Installation Instructions

Variable Speed High Efficiency Blower Kit for Gas Furnace Applications

⚠WARNING

To avoid the risk of electrical shock, personal injury, or death, disconnect electrical power before installing this kit or performing maintenance.

Before beginning installation, read these instructions thoroughly and follow all warnings and cautions in these instructions and on the unit. These instructions are primarily intended to assist qualified individuals experienced in the proper installation of this appliance. Some local codes require licensed installation/service personnel for this type of equipment. Improper installation, service, adjustment, of maintenance can cause fire, electrical shock of other conditions which may result in personal injury or property damage, unless otherwise noted in the instructions, only factory authorized kits of accessories may be used when modifying this product.

1. SPECIFICATIONS

The variable speed blower kit is designed for installation in G7 gas furnaces. Part number 904876 is for "A" cabinet models and may be field-configured for air conditioning/heat pump airflows from 1-1/2 to 3 tons. Part number 904877 is for "B" cabinet models and may be field-configured for air conditioning/heat pump airflows from 2 to 3-1/2 tons. Part number 904878 is for "C" cabinet models, and may be field-configured for air conditioning/heat pump airflows from 3 to 5 tons. Part number 904879 is for "D" cabinet models and may be field-configured for air conditioning/heat pump airflows from 4 to 5 tons. Part number 904880 is an upgrade kit for units already equipped with the Fixed Speed High Efficiency Blower.

Note: When using these kits as part of an iQ Drive System, replace the transformer in the furnace with a 60 VA transformer - NORDYNE part number 622037 (see iQ Drive instructions).

2. INSTALLATION REQUIREMENTS

Check Equipment – After unpacking, inspect the kit thoroughly for concealed damage. If damage is found, notify the transportation company immediately and file a concealed damage claim. All installations shall be made as described in the installation instructions and in accordance with applicable national and local codes including the requirements of local utilities.

3. INSTALLATION

G7 VSHE Blower Kit - SKUs 904876, 904877, 904878, 904879

Loose harness descriptions:

For upflow furnaces:

2A1371 or 634699 – Female 9-pin AMP mate-n-lok to 6-pin power connector, blue wire with female QC, black wire with female QC, and white wire with female QC

For downflow furnace:

634747 – Female 9-pin AMP mate-n-lok to female 8-pin JST connector, 2 blue wires with female QC, black wire with female QC, and white wire with female QC

634702 – Male 9-pin AMP mate-n-lok to female 8-pin JST connector, 2 blue wires with female QC, black wire with male QC, and white wire with male QC

2A1401 or 634703 – 6-pin power connector to 6-pin power connector

Upflow Installations

1. Disconnect electrical power to the furnace.
2. Remove the upper and lower access doors from the furnace.
3. Remove or back-out the 2 ground screws from the top of the blower deck to allow the blower to slide out of the furnace.
4. Unplug the existing electrical connector containing the blower wires from the receptacle located on the right side of the blower deck.
5. Remove the blower assembly from the furnace by removing the screws attaching the blower to the blower deck and sliding the blower assembly out of the furnace.
6. Remove the existing upper wire harness containing the blower power wires from the blower deck and the furnace control board, including the wires in the harness which go to the limits (supply air limit and either the vent limit, on select models, or the flame roll-out limit).

⚠WARNING

Failure to remove the existing high voltage harness in this step may damage new motor or control board if VSHE kit is connected.

7. Also remove the other blue limit wire from the supply air limit, cut off the connector, wire nut the blue wire (from pin 8 of the furnace control board 9-pin control harness), and leave dead.

8. If needed, attach the blower mounting brackets to the blower assembly. These brackets may be already attached to the new blower, or they may be taken from the old blower.
9. Slide the blower assembly into the furnace. Be sure that the sides of the blower are captured by all of the blower mounting tabs in the blower deck. Secure with the screws removed in step 5.
10. Replace the ground screws attaching the ground wires to the blower deck removed in step 3.
11. Install the 2A1371 or 634699 wire harness (loose harness included in kit). Attach the female 9-pin AMP panel connector to the blower deck. Attach the 6-pin power connector to the "Expansion Port" connector on the furnace control board. Attach the black wire to "L1A" on the furnace control board. Attach the white wire to an open "Neutral" on the furnace control board. Attach the limit wire to the supply air limit (terminal open from step 7).
12. Install the blue jumper wire (included in kit) from the supply air limit to the flame roll-out limit or, on select models, the vent limit (open terminals from step 6).
13. Attach the electrical plug of the new blower assembly to the receptacle installed in the blower deck in step 11.
14. Verify all wires are connected to the furnace according to the wiring diagram. Additionally, verify all wires which are factory connected and tighten as necessary.
15. Use wire ties to secure wires away from moving parts, burner area, and to keep wires neat.
16. Refer to section marked "Configuring the Blower". If necessary to gain access to the motor control board, remove the cover of the motor control board mounting bracket. Replace when finished configuring the blower.
17. Replace current wiring diagram with new wiring diagram for the application which is included in the kit.
18. Replace doors. Restore power to the furnace. Installation is now complete.

Downflow Installations

For downflow installations, the motor control board and power choke (applicable with ¾ and 1 hp motors) will be mounted separately from the blower. Begin installation by preparing the blower kit as follows: Remove the wiring harness which was pre-installed on the kit, the motor control board, and the choke (if applicable) from the motor control mounting bracket, disconnecting any wiring to allow these parts to be removed. Remove the motor control mounting bracket by removing the 4 screws attaching it to the blower. Install the new 634702 wiring harness (loose harness included in kit) by attaching the 8-pin female connector to the motor low voltage 8-pin plug. Attach the black wire to the motor black power wire, and the white wire to the motor white power wire. Attach the longer of the blue limit wires to the limit on the opposite side of the blower wrapper, and the shorter blue limit wire to the limit on the same side of the blower wrapper as the motor. Leave the blue jumper wire attaching the 2 blower limits on either side of the blower housing. Be sure to re-attach the green motor ground wire to the blower wrapper side. If applicable, remove the blower mounting brackets from either side of the blower housing.

1. Disconnect electrical power to the furnace.
2. Remove the upper and lower access doors from the furnace.
3. Remove the flue pipe from in front of the inner blower access door.
4. Remove the inner blower access door and unplug the receptacle containing the blower wires from the blower access door support column.
5. Remove the screws securing the blower assembly and slide the entire blower assembly out of the furnace.
6. Remove the existing wire harness containing the blower power wires from the inner blower access door support column and the furnace control board, including the wires in the harness which go to the limits (supply air limit and either the vent limit, on select models, or the flame roll-out limit).

⚠ WARNING

Failure to remove the existing high voltage harness in this step may damage new motor or control board if VSHE kit is connected.

7. Install the new modified blower assembly into the furnace, making sure that the sides of the blower are captured by all of the blower mounting tabs in the blower deck. Secure the blower with the screws removed in step 5.
8. Install one end of the new 634747 wiring harness (loose harness included in kit) by attaching the female 9-pin AMP panel connector to the inner blower access door.
9. Install the plug of the blower wires harness into the receptacle inner blower access door.
10. Re-install the inner blower access door.
11. Mount the motor control board to the mounting bracket (included in kit). Then mount the mounting bracket onto inside wall of the furnace using the 2 mounting holes on the right furnace side wall.

12. Mount the power choke (applicable with ¾ and 1hp motors only) onto the inner blower access door using the 4 mounting holes provided.
13. Attach the other leads of the 634747 wiring harness from the inner blower access support column (in step 8). Connect the 8-pin plug onto the motor control board "Blower Motor" receptacle. Connect the 2 blue limit wires of the harness to the supply air limit and either the vent limit (on select models) or the flame roll-out limit (the limits that had the harness removed from in Step 6). Attach the white wire of the harness to the "VAC_L2 _OUT" terminal on the motor control board. Attach the black wire of the wire harness to either "L1" terminal on the motor control board. (On 3/4 or 1 hp motor units, attach the black wire of the harness to the motor choke male quick-connect terminal, then use the long, black extra wire included in the kit to connect the other lead of the choke to the "L1" terminal of the motor control board.)
14. Attach the 2A1401 or 634703 harness (loose harness included in kit) from the furnace control board "Expansion Port" to the motor control board "Expansion Port".
15. Attach the short, black extra wire included in the kit from the other "L1" terminal on the motor control board to the "L1A" terminal on the furnace control board. Attach the extra white wire included in the kit from the "VAC_L2 _IN" terminal on the motor control **board to an open** "Neutral" terminal on the furnace control board.
16. Verify all wires are connected to the furnace according to the wiring diagram. Additionally, verify all wires which are factory connected and tighten as necessary.
17. Use wire ties to secure wires away from moving parts, burner area, and to keep wires neat.
18. Refer to section marked "Configuring the Blower".
19. Replace current wiring diagram with new wiring diagram for the application which is included in the kit.
20. Replace doors. Restore power to the furnace. Installation is now complete.

G7 VSHE Blower Upgrade Kit - SKU 904880

Loose harness descriptions:

For Upflow Furnace:

2A1391 or 634700 Male 9-pin AMP mate-n-lok to 6-pin power connector, blue wire with female QC, black wire with female QC, and white wire with female QC

Note: Airflow Labels for all sizes of the furnace are supplied in the kit. Select the correct Airflow Label and place it on the motor control mounting bracket cover in upflow applications or on the back of the access panel on downflow applications:

710794 for "A" cabinet size furnaces

710795 for "B" cabinet size furnaces

710796 for "C" cabinet size furnaces

710797 for "D" cabinet size furnaces

Upgrade Kit Installations – Upflow

1. Disconnect electrical power to the furnace.
2. Remove the upper and lower access doors from the furnace.
3. Remove or back-out the 2 ground screws from the top of the blower deck to allow the blower to slide out of the furnace.
4. Unplug the existing electrical connector containing the blower wires from the receptacle located on the right side of the blower deck.
5. Remove the blower assembly from the furnace by removing the screws attaching the blower to the blower deck and sliding the blower assembly out of the furnace.
6. Remove the cover from the motor control board bracket located on the front of the blower.
7. Remove the existing blower wire harness from the blower assembly by unplugging the black and white power wires from the motor, the blue wire from the blower limit, and the 6-pin connector from the motor control board. Remove blue wire from W1 on board.
8. Replace the Fixed Speed Motor Control Board on the mounting bracket with the Variable Speed Motor Control Board which is included with the kit. Reconnect blue wire removed from W1 on FSHE to the output W on VSHE Board.
9. Route the black and white power wires from the motor through the wire grommet in the motor control mounting bracket. Connect the white motor power wire to the "VAC_L2 _OUT" terminal on the motor control board. Connect the black wire to either "L1" terminal on the motor control board. Leave the green motor ground attached to the blower housing.
10. Route the low voltage 8-pin connector from the motor through the wire grommet in the motor control mounting bracket. Connect the 8-pin connector to the "Blower Motor" receptacle on the motor control board.
11. Install the new 2A1391 or 634700 wire harness, routing the 6 pin connector and the black and white power wires through the wire grommet on the motor control mounting bracket. Connect the 6-pin connector to the "Expansion Port" on the motor control board. Connect the white wire to the "VAC_L2 _IN" terminal on the blower control board. Connect the black wire to the other "L1" terminal not used in Step 8 on the

motor control board. (On 3/4 or 1 hp motor units, attach the black wire of the harness to the motor choke male quick-connect terminal, then the other lead of the choke to the “L1” terminal of the motor control board.)

12. Slide the blower assembly back into the furnace. Be sure that the sides of the blower are captured by all of the blower mounting tabs in the blower deck. Secure with the screws removed in step 5.
13. Replace the ground screws attaching the ground wires to the blower deck removed in step 3.
14. Attach the new harness 9-pin plug to the receptacle on the right side of the blower deck.
15. Verify all wires are connected to the furnace according to the wiring diagram. Additionally, verify all wires which are factory connected and tighten as necessary.
16. Use wire ties to secure wires away from moving parts, burner area, and to keep wires neat.
17. Refer to section marked “Configuring the Blower”. If necessary to gain access to the motor control board, remove the cover of the motor control board mounting bracket. Replace when finished configuring the blower.
18. Replace current wiring diagram with new wiring diagram for the application which is included in the kit.
19. Replace doors. Restore power to the furnace. Installation is now complete.

Upgrade Kit Installations – Downflow

1. Disconnect electrical power to the furnace.
2. Remove the upper and lower access doors from the furnace.
3. Remove all wires from the connectors on the existing motor control board.
4. Replace the Fixed Speed Motor Control Board on the mounting bracket with the Variable Speed Motor Control Board which is included with the Upgrade Kit.
5. Re-attach the leads of the existing wiring harness to the new motor control board. Connect the 8-pin plug onto the motor control board “Blower Motor” receptacle. Remove the white wire of the blower motor harness from the “Neutral” connector on the furnace control board and attach it to the “VAC_L2 _OUT” terminal on the motor control board. Remove the black wire from the “L1A” terminal on the furnace control board and attach it to either “L1” terminal on the motor control board. (On 3/4 or 1 hp motor units, the black power wire coming from the motor choke needs to be removed from the “L1A” terminal and connected to the “L1” terminal of the motor control board.)
6. Re-attach the 6-pin board-to-board harness from the furnace control board “Expansion Port” to the motor control board “Expansion Port”.
7. Attach the short black extra wire included in the kit from the other “L1” terminal on the motor control board to the “L1A” terminal on the furnace control board. Attach the extra white wire included in the kit from the “VAC_L2 _IN” terminal on the motor control board to an open “Neutral” terminal on the furnace control board. Reconnect blue wire removed from W1 on FSHE board to output W on VSHE.
8. Verify all wires are connected to the furnace according to the wiring diagram. Additionally, verify all wires which are factory connected and tighten as necessary.
9. Use wire ties to secure wires away from moving parts, burner area, and to keep wires neat.
10. Refer to section marked “Configuring the Blower”.
11. Replace current wiring diagram with new wiring diagram for the application which is included in the kit.
12. Replace doors. Restore power to the furnace. Installation is now complete.

4. CONFIGURING THE BLOWER

The variable speed high efficiency blower kit is equipped with a microprocessor-controlled variable speed motor that is pre-programmed to deliver optimum airflow in a variety of conditions and system configurations. Before operation, the variable speed high efficiency blower kit must be configured to match the unit with the system, system options, and climatic conditions. With the variable speed high efficiency blower kit installed and configured properly, the furnace will respond directly to thermostat inputs. During normal operation, the motor will gradually change speed in response to changes in the system variables, such as the thermostat settings, duct static, filter, etc. The variable speed high efficiency blower kit is configured by setting the 8 switches located on the motor control board as described below.

Note: When used as a part of an iQ Drive System, the blower airflow is controlled by the iQ Drive thermostat, not the 3 "HEAT" and 4 "COOL" switches on the motor control board - these switches are ignored. However, it is necessary to set the first "A/B" selector switch to select an "A" or "B" cabinet size, if applicable(see section "Selecting the Cabinet Size"). Also see iQ Drive instructions.

⚠ IMPORTANT

The variable speed high efficiency blower kit is designed to give the installer maximum flexibility to optimize system performance, efficiency, and comfort. Because there are so many way to configure the kit, it is important to read and follow these instructions carefully.

Selecting the Cabinet Size

The furnace cabinet size may be selected by setting the first switch marked "A/B". For an A-size furnace, this switch should be set to 0 or "off". For a B-size furnace, this switch should be set to 1 or "on". For a C- or D-size furnace, the switch setting does not matter - it may be set to either "on" or "off".

Selecting the (Gas) Heating Airflow

The heating airflow is selected by setting switches 2 through 4 (also marked as HEAT) on the motor control board. Refer to the “Airflow Settings” graph and select an airflow to allow the furnace to reach an appropriate heat rise as shown on the unit rating plate. To reduce the heat rise, select a higher airflow; to increase the heat rise, select a lower airflow. Be sure that the selected rise is within the specification of the furnace as shown on the furnace rating label.

Determining Nominal System Capacity (A/C & HP)

In order to select the appropriate airflow for the AC and HP operation, the nominal system capacity must be known. The nominal system capacity is ALWAYS the nominal capacity of the outdoor unit. In some cases, the nominal system capacity is not the same as the nominal capacity of the indoor coil.

Selecting the Cooling/Heat Pump Airflow

The cooling/heat pump airflow is selected by setting switches 5 through 8 (also marked as COOL) on the motor control board. All airflows for other modes of operation, except for gas heat, are determined by this setting. Refer to the “Airflow Settings” graph and select an airflow in the range recommended for the nominal system capacity.

For maximum capacity and energy efficiency, generally a selection at or near the top of the CFM range for that nominal system capacity is best. For maximum dehumidification, select an airflow near the middle or bottom of the CFM range for that nominal system capacity.

Note: If coil icing is observed, the cooling/heat pump airflow may be set too low. Double-check to be sure the setting selected is within the range shown. Also, check to be sure the system is properly charged (see outdoor unit installation instructions). If icing continues to occur, raise the selected airflow one or two steps.

5. SYSTEM OPERATION

(Gas) Heating Mode

When the thermostat calls for heating, the circuit between R and W is completed. The furnace control board initiates the ignition sequence. Approximately 30 seconds after the gas flame has proven, the blower motor will slowly ramp up to the selected motor airflow . The blower will continue to operate after the call for heat has been removed for a selectable (switch on furnace control board) number of seconds.

Note: All on- and off-delays for heating continue to be controlled by the furnace control board.

Cooling or Heat Pump Mode

When the thermostat calls for cooling or heat pump heating, the circuit between R, G, and Y (O is ignored by the blower) is completed. The blower slowly ramps up to the selected cooling airflow. If there is a humidistat connected to the motor control board calling for humidity control, the motor will operate at 75% of the airflow setting. Or, if the system is installed where humidity control is desired but a humidistat is not available, the DEHUM and R terminals on the motor control board may be jumpered. In this case, the blower will operate at 75% airflow for the first 10 minutes of the cycle and then return to normal torque for the remainder of the cooling cycle. After the call for cooling or heat pump is satisfied, the blower continues to operate for 60 seconds at 60% of the selected airflow.

Manual Fan

When the manual fan switch on the thermostat is on, energizing G only, the blower will ramp up to 50% of the selected cooling/heat pump motor airflow.

6. FAULT CONDITIONS

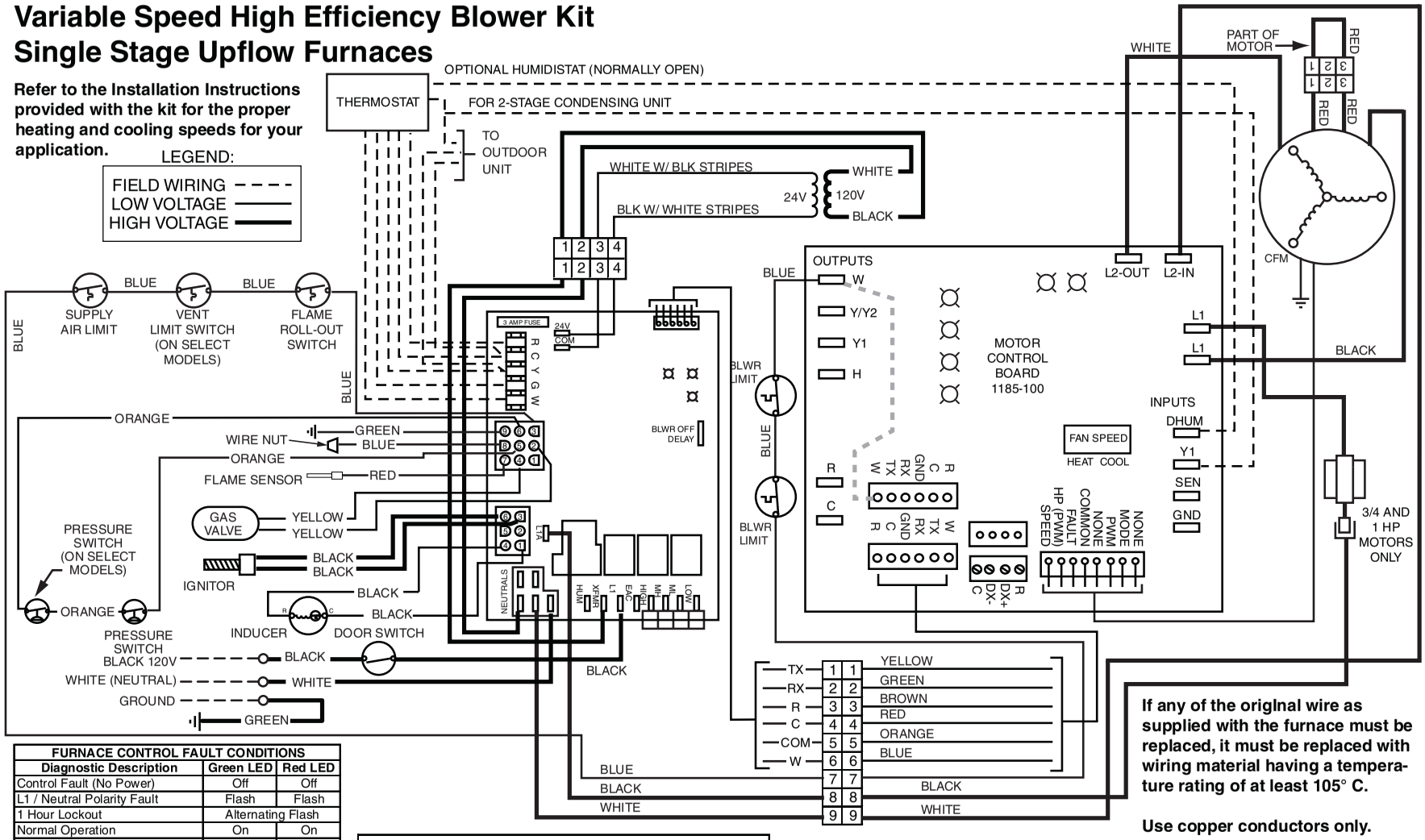
There is a green and a red LED labeled “Status” on the motor control board to provide system faults as described below.

Diagnostic Description	Red LED (AN1)	Green LED (AN2)
Control Fault (No Power)	Off	Off
Normal Operation	On	On
Motor Fault	On	Flash
No Motor Fault	Flash	On
Communications Fault	Flash	Flash

Table 1. Fault Conditions

Variable Speed High Efficiency Blower Kit
Single Stage Upflow Furnaces

Refer to the Installation Instructions provided with the kit for the proper heating and cooling speeds for your application.



If any of the original wire as supplied with the furnace must be replaced, it must be replaced with wiring material having a temperature rating of at least 105° C.

Use copper conductors only.

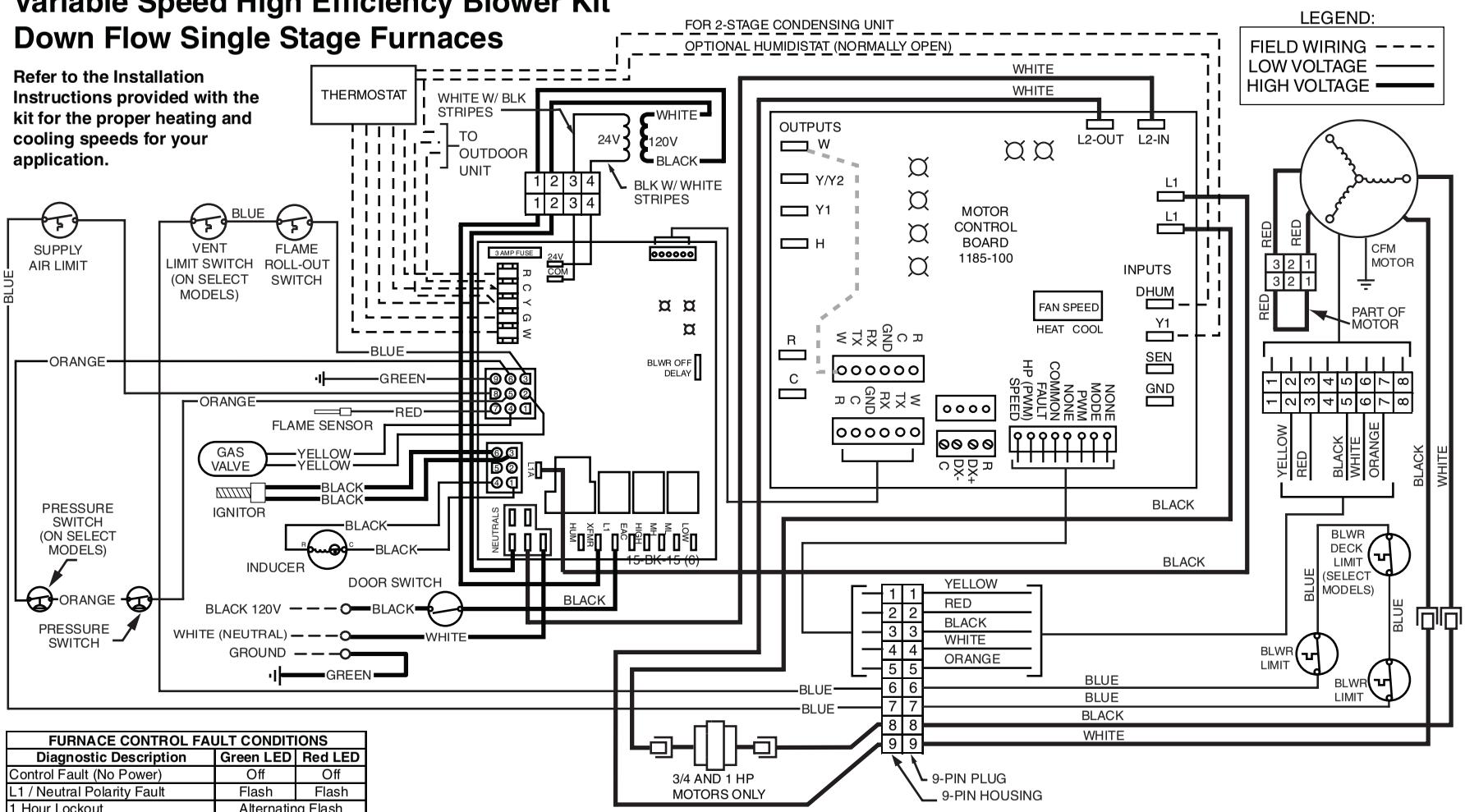
FURNACE CONTROL FAULT CONDITIONS		
Diagnostic Description	**Green LED**	**Red LED**
Control Fault (No Power)	Off	Off
L1 / Neutral Polarity Fault	Flash	Flash
1 Hour Lockout	Alternating Flash	
Normal Operation	On	On
Pressure Switch Closed Fault	On	Flash
Pressure Switch Open Fault	Flash	On
Open Limit Switch Fault	Flash	Off
Motor Fault	On	Off
Diagnostic Description	**Yellow LED**	
Low Flame Sensor Signal	Continuous Flash	
Flame Present	On	

MOTOR CONTROL FAULT CONDITIONS		
Diagnostic Description	**Red LED**	**Green LED**
Control Fault (No Power)	Off	Off
Normal Operation	On	On
Motor Fault	On	Flash
No Motor Fault	Flash	On
Communications Fault	Flash	Flash

7109230

Variable Speed High Efficiency Blower Kit
Down Flow Single Stage Furnaces

Refer to the Installation Instructions provided with the kit for the proper heating and cooling speeds for your application.



FURNACE CONTROL FAULT CONDITIONS		
Diagnostic Description	**Green LED**	**Red LED**
Control Fault (No Power)	Off	Off
L1 / Neutral Polarity Fault	Flash	Flash
1 Hour Lockout	Alternating Flash	
Normal Operation	On	On
Pressure Switch Closed Fault	On	Flash
Pressure Switch Open Fault	Flash	On
Open Limit Switch Fault	Flash	Off
Motor Fault	On	Off
Diagnostic Description	**Yellow LED**	
Low Flame Sensor Signal	Continuous Flash	
Flame Present	On	

MOTOR CONTROL FAULT CONDITIONS		
Diagnostic Description	**Red LED**	**Green LED**
Control Fault (No Power)	Off	Off
Normal Operation	On	On
Motor Fault	On	Flash
No Motor Fault	Flash	On
Communications Fault	Flash	Flash

If any of the orlglnal wire as supplied with the furnace must be replaced, it must be replaced with wiring material having a temperature rating of at least 105° C.

Use copper conductors only.

7109250

For 80+ and 90+ 2-Stage Variable Speed Upflow Furnaces

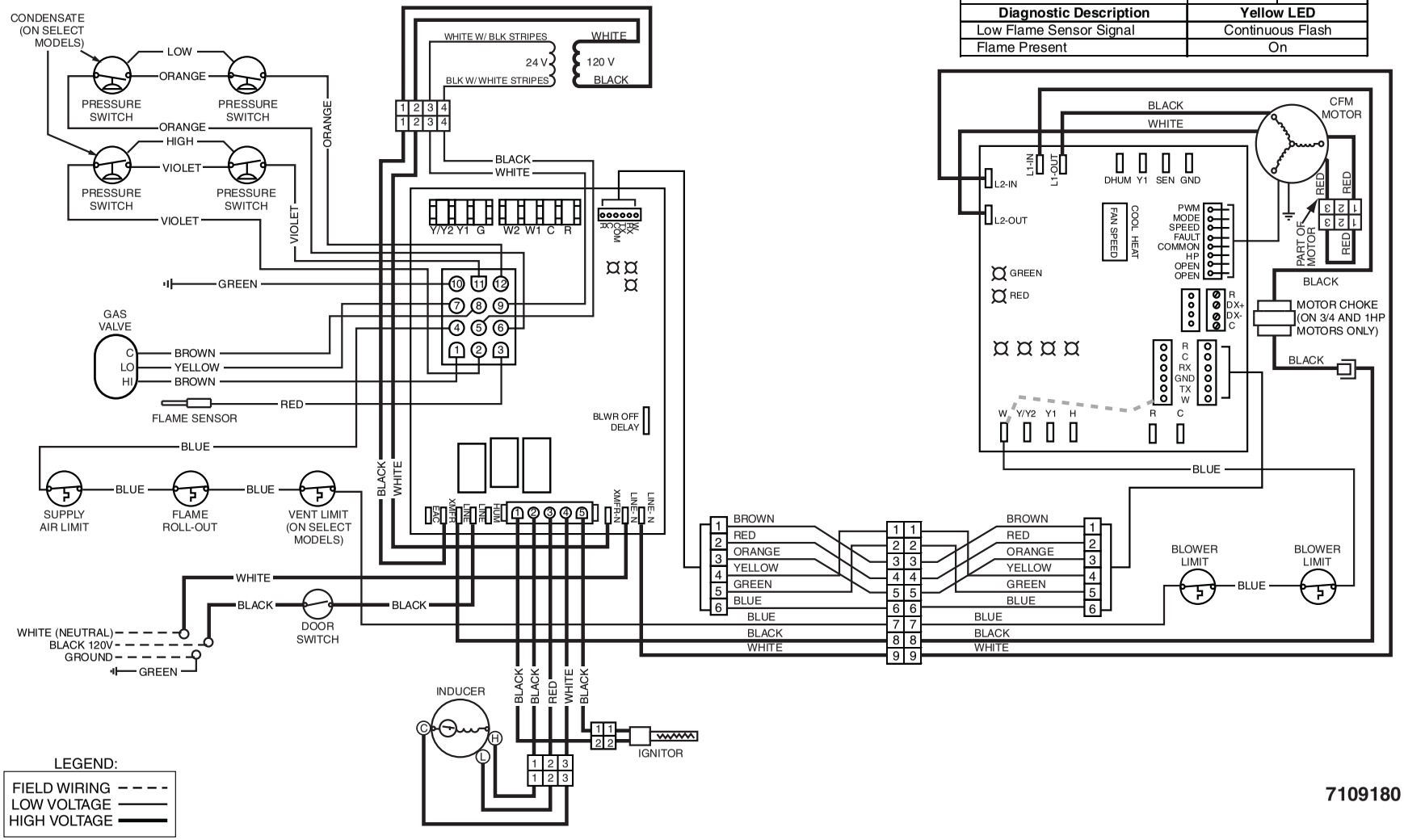
Refer to the Installation Instructions provided with the kit for the proper heating and cooling speeds for your application.

This wiring diagram shows connections and termination required for the blower kit only. Use in addition to the wiring diagram for the furnace.

If any of the orlglnal wire as supplied with the furnace must be replaced, it must be replaced with wiring material having a temperature rating of at least 105° C.

Use copper conductors only.

FAULT CONDITIONS		
Diagnostic Description	**Green LED**	**Red LED**
Control Fault (No Power)	Off	Off
L1 / Neutral Polarity Fault	Flash	Flash
1 Hour Lockout	Alternating Flash	
Normal Operation	On	On
Pressure Switch Closed Fault	On	Flash
Pressure Switch Open Fault	Flash	On
Open Limit Switch Fault	Flash	Off
Motor Fault	On	Off
Diagnostic Description	**Yellow LED**	
Low Flame Sensor Signal	Continuous Flash	
Flame Present	On	



LEGEND:

FIELD WIRING
LOW VOLTAGE
HIGH VOLTAGE

7109180

For 80+ and 90+ 2-Stage Variable Speed Downflow Furnaces

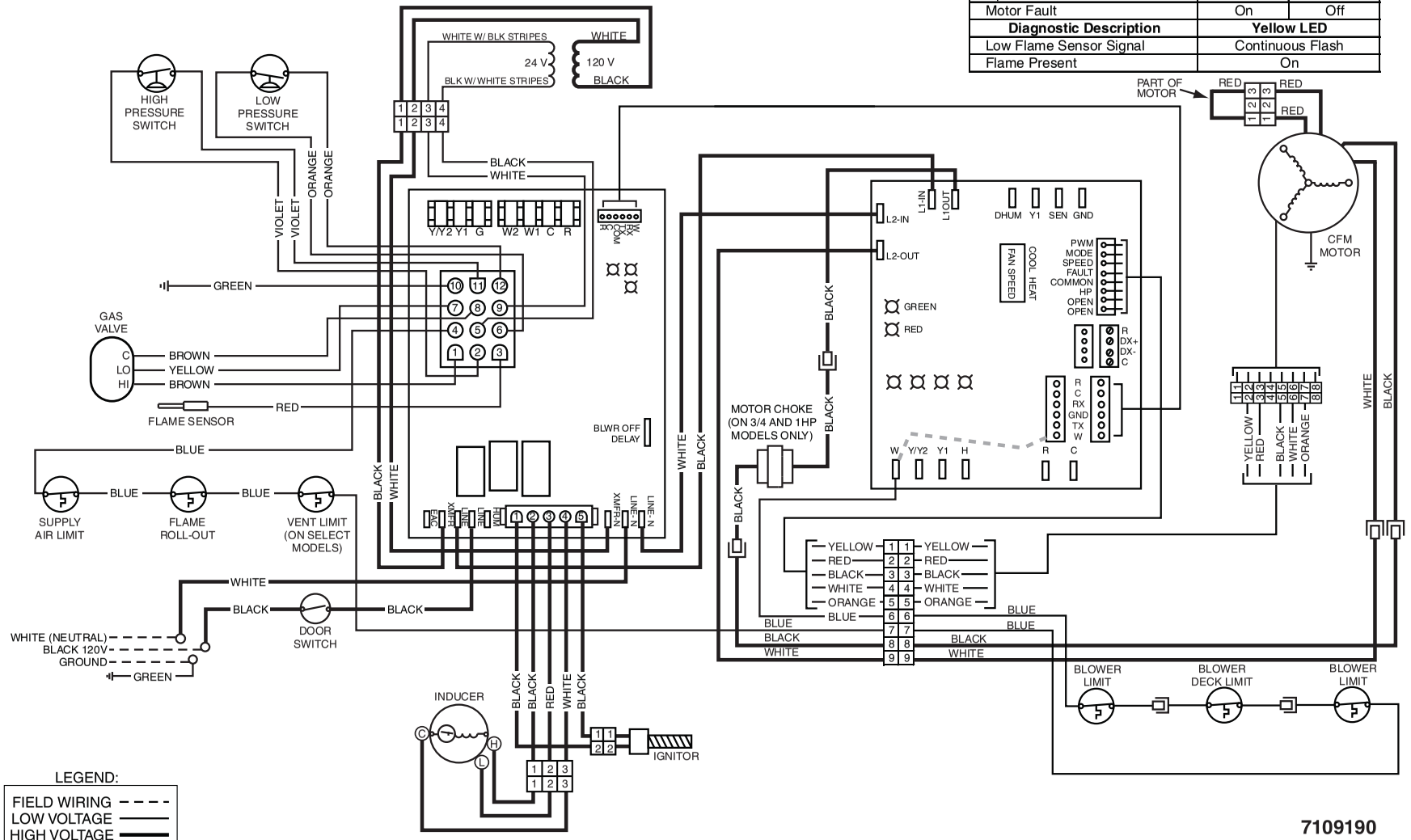
Refer to the Installation Instructions provided with the kit for the proper heating and cooling speeds for your application.

This wiring diagram shows connections and termination required for the blower kit only. Use in addition to the wiring diagram for the furnace.

If any of the original wire as supplied with the furnace must be replaced, it must be replaced with wiring material having a temperature rating of at least 105° C.

Use copper conductors only.

FAULT CONDITIONS		
Diagnostic Description	**Green LED**	**Red LED**
Control Fault (No Power)	Off	Off
L1 / Neutral Polarity Fault	Flash	Flash
1 Hour Lockout	Alternating Flash	
Normal Operation	On	On
Pressure Switch Closed Fault	On	Flash
Pressure Switch Open Fault	Flash	On
Open Limit Switch Fault	Flash	Off
Motor Fault	On	Off
Diagnostic Description	**Yellow LED**	
Low Flame Sensor Signal	Continuous Flash	
Flame Present	On	



7109190

Single Stage Furnace

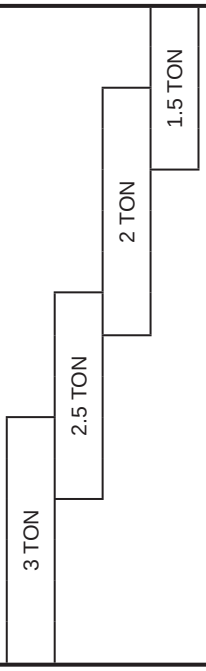
Nominal Heating Airflows (CFM) and Temperature Rise (°F)																			
A Cabinet				***SA-045(ŧ)-*A Models**		***SA/SK-054(ŧ)-*A Models**		***SC-038D-*A Models**											
Switch Settings HEAT				Input (BTU) 45000		Input (BTU) 54000		Input (BTU) 40000											
A/B	2	3	4	CFM	Temp Rise (°F)	CFM	Temp Rise (°F)	CFM	Temp Rise (°F)										
0	0	0	0	640	52	640	62	640	53										
0	0	0	1	720	46	720	56	720	47										
0	0	1	0	800	42	800	50	800	43										
0	0	1	1	880	38	880	45	880	39										
0	1	0	0	960	35	960	42	960	36										
0	1	0	1	1040	32	1040	38	1040	33										
0	1	1	0	1120	30	1120	36	1120	30										
0	1	1	1	1200	28	1200	33	1200	28										
B Cabinet				***SA/SK-072(ŧ)-*B Models**		***SA/SK-090(ŧ)-*B Models**		***SC/SL-054D-*B Models**		***SC/SL-072D-*B Models**									
Switch Settings HEAT				Input (BTU) 72000		Input (BTU) 90000		Input (BTU) 54000		Input (BTU) 72000									
A/B	2	3	4	CFM	Temp Rise (°F)	CFM	Temp Rise (°F)	CFM	Temp Rise (°F)	CFM	Temp Rise (°F)								
1	0	0	0	1000	53	1000	67	1000	46	1000	61								
1	0	0	1	1100	48	1100	61	1100	42	1100	56								
1	0	1	0	1200	44	1200	56	1200	38	1200	51								
1	0	1	1	1300	41	1300	51	1300	35	1300	47								
1	1	0	0	1400	38	1400	48	1400	33	1400	44								
1	1	0	1	1500	36	1500	44	1500	31	1500	41								
1	1	1	0	1600	33	1600	42	1600	29	1600	38								
1	1	1	1	1700	31	1700	39	1700	27	1700	36								
C Cabinet				***SA-072(ŧ)-*C Models**		***SA-090(ŧ)-*C Models**		***SA/SK-108(ŧ)-*C Models**		***SC-072D-*C Models**		***SC/SL-090D-*C Models**							
Switch Settings HEAT				Input (BTU) 72000		Input (BTU) 90000		Input (BTU) 108000		Input (BTU) 72000		Input (BTU) 90000							
A/B	2	3	4	CFM	Temp Rise (°F)	CFM	Temp Rise (°F)	CFM	Temp Rise (°F)	CFM	Temp Rise (°F)	CFM	Temp Rise (°F)						
#	0	0	0	1000	53	1000	67	1000	80	1000	61	1000	77						
#	0	0	1	1115	48	1115	60	1115	72	1115	55	1115	69						
#	0	1	0	1230	43	1230	54	1230	65	1230	50	1230	62						
#	0	1	1	1345	40	1345	50	1345	59	1345	46	1345	57						
#	1	0	0	1460	37	1460	46	1460	55	1460	42	1460	53						
#	1	0	1	1575	34	1575	42	1575	51	1575	39	1575	49						
#	1	1	0	1690	32	1690	39	1690	47	1690	36	1690	45						
#	1	1	1	1805	30	1805	37	1805	44	1805	34	1805	43						
D Cabinet				***SA/SK-126(ŧ)-*D Models**		***SC-108D-*D Models**		***SC/SL-120D-*D Models**											
Switch Settings HEAT				Input (BTU) 126000		Input (BTU) 108000		Input (BTU) 120000											
A/B	2	3	4	CFM	Temp Rise (°F)	CFM	Temp Rise (°F)	CFM	Temp Rise (°F)										
#	0	0	0	1500	62	1500	61	1500	68										
#	0	0	1	1615	58	1615	57	1615	63										
#	0	1	0	1730	54	1730	53	1730	59										
#	0	1	1	1845	51	1845	50	1845	55										
#	1	0	0	1960	48	1960	47	1960	52										
#	1	0	1	2075	45	2075	44	2075	49										
#	1	1	0	2190	43	2190	42	2190	47										
#	1	1	1	2305	40	2305	40	2305	44										
# Switch not used - can be 0 or 1																			

Notes:

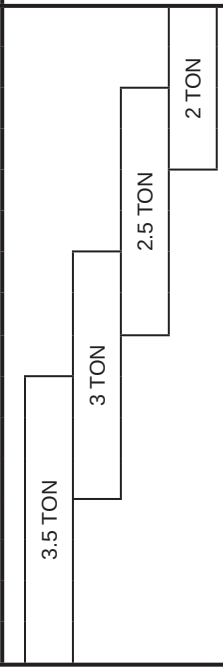
1. Two openings are recommended for airflows above 1600 CFM if the filter(s) is (are) adjacent to the furnace.
2. Temperature rises in the table are approximate. Actual temperature rises may vary.
3. Temperature rises that are shaded in grey are for reference only. These conditions are not recommended.

Cooling/Heat Pump Airflows

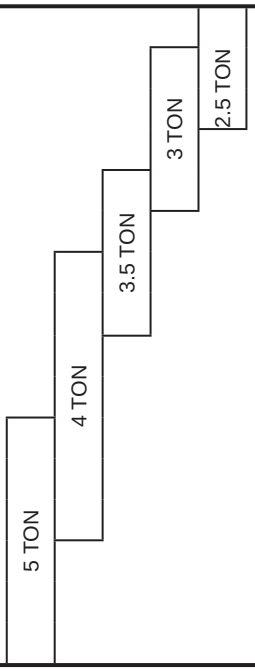
A Cabinet							Nominal A/C and HP Capacity
Switch Settings					CFM		
HEAT	COOL						
A/B	5	6	7	8	LOW	HIGH	
0	0	0	0	0	360	525	
0	0	0	0	1	400	580	
0	0	0	1	0	440	635	
0	0	0	1	1	475	690	
0	0	1	0	0	515	745	
0	0	1	0	1	550	800	
0	0	1	1	0	590	855	
0	0	1	1	1	630	910	
0	1	0	0	0	665	965	
0	1	0	0	1	705	1020	
0	1	0	1	0	740	1075	
0	1	0	1	1	780	1130	
0	1	1	0	0	820	1185	
0	1	1	0	1	855	1240	
0	1	1	1	0	895	1295	
0	1	1	1	1	930	1350	



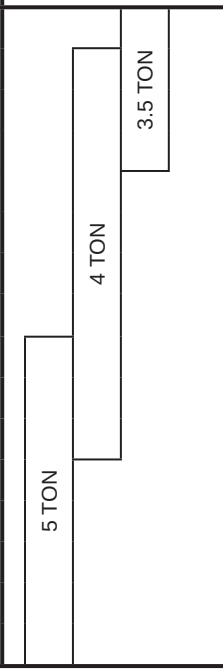
B Cabinet							Nominal A/C and HP Capacity
Switch Settings					CFM		
HEAT	COOL						
A/B	5	6	7	8	LOW	CFM	
1	0	0	0	0	485	700	
1	0	0	0	1	525	760	
1	0	0	1	0	565	820	
1	0	0	1	1	605	880	
1	0	1	0	0	650	940	
1	0	1	0	1	690	1000	
1	0	1	1	0	730	1060	
1	0	1	1	1	775	1120	
1	1	0	0	0	815	1180	
1	1	0	0	1	855	1240	
1	1	0	1	0	895	1300	
1	1	0	1	1	940	1360	
1	1	1	0	0	980	1420	
1	1	1	0	1	1020	1480	
1	1	1	1	0	1065	1540	
1	1	1	1	1	1105	1600	



C Cabinet							Nominal A/C and HP Capacity
Switch Settings					CFM		
HEAT	COOL						
A/B	5	6	7	8	LOW	CFM	
#	0	0	0	0	705	1025	
#	0	0	0	1	750	1090	
#	0	0	1	0	795	1155	
#	0	0	1	1	840	1220	
#	0	1	0	0	885	1285	
#	0	1	0	1	930	1350	
#	0	1	1	0	975	1415	
#	0	1	1	1	1020	1480	
#	1	0	0	0	1065	1545	
#	1	0	0	1	1110	1610	
#	1	0	1	0	1155	1675	
#	1	0	1	1	1200	1740	
#	1	1	0	0	1245	1805	
#	1	1	0	1	1290	1870	
#	1	1	1	0	1335	1935	
#	1	1	1	1	1380	2000	



D Cabinet							Nominal A/C and HP Capacity
Switch Settings					CFM		
HEAT	COOL						
A/B	5	6	7	8	LOW	CFM	
#	0	0	0	0	965	1400	
#	0	0	0	1	995	1440	
#	0	0	1	0	1020	1480	
#	0	0	1	1	1050	1520	
#	0	1	0	0	1075	1560	
#	0	1	0	1	1105	1600	
#	0	1	1	0	1130	1640	
#	0	1	1	1	1160	1680	
#	1	0	0	0	1185	1720	
#	1	0	0	1	1215	1760	
#	1	0	1	0	1240	1800	
#	1	0	1	1	1270	1840	
#	1	1	0	0	1295	1880	
#	1	1	0	1	1325	1920	
#	1	1	1	0	1350	1960	
#	1	1	1	1	1380	2000	



Switch not used - can be 0 or 1

Two - Stage Furnace
Natural Heating Airflows (CFM) and Temperature Rise (°F)

"A" CABINET					
Switch Settings (HEAT)				*TA/TK-060( )-*VA Input (BTU) 60,000	
1	2	3	4	CFM	Temp Rise (°F)
0	0	0	0	640	69
0	0	0	1	720	62
0	0	1	0	800	56
0	0	1	1	880	51
0	1	0	0	960	46
0	1	0	1	1,040	43
0	1	1	0	1,120	40
0	1	1	1	1,200	37

"B" CABINET							
Switch Settings (HEAT)				*TA/TK-080( )-*VB Input (BTU) 80,000		*TA/TK-100( )-*VB Input (BTU) 100,000	
1	2	3	4	CFM	Temp Rise (°F)	CFM	Temp Rise (°F)
1	0	0	0	1,000	59	1,000	74
1	0	0	1	1,100	54	1,100	67
1	0	1	0	1,200	49	1,200	62
1	0	1	1	1,300	46	1,300	57
1	1	0	0	1,400	42	1,400	53
1	1	0	1	1,500	40	1,500	49
1	1	1	0	1,600	37	1,600	46
1	1	1	1	1,700	35	1,700	44

"C" CABINET							
Switch Settings (HEAT)				*TA/TK-100( )-*VC Input (BTU) 100,000		*TA/TK-120( )-*VC Input (BTU) 120,000	
1	2	3	4	CFM	Temp Rise (°F)	CFM	Temp Rise (°F)
#	0	0	0	1,000	74	1,000	89
#	0	0	1	1,115	66	1,115	80
#	0	1	0	1,230	60	1,230	72
#	0	1	1	1,345	55	1,345	66
#	1	0	0	1,460	51	1,460	61
#	1	0	1	1,575	47	1,575	56
#	1	1	0	1,690	44	1,690	53
#	1	1	1	1,805	41	1,805	49

"D" CABINET					
Switch Settings (HEAT)				*TA/TK-140( )-*VD Input (BTU) 140,000	
1	2	3	4	CFM	Temp Rise (°F)
#	0	0	0	1,500	69
#	0	0	1	1,615	64
#	0	1	0	1,730	60
#	0	1	1	1,845	56
#	1	0	0	1,960	53
#	1	0	1	2,075	50
#	1	1	0	2,190	47
#	1	1	1	2,305	45

NOTES:

Switch not used - can be 0 or 1

1. Two openings are recommended for airflows above 1,600 CFM if the filter(s) is (are) adjacent to the furnace.
2. Temperature rises in the table are approximate. Actual temperature rises may vary.
3. Temperature rises shaded in grey are for reference only. These conditions are not recommended.

Nominal Heating Airflows (CFM) and Temperature Rises (°F) for Furnaces with - Variable Speed

"B" CABINET					
Switch Settings (HEAT)				*TC/TL-060D-*B Input (BTU) 60,000	
1	2	3	4	CFM	Temp Rise (°F)
1	0	0	0	1,000	53
1	0	0	1	1,100	48
1	0	1	0	1,200	44
1	0	1	1	1,300	41
1	1	0	0	1,400	38
1	1	0	1	1,500	35
1	1	1	0	1,600	33
1	1	1	1	1,700	31

"C" CABINET							
Switch Settings (HEAT)				*TC/TL-080D-*C Input (BTU) 80,000		*TC/TL-100D-*C Input (BTU) 100,000	
1	2	3	4	CFM	Temp Rise (°F)	CFM	Temp Rise (°F)
#	0	0	0	1,000	70	1,000	88
#	0	0	1	1,115	63	1,115	79
#	0	1	0	1,230	57	1,230	72
#	0	1	1	1,345	52	1,345	65
#	1	0	0	1,460	48	1,460	60
#	1	0	1	1,575	45	1,575	56
#	1	1	0	1,690	42	1,690	52
#	1	1	1	1,805	39	1,805	49

"D" CABINET					
Switch Settings (HEAT)				*TC/TL-120D-*D Input (BTU) 120,000	
1	2	3	4	CFM	Temp Rise (°F)
#	0	0	0	1,500	70
#	0	0	1	1,615	65
#	0	1	0	1,730	61
#	0	1	1	1,845	57
#	1	0	0	1,960	54
#	1	0	1	2,075	51
#	1	1	0	2,190	48
#	1	1	1	2,305	46

Notes:

Switch not used - can be 0 or 1

1. Two openings are recommended for airflows above 1,600 CFM if the filter(s) is (are) adjacent to the furnace.
2. Temperature rises in the table are approximate. Actual temperature rises may vary.
3. Temperature rises shaded in grey are for reference only. These conditions are not recommended.

O'Fallon, MO

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