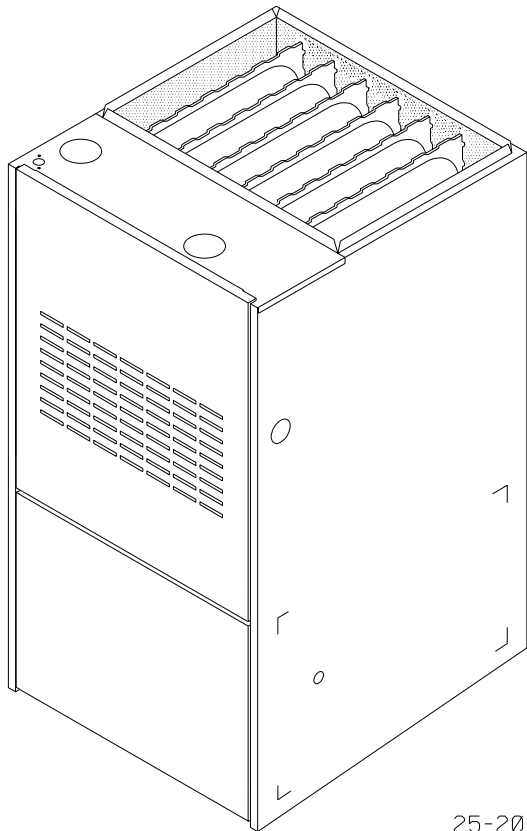


Technical Support Manual



25-20-66

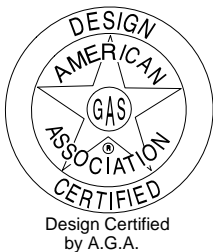
Models

NTGM050EFA3
NTGM075EGA3
NTGM100EHA3
NTGM125EKA3

GNK050N12A3
GNK075N14A3
GNK100N16A3
GNK125N20A3

Manufactured by:
International Comfort Products Corporation (USA)
Lewisburg, TN USA 37091

Condensing Gas Furnaces



Save This Manual For Future Reference

THIS DATA IS SUBJECT TO CHANGE WITHOUT NOTICE

Manufacturers Number (Mfr No -See Rating Plate)				NTGM050EF/GNK050N12A							
Specifications				Circulation Air Blower Data							
GENERAL	Gas Type	Nat	LP	Type & Size	10-8	Filt Type	Washable				
	Input (Btuh) Std/Alt.	50,000	50,000					Motor Amps/RPM	4.6/1050	Filt Size (")	16x25x1
	Output (Btuh) Std/Alt.	45,500	45,500					Motor Type/ H.P.	PSC/1/3	Min. Cool	
	Temp. Rise (°F)	40-70	40-70	Cap. MFD/Volts	5/370	Cap. (Tons)	1.5				
	Electrical (Volts/Hz/FLA)	115/60/5.3	115/60/5.3			Max. Cool					
	Transformer Size (VA)	40	40			Cap. (Tons)	3				
	T'stat Heat Anticipator	.30	.30								
GAS & IGNITION	Gas Valve	HW SV9500	HW SV9500	Air Delivery in Cubic Feet per Minute (C.F.M.) (Furnace Rated @0.5" WC ESP)							
	Regulation Type	SNAP	SNAP								
	Manifold Press. (Inch's WC)	3.5	10.0								
	Std. Main Orifices (No/Size)	2/#42	2/#54								
	Pilot Orifice Size	.018	.011								
	Ignition Type/Series	HW HSP	HW HSP								
	Lock-Out Time	---	---								
COMBUSTION	Flue Outlet Size (Inches)	2	2	Air Delivery in Liters Per Second (L/S) (Furnace Rated @0.5" WC ESP)							
	Std. Outlet Temp (°F)	<140	<140								
	Comb. Blower (MFD/Volts)	4/250	4/250								
	Std. Pressures (Inch's of WC)	@Blower	@Burner Box					Differential			
	5' No Elbows	-2.30	-.10								
	40' +5-90° DWV Elbows	-2.20	-.20								
LIMITS & CONTROLS	Rollout Switch	250	250	External Static Pressure Inches of W.C.							
	Limit Control Setting (°F)	160	160								
	Auxiliary Limit (°F)	130	130								
	Fan Control (Type)	HW ST9120	HW ST9120								
	Fan Control	On	60								
		Off	60,90,120,150					60,90,120,150			
	Std. Pressure Sw. (Part No)	1010895	1010895								
	Press Differential (Close)	1.62	1.62								
	Press Differential (Open)	1.38	1.38								
	High Alt. Press. Sw (Part No)	1008817	1008817								
	Press Differential (Close)	1.40	1.40								
	Press Differential (Open)	1.18	1.18								

THIS DATA IS SUBJECT TO CHANGE WITHOUT NOTICE

Manufacturers Number (Mfr No -See Rating Plate)				NTGM075EG/GNK075N14A							
Specifications				Circulation Air Blower Data							
GENERAL	Gas Type	Nat	LP	Type & Size	10-8	Filt Type	Washable				
	Input (Btuh) Std/Alt.	75,000	75,000					Motor Amps/RPM	6.8/1050	Filt Size (")	16x25x1
	Output (Btuh) Std/Alt.	67,500	67,500					Motor Type/ H.P.	PSC/1/2	Min. Cool	
	Temp. Rise (°F)	40-70	40-70	Cap. MFD/Volts	7.5/370	Cap. (Tons)	2				
	Electrical (Volts/Hz/FLA)	115/60/7.5	115/60/7.5			Max. Cool					
	Transformer Size (VA)	40	40			Cap. (Tons)	3.5				
	T'stat Heat Anticipator	.30	.30								
GAS & IGNITION	Gas Valve	HW SV9500	HW SV9500	Air Delivery in Cubic Feet per Minute (C.F.M.) (Furnace Rated @0.5" WC ESP)							
	Regulation Type	SNAP	SNAP								
	Manifold Press. (Inch's WC)	3.5	10.0								
	Std. Main Orifices (No/Size)	3/#42	3/#54								
	Pilot Orifice Size	.018	.011								
	Ignition Type/Series	HW HSP	HW HSP								
	Lock-Out Time	---	---								
COMBUSTION	Flue Outlet Size (Inches)	2,2 ¹ / ₂ ,3	2,2 ¹ / ₂ ,3	Air Delivery in Liters Per Second (L/S) (Furnace Rated @0.5" WC ESP)							
	Std. Outlet Temp (°F)	<140	<140								
	Comb. Blower (MFD/Volts)	4/250	4/250								
	Std. Pressures (Inch's of WC)	@Blower	@Burner Box					Differential			
	5' No Elbows	-2.30	-.10								
	40' +5-90° DWV Elbows	-2.05	-.15								
LIMITS & CONTROLS	Rollout Switch	200	200	External Static Pressure Inches of W.C.							
	Limit Control Setting (°F)	190	190								
	Auxiliary Limit (°F)	130	130								
	Fan Control (Type)	HW ST9120	HW ST9120								
	Fan Control	On	60								
		Off	60,90,120,150					60,90,120,150			
	Std. Pressure Sw. (Part No)	1010895	1010895								
	Press Differential (Close)	1.62	1.62								
	Press Differential (Open)	1.38	1.38								
	High Alt. Press. Sw (Part No)	1008817	1008817								
	Press Differential (Close)	1.40	1.40								
	Press Differential (Open)	1.18	1.18								

THIS DATA IS SUBJECT TO CHANGE WITHOUT NOTICE

Manufacturers Number (Mfr No -See Rating Plate)				NTGM100EH/GNK100N16A																																													
Specifications				Circulation Air Blower Data																																													
GENERAL	Gas Type	Nat	LP	Type & Size	10-10	Filt Type	Washable																																										
	Input (Btuh) Std/Alt.	100,000	100,000		Motor Amps/RPM			8.5/1050	Filt Size (")	16x25x1																																							
	Output (Btuh) Std/Alt.	90,000	90,000		Motor Type/ H.P.			PSC/1/2	Min. Cool																																								
	Temp. Rise (°F)	40-70	40-70	Cap. MFD/Volts	10/370	Cap. (Tons)	2																																										
	Electrical (Volts/Hz/FLA)	115/60/9.2	115/60/9.2			Max. Cool																																											
	Transformer Size (VA)	40	40			Cap. (Tons)	4																																										
	T'stat Heat Anticipator	.30	.30	Air Delivery in Cubic Feet per Minute (C.F.M.) (Furnace Rated @0.5" WC ESP)																																													
GAS & IGNITION	Gas Valve	HW SV9500	HW SV9500																																														
	Regulation Type	SNAP	SNAP																																														
	Manifold Press. (Inch's WC)	3.5	10.0																																														
	Std. Main Orifices (No/Size)	4/#42	4/#54					External Static Pressure Inches of W.C.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>TAP</th> <th>LOW</th> <th>MED L</th> <th>MED H</th> <th>HIGH</th> </tr> </thead> <tbody> <tr><td>.10</td><td>954</td><td>1312</td><td>1698</td><td>1925</td></tr> <tr><td>.20</td><td>950</td><td>1292</td><td>1645</td><td>1853</td></tr> <tr><td>.30</td><td>946</td><td>1265</td><td>1596</td><td>1780</td></tr> <tr><td>.40</td><td>915</td><td>1231</td><td>1530</td><td>1708</td></tr> <tr><td>.50</td><td>878</td><td>1175</td><td>1455</td><td>1638</td></tr> <tr><td>.60</td><td>830</td><td>1118</td><td>1362</td><td>1546</td></tr> <tr><td>.70</td><td>778</td><td>1020</td><td>1241</td><td>1435</td></tr> </tbody> </table>					TAP	LOW	MED L	MED H	HIGH	.10	954	1312	1698	1925	.20	950	1292	1645	1853	.30	946	1265	1596	1780	.40	915	1231	1530	1708	.50	878	1175	1455	1638	.60	830	1118	1362	1546	.70
TAP	LOW	MED L	MED H	HIGH																																													
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	Pilot Orifice Size	.018	.011																																														
	Ignition Type/Series	HW HSP	HW HSP																																														
	Lock-Out Time	---	---																																														
COMBUSTION	Flue Outlet Size (Inches)	2,2 ¹ / ₂ ,3	2,2 ¹ / ₂ ,3																																														
	Std. Outlet Temp (°F)	<140	<140																																														
	Comb. Blower (MFD/Volts)	4/250	4/250																																														
	Std. Pressures (Inch's of WC)	@Blower	@Burner Box	Differential																																													
	5' No Elbows	-2.40	-.10																																														
	40' +5-90° DWV Elbows	-1.98	-20																																														
LIMITS & CONTROLS	Rollout Switch	200	200																																														
	Limit Control Setting (°F)	180	180																																														
	Auxiliary Limit (°F)	130	130																																														
	Fan Control (Type)	HW ST9120	HW ST9120																																														
	Fan Control	On	60	60																																													
	(Timed-Secs)	Off	60,90,120,150	60,90,120,150																																													
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Manufacturers Number (Mfr No -See Rating Plate)				NTGM125EK/GNK125N20A																																													
Specifications				Circulation Air Blower Data																																													
GENERAL	Gas Type	Nat	LP	Type & Size	11.8-10.6	Filt Type	Washable																																										
	Input (Btuh) Std/Alt.	125,000	125,000		Motor Amps/RPM			9.8/900	Filt Size (")	(2)16x25																																							
	Output (Btuh) Std/Alt.	113,125	113,125		Motor Type/ H.P.			PSC/3/4	Min. Cool																																								
	Temp. Rise (°F)	45-75	45-75	Cap. MFD/Volts	10/370	Cap. (Tons)	3.5																																										
	Electrical (Volts/Hz/FLA)	115/60/10.5	115/60/12.0			Max. Cool																																											
	Transformer Size (VA)	40	40			Cap. (Tons)	5																																										
	T'stat Heat Anticipator	.30	.30	Air Delivery in Cubic Feet per Minute (C.F.M.) (Furnace Rated @0.5" WC ESP)																																													
GAS & IGNITION	Gas Valve	HW SV9500	HW SV9500																																														
	Regulation Type	SNAP	SNAP																																														
	Manifold Press. (Inch's WC)	3.5	10.0																																														
	Std. Main Orifices (No/Size)	5/#42	5/#54					External Static Pressure Inches of W.C.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>TAP</th> <th>LOW</th> <th>MED L</th> <th>MED H</th> <th>HIGH</th> </tr> </thead> <tbody> <tr><td>.10</td><td>1463</td><td>1650</td><td>1879</td><td>2214</td></tr> <tr><td>.20</td><td>1429</td><td>1635</td><td>1859</td><td>2154</td></tr> <tr><td>.30</td><td>1417</td><td>1614</td><td>1838</td><td>2152</td></tr> <tr><td>.40</td><td>1389</td><td>1579</td><td>1806</td><td>2106</td></tr> <tr><td>.50</td><td>1364</td><td>1556</td><td>1773</td><td>2049</td></tr> <tr><td>.60</td><td>1339</td><td>1513</td><td>1725</td><td>1981</td></tr> <tr><td>.70</td><td>1299</td><td>1470</td><td>1668</td><td>1903</td></tr> </tbody> </table>					TAP	LOW	MED L	MED H	HIGH	.10	1463	1650	1879	2214	.20	1429	1635	1859	2154	.30	1417	1614	1838	2152	.40	1389	1579	1806	2106	.50	1364	1556	1773	2049	.60	1339	1513	1725	1981	.70
TAP	LOW	MED L	MED H	HIGH																																													
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	Pilot Orifice Size	.018	.011																																														
	Ignition Type/Series	HSP	HSP																																														
	Lock-Out Time	---	---																																														
COMBUSTION	Flue Outlet Size (Inches)	3	3																																														
	Std. Outlet Temp (°F)	<140	<140																																														
	Comb. Blower (MFD/Volts)	4/250	4/250																																														
	Std. Pressures (Inch's of WC)	@Blower	@Burner Box	Differential																																													
	5' No Elbows	-2.40	-.17																																														
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LIMITS & CONTROLS	Rollout Switch	200	200																																														
	Limit Control Setting (°F)	190	190																																														
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Replacement Parts - NTGM/GNK

Models - NTGM050EFA3, NTGM075EGA3, NTGM100EHA3, NTGM125EKA3 (Natural Gas)
 GNK050N12A3, GNK075N14A3, GNK100N16A3, GNK125N20A3 (Natural Gas)

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

Key No.	Description Functional	Part Number	050	075	100	125
1	Heat Exchanger	1008876	1	-	-	-
		1008877	-	1	-	-
		1008878	-	-	1	-
		1008879	-	-	-	1
2	Coil Condenser	1010495	1	1	-	-
		1010496	-	-	1	-
		1010497	-	-	-	1
3	Wheel Blower	600587	1	1	-	-
		601210	-	-	1	-
		1011420	-	-	-	1
4	Motor Blower	1009054	1	-	-	-
		1009053	-	1	-	-
		1009052	-	-	1	-
		1011404	-	-	-	1
5	Mount Motor Kit	609227	1	1	1	-
		522020024	-	-	-	1
6	Capacitor 5/370V 10/370V 7.5/370V	1094954	1	-	-	-
		1094956	-	-	1	1
		1094239	-	1	-	-
7	Control, Fan Timer	1009838	1	1	1	1
8	Transformer	1011626	1	1	1	1
9	Switch Door Interlock	1010886	1	1	1	1
10	Switch Pressure	1010895	1	1	1	1
11	Blower Exhaust	1011412	1	1	1	1
12	Restrictor Exh Blwr	1008696	1	1	-	-
		1009386	-	-	1	-
		1008699	-	-	-	1
13	O Ring (Exh Blwr)	1009035	1	1	1	1
14	Washer Exh Blwr	1009037	2	2	2	2
15	Transition Asy	1010537	1	1	1	1
16	O Ring (Header Box)	1009036	1	1	1	1
17	Pressure Tap	1005606	1	1	1	1
18	Switch Limit Rollout	1005548	1	-	-	-
		1010575	-	1	1	1
19	Valve Gas Nat & LP	1011024	1	1	1	1
20	Manifold Gas	1011645	1	-	-	-
		1011646	-	1	-	-
		1011647	-	-	1	-
		1011648	-	-	-	1
21	Tube Pilot	64930	1	1	1	1
22	Orifice Burner Nat #42 LP #54 High Altitude Orifice Nat #44 LP #55 LP #56	1011351	2	3	4	5
		*1011376	2	3	4	5
		1011352	2	3	4	5
		*1011354	2	3	4	5
		*1011355	2	3	4	5
23	Igniter/Sensor with Clip	1009524	1	1	1	1
24	Pilot Burner Assembly Nat & LP	1149856	1	1	1	1
25	Orifice Pilot Nat .020 LP .011	1160403	1	1	1	1
		1009136	-	-	-	-
26	Burner Asy	1008723	1	-	-	-
		1008724	-	1	-	-
		1008725	-	-	1	-
		1008726	-	-	-	1
27	Switch Limit (Main)	1010647	1	-	-	-
		34332903	-	1	-	1
		1320547	-	-	1	-
28	Tube Sensor	1006298	1	1	1	1
29	Switch, Limit (Aux.)	1000735	1	1	1	1
30	Filter 16" x 25" x 1/2"	1010365	1	1	1	2

Key No.	Description Non-Functional	Part Number	050	075	100	125
A	Panel Top	1010607	1	1	-	-
		1010608	-	-	1	-
		1010609	-	-	-	1
B	Box Field Connect	1010359	1	1	1	1
C	Cover Field Connect	1010360	1	1	1	1
D	Casing	1011649	1	1	-	-
		1011650	-	-	1	-
		1011651	-	-	-	1
E	Baffle Circ Air	707010031	2	2	2	2
F	Bracket Coil	1008743	1	1	-	-
		1008745	-	-	1	-
		1008747	-	-	-	1
G	Bracket Mount Coil(RH)	1011446	1	1	1	1
H	Bracket Mount Coil(LH)	1011445	1	1	1	1
J	Rail Blower Slide	57059	2	2	2	2
K	Casing Base	1010113	1	1	-	-
L	Blower Partition	1010114	-	-	1	-
		1010115	-	-	-	1
		1010815	1	1	-	-
M	Panel Cutoff Blwr	1010816	-	-	1	-
		1010817	-	-	-	1
		721020013	1	1	-	-
N	Housing Blower	721020008	-	-	1	1
		1011680	1	1	-	-
O	Bracket Ctrl Board	1011681	-	-	1	-
		1010481	-	-	-	1
		1011178	1	1	1	1
Q	Hanger Blower	1010690	2	2	2	2
R	Partition Frit Bot	1009489	1	-	-	-
		1009490	-	1	-	-
		1009491	-	-	1	-
		1009492	-	-	-	1
S	Partition Frit Top	1009485	1	-	-	-
		1009486	-	1	-	-
		1009487	-	-	1	-
		1009488	-	-	-	1
T	Gasket Collector Box	1008676	1	1	-	-
		1008677	-	-	1	-
		1008678	-	-	-	1
U	Collector Box	1008670	1	1	-	-
		1008671	-	-	1	-
		1008672	-	-	-	1
		1008682	1	1	-	-
V	Board Insul Coll Box	1008683	-	-	1	-
		1008684	-	-	-	1
		1068036	1	1	1	1
W	Cover Diaphragm	1068036	1	1	1	1
X	Diaphragm Silicone	1008763	1	1	1	1
Y	Bracket Pilot	1010901	1	1	1	1
Z	Gasket Limit Switch	1008778	1	1	1	1
AA	Door Louvered (NTGM ONLY)	1010184	1	1	-	-
		1010185	-	-	1	-
		1010186	-	-	-	1
		1010168	1	1	-	-
BB	Door Louvered (GNK ONLY)	1010169	-	-	1	-
		1010170	-	-	-	1
CC	Door Blower	1010190	1	1	-	-
		1010192	-	-	1	-
		1010257	-	-	-	1
DD	Viewport Cover Lexan	2480678	1	1	1	1
	Gasket Viewport	1093666	1	1	1	1

* Only used when furnace has been converted to LP Gas

Replacement Parts - NTGM

Models - NTGM050EFA3, NTGM075EGA3, NTGM100EHA3, NTGM125EKA3 (Natural Gas)
 GNK050N12A3, GNK075N14A3, GNK100N16A3, GNK125N20A3 (Natural Gas)

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

Key No.	Description Non-Functional	Part Number	050	075	100	125
EE	Cover Burner Box	1008748	1	1	-	-
		1008749	-	-	1	-
		1008750	-	-	-	1
FF	Bracket Burner Box	1008722	2	2	2	2
GG	Baffle Burner Box	1008709	1	1	-	-
		1008710	-	-	1	-
		1008711	-	-	-	1
HH	Burner Box Asy	1010381	1	1	-	-
		1010382	-	-	1	-
		1010383	-	-	-	1
JJ	Gasket Air Intake	1008746	1	1	1	1
KK	Coupling Air Intake	1008744	1	1	1	1
LL	Gasket Burner Box	1008759	1	1	-	-
		1008760	-	-	1	-
		1008761	-	-	-	1
MM	Door Handle	1010073	1	1	1	1
NN	Gasket, Heat Exchanger	2480904	2	-	-	-
		2480905	-	2	-	-
		2480906	-	-	2	-
		2480907	-	-	-	2
OO	Seal, Burner Box Sides	1008755	2	2	2	2
PP	Seal, Burner Box	1008762	2	2	-	-
		1009243	-	-	2	-
		1009244	-	-	-	2
QQ	Gasket, Header Box	1010510	1	1	1	1
RR	Support, Heat Exchanger	1010092	1	-	-	-
		1010093	-	1	-	-
		1010098	-	-	1	-
		1010099	-	-	-	1
SS	Clamp, Capacitor	1095020	1	1	1	1
TT	Wrapper Filter Rack	741010039	1	1	1	2
UU	Front Filter Rack	741020001	1	1	1	2
VV	Cover Filter Plastic	2791043	1	1	1	2
WW	Clip Filter	1008482	3	3	3	3
)	PART NOT ILLUSTRATED					
)	Wire Harness	1011068	1	1	1	1
)	Pin Plastic Clip	2344276	3	3	3	3
)	Flexible Neoprene Coupling	1002522	2	2	2	2
)	Clamp Hose	1002793	4	4	4	4
)	Screen 2"	1007339	2	2	2	2
)	Screen 3"	1007340	2	2	2	2
)	Elbow Union	2971503	1	1	1	1
)	Manual Tech	440 03 1003 00	1	1	1	1
)	Manual Install	440 01 1001 03	1	1	1	1
)	Manual Homeowners	441 02 1001 02	1	1	1	1
)	Flue Pipe, ABS 2" x 22"	1009566	1	1	1	1
)	Grommet, Vinyl	1009535	1	1	1	1
)	Bushing, Strm Rlf	1945287	1	1	1	1

Gas Conversion Kits - All models

Nat to LP NAHF002LP *1009509
 LP to Nat *1009510

*Must be ordered from Service Parts