

TECHNICAL SPECIFICATIONS

FG7S (D and M Series)

High Efficiency/Direct Vent

or Non Direct Vent

**Condensing Upflow/Horizontal and
Downflow Gas Furnaces**

Induced Draft - 95.0 AFUE

Input 38,000 - 120,000 Btuh

The high efficiency upflow gas furnace may be installed free standing in a utility room, basement, or enclosed in an alcove or closet. Upflow/horizontal units come ready for upflow or horizontal application. The extended flush jacket provides a pleasing "appliance appearance." Design certified by CSA for application in Canada and the United States.



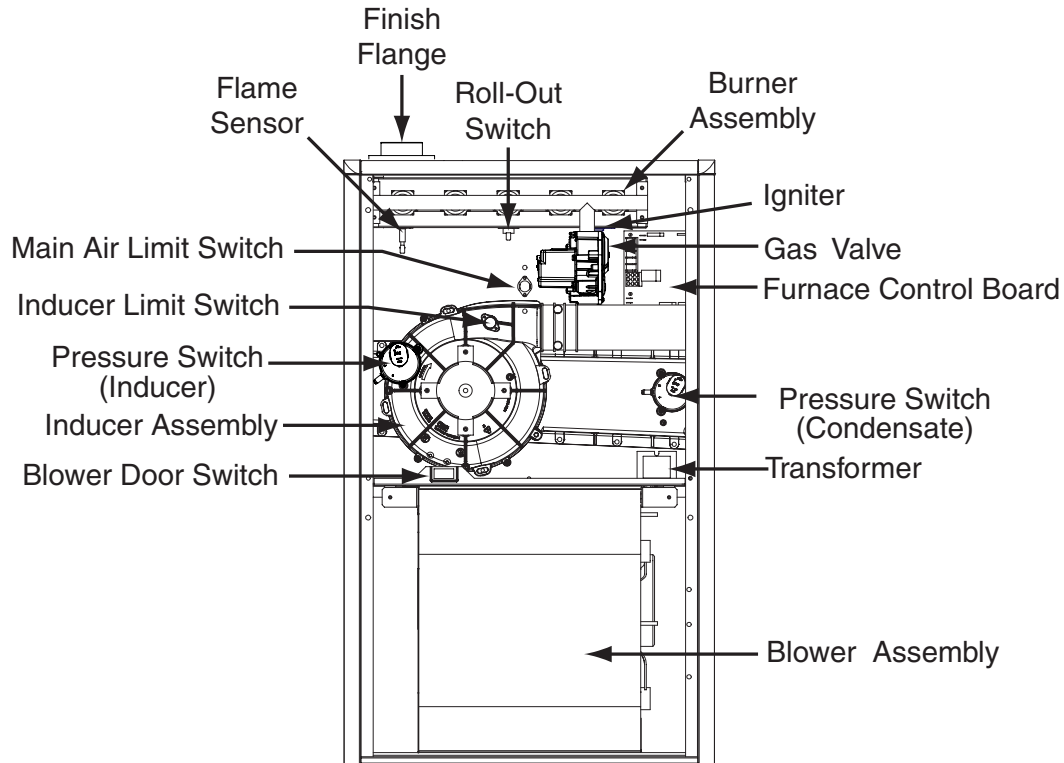
WARRANTY

- 10-year all-parts warranty.
- 10 Year Quality Pledge to replace the unit if the heat exchanger fails within the first 10 years of operation, to the original owner.
- Consumer product registration required for 10 year All Parts Warranty and Quality Pledge within a limited period of time after the installation. See current warranty document or visit our consumer web site listed on the back of this document for warranty details.
- When registered, this product is upgraded to a limited lifetime heat exchanger warranty.

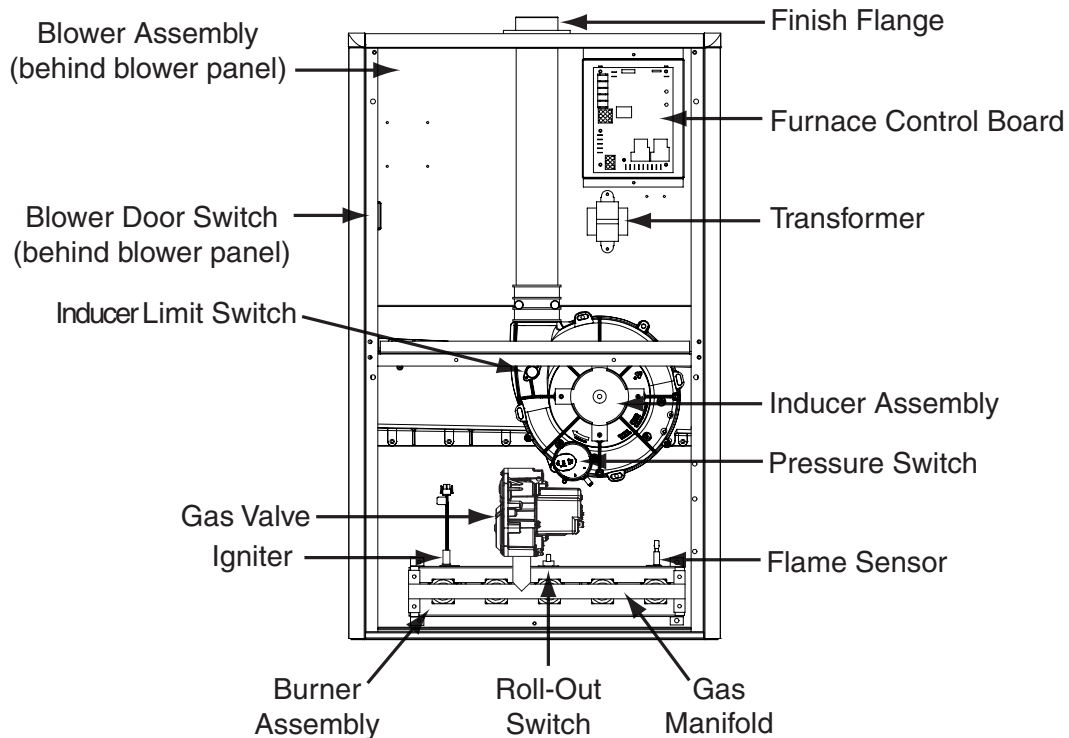
FEATURES and BENEFITS

- **100% fired and tested:** All units and each component are tested on the manufacturing line.
- **Best packaging in the industry:** Unique corner post design assures product will arrive to the homeowner dent free.
- **30 second blower delay** at start-up assures a warm duct temperature at furnace start-up. Adjustable blower off settings (60, 90, 120 and 180 seconds).
- **30 second post purge** increases life of heat exchanger.
- **Hot surface igniter:** Innovative application of a silicon nitride type igniter. Utilizes proven Smartlite® technology.
- **Color coded wire harness:** Designed to fit the components, all with quick-connect fittings for ease of service and replacement.
- **Flexible category IV venting system:** May be vertically or horizontally vented using either a one-pipe or two-pipe system for maximum flexibility in installation.
- **High Static Blowers:** All models equipped with high static blowers.
- **Low Boy Height:** Easy to apply in low ceiling applications, works well with taller high SEER coils, easier to handle and install.
- **Tubular primary heat exchanger:** Heavy gauge aluminized steel heat exchanger and stainless steel secondary heat exchanger assures a long life.
- **90 second fixed cooling cycle blower-off delay (TDR)** increases cooling performance when matched with a NORDYNE coil.
- **High efficiency blower kits** maximize efficiencies. On select units, a SEER improvement of up to 1 point is realized.
- **Multi-speed direct drive blower:** Designed to give a wide range of cooling capacities. Switches on PCB, provide ultra easy motor speed selection.
- **LP convertible:** Simple burner orifice and regulator spring change for ease of convertibility.
- **Diagnostic lights for easy troubleshooting without counting flashes:** Dedicated light for flame signal strength and 2 lights in combination to indicate all other fault codes with easy to recognize states without counting flashes.
- **Incorporates integrated control board** with connections for electronic air cleaner and humidifier.
- **Two piece door design** enhances furnace appearance and uses captured screws to prevent losing door screws.
- **Blower Compartment:** Sealed door to reduce air leakage and insulated for ultra quiet operation.
- **Sealed Vestibule** reduces burner and inducer sound levels.

GAS FURNACE COMPONENTS



***SD Series -Upflow / Horizontal Furnace**

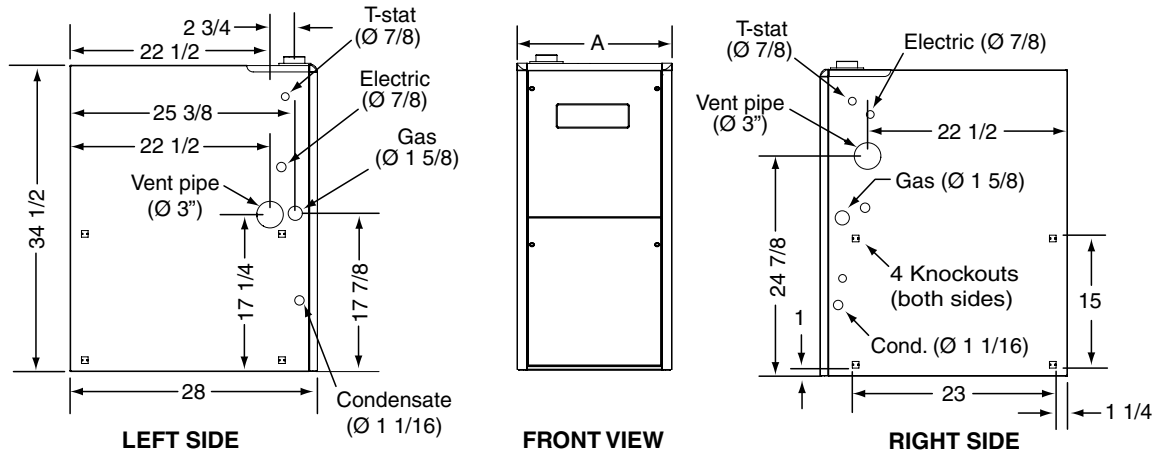
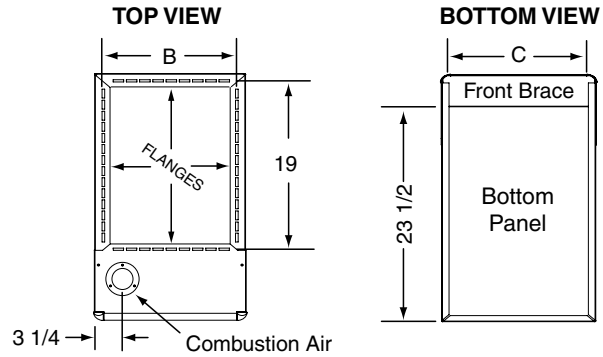


***SM Series Downflow Furnace**

DIMENSIONS

*SD Upflow / Horizontal Furnaces			
Model #'s	Dim. -A-	Dim -B-	Dim -C-
038D-24B	17 1/2	15 7/8	16 1/8
054D-24B			
072D-35C	21	19 3/8	19 5/8
090D-35C			
108D-45D	24 1/2	22 7/8	23 1/8
120D-45D			

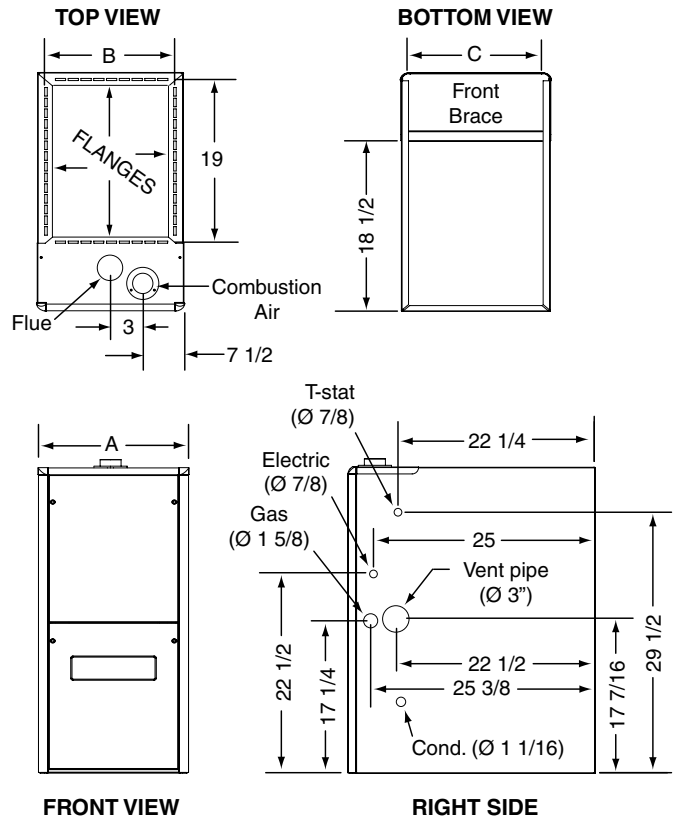
NOTE: Dimensions shown in inches.



*SD Series -Upflow / Horizontal Furnace

*SM Downflow Furnaces			
Model #'s	Dim. -A-	Dim. -B-	Dim. -C-
054D-24B	17 1/2	15 7/8	16 1/8
072D-35C			
090D-35C	21	19 3/8	19 5/8
118D-45D	24 1/2	22 7/8	23 1/8

NOTE: Dimensions shown in inches.



*SM Series Downflow Furnace

BLOWER PERFORMANCE - FG7SD

*SD - UPFLOW / HORIZONTAL FURNACES																	
Model Number & Heating Input (Btuh)	Motor Speed	External Static Pressure (Inches Water Column)															
		0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8	
		CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise
SD038D-24B Bottom Return (38,000)	HIGH	1237	26	1237	26	1212	26	1179	27	1139	28	1094	29	1044	31	992	32
	MED-H	934	34	934	34	927	35	917	35	905	35	890	36	873	37	854	37
	MED-L	837	38	837	38	819	39	803	40	789	41	775	41	762	42	750	43
	LOW	723	44	723	44	696	46	669	48	641	50	613	52	586	55	559	57
SD038D-24B Side Return (38,000)	HIGH	1286	25	1286	25	1261	25	1226	26	1185	27	1137	28	1086	29	1032	31
	MED-H	971	33	971	33	964	33	954	34	941	34	925	35	908	35	889	36
	MED-L	870	37	870	37	852	38	836	38	820	39	806	40	793	40	780	41
	LOW	752	43	752	43	724	44	695	46	666	48	638	50	609	52	582	55
SD054D-24B Bottom Return (54,000)	HIGH	1225	37	1214	37	1197	38	1174	39	1146	40	1114	41	1079	42	1041	44
	MED-H	960	47	971	47	973	47	965	47	949	48	924	49	893	51	857	53
	MED-L	835	54	828	55	817	56	801	57	782	58	759	60	734	62	708	64
	LOW	737	62	728	62	716	63	700	65	680	67	658	69	633	72	607	75
SD054D-24B Side Return (54,000)	HIGH	1274	36	1263	36	1245	37	1221	37	1192	38	1159	39	1122	41	1082	42
	MED-H	999	46	1010	45	1012	45	1004	45	987	46	961	47	929	49	891	51
	MED-L	869	52	861	53	849	54	833	55	813	56	790	58	764	60	736	62
	LOW	766	59	758	60	745	61	728	62	707	64	684	66	658	69	631	72
SD072D-35C Bottom Return (54,000)	HIGH	1842	33	1745	35	1638	37	1526	40	1413	43	1303	47	1198	51	1100	55
	MED-H	1634	37	1629	37	1591	38	1526	40	1439	42	1338	45	1231	49	1124	54
	MED-L	1236	49	1202	50	1156	52	1101	55	1039	58	975	62	909	67	845	72
	LOW	1233	49	1163	52	1096	55	1032	59	971	62	914	66	860	70	809	75
SD072D-35C Side Return (54,000)	HIGH	1916	32	1815	33	1704	36	1587	38	1469	41	1355	45	1246	49	1144	53
	MED-H	1699	36	1694	36	1655	37	1587	38	1496	41	1392	44	1281	47	1169	52
	MED-L	1286	47	1250	48	1202	50	1145	53	1081	56	1014	60	946	64	878	69
	LOW	1282	47	1210	50	1140	53	1073	56	1010	60	950	64	894	68	842	72
SCD72D-35C Side + Bottom or 2 Sides (72,000)	HIGH	1955	31	1852	33	1738	35	1619	37	1499	40	1383	44	1271	48	1167	52
	MED-H	1734	35	1729	35	1689	36	1619	37	1527	40	1420	43	1307	46	1193	51
	MED-L	1312	46	1276	48	1227	49	1168	52	1103	55	1034	59	965	63	896	68
	LOW	1308	46	1234	49	1163	52	1095	55	1031	59	970	62	913	66	859	71
SD090D-35C Bottom Return (90,000)	HIGH	2166	35	1969	38	2011	38	2011	38	1969	38	1889	40	1782	43	1656	46
	MED-H	1917	40	1868	41	1821	42	1777	43	1734	44	1694	45	1656	46	1619	47
	MED-L	1701	45	1656	46	1664	46	1651	46	1619	47	1568	48	1504	50	1428	53
	LOW	1480	51	1457	52	1431	53	1404	54	1374	55	1343	56	1311	58	1256	60
SD090D-35C Side Return (90,000)	HIGH	1539	36	2048	37	2091	36	2091	36	2048	37	1965	39	1853	41	1722	44
	MED-H	1994	38	1943	39	1894	40	1848	41	1804	42	1762	43	1722	44	1684	45
	MED-L	1731	44	1722	44	1731	44	1717	44	1684	45	1631	46	1564	48	1485	51
	LOW	1539	49	1515	50	1489	51	1460	52	1429	53	1397	54	1364	56	1306	58
SCD90D-35C Side + Bottom or 2 Sides (90,000)	HIGH	1539	36	2048	37	2134	35	2134	35	2089	36	2005	38	1891	40	1757	43
	MED-H	1994	38	1943	39	1933	39	1885	40	1841	41	1798	42	1757	43	1718	44
	MED-L	1731	44	1722	44	1766	43	1752	43	1718	44	1664	46	1596	47	1516	50
	LOW	1539	49	1515	50	1519	50	1490	51	1459	52	1426	53	1391	54	1306	58

BLOWER PERFORMANCE - FG7SD Continued

*SD - UPFLOW / HORIZONTAL FURNACES																	
Model Number & Heating Input (Btuh)	Motor Speed	External Static Pressure (Inches Water Column)															
		0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8	
		CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise
SD108D-45D Bottom Return (108,000)	HIGH	1761	52	1730	53	1654	55	1590	57	1536	59	1489	61	1450	63	1418	64
	MED-H	1698	54	1645	55	1558	58	1491	61	1440	63	1401	65	1373	66	1355	67
	MED-L	1436	64	1450	63	1417	64	1386	66	1357	67	1330	68	1304	70	1280	71
	LOW	1305	70	1294	70	1249	73	1212	75	1181	77	1157	79	1138	80	1124	81
SD108D-45D Side Return (108,000)	HIGH	1905	48	1800	51	1721	53	1654	55	1597	57	1549	59	1508	60	1474	62
	MED-H	1837	50	1710	53	1621	56	1551	59	1497	61	1457	62	1428	64	1409	65
	MED-L	1553	59	1508	60	1474	62	1442	63	1412	64	1383	66	1356	67	1331	68
	LOW	1411	65	1346	68	1299	70	1260	72	1229	74	1203	76	1183	77	1169	78
SD120D-45D Bottom Return (120,000)	HIGH	1919	53	1824	55	1744	58	1676	60	1619	62	1570	64	1529	66	1494	68
	MED-H	1851	55	1734	58	1643	61	1572	64	1518	67	1477	68	1447	70	1428	71
	MED-L	1565	65	1528	66	1494	68	1461	69	1431	71	1402	72	1375	73	1349	75
	LOW	1422	71	1364	74	1317	77	1277	79	1245	81	1219	83	1199	84	1184	85
SD120D-45D Side Return (120,000)	HIGH	1996	51	1897	53	1814	56	1743	58	1684	60	1633	62	1590	64	1554	65
	MED-H	1925	52	1803	56	1708	59	1635	62	1578	64	1536	66	1505	67	1485	68
	MED-L	1627	62	1589	64	1553	65	1520	66	1488	68	1458	69	1430	71	1403	72
	LOW	1479	68	1419	71	1369	74	1328	76	1295	78	1268	80	1247	81	1232	82

BLOWER PERFORMANCE - FG7SM

*SM - DOWNFLOW FURNACES																	
Model Number & Heating Input (Btuh)	Motor Speed	External Static Pressure (Inches Water Column)															
		0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8	
		CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise
SM054D-24B Top Return (54,000)	HIGH	1420	32	1466	31	1420	32	1420	32	1377	33	1299	35	1229	37	1166	39
	MED-H	1299	35	1299	35	1299	35	1263	36	1229	37	1166	39	1109	41	1057	43
	MED-L	1196	38	1166	39	1136	40	1082	42	1057	43	1010	45	988	46	947	48
	LOW	1057	43	1010	45	988	46	947	48	909	50	891	51	858	53	826	55
SM072D-35C Top Return (72,000)	HIGH	1837	33	1894	32	1837	33	1837	33	1732	35	1684	36	1595	38	1515	40
	MED-H	1554	39	1554	39	1515	40	1478	41	1409	43	1347	45	1289	47	1212	50
	MED-L	1289	47	1237	49	1212	50	1166	52	1122	54	1082	56	1045	58	1010	60
	LOW	1082	56	1045	58	1010	60	962	63	932	65	905	67	878	69	842	72
SM090D-35C Top Return (90,000)	HIGH	1848	41	1848	41	1848	41	1804	42	1762	43	1684	45	1612	47	1515	50
	MED-H	1848	41	1804	42	1762	43	1722	44	1647	46	1578	48	1515	50	1429	53
	MED-L	1722	44	1647	46	1612	47	1546	49	1515	50	1457	52	1403	54	1353	56
	LOW	1515	50	1457	52	1403	54	1353	56	1306	58	1263	60	1222	62	1184	64
SM118D-45D Top Return (118,000)	HIGH	2149	47	2149	47	2149	47	2104	48	2020	50	1943	52	1837	55	1742	58
	MED-H	2104	48	2104	48	2020	50	1981	51	1906	53	1837	55	1742	58	1656	61
	MED-L	1906	53	1871	54	1804	56	1742	58	1684	60	1629	62	1578	64	1508	67
	LOW	1712	59	1629	62	1578	64	1508	67	1464	69	1423	71	1365	74	1329	76

NOTES:

* Factory Set Cooling Speed

** Factory Set Heating Speed

- Two openings are recommended for airflows above 1,600 CFM if filter(s) is(are) adjacent to furnace
- Temperature rises in the table are approximate. Actual temperature rises may vary.
- Temperature rises shaded in gray are for reference only. These conditions are not recommended

VENTING

All models are approved for vertical non direct (1 pipe) and direct (2 pipe) venting applications. See Vent Table below for specified sizes and allowable lengths.

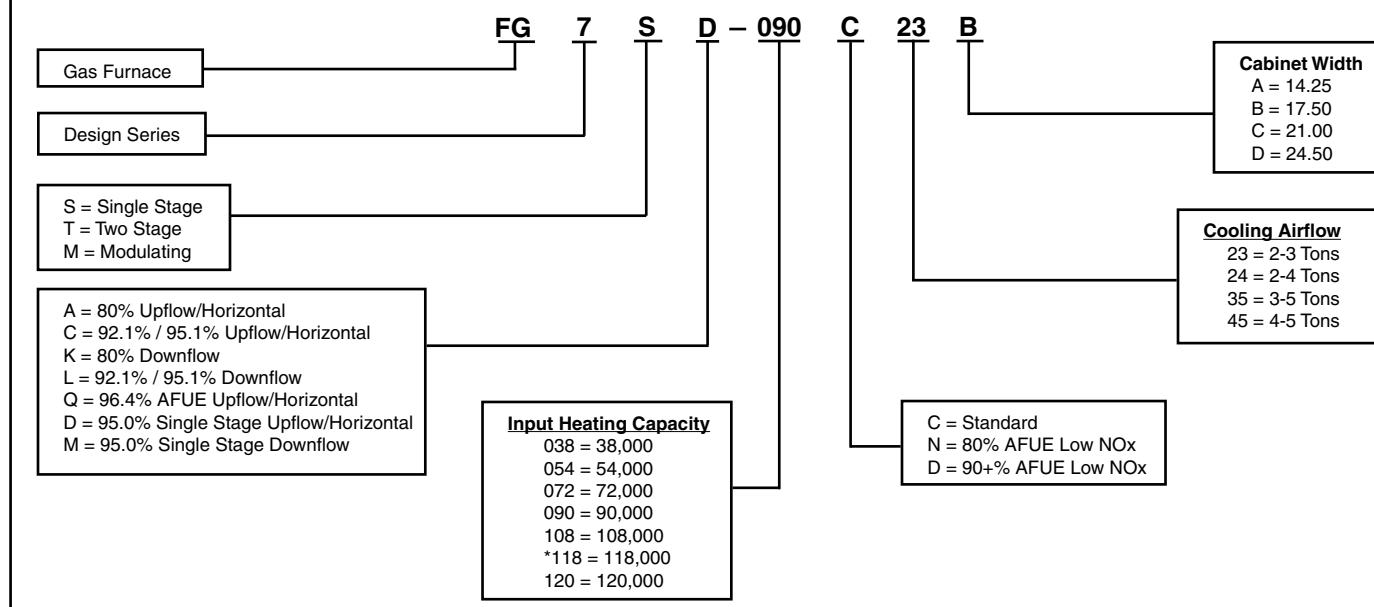
VENT TABLE

	SINGLE PIPE LENGTH (FT.) with 1 long radius elbow*		DIRECT VENT, DUEL PIPE LENGTH (ft.) WITH 1 long radius elbow on each pipe*	
	OUTLET	OUTLET	INLET/OUTLET	INLET/OUTLET
MODELS	2"	3"	2"	3"
SD038	50	70	60	80
SD054	90	90	90	90
SD072	90	90	90	90
SD090	90	90	90	90
SD108	N/A	90	N/A	90
SD120	N/A	90	N/A	90
SM054	90	90	90	90
SM072	90	90	90	90
SM090	70	90	70	90
SM118	N/A	90	N/A	90

* NOTE:

1. Subtract 2.5 ft. for each additional 2" elbow and 3.5 ft. for each additional 3" elbow.
2. Two 45 degree elbows are equivalent to one 90 degree elbow.
3. One short radius elbow is equivalent to two long radius elbows.
4. Do not include termination elbows in calculation of vent length.
5. This table is applicable for elevations from sea level to 2000 ft. For higher elevations decrease vent pipe lengths by 8% per 1000 ft. of altitude.
6. Only the listed pipe materials are approved for use with FG7 Condensing Furnaces.

MODEL IDENTIFICATION CODE



* 118 = 118,000 for SM Models

SPECIFICATIONS

FG7SD MODEL NUMBERS:	-038D-24B	-054D-24B	-072D-35C	-090D-35C	-108D-45D	-120D-45D
Input - Btuh (a)	38,000	54,000	72,000	90,000	108,000	120,000
Heating Capacity - Btuh	36,100	51,300	68,400	85,500	102,600	114,000
AFUE	95.0	95.0	95.0	95.0	95.0	95.0
Blower D x W	10 x 6	11 x 8	10 x 10	11 x 10	11 x 10	11 x 10
Motor H.P. - Speed - Type	1/2 - 4 - PSC	1/2 - 4 - PSC	1/2 - 4 - PSC	3/4 - 4 - PSC	3/4 - 4 - PSC	3/4 - 4 - PSC
Motor FLA	4.80	8.20	7.50	13.75	13.75	13.75
Rated Ext. SP - In. W.C.	0.5	0.5	0.5	0.5	0.5	0.5
Temperature Rise Range - °F	30-60	30-60	35-65	35-65	40-70	40-70
Shipping Weights	100lbs	120lbs	130lbs	135lbs	155lbs	155lbs

FG7SM MODEL NUMBERS:	-054D-24B	-072D-35C	-090D-35C	-118D-45D
Input - Btuh (a)	54,000	72,000	90,000	118,000
Heating Capacity - Btuh	51,300	68,400	85,500	112,100
AFUE	95.0	95.0	95.0	95.0
Blower D x W	11 x 8	11 x 8	10 x 10	11 x 10
Motor H.P. - Speed - Type	1/2 - 4 - PSC	3/4 - 4 - PSC	3/4 - 4 - PSC	3/4 - 4 - PSC
Motor FLA	8.20	8.20	7.50	13.75
Rated Ext. SP - In. W.C.	0.5	0.5	0.5	0.5
Temperature Rise Range - °F	30-60	35-65	35-65	40-70
Shipping Weights	120lbs	125lbs	135lbs	155lbs

Note: All models are 115V, 60 Hz. Gas Connections are 1/2" N.P.T. AFUE = Annual Fuel Utilization Efficiency
(a) Ratings to 2,000 ft. Over 2,000 ft. reduce 4% for each 1,000 ft. above sea level.

ACCESSORIES

FG7S (D, M) KITS	
Description	SKU
2" Concentric vent kit	904952
3" Concentric vent kit	904953
"B", "C", "D" Cabinet downflow sub base kit	904911
2" Side wall vent kit	904617
3" Side wall vent kit	904347
U.S. LP Conversion kit (0 to 10,000 ft.)	905028
Canada LP Conversion kit (0 to 4,500 ft.)	905029
Bottom return filter 20 per box, "B" cabinet	904916
Bottom return filter 20 per box, "C" cabinet	904917
Bottom return filter 20 per box, "D" cabinet	904918
Side return filter kit	541036
Neutralizer kit	902377
"A" Cabinet fixed speed, high efficiency, FSHE	904872
"B" Cabinet fixed speed, high efficiency, FSHE	904873
"C" Cabinet fixed speed, high efficiency, FSHE	904874
"D" Cabinet fixed speed, high efficiency, FSHE	904875
"A" Cabinet variable speed, high efficiency, VSHE	904876
"B" Cabinet variable speed, high efficiency, VSHE	904877
"C" Cabinet variable speed, high efficiency, VSHE	904878
"D" Cabinet variable speed, high efficiency, VSHE	904879



GENERAL TERMS OF LIMITED WARRANTY

NORDYNE will furnish a replacement for any part of this product which fails in normal use and service within the first ten years of installation, in accordance with the terms of the warranty.

For complete details of the Limited Warranty, including applicable terms and conditions, see your local installer or contact the NORDYNE warranty department for a copy.



8000 Phoenix Parkway | O'Fallon MO 63368-3827

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749D-1011 (Replaces 749D-0911)