



**RESIDENTIAL
PRODUCT SPECIFICATIONS**

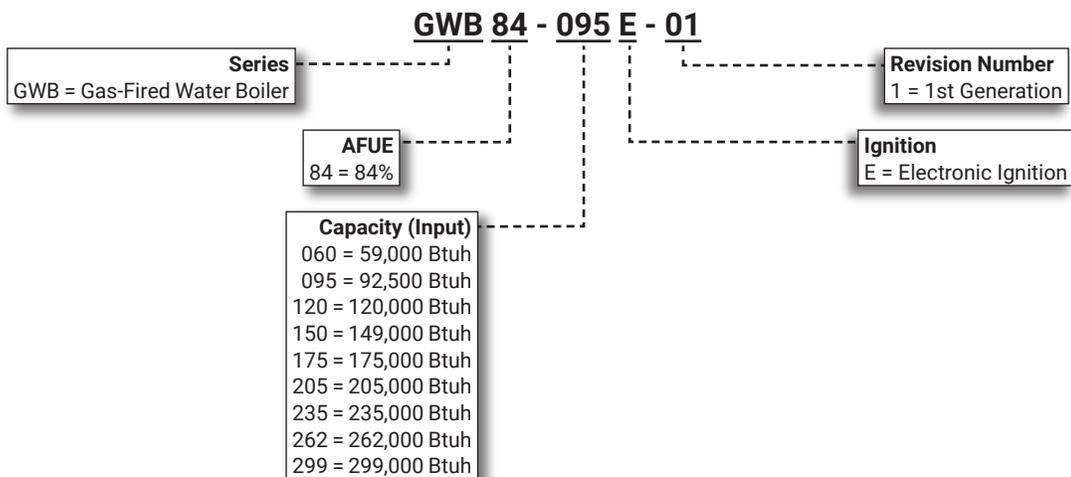
Bulletin No. 210926
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(NOTE - GWB84-060 through 235 models shown)

AFUE - 84.0%
Heating Input - 59,000 to 299,000 Btuh

MODEL NUMBER IDENTIFICATION



CONTENTS

Approvals And Warranty	2
Circulating Pump Flow Rate	10
Dimensions	9
Features	2
High Altitude Natural Gas Kits	7
Installation Clearances	8
LPG/Propane Conversion Kits	7
LPG/Propane To Natural Gas Conversion Kits	7
Optional Accessories - Order Separately	6
Orifice Kits - 262-299 Models Only	8
Specifications	5

APPROVALS AND WARRANTY

APPROVALS

- AHRI Certified
- Annual Fuel Utilization Efficiencies based on US DOE test procedures and FTC labeling regulations
- Certified by CSA International
- Boiler heat exchanger assemblies are constructed and hydrostatically tested in accordance with American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code Section IV Standards for cast iron heating boilers

WARRANTY

- Heat Exchanger:
 - Limited twenty years in residential applications only
 - Limited one year in non-residential applications
- All other covered components:
 - Limited five-years in residential applications
 - Limited one year in non-residential installations

NOTE - Refer to Lennox Equipment Limited Warranty certificate included with unit for specific details.

FEATURES

APPLICATIONS

- Nine models with heating inputs of 59,000 to 299,000 Btuh
- AFUE - 84.0%
- Natural gas or LPG/Propane (LPG with optional conversion kit)
- Boiler applications include radiant floor heating, baseboard heating and zoned heating systems
- Compact size allows easy installation in a basement or utility room
- Shipped factory assembled with all controls installed and wired
- Each unit is factory test operated to ensure dependable performance

- Pilot gas is ignited and burns during each running cycle of the boiler
- Main burners and pilot gas are extinguished during the off cycle
- Ignition system permits main gas valve to open only when the pilot burner is proven to be lit
- Pilot operation is fully automatic on demand for heat.
- Should flame fail to ignite, control will continue to re-attempt ignition
- Should a loss of flame occur, the main valve closes, shutting down the unit

Automatic Gas Control

- Silent operating gas controls provide 100% safety shut off
- 24 volt redundant combination gas control valve combines automatic safety pilot, manual shut off option (On-Off), pilot filtration, automatic electric valve (dual) and gas pressure regulation into a compact combination control
- Dual valve design provides double assurance of 100% close off of gas to the pilot and main burners on each off cycle

Stainless Steel Burners (060 to 235 Models)

- Each burner has rows of continuous ports which result in quiet and clean combustion

HEATING SYSTEM

Heat Exchanger

- Boiler sections are constructed of long life cast iron
- Boiler sections and push nipples expand and contract together, providing positive watertight seal
- Boiler components are easily accessible for cleaning and servicing

Electronic Ignition

- Electronic spark igniter provides positive ignition of pilot burner on each operating cycle

FEATURES

HEATING SYSTEM (continued)

Titanium Burners (262 and 299 Models)

- Titanium composite burners resist corrosion and oxidation
- Slotted port design results in quiet, clean combustion
- Superior strength and longevity

Circulating Pump

- Constructed of cast iron
- Pump motor is impedance protected
- Motor and impeller is removeable as a single unit for servicing

Relief Valve

- Furnished as standard for field installation
- Valve provides for pressure relief of heating system in case of abnormal operating conditions
- Valve opens at 30 psig
- Approved by ASME

Combination Temperature/Pressure Gauge

- Gauge monitors system for safe and reliable operation

Brass Drain Valve

- 3/4 in. brass drain valve is furnished as standard for field installation in drain outlet on side of cabinet on all models
- See dimension drawing for location

Optional Accessories

LPG/Propane Standard and High Altitude Conversion Kits

- Required for field changeover from natural gas

Natural Gas High Altitude Kits

- Required for high altitude operation

IGNITION CONTROL MODULE

- Control module provides ignition sequence, flame monitoring and safety shutoff for intermittent pilot spark ignition heating system

BOILER CONTROL MODULE

- On-board microprocessor saves fuel by adjusting boiler temperature based on heating demand
- Easy dial-in settings for low/high temperature limits and economy settings
- Installed internal to the boiler cabinet (60 through 235 models and external on 262 and 299 models)
- Durable protective housing with display window



Thermal Targeting

- Microprocessor-based algorithm monitors thermostat activity and continually evaluates how much heat the house requires

- When it is very cold outside, heat demand is high and the control raises the boiler Target Temperature to provide needed heat to the house
- When the outside temperature is milder, heat demand is lower
- During these periods, the control lowers the boiler Target Temperature - saving fuel - while continuing to provide comfort to the house

Thermal Pre-Purge

- Enhances boiler efficiency by supplying latent heat that may remain in the boiler from a previous run cycle to the heating zone requiring heat
- The control activates the burner only when it determines that the latent heat will not be adequate to satisfy the heating demand

Enhanced Condensing Protection

- Allows the boiler to heat to 125°F before energizing the circulating pump, reducing the potential for condensing
- Once activated, the control continues to monitor boiler temperature and interrupts the pump if it drops below 115°F

Display LEDs

- Three, seven segment LEDs continually displays boiler temperature
- Instantly changes to display control settings when any dial is adjusted
- Indicator light for heating call
- Fahrenheit or Celsius display

LED Status Lights

- Status lights on top of control continually indicates which functions are active and if the control is holding the burner off for any reason



TEMP

- **ACTIVE** – Indicates the control is powered and the temperature function is active
- **HI TEMP** – Illuminates any time the burner is off as a result of the boiler reaching the high limit setting

LWCO

- **ACTIVE** – Illuminates when the control is providing low water cut-off protection
- **LOW WATER** – Indicates a low water condition in the boiler

ECONOMY

- **ACTIVE** – Indicates that the Economy dial is turned on and that Thermal Targeting function is active
- **TARGET** – Illuminates any time the burner is off as a result of the boiler reaching the Target temperature determined by Thermal Targeting
- **TEST SETTINGS BUTTON** – Automatic or Manual reset mode. and test settings for initial control setup

Transformer

- 40VA transformer furnished integral to the Boiler Control Module

FEATURES

ADDITIONAL CONTROLS

Flame Rollout Switch

- Temperature sensitive manual reset switch is furnished and factory installed (060 through 235 models)
- Temperature sensitive fusible-link device is furnished and factory installed (262 and 299 models)
- Prevents unit operation in the event combustion products passageway through the flueway is reduced or blocked

Electrical Junction Box

- Facilitates easy wiring connections
- Furnished for field installation on 060 through 235 models)
- Factory installed in the Boiler Control Module housing on 262 and 299 models

Limit Sensor

- Factory installed immersion type limit sensor provides protection against abnormal operating conditions

Optional Accessories

Thermostat

- Thermostat is not furnished with unit
- Lennox Price Book for selection

VENTING

Blocked Vent Shutoff Sensor

- Temperature Switch prevents unit operation in case of flue blockage
- Sensor is furnished as standard and factory installed at the relief opening of the draft diverter

Integral Draft Hood

- Reduces the overall height and footprint of the boiler making it ideal for low clearance/space limited installations

Vent Damper

- Motorized vent damper electrically interlocks with the gas ignition system to increase efficiency of heating system by reducing loss of heated air up the chimney after burner shut off
- Also reduces chimney infiltration during boiler off cycle
- Furnished as standard for field installation

CABINET

- Heavy gauge steel
- Thermosetting polyester paint finish
- Wrap-around fiberglass insulation on heat exchanger (060-235 models)
- Fully insulated cabinet with fiberglass insulation (262, 299 models) keeps cabinet surface temperatures low
- Hole for drain valve (furnished) furnished on left side of cabinet for 262 and 299 models only
- All controls are factory installed
- Burner access panel is easily removed for servicing

Draft Diverter

- Top rear of boiler on 060 through 235 models
- Top front and integral to the unit cabinet on 262 and 299 models
- See dimension drawings

SPECIFICATIONS

		Model No.	GWB84-060E	GWB84-095E	GWB84-120E	GWB84-150E	GWB84-175E
Gas Heating Performance	Heating capacity input - Btuh		59,000	92,500	120,000	149,000	175,000
	Heating capacity output - Btuh		50,000	78,000	101,000	125,000	147,000
	¹ Net AHRI rating - Btuh		43,000	68,000	88,000	109,000	128,000
	² AFUE		84.0%	84.0%	84.0%	84.0%	84.0%
Boiler Data	Number of boiler sections		3	4	5	6	7
	Boiler capacity - U.S. gallons		1.9	2.3	2.8	3.2	3.7
Connections in.	Flue Size diameter (round)		4	5	6	6	7
	Gas piping size I.P.S.	Natural gas	1/2 NPT				
		LPG/Propane	1/2 NPT				
	Water supply and return size		1-1/4 NPT				
	Drain connection size		3/4 NPT				
Electrical characteristics	120 volts - 60 hertz - 1 phase (less than 12 amps)						
Shipping Data	lbs. - 1 package		215	250	295	335	385

¹ Net AHRI ratings indicate the amount of heat each boiler will produce under normal conditions and thermostatic control.

AHRI water ratings are based on an allowance of 1.15 in accordance with the factors shown in the Operations Manual of the AHRI Residential Boilers Certification Program.

Selection of boiler size should be based on "Net AHRI Rating" being equal to or greater than the calculated heat loss of the building.

² Heating Capacity and AFUE (Annual Fuel Utilization Efficiency) based on US DOE test procedures and FTC labeling regulations.

SPECIFICATIONS

		Model No.	GWB84-205E	GWB84-235E	GWB84-262E	GWB84-299E
Gas Heating Performance	Heating capacity input - Btuh		205,000	235,000	262,000	299,000
	Heating capacity output - Btuh		172,000	197,000	221,000	251,500
	¹ Net rating - Btuh		150,000	172,000	192,000	219,000
	² AFUE		84.0%	84.0%	84.0%	84.0%
Boiler Data	Number of boiler sections		8	9	8	9
	Boiler capacity - U.S. gallons		4.1	4.6	10.3	11.6
Connections in.	Flue Size diameter (round)		7	7	7	7
	Gas piping size I.P.S.	Natural gas	3/4 NPT	3/4 NPT	1/2 NPT	1/2 NPT
		LPG/Propane	3/4 NPT	3/4 NPT	1/2 NPT	1/2 NPT
	Water supply and return size		1-1/4 NPT	1-1/4 NPT	1-1/4 NPT	1-1/4 NPT
	Drain connection size		3/4 NPT	3/4 NPT	3/4 NPT	3/4 NPT
Electrical characteristics	120 volts - 60 hertz - 1 phase (less than 12 amps)					
Shipping Data	lbs. - 1 package		420	465	651	722

¹ Net AHRI ratings indicate the amount of heat each boiler will produce under normal conditions and thermostatic control.

AHRI water ratings are based on an allowance of 1.15 in accordance with the factors shown in the Operations Manual of the AHRI Residential Boilers Certification Program.

Selection of boiler size should be based on "Net AHRI Rating" being equal to or greater than the calculated heat loss of the building.

² Heating Capacity and AFUE (Annual Fuel Utilization Efficiency) based on US DOE test procedures and FTC labeling regulations.

OPTIONAL ACCESSORIES - ORDER SEPARATELY

See Lennox Price Book For Complete Listing of Additional Accessories

Catalog No.

PLUMBING

Automatic Air Vent Valve (3/4 in. sweat)	29K49
Automatic Air Vent Valve (1 in. sweat)	29K50
Air Eliminator (1 in. sweat)	X6447
Air Eliminator (1-1/4 in. sweat)	X6449
Boiler Trim Kit w/ Check Valve, 1 in. NPT Air Eliminator, 4.4 Gal. Expansion Tank	X6524
Boiler Trim Kit w/ Check Valve, 1-1/4 in. NPT Air Eliminator, 4.4 Gal. Expansion Tank	X6525
Flow Check Valve (3/4 in.)	78Y08
Water Mixing Valve (3/4 in.)	99L99
Water Mixing Valve (1 in.)	10M00

WATER HEATING/STORAGE

Indirect Water Heater - 316L Stainless Steel Tank/Coil	40 US gallons	20X33
	60 US gallons	20X34

ZONING

Boiler Reset Control - Used with Zone Pump Control - Boiler and Outdoor Sensors furnished	X2965
Zone Pump Control - Four Zones (expandable to 15 zones with Expansion Module)	20X37
Zone Pump Control - Six Zones (expandable to 15 zones with Expansion Module)	20X38
Boiler Control Expansion Module (One Zone with 18 in. cable)	20X35
Boiler Control Expansion Module (Four Zones with 18 in. cable)	20X36
Zone Valve Control - Four Zones with Priority	20X39
Zone Valve Control - Six Zones with Priority	20X40
Zone Valve (3/4 in.)	78Y03
Zone Valve (1 in.)	78Y04
Zone Valve (1-1/4 in.)	78Y05

HIGH ALTITUDE NATURAL GAS KITS

Units are certified to operate at altitudes up to 2000 ft. CSA certified units for the U.S. and Canada must be derated 4% per 1000 ft. when installed at an elevation of more than 2000 feet above sea level.

NOTE – This is the only permissible derate for these units.

Model No.	GWB84-060E	GWB84-095E	GWB84-120E	GWB84-150E	GWB84-175E	GWB84-205E	GWB84-235E	GWB84-262E	GWB84-299E
2000 ft.	21L30	21L35	21L43	21L43	21L43	21L43	21L43	See Orifice Kits Table	See Orifice Kits Table
3000 ft.	21L31	21L37	21L44	21L44	21L44	21L44	21L44		
4000 ft.	21L31	21L38	21L44	21L44	21L44	21L44	21L44		
5000 ft.	21L31	21L38	21L45	21L45	21L45	21L45	21L45		
6000 ft.	21L32	21L39	21L45	21L45	21L45	21L45	21L45		
7000 ft.	21L32	21L39	21L46	21L46	21L46	21L46	21L46		
8000 ft.	21L33	21L40	21L46	21L46	21L46	21L46	21L46		
9000 ft.	21L33	21L40	21L47	21L47	21L47	21L47	21L47		
10,000 ft.	21L34	21L41	21L47	21L47	21L47	21L47	21L47		

LPG/PROPANE CONVERSION KITS

Units are certified to operate at altitudes up to 2000 ft. CSA certified units for the U.S. and Canada must be derated 4% per 1000 ft. when installed at an elevation of more than 2000 feet above sea level.

NOTE – This is the only permissible derate for these units.

Model No.	GWB84-060E	GWB84-095E	GWB84-120E	GWB84-150E	GWB84-175E	GWB84-205E	GWB84-235E	GWB84-262E	GWB84-299E
0-1999 ft.	20X10	21U93	21U94						
2000 ft.	21L26	Furnished	21L26	21L26	21L26	21L26	21L26	See Orifice Kits Table	See Orifice Kits Table
3000 ft.	21L26	21L28	21L26	21L26	21L26	21L26	21L26		
4000 ft.	21L26	21L28	21L26	21L26	21L26	21L26	21L26		
5000 ft.	21L26	21L28	21L26	21L26	21L26	21L26	21L26		
6000 ft.	21L26	21L28	21L26	21L26	21L26	21L26	21L26		
7000 ft.	21L26	21L28	21L26	21L26	21L26	21L26	21L26		
8000 ft.	21L27	21L29	21L27	21L27	21L27	21L27	21L27		
9000 ft.	21L27	21L29	21L27	21L27	21L27	21L27	21L27		
10,000 ft.	21L27	21L29	21L27	21L27	21L27	21L27	21L27		

LPG/PROPANE TO NATURAL GAS CONVERSION KITS

Model No.	GWB84-060E	GWB84-095E	GWB84-120E	GWB84-150E	GWB84-175E	GWB84-205E	GWB84-235E	GWB84-262E	GWB84-299E
0-2000 ft.	20X11	54L67	54L69						

ORIFICE KITS - 262-299 MODELS ONLY

Altitude	Natural Gas		LPG/Propane	
	Catalog No.	Orifice Size	Catalog No.	Orifice Size
2000 ft.	22A06	#35	22A12	#52
3000 ft.	22A07	#36	22A12	#52
4000 ft.	22A07	#36	22A12	#52
5000 ft.	22A08	#37	22A12	#52
6000 ft.	22A08	#37	22A12	#52
7000 ft.	99X95	#38	22A13	#53
8000 ft.	22A09	#39	22A13	#53
9000 ft.	22A10	#40	22A13	#53
10,000 ft.	22A11	#42	22A17	#54

NOTE - GWB84-262E requires seven (7) orifices per unit.
GWB84-299E requires eight (9) orifices per unit.

INSTALLATION CLEARANCES

Size	060 to 235 Models	262 to 299 Models
Left Side	2 (51)	6 (152)
Right Side Gas Supply/Control Side	2 (51)	7 (178)
Top	10 (254)	6 (152)
Front	¹ Alcove	¹ Alcove
Rear	6 (102)	6 (152)
Service Clearance (Front and One Side)	24 (610)	- - -
Service Clearance (Front and Right Side)	- - -	24 (610)
Floor	² Combustible	³ Non-Combustible
Flue Pipe	Single Wall	6 (152)
	Type "B" Double Wall	1 (25)
Hot Water Piping	Per Local Code	Per Local Code

NOTE - Air for combustion must conform to the methods outlined in the National Fuel Gas Code (NFPA 54/ANSI-Z223.1) or the National Standard of Canada CAN/CSA-B149.1 "Natural Gas and Propane Installation Code".

NOTE - In the U.S. flue sizing must conform to the methods outlined in the current National Fuel Gas Code (NFPA 54/ANSI-Z223.1) or applicable provisions of local building codes. In Canada flue sizing must conform to the methods outlined in National Standard of Canada CAN/CSA-B149.1.

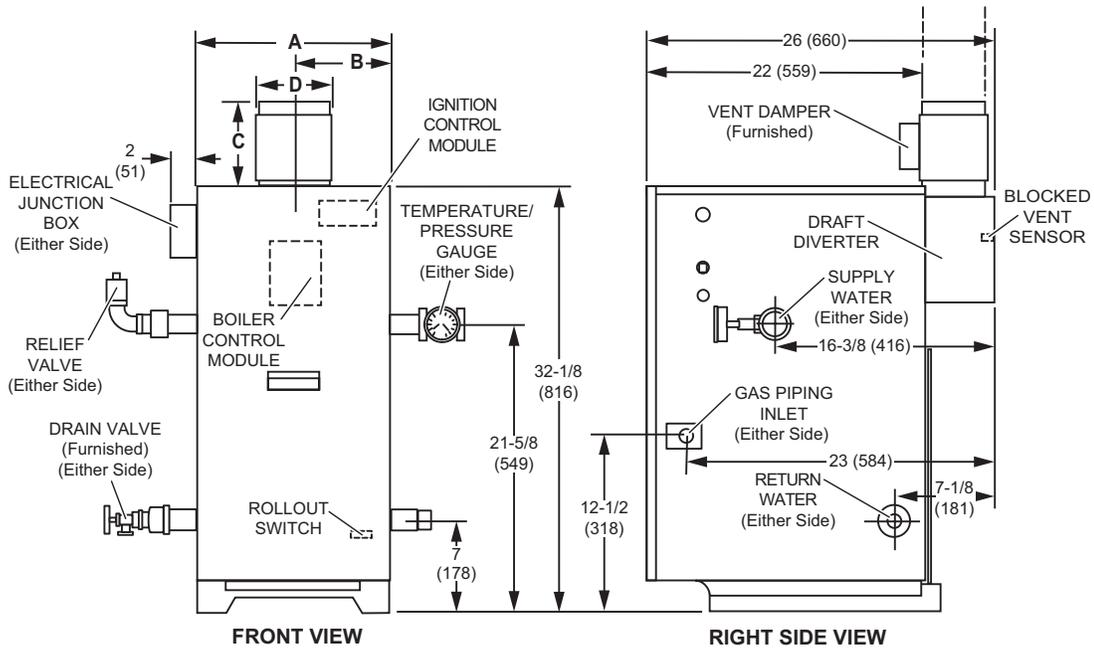
¹ Definition of Alcove is a three-sided space with no wall in front of boiler. ANSI standard for alcove is 18 inches (457 mm) from front of appliance to leading edge of side walls.

² Combustible floor approved.

³ Clearance for installation on combustible floor if combustible flooring base (field supplied) is installed between the boiler and the combustible floor.

DIMENSIONS

060 TO 235 MODELS

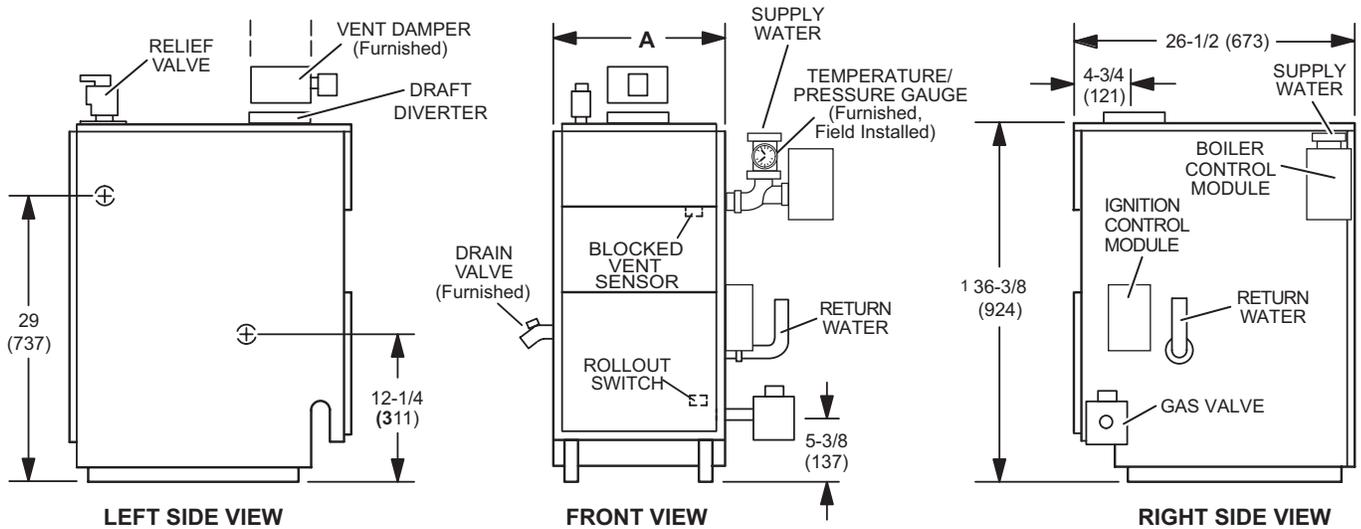


NOTE - Circulating pump is shipped separately with unit for field installation.

Model No.	A		B		C		D	
	in.	mm	in.	mm	in.	mm	in.	mm
GWB84-060E	13-3/8	340	6-3/4	171	6	152	4	102
GWB84-095E	13-1/2	343	6-3/4	171	6	152	5	127
GWB84-120E	16-1/4	413	8-1/8	206	6-1/2	165	6	152
GWB84-150E	19	483	9-1/2	241	6-1/2	165	6	152
GWB84-175E	21-7/8	555	11	279	7	178	7	178
GWB84-205E	27-1/2	699	13-3/4	349	7	178	7	178
GWB84-235E	27-1/2	699	13-3/4	349	7	178	7	178

DIMENSIONS

262 TO 299 MODELS



NOTE - Circulating pump is shipped separately with unit for field installation.

¹ Minimum acceptable height for low water cutoff probe.

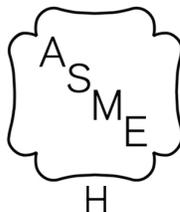
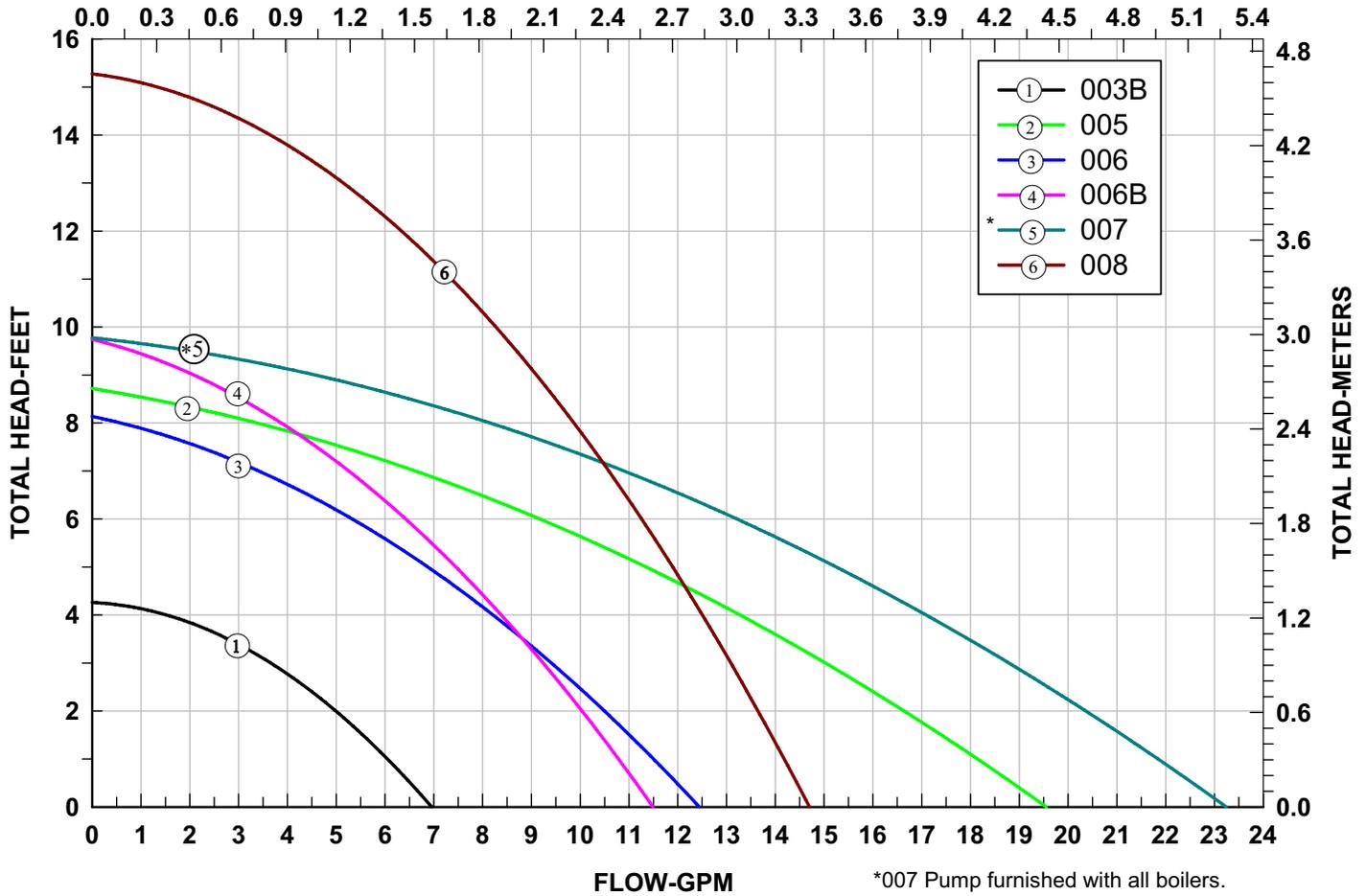
Model No.	A	
	in.	mm
GWB84-262E-3	27-1/2	699
GWB84-299E-3	30-3/4	781

NOTE - Add 7 (178 mm) to height for Vent Damper.

CIRCULATING PUMP FLOW RATE



FLOW-M3/H



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Contact us at 1-800-4-LENNOX

NOTE - Due to Lennox' ongoing commitment to quality, Specifications, Ratings and Dimensions subject to change without notice and without incurring liability. Improper installation, adjustment, alteration, service or maintenance can cause property damage or personal injury. Installation and service must be performed by a qualified installer and servicing agency.

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