Parts List
Tech Labels
Wiring Diagrams

Models

Single Phase

PHF024K000A	**HPFM24K000A**
PHF039K000A	**HPFM30K000A**
PHF036K000A	**HPFM36K000A**
PHF042K000A	**HPFM42K000A**
PHF048K000A	**HPFM48K000A**
PHF060K000A	**HPFM60K000A**

Single Package Heat Pumps

Save This Manual For Future Reference

518 04 1101 00 LP1
7-29-98

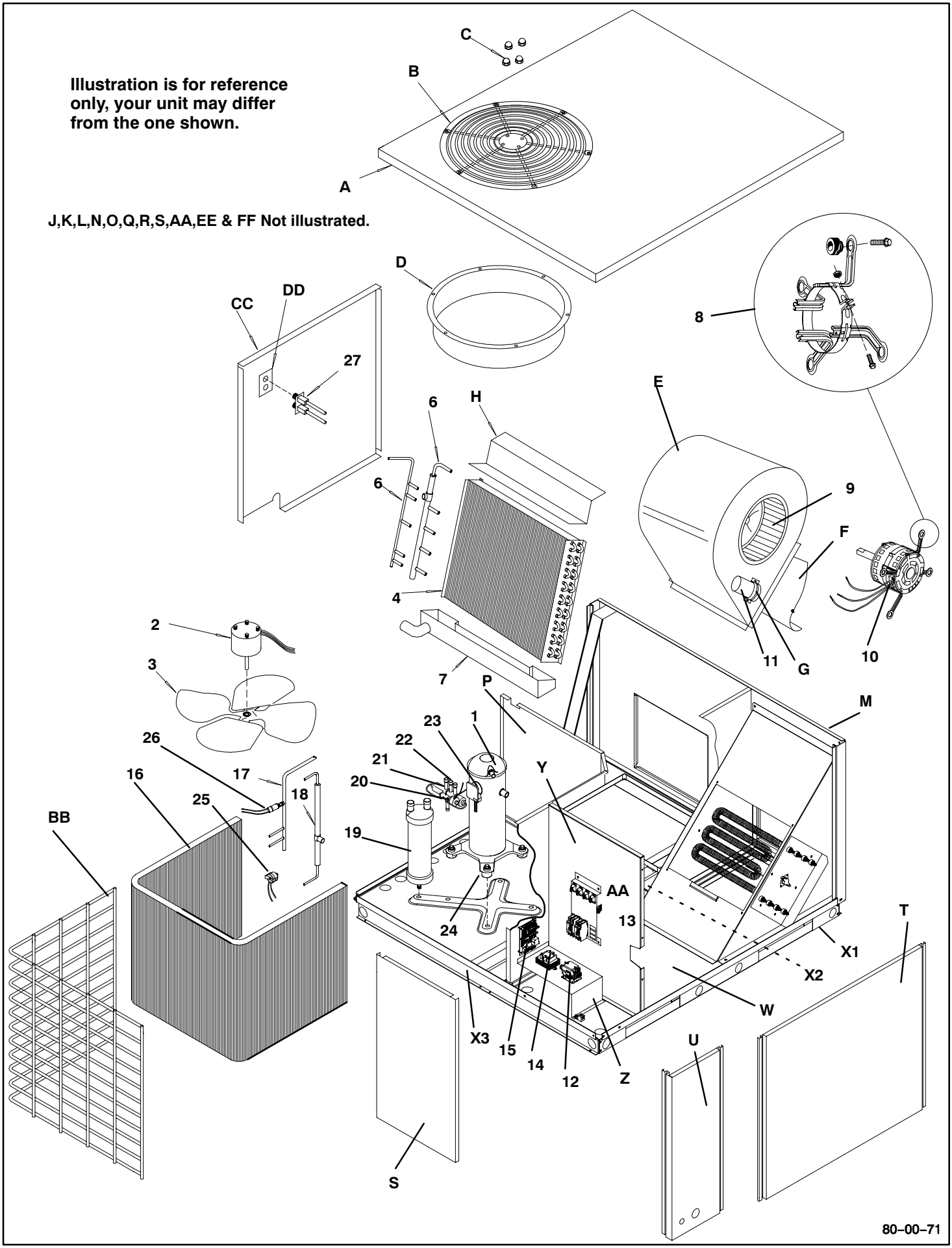
NO	DESCRIPTION	PART NO.	PHF0 & HPFM SERIES					
			24K000A	30K000A	36K000A	42K000A	48K000A	60K000A
1	Compressor, ZR24KCPFV	1080976	1					
1	Compressor, ZR28KCPFV	1082500	-	1				
1	Compressor, ZR34KCPFV	1084517	-	-	1			
1	Compressor, ZR42KCPFV	1082502	-	-	-	1		
1	Compressor, ZR47KCPFV	1084518	-	-	-	-	1	
1	Compressor, ZR61KCPFV	1084520	-	-	-	-	-	1
2	Motor, Condenser Fan 230 Volt, 1/5 HP	1082639	1					
2	Motor, Condenser Fan 230 Volt, 1/3 HP	1082492	-	1				
2	Motor, Condenser Fan 230 Volt, 1/3 HP	1082642	-	-	1	1	1	1
3	Fan, Condenser	1096903	1	1				
3	Fan, Condenser	1096902	-	-	1	1	1	
3	Fan, Condenser	1097974	-	-	-	-	-	1
4	Coil, Evaporator	1084229	1					
4	Coil, Evaporator	1084231	-	1				
4	Coil, Evaporator	1096997	-	-	1			
4	Coil, Evaporator	1084240	-	-	-	1		
4	Coil, Evaporator	1084243	-	-	-	-	1	
4	Coil, Evaporator	1084249	-	-	-	-	-	1
5	Manifold, Evap (Suction)	1084230	1					
5	Manifold, Evap (Suction)	1085656	-	1	1			
5	Manifold, Evap (Suction)	1084245	-	-	-	1		
5	Manifold, Evap (Suction)	1084246	-	-	-	-	1	
5	Manifold, Evap (Suction)	1085560	-	-	-	-	-	1
6	Manifold, Evap (Liquid)	1084228	1	1				
6	Manifold, Evap (Liquid)	1085655	-	-	1			
6	Manifold, Evap (Liquid)	1084232	-	-	-	1		
6	Manifold, Evap (Liquid)	1084233	-	-	-	-	1	
6	Manifold, Evap (Liquid)	1084234	-	-	-	-	-	1
7	Pan, Drain	1097695	1	1	1	1	1	1
8	Mount, Blower Motor Kit	1004805	1	1	1	1		
8	Mount, Blower Motor Kit	1002804	-	-	-	-	1	1
9	Wheel, Blower	600587	1	1	1	1		
9	Wheel, Blower	1097529	-	-	-	-	1	
9	Wheel, Blower	1054593	-	-	-	-	-	1
10	Motor, Blower 230 Volt, 1/4 HP	1083043	1					
10	Motor, Blower 230 Volt, 1/3 HP	1083044	-	1	1			
10	Motor, Blower 230 Volt, 1/2 HP	1083045	-	-	-	1		
10	Motor, Blower 230 Volt, 3/4 HP	1083046	-	-	-	-	1	
10	Motor, Blower 230 Volt, 1 HP	1054586	-	-	-	-	-	1
11	Capacitor, 5 Mfd, 370 Volt	1094954	1					
11	Capacitor, 10 Mfd, 370 Volt	1094956	-	1	1	1		
11	Capacitor, 15 Mfd, 370 Volt	1094960	-	-	-	-	1	
11	Capacitor, 20 Mfd, 440 Volt	1094968	-	-	-	-	-	1
12	Contactor, 25 Amp, 1 Pole	1050699	1	1	1	1		
12	Contactor, 40 Amp, 2 Pole	1059574	-	-	-	-	1	1
13	Capacitor, 3 + 35 Mfd, 370 Volt	1082632	1					
13	Capacitor, 3 + 35 Mfd, 440 Volt	1082636	-	1				
13	Capacitor, 5 + 40 Mfd, 370 Volt	1084980	-	-	1	1	1	1
14	Transformer, 230 V Pri, 24 V Sec, 40VA	1082611	1	1	1	1	1	1
15	Control, Board	1085472	1	1	1	1	1	1
16	Coil, Condenser	1097511	1					
16	Coil, Condenser	1097512	-	1				
16	Coil, Condenser	1097513	-	-	1			
16	Coil, Condenser	1097514	-	-	-	1		
16	Coil, Condenser	1097515	-	-	-	-	1	
16	Coil, Condenser	1097516	-	-	-	-	-	1

NO	DESCRIPTION	PART NO.	PHF0 & HPFM SERIES					
			24K000A	30K000A	36K000A	42K000A	48K000A	60K000A
17	Manifold, Condenser (Liquid)	1084253	1					
17	Manifold, Condenser (Liquid)	1084257	-	1				
17	Manifold, Condenser (Liquid)	1084258	-	-	-	1		
17	Manifold, Condenser (Liquid)	1084259	-	-	-	-	1	
17	Manifold, Condenser (Liquid)	1085651	-	-	-	-	-	1
18	Manifold, Condenser (Discharge)	1084260	1	1	1			
18	Manifold, Condenser (Discharge)	1085652	-	-	1			
18	Manifold, Condenser (Discharge)	1085653	-	-	-	1		
18	Manifold, Condenser (Discharge)	1084261	-	-	-	-	1	
18	Manifold, Condenser (Discharge)	1085654	-	-	-	-	-	1
19	Accumulator	1097502	1					
19	Accumulator	1097501	-	1				
19	Accumulator	1092835	-	-	1			
19	Accumulator	1081064	-	-	-	1	1	1
20	Valve, Reversing	1095322	1					
20	Valve, Reversing	1095321	-	1	1			
20	Valve, Reversing	1095226	-	-	-	1		
20	Valve, Reversing	1095319	-	-	-	-	1	1
21	Coil, Revesring Valve 24 Volt	34329055	1	1	1	1	1	1
22	Harness, Reversing Valve	1066711	1	1	1	1	1	1
23	Plug, Compressor	1097674	1	1	1	1		
23	Plug, Compressor	1097526	-	-	-	-	1	1
24	Grommet, Compressor Mtg	1052060	4	4	4	4	4	4
25	Sensor, Defrost							
26	Switch, Low Pressure							
27	Port Assembly	1085669	1	1	1	1	1	1
A	Panel, Top	1084120	1	1	1	1	1	1
AA	Clamp, Capacitor	1064218	1	1	1	1	1	1
B	Grille, Outlet	1084490	1	1	1	1	1	1
BB	Grille, Inlet	1084255	1	1	1	1		
BB	Grille, Inlet	1084268	-	-	-	-	1	1
C	Nut, Cap	1067902	4	4	4	4	4	4
CC	Panel, Access Compressor	1084137	1	1	1	1		
CC	Panel, Access Compressor	1084168	-	-	-	-	1	1
D	Orifice, Condenser fan	1065724	1	1	1	1	1	1
DD	Plate, Pressure Port	1085473	1	1	1	1	1	1
E	Housing, Blower	1085665	1	1	1	1		
E	Housing, Blower	1085666	-	-	-	-	1	1
EE	Bracket, Condenser Coil	1097549	1	1	1			
EE	Bracket, Condenser Coil	1085674	-	-	-	1		
EE	Bracket, Condenser Coil	1096945	-	-	-	-	1	1
F	Panel, Blower Cutoff	95143	1	1	1	1		
F	Panel, Blower Cutoff	1065073	-	-	-	-	1	1
FF	Support, Blower	1085663	1	1	1	1		
FF	Support, Blower	1085664	-	-	-	-	1	1
G	Clamp, Capacitor	1095020	1	1	1	1		
G	Clamp, Capacitor	1095022	-	-	-	-	1	1
H	Baffle, Evap Coil	1084128	1	1	1	1		
J	Plate, Evap Drip	1084124	1	1	1	1		
J	Plate, Evap Drip	1096955	-	-	-	-	1	1
K	Bracket, Filter	1097531	1	1	1	1	1	1
L	Box, Blower	1084151	1	1	1	1	1	1
M	Panel, Rear	1084162	1	1	1	1		
M	Panel, Rear	1084140	-	-	-	-	1	1
N	Panel, Rear Filler	1096960	1	1	1	1	1	1
O	Cover, Duct	1096918	2	2	2	2	2	2

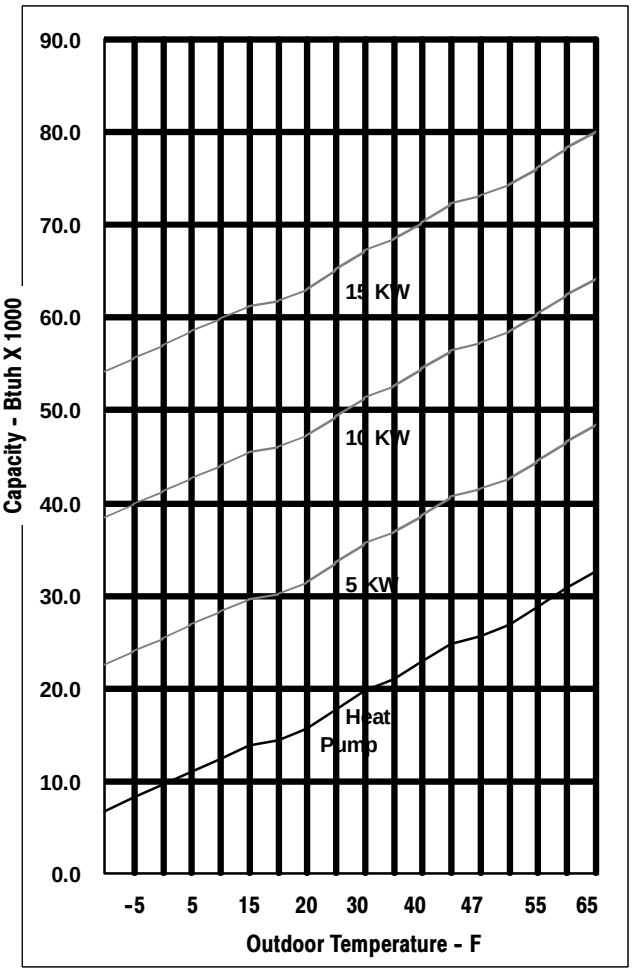
NO	DESCRIPTION	PART NO.	PHF0 & HPFM SERIES					
			24K000A	30K000A	36K000A	42K000A	48K000A	60K000A
P	Panel, Center	1084146	1	1	1	1		
P	Panel, Center	1084148	-	-	-	-	1	1
Q	Support, Evap Coil	1084133	1	1	1	1		
Q	Support, Evap Coil	1084132	-	-	-	-	1	1
R	Plate, Htr Cover	1083655	1	1	1	1	1	1
S	Panel, Access Heating	1084134	1	1	1	1		
S	Panel, Access Heating	1097977	-	-	-	-	1	1
T	Panel, Access Blower	1084156	1	1	1	1		
T	Panel, Access Blower	1084153	-	-	-	-	1	1
U	Post, Corner	1084155	1	1	1	1		
U	Post, Corner	1084170	-	-	-	-	1	1
W	Panel, Base	1097699	1	1	1	1	1	1
X1	Rail, Base (Front & Rear)	1084101	2	2	2	2	2	2
X2	Rail, Base (Center)	1096995	1	1	1	1	1	1
X3	Rail, Base (End)	1084102	2	2	2	2	2	2
Y	Panel, Control	1084154	1	1	1	1		
Y	Panel, Control	1084169	-	-	-	-	1	1
Z	Bracket, Control Mounting	1084157	1	1	1	1	1	1
)(	Manual, Parts List	518041101	1	1	1	1	1	1
)(	Manual, Users	428021101	1	1	1	1	1	1
)(	Manual, Installation	518011001	1	1	1	1	1	1

Illustration is for reference only, your unit may differ from the one shown.

J,K,L,N,O,Q,R,S,AA,EE & FF Not illustrated.



Balance Chart
2 Ton
Package Heat Pump



Tech Data

Unit Size	**PHF024/HPFM24**	
Voltage	208/230/1/60	
Ampacity	23.8	
Max. Fuse	35	
Compressor		
RLA	16.1	
LRA	59	
CAP MFD/V	35/370	
CC HEATER	N/A	
Cond & Evap	Cond	Evap
Type	Fan	Blower
Size.	20.3	10-8A
Motor-Hp	1/5	1/4
FLA	1.3	2.2
LRA	n/a	n/a
RPM	1155	1075
Cap MFD/Volts	3/370	5/370
Hi Pressure	N/A	
Lo Pressure	N/A	
Low Ambient	N/A	
Low Charge Sw	20 - 50	
Defrost	Timed	
Sensor	31/51	
R-22, oz.		
Operating Chg.		
See Rating Plate		
Service Driers		
Liquid/Chg	Field	
Suction	Field	
Unit Weight	n/a	

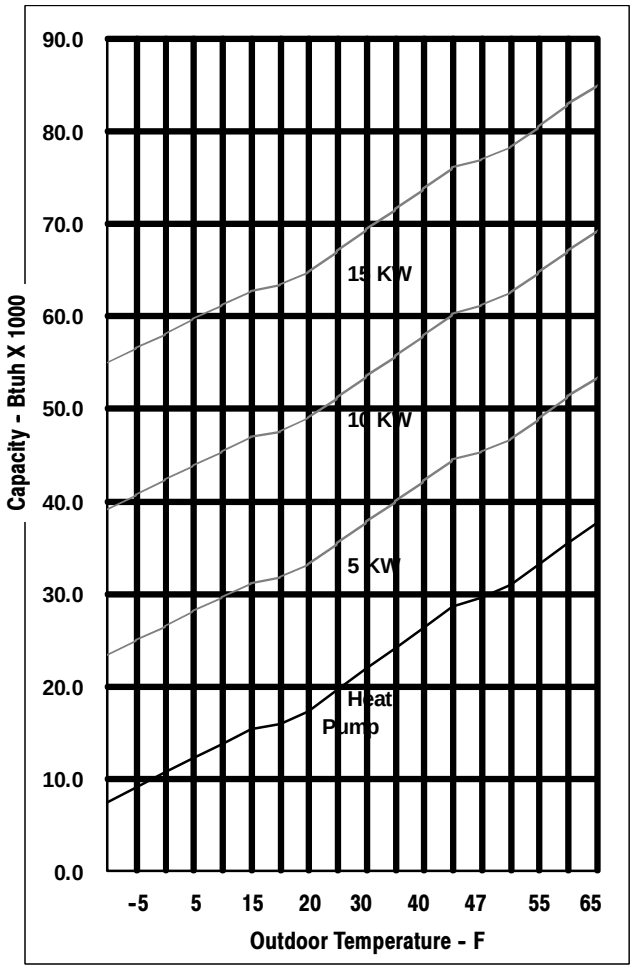
Cooling		Outdoor Ambient Temperature - Degrees F. Dry Bulb																			
		75				85				95				105				115			
IDB		Entering Indoor Temperature - Degrees F. Wet Bulb																			
		59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71
75	MBh	22.3	23.0	24.9	26.7	21.8	22.4	24.3	26.0	21.2	21.9	23.7	25.4	20.2	20.8	22.5	24.1	18.7	19.2	20.8	22.4
	S/T	0.86	0.77	0.58	0.37	0.88	0.79	0.60	0.38	0.91	0.81	0.61	0.40	0.94	0.84	0.64	0.41	0.95	0.85	0.64	0.41
	AMPS	9.8	10.0	10.3	10.6	10.5	10.7	11.0	11.4	11.1	11.3	11.7	12.0	11.7	12.0	12.3	12.7	12.3	12.6	12.9	13.3
	HI PR	182	196	207	216	207	223	236	246	236	254	268	280	266	286	302	315	293	316	333	348
	LOPR	61	65	71	75	63	67	74	78	66	71	77	82	70	74	81	86	72	77	84	89
80	MBh	22.7	23.2	24.8	26.5	22.2	22.6	24.2	25.9	21.6	22.1	23.6	25.2	20.5	21.0	22.4	24.0	19.0	19.4	20.8	22.2
	S/T	0.94	0.88	0.72	0.54	0.96	0.90	0.74	0.55	1.00	0.93	0.76	0.57	1.00	0.97	0.79	0.59	1.00	0.98	0.80	0.59
	AMPS	9.9	10.1	10.4	10.7	10.6	10.8	11.1	11.5	11.2	11.4	11.8	12.1	11.8	12.0	12.4	12.8	12.4	12.7	13.0	13.4
	HI PR	184	198	209	218	209	225	238	248	238	257	271	283	268	289	305	318	296	319	337	351
	LOPR	62	65	71	76	64	68	74	79	67	71	78	83	70	75	82	87	73	77	85	90
85	MBh	23.1	23.5	24.7	26.3	22.5	23.0	24.1	25.7	22.0	22.4	23.5	25.1	20.9	21.3	22.3	23.8	19.4	19.7	20.7	22.0
	S/T	0.99	0.95	0.86	0.70	1.00	0.98	0.88	0.71	1.00	1.00	0.91	0.74	1.00	1.00	0.94	0.77	1.00	1.00	0.95	0.77
	AMPS	10.0	10.2	10.5	10.8	10.7	10.9	11.2	11.5	11.3	11.5	11.8	12.2	11.9	12.1	12.5	12.9	12.5	12.8	13.1	13.5
	HI PR	186	200	211	220	211	228	240	251	241	259	274	285	271	292	308	321	299	322	340	355
	LOPR	62	66	72	77	65	69	75	80	68	72	79	84	71	76	83	88	74	78	85	91

Heating		Outdoor Ambient Temperature - Degrees F. Dry Bulb																	
IDB		65	60	55	50	47	45	40	35	30	25	20	17	15	10	5	0	-5	-10
70	MBh	32.6	30.8	28.7	26.8	25.6	24.8	22.8	20.9	19.7	17.6	15.6	14.3	13.8	12.4	11.0	9.6	8.2	6.7
	T/R	35.5	33.5	31.3	29.2	27.9	27.0	24.9	22.8	21.5	19.2	16.9	15.6	15.0	13.5	11.9	10.4	8.9	7.3
	KW	2.79	2.73	2.68	2.63	2.60	2.58	2.53	2.48	2.22	2.17	2.13	2.10	2.08	2.04	1.99	1.95	1.90	1.85
	AMPS	14.8	13.8	13.1	12.4	12.0	11.8	11.2	10.7	10.4	10.0	9.6	9.4	9.3	8.9	8.4	8.0	7.6	7.0
	COP	3.43	3.29	3.13	2.98	2.88	2.82	2.64	2.48	2.60	2.38	2.14	1.99	1.94	1.78	1.61	1.44	1.26	1.05
	EER	11.7	11.3	10.7	10.2	9.8	9.6	9.0	8.5	8.9	8.1	7.3	6.8	6.6	6.1	5.5	4.9	4.3	3.6
	HI PR	313	300	288	275	269	264	254	243	233	223	214	209	205	197	190	182	175	169
	LO PR	69	64	60	55	52	50	46	41	37	33	29	27	26	22	19	16	14	11

Air Delivery in CFM - Dry Coil (Add .08 static W/Internal Filters - Substract 25 CFM for Wet Coil)						
230 Volt	External Static Pressure (Inch Water Column))					
Motor Speed	0.10	0.20	0.30	0.40	0.50	0.60
Hi	1072	1081	1085	1075	1058	1031
MD HI	764	777	775	775	773	760
MD LO						
LO	566	559	558	554	537	519

1097634
7-29-98

Balance Chart
2 1/2 Ton
Package Heat Pump



Tech Data

Unit Size	**PHF030/HPFM30**	
Voltage	208/230/1/60	
Ampacity	24.8	
Max. Fuse	40	
Compressor		
RLA	16.3	
LRA	73	
CAP MFD/V	35/440	
CC HEATER	N/A	
Cond & Evap	Cond	Evap
Type	Fan	Blower
Size.	20.3	10-8A
Motor-Hp	1/5	1/3
FLA	1.3	3.1
LRA	N/A	N/A
RPM	1155	1075
Cap MFD/Volts	10/370	3/440
Hi Pressure	N/A	
Lo Pressure	N/A	
Low Ambient	N/A	
Low Charge Sw	20 - 50	
Defrost	Timed	
Sensor	31/51	
R-22, oz.		
Operating Chg.		
See Rating Plate		
Service Driers		
Liquid/Chg	Field	
Suction	Field	
Unit Weight	n/a	

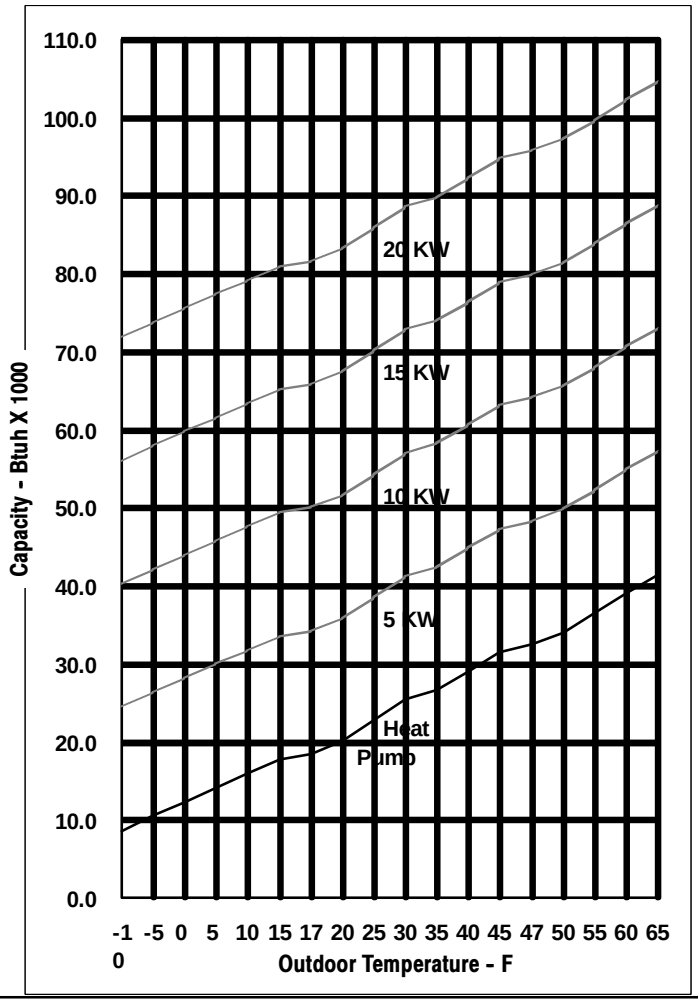
Cooling		Outdoor Ambient Temperature - Degrees F. Dry Bulb																			
		75				85				95				105				115			
IDB		Entering Indoor Temperature - Degrees F. Wet Bulb																			
		59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71
75	MBh	27.5	28.3	30.6	32.9	26.8	27.6	29.9	32.1	26.2	27.0	29.2	31.3	24.9	25.6	27.7	29.8	23.0	23.7	25.7	27.6
	S/T	0.88	0.79	0.60	0.38	0.90	0.81	0.61	0.39	0.93	0.83	0.63	0.41	0.97	0.86	0.65	0.42	0.98	0.87	0.66	0.42
	AMPS	12.7	13.0	13.3	13.8	13.6	13.9	14.3	14.8	14.4	14.8	15.2	15.7	15.2	15.6	16.0	16.6	16.0	16.4	16.9	17.4
	HI PR	200	215	227	237	227	244	258	269	259	278	294	307	291	313	331	345	322	346	365	381
	LO PR	66	71	77	82	69	73	80	85	72	77	84	90	76	81	88	94	79	84	91	97
80	MBh	28.0	28.6	30.6	32.7	27.3	27.9	29.8	31.9	26.7	27.2	29.1	31.1	25.3	25.9	27.6	29.6	23.5	24.0	25.6	27.4
	S/T	0.97	0.91	0.74	0.55	0.99	0.93	0.76	0.56	1.00	0.96	0.78	0.58	1.00	0.99	0.81	0.61	1.00	1.00	0.82	0.61
	AMPS	12.8	13.1	13.4	13.9	13.8	14.0	14.4	14.9	14.6	14.9	15.3	15.8	15.4	15.7	16.2	16.7	16.2	16.5	17.0	17.6
	HI PR	202	217	229	239	229	247	261	272	261	281	297	310	294	316	334	348	325	350	369	385
	LO PR	67	71	78	83	70	74	81	86	73	78	85	91	77	82	89	95	79	84	92	98
85	MBh	28.5	29.0	30.4	32.4	27.8	28.3	29.7	31.7	27.1	27.6	29.0	30.9	25.8	26.3	27.5	29.3	23.9	24.3	25.5	27.2
	S/T	1.00	0.98	0.88	0.72	1.00	1.00	0.90	0.73	1.00	1.00	0.93	0.76	1.00	1.00	0.97	0.79	1.00	1.00	0.98	0.79
	AMPS	12.9	13.2	13.5	14.0	13.9	14.1	14.6	15.0	14.7	15.0	15.4	15.9	15.5	15.8	16.3	16.8	16.3	16.7	17.1	17.7
	HI PR	204	219	232	242	232	249	263	275	264	284	300	313	297	320	337	352	328	353	373	389
	LO PR	68	72	79	84	70	75	82	87	74	79	86	91	77	82	90	96	80	85	93	99

Heating		Outdoor Ambient Temperature - Degrees F. Dry Bulb																	
IDB		65	60	55	50	47	45	40	35	30	25	20	17	15	10	5	0	-5	-10
70	MBh	37.6	35.5	33.1	30.9	29.5	28.6	26.3	24.1	21.9	19.6	17.3	15.9	15.3	13.7	12.2	10.6	9.1	7.4
	T/R	33.1	31.2	29.1	27.2	26.0	25.2	23.2	21.2	19.3	17.3	15.2	14.0	13.5	12.1	10.7	9.3	8.0	6.5
	KW	2.83	2.78	2.72	2.67	2.64	2.62	2.57	2.51	2.54	2.49	2.43	2.40	2.38	2.32	2.27	2.21	2.16	2.10
	AMPS	15.3	14.4	13.6	12.9	12.5	12.3	11.7	11.2	10.8	10.4	10.0	9.9	9.8	9.4	8.9	8.5	8.0	7.4
	COP	3.89	3.74	3.55	3.38	3.27	3.20	3.00	2.81	2.52	2.31	2.08	1.94	1.88	1.73	1.57	1.40	1.23	1.03
	EER	13.3	12.8	12.1	11.6	11.2	10.9	10.3	9.6	8.6	7.9	7.1	6.6	6.4	5.9	5.4	4.8	4.2	3.5
	HI PR	236	226	217	208	203	199	191	184	176	168	161	158	155	149	143	137	132	128
	LO PR	72	66	62	57	54	52	48	43	38	34	30	28	27	23	20	17	15	11

Air Delivery in CFM - Dry Coil (Add .08 static W/Internal Filters - Substract 25 CFM for Wet Coil)						
230 Volt	External Static Pressure (Inch Water Column))					
Motor Speed	0.10	0.20	0.30	0.40	0.50	0.60
Hi	1537	1493	1447	1394	1338	1269
MD HI	1305	1287	1262	1226	1184	1136
MD LO						
LO	1009	1012	1002	987	962	922

1097635
7-29-98

Balance Chart
3 Ton
Package Heat Pump



Tech Data

Unit Size	**PHF036/HPFM36**	
Voltage	208/230/1/60	
Ampacity	25.7	
Max. Fuse	40	
Compressor		
RLA	16.5	
LRA	93	
CAP MFD/V	40/370	
CC HEATER	N/A	
Cond & Evap	Cond	Evap
Type	Fan	Blower
Size.	20.3	10-8A
Motor-Hp	1/3	1/3
FLA	1.9	3.1
LRA	N/A	N/A
RPM	1135	1075
Cap MFD/Volts	10/370	5/370
Hi Pressure	N/A	
Lo Pressure	N/A	
Low Ambient	N/A	
Low Charge Sw	20 - 50	
Defrost	Timed	
Sensor	31/51	
R-22, oz.		
Operating Chg.		
See Rating Plate		
Service Driers		
Liquid/Chg	Field	
Suction	Field	
Unit Weight	n/a	

		Outdoor Ambient Temperature - Degrees F. Dry Bulb																			
		75				85				95				105				115			
Cooling IDB		Entering Indoor Temperature - Degrees F. Wet Bulb																			
		59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71
75	MBh	32.2	33.2	35.9	38.5	31.5	32.4	35.1	37.6	30.7	31.6	34.2	36.7	29.2	30.0	32.5	34.9	27.0	27.8	30.1	32.3
	S/T	0.90	0.81	0.61	0.39	0.93	0.83	0.63	0.40	0.96	0.85	0.65	0.42	0.99	0.89	0.67	0.43	1.00	0.89	0.68	0.44
	AMPS	15.3	15.6	16.0	16.5	16.4	16.7	17.2	17.8	17.4	17.7	18.3	18.9	18.3	18.7	19.3	19.9	19.3	19.7	20.3	21.0
	HI PR	202	217	229	239	229	247	261	272	261	281	297	310	294	316	334	348	325	350	369	385
	LOPR	65	69	75	80	67	72	78	83	71	75	82	88	74	79	86	92	77	82	89	95
80	MBh	32.8	33.5	35.8	38.3	32.0	32.7	35.0	37.4	31.2	31.9	34.1	36.5	29.7	30.3	32.4	34.6	27.5	28.1	30.0	32.1
	S/T	0.99	0.93	0.76	0.56	1.00	0.95	0.78	0.58	1.00	0.98	0.80	0.60	1.00	1.00	0.83	0.62	1.00	1.00	0.84	0.63
	AMPS	15.4	15.7	16.2	16.7	16.5	16.9	17.4	17.9	17.5	17.9	18.4	19.0	18.5	18.9	19.4	20.1	19.5	19.9	20.5	21.2
	HI PR	204	219	232	242	232	249	263	275	264	284	300	313	297	320	338	352	328	353	373	389
	LOPR	65	70	76	81	68	72	79	84	71	76	83	88	75	80	87	93	77	82	90	96
85	MBh	33.4	34.0	35.6	38.0	32.6	33.2	34.8	37.1	31.8	32.4	33.9	36.2	30.2	30.8	32.2	34.4	28.0	28.5	29.9	31.9
	S/T	1.00	1.00	0.90	0.73	1.00	1.00	0.93	0.75	1.00	1.00	0.96	0.78	1.00	1.00	0.99	0.81	1.00	1.00	1.00	0.81
	AMPS	15.5	15.8	16.3	16.8	16.7	17.0	17.5	18.1	17.6	18.0	18.5	19.2	18.6	19.0	19.6	20.3	19.6	20.0	20.6	21.3
	HI PR	206	222	234	244	234	252	266	277	267	287	303	316	300	323	341	356	331	357	377	393
	LOPR	66	70	77	82	69	73	80	85	72	77	84	89	76	80	88	94	78	83	91	97

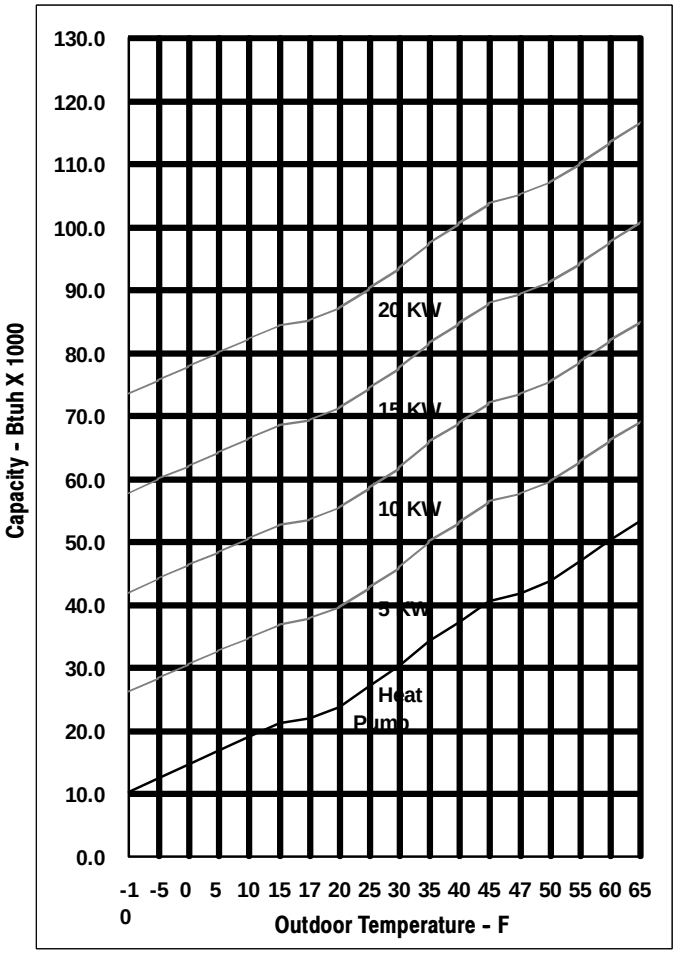
		Outdoor Ambient Temperature - Degrees F. Dry Bulb																
Heating IDB		65	60	55	50	47	45	40	35	30	25	20	17	15	10	5	0	-5	-10
70	MBh	41.4	39.1	36.4	34.0	32.5	31.5	29.0	26.6	25.4	22.7	20.0	18.4	17.7	15.9	14.1	12.3	10.5	8.6
	T/R	30.7	28.9	27.0	25.2	24.1	23.3	21.5	19.7	18.8	16.8	14.8	13.6	13.1	11.8	10.4	9.1	7.8	6.4
	KW	3.25	3.19	3.13	3.06	3.03	3.00	2.95	2.89	2.97	2.90	2.84	2.80	2.77	2.71	2.65	2.58	2.52	2.46
	AMPS	18.3	17.1	16.2	15.4	14.9	14.7	14.0	13.4	12.9	12.4	12.0	11.7	11.6	11.1	10.6	10.1	9.5	8.8
	COP	3.73	3.59	3.41	3.25	3.14	3.07	2.88	2.70	2.50	2.29	2.06	1.92	1.87	1.72	1.56	1.39	1.22	1.02
	EER	12.8	12.3	11.7	11.1	10.7	10.5	9.8	9.2	8.6	7.8	7.1	6.6	6.4	5.9	5.3	4.8	4.2	3.5
	HI PR	230	221	212	203	198	194	187	179	172	164	157	154	151	145	140	134	129	125
	LO PR	64	59	55	51	48	46	42	38	34	30	27	25	24	20	18	15	13	10

Air Delivery in CFM - Dry Coil
(Add .08 static W/Internal Filters - Substract 25 CFM for Wet Coil)

230 Volt	External Static Pressure (Inch Water Column))					
Motor Speed	0.10	0.20	0.30	0.40	0.50	0.60
Hi	1537	1493	1447	1394	1338	1269
MD HI	1305	1287	1262	1226	1184	1136
MD LO						
LO	1009	1012	1002	987	962	922

1097636
7-29-98

Balance Chart
3½ Ton
Package Heat Pump



Tech Data

Unit Size	**PHF042/HPFM42**	
Voltage	208/230/1/60	
Ampacity	32.6	
Max. Fuse	50	
Compressor		
RLA	21.4	
LRA	127	
CAP MFD/V	40/370	
CC HEATER	N/A	
Cond & Evap	Cond	Evap
Type	Fan	Blower
Size.	20.3	10-8A
Motor-Hp	1/3	1/2
FLA	1.9	4.0
LRA	N/A	N/A
RPM	1140	1075
Cap MFD/Volts	10/370	5/370
Hi Pressure	N/A	
Lo Pressure	N/A	
Low Ambient	N/A	
Low Charge Sw	20 - 50	
Defrost	Timed	
Sensor	31/51	
R-22, oz.	130	
Operating Chg. See Rating Plate		
Service Driers		
Liquid/Chg	Field	
Suction	Field	
Unit Weight	n/a	

Cooling		Outdoor Ambient Temperature - Degrees F. Dry Bulb																			
		75				85				95				105				115			
IDB		Entering Indoor Temperature - Degrees F. Wet Bulb																			
		59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71
75	MBh	38.8	40.0	43.3	46.5	37.9	39.0	42.3	45.3	37.0	38.1	41.2	44.2	35.1	36.2	39.2	42.0	32.6	33.5	36.3	38.9
	S/T	0.90	0.81	0.61	0.39	0.93	0.83	0.63	0.40	0.96	0.85	0.65	0.42	0.99	0.89	0.67	0.43	1.00	0.89	0.68	0.44
	AMPS	24.1	24.1	24.2	24.2	24.2	24.3	24.3	24.4	24.4	24.4	24.5	24.6	24.5	24.5	24.6	24.7	24.6	24.7	24.8	24.9
	HI PR	192	206	218	227	218	235	248	258	248	267	282	294	279	301	317	331	309	332	351	366
	LO PR	63	67	73	78	66	70	76	81	69	73	80	85	72	77	84	90	75	80	87	93
80	MBh	39.5	40.4	43.2	46.1	38.6	39.4	42.1	45.0	37.6	38.5	41.1	43.9	35.8	36.5	39.0	41.7	33.1	33.9	36.2	38.7
	S/T	0.99	0.93	0.76	0.56	1.00	0.95	0.78	0.58	1.00	0.98	0.80	0.60	1.00	1.00	0.83	0.62	1.00	1.00	0.84	0.63
	AMPS	24.1	24.1	24.2	24.3	24.2	24.3	24.4	24.4	24.4	24.4	24.5	24.6	24.5	24.6	24.6	24.7	24.6	24.7	24.8	24.9
	HI PR	194	208	220	229	220	237	250	261	251	270	285	297	282	304	321	334	312	335	354	369
	LO PR	64	68	74	79	66	71	77	82	70	74	81	86	73	78	85	90	76	80	88	94
85	MBh	40.2	41.0	42.9	45.8	39.3	40.0	41.9	44.7	38.3	39.0	40.9	43.6	36.4	37.1	38.8	41.4	33.7	34.4	36.0	38.4
	S/T	1.00	1.00	0.90	0.73	1.00	1.00	0.93	0.75	1.00	1.00	0.96	0.78	1.00	1.00	0.99	0.81	1.00	1.00	1.00	0.81
	AMPS	24.1	24.2	24.2	24.3	24.3	24.3	24.4	24.5	24.4	24.4	24.5	24.6	24.5	24.6	24.7	24.8	24.7	24.7	24.8	24.9
	HI PR	196	210	222	232	222	239	253	264	253	273	288	300	285	307	324	338	315	339	358	373
	LO PR	65	69	75	80	67	71	78	83	70	75	82	87	74	79	86	91	76	81	89	94

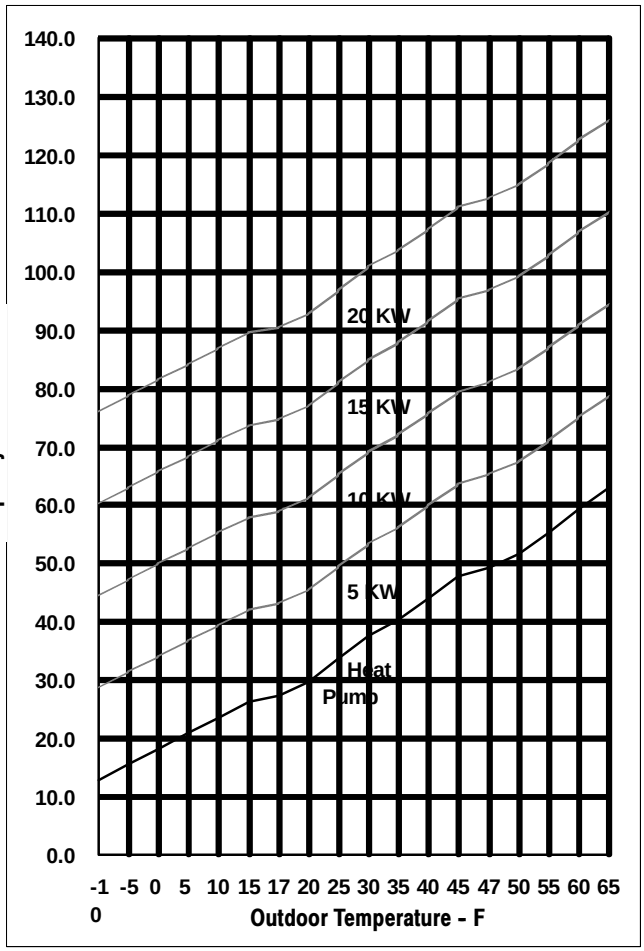
Heating		Outdoor Ambient Temperature - Degrees F. Dry Bulb																	
IDB		65	60	55	50	47	45	40	35	30	25	20	17	15	10	5	0	-5	-10
70	MBh	53.3	50.2	46.9	43.8	41.8	40.5	37.3	34.2	30.2	27.0	23.8	21.9	21.1	18.9	16.8	14.6	12.5	10.2
	T/R	32.9	31.0	28.9	27.0	25.8	25.0	23.0	21.1	18.6	16.7	14.7	13.5	13.0	11.7	10.4	9.0	7.7	6.3
	KW	4.24	4.17	4.09	4.01	3.96	3.93	3.85	3.77	3.81	3.73	3.65	3.60	3.57	3.48	3.40	3.32	3.24	3.16
	AMPS	21.9	21.9	21.9	22.0	22.0	22.0	22.0	22.1	22.1	22.1	22.1	22.1	22.1	22.2	22.2	22.2	22.2	22.3
	COP	3.67	3.53	3.36	3.20	3.09	3.02	2.83	2.65	2.32	2.12	1.91	1.78	1.73	1.59	1.44	1.29	1.13	0.95
	EER	12.5	12.1	11.5	10.9	10.6	10.3	9.7	9.1	7.9	7.2	6.5	6.1	5.9	5.4	4.9	4.4	3.9	3.2
	HI PR	237	227	218	209	204	200	192	185	177	169	162	158	155	150	144	138	133	128
	LO PR	68	63	59	54	51	49	45	40	36	32	28	26	26	22	19	16	14	11

Air Delivery in CFM - Dry Coil
(Add .08 static W/Internal Filters - Substract 25 CFM for Wet Coil)

230 Volt	External Static Pressure (Inch Water Column))					
Motor Speed	0.10	0.20	0.30	0.40	.50	.60
Hi	1647	1603	1564	1497	1434	1369
MD HI	1384	1377	1361	1333	1289	1243
MD LO						
LO	1037	1049	1051	1041	1031	1014

1097637
7-29-98

Balance Chart
4 Ton
Package Heat Pump



Tech Data

Unit Size	**PHF048/HPFM48**	
Voltage	208/230/1/60	
Ampacity	46.3	
Max. Fuse	70	
Compressor		
RLA	30.7	
LRA	131	
CAP MFD/V	40/370	
CC HEATER	N/A	
Cond & Evap	Cond	Evap
Type	Fan	Blower
Size.	20.3	11-11A
Motor-Hp	1/3	3/4
FLA	1.9	6.0
LRA	N/A	N/A
RPM	1140	1075
Cap MFD/Volts	15/370	5/370
Hi Pressure	N/A	
Lo Pressure	N/A	
Low Ambient	N/A	
Low Charge Sw	20 - 50	
Defrost	Timed	
Sensor	31/51	
R-22, oz.		
Operating Chg.		
See Rating Plate		
Service Driers		
Liquid/Chg	Field	
Suction	Field	
Unit Weight	n/a	

Cooling		Outdoor Ambient Temperature - Degrees F. Dry Bulb																			
		75				85				95				105				115			
		Entering Indoor Temperature - Degrees F. Wet Bulb																			
IDB		59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71
75	MBh	42.3	43.6	47.2	50.6	41.3	42.6	46.1	49.4	40.3	41.5	44.9	48.2	38.3	39.4	42.7	45.8	35.5	36.5	39.5	42.4
	S/T	0.89	0.80	0.60	0.39	0.91	0.82	0.62	0.40	0.94	0.84	0.64	0.41	0.98	0.88	0.66	0.43	0.99	0.88	0.67	0.43
	AMPS	21.0	21.4	22.0	22.7	22.5	23.0	23.7	24.4	23.9	24.4	25.1	25.9	25.2	25.8	26.5	27.4	26.5	27.1	27.9	28.9
	HI PR	190	205	216	226	216	233	246	257	247	265	280	292	277	298	315	329	306	330	348	363
	LOPR	62	66	73	77	65	69	75	80	68	73	79	84	71	76	83	88	74	79	86	91
80	MBh	43.1	44.0	47.0	50.3	42.1	43.0	45.9	49.1	41.0	41.9	44.8	47.9	39.0	39.8	42.6	45.5	36.1	36.9	39.4	42.1
	S/T	0.98	0.92	0.75	0.56	1.00	0.94	0.77	0.57	1.00	0.97	0.79	0.59	1.00	1.00	0.82	0.61	1.00	1.00	0.83	0.62
	AMPS	21.1	21.6	22.2	22.9	22.7	23.2	23.9	24.6	24.1	24.6	25.3	26.1	25.4	26.0	26.7	27.6	26.8	27.3	28.2	29.1
	HI PR	192	207	218	228	219	235	248	259	249	268	283	295	280	302	318	332	310	333	352	367
	LOPR	63	67	73	78	66	70	76	81	69	73	80	85	72	77	84	89	75	79	87	92
85	MBh	43.8	44.7	46.8	49.9	42.8	43.6	45.7	48.7	41.8	42.6	44.6	47.6	39.7	40.4	42.3	45.2	36.7	37.5	39.2	41.8
	S/T	1.00	0.99	0.89	0.72	1.00	1.00	0.92	0.74	1.00	1.00	0.94	0.77	1.00	1.00	0.98	0.80	1.00	1.00	0.99	0.80
	AMPS	21.3	21.7	22.4	23.1	22.9	23.4	24.0	24.8	24.3	24.8	25.5	26.4	25.6	26.2	27.0	27.9	27.0	27.6	28.4	29.4
	HI PR	194	209	221	230	221	238	251	262	252	271	286	298	283	305	322	335	313	336	355	371
	LOPR	64	68	74	79	66	70	77	82	70	74	81	86	73	78	85	90	75	80	88	93

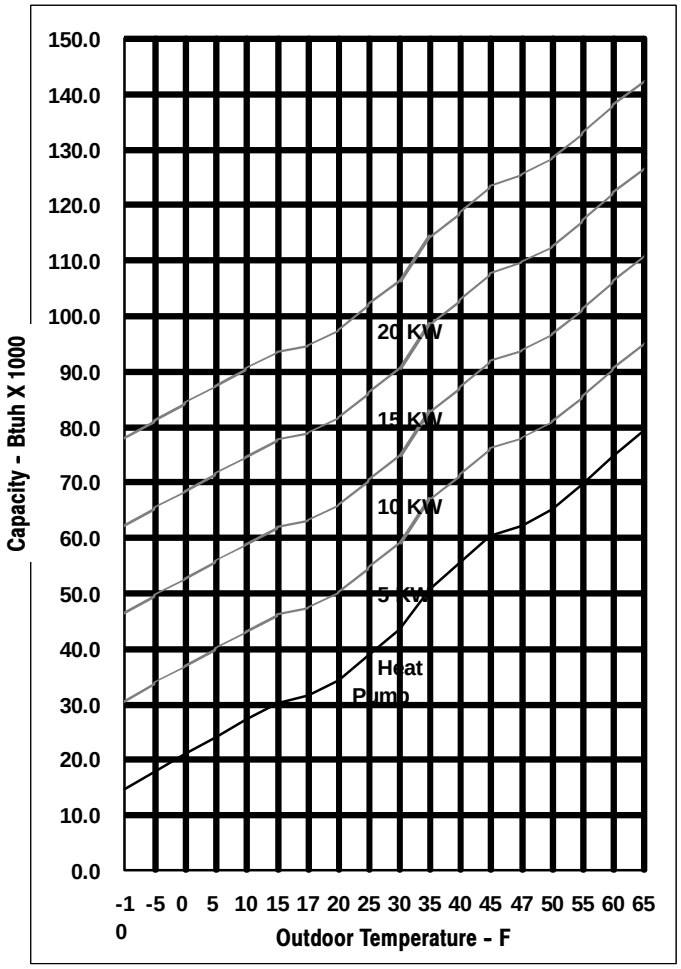
Heating		Outdoor Ambient Temperature - Degrees F. Dry Bulb																	
IDB		65	60	55	50	47	45	40	35	30	25	20	17	15	10	5	0	-5	-10
70	MBh	62.8	59.3	55.3	51.6	49.3	47.8	44.0	40.3	37.5	33.6	29.6	27.2	26.2	23.5	20.8	18.2	15.5	12.7
	T/R	36.3	34.3	32.0	29.9	28.5	27.6	25.4	23.3	21.7	19.4	17.1	15.7	15.2	13.6	12.1	10.5	9.0	7.4
	KW	5.26	5.16	5.06	4.96	4.90	4.86	4.76	4.66	4.33	4.24	4.15	4.09	4.05	3.96	3.87	3.77	3.68	3.58
	AMPS	30.4	28.4	26.7	25.3	24.5	24.1	22.9	21.8	21.0	20.2	19.4	19.0	18.8	18.0	17.0	16.1	15.1	13.9
	COP	3.49	3.36	3.20	3.05	2.94	2.88	2.70	2.53	2.53	2.32	2.09	1.95	1.89	1.74	1.58	1.41	1.23	1.04
	EER	11.9	11.5	10.9	10.4	10.1	9.8	9.2	8.7	8.7	7.9	7.1	6.7	6.5	5.9	5.4	4.8	4.2	3.5
	HI PR	307	294	283	270	264	259	249	239	229	219	210	205	201	194	186	178	172	166
	LO PR	68	63	59	54	51	49	45	40	36	32	28	26	26	22	19	16	14	11

Air Delivery in CFM - Dry Coil
(Add .08 static W/Internal Filters - Substract 25 CFM for Wet Coil)

230 Volt	External Static Pressure (Inch Water Column))					
Motor Speed	0.10	0.20	0.30	0.40	.50	.60
Hi	2202	2131	2068	1998	1925	1849
MD HI	2154	2085	2022	1958	1888	1812
MD LO	2047	1984	1922	1865	1799	1731
LO	1954	1899	1847	1796	1730	1655

1097638
7-29-98

Balance Chart
5 Ton
Package Heat Pump



Tech Data

Unit Size	**PHF060/HPFM60**	
Voltage	208/230/1/60	
Ampacity	46.1	
Max. Fuse	70	
Compressor		
RLA	30.6	
LRA	175	
CAP MFD/V	40/370	
CC HEATER	N/A	
Cond & Evap	Cond	Evap
Type	Fan	Blower
Size.	20.3	11-11A
Motor-Hp	1/3	1
FLA	1.9	6.0
LRA	N/A	N/A
RPM	1150	1100
Cap MFD/Volts	20/440	5/370
Hi Pressure	N/A	
Lo Pressure	N/A	
Low Ambient	N/A	
Low Charge Sw	20 - 50	
Defrost	Timed	
Sensor	31/51	
R-22, oz.		
Operating Chg.		
See Rating Plate		
Service Driers		
Liquid/Chg	Field	
Suction	Field	
Unit Weight	n/a	

Cooling IDB		Outdoor Ambient Temperature - Degrees F. Dry Bulb / Entering Indoor Temperature - Degrees F. Wet Bulb																			
		75				85				95				105				115			
		59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71	59	63	67	71
75	MBh	54.2	55.8	60.5	64.9	53.0	54.5	59.0	63.3	51.7	53.2	57.6	61.8	49.1	50.5	54.7	58.7	45.5	46.8	50.7	54.4
	S/T	0.87	0.78	0.59	0.38	0.89	0.80	0.60	0.39	0.92	0.82	0.62	0.40	0.95	0.85	0.65	0.42	0.96	0.86	0.65	0.42
	AMPS	28.3	28.9	29.7	30.7	30.4	31.1	32.0	33.0	32.2	32.9	33.9	35.1	34.1	34.8	35.9	37.1	35.9	36.7	37.8	39.1
	HI PR	198	214	225	235	226	243	256	267	257	277	292	305	289	311	329	343	319	344	363	379
	LO PR	63	67	73	78	66	70	76	81	69	73	80	85	72	77	84	90	75	80	87	93
80	MBh	55.2	56.4	60.3	64.4	53.9	55.1	58.8	62.9	52.6	53.7	57.4	61.4	49.9	51.0	54.5	58.3	46.3	47.3	50.5	54.0
	S/T	0.95	0.89	0.73	0.54	0.98	0.92	0.75	0.56	1.00	0.95	0.77	0.58	1.00	0.98	0.80	0.60	1.00	0.99	0.81	0.60
	AMPS	28.5	29.1	30.0	30.9	30.7	31.3	32.2	33.3	32.5	33.2	34.2	35.4	34.4	35.1	36.2	37.4	36.2	37.0	38.1	39.4
	HI PR	200	216	228	238	228	245	259	270	260	279	295	308	292	314	332	346	323	347	367	382
	LO PR	64	68	74	79	66	71	77	82	70	74	81	86	73	78	85	90	76	80	88	94
85	MBh	56.2	57.3	60.0	64.0	54.8	55.9	58.5	62.5	53.5	54.5	57.1	60.9	50.8	51.8	54.3	57.9	47.1	48.0	50.3	53.6
	S/T	1.00	0.96	0.87	0.71	1.00	0.99	0.89	0.72	1.00	1.00	0.92	0.75	1.00	1.00	0.96	0.78	1.00	1.00	0.96	0.78
	AMPS	28.7	29.4	30.2	31.2	30.9	31.6	32.5	33.6	32.8	33.5	34.5	35.6	34.6	35.4	36.5	37.7	36.5	37.3	38.4	39.8
	HI PR	202	218	230	240	230	248	262	273	262	282	298	311	295	317	335	350	326	351	370	386
	LO PR	65	69	75	80	67	71	78	83	70	75	82	87	74	79	86	91	76	81	89	94

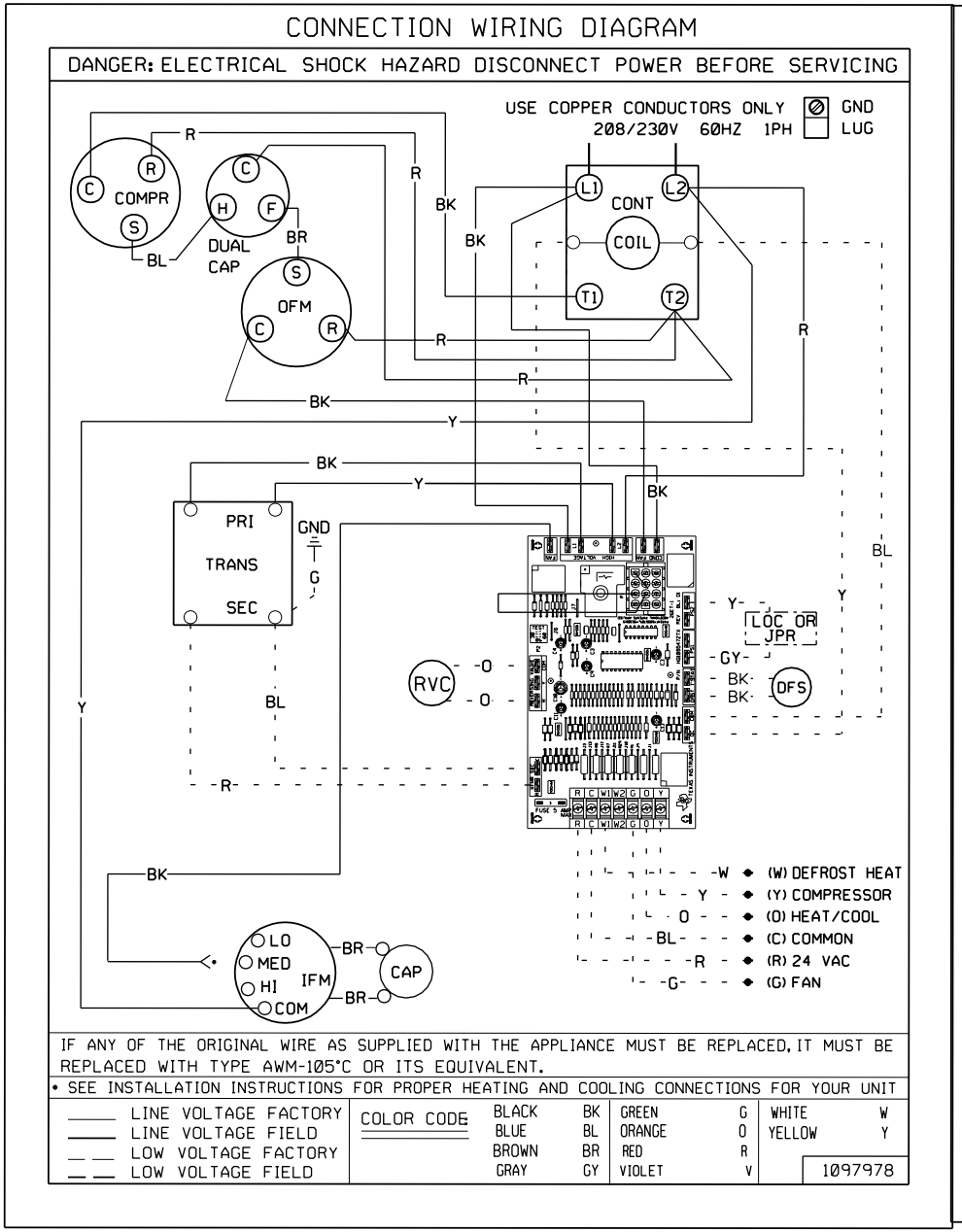
Heating IDB		Outdoor Ambient Temperature - Degrees F. Dry Bulb																	
		65	60	55	50	47	45	40	35	30	25	20	17	15	10	5	0	-5	-10
70	MBh	79.1	74.6	69.6	65.0	62.1	60.2	55.4	50.8	43.3	38.7	34.2	31.4	30.2	27.1	24.1	21.0	17.9	14.7
	T/R	45.8	43.2	40.3	37.6	35.9	34.8	32.1	29.4	25.1	22.4	19.8	18.2	17.5	15.7	13.9	12.1	10.4	8.5
	KW	6.12	6.01	5.89	5.78	5.71	5.66	5.55	5.44	5.19	5.07	4.96	4.90	4.86	4.74	4.64	4.53	4.42	4.31
	AMPS	36.8	34.3	32.4	30.7	29.7	29.2	27.8	26.5	25.6	24.6	23.6	23.1	22.9	21.9	20.7	19.7	18.5	17.1
	COP	3.78	3.64	3.46	3.29	3.18	3.11	2.92	2.73	2.44	2.24	2.01	1.88	1.82	1.67	1.52	1.36	1.19	1.00
	EER	12.9	12.4	11.8	11.3	10.9	10.6	10.0	9.3	8.4	7.6	6.9	6.4	6.2	5.7	5.2	4.6	4.1	3.4
	HI PR	259	248	239	228	223	219	210	202	193	185	177	173	170	163	157	151	145	140
	LO PR	65	60	57	52	49	47	43	39	35	31	27	25	25	21	18	15	13	10

Air Delivery in CFM - Dry Coil
(Add .08 static W/Internal Filters - Substract 25 CFM for Wet Coil)

230 Volt	External Static Pressure (Inch Water Column))					
Motor Speed	0.10	0.20	0.30	0.40	.50	.60
Hi	2147	2065	1993	1929	1860	1787
MD HI	2075	2020	1966	1901	1832	1757
MD LO	1997	1940	1875	1815	1746	1677
LO	1914	1853	1807	1747	1683	1616

1097639
7-29-98

4 & 5 TON MODELS



2 THRU 3-1/2 TON MODELS