

TECHNICAL SPECIFICATIONS

MG2S Series

High Efficiency / Direct Vent Downflow 2-Stage Gas Furnace with Fixed Speed Blower

**Induced Draft - 96% AFUE
Input 45,000 thru 72,000 Btuh**

The high efficiency downflow gas furnace is especially designed for manufactured and modular housing. It may be installed in a utility room, or enclosed in a closet. ITS design certified for use in the United States and Canada.



Front Return
Models



Top Return
Models

FEATURES and BENEFITS

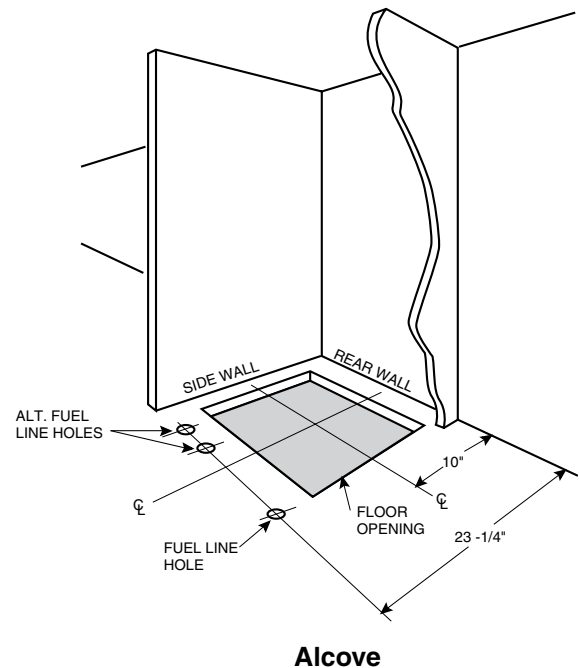
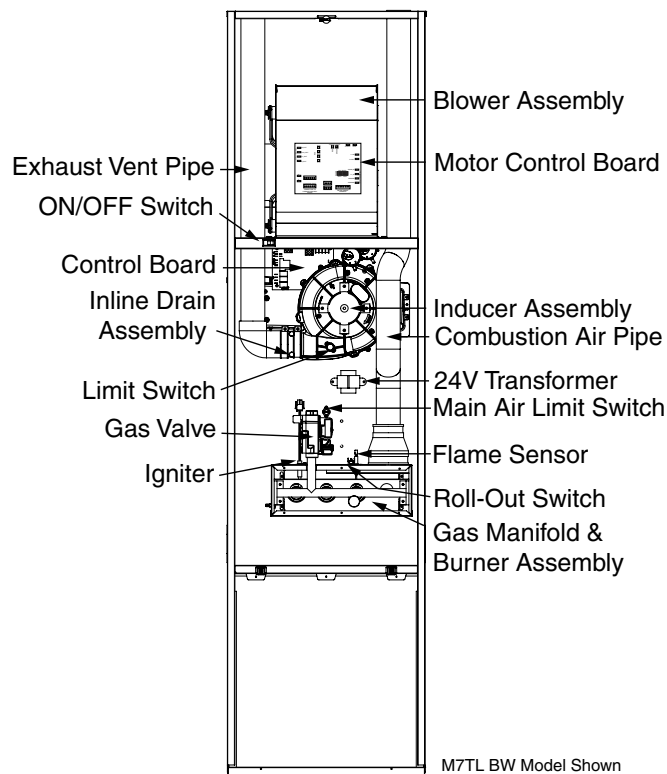
- **ECM blower:** Designed to give a wide range of cooling and heating airflows.
- **2 Stage gas valve:** Provides 2-stage thermostat control.
- **2 Stage inducer:** Optimizes efficiency on first stage heat and reduces sound levels.
- **100% fired and tested:** All units and each component (both mechanical and electrical) are tested on the manufacturing line.
- **Clean and quiet operation:** Due to the unique design of in-shot burners, location of inducer and use of insulation.
- **Fixed 30 second blower delay:** At burner start-up assures a warm outlet air temperature at furnace start-up. Adjustable blower off settings (60, 90, 120 and 180 seconds).
- **Fixed 30-second post purge:** Increases life of heat exchanger.
- **Dependable, hot surface ignitor:** Innovative application of silicon nitride type igniter. Utilizes proven Smartlite® technology.
- **Tubular primary heat exchanger:** Heavy gauge aluminized steel heat exchanger assures a long life.
- **Stainless steel secondary heat exchanger:** Assures a long life.
- **60 second fixed cooling cycle blower-off delay (TDR):** Increases cooling performance when matched with an approved coil.
- **Sealed combustion approved for direct vent furnace, category IV venting system:** May be vertically or horizontally vented using a two-pipe system for maximum flexibility in installation.
- **LP convertible:** Simple burner orifices and gas valve regulator change for ease of convertibility.
- **3 amp fuse protection against low voltage shorts:** Protects transformer and control board.
- **Low voltage terminal board:** For easy field wiring.
- **Easy open pawl latch:** Secures the door firmly for transit, yet allows easy removal for access.
- **Appliance quality door:** Protects against rust and other corrosion. Baked enamel finish allows for easy cleaning.
- **Fully insulated cabinet:** Insures minimized heat loss and quiet operation.
- **Color coded wire harness:** Designed to fit the components, all with quick-connect fittings for ease of service and replacement.
- **40VA transformer included.**
- **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.

Note: The MG2S will fit in the same footprint, use the same duct connector, and allow for direct substitution in place of the M7 furnace.

FEATURES

High Efficiency Downflow 96% AFUE Gas Furnace

Downflow Furnace



SPECIFICATIONS

MG2S MODEL NUMBERS:	045	060	072
Input (BTUH)*	45,000/29,000	60,000/39,000	72,000/47,000
Heating Capacity (BTUH)	43,200/27,840	57,600/37,440	69,120/45,120
AFUE (%)	96	96	96
Supply Voltage	115V/60Hz/1 Phase		
Blower D x W (in.)	11 x 8	11 x 8	11 x 8
Motor HP	3/4	3/4	3/4
Motor FLA (Amps)	8.4	8.4	8.4
Rated Ext. SP (in. WC)	0.3	0.3	0.3
Temperature Rise Range (°F)	30-60	30-60	35-65
Max Amps	11.7	11.7	11.7
Fuse or Breaker (Amps)	15	15	15

Note: Gas Connections are 1/2" NPT. AFUE = Annual Fuel Utilization Efficiency
 * Ratings to 2,000 ft. Over 2,000 ft. reduce 4% for each 1,000 ft. above sea level.

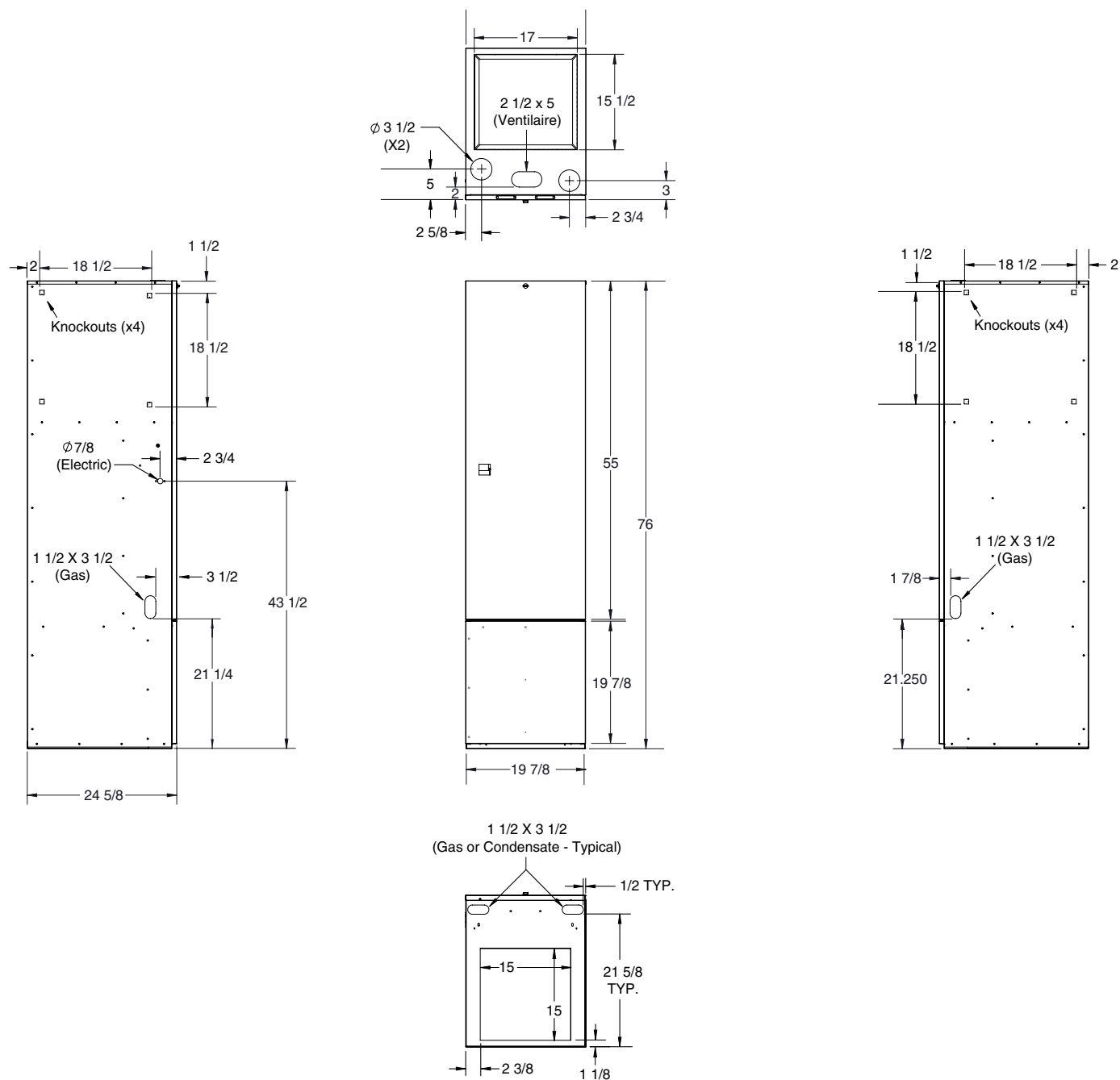
Shipping Weights

Furnace Model	Shipping Weight (lbs)	Unit Weight (lbs)
MG2S 045	179	177
MG2S 060	179	177
MG2S 072	186	184

Shipping Dimensions (inches)

Furnace Model	Length	Width	Height
MG2S 045	26.5	21.5	78.0
MG2S 060	26.5	21.5	78.0
MG2S 072	26.5	21.5	78.0

DIMENSIONS



ALL MODELS	CLOSET	ALCOVE
	Inches	Inches
Front	1*	1*
Back	0	0
Sides	0	0
Vent	0	0
Top	6	6
Duct (Plenum) w/ Coil Box	0	0
w/o Coil Box (within 3 feet)	1/4	1/4

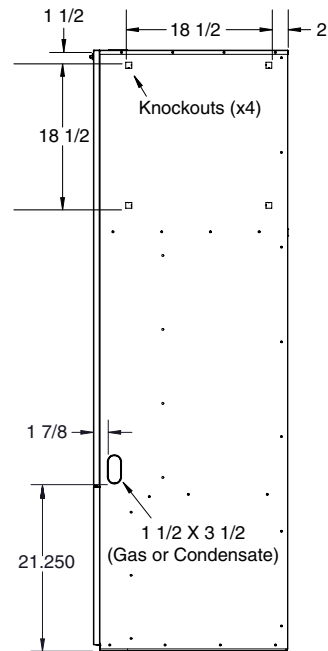
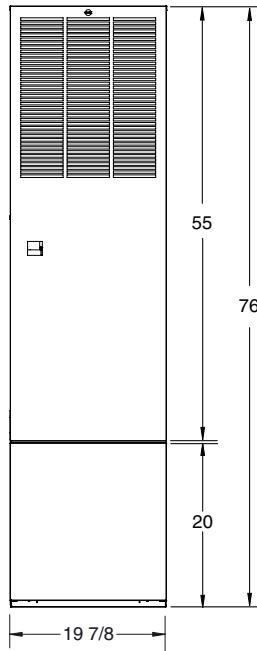
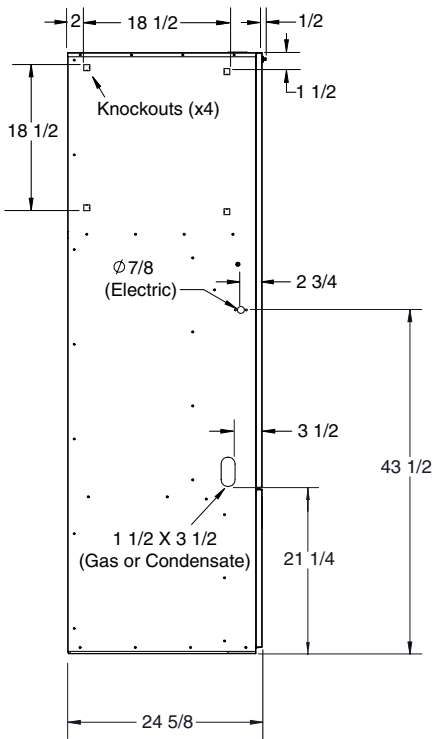
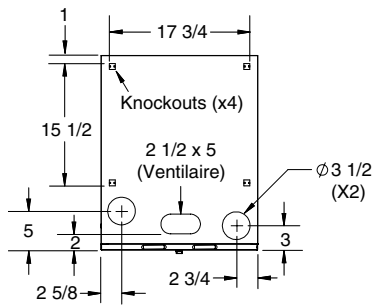
*Note: For 1" clearance, use a fully louvered door with at least 400 square inches of free airflow area.

Minimum Clearances

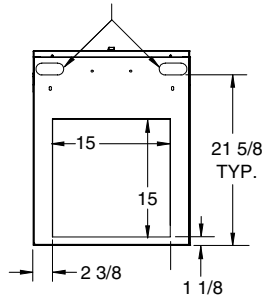
MG2S Top Return Models

DIMENSIONS

BW Top



1 1/2 X 3 1/2
(Gas, Condensate, or Linesets - Typical)



ALL MODELS	CLOSET	ALCOVE
	Inches	Inches
Front	1*	1*
Back	0	0
Sides	0	0
Vent	0	0
Top	6	6
Duct (Plenum) w/ Coil Box	0	0
w/o Coil Box (within 3 feet)	1/4	1/4

*Note: For 1" clearance, use a fully louvered door with at least 400 square inches of free airflow area.

Minimum Clearances

MG2S Front Return Models

BLOWER PERFORMANCE - Front Return

MODEL NUMBER	MOTOR SWITCH SETTINGS (0 =OFF,1 =ON)				COOLING				HEATING							
					EXTERNAL STATIC PRESSURE (IN.W.C.)				EXTERNAL STATIC PRESSURE (IN.W.C.)							
					0.2	0.3	0.4	0.5	0.2	0.3	0.4	0.5	0.2	0.3	0.4	0.5
	1/5	2/6	3/7	4/8	CFM	CFM	CFM	CFM	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE
MG2S-045F*	0	0	0	0	913	868	841	795	913	44	868	46	841	48	795	50
	1	0	0	0	965	944	886	848	965	41	944	42	886	45	848	47
	0	1	0	0	1037	1000	973	933	1037	39	1000	40	973	41	933	43
	1	1	0	0	1112	1079	1047	1012	1112	36	1079	37	1047	38	1012	40
	0	0	1	0	1185	1155	1118	1082	1185	34	1155	35	1118	36	1082	37
	1	0	1	0	1256	1216	1180	1151	1256	32	1216	33	1180	34	1151	35
	0	1	1	0	1289	1258	1222	1186	1289	31	1258	32	1222	33	1186	34
	1	1	1	0	1354	1319	1283	1247	1354	30	1319	30	1283	31	1247	32
	0	0	0	1	1396	1366	1331	1299								
	1	0	0	1	1442	1411	1379	1351								
	0	1	0	1	1485	1451	1421	1388								
	1	1	0	1	1510	1473	1446	1416								
	0	0	1	1	1550	1517	1494	1460								
	1	0	1	1	1588	1561	1530	1503								
	0	1	1	1	1635	1606	1582	1554								
	1	1	1	1	1646	1612	1582	1550								
MG2S-060F*	0	0	0	0	913	868	841	795	913	58	868	61	841	63	795	67
	1	0	0	0	965	944	886	848	965	55	944	56	886	60	848	63
	0	1	0	0	1037	1000	973	933	1037	51	1000	53	973	55	933	57
	1	1	0	0	1112	1079	1047	1012	1112	48	1079	49	1047	51	1012	53
	0	0	1	0	1185	1155	1118	1082	1185	45	1155	46	1118	48	1082	49
	1	0	1	0	1256	1216	1180	1151	1256	42	1216	44	1180	45	1151	46
	0	1	1	0	1289	1258	1222	1186	1289	41	1258	42	1222	44	1186	45
	1	1	1	0	1354	1319	1283	1247	1354	39	1319	40	1283	42	1247	43
	0	0	0	1	1396	1366	1331	1299								
	1	0	0	1	1442	1411	1379	1351								
	0	1	0	1	1485	1451	1421	1388								
	1	1	0	1	1510	1473	1446	1416								
	0	0	1	1	1550	1517	1494	1460								
	1	0	1	1	1588	1561	1530	1503								
	0	1	1	1	1635	1606	1582	1554								
	1	1	1	1	1646	1612	1582	1550								
MG2S-072F	0	0	0	0	923	884	843	798	923	69	884	72	843	76	798	80
	1	0	0	0	964	922	886	843	964	66	922	69	886	72	843	76
	0	1	0	0	1052	1017	977	938	1052	61	1017	63	977	66	938	68
	1	1	0	0	1117	1088	1049	1017	1117	57	1088	59	1049	61	1017	63
	0	0	1	0	1196	1163	1131	1092	1196	54	1163	55	1131	57	1092	59
	1	0	1	0	1258	1219	1190	1151	1258	51	1219	53	1190	54	1151	56
	0	1	1	0	1283	1248	1213	1177	1283	50	1248	51	1213	53	1177	54
	1	1	1	0	1335	1299	1268	1234	1335	48	1299	49	1268	50	1234	52
	0	0	0	1	1389	1356	1322	1292	1389	46	1356	47	1322	48	1292	50
	1	0	0	1	1442	1406	1374	1340	1442	44	1406	46	1374	47	1340	48
	0	1	0	1	1480	1446	1415	1382	1480	43	1446	44	1415	45	1382	46
	1	1	0	1	1506	1475	1442	1410	1506	42	1475	43	1442	44	1410	45
	0	0	1	1	1542	1507	1474	1443	1542	42	1507	42	1474	43	1443	44
	1	0	1	1	1583	1554	1518	1488	1583	40	1554	41	1518	42	1488	43
	0	1	1	1	1630	1601	1563	1530	1630	39	1601	40	1563	41	1530	42
	1	1	1	1	1633	1599	1564	1529								

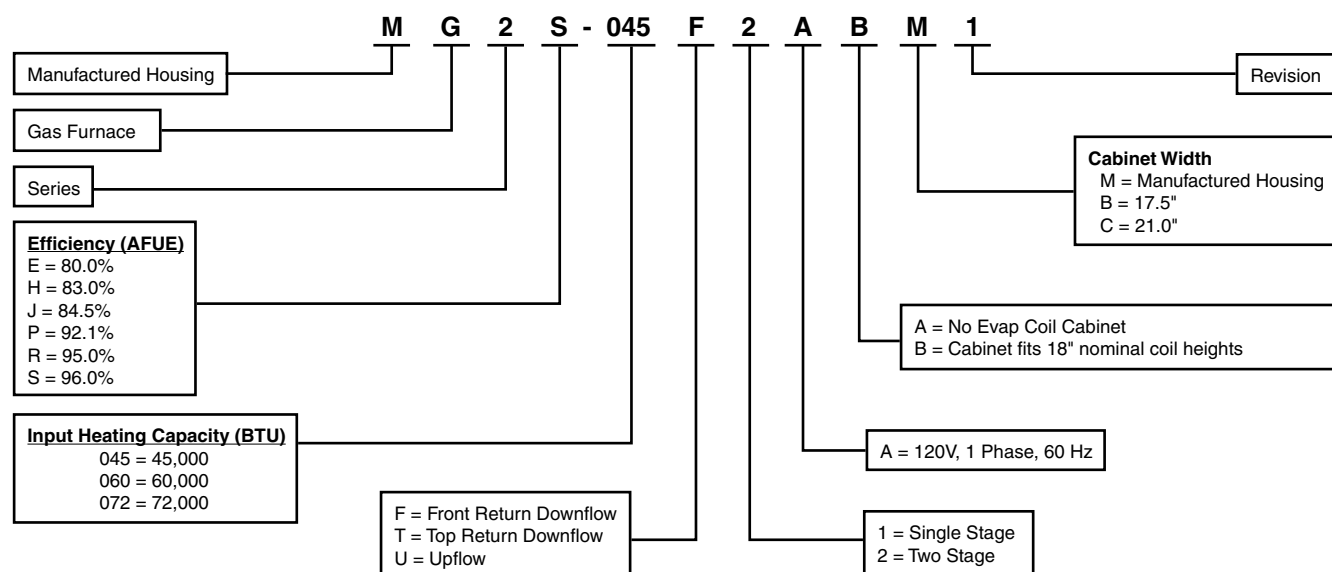
 Greyed out blower speeds do not meet FER efficiency requirements and should not be used.

BLOWER PERFORMANCE - Top Return

MODEL NUMBER	MOTOR SWITCH SETTINGS (0 =OFF,1 =ON)				COOLING				HEATING							
					EXTERNAL STATIC PRESSURE (IN.W.C.)				EXTERNAL STATIC PRESSURE (IN.W.C.)							
					0.2	0.3	0.4	0.5	0.2	0.3	0.4	0.5				
	1/5	2/6	3/7	4/8	CFM	CFM	CFM	CFM	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE
MG2S-045T*	0	0	0	0	872	831	797	745	872	46	831	48	797	50	745	54
	1	0	0	0	924	888	855	809	924	43	888	45	855	47	809	49
	0	1	0	0	1005	969	939	899	1005	40	969	41	939	43	899	44
	1	1	0	0	1076	1043	1014	972	1076	37	1043	38	1014	39	972	41
	0	0	1	0	1155	1122	1078	1046	1155	35	1122	36	1078	37	1046	38
	1	0	1	0	1220	1187	1158	1126	1220	33	1187	34	1158	35	1126	36
	0	1	1	0	1269	1230	1199	1164								
	1	1	1	0	1321	1290	1251	1218								
	0	0	0	1	1399	1360	1325	1293								
	1	0	0	1	1448	1423	1382	1347								
	0	1	0	1	1495	1463	1427	1390								
	1	1	0	1	1531	1490	1457	1424								
	0	0	1	1	1564	1534	1501	1464								
	1	0	1	1	1611	1576	1543	1510								
	0	1	1	1	1645	1609	1583	1547								
	1	1	1	1	1683	1653	1624	1594								
MG2S-060T*	0	0	0	0	872	831	797	745	872	61	831	64	797	67	745	72
	1	0	0	0	924	888	855	809	924	58	888	60	855	62	809	66
	0	1	0	0	1005	969	939	899	1005	53	969	55	939	57	899	59
	1	1	0	0	1076	1043	1014	972	1076	50	1043	51	1014	53	972	55
	0	0	1	0	1155	1122	1078	1046	1155	46	1122	48	1078	49	1046	51
	1	0	1	0	1220	1187	1158	1126	1220	44	1187	45	1158	46	1126	47
	0	1	1	0	1269	1230	1199	1164								
	1	1	1	0	1321	1290	1251	1218								
	0	0	0	1	1399	1360	1325	1293								
	1	0	0	1	1448	1423	1382	1347								
	0	1	0	1	1495	1463	1427	1390								
	1	1	0	1	1531	1490	1457	1424								
	0	0	1	1	1564	1534	1501	1464								
	1	0	1	1	1611	1576	1543	1510								
	0	1	1	1	1645	1609	1583	1547								
	1	1	1	1	1683	1653	1624	1594								
MG2S-072T	0	0	0	0	885	848	804	764	885	72	848	75	804	80	764	84
	1	0	0	0	944	901	862	816	944	68	901	71	862	74	816	78
	0	1	0	0	1020	976	940	906	1020	63	976	66	940	68	906	71
	1	1	0	0	1087	1055	1019	985	1087	59	1055	61	1019	63	985	65
	0	0	1	0	1161	1132	1089	1060	1161	55	1132	57	1089	59	1060	60
	1	0	1	0	1225	1195	1164	1137	1225	52	1195	54	1164	55	1137	56
	0	1	1	0	1265	1239	1204	1175	1265	51	1239	52	1204	53	1175	54
	1	1	1	0	1330	1299	1265	1228	1330	48	1299	49	1265	51	1228	52
	0	0	0	1	1388	1353	1320	1289								
	1	0	0	1	1447	1413	1382	1346								
	0	1	0	1	1489	1454	1423	1388								
	1	1	0	1	1513	1484	1452	1420								
	0	0	1	1	1556	1523	1492	1459								
	1	0	1	1	1599	1566	1534	1502								
	0	1	1	1	1639	1609	1578	1547								
	1	1	1	1	1670	1651	1613	1583								

 Greyed out blower speeds do not meet FER efficiency requirements and should not be used.

MODEL IDENTIFICATION CODE



VENTING

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

Maximum Direct Vent, Dual Pipe Length (ft.)*		
MG2S Inputs (BTUH)	Inlet / Outlet 3 in. Diameter	Inlet / Outlet 2 in. Diameter
45,000	60	30
60,000	60*	30
72,000	60	30

*NOTES:

1. Subtract 3.5 ft. for each additional 3" 90 degree 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 2,000 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 M7 condensing furnaces.
7. For Canadian applications, use ULC S636 approved material.
8. For the 60,000 BTU top return furnace, the length of the 3" diameter pipe must not be longer than 30 ft.

Pipe Materials	ANSI/ASTM Standard
Schedule 40PVC	D1785
PVC-DWV	D2665
SDR-21 & SDR-26	D2241
ABS-DWV	D2661
Schedule 40 ABS	F628
Foam / Cellular Core PVC	F891
PolyPro® by DuraVent	ULC-S636

ACCESSORIES

Description	Part Number
Automatic Cavity Damper	901083
Side Return Air Kit	904003
Neutralizer Kit - All Models	902377
PVC Isolation Kit	904063
Vent Transition Kit	904106
Soffit Air Inlet (for VentilAire III only)	917201A
VentilAire III - Sloped 3/12	914098B
VentilAire IV - Sloped 3/12	914229B
Side Wall Vent Kit, 2"	904617
Side Wall Vent Kit, 3"	904347
Concentric Vent Kit, 3"	904953
Non-Condensing to M7/CMF95 Vent Transition Kit	921683

Duct Connector Kits		
If Floor Cavity ("X") is:	Duct Connector Type & Part Number	
	Finger Tab	Screw Down
7/8" (22)	901987A	904008
2" (51)	901988A	904009
4-1/4" (108)	901989A	904010
6-1/4" (159)	901990A	904011
8-1/4" (210)	901991A	904012
10-1/4" (260)	901992A	904013
12-1/4" (311)	901993A	904014

NOTE: Dimensions shown as Inches (Millimeter)



GENERAL TERMS OF LIMITED WARRANTY

Nortek Global HVAC, LLC will furnish a replacement for any part of this product which fails in normal use and service within the terms and conditions of the warranty.

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

Before purchasing this appliance, read important energy cost and efficiency information available from your retailer. Specifications and illustrations subject to change without notice and without incurring obligations. Printed in U.S.A (01/2022)