

G234X-55 Conventional Gas Boiler

Engineering
Submittal
Sheet

Buderus

Boiler Overview



Engineering Specifications

There shall be provided and installed a quantity of ____ Buderus G234X-55 floor standing hot water boiler(s), suitable with natural gas or propane. Boiler(s) shall have an AFUE efficiency rating of 84.8%.

Boiler(s) shall utilize GL180M cast iron sectional heat exchanger.

Boiler(s) shall be constructed, tested and labeled in accordance with ASME Section IV and shall bear the ASME stamp. Boilers shall be CSA approved and have an applicable Canadian Registration number.

Heat exchanger shall be labeled for 58psig maximum working pressure rating.

Standard equipment shall include a 90° elbow, safety relief valve, drain valve, vent damper, pressure gauge, 30psig relief valve, and technical documentation.

Minimal clearances shall be integral to the boiler cabinet design; a removable door shall be used to access heat exchanger, burner components, gas valve and sensors.

Optional integrated 2107 series controller shall monitor and control all combustion process functions, control of the boiler water temperature to a value required by the connected components and shall display current water temperatures or fault conditions with changes in operation status. Additional control functions shall include an on/off button, rotary temperature knobs, LCD display for burner operation and button for fault condition reset. Outdoor reset may be accomplished with 2107 control using an outdoor air sensor.

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Performance Data		
	Unit	Value
Gas input	MBtu/h	228
Gross rated output	MBtu/h	188
IBR Rating	MBtu/h	163
Boiler horsepower	H.P	6.05
AFUE	%	84.8

General Data		
	Unit	Value
Boiler category	-	Atmospheric
Heat exchanger construction	-	GL180M Cast Iron
Maximum allowable working pressure	PSIG	58
Water content	Gallons	7.1
Weight - shipping (approx.)	Lbs	562
Weight - operating (approx.)	Lbs	621
Standard relief valve size (inlet x outlet)	Inch	3/4 x 3/4
Standard relief valve pressure rating (other capacities available upon request)	PSI	30
Minimum capacity of safety relief valve	Lb / hr	188
Number of burner tubes	Qty	4
Venting category	-	I

Operational Data		
	Unit	Value
Maximum supply water temperature	°F	194
Minimum return water temperature	°F	> 120° F

Electrical Data		
	Unit	Value
Electrical voltage mains	VAC	120
Power consumption max load	Watts	104
Power consumption partial load	Watts	29
Max. permissible fuse rating	Amps	15

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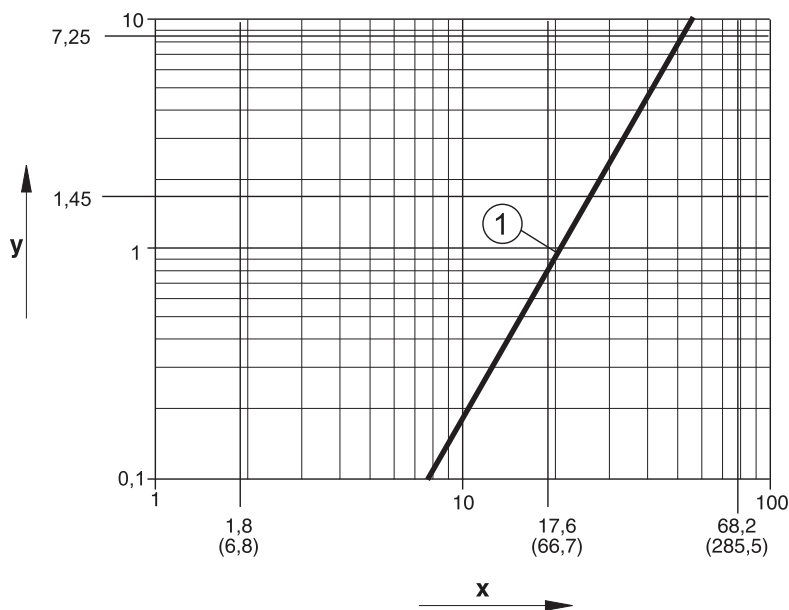
Burner Data

	Unit	Value
Allowable fuels	-	Natural gas, LP
Min Static Inlet Gas Pressure - NG	Inch W.C.	7.0
Max Static Inlet Gas Pressure - NG	Inch W.C.	10.5
Min Static Inlet Gas Pressure - LP	Inch W.C.	11.0
Max Static Inlet Gas Pressure - LP	Inch W.C.	13.0

Approval Data

Approval description	Approval number
Massachusetts Approval #	G3-0106-74
New York MEA #	217-98-E
CRN #	7169.7C

Boiler Pressure Drop Curve (1 psi = 69 mbar, 1 GPM = 0.23 m³/h)

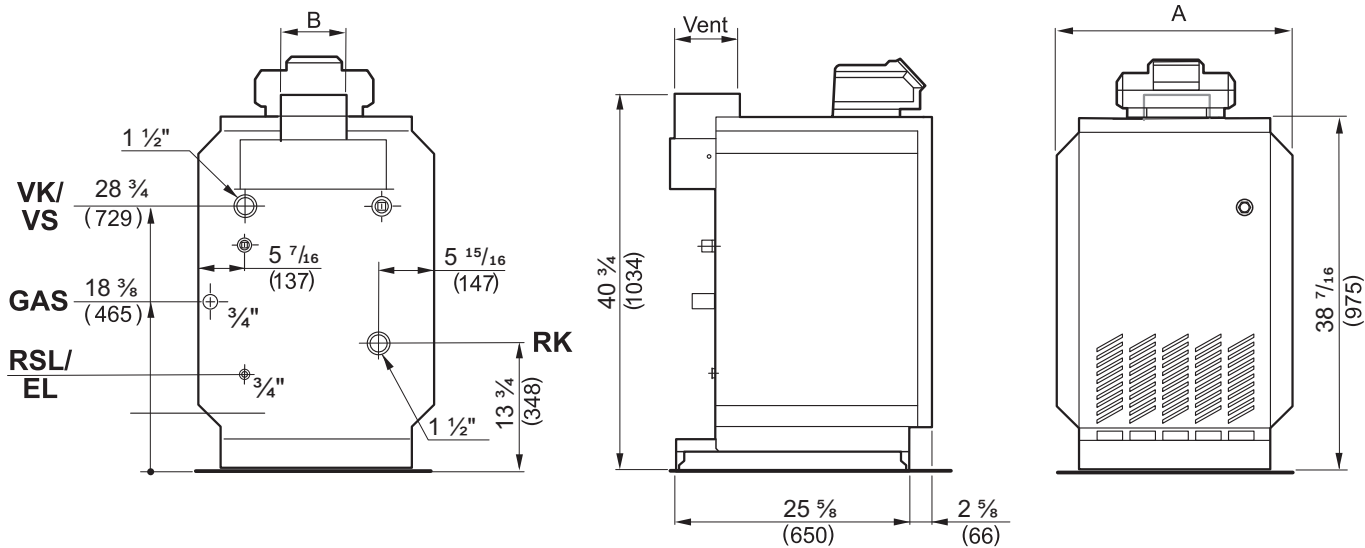


- x Flow Rate in GPM (m³/h)
- y Pressure drops in psi
- 1 228 400 BTU/hr (boiler rating 55)

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Boiler Dimensions and Connections

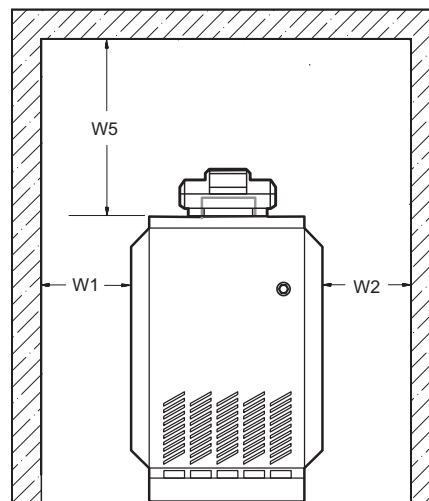
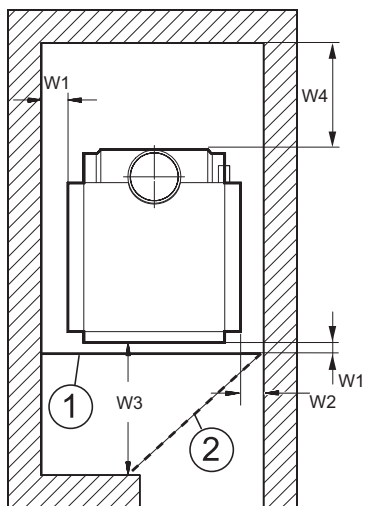


Tolerances are $\pm 1/4''$ (6.35mm)

Boiler Dimensions / Connections Data

Item	Description	Unit	Value
A	Boiler width	Inch	29 1/8
VK/VS	Boiler supply / storage tank supply	Inch	1 1/2 FPT
GAS	Boiler gas connection + main isolating valve	Inch	1 FPT
RK	Boiler return	Inch	1 1/2 FPT
RSL/EL	Return safety line / draining	Inch	3/4
B	Vent	Inch	7

Boiler Clearances



- 1 Closed door
- 2 Open door

Description	Unit	Minimum clearance
Wall clearance W1	Inch	2
Wall clearance W2	Inch	2
Wall clearance W3	Inch	33
Wall clearance W4	Inch	6
Top clearance W5	Inch	30

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