



# IQ / OQ

Installation and Operational Qualification

LR 500 / -ST



**ARCTIKO**

## **IQ/OQ for LR500 / -ST Model.:**

The objective of this Installation and Operational Qualification (IQ/OQ) Checklist is to qualify the installation and operation of the Arctiko unit LR500 / -ST Refrigerator for routine laboratory use.

This Installation and Operation Qualification Check will define the minimum test procedures and acceptance criteria to be used to establish that the Arctiko unit LR500 / -ST Refrigerator is installed and operated as per our specifications.

This checklist is mentioned to be used as input for distributors of Arctiko unit LR500 / -ST Refrigerator. Please be aware that local circumstance can require additional control and verification during validation.

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## 1 Basic information

### 1.1 Basic information about the unit

Serial number: \_\_\_\_\_

Arctiko Purchase order: \_\_\_\_\_

Date of quality control: \_\_\_\_\_

Quality control carried out by: \_\_\_\_\_

Date & Sign: \_\_\_\_\_

<i>Comments</i>

## 2 Component Verification

### 2.1 Cabinet check points:

<i>Scope of supply</i>		<i>Check</i>
<i>Delivered versus P.O.</i>	<i>All Items are delivered as stated in P.O.</i>	

<i>Cabinet check points</i>		<i>Check</i>
<i>Body</i>	<i>All packing material has been removed</i>	
	<i>No scratches. No dents. No rust</i>	
	<i>No cracks on plastic frames</i>	
<i>Door</i>	<i>Can open and close</i>	
	<i>Can be locked via the key</i>	
	<i>No gab between gasket and frame</i>	
<i>Controller</i>	<i>No scratches on display</i>	
	<i>All cable mounted as per safety requirements</i>	
<i>Inside compartment</i>	<i>No scratches or cracks on the inside of the door</i>	
	<i>No scratches and cracks on the inside of the cabinet</i>	
	<i>Sensor mounted at the right place</i>	
<i>Documentation</i>	<i>Operating Instruction Manual available</i>	

<i>Comments</i>

## 3 Environmental Conditions Verification

### 3.1 Verify that the following is correct

<i>Cabinet check points</i>		<i>Check</i>
<i>Alarms</i>	<i>High temp. alarm</i>	
	<i>Low temp. alarm</i>	
	<i>Power failure</i>	
<i>Fan</i>	<i>No unusual noise</i>	
<i>Compressor</i>	<i>No unusual noise</i>	

<i>Environment</i>		<i>Check</i>
<i>Clima</i>	<i>Max. ambient temp. 32°C Class N. No direct sun on the refrigerator</i>	
<i>Electrical supply</i>	<i>As per stated in Operating Instruction Manual and in accordance to local regulations</i>	
<i>Surface</i>	<i>Refrigerator kept on a solid flat surface to eliminate any vibrations &amp; irritating noise</i>	
<i>Airflow</i>	<i>The unit is installed with at least 10 cm free space to the sides and 15 cm free space at the back</i>	

<i>Comments</i>

## 4 Equipment File Verification

### 4.1 Verify that the documentation is available

<i>Documentation</i>	<i>Check</i>
<i>Purchase Order</i>	
<i>Operating Instruction Manual</i>	
<i>Spare Parts List</i>	
<i>Declaration of Conformity (only for EU)</i>	

<i>Comments</i>

## 5 Operational Qualification Data Sheet

### 5.1 Make sure that the following parameters will be noted and filled

It is our recommendation that the parameters are checked app. Ones time every year.

Description	Arctiko default settings	Customer setting.
<b>Custom Settings</b>		
<b>Password</b>	0000	
<b>Set point</b>		
Refrigerator	+4,0	
<b>Alarm Settings:</b>		
<b>Alarm Delay</b>		
Refrigerator	15 min.	
<b>Door open alarm</b>		
Refrigerator	Enable	
<b>High temp. alarm</b>		
Refrigerator	+6	
<b>Low temp. alarm</b>		
Refrigerator	+2	
<b>Probe/eprom failure</b>		
Refrigerator	Enable	
<b>Power failure</b>		
Refrigerator	Enable	
<b>Alarm log time interval</b>		
Refrigerator	1	

<i>Comments</i>

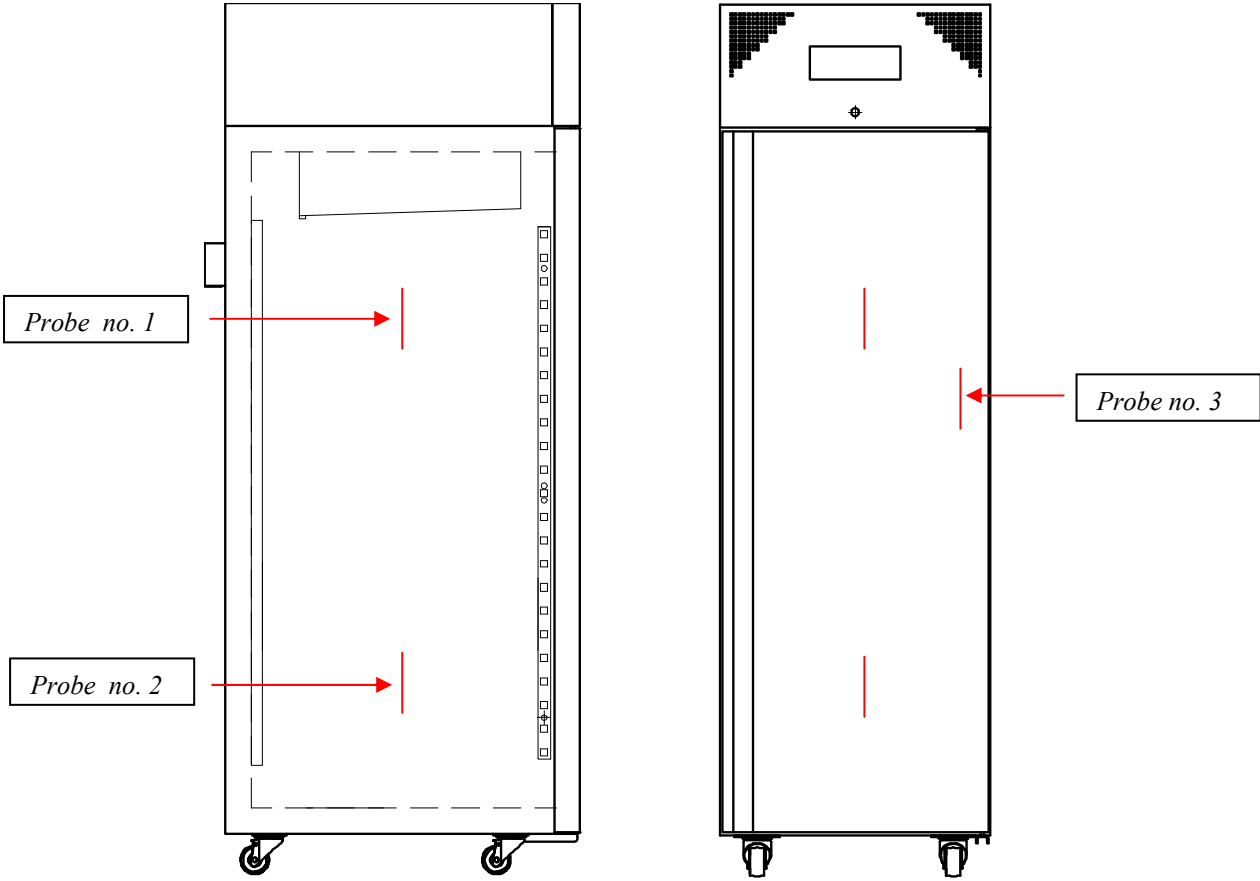


Description	Arctiko default settings	Customer setting.
<b>Advanced Settings</b>		
<b>Password</b>	0000	
<b>Calibration</b>		
Refrigerator	0,0	
<b>Automatic defrost</b>		
Refrigerator	06	
<b>Manual defrost</b>		
Refrigerator	OK	
<b>Hysteresis</b>		
Refrigerator	2,0	
<b>Temp. range limits</b>		
Refrigerator Max.	+10,0	
Refrigerator Min.	+1,0	

<i>Comments</i>

## 6 Placement of test probes.

The probes must be placed in the unit like following marked with red.  
Probe no. 1 is placed 200mm down from the top of the room.  
Probe no. 2 is placed 1100mm down from the top of the room.  
Probe no. 3 is placed beside the probe for the controller.



Comments

## 7 Requirement for accept.

### 7.1 Max. deviation and performance limits.

Max. Ambient temperature	25°C +/- 2K
Set point of controller	_____
Max. deviation between warmest and coldest spot in the unit:	5K

	Probe no. on pull down
Actual value for probe no. 1:	
Max. temperature	_____
Min. temperature	_____
Passed Yes / No	_____
Actual value for probe no. 2:	
Max. temperature	_____
Min. temperature	_____
Passed Yes / No	_____
Actual value for probe no. 3:	
Max. temperature	_____
Min. temperature	_____
Passed Yes / No	_____

If there are deviation between probe placed beside the probe for controller and display then change the parameter “calibration” .  
 Start new test if the controller has been calibrate.

Pull down time	Max. 2 h
Passed Yes / No	_____

<i>Comments</i>



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