

SUPPLEMENTAL INSTALLATION MANUAL

CLIMATE CONTROL & CFM SELECTION

FOR MODELS: N*VS & F*FV SERIES VARIABLE SPEED AIR HANDLERS

BLOWER SPEED SELECTION

High Speed Cooling and Heat Pump CFM					
Model				Jumper Setting	
N*VSB12	N*VSD12	N*VSC16	N*VSD20 F*FV060	"Cool Tap"	"Adj Tap"
1250	1400	1650	2100	"A"	"B"
1230	1230	1570	1980	"B"	"B"
1150	1220	1500	1860	"A"	"A"
1070	1070	1425	1750	"B"	"A"
1035	1100	1350	1675	"A"	"C"
1000	1000	1305	1605	"C"	"B"
965	965	1285	1575	"B"	"C"
820	820	1220	1510	"D"	"B"
870	870	1185	1420	"C"	"A"
715	715	1110	1335	"D"	"A"
785	785	1065	1280	"C"	"C"
645	645	1000	1200	"D"	"C"

Electric Heat CFM - First Stage Heating				
Model				Tap Selections
N*VSB12	N*VSD12	N*VSC16	N*VSD20 / F*FV060	"Heat"
1150	1220	1500	1860	"A"
1070	1070	1425	1750	"B"
870	870	1185	1420	"C"
715	715	1110	1335	"D"

Comfort Setting - Delay Profile	
"Delay" Tap	Unit Type
Jumper at "A"	Normal Profile
Jumper at "B"	Humid Profile
Jumper at "C"	Dry Profile
Jumper at "D"	Temperate Profile

NOTE:

- Both the "COOL" and the "ADJ" tap are set for the cooling CFM from the factory. Use chart above to choose different CFM. Taps must be in place.
- Factory default tap settings are:
Cool = A, Heat = A, ADJ = A, Delay = A.
- Low speed cooling is used only with two stage outdoor units. (Speed is preset to 66% of high speed).
- When operating in both heat pump and electric heat modes, the CFM will be whichever is greater.
- CFM indicator light flashes once for every 100 CFM. (i.e.: 12 Flashes is 1200 CFM).
- Fan only CFM = 63% of high speed cooling.
- Dehumidification speed is 85% of cooling speed.

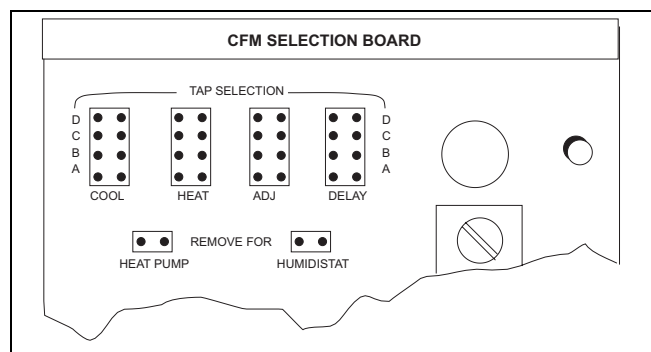


FIGURE 1: CFM Selection Board Detail

INSTRUCTIONS FOR COMFORT SETTINGS

CFM Selection Board - Delay Tap Selection

The set of jumper pins on the CFM board labeled "DELAY" are used to set the delay profiles for the Air Handler. These can be chosen so as to maximize the comfort and sound levels for various regions of the country.

Tap A is the normal profile:

It provides a 30-second ramp-up from zero airflow to full capacity and a 30-second ramp-down from full capacity back to zero airflow. Whenever there is a change in airflow mode, such as a call for cooling or a change from low heat to high heat, the motor will take 30 seconds to ramp from one speed to the other.

Tap B is the humid profile:

This profile is best-suited for installations where the humidity is frequently very high during cooling season, such as in the southern part of the country. On a call for cooling, the blower will ramp up to 50% of full capacity and will stay there for two minutes, then will ramp up to 82% of full capacity and will stay there for five minutes, and then will ramp up to full capacity, where it will stay until the wall thermostat is satisfied. In every case, it will take the motor 30 seconds to ramp from one speed to another.

Tap C is the dry profile:

This profile is best suited to parts of the country where excessive humidity is not generally a problem, where the summer months are usually dry. On a call for cooling the motor will ramp up to full capacity and will stay there until the thermostat is satisfied. At the end of the cooling cycle, the blower will ramp down to 50% of full capacity where it will stay for 60 seconds. Then it will ramp down to zero. In every case, it will take the motor 30 seconds to ramp from one speed to another.

Tap D is the temperate profile:

Best suited for most of the country, where neither excessive humidity nor extremely dry conditions are the norm. On a call for cooling, the motor will ramp up to 63% of full capacity and will stay there for 90 seconds, then will ramp up to full capacity. At the end of the cooling cycle, the motor will ramp down to 63% of full capacity and will stay there for 30 seconds, then will ramp down to zero. In every case, it will take the motor 30 seconds to ramp from one speed to another.

SPEED TAP SELECTIONS AND THERMOSTAT INPUTS

Continuous Blower Operation

The blower will run continuously whenever the wall thermostat fan switch is in the "ON" position. The Air Handler blower will run at 63% of the speed selected by the "TAP SELECTION" jumpers on the CFM Selection board (COOL, HEAT & ADJ).

Intermittent Blower Cooling

On cooling/ heating thermostats with a fan switch, when the fan switch is set in the auto position and the thermostat calls for cooling, a circuit is completed between the R, Y and G terminals. The fan motor is energized through the Y cool terminal and runs on the speed selected by the COOL & ADJ taps of the CFM Selection board. The fan off delay setting is fixed at 60 seconds for SEER enhancement.

The CFM Selection control board can accommodate two-stage cooling. When a two-stage cool thermostat is connected to the Y1 terminal on the CFM board, the blower will operate on LOW COOL speed when Y1 is energized. LO COOL is 66% of HI COOL. HI COOL speed is selected when Y or Y&Y1 are energized.

Intermittent Blower Heating

On cooling/ heating thermostats with a fan switch, when the fan switch is set in the auto position and the thermostat calls for first stage heating, a circuit is completed between the R and W1 terminals. The indoor fan motor is energized through the W1 heat terminal and runs on the speed selected on the HEAT tap of the CFM Selection board. ADJ tap is not applicable. When the W2 (Second Stage Heating) or W1&W2 terminals are energized, the fan motor will run on the speed selected by the COOL & ADJ taps

Humidistat

When a humidistat is installed in the system, the "Humidistat" jumper on the CFM board should be re-moved, the cooling CFM will then be reduced by 15% whenever the humidistat is energized

Heat Pump

When a heat pump is installed in the system, the jumper on the heat pump tap should be removed. When operating with both heat pump and electric heat, the CFM will be set to whichever is greater.