



Gas-Fired, Modulating, Condensing, Wall Hung Water Boiler - 60 Hz

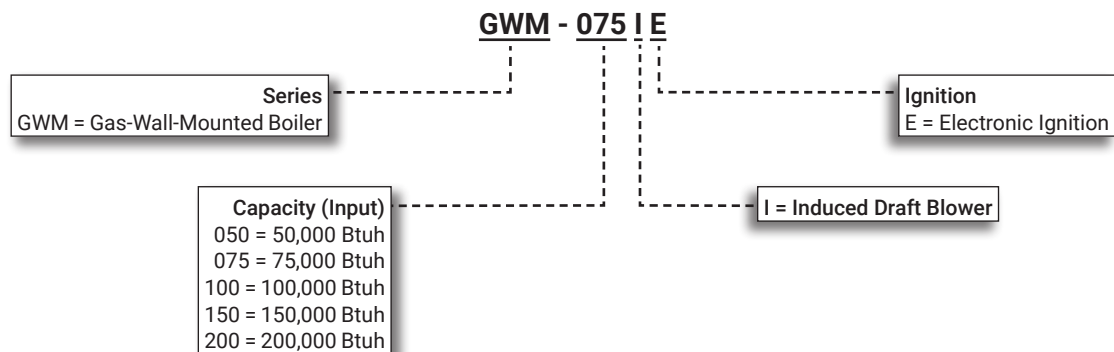
**RESIDENTIAL
PRODUCT SPECIFICATIONS**

Bulletin No. 210650
December 2020
Supersedes October 2020



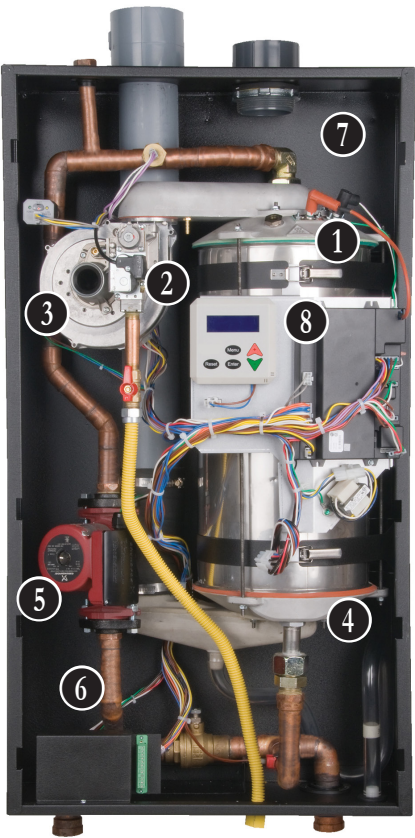
AFUE 95%
Heating Input – 50,000 to 200,000 Btuh

MODEL NUMBER IDENTIFICATION



FEATURE HIGHLIGHTS

- 1. Stainless Steel Helical Heat Exchanger Assembly
- 2. Automatic Gas Control
- 3. Combustion Air Blower
- 4. Polypropylene Flue Condensate Collector
- 5. Circulating Pump
- 6. Integrated Primary/Secondary Piping With Pump
- 7. Heavy Gauge Steel Cabinet
- 8. Control Module/User Interface



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APPROVALS AND WARRANTY

APPROVALS

- Design certified by CSA for use with natural gas or LPG/Propane
- Annual Fuel Utilization Efficiencies based on US DOE test procedures and FTC labeling regulations
- Certified by AHRI
- Boiler heat exchanger assemblies are constructed and hydro-statically tested in accordance with American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code Section IV Standards for stainless steel heating boilers
- ENERGY STAR® certified units are designed to use less energy, help save money on utility bills, and help protect the environment

WARRANTY

- Heat Exchanger:
 - Limited fifteen years in residential installations
 - Limited five years in non-residential installations
- All other covered components:
 - Limited ten years in residential installations
 - Limited one year in non-residential installations

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

FEATURES

APPLICATIONS

- Five models with heating inputs of 50,000 to 200,000 Btuh
- AFUE - 95%
- Direct spark ignition
- Natural gas or LPG/propane
- LPG kit is furnished with unit
- Applications include radiant floor heating, baseboard heating, radiators and zoned heating systems
- Compact units allow easy mounting on a wall in a closet, alcove, basement or utility room
- All units are completely factory assembled with all controls installed and wired
- Each unit is factory test operated

HEATING SYSTEM

1 Stainless Steel Helical Heat Exchanger Assembly

- Stainless steel (316L/444) fin and tube heat exchanger features a wide diameter stainless steel tube with laser welded heat transfer fins
- Helical design and inner finned tubing results in overall compact boiler with superior heat transfer characteristics
- Self-cleaning design helps to remove hard water deposits and prevent scaling
- Sight glass on top of heat exchanger permits easy viewing of the burner flame



2 Stainless Steel Mesh Modulating Burner

- Provides efficient, trouble-free operation
- Mixes air and gas in correct proportion for proper combustion

Direct Spark Igniter

- Electronic spark igniter provides positive ignition on each operating cycle

Automatic Gas Control

- Silent operating gas controls provide 100% safety shut-off
- 115 volt redundant combination gas control valve combines manual shut off option (On-Off), 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 main burners on each off cycle
- Should a loss of flame occur, the main valve closes, shutting down the unit
- Gas shutoff valve is furnished in gas supply line to gas valve

3 Combustion Air Blower

- Heavy duty blower safely vents flue products
- Motor permanently lubricated
- Ball bearings
- Loss of flame signal prevents unit operation in case of flue blockage of flue outlet

4 Polypropylene Flue Condensate Collector

- Corrosion resistant polypropylene flue condensate collector collects flue condensate for disposal through condensate drain on bottom of unit
- Condensate drain trap is included with the unit

5 Circulating Pump

- Heavy duty pump is constructed of cast iron
- Pump motor is impedance protected
- Motor and impeller is removable as a single unit for servicing

FEATURES

HEATING SYSTEM (continued)

Relief Valve and Air Vent

- Furnished as standard
- Field installed in top of cabinet
- 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

- Furnished for field installation in supply water line at bottom of unit cabinet
- Monitors system for safe and reliable operation

Brass Drain Valve

- 3/4 in. brass drain valve is furnished for field installation in return water line at bottom of unit cabinet

LPG/Propane Conversion Kit (Furnished)

- Conversion kit is required for field changeover from natural gas

DIRECT VENT

SEALED COMBUSTION SYSTEM

- Boiler features a "sealed combustion" system that can be installed in Direct Vent (single or two pipe) applications
- In Direct Vent applications, combustion air is supplied from outdoors and flue gases are discharged outdoors

VENTING

Vent Temperature Sensor

- Loss of flame signal prevents unit operation in case of flue blockage
- Vent temperature sensor is furnished as standard and factory installed on the polypropylene flue condensate collector

Optional Accessories

Termination Kit - Concentric

- 2 or 3 inch kit contains concentric termination assembly, reducer bushing and 45° elbow
- Kit requires single hole penetration of roof or wall for installation
- Roof penetration applications requires field supplied boot/flashing
- CSA certified

INTEGRATED PRIMARY/SECONDARY PIPING WITH PUMP

- 6 • Primary and secondary piping with circulator pump are factory installed and piped internal to the unit
- Reduces installation costs

CABINET

- 7 • Heavy gauge steel
- Baked-on enamel paint finish
- Front cover slides on and off for easy servicing
- Combustion air and vent connections located on the top of the cabinet
- Condensate drain connection furnished on bottom of cabinet
- Water supply and return connections furnished on bottom of cabinet
- Knockouts are provided in bottom of cabinet for line and low voltage connections

Wall Hanging Support Bracket

- Furnished with boiler to facilitate hanging boiler on a wall
- Flange on back of boiler cabinet engages support bracket installed on wall for easy mounting

FEATURES

CONTROL MODULE/USER INTERFACE

Boiler is equipped with programmable Electronic Control Module and User Interface Control

8 Fully Modulating Electronic Control

- Automatically adjusts heat input in increments from 20% to 100% (full input) for greater water temperature control

User Interface Control

- Buttons (MENU, ENTER, RESET and UP/DOWN ARROWS) allow access to the Boiler Status Screens
- **RESET** - Manual Lockout Boiler Reset
- **MENU** - Enter/Exit user menu, Go to the previous screen
- **ENTER** - Select a menu item, Confirm a new parameter value
- **UP/DOWN ARROWS** - Scroll up/down to next menu item. Increase/decrease value



LCD Display

- Displays information about the boiler operation and service reminders

SCREENS

- Boiler Status Indicator
- **F** = Flame Detected
- **P** = Central Heating (CH) System Pump On
- **B** = Combustion Air Blower On
- **S** = Safety Relay Check
- **G** = Gas Valve Open
- **D** = Direct Hot Water (DHW) Pump On
- **PERCENT (%)** - Combustion Air Blower Speed Indicator
- **SERVICE REMINDER** - Service Reminder Indicator
- **STANDBY: NO DEMAND** - Boiler in Standby Mode
- **°F or °C** - Boiler Supply Water Temperature Indicator
- **CENTRAL HEATING** - Boiler Running in Central Heating Mode
- **DOMESTIC HOT WATER** - Boiler Running in Direct Hot Water (DHW) Mode.
- **LOCKOUT ALARM** - Error code and short text description displayed. Press RESET key for manual reset.
- **BLOCKING ERROR** - Error code and short text description displayed. Boiler automatically returns to Standby Mode when the condition corrected.
- **BOILER STATUS**
 - Current Water Supply Setpoint and CH or DHW Supply Water Setpoint
 - Supply (leaving) and Return (entering) Water Temperatures
 - DHW Thermostat "Open" or "Closed"
 - System Water Temperature (if used)

- Vent System Temperature
- Outdoor Temperature (if used)
- Heat Exchanger Pump Status (On or Off)
- CH or DHW Pump Status (On or Off)

CONTROL MODULE USER MENU

Settings

- Central Heating Setpoint (104 to 195°F, **default is 140°F**)
- DHW (Domestic Hot Water) Setpoint (104 to 195°F, **default is 180°F**)
- Temperature Units (°F or °C, **default is °F**)



Bold indicates default setting.

FEATURES

CONTROL MODULE INSTALLER MENU

Boiler Configuration

- Boiler Address
(0 to 15, **default is 0**)
- Low Water Cutoff
(Enabled/Disabled, **default is Enabled**)
- Pump Mode
(0 and 4, **default is 0**)
- Service Reminder Status
(ON/OFF, **default is ON**)
- Service Reminder Days
(1 - 999 Days, **default is 365 Days**)

CH (Central Heating) Settings

- CH Mode
(0, 1, 2, 3, **default is 1**)
- Warm Weather Shutdown
(35 to 100°F, **default is 70°F**)
- Reset Curve Design Temperature - Boiler
(60 to 195°F, **default is 180°F**)
- Reset Curve Design Temperature - Outdoor
(-60 to 32°F, **default is 25°F**)
- Reset Curve Mild Weather Temperature - Boiler
(35 to 120°F, **default is 100°F**)
- Reset Curve Mild Weather Temperature - Outdoor
(35 to 85°F, **default is 70°F**)
- Reset Curve Boiler Minimum Temperature
(40 to 180°F, **default is 70°F**)
- Reset Curve Boiler Maximum Temperature
(80 to 195°F, **default is 180°F**)
- Boost Function Temperature
(0 to 36°F, **default is 0°F**)
- Boost Function Time
(1 to 120 minutes, **default is 20 minutes**)
- Maximum Power CH
(1 to 100%, **default is 100%**)

DHW (Direct Hot Water) Settings

- DHW Mode
(0/2, **default is 0**)
- DHW Maximum Priority Time
(1 to 60 minutes, **default is 30 minutes**)



Refer to Installation Instructions for more detailed information.

Bold indicates default setting.

ADDITIONAL CONTROLS

Flame Sensor

- Flame sensitive sensor furnished and factory installed on the heat exchanger
- Prevents unit operation in the event there is a loss of flame or unstable flame

Integrated Low Water Cutoff Control

- Interrupts power immediately in a low water condition
- Automatically restarts burner on return of water level
- Factory installed and wired
- Low water indicator LED
- Test button

Transformer

- Supplies 24V power to Low Water Cutoff Control

Supply Water Switch

- Monitors boiler water temperature in conjunction with the main boiler control to adjust the heat output of the boiler to meet system demands
- Shuts off boiler in case of abnormal supply water temperature

Return Water Temperature Sensor

- Monitors return water temperature

Terminal Block

- Removable for easy wiring connections

High Voltage Junction Box

- For line voltage connections
- Located inside bottom of cabinet

Optional Accessories

High Altitude Control Module

- Required at altitudes from 2000-4500 ft.
- Module replaces existing control model in unit

Thermostat

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

SPECIFICATIONS

Model No.			GWM-050IE	GWM-075IE	GWM-100IE	GWM-150IE	GWM-200IE
Gas Heating Performance	Heating capacity input	Btuh (Maximum)	50,000	75,000	100,000	150,000	200,000
		Btuh (Minimum)	10,000	15,000	20,000	30,000	40,000
	Heating capacity output - Btuh		46,000	69,000	91,000	139,000	185,000
	¹ Net AHRI I=B=R rating - Btuh		40	50	79	121	161
	² AFUE		95%	95%	95%	95%	95%
Connections in.	Flue size diameter (round)		2	2	2	3	3
	Gas piping size		1/2 NPT	1/2 NPT	1/2 NPT	3/4 NPT	3/4 NPT
	Water supply and return size		1-1/4 NPT	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	3/4 NPT
Electrical characteristics			120 volts - 60 hertz - 1 phase (less than 12 amps)				
Shipping Data		lbs. - 1 package	111	111	111	182	182

¹ AHRI I=B=R ratings indicate the amount of equivalent direct radiation each boiler will produce under normal conditions and thermostatic control. Ratings based on an allowance of 1.15 in accordance with the factors shown on the I=B=R Standard as published by The Hydronics Institute. Selection of boiler size should be based on "Net I=B=R 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

			Model No.	GWM-050IE	GWM-075IE	GWM-100IE	GWM-150IE	GWM-200IE
VENTING								
Concentric Vent Termination Kits	US - 2 inch		69M29	69M29	69M29	---	---	
	3 inch		---	60L46	60L46	60L46	60L46	
	Canada - 2 inch		44W92	44W92	44W92	---	---	
	3 inch		---	44W93	44W93	44W93	44W93	

NOTE - Termination Kits 44W92, 44W93 are certified to ULC S636 standard for use in Canada only.

OPTIONAL ACCESSORIES - ORDER SEPARATELY (continued)

See Lennox Price Book For Complete Listing of Additional Accessories		Catalog No.
CONTROLS		
High Altitude Control Module (2000-4500 ft.)		12Y86
Multi-Boiler Sensor Kit (up to 16 boilers)		Y5401
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

INTAKE/EXHAUST PIPE VENT LENGTHS

Model No.	Pipe Size	Minimum	Maximum
GWM-050IE	2 inch	6 ft	100 ft.
GWM-075IE	2 inch	6 ft.	50 ft.
GWM-100IE	3 inch	6 ft.	100 ft.
GWM-150IE	3 inch	6 ft.	100 ft.
GWM-200IE			

NOTES:

One 90° elbow = 5 ft.

One 45° elbow = 3.5 ft.

One 2 x 3 in. adaptor = 0 ft.

Concentric Vent Kit (optional) = 5 ft.

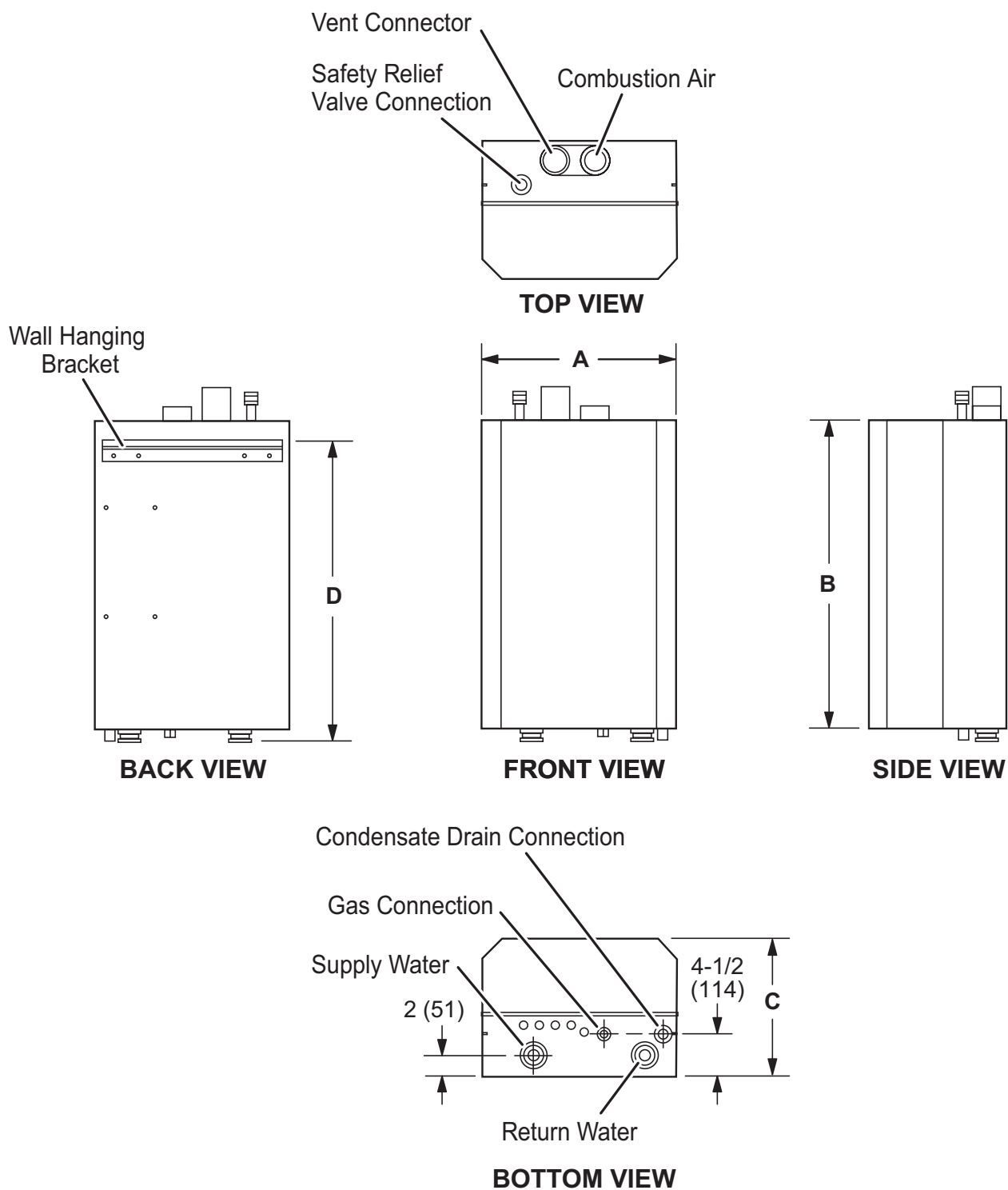
INSTALLATION CLEARANCES

	in.	mm
Top	0	0
Top Service	14	356
Left Side	0	0
Right Side	0	0
Front	0	0
Front (Service)	6	152
Back	0	0
Bottom	0	0
Bottom (Service)	12	305
Combustion Air/Vent Piping	0	0
Combustion Air/Vent Piping (Service)	6	152
Hot Water Piping	1/2	13
Hot Water Piping (Service)	6	152

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.

DIMENSIONS - UNIT



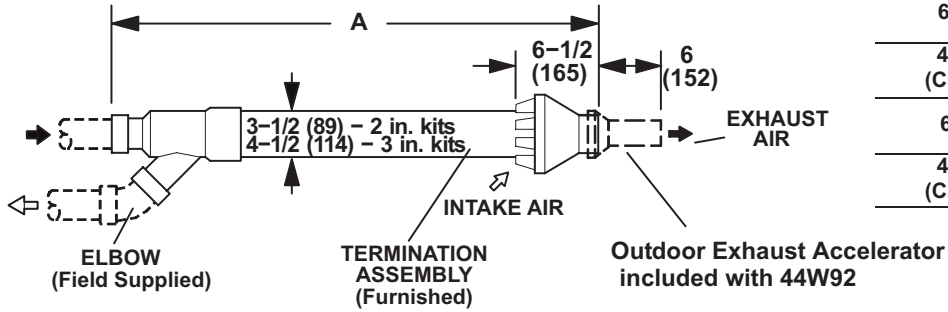
Model No.	A		B		C		D	
	in.	mm	in.	mm	in.	mm	in.	mm
GWM-050IE GWM-075IE GWM-100IE	20	508	31	787	14	356	28	711
GWM-150IE GWM-200IE	23	584	42	1092	16	406	40	1016

DIMENSIONS - OPTIONAL ACCESSORIES - VENTING

69M29 / 44W92 – 2 inch kits
60L46 / 44W93 – 3 inch kits

See Installation Instructions for additional information.

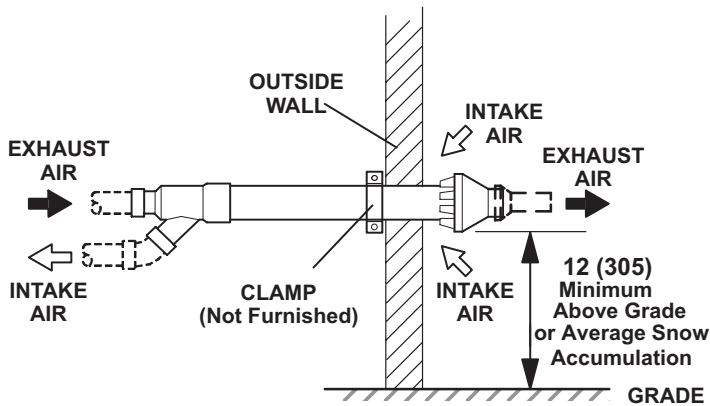
Note - Field provided reducer may be required to adapt larger vent pipe size to termination.



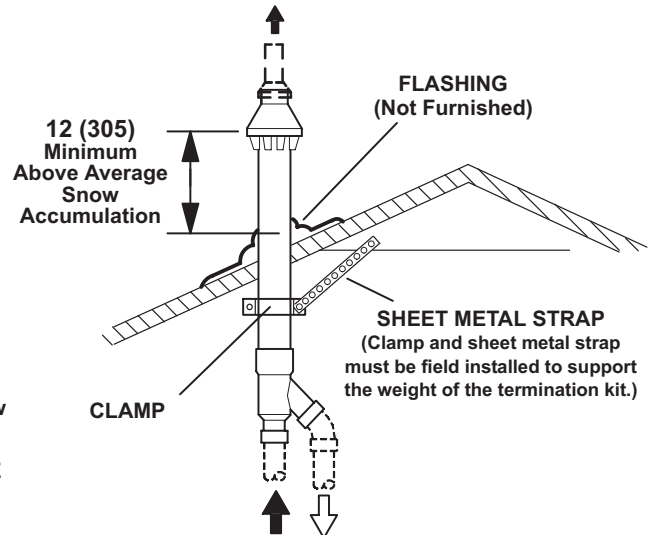
Cat. No.	A		B	
	in.	mm	in.	mm
69M29	33-3/8	848	16-3/4	425
44W92 (Canada)	29	737	15-1/2	394
60L46	38-7/8	987	21-3/16	538
44W93 (Canada)	36-1/8	918	19-1/2	495

NOTE - Typical illustration for dimensions only. Design may vary depending on kit ordered.

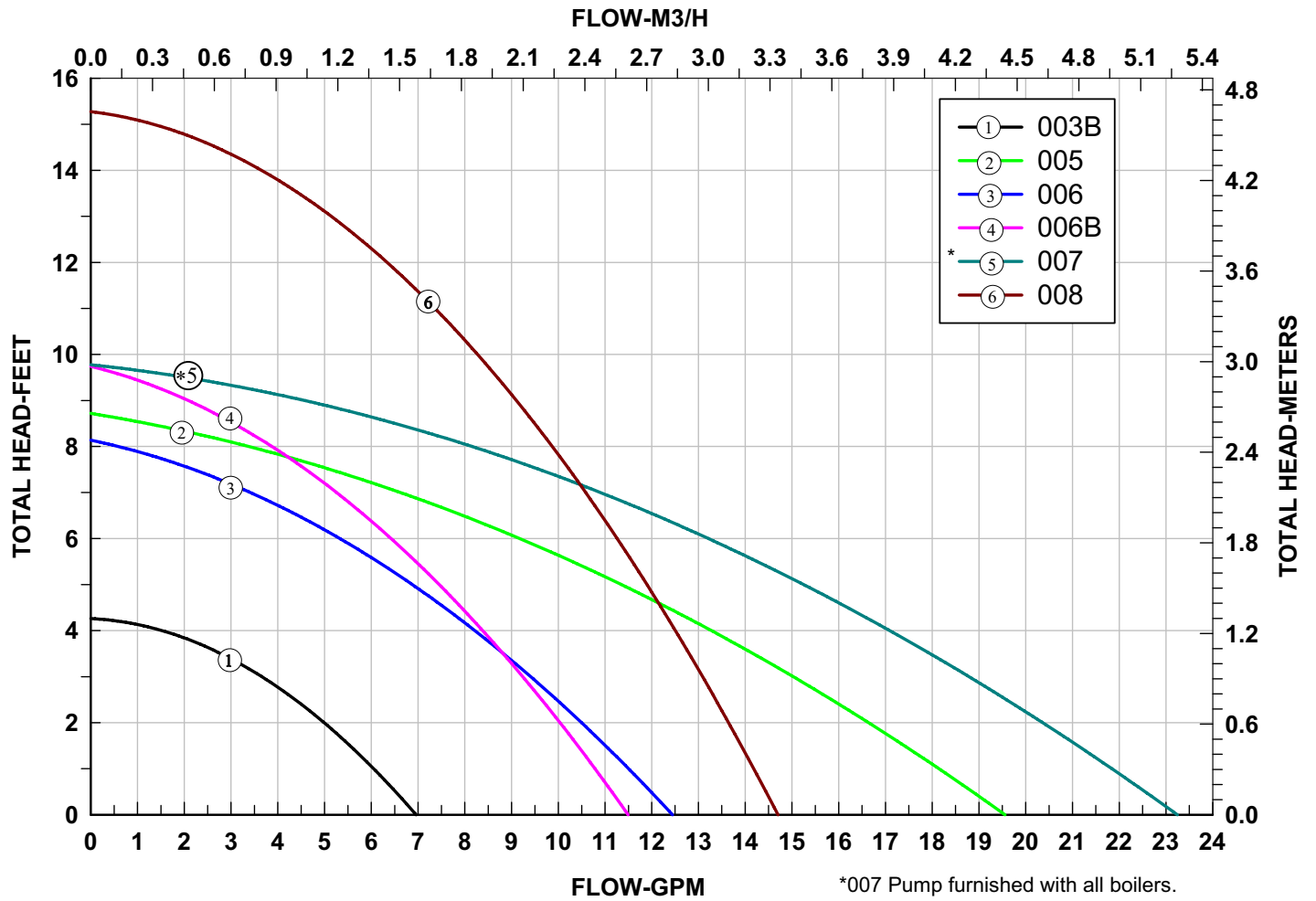
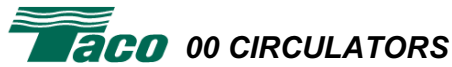
CONCENTRIC WALL TERMINATION APPLICATIONS



CONCENTRIC ROOF TERMINATION APPLICATIONS

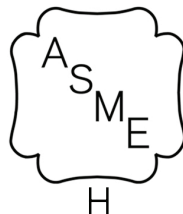


CIRCULATING PUMP FLOW RATE



REVISIONS

Sections	Description of Change
Optional Accessories	Removed Magnetic Dirt Separators - Not available.



Visit us at www.lennox.com

For the latest technical information, www.LennoxPros.com

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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