



GE APPLIANCES

Product Specifications

NF80(U,D)*T**R**

80% Two-Stage Constant
Torque Gas Furnaces



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.**

NF80(U,D)***T**R

PRODUCT SPECIFICATIONS

CONFIGURATIONS

- Upflow / Horizontal
- Downflow



HEAT EXCHANGER DESIGN

- Aluminized steel primary heat exchanger with crimped non-welded construction

BURNERS

- Aluminized steel in shot burners for smooth ignition

CABINET CONSTRUCTION

- Compact 33" height
- Standardized widths for easy coil fit
- Heat exchanger compartment is insulated to increase efficiency and reduce sound levels
- Baked on prepainted steel cabinet finish

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 with Refrigerant Leak Detection capability (Sensors ordered separately).
- Self diagnostics saving last 10 fault codes 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

INSTALLATION FEATURES

- Left or right gas and electric entry
- Zero step horizontal conversion
- Removable floor base (upflow/horizontal units) for bottom return air

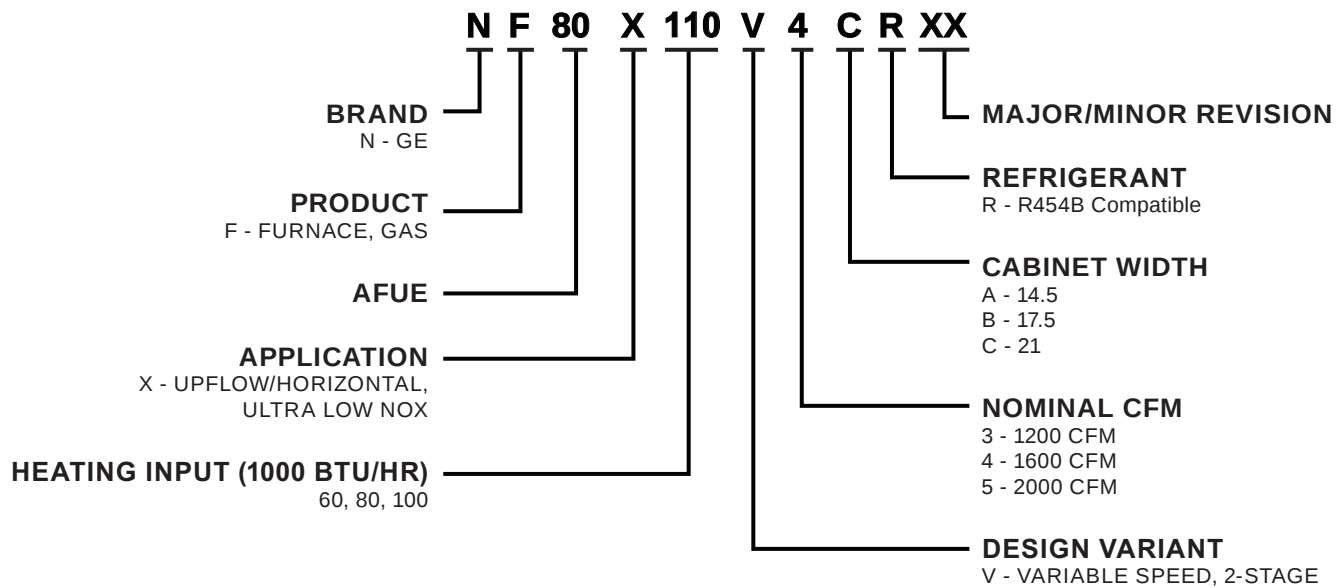
WARRANTY

See warranty document for details.

California Only

This furnace does not meet the 14 Ng/J NOx limit required by some Air Quality Management Districts in California.

MODEL NUMBER GUIDE



PHYSICAL AND ELECTRICAL DATA

Model		High Fire		Low Fire		AFUE (ICUS)	Nom. Cooling Capacity (tons)	Gas Inlet (in.)	Volts/ Hz/ Phase	Max. Overcurrent Protection	Nominal F.L.A.	Trans. (V.A.)	Motor Output (hp)	Approx. Weight (lbs.)
		Input (Btuh)	Output (Btuh)	Input (Btuh)	Output (Btuh)									
UPFLOW / HORIZONTAL	NF80U045T3AR	44,000	35,000	29,000	23,000	80.0	3	1/2	120-60-1	15	6.1	40	1/2	111
	NF80U070T3AR	66,000	53,000	43,000	35,000	80.0	3	1/2	120-60-1	15	6.1	40	1/2	121
	NF80U090T4BR	88,000	72,000	57,000	46,000	80.0	4	1/2	120-60-1	15	8.2	40	3/4	140
	NF80U110T5CR	110,000	87,000	72,000	58,000	80.0	5	1/2	120-60-1	15	10.0	40	1	156
DOWNFLOW	NF80D070T3AR	66,000	52,000	43,000	35,000	80.0	3	1/2	120-60-1	15	6.1	40	1/2	123
	NF80D090T4BR	88,000	69,000	57,000	46,000	80.0	4	1/2	120-60-1	15	8.2	40	3/4	142

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

Note: Filters and provisions for mounting are not furnished and must be field provided.

BLOWER PERFORMANCE DATA - UPFLOW / HORIZONTAL**NF80U045T3AR**

External Static Pressure in. w.g.	Air Volume / Watts at Various Blower Speeds									
	High (Black)		Medium-High (Brown)		Medium (Blue)		Medium-Low (Yellow)		Low (Red)	
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	1500	300	1220	175	1050	114	850	65	800	48
0.10	1485	311	1200	179	1025	118	810	68	790	50
0.20	1460	323	1170	188	980	125	725	73	580	53
0.30	1420	334	1140	195	930	133	670	76	455	54
0.40	1395	343	1095	203	890	138	600	86	375	60
0.50	1355	355	1050	212	840	149	550	93	325	64
0.60	1325	368	1020	222	790	158	495	96	275	67
0.70	1290	369	980	228	745	164	420	103	238	69
0.80	1260	381	945	238	700	172	380	107	---	---

NF80U070T3AR

External Static Pressure in. w.g.	Air Volume / Watts at Various Blower Speeds									
	High (Black)		Medium-High (Brown)		Medium (Blue)		Medium-Low (Yellow)		Low (Red)	
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	1375	340	1350	240	1110	190	970	93	780	50
0.10	1350	346	1325	254	1100	194	940	104	725	57
0.20	1330	346	1310	264	1080	200	895	113	680	64
0.30	1315	353	1280	272	1060	204	860	118	610	70
0.40	1300	368	1250	283	1040	212	810	125	550	76
0.50	1285	369	1220	293	1010	222	765	132	510	78
0.60	1260	384	1190	301	975	227	725	140	460	83
0.70	1240	391	1150	314	950	236	680	147	400	89
0.80	1210	399	1120	319	915	244	640	152	355	95

NF80U090T4BR

External Static Pressure in. w.g.	Air Volume / Watts at Various Blower Speeds									
	High (Black)		Medium-High (Brown)		Medium (Blue)		Medium-Low (Yellow)		Low (Red)	
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	1800	370	1555	260	1425	207	1370	172	1240	131
0.10	1765	381	1525	272	1390	218	1320	184	1190	144
0.20	1725	397	1485	283	1350	229	1255	195	1130	157
0.30	1685	416	1450	296	1310	241	1205	206	1075	165
0.40	1635	425	1390	312	1260	250	1165	217	1015	174
0.50	1600	438	1350	322	1205	263	1100	230	955	185
0.60	1560	453	1300	332	1140	270	1050	239	905	193
0.70	1520	467	1255	344	1110	284	1000	249	840	202
0.80	1470	474	1215	352	1050	294	935	258	765	211

NF80U110T5CR

External Static Pressure in. w.g.	Air Volume / Watts at Different Blower Speeds									
	Bottom Return Air, Side Return Air from Both Sides or Return Air from Bottom and One Side.									
	High (Black)		Medium-High (Brown)		Medium (Blue)		Medium-Low (Yellow)		Low (Red)	
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	2175	590	2050	410	1850	310	1695	275	1510	195
0.10	2158	607	1943	421	1778	328	1650	283	1461	205
0.20	2131	620	1897	436	1719	345	1591	299	1405	215
0.30	2085	639	1847	456	1678	354	1563	308	1351	228
0.40	2055	652	1806	466	1641	371	1499	317	1297	238
0.50	2030	668	1767	476	1588	387	1462	333	1256	254
0.60	1976	686	1724	495	1550	399	1419	348	1215	265
0.70	1949	700	1685	510	1512	408	1371	357	1168	271
0.80	1896	716	1649	527	1473	419	1332	372	1121	287
External Static Pressure in. w.g.	Air Volume / Watts at Different Blower Speeds									
	Single Side Return Air - Air volumes equal to or above 1800 CFM require Optional Return Air Base and field fabricated transition to accommodate 20 x 25 x 1 in. air filter in order to maintain proper air velocity.									
	High (Black)		Medium-High (Brown)		Medium (Blue)		Medium-Low (Yellow)		Low (Red)	
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	2175	605	1930	420	1785	320	1675	260	1500	195
0.10	2129	628	1892	441	1733	345	1627	288	1458	209
0.20	2091	649	1838	458	1691	360	1586	297	1407	220
0.30	2072	660	1806	471	1631	371	1529	313	1353	232
0.40	2014	677	1772	485	1591	385	1485	327	1302	243
0.50	1977	690	1742	498	1554	395	1444	337	1252	256
0.60	1960	707	1696	511	511	410	1412	348	1204	265
0.70	1913	720	1661	525	1480	424	1351	359	1149	274
0.80	1873	738	1617	538	1440	437	1313	371	1117	285

NOTE: See installation instructions for Return Air configurations and proper Blower setup.

BLOWER PERFORMANCE DATA - DOWNFLOW**NF80D070T3AR**

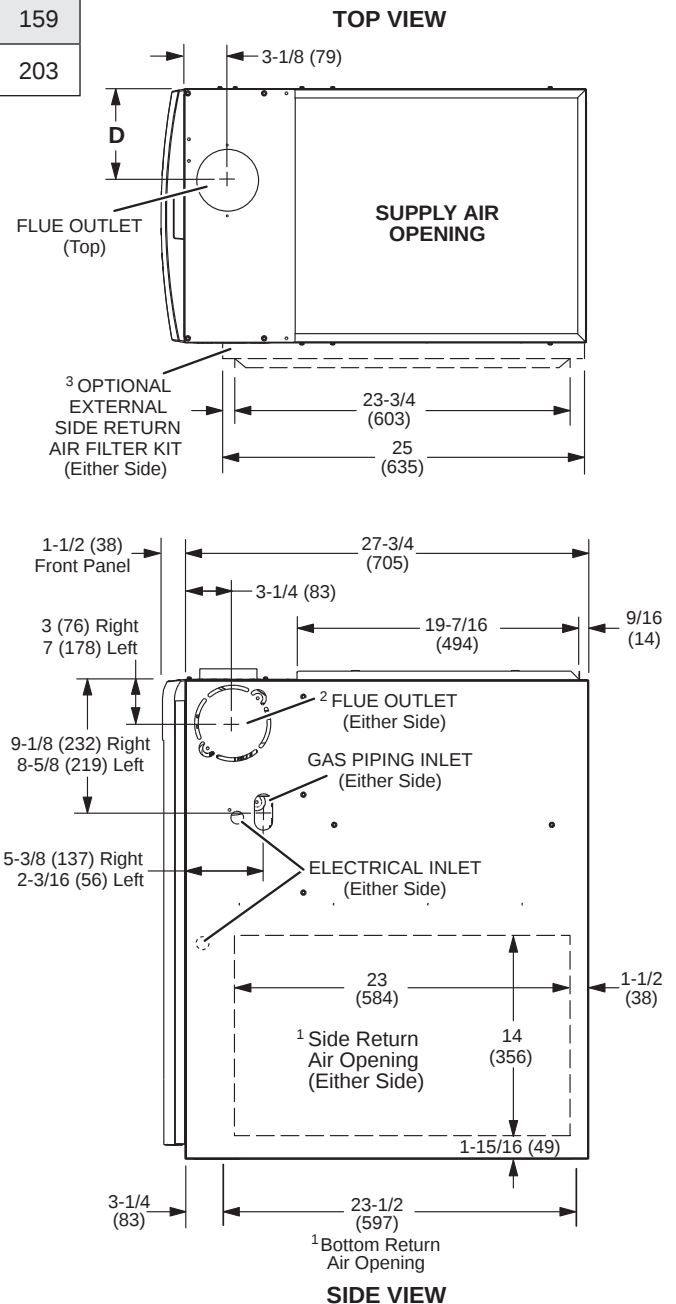
External Static Pressure in. w.g.	Air Volume / Watts at Various Blower Speeds									
	High (Black)		Medium-High (Brown)		Medium (Blue)		Medium-Low (Yellow)		Low (Red)	
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	1475	346	1345	269	1190	192	970	109	785	71
0.10	1440	355	1325	276	1165	198	935	114	775	74
0.20	1410	365	1280	287	1135	207	905	120	740	79
0.30	1260	401	1250	296	1095	216	855	129	665	86
0.40	1355	380	1225	305	1060	223	815	134	615	92
0.50	1320	394	1200	315	1035	229	770	140	580	97
0.60	1290	401	1160	324	1005	237	745	149	465	105
0.70	1260	410	1130	333	970	245	700	155	445	108
0.80	1215	399	1095	341	935	254	660	158	400	113

NF80D090T4BR

External Static Pressure in. w.g.	Air Volume / Watts at Various Blower Speeds									
	High (Black)		Medium-High (Brown)		Medium (Blue)		Medium-Low (Yellow)		Low (Red)	
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.10	1700	423	1495	293	1380	233	1295	202	1165	156
0.20	1665	436	1455	307	1330	248	1245	211	1110	166
0.30	1620	452	1415	319	1295	257	1195	221	1055	175
0.40	1585	464	1365	328	1225	269	1140	230	985	185
0.50	1560	471	1325	343	1185	277	1090	240	930	193
0.60	1455	475	1275	355	1120	290	1025	252	875	202
0.70	1405	482	1235	365	1075	295	990	259	840	209
0.80	---	---	1160	369	1025	308	925	268	780	217

DIMENSIONS (IN.) - UPFLOW POSITION

Model	A		B		C		D	
	in.	mm	in.	mm	in.	mm	in.	mm
NF80U045T3AR NF80U070T3AR	14-1/2	368	13-3/8	340	13	330	4-3/4	121
NF80U090T4BR	17-1/2	446	16-3/8	416	16	406	6-1/4	159
NF80U110T5CR	21	533	19-7/8	504	19-1/2	495	8	203



¹ **NOTE** - 60C size units that require air volumes over 1800 cfm must have one of the following:

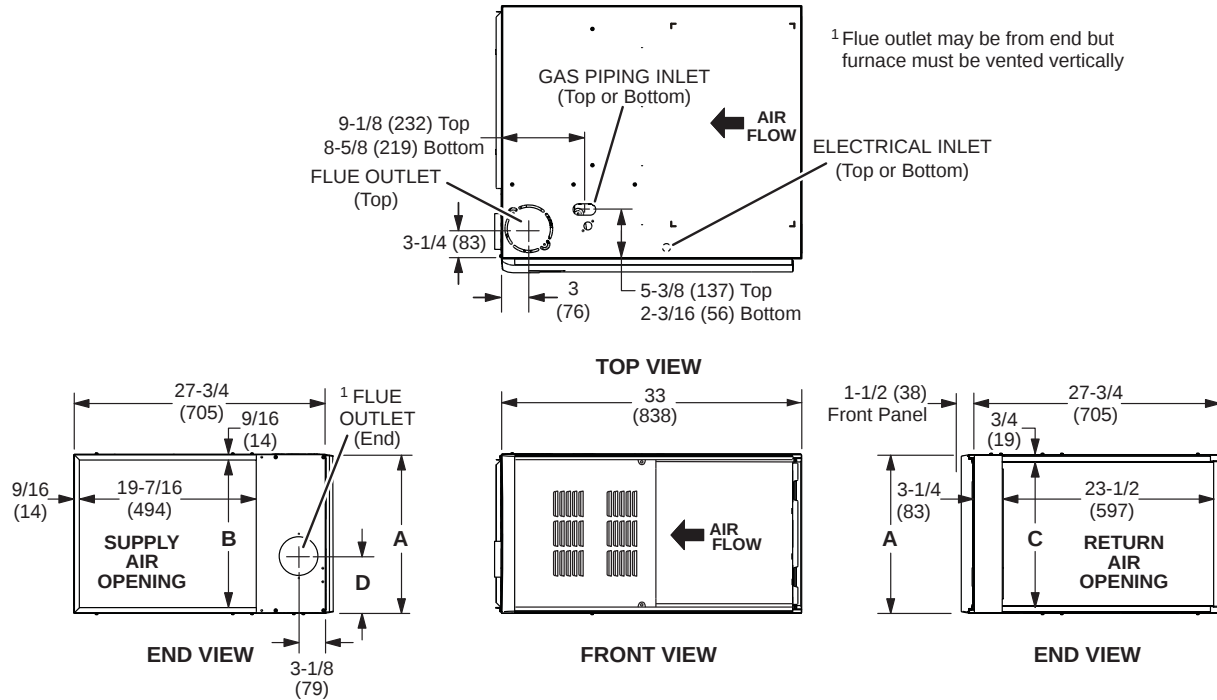
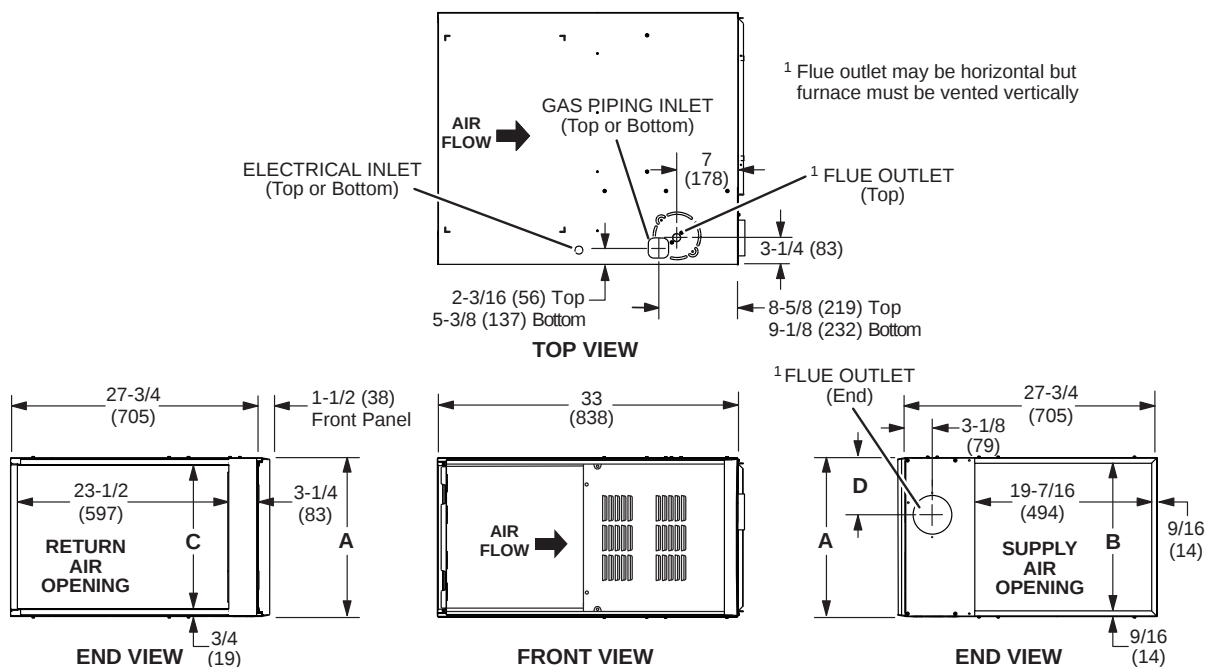
1. Single side return air and Optional Return Air Base with transition that must accommodate required 20 x 25 x 1 inch (508 x 635 x 25 mm) air filter to maintain proper velocity.
2. Bottom return air.
3. Return air from both sides.
4. Bottom and one side return air. See Blower Performance Tables for additional information.

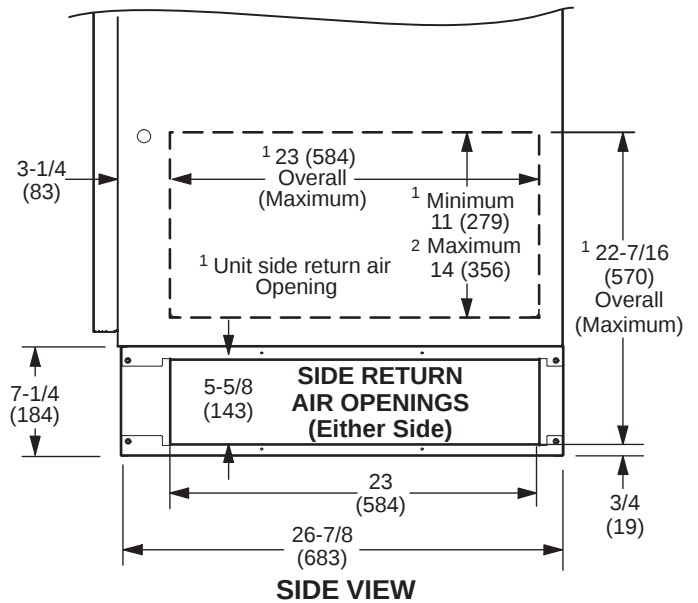
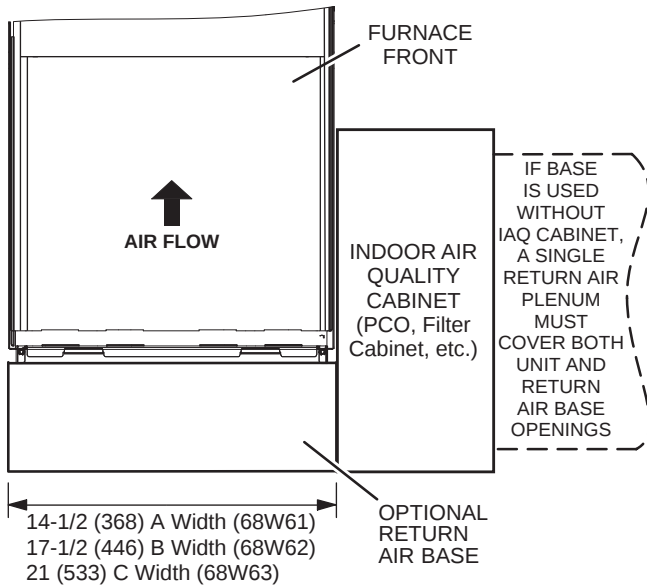
² Flue outlet may be horizontal but furnace must be vented vertically.

³ Optional External Side Return Air Filter Kit is not for use with the optional Return Air Base.

DIMENSIONS (IN.) - HORIZONTAL POSITION

Model	A		B		C		D	
	in.	mm	in.	mm	in.	mm	in.	mm
NF80U045T3AR NF80U070T3AR	14-1/2	368	13-3/8	340	13	330	4-3/4	121
NF80U090T4BR	17-1/2	446	16-3/8	416	16	406	6-1/4	159
NF80U110T5CR	21	533	19-7/8	504	19-1/2	495	8	203

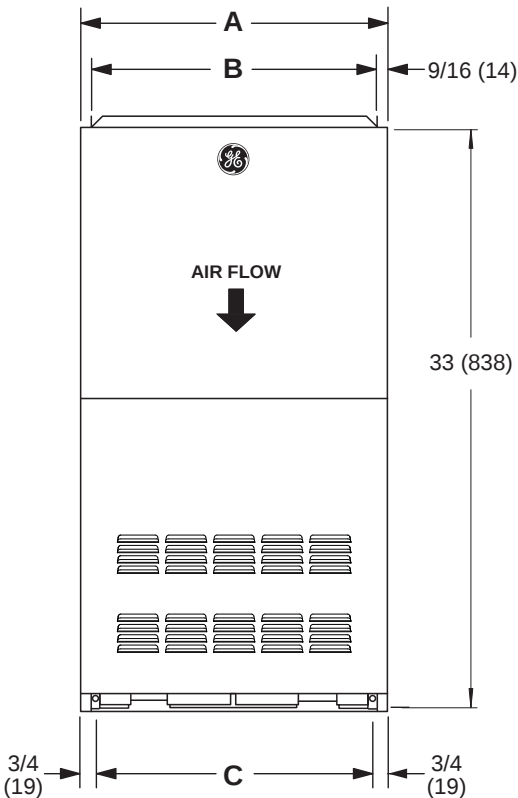
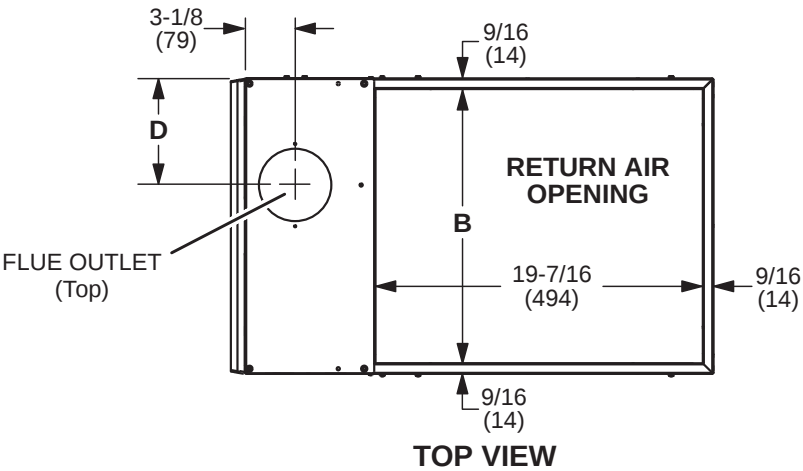
LEFT-HAND AIR DISCHARGE**RIGHT-HAND AIR DISCHARGE**

OPTIONAL RETURN AIR BASE**(Upflow Applications Only - For use with A, B and C width cabinets)****NOTE-** Optional Side Return Air Filter Kits are not for use with Optional Return Air Base.

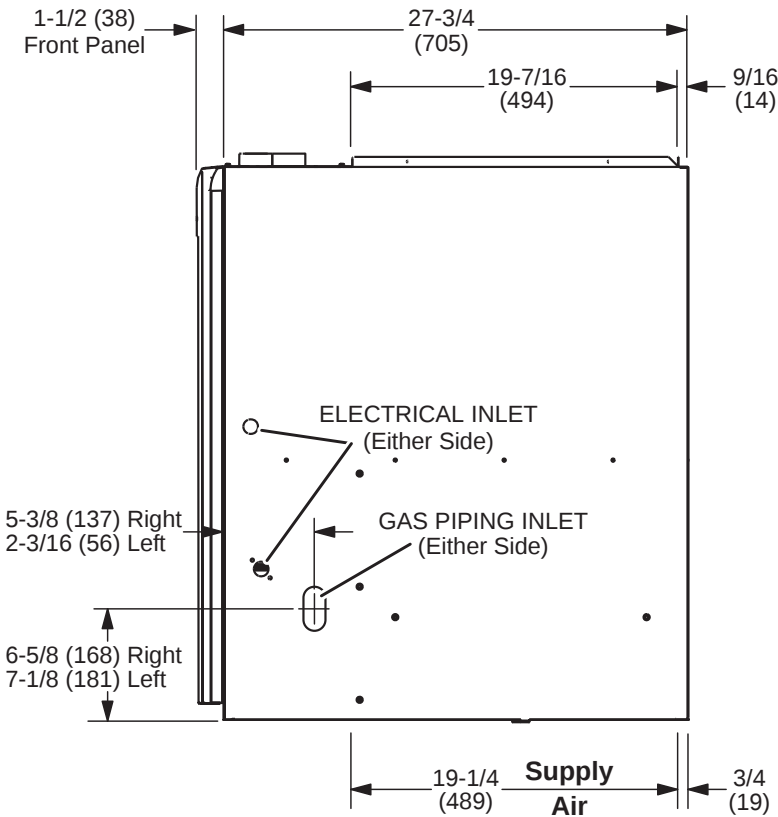
- 1) Both the unit return air opening and the base return air opening must be covered by a single plenum or IAQ cabinet. Minimum unit side return air opening dimensions for units requiring 1800 cfm or more of air (W x H): 23 x 11 in. (584 x 279 mm). The opening can be cut as needed to accommodate plenum or IAQ cabinet while maintaining dimensions shown. Side return air openings must be cut in the field. There are cutting guides stenciled on the cabinet for the side return air opening. The size of the opening must not extend beyond the markings on the furnace cabinet.
- 2) To minimize pressure drop, the largest opening height possible, up to 14 in. (356 mm), is preferred.

DIMENSIONS (IN.) - DOWNFLOW MODELS

Model	A		B		C		D	
	in.	mm	in.	mm	in.	mm	in.	mm
NF80D070T3AR	14-1/2	368	13-3/8	340	13	330	4-3/4	121
NF80D090T4BR	17-1/2	446	16-3/8	416	16	406	6-1/4	159



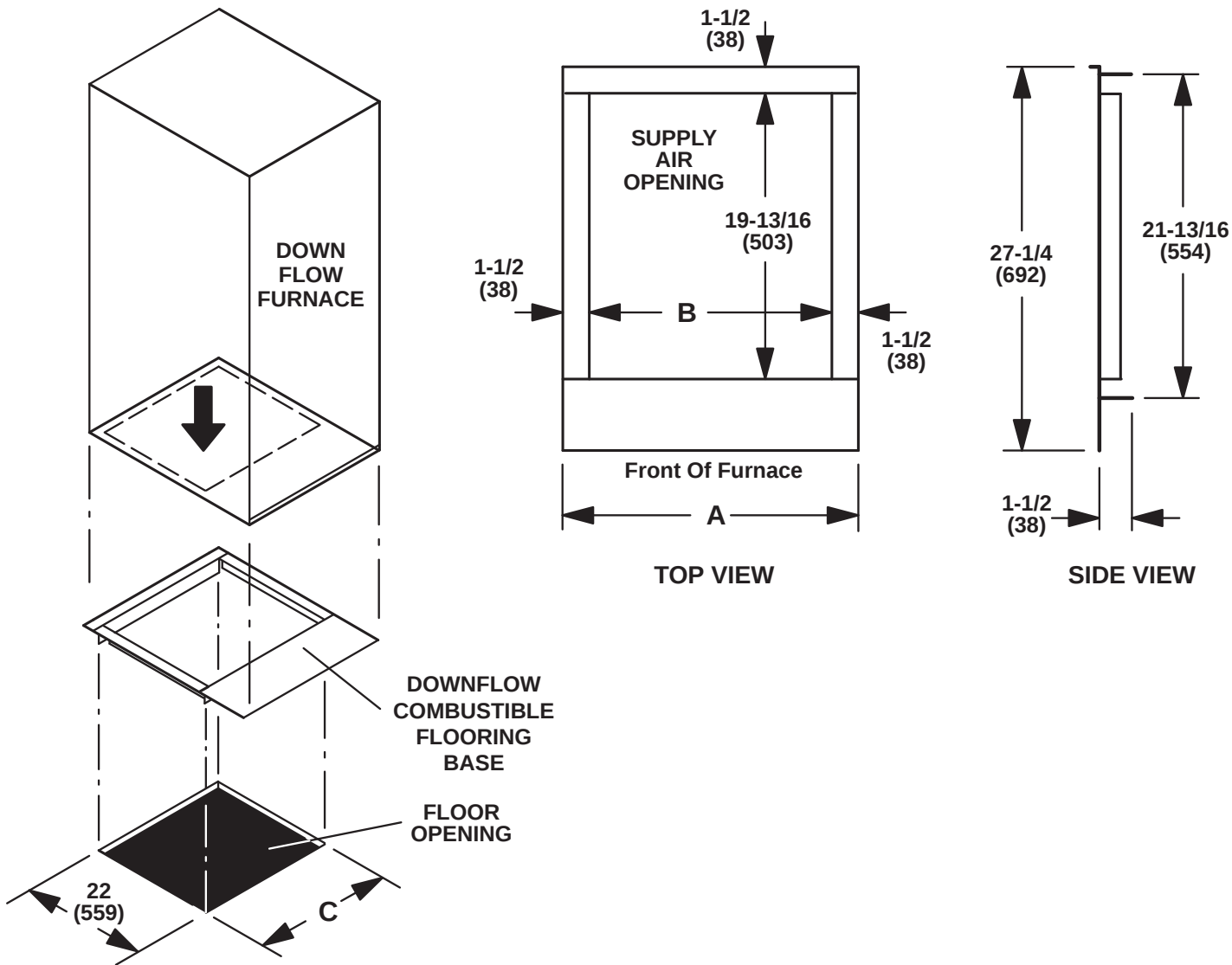
FRONT VIEW



SIDE VIEW

DOWNFLOW COMBUSTIBLE FLOORING BASE

Furnace Cabinet Width	Catalog Number	A		B		C	
		in.	mm	in.	mm	in.	mm
A	11M59	16-9/16	421	13-9/16	344	15-3/4	400
B	11M60	19-9/16	497	16-9/16	421	18-3/4	476



ACCESSORIES

ACCESSORY	CATALOG NUMBER
RETURN AIR BASE	
Return Air Base 14.5"	68W61
Return Air Base 17.5"	68W62
Return Air Base 21.0"	68W63
DOWNFLOW COMBUSTIBLE FLOORING BASE	
14.5"	11M59
17.5"	11M60
LP TO NATURAL KITS	
2-Stage 80% UH/DF	77W10
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.

DESCRIPTION	ORDER NO.
Refrigerant Detection System (RDS) Coil Sensor Kit	27V53

		Natural Gas High Altitude Conversion Kit			Pressure Switch			LP High Alt. Conversion Kit		
MODEL NUMBER	Description	0-4500	4500-7500	7500-10,000	0-4500	4500-7500	7500-10,000	0-4500	4500-7500	7500-10,000
NF80U045T3AR	80% Upflow 2-Stage ECM	Not Required		51W01	Not Required	91W53	73W35	11K48	11K47	
NF80U070T3AR										
NF80U090T4BR										
NF80U110T5CR										
NF80D070T3AR	80% Downflow 2-Stage ECM	Not Required		51W01	Not Required	91W53	73W35	11K48	11K47	
NF80D090T4BR										

**GE APPLIANCES**

All specifications and illustrations subject to change without notice and without incurring obligations.

Printed in the U.S.A.