

Technical Support Manual

Four Position Furnace

Models

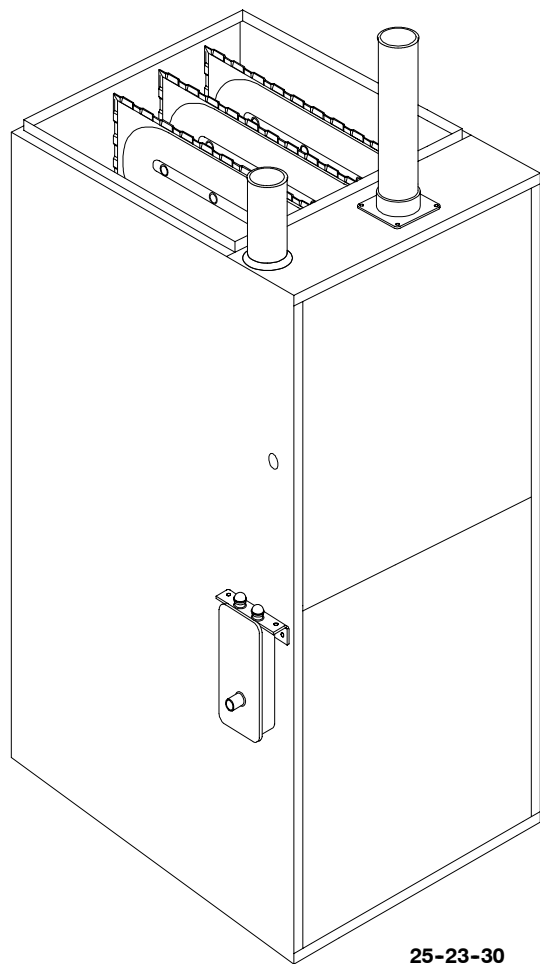
Dual Certified

***9MPV050F12A**

***9MPV075F12A**

***9MPV100J20A**

***9MPV125L20A**



25-23-30

Manufactured by:

International Comfort Products Corporation (USA)

Lewisburg, TN USA 37091

Save This Manual For Future Reference

MODEL NUMBER IDENTIFICATION GUIDE

Brand Identifier T = Tempstar C = Comfortmaker/Keeprite H = Heil/Arcoaire N = Non-Brand Specific (Generic)	Efficiency Identifier 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	0 7 5	F	1 2	A	# Engineering Rev. Denotes minor changes
								Marketing Digit Denotes minor change
								Cooling Airflow 08 = 800 CFM 12 = 1200 CFM 14 = 1400 CFM 16 = 1600 CFM 20 = 2000 CFM
								Cabinet Width B = 15.5" Wide F = 19.1" Wide J = 22.8" Wide L = 24.5" Wide
								Input (Nominal MBTUH)

* Denotes brand (T, H or C)

Manufacturers Number (Mfr No -See Rating Plate)			
ALL Models			
Specifications			
General	Gas Type	Nat	LP
	Transformer Size (VA) T'stat Heat Anticipator	40 .10	
Gas & Ignition	Gas Valve Regulation Type	HW SV 9541 SNAP	HW SV 9541 SNAP
	Manifold Press. Hi Fire (" WC) Lo Fire (" WC)	3.5 1.7	10.0 4.9
	Pilot Orifice Size	.018	.011
Combustion	Ignition Type/Series	HW HSP	
	Standard Outlet Temp. (°) Comb. Blower (MFD/Volts)	<140 4/370	
Limits & Controls	Fan Control (Type) Fan Control On (Timed-secs) Off	HW ST9162A 30/60 60,100,140,180	
Gas Conversion Kits All Models		Nat to LP *1011789 LP to Nat *1011787 *Order from Service Parts	

Specifications									
		*9MPV050F12A		*9MPV075F12A		*9MPV100J20A		*9MPV125L20A	
General									
Input (Btuh) Std/Alt.	Hi Fire	50,000		75,000		100,000		125,000	
	Lo Fire	35,000		53,000		70,000		87,500	
Output (Btuh) Std/Alt.	Hi Fire	46,000		69,000		92,000		115,000	
	Lo Fire	32,200		48,800		64,400		80,500	
Temp. Rise (°F)	Hi Fire	35-65		40-70		40-70		40-70	
	Lo Fire	35-65		40-70		40-70		40-70	
Electrical (Volts/Hz/FLA)		115/60/9.8		115/60/8.9		115/60/9.0		115/60/11.2	
Gas & Ignition									
Gas Type		Nat.	L.P.	Nat.	L.P.	Nat.	L.P.	Nat.	L.P.
Std. Main Orifices (No/Size)		2/42	2/54	3/42	3/54	4/42	4/54	5/42	5/54
Combustion									
Flue Outlet Size (Inches)		2		2		3		3	
Std. Outlet Temp (° F)		<140		<140		<140		<140	
@ Blower / @ Transition Box (Hi Fire)									
Std. Pressures (" of WC)									
5' No Elbows		-1.80 / -2.60		-1.80 / -2.60		-1.80 / -2.60		-1.80 / -2.60	
40' +5-90° DWV Elbows		-1.30 / -2.30		-1.30 / -2.30		-1.70 / -2.50		-1.70 / -2.50	
@ Blower / @ Transition Box (Lo Fire)									
Std. Pressures (" of WC)									
5' No Elbows		-1.20 / -1.90		-1.20 / -1.90		-1.20 / -1.90		-1.30 / -2.30	
40' +5-90° DWV Elbows		-1.00 / -1.80		-1.00 / -1.80		-1.00 / -1.80		-1.20 / -2.20	
Limits & Controls									
Rollout Switch (° F)		300		300		300		300	
Limit Control Setting (° F)		260		210		240		190	
Std. Pressure Sw. (Part No)		1013515		1013515		1013515		1013166	
Blower Switch Pressure (Close)		0.95		0.95		0.95		1.30	
Blower Switch Pressure (Open)		0.80		0.80		0.80		1.10	
Transition Switch Pressure (Close)		1.70		1.70		1.70		1.80	
Transition Switch Pressure (Open)		1.50		1.50		1.50		1.60	
High Altitude Pressure Sw. (Part No)		1013165		1013165		1013165		1013157	
Blower Switch Pressure (Close)		0.70		0.70		0.70		0.85	
Blower Switch Pressure (Open)		0.55		0.55		0.55		0.70	
Transition Switch Pressure (Close)		1.40		1.40		1.40		1.70	
Transition Switch Pressure (Open)		1.20		1.20		1.20		1.50	
Blower Data									
Type & Size		11-8		11-10		11-10		11-10	
Motor Amps/Rpm		9.8/1050		8.9/1080		11.2/1150		11.2/1150	
Motor Type/H.p.		DC ¹ /1/2		DC/1		DC/1		DC/1	
Filter Type		16x25x1		16x25x1		16x25x1		16x25x1 (2)	
Min. Cool Cap. (Tons)		1.5		1.5		2		2	
Max. Cool Cap. (Tons)		3		3		5		5	

Circulation Air Blower Data - *9MPV

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).

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

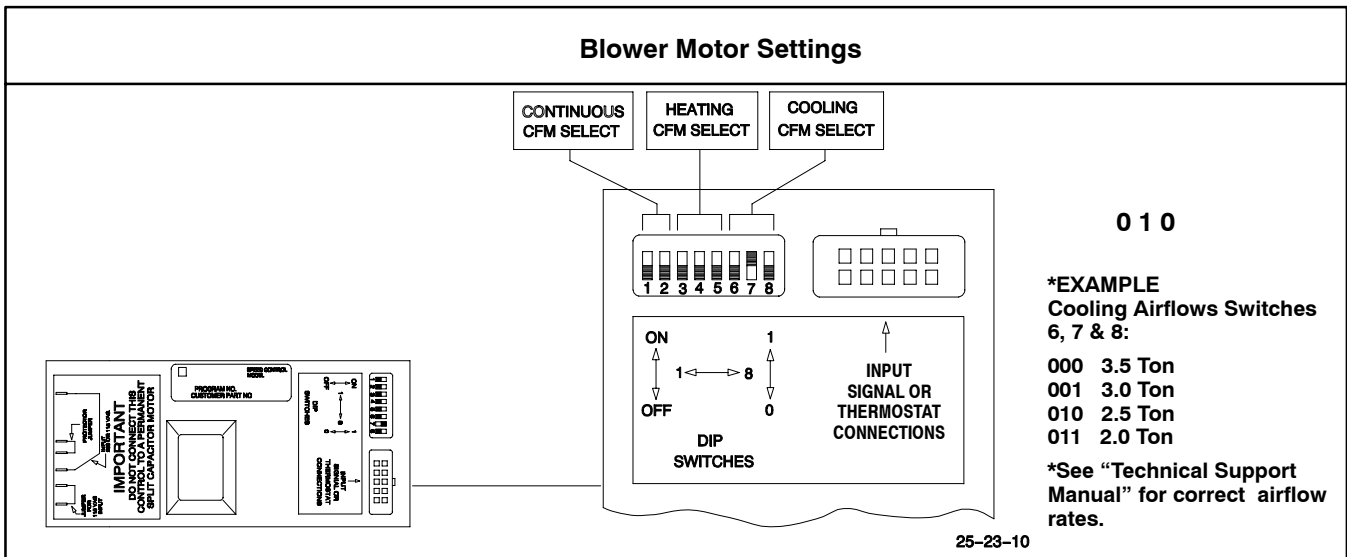
**Approximate air temperature change from factory setting @ 0.20" static on high heat).

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



Circulation Air Blower Data - *9MPV

Heating, Cooling & Continuous Airflow Settings

Figure 1

*9MPV050 COOLING (CFM VS. EXTERNAL STATIC PRESSURE)

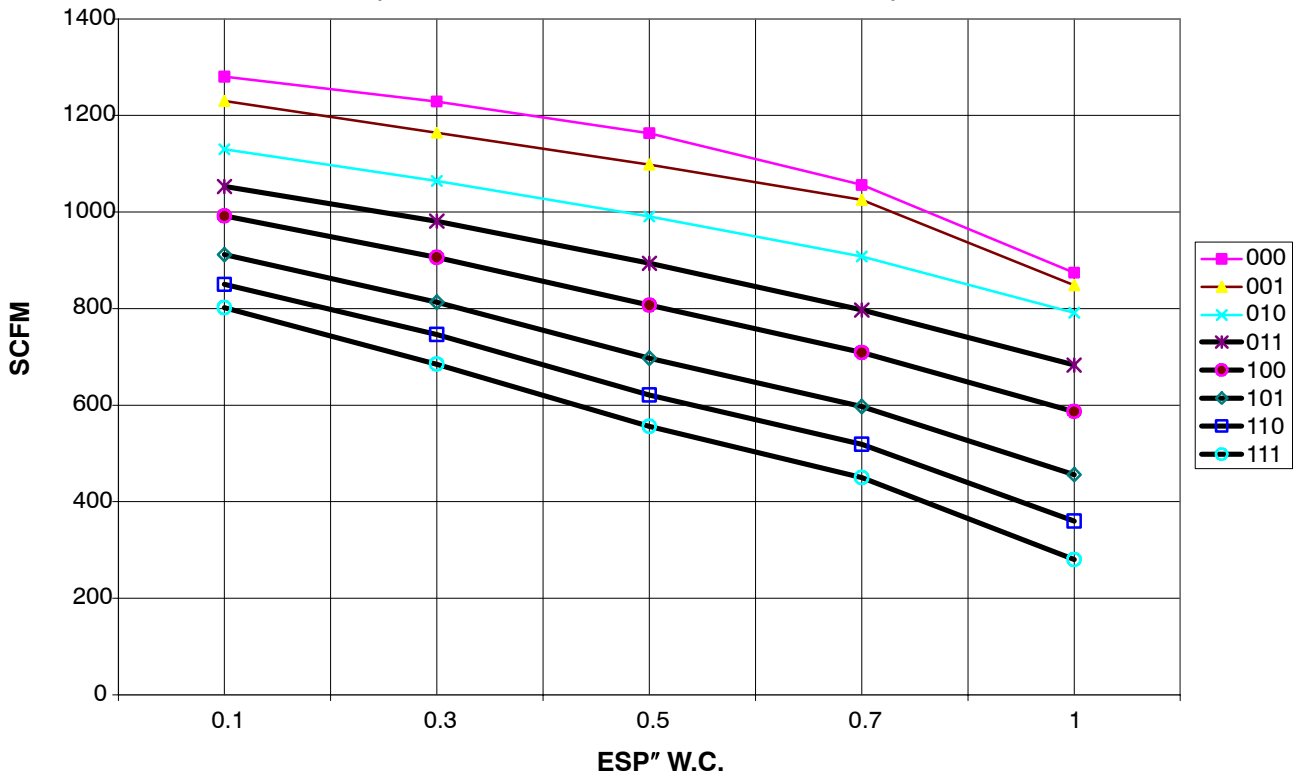
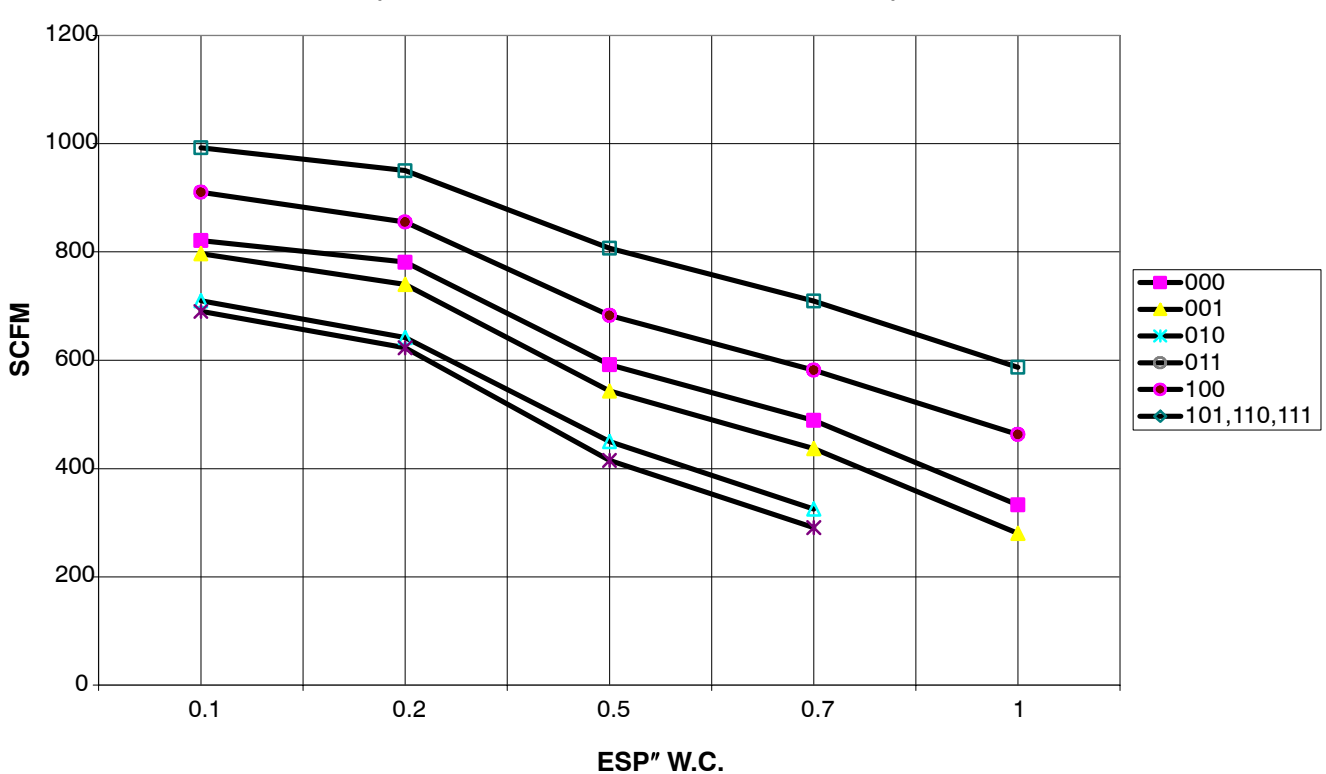


Figure 2

*9MPV050 Hi HEAT (CFM VS. EXTERNAL STATIC PRESSURE)



Circulation Air Blower Data - *9MPV

Heating, Cooling & Continuous Airflow Settings

Figure 3

*9MPV050 Lo HEAT (CFM VS. EXTERNAL STATIC PRESSURE)

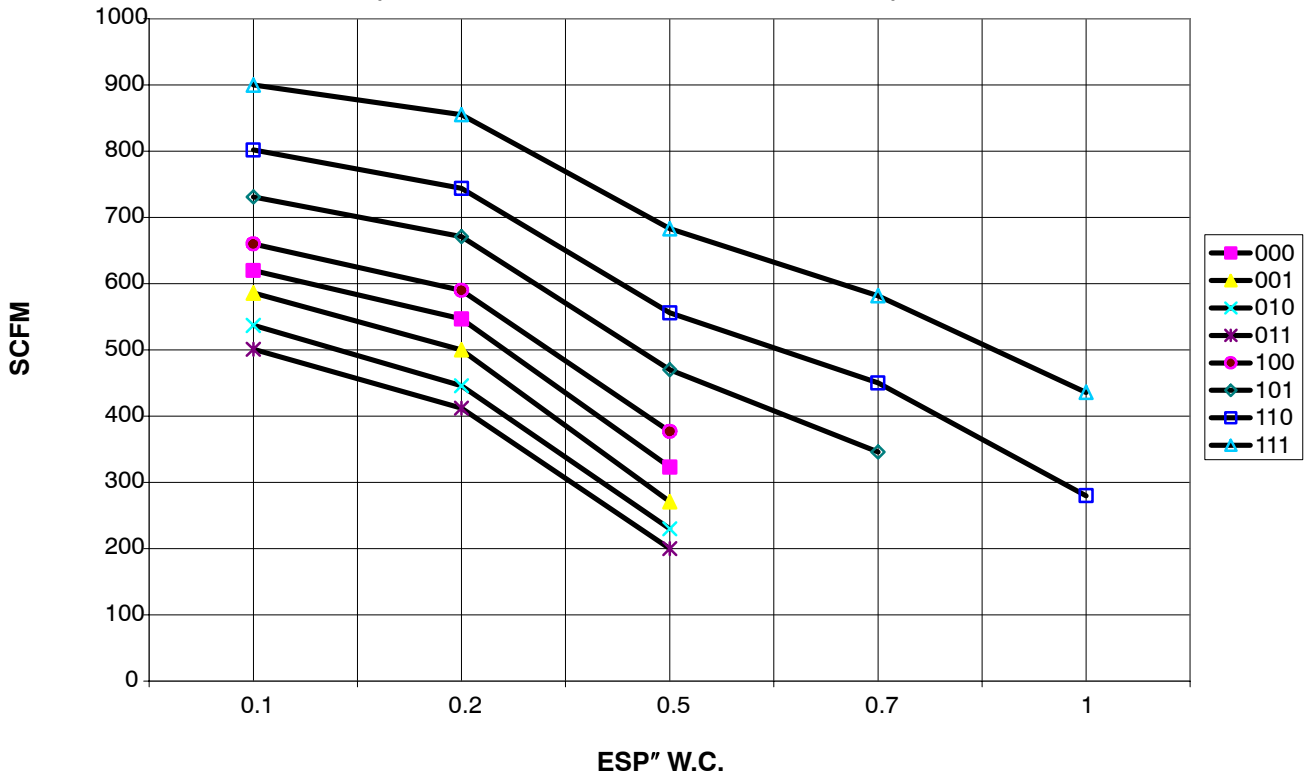
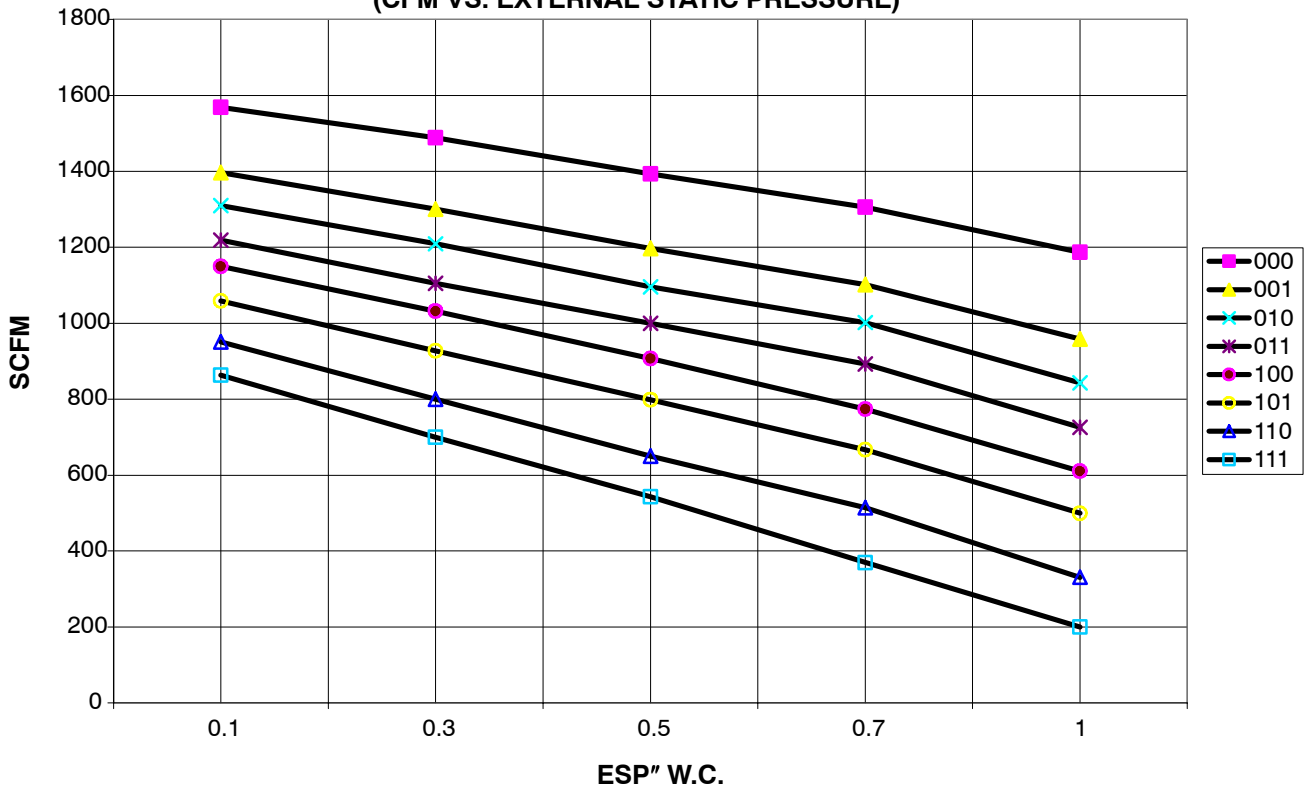


Figure 4

*9MPV075 COOLING (CFM VS. EXTERNAL STATIC PRESSURE)



Circulation Air Blower Data - *9MPV

Heating, Cooling & Continuous Airflow Settings

Figure 5

*9MPV075 Hi HEAT (CFM VS. EXTERNAL STATIC PRESSURE)

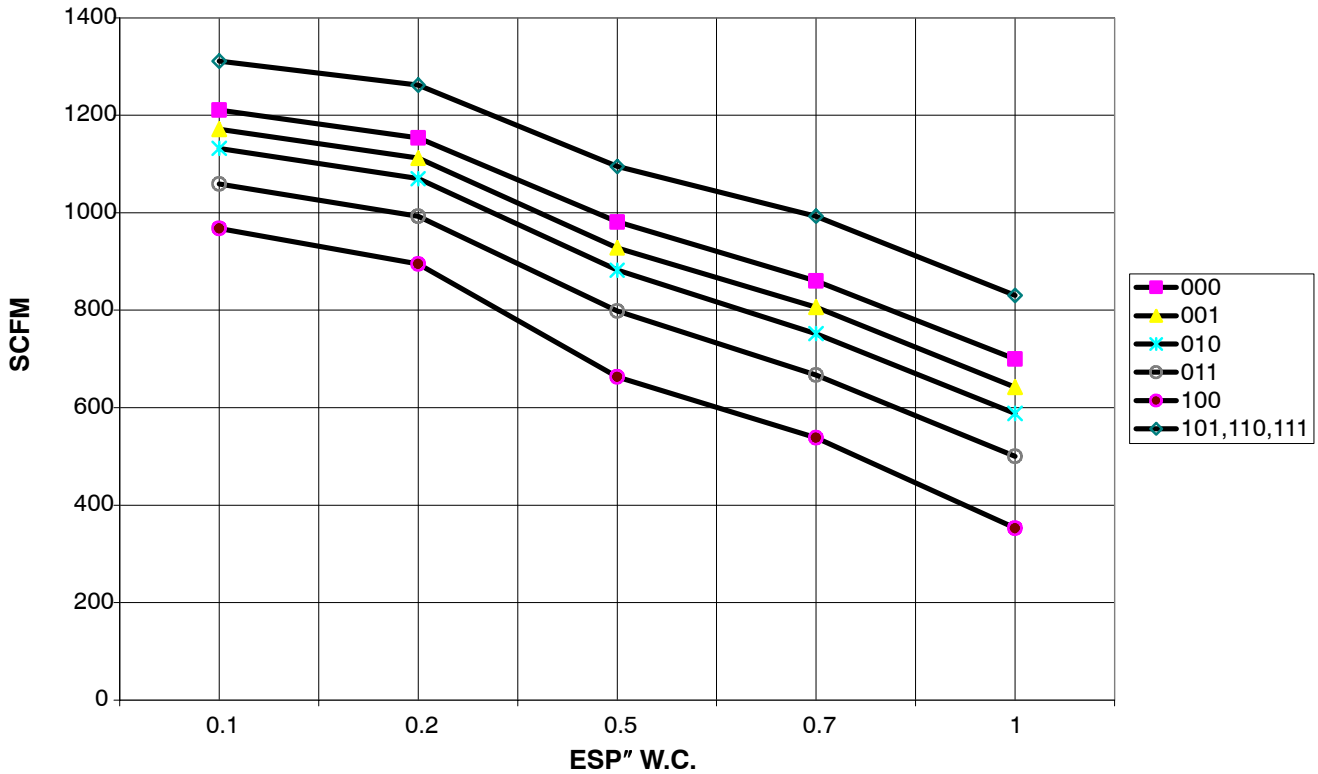
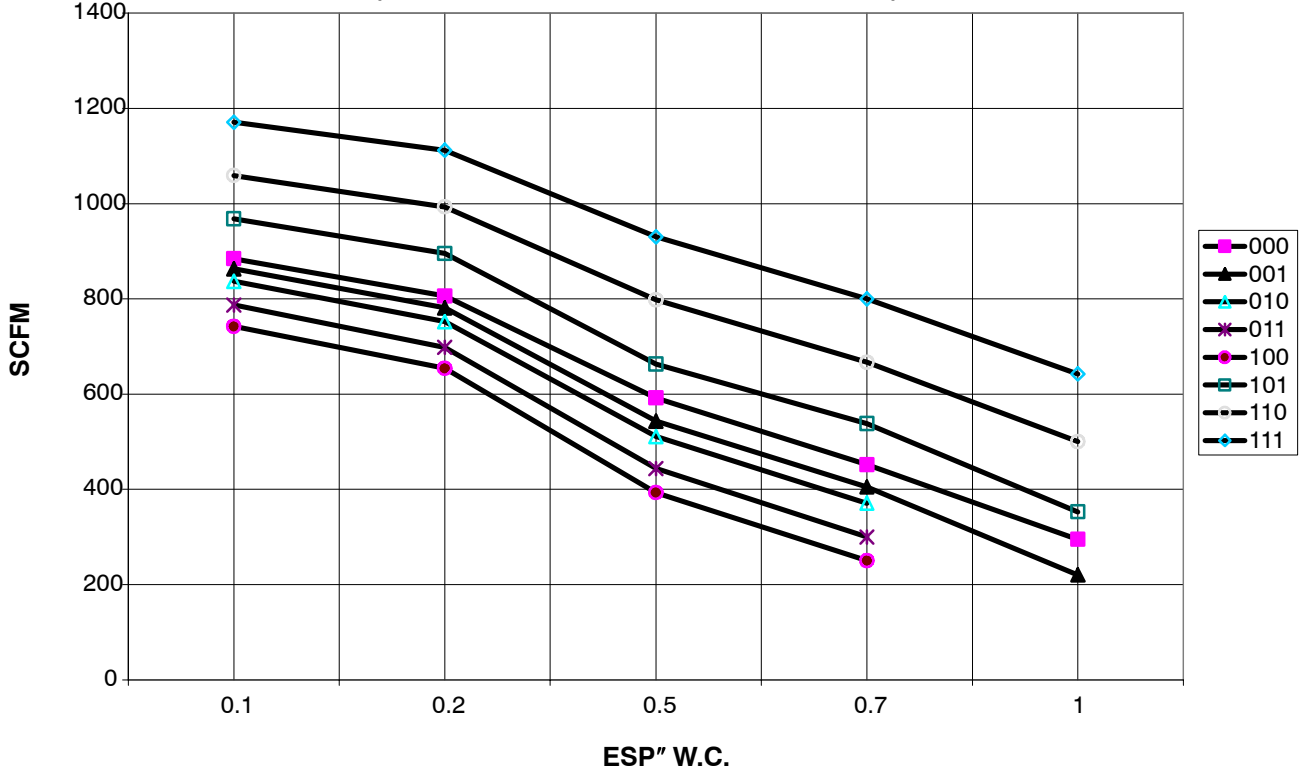


Figure 6

*9MPV075 Lo HEAT (CFM VS. EXTERNAL STATIC PRESSURE)



Circulation Air Blower Data - *9MPV

Heating, Cooling & Continuous Airflow Settings

Figure 7

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

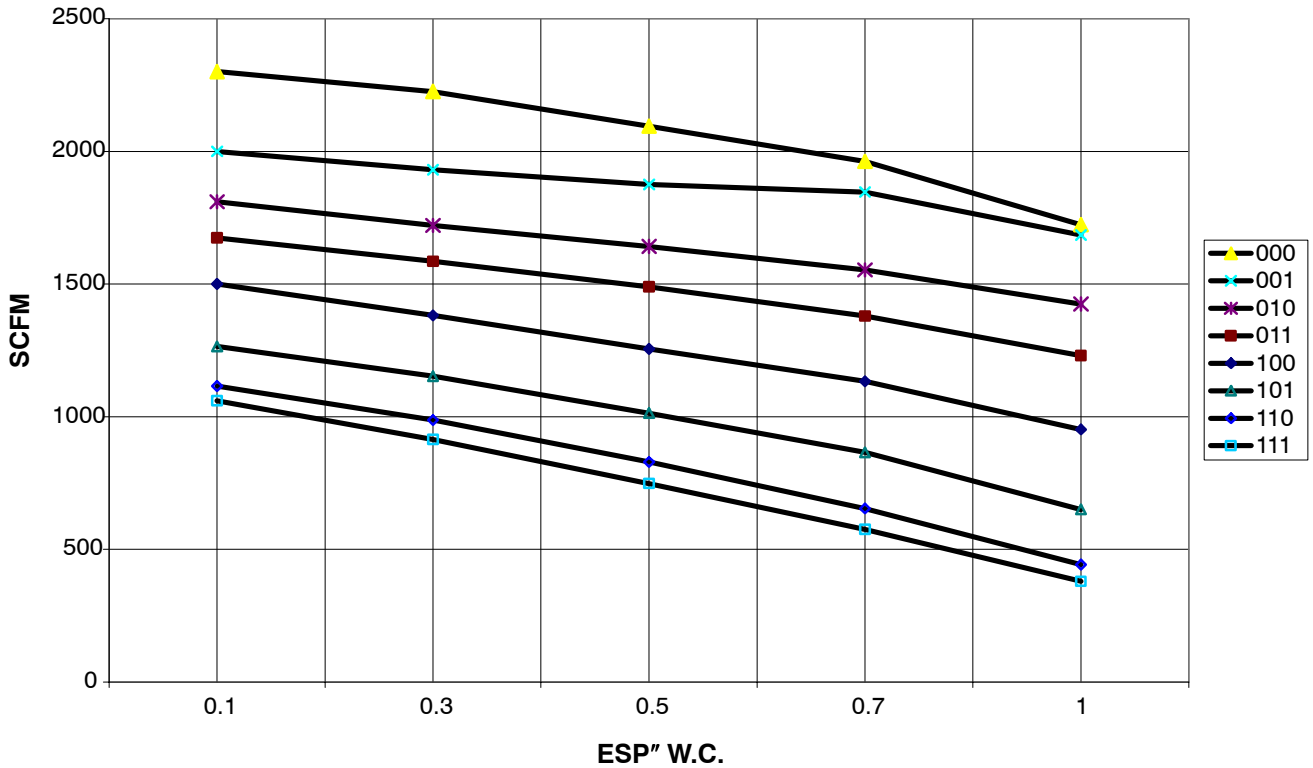
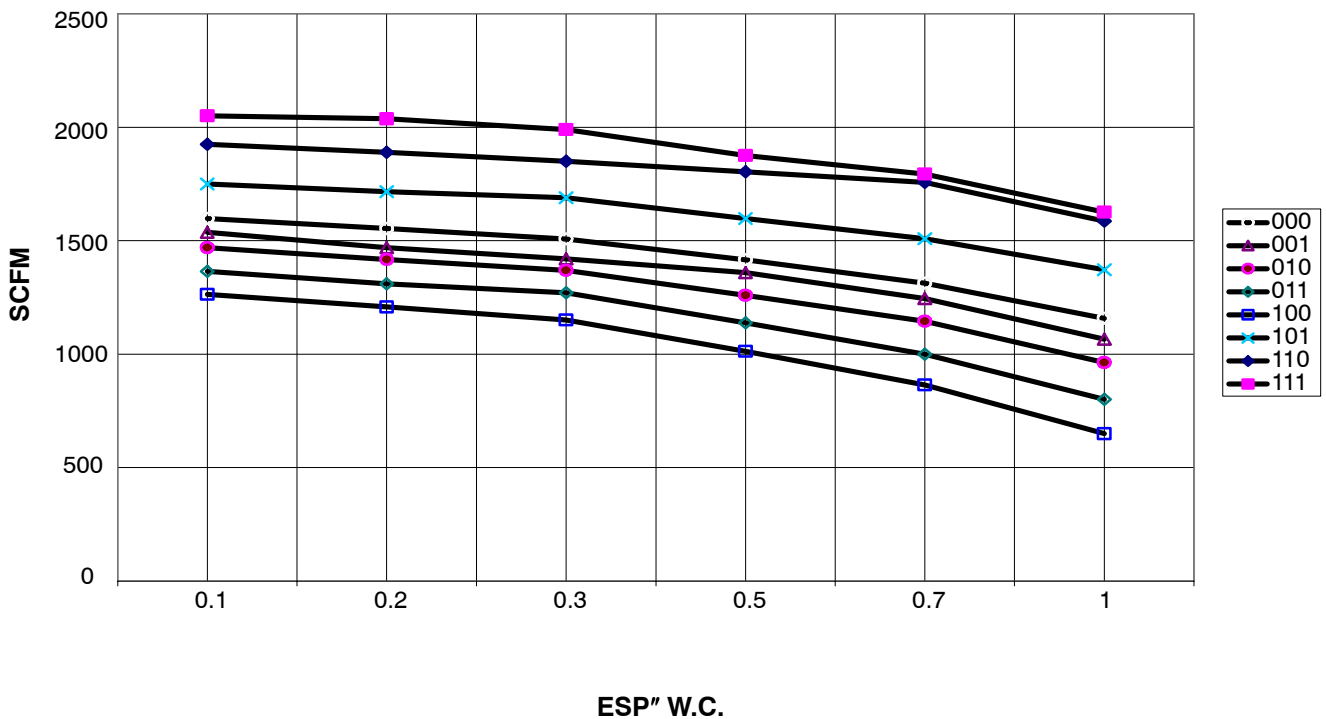


Figure 8

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



Circulation Air Blower Data - *9MPV

Heating, Cooling & Continuous Airflow Settings

Figure 9

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

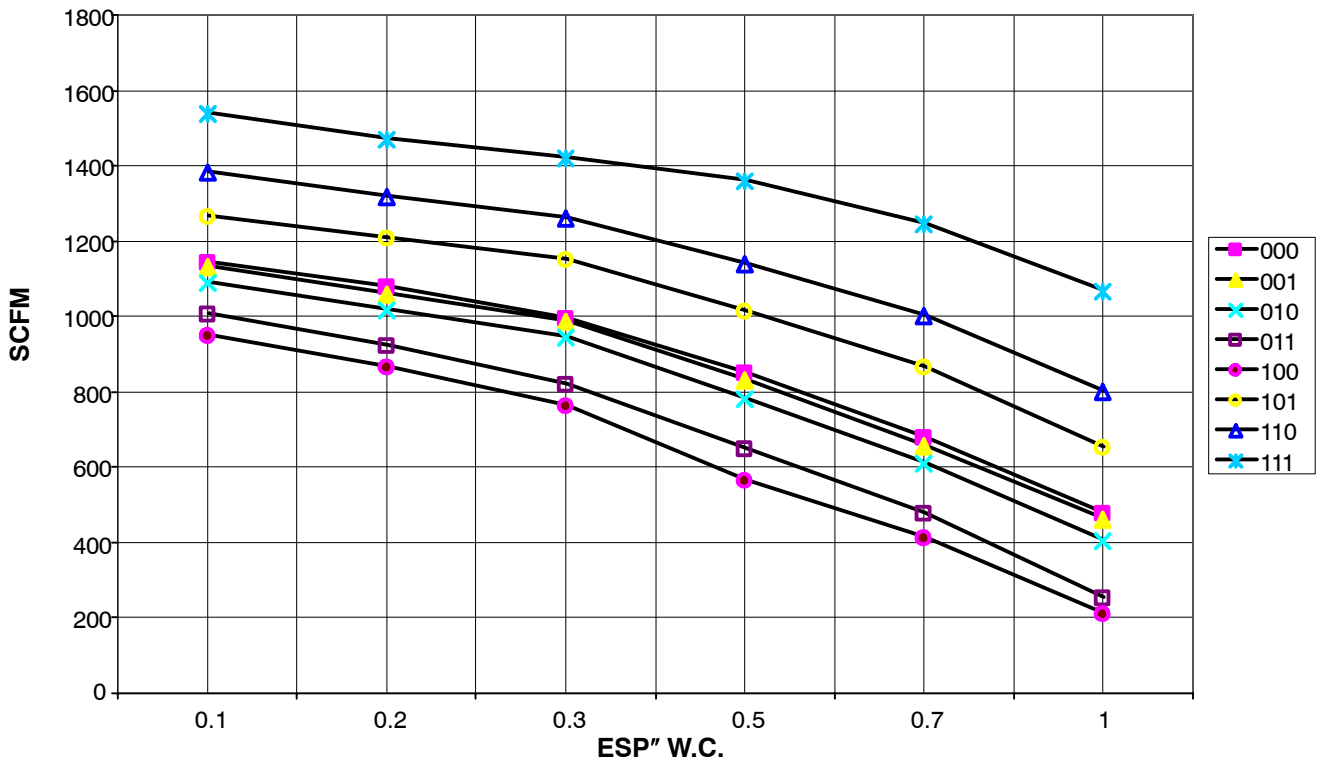
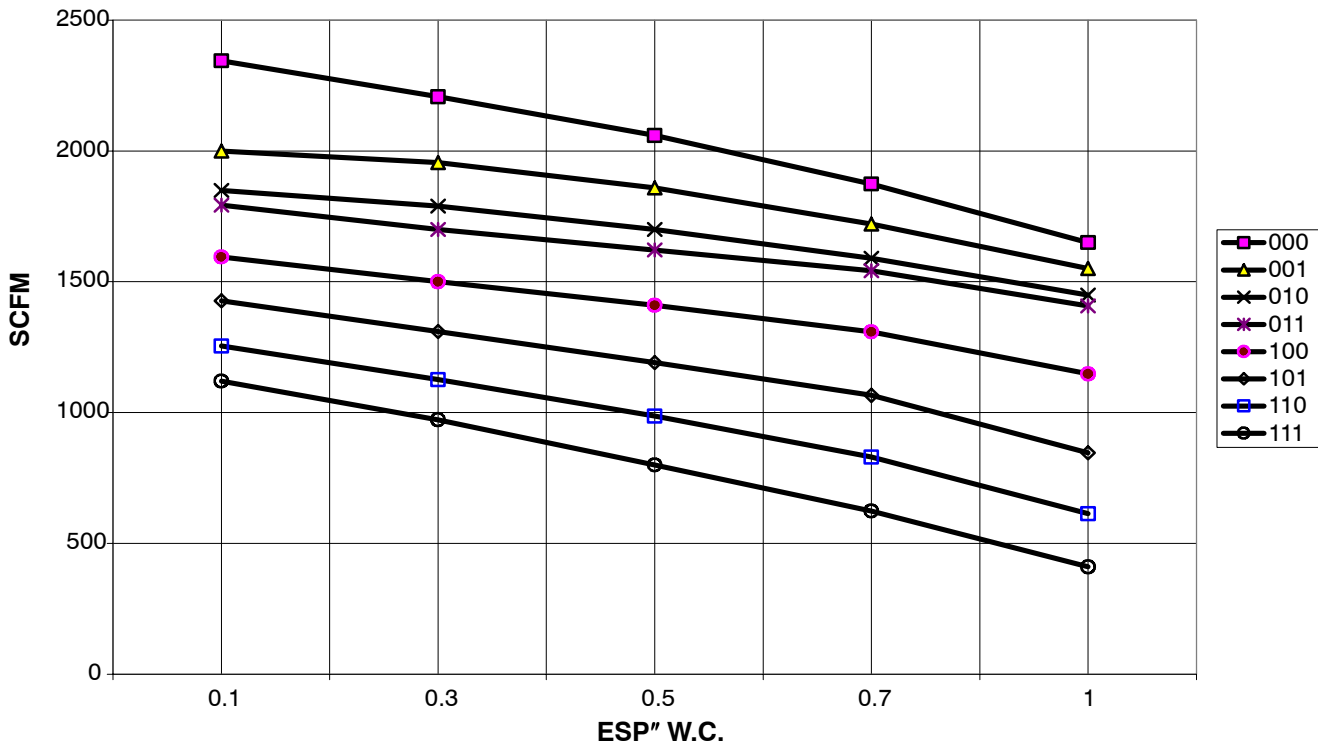


Figure 10

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



Circulation Air Blower Data - *9MPV

Heating, Cooling & Continuous Airflow Settings

Figure 11

***9MPV125 Lo HEAT**
(CFM VS. EXTERNAL STATIC PRESSURE)

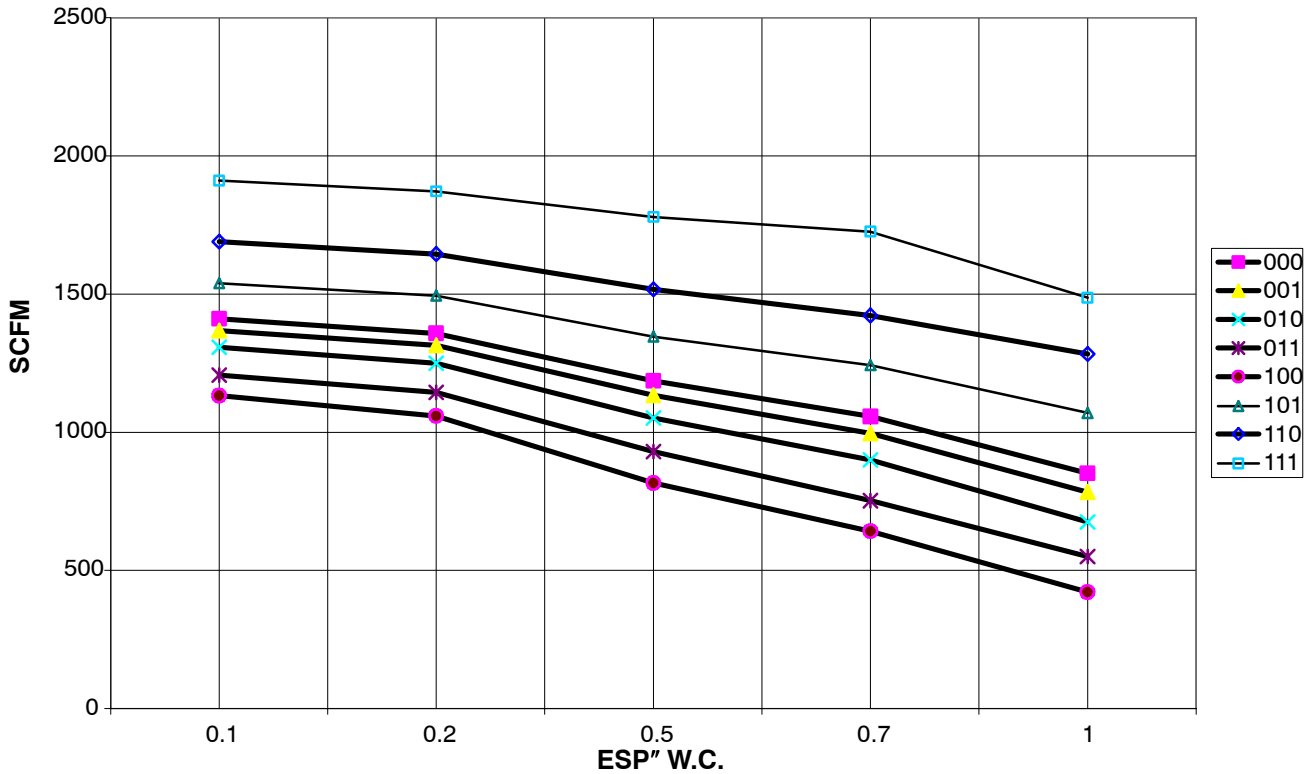
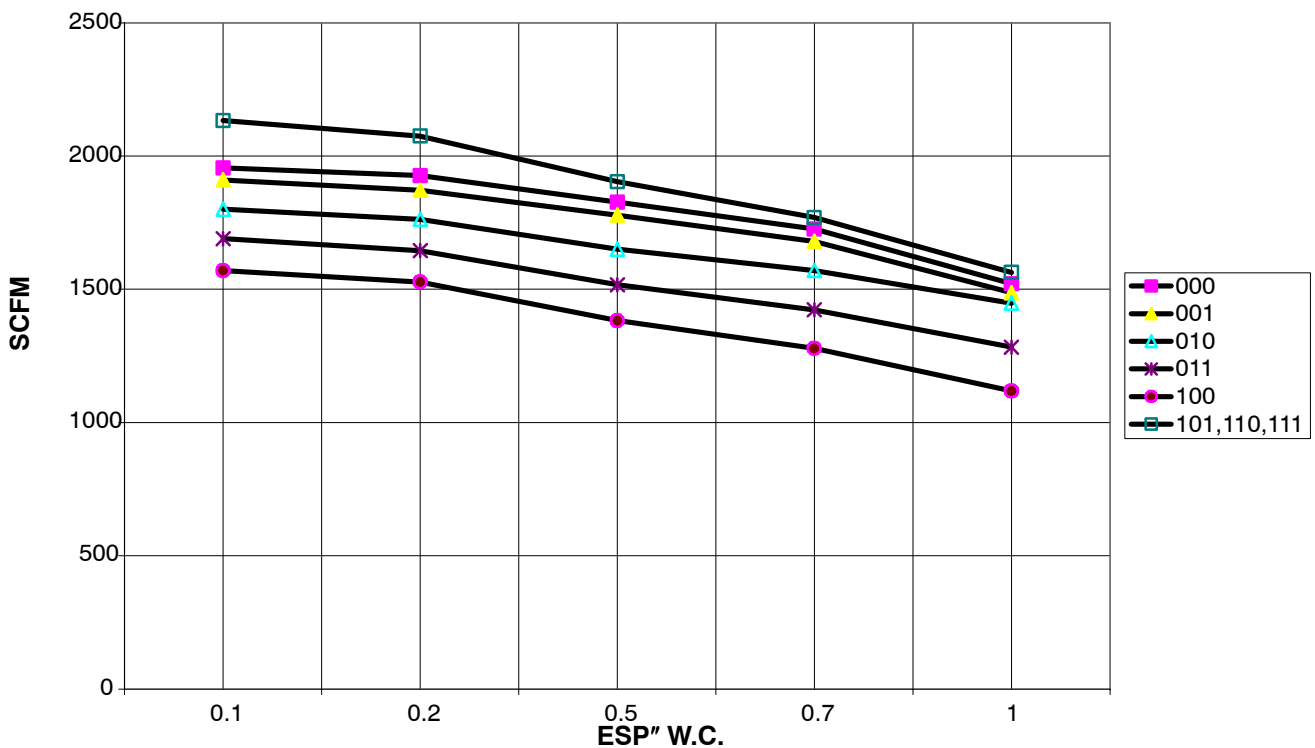
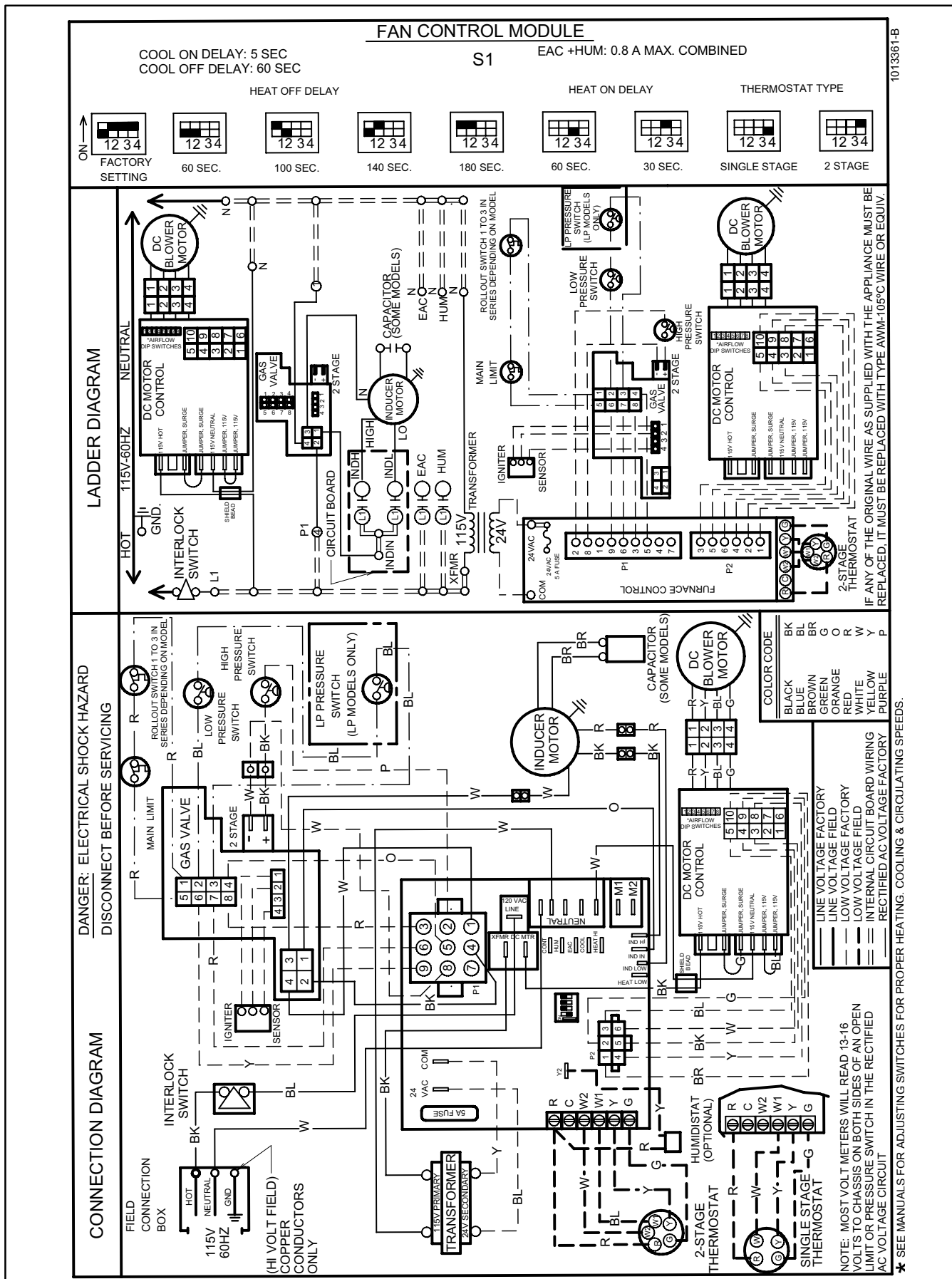


Figure 12

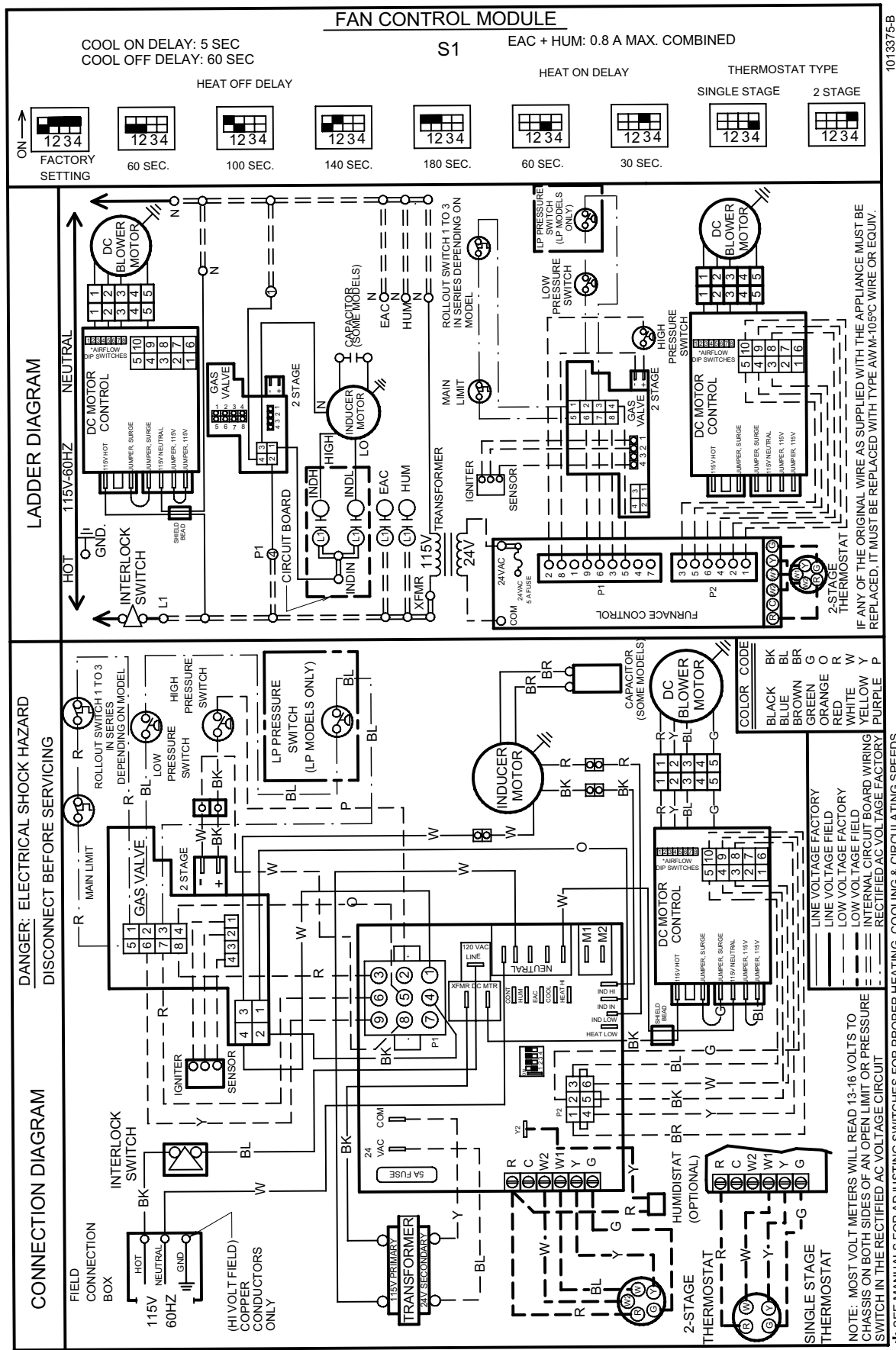
***9MPV125 Hi HEAT**
(CFM VS. EXTERNAL STATIC PRESSURE)



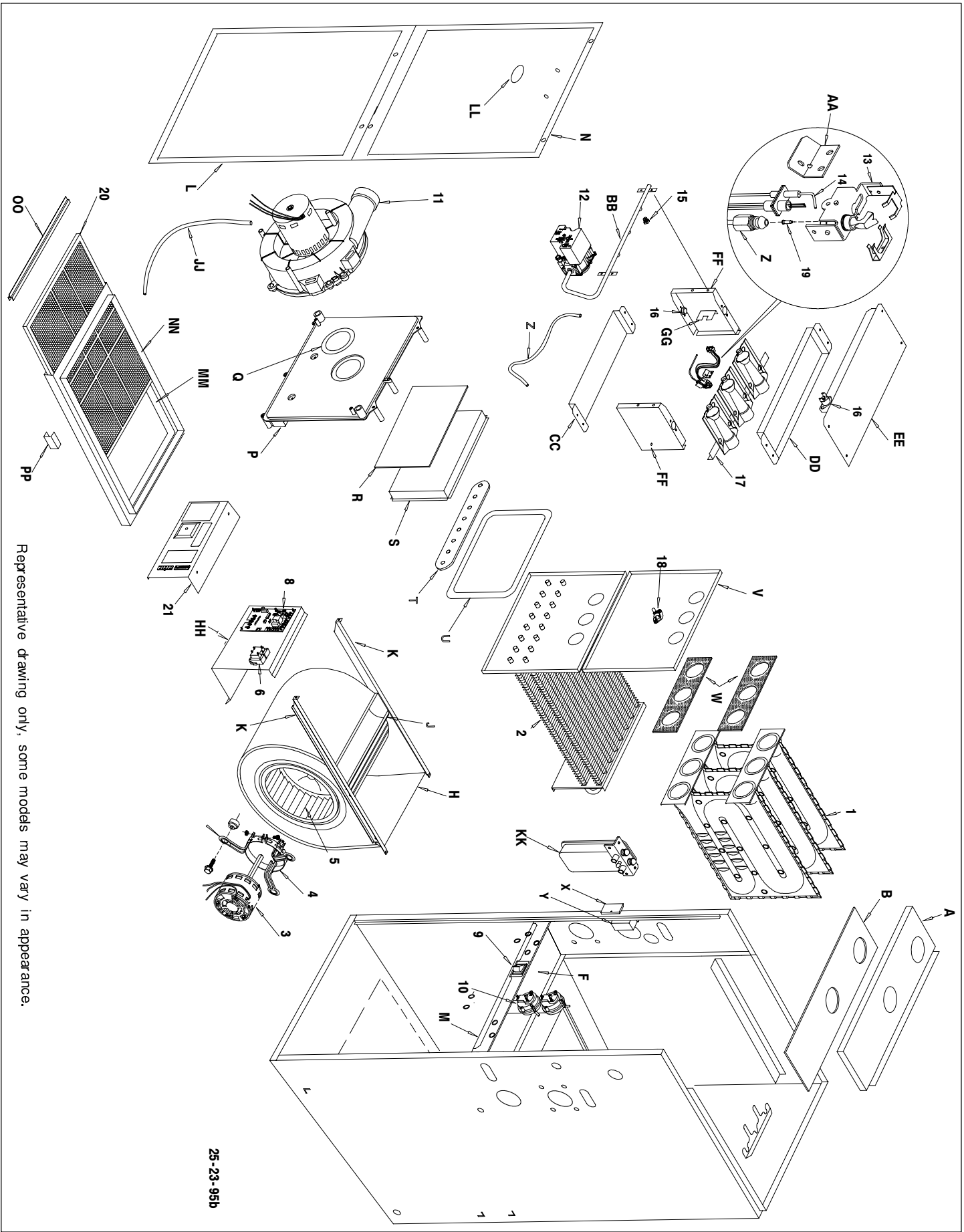
1. Wiring Diagram (1½ HP Variable Speed Blower Motor)



Wiring Diagram (1 HP Variable Speed Blower Motor)



2. (*9MPV)



Replacement Parts - *9MPV

Models - *9MPV050F12A2, *9MPV075F12A2, *9MPV100J20A2 & *9MPV125L20A2 (Natural Gas)

Replacement part supplied will be current active part. For parts not listed, consult place of purchase.

Key No.	Description Functional	Part Number	*9MPV			
			050 F12A	075 F12A	100 J20A	125 L20A
1	Heat Exchanger, Primary	1012850 1012854 1012858 1012862	1 - - -	- 1 - -	- - 1 -	- - - 1
2	Ht Exchanger, Secondary	1013762 1013763 1013765 1013767	1 - - -	- 1 - -	- - 1 -	- - - 1
3	Motor, Blower	1012478 1012479	1 -	- 1	- 1	- 1
4	Mount, Motor kit	522020024	1	1	1	1
5	Wheel, Blower	1013011 1011420	1 -	- 1	- 1	- 1
6	Transformer	1012722	1	1	1	1
8	Control, Fan Timer	1012084	1	1	1	1
9	Switch, Interlock	1012351	1	1	1	1
10	Switch, Pressure	1013166 1013515	- 1	- 1	- 1	1 -
11	Blower, Exhaust	1013357 1013376	1 -	1 -	1 -	- 1
12	Valve, Gas HSP Nat. 2 Stage	1013351	1	1	1	1
13	Burner, Pilot HSP	1008731	1	1	1	1
14	Igniter/Sensor HSP	1009524	1	1	1	1
15	Orifice, Burner #42 Nat.	1011351	2	3	4	5
16	Switch, Limit (Rollout)	1013102	2	2	2	2
17	Burner Assembly	1008723 1008724 1008725 1008726	1 - - -	- 1 - -	- - 1 -	- - - 1
18	Switch, Limit (Main)	1320366 34335001 34335002 1008445	1 - - -	- 1 - -	- - 1 -	- - 1 -
19	Orifice, Pilot .018	503211	1	1	1	1
20	Filter, HH 16X25X1/2"	1010365	1	1	2	2
21	Control, Mtr Variable Spd	1013410 1013411 1013412 1013413	1 - - -	- 1 - -	- - 1 -	- - - 1

Key No.	Description	Part Number	*9MPV			
			050 F12A	075 F12A	100 J20A	125 L20A
A	Panel, Top	1012342 1012343 1012344	1 - -	1 - -	- 1 -	- - 1
B	Gasket, Top Panel	1012603 1012604 1012605	1 - -	1 - -	- 1 -	- - 1
F	Partition, Blower	1013164 1012877 1013162 1013163	1 - - -	- 1 - -	- - 1 -	- - - 1
H	Housing, Blower	1012972 1012888	1 -	- 1	- 1	- 1
J	Panel, Blower Cutoff	721020013 721020008	1 -	- 1	- 1	- 1
K	Hanger, Blower	1012328	2	2	2	2
L	Door, Blower (Cmaker only) (Cmaker only) (Cmaker only) (Heil only) (Heil only) (Heil only) (Tstar only) (Tstar only) (Tstar only)	1013141 1013142 1013143 1013138 1013139 1013140 1013394 1013395 1013396	1 - - 1 - - 1 - -	1- - - 1 - - 1 - -	- 1 - - 1 - - 1 -	- - 1 - - 1 - 1
M	Bracket Asy., Door Filler	1013730 1013727 1013728 1013729	1 - - -	- 1 - -	- - 1 -	- - - 1
N	Door, Front (Cmaker only) (Cmaker only) (Cmaker only) (Heil only) (Heil only) (Heil only) (Tstar only) (Tstar only) (Tstar only)	1013148 1013149 1013150 1013145 1013146 1013147 1013397 1013398 1013399	1 - - 1 - - 1 - -	1 - - 1 - - 1 1 -	- 1 - - 1 - - 1 -	- - 1 - - 1 - 1
P	Transition Assembly	1012281 1012282 1012283	1 - -	1 - -	- 1 -	- - 1
Q	Gasket, Exhaust Blower	1012588 1013415	1 -	1 -	1 -	- 1
R	Board, Insulating	1012418 1012419 1012420	1 - -	1 - -	- 1 -	- - 1
S	Box, Collector	1012244 1012245 1012246	1 - -	1 - -	- 1 -	- - 1
T	Gasket, Transition	1013263 1013080 1013083 1013084	1 - - -	- 1 - -	- - 1 -	- - - 1
U	Gasket, Collector Box	1012594 1012595 1012596	1 - -	1 - -	- 1 -	- - 1

Replacement Parts - *9MPV

Models - *9MPV050F12A2, *9MPV075F12A2, *9MPV100J20A2 & *9MPV125L20A2 (Natural Gas)

Replacement part supplied will be current active part. For parts not listed, consult place of purchase.

Key No.	Description	Part Number	*9MPV				Key No.	Description	Part Number	*9MPV			
			050 F12A	075 F12A	100 J20A	125 L20A				050 F12A	075 F12A	100 J20A	125 L20A
V	Partition, Front Ht Exchger	1012650	1	-	-	-	(	PART NOT ILLUSTRATED					
		1012648	-	1	-	-	(	Door Screws	1013349	4	4	4	4
		1012651	-	-	1	-	(	Door Screw Retainers	1013725	4	4	4	4
		1012653	-	-	-	1	(	Elbow Vent Asy 90+	1013495	1	1	1	1
W	Gasket, Attachment Plate	1012542	2	-	-	-	(	Drain, Vent	1013796	1	1	1	1
		1012543	-	2	-	-	(	Elbow, 90° Vent	1012617	1	1	1	1
		1012544	-	-	2	-	(	Coupling, Discharge	1002522	1	1	1	1
		1012545	-	-	-	2	(	Clamp, Hose	1013651	1	1	1	1
X	Cover, Junction Box	1012350	1	1	1	1	(	Coupling, Air Intake	1012284	1	1	1	1
Y	Box, Junction	1012349	1	1	1	1	(	Gasket, Air Intake	1012583	1	1	1	1
Z	Tube, Pilot	1012832	1	-	1	-	(	Gasket, Trap	1012610	1	1	1	1
		1013189	-	1	-	-	(	Hose, Drain 1/2"	1012695	1	1	1	1
		1013077	-	-	-	1	(	Hose, Drain 5/8"	1012696	1	1	1	1
AA	Bracket, Pilot	1010901	1	1	1	1	(	Tube, Drain Rigid	1013356	1	1	-	-
BB	Manifold	1012970	1	-	-	-	(		1013427	-	-	1	-
		1012971	-	1	-	-	(		1013428	-	-	-	1
		1012278	-	-	1	-	(	Clamp, Hose 5/8"	1012975	2	2	2	2
		1012279	-	-	-	1	(	Clamp, Hose 3/4"	1012976	4	4	4	4
CC	Bottom, Burner Box	1012334	1	1	-	-	(	Grommet, Vent	1012697	1	1	1	1
		1012335	-	-	1	-	(	Clamp, Hose	1013651	2	2	2	2
		1012336	-	-	-	1	(	Bushing, Strain Relief	1945287	1	1	1	1
DD	Baffle, Burner Box	1012338	1	1	-	-	(	Grommet, Vinyl	1009535	1	1	1	1
		1012339	-	-	1	-	(	Plug, Rubber	1057573	1	1	1	1
		1012340	-	-	-	1	(	Harness, Wire	1013689	1	1	-	-
EE	Top, Burner Box	1013702	1	1	-	-	(		1013690	-	-	1	1
		1013703	-	-	1	-	(	Harness, Wire Lo Voltage	1012520	1	1	1	1
		1013704	-	-	-	1	(	Harness, Wire Hi Voltage	1012521	1	1	1	1
FF	Bracket, Manifold Support	1012377	2	2	2	2	(	Manual, Tech / Parts List	44003201301	1	1	1	1
GG	Bracket, Burner Box Side	1012532	2	2	2	2	(	Manual, Users	44002101002	1	1	1	1
HH	Bracket, Control Mounting	1012321	1	1	1	1	(	Manual, Installation	44001201100	1	1	1	1
JJ	Tube, Sensor	1009238	1	1	1	1							
KK	Trap, Drain Assembly	1012322	1	1	1	1							
LL	Sightglass	1013235	1	1	1	1							
	(Tstar only)	1013236	1	1	1	1							
MM	Wrapper, Filter Rack	741010039	1	1	2	2							
NN	Front, Filter Rack	741020001	1	1	2	2							
OO	Cover, Filter	2791043	1	1	2	2							
PP	Clip, Filter	1008482	3	3	3	3							
Gas Conversion Kits - All models Nat to LP *1011789 LP to Nat *1011787 *Must be ordered from Service Parts													