



# CABINET MODEL INSTRUCTIONS

For All 1500 series Incubators & Hatchers produced after 2010 including 110 and 220 Volt models

Notice: It is suggested that a small number of inexpensive eggs be used during the first setting to establish the operator's procedure and the incubators desired operation. (See warranty on last page.)

## INITIAL SETUP

The items listed below should be included with your incubator.

*Hatcher models will not include the sample egg trays.*



No. 4502  
WICK PADS



TOP LATCH  
UNINSTALLED  
FOR SHIPPING



No. 4500  
MOISTURE PAN



No. 3078  
FOOT PAD  
ASSEMBLY



SAMPLE QUAIL  
EGG TRAYS



No. 3048  
CORD SET



No. 3036  
HATCHING TRAY  
(1502, 1520,  
1550 & 1554)



SAMPLE CHICKEN  
EGG TRAYS

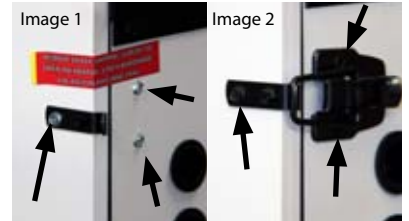
### 1550 & 1554 HATCHER ONLY



**X 4**  
No. 3066  
HATCHING TRAY  
& 3068 COVER



1. Remove plastic film from door window and LCD.
2. Remove red label & silver shipping screws shown in Image 1 below. Discard screws & shipping block.



3. Remove cardboard shipping brace and discard.
4. Plug in incubator and level trays to remove hatching drawer (1502, 1520)
5. Remove contents from hatching drawer and replace it in the bottom.



6. Locate and install the top latch which was left uninstalled for shipping. The long screw with nut is installed in the door tab. See image 2 above.
7. Unplug the incubator and gently lay it on its side to install the foot assembly. Do not lay incubator on the thermostat side.

# LOCATION

The location of the incubator is important to successful operation. A thermostatically controlled room temperature between 75 F to 80 F (24 C to 27 C) degrees with fresh air without drafts is ideal. Room temperatures from 55 F to 90 F (13 C to 32 C) are acceptable but good temperature control in the incubator is obtained when the room temperature is held within a few degrees. The back of the incubator and the right side where the vents are located should be placed no closer to a wall or barrier than 12 inches (30 cm) in order to have free air exchange within the room. Avoid areas of strong sunlight or air ducts that could influence the temperature in the incubator. When not in use the incubator should be stored in a climate controlled room to protect the electronics.

**Avoid strong sunlight & drafts**

# SETUP



1. Plug the cord set into the side of the incubator and then into the proper outlet.



2. Turn on the power switch located next to the cord set. When turned on the fan should begin to blow.



3. Locate the external sensor located next to the black instruction decal near the DIGITAL COMMAND CENTER. The sensor is a small BLUE node in a black plastic tube. Do not pull on the blue sensor node! Pull the black tube holding the node out so that the blue node is positioned about 1 inch (25 mm) from the outside wall of the incubator. This is the normal position for operating the incubator.



4. Press the "A" button to turn off automatic mode and allow the "M" button to function. Level the turning racks in the incubator by using the controls of the DIGITAL COMMAND CENTER. Press and hold the white M button until the racks move to a level position and then release. Racks may now be accessed. Press the yellow A button to return the incubator to automatic turning mode.

**TROUBLESHOOT:** If power does not come on check connection of the power cord. Next, check to see if power is available at the wall plug. Then check the fuse in the incubator located by the OFF/ON switch. Pry open the cover with a very small flat blade screw driver. If needed replace the fuse with a 250-V 5amp fast blow fuse (F5AL250V). A 3 or 4 amp may be used if a 5 amp is not available. If used in countries other than the USA a cord set with the same IEC plug as required by the incubator (similar to those used in computers and other appliances) that fits electric outlets used in that country. Check to be sure that the cabinet incubator is the proper voltage for the power supply (110-VAC or 220-VAC).

5. Allow the incubator to run for at least half a day in order to warm the cabinet and stabilize the operation. The thermostat is calibrated and set to operate at 100 F. Look at the LCD display on the DIGITAL COMMAND CENTER. If the set point (this is different from the actual temperature reading) is not showing 100 F then use the blue - button or the red + button to set it to 100 F.

6. When operating as expected the eggs may be placed in the turning racks. Paper trays or plastic cartons maybe used to hold the eggs upright with the small end down. GQF offers plastic trays for different size eggs which will allow maximum capacity with proper air flow around eggs. Most trays have about 1/4" clearance which allows the trays to slide from one side to the other when the racks turn. To dampen or stop this, material such as 1/4" (7mm) weather stripping or wood strips can be added to each rim of the turning rack. Quail eggs may have their trays double stacked. Goose, turkey and other large eggs maybe too tall to stand on end. If so they should be placed with large/small end oriented to the parallel turning axis of the tray. Extremely large eggs may be secured with rows of "V" shaped hardware cloth fastened to the turning rack or a removable tray (see accessories). Sliding metal trays are also an option.

# OPERATION - VENTILATION



There are two holes in the upper back panel and two holes in the upper right side near the door. These holes are covered with a plastic plug. One plug on the right side and one on the back has a hole punched in them. This is to provide the necessary flow of air into and out of the cabinet. These holes should always stay open. In the event that a dryer incubator is needed refer to the humidity section on working with the humidity pan. Normally the plugs will remain in place at all times.

## OPERATION - TEMPERATURE CONTROL

The digital thermostat is factory set for 100 F so regulation of the temperature for bird eggs is most likely not required. The temperature setting is controlled by the BLUE - and the RED + buttons on the DIGITAL COMMAND CENTER. The factory setting of 100 F can be changed quickly by pressing the BLUE button to decrease or the RED button to increase the temperature setting. A quick press of the button changes the setting in small increments while continuous pressing advances the setting quicker. GQF strongly recommends 100 F as the starting set point for all bird eggs except ratite (ostrich). The set temperature should only be changed if the eggs do not hatch well.



## OPERATION - HUMIDITY

The humidity read out on the LCD is given in percent of wet bulb to dry bulb temperatures. Humidity readings are adjusted in the incubator primarily by adjusting the surface area of water exposed to the air. Levels of humidity can be increased by adding one or two wick pads to the pan. If higher levels are required then a room humidifier may be needed in the incubator room. **For setting of most eggs the moisture pan with water in it will be sufficient. A day or two before the expected hatch date a wick pad maybe placed in the pan to increase the humidity to a suitable hatching level.** GQF recommends that this simple rule of thumb be used on the first setting of eggs regardless of humidity readings and if found to be effective continued on all other settings of eggs.

To reduce humidity levels remove any wick pads. Cover over all or a portion of the moisture pan with foil or plastic wrap. If more reduction is needed then pull plugs in vent holes locate in the back and upper right side of the cabinet. To reduce humidity beyond removal of water from the incubator then a room dehumidifier must be used to reduce humidity in the incubator room. Uses of a room dehumidifier is extreme so review procedures for the type of egg being hatched.

All eggs will lose moisture during incubation. Water is added to the incubator in most cases to prevent excessive drying of the eggs. Humidity levels can be easily checked by the humidity reading on the LCD. Keep in mind, however, that humidity requirements differ among egg types and the age of the flock. Pore sizes and numbers vary in the eggs produced between young and old hens. This means that the humidity reading is the level being applied but may not necessarily be what the eggs require. The following is a description of two methods used to determine humidity needs. Most operators do not do either, as they are time consuming, complex and often not required. GQF recommends that the instructions in the first paragraph under HUMIDITY be used for simplicity.

Experienced operators are able to candle eggs to see if the air sack is of the proper size and then make adjustments during the hatch. Air sacks too large require more humidity. Sacks too small need less humidity.

A more accurate method is to weigh the egg with a very accurate scale. Most eggs loose between 12% and 14% of their weight during incubation. Using the starting weight times the weight loss percent divided by the number of days will yield the weight loss per day that is expected. Weigh egg every 5 days or so to see if the weight loss is at the proper rate. If too much weight is lost then humidity level should be increased. If egg(s) is too heavy then humidity should be decreased.

## No. 3030 WATER RESERVE SYSTEM (optional)



Consists of a 5 gallon tank, connecting hose with quick disconnect coupling, moisture pan with constant level float valve, and 2 wick pads.

If using the optional No. 3030 Water Reserve pan with tank, thread the shut off clamp on the hose that goes to the tank and then attach hose to the tank nipple and secure with clamp. Remove plug from side of the incubator and insert the new plug with hose provided with the kit. Attach the hose end to the nipple on the humidity pan inside the incubator and secure with clamp. Place tank on top of the incubator, connect the quick disconnects, and fill the tank with water. It is the surface area of water and not the depth that determines humidity. The wick pads in the moisture pan are not usually used during the setting of eggs but are used during the hatch. Refer to the humidity section of the instructions for wick pad use. The moisture pan should stay on the fan shelf even if no water is being used. The moisture pan is necessary for proper air flow in the incubator.

## OPERATION - HATCHING

About three days before the expected hatch date move the eggs from the turning racks and lay them in the hatching tray(s). To do this remove the eggs from their holding cradles or cartons and lay them on the bottom of the hatching tray in their natural, unsupported position\*. It is recommended to use a separate hatcher such as the Model 1550 as temperatures are usually ½ to 1 degree cooler for hatching with increased humidity and can be shut down periodically for cleaning. The 1502 incubator has a hatching tray in the bottom, which will allow for hatching eggs while newer eggs are being turned in the setting trays. Do not adjust the temperature in the 1502 for hatching. If possible, avoid opening the door during the hatch as this removes warm, moist air resulting in a slowed or damaged hatch.

The black plastic hatching tray at the bottom of 1502 and 1550 models is deep enough to accommodate small chicks, such as quail, without a cover. Humidity levels are increased in the hatcher by adding a wick pad to the water pan. If necessary add a second wick pad to raise moisture levels 6 % to 10 % above normal. When setting and hatching at the same time in the 1502 as soon as the hatch is completed return the incubator to its normal humidity level usually by removing the wick pads.

As soon as the hatch is complete remove the chicks to the brooder. Most eggs hatch within a few hours of each other but a normal hatch can take up to 24 hours to complete. If temperatures are incorrect or eggs were set late or pre-incubated the hatch may have some chicks that emerge days before or after hatching of most eggs. Chicks that hatch days late are often weak and do not survive, therefore, it is best to pull the hatched and unhatched eggs from the incubator after a few days for disposal.

*\*The black corrugated plastic bottom tray in the hatcher and hatching tray in the 1502 should be lined with paper towels or DACB paper. This makes for quick clean up and offers sure-footing for new chicks.*

## HATCH ANALYSIS

Note on a calendar the date and time eggs are set in the incubator as well as the target temperature setting and average humidity level shown on the LCD. Start checking the eggs that are due to hatch a full day before expected hatch day. Look for any signs of pipping or hatched eggs and note this on the calendar for that day. After the hatch is complete check the un-hatched eggs for any development such as blood rings, partial or fully formed chicks to establish the number or percentage of fertile eggs that did not hatch. In most batches of eggs there is usually a small number of eggs that have fully formed chicks that never hatch. However, if there are many fertile eggs that did not hatch then there is the possibility that adjustments to the incubator's operation may be needed. Also keep in mind that other factors independent from the incubator's operation can yield the same poor results. Fresh eggs will hatch on time or perhaps a bit early. Eggs that are 10 days or more old will tend to hatch late and may have poor hatches. Pre-incubated eggs or eggs held in warm rooms may hatch early. These factors would not require a temperature change in the incubator. Ideally a good hatch is 75% to 85% hatch of the fertile eggs.

If the eggs pip or hatch a day or more early, and the hatch results were poor among the fertile eggs then the temperature is too warm by ½ to 1 degree. If the eggs piped or hatched a day or more late, and the hatch results were poor among the fertile eggs then the temperature was too cool by ½ to 1 degree. If fertile eggs piped or hatched on correct day but the hatch was poor then the humidity probably needs to be adjusted.

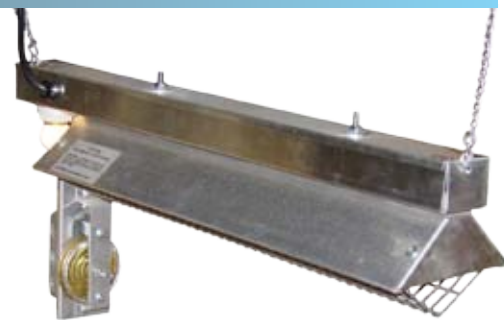
## BROODING

Remove chicks to the brooder within 24 hours after hatching as soon as they are dry. If some of the eggs are late hatching, removal of chicks should be done quickly as possible to prevent chilling of un-hatched eggs. If some eggs appear hatchable, continue the hatch for a day or two more. Chicks hatching a few days beyond expected date are usually weak and may not survive. Discard eggs that are over four days beyond hatch date.



No. 0534

When chicks are removed from the incubator they must have a place that is warm and dry. A brooder should have one section that is heated with a temperature of 100F (37C) for small birds like quail or 95F (34C) for larger birds like chickens. Maintain this temperature for the first week and then lower it 5 degrees (F) each week there after down to normal room temperature. If temperatures are a little too warm the chicks will move to the cooler parts of the brooder on their own. Place food on a flat surface near the feeder. Avoid slick surfaces like cardboard, plastic or flat newspaper as young chicks have difficulty standing on them. Small birds such as quail can easily drown in large drinkers so rocks or marbles may need to be used at first if the drinker is not made especially for them. The GQF catalog has suitable brooders, feeders and drinkers. GQF Vitamins Plus is also recommended for the first seven days to improve survivability.



# DIGITAL COMMAND CENTER

## LCD DISPLAY MESSAGES



**COMMAND** - Shows desired set temperature.



**INC TEMP** - Shows actual temperature inside incubator.



**OUTDOORT** - Shows temperature outside of incubator.



**HUMIDITY** - Shows humidity percentage.



**TURN CNT** - Shows amount of times the turner has turned. Resets at 1000. No count on hatcher models.

**DIGITAL COMMAND CENTER**

**THERMOSTAT**

- Temperature control range is from 80° F. to 102.5° F. in 1/2 degree increments. At lower temperature settings, ambient room temperature should be 10° F. less than set temp.
- To rapidly adjust temperature command press continuously on either the + or - buttons until desired set temperature is reached.

**AUTOMATIC TURNER\*** \*TURNER NOT PRESENT ON HATCHERS

- Trays will turn as long as the M button is depressed. Release button when trays are in the desired position.
- Press the A button until GREEN LED lights to set turner to AUTOMATIC mode.

**THERMOSTAT MODEL#:** 3 2 5 8

**DISPLAY MODES FOR LCD:**

- Start Up
- Command Temperature Setting
- Actual Temperature Reading
- Humidity Reading
- Turn Count
- Alarm Code (if any)

**YELLOW HEATER LED**

When lit, power is being supplied to heat element. This LED will flash on and off rapidly as set temperature is being maintained.

**RED ALARM LED**

When on, there is an alarm condition and heater will cease operation.

**GREEN TURNER LED**

Constantly lit when turner is set to automatic. Blinks when motor is operating and in manual mode.

Buttons: DECREASE TEMP, INCREASE TEMP, TURNER MANUAL (M), TURNER AUTOMATIC (A)

## ALARM TROUBLESHOOTING CHART

MESSAGE DISPLAYED	SYMPTOMS	REASON	SOLUTION
SYSTEM FAILURE	-Alarm LED on -Buzzer on continuously -No heat	-Inside Temp Sensor signal lost	-Check connection of yellow box and thermostat -Plug in Stand-by, call GQF
OUTSIDE TOO HOT	-The incubator continues to operate but cannot maintain a steady temperature	-Room Temperature is too hot	-Cool the room down to 90°F
OUTSIDE TOO COLD	-The incubator continues to operate but cannot maintain a steady temperature	-Room Temperature has dropped below 60°F	-Warm the room temperature above 65°F
INCUBATOR TEMP TOO HOT	-Alarm LED on -Buzzer on continuously -No heat	-Electronic out of calibration OR -Heater switching failure	-Plug in Stand-by, call GQF
PLUGSNSR	-No Heat	-Inside Temp Sensor & Humidity Sensor signal lost	-Check connection of yellow box and thermostat -Plug in Stand-by, call GQF
OutAlm 1	-Message on LCD only	-Outside Sensor signal lost OR -Failure of Outside Sensor	-Check connection of Outside Temp Sensor -Call GQF
OutAlm 2	-Message on LCD only	-Outside Temp Sensor out of calibration	-Call GQF
INALARM	-Message on LCD only	-Inside Temp Sensor out of calibration	-Call GQF
TOO COLD	-Message on LCD only	-Incubator temperature is below 56°F	-Pre-heat incubator to set temperature before placing eggs
EGG MTR ALM	-Alarm LED flashes slowly	-Signal from Egg Turner Motor has been lost	-Check connection of Grey cable going from Black box to Egg Turner Microswitch

**YELLOW HEATER LED** – After the incubator has reached its “command temperature” or set point the HTR LED flashes ON and OFF rapidly. The rapid flashing of the HTR LED indicates proper incubator operation. The yellow flashing light is normal.

**GREEN TURNER LED** – When the “M” manual yellow button is pressed and held the EGG LED will blink slowly indicating that the egg rack inside the incubator is turning. The flashing stops when the button is no longer pressed. When the “A” auto white button is pressed twice (2X) the EGG LED will be ON continuously indicating that the egg racks will rotate every 1 to 2 hours approximately.

**RED ALARM LED** – If the ALARM LED is on and/or the buzzer is on, then there is a failure of the system. Most likely, there is a problem with the Inside Sensor. Unplug the incubator and make sure all connectors are securely fastened, then try to power up the unit again. If this fails to work then contact the factory for technical support.

## AUDIBLE INDICATIONS

- If the buzzer sounds constantly, a system failure condition exists.
- A short beep will sound every 1 to 2 hours as the egg racks are turned in automatic mode. This tone will not sound in Hatcher models.
- Buzzer will sound when incubator is powered on as part of start up sequence.

### TO DISABLE BUZZER:

Make sure incubator is powered off and unplugged. Open top of incubator and unplug holex connector to buzzer which is circular in shape and located above the cordset input.

## ACCESSORIES

### CLEAR ACRYLIC DOOR

ITEM  
No 3065

Clear acrylic door  
Allows for full frontal  
view of the incubator  
interior. Easily installed  
by customer.



### SETTING TRAY

ITEM  
No 3067



The turning racks in the 1502 and 1500 are designed to accommodate plastic egg trays or this setting tray.

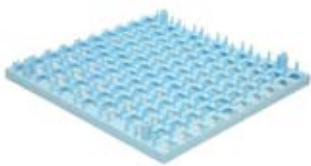
### CABINET CASTERS

ITEM  
No 3055

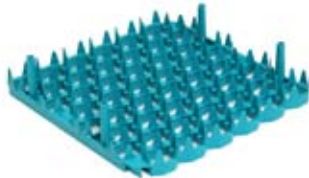


This set of 4 casters will make it easier to move your cabinet incubator around for servicing, cleaning, & accessing eggs or trays. Easy to install on all cabinet models. Comes with base strips, mounting tape, & four locking casters.

### PLASTIC EGG TRAYS



No. 0243



No. 0246



No. 0248



No. 0249

**No. 0243** Set of 6 quail egg racks. Made of sturdy plastic, each rack holds 248 quail eggs. 2 racks per turning tray of the 1502 incubator will set 744 quail eggs on single level. Mounting posts on the egg racks allow for double stacking for maximum capacity of 1488 quail eggs. Note: hatching tray in 1502 is limited to 250 quail eggs.

**No. 0245** Set of 6 Pheasant egg Racks. Made of sturdy plastic each rack holds 59 eggs, for a total of 354 eggs per 1502 incubator.

**No. 0246** Set of 6 Universal egg racks, Made of sturdy plastic each rack holds 45 bantam to chicken sized eggs, for a total 270 eggs per 1502 incubator.

**No. 0248** Set of Extra-large egg racks. Made of sturdy plastic each rack holds 30 extra large eggs such as duck for a total of 180 eggs per 1502 incubator.

**No. 0249** Large egg setting tray. Made of metal and wire and use to hold very large eggs such as turkey, goose, peafowl, emu. Eggs are laid on their side. Holds 12 to 15 eggs per tray.

# 1500 & 1502

**FRONT                      DIAGRAM PART NUMBER                      BACK**

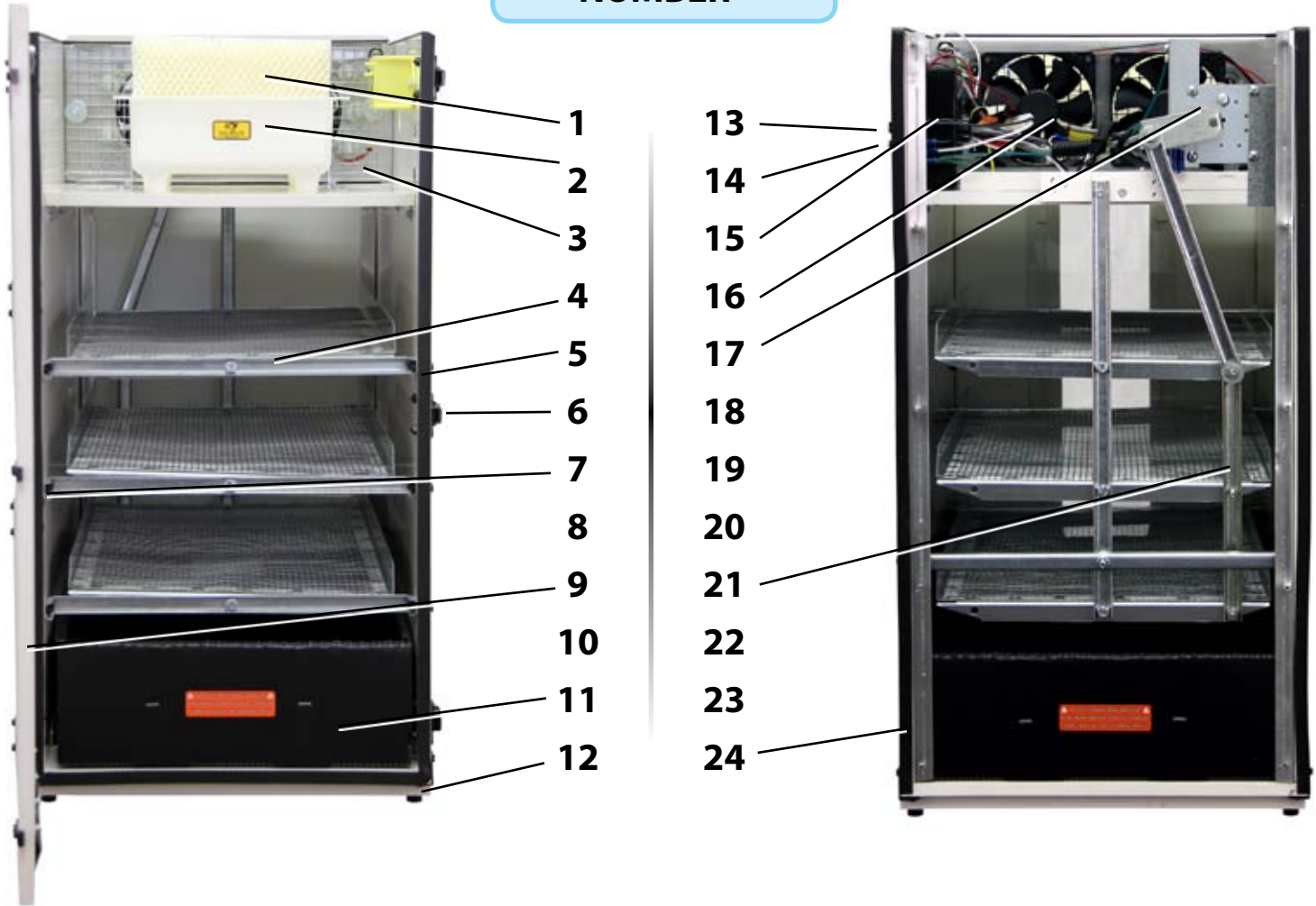


Diagram Part Number	GQF Part Number	Item Description	Diagram Number	GQF Part Number	Item Description
<b>1</b>	No 4502	Humidity wick pads (2)	<b>13</b>	No 3179	Off/On switch with fuse
<b>2</b>	No 4500	Humidity pan	<b>14</b>	No 3178	Fuse 250-V 5amp fast blow
<b>3</b>	No 3169	Heater/Fan assembly 110V (Item #3168 for 220 Volt)	<b>15</b>	No 3258	Digital Command Center (no sensors)
<b>4</b>	No 3043	Front support bar	<b>16</b>	No 3169	Heater/Fan assembly 110V (Item #3168 for 220 Volt)
<b>5</b>	No 3045	Door gasket	<b>17</b>	No 3175	Turner assembly 110V (after 2007 production)
<b>6</b>	No 3051	Complete door latch (1)	<b>18</b>	No 3180	IEC/USA cord set for 1502
<b>7</b>	No 3063	Set of 4 hinges for door	<b>19</b>	No 3182	Black vent plugs
<b>8</b>	No 3070	Back panel	<b>20</b>	No 3040	Connecting bar for <b>1500</b>
<b>9</b>	No 3074	Door w/ window & hardware	<b>21</b>	No 3041	Connecting bar for <b>1502</b>
<b>10</b>	No 3077	Top panel	<b>22</b>	No 3281	Inside sensor assembly
<b>11</b>	No 3036	Hatching tray	<b>23</b>	No 3283	Outside sensor assembly
<b>12</b>	No 3078	Foot pad assembly	<b>24</b>	No 3047	Back and top gasket

**HATCHER PARTS** - The model 1550 hatcher uses many of the same parts as the 1502 and 1500. However, the 1550 does not include parts associated with the turning mechanism including the motor, racks, and connecting bars. The 1550 does include 4 metal hatching trays with covers (item No. 3066 & 3068) in addition to the black plastic hatching tray included with the 1502.

## CLEANING & SERVICE

The incubator may be cleaned of feather dust and hatching debris with a damp cloth and mild soap, for those surfaces accessible from the front door. Finish with a wipe or spray of a mild disinfectant such as Tektrol. Plastic egg racks are machine washable. The hatching tray should be washed and disinfected after each hatch. At the start or end of a season it is recommended that the top and back of the incubator be removed so that feather dust may be removed. To do this, turn off and unplug the incubator before removal of the top and back. Use a soft bristle paint brush to remove feather dust. Take care not to stretch the heat element if cleaning in that area. Do not wet down or spray into electrical boxes, heater or motors. Other surface areas may be wiped with a damp cloth and a mild disinfectant used in the same manner.

Repair parts are available directly from GQF Manufacturing Co. or a GQF dealer. The DIGITAL COMMAND CENTER may require recalibration after five years of service. This will require that it be removed and returned to GQF Manufacturing Co.. Contact GQF regarding shipping information and current fees.

## ELECTRICAL SPECIFICATIONS

— All 110V units 110V, 50/60Hz, 325W

— All 220V units 220V, 50/60Hz, 350W

**Unit must be plugged into a grounded outlet to maintain the safety of the equipment. This appliance must be located so the power switch and cord set are accessible as they are relied upon to disconnect the device. Appliance protection may be impaired if used in a manner not specified by the manufacturer.**

## LIMITED WARRANTY & RESTRICTIONS

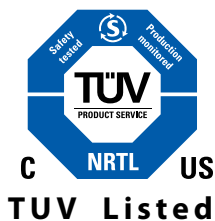
*GQF Manufacturing Co., Inc. guarantees against defect for a period of 1 year from date of purchase. This warranty is void for product more than 3 years old when not sold direct from GQF to the consumer. Notify GQF Mfg. Co. of any defective items, giving catalogue number and name of item and what is wrong with item. Send copy of invoice showing date of purchase. GQF Mfg. Co. will send replacement, or replacement parts, or notify regarding return. Shipping charges for express shipping are to be paid by the customer. GQF's warranty applies to residents of the USA only. International warranty claims are handled by the authorized GQF dealer that sold the equipment in that area. Returning of items without written permission will be at owner's expense.*

*Whereas GQF Mfg. Co. has no control over usage of equipment and product supplied, it assumes no responsibility for losses or damage from the equipment or product other than replacement of defective parts. No guarantee on hatchability of eggs. GQF assumes no responsibility for losses due to shipping damage, late shipment or arrival of product.*

*Do not expose electrical parts to water. Installation of electrical parts should be done by a qualified electrician. Use of replacement parts other than intended by GQF Mfg. Co. is not permitted. Custom modifications and use of non GQF parts can void the warranty. GQF is not responsible if product does not comply with local product codes or codes outside of the USA.*

**IF THE EQUIPMENT IS USED IN A MANNER NOT SPECIFIED BY THE MANUFACTURER, THE PROTECTION PROVIDED BY THE EQUIPMENT MAY BE IMPAIRED.**

1.4.1 Normal environmental conditions - This equipment designed to be safe at least under the following conditions: a) indoor use; b) altitude up to 2000m; c) temperature 5°C to 40°C; d) maximum relative humidity 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C; e) mains supply voltage fluctuations up to ±10% of the nominal voltage; f) transient overvoltages typically present on the mains supply (impulse withstand category II 1500 V transient; g) pollution degree 2.



CAUTION—Hot Surfaces



Protective Earthing

**G.Q.F. MANUFACTURING COMPANY**

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