

G24M SERIES UNITS

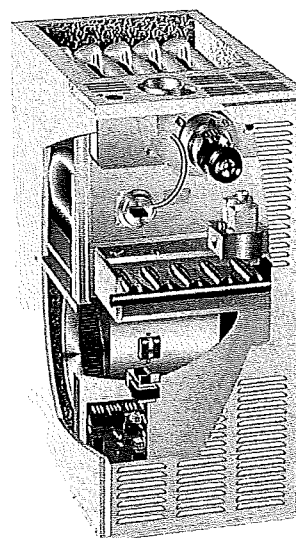
G24M series units are mid-efficiency gas furnaces manufactured with tubular steel heat exchangers formed of aluminized steel. G24M units are available in heating capacities of 45,000 to 140,000 Btuh and cooling applications up to 5 tons. Refer to Engineering Handbook for proper sizing.

Units are factory equipped for use with natural gas. A kit is available for conversion to LPG operation. Early model G24M units use electronic (direct spark) ignition. Late model G24M model units feature the Lennox SureLight® silicon-nitride ignition system. The G24MX unit meets the California Nitrogen Oxides (NO_x) Standards and California Seasonal Efficiency requirements. All units use a redundant gas valve to assure safety shut-off as required by A.G.A. or C.G.A.

Units may be installed in upflow, downflow or horizontal position. The heat exchanger is designed for upright or horizontal use only. When the unit is installed in the downflow position, the heat exchanger is field removed and reinstalled so it is upright when the cabinet is inverted. No field conversion is required when the unit is installed in the horizontal position.

The heat exchanger, burners and manifold assembly can easily be removed for inspection and service by simply disconnecting gas, unplugging wiring harness and spark wires and removing four screws holding the heat exchanger in place. Then the heat exchanger slides out of the cabinet.

All specifications in this manual are subject to change. Procedures outlined in this manual are presented as a recommendation only and do not supersede or replace local or state codes. In the absence of local or state codes, the guidelines and procedures outlined in this manual (except where noted) are recommended only and do not constitute code.



SPECIFICATIONS

Model No.		G24M2(X)-45	G24M2-60	G24M3(X)-60	G24M2-75	G24M3(X)-75
Input Btuh (kW)		45,000 (13.2)	60,000 (17.6)		75,000 (22.0)	
Output Btuh (kW)		36,900 (10.8)	49,200 (14.4)		61,700 (18.1)	
☆A.F.U.E.		80.1%	80.5%	80.5%	80.1%	80.0%
California Seasonal Efficiency		75.4%	76.4%	75.9%	76.8%	76.8%
Flue size connection diameter — in. (mm) round		3 (76)			4 (102)	
Temperature rise range — °F (°C)		30 - 60 (17 - 33)	45 - 75 (25 - 42)			
High static certified by A.G.A./C.G.A. — in wg. (Pa)		.50 (125)				
Gas Piping Size I.P.S. Natural or LPG/propane		1/2 (13)				
Blower wheel nominal diameter x width	in.	9 x 7		10 x 7		
	mm	229 x 178		254 x 178		
Blower motor output — hp (W)		1/4 (187)		1/3 (224)		
Nominal cooling that can be added	Tons	1, 1-1/2 or 2		2, 2-1/2 or 3		
	kW	3.5, 5.3 or 7.0		7.0, 8.8 or 10.6		
Shipping weight — lbs. (kg) 1 package		130 (59)		135 (61)		
Electrical characteristics		120 volts — 60 hertz — 1 phase (less than 12 amps) All models				
◆ Optional Accessories (Must Be Ordered Extra) ◆						
LPG/propane kit		LB-69845L (38K84)				
Twinning Kit		96J69 — 5 lbs. (2 kg)				
Up-Flow/Horizontal Filter and Filter Rack Kits		Single (32J02) Ten Pack (66K64)				
‡No. & size of filters - in. (mm)		(1) 16 x 20 x 1 (406 x 508 x 25)				
①Down-flow Filter Kit	Catalog No.	LB-69843A (32J01) — 3 lbs. (1 kg)				
	No. & Size of Filters — in. (mm)	(2) 16 x 20 x 1 (406 x 508 x 25)				
Down-flow Combustible Floor Base		LB-79239A (67J91) — 10 lbs. (4 kg)				
Sidewall Power Venting Kit		79J15 — 25 lbs. (11 kg)				
Hanging Bracket Kit		LB-69957 (46J66) — 15 lbs. (8 kg)				

☆Annual Fuel Utilization Efficiency based on U.S. DOE test procedures and according to FTC labeling regulations. Isolated combustion system rating for non-weatherized furnaces.

‡Polyurethane frame type filter is furnished with kit.

□ Filters are not furnished with kit and must be ordered extra.

SPECIFICATIONS

Model No.		G24M4(X)-75	G24M3/4(X)-100	G24M4/5(X)-100
Input Btuh (kW)		75,000 (22.0)	100,000 (29.3)	
Output Btuh (kW)		61,700 (18.1)	82,000 (24.0)	
☆A.F.U.E.		80.0%	80.1%	80.0%
California Seasonal Efficiency		76.3%	76.5%	77.0%
Flue size connection diameter — in. (mm) round		4 (102)		
Temperature rise range — °F (°C)		45 - 75 (25 - 42)		35 - 65 (19 - 36)
High static certified by A.G.A./C.G.A. — in wg. (Pa)		.50 (125)		
Gas Piping Size I.P.S. Natural or LPG/propane		1/2 (13)		
Blower wheel nominal diameter x width	in.	12 x 8		12 x 9
	mm	305 x 203		305 x 229
Blower motor output — hp (W)		1/2 (373)		3/4 (560)
Nominal cooling that can be added	Tons	2, 2-1/2, 3, 3-1/2 or 4		3-1/2, 4, 5 or 6
	kW	7.0, 8.8, 10.6, 12.3 or 14.1		12.3, 14.1, 17.6 or 21.1
Shipping weight — lbs. (kg) 1 package		140 (64)	175 (79)	175 (79)
Electrical characteristics		120 volts — 60 hertz — 1 phase (less than 12 amps) All models		
Optional Accessories (Must Be Ordered Extra)				
LPG/propane kit		LB-69845L (38K84)	LB-69845K (81J14)	
Twinning Kit		96J69 — 5 lbs. (2 kg)		
Up-Flow/Horizontal Filter and Filter Rack Kits ‡No. & size of filters - in. (mm)		Single (32J02) Ten Pack (66K64) (1) 16 x 20 x 1 (406 x 508 x 25)	Single (46J14) Ten Pack (66K65) (1) 20 x 20 x 1 (508 x 508 x 25)	
Down-flow Filter Kit	Catalog No.	LB-69843A (32J01) — 3 lbs. (1 kg)		
	No. & Size of Filters — in. (mm)	(2) 16 x 20 x 1 (406 x 508 x 25)		
Down-flow Combustible floor Base		LB-79239A (67J91) — 10 lbs. (4 kg)	LB-79239B (67J92) — 10 lbs. (4 kg)	
Sidewall Power Venting Kit		79J15 — 25 lbs. (11 kg)		
Hanging Bracket Kit		LB-69957 (46J66) — 15 lbs. (8 kg)		

★Annual Fuel Utilization Efficiency based on U.S. DOE test procedures and according to FTC labeling regulations. Isolated combustion system rating for non-weatherized furnaces.

‡Polyurethane frame type filter is furnished with kit.

□ Filters are not furnished with kit and must be ordered extra.

SPECIFICATIONS

Model No.			G24M3/4-120	G24M4/5(X)-120	G24M4/5-140
Input Btuh (kW)			120,000 (35.2)		140,000 (41.0)
Output Btuh (kW)			98,400 (28.8)		114,800 (33.6)
★A.F.U.E.			80.0%	80.1%	80.0%
California Seasonal Efficiency			Not Available	75.5%	Not Available
□ Flue size connection diameter — in. (mm) round			4 (102)		5 (127)
Temperature rise range — °F (°C)			45 - 75 (25 - 42)		
High static certified by A.G.A./C.G.A. — in wg. (Pa)			.50 (125)		.65 (162)
Gas Piping Size I.P.S. Natural or LPG/propane - in (mm)			1/2 (13)		
Blower wheel nominal diameter x width	in.	12 x 8		12 x 9	
	mm	305 x 203		305 x 229	
Blower motor output — hp (W)			1/2 (373)		3/4 (560)
Nominal cooling that can be added	Tons	2, 2-1/2, 3, 3-1/2 or 4		3-1/2, 4, 5 or 6	
	kW	7.0, 8.8, 10.6, 12.3 or 14.1		12.3, 14.1, 17.6 or 21.1	
Shipping weight — lbs. (kg) 1 package			175 (79)		190 (86)
Electrical characteristics			120 volts — 60 hertz — 1 phase (less than 12 amps) All models		
▼ Optional Accessories (Must Be Ordered Extra) ▼					
LPG/propane kit			LB-69845K (81J14)		
Twinning Kit			96J69 — 5 lbs. (2 kg)		
Up-Flow/Horizontal Filter and Filter Rack Kits ‡No. and size of filters - in. (mm)			Single (46J14) Ten Pack (66K65) (1) 20 x 20 x 1 (508 x 508 x 25)		Single (58J93) Ten Pack (66K66) (1) 20 x 20 x 1 (508 x 508 x 25)
□ Down-flow Filter Rack	Catalog No.		LB-69843A (32J01) — 3 lbs. (1 kg)		
	No. & Size of Filters	in.	(2) 16 x 20 x 1		
		mm	(2) 406 x 508 x 25		
Down-flow Combustible Floor Base			LB-79239B (67J92) — 10 lbs. (4 kg)		LB-79239C (67J93) — 12 lbs. (5 kg)
Sidewall Power Venting Kit			79J15 — 25 lbs. (11 kg)		
Hanging Bracket Kit			LB-69957 (46J66) — 15 lbs. (8 kg)		

★Annual Fuel Utilization Efficiency based on U.S. DOE test procedures and according to FTC labeling regulations. Isolated combustion system rating for non-weatherized furnaces.

‡ Polyurethane frame type filter is furnished with kit.

① 2 in. x 5 in. (51 mm x 127 mm) flue adaptor furnished with -140 input furnaces for connection to furnace induced draft blower.

② Filters are not furnished with kit and must be ordered extra.

BLOWER DATA

G24M2-45, G24M2-60 AND G24M2-75 BLOWER PERFORMANCE

External Static Pressure		Air Volume at Various Blower Speeds							
		High		Medium-High		Medium-Low		Low	
in. w.g.	Pa	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s
0	0	1270	600	980	460	770	365	570	270
.05	12	1245	590	975	460	770	365	565	265
.10	25	1220	575	975	460	770	365	565	265
.15	37	1195	565	965	455	765	360	560	265
.20	50	1170	550	960	455	760	360	560	265
.25	62	1140	540	950	450	760	360	555	260
.30	75	1110	525	940	445	760	360	550	260
.40	100	1060	500	910	430	750	355	545	255
.50	125	990	465	880	415	740	350	540	255
.60	150	900	425	810	380	690	325	530	250
.70	175	800	380	740	350	630	295	520	245

NOTE — All air data is measured external to unit with 1 in. (25 mm) cleanable filter (not furnished) in place. Also see Filter Air Resistance table

BLOWER DATA
G24M3-60 AND G24M3-75 BLOWER PERFORMANCE

External Static Pressure		Air Volume at Various Blower Speeds							
		High		Medium-High		Medium-Low		Low	
in. w.g.	Pa	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s
0	0	1425	670	1240	585	1000	470	800	380
.05	12	1415	670	1230	580	995	470	800	380
.10	25	1400	660	1220	575	990	465	795	375
.15	37	1385	655	1200	565	985	465	795	375
.20	50	1370	645	1180	555	980	460	790	375
.25	62	1350	635	1160	545	970	460	780	370
.30	75	1330	630	1140	540	955	450	770	365
.40	100	1280	605	1095	515	925	435	750	355
.50	125	1210	570	1040	490	900	425	720	340
.60	150	1135	535	985	465	860	405	680	320
.70	175	1070	505	920	435	800	380	630	300

NOTE — All air data is measured external to unit with 1 in. (25 mm) cleanable filter (not furnished) in place. Also see Filter Air Resistance table

G24M4-75, G24M3/4-100 AND G24M3/4-120 BLOWER PERFORMANCE

External Static Pressure		Air Volume at Various Blower Speeds									
		High		Medium-High		Medium		Medium-Low		Low	
in. w.g.	Pa	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s
0	0	1830	865	1600	755	1325	625	1070	505	880	415
.05	12	1815	855	1585	750	1320	625	1070	505	880	415
.10	25	1800	850	1570	740	1315	620	1070	505	880	415
.15	37	1875	885	1550	730	1310	620	1065	505	875	415
.20	50	1750	825	1530	720	1300	615	1060	500	875	415
.25	62	1725	815	1515	715	1290	610	1050	495	870	410
.30	75	1700	800	1500	710	1275	600	1040	490	870	410
.40	100	1650	780	1460	690	1245	590	1020	480	860	405
.50	125	1600	755	1420	670	1210	570	1000	470	840	395
.60	150	1550	730	1380	650	1170	550	980	460	820	385
.70	175	1480	700	1330	630	1130	535	960	455	790	375

NOTE — All air data is measured external to unit with 1 in. (25 mm) cleanable filter (not furnished) in place. Also see Filter Air Resistance table

BLOWER DATA
G24M4/5-100, G24M4/5-120 AND G24M4/5-140 BLOWER PERFORMANCE

External Static Pressure		Air Volume at Various Blower Speeds									
		High		Medium-High		Medium		Medium-Low		Low	
in. w.g.	Pa	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s	cfm	L/s
0	0	2450	1155	2160	1020	1970	930	1700	800	1500	710
.05	12	2440	1150	2155	1015	1965	925	1695	800	1500	710
.10	25	2430	1145	2150	1015	1960	925	1690	800	1495	705
.15	37	2415	1140	2135	1010	1950	920	1685	795	1495	705
.20	50	2400	1135	2120	1000	1940	915	1680	795	1490	705
.25	62	2380	1125	2105	995	1930	910	1675	790	1480	700
.30	75	2360	1115	2090	985	1915	905	1670	790	1470	695
.40	100	2310	1090	2050	965	1870	880	1650	780	1440	680
.50	125	2260	1065	2000	945	1810	855	1610	760	1410	665
.60	150	2180	1030	1950	920	1750	825	1560	735	1370	645
.70	175	2100	990	1890	890	1700	800	1520	715	1330	630

NOTE — All air data is measured external to unit with 1 in. (25 mm) cleanable filter (not furnished) in place. Also see Filter Air Resistance table

FILTER AIR RESISTANCE

cfm (L/s)	in. w.g. (Pa)
0 (0)	0.00 (0)
200 (95)	0.01 (2)
400 (185)	0.03 (7)
600 (280)	0.04 (10)
800 (375)	0.06 (15)
1000 (470)	0.09 (22)
1200 (560)	0.12 (30)
1400 (655)	0.15 (37)
1600 (750)	0.19 (47)
1800 (845)	0.23 (57)
2000 (935)	0.27 (67)
2200 (1030)	0.33 (82)
2400 (1125)	0.38 (95)
2600 (1220)	0.44 (110)