



# CTM6

## Coverslipper

### Operator Guide

A83410100 Issue 10 February 2022

**REF**  
970010  
A83400002

# Our mission is to improve lives by enhancing cancer diagnostics.

To every one of us at EpreDia, this mission is personal. Many of us have loved ones and family who have been affected by cancer.

You are on the front line of this fight, and our pledge is to arm you with the most innovative tools to enable early detection and diagnosis of this disease.

Learn more at [epredia.com](http://epredia.com)



# Company Information

© Copyright 2022. EpreDia. All rights reserved.

EpreDia makes every attempt to ensure that the information contained in this supporting document is correct and clearly stated, but does not accept responsibility for any errors or omissions. The development of EpreDia products and services is an ongoing process. Please ensure that any published information you use as a reference is up to date and relates to the condition of the product. If necessary, check with your local EpreDia representative.

This document may not, in whole or in part, be copied, photocopied, reproduced, translated, or converted to any electronic or other form without prior written consent of EpreDia. All information contained in this manual is proprietary and confidential, and the exclusive property of EpreDia and is protected by copyright.

## Contact address



Shandon Diagnostics Limited, a subsidiary of EpreDia  
Tudor Road, Manor Park, Runcorn  
Cheshire, WA7 1TA, UK

Tel: +44 (0) 1928 534000

Fax: +44 (0) 1928 534001

Web: [www.epredia.com](http://www.epredia.com)

## USA Distributor

Richard-Allan Scientific LLC, a subsidiary of EpreDia  
4481 Campus Drive  
Kalamazoo, MI 49008, USA

Tel: 1-800-522-7270

Fax: +1 269-372-2674

Web: [www.epredia.com](http://www.epredia.com)



These instruments conform to the general safety and performance of:

- In Vitro Diagnostics Regulation (IVDR) EU 2017/746

## Symbols

The following symbols and conventions may be used throughout this document and on the instrument:



This symbol is used on the equipment, or in a document, to indicate that instructions must be followed for safe and correct operation.

This symbol is also used on the instrument, or in a document, to indicate that irritants or potentially harmful chemicals are present. Refer to the Material Safety Data Sheets for the products, and always use Good Laboratory Practice.

If this symbol appears on the instrument always refer to the operator guide.



This symbol is utilised on the instrument, or in a document, to indicate that there are potential biological risks associated with the instrument and / or with instrument use. Always use Good Laboratory Practice.



This symbol is used on the equipment, or in a document, to indicate that there are sharp edges. Watch your hands.



Manufacturer



This symbol is used on the instrument, or in the document, to indicate that instructions for use must be consulted.

A warning is given in the documentation if there is a potential risk of injury, equipment failure or damage to the equipment or samples.

### Note

*Notes give additional information about a job or instruction, but do not form part of the instruction.*

# Contents

<b>Company Information</b>	<b>3</b>		
Symbols .....	3		
Contact address .....	3		
USA Distributor .....	3		
<b>Contents</b>	<b>4</b>		
EMC Statement .....	5		
<b>Safety Information</b>	<b>6</b>		
General Safety .....	6		
Chemical Safety .....	7		
Environment .....	7		
Warranty Statement .....	8		
<b>Chapter 1 – Introduction to the CTM6</b>	<b>9</b>		
<b>Chapter 2 - Operating Instructions</b>	<b>14</b>		
Setting up the CTM6 .....	14		
Locating the CTM6 .....	14		
Initial Operation .....	15		
Checking Pump Function .....	16		
Coverslipping .....	17		
Summary of the Operating Buttons .....	18		
Filling the coverslip magazine with coverslips ..	19		
Refilling the Mountant Bottle .....	20		
Refilling / Changing the Solvent in the Cleaning Station .....	20		
Change to a Different Coverslip Sizes .....	21		
Selecting the Language .....	22		
Turning on/off the beep sound for key press ..	23		
Setting the Pump Start Delay .....	23		
Error Code Indication .....	24		
<b>Chapter 3 – Maintenance</b>	<b>26</b>		
Daily Maintenance .....	26		
Weekly Maintenance .....	26		
Instrument Shutdown procedure .....	26		
		<b>Chapter 4 - Cleaning and Care</b>	<b>29</b>
		<b>Appendix A – Accessories</b>	<b>30</b>
		<b>Appendix B – Packing Instructions</b>	<b>32</b>
		<b>Index</b>	<b>34</b>
		<b>Revision Control For This Document</b>	<b>5</b>

## EMC Statement

This IVD equipment complies with the emissions and immunity requirements of IEC 61326-2-6.

This equipment has been designed and tested to CISPR 11 Class A.

This equipment is intended for use in a laboratory environment, by a trained and qualified professional. In a domestic environment, it may cause radio interference, in which case it may be necessary to take measures to mitigate the interference.

The electromagnetic environment should be evaluated prior to operation of the instrument.

Do not use this instrument in close proximity to sources of strong electromagnetic radiation (e.g. unshielded Intentional RF sources) as these may interfere with the proper operation.

# Safety Information

Epredia instruments are designed for convenient and reliable service; however, improper use or handling by a user may damage the instrument or cause a hazard to health. The instrument must not be used in a manner not specified by Epredia. Correct maintenance procedures are essential for consistent performance. It is recommended that users secure a maintenance contract with our service department.

To remain compliant with regulatory requirements, and to ensure that mandatory safety upgrades are performed at the earliest opportunity, it is strongly recommended that all service activities are performed by Epredia-factory trained Engineers. Warranty may be voided if service is performed by non-factory trained Engineers.

Maintenance or repairs that are not performed by Epredia trained Engineers with proven training may affect the safety, performance and compliance of the equipment.

Please consult your local sales or support teams for more information about service contracts.



The following sections contain important information for the safe setup and use of the instrument, and should be read and understood by the user before using the instrument.

## General Safety



This instrument, as supplied, conforms to IEC61010-1 and IEC61010-2-101; however, the addition of chemicals introduces potential hazards. Good Laboratory Practice must be employed and consideration must be given to the potential for hazard when dealing with these chemicals.



Do not use this instrument in close proximity to strong electromagnetic radiation as these may interfere with the proper operation. The electromagnetic environment should be evaluated prior to operation of the device.



Good Laboratory Practice must be used when handling tissue samples to prevent cross contamination and infection. The user should complete a risk assessment to determine any potential hazards related to tissue handling.

- Do not introduce any source of ignition into, or near, the instrument once it has been loaded with reagents.
- Do not remove any panels or access covers, unless specifically instructed to do so. The instrument does not have any user serviceable parts. Potentially lethal voltages are present inside the instrument.
- The instrument must be properly connected to a good earth (ground) via the Mains input supply and positioned such that it is possible to interrupt the Mains supply at the source by removing the plug from the socket.
- Use only factory approved accessories or replacement parts with this instrument.
- Only use reagents recommended in the Operator Guide.
- Disconnect the instrument from the mains supply before performing maintenance.
- Take necessary precautions when handling glass. Wear Personal Protective Equipment (PPE) if required.



## Chemical Safety

The introduction of chemicals creates potential hazards. EpreDia has adopted the following position with regard to the subject of volatile chemicals used in laboratories:



- Customers using non-specified chemicals in the instrument do so at their own risk.
- All chemicals recommended by EpreDia have auto-ignition temperatures considerably above any surface temperature that can be reached during a single fault failure on the instrument.
- The instrument contains no source of ignition in any areas of the instrument where chemicals are stored, or are likely to leak into in a single fault condition.
- The operator is fully aware of the contents of the specification documents detailing the properties of the chemicals they are using.
- The operator has carried out any legally required assessment of chemicals used and is using Good Laboratory Practice.
- Harmful chemical vapours such as Xylene and Toluene may be emitted during the normal operation of some instruments and the operator should be aware of suitable precautions and safety measures. The short-term exposure limits for Xylene and Toluene will be no greater 100 ppm.
- Do not use consumables past their expiration date.

## Environment

This instrument is required to comply with the European Union's Waste Electrical and Electronic Instrument (WEEE) Directive 2012/19/EU. It is marked with the following symbol:



EpreDia has contracts with one or more recycling / disposal companies in each EU Member State, and this product should be disposed of or recycled through them. For further information contact your EpreDia service representative

## Warranty Statement

Epredia is proud of their quality, reliability and after-sales services. We continuously strive to improve our service to our customers.

Please ask your distributor or Epredia representative about service contracts which can help maintain your instrument in an optimal operating condition.

Warranty provisions necessarily vary to comply with differences in national and regional legislation. Specific details can be found in the delivery documentation or from your dealer or representative.

Please note that your warranty may be invalidated if:

- This instrument is modified in any way, or not used as intended by Epredia
- Accessories and reagents which have not been approved by Epredia are used.
- The instrument is not operated or maintained in accordance with instructions.
- The installation of the instrument was not conducted by a certified Epredia representative.



Any serious incident that has occurred in relation to the device shall be reported to the manufacturer and the competent authority of the Member State in which the user/or the patient is established.



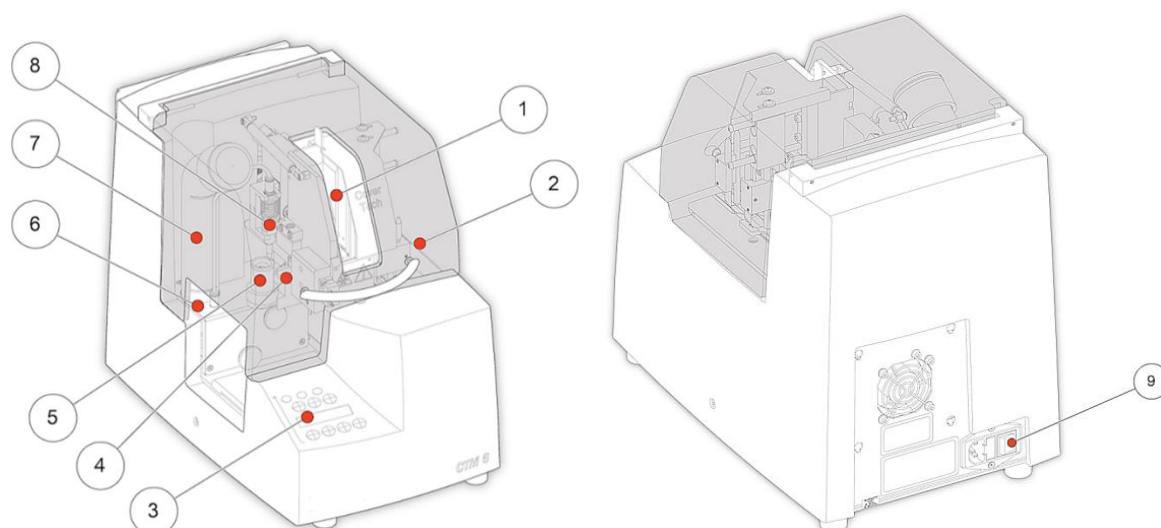
# Chapter 1 – Introduction to the CTM6

## Description of CTM6



The CTM6 is an in vitro diagnostic device. The automated coverslipping instrument is intended for use in laboratories by trained operatives familiar with coverslipping techniques and laboratory equipment. It is designed to apply a coverslip over a microscope slide to allow for subsequent examination and diagnosis of fixed/stained specimen by a technologist or pathologist.

## Parts Identification



- 1 Basket Input Area
- 2 Coverslip Magazine
- 3 Control Panel
- 4 Waste Tray
- 5 Cleaning Station
- 6 Dispenser Unit
- 7 Mountant Container
- 8 Dispense Needle
- 9 Mains I/O Power Switch

## Description of CTM6

The CTM6 is capable of coverslipping 450 slides every hour in a precise and efficient manner.

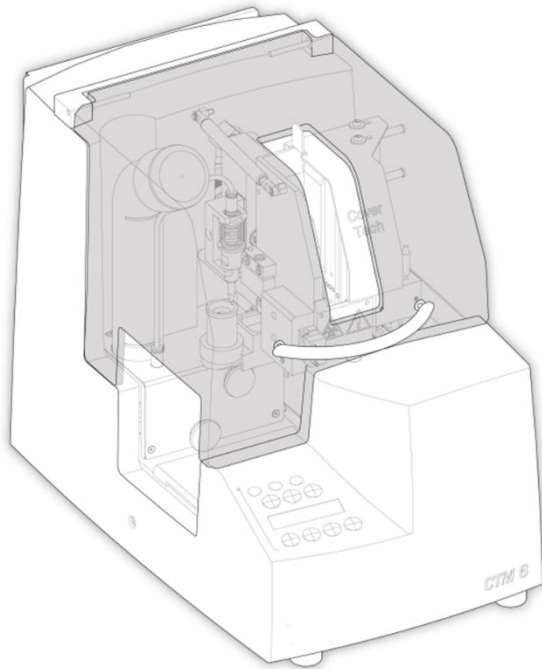


Figure 1

To enable continuous loading, two baskets can be loaded at once. The slide baskets are available in two sizes:

- 19 Slides
- 30 slides

The CTM6 is compatible with the following sizes of coverslips:

- No 1.0 x 24 x 40
- No 1.0 x 24 x 50
- No 1.0 x 24 x 55
- No 1.0 x 24 x 60

A maximum of 400 slips can be loaded into the coverslip magazine.

The following slide dimensional tolerances are permissible:

- Length      74.5 – 76.5 mm
- Width        24.7 – 26.3 mm
- Thickness    0.8 – 1.2 mm

## Technical Specifications of the CTM6

<b>Working Speed</b>		Up to 450 slides / hour
<b>Slides</b>	Ground or cut edges:	26 x 76 x 1 mm or 25 x 75 x 1 mm
	Divergences	Long: 74.5 - 76.5 mm
		Width: 24.7 - 26.3 mm
		Thickness: 0.8 – 1.2 mm
	Magazine Capacity:	30 or 19 slide baskets
		2 x 30 or 2 x 19 slide baskets
<b>Coverslips</b>		40, 50, 55 or 60 x 24 mm, No.1
	Divergences	Long: 40, 50, 55 or 60 mm / +0.3mm / -1 mm
		Wide: 23.5 – 24.3 mm
		Thickness: no. 1, 0, 13 – 0, 17 mm
	Magazine Capacity:	Up to 400 coverslips
<b>Coverslipping</b>		All commercially available coverslipping media
<b>Capacity of coverslipping medium</b>		100 ccm
<b>Pump Volume</b>		Up to 250 µl / slide
<b>Storage &amp; transportation temperature range</b>		-20°C up to +50°C
<b>Operating conditions</b>		Maximum 80% RH at 31°C (88°F) decreasing linearly to 50% RH at 40°C (104°F)
		Altitude up to 2000 m NN
		For indoor use only
<b>Power requirements</b>		100 - 240 VAC (~) 160VA, 50/60 Hz +/- 10%
<b>Internal fuses secondary circuits</b>		1 x T3. 15Ah, 1 x T1, 6Ah
<b>Mains Inlet Fuse</b>		2 x T1.6A
<b>Overvoltage category</b>		II
<b>Pollution degree</b>		2

Acoustic pressure		50 dB
Dimensions		270 x 420 x 360 mm (wide / depth / high)
		(Deep: 520 mm with exhaust housing)
Weight		20 kg

#### List of Recommended Mounting Media



CTM6 must only be installed and operated using the recommended mounting media listed below.

Mountant	Mountant Base	Pump vol setting
		★
		1 - 5
		★★
		6 - 11
		★★★
		12 - 19
		★★★★
		20 - 40
		★★★★★
		41 - 99
Richard-Allen Scientific Signature Series # 4111	Toluene	★★
Stephens Scientific Cytoseal XYL	Xylene	★
Pertex	Xylene	★★★
HistoJitt	Xylene	★★★
Entellan new	Xylene	★★



The amount of mountant dispensed can be adjusted by pressing the  or  keys on the touchpad keyboard.



Figure 2



- Too much mountant may result in additional cleaning / maintenance requirements.
- Too little mountant may result in poor quality preparations.
- It is essential that the amount of mountant dispensed is validated to meet laboratory requirements.

# Chapter 2 - Operating Instructions

## Setting up the CTM6

Unpack the instrument (following the unpacking instructions provided with the instrument).

Ensure that the area for installation has adequate ventilation and there is sufficient space around the instrument.



The instrument is equipped with a charcoal filter for the removal of solvent vapours. This should be changed every 12 weeks.

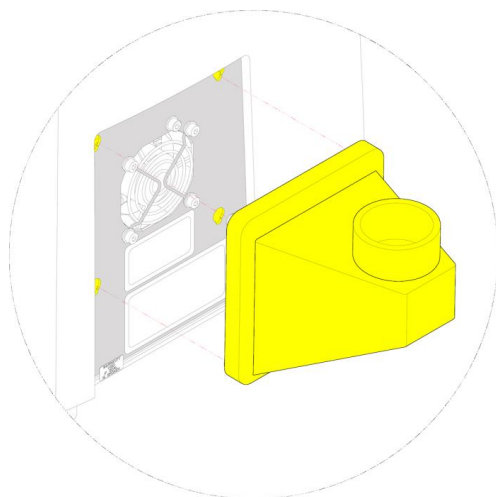


Figure 3

If the area does not have adequate ventilation the unit may be vented with a  $\varnothing$  50 mm hose to a ventilation source.

## Locating the CTM6

The instrument must be properly connected to a good earth (ground) via the Mains input supply and positioned such that it is possible to interrupt the Mains supply at the source by removing the plug from the socket.

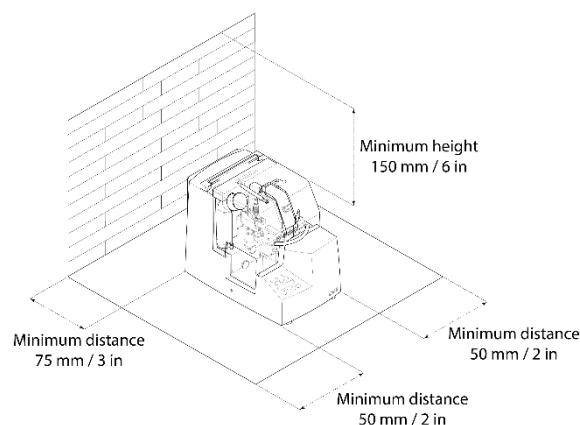


Figure 4

## Initial Operation

Once the CTM6 has been unpacked it can be connected to the mains power.

Insert the appropriate mains cable into the mains connector on the rear of the instrument. Then connect the cable to the local power supply outlet and switch on.

Before use, air needs to be removed from the dispenser, as described below.

This dispenser can be removed from the instrument by loosening the screws.

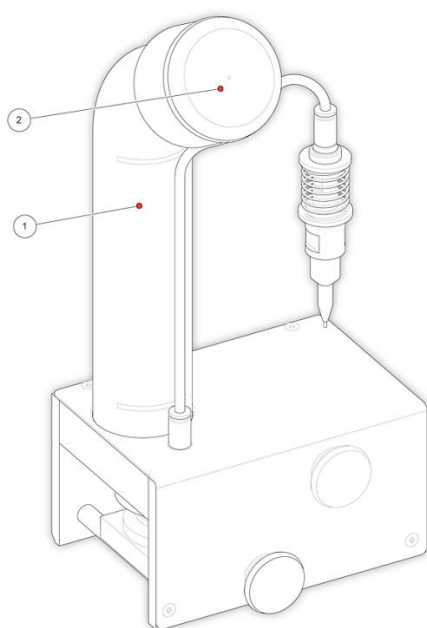


Figure 5



Initially fill the mountant bottle to the lower mark min with xylene.



Place the disposable syringe onto the dispenser needle and remove the solvent by pulling the syringe piston. This should be repeated until the liquid has reached the filter at the bottom of the mountant container and no bubbles can be seen in the hose.

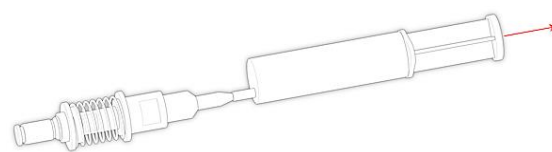




Figure 6

Next fill the mountant bottle with the mounting medium and repeat the above suction process several times until no bubbles are dispensed.



Do not overfill the mountant bottle. Only fill to the maximum fill level.

Re-install the dispenser system and move the needle to the upper position by pressing the red stop button , then press the pump button  which will dispense mountant into the waste tray to check no bubbles are present.

Whilst the needle is in the upper position the cleaning station can be accessed and filled. To remove see Figure 7.

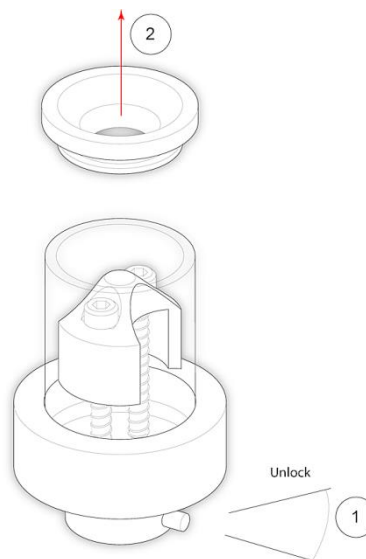


Figure 7



The station should be filled with Xylene to prevent the dispense needle drying out. It should be 2/3 full, see Figure 6.

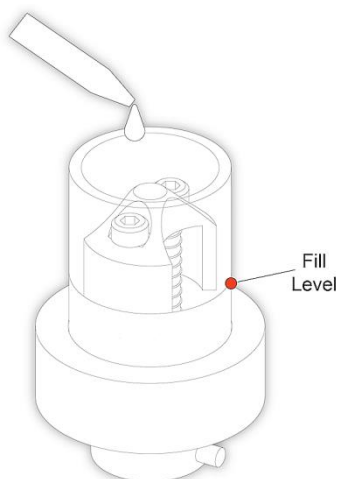


Figure 8




Check the solvent level daily. Clean thoroughly once a week.

#### Note



Press the **CLEAR** button . This will send the needle back to its home position. The display shows status "1:Load Basket".

## Checking Pump Function

When the instrument is turned ON, the display shows "1:Load Basket". The instrument is now ready for the pump test. To check the pump function, press the **STOP** button .

- The dispense needle moves to the upper position.

The display shows: "\*\*\*4:STOP/SERVICE \*\*\*".

- Press the **Pump** button  to dispense mountant into the waste tray. This will remove any bubbles from the system.
- When the pump test is complete press the **CLEAR** button .

The dispense needle moves back to its home position. The display shows: "1:LOAD BASKET".



## Coverslipping



Check if coverslips are loaded. Insert the slide basket into the basket load area. The basket is marked with an up message. This should be on top of the basket facing away from the user. Then the display shows: "2:READY".

- Press the green START button

The display shows: "3:RUNNING". The slides are now being coverslipped and returned back to the basket.

- To interrupt this process, press the STOP button

The instrument stops immediately and the dispense needle is left in the upper position.

This basket can be aborted without finishing using the arrow key.

- If coverslipping needs to be continued press and then to restart.

### Note

*For continuous processing, another basket can be inserted whilst the first is being coverslipped.*

*When the coverslipping process is finished the basket will be pushed into the output area by an expelling arm. The basket can then be removed.*

### Note

*Two different slide baskets are available. These are for 19 or 30 slides. If the 19 slide baskets are used please ensure that the high insertion plate is inserted according to Figure 9. This plate will stop the smaller baskets dropping to the base of the instrument.*

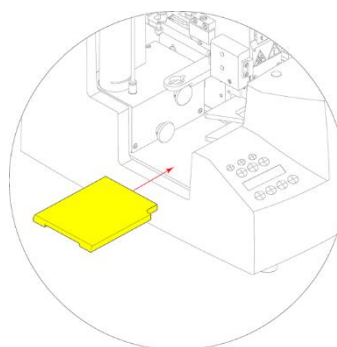
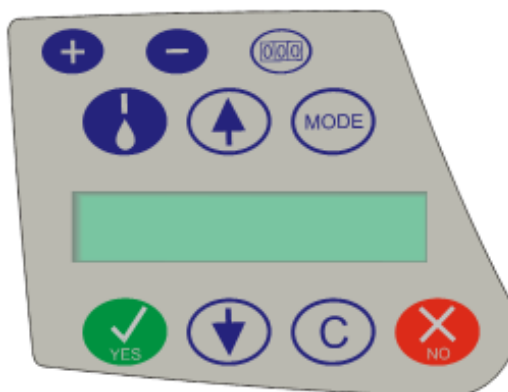


Figure 9



Never use the high insertion plate with 30 slide baskets. The Specimens or the instrument may be damaged.

## Summary of the Operating Buttons



The amount of mountant can be increased by pressing the (+) or decreased by pressing (-) (from 1 up to 99). The display shows: **MM:9** (e.g. mounting medium, stage 9).



The Pump Button allows the mountant to be pumped. It is recommended that the pump is checked regularly, especially after an extended period of non-operation. The pump test can only be carried out after pressing the STOP button. This lifts the dispense needle to the upper position above the waste tray.

### **Note**

*This should not be done when a basket is being coverslipped.*



**STOP button:** Press this button to interrupt the coverslipping process immediately. If not coverslipping, the Dispense needle / transfer head moves into the upper position. This allows easy access to the transfer head.

The display shows: **4:STOP/SERVICE**.



When the **CLEAR** button is pressed the instrument is reset and the dispense needle and transfer head move into their starting positions.



During routine operation, the green **START** button is used to start a coverslipping process.

The display will show **3:RUNNING**. Within the setup menu this button is also used to select the respective submenus.



**Arrow Upwards:** After using the STOP button to pause coverslipping, the carrier plate for the coverslipper can be moved forward by pressing this button. In doing so a coverslip is dispensed.

Press the  to move it back.



**Arrow downwards:** Press this button to move the slide basket through the instrument quickly.

This is especially useful when the basket is only partly loaded with slides or when the basket has been aborted.

**Counter reset button:** The instrument is equipped with two counters.



One is to monitor daily/weekly throughput and can be reset using this button. The second can only be seen when turning on the instrument and is only shown for a short time. This indicates the cumulative number of coverslips dispensed over the life of the instrument. This cannot be reset.



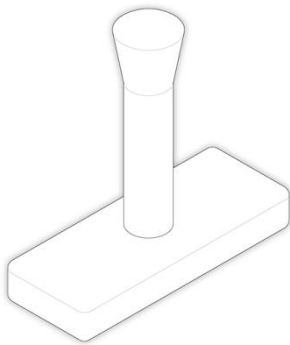
This button is used to set customer specific parameters, e.g. the coverslip size, language selection and the beep. To access this menu the stop button needs to be pressed first.

## Filling the coverslip magazine with coverslips

Coverslips with a length of 40, 50, 55 or 60 mm can be used. Up to 400 coverslips can be loaded into the coverslip magazine at any one time.



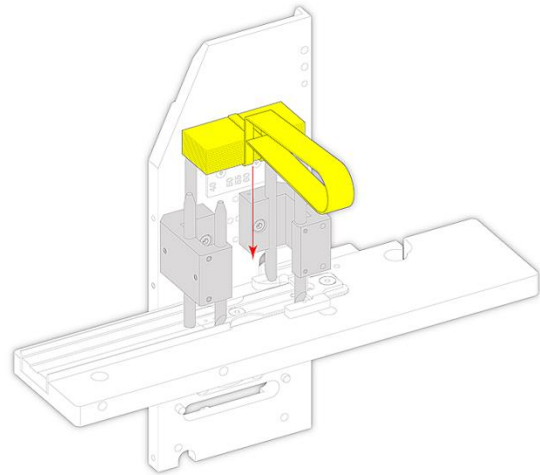
When refilling it is necessary to remove the compressing weight (Figure 10) from the coverslips. Before you insert the coverslips they should be checked. They should be dry and should not be stuck together. Also check that none are broken. This can be done by holding the coverslip stack against the light.



*Figure 10*

To load the coverslips into the instrument the clamping tool should be used (see Figure 11). This is to prevent moisture or damage to the coverslips during the loading process.

Then carefully place the compressing weight (Figure 10) onto the coverslips.



*Figure 11*

## Refilling the Mountant Bottle



The mountant bottle has a minimum and maximum mark. The bottle should be refilled before the lower (min) mark has been reached.

To fill the bottle (Figure 12.1), pull off the black cap (Figure 12.2). Slowly pour in the mountant taking care to avoid creating bubbles. Do not exceed the maximum fill level. Replace the black cap (Figure 12.2).

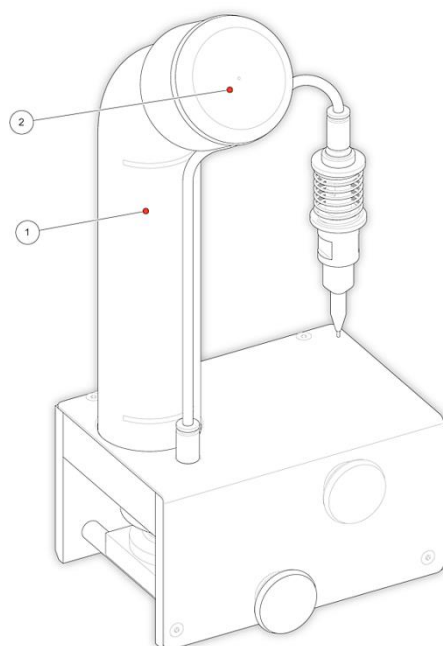


Figure 12

### Note

*For the set up process or after completely emptying the bottle , please see Initial Setup.*



Mixing mountant can cause major damage to the instrument.

When using another mountant, we recommend using another pump unit and mountant bottle to avoid cross-contamination.

For more information please see mounting and dismounting the pump and dispenser.

## Refilling / Changing the Solvent in the Cleaning Station

The cleaning station prevents the dispense needle drying out when it is in its home position.

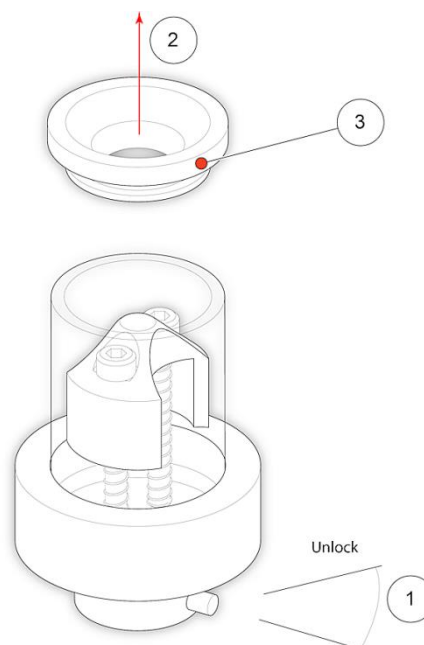


Figure 13

The container should be 2/3 full at all times

To remove the cleaning station, turn it by 90° to release (see Figure 13).



Carefully clean any solvent spills.

Dispose of the waste from the cleaning station according to local regulations and clean thoroughly before refilling.

Refill the cleaning station with new solvent. Replace the cover (Figure 13.3). Re-insert the container and lock it into position.

## Change to a Different Coverslip Sizes

The following coverslip sizes can be used on the CTM6 24 x 40 mm, 24 x 50, 24 x 55 mm and 24 x 60 mm.

To change to a different size it is necessary to make 3 hardware changes and change one software value.

What is required to make the hardware changes:

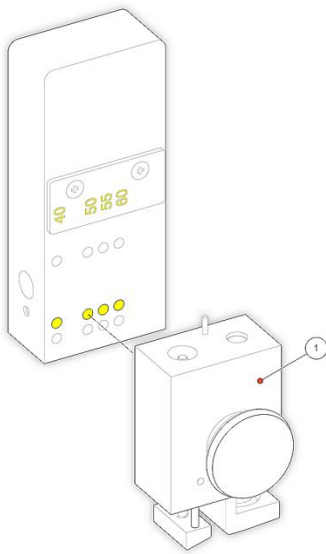


Figure 14

1. Loosen the screw on the transfer head and remove the vacuum cup holder (Figure 14.1).

Four vertical rows of holes become visible. To prevent the vacuum cup holder being put into the wrong position, the unused holes are closed off and the current slip size holes are exposed. Unscrew the set screw which matches the new slip size using an allen key (size 2) and insert it into the previously used threaded hole.

The vacuum cup holder can now be placed into the new fastening position.

2. A clasp (Figure 15.2) present on the coverslip carrier plate also needs to be changed if the coverslip size changes. Remove the clasp with an allen key by loosening the fastening screw using a hex

head wrench (size 2,5).

Refit the appropriate clasp in the appropriate position, ensuring that the guidepins fit into the last pair of holes. Refit the fastening screw into the appropriate position for the selected coverslip size (see Figure 15). Then tighten the screw.

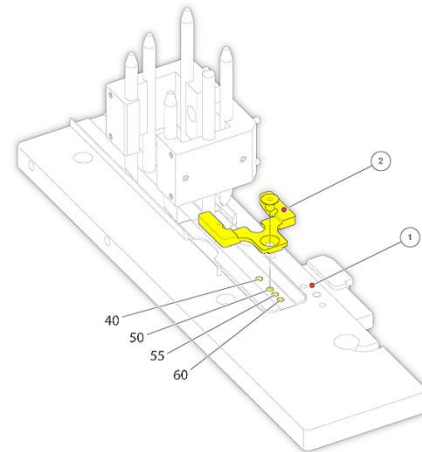


Figure 15

3. The coverslip magazine must also be adjusted to the new coverslip size. To do this loosen the fastening screw on the front part of the coverslip magazine (Figure 16) and remove it. Move the carrier plate to the appropriate location for the new coverslip size and tighten the screw.

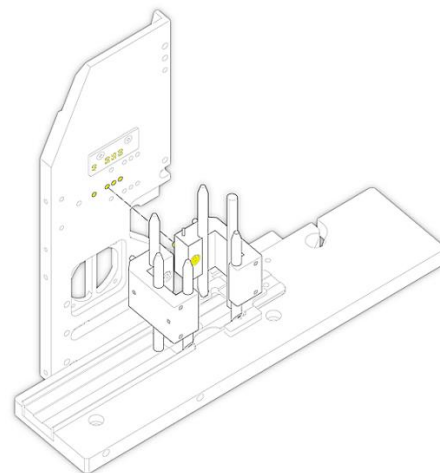









Figure 16



The size of the coverslip must also be altered in the software.

4. To do this press the STOP button . This will bring up the message 4. Stop/Service. Then press the MODE button  to enter the menu. The set-up menu appears and the display shows: "COVERGLASS SIZE ". Press  to enter this menu. The display now shows the current coverslip setting.



**cover glass length**  
**50 mm**

5. To change the setting use the  and  buttons. Confirm the setting via the START button  and quit the set-up menu by pressing the  button twice.

## Selecting the Language

The information on the display can be shown in four different languages. The following languages are available:

- English
- French
- German
- Spanish

To change this language access the setup menu. This is done by first pressing  and then .





Use the  key to scroll through the set-up menu.

The display shows the following indication:




**33:Language**

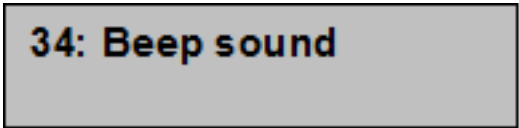
Press  to enter this menu.

All languages that can be selected are shown. However, the active setting is shown at the bottom.


To change the setting press the  or  buttons until the required language is selected. Confirm the setting using the start button  and exit the set-up menu by pressing the  button twice.





## Turning on/off the beep sound for key press

To turn the beep sound for the key presses on or off access the set up menu. This is done by first pressing  and then . Use the  button to scroll through the setup menu. The display will then show the following text:



**34: Beep sound**

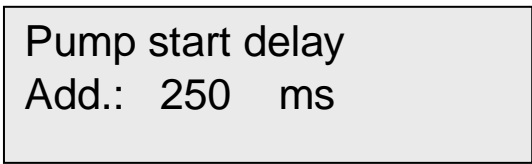
Press  to enter the menu. The setting options are shown first 1=ON 2=OFF followed by the active setting.

To choose the setting, press the  or  button until the correct setting is displayed. Confirm the setting using the start button  and exit the setup menu by pressing the  button twice.



## Setting the Pump Start Delay

The viscosity of the mountant results in a delay during the dispense. This delay can be compensated by adjusting the delay time. The pump start time cannot be adjusted but the slide movement can be adjusted using this setting. This allows the distance between the mountant bead and frosted area on the slide to be adjusted.

From the setup menu select pump start add time and press . The following display appears:












**Pump start delay**  
**Add.: 250 ms**











In this example, the movement of the slide has a delay of 250 ms in relation to the pump start. The value can be altered via the  and  button.

An increased value for the delay results in the mountant bead being dispensed closer to the frosted area. A decreased value results in it being further away.

## Error Code Indication

Indication	Cause	Remedy
5: VACUUM ERROR Check Coverslip	The vacuum monitoring switch detected a vacuum loss during transportation of the coverslip.  Possible causes:  1. No coverslips present	Refill coverslip magazine
	2. Broken coverslip	Carefully remove broken coverslip and clean area. Simultaneously press the buttons  and  to stop the instrument dispensing a second bead of mountant onto the slide. Then start the coverslipping process again by pressing  .
	3. Dirty vacuum cup	Loosen the screw on the transfer head to remove the vacuum cup holder. Clean the area using a cotton swab moistened with the xylene and replace.
	4. Defective vacuum switch	Please call an authorized service technician.
6: ERROR Check carrier	Carrier plate is blocked or not in its end position.	Press button  . Check carrier plate for blocking elements. Press button  to reset.
7: ERROR Check Expeller	The movement of the expeller is blocked.	Check the output area for blockages. Remove any baskets. Press button  to reset. Press  to continue.
8: ERROR Check step down	The transportation wheel for the basket movement was not able to carry out one full rotation. Check if there is a Basket jammed inside the magazine?	Loosen any jammed parts (slides) within the basket magazine. Press button  to reset. Then press button  to expel the basket without being coverslipped. Check basket for encrusted waste and clean up if necessary. Check slides being used are the correct size.



Indication	Cause	Remedy
9: ERROR Check pump	Pump drive was blocked.	Loosen the two screws on the pump to allow the dispense unit to be removed. Remove pump and press button  . Press button  to check the pump drive. Does the drive clutch move correctly: <ul style="list-style-type: none"> <li>• If yes, install pump again and retry.</li> <li>• If no, call authorised service personnel.</li> </ul>
10: ERROR Check tran/slip	Side to side movement of the transfer arm was blocked.	Check for blockages around the transfer arm and remove. Press button  to reset and press  to restart.
11: ERROR Check grip finger	Carrier plate was not in its starting position when the instrument was turned on.	Press button  to reset and press  to restart.
	The grip finger detected an incorrect position during operation.	Please call authorized service personnel.
12: ERROR Lost slide	Incomplete removal of a slide from a basket.	Check for obstructions on the slide basket and clean if necessary. Press button  to reset and restart using  .
		Check slides for damage. Press button  to reset and  to start again.

# Chapter 3 – Maintenance



Disconnect the instrument from the mains supply before performing maintenance.



Take necessary precautions when handling glass. Wear Personal Protective Equipment (PPE) if required.

## Daily Maintenance

The following items should be checked daily:




- Check mountant volume and refill if necessary. The volume should be between the min and max levels.
- Check vacuum cup and clean if necessary. If there is physical damage to the vacuum cup please replace.



Top up the cleaning station with solvent. This cleaning station prevents blockages in the needle and should be kept 2/3 full.




Check coverslip magazine and transportation area for broken glass and remove if necessary. Keep coverslips topped up.

- Check the pump function by moving the dispenser to the up position by pressing the  button. Then press the  button and dispense mountant into the waste tray until no bubbles are seen. Press the  button to return the needle home.

## Weekly Maintenance

The following items should be checked weekly:

- Remove and clean the cleaning station and refill with solvent.
- Empty the waste tray to prevent overspills.
- Clean output area and remove any debris.
- Clean the bar guides that the slides sit on and the grip finger which handles the slides.

After completing the daily or weekly maintenance please reset the instrument using button . Please check that the dispense needle is placed in the cleaning station

## Instrument Shutdown procedure

If the CTM6 is to be moved, left unattended for long periods of time or decommissioned, carry out the following steps:

- Ensure that the instrument has finished any programs that were running.
- Ensure that the dispense needle has returned to the cleaning station.
- Press the 0 (OFF) side of the main I/O power switch to switch off the CTM6.
- Empty the instrument of all reagents and solvents.
- Clean the instrument, refer to [Chapter 4 – Cleaning and Care](#).

### Note

*If you want to repack the instrument, refer to the Packing List sent with the instrument.*

## Dismounting the Pump and the Dispenser

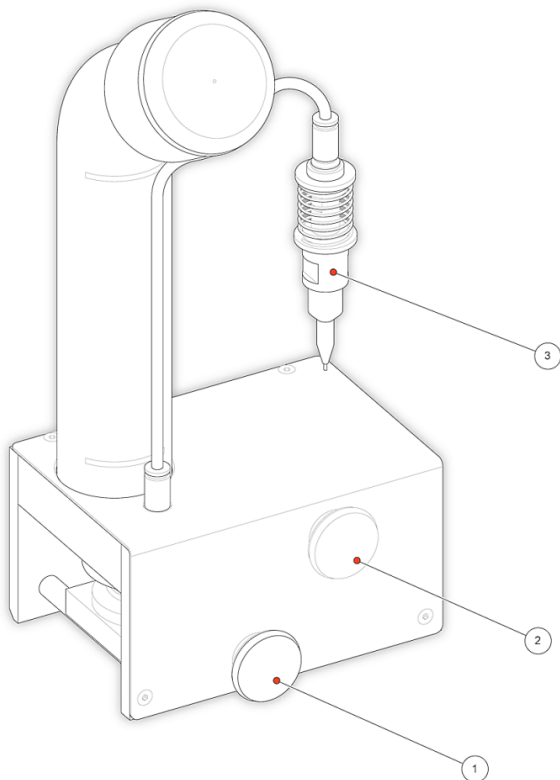


Figure 17



If mountant is spilt during refilling, the whole pump should be removed and the area cleaned. This is to prevent the pump unit becoming stuck.

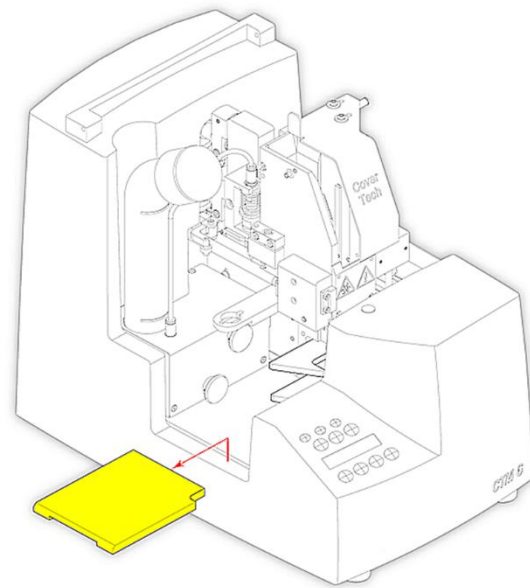


Figure 18

First lift the black bottom insert (Figure 18) upwards and remove it from the machine

To remove the pump loosen the two screws (Figure 17.1 and remove Figure 17.2). These screws can be loosened manually without any special tools.

To remove the dispense needle press the black plastic ring above the spring and pull the needle out to the side.



Do not lift the pump unit by the glass container or exert force as this may cause damage.

## Annual Routine Maintenance

To maintain the reliability and coverslipping quality of your CTM6, it is recommended that routine maintenance is performed by a trained service technician once a year.

### Exchange of Fuses

It is possible to change the fuses without completely opening up the instrument.

The two fuses and the connection for the power cord and the main switch are placed in the mains plug unit (Figure 19).

The mains plug unit can be opened using a screwdriver. Then remove the fuses and check them.

When re-installing the fuses, please note that they are inserted correctly.

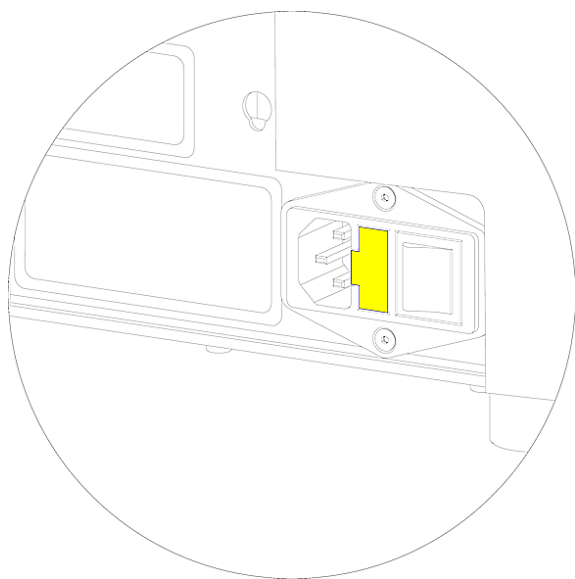


Figure 19



Fuses must be replaced by technically competent personnel

## Transportation of Instrument



Any shipping of the instrument requires original packaging materials! Damages caused by shipping with non-conforming packaging are not covered by the manufacturer warranty! Any damage repairs resulting in non-conforming package are fully charged to the sending party. We reserve the right depending on seriousness of damage NOT to repair. To order original packaging materials, please contact your local EpreDia representative.



The user must ensure the instrument is in a clean and safe condition when returning it to an appropriate service provider.

### Note

*If the original packaging is no longer available, please contact your local EpreDia representative.*

# Chapter 4 - Cleaning and Care

## Cleaning

Carefully clean the instrument daily to guarantee optimal functionality and best coverslipping quality.

## Cleaning Reagents



Mild household cleaners can be used to clean the instrument. Do not use aggressive cleaners or solvents, as the paint and plastic parts can be affected. Clean the dispenser as well as the needle and the horizontal carrier with a solvent matching the mountant, refer to [List of Recommended Mounting Media section](#).

## Mountant Cleaning



If the instrument is to be switched Off for long periods of time, you must ensure that you empty the instrument of mountant. The station should be filled with Xylene to prevent the dispense needle drying out. It should be 2/3 full, see Fig 6.

# Appendix A – Accessories

## Note

A range of coverslipping consumables are available from your Epredia representative.

Part No	Alternative Ref	Description	Qty
AP17808	172550	Slide Basket (30)	1
AP17809	172540	Slide Basket (19)	1
A83410015	526770	Coverslip Weight (40)	1
A83410016	526770	Coverslip Weight (50)	1
A83410017	526770	Coverslip Weight (55)	1
A83410018	526770	Coverslip Weight (60)	1
A83410019	N/A	Coverslip Weight Kit	1
A83420002	403390	Slip Guide Plate 40	1
A83420004	403980	Slip Guide Plate 55	1
A83420005	403990	Slip Guide Plate 60	1
A83420009	401660	Basket Drop Plate	1
A83420049	524150	Expeller Platform 19 Basket	1
A83430091	403780	Carriage Slip Plate (1.5) Non Standard	1
A83420064	172840	Slip Insertion Tool	1
A83430040	172840	Coverslip Stack Support	1
A83410021	524000	Xylene Container Assembly	1
A83430034	403440	Drip Tray / Purge Pot	1
A83410034	463460	Vent Adapter Assembly (fitted with 4 screws)	1
AP17740	172700	Vacuum Cups	2
AP17383	261850	Disposable Syringe	1
AP17781	362310	Allen Key 2mm	1
AP17782	362220	Allen Key 2.5mm	1
AP17783	362230	Allen Key 3mm	1

Part No	Alternative Ref	Description	Qty
AP17784	362260	Allen Key 5mm	1
P12940	334169	Bristle Paint Brush 10mm Flat Head	1
N/A	172560	Adapter for HMS-MS/DS 50" (1 x 30 slides)	1
N/A	172750	Adapter for HMS-MS/DS 50" (2 x 19 slides)	1
N/A	172570	Adapter for HMS-MS/DS 100" (2 x 30 slides)	1
N/A	172760	Adapter for Medite (1 x 19 slides)	1
N/A	172580	Adapter for Leica Autostainer XL (ST5010) (2 x 30)	1
N/A	173120	Adapter for Leica ST 4040 (1 x 19)	1
N/A	172590	Adapter for Epreia Varistain 24.4 (1 x 30 slides)	1
N/A	172920	Adapter for Epreia Varistain 24-4 (2 x 19 slides)	1
N/A	172600	Adapter for Epreia Varistain XY (2 x 30 slides)	1
N/A	172940	Adapter for Sakura DRS-601	1
N/A	172610	Adapter for Combi-Tech	1
N/A	172930	Adapter for manual staining 30 baskets	1
N/A	173070	Adapter for manual staining 19 baskets	1
A83410036	N/A	Slide Rack Carrier Gemini Pk 5	1



Only use accessories specified by Epreia. If in doubt, contact your service representative.



Do not replace a detachable mains lead set with an inadequately rated mains lead set.

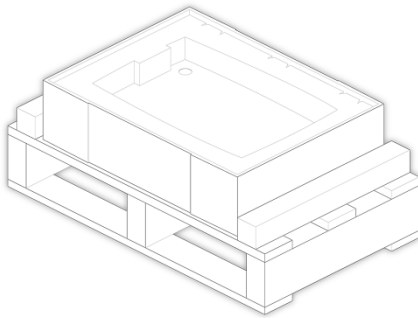
# Appendix B – Packing Instructions

If the instrument is to be transported, follow these packing instructions, after unloading ALL solvents and switching the instrument off.

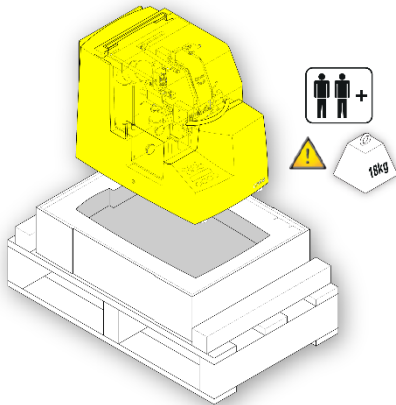
## Note

Use ALL original packaging and keep the instrument upright at ALL times.

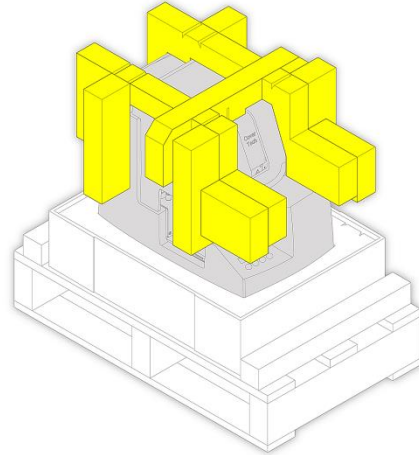
- Place the base of the packaging in a clear area.



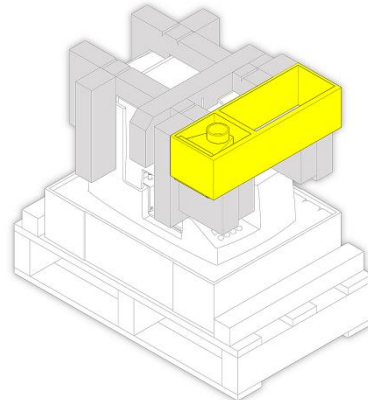
- Place the CTM6 instrument onto the base of the packaging.



- Fit the inner packaging onto the instrument. Ensure that it is seated correctly or the outer packaging will not fit properly.

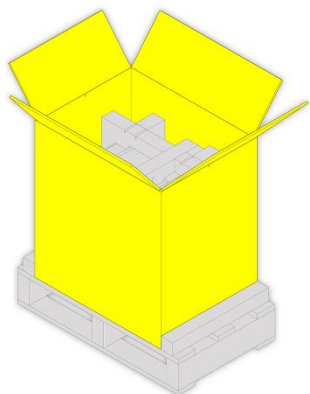


- Fit the rectangular packing box onto the inner packaging.

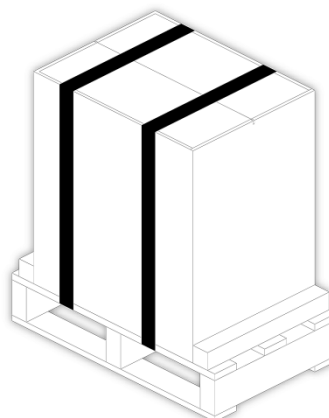




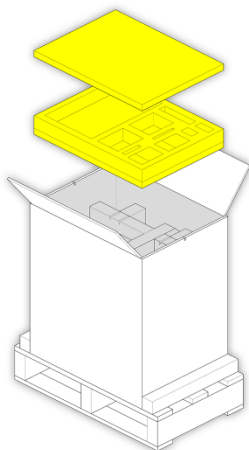
- Fit the outer packaging over the top of the instrument. Make sure you leave the lid of the outer packaging open.



- Tie wrap the outer packaging to the base unit.



- Fit the accessory tray into the packaging onto of the instrument.
- Fit the lid onto the accessory tray and close the flaps of the outer packaging.



# Index

---

## A

Annual Routine Maintenance .....	28
Appendix A – Accessories .....	30
Appendix B – Packing Instructions .....	32

---

## C

Change to a Different Coverslip Sizes .....	21
Chapter 1 - Introduction .....	9
Chapter 2 - Operating Instructions .....	14
Chapter 3 – Maintenance .....	26
Chapter 4 - Cleaning and Care .....	29
Checking Pump Function .....	16
Chemical Safety .....	7
Cleaning .....	29
Cleaning Reagents .....	29
Company Information .....	3
Contact address .....	3
contents .....	4
Coverslipping .....	17

---

## D

Daily Maintenance .....	26
Description of Cover-Tech CTM6 .....	9
Description of CTM6 .....	10
Dismounting the Pump and the Dispenser .....	27

---

## E

EMC Statement .....	5
Environment .....	7
Error Code Indication .....	24
Exchange of Fuses .....	28

---

## F

Filling the coverslip magazine with coverslips .....	19
--	----

---

## G

General Safety .....	6
----------------------	---

---

## I

Initial Operation .....	15
Instrument	
Repacking .....	32
Instrument Shutdown procedure .....	26

---

## L

List of Recommended Mounting Media .....	12
Locating the CTM6 .....	14

---

## M

Mountant Cleaning .....	29
-------------------------	----

---

## P

Packing Instructions .....	32
Parts Identification .....	9

---

## R

Refilling / Changing the Solvent in the Cleaning Station .....	20
Refilling the Mountant Bottle .....	20
Repacking .....	32

---

## S

Safety Information .....	6
Selecting the Language .....	22
Setting the Pump Start Delay .....	23
Setting up the CTM6 .....	14
Summary of the Operating Buttons .....	18

---

## T

Technical Specifications of the CTM6 .....	11
--	----

<i>Transportation of Instrument.....</i>	<i>28</i>
<i>Turning on/off the beep sound for key press.....</i>	<i>23</i>

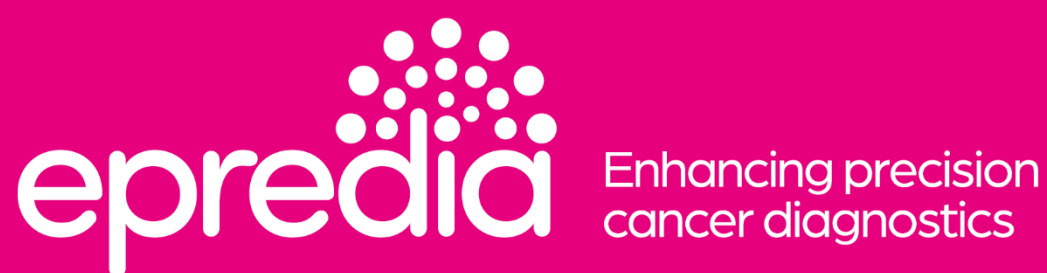
---

## **W**

<i>Warranty Statement.....</i>	<i>8</i>
<i>Weekly Maintenance.....</i>	<i>26</i>

# Revision Control For This Document

Date	Revision number	Changes made
February 2022	10	IVDR compliance requirements added, including this revision record table.



[www.epredia.com](http://www.epredia.com)



**Tudor Road, Manor Park  
Runcorn, WA7 1TA  
United Kingdom  
+44 (0) 800 018 9396  
+44 (0) 1928 534 000**

**4481 Campus Drive  
Kalamazoo, MI 49008  
United States  
+1 (800) 522-7270**



Enhancing precision  
cancer diagnostics