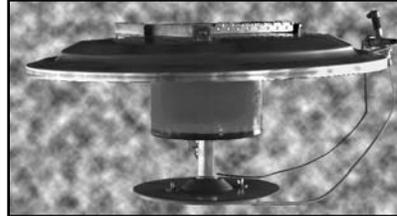
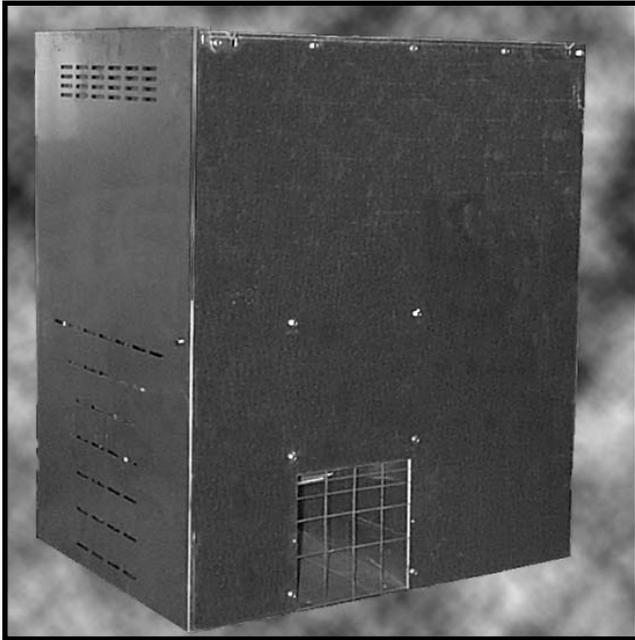


# CHORE-TIME®

## Instruction Manual



*Made to Work. Built to Last.*<sup>SM</sup>  
P.O. Box 2000 State Road 15 North  
Milford, IN. 46542-2000 U.S.A.  
219-658-4101 Fax 877-730-8825  
[www.ctbinc.com](http://www.ctbinc.com)

Made in the U.S.A.

### FOR YOUR SAFETY

If you smell gas:

1. Open Windows
2. Don't touch electrical switches
3. Extinguish any open flame
4. Immediately call your gas supplier

### POUR VOTRE SURETE

Si vous sentez une odeur de gaz:

1. Ouvrez les fenêtres
2. Ne touchez pas aux de commutateurs électriques
3. Eteindre n'importe quelle ouverture flamme
4. Immédiatement appeler votre fournisseur de gaz

### FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

### POUR VOTRE SURETE

Pas l'essence de magasin ou usage ou les autres vapeurs et les liquides inflammables à proximité de cet ou l'autre appareil.



## **DANGER !**

**SICKNESS AND/OR DEATH MAY RESULT FROM USE OF THIS HEATER IN AN UNVENTILATED BUILDING OR IN HUMAN LIVING AREAS.**

- ⚠ Do not use the heater to heat human living areas.
- ⚠ The intended use of the heater is to provide warmth for poultry and hog buildings. Adequate ventilation must be provided.
- ⚠ The installation of the heater must comply with all applicable state, local, and/or national codes in accordance with CAN/CGA - B149.1 or .2 installation codes.
- ⚠ Use only the type of gas being supplied to the unit as marked on it (Propane or Natural Gas). Do not operate with improper fuel.
- ⚠ Ventilation air and combustion air must not be obstructed.
- ⚠ Do not operate the heater in the presence of combustible vapors, liquids, or gases. Failure to heed this warning could result in an explosion and/or fire.
- ⚠ Test all pipe and pipe joints for leaks by a suitable means (Example: soap and water solution or a pressure check). Do not operate the heater until this test has been performed.
- ⚠ Do not move, handle, repair, or adjust height of the heater while in operation or when still hot.
- ⚠ Do not bypass any safety devices.
- ⚠ Before each use, a visual inspection of the heater is essential to insure safe and satisfactory heating. Replace or repair defective components before operating heater. Failure to do so will void warranty and could result in injury or property damage.

The installation of these appliances is to be in accordance with CAN/CGA-B149.1 and National Fuel Gas Code, ANSI 2223.1/NFPA 54 installation codes for gas burning appliances and equipment and/or local codes.

**⚠ WARNING:** Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing or servicing this equipment.



## LIMITED WARRANTY:

CHORE-TIME INDUSTRIES, INC. WARRANTS THAT ITS PRODUCTS SHALL BE FREE FROM DEFECTS IN MATERIAL AND IN WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR, WHEN PROPERLY USED FOR THEIR ORDINARY AND INTENDED PURPOSES AND WHEN PROPERLY MAINTAINED AND REPAIRED.

It is expressly agreed and understood that the Buyer's sole and exclusive remedy for any breach of this Limited Warranty shall consist of the repair or replacement of any defective part or product when returned to the Seller or to the Seller's authorized representative. It is further expressly agreed and understood that this sole and exclusive remedy shall be in lieu of and shall preclude any other liability of the Seller to the Buyer for any consequential or incidental damages sustained by the Buyer as a result of any defect in the products including any loss of profits, loss of business opportunity, inconvenience, increased costs of operation, loss of goodwill, property damage or any other economic or business loss. The foregoing provisions of this Limited Warranty constitute the final and complete expression of the agreement between the Buyer and Seller concerning express warranties of the product. Any other statements, representations, or promises made by salesmen, dealers, brokers, distributors or others which purport to expand or extend the coverage or term of this Limited Warranty in any particular whatsoever, are unauthorized and shall not be binding on the Seller and shall not operate as warranties of the product. It is further understood that no salesman, dealer, distributor, broker or other person is authorized to change, modify, alter, amend, delete, or supplement the printed terms of this Limited Warranty in any manner or in any particular. No handwritten or typewritten interlineation, modification, amendment, addendum, deletion, supplement change or alteration of the printed terms of this Limited Warranty shall be effective or shall be binding upon the Seller. All prior discussions, negotiations, statements, promises, agreements, understanding and representations concerning the character and quality of the products are merged with and superseded by the terms of this Limited Warranty. The printed term of the Limited Warranty contain the final and exclusive statement of the Buyer's and Seller's intentions, understanding and agreement concerning the subject matter hereof.

**DISCLAIMER AND EXCLUSION OF WARRANTIES** - The foregoing LIMITED WARRANTY is given in lieu of and in substitution for any and all other warranties of any kind or description whatsoever, specifically including the implied warranty of the character or condition of the products. The SELLER disclaims and excludes any implied warranty or merchantability or fitness for a particular purpose in connection with the products subject to this transaction. The SELLER further disclaims any express warranties concerning the products other than the foregoing "LIMITED WARRANTY". There are no warranties of any nature whatsoever which extend beyond the express "LIMITED WARRANTY" set forth in the preceding paragraph.

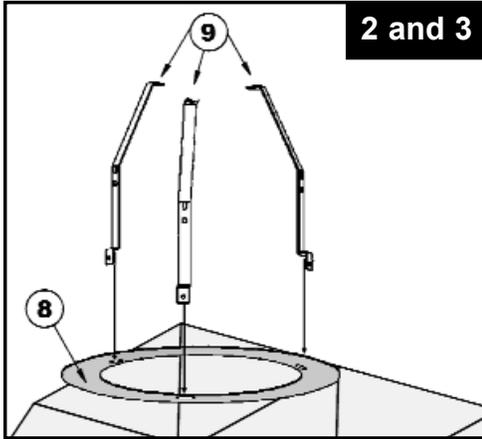
Any exceptions to this warranty must be authorized in writing by an officer of the company. Chore-Time Industries reserves the right to change models and specifications at any time without notice or obligation to improve previous models.

# CONVECTION BROODER ASSEMBLY INSTRUCTIONS

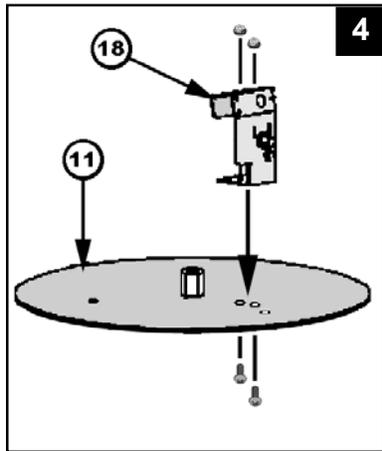
**NOTE:** The installation of these appliances is to be in accordance with CAN/CGA - B49.1 and B149.2 Installation Codes for gas burning appliances and equipment and/or local code.

1. Remove all parts from the box - save empty box for use in assembly
2. Set the **RADIANT RING (8)** with lip up on the end and inside divider of the open box.

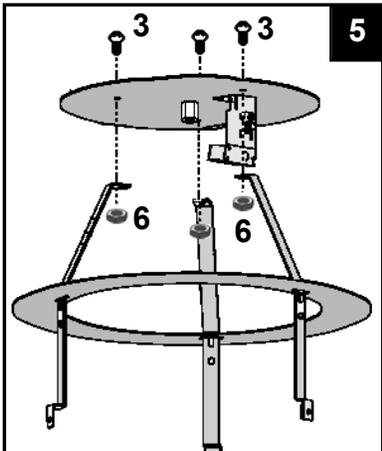
3. Locate the three **BROODER LEGS (9)**. Insert the double bent end of the brooder leg through the slot in the radiant ring down to the bent tabs in the middle of the leg. Be sure that the tab is facing the outside of the radiant ring. Insert the remaining two legs.



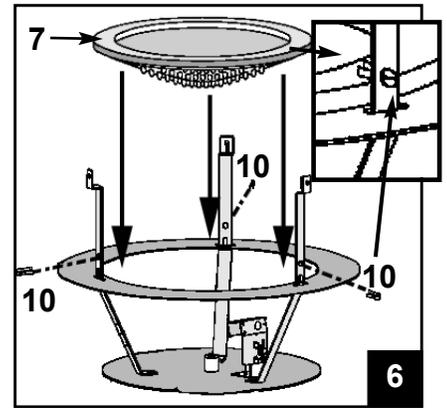
4. Attach the **PILOT BRACKET (18)** to the top of **BURNER PAN (11)**. Align the two holes in the pilot assembly with the two holes in the burner pan. The brass fitting on the pilot assembly must be facing the outside of the pan. Use two **SCREWS (3)** and two **NUTS (6)** to fasten the pilot assembly to the burner pan.



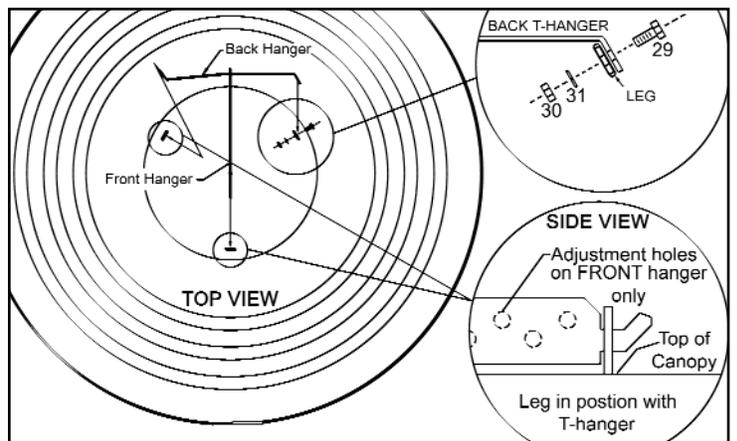
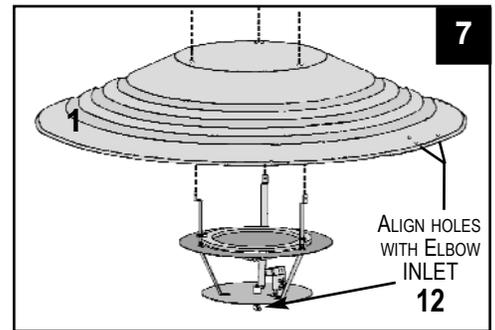
5. Turn the burner pan upside down so the pilot bracket is pointed down. Attach the burner pan to the brooder legs using three **SCREWS (3)** and **NUTS (6)**.



6. Flip the entire assembly over. Install the **CERAMIC RADIANT (7)** with the smooth side up and secure in place with the **RADIANT CLIPS (10)**. Push the radiant clips through the hole in the brooder leg from the outside of the leg to the inside.



7. Locate the holes on the outer edge of the **CANOPY (1)**, align these holes with the brass **ELBOW INLET (12)** on the bottom of the burner pan. Place the canopy on the burner assembly by sliding the brooder legs through the slots in the canopy.

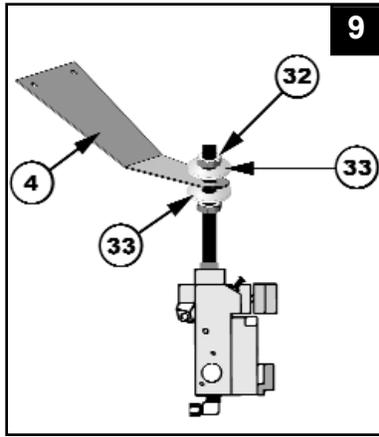


8. "T-Hanger" assembly instructions:

- A. Insert slot in the middle of **BACK T-HANGER (2B)** into the slot in the end of the **FRONT T-HANGER (2F)** (Note: adjustment holes at top)
- B. Insert hook on front T-hanger through top leg of Emitter which is aligned with the four holes in the Canopy. Insert the hook on the left end of the back T-Hanger through left top leg of the Emitter.
- C. Assemble and tighten **BOLT (29)**, **NUT (30)**, and **WASHER (31)** as shown with back T-hanger on outside

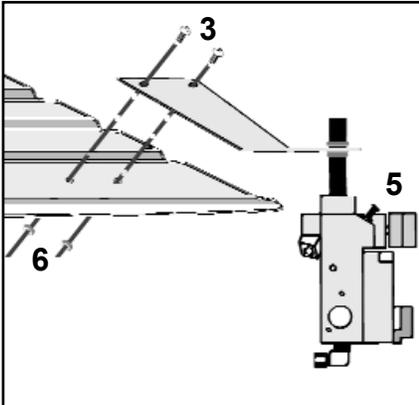
**9. FOR SMALL CANOPY:**

Place one **WASHER (33)** on the inlet pipe on top of the nut. Insert the pipe through the hole in the rounded end of the **CONTROL BRACKET (4)**. Secure with one **WASHER (33)** and one **NUT (32)**.



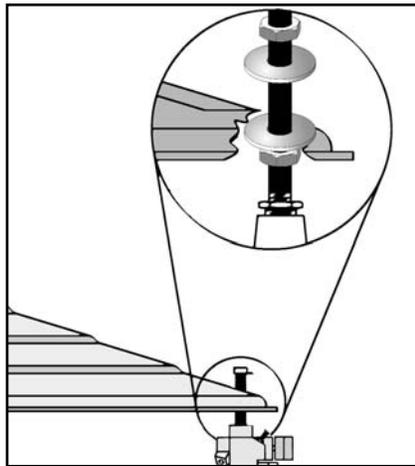
Attach the **CONTROL VALVE ASSEMBLY (5)** to the **top** side of the **CANOPY (1)**.

Align the two holes in the valve bracket with the holes on the outside edge of the canopy. Use two **SCREWS (3)** and **NUTS (6)** to fasten the control assembly to the canopy.

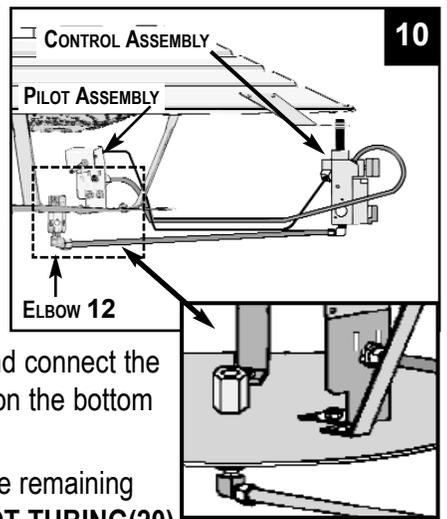


**FOR LARGE CANOPY:**

Place one **WASHER (33)** on the inlet pipe of the valve on top of the the nut. Insert the pipe into the larger hole in the canopy from the underside. Secure with a **WASHER (33)** and **NUT (32)** on the **top** side of the canopy.

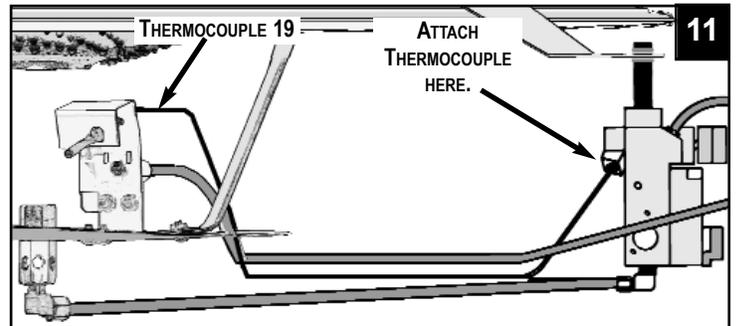


10. Connect one end of the **BURNER TUBING (19)** to the **BRASS ELBOW (12)** on the **BURNER PAN (11)**. Hand form the tubing to fit to the bottom of the control assembly and connect the tubing to the fitting on the bottom of the valve.

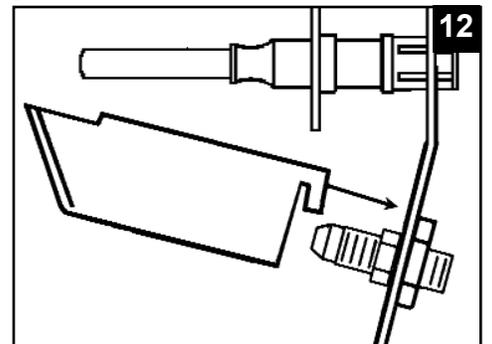


**PILOT** - Connect the remaining 1/4" aluminum **PILOT TUBING (20)** to the brass fitting on the **PILOT ASSEMBLY (23)**. Hand form the tubing along side of the burner tubing and connect to the female brass fitting on the control valve.

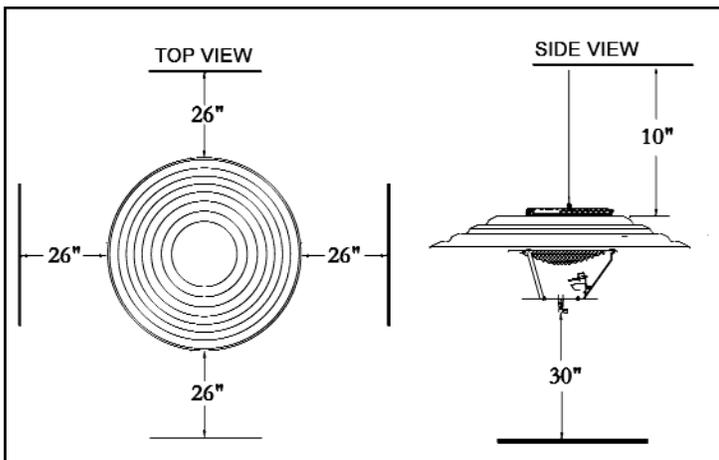
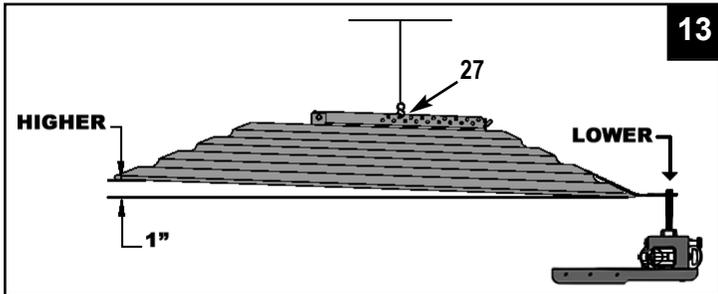
11. Insert the rod end of the **THERMOCOUPLE (19)** into the hole above the 1/4" aluminum tubing on the **PILOT ASSEMBLY**. Hand form the thermocouple wire along the burner tube and thread the connector into the control assembly. Important: tighten the connector finger tight first and then 1/4 turn with a wrench.



12. Slide the **SQUARE PILOT BODY (17)** into the slots on the Pilot assembly.



13. Suspend the brooder: To level the heater, simply support the heater underneath and then move the **S-HOOK (27)** forward or backward. After it is level clamp both ends of the s-hook shut. The brooder should hang with the control assembly tilted slightly downward. Normally the brooder is attached to a winch cable used for raising and lowering. In addition, we strongly recommend that a safety cable or chain be attached to the brooder to prevent the brooder from falling to the litter if the winching cable should happen to break.



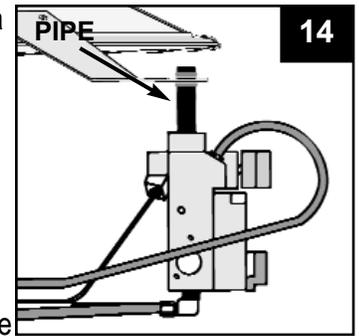
**GENERAL INFORMATION**

The heater must be located so there is a minimum clearance of 10" above the heater and 26" from the side. Any combustible material must not be adjacent to the heater.

The heater should be hung with a min. of 30" from bottom of the heater to the floor.

Be sure to comply with all local, state, and federal gas codes for your area.

14. Attach the hose (use only a CGA approved gas hose assembly in accordance with CAN/CGA - B149.1 and B149.2) from the gas supply to the pipe on the control using hose clamps (not provided). Check all connections for leaks before lighting brooder. - See lighting instructions



15. GAS PRESSURE - should be CHECKED AND ADJUSTED to recommended settings.

**LP GAS:**

**FIRST** - go to the furthest stove from the regulator and connect the pressure gauge to the Press Tap on the gas valve. Light only the stove you are testing or if you have a zone system light all the stoves in the zone. Set the pressure at a maximum of 11 1/4" WC.

**SECOND** - light all stoves in the house and check the pressure again. The pressure should not drop below 10 1/2" WC. If the pressure does fall below 10 1/2" WC, then the gas distribution system is inadequately designed. The problem may be a regulator, pipe sizing, etc.

**NATURAL GAS**

Use same procedure as LP gas above, except the pressure should not exceed 7 1/4" W.C. with only one stove or zone operating. The pressure should not drop below 6 1/2" W.C. with all stoves running.

27

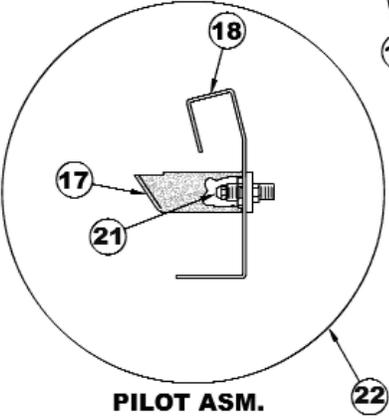
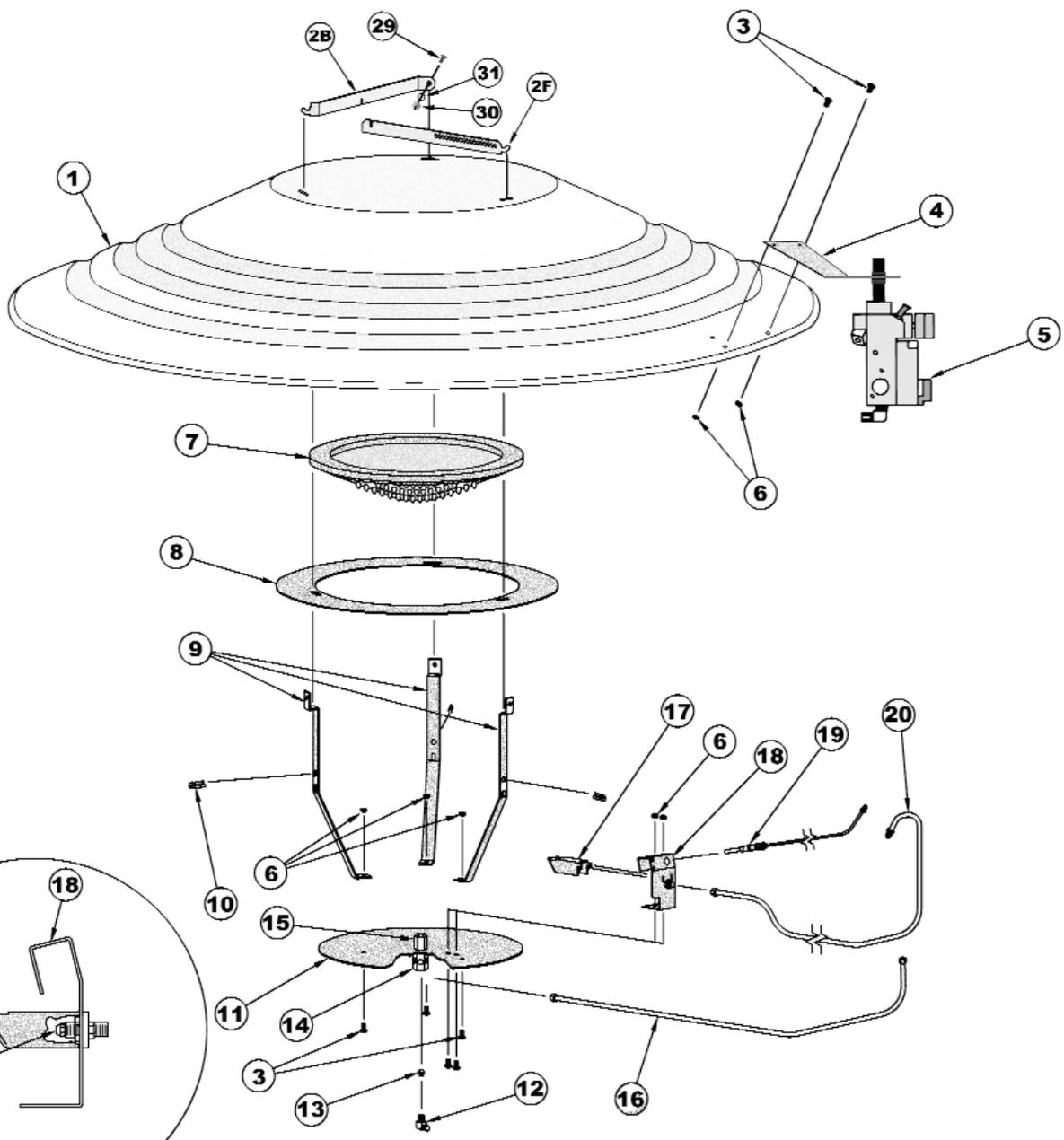
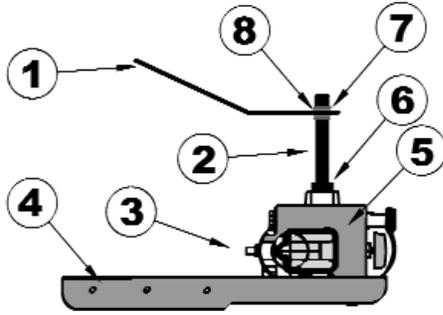
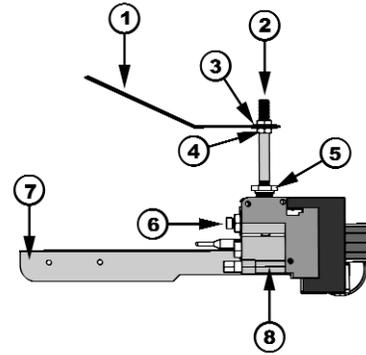


Illustration Number	Part Number	Part Description	Number Required
1		CANOPY	
2B	21004002	HANGER-T BACK LEG	1
2F	21014002	HANGER-T FRONT LEG	1
3	18003945	SCREW 10-24 X 3/8	7
4	16-104093	BRKT: UNIVRSL BRDR CTR	1
5	see pg. 8	CTRL ASM	1
6	18000021	NUT 10-24 STAR KEP	7
7	18005057	RADIANT TURBO CLAY	1
7	16-11152	RADIANT: BRDR FIBER	1
8	21004039	RADIANT RING	1
9	21020493	BROODER LEGS JET HEATER	3
10	11004105	RADIANT CLIP	3
11	21034039	BURNER PAN ROCKET JET	1
12	21000624	ELBOW BRASS 1/4MCT X 1	1
13	11010223	ORIFICE #52 LP	1
13	11010218	ORIFICE #43 NAT	1
14	11000315	JET AIR MIXER 31M	1
15	11000317	JET NOZZLE THREADED	1
16	see pg. 8	BURNER TUBE	1
17	28024042	PILOT BODY FINISHED	1
18	21117088	PILOT BRKT/"L"TAB COMB	1
19	11000663	THERMOCOUPLE 30"	1
20	see pg. 8	PILOT TUBE	1
21	11002205	ORIFICE #78 LP ONE PIECE	1
21	11002203	ORIFICE #73 NATONE PIECE	1
22	31004000	PILOT ASM LP SQ PLT	1
23	31014000	PILOT ASM NAT SQ PLT RK	1
27	11004900	HOOK S LARGE	1
29	11000028	BOLT 1/4-20 X 5/8 GRD	1
30	11000187	NUT 1/4 - 20 FINISH	1
31	11000338	WASHER 1/4 LOCK SPLIT	1
32	16-11176	LOCKNUT: HEX STEEL	1
33	16-10335	WASHER: 3/8 X 11/4 FENDER	2

## INDIVIDUAL THERMOSTAT (STANDARD)



## INDIVIDUAL THERMOSTAT MODULATING



ITEM #	DESCRIPTION	PART #
1	BRKT: UNIVRSL BRDR CTR	16-104093
2	NIPPLE: GALV 1/8 X 3-1/2 SPEC	16000000
3	CONN 3/8MPT X 1/4MCT	18000037
4	SHIELD: UNIVERSAL BRDR	16-104219
5	THMST 110S valve (bare)	11003981
6	BUSHING: GALV STDHEX 1/2X1/8	16-11188
7	LOCKNUT: HEX STEEL	51001100
8	WASHER: 3/8 X 11/4 FENDER	16-10335

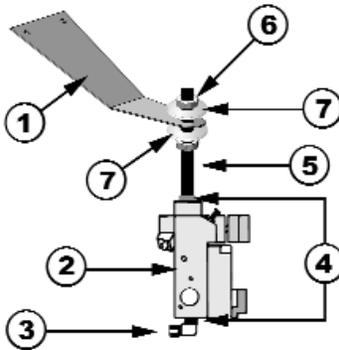
16-85050300 TUBE: ALUM 1/4 X .032 X 19 1/2

ITEM #	DESCRIPTION	PART #
1	BRKT: UNIVRSL BRDR CTR	16-104093
2	NIPPLE: GALV 1/8 X 3-1/2 SPEC	16000000
3	WASHER: 3/8 X 11/4 FENDER	16-10335
4	LOCKNUT: HEX STEEL	51001100
5	BUSHING: GALV STDHEX 1/2X1/8	16-11188
6	CONN 3/8MPT X 1/4MCT	18000037
7	SHIELD: UNIVERSAL BRDR	16-104219
8	CTRL: SIT EUROSIT VALV	16-10436350

16-85050130 TUBE: ALUM 1/4 X .032 X 21

16-85050120 TUBE: ALUM 1/4 X .032 X 20 1/4

## 24 VOLT ZONE

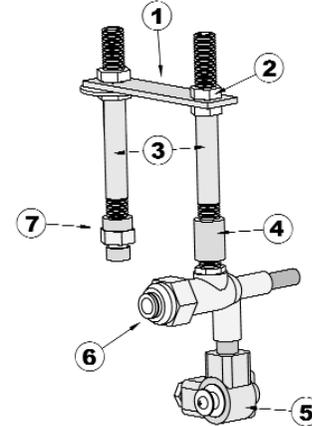


ITEM #	DESCRIPTION	PART #
1	BRKT: UNIVRSL BRDR CTR	16-104093
2	VALVE 7000 ELC (BARE)	11004081
3	ELBOW BRASS 1/4M COMP	11000624
4	BUSHING: GALV STDHEX 3/8X1/8	16-11194
5	NIPPLE: GALV 1/8 X 3-1/2 SPEC	16000000
6	LOCKNUT: HEX STEEL	16-11176
7	WASHER: 3/8 X 11/4 FENDER	16-10335

16-85050130 TUBE: ALUM 1/4 X .032 X 21

16-85050540 TUBE: ALUM 1/4 X .032 X 28 1/2

## TWO PIPE SUPPLY



ITEM #	DESCRIPTION	PART #
1	BRKT TWO PIPE SUPPLY	21007000
2	LOCKNUT: HEX STEEL	16-11176
3	NIPPLE: GALV 1/8 X 3-1/2 SPEC	16000000
4	COUPLING 1/8" NPT BLK	11001506
5	GRAY ELBOW GAS VALVE	11000331
6	VALVE S.I.T SSO	11005223
7	CONN STRT 1/4 X 1/8	11003986

16-85050500 TUBE: ALUM 1/4 X .032 X 24 1/2

## BROODER LIGHTING INSTRUCTIONS

- 1. NEW INSTALLATIONS** - test pipe system for leaks, purge all gas lines of dirt and moisture before connecting brooders. Turn ALL gas cocks to each brooder to the "closed" position. Open tank (LP) or meter valve (Nat.).

**GAS PRESSURE** - This brooder/heater is designed for 11 inches WC (Water Column) for LP Gas and 7 inches WC for Natural Gas. Conversion from one gas to another requires that both pilot and burner orifices be changed!!

- 2. LIGHTING PILOT:**

**INDIVIDUAL & 24 VOLT ZONE CONTROLS** - Turn thermostat to lowest setting. Turn the gas cock on the gas supply line to the "OPEN" position. Turn the "on-off" knob on the control valve to the "PILOT" position. Depress reset button and light pilot. Continue to hold down reset button 30 to 45 seconds or until pilot continues to burn when button is released.

**MANIFOLD ZONE CONTROL** - Turn Zone thermostat to lowest setting. Turn gas supply cock to the "OPEN" position. Depress button on the Safety Shut Off Valve and light pilot; continue to hold 30-45 seconds to activate the Safety Valve, this will enable you to light the Main Burner later.

**NOTE:** The thermocouple is installed directly in the pilot flame. The top ½ inch of the thermocouple tip gets cherry red. Normal output from this thermocouple is 15-20 millivolts. When installing brooders in a heavy draft area, be sure that the flame is blown toward the thermocouple tip.

- 3. LIGHTING MAIN BURNER** - After pilot is burning, turn the control knob to the "ON" position. NEXT: .

- A. INDIVIDUAL CONTROL** - When ready to ignite main burner, rotate the thermostat knob counterclockwise until main burner lights. To check burner for proper ignition, cycle the thermostat up and down several times, the main burner should light instantly. Set thermostat at desired heat setting.
- B. 24 VOLT ZONE CONTROL** - When ready to ignite main burners, turn the control knob to higher temperature setting until the main burners on the brooders within the Zone light.

Cycle the zone thermostat up and down several times, the main burners should light instantly. Set thermostat at desired heat setting. If main burner does not ignite, check wiring connections.

- C. MANIFOLD ZONE CONTROL** - When ready to ignite main burners, turn each gas cock to the main burner to the "OPEN" position.

**NOTE:** If temperature in the house is below lowest setting on the zone thermostat the main burner may light). After all gas cocks are in the "OPEN" position rotate zone thermostat to higher temperature setting until all Main Burners within the zone light. Set to desired heat setting.

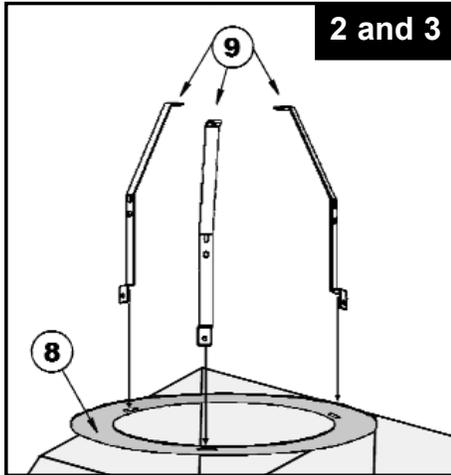
- 4. BETWEEN BROODS** - Turn pilot "ON/OFF" knob to the "OFF" POSITION. Then, turn gas off at Tank or Meter if desired. This will facilitate start up for the next flock

# DIRECT SPARK IGNITION ASSEMBLY INSTRUCTIONS

**NOTE:** The installation of these appliances is to be in accordance with CAN/CGA - B49.1 and B149.2 Installation Codes for gas burning appliances and equipment and/or local code.

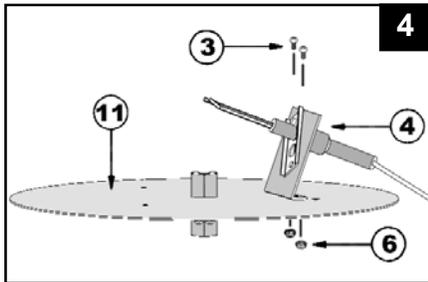
1. Remove all parts from the box - save empty box for use in assembly.

2. Set the **RADIANT RING (8)** with lip up on the end and inside divider of the open box.



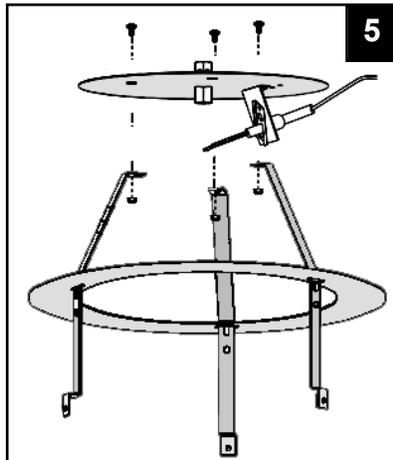
3. Locate the three **BROODER LEGS (9)**. Insert the double bent end of the brooder leg through the slot in the radiant ring down to the bent tabs in the middle of the leg. Be sure that the tab is facing the outside of the radiant ring. Insert the remaining two legs.

4. Attach the **Igniter Asm. (4)** to the top of the **Burner Pan (11)**. Align the two holes in the pilot assembly with the two holes in the burner pan. The

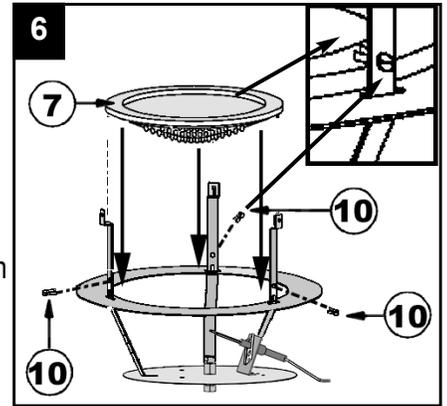


wires on the igniter asm should face the outside of the pan. Use one of the **3/8" screws (3)** provided and one of the **nuts with star washers (6)** to fasten the pilot assembly to the burner pan.

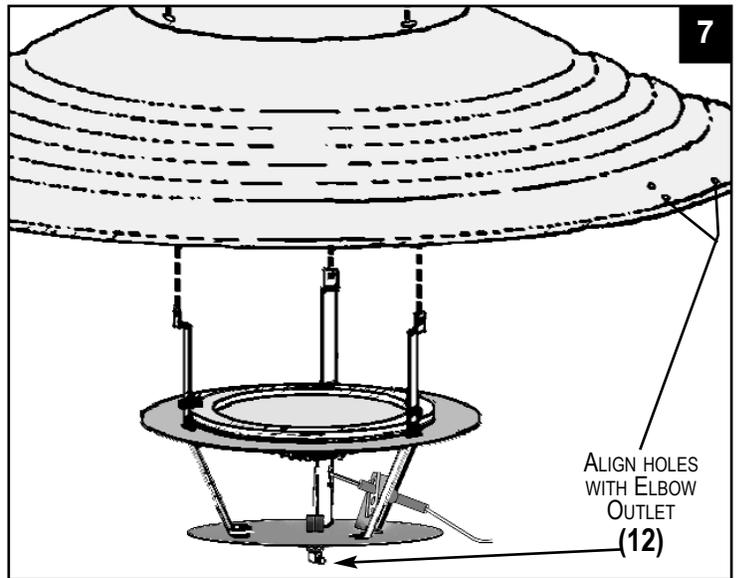
5. Turn the burner pan upside down so the igniter is pointed down. Attach the burner pan to the brooder legs using three **3/8" screws (3)** and **nuts with star washers (6)**.

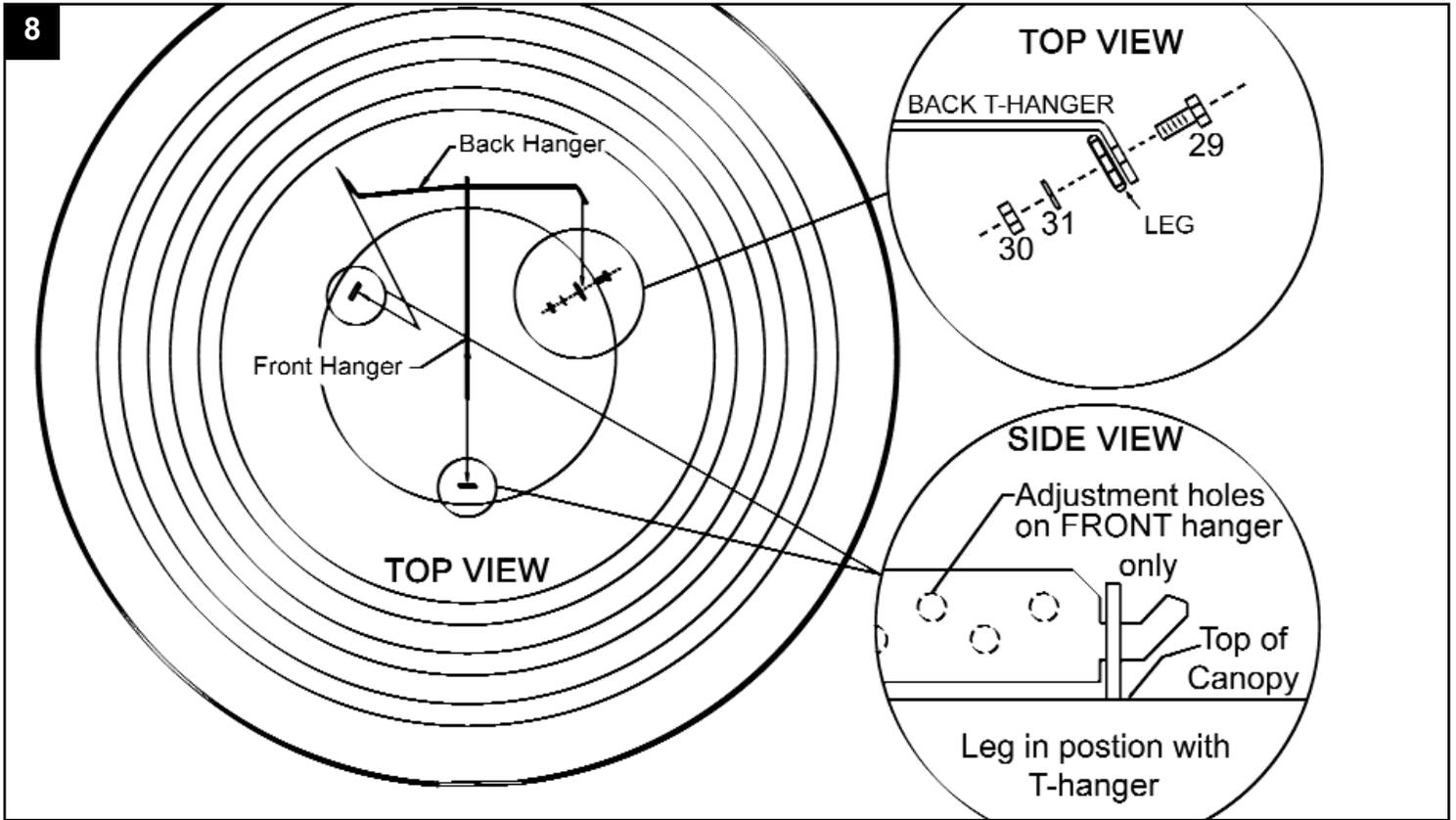


6. Flip the entire assembly over. Install the **CERAMIC RADIANT (7)** with the smooth side up and secure in place with the **RADIANT CLIPS (10)**. Push the radiant clips through the hole in the brooder leg from the outside of the leg to the inside.



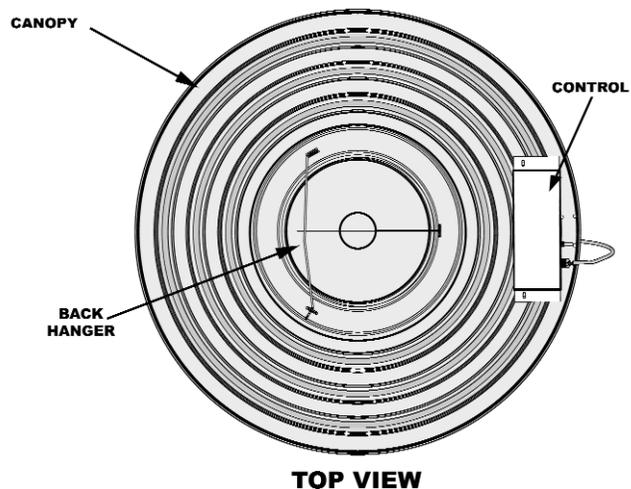
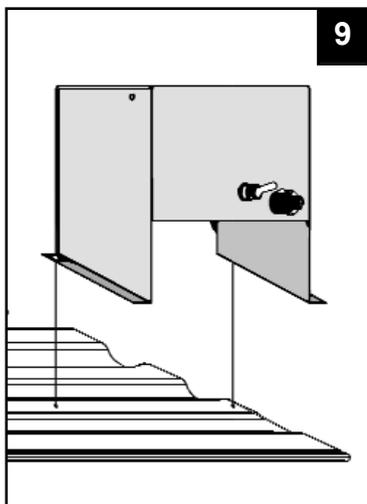
7. Locate the holes on the outer edge of the **CANOPY (1)**, align these holes with the brass **ELBOW OUTLET (12)** on the bottom of the burner pan. Place the canopy on the burner assembly by sliding the brooder legs through the slots in the canopy.



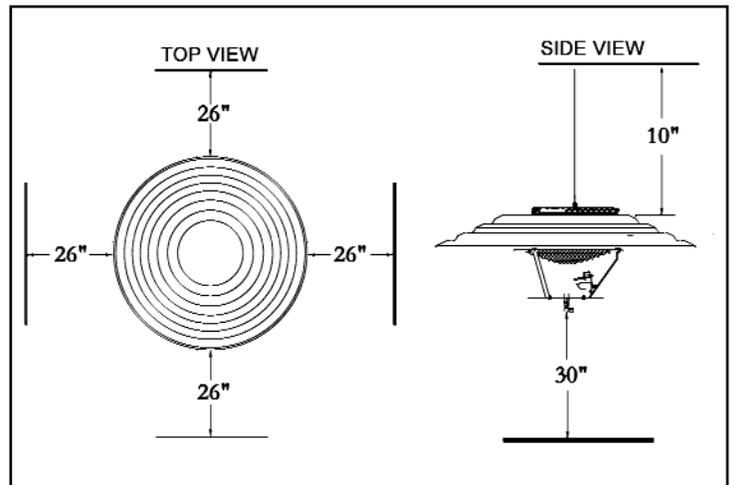
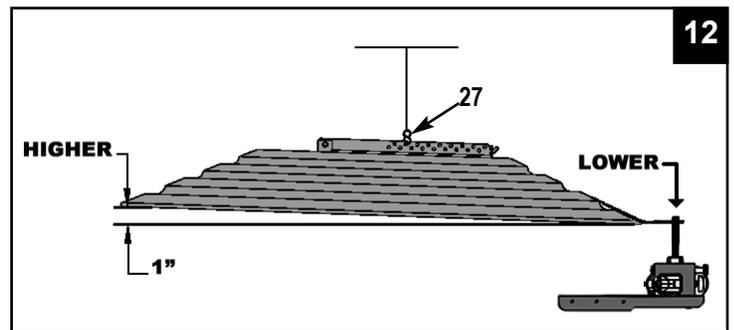
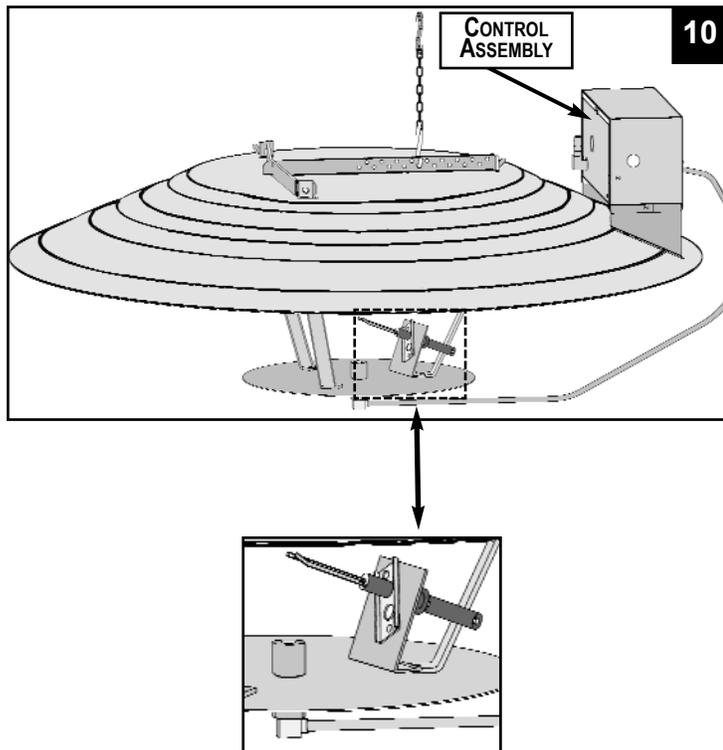


**8. "T-Hanger" assembly instructions:**

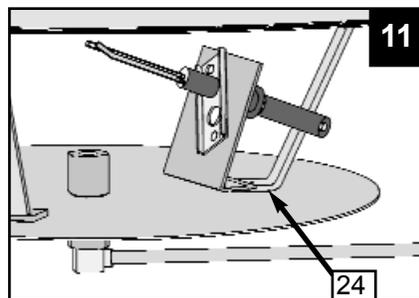
- A.** Insert slot in the middle of **BACK T-HANGER (2B)** into the slot in the end of the **FRONT T-HANGER (2F)** (Note: adjustment holes at top)
  - B.** Insert hook on front T-hanger through top leg of Emitter which is aligned with the four holes the Canopy. Insert the hook on the left end of the back T-Hanger through left top leg of the Emitter.
  - C.** Assemble and tighten **bolt (29)**, **nut (30)**, and **washer (31)** as shown with back T-hanger on outside of Emitter leg.
- 9.** Attach the control box assembly to the top side of the canopy. The on/off switch must face the outer rim of the canopy. Align the two holes in the assembly with the holes on the outside edge of the canopy. Use two of the 3/8" long screws and nuts with star washers to fasten the control assembly to the canopy.



10. Connect the burner tubing: Hand form the tubing to fit up to the bottom of the control assembly. Connect the fitting.



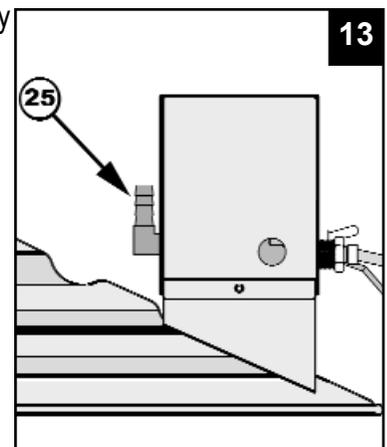
11. Connect the two shorter wires to the hot surface igniter. Connect the **longer wire with the ring terminal (24)** under one screw. Attach 24VAC power supply to the toggle switch inside of the control box.



12. Suspend the brooder: to level the brooder simply support the heater underneath and then move the s-hook forward or backward. After it is level clamp both ends of the s-hook shut. The brooder should hang with the control assembly tilted slightly downward. Normally the brooder is attached to a winch cable used for raising and lowering. **In addition, we strongly recommend that a safety cable or chain be attached to the brooder to prevent the brooder from falling to the litter if the winching cable should happen to break.**

Any combustible material must not be adjacent to the heater. The heater should be hung with a minimum of 30" from bottom of the heater to the floor. Be sure to comply with all local, state, and federal gas codes for your area.

13. Attach the hose (use only a CGA approved gas hose assembly in accordance with CAN/CGA - B149.1 and B149.2) from the gas supply to the **hose barb (25)** on the control using hose clamps (not provided). Check all connections for leaks before lighting brooder. - See lighting instructions



**14. GAS PRESSURE** - should be CHECKED AND ADJUSTED to recommended settings.

LP GAS	11" WC (WATER COLUMN)
NAT. GAS	7" WC (WATER COLUMN)

**15. Transformers** - Need to be mounted as close as possible to the zone they are running, 40 PILOT ZONES and 18 DSI is the maximum number of brooders it will hold. The wire required is 14-2 wire.

### **LP GAS**

First: Go to the furthest stove from the regulator and connect the pressure gauge to the Pressure Tap on the gas valve. Light only the stove you are testing or if you have a zone system light all the stoves in the zone and set the pressure at a maximum of 11 1/4" W.C.

Next: Light all the stoves in the house and check the pressure again. The pressure should not drop below 10 1/2" W.C. If the pressure falls below 10 1/2", then the gas distribution system is inadequately designed. The problem may be in the regulator, pipe sizing, etc.

### **NATURAL GAS**

Use same procedure as LP gas above, except the pressure should not exceed 7 1/4" W.C. with only one stove or zone operating. The pressure should not drop below 6 1/2" W.C. with all stoves running.

## **LIGHTING INSTRUCTIONS**

- 1. NEW INSTALLATIONS** - test pipe system for leaks, purge all gas lines of dirt and moisture before connecting brooders. Turn ALL gas cocks to each brooder to the "closed" position. Open tank (LP) or meter valve (Nat.).

**GAS PRESSURE** - This brooder/heater is designed for 11 inches WC (Water Column) for LP Gas and 7 inches WC for Natural Gas. Conversion from one gas to another requires that both pilot and burner orifices be changed!!

- 2.** Flip switch to the "**ON**" position. Check burner for proper ignition. Set thermostat at desired heat setting.

**NOTE:** If temperature in the house is below lowest setting on the zone thermostat the main burner may light). After all gas cocks are in the "OPEN" position rotate zone thermostat to higher temperature setting until all Main Burners within the zone light. Set to desired heat setting.

# DIRECT SPARK IGNITION CONVECTIONAL BROODER

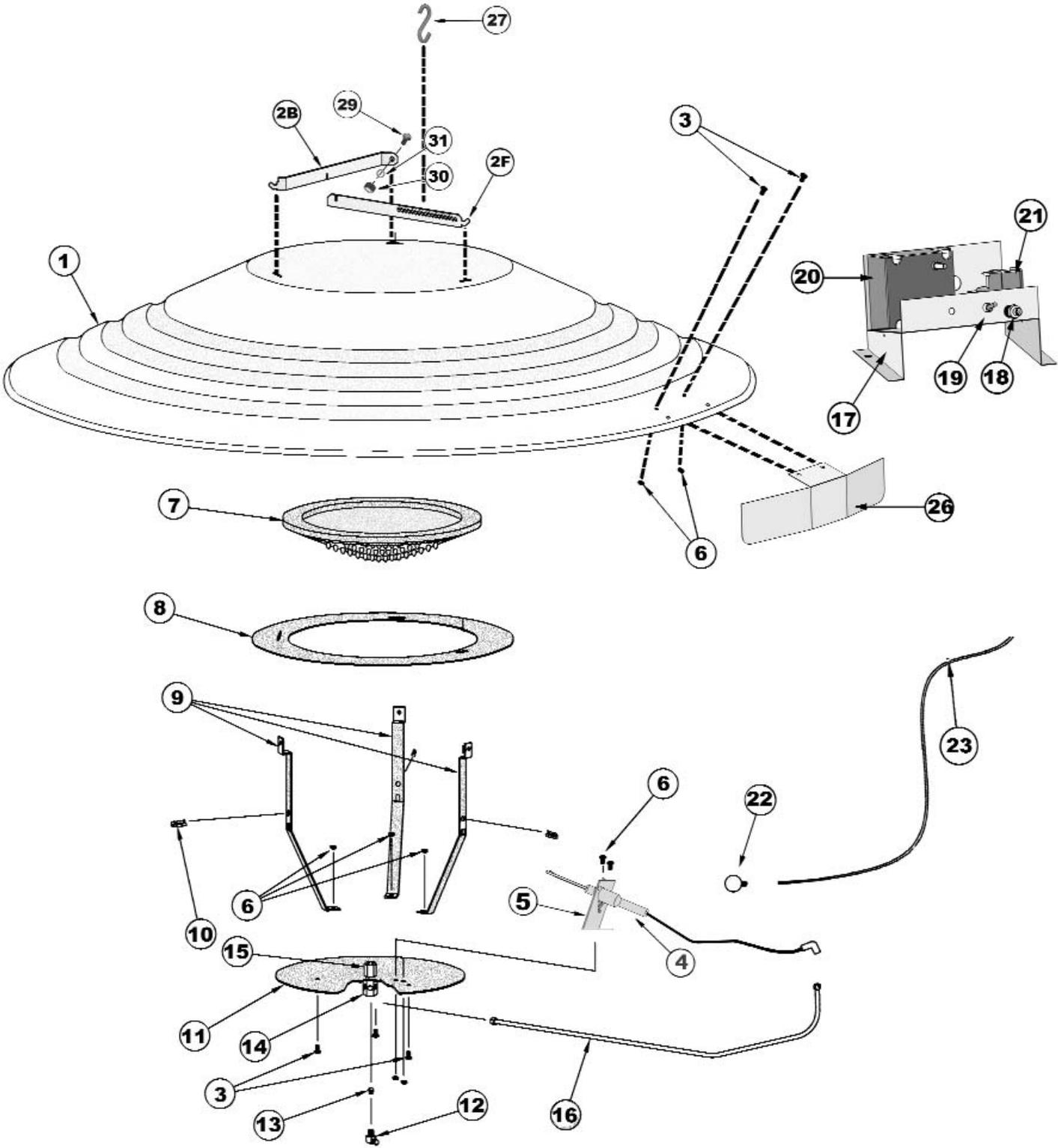


Illustration Number	Part Number	Part Description	Number Required
1	11011008	CANOPY 34 GALV COMP	1
	11010033	CANOPY 34X.040 ALUM HD INFRD	
	11034070	CANOPY 34 ALUM COMPLETE .032	
2B	21004002	HANGER-T BACK LEG	1
2F	21014002	HANGER-T FRONT LEG	1
3	18003945	SCREW 10-24 X 3/8	9
4	13005015	IGN ROD F/ RJ W/LEAD P	1
5	23107008	IGN BRKT HYBRID ROCKET	1
6	18000021	NUT 10-24 STAR KEP	9
7	18005057	RADIANT TURBO CLAY	1
-	16-11152	RADIANT: BRDR FIBER GB/	-
8	21004039	RADIANT RING	1
9	21020493	BROODER LEGS JET HEATER	3
10	11004105	RADIANT CLIP	3
11	21034039	BURNER PAN ROCKET JET 2	1
12	21000624	ELBOW BRASS 1/4MCT X 1/	1
13	11010218	ORIFICE NAT #43	1
-	11010223	ORIFICE LP #52	-
14	11000315	JET AIR MIXER 31M	1
15	11000317	JET NOZZLE THREADED	1
16	21260326	TUBE ALUM 1/4 X .032 x	1
17	21106077	CONTROL BOX BOTTOM DSI	1
18	18000037	CONN 3/8MPT X 1/4MCT	1
19	13005282	SWITCH TOGGLE SINGLE P	1
20	16-101068	BOARD: CTRL IGN DSI BR	1
21	11001238	VALVE WR 25M FOR DSI &	1
22	15100720	TERMINAL RING 14RB-10	1
23	13005274	WIRE 16GA HI TEMP	1
25	11003838	ELBOW BRASS 3/8MPTX3/8HOSEBARB	1
26	21002400	SHIELD: CONTROL HEAT WD BRDR	1
27	11004900	HOOK S LARGE	1
29	11000028	BOLT 1/4-20 X 5/8 GRD	1
30	11000338	WASHER 1/4 LOCK SPLIT	1
31	11000187	NUT 1/4 - 20 FINISH	1
32	16-11176	LOCKNUT: HEX STEEL	1
33	16-10335	WASHER: 3/8 X 11/4 FENDER	2

## WIRING INSTRUCTIONS FOR 24 VOLT ZONE BROODERS/HEATERS

1. Mount "Auto-Switch-Over" (A.S.O.) Power supply in convenient location near electrical panel and WITHIN 3 FEET OF OUTLET. Outlet should be separately fused -- 15 AMP.
2. Mount junction box over each thermostat location selected.
3. Run 14-2 romex from connections on A.S.O. to nearest junction box and continue on to other junction boxes (if used).
4. Run 14-2 romex over each line of brooders to be hooked up to Zone Control. Line should be run adjacent the gas line. If more than one thermostat (zones) is to be used -- black wire should be cut between zones.
5. Cut outer insulation ONLY on romex over each brooder to expose black and white wires. DO NOT CUT OR STRIP WIRES. Bare ground wire is not used.
6. Using "T" tap connectors connect wire from brooder valve (24V) to romex -- white to white; black to black. Note -- cut off excess wire from valve. Tape wire to gas hose and romex to make a neat installation.
7. Connect together in junction box using wire nuts
  - a. Black from feed (A.S.O.)  
Black to next junction box (if used)  
Black from thermostat
  - b. White from feed (A.S.O.)  
White to next junction box (if used)  
White from line over brooders
  - c. White from thermostat to black from line over brooders
8. Light brooder in usual manner and set ZONE thermostat for desired temperature.
9. Check for any voltage drops to brooder.

## MAINTENANCE PROGRAM

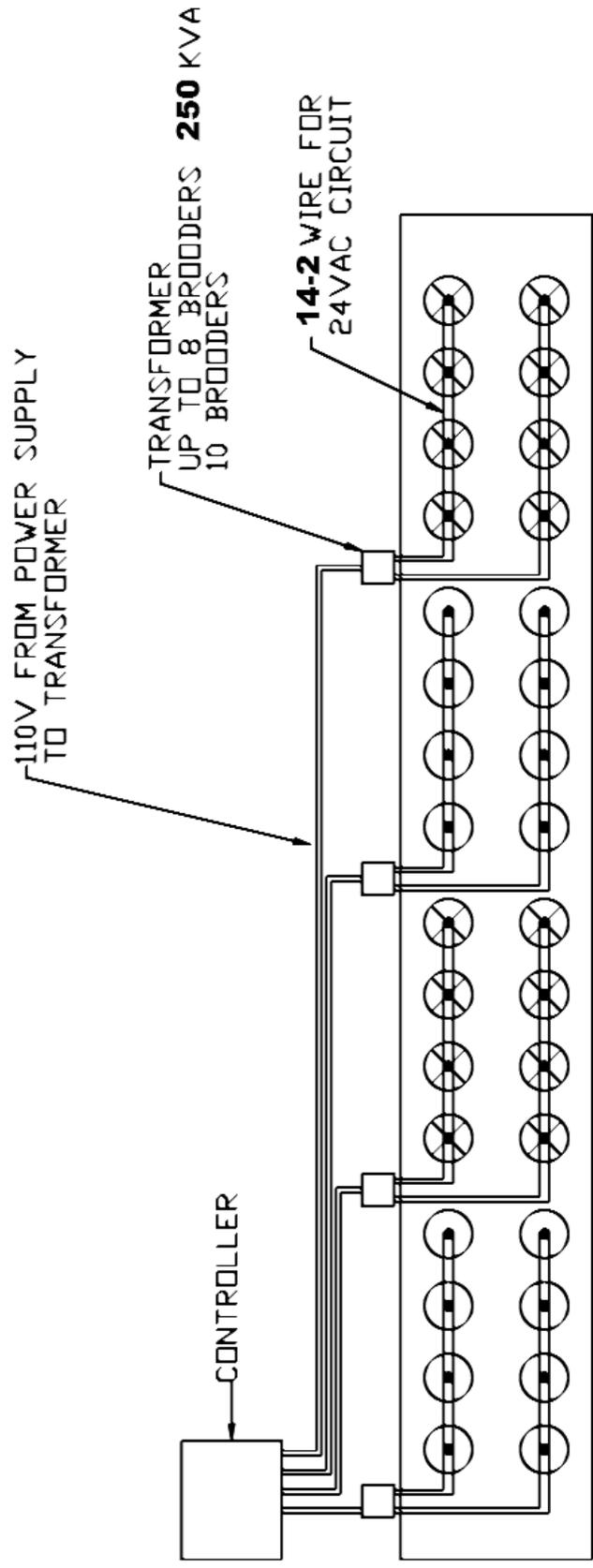
- ◆ Clean brooder after each flock
  - ☑ Inspect for any orifice blockage caused by spider webs in the pilot or burner assemblies.
  - ☑  **DANGER!** Never spray penetrating oil (WD-40) on the control valve. This will cause the loss of high temperature valve grease and cause the valve to leak.
  - ☑ Clean dust and dirt from pilot and burner ports with compressed air. If an air compressor is not available turn the brooder to a vertical position and tap on the

side of the pilot & burner brackets with a screwdriver, pliers, or any other suitable object, to knock the dust from the unit.

- ☑ If houses are washed down, care should be taken to prevent moisture from accumulating on control valve, pilot & burner assemblies. After wash downs we recommend that you light the brooders to dry up any excess moisture.
- ☑ Clean air intakes with a small brush
- ☑ Extreme care must be taken not to enlarge or distort the pilot and burner orifices.
- ◆ Special burner and pilot orifice cleaning kits, which includes the correct size orifice cleaning gauges and brushes, are available for purchase at your local dealer.
- ◆ If brooder is disconnected from the gas line, use tape to seal the open connections. This will keep moisture, dust, and insects out and prevent future problems.

## SAFETY PRECAUTIONS

1. Do not use the brooder/heater to heat human living areas.
2. The intended use of the brooder is to provide heating for poultry and hog buildings. Adequate ventilation must be provided.
3. The installation of the brooder must comply with all applicable state, local, and/or national codes in accordance with CAN/CGA - B149.1 or .2 installation codes.
4. Use only the type of gas being supplied to the unit as marked on it (Propane or Natural Gas). Do not operate with improper fuel.
5. Do not expose brooder to rain, snow, sleet, or water. The brooder/heater is designed for indoor use only.
6. Ventilation air and combustion air must not be obstructed.
7. Do not operate the brooder/heater in the presence of combustible vapors, liquids, or gases. Failure to heed this warning could result in an explosion and/or fire.
8. Test all pipe and pipe joints for leaks by a suitable means (Example: soap and water solution or a pressure check). Do not operate the brooder until this test has been preformed.
9. Do not move, handle, repair, or adjust height of the brooder while in operation or when still hot.
10. Do not bypass any safety devices.
11. Before each use, a visual inspection of the brooder/heater is essential to insure safe and satisfactory heating. Replace or repair defective components before operating brooder/heater. Failure to do so will void warranty and could result in injury or property damage.



## SPECIFICATIONS

### Capacity

31,000 BTU/h  
7.8105 Kcal

### Gas Pressure Requirements

Liquid Propane (LP) 11" WC or 6.35 oz. or 27.5 mbar  
Natural Gas 7" WC or 4.00 oz. or 17.5 mbar

### Gas Consumption 31,000 BTU

Liquid Propane (LP) .34 gph / 1.29 L/hour  
Natural Gas 29.25 cfh / .83 m3/hour

### Brooder Dimensions

#### Width

small canopy 34" / 86.36 cm  
large canopy 46" / 116.84 cm

Height 20 1/2" / 52.07 cm

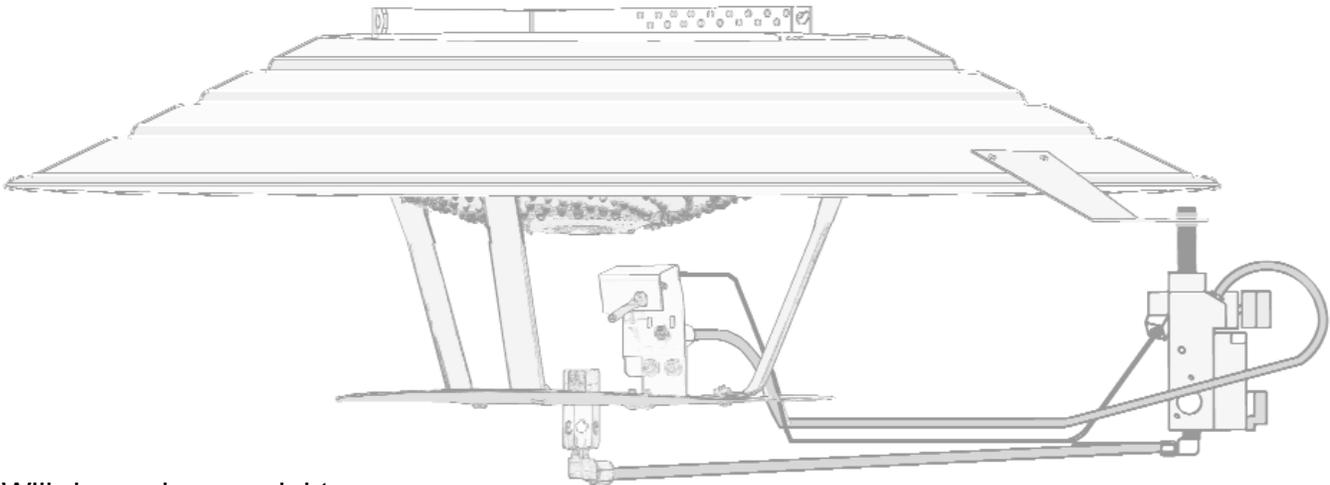
\*Weight (Alum., 34" Canopy) 17 lbs. / 7.71 kilograms

### Operation Guidelines for Brooding Area

Height (edge of canopy) 36" / 91.4 cm  
Space between brooders / side 10-20 ft. / 3-6.1 m  
Square feet per brooder 250-600 sq. ft. / 23.2-55.7 sq. m

### Minimum clearance to combustibles

Side 36" / 91.4 cm  
Top 14" / 35.6 cm  
Below 24" / 61 cm



\*Will depend on model type.