GE APPLIANCES

Product Specifications

NF97(U,D)***T**R

97% Two Stage Constant Torque Motor Gas Furnace

Contact GE Appliances at:

Homeowner: **GEAppliances.com**
HVAC Pro: **GEAppliancesAirandWater.com**
or
866.814.3633

Split System USAC and USHP matches:
AHRIDirectory.org

READ CAREFULLY.
KEEP THESE INSTRUCTIONS.

31-5001160 Rev. 0 11-25

NF97(U,D)T
PRODUCT SPECIFICATIONS

CONFIGURATIONS
- Upflow / Horizontal
- Downflow

HEAT EXCHANGER DESIGN
- Aluminized steel primary heat exchanger with crimped non-welded construction
- AL 29-4C Stainless steel secondary heat exchanger

BURNER
- Aluminized steel inshot burners for smooth ignition
- Isolated burner enclosure for quiet operation

CABINET DESIGN
- Compact 33” height
- Standardized widths for easy coil fit

AIR DELIVERY SYSTEM
- Constant torque ECM
- Efficient blower motor
- Easily removable slide out blower design
- Dynamically balanced blower wheel with resilient motor mounts for smooth and quiet operation

CONTROLS
- Two stage gas valve
- Integrated ignition and fan control
- Integrated Refrigerant Leak Detection with connections for Leak Detection Sensors (purchased separately)
- Control retains last ten (10) fault codes with push button memory recall and 7 segment LED display, regardless of power interruption
- Hot surface ignition system uses silicon nitride ignitor
- Control features 120 volt electronic air cleaner and humidifier terminals
- Control circuit is fuse protected
- Color coded control wiring
- Compatible with single or two stage thermostats for heating Two stage thermostat is recommended when installed with two stage cooling unit.

VENTING
- 2-speed induced draft motor with stainless steel shaft, steel ball bearings, and fan cooled for long life
- Vent materials for Canadian applications must comply with ULC S636
- Certified for direct vent and indirect vent (1 and 2 pipe) applications

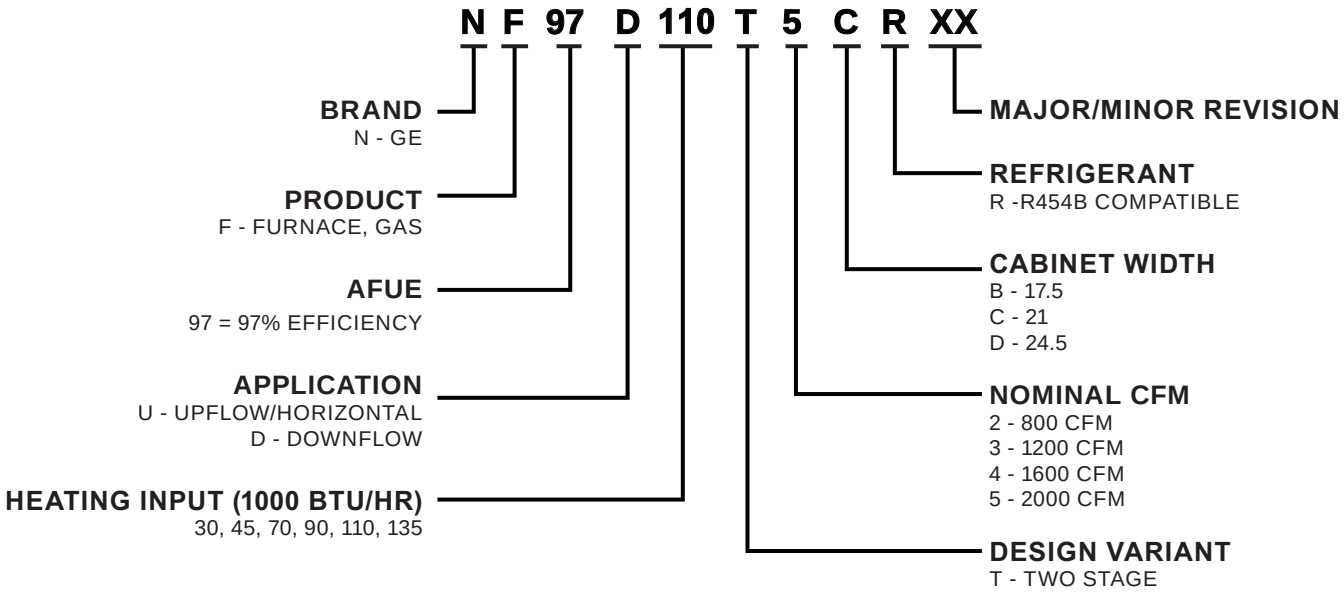
INSTALLATION FEATURES
- Left or right gas or electric entry
- Zero step upflow to horizontal conversion
- Removable floor base (upflow / horizontal units) for bottom return air
- All models comply with California’s South Coast Air Quality Management district Low NOx requirements

WARRANTY
See warranty document for details.

California Only

These furnaces do not meet the South Coast Air Quality Management District (SCAQMD) Rule 1111 and San Joaquin Valley Air Pollution Control District (SJVAPCD) Rule 4905 NOx emission limit (14 NG/J) and cannot be installed within the SCAQMD and SJVAPCD areas. All models meet the California Nitrogen Oxides Standard NOx limit of 40 Ng/J.

MODEL NUMBER GUIDE



PHYSICAL AND ELECTRICAL DATA

	Model	1st Stage		2nd Stage		AFUE (ICS)	Nominal Cooling Capacity (tons)	Gas Inlet (in.)	Volts/Hz/ Phase	Min. Time Delay Breaker or Fuse	Nominal Full Load Amps	Trans (VA)	Approx Shipping Weight (lbs)
		Input (Btuh)	Output (Btuh)	Input (Btuh)	Output (Btuh)								
Upflow / Horizontal	NF97U030T2BR	19,500	19,000	30,000	29,000	97%	2	1/2	120-60-1	15	6.4	40	117
	NF97U045T3BR	29,000	28,000	44,000	43,000	97%	3	1/2	120-60-1	15	6.4	40	120
	NF97U070T3BR	43,000	42,000	66,000	65,000	97%	3	1/2	120-60-1	15	6.4	40	128
	NF97U090T4CR	57,000	56,000	88,000	86,000	97%	4	1/2	120-60-1	15	9.3	40	146
	NF97U110T5CR	72,000	71,000	110,000	108,000	97%	5	1/2	120-60-1	20	12.3	40	157
	NF97U135T5DR	86,000	84,000	132,000	128,000	97%	5	1/2	120-60-1	20	12.3	40	179
Downflow	NF97D045T3BR	29,000	28,000	44,000	43,000	97%	3	1/2	120-60-1	15	6.4	40	123
	NF97D070T4BR	43,000	42,000	66,000	65,000	97%	4	1/2	120-60-1	15	6.4	40	137
	NF97D090T4CR	57,000	56,000	88,000	86,000	97%	5	1/2	120-60-1	15	9.3	40	147
	NF97D110T5CR	72,000	70,000	110,000	108,000	97%	5	1/2	120-60-1	20	12.3	40	166

Note: For vent length and clearances to combustibles, please reference installation instructions.

FILTER REQUIREMENT DATA

Airflow Descriptor	Disposable Filters	Cleanable Filters
	Minimum Area (sq. in.)	Minimum Area (sq. in.)
2	384	192
3	576	288
4	768	384
5	960	480

1. The Airflow Descriptor is the two digits following the “B”, “C”, or “D” in the model number; e.g. “5” is the Airflow Descriptor.
2. Areas shown for permanent filters are based on filters rated at 600 feet per minute face velocity.

BLOWER PERFORMANCE DATA UPFLOW / HORIZONTAL

NF97U030T2BR PERFORMANCE (Less Filter)

External Static Pressure in. w.c.	Rise Range °F		Air Volume / Watts at Various Blower Speeds									
	1st Stage	2nd Stage	High		Medium-High		Medium		Medium-Low		Low	
			cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.10	15-45	30-60	1037	156	964	130	863	101	755	77	742	73
0.20			1001	164	927	137	824	111	689	82	535	55
0.30			968	177	891	147	776	117	634	88	470	59
0.40			937	185	849	157	743	125	596	98	410	66
0.50			896	196	806	167	703	134	544	104	344	72
0.60			865	207	768	173	665	145	502	109	305	79
0.70			835	213	736	184	619	151	459	117	255	84
0.80			787	224	689	193	575	159	412	123	230	88
0.90			743	231	659	199	533	166	365	130	n/a	n/a
1.00			664	221	617	207	500	173	n/a	n/a	n/a	n/a

NF97U045T3BR PERFORMANCE (Less Filter)

External Static Pressure in. w.c.	Rise Range °F		Air Volume / Watts at Various Blower Speeds									
	1st Stage	2nd Stage	High		Medium-High		Medium		Medium-Low		Low	
			cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.10	20-50	30-60	1395	348	1246	249	1139	198	911	111	847	96
0.20			1375	358	1206	258	1105	203	876	120	809	103
0.30			1348	367	1184	267	1079	215	839	122	768	109
0.40			1318	380	1160	278	1046	221	798	132	733	115
0.50			1294	386	1125	286	1014	230	755	139	694	124
0.60			1265	398	1097	296	987	239	710	145	652	132
0.70			1216	393	1066	304	957	247	665	156	606	136
0.80			1147	374	1043	314	923	256	624	160	569	145
0.90			1062	350	1010	320	889	267	589	166	532	151
1.00			941	314	917	301	846	271	556	177	486	156

NF97U070T3BR PERFORMANCE (Less Filter)

External Static Pressure in. w.c.	Rise Range °F		Air Volume / Watts at Various Blower Speeds									
	1st Stage	2nd Stage	High		Medium-High		Medium		Medium-Low		Low	
			cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.10	25-55	35-65	1388	292	1244	221	1131	173	925	110	884	100
0.20			1359	302	1212	230	1096	182	886	116	843	107
0.30			1331	313	1182	238	1062	190	846	123	802	114
0.40			1301	323	1151	247	1028	198	805	130	759	120
0.50			1273	333	1121	256	996	206	764	137	717	127
0.60			1245	342	1090	265	961	215	720	145	670	134
0.70			1217	352	1059	274	928	223	671	151	616	140
0.80			1187	362	1026	283	892	231	623	157	566	146
0.90			1158	371	995	292	854	240	578	163	519	151
1.00			1128	381	962	302	814	248	532	169	464	156

BLOWER PERFORMANCE DATA UPFLOW / HORIZONTAL

NF97U090T4CR PERFORMANCE (Less Filter)

External Static Pressure in. w.c.	Rise Range °F		Air Volume / Watts at Various Blower Speeds									
	1st Stage	2nd Stage	High		Medium-High		Medium		Medium-Low		Low	
			cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.10	30-60	40-70	1714	401	1490	284	1373	217	1286	186	1165	143
0.20			1679	419	1476	292	1332	233	1250	199	1131	155
0.30			1650	435	1440	312	1305	247	1219	214	1083	168
0.40			1630	456	1403	327	1271	258	1178	222	1050	176
0.50			1601	469	1377	334	1227	270	1142	232	1006	188
0.60			1567	478	1347	346	1196	283	1110	245	968	197
0.70			1489	461	1313	361	1165	291	1068	257	930	207
0.80			1390	433	1275	372	1126	306	1035	268	894	217
0.90			1237	387	1218	373	1091	315	990	277	843	228
1.00			1115	354	1075	337	1043	324	951	287	807	235

NF97U110T5CR PERFORMANCE (Less Filter)

External Static Pressure in. w.g.	Rise Range °F		Air Volume / Watts at Different Blower Speeds **Bottom Return Air, Side Return Air with Optional Return Air Base, Return Air from Both Sides or Return Air from Bottom and One Side.**									
	1st Stage	2nd Stage	High		Med-High		Medium		Med-Low		Low	
			cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.10	35-65	40-70	2140	653	1877	449	1706	349	1616	292	1419	215
0.20			2102	669	1840	461	1670	362	1566	304	1388	223
030			2061	687	1799	477	1639	375	1518	317	1326	234
0.40			2031	702	1758	492	1590	387	1480	328	1275	244
0.50			1999	719	1721	507	1546	399	1427	341	1229	255
0.60			1960	735	1683	519	1505	413	1390	351	1179	266
0.70			1908	741	1637	534	1467	424	1351	361	1128	277
0.80			1840	721	1609	550	1423	438	1299	374	1088	284
0.90			1744	692	1569	561	1387	447	1257	386	1036	296
1.00			1651	655	1539	573	1347	461	1218	397	984	305

External Static Pressure in. w.g.	**Single Side Return Air** − Air volumes in **BOLD** require field fabricated transition to accommodate 20 x 25 x 1 in. air filter in order to maintain proper air velocity.									
	High		Med-High		Medium		Med-Low		Low	
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.10	**2101**	**650**	**1821**	**449**	1650	346	1558	288	1383	209
0.20	**2069**	**664**	1795	462	1621	357	1503	301	1331	217
030	**2036**	**681**	1746	479	1575	373	1466	312	1289	229
0.40	**1998**	**698**	1708	492	1538	383	1417	326	1235	241
0.50	**1970**	**717**	1676	509	1497	397	1377	340	1183	254
0.60	**1940**	**731**	1641	517	1460	408	1339	349	1152	262
0.70	**1890**	**740**	1609	533	1417	423	1293	362	1099	274
0.80	**1834**	**730**	1560	549	1375	437	1254	374	1047	286
0.90	1741	702	1532	561	1339	447	1219	384	1011	296
1.00	1645	665	1496	574	1298	460	1177	397	970	304

BLOWER PERFORMANCE DATA UPFLOW

NF97U135T5DR PERFORMANCE (Less Filter)

External Static Pressure in. w.g.	Rise Range °F		Air Volume / Watts at Different Blower Speeds									
			Bottom Return Air, Side Return Air with Optional Return Air Base, Return Air from Both Sides or Return Air from Bottom and One Side.									
	1st Stage	2nd Stage	High		Med-High		Medium		Med-Low		Low	
			cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.10	35-65	45-75	2300	922	2125	689	1948	508	1750	368	1576	287
0.20			2298	932	2111	703	1914	522	1706	385	1531	302
030			2252	960	2074	720	1880	537	1681	398	1489	310
0.40			2227	974	2050	737	1850	550	1629	412	1439	322
0.50			2188	971	2015	757	1809	570	1597	421	1387	334
0.60			2114	946	1984	770	1771	585	1553	439	1351	346
0.70			2048	911	1944	785	1730	600	1516	451	1312	356
0.80			1962	858	1893	797	1705	616	1485	462	1267	368
0.90			1857	806	1838	774	1665	628	1427	477	1209	382
1.00			1780	775	1754	739	1625	642	1387	488	1177	392

External Static Pressure in. w.g.	**Single Side Return Air** − Air volumes in **BOLD** require field fabricated transition to accommodate 20 x 25 x 1 in. air filter in order to maintain proper air velocity.									
	High		Med-High		Medium		Med-Low		Low	
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.10	**2274**	**936**	**2058**	**680**	1880	509	1690	366	1524	269
0.20	**2248**	**957**	**2030**	**695**	1852	523	1659	374	1488	282
030	**2214**	**970**	1997	712	1829	537	1621	394	1446	297
0.40	**2194**	**990**	1974	727	1799	554	1595	407	1407	308
0.50	**2153**	**994**	1947	745	1771	567	1562	418	1356	321
0.60	**2104**	**980**	1928	762	1742	583	1519	434	1322	333
0.70	**2044**	**949**	1897	778	1705	596	1474	447	1277	345
0.80	1962	907	1856	794	1671	616	1449	458	1230	356
0.90	1873	853	1809	793	1637	629	1402	473	1189	368
1.00	1756	801	1733	769	1594	643	1362	487	1148	381

BLOWER PERFORMANCE DATA DOWNFLOW

NF97D045T3BR PERFORMANCE (Less Filter)

External Static Pressure in. w.c.	Rise Range °F		Air Volume / Watts at Various Blower Speeds									
	1st Stage	2nd Stage	High		Medium-High		Medium		Medium-Low		Low	
			cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.10	15-45	30-60	1434	383	1275	277	1169	217	921	126	860	106
0.20			1401	395	1237	288	1140	227	879	134	817	115
0.30			1363	398	1211	297	1101	238	833	140	773	122
0.40			1300	383	1179	308	1070	243	798	151	733	131
0.50			1228	367	1151	316	1036	256	755	156	692	136
0.60			1146	343	1105	319	1005	263	710	163	645	144
0.70			1058	318	1038	309	971	272	672	170	598	154
0.80			930	286	942	284	909	272	614	179	557	158
0.90			807	251	811	251	799	251	569	184	518	163
1.00			645	222	669	224	630	216	532	189	473	169

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BLOWER PERFORMANCE DATA DOWNFLOW

NF97D070T4BR PERFORMANCE (Less Filter)

External Static Pressure in. w.c.	Rise Range °F		Air Volume / Watts at Various Blower Speeds									
	1st Stage	2nd Stage	High		Medium-High		Medium		Medium-Low		Low	
			cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.10	25-55	35-65	1709	485	1510	339	1336	240	1226	196	991	114
0.20			1675	501	1474	350	1294	249	1180	204	927	122
0.30			1638	513	1437	362	1244	261	1127	215	863	130
0.40			1601	529	1386	376	1187	270	1082	226	797	139
0.50			1563	541	1353	388	1139	282	1033	232	727	147
0.60			1511	539	1310	401	1100	293	979	245	661	155
0.70			1445	525	1272	410	1048	304	940	255	604	159
0.80			1339	499	1234	421	1013	313	862	264	531	174
0.90			1243	470	1161	424	952	326	811	272	481	182
1.00			1119	439	1092	414	907	330	763	281	435	192

NF97D090T4CR PERFORMANCE (Less Filter)

External Static Pressure in. w.c.	Rise Range °F		Air Volume / Watts at Various Blower Speeds									
	1st Stage	2nd Stage	High		Medium-High		Medium		Medium-Low		Low	
			cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.10	30-60	40-70	1750	446	1520	308	1389	240	1306	206	1179	158
0.20			1708	463	1487	323	1359	254	1265	217	1130	171
0.30			1685	477	1456	339	1326	264	1228	230	1090	182
0.40			1630	478	1421	350	1274	281	1192	239	1046	192
0.50			1558	462	1394	363	1246	291	1157	251	989	202
0.60			1458	432	1354	373	1209	300	1114	264	952	210
0.70			1371	408	1312	381	1177	314	1079	271	913	220
0.80			1231	368	1234	366	1138	324	1038	282	861	230
0.90			1118	343	1093	336	1093	327	997	291	843	237
1.00			1008	315	976	309	987	306	952	292	794	242

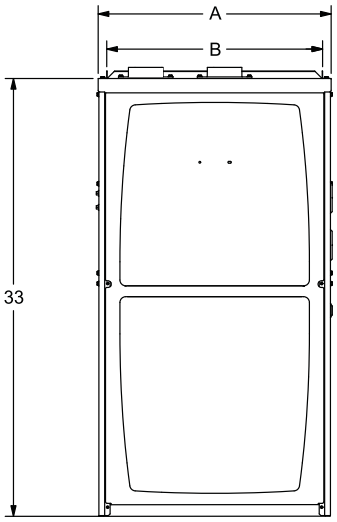
NF97D110T5CR PERFORMANCE (Less Filter)

External Static Pressure in. w.c.	Rise Range °F		Air Volume / Watts at Various Blower Speeds									
	1st Stage	2nd Stage	High		Medium-High		Medium		Medium-Low		Low	
			cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.10	35-65	45-75	2174	694	1920	474	1754	365	1631	312	1441	225
0.20			2136	706	1877	488	1709	379	1583	322	1387	237
0.30			2095	718	1832	500	1658	391	1530	332	1323	247
0.40			2058	734	1792	512	1617	403	1487	345	1276	256
0.50			2006	742	1745	525	1570	413	1433	354	1223	265
0.60			1940	727	1704	538	1523	426	1379	368	1168	276
0.70			1863	702	1665	550	1479	436	1340	377	1110	290
0.80			1765	669	1622	563	1439	445	1288	388	1061	293
0.90			1673	642	1582	572	1398	454	1254	397	1013	304
1.00			1559	599	1522	568	1354	466	1214	407	949	311

DIMENSIONS (IN.) UPFLOW/HORIZONTAL

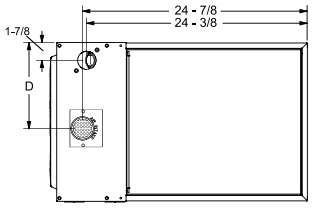
	Model	A	B	C	D
Upflow / Horizontal	NF97U030T2BR	17-1/2	16-3/8	16	7-5/8
	NF97U045T3BR	17-1/2	16-3/8	16	7-5/8
	NF97U070T3BR	17-1/2	16-3/8	16	7-5/8
	NF97U090T4CR	21	19-7/8	19-1/2	9-3/8
	NF97U110T5CR	21	19-7/8	19-1/2	9-3/8
	NF97U135T5DR	24-1/2	23-3/8	23	11-1/8
Downflow	NF97D045T3BR	17-1/2	16-3/8	16	15-1/2
	NF97D070T4BR	17-1/2	16-3/8	16	15-1/2
	NF97D090T4CR	21	19-7/8	19-1/2	19
	NF97D110T5CR	21	19-7/8	19-1/2	19

Front View

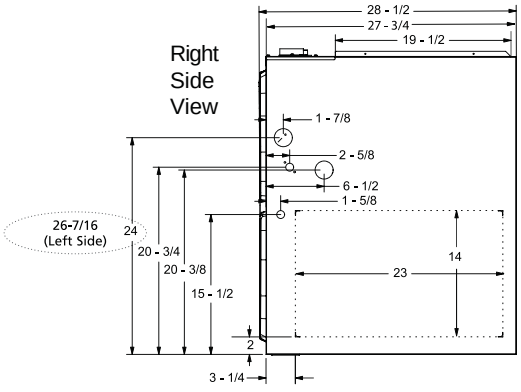


UPFLOW / HORIZONTAL

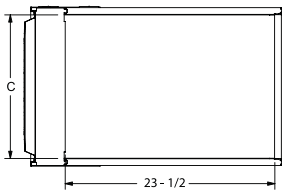
Top View



Right Side View

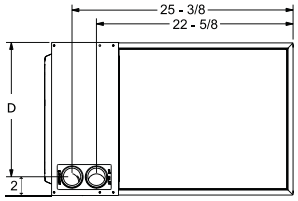


Bottom View

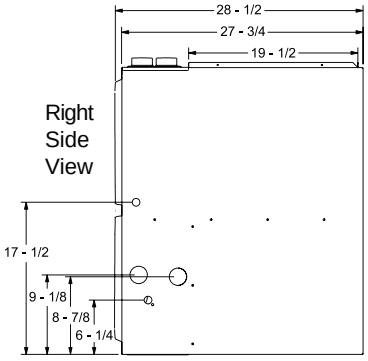


DOWNFLOW

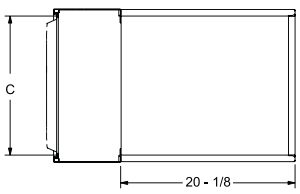
Top View



Right Side View



Bottom View



ACCESSORY LIST

Catalog Number	Description
Return Air Base	
Return Air Base 17.5 Inch	68W62
Return Air Base 21.0 Inch	68W63
Return Air Base 24.5 Inch	68W64
Downflow Combustible Flooring Base	
17.5" B Width	11M60
21.0" C Width	11M61
Concentric Vent Kit (90% Furnaces only) US Only	
1-1/2" Vent Version	71M80
2" Vent Version	69M29
3" Vent Version	60L46
Flush Mount Termination (90% Furnaces only)	
2" & 3.0" Vent - US Version	51W11
2" & 3.0" Vent - ULC S636 Compliant (Canada)	51W12
Transformer (75VA)	
Recommended when furnace is used with zoning or defrost thermostats and other 24V accessories requiring a higher VA rating	27J32
Circuit breaker (furnished) is wired in series	
Replaces the standard 40VA transformer	

For vent length and clearances to combustibles, please reference installation instructions

GAS HEAT ACCESSORIES

Model	Natural to LP/Propane	High Altitude Natural Burner Orifice Kit	High Altitude LP/ Propane Burner Orifice Kit	High Altitude Pressure Switch	
	0-7,500 ft. (0-2286)	7,501-10,000 ft. (2286-3048m)	7,501-10,000 ft. (2286-3048m)	4,501-7,500 ft. (1371-2286m)	7,501-10,000 ft. (2286-3048m)
030	17H64	14C92	17H65	14A47	14A50
045	11K48	*51W01	11K47	14A51	14A53
070				14A48	14A54
090				14A54	14A53
110				25B93	14A45
136	11K51	73W37	11K46	25B94	25B95

*Conversion requires installation of a gas valve manifold spring which is provided with the gas conversion kit.
Pressure switch factory set. No adjustment necessary. All models use the factory-installed pressure switch from 0-4500 ft (0-1370m).

HIGH ALTITUDE DERATE

NOTE: Units may be installed at altitudes up to 10,000 ft.
At altitudes above 4,501 ft. the unit must be derated to match the manifold pressure information shown below.
Units installed at altitudes of 4,501 to 10,000 ft. require a pressure switch change.
Units installed at altitudes of 7,501 to 10,000 ft. requires an orifice change.
See the Gas Heat Accessories table for ordering information.
NOTE: This is the only permissible derate for these units.
NOTE: In Canada, certification for installations at elevations over 4,500 ft. is the jurisdiction of local authorities.

Input	Gas	Manifold Pressure in. w.g.										Supply Line Pressure in. w.g. 0-10,000 ft.	
		0-4,500 ft.		4,501-5,500 ft.		5,501-6,500 ft.		6,501-7,501 ft.		7,501-10,000 ft.			
		Low Fire	High Fire	Low Fire	High Fire	Low Fire	High Fire	Low Fire	High Fire	Low Fire	High Fire	Min.	Max.
All Sizes	Natural	1.7	3.5	1.6	3.3	1.5	3.2	1.5	3.1	1.7	3.5	4.5	13.0
	LPG/Propane	4.5	10.0	4.2	9.4	4.0	9.1	3.9	8.9	4.5	10.0	11.0	13.0

REFRIGERANT DETECTION SYSTEM (RDS) COMPONENTS

Description	Order No.
Refrigerant Detection System (RDS) Coil Sensor Kit	27V53
Refrigerant Detection System (RDS) Coil Sensor Kit (downflow)	29Z35

GE APPLIANCES

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