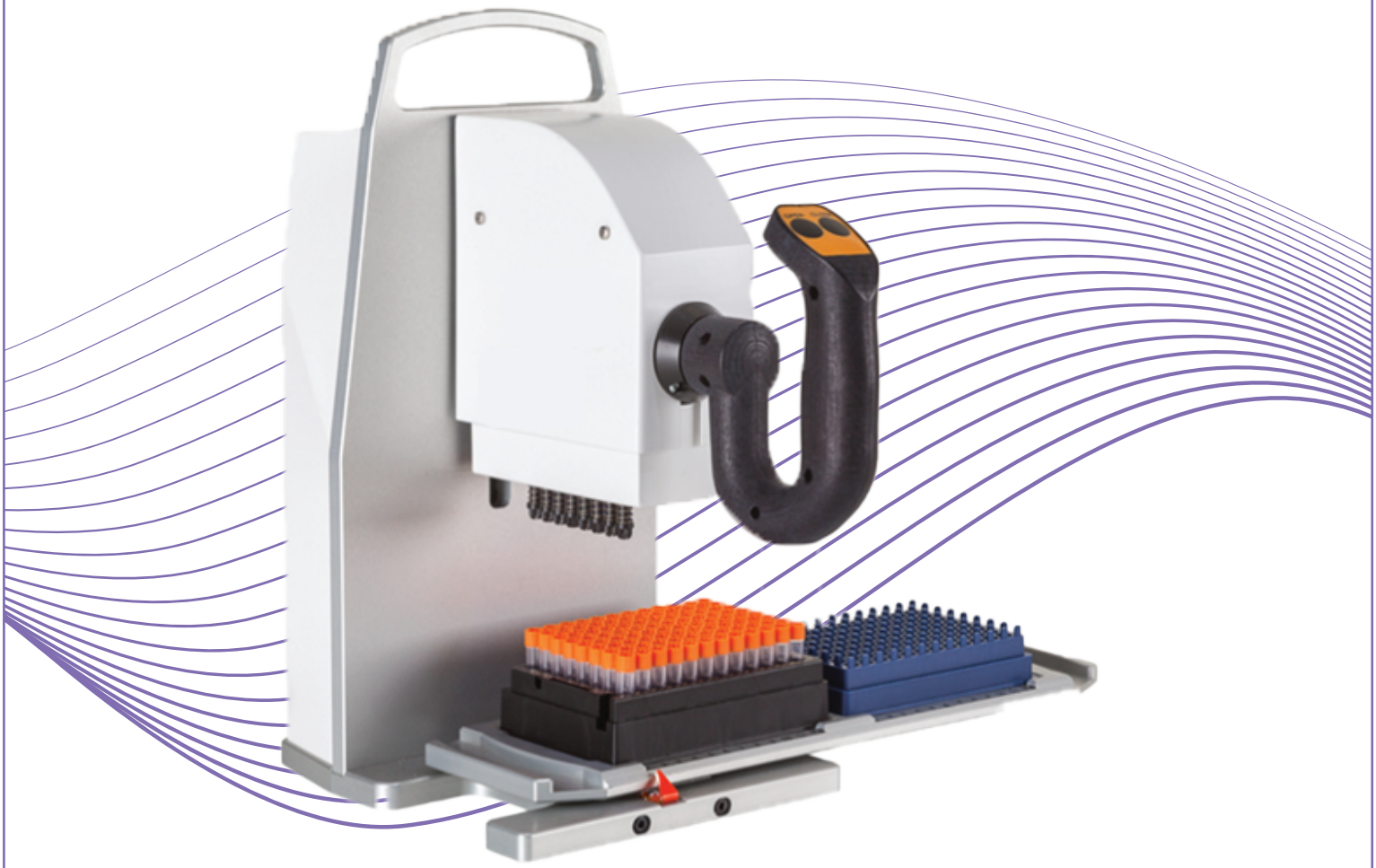
# Semi-Automated Screw Cap Decapper User Manual



AZENTA
LIFE SCIENCES

319427 Revision C

# Azenta US, Inc.

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Original manual printed in English.

These are the original instructions for the Semi-Automated Screw Cap Decapper.

**Corporate Headquarters**
2910 Fortune Circle West
Indianapolis, IN 46241 U.S.A.

**European Union Representative**
Im Leuschnerpark 1B
64347 Griesheim, Germany

## For Technical Support:

| Location | Contact Number | Website |
|---|---|---|
| North America | +1.888.2.AZENTA<br>(+1.888.229.3682) | www.azenta.com |
| Europe | +44.0.161.777.2000 | |
| Japan | +81.45.4477.5570 (ext. 24) | |

# Revision History

Part Number: 319427

Semi-Automated Screw Cap Decapper User Manual

| Revision | ECO Number | Date | Explanation of Changes | Author |
|---|---|---|---|---|
| **Revision A** | EC108865 | 1/22/2019 | Re-branding and application of templates. | A. Kleen |
| **Revision B** | EC119928 | 6/01/2020 | Fixed the Decap and Recap procedures in the Operation chapter.<br>Added the WEEE statement to the appendix. | G. Russell |
| **Revision C** | EC132461 | 10/26/2021 | Updated branding. | V. Bourque |

# Table of Contents

# 1. Overview

The Semi-Automated Screw Cap Decapper semi-automated system is compact and ideal for use on a bench top. The system is designed for efficient tube capping in labs with medium to high throughput. Semi-Automated Screw Cap Decapper offers the consistency of an automated decapping system at lower price point. Using a semi-automated hand lever, the Semi-Automated Screw Cap Decapper system has the ability to cap a single column of tubes from a cap carrier in under 10 seconds, and to cap, or decap, a complete rack of 96 tubes in under 2 minutes.

Semi-Automated Screw Cap Decapper is suitable for use with 24, 48 or 96-format SBS racked tubes. Semi-Automated Screw Cap Decapper is compatible with Azenta sample storage tubes as well as those manufactured by Thermo-Matrix®, Thermo-Nunc™, Micronic, and LVL.

Semi-Automated Screw Cap Decapper provides the consistency of an automated system, with all caps tightened to the same torque delivering an effective and secure seal and peace of mind.

Designed for efficient tube capping and decapping, Semi-Automated Screw Cap Decapper's set down position allows the simple insertion of screw caps using an Azenta Cap Carrier.

Equally suited for use with both internal thread and external thread sample storage tubes.

# 2. Specifications and Site Requirements

## Electrical Requirements

The system must only operate with the power supply and frequency specified on the system identification stickers mounted on the side of the device. Operating the system with any other power supply or frequency can result in damage to the equipment.

**Table 2-1: Electrical Requirements**

| Parameter | Specification |
|---|---|
| Supply Voltage | 100-240 VAC 50/60Hz |

## Unit Dimensions

**Table 2-2: Unit Dimension**

| Parameter | Specification |
|---|---|
| Width | ~345 mm |
| Depth | ~310 mm |
| Height | ~370 mm |
| Weight | ~6 kg |

## Semi-Automated Screw Cap Decapper 4

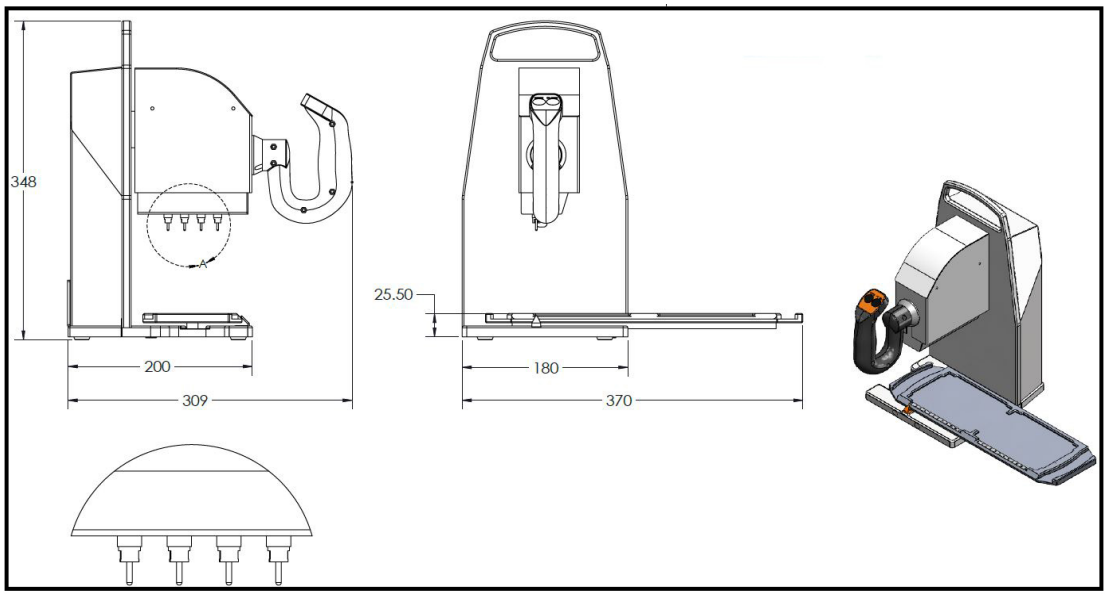



Figure 2-1: Semi-Automated Screw Cap Decapper 4 Dimension

## Semi-Automated Screw Cap Decapper 6

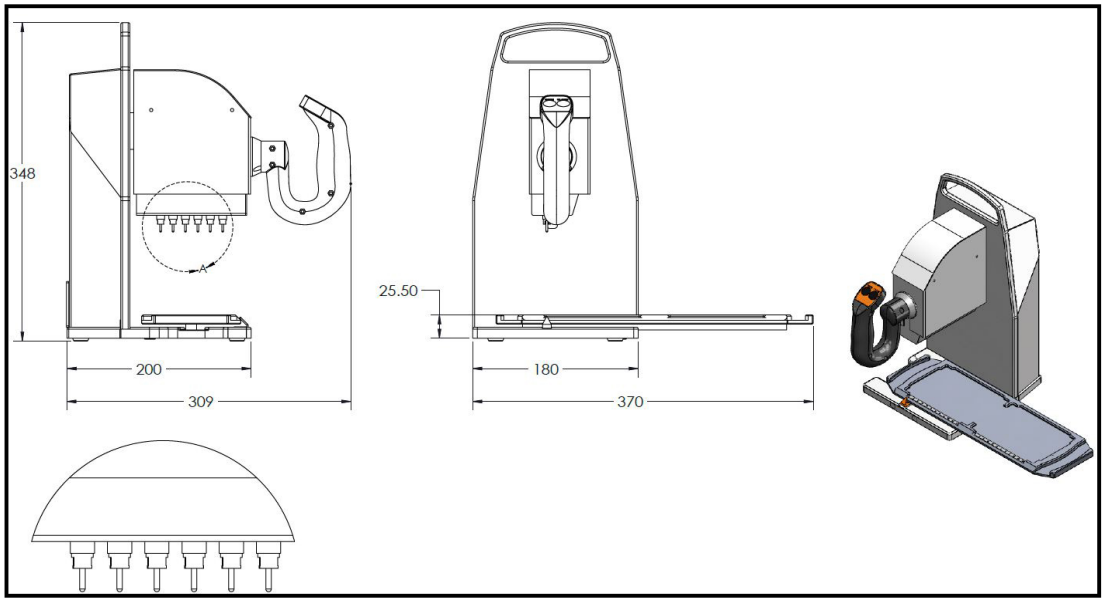



Figure 2-2: Semi-Automated Screw Cap Decapper 6 Dimensions

## Semi-Automated Screw Cap Decapper 8

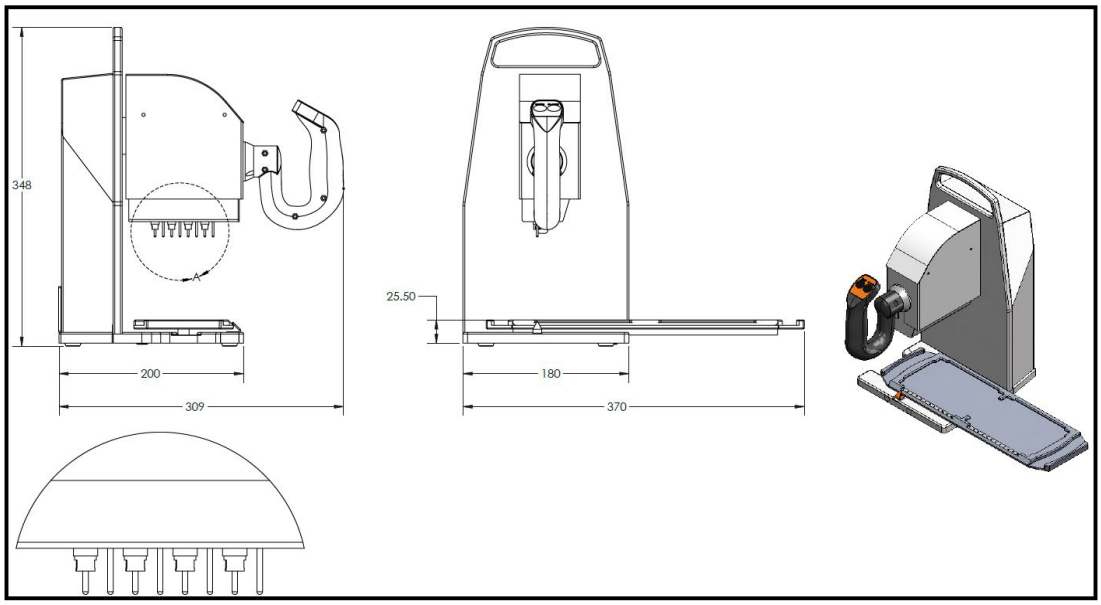



Figure 2-3: Semi-Automated Screw Cap Decapper 8 Dimensions

# 3. Installation

## Unpacking

| Step | Action |
|---|---|
| 1. | Check the integrity of the box for externally damage. |
| 2. | Place the box on a flat firm surface and open the box. |
| 3. | Remove the top foam insert. |
| 4. | Remove the small box containing the Semi-Automated Screw Cap Decapper's associated items. |
| 5. | Lift the Semi-Automated Screw Cap Decapper out of the box by the handle on top of unit and place on a clean, dry flat work bench.<br>***NOTE:*** *Do NOT use the black control lever to lift the unit.* |
| 6. | Remove the additional (2) foam inserts supporting the head of the unit. |

## Setup

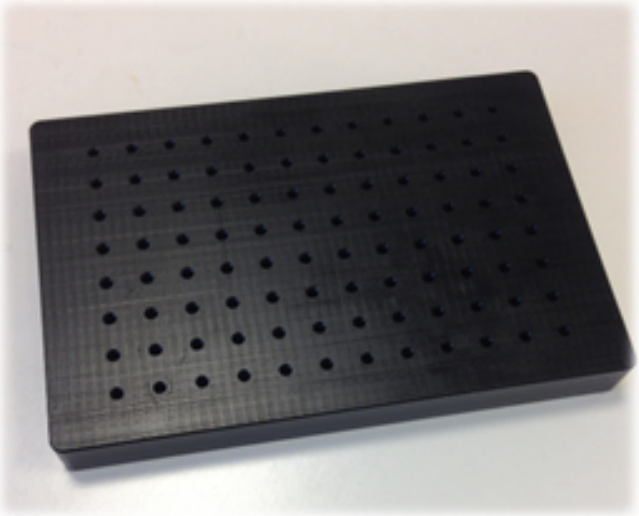
The Semi-Automated Screw Cap Decapper comes supplied with it own external power supply, and power cables for most regions.

| Step | Action |
|---|---|
| 1. | Remove the ties around the power supply and straighten the lead. |
| 2. | Plug the power supply into the rear of the Semi-Automated Screw Cap Decapper. |

| Step | Action |
|---|---|
| 3. | Plug the supplied power cable into the other end of the power supply, then into a wall socket. |
| 4. | Switch the power on at the wall socket. |

# Alignment

## Tools Needed

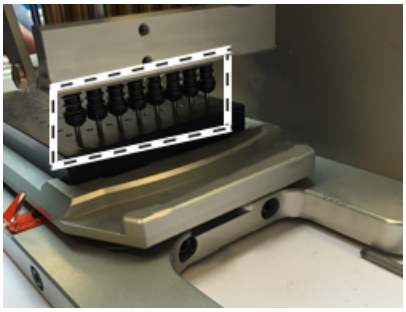
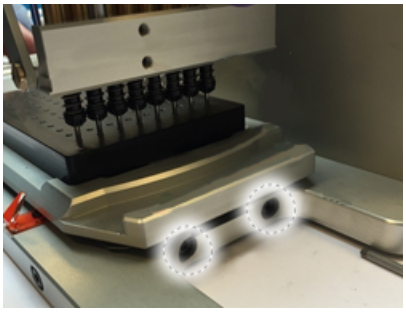
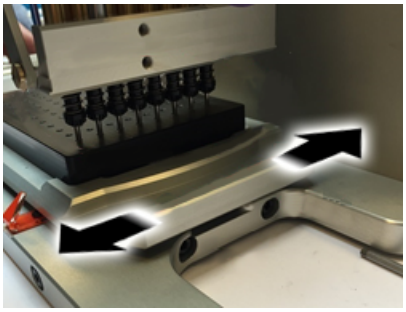


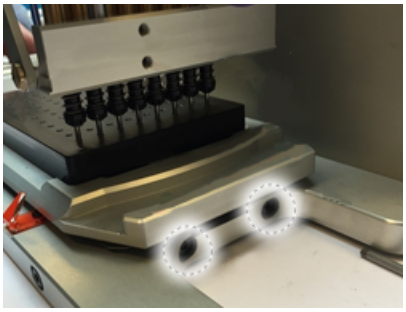
- Semi-Automated Screw Cap Decapper 8 and Semi-Automated Screw Cap Decapper 6 (operates with racks counting 96 and 48 positions correspondingly)
  Item N° 170-01-301
  Spacing = 9mm and 13.50mm

- Semi-Automated Screw Cap Decapper 4 (operates with racks counting 24 positions)
  Item N° 170-01-302
  Spacing = 18mm and 19.50mm

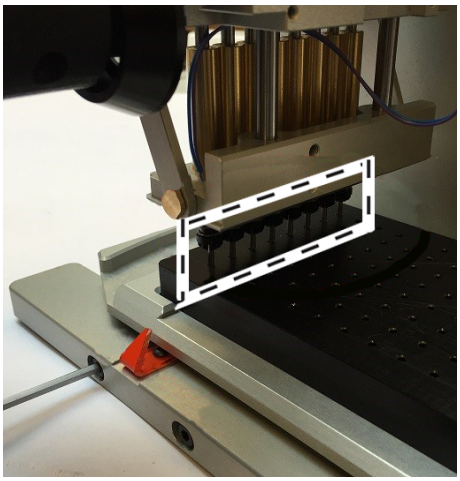
- 3 mm hex wrench

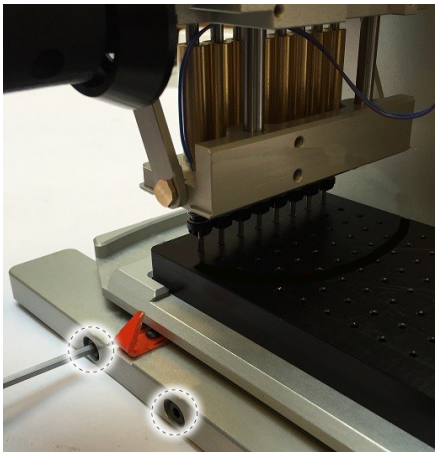
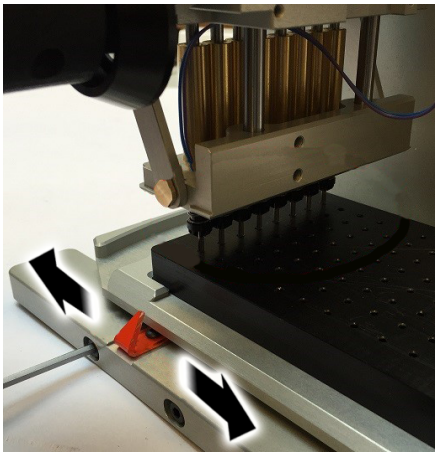
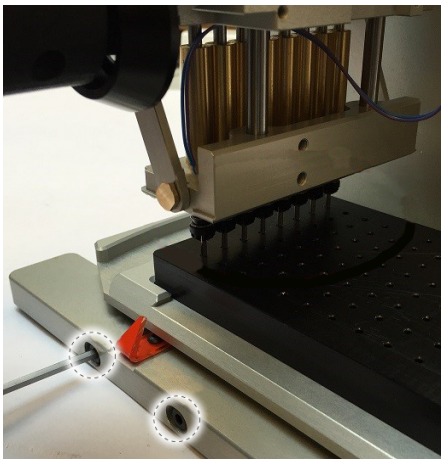
## Portrait Adjustment

| Step | Action |
|---|---|
| 1. | Place calibration tool on the tray and check that the ejection pins are centered in the holes.<br>  |
| 2. | If the eject pins are not centered, use a 3 mm hex head wrench to loosen the (2) screws.<br>  |
| 3. | Move tray in the direction of the arrows until the eject pins are centered.<br>  |

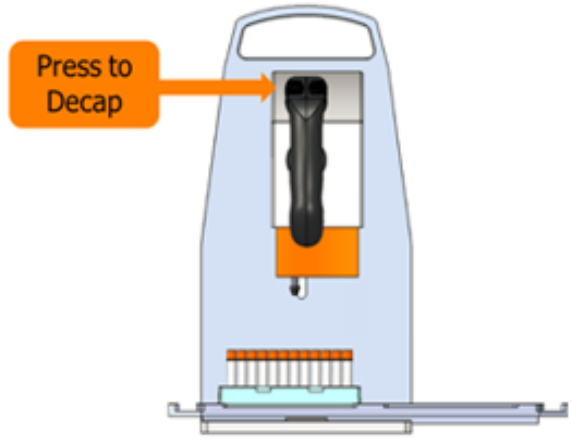
| Step | Action |
|---|---|
| 4. | Use a 3 mm hex head wrench to tighten the (2) screws.<br>  |

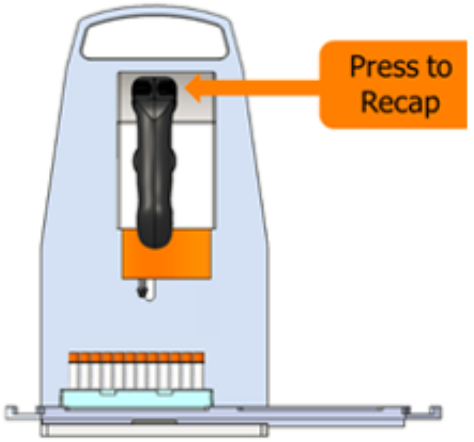
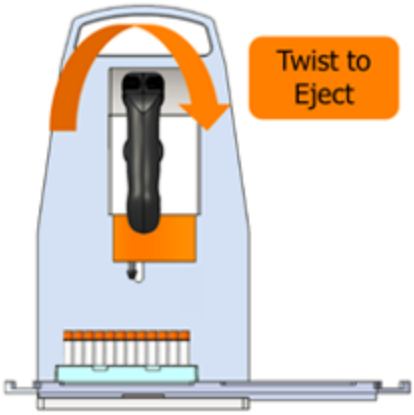
## Landscape Adjustment

| Step | Action |
|---|---|
| 1. | Place calibration tool on the tray and check that the ejection pins are centered in the holes.<br>  |

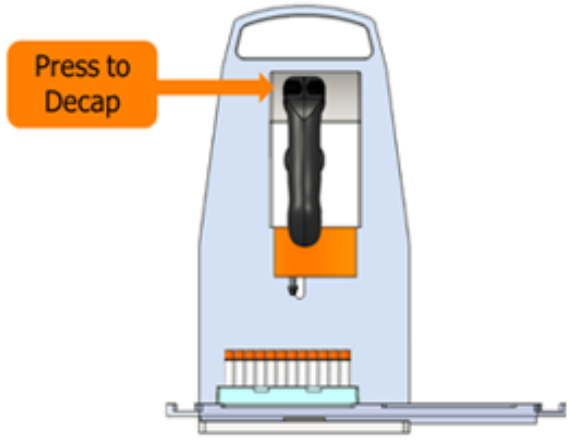
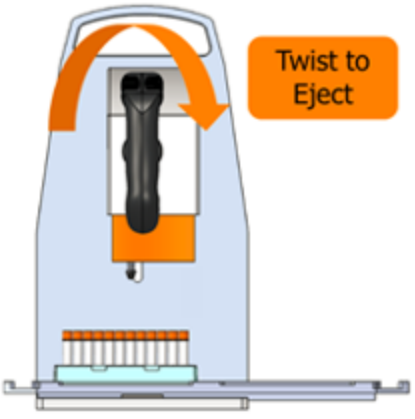
| Step | Action |
|---|---|
| 2. | If the eject pins are not centered, use a 3 mm hex head wrench to loosen the (2) screws.<br>  |
| 3. | Move tray in the direction of the arrows until the eject pins are centered.<br>  |
| 4. | Use a 3 mm hex head wrench to tighten the (2) screws.<br>  |

# 4. Operation

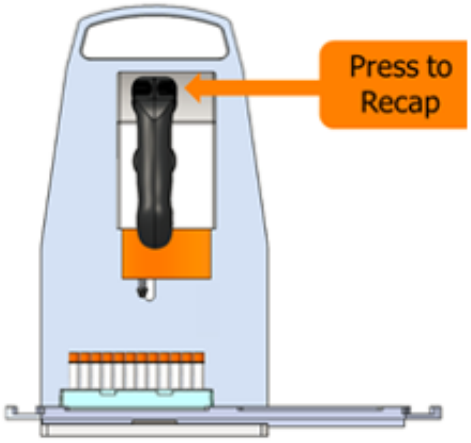
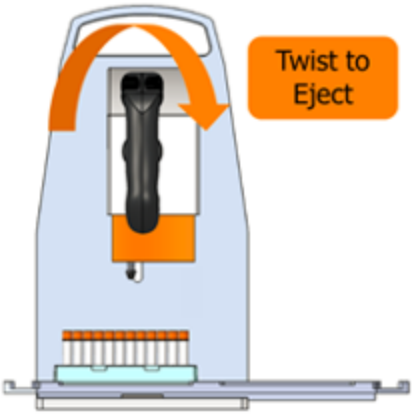
| Step | Action |
|---|---|
| 1. | Place a rack of capped tubes in the left tray position. |
| 2. | Use the lever to lower the head onto the caps. |
| 3. | Press and hold the **Decap** button.<br>  |
| 4. | Once the caps are unscrewed and there is a clicking sound indicating that the caps are skipping on top of the tubes, slowly and gently lift the lever up. |
| 5. | Once caps are cleared of the tubes, release the **Decap** button. |

| Step | Action |
|---|---|
| 6. | To recap, press and hold the right control button on the lever.<br>Lower the head gently onto the cap.<br>  |
| 7. | To eject, twist the joystick handle keeping the head in the down position.<br>  |

# Decap

| Step | Action |
|---|---|
| 1. | Place a rack of capped tubes in the left tray position.<br>To store caps on a cap carrier, place an empty cap carrier in the right tray position. |
| 2. | Use the lever to lower the head onto the caps. |
| 3. | Press and hold the **Decap** button.<br>  |
| 4. | Once the caps are unscrewed and there is a clicking sound indicating the caps skipping on top of the tubes, slowly and gently lift the lever up. |
| 5. | Once caps are cleared of the tubes let go of the **Decap** button. |
| 6. | If storing caps, slide the tray rack into the second tray position (originally, on the right of the device). |
| 7. | Use the lever to lower the head onto the empty cap carrier, then twist the lever clockwise to release the caps.<br>  |

# Recap From Store

| Step | Action |
|---|---|
| 1. | Place a full cap carrier tray in the left tray position |
| 2. | Place a full tray of uncapped tubes in the second tray position. |
| 3. | Press and hold the **Recap** button so the drivers begin turning.<br>  |
| 4. | Use the lever to gently lower the head onto the caps. Once the caps are engaged on the head, let go of the **Recap** button and use the lever to raise the head. |
| 5. | Slide the tray rack to the second tray position. |
| 6. | Use the lever to lower the head onto the full rack of uncapped tubes. |
| 7. | Press and hold the **Recap** button so the drivers begin turning. |
| 8. | Once the caps are installed on the tubes, let go of the **Recap** button and twist the lever clockwise to eject the caps, then use the lever to raise the head.<br>  |

# 5. Preventative Maintenance

## Overview

The Semi-Automated Screw Cap Decapper needs only minimum maintenance to operate.

## Schedules and Procedures

| | |
|---|---|
| Periodic Cleaning | Clean tray using alcohol wipes, non-bleach disinfecting wipes, or germicidal disposable wipes. |
| Tray | Ensure the tray is moving freely and is clean of dust and debris. |
| Springs | The Semi-Automated Screw Cap Decapper has individually sprung loaded cap drivers. Gently push each cap driver up to ensure they spring back. |

# 6. Troubleshooting

| Problem | Possible Causes | Action |
|---|---|---|
| No power | Fuses<br>Supply power from wall socket<br>Plug | Check. |
| Broken cap driver | | Contact a member of the support team with details of the serial number. |
| Driver not turning | Motor failed | Contact a member of the support team with details of the serial number. |
| Misaligned | Tray does not click into position matching arrow<br>Rack is sitting correctly on the tray | Recalibrate the Semi-Automated Screw Cap Decapper. |
| | Not using SBS type racks | The Semi-Automated Screw Cap Decapper can only be used with SBS racks. |

# 7. Appendices

The following chapter contains the appendices for this manual.

# Appendix A: Declaration of CE Conformity

| DOCUMENT NUMBER: | TITLE: | |
|---|---|---|
| 294788 | Declaration of Conformity, Low Voltage Directive | AZENTA LIFE SCIENCES |
| REVISION: C<br>ECO# EC132455 | DOCUMENT CLASSIFICATION:<br>04-Form, Template or Other | |

## DECLARATION OF CONFORMITY

Description: Semi-Automated Screw Cap Decapper

Function: Semi-Automated Screw Cap Decapper is a semi-automated device designed to open and to close screw cap tubes and cap carriers, for internal or external thread. It has individually sprung loaded cap drivers to screw and unscrew caps.

Product code: 46-6XXX

Business name and full address of the manufacturer of the machinery:
Azenta Life Sciences, Northbank, Irlam, Manchester M44 5AY, United Kingdom

Name and address of the person, established in the Community, authorized to compile the relevant technical documentation:
Azenta Life Sciences (Germany) GmbH, Im Leuschnerpark 1B, 64347 Griesheim, Germany

The manufacturer declares:

- That this equipment fulfills all the relevant provisions of Low Voltage Directive 2014/35/EU.
  - EN 61010-1:2010+A1:2019. Safety requirements for electrical equipment for measurement, control, and laboratory use. General requirements
- That this machinery fulfils all the relevant provisions of Directive 2014/30/EU (EMC Directive)
  - EN 61326-1:2021 Electrical equipment for measurement, control and laboratory use. EMC requirements. General requirements
- That this machinery is in conformity with Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment and amendment 2015/863/EU.
  - BS EN IEC 63000:2018. Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.

Year CE Marking Affixed to Product: 2017

Signed for and on the behalf of Azenta Life Sciences:

Rob Woodward

Rob Woodward (Oct 25, 2021 05:58 GMT+1)

Print name: Rob Woodward
Position: Senior Vice President, Global Quality Executive Management
Place: Irlam, Manchester





| Date Printed: Saturday, October 23, 2021 | This is uncontrolled when printed | PAGE 1 OF 1 |
|---|---|---|

# Appendix B: Replaceable Parts

| Part Number | Description |
|---|---|
| 46-6501 | Semi-Automated Screw Cap Decapper 8-Channel Semi- Automatic Screw Top tube rack capper & decapper for Azenta Internal Thread 96 format tubes and racks. |
| 46-6502 | Semi-Automated Screw Cap Decapper 8-Channel Semi- Automatic Screw Top tube rack capper and for Azenta External Thread 96 format tubes and racks |
| 46-6511 | Semi-Automated Screw Cap Decapper 6-Channel Semi- Automatic Screw Top tube rack capper/decapper for Azenta External Thread 48 format Jacket Cryo tubes and racks. |
| 46-6512 | Semi-Automated Screw Cap Decapper 6-Channel Semi- Automatic Screw Top tube rack capper/decapper for Azenta External Thread 48 format Jacket Cryo tubes and racks. |
| 46-6521 | Semi-Automated Screw Cap Decapper4-Channel Semi- Automatic Screw Top tube rack capper/decapper for Azenta External Thread 24 format Jacket Cryo tubes and racks |
| 46-6601 | Semi-Automated Screw Cap Decapper 8-Channel Semi- Automatic Screw Top tube rack capper/decapper for Thermo-Matrix Internal Thread 96 format tubes and racks. |
| 46-6602 | Semi-Automated Screw Cap Decapper 8-Channel Semi- Automatic Screw Top tube rack capper/decapper for Micronic Internal Thread 96 format tubes and racks |
| 46-6603 | Semi-Automated Screw Cap Decapper 8-Channel Semi- Automatic Screw Top tube rack capper/decapper for Thermo-Nunc Bank-It Internal Thread 96 format tubes and racks |
| 46-6604 | Semi-Automated Screw Cap Decapper 8-Channel Semi- Automatic Screw Top tube rack decapper / re-capper for LVL Technologies External Thread 96 format tubes and racks. |
| 46-6605 | Semi-Automated Screw Cap Decapper 6-Channel Semi- Automatic Screw Top tube rack decapper / re-capper for LVL Technologies External Thread 48 format tubes and racks. |
| 170-01-301 | Alignment Tool for Semi-Automated Screw Cap Decapper 8 and Semi-Automated Screw Cap Decapper 6, operates with racks containing 96 and 48 positions correspondingly. |
| 170-01-302 | Alignment Tool for Semi-Automated Screw Cap Decapper 4, operates with racks containing 24 positions. |
| 68-53111-10N | SBS Cap Carrier - External Thread Screw Caps External Thread Screw all Azenta 96 format external thread screw-cap tubes. Azenta orange, in SBS Stackable, re-usable carrier. 10 Carriers, 960 caps per case |
| 67-63111-10 | New SBS Cap Carrier (Internal Thread) Internal Screw-caps for all Azenta Internal Thread screw-cap tubes. Azenta orange, in SBS Stackable, re-usable carrier New "Egg Crate" design. 10 Carriers, 960 caps per case |
| 66-9951 | Cryo Cap Carrier / Adapter, Empty SBS format for 48 Cryo Caps for use with Semi-Automated Screw Cap Decapper and XSD series of Decappers. 10 Cap Carriers per Case |

# Appendix C: WEEE Statement (European Union)

The symbol above indicates that Waste Electrical and Electronic Equipment (WEEE) is not to be disposed of as unsorted municipal waste. Equipment marked with this symbol is to be collected separately.

The objectives of this program are to preserve, protect and improve the quality of the environment, protect human health and utilize natural resources prudently and rationally. Specific treatment of WEEE is indispensable in order to avoid the dispersion of pollutants into the recycled material or waste stream. Such treatment is the most effective means of protecting the customer's environment.

The waste collection, reuse, recycling, and recovery programs available to Azenta Life Sciences customers, vary by customer location. Please contact the responsible body (e.g., your laboratory manager) for information about local requirements.