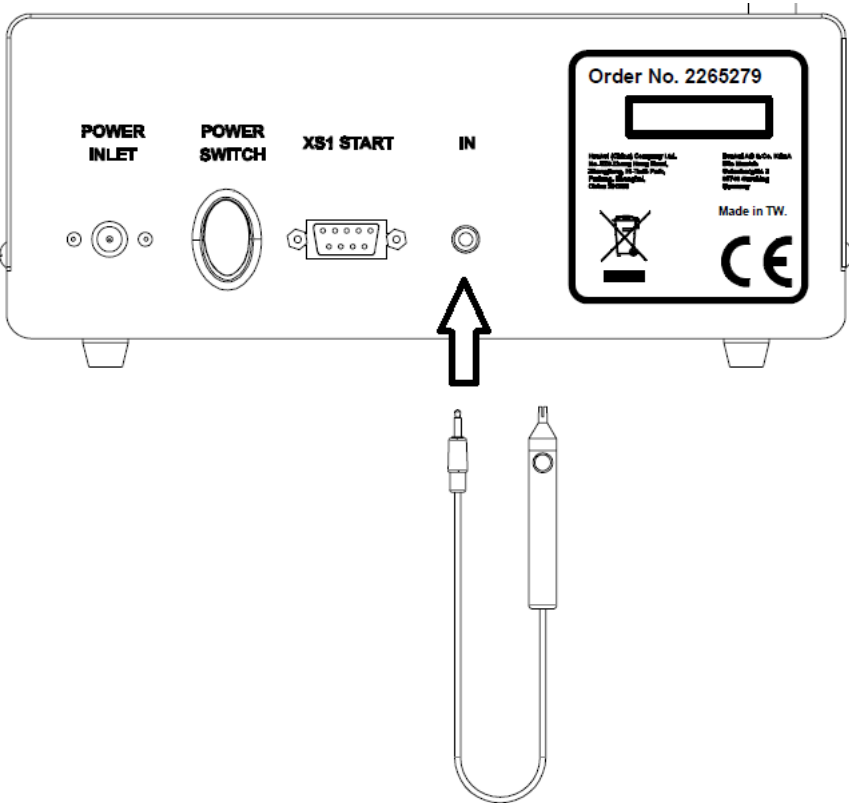
Foot Switch (optional)



Power Adapter



Manual Applicator Finger Switch



Caution!
Switch off the unit before connecting the finger switch

5 Setup and Operation

5.1 Mounting the feedline to the dispenser

Selector Chart Feedline

	Tip Adapter	1.6	2	2.5	3.2
Feedline		2737714	2737715	2737716	2737717
1.0x0.3	1109147	x	—	—	—
	1087219	x	—	—	—
1.4x0.3	1109318	—	x	—	—
	1001830	—	x	—	—
1.7x0.4	1070736	—	—	x	—
	1109317	—	—	x	—
2.4x0.4	1070735	—	—	—	x
	1019162	—	—	—	x

1. Lift Guide Lock 1 and release tube guide 10.
2. Lubricate the tubing and roller with Silicon Grease, HENKEL IDH# 88722。 (Not included in package, need purchase separately).
3. Put the tube into the groove of the left tube holder.
4. Place the tube directly on the rollers.
5. Put the tube into the groove of the right tube holder.
6. Press the white guide plate of tube holder on both sides carefully against tube and fix it with the locking knob.
Note; Pay attention that the tube is placed directly on the roller..
7. Slowly close the tube guide 10 and apply downward thumb pressure whilst turning the Pump Head 12 manually

Notice!

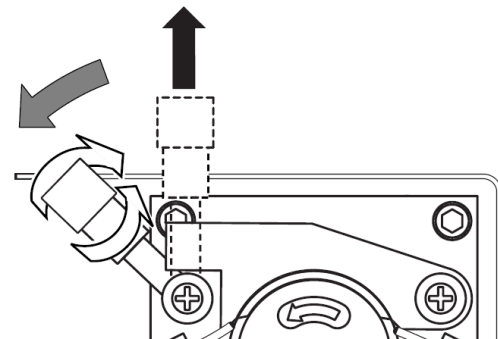
If the tube guide is tightened without turning the rotor, the shape of the rotor rolls will be impressed and the tube will not be inserted evenly. Always turn the rotor after closing the tube guide and press the tube guide 10 against the rotor.

8. Secure the Tube Guide 10 by using the spring loaded Guide lock 1
9. Set unit to manual Mode (section 5.4.2) and press start to check rotation of Pump Head 12

5.1.1 Tube Guide adjustment

If a large diameter feedline is used and the Pump head 12 does not rotate then follow the procedure below:

1. Lift Guide Lock 1.
2. Unscrew the bigger lock grip from the smaller one.
3. Turn the screw counterclockwise one revolution.
4. Assemble both lock parts.
5. Close the Tube Guides 1 as described in Section 5.1 and start dispensing.

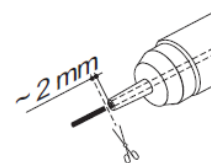


5.1.2 Best practice guidelines

- Keep the product feedlines as short as possible. Typically, the product feedline should not be longer than 2 m.
- Avoid kinking of the feedlines
- Ensure all fittings are secure and tight

5.2 Mounting the Feedline to the Applicator

1. Pull the tube through the applicator and the applicator tip adapter.
2. Mount the applicator tip adapter.
3. Screw on the tip adapter
4. Cut the feed tube as right picture.
5. Install the required dispensing needle



5.3 Mounting the Feedline to the Product Bottle

Dispensing Cyanoacrylate:

- Cut the nozzle of the bottle only as much as it is necessary to insert the tube.

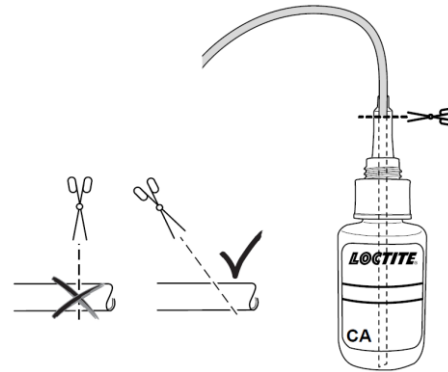
Notice!

It is necessary to minimize moisture access to the bottle that causes curing of the CA.

Dispensing Anaerobic:

- Unscrew the dispensing cap.

- Cut the tube in the way described in the right graphic.
- Insert the tube into the bottle.

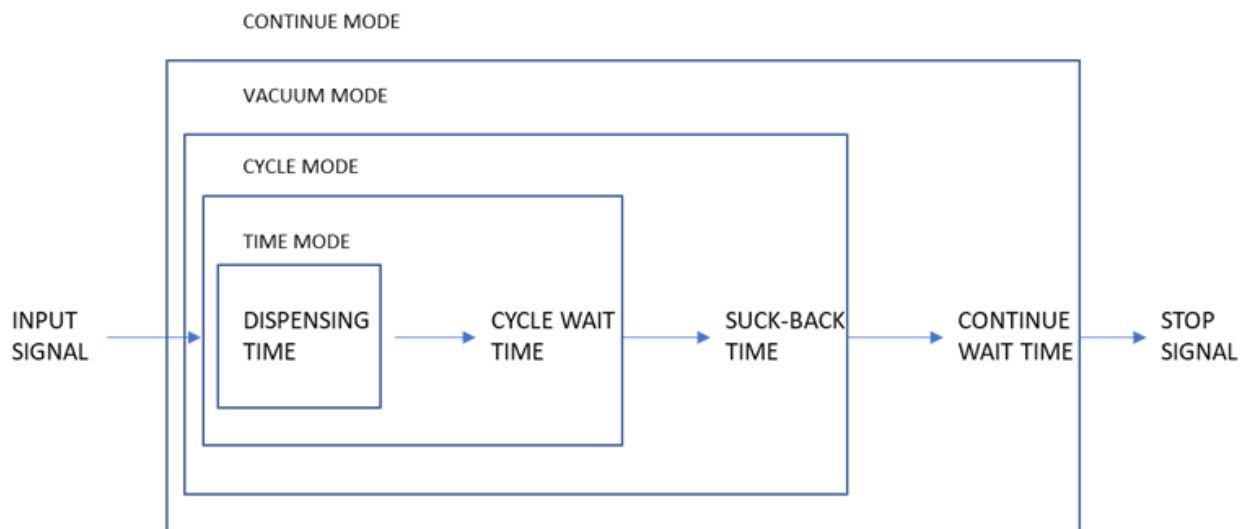


5.4 Dispensing Quantity Setup

Use Mode Button 9 to switch different operation mode.

Mode descriptions:

- Program – Enables different parameters to be set and saved to suit different applications
- Manual mode – Enables the operator to control the START/STOP of the dispense cycle
- Time mode – Enables fixed dispense time for each dispense cycle
- Cycle Mode – This is the cycle wait time between dispense and vacuum
- Vacuum mode – Enables the suck-back at the end of the dispense cycle after the cycle wait time
- Continue mode – Enables repeat cycling after the Continue wait time



5.4.1 Program

Dispenser running data can be saved in a defined program.

When start to edit running data, operator need to defined a program number.

1. Press MODE Button 9, switch to PROGRAM. (PROGRAM indicator on)
2. Press SET, edit program number. 00~29 are available.
3. Press MODE to confirm.

5.4.2 Manual Mode

1. Press MODE Button 9, switch to MANUAL mode. (MANUAL indicator on)
2. Setup CW/CCW via CW/CCW button 8.
3. Setup dispensing speed via speed adjustment button 5.
4. Run dispenser via press SHOT button, Finger Switch on applicator 17 or footswitch.

5.4.3 Time Mode

In Time Mode, operator defines dispensing time then dispenser will run one cycle per initiation.

1. Press MODE Button 9, switch to TIME mode. (TIME indicator on)
2. Setup dispensing speed via speed adjustment button 5.
3. Setup dispensing time as below:

- 1) Press SET button for 2 seconds, then edit dispensing time.
- 2) Press MODE 9 to confirm.



or

- 1) Press TEACH 6, TEACH indicator will flash.
 - 2) Press SHOT button, Finger Switch on applicator 17 or footswitch until desired quantity is achieved.
 - 3) Press TEACH 6, or MODE 9 to teach in dispensing time.
4. Run dispenser via press SHOT button, Finger Switch on applicator 17 or footswitch.

5.4.4 Cycle Mode

In CYCLE mode, you will need to setup interval time which is the delay between the end of dispense and the Vacuum suck back. .

To setup interval time:

1. Press MODE Button 9, switch to CYCLE mode. (TIME indicator on)
2. Setup Interval time as below:
 - 1) Press SET button for 2 seconds, then set interval time.
 - 2) Press MODE 9 to confirm.



Or

- 1) Press TEACH 6, TEACH indicator will flash.
- 2) press SHOT button, Finger Switch on applicator 17 or footswitch until get desired interval time.
- 3) Press TEACH 6, or MODE 9 to teach in interval time.
3. Run dispenser via press SHOT button, Finger Switch on applicator 17 or footswitch. Press again, cycling will be stopped.

5.4.5 Vacuum Mode

Vacuum will work with TIME and Cycle. Operator will need to setup vacuum time. Dispenser will run as TIME→INTERVAL Time→Vacuum Time. Dispenser runs one cycle per trigger.

1. Press MODE Button 9, switch to VACUUM mode. (TIME indicator on)
2. Setup dispensing time as below:
 - 1) Press SET button for 2 seconds, then set vacuum time.
 - 2) Press MODE 9 to confirm.



Or

- 1) Press TEACH 6, TEACH indicator will flash.
- 2) press SHOT button, Finger Switch on applicator 17 or footswitch until get desired vacuum time.
- 3) Press TEACH 6, or MODE 9 to teach in vacuum time.
3. Run dispenser via press SHOT button, Finger Switch on applicator 17 or footswitch.

5.4.6 Continue Mode

In Continue Mode, operator will need to setup an interval time between end of vacuum and the next dispense cycle. Dispenser will run as TIME→INTERVAL Time→Vacuum Time→Continue Interval Time, and then run cycle by cycle.

1. Press MODE Button 9, switch to CONTINUE mode. (CONTINUE indicator on)
2. Setup Continue time as below:

- 1) Press SET, then set interval time.
- 2) Press MODE 9 to confirm.



Or

- 1) Press TEACH 6, TEACH indicator will flash.
 - 2) press SHOT button, Finger Switch on applicator 17 or footswitch until get desired interval time.
 - 3) Press TEACH 6, or MODE 9 to teach in interval time.
3. Run dispenser via press SHOT button, Finger Switch on applicator 17 or footswitch. Press again, cycling will be stopped.

5.5 Shutdown

- Turn off the dispenser by Power On/Off Switch

6 Cleaning and Changing

Clean the roller with a dust free tissue or towel.

Lubricate the rollers of the pump head WITH A Silicone grease once or twice a week. Lubrication will help prolong tube life.

Lifetime of the Feedline:

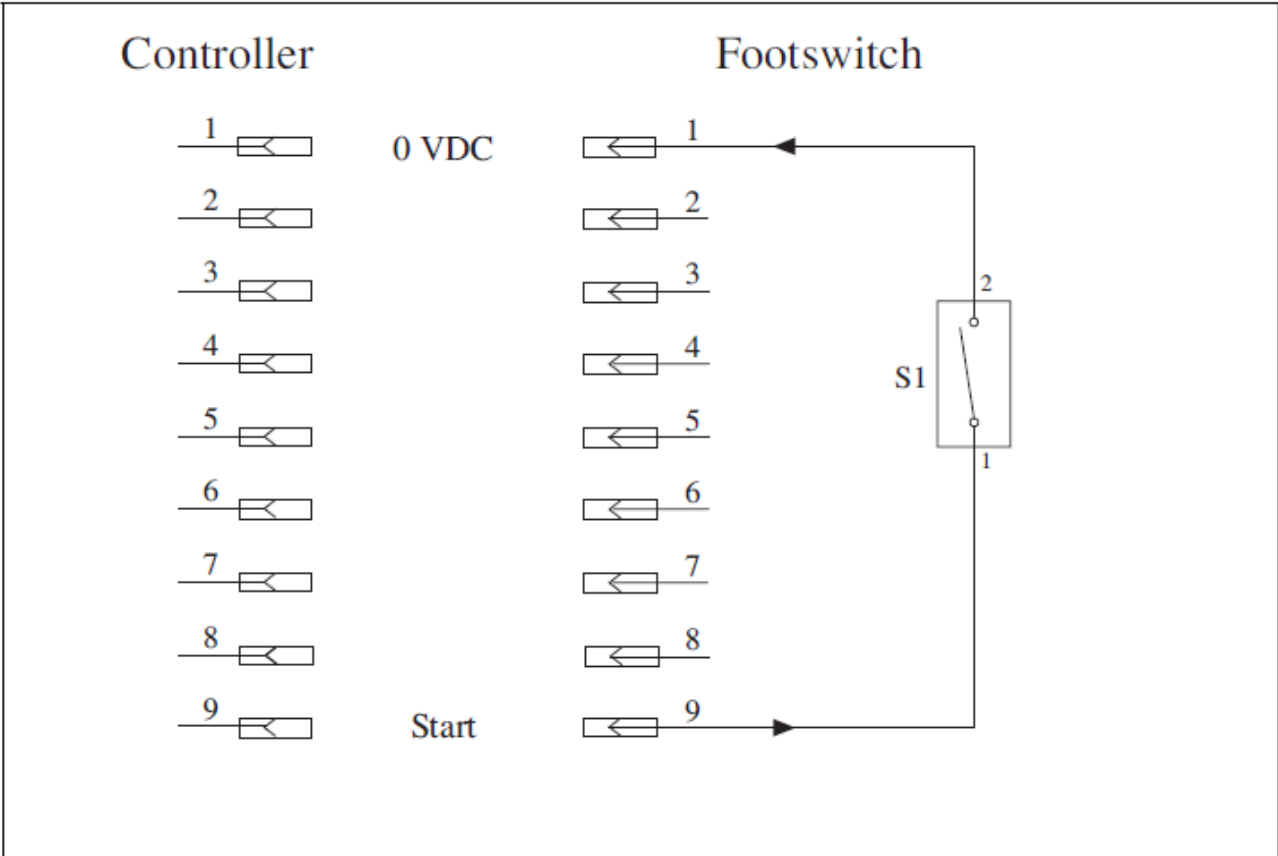
The PTFE tube should be replaced periodically. The lifetime of the tube will vary depending of the rotation speed, frequency of use, etc. The user should determine how often to replace the tube according to their need.

At adjustments „Speed 5“ and „CCW“ (pump head turns right) the lifetime of the PTFE feedline >200 h. If the velocity will be increased the lifetime is proportionally reduced and vice versa.

When dispensing, Cyanoacrylates apply a small amount of silicon grease to the applicator tip adapter **17** to prevent needle bonding.

7 Diagrams

XS1 START Interface



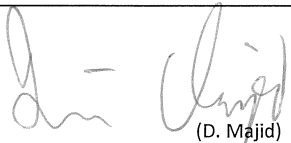
8 Accessories and Spare Parts

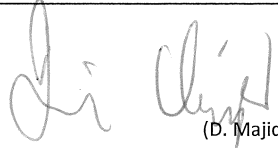
Description	Order Code No.
Foot Switch (Replacement)	88653
EQ PU20 Applicator Assembly 18mm (note 1)	2737712
EQ PU20 Tip Adapter 18mm x 1.6mm (note 2)	2737714
EQ PU20 Tip Adapter 18mm x 2.0mm	2737715
EQ PU20 Tip Adapter 18mm x 2.5mm	2737716
EQ PU20 Tip Adapter 18mm x 3.2mm	2737717
EQ PU20 Pump Head	2737713
Tubing, black, ID 2.4 x 0.4 mm (OD 3.2), 20 m	1070735
Tubing, clear, ID 2.4 x 0.4 mm (OD 3.2), 20 m	1019162
Tubing, black, ID 1.7 x 0.4 mm (OD 2.5), 20 m	1070736
Tubing, clear, ID 1.7 x 0.4 mm (OD 2.5), 20 m	1109317
Tubing, black, ID 1.4 x 0.3 mm (OD 2.0), 20 m	1109318
Tubing, clear, ID 1.4 x 0.3 mm (OD 2.0), 20 m	1001830
Tubing, black, ID 1.0 x 0.3 mm (OD 1.6), 20 m	1109147
Tubing, clear, ID 1.0 x 0.3 mm (OD 1.6), 20 m	1087219
Needle Variety Kit	218288
Silicon Grease 6g Tube	88722

Note 1: The PU20 Applicator Assembly excludes Tip Adaptor which must be ordered separately

Note 2: The Tip Adaptor must be ordered separately to suit the required feedline size

9 Declaration of Conformity

Konformitätserklärung	
Der Hersteller gemäß der EU-Richtlinien	Henkel AG & Co. KGaA Standort München Gutenbergstr. 3 D-85748 Garching bei München
erklärt, dass das nachfolgend bezeichnete Gerät auf Grund seiner Konzipierung und Bauart den unten aufgeführten europäischen Richtlinien, harmonisierten Normen und nationalen Normen entspricht.	
Bezeichnung des Gerätes	EQ PU20 Peristaltic Dispenser
Gerätenummer	2265279
Einschlägige EU-Richtlinien	EU-Richtlinie Niederspannung 2014/35/EU EU-Richtlinie Elektromagnetische Verträglichkeit 2014/30/EU EU-Richtlinie RoHS 2011/65/EU
Angewandte harmonisierte Normen	EN 55032:2015, EN 61000-3-2:2014, EN 61000-3-3:2013, EN 55024:2010+A1:2015
Bevollmächtigter für die technischen Unterlagen	Henkel AG & Co. KGaA Standort München Gutenbergstr. 3 D-85748 Garching bei München
Garching, 19.09.2017	 (D. Majid) Business Director AG Deutschland/Schweiz Standortleiter München

Declaration of Conformity	
The Manufacturer according to the EC regulations	Henkel AG & Co. KGaA Standort München Gutenbergstr. 3 D-85748 Garching bei München
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 and national standards listed below.	
Designation of the unit	EQ PU20 Peristaltic Dispenser
Unit number	2265279
Applicable EC Regulations	EC Directive of Low Voltage 2014/35/EC EC Directive for Electro-Magnetic Compatibility 2014/30/EC EC Directive of RoHS 2011/65/EC
Applicable harmonized standards	EN 55032:2015, EN 61000-3-2:2014, EN 61000-3-3:2013, EN 55024:2010+A1:2015
Authorized person for technical files	Henkel AG & Co. KGaA Site Munich Gutenbergstr. 3 85748 Garching bei München Germany
Garching, 09/19/2017	 (D. Majid) Business Director AG Germany/Switzerland Site Manager Munich

10 Equipment Warranty

Henkel expressly warrants that all products referred to in this Instruction Manual for 2265279 EQ PU20 Digital Peristaltic Dispenser (hereafter called “Products”) shall be free from defects in materials and workmanship. Liability for Henkel shall be limited, as its option, to replacing those Products which are shown to be defective in either materials or workmanship or to credit the purchaser the amount of the purchase price thereof (plus freight and insurance charges paid therefor by the user). The purchaser’s sole and exclusive remedy for breach of warranty shall be such replacement or credit.

A claim of defect in materials or workmanship in any Products shall be allowed only when it is submitted in writing within one month after discovery of the defect or after the time the defect should reasonably have been discovered and in any event, within 12 months after the delivery of the Products to the purchaser. This warranty does not apply to perishable items, such as (fuses, filters, lights, etc.). No such claim shall be allowed in respect of products which have been neglected or improperly stored, transported, handled, installed, connected, operated, used or maintained. In the event of unauthorized modification of the Products including, where products, parts or attachments for use in connection with the Products are available from Henkel, the use of products, parts or attachments which are not manufactured by Henkel, no claim shall be allowed.

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

NO WARRANTY IS EXTENDED TO ANY EQUIPMENT WHICH HAS BEEN ALTERED, MISUSED, NEGLECTED, OR DAMAGED BY ACCIDENT.

EXCEPT FOR THE EXPRESS WARRANTY CONTAINED IN THIS SECTION, HENKEL MAKES NO WARRANTY OF ANY KIND WHATSOEVER, EXPRESS OR IMPLIED, WITH RESPECT TO THE PRODUCTS.

ALL WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND OTHER WARRANTIES OF WHATEVER KIND (INCLUDING AGAINST PATENT OR TRADEMARK INFRINGEMENT) ARE HEREBY DISCLAIMED BY HENKEL AND WAIVED BY THE PURCHASER.

THIS SECTION SETS FORTH EXCLUSIVELY ALL OF LIABILITY FOR HENKEL TO THE PURCHASER IN CONTRACT, IN TORT OR OTHERWISE IN THE EVENT OF DEFECTIVE PRODUCTS.

WITHOUT LIMITATION OF THE FOREGOING, TO THE FULLEST EXTENT POSSIBLE UNDER APPLICABLE LAWS, HENKEL EXPRESSLY DISCLAIMS ANY LIABILITY WHATSOEVER FOR ANY DAMAGES INCURRED DIRECTLY OR INDIRECTLY IN CONNECTION WITH THE SALE OR USE OF, OR OTHERWISE IN CONNECTION WITH, THE PRODUCTS, INCLUDING, WITHOUT LIMITATION, LOSS OF PROFITS AND SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, WHETHER CAUSED BY NEGLIGENCE FROM HENKEL OR OTHERWISE.

Operating Manual

Henkel Corporation
One Henkel Way
Rocky Hill, CT 06067-3910

Henkel Canada Corporation
2515 Meadowpine Boulevard
Mississauga, Ontario L5N 6C3

Henkel Capital, S.A. de C.V.
Calzada de la Viga s/n Fracc. Los Laureles
Loc. Tulpetlac, C.P. 55090
Ecatepec de Morelos, Edo. de México

Henkel Corporation
Automotive / Metals HQ
32100 Stephenson Hwy.
Madison Heights, MI 48071

Henkel Ltda.
Rua Karl Huller, 136 – Jd.
Canhema 09941-410
Diadema/SP, Brazil

www.loctite.com

® and ™ designate trademarks of Henkel Corporation or its affiliates. ® = registered in the U.S. and elsewhere. © Henkel Corporation, 2009. All rights reserved. Data in this operation manual is subject to change without notice.

Manual P/N: 9000619, Rev. B, Date: 12/07/2020

