

#### QL320 3.0.0.4

Fixed a recurring warning issue in 'DEMO Mode' (not applicable to all users).

#### QL320 3.0.0.3

Minor formatting and cosmetic changes.

#### QL320 3.0.0.2

Added feature which allows rollback of meta data changes.

#### QL320 3.0.0.1

Released 3/11/2019

Added support for the FLIR GF620 camera.

Combined Boundary feature and Mask feature into a single method.

Corrected an issue that caused a masked portion of the measurement ring to partially reappear under certain circumstances.

Corrected an issue that allowed Mask drop down selection to be "On" and "Off" at the same time.

Corrected an issue where a Q Mode sequence file taken with a 92mm lens was rotated 180 degrees.

#### QL320 3.0.0.0

Released 2/14/2019

Major version update with new features:

Added support for Q-Mode. (Camera may require firmware update from FLIR)

Re-imagined masking feature to customize ring boundary.

Added manual plume sensitivity settings, 1-10.

Minor changes to report format.

#### QL320 2.0.0.2

Released 10/18/2018

Corrected error in leak rate units, scf/hr and g/hr results were swapped.

Original user settings were not being reported correctly in the results.pdf file for continuous mode. This has been fixed.

Masking feature is now enabled for demo mode.

## QL320 2.0.0.1

### Major version update with new features:

New Continuous mode added, provides immediate and interactive result.

New units of leak rate added: scf/hr, metric tons/year, g/hr.

Temperature screening feature incorporated into background image of continuous mode.

Image overlays (plume, boundary and temperature screening) can be turned on and off.

New plume sensitivity settings added.

New logging feature added to continuously record 1-sec results to CSV file.

## QL320 1.0.0.8

Added scf/hr as an additional unit for the reported leak rate.

Added the measurement ring overlay to the temperature screening image.

In previous version, there was a possibility that the lens selection box would not be populated if the camera did not report a serial number. It has been corrected in this version.

The distance selection drop-down box was mismatched when switching between Metric and English units. It has been corrected in this version.

In previous versions, if you hit the Rerun button during a quantification cycle the application may through an error. Now the Rerun button will be ignored while a quantification is underway.

## QL320 1.0.0.7

In previous versions the contrast in the archived raw video is sometimes poor. This version improves the contrast.

In previous versions the live streaming video when using the 92mm lens is rotated 180. Image is corrected in this version.

The logic and labels on the "Capture" and "Live" buttons is simplified and improved.

When playing back an archived run, sometime the plume overlay video is not displayed. This has been fixed.

### QL320 1.0.0.6

The font on the delta temperature is corrected to match other controls.

The drop-down which displays the calibration used (Factory or user calibrations) can sometimes have multiple entries for user calibrations. This has been corrected to list user calibrations only once.

The measurement ring on the live streaming image is not scaling properly when units are set to metric and distance is greater than 9 meters.

### QL320 1.0.0.5

Auto Connect on Launch: When you launch the Application with the camera connected via USB, the program will automatically have the camera connected. You can disconnect if desired, but this is a great feature and time saver for the end user.

Removal of the “pop-up window” when quantifying: This will also increase efficiency and remove some confusion when operating the unit. The video opens in the window inside the application and not in a separate window.

Threshold Button: Previously the QL320 had only one Threshold (Dynamic). This was automatically chosen by the program with respect to the inputs from the user. One issue seen with this feature is when there is “glinting” or moving items in the background (grass, leaves, clouds). The user can now take better control of the threshold with 4 additional choices that allow the user to select a fixed Delta T (Dynamic is still the threshold chosen by default).

Boundary Button: There is an additional boundary (the blue ring) added to the program. This second boundary allows the user to “notch” out the bottom ~60 degrees of the circle so the quantification does not measure that area. This is a great new feature when quantifying leaks from stacks as it removes any possible errors associated with reflections or false readings on the stack itself. After my signature is a sample image of the new boundary with the notch.

Extended Calibration Curve: A second calibration curve has been added to the application. This allows the QL320 to extend the measuring distance range from ~25 ft. to almost 100 ft.! This process is automatically performed and is seamless to the user.

Increased Speed for Recordings: The QL320 processes the quantification calibrations much faster both in the field and post processing. The “Batch” recording now takes slightly over 1 minute and is much more efficient for the end user.