

## INSTALLATION / OPERATIONAL QUALIFICATION PROTOCOL

The following Installation Qualification (IQ) & Operation Qualification (OQ) is intended to be a guideline. Local IQ & OQ procedures can vary depending on intended use. The IQ & OQ is concluded if all the criteria of acceptance are verified, and the possible deviations are accepted.

This IQ & OQ is intended for the following products:

| Tabletop          | Undercounter | Upright |
|-------------------|--------------|---------|
| ULTF-37i<br>F-90i | F-138i       | F-427i  |

|                     |  |
|---------------------|--|
| Location            |  |
| Model               |  |
| Serial number       |  |
| Name of distributor |  |
| Warranty Start      |  |
| Signature           |  |
| Date                |  |

**Revision: 21-07-2022**

### Acceptance criteria

The IQ/OQ is concluded if all criteria of acceptance are approved, and the possible deviations are accepted.

### Reference

User manual

### Persons performing IQ & OQ

All personnel entering information in this protocol must be identified in the table below by name, full signature, and initials.

Personnel must be fully aware of all the procedures to follow.

| Name | Company | Signature | Initials | Date |
|------|---------|-----------|----------|------|
|      |         |           |          |      |
|      |         |           |          |      |
|      |         |           |          |      |

# IQ - Installation Qualification

## Objective

To verify that the freezer has been installed to a satisfactory standard and is safe to use.

## Pre-Requisites

User manual is available for review

| Step  | Reference to chapter in manual | Description  | Verification |      | Comments |
|-------|--------------------------------|--|--------------|------|----------|
|       |                                |  | Pass         | Fail |          |
| IQ-1  | Before Use                     | Ensure the appliance has not been damaged during transport.  |              |      |          |
| IQ-2  | Before Use                     | Ensure the protective foil on the shelves are removed before cleaning and using the unit.                |              |      |          |
| IQ-3  | Before Use                     | Ensure that the inside of the appliance is clean.  |              |      |          |
| IQ-4  | Before Use                     | Ensure the appliance has been in an upright position for at least an hour before being switched on.      |              |      |          |
| IQ-5  | Before Use                     | Allow the freezer to operate at the desired temperature for a minimum of 12 hours before loading.        |              |      |          |
| IQ-6  | Electrical connection          | Ensure to connect the appliance to the socket outlet.  |              |      |          |
| IQ-7  | Ventilation guards             | Ensure the ventilation guards are mounted behind the appliance.  |              |      |          |
| IQ-8  | Location and ventilation       | Ensure the appliance is not exposed to direct sunlight.  |              |      |          |
| IQ-9  | Location and ventilation       | Ensure the appliance is not exposed to rain.   |              |      |          |
| IQ-10 | Location and ventilation       | Ensure the appliance is installed in a dry, well ventilated room with minimal variations in temperature. |              |      |          |
| IQ-11 | Location and ventilation       | Ensure the appliance is away from sources of heat.   |              |      |          |
| IQ-12 | Location and ventilation       | Ensure ventilation, above, below and around the appliance.   |              |      |          |
| IQ-13 | Location and ventilation       | Ensure enough space for the door to open in at least 90 degrees.   |              |      |          |

|       |                         |                                   |  |  |  |
|-------|-------------------------|-----------------------------------|--|--|--|
| IQ-14 | Levelling the appliance | Ensure the appliance is levelled. |  |  |  |
|-------|-------------------------|-----------------------------------|--|--|--|

### Conclusion

| This section of the protocol has been completed and is deemed to (initial appropriate box below): |  |                   |  |                 |  |
|---|--|-------------------|--|-----------------|--|
| Pass  |  | Pass with comment |  | Fail            |  |
| Comments  |  |                   |  | Non-conformance |  |
|   |  |                   |  |                 |  |

# OQ - Operation Qualification

## Objective

To verify that all refrigerator components function correctly as specified for normal operation.

## Pre-Requisites

Appliance is installed

| Step | Reference to chapter in manual      | Description  | Verification |      | Comments |
|------|-------------------------------------|--|--------------|------|----------|
|      |                                     |  | Pass         | Fail |          |
| OQ-1 | Freezer Components                  | Ensure all doors operate as expected.  |              |      |          |
| OQ-2 | Controller – operation and function | Ensure the appliance is turned on.   |              |      |          |
| OQ-3 | Controller – operation and function | Ensure the time and date are set on the controller.  |              |      |          |
| OQ-4 | Controller – operation and function | Hold the door open to confirm the alarm activates. Close door and confirm alarm de-activates.  |              |      |          |
| OQ-5 | Controller – operation and function | Record temperature set points (for both operating level and the alarm limits) and confirm these meet the acceptance criteria.  |              |      |          |
| OQ-6 | Controller – operation and function | Increase the temperature set point by $\geq 11^{\circ}\text{C}$ (for ULT units its by $\geq 26^{\circ}\text{C}$ ). Confirm that the freezer system responds to increased temperature and the alarm activates (visual and audible) when temperature exceeds alarm high limit. |              |      |          |
| OQ-7 | Controller – operation and function | Ensure temperature set point is returned to the original value on completion and confirm alarm de-activates.   |              |      |          |
| OQ-8 | Controller – operation and function | Decrease the temperature set point by $\geq 11^{\circ}\text{C}$ . Confirm that the freezer system responds to decreased temperature and the alarm activates (visual and audible) when temperature exceeds alarm low limit.   |              |      |          |

|      |                                     |  |  |  |  |
|------|-------------------------------------|--|--|--|--|
| OQ-9 | Controller – operation and function | Ensure temperature set point is returned to the original value on completion and confirm alarm de-activates. |  |  |  |
|------|-------------------------------------|--|--|--|--|

### Conclusion

| This section of the protocol has been completed and is deemed to (initial appropriate box below): |  |                   |                 |      |  |
|---|--|-------------------|-----------------|------|--|
| Pass  |  | Pass with comment |                 | Fail |  |
| Comments  |  |                   | Non-conformance |      |  |
|   |  |                   |                 |      |  |