



H8MPV

Product Specifications

80+ Variable Speed Two-Stage Heating Furnace

FLEXIBILITY

- Supports two-stage cooling units
- 40" high, for ease of installation
- Factory shipped for natural gas, with LP gas conversion kits available
- Four position – upflow/downflow/horizontal installation
- Three position inducer capability
- Category I venting
- Common venting with other Category I appliances

SERVICE

- Self diagnostics
- Entire blower assembly removable

COMFORT

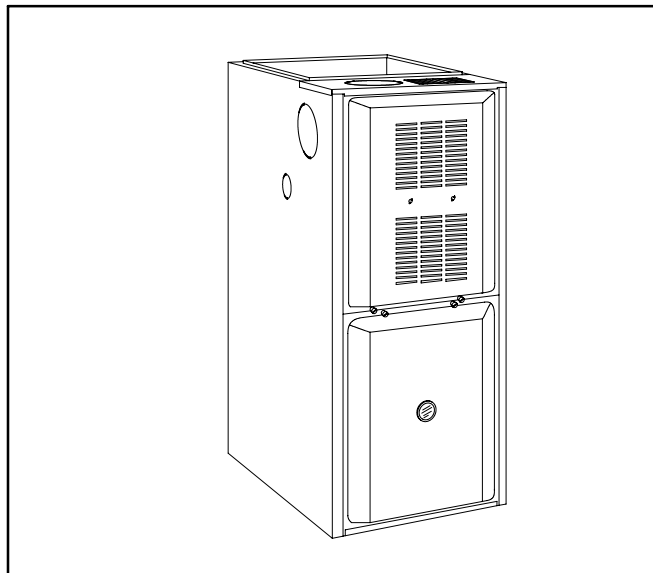
- Adjustable timed blower heating Off delay
- Adjustable timed blower cooling On/Off delay
- 24 and 115 VAC humidifier terminals
- Electronic air cleaner terminal

EFFICIENCY

- 80% AFUE
- Two-stage operation
- BPM Variable speed DC motor
- Two-stage Induced draft blower
- In-shot burners
- California NOx approved

QUALITY

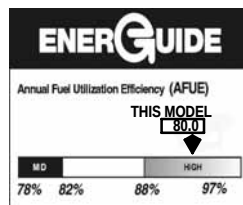
- RPJ3 Aluminized steel heat exchanger
- High temperature limit control prevents overheating
- Direct ignition with Silicon Nitride ignitor
- Flame roll-out sensors standard
- Louvered doors
- One piece prepainted steel cabinet
- Masonry chimney adapter available (Some models)



Representative drawing only, some models may vary in appearance.

WARNING

This furnace is not designed for use inside mobile homes, trailers, or recreational vehicles. Such use could result in property damage, bodily injury, and/or death.



UPFLOW/DOWNFLOW/HORIZONTAL (NATURAL GAS)				
Model Number	Dimensions H x W x D (In.)	Input (MBTUH)	Efficiency AFUE	Cooling Cap. @ .5" W.C.
H8MPV050B12C	40 x 15 ¹ / ₂ x 29	50,000	80%	1.5 – 3.0 TON
H8MPV075F14C	40 x 19 ¹ / ₈ x 29	75,000	80%	1.5 – 3.5 TON
H8MPV100J20C	40 x 22 ³ / ₄ x 29	100,000	80%	2.5 – 5.0 TON
H8MPV125J20C	40 x 22 ³ / ₄ x 29	125,000	80%	3.0 – 5.0 TON

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FURNACE SPECIFICATIONSCE MULTI-POSITION

Model Number	NATURAL GAS	*8MPV050B12C	*8MPV075F14C	*8MPV100J20C	*8MPV125J20C
INPUT (btuh)	HI Heat LO Heat	50,000 35,000	75,000 52,500	100,000 70,000	125,000 87,500
HTG. CAP. (btuh)	HI Heat LO Heat	40,000 28,000	61,000 42,000	81,000 61,000	101,000 71,000
AFUE % (ICS)		80.0%	80.0%	80.0%	80.0%
NOx (Ng/J)		<40	<40	<40	<40
TEMP. RISE (deg. F)	HI Heat LO Heat	30 - 60 25 - 55	30 - 60 25 - 55	35 - 65 35 - 65	30 - 60 25 - 55
VOLTS/PH/HZ		115/60/1	115/60/1	115/60/1	115/60/1
MIN./MAX. VOLTAGE		104/127	104/127	104/127	104/127
RATING PLATE AMPS.		9.8	11.7	14.9	14.9
TRANSFORMER (V.A.)		40	40	40	40
GAS PIPE SIZE (IN.)		1/2	1/2	1/2	1/2
CATEGORY I VENT SIZE		4"	4"	4"	4"
COOLING CAP.		3.0 TON	3.5 TON	5.0 TON	5.0 TON
FILTER SIZE (IN.) (required)		14 x 25 x 1	14 x 25 x 1	16 x 25 x 1 (2)	16 x 25 x 1 (2)
SHIPPING WEIGHT (LBS.)		130	154	174	176
DIMENSIONS (in.) HEIGHT		40	40	40	40
WIDTH X DEPTH		15 ¹ / ₂ x 28 ¹ / ₂	19 ¹ / ₈ x 28 ¹ / ₂	22 ³ / ₄ x 28 ¹ / ₂	22 ³ / ₄ x 28 ¹ / ₂

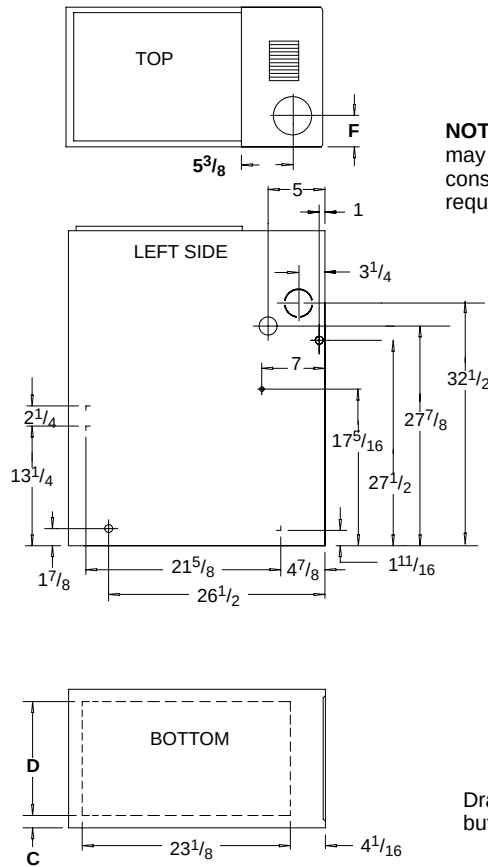
ACCESSORIES

Model Number	Description	Used With Models
GAS CONVERSION KITS		
NAHA002LP (1172959**)	Natural gas to LP (propane) conversion Kit. Allows field conversion to LP (propane) gas.	ALL *8MPV FURNACES
NAHA002NG (1172961**)	LP (Propane) to natural gas conversion kit. Allows field conversion to natural gas.	ALL *8MPV FURNACES
FILTER KITS		
NAHA001FF NAHA001FP	External filter frame. 16" x 25"	Side Return (All Furnaces) Bottom Return (All "F" 19 ¹ / ₈ " Furnaces under 1600 CFM)
NAHA002FF NAHA002FP	Bottom return filter frame kit 20" x 25".	(All "J" 22 ³ / ₄ " Furnaces)
NAHA003FF NAHA002FP	Bottom or side return filter frame kit 14" x 25".	(All "B" 15 ¹ / ₂ " Furnaces)
NAHA001TK	Duct Standoff Filter Kit. To adapt 20" x 25" filter for single side return.	Side Return (All single return applications with 1600 CFM or greater) Bottom Return (All "F" 19 ¹ / ₈ " Furnaces under 1600 CFM)
COMBUSTIBLE FLOOR SUBBASES		
NAHH001SB	Subbase Furnace ONLY: All 15 ¹ / ₂ " wide furnace models	*8MPV050B
NAHH002SB	Subbase Furnace ONLY: All 19 ¹ / ₄ " wide furnace models	*8MPV075F-100F
NAHH003SB	Subbase Furnace ONLY: All 22 ³ / ₄ " wide furnace models	*8MPV100J-125J
NAHH004SB	Subbase Furnace w/15 ¹ / ₂ " cased coil	Counterflow furnace *8MPV050B
NAHH005SB	Subbase Furnace w/19 ¹ / ₄ " cased coil	Counterflow furnace *8MPV075F-100F
NAHH006SB	Subbase Furnace w/22 ³ / ₄ " cased coil	Counterflow furnace *8MPV100J-125J
MASONRY CHIMNEY ADAPTER		
NAHA001DH	Chimney adapter (6")	*8MPV075, 100
NAHA002DH	Chimney adapter (7")	*8MPV125
VENT GUARD		
NAHA002VC	Downflow vent guard	All Furnaces in the Downflow Application
COIL ADAPTER		
NAHA001CA	Coil Adapter for Downflow Furnaces	All Furnaces in the Downflow Application
WARNING LABEL REPLACEMENT KIT		
NAHA002WL	To replace Warning Labels, Operating Instructions & Wiring Labels on Blower Door when needed	*8MPV

* Denotes Brand

** Fast part number

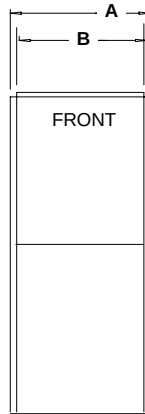
UNIT DIMENSIONS



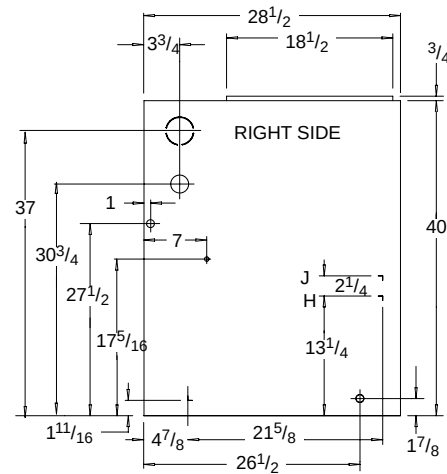
NOTE: Evaporator "A" coil drain pan dimensions may vary from furnace duct opening size. Always consult evaporator specifications for duct size requirements.

Unit is designed for bottom return or side return.

Return air through back of unit is NOT allowed.



Drawing is representative, but some models may vary



25-23-44a

ALL DIMENSIONS IN INCHES

Unit Capacity	Cabinet		Top	Bottom		Duct Size
	A	B	F	C	D	
*8MPV050B12	15 $\frac{1}{2}$	14	6	1 $\frac{3}{8}$	12 $\frac{5}{8}$	H
*8MPV075F14	19 $\frac{1}{8}$	17 $\frac{1}{2}$	7 $\frac{3}{4}$	2 $\frac{1}{8}$	14 $\frac{3}{4}$	J
*8MPV100J20 *8MPV125J20	22 $\frac{3}{4}$	21 $\frac{1}{4}$	9 $\frac{1}{2}$	1 $\frac{5}{16}$	18 $\frac{3}{4}$	J

* Denotes Brand

MODEL NUMBER IDENTIFICATION GUIDE

* Brand		8 8 = Non-Condensing, 80+% Gas Furnace 9 = Condensing, 90+% Gas Furnace	M P	V	0 7 5	B	1 2	C Engineering Rev. Denotes minor change		# Marketing Digit Denotes major change
Brand Efficiency 8 = Non-Condensing, 80+% Gas Furnace 9 = Condensing, 90+% Gas Furnace										
Installation Configuration UP = Upflow DN = Downflow UH = Upflow/Horizontal HZ = Horizontal DH = Downflow/Horizontal MP = Multiposition, Upflow/Downflow/Horizontal										
Major Design Feature 1 = One (Single) Pipe N = Single Stage 2 = Two Pipe P = PVC Vent D = 1 or 2 Pipe T = Two Stage L = Low NOx V = Variable Speed										
								Cooling Airflow 08 = 800 CFM 16 = 1600 CFM 12 = 1200 CFM 20 = 2000 CFM 14 = 1400 CFM		
								Cabinet Width B = 15.5" Wide J = 22.8" Wide F = 19.1" Wide L = 24.5" Wide		
Input (Nominal MBTUH)										

Circulation Air Blower Data - *8MPV050

Heating, Cooling & Continuous Airflow Settings

Table 1

Cooling CFM Adjustment				Heating Rise Adjustment		
DIP Switch 5 & 6	High Cool @ 0.50" w c	Low Cool (80% of High Cool)	**Adjust Jumper Setting	DIP Switch 3 & 4	High Heat Rise Change @ 0.20" w c	Low Heat Rise Change at Resultant Static
00	1235	988	+	00	-3	-3
*00	1206	965	*NOM	*00	0	0
00	1114	891	-	00	5	4
01	1092	874	+	01	0	0
01	1021	817	NOM	01	3	4
01	949	759	-	01	8	6
10	884	707	+	10	-2	-1
10	826	661	NOM	10	2	2
10	740	592	-	10	6	5
11	650	520	+	11	-7	-5
11	591	473	NOM	11	-4	-3
11	530	424	-	11	0	0

Airflow performance includes 1" washable filter media.

*Factory Setting

**Adjust Jumper Setting (+, NOM, -) is applied to both Cooling and Heating

Note 1: HP Mode Jumper provides a 10% reduction in airflow when in Comfort position and a call for low or high cooling is present with the "O" line off. This feature is to provide lower airflow for running in HP Heating Mode if desirable.

Note 2: DEHUM mode (24VAC on DEHUM terminal) provides a 20% airflow reduction during cooling calls.

Note 3: Low Heat ESP is a result of High Heat ESP (- is decrease in rise)

Note 4: High and low heat rise values are approximate air temperature change from return air temperature when at factory default settings.

Table 2

Continuous Fan @ .10" ESP

DIP Switch 1 & 2	Airflow (CFM)
*00	620
01	1060
10	1333
11	1333

* Factory Setting

Table 3

SW2 DIP assignments

DIP Switch	Blower Parameter
1 & 2	Cont Fan Adj
3 & 4	Heat Speed Adj
5 & 6	Cool Speed Adj
7 & 8	Cool On/Off Delay

Table 4

Cooling Delay Options (SW2 - 7, 8)				
On Delay		Off Delay		
DIP SW2-7/8	Timed ON (sec)	Airflow during on delay	Timed OFF (sec)	Airflow during off delay
*00	5	-	90	100%
01	5	-	0	-
10	30	50%	30	100%
11	30	50%	180	50%

Airflow % is of High Cool airflow demand determined from SW2-5/6 Table 1

Airflow resumes to 100% after on delay time is completed

Airflow stops (or switches to continuous fan speed) after off delay time is completed

* Factory Setting

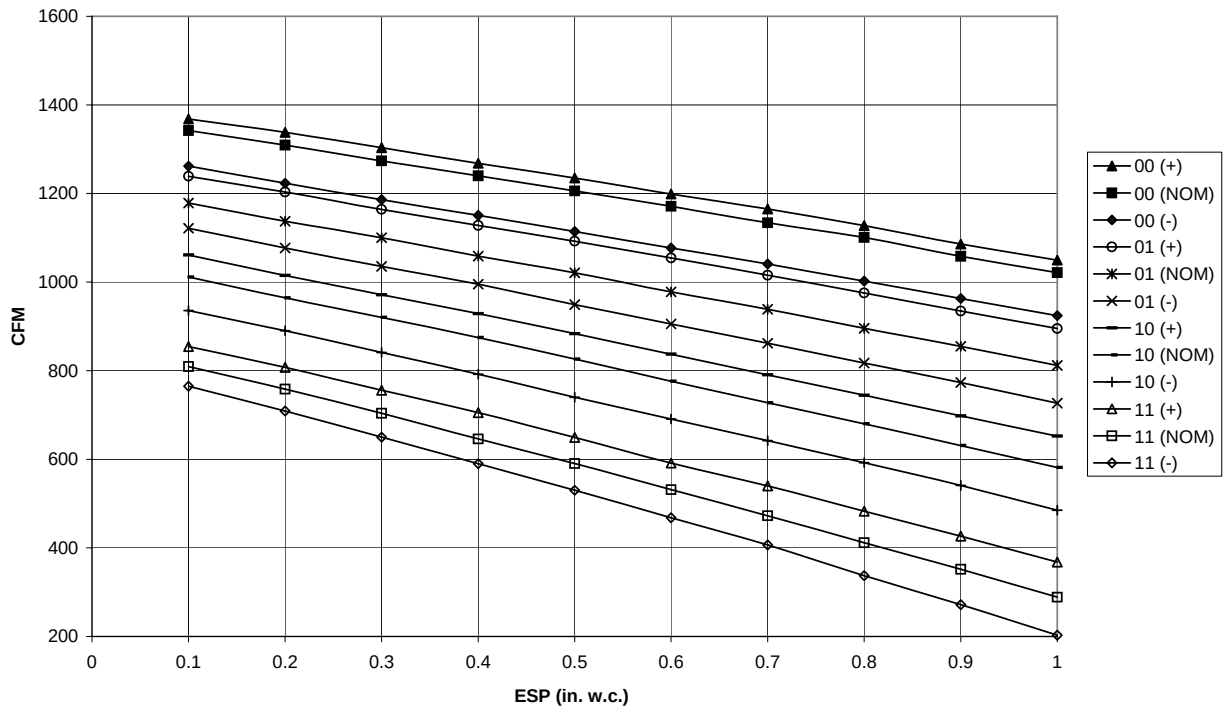
MAX CFM's for Factory Washable Filters	
14" X 25"	1400
16" X 25"	1600
20" X 25"	2000
24" X 25"	2500
MAX CFM based on 600FPM	

Note 1: Disposable filters are typically rated at 300 FPM. These filters only allow half the airflow when compared to 600 FPM filters. (example, 20 x 25 @ 600 FPM = 2000CFM, @ 300 FPM = 1000 CFM)

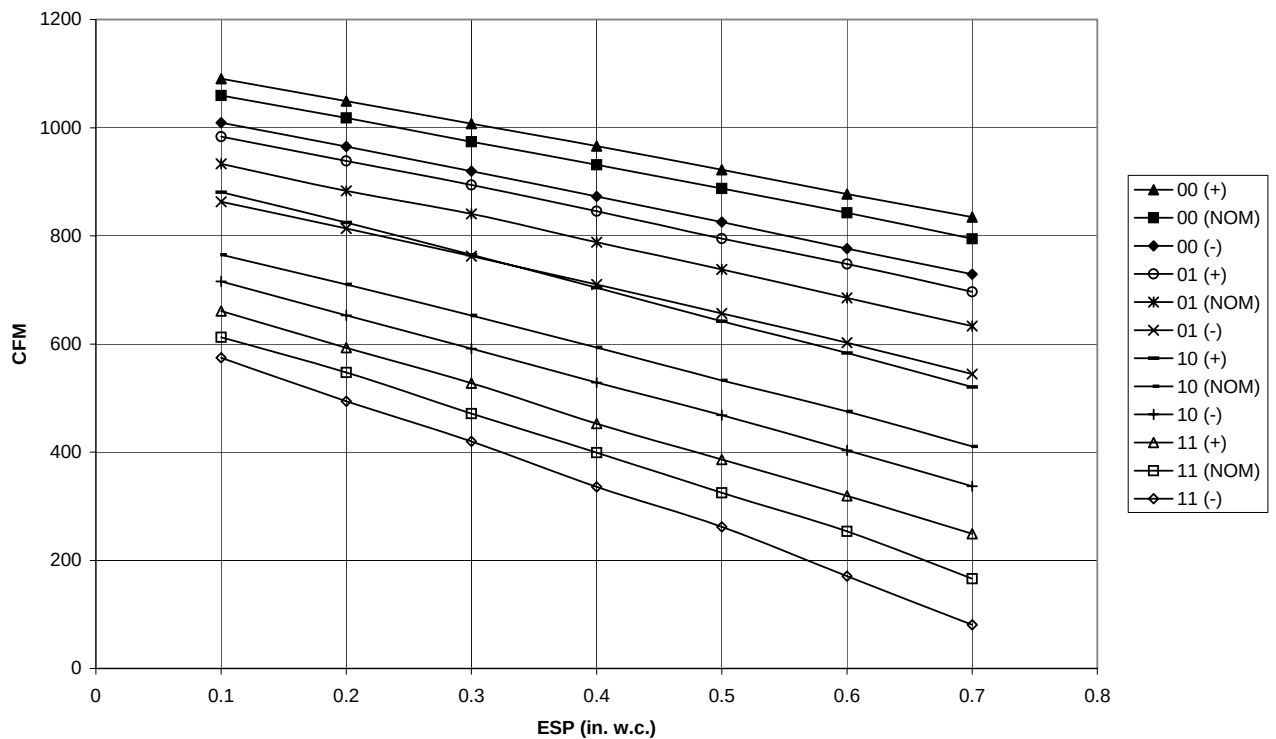
Circulation Air Blower Data - *8MPV050

Cooling Airflow Settings

High Cooling Airflows *8MPV050B12



Low Cooling Airflows *8MPV050B12



Circulation Air Blower Data - *8MPV075

Heating, Cooling & Continuous Airflow Settings

Table 1

Cooling CFM Adjustment				Heating Rise Adjustment		
DIP Switch 5 & 6	High Cool @ 0.50" w c	Low Cool (80% of High Cool)	**Adjust Jumper Setting	DIP Switch 3 & 4	High Heat Rise Change @ 0.20" w c	Low Heat Rise Change at Resultant Static
00	1550	1240	+	00	-3	-2
*00	1423	1138	*NOM	*00	0	0
00	1240	992	-	00	3	3
01	1524	1219	+	01	0	0
01	1209	967	NOM	01	2	3
01	1038	830	-	01	7	6
10	1131	905	+	10	-3	-3
10	1005	804	NOM	10	0	1
10	851	681	-	10	3	4
11	908	726	+	11	-8	-7
11	777	622	NOM	11	-7	-6
11	651	521	-	11	-4	-2

Airflow performance includes 1" washable filter media.

*Factory Setting

**Adjust Jumper Setting (+, NOM, -) is applied to both Cooling and Heating

Note 1: HP Mode Jumper provides a 10% reduction in airflow when in Comfort position and a call for low or high cooling is present with the "O" line off. This feature is to provide lower airflow for running in HP Heating Mode if desirable.

Note 2: DEHUM mode (24VAC on DEHUM terminal) provides a 20% airflow reduction during cooling calls.

Note 3: Low Heat ESP is a result of High Heat ESP (- is decrease in rise).

Note 4: High and low heat rise values are approximate air temperature change from return air temperature when at factory default settings.

Table 2

Continuous Fan @ .10" ESP

DIP Switch 1 & 2	Airflow (CFM)
*00	700
01	1244
10	1597
11	1597

* Factory Setting

Table 3

SW2 DIP assignments

DIP Switch	Blower Parameter
1 & 2	Cont Fan Adj
3 & 4	Heat Speed Adj
5 & 6	Cool Speed Adj
7 & 8	Cool On/Off Delay

Table 4

DIP SW2-7/8	Cooling Delay Options (SW2 - 7, 8)			
	On Delay		Off Delay	
	Timed ON (sec)	Airflow during on delay	Timed OFF (sec)	Airflow during off delay
*00	5	-	90	100%
01	5	-	0	-
10	30	50%	30	100%
11	30	50%	180	50%

Airflow % is of High Cool airflow demand determined from SW2-5/6 Table 1

Airflow resumes to 100% after on delay time is completed

Airflow stops (or switches to continuous fan speed) after off delay time is completed

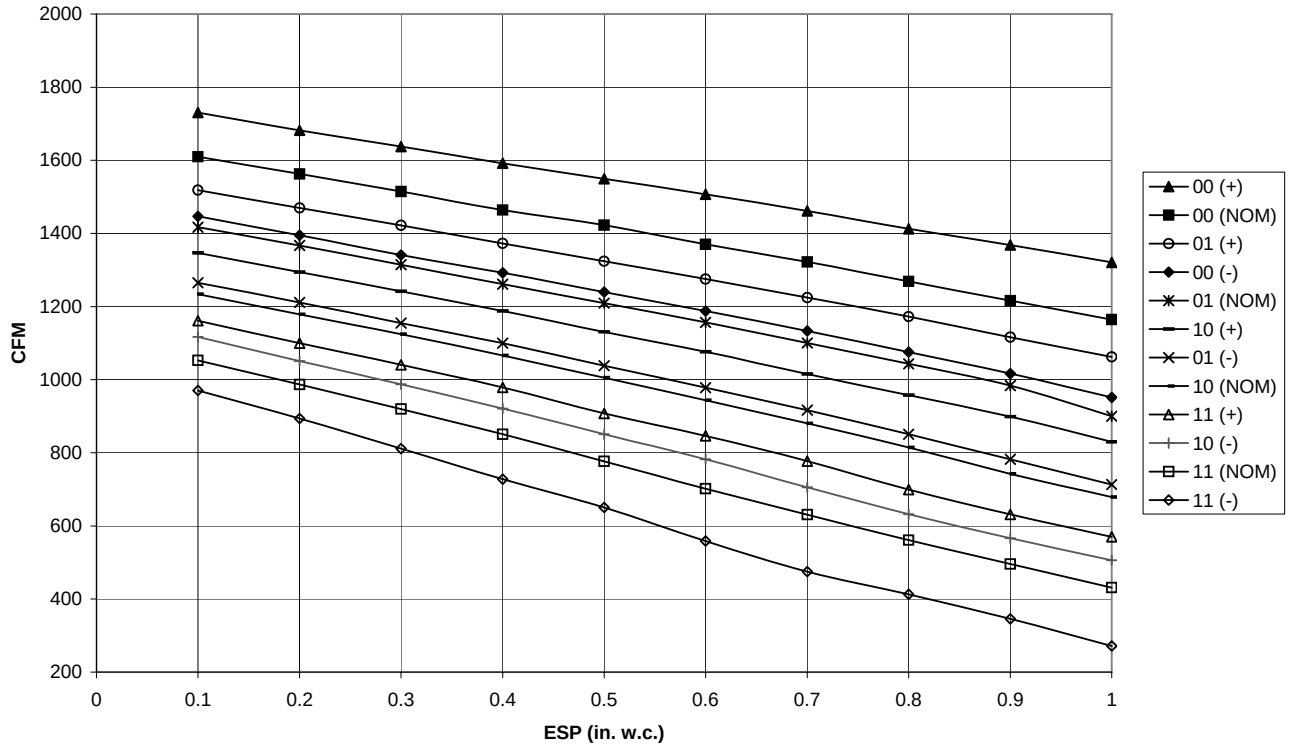
* Factory Setting

MAX CFM's for Factory Washable Filters	
14" X 25"	1400
16" X 25"	1600
20" X 25"	2000
24" X 25"	2500
MAX CFM based on 600FPM	

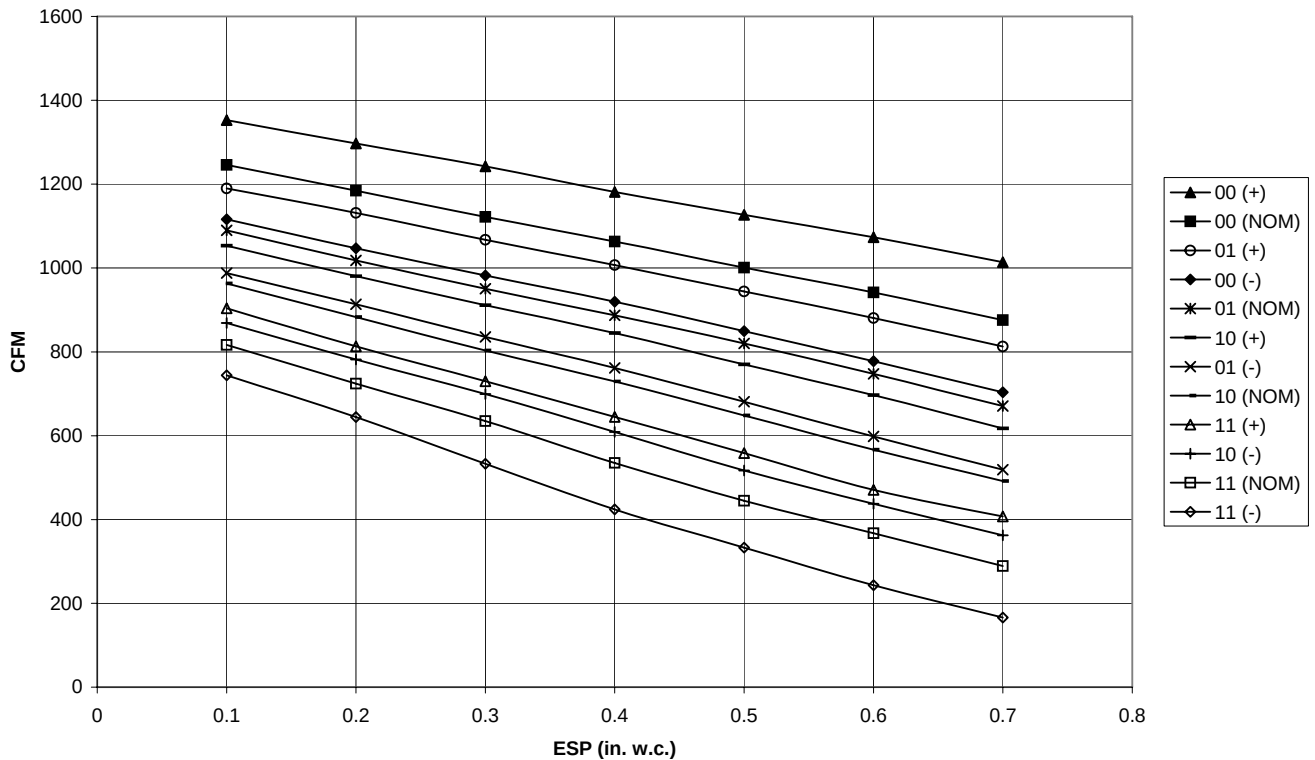
Note 1: Disposable filters are typically rated at 300 FPM. These filters only allow half the airflow when compared to 600 FPM filters. (example, 20 x 25 @ 600 FPM = 2000CFM, @ 300 FPM = 1000 CFM)

Circulation Air Blower Data - *8MPV075

High Cooling Airflows *8MPV075F14



Low Cooling Airflows *8MPV075F14



Circulation Air Blower Data - *8MPV100

Heating, Cooling & Continuous Airflow Settings

Table 1

Cooling CFM Adjustment				Heating Rise Adjustment		
DIP Switch 5 & 6	High Cool @ 0.50" w c	Low Cool (80% of High Cool)	**Adjust Jumper Setting	DIP Switch 3 & 4	High Heat Rise Change @ 0.20" w c	Low Heat Rise Change at Resultant Static
00	2101	1681	+	00	-3	-3
*00	2016	1613	*NOM	*00	0	0
00	1847	1478	-	00	4	4
01	1721	1377	+	01	5	6
01	1600	1280	NOM	01	9	9
01	1470	1176	-	01	15	16
10	1334	1067	+	10	2	2
10	1228	982	NOM	10	7	6
10	1114	891	-	10	11	11
11	920	736	+	11	-9	-9
11	809	647	NOM	11	-7	-6
11	698	558	-	11	-3	-3

Airflow performance includes 1" washable filter media.

*Factory Setting

**Adjust Jumper Setting (+, NOM, -) is applied to both Cooling and Heating

Note 1: HP Mode Jumper provides a 10% reduction in airflow when in Comfort position and a call for low or high cooling is present with the "O" line off. This feature is to provide lower airflow for running in HP Heating Mode if desirable.

Note 2: DEHUM mode (24VAC on DEHUM terminal) provides a 20% airflow reduction during cooling calls.

Note 3: Low Heat ESP is a result of High Heat ESP (- is decrease in rise).

Note 4: High and low heat rise values are approximate air temperature change from return air temperature when at factory default settings.

Table 2

Continuous Fan @ .10" ESP

DIP Switch 1 & 2	Airflow (CFM)
*00	1006
01	1764
10	2205
11	2205

* Factory Setting

Table 3

SW2 DIP assignments

DIP Switch	Blower Parameter
1 & 2	Cont Fan Adj
3 & 4	Heat Speed Adj
5 & 6	Cool Speed Adj
7 & 8	Cool On/Off Delay

Table 4

DIP SW2-7/8	Cooling Delay Options (SW2 - 7, 8)			
	On Delay		Off Delay	
	Timed ON (sec)	Airflow during on delay	Timed OFF (sec)	Airflow during off delay
*00	5	-	90	100%
01	5	-	0	-
10	30	50%	30	100%
11	30	50%	180	50%

Airflow % is of High Cool airflow demand determined from SW2-5/6 Table 1

Airflow resumes to 100% after on delay time is completed

Airflow stops (or switches to continuous fan speed) after off delay time is completed

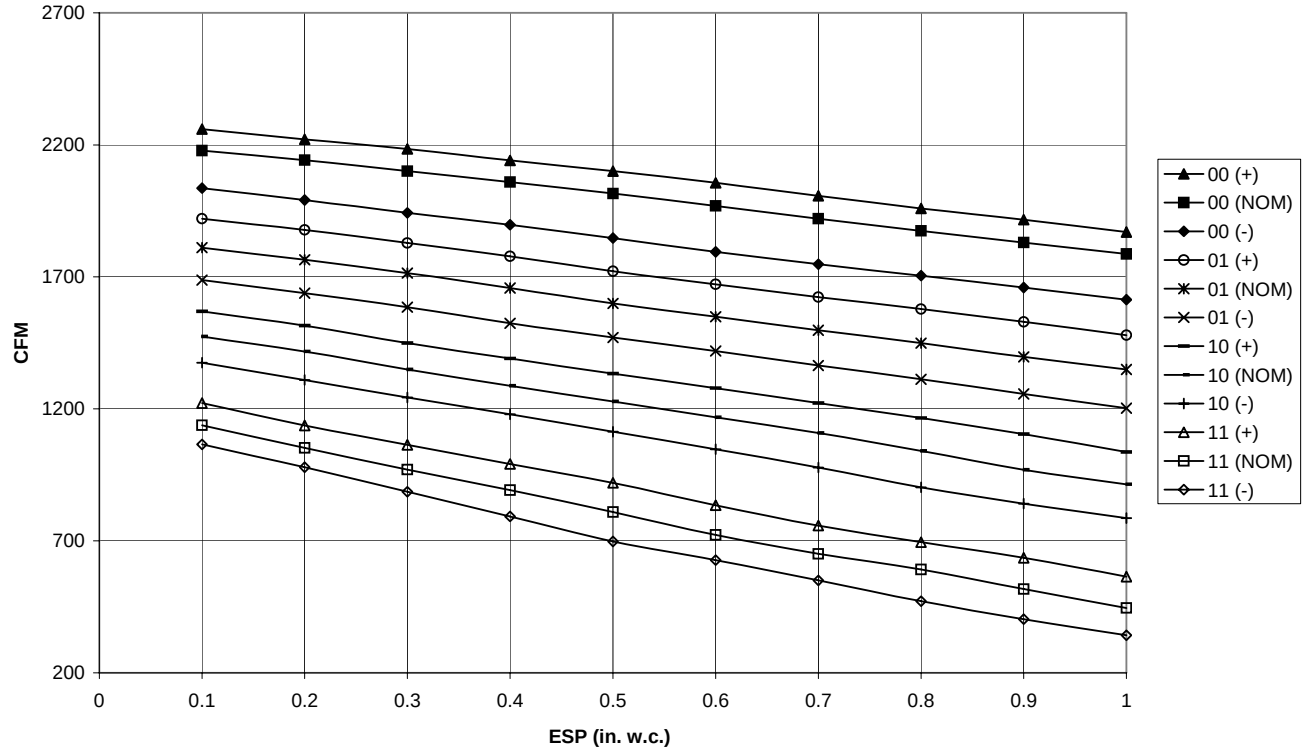
* Factory Setting

MAX CFM's for Factory Washable Filters	
14" X 25"	1400
16" X 25"	1600
20" X 25"	2000
24" X 25"	2500
MAX CFM based on 600FPM	

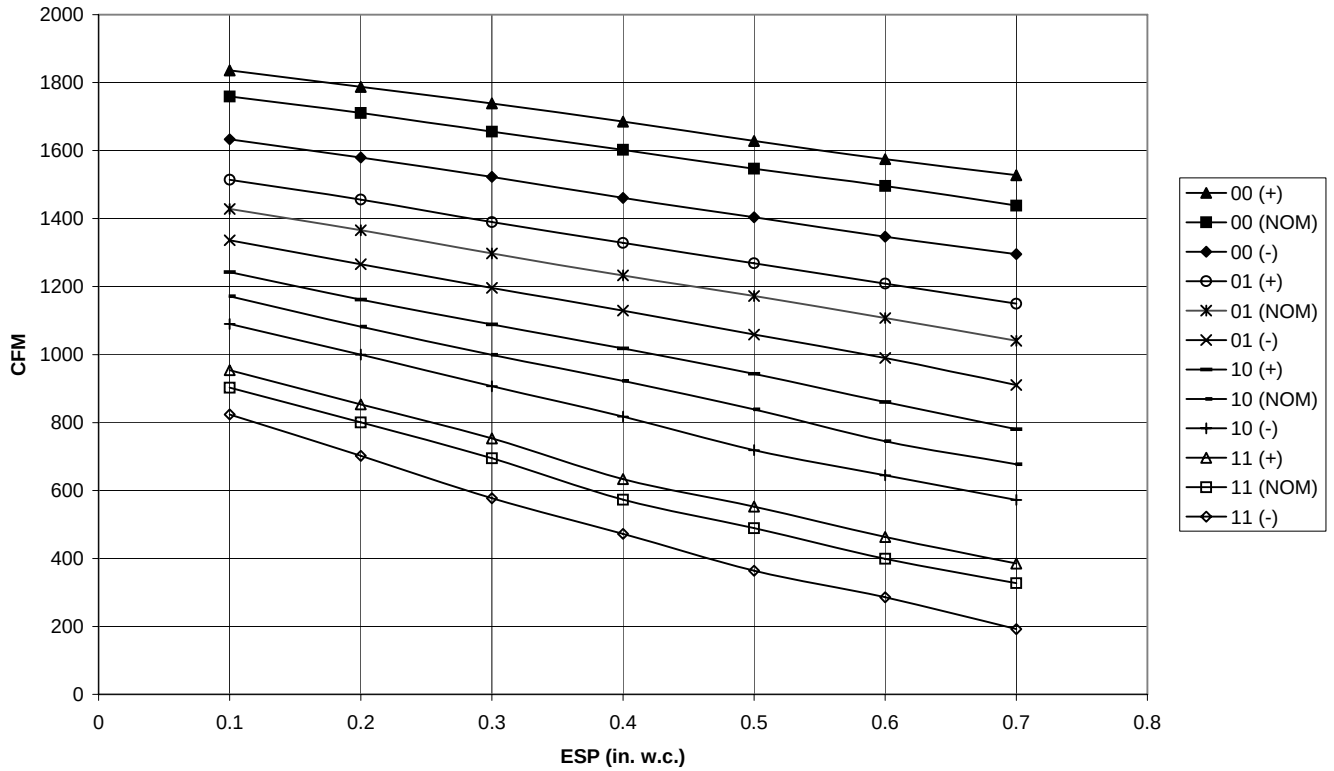
Note 1: Disposable filters are typically rated at 300 FPM. These filters only allow half the airflow when compared to 600 FPM filters. (example, 20 x 25 @ 600 FPM = 2000CFM, @ 300 FPM = 1000 CFM)

Circulation Air Blower Data - *8MPV100

High Cooling Airflows
*8MPV100J20



Low Cooling Airflows
*8MPV100J20



Circulation Air Blower Data - *8MPV125

Heating, Cooling & Continuous Airflow Settings

Table 1

Cooling CFM Adjustment			**Adjust Jumper Setting	Heating Rise Adjustment		
DIP Switch 5 & 6	High Cool @ 0.50" w c	Low Cool (80% of High Cool)		DIP Switch 3 & 4	High Heat Rise Change @ 0.20" w c	Low Heat Rise Change at Resultant Static
00	2153	1722	+	00	-3	-3
*00	2001	1601	*NOM	*00	0	0
00	1808	1446	-	00	4	4
01	1761	1409	+	01	-1	0
01	1621	1297	NOM	01	4	3
01	1458	1166	-	01	8	8
10	1345	1076	+	10	-2	-1
10	1216	973	NOM	10	2	2
10	1074	859	-	10	7	5
11	933	746	+	11	-6	-4
11	802	642	NOM	11	-3	-2
11	692	554	-	11	1	1

Airflow performance includes 1" washable filter media.

*Factory Setting

**Adjust Jumper Setting (+, NOM, -) is applied to both Cooling and Heating

Note 1: HP Mode Jumper provides a 10% reduction in airflow when in Comfort position and a call for low or high cooling is present with the "O" line off. This feature is to provide lower airflow for running in HP Heating Mode if desirable.

Note 2: DEHUM mode (24VAC on DEHUM terminal) provides a 20% airflow reduction during cooling calls.

Note 3: Low Heat ESP is a result of High Heat ESP (- is decrease in rise).

Note 4: High and low heat rise values are approximate air temperature change from return air temperature when at factory default settings.

Table 3

Continuous Fan @ .10" ESP

DIP Switch 1 & 2	Airflow (CFM)
*00	1013
01	1674
10	2193
11	2193

* Factory Setting

Table 2

SW2 DIP assignments

DIP Switch	Blower Parameter
1 & 2	Cont Fan Adj
3 & 4	Heat Speed Adj
5 & 6	Cool Speed Adj
7 & 8	Cool On/Off Delay

Table 4

DIP SW2-7/8	Cooling Delay Options (SW2 - 7, 8)			
	On Delay		Off Delay	
	Timed ON (sec)	Airflow during on delay	Timed OFF (sec)	Airflow during off delay
*00	5	-	90	100%
01	5	-	0	-
10	30	50%	30	100%
11	30	50%	180	50%

Airflow % is of High Cool airflow demand determined from SW2-5/6 Table 1

Airflow resumes to 100% after on delay time is completed

Airflow stops (or switches to continuous fan speed) after off delay time is completed

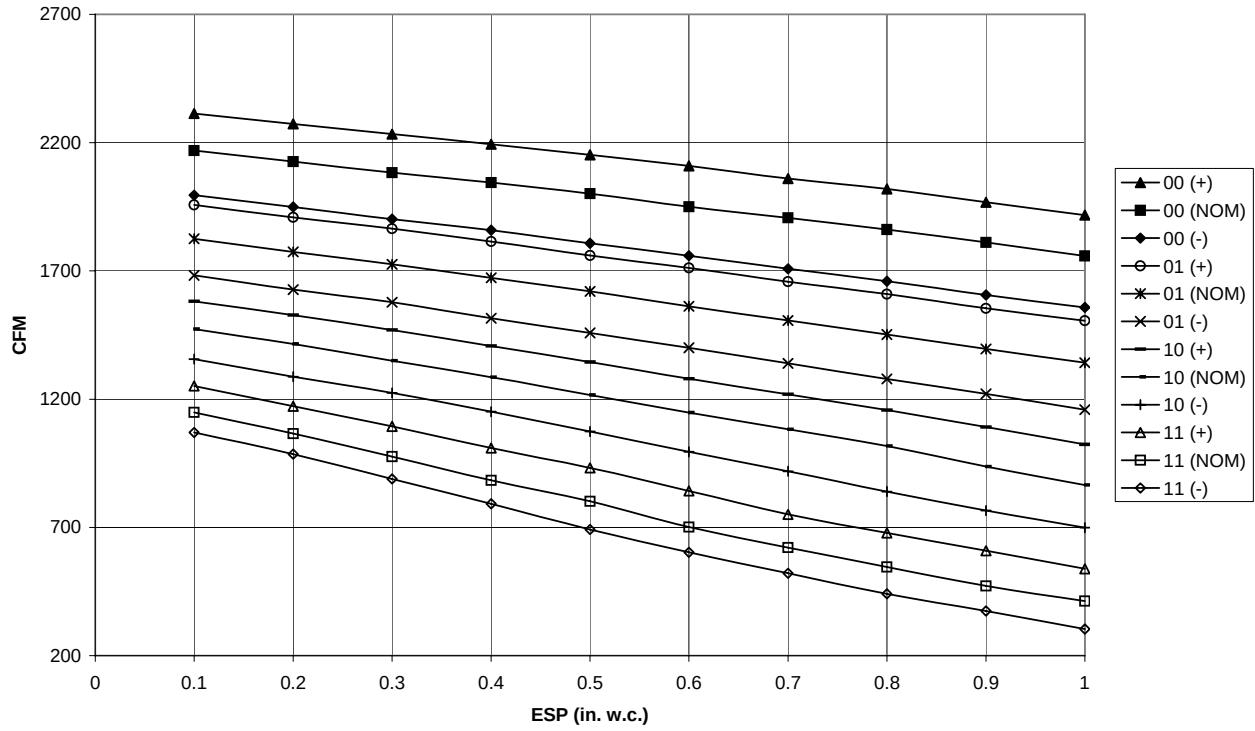
* Factory Setting

MAX CFM's for Factory Washable Filters	
14" X 25"	1400
16" X 25"	1600
20" X 25"	2000
24" X 25"	2500
MAX CFM based on 600FPM	

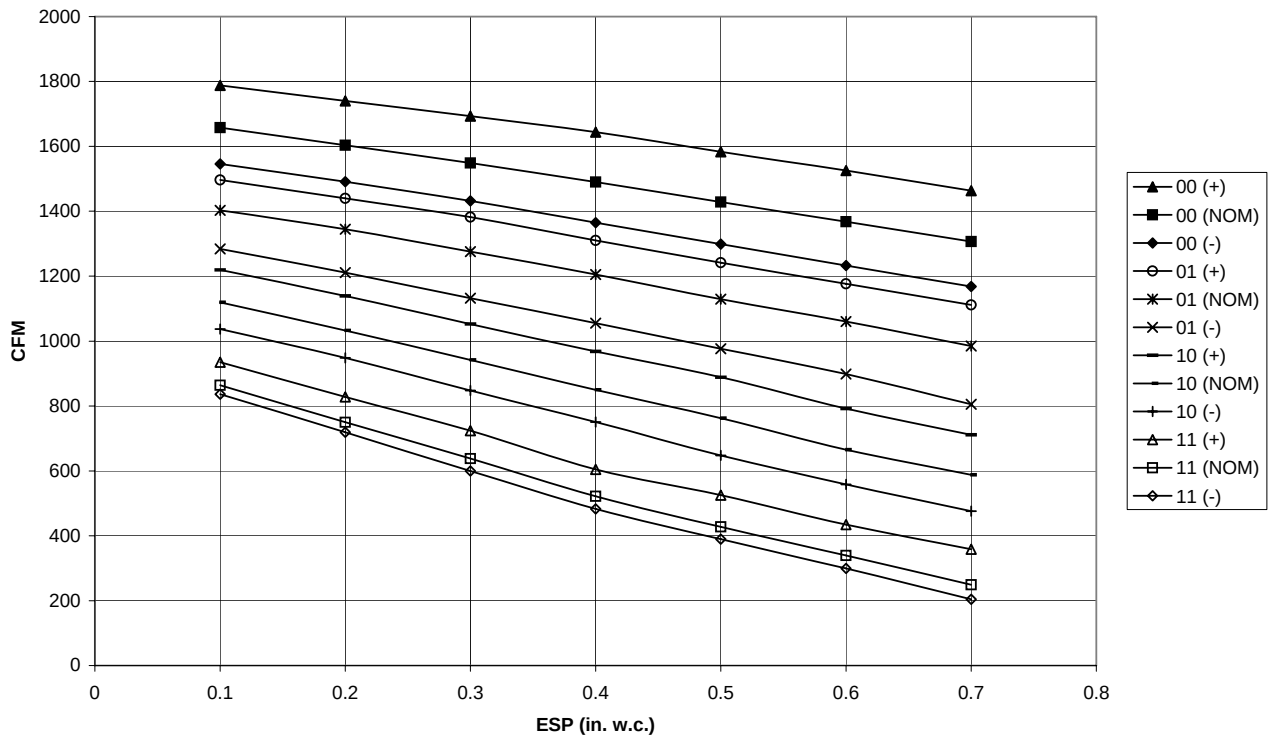
Note 1: Disposable filters are typically rated at 300 FPM. These filters only allow half the airflow when compared to 600 FPM filters. (example, 20 x 25 @ 600 FPM = 2000CFM, @ 300 FPM = 1000 CFM)

Circulation Air Blower Data - *8MPV125

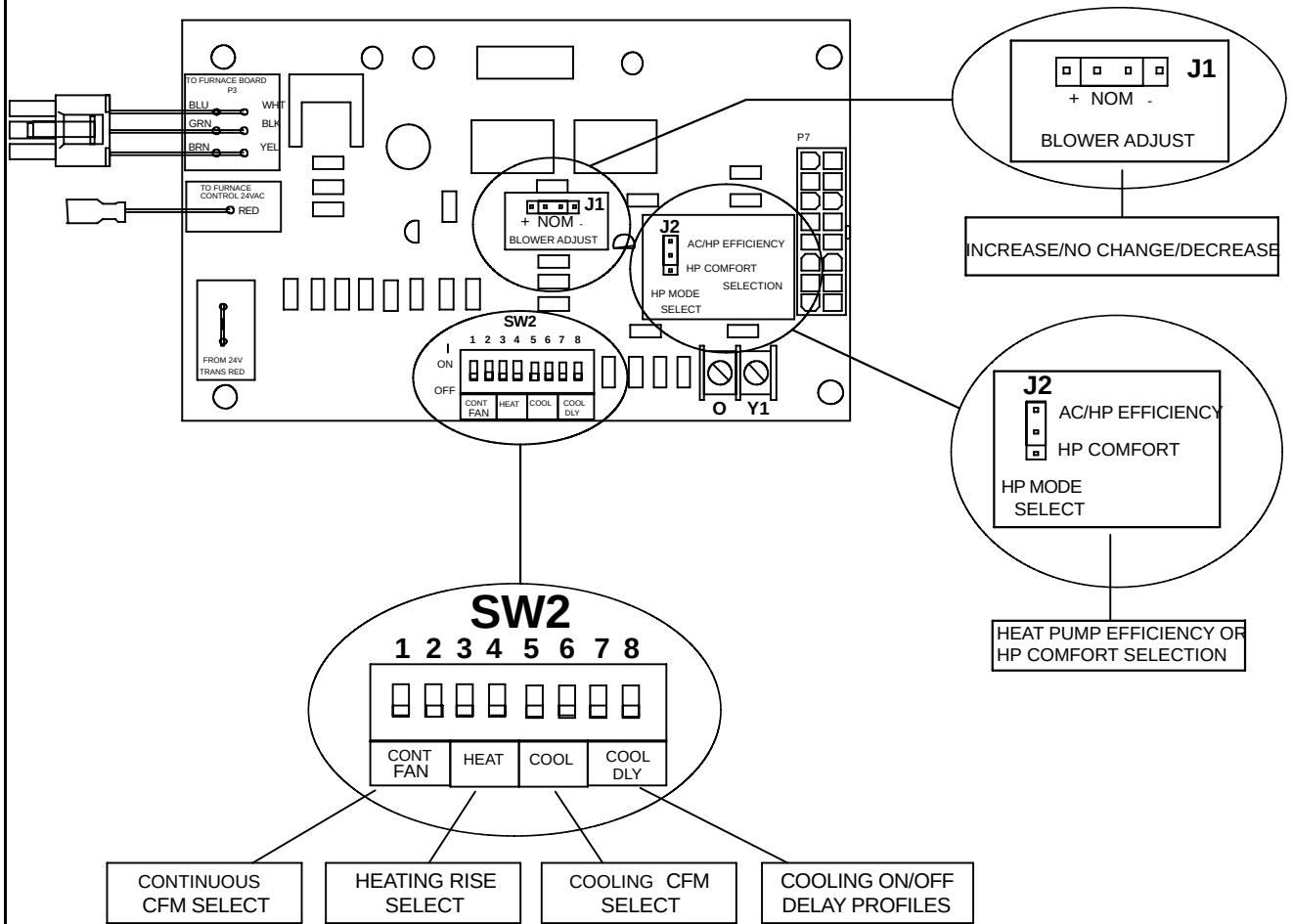
High Cooling Airflows
*8MPV125J20



Low Cooling Airflows
*8MPV125J20



Variable Speed (MPV) Tap Select Interface Board (TSIB)



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