

A decorative graphic consisting of several overlapping, semi-transparent rings in shades of blue and green, arranged in a circular pattern around the central text.

# Vein Viewer Flex

Training



# Vein Viewer

- Non-invasive visual aid device designed to detect superficial blood under the skin and project an image of the blood pattern on the surface on the skin.

## How does it work?

Projects near-infrared light that is absorbed by blood and reflected by surrounding tissue.

Information is captured and projected in real time onto the surface of the skin.

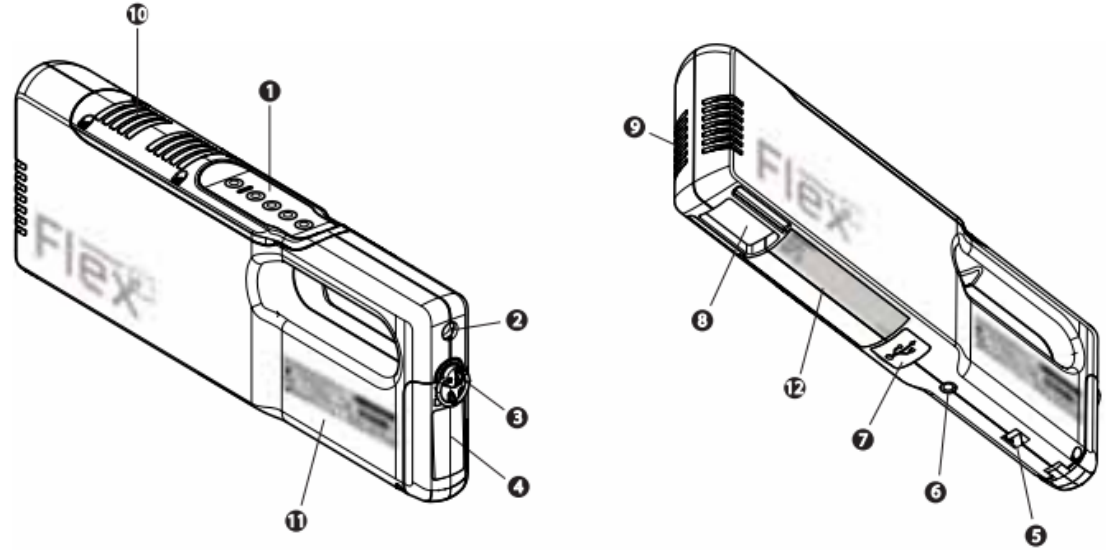
Allows you to see veins/arteries up to 10 mm.

# Overview

Controls, indicators, and features are illustrated and described below.

## VEINVIEWER FLEX UNIT

- ❶ Control Panel
- ❷ Power Inlet
- ❸ Battery Door Lock
- ❹ Battery Door
- ❺ Wrist Strap Attachment
- ❻ Arm Mount Attachment
- ❼ USB Communication Port
- ❽ Projection Window
- ❾ Fan Inlet
- ❿ Fan Exhaust
- ⓫ Serial Label
- ⓬ National Differences Label

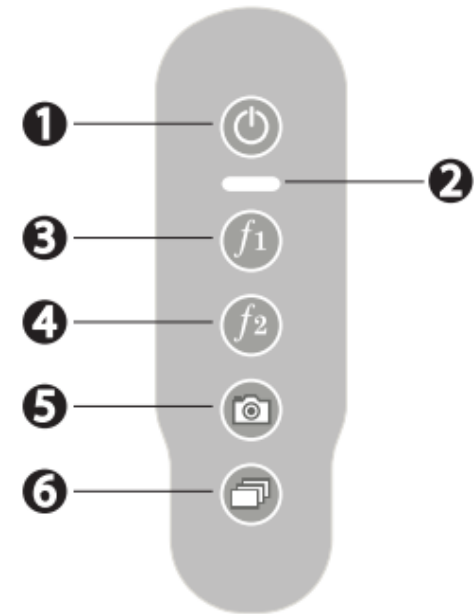


# Control Panel

## CONTROL PANEL

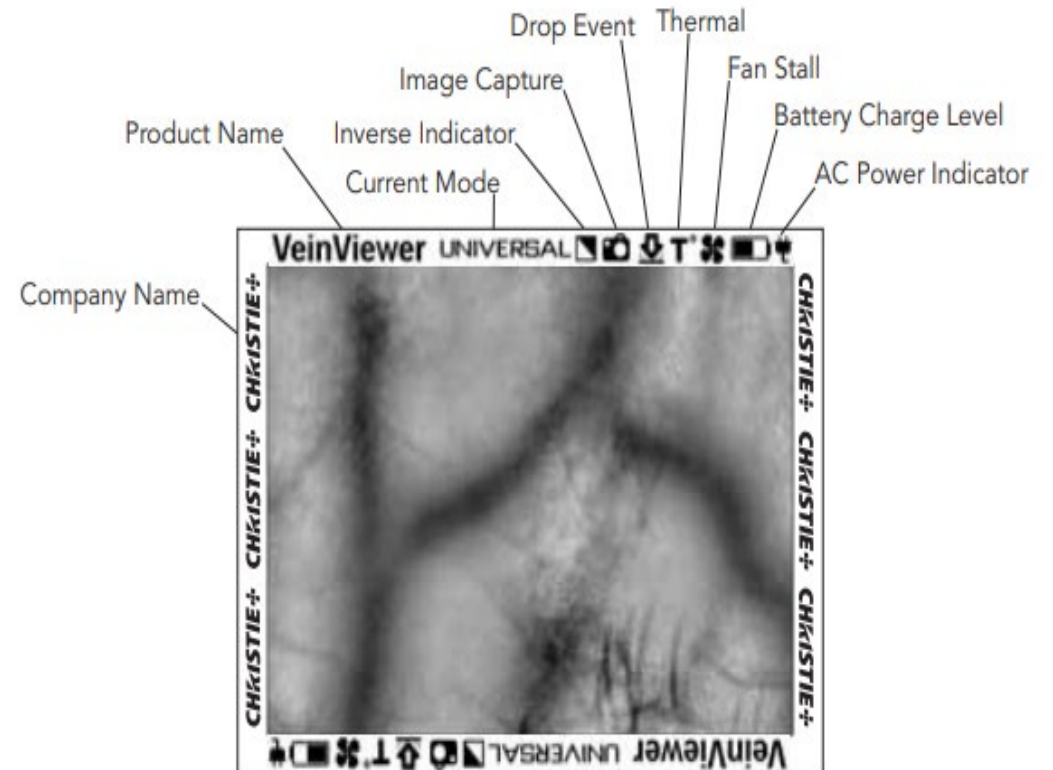
- ❶ Power Button
- ❷ Status Indicator
- ❸ *f1* Button: Resize\*
- ❹ *f2* Button: MaxBright\*
- ❺ Image Capture Button\*
- ❻ Image Mode Button
  - Universal
  - Fine Detail\*
  - Inverse\*

\*Requires license upgrade to activate. See CHAPTER SEVEN: LICENSE, SOFTWARE AND FIRMWARE UPGRADES.

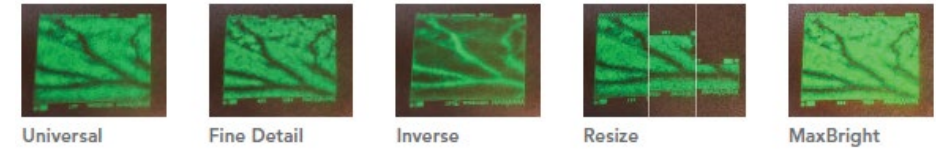


# Status Indicator and Display

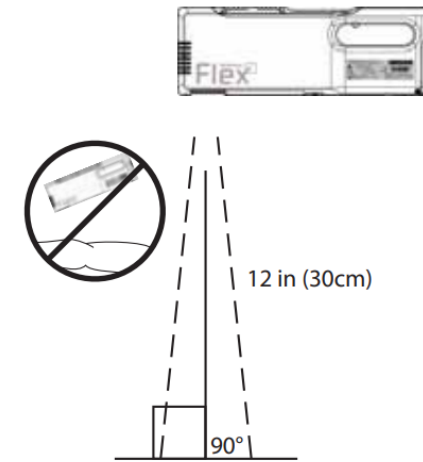
STATUS INDICATOR	MESSAGE
Solid Green	VeinViewer Flex is powered on
Solid Red	Battery Level < 25%
Blinking Red (Repeatedly)	Battery Level < 10%
Solid Orange	System Notice - See icons on image border and see CHAPTER TEN: TROUBLESHOOTING
OFF	Standby Mode or powered Off if no Battery or AC Power Adapter plugged in.
Flash Orange	Invalid button press



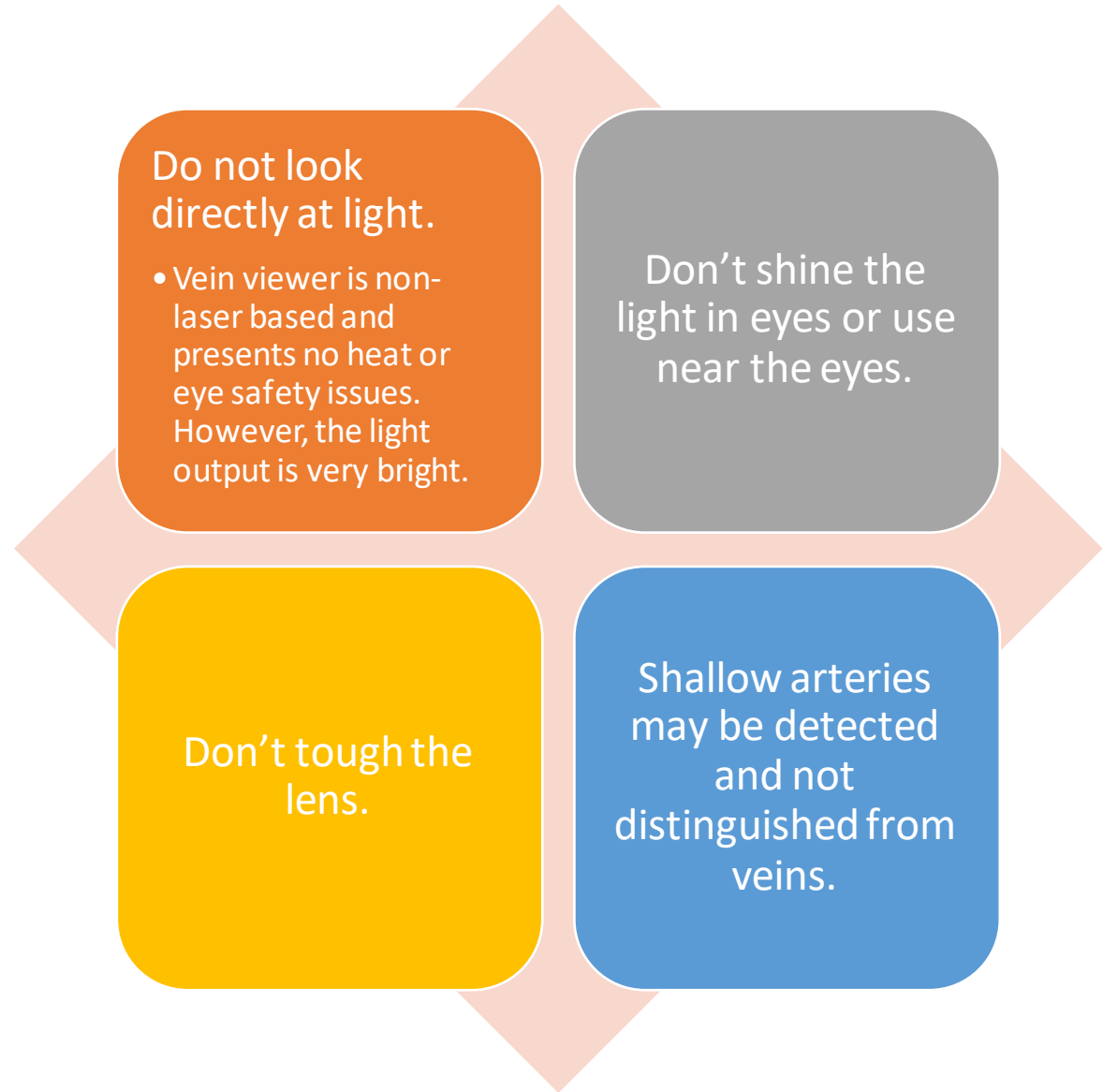
# Imaging Modes- Demonstrate



- Focus Vein Viewer-12 in for optimal focus.
- 90° Angle



# Warnings





## Battery/Charging

Demonstrate Battery installation.

Battery only charges while on the charger.

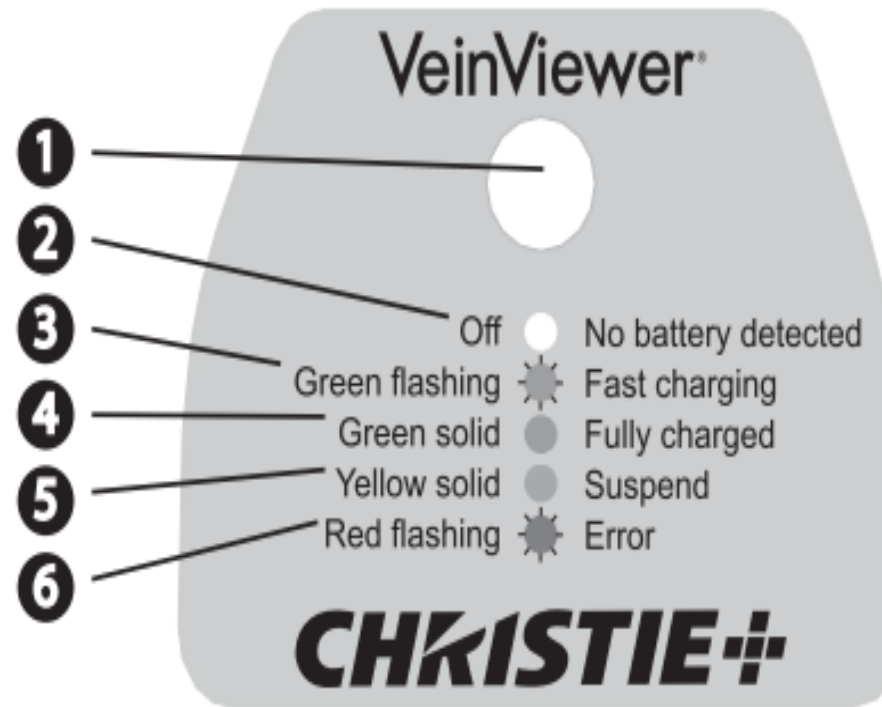
Charge lasts approx. 2 hrs of continuous use.

Takes 4 hrs to fully charge.

Charge lasts approx. 72 hours while in the VeinViewer.

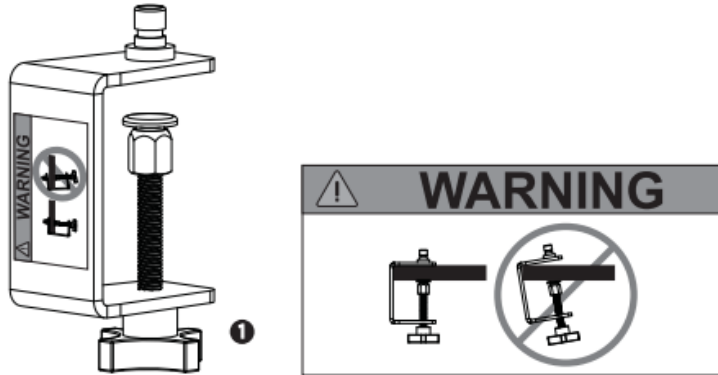
VeinViewer can be connected to wall outlet.

# Charger Icons

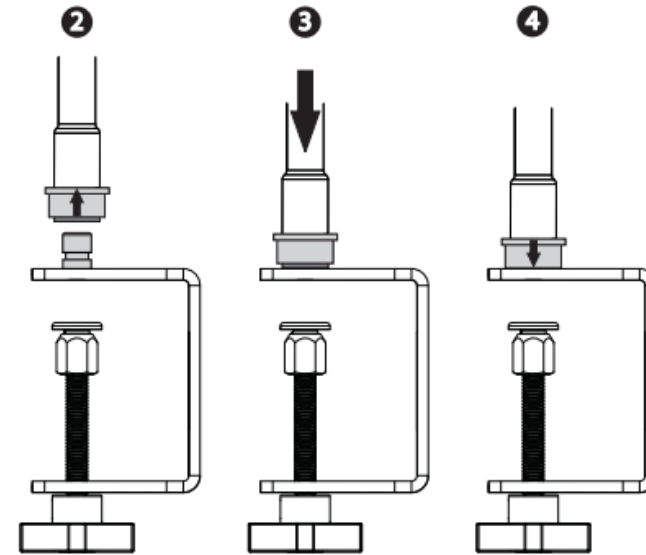


# C Clamp

- 1 Tighten knob until the C- Clamp is firmly secured to a horizontal mounting surface, such as a table.



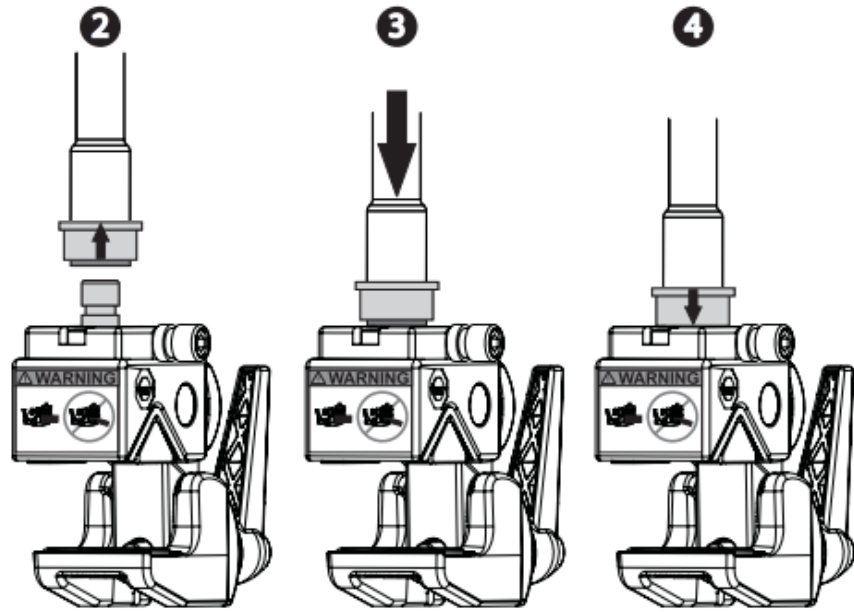
- 2 Pull the S-Mount Quick Release Connector in the direction shown.
- 3 Place the Quick Release Connector on the mating stud on the Clamp.
- 4 Release the Quick Connector.



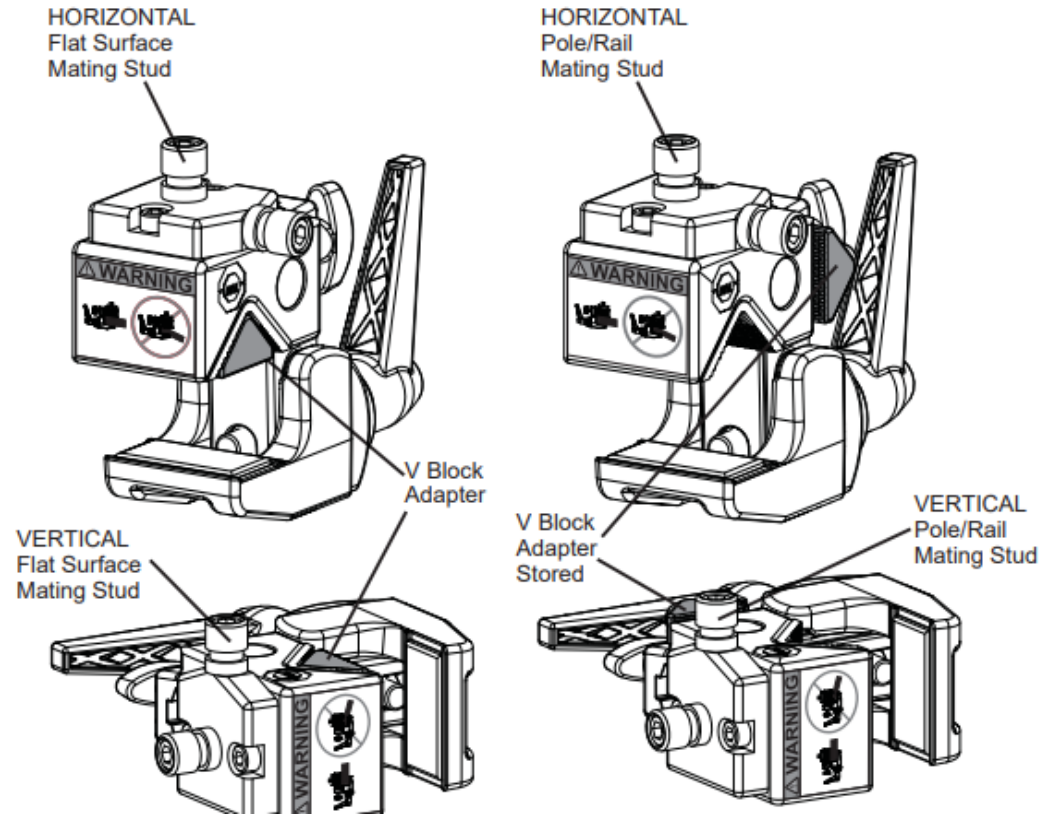
**Periodic inspection and maintenance of the arm and quick release should be performed to extend the efficiency and life of the arm. Contact Christie Technical Support for proper preventive maintenance procedures.**

# S Clamp

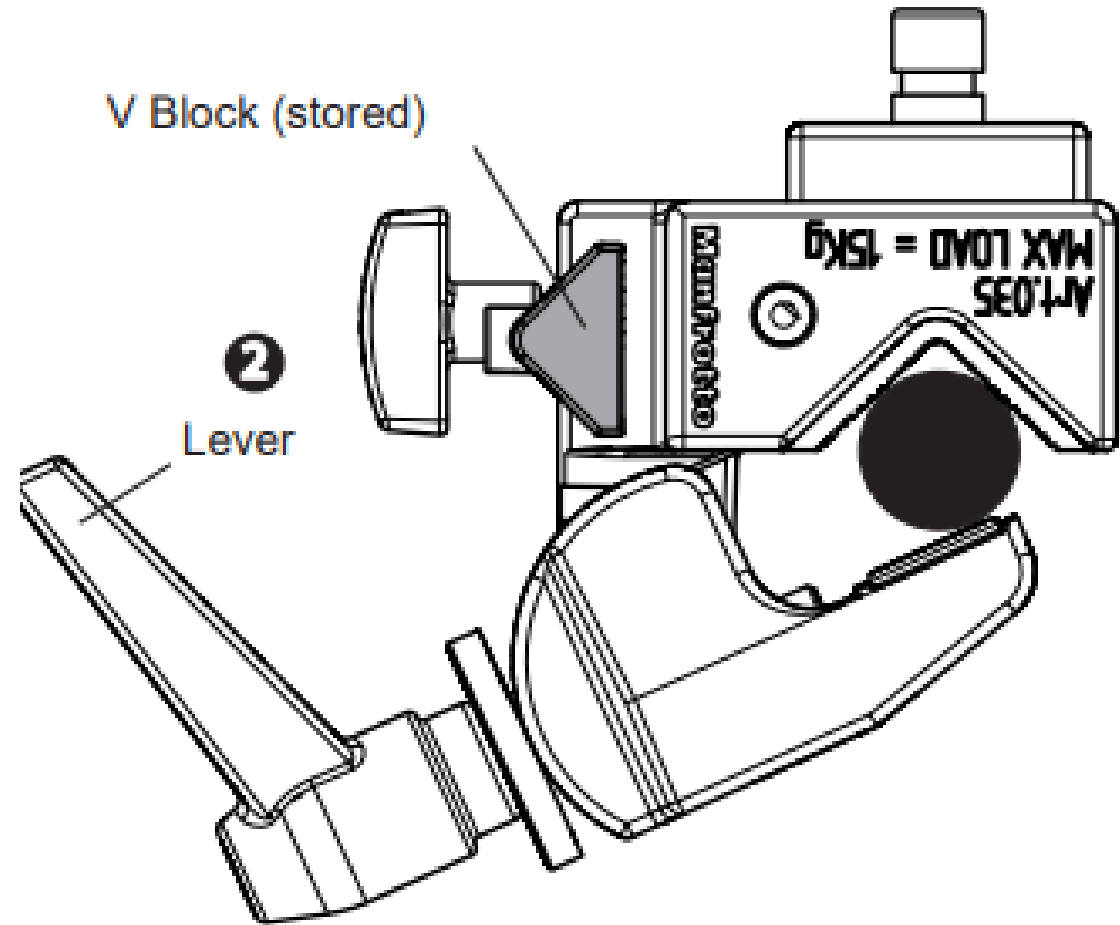
Reuse the Quick Connector.



Super Clamp Mounted to Horizontal Surface

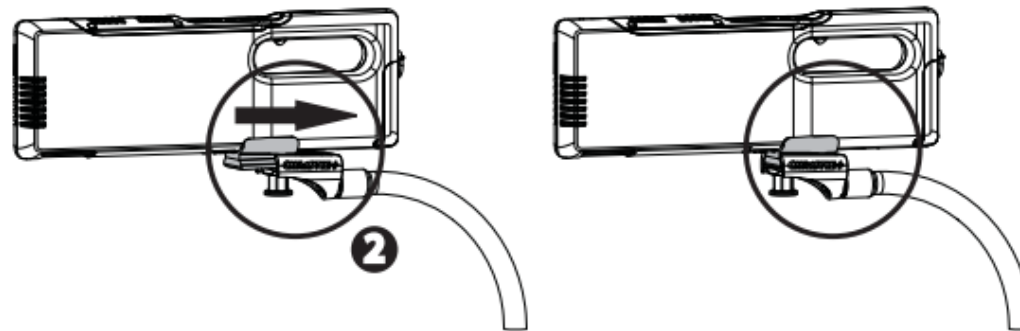


# S Clamp

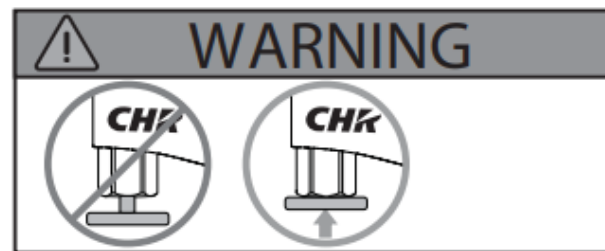


# S Mount

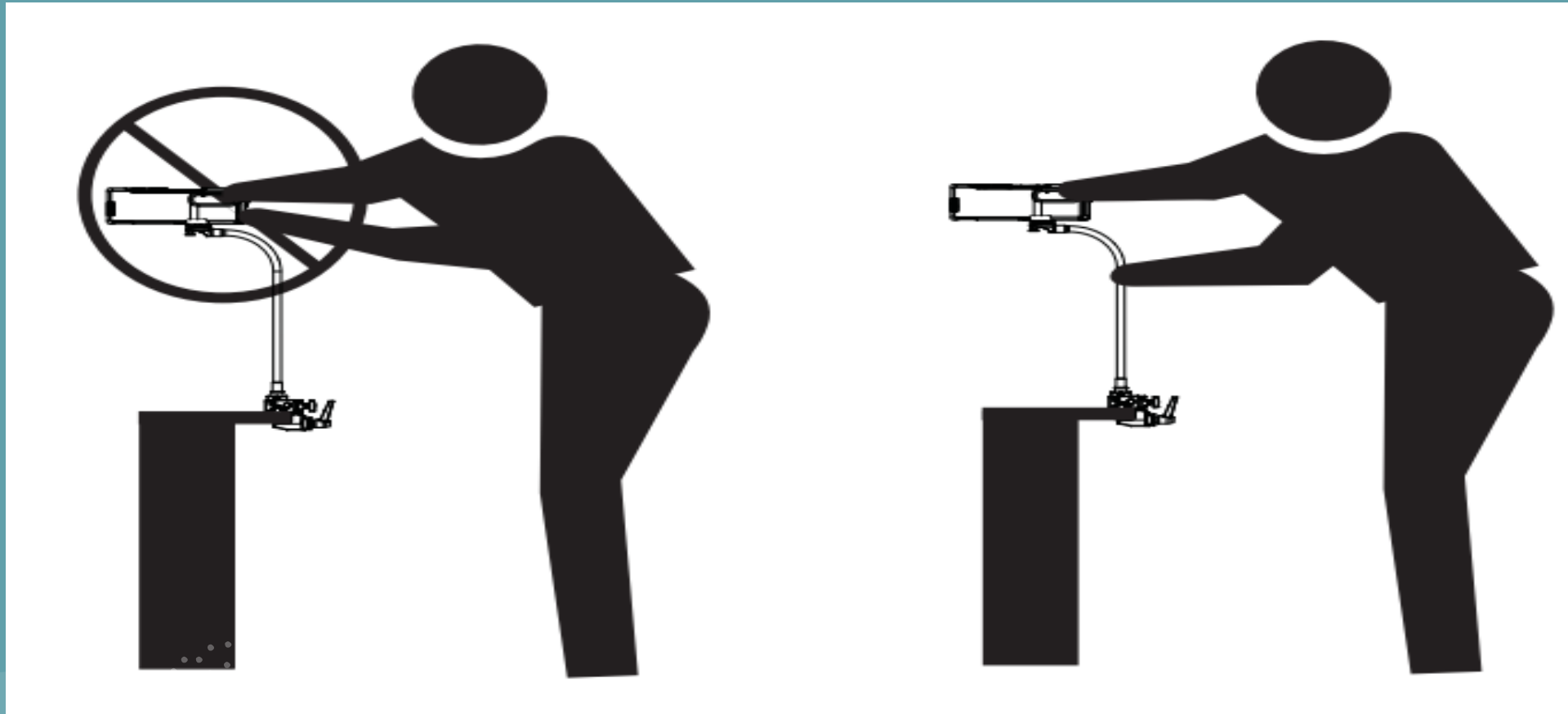
- 2 Slide VeinViewer Flex into the Mounting Bracket on the S-Mount until it clicks into place.



**WARNING:** Make sure the release pin is properly engaged by pulling on VeinViewer Flex before starting any type of medical procedure. See illustration below.



# S Mount Adjustment



# Cart Overview

- Outlet Power
- Wheel Locks







# Maintenance

- Cleaning Surfaces
  - Wear PPE.
  - Super Sani-Cloth or 70% isopropyl alcohol
  - Wipe outer surface (not the lens).
  - Allow to air dry or towel dry.
  - Clean after each use.



# Maintenance

- Cleaning Lens
  - Power off device and disconnect from outlet.
  - Use lint-free cloth moistened with 70% isopropyl alcohol.
  - Dry with lint-free cloth.

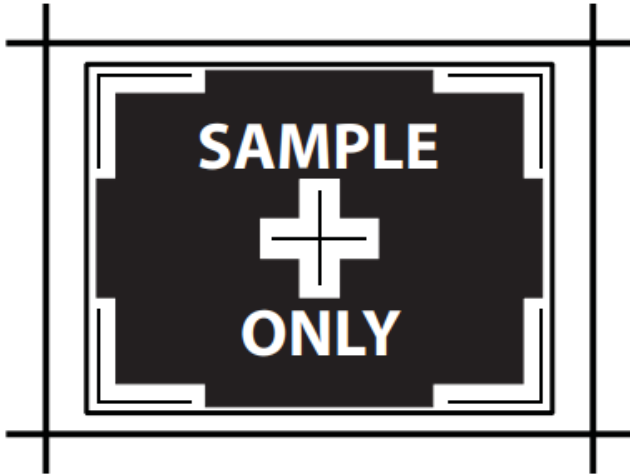
# Drop Event

- Unplug from outlet/remove battery.
- Inspect outer casing
- Inspect projection window
- Inspect Battery
- If damaged, do not use.
- If not damaged, check image display focus and alignment.






# Image Alignment

5. Mount the device 12 in. (30 cm) away from Test Pattern Image to check the image alignment. Ensure VeinViewer Flex is perpendicular to the Alignment Test Pattern located on the inside back cover of this manual. Adjust the distance of the target in order that the border of the projected image is aligned to the largest rectangle of the target.



If there is any separation between the printed line and the projected line in ANY of the 5 horizontal and/or vertical positions, VeinViewer Flex is not within alignment specifications. Please contact Christie Technical Support.

If the Image is in proper alignment, you can reset the Drop Event notification by pressing and holding the f2 button. The Drop Event notification may also be reset by connecting VeinViewer Flex to the VeinViewer Flex Connect software. A pop-up window will prompt you to 'Reset: Yes or No'.

PERFECT ALIGNMENT Projected Line Exactly Matches Printed Line	GOOD ALIGNMENT Projected Line Overlaps Printed Line	BAD ALIGNMENT White Space Between Projected and Printed Lines
		



Questions?

# End of Presentation

- Please complete the VeinViewer Flex Training Checklist and submit it to your supervisor.
  
- References
  - Christie VeinViewer Flex User Guide.



Thank you

