

GAS VALVE RETROFIT KIT

Pull Through Tube Heater Models

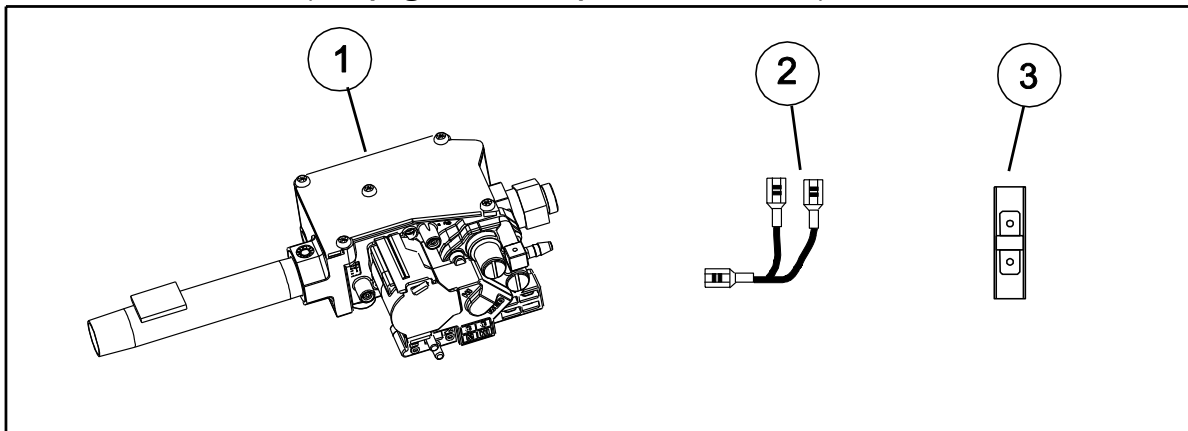
DESCRIPTION:

This kit is designed to replace existing Honeywell gas valves #VR8205P and #VR8205Q with White-Rodgers gas valves #36J23 and #36J58 respectively on pull through tube heater models.

CAUTION:

This conversion kit is to be installed by an authorized distributor or other qualified agency in accordance with the manufacturer's instructions and all codes and requirements of the authority having jurisdiction. Failure to follow instructions could result in serious injury, property damage or death. The qualified agency performing this work assumes responsibility for this conversion. **TURN OFF ALL ELECTRICAL AND GAS SUPPLIES TO THE CONTROL BEFORE MAKING THIS CONVERSION.**

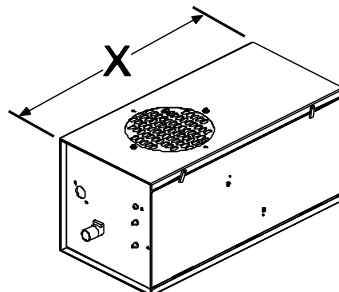
PACKAGE CONTAINS: (see page 6 for complete kit numbers)



Item No.	Part No.	Description	Qty.	15" Control (1-stage)	15" Control (2-stage)	18" Control (1-stage)	18" Control (2-stage)
1	-see page 6-	Gas Valve and Manifold	1	YES	YES	YES	YES
2	43444050	Lead Wire Assembly - 3"	2	YES	NO	YES	NO
3	30516010	Receptacle - Double Male	4	YES	NO	YES	NO
4	44011250	Form, Gas Valve Retrofit	1	YES	YES	YES	YES

BEFORE YOU START: Determine the style of burner control as shown below.

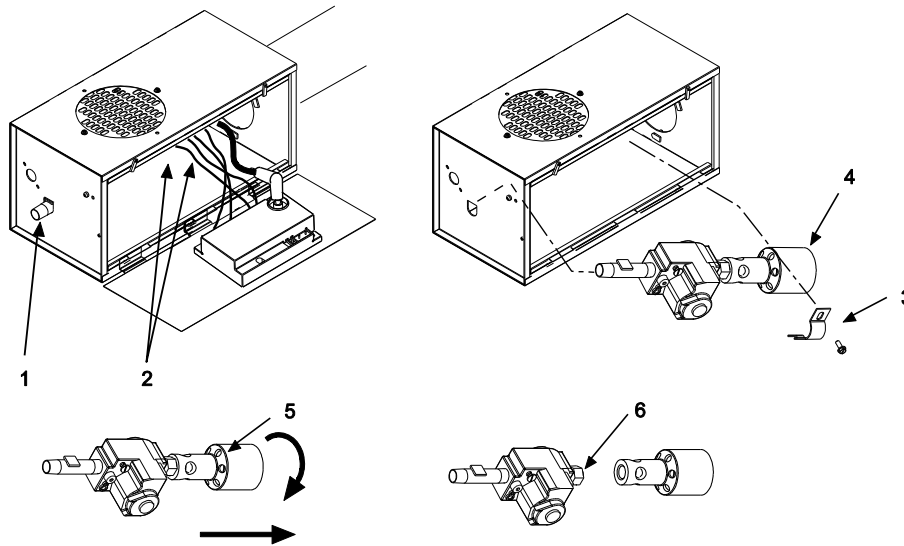
Measure the control box length for the Pull Series Controls. If it is 15" long, then you have Small Controls and can proceed with Instructions A. If the control box length is 18" long then you have Large Controls and can proceed with Instructions B.



Pull Burner Controls

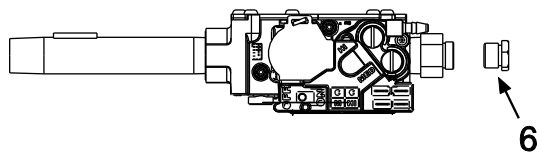
X = 15" for small controls
X = 18" for large controls

INSTRUCTIONS A: REPLACING MAIN BURNER AND GAS VALVE – 15" SMALL CONTROLS



1. Disconnect electrical supply and gas connection at the restrainer nipple.
2. Open the access panel and disconnect the wires from gas valve.
3. Remove the burner clamp and screws.
4. Remove the burner and gas valve assembly from the cabinet.
5. Unscrew the burner from the manifold.
6. Remove main burner orifice from existing manifold pipe and re-attach to new pipe.

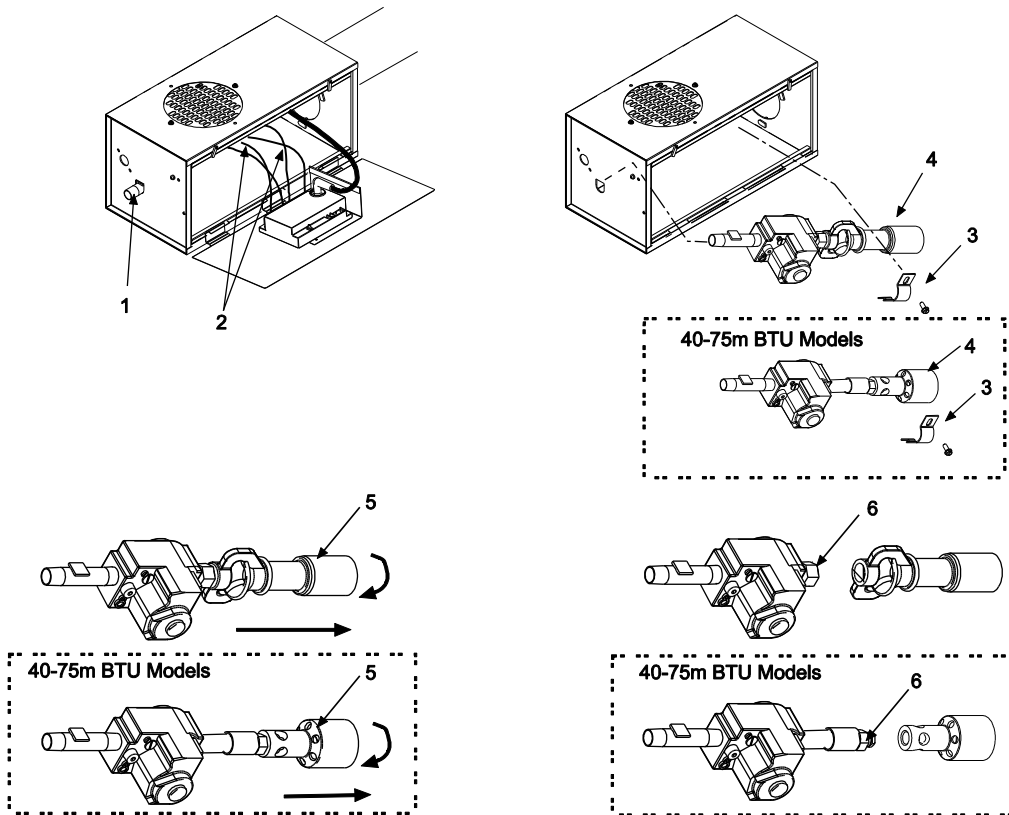
20-75m BTU Models (15" pull burner control)



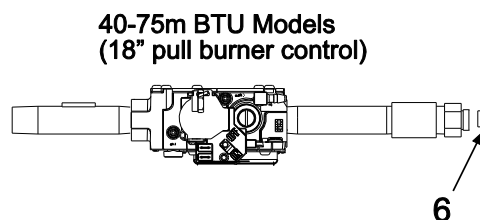
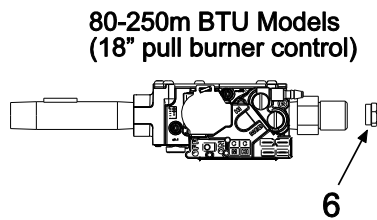
7. Re-attach new gas valve and manifold assembly in reverse order from above. Re-connect wires to gas valve. See below for connections.

Note: Single stage models are furnished with (2) lead wire adapters and (4) receptacles. These are for connection of the wires from the module (valve) terminals and the amber light. See below for connections.

INSTRUCTIONS B: REPLACING MAIN BURNER AND GAS VALVE – 18" LARGE CONTROLS



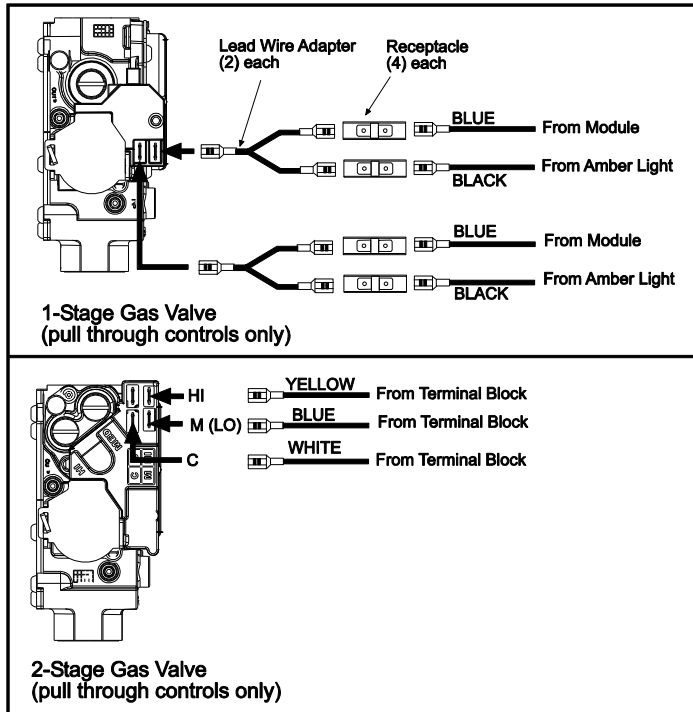
1. Disconnect electrical supply and gas connection at the restrainer nipple.
2. Open the access panel and disconnect the wires from gas valve.
3. Remove the burner clamp and screws.
4. Remove the burner and gas valve assembly from the cabinet.
5. Unscrew the burner from the manifold.
6. Remove main burner orifice from existing manifold pipe and re-attach to new pipe.



7. Re-attach new gas valve and manifold assembly in reverse order from above. Re-connect wires to gas valve. See below for connections.

Note: Single stage models are furnished with (2) lead wire adapters and (4) receptacles. These are for connection of the wires from the module (valve) terminals and the amber light. See below for connections.

GAS VALVE WIRING CONNECTIONS – (1 AND 2 STAGE)



OUTLET GAS PRESSURE CHECK AND ADJUSTMENTS

Gauges that measure pressure in pounds per square inch are not accurate enough to measure or set the manifold pressure. All measurements **MUST BE** made when the heater and all other gas burning equipment that is connected to the gas supply system are operating at maximum capacity. The combination gas valve is factory set and should not need adjustment. If gas pressure adjustment is required, follow the instructions.

1. Turn off all electrical power to the system prior to connecting manometer hoses.
2. Turn the outlet pressure boss test screw (3/32" Hex allen wrench plug) in the center of the boss **not more than one turn counterclockwise**. Attach a 5/16" hose and manometer over the tapered outlet pressure boss on the valve (see figure below). If regulator needs to be adjusted, see instructions below.

To Adjust Regulator (1-stage gas valves):

1. Turn on power and energize the main gas valve. Remove regulator cover screw (see figure below). Turn regulator adjustment screw **clockwise** ⤵ to **increase pressure**, or **counterclockwise** ⤴ to decrease pressure. Replace regulator cover screw and tighten securely.

DO NOT EXCEED THE PRESSURES SHOWN IN THE GAS PRESSURE TABLE.

2. After testing pressure and adjusting the regulator, turn off all electrical power to the system, remove manometer hoses, turn outlet test screw (3/32" Hex) clockwise to seal pressure port. Tighten to 7 in-lb minimum. Turn on system power.

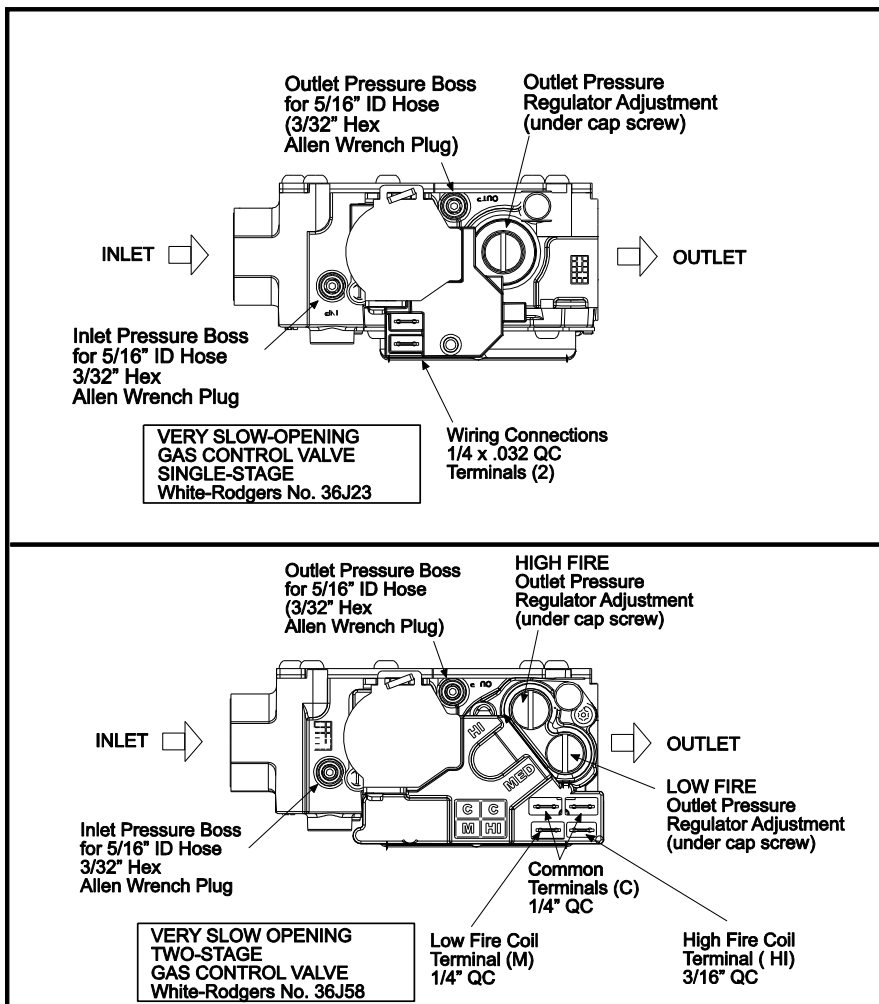
To Adjust Regulator (2-stage gas valves):

1. Turn on power and energize main gas valve solenoid. Do not energize the **HI** solenoid.
2. Remove regulator cover screw from the **low fire** outlet pressure regulator adjustment (see figure below) and turn screw clockwise ⤵ to increase pressure, or counterclockwise ⤴ to decrease pressure. Replace regulator cover screw and tighten securely.

3. Energize main gas valve solenoid as well as the **HI** terminal.
4. Remove regulator cover screw from the **high fire** outlet pressure regulator adjustment (see figure below) and turn screw clockwise \curvearrowright to increase pressure, or counterclockwise \curvearrowleft to decrease pressure. Replace regulator cover screw and tighten securely.

DO NOT EXCEED THE PRESSURES SHOWN IN THE GAS PRESSURE TABLE.

5. After testing pressure and adjusting the regulator, turn off all electrical power to the system, remove manometer hoses, turn outlet test screw (3/32" Hex) clockwise to seal pressure port. Tighten to 7 in-lb minimum. Turn on system power.



GAS PRESSURE TABLE				
GAS TYPE	MANIFOLD PRESSURE		SUPPLY PRESSURE	
	High	Low (2-stage only)	Minimum*	Maximum
Natural Gas	3.5" W.C.	1.4" W.C.	5" W.C.	14" W.C.
Propane Gas	10.0" W.C.	4.0" W.C.	11" W.C.	14" W.C.

GAS LEAK TEST

Perform the gas leak test using a leak detection solution or soapsuds solution at the orifices, pipe nipples and pressure boss screws or check by one of the methods listed in Appendix D of the National Fuel Gas Code, ANSI 2223.1-(latest edition). Bubbles forming indicate a gas leak. **SHUT OFF GAS AND FIX ALL LEAKS IMMEDIATELY.**

▲WARNING:

**DO NOT OMIT THE GAS LEAK TEST.
DO NOT USE AN OPEN FLAME OF
ANY KIND TO TEST FOR LEAKS!**

COMPLETE KIT NUMBERS - GAS VALVE AND MANIFOLD ASSEMBLY REPLACEMENTS

Kit Part No.	Description	Burner Controls Used On
44010250	Manifold with 1-Stage Nat Gas Valve #36J23-203B1	15" Control 20-75M BTU
44010260	Manifold with 1-Stage LP Gas Valve #36J23-204B1	15" Control 20-75M BTU
44010270	Manifold with 1-Stage Nat Gas Valve #36J23-203B1	18" Control 80-250M BTU
44010280	Manifold with 1-Stage LP Gas Valve #36J23-204B1	18" Control 80-250M BTU
44010290	Manifold with 1-Stage Nat Gas Valve #36J23-203B1	18" Control 40-75M BTU
44010300	Manifold with 1-Stage LP Gas Valve #36J23-204B1	18" Control 40-75M BTU
44010310	Manifold with 2-Stage Nat Gas Valve #36J58-201B1	15" Control 20-75M BTU
44010320	Manifold with 2-Stage LP Gas Valve #36J58-202B1	15" Control 20-75M BTU
44010330	Manifold with 2-Stage Nat Gas Valve #36J58-201B1	18" Control 80-250M BTU
44010340	Manifold with 2-Stage LP Gas Valve #36J58-202B1	18" Control 80-250M BTU
44010350	Manifold with 2-Stage Nat Gas Valve #36J58-201B1	18" Control 40-75M BTU
44010360	Manifold with 2-Stage LP Gas Valve #36J58-202B1	18" Control 40-75M BTU