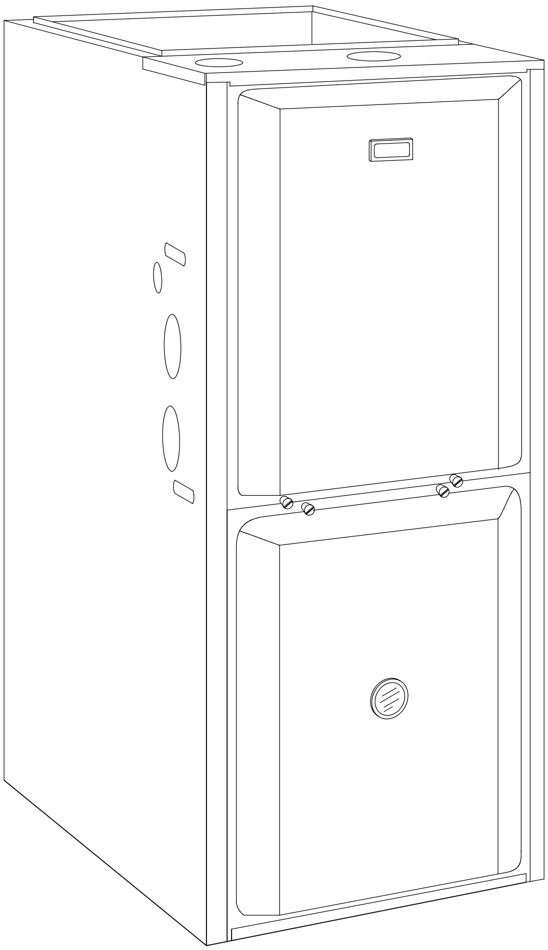
Technical Support Manual

Four Position Furnace



Models

Dual Certified
***9MPT050F12C1**
***9MPT075F14C1**
***9MPT100J16C1**
***9MPT125L20C1**

***9MPV050F12D1**
***9MPV075F12D1**
***9MPV100J20D1**
***9MPV125L20D1**

*** Denotes Brand (C, H, T)**

International Comfort Products, LLC
Lewisburg, TN 37091 U.S.A.

Save This Manual For Future Reference

TECHNICAL SUPPORT

Manufacturers Number (Mfr No - See Rating Plate**)**
ALL Models

Specifications

	*9MPT050F12		*9MPT075F14		*9MPT100J16		*9MPT125L20	
General								
Gas Type	Nat	Propane	Nat	Propane	Nat	Propane	Nat	Propane
Transformer Size (VA)	40							
T'stat Heat Anticipator	.50							
Input (Btuh) Std/Alt. HI Heat	50,000		75,000		100,000		125,000	
LO Heat	35,000		53,000		70,000		87,500	
Output (Btuh) Std/Alt. HI Heat	46,000		70,000		93,000		117,000	
LO Heat	32,000		49,000		65,000		82,000	
Temp. Rise (°F/°C) HI Heat	35-65/19-46		40-70/22-38		40-70/22-38		40-70/22-38	
LO Heat	25-55/14-30		30-60/17-33		30-60/17-33		30-60/17-33	
Electrical (Volts/Hz)	115/60		115/60		115/60		115/60	
Rating Plate Amps	11.8		11.8		11.8		14.0	
Gas & Ignition								
Gas Type	Nat.	Propane	Nat.	Propane	Nat.	Propane	Nat.	Propane
Std. Main Orifices (No/Size)	2/42	2/54	3/42	3/54	4/42	4/54	5/42	5/54
Gas Valve (Honeywell)	VR8205Q	VR8205Q	VR8205Q	VR8205Q	VR8205Q	VR8205Q	VR8205Q	VR8205Q
Regulation Type	SNAP	SNAP	SNAP	SNAP	SNAP	SNAP	SNAP	SNAP
Manifold Press. HI Heat (in wc)	3.5	10.0	3.5	10.0	3.5	10.0	3.5	10.0
LO Heat (in wc)	1.7	4.9	1.7	4.9	1.7	4.9	1.7	4.9
Ignition Type/Series	Hot Surface							
Combustion								
Flue Outlet Size (Inches)	2		2		3		3	
Std. Outlet Temp (°F/°C)	<140/60		<140/60		<140/60		<140/60	
@ Blower / @ Transition Box (HI Heat)								
Std. Pressures (in 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 Heat)								
Std. Pressures (in 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	
Furnace Controls								
Furnace Control (Type)	Integrated							
Furnace Control On	30 HI /45 LO							
(Timed-secs) Off	60,100,140,180							
Limits & Controls								
Rollout Switch (°F/°C)	300/149		300/149		300/149		300/149	
Limit Control Setting (°F/°C)	260/127		210/99		240/116		180/82	
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								
Blower Size (D x W inches)	11 x 8		11 x 10		11 x 10		11 x 10	
Motor Amps/RPM	10/1050		10/1050		10/1050		13/900	
Motor Type/H.P.	PSC/$^{1}/_{2}$		PSC/$^{1}/_{2}$		PSC/$^{1}/_{2}$		PSC/$^{3}/_{4}$	
Cap. Mfd/Volts	10/370		10/370		10/370		40/370	
Filter Type & Size (qty.) Permanent - supplied	16x25x1		16x25x1		16x25x1		16x25x1 (2)	
Cool Cap. (Tons) @ .5 in wc L, ML, MHi & HI	1.5 thru 3		1.5 thru 3.5		2.5 thru 4		3.5 thru 5	

Gas Conversion Kits All Models
Nat to Propane NAHA002LP (1172959*)
Propane to Nat NAHA002NG (1172961*)
*Order from Service Parts

Specifications are subject to change without notice

Circulation Air Blower Data - *9MPT

***9MPT050F12** (1) * Denotes Brand

External Static Pressure (in wc)

Speed Tap	Low	Med L	Med H	Hi
0.1	826	1083	1301	1408
0.2	804	1050	1242	1347
0.3	770	1028	1195	1295
0.4	735	985	1153	1237
0.5	698	952	1093	1183
0.6	657	909	1040	1118
0.7	---	863	935	1053
0.8	----	812	865	976
0.9	---	---	802	887
1.0	---	---	720	787

***9MPT100J16** (1) * Denotes Brand

External Static Pressure (in wc)

Speed Tap	Low	Med L	Med H	Hi
0.1	823	1109	1527	1850
0.2	795	1087	1482	1791
0.3	747	1056	1426	1720
0.4	677	1016	1382	1648
0.5	617	970	1317	1575
0.6	544	854	1245	1485
0.7	---	763	1154	1401
0.8	---	652	1043	1284
0.9	---	---	905	1161
1.0	---	---	737	1028

***9MPT075F14** (1) * Denotes Brand

External Static Pressure (in wc)

Speed Tap	Low	Med L	Med H	Hi
0.1	695	1025	1455	1724
0.2	674	1001	1410	1662
0.3	653	951	1365	1601
0.4	631	921	1309	1530
0.5	609	891	1252	1460
0.6	569	845	1187	1380
0.7	529	799	1122	1300
0.8	490	730	1030	1190
0.9	---	680	950	1080
1.0	---	---	831	969

***9MPT125L20** (2) * Denotes Brand

External Static Pressure (in wc)

Speed Tap	Low	Med L	Med H	Hi
0.1	1720	1910	2127	2315
0.2	1686	1881	2087	2268
0.3	1644	1833	2024	2201
0.4	1600	1777	1961	2131
0.5	1533	1720	1891	2029
0.6	1494	1647	1804	1948
0.7	1413	1571	1708	1820
0.8	1306	1470	1604	1730
0.9	---	1349	1484	1614
1.0	---	---	1328	1430

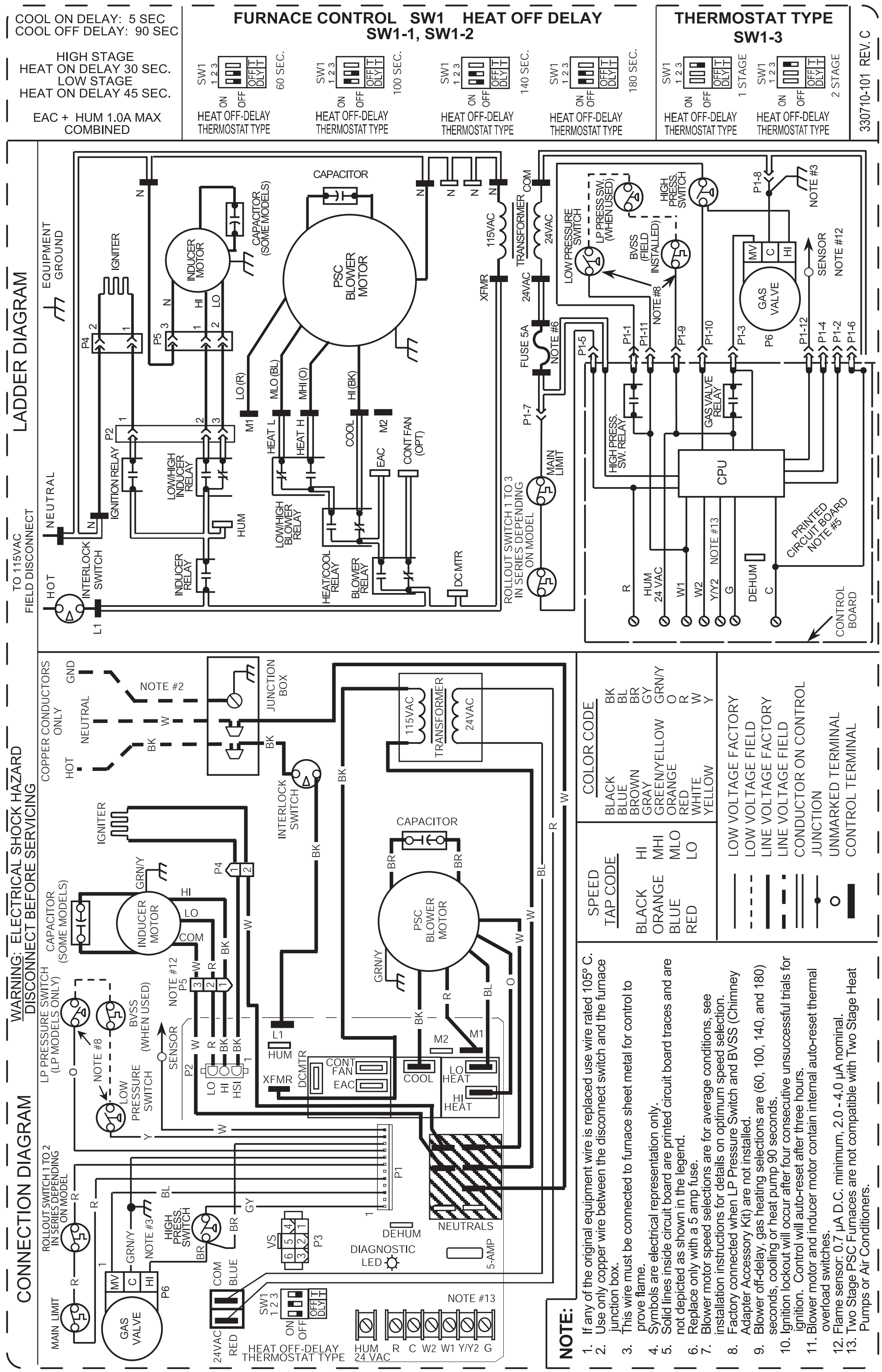
NOTE: (1) Data based on Bottom Only or One Side return.
(2) Data based on Both Sides or Bottom plus One Side

CFM - Cubic feet per minute airflow. Filter required for each return-air inlet. Airflow performance includes 1″ washable (600 FPM max) filter media.

MAX CFM's for Factory Washable Filters	
Filter Size	**CFM**
14″ X 25″	1400
16″ X 25″	1600
20″ X 25″	2000
24″ X 25″	2500
Max CFM based on 600 FPM	

NOTE: 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 = 200 CFM, @ 300 FPM = 1000 CFM)

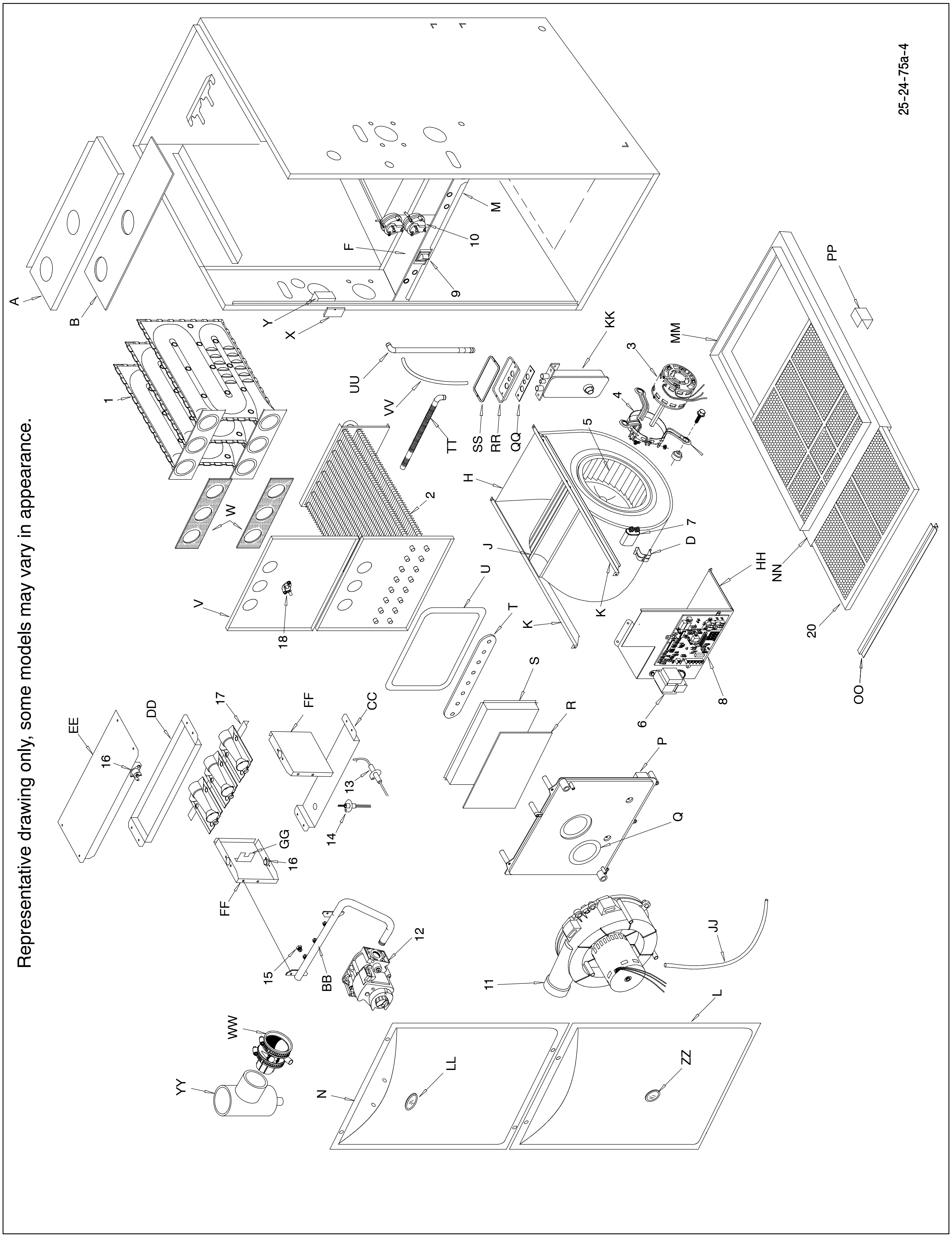
Wiring Diagram *9MPT (Two Stage Heating with PSC Motor)



NOTE:

1. If any of the original equipment wire is replaced use wire rated 105° C.
2. Use only copper wire between the disconnect switch and the furnace junction box.
3. This wire must be connected to furnace sheet metal for control to prove flame.
4. Symbols are electrical representation only.
5. Solid lines inside circuit board are printed circuit board traces and are not depicted as shown in the legend.
6. Replace only with a 5 amp fuse.
7. Blower motor speed selections are for average conditions, see installation instructions for details on optimum speed selection.
8. Factory connected when LP Pressure Switch and BVSS (Chimney Adapter Accessory Kit) are not installed.
9. Blower off-delay, gas heating selections are (60, 100, 140, and 180) seconds, cooling or heat pump 90 seconds.
10. Ignition lockout will occur after four consecutive unsuccessful trials for ignition. Control will auto-reset after three hours.
11. Blower motor and inducer motor contain internal auto-reset thermal overload switches.
12. Flame sensor: 0.7 µA D.C. minimum, 2.0 - 4.0 µA nominal.
13. Two Stage PSC Furnaces are not compatible with Two Stage Heat Pumps or Air Conditioners.

*9MPT Parts



25-24-75a-4
Representative drawing only, some models may vary in appearance.
A
B
M
10
F
9
Y
X
1
UU
VV
TT
SS
RR
QQ
KK
3
4
5
MM
PP
W
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7
D
J
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K
HH
NN
20
OO
V
18
S
R
8
6
P
Q
EE
DD
17
FF
CC
16
13
14
GG
15
BB
12
11
JJ
L
WW
YY
N
LL
ZZ

Replacement Parts - *9MPT

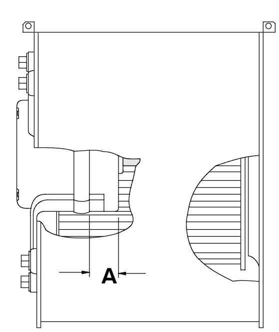
Models – *9MPT050F12C1, *9MPT075F14C1, *9MPT100J16C1 & *9MPT125L20C1 (Natural Gas)

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

Key No.	Description Functional	Part Number	*9MPT 050 F12	075 F14	100 J16	125 L20
1	Heat Exchanger, Primary	1012850	1	–	–	–
		1012854	–	1	–	–
		1012858	–	–	1	–
		1012862	–	–	–	1
2	Heat Exchanger, Secondary	1013762	1	–	–	–
		1013763	–	1	–	–
		1013765	–	–	1	–
		1013767	–	–	–	1
3	Motor, Blower 1/115 $^1/_2$ CCW	1172488	1	1	1	–
	1/115 $^3/_4$ CCW	1172489	–	–	–	1
4	Mount, Motor kit*	1014824	1	–	–	–
		1014823	–	1	1	1
5	Wheel, Blower	1013011	1	–	–	–
		1011420	–	1	1	1
6	Transformer	1172810	1	1	1	1
7	Capacitor, 10Mfd., 370V	1171929	1	1	1	–
	40Mfd., 370V	1171982	–	–	–	1
8	Control	1175594	1	1	1	1
9	Switch, Interlock	1171981	1	1	1	1
10	Switch, Pressure	1013166	–	–	–	1
		1013515	1	1	1	–
11	Blower, Exhaust	1172825	1	1	1	–
		1172826	–	–	–	1
12	Valve, Gas Nat. 2 Stage	1172822	1	1	1	1
13	Flame Sensor	1172827	1	1	1	1
14	Igniter	1172533	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	1172884	1	–	–	–
		1172965	–	1	–	–
		1172966	–	--	1	–
		1172967	–	--	–	1
18	Switch, Limit (Main)	1320366	1	–	–	–
		34335002	–	–	1	–
		1008445	–	–	–	1
		34335001	–	1	–	–
20	Filter,HH 16X25X$^1/_2$"	1010365	1	1	2	2

*See Table below for bellyband location on motor

Bellyband Location on Motor	
Model *9MPT	A(in.)
050F12	2.09″
075F14	1.81″
100J16	1.81″
125L20	1.65″



Key No.	Description Non-Functional	Part Number	*9MPT 050 F12	075 F14	100 J16	125 L20
A	Panel, Top	1012866	1	1	–	–
		1012867	–	–	1	–
		1012868	–	–	–	1
B	Gasket, Top Panel	1012603	1	1	–	–
		1012604	–	–	1	–
		1012605	–	–	–	1
F	Partition, Blower	1172008	1	–	–	–
		1172005	–	1	–	–
		1172006	–	–	1	–
		1172007	–	–	–	1
H	Housing, Blower	1172885	1	–	–	–
		1172969	–	1	1	1
J	Panel, Blower Cutoff	721020013	1	–	–	–
		721020008	–	1	1	1
K	Hanger, Blower	1012328	2	2	2	2
L	Door, Blower (Comfortmaker only)	1173035	1	1	–	–
	(Comfortmaker only)	1173036	–	–	1	–
	(Comfortmaker only)	1173073	–	–	–	1
	(Heil only)	1173038	1	1	–	–
	(Heil only)	1173039	–	–	1	–
	(Heil only)	1173076	–	–	–	1
	(Tempstar only)	1173078	1	1	–	–
	(Tempstar only)	1173079	–	–	1	–
	(Tempstar only)	1173080	–	–	–	1
M	Bracket Asy., Door Filler	1172232	1	1	–	–
		1172233	–	–	1	–
		1172234	–	–	–	1
N	Door, Front (Comfortmaker only)	1013148	1	1	–	–
	(Comfortmaker only)	1013149	–	–	1	–
	(Comfortmaker only)	1013150	–	–	–	1
	(Heil only)	1013145	1	1	–	–
	(Heil only)	1013146	–	–	1	–
	(Heil only)	1013147	–	–	–	1
	(Tempstar only)	1173086	1	1	–	–
	(Tempstar only)	1173087	–	–	1	–
	(Tempstar only)	1173088	–	–	–	1
O	Clamp, Capacitor	1170643	1	1	1	–
		1014315	–	–	–	1
P	Transition Assembly	1172228	1	1	–	–
		1172229	–	–	1	–
		1172230	–	–	–	1
Q	Gasket, Blower	1014425	1	1	1	1
R	Board, Insulating	1012418	1	1	–	–
		1012419	–	–	1	–
		1012420	–	–	–	1
S	Box, Collector	1012244	1	1	–	–
		1012245	–	–	1	–
		1012246	–	–	–	1
T	Gasket, Transition	1013263	1	–	–	–
		1013080	–	1	–	–
		1013083	–	–	1	–
		1013084	–	–	–	1
U	Gasket, Collector Box	1012594	1	1	–	–
		1012595	–	–	1	–
		1012596	–	–	–	1
V	Partition, Front Heat Exchanger	1012650	1	–	–	–
		1012648	–	1	–	–
		1012651	–	–	1	–
		1012653	–	–	–	1

Replacement Parts - *9MPT

Models – *9MPT050F12C1, *9MPT075F14C1, *9MPT100J16C1 & *9MPT125L20C1 (Natural Gas)

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

Key No.	Description Functional	Part Number	*9MPT 050 F12	075 F14	100 J16	125 L20
W	Gasket, Attachment Plate	1012542	2	-	-	-
		1012543	-	2	-	-
		1012544	-	-	2	-
		1012545	-	-	-	2
X	Cover, Junction Box	1012350	1	1	1	1
Y	Box, Junction	1172860	1	1	1	1
BB	Manifold	1012970	1	-	-	-
		1012971	-	1	-	-
		1012278	-	-	1	-
		1012279	-	-	-	1
CC	Bottom, Burner Box	1172847	1	1	-	-
		1172849	-	-	1	-
		1172850	-	-	-	1
DD	Baffle, Burner Box	1012338	1	1	-	-
		1012339	-	-	1	-
		1012340	-	-	-	1
EE	Top, Burner Box	1013702	1	1	-	-
		1013703	-	-	1	-
		1013704	-	-	-	1
FF	Bracket, Manifold Support	1012377	2	2	2	2
GG	Bracket, Burner Box Side	1012532	2	2	2	2
HH	Bracket, Control Mounting	1172845	1	1	1	1
JJ	Tube, Sensor	1172238	1	1	1	1
		1172241	1	1	1	1
KK	Trap, Drain Assembly	1171917	1	1	1	1
LL	Sightglass	1013235	1	1	1	1
	(Tempstar 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
QQ	Gasket, Trap	1013701	1	1	1	1
RR	Bracket, Trap	1171986	1	1	1	1
SS	Gasket, Trap Bracket	1171987	1	1	1	1
TT	Tube, Drain Coll. Box $^{5}/_{8}$″ ID	1172245	1	1	1	1
UU	Tube, Drain Tee $^{1}/_{2}$″ ID	1171989	1	1	1	1
VV	Tube, Relief	1172012	1	1	1	1
WW	Drain Vent	1014003	1	1	1	1
ZZ	Sightglass	1172768	1	1	1	1
YY	Tee, Drain	1171915	1	1	1	1
)(	**PART NOT ILLUSTRATED**					
)(	Door Screws	1014488	4	4	4	4
)(	Door Screw Grommets	1171990	4	4	4	4
)(	Coupling, Air Intake	1002284	1	1	1	1
)(	Gasket, Air Intake	1012583	1	1	1	1
)(	Clamp, Hose $^{5}/_{8}$”	1012975	4	4	4	4
)(	Clamp, Hose $^{3}/_{4}$”	1012976	2	2	2	2
)(	Coupling, Discharge	1002522	1	1	1	1
)(	Clamp Hose	1013830	4	4	4	4
)(	Grommet, Vent	1012697	1	1	1	1
)(	Bushing, Strain Relief	1945287	1	1	1	1
)(	Grommet, Vinyl (Gas Inlet)	1009535	1	1	1	1
)(	Harness, Wire	1172818	1	1	1	1
)(	Grommet,Casing	1171997	1	1	1	1

Key No.	Description Functional	Part Number	*9MPT 050 F12	075 F14	100 J16	125 L20
)(	Trap, Drain Tee	1171916	1	1	1	1
)(	Tube, Drain $^{1}/_{2}$” ID Drain	1171991	1	1	1	1
)(	Tube, $^{1}/_{2}$” Elbow	1171992	2	2	2	2
)(	Coupling, $^{1}/_{2}$” Barbed	1171993	1	1	1	1
)(	Tubing, $^{5}/_{8}$” ID Drain	1171994	1	1	1	1
)(	Connector, $^{3}/_{4}$” X $^{1}/_{2}$”	1171995	1	1	1	1
)(	Elbow, $^{1}/_{2}$” CPVC street	1171996	1	1	1	1
)(	Tube, Relief Ext.	1172239	1	1	1	1
)(	Connector, Relief Tube	1171998	1	1	1	1
)(	Plate, Cover	1171999	1	1	1	1
)(	Gasket, Cover Plate	1172000	1	1	1	1
)(	Cap, Drain Tee	1172255	1	1	1	1
)(	Clamp, Tee Cap	1172256	1	1	1	1
)(	Manual, Users	44102201103	1	1	1	1
)(	Manual, Installation	44001202302	1	1	1	1
)(	Manual, Technical	44004202302	1	1	1	1

Gas Conversion Kits – All models

Nat to Propane	NAHA002LP (1172959*)
Propane to Nat	NAHA002NG (1172961*)

* Must be ordered from Service Parts

Manufacturers Number (Mfr No - See Rating Plate**)**
ALL Models

Specifications

	*9MPV050F12		*9MPV075F12		*9MPV100J20		*9MPV125L20	
General Gas Type	Nat	Propane	Nat	Propane	Nat	Propane	Nat	Propane
Transformer Size (VA)	40							
T'stat Heat Anticipator	.50							
Input (Btuh) Std/Alt. HI Heat	50,000		75,000		100,000		125,000	
LO Heat	35,000		52,500		70,000		87,500	
Output (Btuh) Std/Alt. HI Heat	46,000		70,000		93,000		118,000	
LO Heat	32,000		48,000		65,000		82,000	
Temp. Rise (°F/°C) HI Heat	35-65/19-46		40-70/22-38		40-70/22-38		40-70/22-38	
LO Heat	35-65/19-46		40-70/22-38		40-70/22-38		40-70/22-38	
Electrical (Volts/Hz)	115/60		115/60		115/60		115/60	
Rating Plate Amps	9.5		11.4		14.6		15.4	
Gas & Ignition Gas Type	Nat.	Propane	Nat.	Propane	Nat.	Propane	Nat.	Propane
Std. Main Orifices (No/Size)	2/42	2/54	3/42	3/54	4/42	4/54	5/42	5/54
Gas Valve Honeywell	VR8205Q	VR8205Q	VR8205Q	VR8205Q	VR8205Q	VR8205Q	VR8205Q	VR8205Q
Regulation Type	SNAP	SNAP	SNAP	SNAP	SNAP	SNAP	SNAP	SNAP
Manifold Press. HI Heat (in wc)	3.5	10.0	3.5	10.0	3.5	10.0	3.5	10.0
LO Heat (in wc)	1.7	4.9	1.7	4.9	1.7	4.9	1.7	4.9
Ignition Type	Hot Surface							
Combustion Flue Outlet Size (Inches)	2		2		3		3	
Std. Outlet Temp (less than)	140 °F/60 °C		140 °F/60 °C		140 °F/60 °C		140 °F/60 °C	
Comb. Blower (MFD/Volts)	4/370		4/370		4/370		4/370	
@ Blower / @ Transition Box (HI Heat) Std. Pressures (in 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 Heat) Std. Pressures (in 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/°C)	300/149		300/149		300/149		300/149	
Limit Control Setting (°F/°C)	260/127		210/99		240/116		190/88	
Furnace Control (Type)	Integrated							
Furnace Control On	30 HI /45 LO							
(Timed-secs) Off	60,100,140,180							
Std. Pressure Sw. (Part No)	1013515		1013515		1013515		1013166	
(HI Heat)Blwer Switch Press (Close)	0.95		0.95		0.95		1.30	
Blower Switch Pressure (Open)	0.80		0.80		0.80		1.10	
(LO Heat)Trans Switch Press (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	
(HI Heat)Blwer Switch Press (Close)	0.70		0.70		0.70		0.85	
Blower Switch Pressure (Open)	0.55		0.55		0.55		0.70	
(LO Heat)Trans Switch Press (Close)	1.40		1.40		1.40		1.70	
Transition Switch Pressure (Open)	1.20		1.20		1.20		1.50	
Blower Data Wheel Size (D x W inches)	11 x 8		11 x 10		11 x 10		11 x 10	
FLA Motor Amps/Max RPM	7.7/1240		9.6/1240		12.8/1240		12.8/1240	
Motor Type/H.P.	ECM/$^{1}/_{2}$		ECM/$^{3}/_{4}$		ECM/1		ECM/1	
Filter Type & Size (qty.) Permanent - supplied	16x25x1		16x25x1		16x25x1 (2)		16x25x1 (2)	
Min. Cool Cap. (Tons)	1.5		1.5		2		2	
Max. Cool Cap. (Tons)	3		3		5		5	

Gas Conversion Kits All Models

Nat to Propane NAHA002LP (1172959*)
Propane to Nat NAHA002NG (1172961*)
*Order from Service Parts

*Circulation Air Blower Data - *9MPV050*

Cooling CFM Adjustment				Heating Rise Adjustment		
DIP Switch 5 & 6	**High Cool @ 0.50 in wc**	**Low Cool (80% of High Cool)**	**** Adjust Jumper Setting**	**DIP Switch 3 & 4**	**High Heat Rise Change @ 0.20 in wc**	**Low Heat Rise Change at Resultant Static**
00	1246	997	+	00	-4	-3
*00	1211	969	*NOM	*00	0	0
00	1122	898	-	00	5	5
01	1105	884	+	01	3	4
01	1027	822	NOM	01	7	7
01	945	756	-	01	13	14
10	892	714	+	10	-1	0
10	820	656	NOM	10	4	5
10	745	596	-	10	9	9
11	688	550	+	11	-15	-15
11	609	487	NOM	11	-13	-12
11	541	433	-	11	-9	-9

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 @ 0.10 in wc ESP
DIP Switch 1 & 2	**Airflow (CFM)**
*00	592
01	1021
10	1346
11	1346

* 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**	**Timer OFF (sec)**	**Airflow during off delay**
*00	5	OFF	90	100%
01	5	OFF	0	OFF
10	30	50%	30	100%
11	30	50%	180	50%

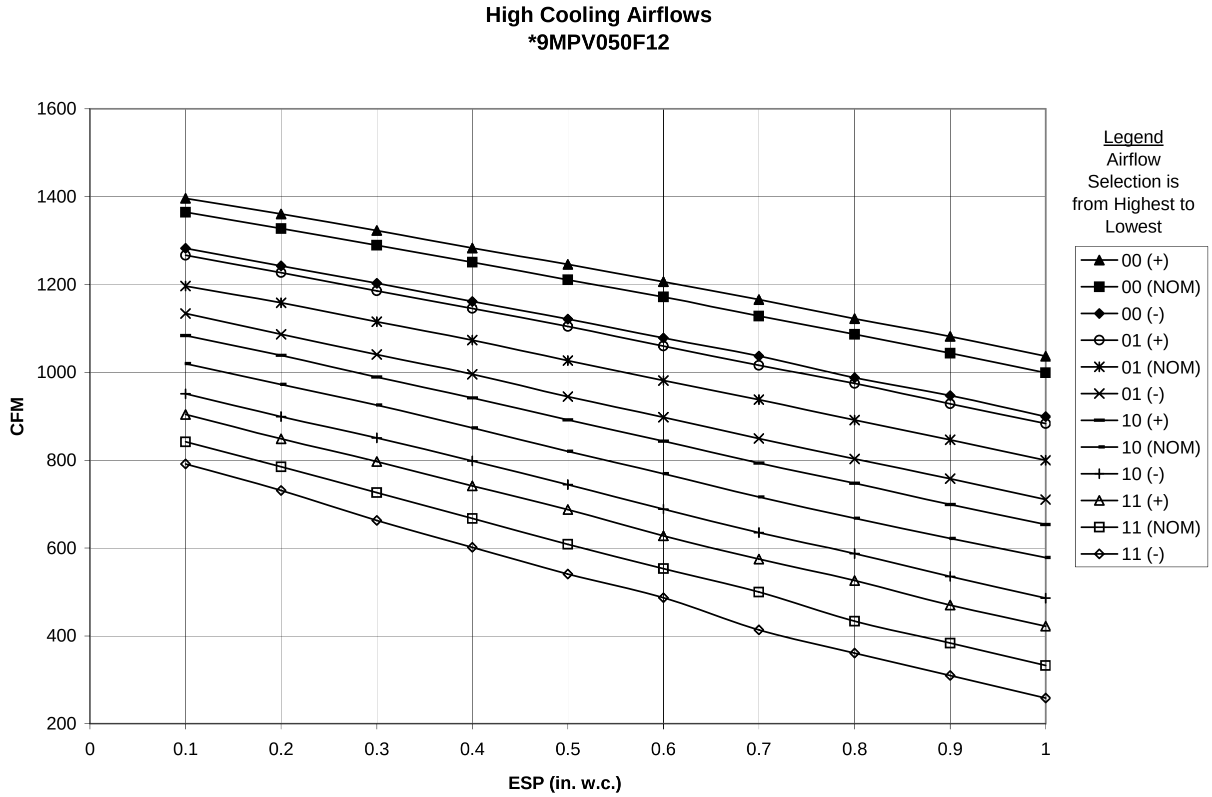
Airflow % is of High Cool airflow demand determined from SW2-5/6 Table 1
Airflow resumes to 100% after on delay time is completed
Airflow stops (or switches to continuous fan speed) after off delay time is completed
* Factory Setting

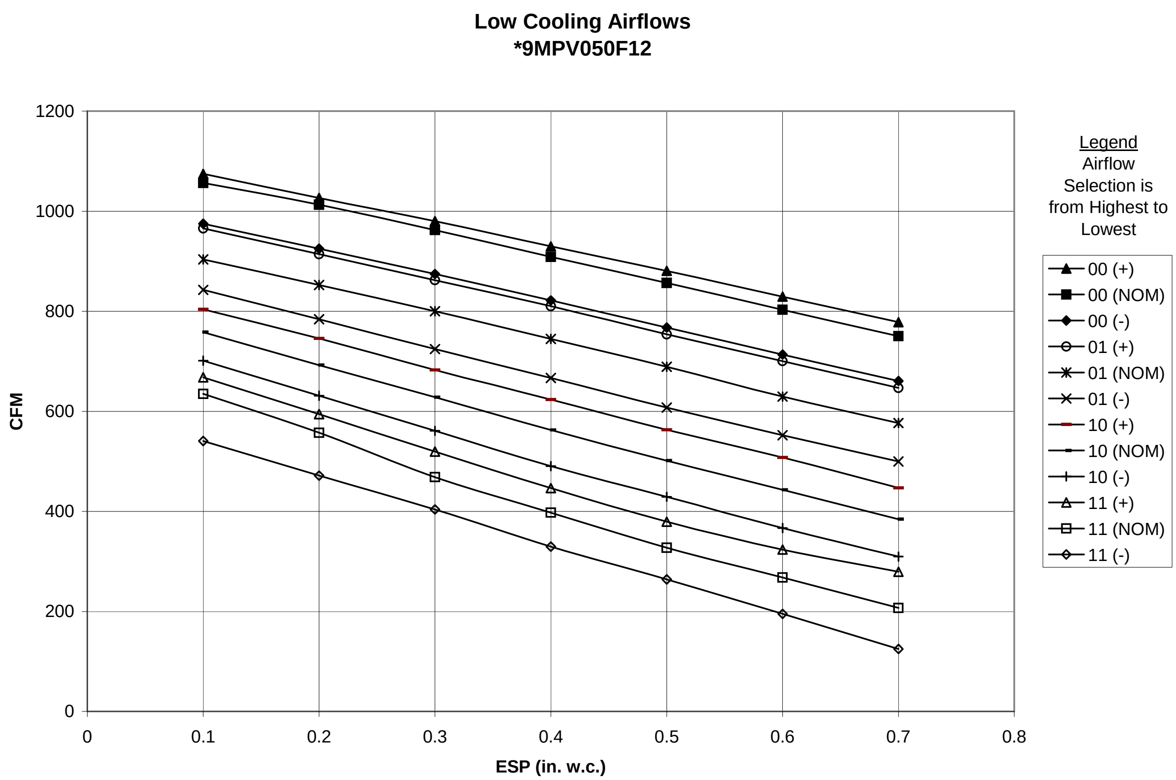
MAX CFM's for Factory Washable Filters	
Dimensions	**Airflow (CFM)**
14" x 25"	1400
16" x 25"	1600
20" x 25"	2000
24" x 25"	2500
MAX CFM based on 600 FPM	

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 - *9MPV050

Cooling Airflow Settings





Circulation Air Blower Data - *9MPV075

Cooling CFM Adjustment				Heating Rise Adjustment		
DIP Switch 5 & 6	**High Cool @ 0.50 in wc**	**Low Cool (80% of High Cool)**	**** Adjust Jumper Setting**	**DIP Switch 3 & 4**	**High Heat Rise Change @ 0.20 in wc**	**Low Heat Rise Change at Resultant Static**
00	1342	1074	+	00	−4	−4
*00	1210	968	*NOM	*00	0	0
00	1053	842	−	00	5	4
01	1135	908	+	01	1	1
01	1020	816	NOM	01	6	5
01	872	698	−	01	12	10
10	965	772	+	10	−1	−1
10	840	672	NOM	10	3	3
10	680	544	−	10	9	8
11	708	566	+	11	−6	−6
11	590	472	NOM	11	−2	−3
11	488	390	−	11	3	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 @ 0.10 in wc ESP
DIP Switch 1 & 2	**Airflow (CFM)**
*00	612
01	1096
10	1403
11	1403

* 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**	**Timer OFF (sec)**	**Airflow during off delay**
*00	5	OFF	90	100%
01	5	OFF	0	OFF
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

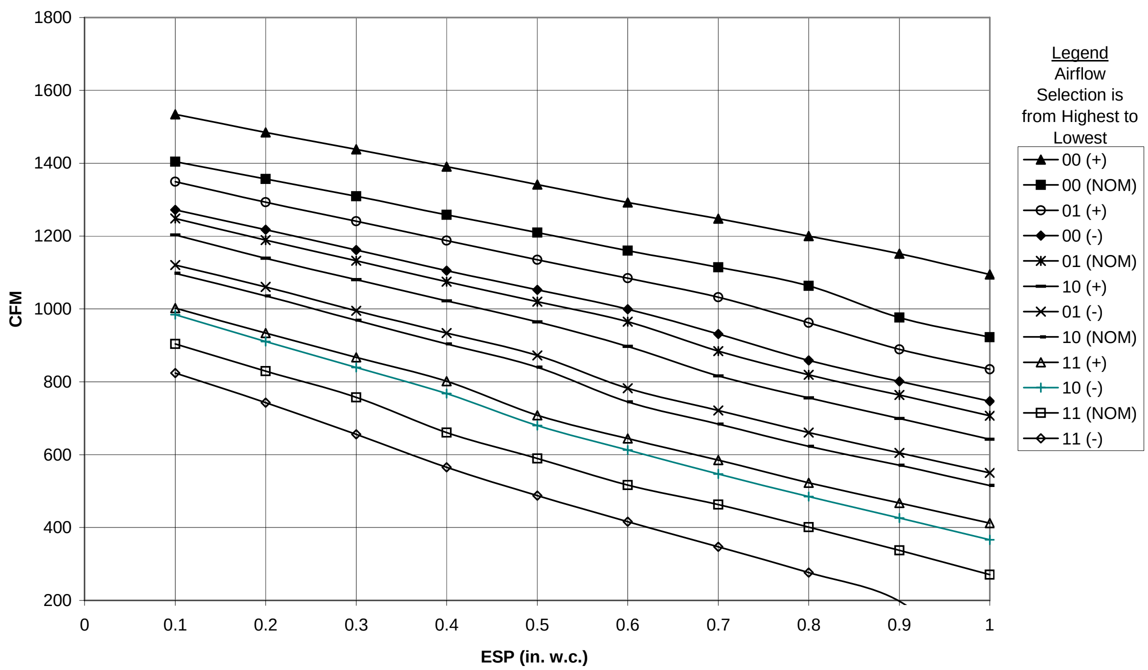
MAX CFM’s for Factory Washable Filters	
Dimensions	**Airflow (CFM)**
14” x 25”	1400
16” x 25”	1600
20” x 25”	2000
24” x 25”	2500
MAX CFM based on 600 FPM	

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)

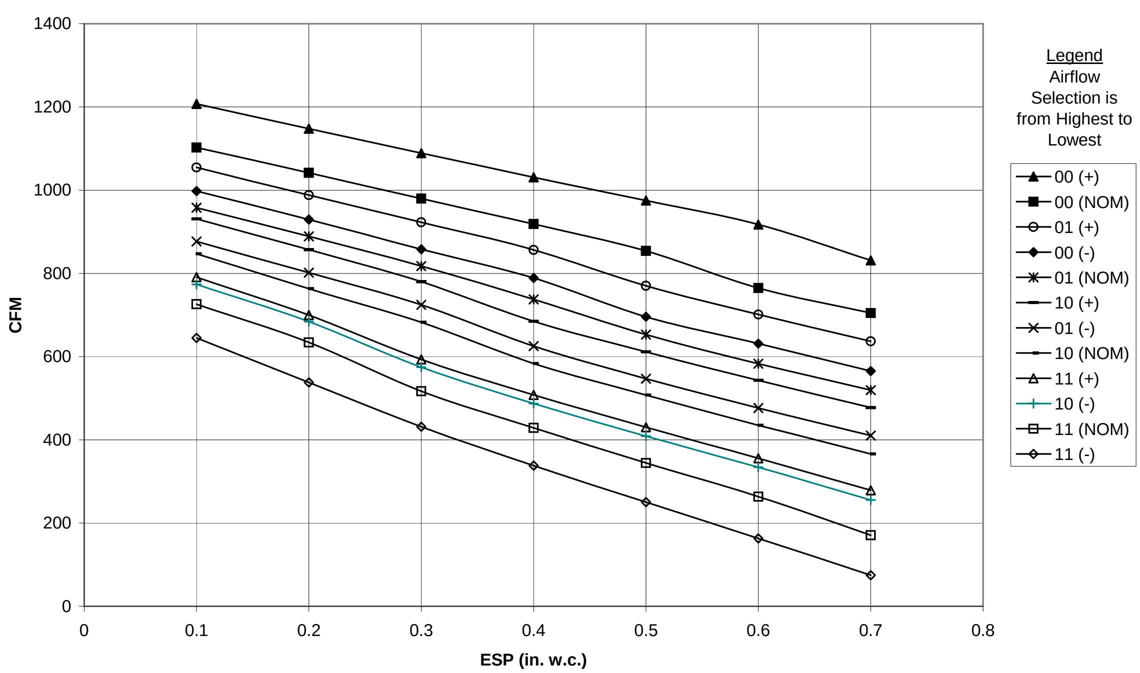
Circulation Air Blower Data - *9MPV075

Cooling Airflow Settings

High Cooling Airflows
***9MPV075F12**



Low Cooling Airflows
***9MPV075F12**



Circulation Air Blower Data - *9MPV100

Cooling CFM Adjustment				Heating Rise Adjustment		
DIP Switch 5 & 6	High Cool @ 0.50 in wc	Low Cool (80% of High Cool)	** Adjust Jumper Setting	DIP Switch 3 & 4	High Heat Rise Change @ 0.20 in wc	Low Heat Rise Change at Resultant Static
00	2144	1715	+	00	−4	−4
*00	2013	1610	*NOM	*00	0	0
00	1842	1474	−	00	5	5
01	1772	1418	+	01	2	1
01	1624	1299	NOM	01	8	7
01	1471	1177	−	01	14	14
10	1367	1094	+	10	0	−1
10	1227	982	NOM	10	6	5
10	1077	862	−	10	13	11
11	930	744	+	11	−6	−7
11	808	646	NOM	11	−2	−2
11	634	507	−	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 @ 0.10 in wc ESP
DIP Switch 1 & 2	Airflow (CFM)
*00	1007
01	1742
10	2204
11	2204

* 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	Timer OFF (sec)	Airflow during off delay
*00	5	OFF	90	100%
01	5	OFF	0	OFF
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

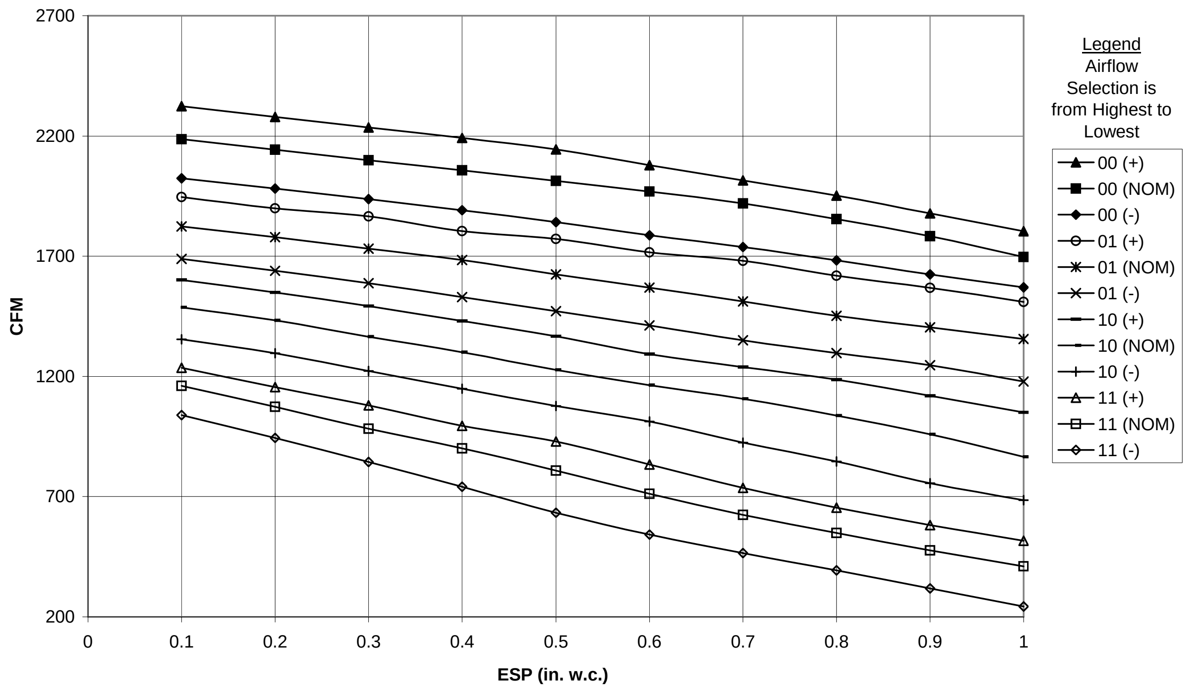
MAX CFM’s for Factory Washable Filters	
Dimensions	Airflow (CFM)
14” x 25”	1400
16” x 25”	1600
20” x 25”	2000
24” x 25”	2500
MAX CFM based on 600 FPM	

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)

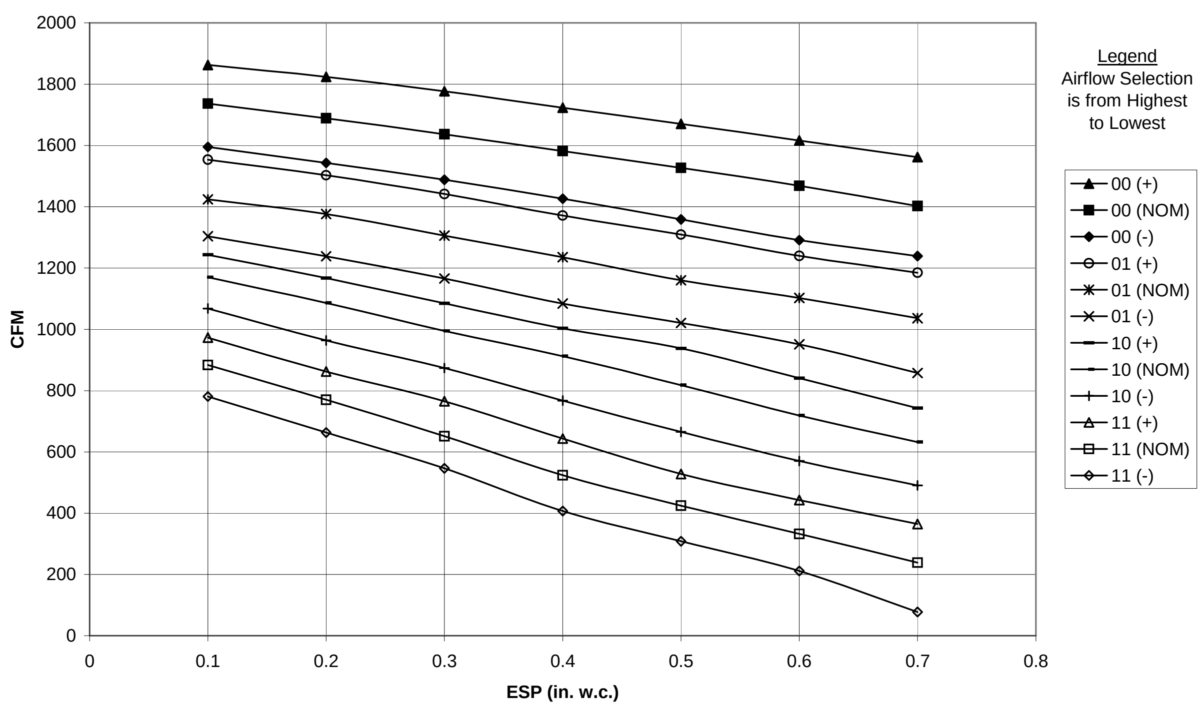
Circulation Air Blower Data - *9MPV100

Cooling Airflow Settings

High Cooling Airflows
*9MPV100J20



Low Cooling Airflows
*9MPV100J20



Circulation Air Blower Data - *9MPV125

Cooling CFM Adjustment				Heating Rise Adjustment		
DIP Switch 5 & 6	High Cool @ 0.50 in wc	Low Cool (80% of High Cool)	** Adjust Jumper Setting	DIP Switch 3 & 4	High Heat Rise Change @ 0.20 in wc	Low Heat Rise Change at Resultant Static
00	2150	1720	+	00	−4	−4
*00	2025	1620	*NOM	*00	0	0
00	1856	1485	−	00	4	5
01	1755	1404	+	01	1	2
01	1615	1292	NOM	01	6	7
01	1452	1162	−	01	12	13
10	1338	1070	+	10	−1	0
10	1201	961	NOM	10	3	4
10	1069	855	−	10	9	10
11	909	727	+	11	−6	−6
11	800	640	NOM	11	−3	−3
11	627	502	−	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 @ 0.10 in wc ESP
DIP Switch 1 & 2	Airflow (CFM)
*00	1032
01	1778
10	2178
11	2178

* 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	Timer OFF (sec)	Airflow during off delay
*00	5	OFF	90	100%
01	5	OFF	0	OFF
10	30	50%	30	100%
11	30	50%	180	50%

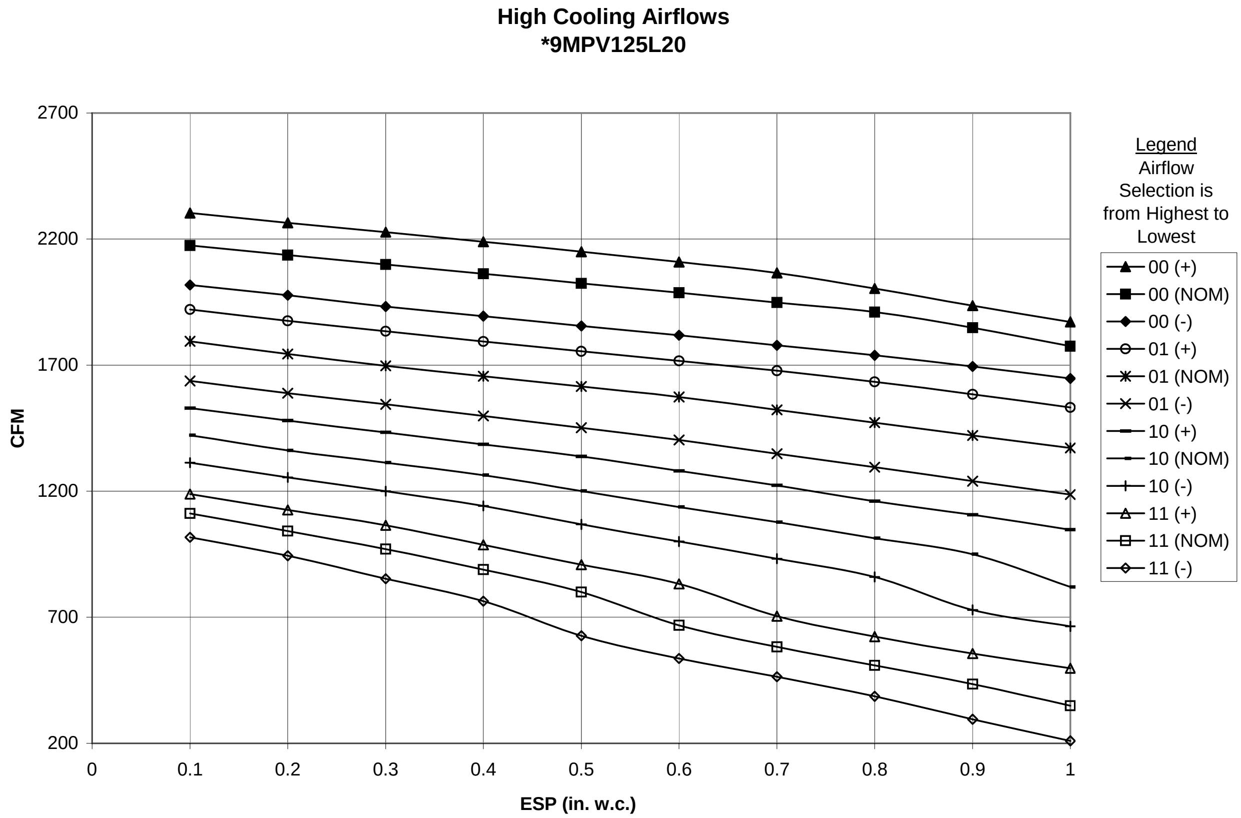
Airflow % is of High Cool airflow demand determined from SW2−5/6 Table 1
Airflow resumes to 100% after on delay time is completed
Airflow stops (or switches to continuous fan speed) after off delay time is completed
* Factory Setting

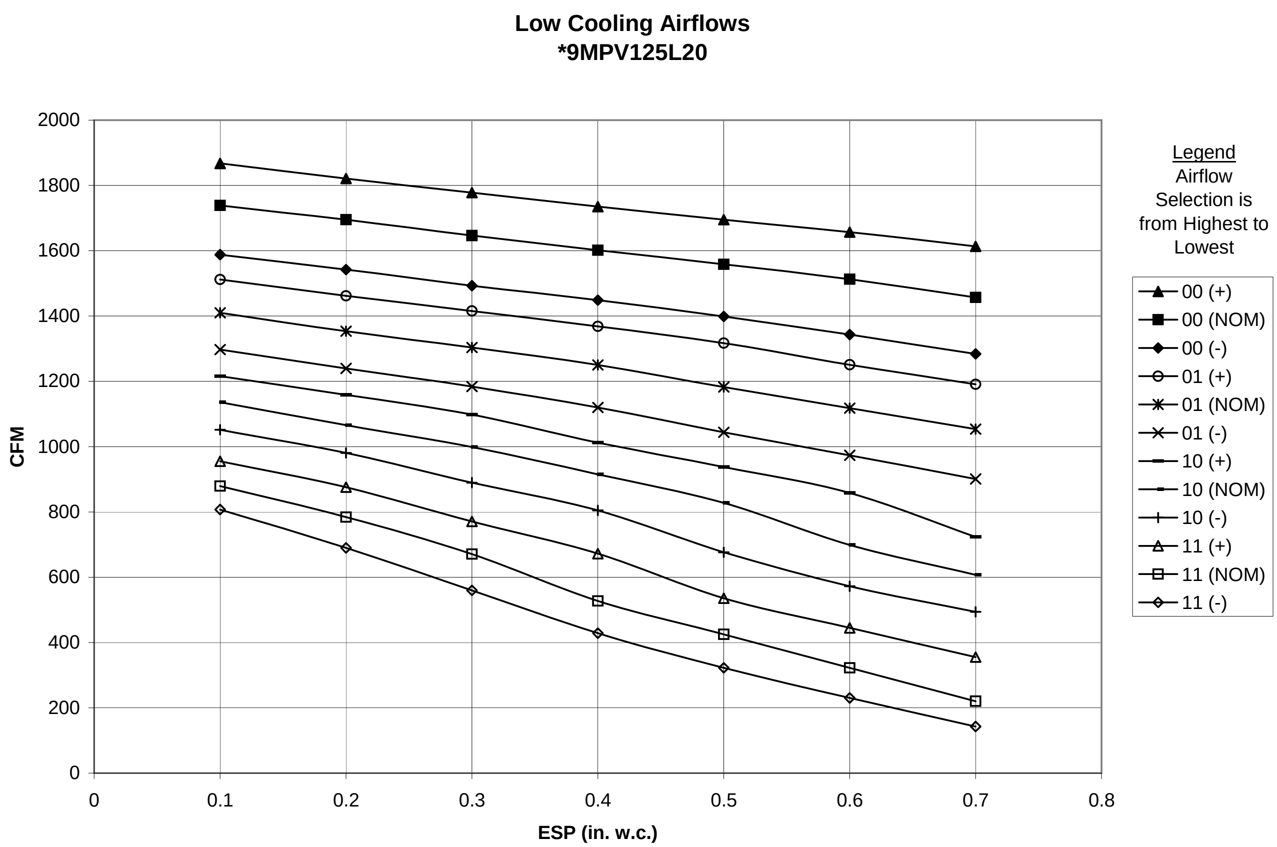
MAX CFM’s for Factory Washable Filters	
Dimensions	Airflow (CFM)
14” x 25”	1400
16” x 25”	1600
20” x 25”	2000
24” x 25”	2500
MAX CFM based on 600 FPM	

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)

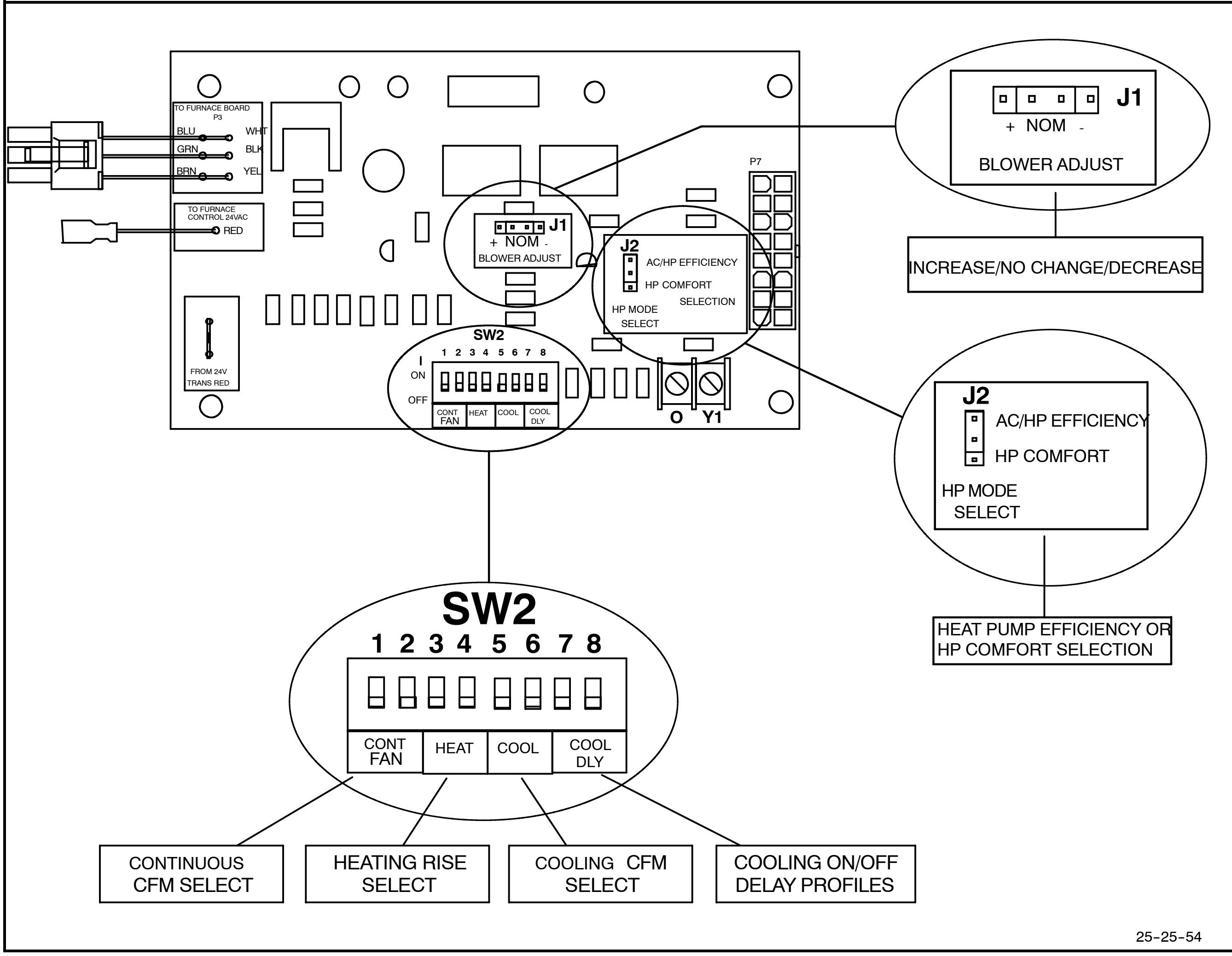
Circulation Air Blower Data - *9MPV125

Cooling Airflow Settings

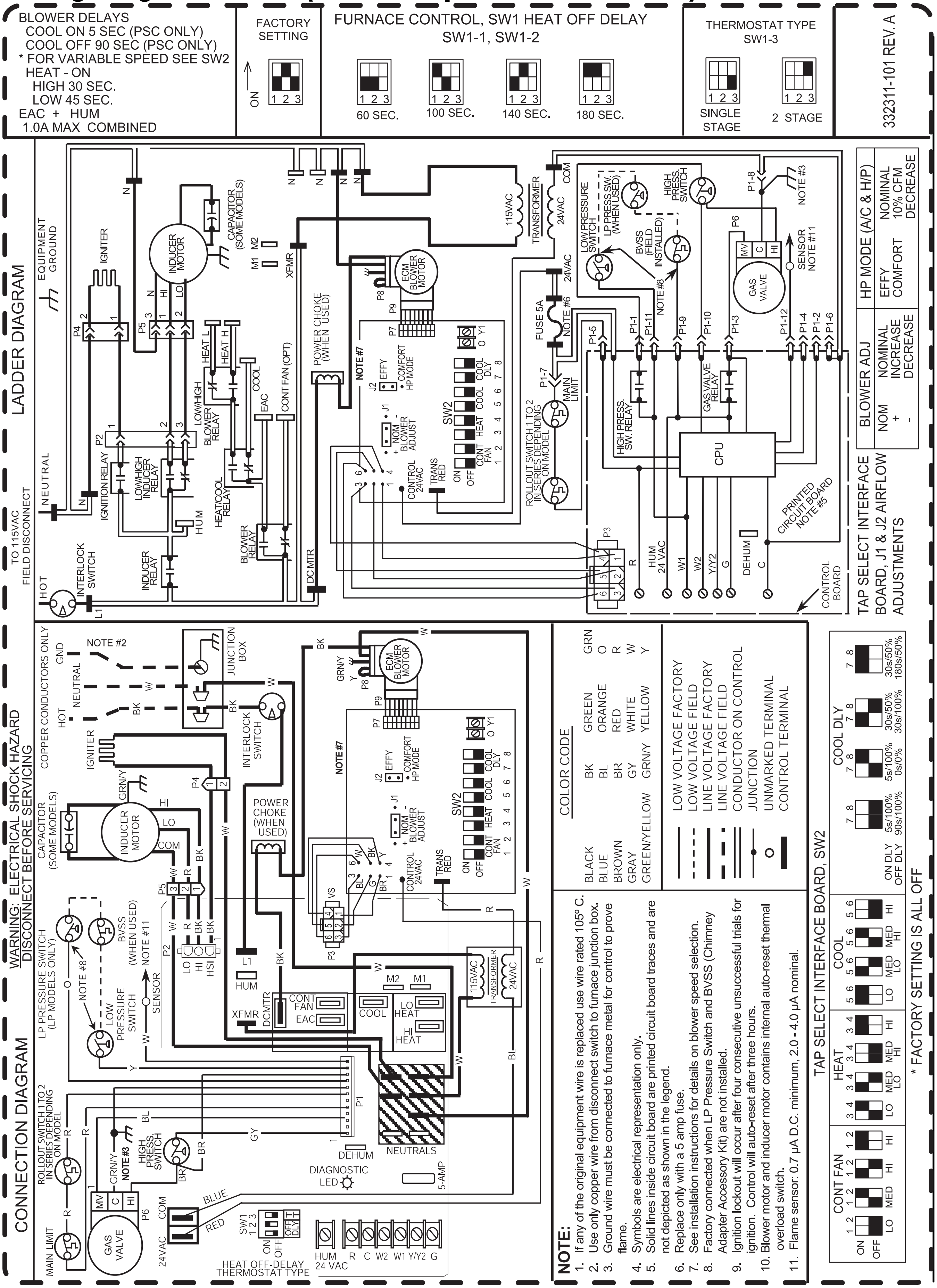


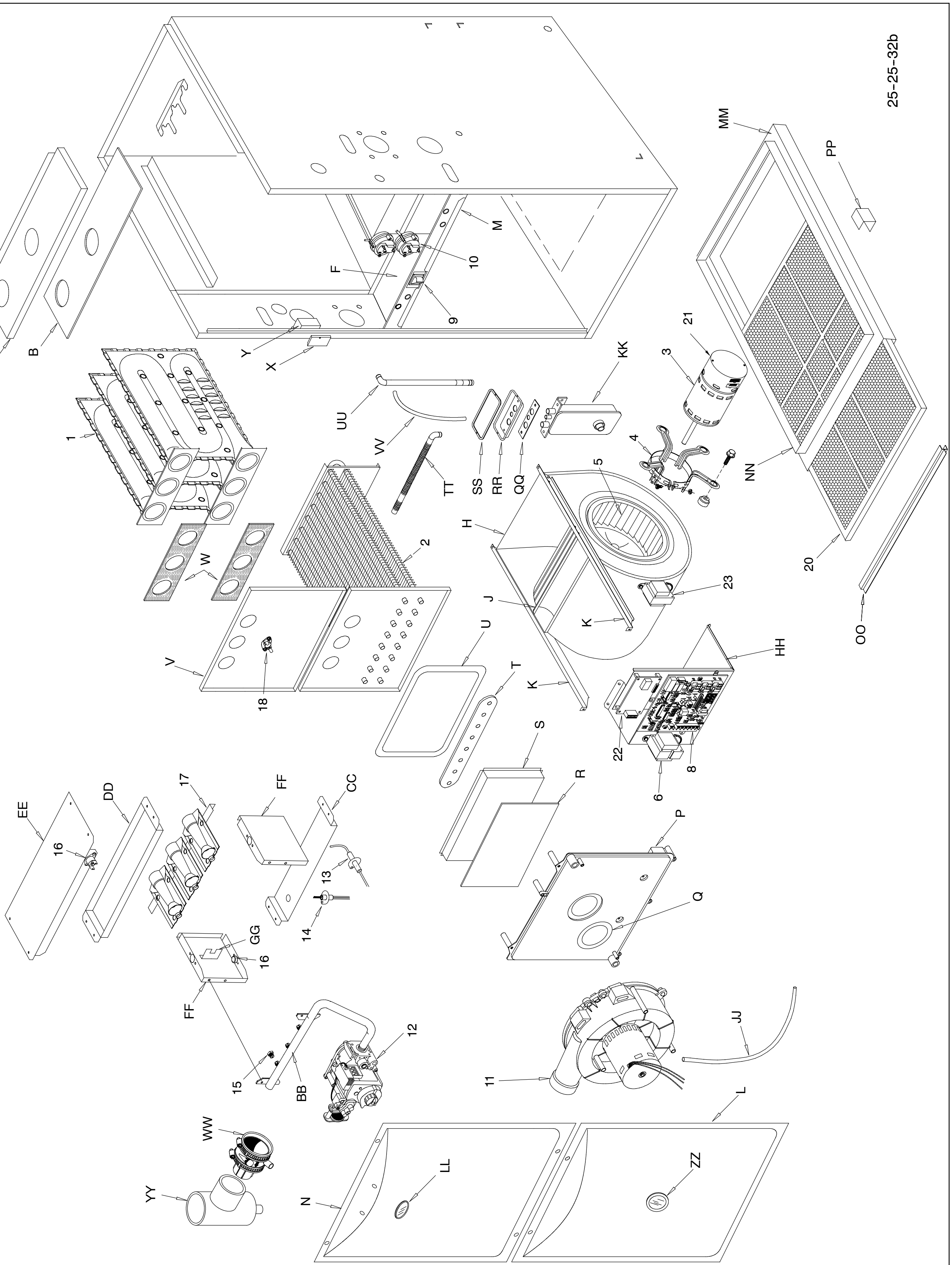


Variable Speed (MPV) Tap Select Interface Board (TSIB)



Wiring Diagram *9MPV (Variable Speed Blower Motor)





Representative drawing only, some models may vary in appearance.

Replacement Parts - *9MPV

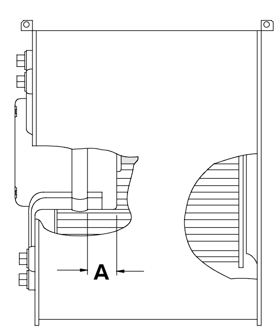
Models – *9MPV050F12D1, *9MPV075F12D1, *9MPV100J20D1 & *9MPV125L20D1 (Natural Gas)

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

Key No.	Description Functional	Part Number	*9MPV 050 F12	075 F12	100 J20	125 L20
1	Heat Exchanger, Primary	1012850	1	–	–	–
		1012854	–	1	–	–
		1012858	–	–	1	–
		1012862	–	–	–	1
2	Ht Exchanger, Secondary	1013762	1	–	–	–
		1013763	–	1	–	–
		1013765	–	–	1	–
		1013767	–	–	–	1
3	Motor, Blower	1172828	1	–	–	–
		1172829	–	1	1	1
4	Mount, Motor kit*	1014822	1	1	1	1
5	Wheel, Blower	1013011	1	–	–	–
		1172129	–	1	1	1
6	Transformer	1172810	1	1	1	1
8	Control	1175594	1	1	1	1
9	Switch, Interlock	1171981	1	1	1	1
10	Switch, Pressure	1013166	–	–	–	1
		1013515	1	1	1	–
11	Blower, Exhaust	1172825	1	1	1	–
		1172826	–	–	–	1
12	Valve, Gas Nat. 2 Stg	1172822	1	1	1	1
13	Flame Sensor	1172827	1	1	1	1
14	Igniter	1172533	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	1172884	1	–	–	–
		1172965	–	1	–	–
		1172966	–	–	1	–
		1172967	–	–	–	1
18	Switch, Limit (Main)	1320366	1	–	–	–
		34335001	–	1	–	–
		1320367	–	–	1	–
		1008445	–	–	–	1
20	Filter,HH 16X25X1/2”	1010365	1	1	2	2
22	Board, Tap Select Interface	1174894	1	1	1	1
21	Control, Motor Variable Spd	1174887	1	–	–	–
		1174888	–	1	–	–
		1174889	–	–	1	–
		1174895	–	–	–	1
23	Choke, Power	1172838	–	–	1	1

*See Table below for bellyband location on motor

Bellyband Location on Motor	
Model *9MPV	A(in.)
050F12	$1^3/_8$”
075F12	$2^7/_8$”
100J20	$2^7/_8$”
125L20	$2^7/_8$”



Key No.	Description	Part Number	*9MPV 050 F12	075 F12	100 J20	125 L20
A	Panel, Top	1012866	1	1	–	–
		1012867	–	–	1	–
		1012868	–	–	–	1
B	Gasket, Top Panel	1012603	1	1	–	–
		1012604	–	–	1	–
		1012605	–	–	–	1
F	Partition, Blower	1172008	1	–	–	–
		1172005	–	1	–	–
		1172006	–	–	1	–
		1172007	–	–	–	1
H	Housing, Blower	1172885	1	–	–	–
		1172969	–	1	1	1
J	Panel, Blower Cutoff	721020013	1	–	–	–
		721020008	–	1	1	1
K	Hanger, Blower	1012328	2	2	2	2
L	Door, Blwer (Cmaker only)	1175025	1	1	–	–
	(Cmaker only)	1175026	–	–	1	–
	(Cmaker only)	1175042	–	–	–	1
	(Heil only)	1175028	1	1	–	–
	(Heil only)	1175029	–	–	1	–
	(Heil only)	1175043	–	–	–	1
	(Tstar only)	1175031	1	1	–	–
	(Tstar only)	1175032	–	–	1	–
	(Tstar only)	1175044	–	–	–	1
M	Bracket Asy., Door Filler	1172232	1	1	–	–
		1172233	–	–	1	–
		1172234	–	–	–	1
N	Door, Front (Cmaker only)	1013148	1	1	–	–
	(Cmaker only)	1013149	–	–	1	–
	Cmaker only)	1013150	–	–	–	1
	(Heil only)	1013145	1	1	–	–
	(Heil only)	1013146	–	–	1	–
	(Heil only)	1013147	–	–	–	1
	(Tstar only)	1173086	1	1	–	–
	(Tstar only)	1173087	–	–	1	–
	(Tstar only)	1173088	–	–	–	1
P	Transition Assembly	1012228	1	1	–	–
		1012229	–	–	1	–
		1012230	–	–	–	1
Q	Gasket, Exhaust Blower	1014425	1	1	1	1
R	Board, Insulating	1012418	1	1	–	–
		1012419	–	–	1	–
		1012420	–	–	–	1
S	Box, Collector	1012244	1	1	–	–
		1012245	–	–	1	–
		1012246	–	–	–	1
T	Gasket, Transition	1013263	1	–	–	–
		1013080	–	1	–	–
		1013083	–	–	1	–
		1013084	–	–	–	1
U	Gasket, Collector Box	1012594	1	1	–	–
		1012595	–	–	1	–
		1012596	–	–	–	1

Replacement Parts - *9MPV

Models – *9MPV050F12D1, *9MPV075F12D1, *9MPV100J20D1 & *9MPV125L20D1 (Natural Gas)

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

Key No.	Description	Part Number	*9MPV 050 F12	*9MPV 075 F12	*9MPV 100 J20	*9MPV 125 L20
V	Partition, Front Ht Exchger	1012650	1	-	-	-
		1012648	-	1	-	-
		1012651	-	-	1	-
		1012653	-	-	-	1
W	Gasket, Attachment Plate	1012542	2	-	-	-
		1012543	-	2	-	-
		1012544	-	-	2	-
		1012545	-	-	-	2
X	Cover, Junction Box	1012350	1	1	1	1
Y	Box, Junction	1172860	1	1	1	1
BB	Manifold	1012970	1	-	-	-
		1012971	-	1	-	-
		1012278	-	-	1	-
		1012279	-	-	-	1
CC	Bottom, Burner Box	1172847	1	-	-	-
		1172848	-	1	-	-
		1172849	-	-	1	-
		1172850	-	-	-	1
DD	Baffle, Burner Box	1012338	1	1	-	-
		1012339	-	-	1	-
		1012340	-	-	-	1
EE	Top, Burner Box	1013702	1	1	-	-
		1013703	-	-	1	-
		1013704	-	-	-	1
FF	Bracket, Manifold Support	1012377	2	2	2	2
GG	Bracket, Burner Box Side	1012532	2	2	2	2
HH	Bracket, Control Mounting	1172845	1	1	1	1
JJ	Tube, Sensor	1172238	1	1	1	1
		1172241	1	1	1	1
KK	Trap, Drain Assembly	1171917	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
QQ	Gasket, Trap	1013701	1	1	1	1
RR	Bracket, Trap	1171986	1	1	1	1
SS	Gasket, Trap Bracket	1171987	1	1	1	1
TT	Tube, Drain Coll. Box 5/8″ ID	1172245	1	1	1	1
UU	Tube, Drain Tee 1/2″ ID	1171989	1	1	1	1
VV	Tube, Relief	1172012	1	1	1	1
WW	Drain Vent	1014003	1	1	1	1
YY	Tee, Drain	1171915	1	1	1	1
ZZ	Sightglass	1172768	1	1	1	1

Key No.	Description	Part Number	*9MPV 050 F12	*9MPV 075 F12	*9MPV 100 J20	*9MPV 125 L20
)(	**PART NOT ILLUSTRATED**					
)(	Door Screws	1014488	4	4	4	4
)(	Door Screw Grommets	1171990	4	4	4	4
)(	Coupling, Air Intake	1002284	1	1	1	1
)(	Gasket, Air Intake	1012583	1	1	1	1
)(	Clamp, Hose 5/8"	1012975	4	4	4	4
)(	Clamp, Hose 3/4"	1012976	2	2	2	2
)(	Coupling, Discharge	1002522	1	1	1	1
)(	Clamp Hose	1013830	2	2	2	2
)(	Grommet, Vent	1012697	1	1	1	1
)(	Bushing, Strain Relief	1945287	1	1	1	1
)(	Grommet, Vinyl (Gas Inlet)	1009535	1	1	1	1
)(	Harness, Wire	1172818	1	1	1	1
)(	Harness, Wire Blower V.S.	1174758	1	1	1	1
)(	Trap, Drain Tee	1171916	1	1	1	1
)(	Tube, Drain 1/2" ID Drain	1171991	1	1	1	1
)(	Tube, 1/2" Elbow	1171992	2	2	2	2
)(	Coupling, 1/2" Barbed	1171993	1	1	1	1
)(	Tubing, 5/8" ID Drain	1171994	1	1	1	1
)(	Connector, 3/4" X 1/2"	1171995	1	1	1	1
)(	Elbow, 1/2" CPVC street	1171996	1	1	1	1
)(	Grommet, Casing	1171997	1	1	1	1
)(	Tube, Relief Ext.	1172239	1	1	1	1
)(	Connector, Relief Tube	1171998	1	1	1	1
)(	Plate, Cover	1171999	1	1	1	1
)(	Gasket, Cover Plate	1172000	1	1	1	1
)(	Cap, Drain Tee	1172255	1	1	1	1
)(	Clamp, Tee Cap	1172256	1	1	1	1
)(	Manual, Users	44102201103	1	1	1	1
)(	Manual, Installation	44001202301	1	1	1	1
)(	Manual, Technical	44004202301	1	1	1	1

Gas Conversion Kits – All models

Nat to Propane	NAHA002LP	(1172959*)
Propane to Nat	NAHA002NG	(1172961*)

* Must be ordered from Service Parts