

CHORE-TIME[®]

Poultry Production Systems
A400-2GLP, A400-2GN, A400-2O 110V and 220V
INCINERATOR
Installation and Operators Manual



Chore-Time Equipment
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WARRANTY WARNING

1. Tampering with orifices in the burner will void warranty.
2. Failure to cure refractory before using will void warranty.

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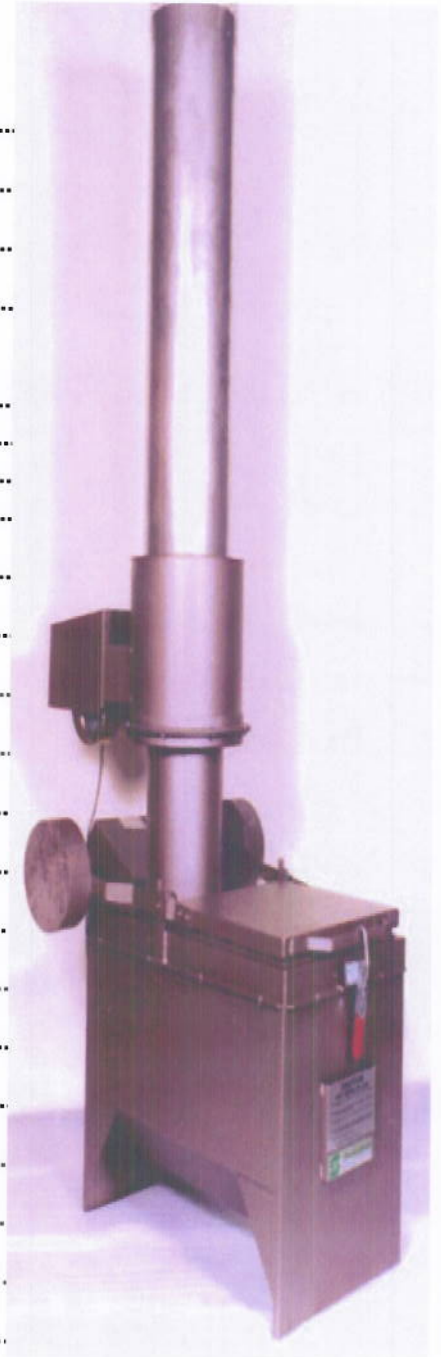
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LIMITED WARRANTY

WARRANTY

Chore-Time Equipment, a division of CTB, Inc., WARRANTOR, warrants to the original purchaser for a period of one (1) year from date of purchase or delivery to original purchase, products manufactured by it which are installed and operated according to WARRANTS'S instructions that are furnished and/or are available to purchaser upon request, and installed according to other applicable Federal, State, and local codes or regulations and upon substantiation that said products were installed correctly, were not abused, and or defective. The exact nature of said warranty and exclusive remedy for breach of warrantor is as follows:

WARRANTOR will refund or credit to purchaser's account an amount equal to the original purchase price or at WARRANTOR'S option repair or replace at WARRANTOR'S expense products found to be defective in workmanship or material. If a problem occurs which the purchaser believes is covered by this warranty, then purchaser shall contact the seller giving the seller sufficient information to enable a resolution to the problem. If the seller is unable or unwilling to resolve the problem and purchaser is still convinced that it is covered by the warranty the purchaser should contact the manufacturer at the address listed in the following paragraph and provide a description in writing of the problem and the attempts made to resolved it. "Seller" as used herein shall mean the dealer or distributor from whom the product was purchased.

No product or part thereof may be returned pursuant to this warranty without first receiving specific written permission to do so. All request should be addressed to Chore-Time Equipment at P.O. 2000, Milford, IN 46542, requesting specific authority for returning merchandise pursuant to this warranty with reasons for the request.

LIMITATIONS

Products which are abused or neglected are not covered under this Warranty. WARRANTOR shall not be responsible for the costs of removal or reinstallation of its products and shall not be liable for transportation costs to and from it factory. Further, WARRANTOR shall not be liable for replacement, repair, or refund for component parts not manufactured by it.

Use of parts for modification or repair of the unit or any component not authorized or manufactured by Chore-Time Equipment, specifically for this product shall void this warranty.

IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO THE SAME PERIOD OF TIME AS THIS EXPRESS LIMITED ONE (1) YEAR WARRANTY AND ARE SPECIFICALLY DISCLAIMED THEREAFTER.

CHORE-TIME EQUIPMENT, SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL, OR CONTINGENT DAMAGES OR EXPENSES ARISING DIRECTLY OR INDIRECTLY FROM ANY DEFECT IN THE PRODUCT HEREBY WARRANTED.

THIS WARRANTY SHALL BE VOID IF SOLVENTS OR OTHER HIGHLY INFLAMMABLE FLUIDS, SUCH AS BUT NOT LIMITED TO, BENZENE, METHYLETHYL, KETONES, TOLUENE, XYLENE, OR NAPHTHA ARE BURNED IN OR MIXED WITH OIL FOR BURNING IN USED OIL-FIRED BURNING HEATERS OR FURNACES.

For those states that do not allow limitations on how long an implied warranty lasts, this limitation may not apply. Similarly, for those states that do not allow the exclusion on limitations of incidental or consequential damages, the above exclusions of indirect, incidental, or consequential damages may not apply.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Chore-Time Equipment is not responsible for any undertaking, representation, or warranty made by dealer, distributor, or other persons, beyond those expressly set forth in this warranty.

A400 INCINERATOR SPECIFICATIONS

Table 1: WASTE CHAMBER

CHAMBLER CAPACITY:	400 lbs. Type IV waste
CHAMBER VOLUME:	12.6 cubic feet
DOOR DIMENSION:	22" x 29"
HEIGHT TO DOOR:	30.5"
REFRATORY:	3", 2800 ^f , 126 lbs/cubic feet
JACKET MATERIAL:	14 gauge aluminized steel
HEIGHT TO TOP OF CHAMBER:	32"

Table 2: STACK

DIMINENSIONS:	(1) 14" Dia., SS 60" L
	(1) 14" Dia., SS 36" L
	(1) 14" to 18" Transition
	(1) 14" x 24" lined stack
STACK CAP:	SS 304-2B: 18 GA

Table 3: BURNER

MODEL: NAT GAS and LP	Two (2) Midco J83-DS Direct Main Flame Spark Ignition Electronic Flame Safety, 100% Shut-offs
MODEL: OIL	One (1) Beckett AF Oil Burner W/ Flame Safety One (1) Beckett SF Oil Burner W/ Flame Safety
OPERATION:	Digital Timer

Table 4: GENERAL

EXTERNAL DIMENSIONS:	38" W x 34" H x 50" L (less stack).
ELECTRICAL SERVICE:	Standard-110 volt, 60hz, 20 amp, Also available -- 220 volts, 50hz, 10 amp
GAS SERVICE:	410,000 BTUH (piping sized accordingly) Natural Gas: 7" W.C. (with burner operating) Liquid Propane: 11" W.C. (with burner operating)
GAS/FUEL CONSUMPTION (approximate):	Natural Gas = 573 CFH Liquid Propane = 6.25 GPH Fuel Oil = 3.75 GPH
TOTAL WEIGHT:	1925 lbs (approx)
PAD REQUIREMENTS:	12' W x 14' L x 4" D (if sheltered) 6' W x 8' L x 4" D (if not sheltered)
PAINT:	1200 degree primer 1200 degree paint

Table 5: CHARGING RATE

PATHOLOGICAL:	Up to 400 lbs. per charge of typical pathological waste with a BTU/lb rating of 1000. Batch loaded allowing complete burn-out 6-8 hours, cool down and ash removal before reloading
BURN RATE:	Approx. 55lb./hr.

Must be installed in accordance with local codes and ordinances, subject to regulatory agencies. Stack test data is available from the distributor for permit application. If on-site testing is required, it is the responsibility of the purchaser and can be arranged through the distributor. Outside installation is recommended with a simple metal roof or three-sided metal shelter, provided a **minimum** of four (4) foot clearance from any combustible material. Inside installations may be have special insurance requirements. Factory must be advised.

A400 PACKING LIST

Primary Chamber Components

1	Primary Chamber w/ top & door assembly
2	Counter Weight Arms
4	Counter Weights

Stack Components

1	5' SS lined stack section
1	3' SS lined stack section
1	Transition Stack
1	2' Refractory lined stack
1	Stack cap
1	Secondary Chamber

Burner & Hardware

2	Burner Midco J83-DS (NAT Gas and LP only)
1	Burner Beckett AF (oil burner only)
1	Burner Beckett SF (oil burner only)
2	Burner cover
2	3/4" Gas cut off valve (NAT Gas and LP only)
1	Pressure gauge (NAT Gas and LP only)
1	Oil filter (oil burner only)
8	1/4 - 20 X 1/2 bolts (oil burner only)
8	1/4 - 20 nuts (oil burner only)
2	Brass flare ell (oil burner only)
1	Brass flare fitting (oil burner only)
2	Brass flare nut (oil burner only)
1	1/4 x 3/8 bushing (oil burner only)
1	1/2 x 3/8 bushing (oil burner only)
1	3/8 x 2 pipe nipple (oil burner only)

SITE INFORMATION

PLACEMENT AND CONSTRUCTION RECOMMENDATIONS

- The A400 incinerator is designed for outdoor installation on a concrete slab 6' x 8' x 4" thick. (12' x 14' x 4" if sheltered)
- The A400 may be installed in a three sided shelter with a minimum of 13' from the floor to the roof. The shelter must comply with local building and fire codes for clearances from combustible walls and materials. A minimum clearance of 4' around the incinerator is recommended for service and maintenance.
- For recommended construction of a metal chimney through a combustible roof, **See Figure 3: "Combustible Roof Construction Diagram" on page 9**

ELECTRICAL SERVICE

**115 volts, 60hz, 20 amp for NAT Gas, LP, & Fuel Oil
220 volts, 50hz, 10 amp for NAT Gas & LP**

- Electrical service can be supplied to the control box on the terminal strip.

FUEL SUPPLY

NAT Gas and LP

PIPING:

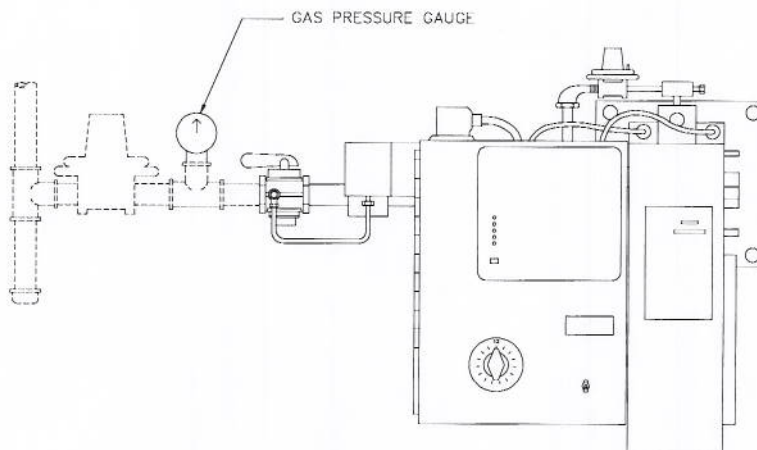
1. Install gas train with 3/4" minimum dia. pipe or tubing. Larger pipe may be needed depending on the gas supply and regulator location. The A400 requires 410,000 BTUH for operation.
2. Using soap solution, leak test all gas connections.

REGULATOR:

1. Use a properly sized regulator which maintains reduced pressure under static conditions when no gas is flowing. (Dead end lock up).
2. For best results install regulator as near as possible to the incinerator.
3. Regulate LP gas to 11" W.C., NAT gas to 7" W.C. (while burner is burning).
4. Do not exceed 14" W.C. under static conditions when there is no gas flow.

PRESSURE GAUGE:

- A gas pressure gauge is supplied with each incinerator and should be located between the regulator and gas shut off valve, as close to the burner as possible. See below.



FUEL SUPPLY (CONTINUED)

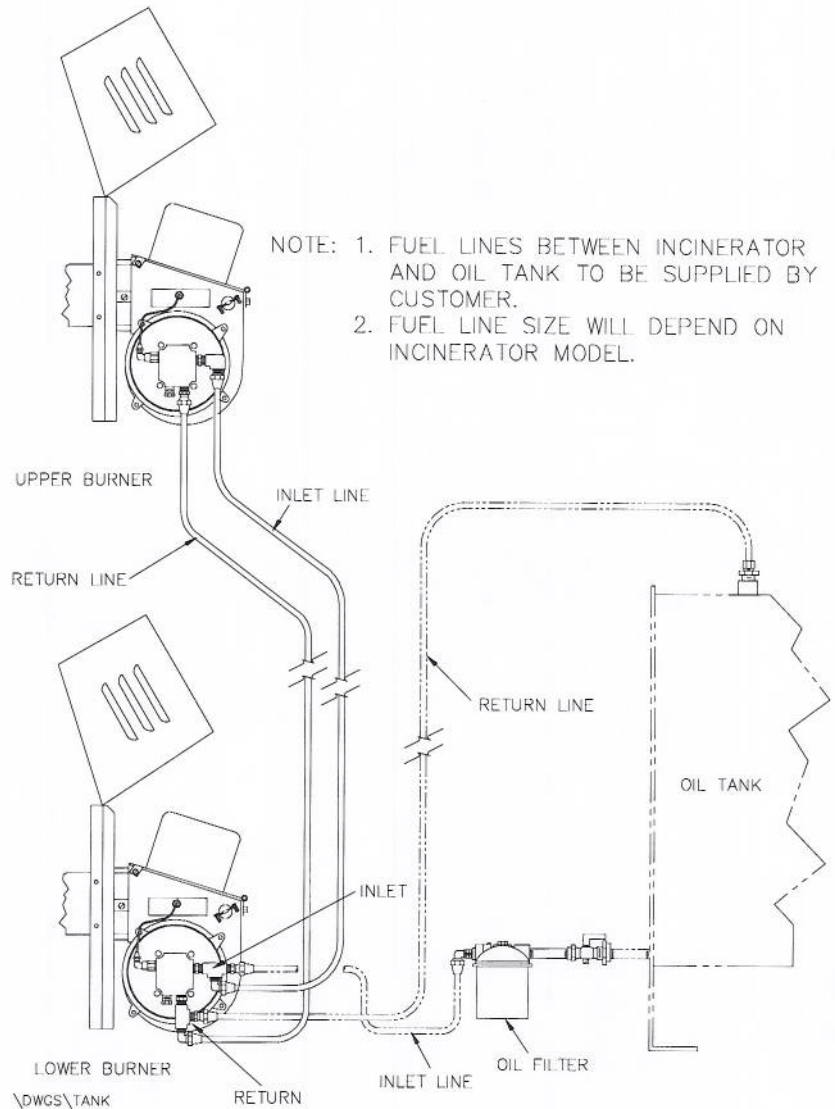
Fuel Oil

OIL TANK:

1. Since tanks vary in size and fixtures, you may need to make adaptations to use the parts supplied.
2. It is important that a filter be provided in the line between that tank and the incinerator.
3. If the flow outlet is on the underside of the tank, extend a threaded nipple about 2" into the tank to avoid problems from condensation in the bottom of the tank.

PIPING:

1. A flaring tool will be needed to form the ends of the copper tubing.
2. Assemble 3/8" copper tubing, oil filter, shut-off valve and fittings between the oil tank and the burner.



COMBUSTIBLE ROOF CONSTRUCTION

RECOMMENDED CONSTRUCTION FOR METAL CHIMNEY THROUGH COMBUSTIBLE ROOF

1. DIMENSIONS ARE MINIMUM DISTANCES
2. BASED ON NFPA 82
3. CONSULT LOCAL BUILDING CODES
4. STOCK SHOULD EXTEND NOT LESS THAN 10 FT. HIGHER THAN ANY BUILDING WITHIN 25 FT.

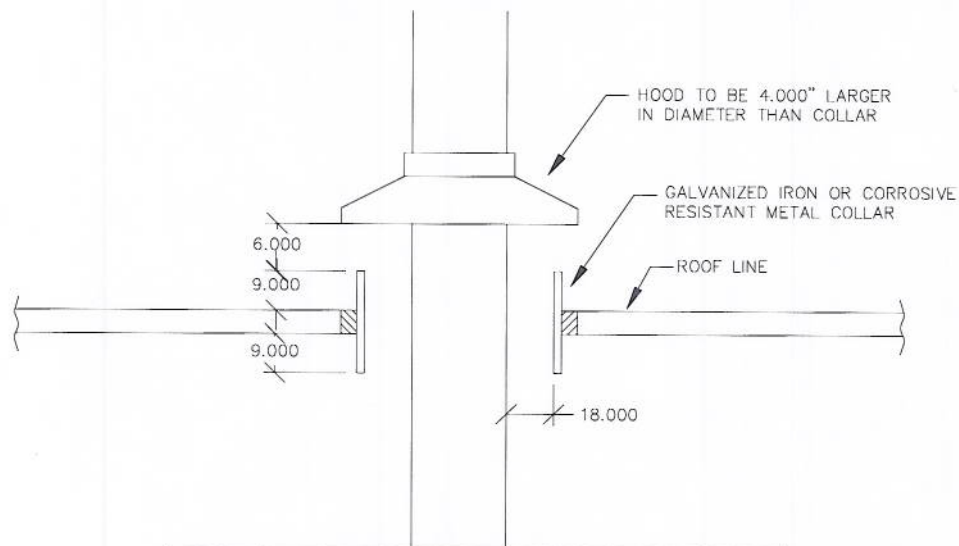


Figure 3: Combustible Roof Construction Diagram

ASSEMBLY INSTRUCTIONS

1. Position the incinerator on the concrete slab as needed for fuel and electrical hook up.
2. Bolt the secondary chamber to the transition stack w/ 3/8 – 16 x 3/4 flange bolts and flange nuts.
3. Slip the long SS stack section down over the top of the secondary outlet.
4. Attach the stack cap to the shorter SS stacking using screws.
5. Position the SS stack w/cap over the existing stack and slip down.
6. Bolt the toggle clamp to the primary chamber at the mount bracket using (4) 3/8-16x3/4 flange bolts and (4) 3/8-16 flange nuts.
7. Attached the counter weight arms to the door arms using (4) 3/8-16x3/4 flange bolts and (4) 3/8-16 flange nuts.
8. Bolt the counter weights to the counter weight arms (be sure door is clamped closed) with (2) 5/16-18 x 9 bolts, (2) 5/16 - 18 Nylock nuts and (4) 5/16 X 2 washers.
9. Attach the burners, housings and wiring as described below.

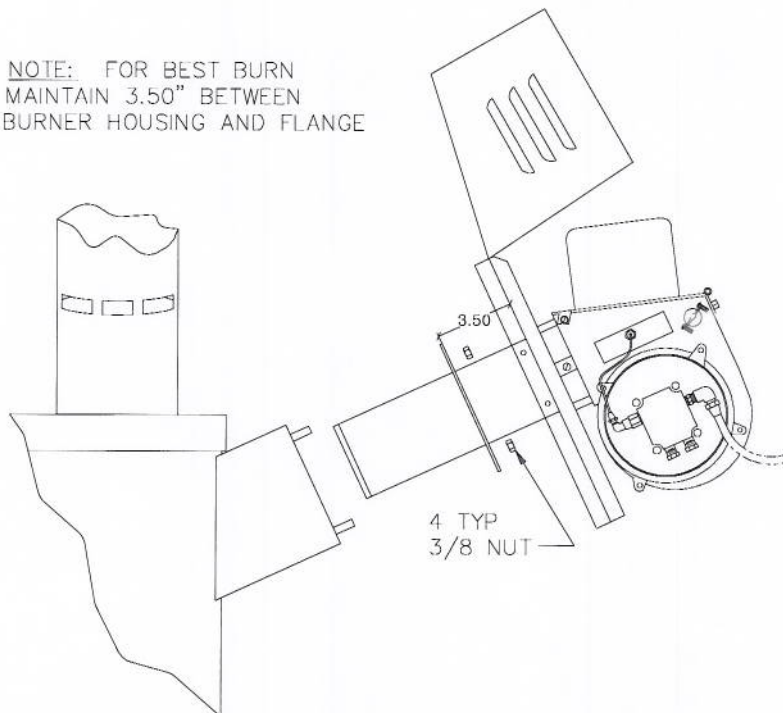
A. For Gas burners -

1. Attach the burner cover and burner to the primary chamber with (4) 3/8-16 flange nuts.
2. Attach the cord to the bottom burner and attach black wire to L1, white wire to L2, and the green wire to the ground lug.

B. For Fuel Oil Burners -

1. Attach the burner to the primary and secondary chamber with (4) 3/8-16 flange nuts each.
2. Make sure that the end of the burner is a 1/4" back from the inner refractory lined wall.
3. Attach the burner cover to the bracket on the burners with (4) 1/4 - 20 X 1/2 bolts and nuts each.
4. Attach the cord from lower burner to the upper burner and wire nut the black, white, and green wires.

NOTE: FOR BEST BURN
MAINTAIN 3.50" BETWEEN
BURNER HOUSING AND FLANGE



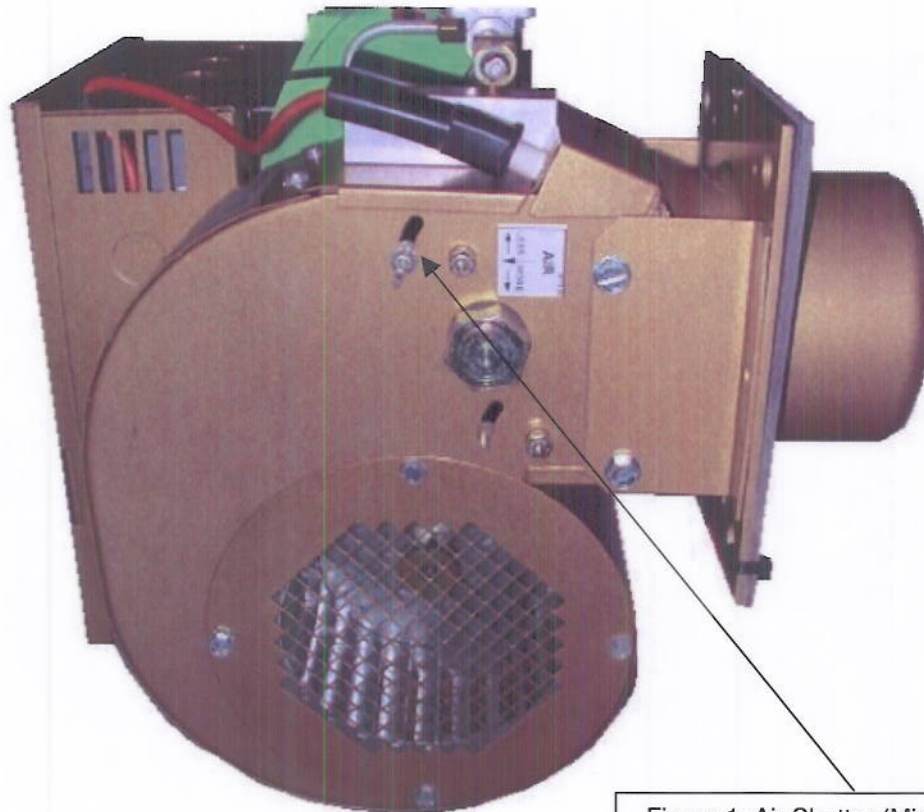
BURNER SETTINGS & AIR ADJUSTMENTS

Mid Continent Gas Burner Model J-83-DS, **Natural Gas**

	<u>Air Setting*</u>	<u>Gas Pressure</u>	<u>Pilot</u>	<u>Burner</u>	<u>BTU/HR</u>
Upper	Full Open	7" W.C.	#55	5/32	75,000
Lower	Half Open	7" W.C.	#55	11/32	335,000

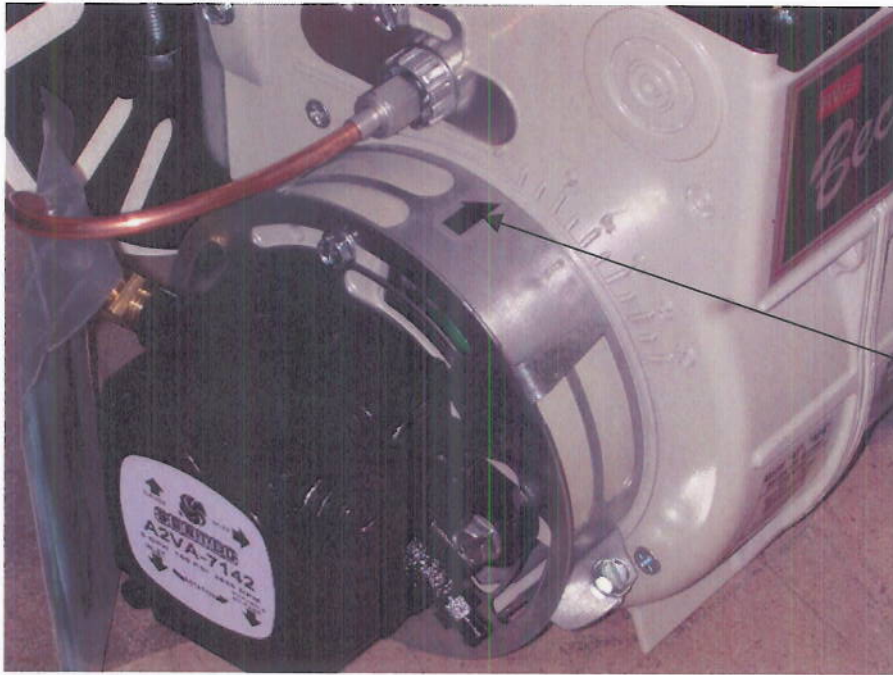
Mid Continent Gas Burner Model J-83-DS, **LP Gas**

	<u>Air Setting*</u>	<u>Gas Pressure</u>	<u>Pilot</u>	<u>Burner</u>	<u>BTU/HR</u>
Upper	Full Open	11" W.C.	#58	7/64	75,000
Lower	Half Open	11" W.C.	#58	7/32	275,000



BURNER SETTINGS & AIR ADJUSTMENTS

(continued)

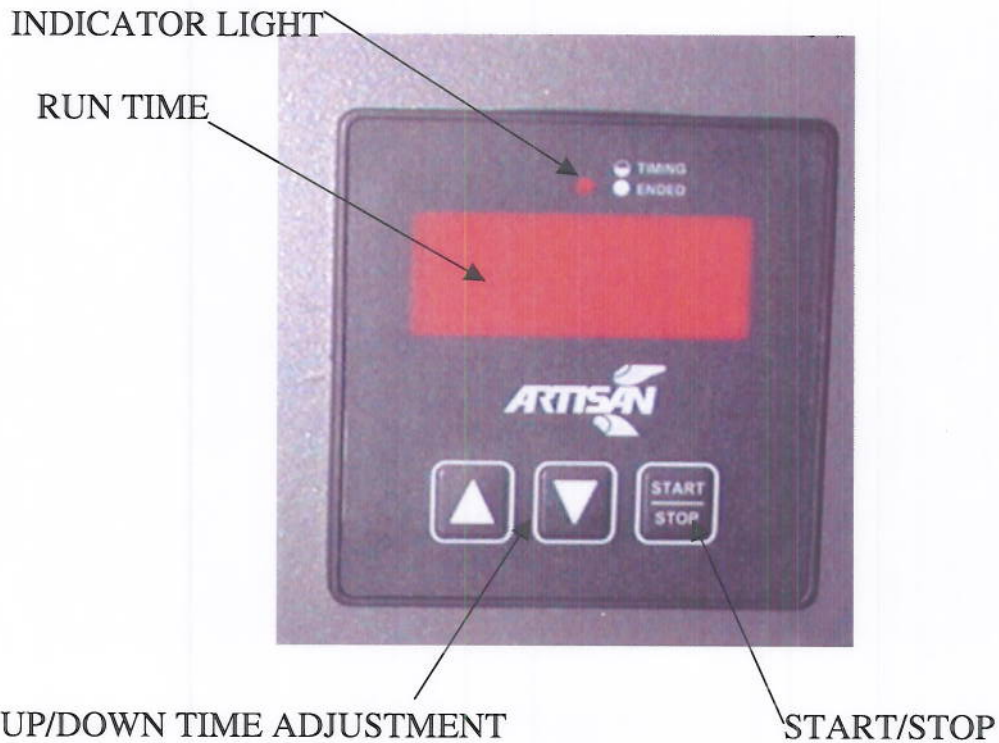


Air Band indicator
(Beckett burner)
Set to 0



Air Shutter indicator
(Beckett burner)
Upper set to 10
Lower set to 8

DIGITAL TIMER OPERATION



START BURNER BY SETTING THE TIMER FOR THE DESIRED HOURS OF BURN TIME. PRESS START, THIS WILL START THE BURNER. A FULL LOAD MAY NEED 6 TO 8 HOURS DEPENDING ON MANY FACTORS LIKE FROZEN ANIMALS, OUTSIDE TEMPERATURE, FATTY CONTENT OF LOAD. EXPERIENCE WILL SHOW HOW TO PREDICT THE TIME AND ACHIEVE A BURN AS COMPLETE AS DESIRED. IT IS ACCEPTABLE TO PRESS STOP OR START AT ANY TIME DURING THE BURN.

REFRACTORY CURING PROCEDURE

Table 1: REFRACTORY CURING PROCEDURE

Procedure	Time
Start burner and burn for	5 minutes
Allow to cool for	15 minutes
burn	5 minutes
cool	15 minutes
burn	15 minutes
cool	15 minutes
burn	15 minutes
cool	15 minutes
burn	30 minutes
cool	15 minutes
burn	30 minutes
cool	15 minutes
burn	1 hour
cool	15 minutes
burn	1 hour
cool	15 minutes
burn	1 hour
cool	15 minutes
burn	2 hour
cool	15 minutes
burn	3 hours
Total Time	12 hours(approximate)

There will be hairline cracks and minor scaling of the refractory when curing is complete. This is a normal result of the curing process.

OPERATING INSTRUCTIONS

Curing of the refractory is essential prior to burning the first load of waste. See "REFRACTORY CURING PROCEDURE".

1. Remove all ash and other materials from inside the incinerator.
2. Load incinerator. Keep the waste 6"-8" away from the burner port.
3. Set the timer for the desired burn time, press Start.
4. A full load may burn out in 4 - 5 hours. Experience will dictate per type of waste.
5. The incinerator will automatically shut off when the burn is completed.
6. Remove excess ash each load,

TROUBLE SHOOTING

NAT GAS & LP MODELS

No spark at electrodes

1. Is burner blower operating? Possible defective blower motor.
2. Clean electrodes and pilot igniter assembly. Apply heat if moisture is present.
3. Check electrode position. See drawing in Midco manual for proper adjustment.
4. Defective Honeywell Control Board. Check voltage to 25V terminal on board.
5. Check service breaker, timer, electrical connections, and polarity.

Spark but no ignition

1. Confirm gas pressure. LP gas @ 11" WC or NAT gas @ 7" WC.
2. Clean electrodes and pilot igniter assembly. Apply heat if moisture is present.
3. Check electrode position. See drawing in Midco manual for proper adjustment.
4. Listen to confirm that solenoid gas valve is opening. Possible defective gas valve.
5. Check for dirt in brass pilot orifice tee.

If incinerator does not burn properly

1. Have the ashes been removed at the beginning of the day?
2. Be sure there is no obstruction blocking the burner tube.
3. Is the air shutter in the full open position? See diagram in "BURNER SETTINGS" section of this manual.
4. Check gas pressure while the burner is burning. LP gas @ 11" WC or NAT gas @ 7" WC.

TROUBLE SHOOTING

FUEL OIL MODELS

No spark at electrodes

1. Be sure there is no obstruction in the end of the burner tube and there is no soot build-up on the retention head, electrodes or nozzle.
2. Check all electrical connections.
3. Transformer may be burned out. Listen or look to see if there is an arc across the electrodes. Replace transformer if no spark is present.
4. Check for damage to electrodes.
5. Improper firing head adjustment. See Beckett burner installation manual.

No oil spray through nozzle

1. Defective motor. Check to see if blower wheel is turning. If not, check electrical connections and voltage to motor.
2. Air in fuel line. Check all fittings between burners and at fuel tank for tightness. Air may be bled from the fuel line at the fuel pump.
3. Dirt or water in oil tank.
4. Check the plastic coupling between motor and pump for tight fit.
5. Check for clogged filter at tank or on nozzle.
6. Be sure there are no kinks in the oil line.
7. Check the tubing between the pump and nozzle for blockage.
8. Defective pump.

If incinerator does not burn properly

1. Have the ashes been removed at the beginning of the day?
2. Be sure there is no obstruction blocking the burner tube.
3. Are the air bands adjusted correctly?
4. Is No. 1 Fuel Oil (Kerosene) or No. 2 Fuel Oil (Diesel) being used as fuel?

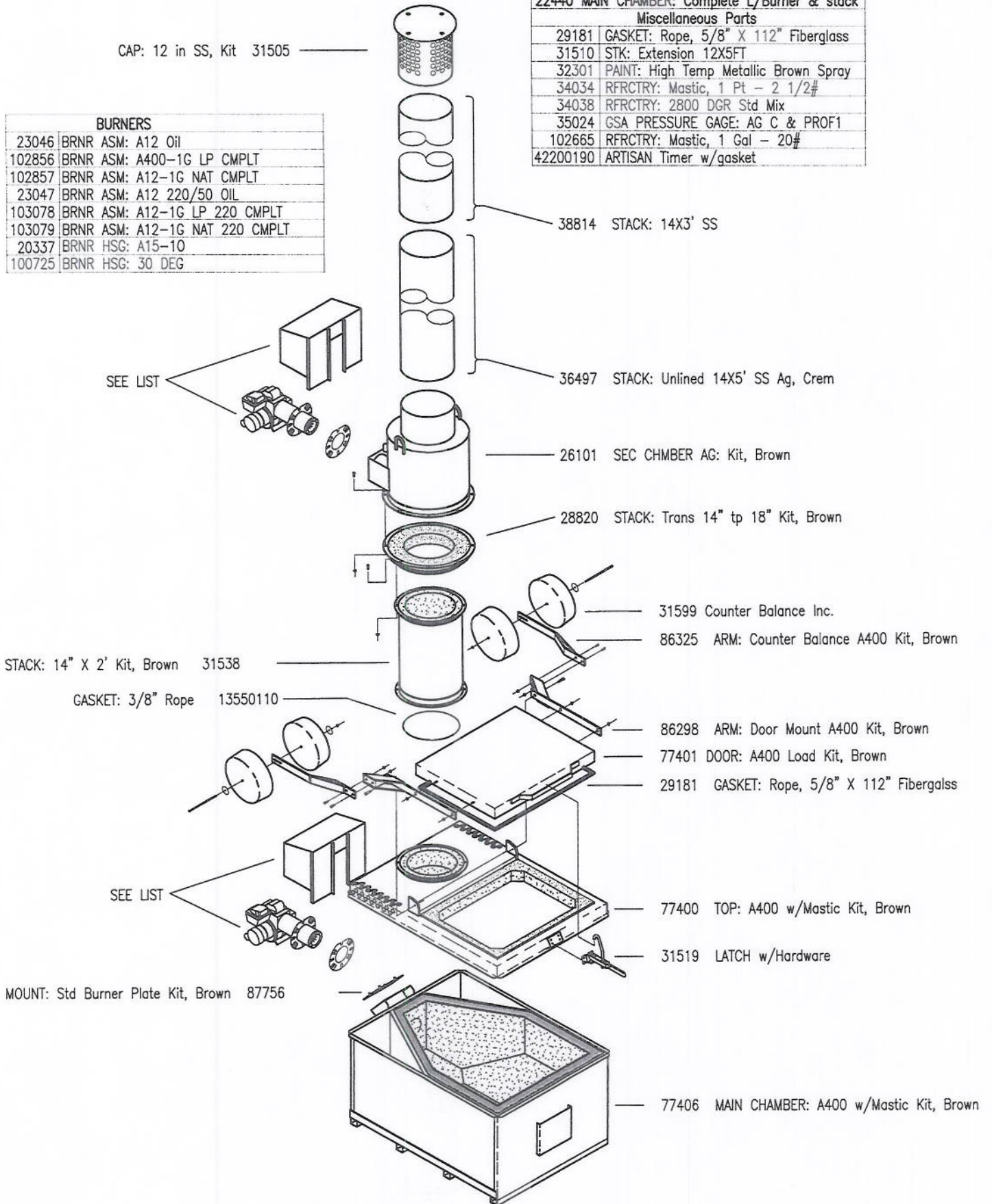
A400

- Dual Burner -

22440 MAIN CHAMBER: Complete L/Burner & stack	
Miscellaneous Parts	
29181	GASKET: Rope, 5/8" X 112" Fiberglass
31510	STK: Extension 12X5FT
32301	PAINT: High Temp Metallic Brown Spray
34034	RFRCTRY: Mastic, 1 Pt - 2 1/2#
34038	RFRCTRY: 2800 DGR Std Mix
35024	GSA PRESSURE GAGE: AG C & PROF1
102665	RFRCTRY: Mastic, 1 Gal - 20#
42200190	ARTISAN Timer w/gasket

CAP: 12 in SS, Kit 31505

BURNERS	
23046	BRNR ASM: A12 Oil
102856	BRNR ASM: A400-1G LP CMPLT
102857	BRNR ASM: A12-1G NAT CMPLT
23047	BRNR ASM: A12 220/50 OIL
103078	BRNR ASM: A12-1G LP 220 CMPLT
103079	BRNR ASM: A12-1G NAT 220 CMPLT
20337	BRNR HSG: A15-10
100725	BRNR HSG: 30 DEG



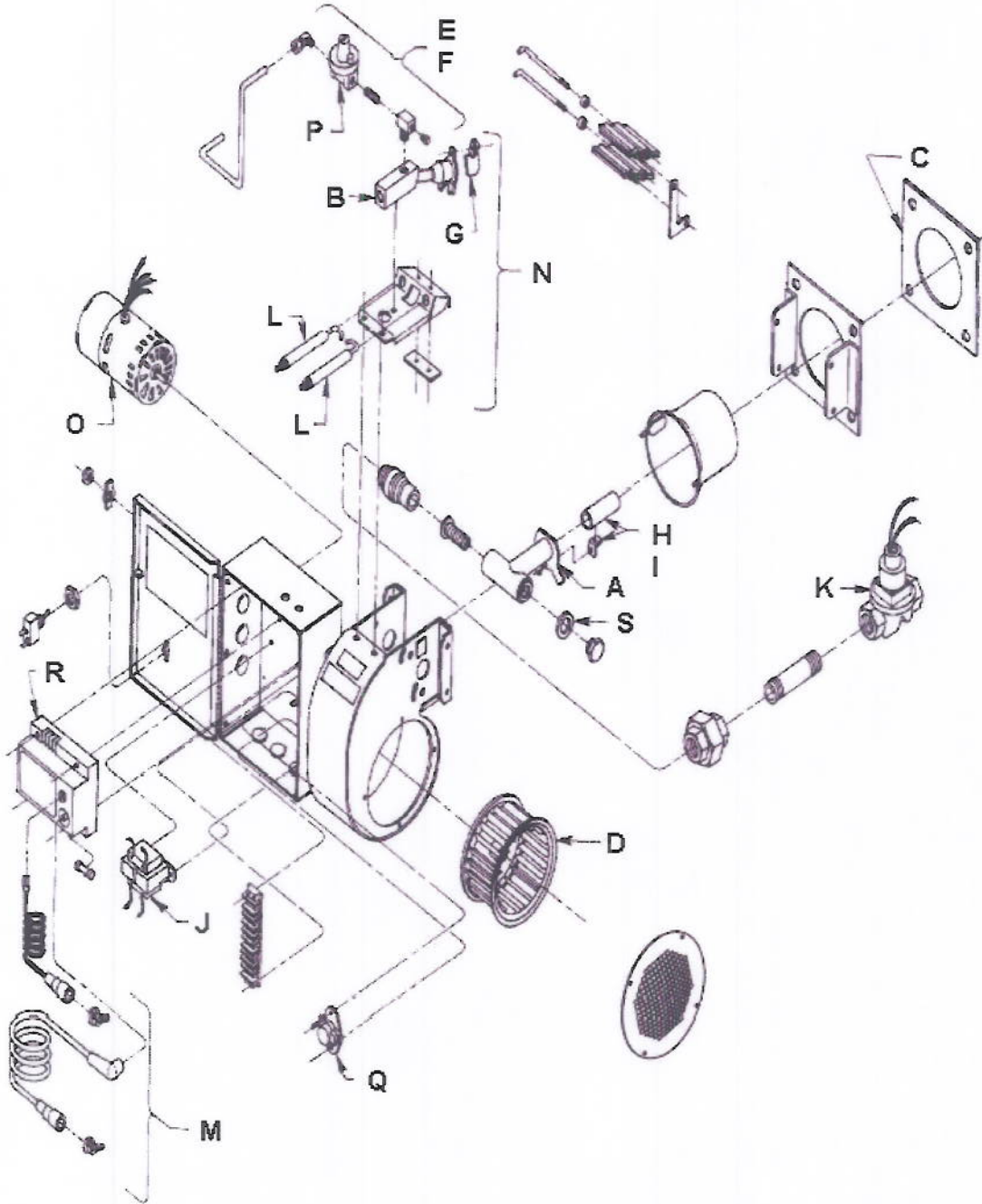
A400 PARTS LIST

Key	Part Number	Description	Burners	
I	77404	Lower Chamber less Top & Load Door	102857	Natural Gas Burner 110V
J	31519	Latch W/ Bolts	102856	LP Burner 110V
K	100725 20337	Natural Gas & LP Burner Cover Fuel Oil Burner Cover	23046	Fuel Oil Burner 110V
			103079	Natural Gas Burner 220V
			103078	LP Burner 220V
			23047	Fuel Oil Burner 220V
			22440	Main Chamber complete w/ top and door

PARTS LIST: MIDCO BURNER (J83-DS)

Key	Part Number	Description
A	33116	Manifold
B	33117	Ignitor Gas Inlet Block, Tube and Ignitor Tip Assembly
C	31603	Flange Gasket
D	33125	Blower Wheel
E	101211	Ignitor Control Piping NATURAL -- #55 Drill (.052)
F	34290	Ignitor Control Piping PROPANE -- #58 Drill (.042)
G	33140	Ground Barrier Kit
H	33113	Main Gas Port and Tube Kit – PROPANE
I	31581	Main Gas Port and Tube Kit – NATURAL
J	33129	Transformer 115/1/50-60 Primary, 24V-30VA
	101420	Or Transformer 220/24V 50/60 Hz, 35VA
K	33109	3/4" NPT Gas Valve -- 24 Volt
L	33121	Electrode (spark or flame) - 2 required
M	33138	Electrode Wires, Boots and Strain Reliefs
N	33131	Ignitor Assembly
O	33126	Motor, 115/1/50-60 Hz
	101426	Or Motor, 220/1/60 Hz
P	33112	Ignitor Regulator 1/8 NPT
Q	33120	Thermal Switch
R	33151	DSI Electronic Control Board
S	33118	Input Adjuster Sealing Gasket
Not Shown	33136	PROPANE Conversion Kit
Not Shown	33135	NATURAL Conversion Kit

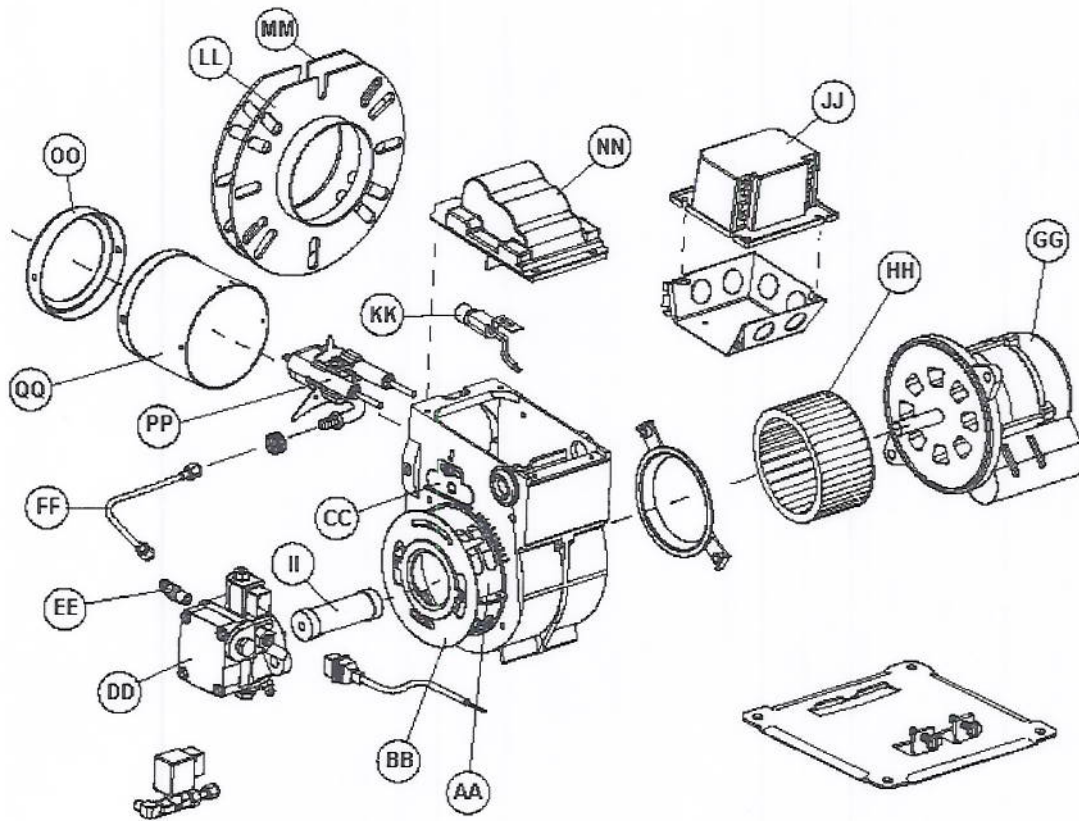
MIDCO BURNER (J83-DS) EXPLODED VIEW



PARTS LIST: BECKETT BURNER (AF)

Item	Description	Part Number
AA	Air band assembly – 8 slot	32322
BB	Air shutter – 8 slot	52321
CC	Escutcheon plate	32323
DD	Pump A2VA7116 (<i>Suntec</i>) 110V 220V	32341 10176130
EE	Pump elbow	57210
FF	Connector tube assembly – 8"	101472
GG	Motor 110V 220V	32302 32303
HH	Blower wheel (use only RWB replacement)	57204
II	Coupling	32340
JJ	Primary Control 110V 220V	57207 57226
KK	Cad cell detector	32345
LL	Flange – universal, adjustable, incl. gasket	32365
MM	Gasket only	32320
NN	Transformer 110V 220V	32310 10173200
OO	Retention head	32335
PP	Electrode kit F head air tubes longer than 9"	101474
QQ	Air Tube	32351
Not Shown	Nozzle: 0.65 X 70A	24050

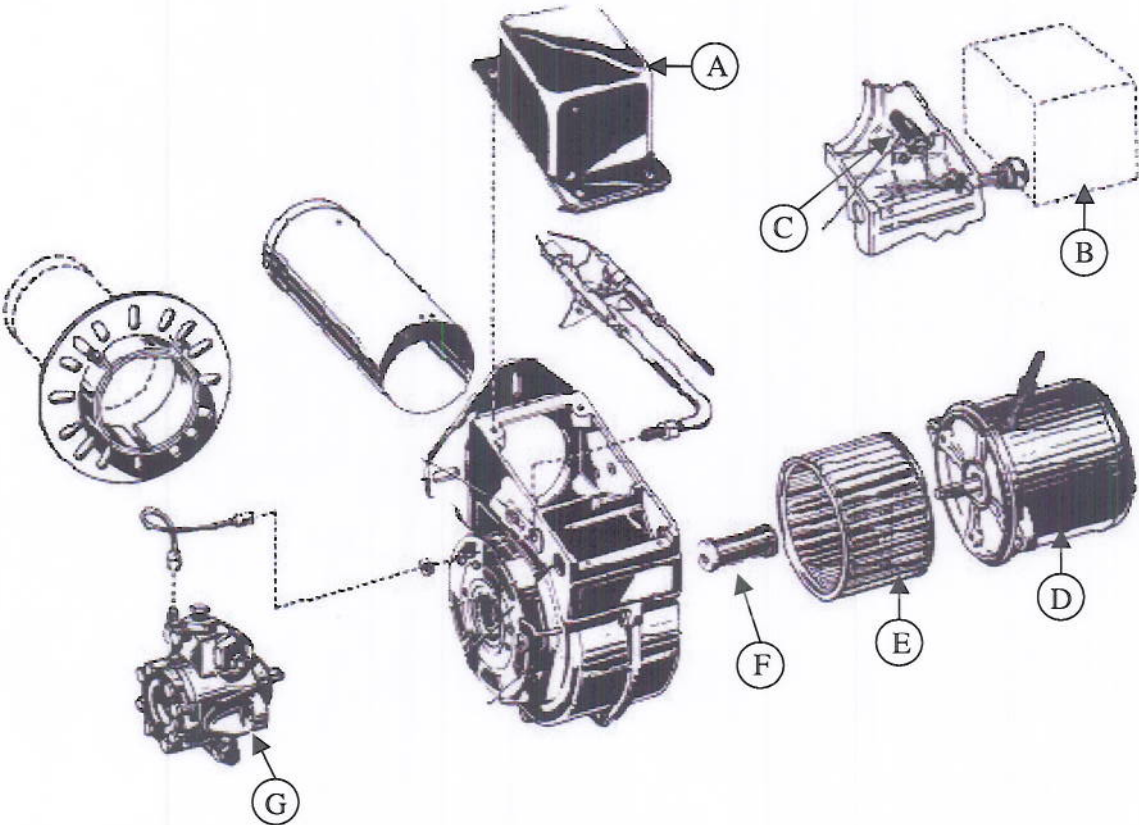
BECKETT BURNER (AF) EXPLODED VIEW

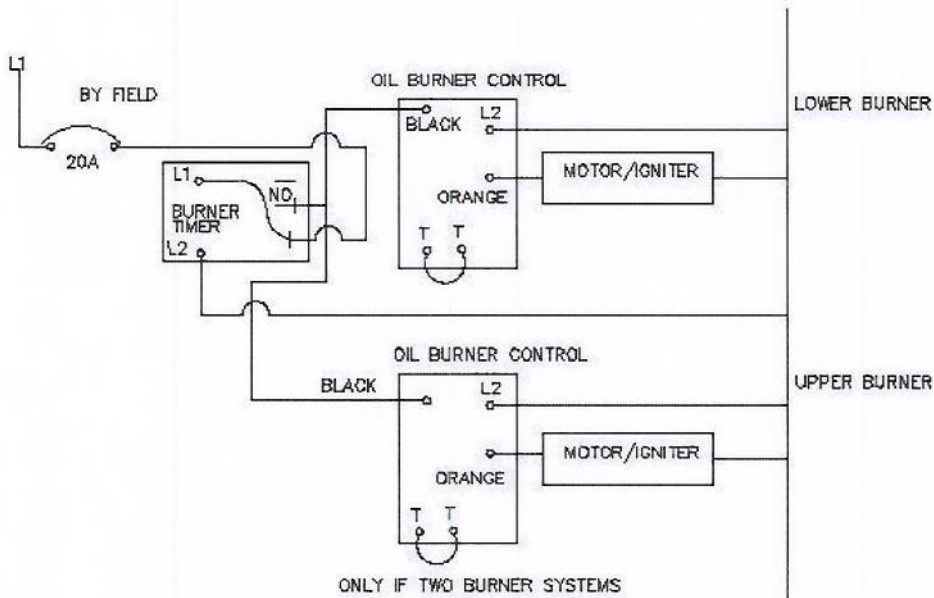
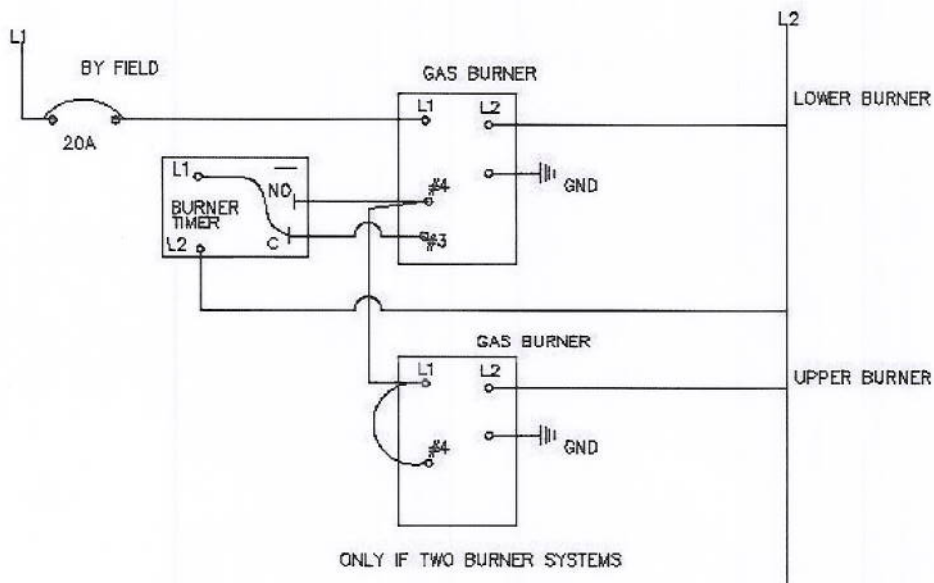


PARTS LIST: BECKETT BURNER (SF)

Item	Part Number	Description
A	101271 101266	Ignition Transformer 120v/60hz Ignition Transformer 220v/50hz
B	101273 101268	Primary Safety Control 120v/60hz Primary Safety Control 220v/50hz
C	101269	Flame Detector
D	101270 101262	SF Burner Motor 120v/60hz AF Burner Motor 220v/50hz
E	101265	Blower Wheel
F	101263	Flexible Coupling
G	101264	Fuel Pump
Not Shown	101272	Solenoid Valve 120v/60hz
Not Shown	101267	Solenoid Valve 220v/50hz
Not Shown	101332	F310 Retention Head
Not Shown	101472	Connector Tube Assembly
Not Shown	101471	Air Tube Assembly
Not Shown	101473	Nozzle Line Electrode Assembly
Not Shown	101474	Electrode
Not Shown	22137	Nozzle: 3.00 x 30A

BECKETT BURNER (SF) EXPLODED VIEW





FIRELAKE MFG. L.L.C.
DASSEL, MN 55325

DATE 1.21.2014
KC

SIZE

MATL.

DESCRIPTION
WIRING DIAGRAM:

PART NO.
AG ARTISAN

4970

Configurable Countdown Timer



The 4970 is a highly flexible countdown interval timer with digital display of timing controlling a set of high current output contacts. The timing cycle range can be configured for any of the following values: 00:01-99:59 Minutes:Seconds, 00:01-99:59 Hours:Minutes, 0001-9999 Seconds, and 00.01-99.99 Seconds. The two arrow buttons on the front panel are used to set the time, the Up button increases the time and the Down decreases it. The longer a button is held down the faster the rate at which the time value will change, the time value rolls around at both ends of the time range.

The Start/Stop button performs multiple functions. Pressing the Start/Stop button while the timer is Idle will energize the output power relay contacts and the controller begins counting down the time on the display, once the display reaches 0 the contacts de-energize and the unit alarms for 5 seconds and then returns to the original cycle time. Pressing the Start/Stop button while the controller is timing will pause the controller at the current time and de-energize the output relay contacts. Pressing the Start/Stop button while in pause mode causes the output relay to energize and the controller continues timing from the point at which it was paused. Should the Start/Stop switch be held down for longer than two seconds while in pause mode the controller will reset and the display will return to the original starting time.

Should power fall during a timing cycle the controller remembers the last time value and will recover upon restoration of power dependant on its configuration. The 4970 always remembers the last interval time programmed and when first powered up resets to that time. The LED above the 4 digit display flashes during the timing cycle to indicate timing and is on continuously when the cycle is ended. The 4970 can be configured with a variety of time range, timing adjustment, alarming, power recovery, and power conservation options, see the second page for information.

Specifications

Operating Voltage: 12VDC -10/+30%, 115VAC ±15%, 230VAC ±15%, 24VAC ±10%, 50/60 Hz for AC.

Current Consumption: See table for operating current at nominal input voltages; Idle = display on,

Timing = display & relay on, Standby = display off (option LP:02 selected)

Timing Accuracy: ±0.5% of set time.

LED Digital Display: Four digit red LED, 0.56" characters.

Timing Cycle Memory: All data stored in non-volatile memory, 10 yr. min. retention with no power.

Audible Alarm: Solid state alarm operating dependant on unit configuration.

Output Contact Ratings: See table below for various load types and voltages.

Agency Listing: UL File E47858: Appliance Controls - Component ATNZ2 (US), ATNZ6 (Can)

Mounting: 2.63 sq. cutout accepts timer which is secured with supplied bracket & nut. Mounting nut must be tightened to 3 inch pounds.

Wiring: .25" Quick Connect terminals.

Operating Temperature: 0°C to 70°C.

Data Sheet Revision Date: January 23, 2012

Operating Current (mA)

	Idle	Timing	Standby
12V DC	55	135	20
115V AC	22	30	19
230V AC	10	15	8.0
24V AC	105	150	95

Ordering Information

Part Number	Operating Voltage
4970-1	12V DC
4970-2	115V AC
4970-3	230V AC
4970-4	24V AC

Output Contact Ratings

	NO Contacts	NC Contacts
Resistive Inductive	20A @ 125/240VAC, 30VDC 8A @ 277VAC	10A @ 125/240VAC, 30VDC 3A @ 277VAC
Motor	2HP @ 240VAC 1HP @ 125VAC	1/2HP @ 240VAC 1/4HP @ 125VAC
LRA/FLA	60A LRA @ 240VAC 20A FLA @ 240VAC	33A LRA @ 240VAC 10A FLA @ 240VAC
Ballast	6A @ 125/277VAC	3A @ 125/277VAC

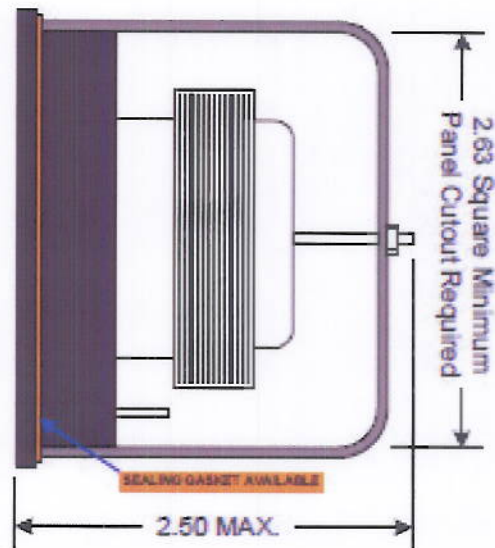
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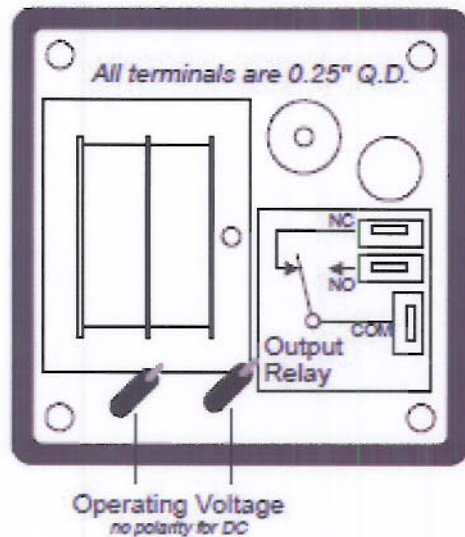
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Mechanical



Wiring



Configuration

The 4970 can be configured to any of four time ranges by performing the following. Press and hold the down button (center) and apply the power. The unit will display one of the four ranges per this chart

- 0 = 00.01 - 99.99 seconds
- 1 = 00:01 - 99:59 minutes:seconds
- 2 = 0001 - 9999 seconds
- 3 = 00:01 - 99:59 hours:minutes

To change the timing range use the up and down buttons to change the displayed value to the range desired, then turn the controller off. The next time the controller is turned on it will be operating in the selected time range.

More detailed configurations such as styles of beeping and limiting the time range are available by using the Start/Stop button in a similar manner, please refer to the 4970 Users Manual for details

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