Arcoaire®
Air Conditioning & Heating

H9MPV

2-Stage Variable Speed 90

Flexibility

- Dual Certified venting (1 or 2 pipe). Direct Vent Furnace
- 40″ high with wider cabinets, for noise reduction and ease of installation.
- Factory shipped as natural gas, with LP Gas conversion kits available.
- Four position – upflow/downflow/ horizontal installation.
- Vent pipe can be run horizontally or vertically.
- Internal condensate drain system.

Service

- Self diagnostics.
- Entire blower assembly mounted on rails.

Quality

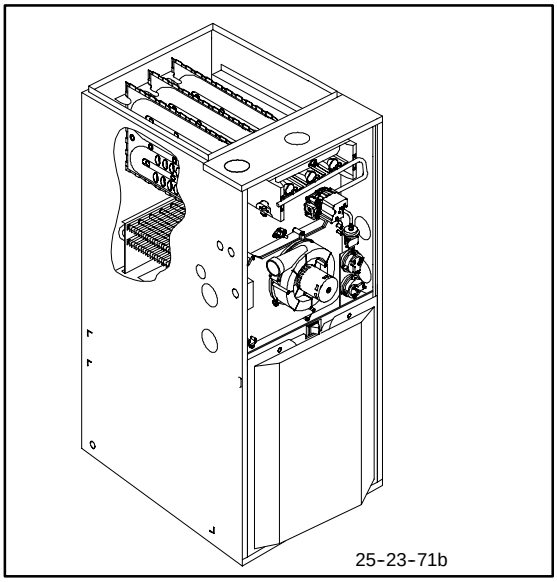
- RPJ III Stainless steel heat exchanger.
- Stainless steel secondary heat exchanger.
- Lifetime limited warranty on heat exchangers and 5 years on parts.
- High temperature limit control prevents overheating.
- Hot surface pilot ignition device.
- Flame roll-out sensors standard.
- External filter rack with permanent filters.
- Solid doors.

Comfort

- Adjustable timed blower Off delay.
- Thermal lined, one piece steel cabinet for noise reduction.
- Insulated blower compartment.
- Humidifier terminal
- Electronic air cleaner terminal.
- Dehumidification option.

Efficiency

- 92.1% AFUE efficiency range.
- Two stage gas valve operation.
- Two stage fan timer.
- BPM Variable speed blower motors.
- Induced draft blower.
- In-shot burners.



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)

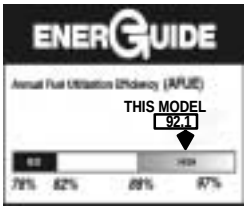
Model Number	Heat Exchangers *	Dimensions H x W x D (In.)	Price
H9MPV050F12B	Lifetime	40 x 19 1/8 x 29	
H9MPV075F12B	Lifetime	40 x 19 1/8 x 29	
H9MPV100J20B	Lifetime	40 x 22 3/4 x 29	
H9MPV125L20B	Lifetime	40 x 24 1/2 x 29	

* LIMITED LIFETIME WARRANTY

PERFORMANCE DATA HEATING

Model Number	Input (MBTUH)	Efficiency AFUE	Cooling Cap. @ .5 In. W.C.
*9MPV050F12B	50	92.1	1.5 - 3.0 TON
*9MPV075F12B	75	92.1	1.5 - 3.5 TON
*9MPV100J20B	100	92.1	3 - 5.0 TON
*9MPV125L20B	125	92.1	3 - 5.0 TON

LIMITED PARTS 5 YEAR WARRANTY



Energy
EPA POLLUTION PREVENTER

EFFICIENCY RATING CERTIFIED
Gama

440 31 2013 02 (7/2004)

FURNACE SPECIFICATIONS

Model Number	*9MPV050F12	*9MPV075F12	*9MPV100J20	*9MPV125L20
INPUT HIGH FIRE(BTUH) LOW FIRE (BTUH)	50,000 35,000	75,000 52,500	100,000 70,000	125,000 87,500
HTG. CAP. HIGH FIRE (BTUH) LOW FIRE (BTUH)	47,000 33,000	70,500 49,800	94,000 65,800	117,500 82,250
AFUE % (ICS)	92.1	92.1	92.1	92.1
TEMP. RISE RANGE High Fire (^{0}F) Low Fire (^{0}F)	35-65 35-65	40-70 40-70	40-70 40-70	40-70 40-70
VENT SIZE^	2″ OD	2″- 3″OD	2″- 3″OD	3″ OD
VOLTS/PH/HZ	115/60/1	115/60/1	115/60/1	115/60/1
F.L.A.	9.8	8.9	11.2	11.2
MIN./MAX. VOLTAGE	97/132	97/132	97/132	97/132
TRANSFORMER (V.A.)	40	40	40	40
GAS PIPE SIZE (IN.)	1/2	1/2	1/2	1/2
COOLING CAP. (TONS)	3.0	3.0	5.0	5.0
HIGH ALTITUDE PRESSURE SWITCH	1013165	1013165	1013165	1013157
FILTER SIZE (IN.)	16X25X1(1)	16X25X1(1)	16X25X1(2)	16X25X1(2)
DIMENSIONS (in.) WIDTH X DEPTH X HEIGHT	$19\frac{1}{8}$ x 29 x 40	$19\frac{1}{8}$ x 29 x 40	$22\frac{3}{4}$ x 29 x 40	$24\frac{1}{2}$ x 29 x 40
WEIGHT (Lbs.)	150	168	187	203

^ Vent size may vary depending on length, number of elbows, standard vent or direct vent. See Installation Instructions.
* Denotes Brand (T, H or C)

MODEL NUMBER IDENTIFICATION GUIDE

*	9	M P	V	0 75	F	1 2	A	1

Brand Identifier
* = Brand

Model 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, Up/Down/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

Input (Nominal MBTUH)

Cabinet Width
B = 15.5″ Wide
F = 19.1″ Wide
J = 22.8″ Wide
L = 24.5″ Wide

Cooling Airflow
08 = 800 CFM
12 = 1200 CFM
14 = 1400 CFM
16 = 1600 CFM
20 = 2000 CFM

Marketing Digit
Denotes minor change

Engineering Rev.
Denotes minor changes

ACCESSORIES

Model Number	Description	Used With Models
1011787 ^	Gas Conversion Kits (2–Stage) – LP (Propane) to natural gas conversion kit. Allows field conversion to natural gas.	*9MPV
1011789 ^	Gas Conversion Kits (2–Stage) – Natural gas to LP (propane) conversion Kit (includes LP high altitude kit). Allows field conversion to LP (propane) gas.	*9MPV
NAHA001PS 1009522 ^	LP Low Pressure Switch – For detecting low line pressure. Opens at 6.5″ W.C. (included in NAHF002LP)	All LP *9MPV Models
NAHA001FF	Filter Kits – External filter frame. 16″ x 25″	Side Return (All Furnaces) Bottom Return (All "F" $19^1/_8$″ Furnaces under 1650 CFM)
NAHA001FP	External filter frame. 16″ x 25″ (Bulk Pack Kit – Qty 10)	
NAHA002FF	Filter Kits – Bottom return filter frame kit 20″ x 25″	(All "J" $22^3/_4$″ Furnaces)
NAHA002FP	Bottom return filter frame kit 20″ x 25″ (Bulk Pack Kit – Qty 10)	
NAHA003FF	Filter Kits – Bottom or side return filter frame kit 14″ x 25″.	(All "B" $15^1/_2$″ Furnaces)
NAHA003FP	Bottom or side return filter frame kit 14″ x 25″ (Bulk Pack Kit – Qty 10)	
NAHA001TK	Duct Standoff Filter Kit – To adapt 20″ x 25″ filter for single side return.	Side Return (All single return applications with 1650 CFM or greater) Bottom Return (All "F" $19^1/_8$″ Furnaces under 1650 CFM)
NAHA001NK 612833 ^	Condensate Neutralizer Kit – for condensing gas furnaces	All *9MPV Furnaces if Required
NAHH002SB	Combustible Floor Subbase – Subbase Furnace ONLY: All $19^1/_4$″ wide furnace models	*9MPV050/075
NAHH003SB	Combustible Floor Subbase – Subbase Furnace ONLY: All $22^3/_4$″ wide furnace models	*9MPV100
NAHH010SB	Combustible Floor Subbase – Subbase Furnace ONLY: All $24^1/_2$″ wide furnace models	*9MPV125
NAHH005SB	Subbase – Furnace w/$19^1/_4$″ cased coil	*9MPV050/075 Counterflow furnace w/$19^1/_4$″cased coil
NAHH006SB	Subbase – Furnace w/$22^3/_4$″ cased coil	*9MPV100 Counterflow furnace w/$22^3/_4$″cased coil
NAHH009SB	Subbase Furnace w/$24^1/_2$″ cased coil	*9MPV125 Counterflow furnace w/$24^1/_2$″cased coil
1013515^	Standard Pressure Switch Kit	*9MPV050, 075 & 100
1013166^	Standard Pressure Switch Kit	*9MPV125
1013165^	High Altitude Pressure Switch Kit	*9MPV050, 075 & 100
1013157^	High Altitude Pressure Switch Kit	*9MPV125
NAHA001CV 1011129^	3″ Concentric Vent Kit – allows single wall penetration for 2 pipe direct vent applications (90+).	*9MPV100/125
NAHA002CV	2″ Concentric Vent Kit – allows single wall penetration for 2 pipe direct vent applications (90+).	*9MPV050/075
NAHA001CA	Coil Adapter for Downflow Furnaces	All Downflow Models
NAHL001WL	To replace Warning Labels, Operating Instructions & Wiring Labels on Blower Door when needed	*9MPV

^ Must be ordered from Service Parts
* Denotes Brand

Heating, Cooling & Continuous Airflow Settings

Continuous Blower (CFM) @ 0.10″ Static

Switch Settings		*Furnace Model*			
#1	***#2***	***50K***	***75K***	***100K***	***125K***
0*	0*	540	540	700	703
0	1	660	660	860	821
1	0	780	780	1020	1000
1	1	900	900	1180	1160

*Factory Setting

Hi Heat Air Temperature Adjustment (° F)**

Switch Settings			*Furnace Model*			
#3	***#4***	***#5***	***50K***	***75K***	***100K***	***125K***
0**	0**	0**	0	0	0	0
0	0	1	3	2	3	2
0	1	0	6	4	5	6
0	1	1	14	6	9	11
1	0	0	17	11	13	13
1	0	1	–8	–4	–4	–5
1	1	0	–13	–4	–7	–5
1	1	1	–17	–4	–9	–5

*Factory setting

**Approximate air temperature change from factory setting @ 0.20″ static on high heat) low heat speed changes with change of high heat speed on most settings)

Lo Heat Air Temperature Adjustment (° F)**

Switch Settings			*Furnace Model*			
#3	***#4***	***#5***	***50K***	***75K***	***100K***	***125K***
0**	0**	0**	0	0	0	0
0	0	1	1	1	1	6
0	1	0	4	2	2	8
0	1	1	7	3	5	12
1	0	0	11	6	8	16
1	0	1	–7	–4	–5	–1
1	1	0	–11	–6	–9	–4
1	1	1	–15	–9	–11	–7

*Factory setting

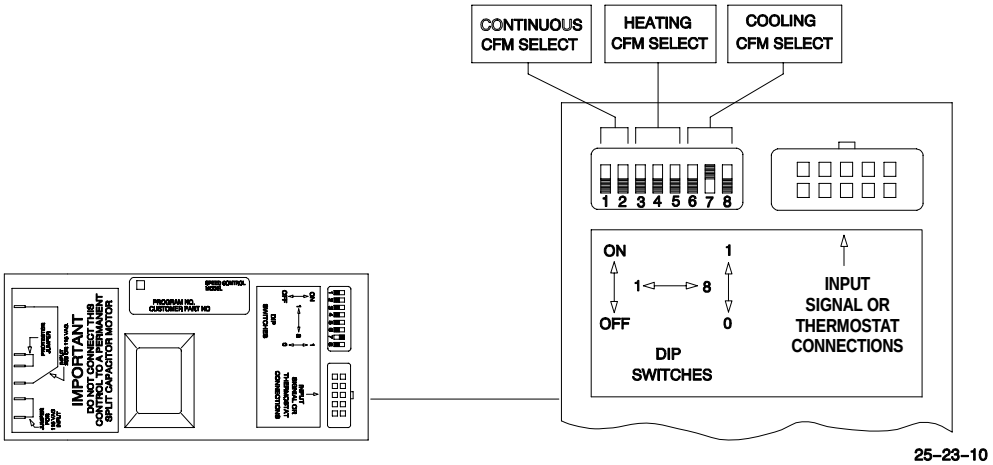
**Approximate air temperature change from factory setting @ 0.20″ static on high heat) low heat speed changes with change of high heat speed on most settings)

Cooling (CFM) @ 0.50″ Static

Switch Settings			*Furnace Model*			
#6	***#7***	***#8***	***50K***	***75K***	***100K***	***125K***
0*	0*	0*	1170	1395	2095	2059
0	0	1	1098	1197	1875	1859
0	1	0	991	1096	1642	1700
0	1	1	894	1000	1489	1621
1	0	0	807	907	1255	1410
1	0	1	697	799	1013	1191
1	1	0	621	650	830	986
1	1	1	556	543	750	800

*Factory setting

Blower Motor Settings



25–23–10

0 1 0

***EXAMPLE**
Cooling Airflows Switches 6, 7 & 8:

000 3.5 Ton
001 3.0 Ton
010 2.5 Ton
011 2.0 Ton

***See "Technical Support Manual" for correct airflow rates.**

Heating, Cooling & Continuous Airflow Settings

Figure 1

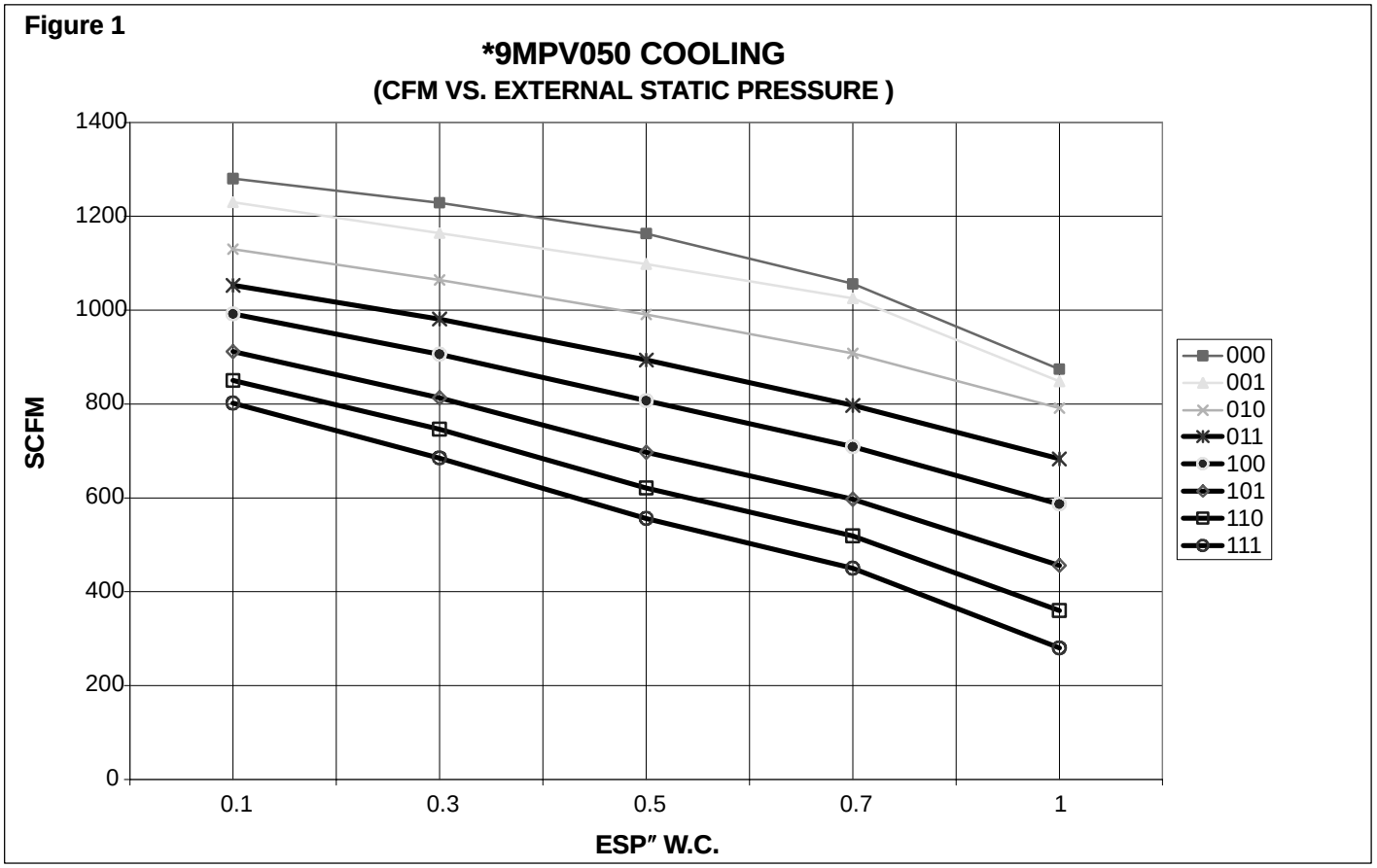
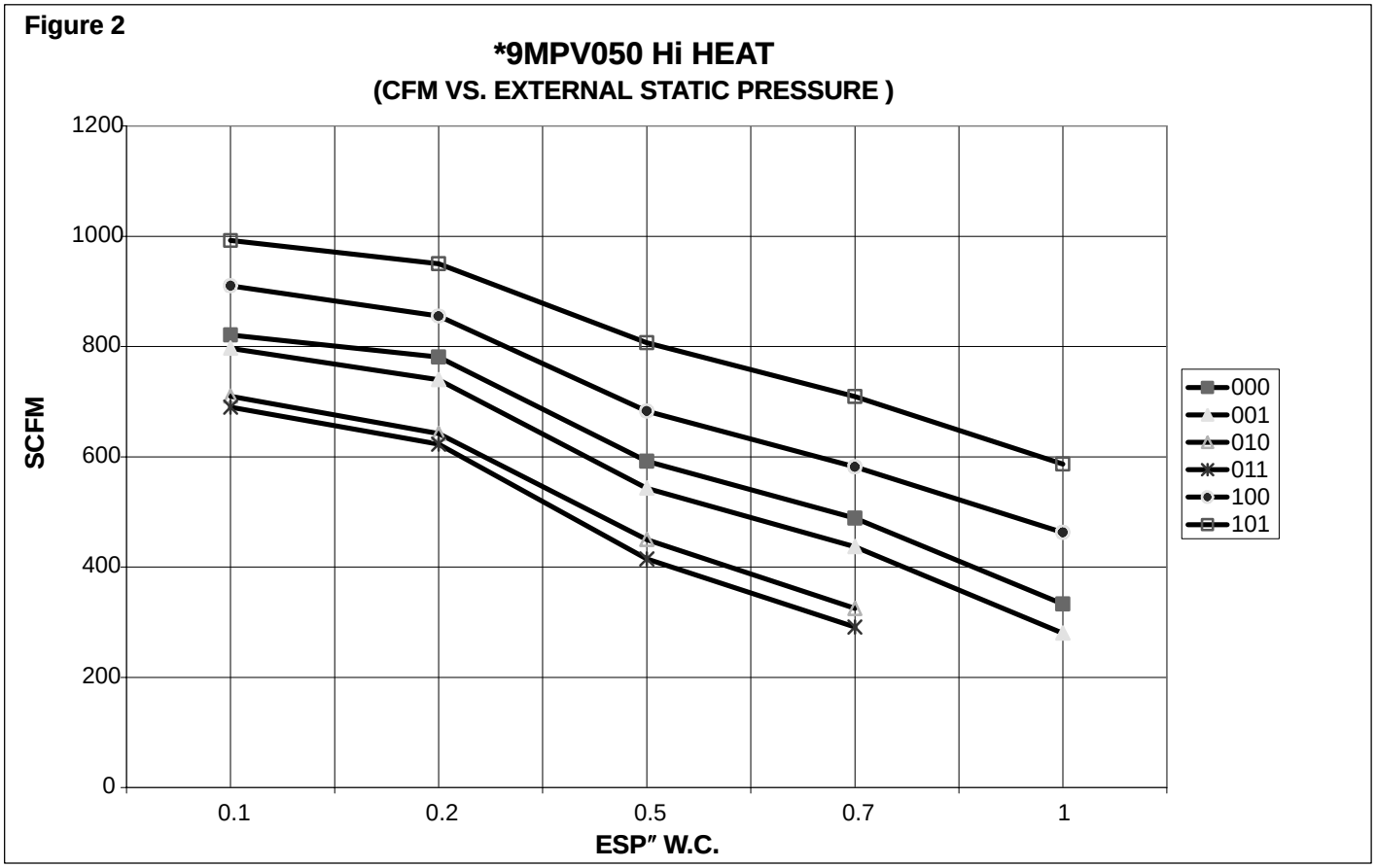


Figure 2



Heating, Cooling & Continuous Airflow Settings

Figure 3

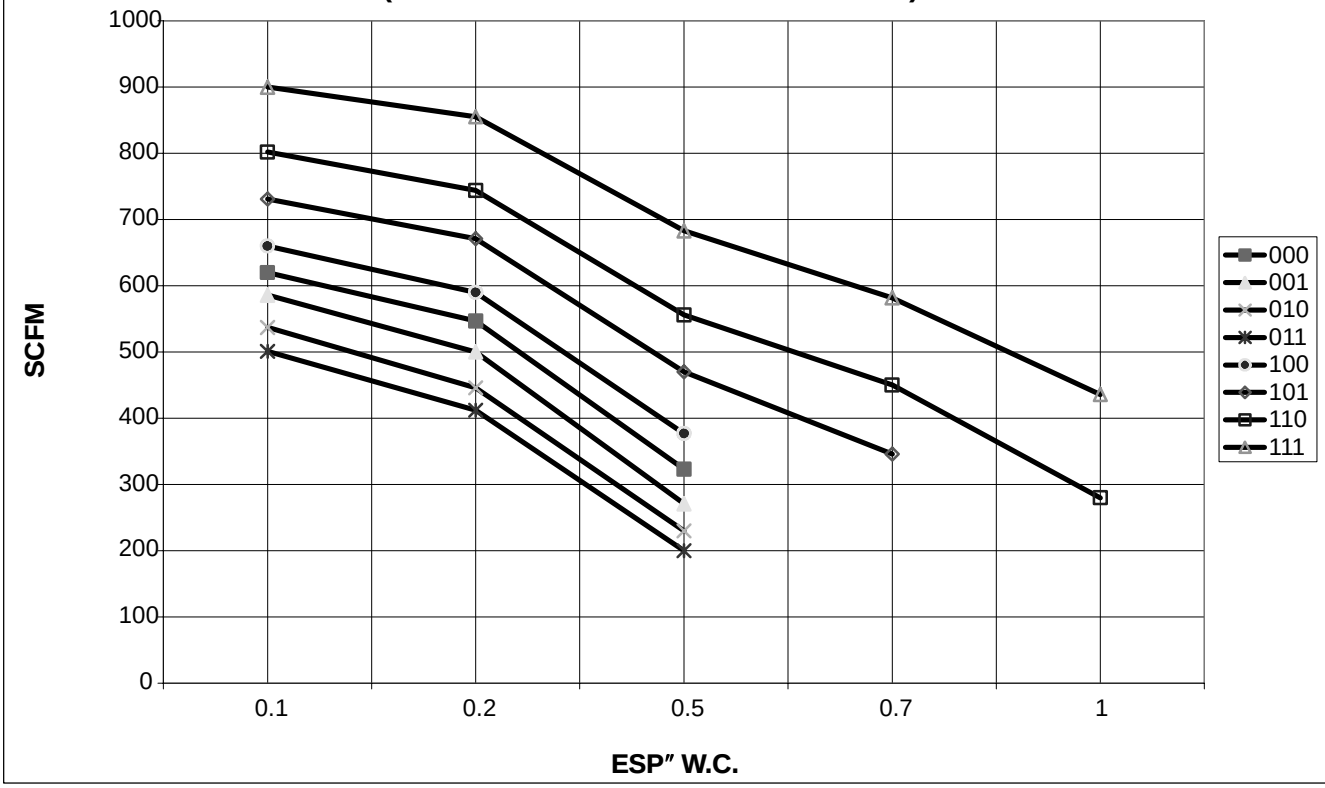
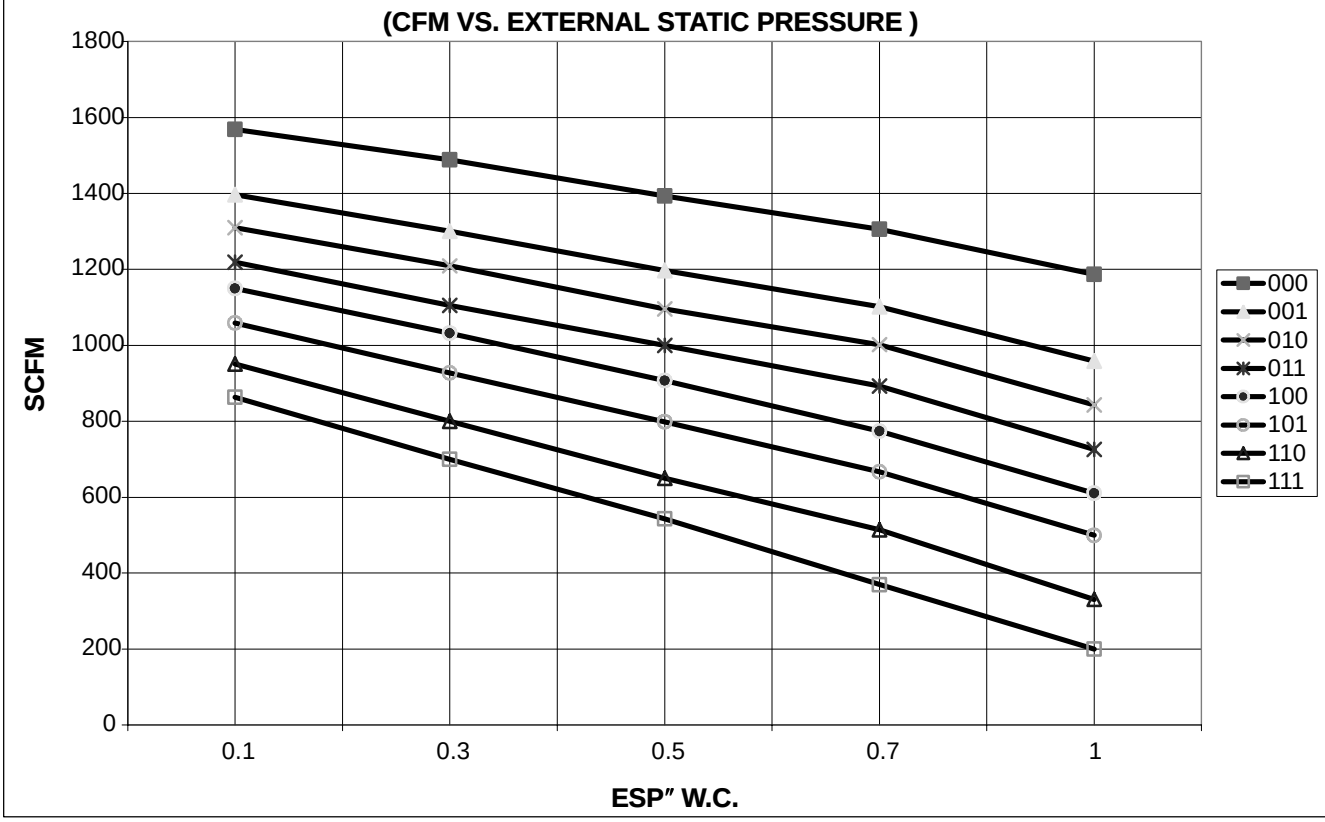


Figure 4



Heating, Cooling & Continuous Airflow Settings

Figure 5

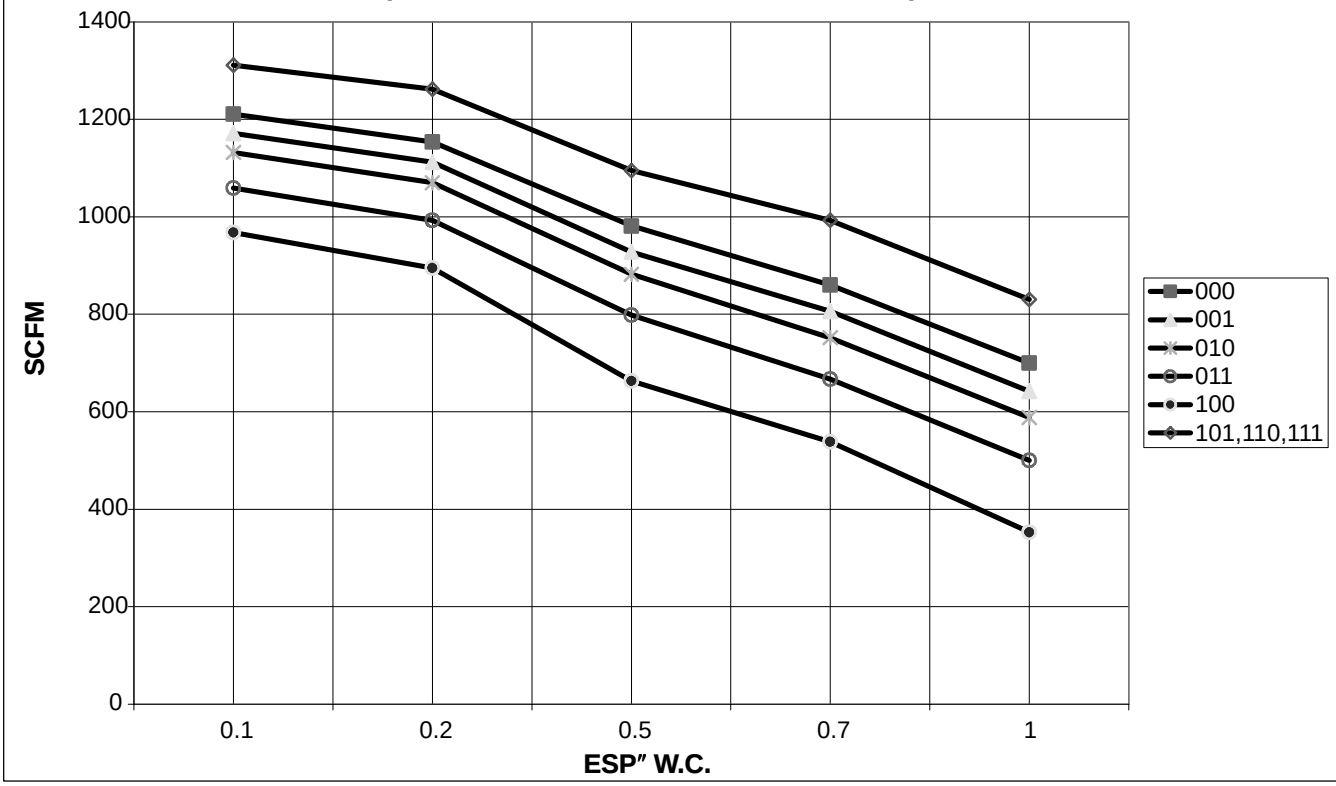
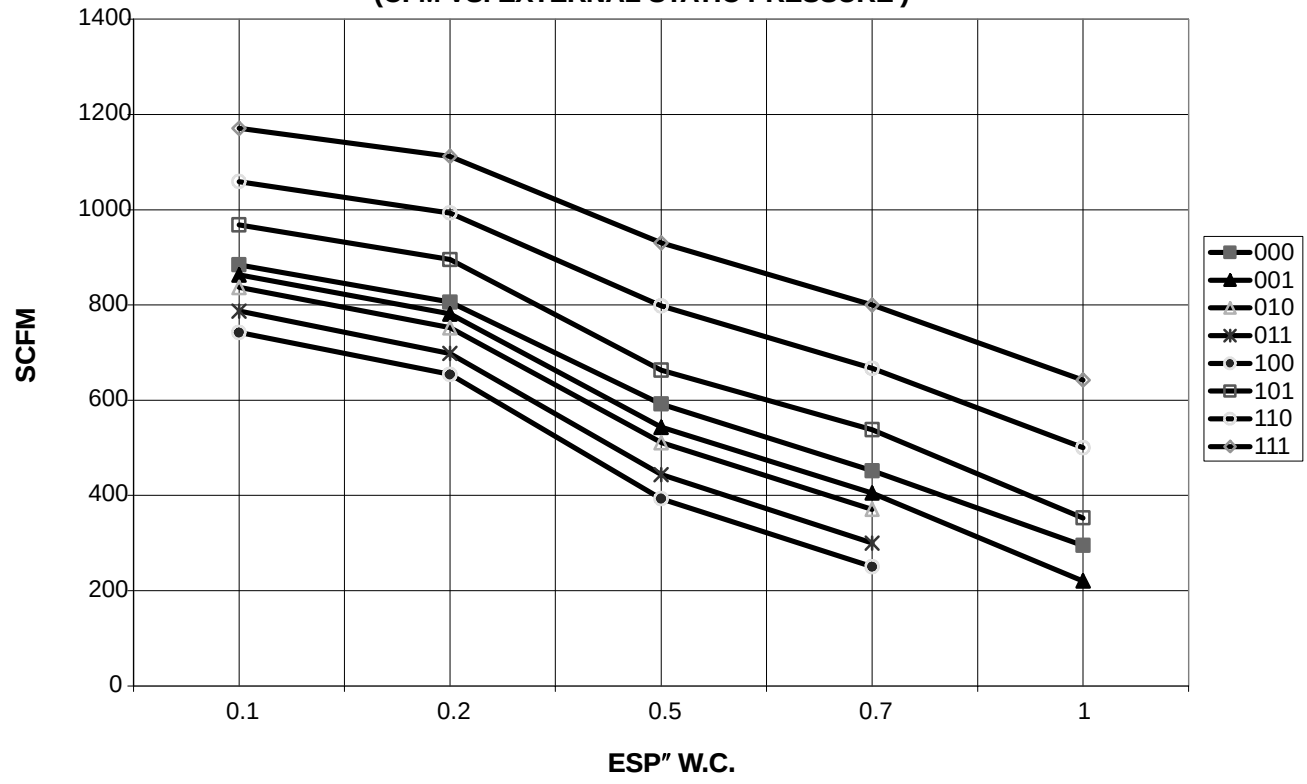


Figure 6



Heating, Cooling & Continuous Airflow Settings

Figure 7

*9MPV100 COOLING
(CFM VS. EXTERNAL STATIC PRESSURE)

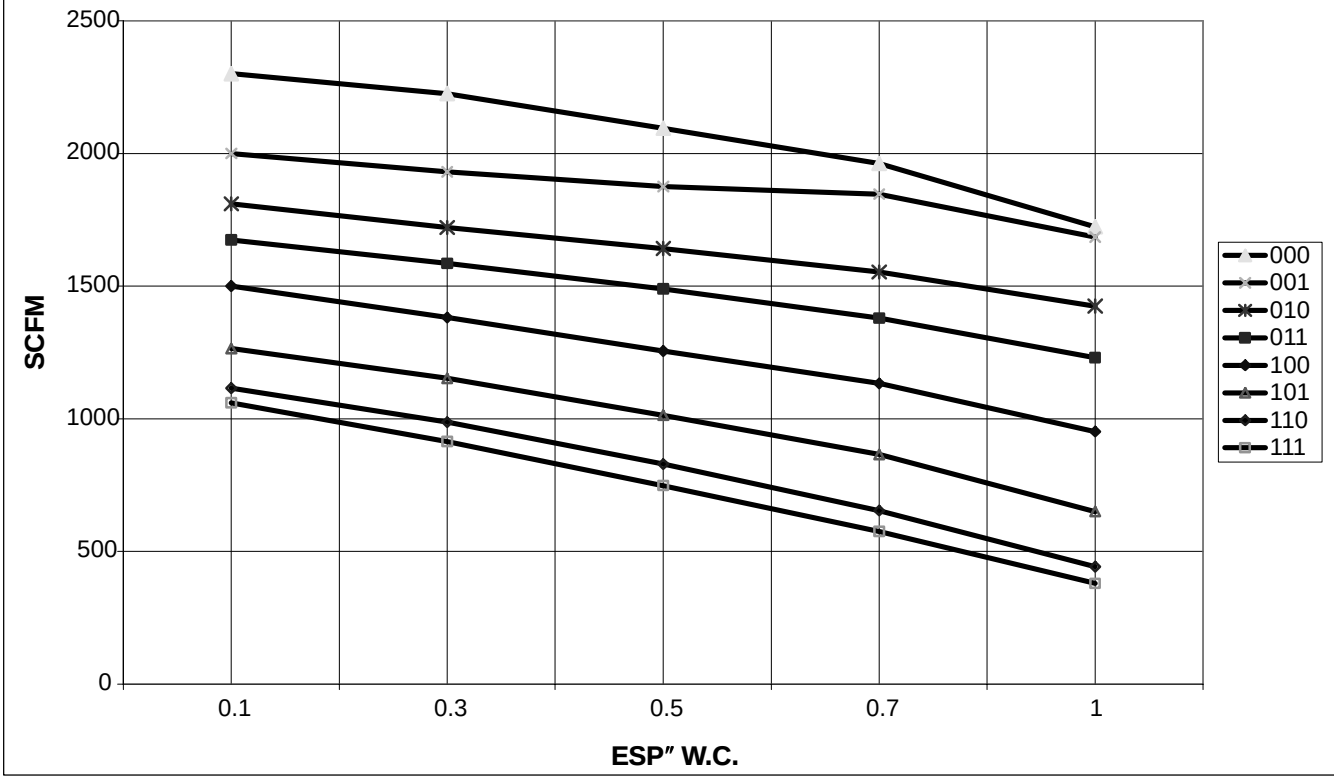
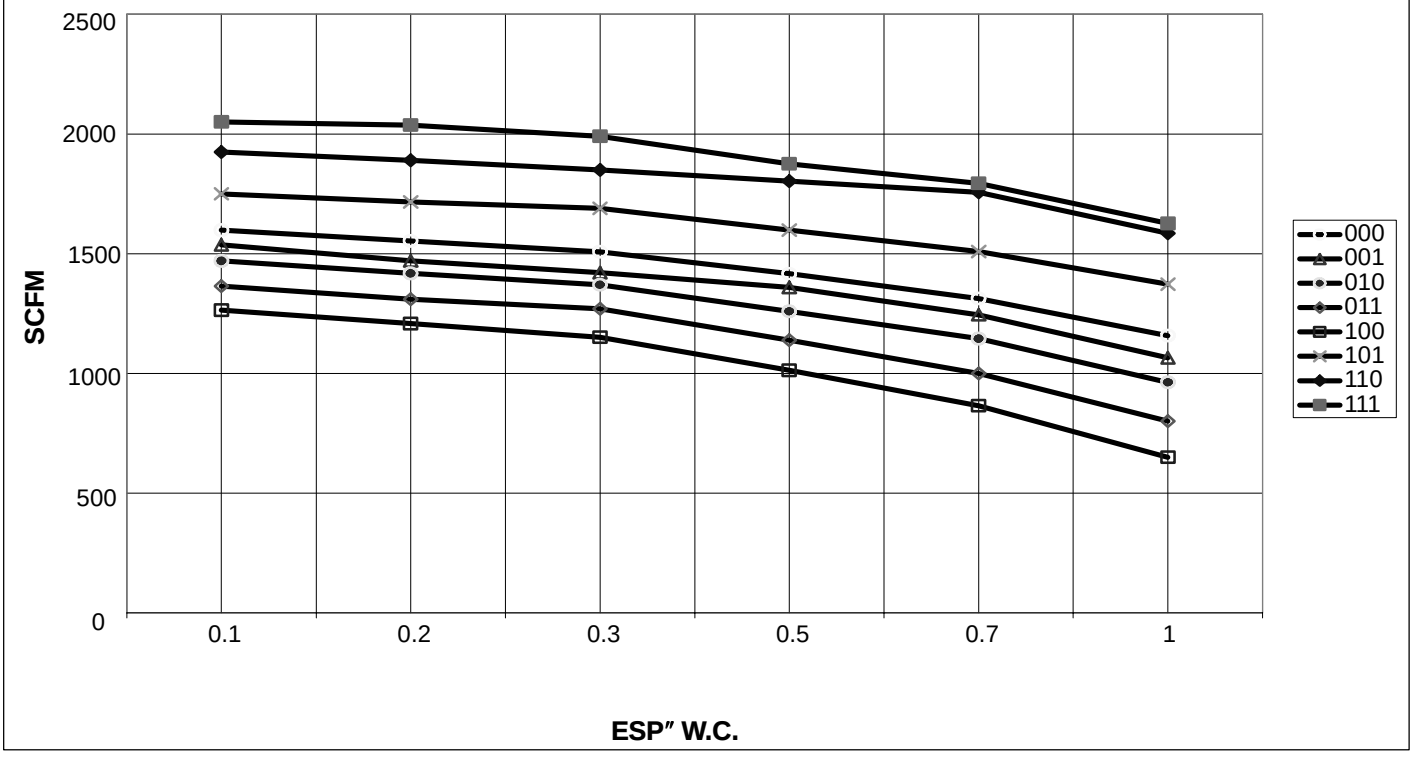


Figure 8

*9MPV100 Hi HEAT
(CFM VS. EXTERNAL STATIC PRESSURE)



Heating, Cooling & Continuous Airflow Settings

Figure 9

*9MPV100 Lo HEAT
(CFM VS. EXTERNAL STATIC PRESSURE)

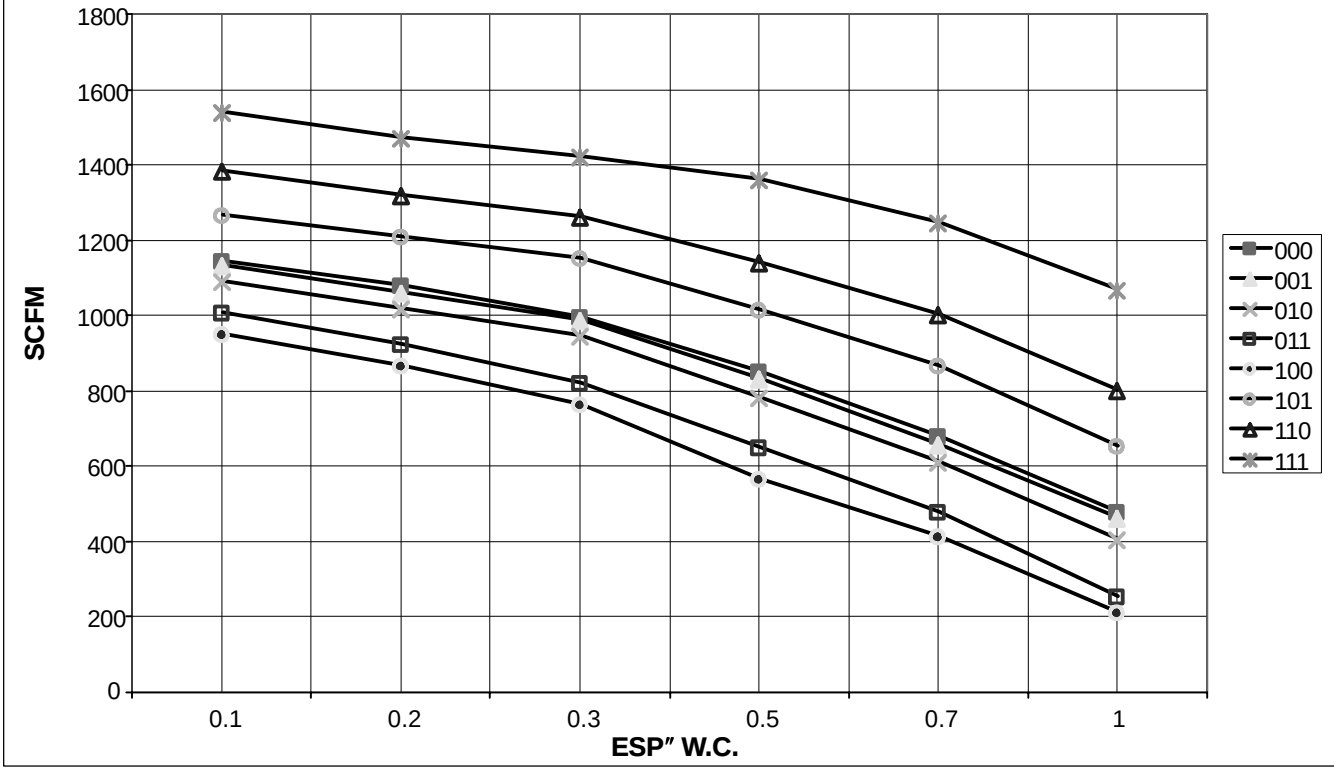
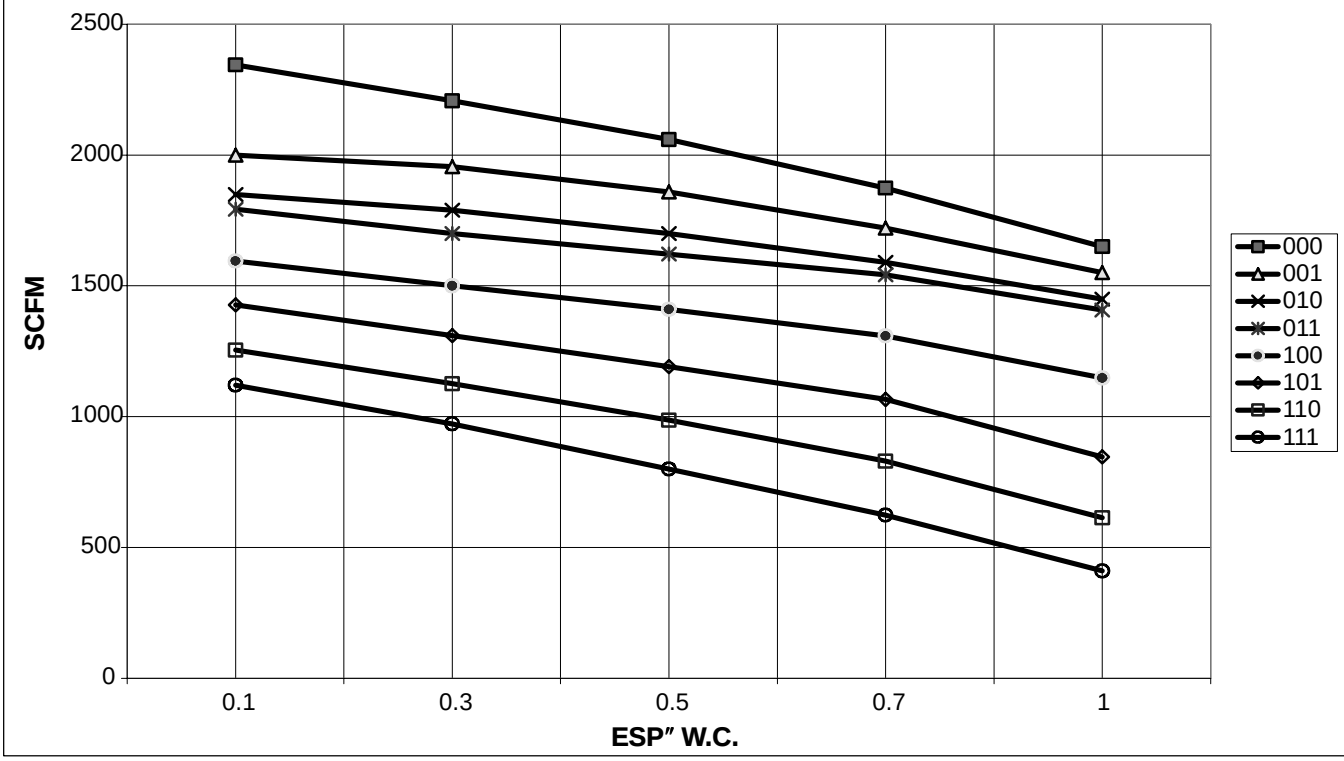


Figure 10

*9MPV125 COOLING
(CFM VS. EXTERNAL STATIC PRESSURE)



Heating, Cooling & Continuous Airflow Settings

Figure 11

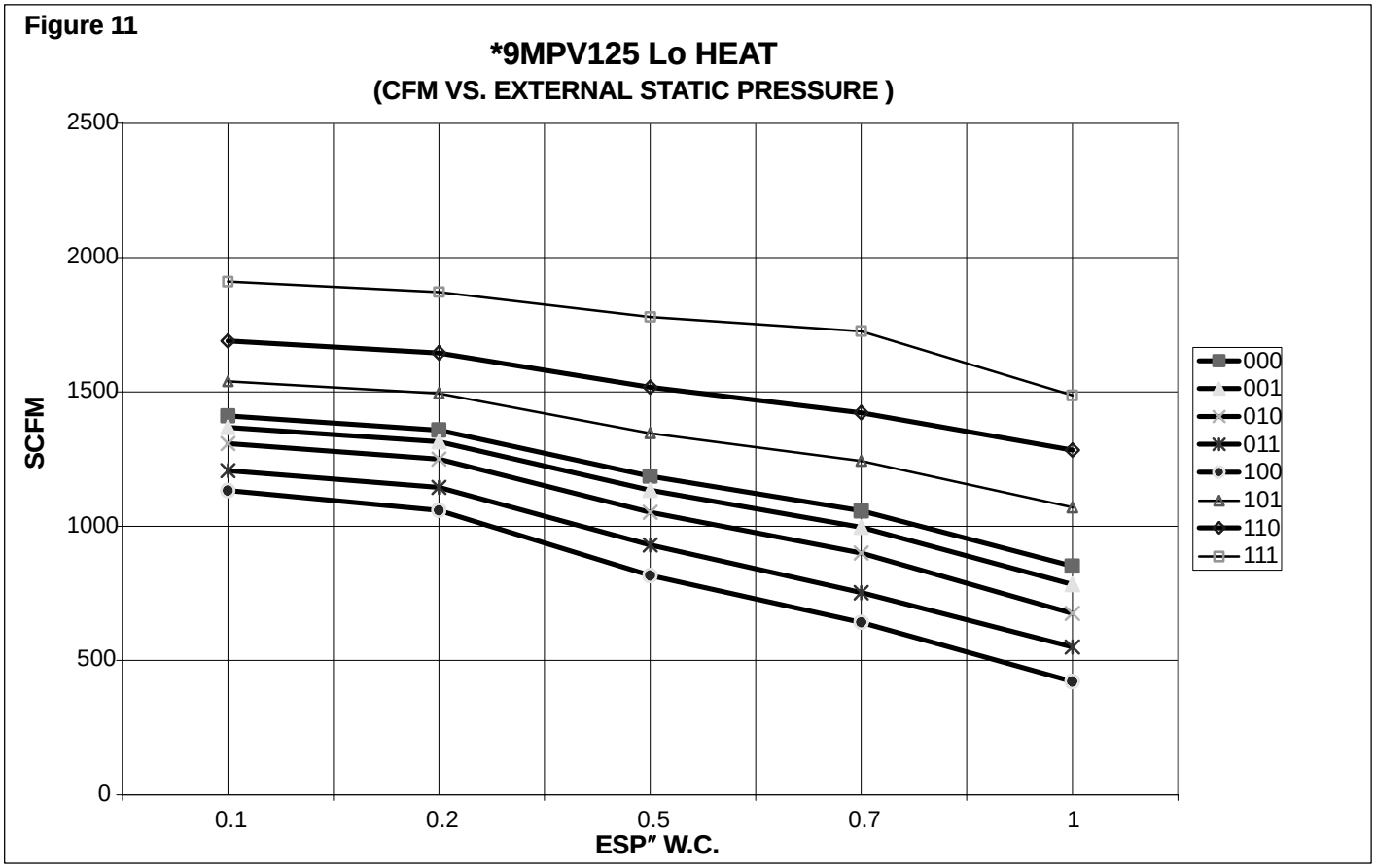
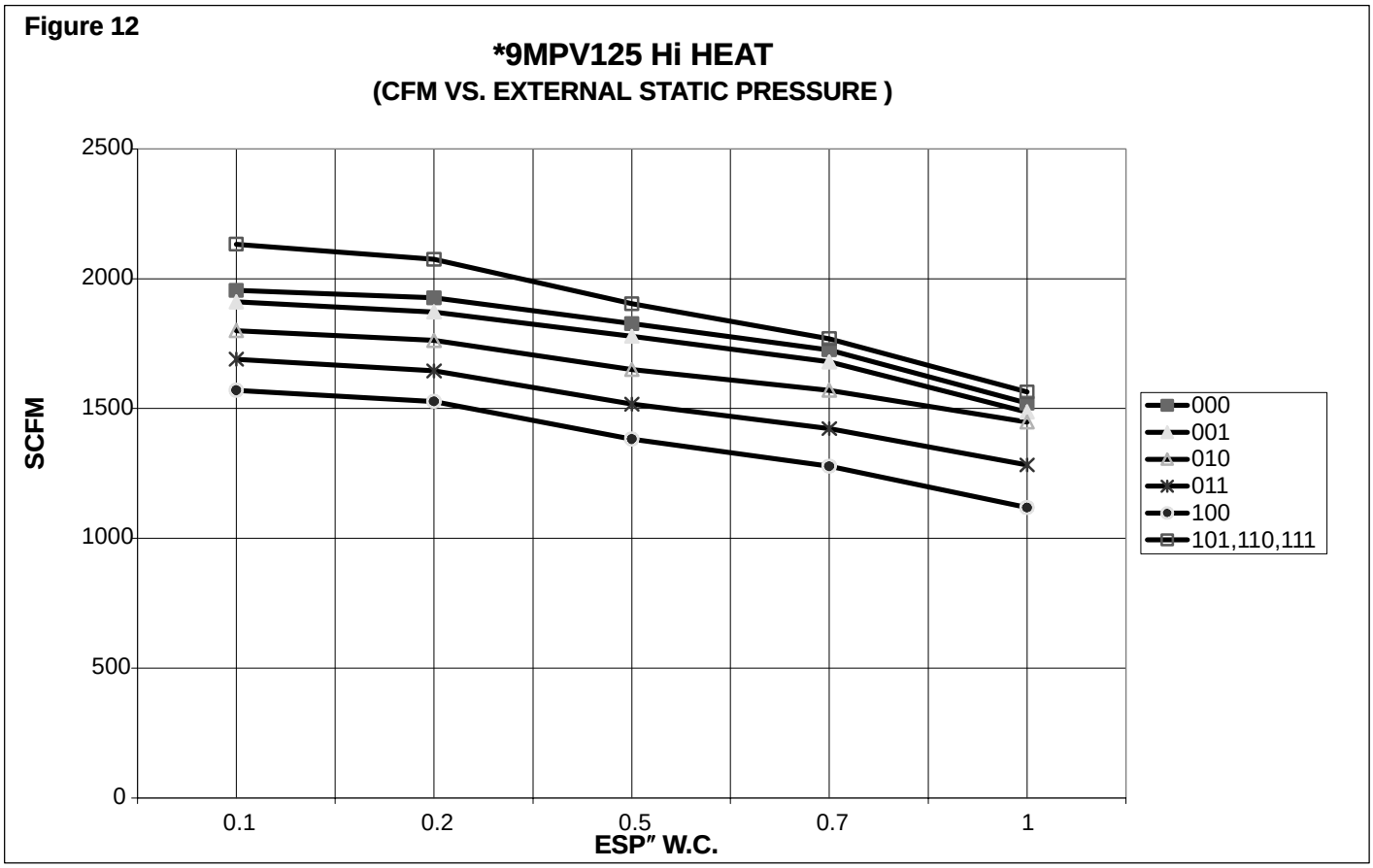
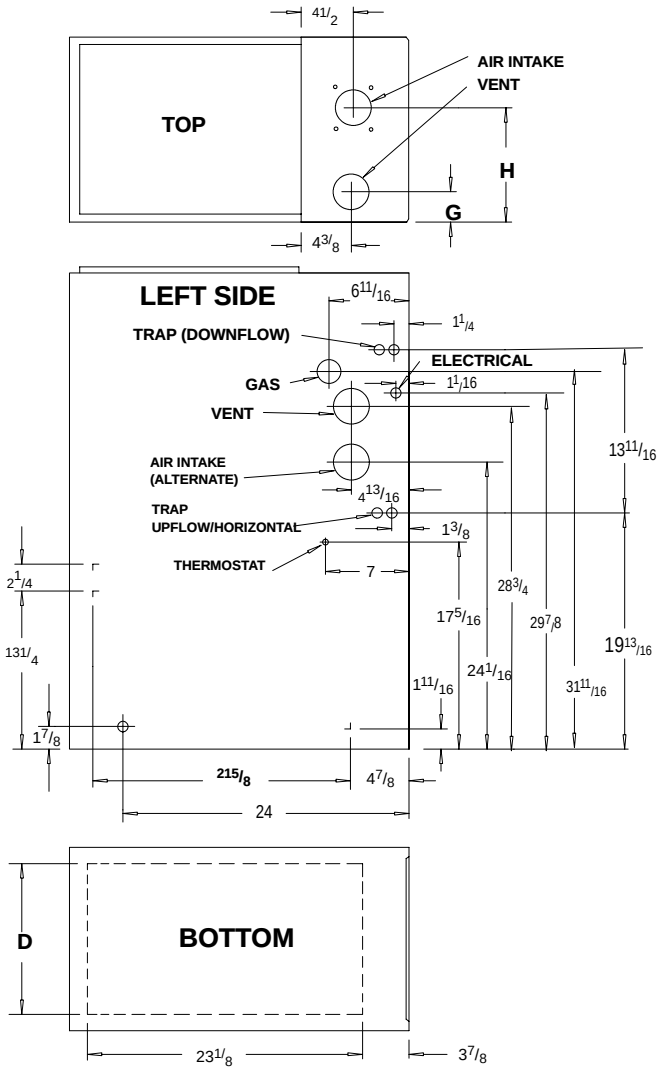


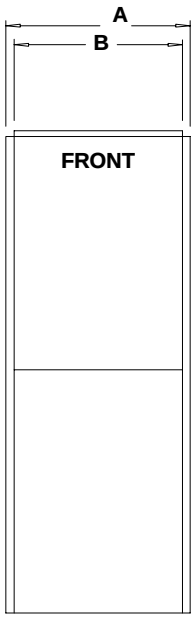
Figure 12

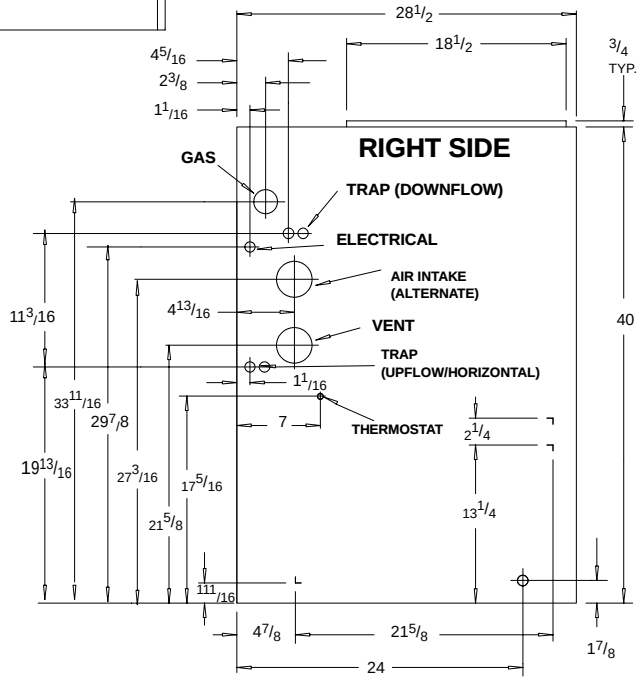


DIMENSIONS

Cabinet to Combustible Clearances						
TOP	BOT.	RH	LH	BACK	FRNT	FLUE
1″	0″	0″	0″	0″	3″	0″







ALL DIMENSIONS IN INCHES

Unit Capacity	Cabinet		Bottom	Top	
	A	B	D	G	H
*9MPV050F12A	19 1/8	17 5/8	14 3/4	2 1/2	9 1/2
*9MPV075F12A	19 1/8	17 5/8	14 3/4	2 1/2	9 1/2
*9MPV100J20A	22 3/4	21 1/4	18 3/4	2 5/8	11 3/8
*9MPV125L20A	24 1/2	23	23	2 1/4	12 1/4

* Denotes Brand

25-23-36A