# TYPICAL WIRING DIAGRAM MANUAL

## INDOOR GAS-FIRED UNIT HEATERS AND DUCT FURNACES

Standard (Natural Vent) or Power Vented
Standing or Intermittent (Auto spark) Pilot Ignition

## Table of Contents

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Safety Information</td>
<td>2</td>
</tr>
<tr>
<td><strong>Wiring Diagram Usage Charts</strong></td>
<td></td>
</tr>
<tr>
<td>Standard Propeller (Model QVF)</td>
<td>3, 4</td>
</tr>
<tr>
<td>Standard Blower (Model QVB)</td>
<td>5, 6</td>
</tr>
<tr>
<td>Enerpak Propeller (Model QVEF)</td>
<td>7</td>
</tr>
<tr>
<td>Enerpak Blower (Model QVEB)</td>
<td>8</td>
</tr>
<tr>
<td>Standard Duct Furnaces (Models QVD and QVS)</td>
<td>9, 10</td>
</tr>
<tr>
<td>Enerpak Duct Furnaces (Models QVED and QVES)</td>
<td>11</td>
</tr>
<tr>
<td><strong>Wiring Diagrams</strong></td>
<td></td>
</tr>
<tr>
<td>Standard Propeller (Model QVF)</td>
<td>12-16</td>
</tr>
<tr>
<td>Standard Blower (Model QVB)</td>
<td>17-21</td>
</tr>
<tr>
<td>Enerpak Blower and Propeller (Models QVEB and QVEF)</td>
<td>22-24</td>
</tr>
<tr>
<td>Standard Duct Furnaces (Models QVD and QVS)</td>
<td>25-34</td>
</tr>
<tr>
<td>Enerpak Duct Furnaces (Models QVED and QVES)</td>
<td>35-40</td>
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</tbody>
</table>
GENERAL SAFETY INFORMATION

ELECTRICAL CONNECTIONS
Standard units are shipped for use on 115 volt, 60 hertz single phase electric power. The motor nameplate and electrical rating on the transformer should be checked before energizing the unit heater electrical system. All external wiring must conform to ANSI/NFPA No. 70-1996, National Electrical Code (or the latest edition of) and applicable local codes; in Canada, to the Canadian Electrical Code, Part 1 CSA Standard C22.1.

⚠️ CAUTION ⚠️ Do not use any tools (i.e. screwdriver, pliers, etc.) across the terminals to check for power. Use a voltmeter.

It is recommended that the electrical power supply to each unit heater be provided by a separate, fused and permanently live electric circuit. A disconnect switch of suitable electrical rating for each unit heater/duct furnace should be located as close to the gas valve and controls as possible. Each unit heater /duct furnace must be electrically grounded in accordance with National Electric Code, ANSI/NFPA no. 70-1996 (or the latest edition of) or CSA Standard C22.1. Sample wiring connections are depicted throughout this manual. The transformer supplied with this unit heater is internally fused. Any overload or short circuit will ruin the transformer.

NOTICE: All installations and electrical connections must conform to the Installation Instructions Manual equipped with your unit.

NOTICE: For all electrical connections to your unit, refer to the wiring diagram that your unit is equipped with (either affixed to the side jacket or enclosed in your unit’s installation instruction envelope). This manual is for reference only.

THERMOSTAT WIRING AND LOCATION

NOTICE: The thermostat must be mounted on a vertical vibration-free surface free from air currents and in accordance with the furnished instructions.

*Thermostat wires tagged “W” and “G” must be connected together except when using a general purpose “SPDT” 24VAC relay and a standard thermostat with subbase, or when using Honeywell T834H-1009 or T834H-1017 thermostats. Refer to the following diagram.

⚠️ WARNING ⚠️ FACTORY WIRE CHANGES!
CONSULT MANUFACTURER PRIOR TO CHANGING FACTORY WIRING. Incorrect wiring of safety circuits could result in death or fire.

⚠️ CAUTION ⚠️ USE COPPER CONDUCTORS ONLY! UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS. Failure to do so may cause damage to the equipment.

⚠️ CAUTION ⚠️ CONTROL BOX COVER! 
CONTROL BOX COVER MUST BE IN PLACE WHEN SYSTEM IS OPERATED. Failure to replace control box cover may result in personal injury.

IMPORTANT: Refer to installation and operation manual for service instructions. Service equipment by qualified personnel only.

Install a ground conductor to the ground plug provided if this unit is supplied by a wiring system that in accordance with the National Electric Code, requires the installation of an equipment grounding conductor or conductors.

Wiring must be in accordance with applicable codes or ordinances.
UNIT WIRING DIAGRAM USAGES
Model “QVF” – Standard Propeller (Standing Pilot Ignition)

OPTIONS INCLUDED
ON THESE WIRING DIAGRAMS
Manual Fan Switch
Terminal Blocks
1-Stage Thermostat
1-Stage T834H Thermostat
2-Stage 24V Thermostat

OPTIONS NOT INCLUDED
ON THESE WIRING DIAGRAMS
Draftor Motor
Line-Voltage Stat’s
Thermostats
w/Subbase Wired
Motor Contactor
Motor Starter
3-Phase Supply Voltage
All Others Specials
### UNIT WIRING DIAGRAM USAGES

Model “QVF” – Standard Propeller (Intermittent Spark Ignition)

<table>
<thead>
<tr>
<th>UNIT TYPE</th>
<th>GAS TYPE</th>
<th>UNIT SIZE</th>
<th>GAS CONTROL STAGE</th>
<th>WIRING DIAGRAM NO.</th>
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</thead>
<tbody>
<tr>
<td>Natural Gas</td>
<td>1-Stage</td>
<td>30-350</td>
<td>1-Stage</td>
<td>C1316H See Figure 4</td>
</tr>
<tr>
<td>QVF Propeller</td>
<td>2-Stage</td>
<td>30-350</td>
<td>2-Stage</td>
<td>C1339 See Figure 5</td>
</tr>
<tr>
<td>LP Gas</td>
<td>1-Stage</td>
<td>400</td>
<td>1-Stage</td>
<td>C1316H See Figure 4</td>
</tr>
<tr>
<td></td>
<td>2-Stage</td>
<td>400</td>
<td>2-Stage</td>
<td>C1339 See Figure 5</td>
</tr>
</tbody>
</table>

#### OPTIONS INCLUDED ON THESE WIRING DIAGRAMS
- Manual Fan Switch
- Terminal Blocks
- 1-Stage 24V Thermostat
- 1-Stage T834H Thermostat
- 2-Stage 24V Thermostat
- 100% Shutoff Ignition
- Lockout

#### OPTIONS NOT INCLUDED ON THESE WIRING DIAGRAMS
- Draftor Motor
- Line-Voltage Stat’s
- Thermostats w/Subbase Wired
- All Others Specials
UNIT WIRING DIAGRAM USAGES
Model “QVB” – Standard Blower (Standing Pilot Ignition)

OPTIONS INCLUDED
ON THESE WIRING
DIAGRAMS
Manual Fan Switch
Terminal Blocks
1-Stage 24V Ductstat
1-Stage 24V Thermostat
1-Stage T834H Thermostat

OPTIONS NOT INCLUDED
ON THESE WIRING
DIAGRAMS
Drafter Motor
Line-Voltage Stat’s
Thermostats
w/Subbase Wired
Motor Contactor
Motor Starter
3-Phase Supply Voltage
All Others Specials
UNIT WIRING DIAGRAM USAGES
Model “QVB” – Standard Blower (Intermittent Spark Ignition)

OPTIONS INCLUDED ON THESE WIRING DIAGRAMS
Manual Fan Switch
Terminal Blocks
1-Stage 24V Ductstat
1-Stage 24V Thermostat
1-Stage T834H Thermostat
2-Stage 24V Ductstat
2-Stage 24V Thermostat
100% Shutoff Ignition Lockout

OPTIONS NOT INCLUDED ON THESE WIRING DIAGRAMS
Drafter Motor
Line-Voltage Stat’s
Thermostats
w/Subbase Wired
Motor Contactor
Motor Starter
3-Phase Supply Voltage
All Others Specials
UNIT WIRING DIAGRAM USAGES
Model “QVEF” – Power Vented “Enerpak” Propeller (Intermittent Spark Ignition)

<table>
<thead>
<tr>
<th>UNIT TYPE</th>
<th>GAS TYPE</th>
<th>UNIT SIZE</th>
<th>GAS CONTROL STAGE</th>
<th>WIRING DIAGRAM NO.</th>
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<tr>
<td></td>
<td></td>
<td></td>
<td>1-Stage</td>
<td>C1336H</td>
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<tr>
<td>Natural Gas</td>
<td></td>
<td>30-350</td>
<td></td>
<td>See Figure 11</td>
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<tr>
<td></td>
<td></td>
<td>30-350</td>
<td>2-Stage</td>
<td>C1371</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400</td>
<td></td>
<td>See Figure 13</td>
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<td>QVEF Enerpak Propeller</td>
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<tr>
<td>LP Gas</td>
<td></td>
<td>30-400</td>
<td>1-Stage</td>
<td>C1336H</td>
</tr>
<tr>
<td></td>
<td></td>
<td>30-400</td>
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<td>See Figure 11</td>
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<td></td>
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<td>30-400</td>
<td>2-Stage</td>
<td>C1371</td>
</tr>
<tr>
<td></td>
<td></td>
<td>30-400</td>
<td></td>
<td>See Figure 13</td>
</tr>
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OPTIONS INCLUDED ON THESE WIRING DIAGRAMS
Manual Fan Switch
Terminal Blocks
1-Stage 24V Thermostat
1-Stage T834H Thermostat
2-Stage 24V Thermostat
100% Shutoff Ignition
Lockout

OPTIONS NOT INCLUDED ON THESE WIRING DIAGRAMS
Line-Voltage Stat’s
Thermostats
w/Subbase Wired
All Others Specials
UNIT Wiring Diagram Usages

Model “QVEB” – Power Vented “Enerpak” Blower (Intermittent Spark Ignition)

<table>
<thead>
<tr>
<th>UNIT TYPE</th>
<th>GAS TYPE</th>
<th>UNIT SIZE</th>
<th>GAS CONTROL STAGE</th>
<th>WIRING DIAGRAM NO.</th>
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</thead>
<tbody>
<tr>
<td>Natural Gas</td>
<td>Natural Gas</td>
<td>100-350</td>
<td>1-Stage</td>
<td>C1336H See Figure 11</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>Natural Gas</td>
<td>400</td>
<td>2-Stage</td>
<td>C1371 See Figure 13</td>
</tr>
<tr>
<td>LP Gas</td>
<td>LP Gas</td>
<td>100-300</td>
<td>1-Stage</td>
<td>C1336H See Figure 11</td>
</tr>
<tr>
<td>LP Gas</td>
<td>LP Gas</td>
<td>350-400</td>
<td>2-Stage</td>
<td>C1371 See Figure 13</td>
</tr>
</tbody>
</table>

Options Included on These Wiring Diagrams:
- Manual Fan Switch
- Terminal Blocks
- 1-Stage 24V Ductstat
- 1-Stage 24V Thermostat
- 1-Stage T834H Thermostat
- 2-Stage 24V Ductstat
- 2-Stage 24V Thermostat
- 100% Shutoff Ignition
- Lockout

Options Not Included on These Wiring Diagrams:
- Line-Voltage Stat’s
- Thermostats
- w/Subbase Wired
- Motor Contactor
- Motor Starter
- 3-Phase Supply Voltage
- All Others Specials

C1336H
See Figure 11

C1371
See Figure 13

C1336W
See Figure 12

C1371
See Figure 13
UNIT WIRING DIAGRAM USAGES
Models “QVD” & “QVS” – Standard Indoor Duct Furnaces (Standing Pilot Ignition)

NOTE
Contact factory for 3-phase wiring diagrams.

OPTIONS INCLUDED ON UNITS WITH FAN TIME DELAYS
Manual Fan Switch
Terminal Blocks
1-Stage 24V
Ductstat
1-Stage 24V
Thermostat
1-Stage T834H
Thermostat

OPTIONS INCLUDED ON UNITS WITHOUT FAN TIME DELAYS
Terminal Blocks
1 or 2 Stage 24V
Ductstat
1 or 2 Stage 24V
Thermostat

OPTIONS NOT INCLUDED
Draftor Motor
Line-Voltage Stat’s
Thermostats
w/Subbase Wired
Motor Contactor
Motor Starter
3-Phase
Supply Voltage
All Others Specials

F.T.D. = Fan Time Delay
UNIT WIRING DIAGRAM USAGES
Models “QVD” & “QVS” – Standard Indoor Duct Furnace (Intermittent Spark Ignition)

NOTE
Contact factory for 3-phase wiring diagrams.

OPTIONS INCLUDED ON UNITS WITH FAN TIME DELAYS
Manual Fan Switch
Terminal Blocks
1 or 2 Stage 24V Ductstat
1 or 2 Stage 24V Thermostat
1-Stage T834H Thermostat
100% Shutoff Ignition Lockout

OPTIONS INCLUDED ON UNITS WITHOUT FAN TIME DELAYS
Terminal Blocks
1 or 2 Stage 24V Ductstat
1 or 2 Stage 24V Thermostat
100% Shutoff Ignition Lockout

OPTIONS NOT INCLUDED
Drafter Motor
Line-Voltage Stat’s
Thermostats
w/Subbase Wired
Motor Contactor
Motor Starter
3-Phase
Supply Voltage
All Others Specials

F.T.D. = Fan Time Delay
UNIT WIRING DIAGRAM USAGES
Models “QVED” & “QVES” – Powered Vented “Enerpak” Duct Furnaces (Intermittent Spark Ignition)

<table>
<thead>
<tr>
<th>UNIT TYPE</th>
<th>GAS TYPE</th>
<th>UNIT SIZE</th>
<th>GAS CONTROL STAGE</th>
<th>FAN TIME DELAYS</th>
<th>WIRING DIAGRAM NO.</th>
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<tr>
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<td></td>
<td></td>
<td>F.T.D.</td>
<td>C1335H</td>
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<td>1-Stage</td>
<td></td>
<td>See Figure 24</td>
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<tr>
<td></td>
<td></td>
<td>100-350</td>
<td></td>
<td>No F.T.D.</td>
<td>C1334H</td>
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<td>See Figure 25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100-350</td>
<td></td>
<td>F.T.D.</td>
<td>C1343</td>
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<td>See Figure 26</td>
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<tr>
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<td></td>
<td></td>
<td>2-Stage</td>
<td>No F.T.D.</td>
<td>C1342</td>
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<td>See Figure 27</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400</td>
<td></td>
<td>F.T.D.</td>
<td>C1335H</td>
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<td></td>
<td>See Figure 24</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1-Stage</td>
<td>No F.T.D.</td>
<td>C1334H</td>
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<td></td>
<td></td>
<td>See Figure 25</td>
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<td></td>
<td></td>
<td>400</td>
<td></td>
<td>F.T.D.</td>
<td>C1343</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>See Figure 26</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2-Stage</td>
<td>No F.T.D.</td>
<td>C1342</td>
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<td></td>
<td>See Figure 27</td>
</tr>
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</table>

OPTIONS INCLUDED ON UNITS WITH FAN TIME DELAYS
- Manual Fan Switch
- Terminal Blocks
- 1-Stage 24V Ductstat
- 1-Stage 24V Thermostat
- 1-Stage T834H Thermostat
- 2-Stage 24V Ductstat
- 2-Stage 24V Thermostat
- 100% Shutoff Ignition Lockout

OPTIONS INCLUDED ON UNITS WITHOUT FAN TIME DELAYS
- Terminal Blocks
- 1-Stage 24V Ductstat
- 1-Stage 24V Thermostat
- 2-Stage 24V Ductstat
- 2-Stage 24V Thermostat
- 100% Shutoff Ignition Lockout

OPTIONS NOT INCLUDED
- Line-Voltage Stat’s
- Thermostats w/Subbase Wired
- Motor Contactor
- Motor Starter
- 3-Phase
- Supply Voltage
- All Others Specials

F.T.D. = Fan Time Delay
Figure 1: Propeller Unit Heater, Standing Pilot Ignition, Single Stage or Hydraulic Modulating Gas Control, 115/1/60, Natural or LP (Propane) Gas, plus Options.
Figure 2: Propeller Unit Heater, Standing Pilot Ignition, Two Stage Gas Control, 115/1/60, Natural or LP (Propane) Gas, plus Options.
Figure 3: Propeller Unit Heater, Intermittent Pilot (Spark) Ignition, Single Stage or Hydraulic Modulating Gas Control, 115/1/60, Natural Gas, plus Options.

WIRING DIAGRAM FOR PROPELLER FAN UNIT HEATERS WITH INTERMITTENT PILOT

- CAUTION—DISCONNECT POWER BEFORE SERVICING.
- UNIT MUST BE GROUNDED.
- USE COPPER CONDUCTORS ONLY.
- REFER TO INSTALLATION INSTRUCTIONS FOR VENTING, GAS PIPING, AND START-UP PROCEDURES.
- T’STAT WIRES (W) AND (G) MUST BE CONNECTED TOGETHER EXCEPT WHEN USING THE T834H THERMOSTAT.

- IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE APPLIANCE MUST BE REPLACED, IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105°C.
- HIGH LIMIT AND BLOCKED VENT SWITCH WIRES MINIMUM 200°C.

OPTIONS/ITEMS

- FAN SWITCH
- TERM. BLKS.
- THERMOSTAT
- T834H T’STAT
- IGN. LOCKOUT

LEGEND
- BY MANUFACTURER
- BY OTHERS OR OPTIONS

3184-2
Figure 4: Propeller Unit Heater, Intermittent Pilot (Spark) Ignition, Single Stage or Hydraulic Modulating Gas Control, 115/1/60, Natural or LP (Propane) Gas, plus Options.
Figure 5: Propeller Unit Heater, Intermittent Pilot (Spark) Ignition, Two Stage Gas Control, 115/1/60, Natural or LP (Propane) Gas, plus Options.

WIRING DIAGRAM FOR PROPELLER UNIT HEATERS, TWO STAGE, INTERMITTENT PILOT

- CAUTION—DISCONNECT POWER BEFORE SERVICING.
- UNIT MUST BE GROUNDED.
- USE COPPER CONDUCTORS ONLY.
- REFER TO INSTALLATION INSTRUCTIONS FOR VENTING, GAS PIPING, AND START-UP PROCEDURES.

* IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE APPLIANCE MUST BE REPLACED, IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105°C.
- HIGH LIMIT, HIGH LIMIT #1, AND BLOCKED VENT SWITCH WIRES MINIMUM 200°C.

OPTIONS/ITEMS

- FAN SWITCH
- TERM. BLKS.
- THERMOSTAT
- DUAL FANS
- IGN. LOCKOUT
Figure 6: Blower Unit Heater, Standing Pilot Ignition, Single Stage or Hydraulic Modulating Gas Control, 115-230/1/60, Natural or LP (Propane) Gas, plus Options.
NOTE: 3-phase units – contact factory.
Figure 7: Blower Unit Heater, Standing Pilot Ignition, Two Stage Gas Control, 115-230/1/60, Natural or LP (Propane) Gas, plus Options.

NOTE: 3-phase units – contact factory.

WIRING DIAGRAM FOR BLOWER UNIT HEATERS, TWO-STAGE, STANDING PILOT

- CAUTION—DISCONNECT POWER BEFORE SERVICING.
- UNIT MUST BE GROUNDED.
- USE COPPER CONDUCTORS ONLY.
- REFER TO INSTALLATION INSTRUCTIONS FOR VENTING, GAS PIPING, AND START-UP PROCEDURES.

- IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE APPLIANCE MUST BE REPLACED, IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105°C. HIGH LIMIT AND BLOCKED VENT SWITCH WIRES MINIMUM 200°C.

OPTIONS/ITEMS

□ FAN SWITCH
□ DUCTSTAT
□ THERMOSTAT
□ TERM. BLKS.
□
Figure 8: Blower Unit Heater, Intermittent Pilot (Spark) Ignition, Single Stage or Hydraulic Modulating Gas Control, 115-230V/1/60, Natural Gas or LP (Propane) Gas, plus Options.

WIRING DIAGRAM FOR BLOWER UNIT HEATERS WITH INTERMITTENT PILOT

- CAUTION—DISCONNECT POWER BEFORE SERVICING.
- UNIT MUST BE GROUNDED.
- USE COPPER CONDUCTORS ONLY.
- REFER TO INSTALLATION INSTRUCTIONS FOR VENTING, GAS PIPING, AND START-UP PROCEDURES.
- T'STAT WIRES (W) AND (G) MUST BE CONNECTED TOGETHER EXCEPT WHEN USING THE T834H THERMOSTAT.
- IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE APPLIANCE MUST BE REPLACED, IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105°C. HIGH LIMIT AND BLOCKED VENT SWITCH WIRES MINIMUM 200°C.

OPTIONS/ITEMS

- FAN SWITCH
- DUCTSTAT
- T834H T'STAT
- TERM. BLKS.
- IGN. LOCKOUT
Figure 9: Blower Unit Heater, Intermittent Pilot (Spark) Ignition, Single Stage or Hydraulic Modulating Gas Control, 115-230/1/60, Natural Gas, plus Options.

WIRING DIAGRAM FOR BLOWER UNIT HEATERS WITH INTERMITTENT PILOT

- CAUTION—DISCONNECT POWER BEFORE SERVICING.
- UNIT MUST BE GROUNDED.
- USE COPPER CONDUCTORS ONLY.
- REFER TO INSTALLATION INSTRUCTIONS FOR VENTING, GAS PIPING, AND START-UP PROCEDURES.
- T'STAT WIRES (W) AND (G) MUST BE CONNECTED TOGETHER EXCEPT WHEN USING THE T834H THERMOSTAT.
- IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE APPLIANCE MUST BE REPLACED, IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105°C.
- HIGH LIMIT AND BLOCKED VENT SWITCH WIRES MINIMUM 200°C.

OPTIONS/ITEMS

- FAN SWITCH
- DUCTSTAT
- T834H T'STAT
- TERM. BLKS.
- IGN. LOCKOUT

LEGEND ———- BY MANUFACTURER
3184-1
———- BY OTHERS OR OPTIONS
Figure 10: Blower Unit Heater, Intermittent Pilot (Spark) Ignition, Two Stage Gas Control, 115-230/1/60, Natural or LP (Propane) Gas, plus Options.
Figure 11: “Enerpak” Blower or Propeller Unit Heaters, Intermittent Pilot (Spark) Ignition, Single Stage or Hydraulic Modulating Gas Control, 115/1/60, Natural Gas or LP (Propane) Gas, Factory Installed Power Venter with Pressure Switch, Fan Time Delay, plus Options.
Figure 12: “Enerpak” Blower or Propeller Unit Heaters, Intermittent Pilot (Spark) Ignition, Single Stage or Hydraulic Modulating Gas Control, 115/1/60, Natural Gas, Factory Installed Power Venter with Pressure Switch, Fan Time Delay, plus Options.
Figure 13: “Enerpak” Blower or Propeller Unit Heaters, Intermittent Pilot (Spark) Ignition, Two Stage Gas Control, 115/1/60, Natural or LP (Propane) Gas, Factory Installed Power Venter with Pressure Switch, Fan Time Delay, plus Options.
Figure 14: Indoor Duct Furnace, Standing Pilot Ignition, Single Stage or Hydraulic Modulating Gas Control, 115-230/1/60, Natural or LP (Propane) Gas, Fan Time Delay, plus Options.
Figure 15: Indoor Duct Furnace, Standing Pilot Ignition, Single Stage or Hydraulic Modulating Gas Control, 115-230/1/60, Natural or LP (Propane) Gas, plus Options.

**PICTORIAL**

**LADDER FUNCTION**

- **TRANSFORMER 115-230/24V**
- **FAN MOTOR 115-230V/1/60**
- **MAIN GAS VALVE**
- **SOLENOID GAS VALVE**
- **SPST HIGH LIMIT SWITCH**
- **BLOCKED VENT SWITCH**
- **THERMOSTAT**
- **DUCTSTAT**
- **MAIN VALVE**
- **SOLENOID VALVE**

**OPTIONS/ITEMS**

- DUCTSTAT
- THERMOSTAT
- TERM. BLKS.
- H91 SOLENOID VALVE

**CAUTION—DISCONNECT POWER BEFORE SERVICING.**
- UNIT MUST BE GROUNDED.
- USE COPPER CONDUCTORS ONLY.
- REFER TO INSTALLATION INSTRUCTIONS FOR VENTING, GAS PIPING, AND START-UP PROCEDURES.

- IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE APPLIANCE MUST BE REPLACED, IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105°C.
- HIGH LIMIT AND BLOCKED VENT SWITCH WIRES MINIMUM 200°C.

**LEGEND**

- BY MANUFACTURER
- BY OTHERS OR OPTIONS

5181-R
Figure 16: Indoor Duct Furnace, Standing Pilot Ignition, Two Stage Gas Control, 115-230/1/60, Natural or LP (Propane) Gas, Fan Time Delay, plus Options.
Figure 17: Indoor Duct Furnace, Standing Pilot Ignition, Two Stage Gas Control, 115-230/1/60, Natural or LP (Propane) Gas, plus Options.

**DUCT FURNACE WIRING DIAGRAM — TWO STAGE STANDING PILOT**

- Caution— Disconnect power before servicing.
- Unit must be grounded.
- Use copper conductors only.
- Refer to installation instructions for venting, gas piping, and start-up procedures.

**OPTIONS/ITEMS**

- Ductstat
- Thermostat
- Term. Blks.
- H91 Solenoid Valve

**LEGEND**

- By manufacturer
- By others or options

**5187-R**
Figure 18: Indoor Duct Furnace, Intermittent Pilot (Spark) Ignition, Single Stage or Hydraulic Modulating Gas Control, 115-230/1/60, Natural Gas or LP (Propane) Gas, Fan Time Delay, plus Options.

**Duct Furnace Wiring Diagram – Intermittent Pilot Ignition with Fan Time Delay**

- **CAUTION—DISCONNECT POWER BEFORE SERVICING.**
- **UNIT MUST BE GROUNDED.**
- **USE COPPER CONDUCTORS ONLY.**
- **REFER TO INSTALLATION INSTRUCTIONS FOR VENTING, GAS PIPING, AND START-UP PROCEDURES.**
- **T'STAT WIRES (W) AND (G) MUST BE CONNECTED TOGETHER EXCEPT WHEN USING THE T834H THERMOSTAT.**
- **IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE APPLIANCE MUST BE REPLACED, IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105°C. HIGH LIMIT AND BLOCKED VENT SWITCH WIRES MINIMUM 200°C.**

**Options/Items**
- **FAN SWITCH**
- **DUCTSTAT**
- **T834H T'STAT**
- **TERM. BLKS.**
- **IGN. LOCKOUT**

**Legend**
- **BY MANUFACTURER**
- **BY OTHERS OR OPTIONS**

**Options/Items**
- **FAN SWITCH**
- **DUCTSTAT**
- **T834H T'STAT**
- **TERM. BLKS.**
- **IGN. LOCKOUT**
Figure 19: Indoor Duct Furnace, Intermittent Pilot (Spark) Ignition, Single Stage or Hydraulic Modulating Gas Control, 115-230/1/60, Natural Gas or LP (Propane) Gas, plus Options.

**DUCT FURNACE WIRING DIAGRAM – SINGLE STAGE INTERMITTENT PILOT IGNITION**

- CAUTION—DISCONNECT POWER BEFORE SERVICING.
- UNIT MUST BE GROUNDED.
- USE COPPER CONDUCTORS ONLY.
- REFER TO INSTALLATION INSTRUCTIONS FOR VENTING, GAS PIPING, AND START-UP PROCEDURES.
- IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE APPLIANCE MUST BE REPLACED, IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105°C. HIGH LIMIT AND BLOCKED VENT SWITCH WIRES MINIMUM 200°C.

**OPTIONS/ITEMS**
- [ ] DUCTSTAT
- [ ] THERMOSTAT
- [ ] TERM. BLKS.
- [ ] IGN. LOCKOUT

**LEGEND**
- BY MANUFACTURER
- BY OTHERS OR OPTIONS

1181
Figure 20: Indoor Duct Furnace, Intermittent Pilot (Spark) Ignition, Two Stage Gas Control, 115-230/1/60, Natural or LP (Propane) Gas, Fan Time Delay, plus Options.

**Duct Furnace Wiring Diagram – Two-Stage Intermittent Pilot Ignition with Fan Time Delay**

- **CAUTION**— DISCONNECT POWER BEFORE SERVICING.
- **UNIT MUST BE GROUNDED.**
- **USE COPPER CONDUCTORS ONLY.**
- **REFER TO INSTALLATION INSTRUCTIONS FOR VENTING, GAS PIPING, AND START-UP PROCEDURES.**

**Options/Items**

- ✔️ FAN SWITCH
- ✔️ DUCTSTAT
- ✔️ THERMOSTAT
- ✔️ TERM. BLKS.
- ✔️ IGN. LOCKOUT

**Legend**

- **BY Manufacturer**
- **BY Others or Options**

1190
Figure 21: Indoor Duct Furnace, Intermittent Pilot (Spark) Ignition, Two Stage Gas Control, 115-230/1/60, Natural or LP (Propane) Gas, plus Options.
Figure 22: Indoor Duct Furnace, Intermittent Pilot (Spark) Ignition, Single Stage or Hydraulic Modulating Gas Control, 115-230/1/60, Natural Gas, Fan Time Delay, plus Options.
Figure 23: Indoor Duct Furnace, Intermittent Pilot (Spark) Ignition, Single Stage or Hydraulic Modulating Gas Control, 115-230/1/60, Natural Gas, plus Options.
Figure 24: “Enerpak” Duct Furnace, Intermittent Pilot (Spark) Ignition, Single Stage or Hydraulic Modulating Gas Control, 115/1/60, Natural Gas or LP (Propane) Gas, Factory Installed Power Venter with Pressure Switch, Fan Time Delay, plus Options.

WIRING DIAGRAM FOR ENERPAC DUCT FURNACE WITH FAN TIME DELAY RELAY

* CAUTION—DISCONNECT POWER BEFORE SERVICING.
* UNIT MUST BE GROUNDED.
* USE COPPER CONDUCTORS ONLY.
* REFER TO INSTALLATION INSTRUCTIONS FOR VENTING, GAS PIPING, AND START-UP PROCEDURES.
* T’STAT WIRES (W) AND (G) MUST BE CONNECTED TOGETHER EXCEPT WHEN USING THE T834H THERMOSTAT.

* IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE APPLIANCE MUST BE REPLACED, IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105°C. HIGH LIMIT AND BLOCKED VENT SWITCH WIRES MINIMUM 200°C.

OPTIONS/ITEMS

- □ FAN SWITCH
- □ DUCTSTAT
- □ T834H T’STAT
- □ TERM. BLKS.
- □ IGN. LOCKOUT

2184V-1 S/W
Figure 25: “Enerpak” Duct Furnace, Intermittent Pilot (Spark) Ignition, Single Stage or Hydraulic Modulating Gas Control, 115/1/60, Natural Gas or LP (Propane) Gas, Factory installed Power Venter with Pressure Switch, plus Options.

WIRING DIAGRAM FOR ENERPAC Duct Furnace

- CAUTION—DISCONNECT POWER BEFORE SERVICING.
- UNIT MUST BE GROUNDED.
- USE COPPER CONDUCTORS ONLY.
- REFER TO INSTALLATION INSTRUCTIONS FOR VENTING, GAS PIPING, AND START-UP PROCEDURES.

* IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE APPLIANCE MUST BE REPLACED, IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105°C.
* HIGH LIMIT AND BLOCKED VENT SWITCH WIRES MINIMUM 200°C.

LEGEND ———— BY MANUFACTURER
————— BY OTHERS OR OPTIONS
2181V-1

OPTIONS/ITEMS
☐ DUCTSTAT
☐ THERMOSTAT
☐ TERM. BLKS.
☐ IGN. LOCKOUT
Figure 26: “Enerpak” Duct Furnace, Intermittent Pilot (Spark) Ignition, Two Stage Gas Control, 115/1/60, Natural or LP (Propane) Gas, Factory Installed Power Venter with Pressure Switch, plus Options.
Figure 27: "Enerpak" Duct Furnace, Intermittent Pilot (Spark) Ignition, Two Stage Gas Control, 115/1/60, Natural or LP (Propane) Gas, Factory Installed Power Venter with Pressure Switch, plus Options.
Figure 28: “Enerpak” Duct Furnace, Intermittent Pilot (Spark) Ignition, Single Stage or Hydraulic Modulating Gas Control, 115/1/60, Natural Gas, Factory Installed Power Venter with Pressure Switch, Fan Time Delay, plus Options.

**WIRING DIAGRAM FOR ENERPAC DUCT FURNACE WITH FAN TIME DELAY RELAY**

- **CAUTION**—DISCONNECT POWER BEFORE SERVICING.
- UNIT MUST BE GROUNDED.
- USE COPPER CONDUCTORS ONLY.
- REFER TO INSTALLATION INSTRUCTIONS FOR VENTING, GAS PIPING, AND START-UP PROCEDURES.
- T’STAT WIRES (W) ANG (G) MUST BE CONNECTED TOGETHER EXCEPT WHEN USING THE T834H THERMOSTAT.

- **IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE APPLIANCE MUST BE REPLACED, IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105°C.**
- **HIGH LIMIT AND BLOCKED VENT SWITCH WIRES MINIMUM 200°C.**

**OPTIONS/ITEMS**

- FAN SWITCH
- TERM. BLKS.
- T834H T’STAT
- IGN. LOCKOUT

**LEGEND**

- BY MANUFACTURER
- BY OTHERS OR OPTIONS

**S8600 IGNITOR**

- MAIN
- MV
- MV/PV
- PV
- GND
- 24V(GND)
- 24V(HOT)
- SPARK

**GAS VALVE**

- TH-TR
- BW
- GND
- 24V(GND)
- 24V(HOT)
- SPARK

**DRAFTOR RELAY**

- 2184V-1 S/W
Figure 29: “Enerpak” Duct Furnace, Intermittent Pilot Ignition, Single Stage or Hydraulic Modulating Gas Control, 115/1/60, Natural Gas, Factory Installed Power Venter with Pressure Switch, plus Options.