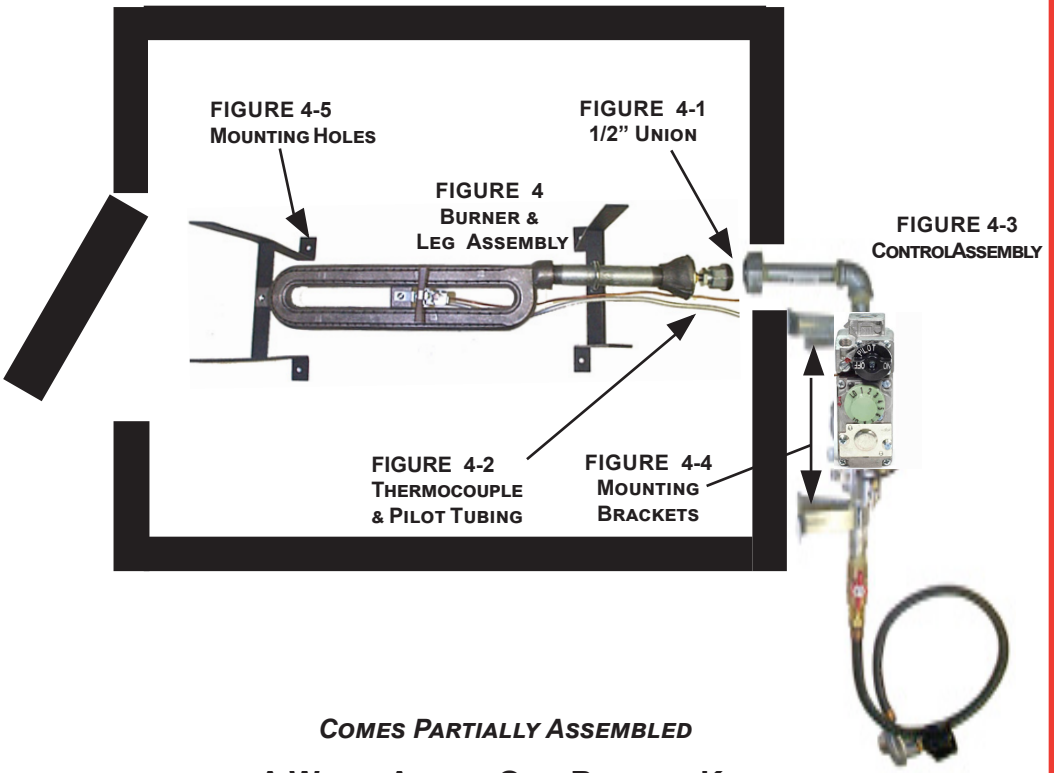
26 Lyerly St. Houston, Texas 77022
Phones: 713-691-2935
800-356-5189
Fax: 713-691-3250
E-mail: aks@alliedkenco.com
Web: alliedkenco.com



Comes Partially Assembled

A Word About Our Burner Kits

This Burner Kit Is Self Contained And Requires No Electricity. All You Need Is A Propane Bottle Or Natural Gas Hookup And You Can Start Smoking. It Will Provide 30,000 B.T.U. Of Heat And Will Easily Heat A 6' X 6' X 8' Smoke House. By Adding Wood Chips Or Sawdust To The Pan You Can Generate Smoke And By Adding Water To The Pan Steam Will Be Provided.

This Burner Kit Is Shown Above In A Typical "Cut Away" Installation. Our Kit Is Complete With Mounting Brackets To Secure Controls To The Outside Of Your Smoke House. The Gas Pipe Connecting The Control To The Burner Can Be Lengthened To Allow Burner To Be Centered Inside The Smoke House.

INSTALLATION INSTRUCTIONS

Our Burner Kit Comes Partially Assembled In 3 Sections:

Burner Assembly - Figure 1
With Pilot Tubing And Thermocouple

Leg Assembly - Figure 2
With Misc. Nuts & Bolts

Control Assembly - Figure 3
With Mounting Brackets, Regulator And Hose

These Instructions Assume The Burner Assembly Will Be Mounted On The Floor Of The Smoke House And The Thermostat Control Assembly Will Be Mounted On The Outside Wall Of The Smoke House.

FIGURE 1
Burner Assembly

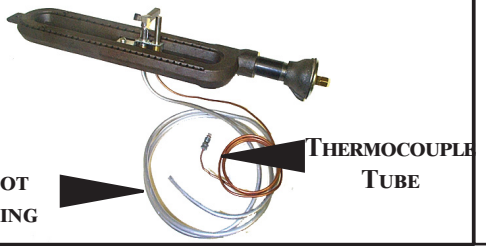


FIGURE 2
Leg Assembly

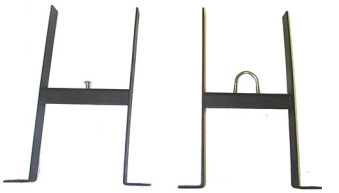
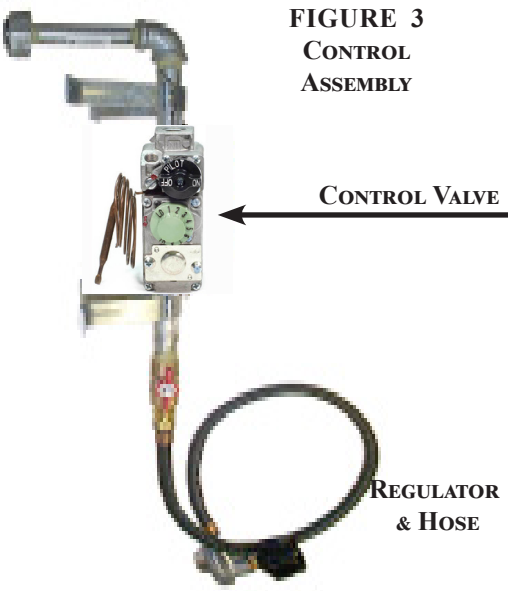
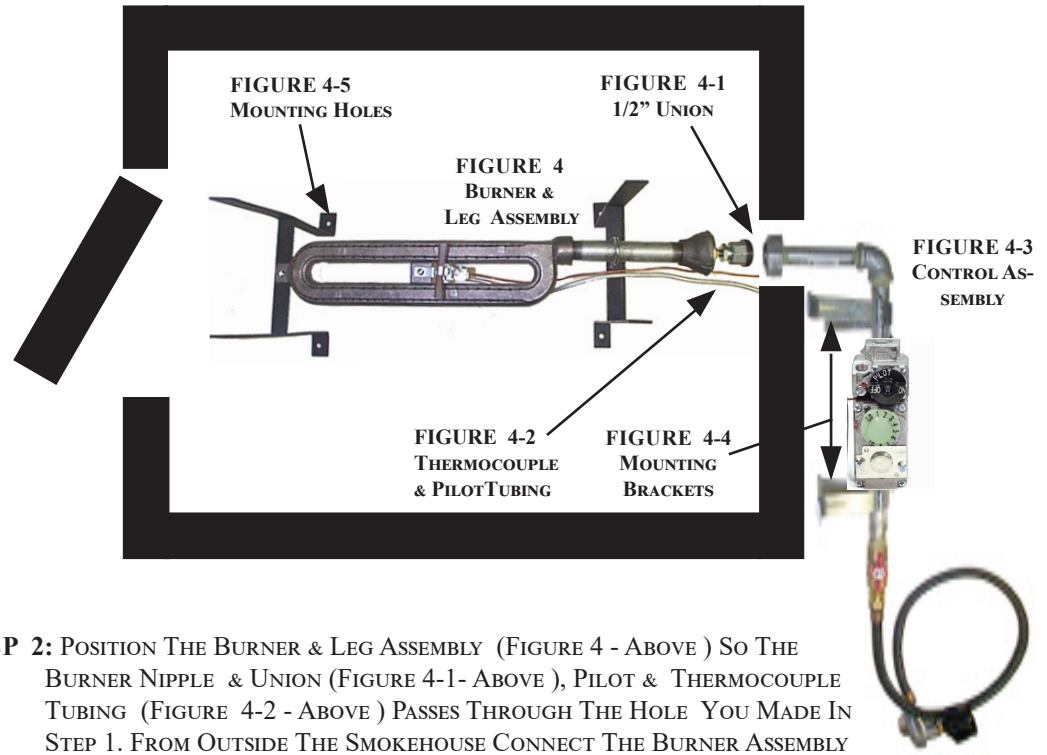


FIGURE 3
Control Assembly



STEP 1: Attach The Burner Section (Figure 1- Page 2) To The 2 "H" Legs (Figure 2- Page 2) Using The "U" Bolt & Screw, Nut & Lock Washers Provided. Place The Burner And Leg Assembly Inside The Smokehouse , Mark The Location On The Wall At The Position Where The Pipe Union (Figure 4-1 Below) Will Pass Through The Wall. This Will Be About 6-1/2" Above The Floor Level. Drill Or Cut A 3" Hole To Allow The Burner Pipe Union (Figure 4-1), Pilot & Thermocouple Tubing (Figure 4-2 Below) To Pass Through The Wall This Hole Will Also Provide Combustion Air For The Burner So Do Not Seal It.
NOTE: You May Also Want To Make A Small Hinged Access Door In This Area To Make It Easier To View The Burner & Pilot Flames From The Outside Of The Smokehouse.



STEP 2: Position The Burner & Leg Assembly (Figure 4 - Above) So The Burner Nipple & Union (Figure 4-1- Above), Pilot & Thermocouple Tubing (Figure 4-2 - Above) Passes Through The Hole You Made In Step 1. From Outside The Smokehouse Connect The Burner Assembly (Figure 4 - Above) To The Control Section (Figure 4-3 - Above) By Hand Tightening The Union (Figure 4-1 - Above).

STEP 3: Rotate The Control Assembly (Figure 4 -3, Above) To A Level And Horizontal Position & Wrench Tighten The Union (Figure 4 -1, Above). Push The Control Assembly (Figure 4 -3,Above) That Is Now Attached To The Burner And Leg Assembly (Figure 4) Until The Control Assembly Wall Mounting Brackets (Figure 4 -4, Above) Contact The Outside Smoke House Wall. Using The Appropriate Screws (Not Supplied) Secure The Control Assembly To The Smokehouse Wall. You May Secure The Burner "H" Legs (Figure 4-5, Above) To The Smokehouse Floor Using The Appropriate Fasteners (Not Supplied) If You Desire.

NOTE: To Center The Burner Inside The Smoke House You May Extend The Distance Between The Burner And The Outside Wall Of The Smoke House By Installing A Longer Nipple (Figure 7) In Place Of The Existing Nipple . (Up To 12" Max. Length)

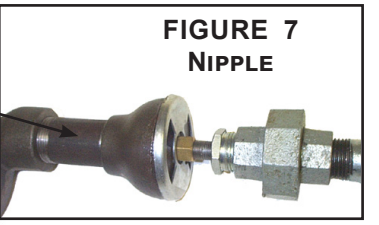


FIGURE 7
Nipple

FIGURE 7-1
Burner And Leg Assembly

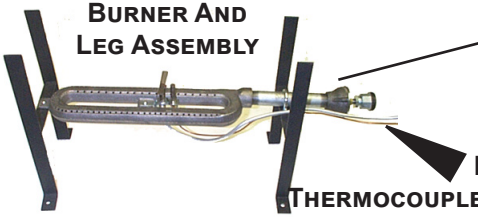


FIGURE 7-2
Thermocouple (Smaller Copper Tubing & Pilot Tubing (Larger Aluminium Tubimg)

STEP 5: Drill Hole In Smokehouse Wall Big Enough To Allow Thermostat Sensing Bulb (Figure 8-1- Below) To Pass Through. Attach Thermostat Sensing Bulb (Figure 8-1- Below) To Inside Smokehouse Wall With Clamps (Usually Centered On The Upper Rear Wall). You May Seal This Hole If You Desire.

WARNING!

THE SENSING BULB IS LIQUID FILLED AND MUST NOT BE BENT OR CRIMPED. BE SURE TO HANDLE THIS ITEM WITH CARE AS A DAMAGED SENSING TUBE WILL NOT BE COVERED BY OUR WARRANTY.

YOU MUST PROTECT THE CONTROL VALVE AND THERMOSTAT FROM THE ELEMENTS. ALLOW NO WATER TO CONTACT ANY OF THE CONTROLS.

8-1
Sensing Bulb

FIGURE 8
Thermostat/Control Valve

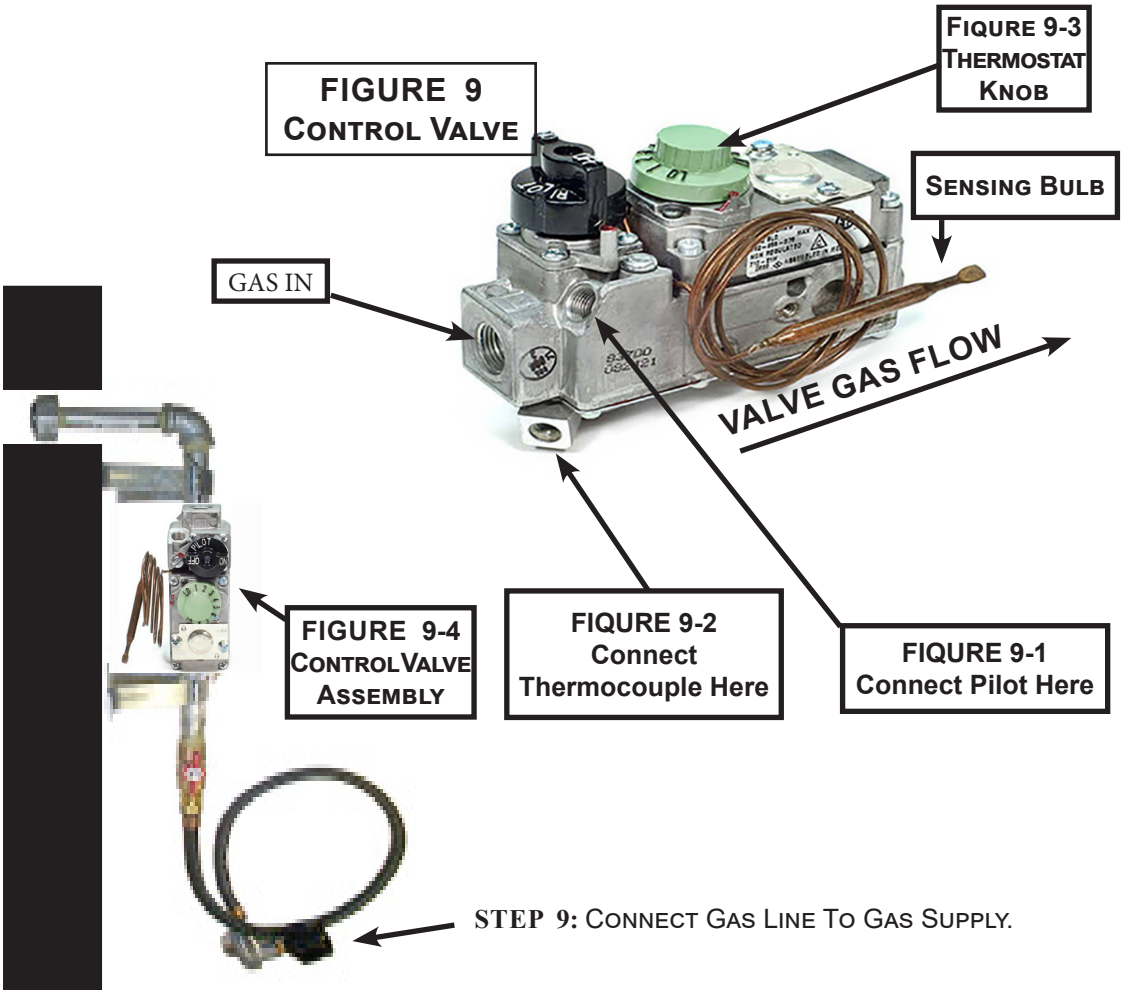
STEP 6: Connect The Thermocouple Tube (Copper Color) From The Burner Section (Figure 7-2, Page 4) To The Gas Control Valve (Figure 9-2, Below).

Be Sure Not To Kink Or Bend The Tube At Too Sharp An Angle.

STEP 7: Connect The Aluminum Pilot Tubing From The Burner Section (Figure 7-2, Page 4) To The Gas Control Valve (Figure 9-1, Below).

Be Sure Not To Kink Or Bend The Tubing At Too Sharp An Angle.

FIGURE 9
CONTROL VALVE



Top View

NOTE: You Must Protect The Control Valve Assembly (Figure 9-4) From The Elements. Please Shelter This Item If Your Smokehouse Is Located Outside.

START UP INSTRUCTIONS

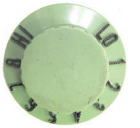


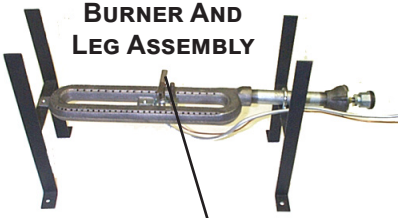
FIGURE 10
DIAL

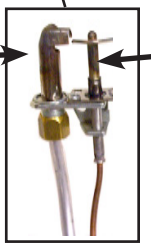
1. Place The Thermostat Dial To The 'Off'Position
2. Turn The Gas SUPPLY Valve(s) On.
3. On The Initial Start Up Of The Burner Kit You Will Find The Gas Lines Full Of Air That Must Be Purged Before Use. You Can Do This By Disconnecting The ¼"Aluminum Pilot Tubing (Figure 12-1, Page 7) At The Gas Control Valve . Then Locate The Black Plastic Knob (Figure 12-2, Page 7) & Press Down & Hold The Knob Down Until You Smell Gas, Release The Knob And Reconnect The Pilot Tubing. This Step Is Necessary Only On New Installations Or If Repairs Have Been Made That Allowed Air To Get Inside The Gas Piping And Controls.
4. Wait A Few Minutes To Allow Any Gas To Dissipate.
5. You Are Now Ready To Light The Pilot (Figure 11-3, Below).
6. Locate The Black Plastic Ignitior Knob (Without Numbers - Figure 12-2 - Page 7) Also Shown Below Fiqure 10A) On The Gas Control Valve (Figure 12- Page 7). Rotate To Pilot And Press Down - The Pilot Should Light. Continue To Hold The Knob Down For 15 -30 Seconds, Release Knob Up And The Pilot Should Remain Lit. If Pilot Goes Out, Repeat This Step, Depressing Knob For 60 Seconds.

FIGURE 10A
IGNITOR KNOB

FIQURE 11

BURNER AND LEG ASSEMBLY





11-3 PILOT

11-4THERMOCOUPLE

PILOT ASSEMBY

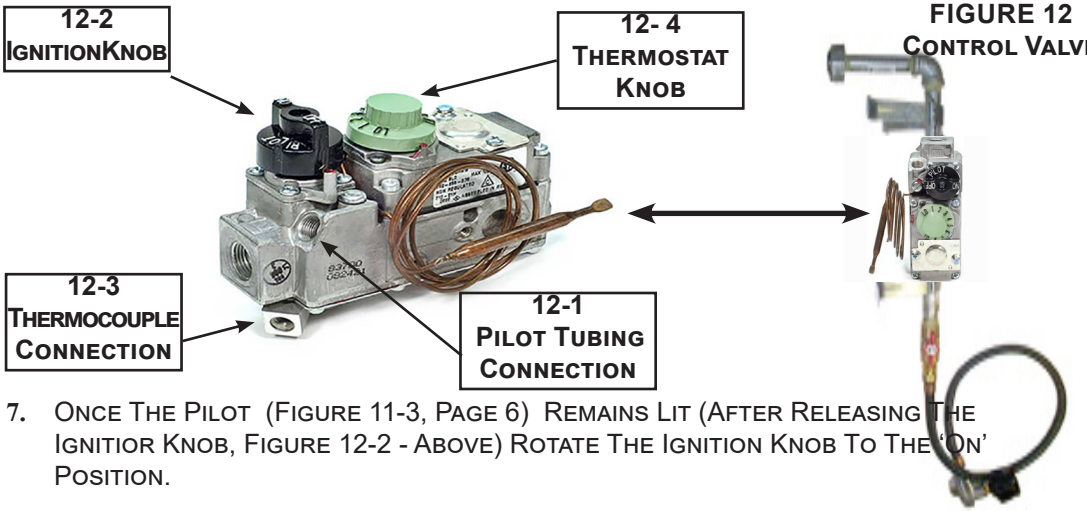


FIGURE 12
Control Valve

7. Once The Pilot (Figure 11-3, Page 6) Remains Lit (After Releasing The Ignitior Knob, Figure 12-2 - Above) Rotate The Ignition Knob To The 'On' Position.

8. Turn The Thermostat Dial (Figure 12-4) To The Desired Temperature. This Thermostat Knob Is Mark Lo-Hi. If You Are Working With Fahrenheit Please Refer To The Chart On Page 8 For The Corresponding Valves

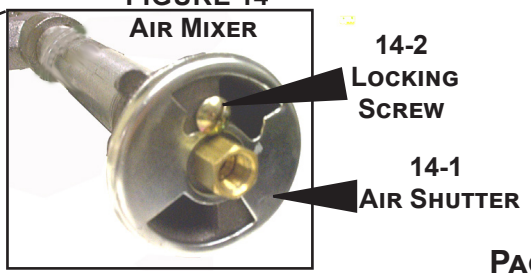
9. Observe The Burner Flame. The Flame Should Be Blue With A Small Amount Of Yellow At The Tips. If Needed, Turn The Air Shutter (Figure 14-1) At The End Of The Burner, Until The Flame Is Properly Adjusted. Tighten The Locking Screw (Figure 14-2) On The Air Shutter. Be Sure Not To Turn The Adjustment Too Far, As The Flame Will Start To Pull Off The Burner. This Adjustment Was Set During Checkout (At About 50 Ft. Above Sea Level) & Is Dependent On Elevation Above Sea Level.

10. Close Smokehouse Door(s) And Observe Flame Through Access Door Or 3" Hole Made In Step 1. If Flame Does Not Change Appreciably You Have Completed The Start Up Of The Burner Kit.

11. If The Flame Changes Greatly By Going Out Or By Pulling Off The Burner You Will Need To Provide More Combustion Air Inside The Smokehouse. In This Case Please Provide A Ventilation Hole Near The Burner Area.

Note: All Smokehouses Should Have A Lower Air Intake And An Upper Damper (Stack) To Provide Air Movement Within The Smoke House.. This Should Provide All The Combustion Air Needed To Operate The Burner.

FIGURE 14
Air Mixer



OPERATING INSTRUCTIONS

1. Be Sure To Turn The Supply Valve (Figure 15-3) On. (The Handle Should Be In-line With The Pipe.)
2. Light The Pilot (Figure 16) As Instructed In Step 6 Of The Start Up Section.
3. Set The Control Valve Knob (Figure 15-2) To The 'On' Position.
4. Set Thermostat Dial (Figure 15-1) To The Desired Temperature.
5. Flame Will Cycle On And Off Maintaining The Desired Temperature.

FIGURE 15 -2
Control Knob

FIGURE 15 -1
Thermostat Dial

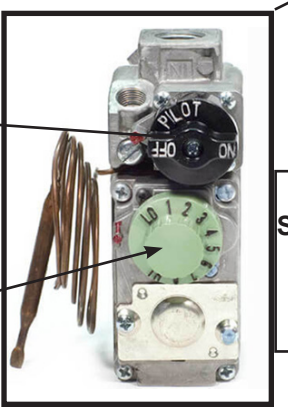


FIGURE 15 -3
Shut Off Valve

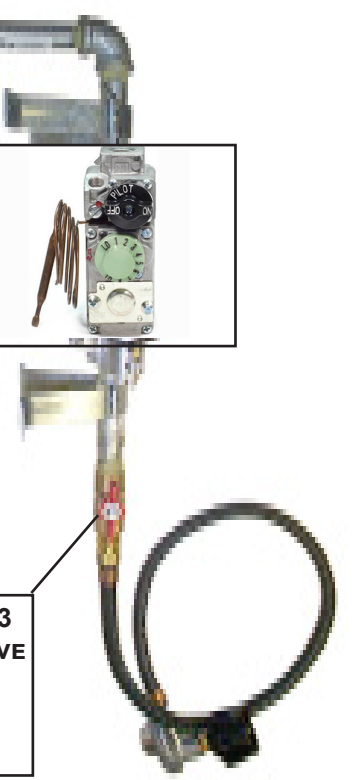


FIGURE 15
Control Assembly

The Thermostat Comes With A LO-HI Dial (Above, Figure 15-1), For Fahrenheit Degrees Please Refer To The Chart Below For The Corresponding Valves

DIAL POSITION	LOW	1	2	3	4	5	6	7	8	HI
TEMP. (F)	100	128	145	160	175	194	208	223	238	250

Burner And Leg Assembly

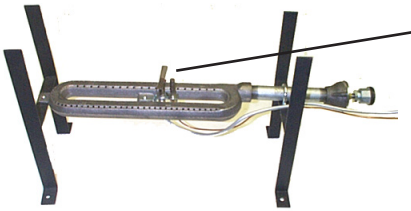
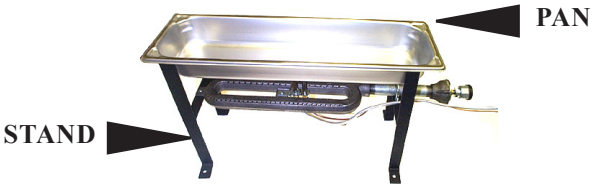
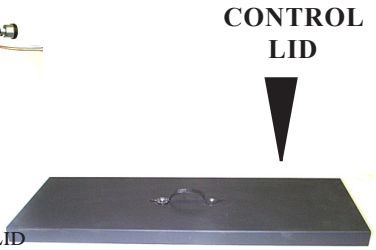


FIGURE 16
Pilot

6. Place The Pan On The Stand.





7. Add Sawdust, Chips Or Water To The Pan If Desired. Once The Sawdust Or Chips Start To Burn You Can Control The Rate Of Burn By Placing The Control Lid On The Pan And By Sliding The Lid Open Or Closed. You Must Experiment With This Because The Rate Of Burn And The Amount Of Smoke You Will Get Depends Upon Several Factors Including:

A. The Length Of Time The Burner Flame Is On Which In Turn Is Affected By:
1. Outside Air Temperature.
2. The Temperature Setting Of The Thermostat. The Higher The Setting The Longer The Flame Will Be On And The More Sawdust Will Be Burnt.

B. Moisture Content Of The Sawdust Or Chips. You May Add Water To The Sawdust To Slow Down The Rate Of Burn.

C. The Number Of Times The Smokehouse Door Is Opened, Which Will Cause The Temperature To Drop Causing The Burner To Come On. The Amount Of Drop Depends On The Outside Temperature And The Amount Of Time The Door Is Left Open. Try To Monitor The Smokehouse Temperature By Installing A Thermometer That You Can View From Outside Of The Smokehouse.

Simply Put, The Sawdust Rate Of Burn Will Be Directly Proportional To The 'On' Cycle Of The Burner. You May Slow The Rate Of Burn By Controlling The Air Supply Via The Control Lid (Close The Lid For Less Smoke; Open The Lid For More Smoke) And By Adding Water To The Sawdust & Chips.

WARNING:

Smokehouse Fires Are Common. Your Smokehouse Should Be Made Of Non-Flammable Materials. You Should Keep The Pan And/Or Lid On The Burner Stand At All Times To Shield The Burner From Drippings. Drippings Can Start Smoke House Fires If Allowed To Drip On The Flame. Always Keep Your Smokehouse Clean Of Drippings When Using Any Type Of Flame or Heat.

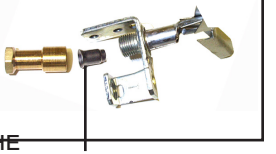
A CLEAN SMOKEHOUSE IS HARD TO BURN DOWN !

TROUBLE SHOOTING

Main Burner Flame Comes On And Goes Off Almost Immediately.
Cause: The Thermostat's Sensing Bulb Is Too Close To The Burner And Directly Sensing The Heat From The Burner's Flame.
Solution: Try One Or More Of The Following.

1. Move The Sensing Bulb To A Different Location Within The Smokehouse.
2. Shield The Sensing Bulb By Fabricating A Deflector Or Cover Over The Sensing Bulb Be Sure The Cover Has Holes Or Open Ends To Allow For Air Circulation Pass The Sensing Bulb. A Simple Deflector Or Cover Made Of Sheet Metal And Cut With Tin Snips Will Work Fine.

FIGURE 18
Pilot Assembly



Pilot Won't Come On.
Cause: Gas Valve(s) Are Turned Off Or L. P. Bottle Is Empty.
Solution: Turn On All Gas Valves And/Or Refill L. P. Bottle.

Cause: The Pilot Orifice Is Stopped Up.
Solution: Disassemble And Clean Pilot Orifice.(Figure 18-1). The Pilot Orifice Has A Hole Which Must Be Cleaned. Be Sure Not To Enlarge The Hole While Cleaning. Clean Pilot's Orifice By Blowing Out With Compressed Air Or By Using A Pin.

FIGURE 18 -1
Pilot Orifice

Pilot Stays On As Long As Knob Is Depressed But Goes Out When Knob Is Released.
Cause: Pilot Flame Is Too Low.
Solution: Clean The Pilot's Orifice (Figure 18-1)
Cause: Thermocouple Is Defective (Figure 20).
Solution: Replace Thermocouple

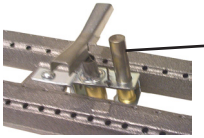


FIGURE 20
Thermocouple

Pilot Stays On But Main Flame Won't Come On. - First Check If The Pilot's Flame Is Strong And Is In Contact With The Upper 3/8" Of The Thermocouple Tip.

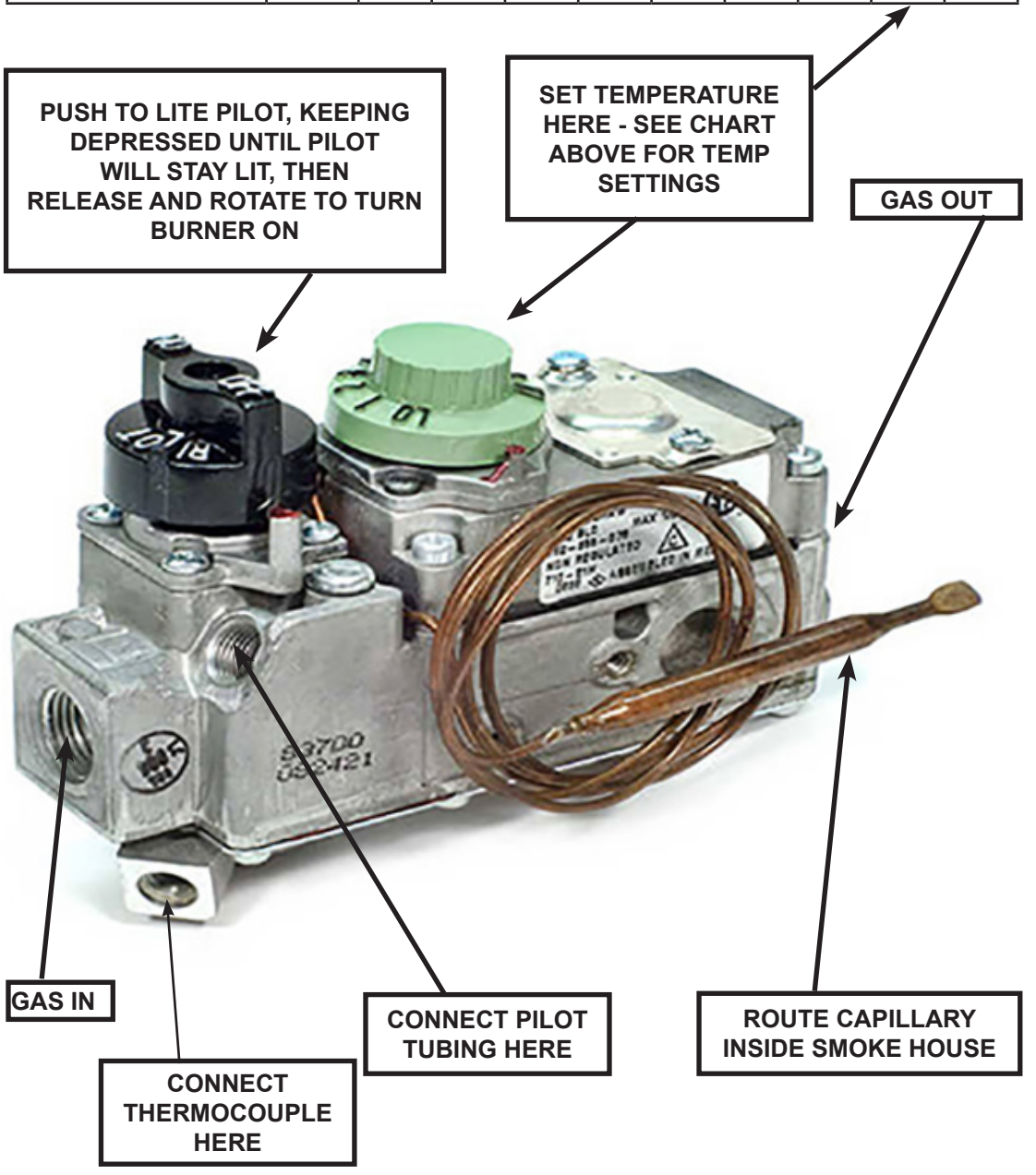
Cause: Pilot's Flame Is Not Big Or Strong Enough To Heat Thermocouple To Proper Temperature.
Solution: Clean Pilot's Orifice By Blowing Out With Compressed Air Or By Using A Pin. See Figure 18-1. Do Not Enlarge.

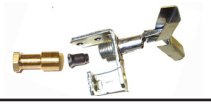
Cause: Thermostat Dial Is Set Too Low Or Is In The 'Off' Position.
Solution: Set The Thermostat Dial To The Correct Setting.

Cause: Control Valve's Knob Is In The 'Pilot' Position.
Solution: Turn Knob To The 'On' Position.

QUICK START PAGE

DIAL POSITION	LOW	1	2	3	4	5	6	7	8	HI
TEMP. (F)	100	128	145	160	175	194	208	223	238	250



Picture	Name	Order #
	Thermostat / Control 77 - 230 Degrees C. 60 - 250 Degrees F.	RS710-218
	Pilot With Orfice	CCCM-193
	Thermocouple	ICSH-462
	Aluminum Tubing 1/4”	ICS A-834
	Shut Off Valve 1/2” NPT	ICS H-606
	Hose & Regulator Assembly 3 Ft. In Length	MFI 04502
	30 K BTU Burner With Orifice	ICS A-1767
	Sawdust / Chip Pan	AKS PAN
	Control Lid	AKS LID
	Mounts	LIP1006