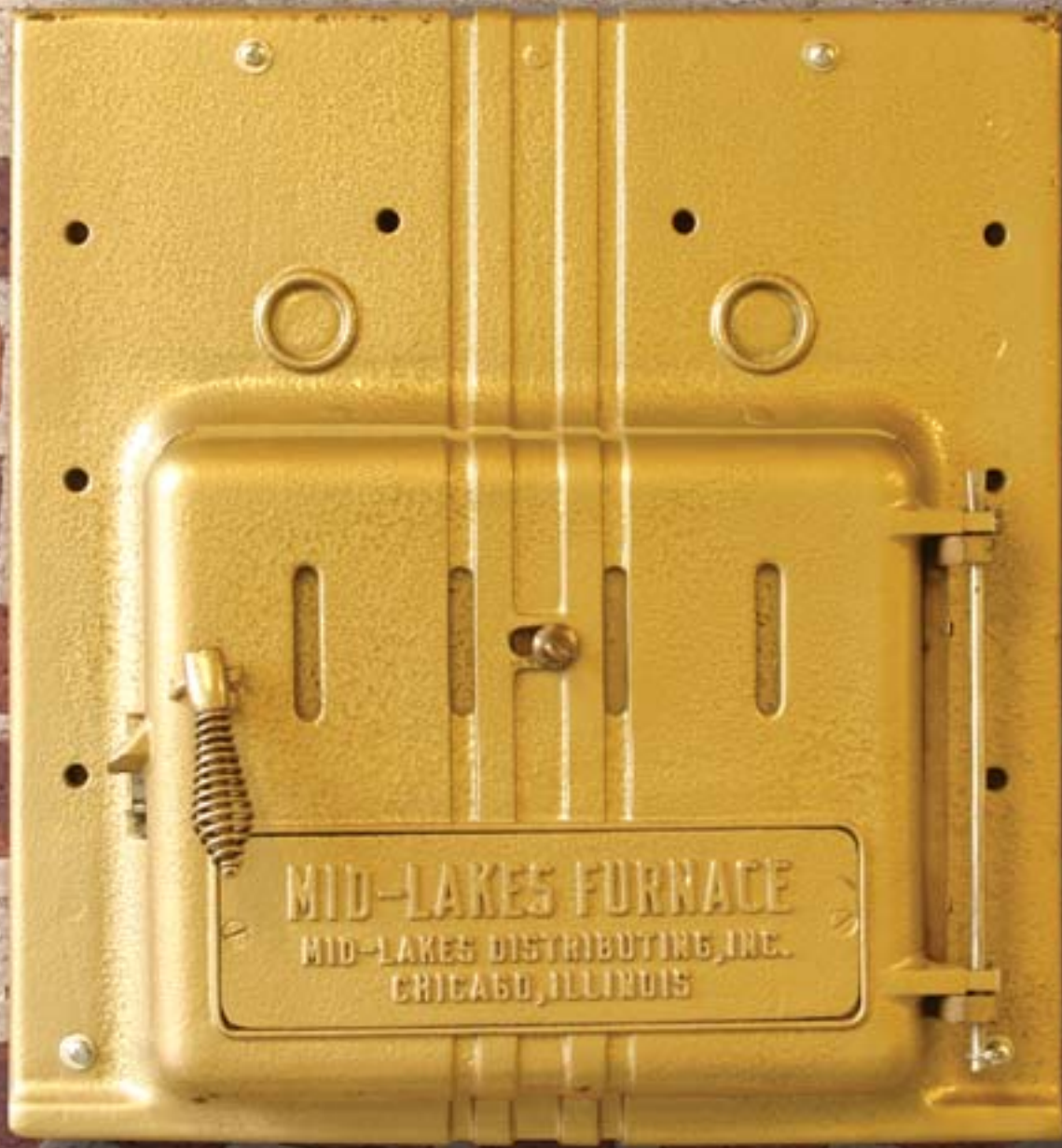


2006 HEATING CATALOG



"PROUDLY SERVING THE TRADES SINCE 1928"

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Prices shown are to be used as a guide only and are subject to change without notice.

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VENTING CATEGORIES FOR GAS-FIRED EQUIPMENT

CATEGORY I fan assisted appliances are designed to operate with a non-positive vent pressure and with a flue loss of not less than 17%. While a fan is necessary to provide an adequate flow of combustion air through the appliance, the fan is not intended to assist the flow of flue gas up the vent. The flow of flue gas up the vent is dependant on the heat content of the flue gas (buoyancy). The pressure in the vent remains non-positive, as is the case with draft hood-equipped appliances. Category I gas appliances typically operate within an efficiency range of 78% to 83% AFUE and are commonly vented with Type-B Gas Vent.

CATEGORY II gas appliances are defined as appliances which operate with a non-positive vent pressure and with a flue loss less than 17%. Category II appliances must rely on heat (buoyancy) in the flue gases to achieve a natural draft (non-positive vent pressure). Yet by definition, the flue gas is very cool (less than 17% flue loss) and, therefore, it is difficult to achieve a natural draft. Hence, Category II appliances are considered condensing appliances and have venting requirements as specified by the appliance manufacturer.

CATEGORY III gas appliances are designed to operate with a positive vent pressure and a flue loss of not less than 17%. Category III appliances utilize a fan not only to assist the flow of air through the combustion chamber, but also to assist the flow of flue gas up the vent. As a result, a positive pressure exists in the vent. It is also noted that Category III type appliances tend to be borderline condensing. In order to contain the positive pressure in the venting system, plus provide for a water tight, corrosion resistant venting system, Category III gas appliances typically utilize special venting, as required by the appliance manufacturer (commonly stainless steel). Category III appliances typically operate in the 78% to 83% AFUE efficiency range.

VENTING CATEGORIES FOR GAS-FIRED EQUIPMENT

CATEGORY IV gas appliances are designed to operate with a positive vent pressure and with a flue loss less than 17%. Category IV gas appliances utilize a fan to assist the flow of gas up the vent, thereby creating a positive pressure in the vent. It should also be noted that since Category IV appliances typically operate at over 90% AFUE efficiency, the flue gas is very cool and, as a result, significant quantities of condensation can occur in the venting system. For this reason, high efficiency Category IV gas appliances typically utilize special venting (commonly PVC or CPVC), as required by the appliance manufacturer. These venting systems may be sealed to contain the positive vent pressure, as well as to provide resistance to condensate corrosion and condensate leakage.

Draft hood-equipped gas appliances are listed only as Category I appliances since they are a non-condensing appliance and operative with a non-positive vent pressure. Fan-assisted combustion appliances may fall into any of the four categories: I, II, III, IV. Note that some fan-assisted appliances may be listed as a Category I appliance, provided it is vented in a standard vertical type installation, but is considered a Category II appliance in the event that it is vented in a horizontal type application. This is due to the higher back pressure that occurs with a short horizontal vent.

Check the label on the appliance to determine to which category the appliance is listed as, and follow the appliance manufacturers' installation instructions.

MID-LAKES DISTRIBUTING



SELECT

Standard Vent Gas Models

All Select Models Feature:

- Long-lasting PEXAN cross-link polymer dip tube
- C3 technology flammable vapor ignition resistant design
- Easy-to-light Piezo igniter
- Durable brass drain valve with tamper resistant design
- Aluminum anode rod
- Factory installed temperature and pressure (T&P) relief valve
- 6-year tank and parts warranty



SELECT WATER HEATERS										
	Model Number	Peak Demand Output (gallon)	Energy Factor	Gallon Capacity	BTU Input Per Hour Natural	Recovery 90° F Rise Gallons Per Hour	Dimensions in Inches			Price
							Height**	Diameter	Draft Hood Outlet	
Select High Output	Standard Height Models									
	GS6 40 YRRT	88	0.60	38	50,000	48	58 ½	20 ½	4	\$916.00
	GS6 50 YRRT	90	0.58	48	50,000	51	60 ⅞	20	4	\$928.00
	GS6 50 YRRT 5	93	0.58	50	65,000	67	63 ⅞	22	4	\$960.00
	GS6 65 XRRT*	112	0.55	65	65,000	67	63 ¼	22	4	\$1,196.00
	GS6 100 XRRT*	N/A	N/A	98	75,100	81	68 ½	26 ½	4	\$2,692.00
	Short Model									
GS6 75 XRRS*	N/A	N/A	74	75,100	81	61	26 ½	4	\$1,202.00	
Select	Standard Height Models									
	GS6 30 YBRT	66	0.62	28	40,000	41	59 ⅝	16	3 or 4	\$706.00
	GS6 40 YBRT	71	0.6	38	40,000	39	57 ⅝	18 ½	3 or 4	\$664.00
	GS6 50 YBRT	91	0.58	50	40,000	41	60 ⅞	20	3 or 4	\$760.00
	Short Models									
	GS6 30 YBRS	66	0.61	30	40,000	40	48 ⅞	18 ½	3 or 4	\$706.00
	GS6 40 YBRS	71	0.59	40	40,000	41	51 ⅝	20	3 or 4	\$664.00
GS6 50 YBRS	86	0.58	50	40,000	41	53 ¼	24	3 or 4	\$982.00	

* Not equipped with C3 Technology

** Height shown is to top of draft hood



SELECT

Power Vent Gas Models (Single Pipe)

Features:

- Permits combined horizontal and vertical vent runs up to 115 feet with one elbow using 3" Schedule 40 PVC
- Quiet modular blower with 110/120 volt electrical system (rating 3 amps or less), 7-foot cord, standard 3-prong male connector
- Long-lasting PEXAN cross-link polymer dip tube
- Advanced intelli-vent gas control
- Aluminum anode rod
- Factory-installed temperature and pressure (T&P) relief valve
- HSI electric ignition
- 6-year tank and parts warranty



SELECT POWER VENT WATER HEATERS

Model Number	Peak Demand Output (gallon)	Energy Factor	Gallon Capacity	BTU Input Per Hour Natural	Recovery 90° F Rise Gallons Per Hour	Dimensions in Inches			Price
						Height*	Diameter	Vent Outlet**	
PR6 40 XCVIT	76	0.61	40	40,000	42	63 1/2	18 1/4	2 or 3	\$1,072.00
PR6 50 XCVIT	84	0.61	50	40,000	42	65	20 1/4	2 or 3	\$1,200.00
PR6 50 XRVIT	91	0.59	50	52,500	54	68 1/2	20	3 or 4	\$1,574.00
PR6 75 XRVIT	128	0.53	75	75,000	77	72 1/4	26 1/4	3 or 4	\$1,930.00

* Height shown is to top of blower outlet

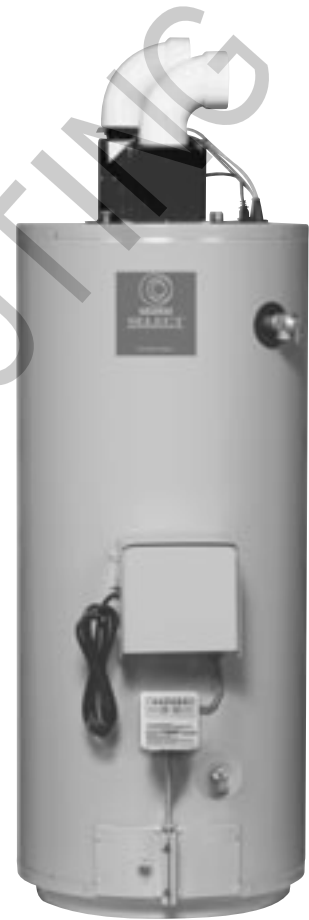
** All connections 3", increasers or reducers included

**SELECT**

Power Direct-Vent Gas Models (Two Pipe)

Features:

- Two-pipe "closed combustion" system permits combined horizontal and vertical venting and air intake runs up to 45 total feet with one elbow using 3" Schedule 40 PVC
- Quiet modular blower with 110/120 volt electrical system (rating 3 amp or less), 7-foot cord, standard 3-prong male connector
- Long-lasting PEXAN cross-link polymer dip tube
- Advanced intelli-vent gas control with HSI
- Aluminum anode rod
- Factory-installed temperature and pressure (T&P) relief valve
- 6-year tank and parts warranty

**SELECT POWER DIRECT VENT WATER HEATERS**

Model Number	Peak Demand Output (gallon)	Energy Factor	Gallon Capacity	BTU Input Per Hour Natural	Recovery 90° F Rise Gallons Per Hour	Dimensions in Inches			Price
						Height*	Diameter	Vent Outlet	
PR6 40 XBPDT	73	0.59	40	40,000	41	57	21	3	\$1,558.00
PR6 50 XBPDT	80	0.58	50	40,000	41	66	21	3	\$1,686.00
PR6 75 XRPDT	123	0.53	75	70,000	72	71 1/2	26 1/4	3	Call for Price

*Height shown is to top of air intake and blower outlet.



SELECT

Residential Electric Water Heaters



Features:

- Tall, short and Lowboy models available
- Longer-lasting low-watt density copper lower heating element – upper heating element is high-watt density copper element
- Diffuser dip tube – made of State PEXAN, a cross-link PEX polymer that can withstand long term exposure to water temperatures up to 400° F
- Aluminum anode rod
- Glass-lined tank
- Factory installed side-mounted temperature and pressure (T&P) relief valve
- 6-year tank and parts warranty

SELECT ELECTRIC WATER HEATERS

Model Number	Peak Demand Output (gallon)	Energy Factor	Gallon Capacity	Standard Element Wattage 240 V.A.C. Upper/Lower	Recovery 90° F Rise Gallons Per Hour	Dimensions in Inches		Price
						Height	Diameter	
Tall Models								
ES6 30 DORT	43	0.93	30	4500/4500	21	46 ½	18	\$580.00
ES6 40 DORT	52	0.92	40	4500/4500	21	59 ½	18	\$582.00
ES6 52 DORT	60	0.9	50	4500/4500	21	54	20 ½	\$600.00
ES6 55 DORT	64	0.9	55	4500/4500	21	60 ¼	20 ½	Call for Price
ES6 66 DORT	72	0.88	66	4500/4500	21	60 ¼	22	Call for Price
ES6 80 DORT	81	0.86	80	4500/4500	21	60 ½	24	\$1,106.00
ES6 120 DORT	116	0.81	119	4500/4500	21	64 ¼	28	Call for Price
Short Models								
ES6 30 DORS	43	0.93	30	4500/4500	21	36 ½	20 ½	Call for Price
ES6 40 DORS	52	0.92	40	4500/4500	21	44	20 ½	Call for Price
ES6 50 DORS	62	0.9	50	4500/4500	21	48	22	Call for Price
Lowboy Models								
ES6 30 DOLS	41	0.93	29	4500/4500	21	30	22	Call for Price
ES6 40 DOLS	48	0.92	40	4500/4500	21	32 ¼	25	\$598.00
ES6 50 DOLS	55	0.9	50	4500/4500	21	34	26 ½	Call for Price
Table-Top Models								
P6 30 20T1*	45	0.89	27	4500/4500	21	36	21	Call for Price
P6 40 20T4 W*	52	0.88	40	4500/4500	21	36	24	Call for Price

* Depth (front to back) of both Table Top models is 25-1/8"

**SELECT**

Specialty Residential Electric Water Heaters

Features:

- 6-year tank and parts warranty
- Compact design
- Side-mounted plumbing
- 6 through 40 gallon capacity
- Single element standard

**SELECT JUNIOR WATER HEATERS**

Model Number	Gallon Capacity	Standard Element Wattage	Recovery 90° F Rise Gallons Per Hour	Dimensions in Inches		Price
		120V		Height	Diameter	
P6 6 10MS K	6	1650	8	17 1/4	14	\$540.00
P6 10 10MS K	10	1650	8	17 1/4	16	\$570.00
P6 17 10MS K	17	1650	8	28	18	Call for Price
P6 20 10MS K	19.9	1650	8	21 3/4	20	\$650.00
ES6 30 SOMS K	29	1650	8	30	22	\$770.00
ES6 40 SOMS K	40	1650	8	32 1/4	25	Call for Price



SANDBLASTER FORCE

SDV SERIES – Power Direct-Vent Gas (Two Pipe)



Features:

- Power direct-vent design draws all combustion make-up air from outside, eliminates negative air pressure problems
- Self-cleaning feature – new Hydro Cannon
- Installs with 3", 4" or 6" Schedule 40 PVC pipe
- Intermittent electronic ignition on SDV models
- ASME tank construction available on selected models
- Multiple anode rods
- 83% thermal efficiency – meets ASHRAE/IESNA 90.1-1999
- 3-year limited tank warranty

**CALL FOR
PRICING**

SANDBLASTER FORCE WATER HEATERS

Model Number	Gal Cap	BTU Input Per Hour Natural	First-Hour Delivery Gallons @ 100° Rise	Recovery - GPH @ Degree Rise		Dimensions in Inches		Approx Shipping Wt. (lbs)	Water Conn	Water Conn (Female N.P.T.)
				80° Rise	100° Rise	Height**	Diameter			
SDV75 70NE	75	70,000	117	81	64	69 ⁵ / ₈	26	352	³ / ₄	³ / ₄
SDV80 140NET	80	140,000	200	180	144	76 ¹ / ₄	28	680	1 ¹ / ₂	1 ¹ / ₂
SDV100 199NES* ¹	100	199,000	276	258	206	74 ⁷ / ₈	30 ¹ / ₄	825	1 ¹ / ₂	1 ¹ / ₂
SDV100 260NE*	100	260,000	338	335	268	79 ¹ / ₂	30 ¹ / ₄	900	1 ¹ / ₂	1 ¹ / ₂
SDV100 400NE*	95	400,000	461	493	295	82 ¹ / ₄	30 ¹ / ₄	950	1 ¹ / ₂	1 ¹ / ₂

* Available with ASME tank construction.

** Height shown is to top of blower outlet

¹ Rear plumbing connections ¹



SANDBLASTER

SBS SERIES – Light Duty

SBD SERIES – Automatic Flue Damper Gas

Features:

- Self Cleaning feature – new Hydro Cannon design
- Energy-saving automatic flue damper
- Front, top or rear water connection options – self-cleaning Hydro Cannon functions only when front cold water connection is used
- Intermittent electronic ignition
- ASME tank construction available on 250,000 through 500,000 BTU models
- Multiple anode rods with stainless steel cores for longer life
- 80% thermal efficiency
- 3-year limited tank warranty



STATE SBD WATER CONNECTIONS

Model Number	Water Connections in Inches					
	Inlet			Outlet		
	Top	Front	Rear	Top	Front	Rear
SBD71 120NE	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
SBD81 154NE	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
SBD81 180NE	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
SBD100 199NET	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
SBD100 199NE	1 1/2	1 1/2	2	1 1/2	1 1/2	2
SBD81 190NE	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
SBD100 199NES	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
SBD100 250NE A	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
SBD65 251NE A	NA	1 1/2	1 1/2	NA	1 1/2	1 1/2
SBD100 275NE A	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
SBD65 305NE A	NA	1 1/2	1 1/2	NA	1 1/2	1 1/2
SBD85 365NE A	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
SBD100 399NE A	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
SBD85 500NE A	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2

No caps or plugs supplied
Front and rear connections are female N.P.T.
Top connection is male N.P.T.

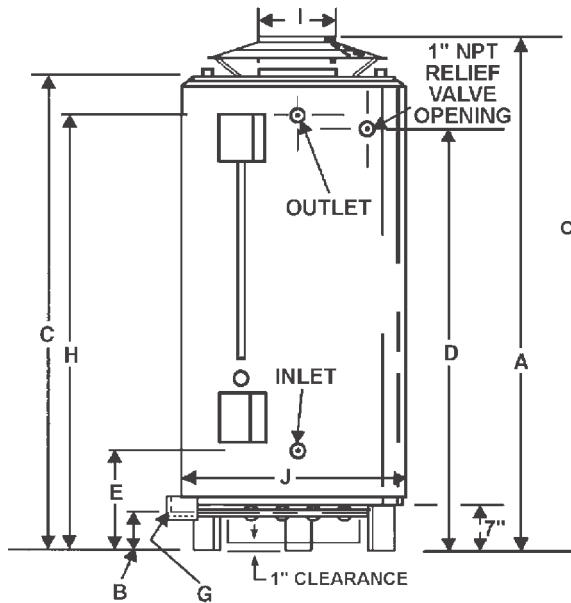
Model Number	Price
SBD71 120NE	\$4,932.00
SBD81 154NE	\$5,896.00
SBD81 180NE	\$7,166.00
SBD100 199NET	\$6,946.00
SBD100 199NES	\$6,946.00
SBD81 190NE	\$6,946.00
SBD100 199NES	\$6,946.00
SBD100 250NE A	\$8,610.00
SBD65 251NE A	\$8,056.00
SBD100 275NE A	\$8,620.00
SBD65 305NE A	\$8,800.00
SBD85 365NE A	\$10,876.00
SBD100 399NE A	\$10,748.00
SBD85 500NE A	\$12,604.00
SBS65 65 NE	\$2,110.00
SBS75 76NE	\$2,242.00
SBS100 75NE	\$2,840.00



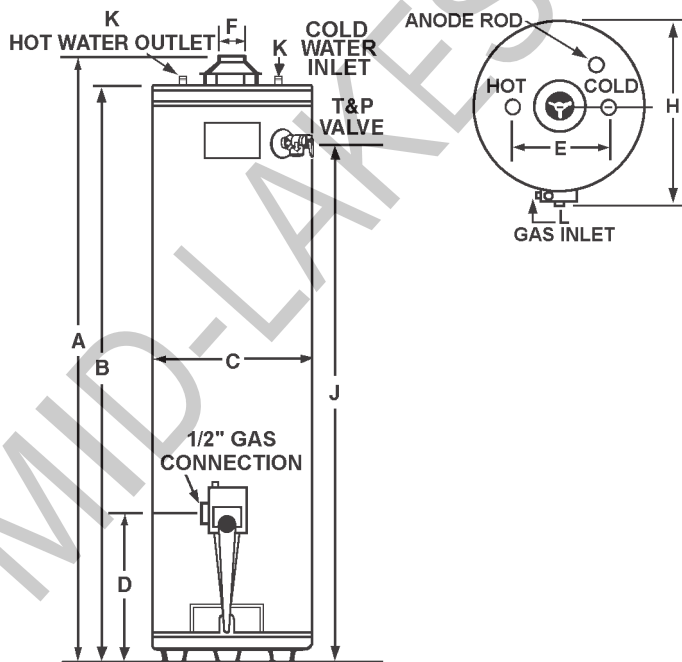
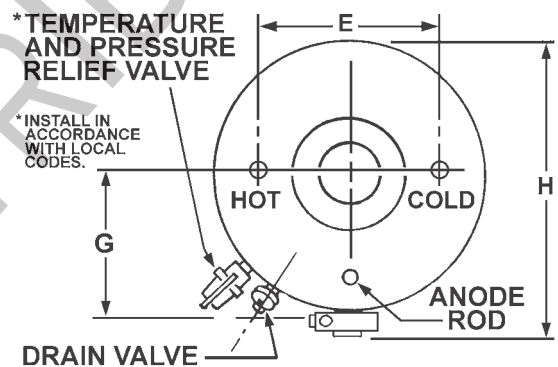
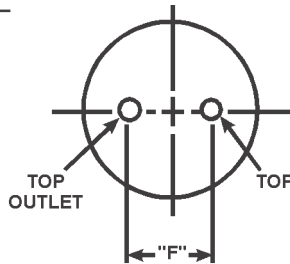
SANDBLASTER

SBS SERIES – Light Duty

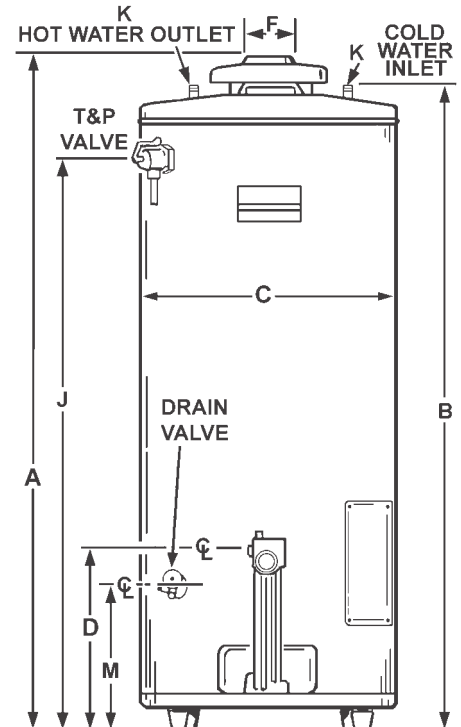
SBD SERIES – Automatic Flue Damper Gas



SBD SERIES



SBS65 65NE



SBS75 75NE & SBS100 75NE



SANDBLASTER

SBS SERIES – Light Duty
SBD SERIES – Automatic Flue Damper Gas

SBD AND SBS COMMERCIAL GAS WATER HEATER

Model Number	Gallon Cap	Input Rate BTUH	First Hour Delivery Gallons 100° F Rise	Recovery @ 100° F	Dimensions in Inches										Approx Shipping Weight (lbs.)	Approx ASME Weight (lbs.)
					A	B	C	D	E	F	G	H	I	J		
SBD																
SBD71 120NE	71	120,000	166	116	69 3/4	4 1/4	59 1/2	50 7/8	19 2/3	19	1/2	51 7/8	5	27 3/4	400	
SBD81 154NE	81	154,000	206	149	73	4 1/4	66 1/2	57 7/8	19 2/3	19	1/2	59	6	27 3/4	470	
SBD81 180NE	81	180,000	231	174	67 1/2	4 1/2	62	53 5/8	20 1/2	21	1/2	54 5/8	6	27 3/4	470	
SBD100 199NET	100	199,000	263	193	75	4 1/2	70	61 5/8	20 1/2	21	1/2	62 5/8	6	27 3/4	603	
SBD81 190NE	81	190,000	241	184	67 1/2	4 1/2	62	53 5/8	20 1/2	21	1/2	54 5/8	6	27 3/4	470	
SBD100 199NES	100	199,000	263	193	72	4 1/2	65 1/8	55 7/8	19 3/4	23	1/2	56 3/8	6	30 1/4	630	
SBD100 250NE A	100	250,000	312	242	72	4 1/2	65 1/8	55 7/8	19 3/4	23	1/2	56 3/8	8	30 1/4		725
SBD65 251NE A	65	251,000	289	243	75	4 1/2	65 3/4	57 1/4	20	NA	1/2	58 3/4	8	27 3/4		862
SBD100 275NE A	100	275,000	337	267	72	4 1/2	63 1/8	55 7/8	19 3/4	23	1/2	56 3/8	8	30 3/4		725
SBD65 305NE A	65	305,000	342	296	75	4 1/2	65 3/4	57 1/4	20	NA	1/2	58 3/4	8	27 3/4		862
SBD85 365NE A	85	365,000	414	354	79 1/2	4 1/2	70 1/4	62 1/2	22 1/2	23	3/4	63	8	27 3/4		833
SBD100 399NE A	100	399,000	458	388	75 1/2	4 1/2	67 1/2	58 1/4	26 3/4	23	3/4	59	8	30 1/4		874
SBD85 500NE A	85	500,000	545	485	82 1/4	4 1/2	73 1/2	65 1/4	25 1/2	21	1	65 3/4	8	27 3/4		857
SBS																
Model Number	Gallon Cap	BTU'S Per Hour Natural or Propane (LP)	First Hour Delivery Gallons 100° Rise	Recovery @ 100° F	A	B	C	D	E	F	G	H	J	K	Gas Conn	Approx Shipping Weight (lbs)
SBS65 65NE	65	65,000	106	60	63 1/4	59 1/2	22	15	8	4		26	53 3/4	3/4	1/2"	215
SBS75 75NE	74	76,000	124	72	61 1/8	58 1/2	25 3/8	15 3/16	16	4	14	28 1/2	50 5/8	1	1/2"	271
SBS100 75NE	98	78,000	143	74	69 3/4	66 1/2	26 1/2	15 3/16	16	4	14 1/2	29 11/16	57 3/8	1 1/4	1/2"	350

Propane Models Available



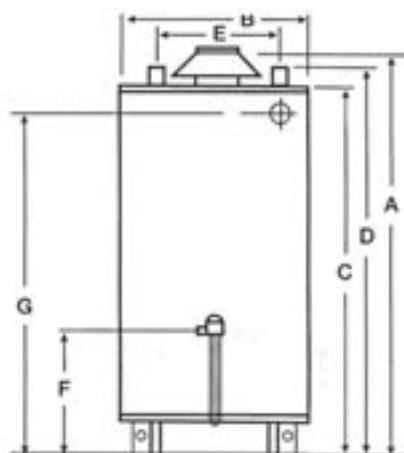
GAS FIRED



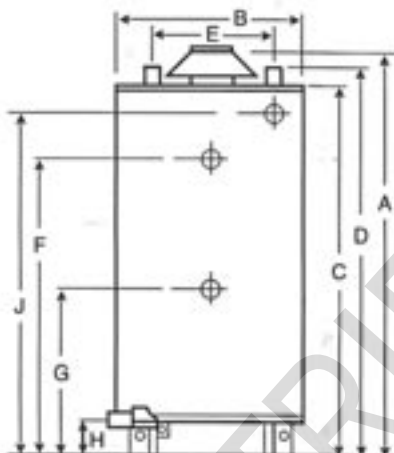
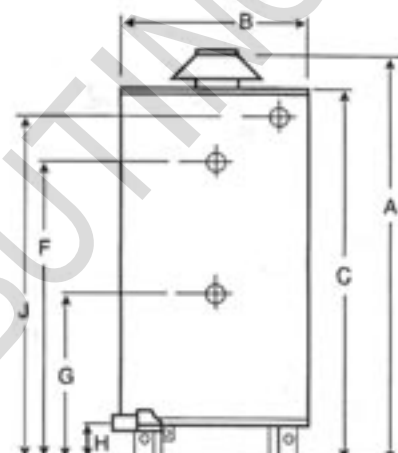
Features:

- DURA-GLAS enameled heavy duty single and multi flue steel tanks
- Foam insulated
- Dual or four anode rods to ensure maximum tank life.
- Self-cleaning turbulence inducing cold water inlet-tube engineered to diminish hard water area sediment deposits
- Full size hand-hole cleanout for eased tank inspection and/or removal of sediment deposits
- Electronic direct-spark ignition system saves fuel by eliminating the need for a standby gas pilot
- Automatic motorized flue damper reduces tank heat loss during standby periods for lowest operating costs
- Factory installed energy cut-off system and pressure/temperature relief valve
- All models are design-certified by CSA International and meet or exceed the efficiency requirements of the D.O.E. Energy Policy Act (Epact), ASHRAE 90.1-1999 and the energy mandate of the State of California.

Model Number	Price
Light Duty Storage Series	
75-76-AS	\$2,178.00
100-83-AS	\$2,722.00
Heavy Duty Spark Ignition/Flue Dampered Series	
D-80-125	\$4,786.00
D-80-165-AS	\$5,142.00
D-80-180-AS	\$5,314.00
D-80-199-AS	\$5,430.00
D-100-199-AS	\$5,430.00
D-100T-199-AS	\$5,432.00
ASME Code Spark Ignition/Flue Dampered Series	
D-100-250-ASME	\$7,870.00
D-100-270-ASME	\$7,870.00
D-100-300-ASME	\$8,072.00
D-75-365-ASME	\$9,200.00
D-75-399-ASME	\$10,586.00
D-80-512-ASME	\$11,920.00



MODELS: 75-76; 100-83

MODELS: D-80-125; D-80-165;
D-80-180; D-80-199; D-100-199;
D-100T-199; D-100-250;
D-100-270; D-100-300MODELS: D-75-365; D-75-399;
D-80-512

COMMERCIAL GAS WATER HEATERS

Model Number	Gal Cap	BTU Input	Rec @ 100° F Rise	Connections in Inches†				Dimensions shown in inches (see drawings)									Approx. Shipping Weight
				Vent	Top* Water	Gas	T&P	A	B	C	D	E	F	G	H	J	
Light Duty Storage Series																	
75-76-AS	75	76,100	74	4	1 1/2	1/2	3/4	66 3/4	26 1/4	64 1/2	66 3/4	16	18	56 1/2			294
100-83-AS	100	83,000	81	4	1 1/2	1/2	3/4	70 3/4	28	68 1/8	71 5/8	16	18	59 1/2			420
Heavy Duty Spark Ignition/Flue Dampered Series																	
D-80-125	80	125,000	121	5	1 1/2	1/2	3/4	73 1/4	26 1/4	67 1/2	70	19 5/8	55 1/4	22 3/4	4 3/4	57 1/8	519
D-80-165-AS	80	165,000	168	6	1 1/2	1/2	3/4	75 1/4	26 1/4	67 1/2	70	19 5/8	55 1/4	22 3/4	4 3/4	57 1/8	539
D-80-180-AS	80	180,000	177	6	1 1/2	1/2	3/4	75 1/4	26 1/4	67 1/2	70	19 5/8	55 1/4	22 3/4	4 3/4	57 1/8	539
D-80-199-AS	80	199,900	194	6	1 1/2	1/2	3/4	68 1/4	28 1/4	60 1/2	63 5/8	21 1/4	52	18 3/4	4 3/4	53 5/8	539
D-100-199-AS	100	199,900	194	6	1 1/2	1/2	3/4	73 5/8	30 1/4	65 5/8	67 5/8	23 5/8	57 1/2	20	4 3/4	58 7/8	682
D-100T-199-AS	100	199,900	194	6	1 1/2	1/2	3/4	78 1/4	28 1/4	70 1/2	73 5/8	21 1/4	62	18 3/4	4 3/4	63 5/8	566
ASME Code Spark Ignition/Flue Dampered Series																	
D-100-250-ASME	100	250,000	242	6	1 1/2	1/2	1	73 5/8	30 1/4	65 5/8	67 5/8	23 5/8	57 1/2	20	4 3/4	58 7/8	787
D-100-270-ASME	100	270,000	255	6	1 1/2	1/2	1	73 5/8	30 1/4	65 5/8	67 5/8	23 5/8	57 1/2	20	4 3/4	58 7/8	787
D-100-300-ASME	100	300,000	291	7	1 1/2	1/2	1	73 5/8	30 1/4	65 5/8	67 5/8	23 5/8	57 1/2	20	4 3/4	58 7/8	787
D-75-365-ASME	75	365,000	358	8	N/A	1	1	75 3/4	30 1/4	66 1/4	N/A	N/A	57	19 1/4	4 3/4	58 1/4	903
D-75-399-ASME	75	399,900	393	8	N/A	1	1	75 3/4	30 1/4	66 1/4	N/A	N/A	57	19 1/4	4 3/4	58 1/4	903
D-80-512-ASME	80	512,000	496	10	N/A	1	1	72 1/4	30 1/4	66 1/4	N/A	N/A	57	19 1/4	4 3/4	58 1/4	908

*Caps or plugs not included

†Rear and Front Water Connection 2"



MIGHTY THERM

Copper Finned Gas-Fired Volume Water Heaters



Features:

- Energy efficient as high as 82%
- Integral finned, copper tube heat exchanger with 160 PSI working pressure
- Field removable external header covers
- ASME pressure relief valve
- Stainless steel atmospheric burners
- Flow switch
- EM2 pump delay circuit
- Controls meet A.G.A. and C.G.A.

Models Available:

- Model VW- Volume Water Heater (no pump)
- Model PW – Volume Water Heater with Pump

Available Firing Modes:

- On/Off: Standard on all sizes
- Two Stage: Available on all sizes
- Four Stage: Available on sizes 500-5000
- Motorized Modulation: Available on sizes 500-5000

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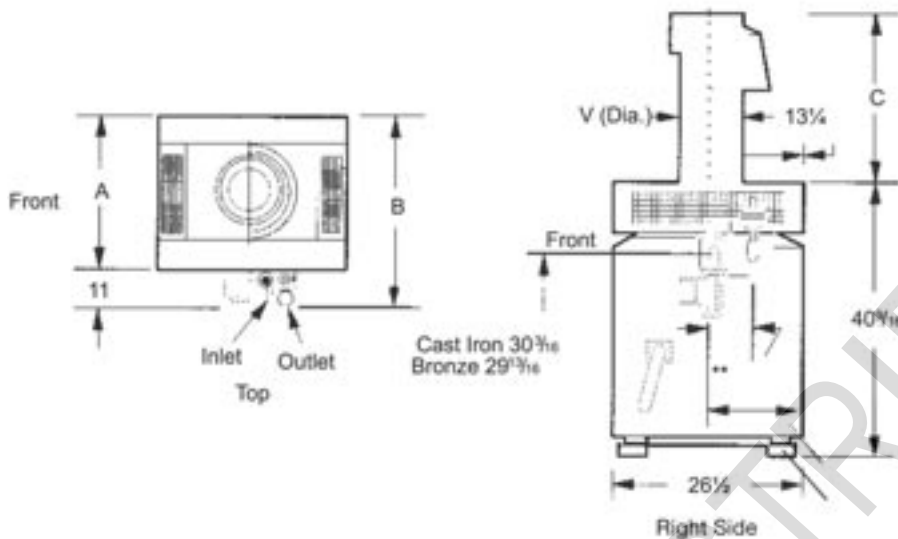
LAARS MIGHTY THERM WATER HEATER

Indoor Models										
Indoor Model Size	Input MBTU/h	Output MBTU/h	Gas Connection NPT*	Water Conn. Size inches NPT	Dimensions in inches				Shipping Weight in lbs.	Recovery @ 100° F gph
			Natural		A	B	C	V		
175	175	144	1/2-3/4	1 1/2	18	26 1/2	23 1/2	6	255	170
250	250	205	3/4	1 1/2	22 1/2	31	24 3/4	7	255	245
325	325	267	3/4	1 1/2	26 3/4	35 3/4	25 7/8	8	325	316
400	400	328	3/4	1 1/2	31 3/4	40 1/4	26 7/8	9	360	389
500	500	410	1	2	33 5/8	39 5/8	23 5/8	10	612	486
600	600	492	1	2	38 5/8	44 5/8	22 5/8	12	702	583
715	715	586	1	2	44 1/4	50 1/4	22 5/8	12	750	695
850	850	697	1-1 1/4	2	50 5/8	56 5/8	21 5/8	14	830	826
1010	1010	828	1 1/4	2 1/2	58	64	20 5/8	16	986	982
1200	1200	984	1 1/4	2 1/2	66 1/4	72 1/4	20 5/8	16	995	1166
1430	1430	1173	1 1/4	2 1/2	76	82	19 5/8	18	1080	1390
1670	1670	1369	1 1/4-1 1/2	2 1/2	85 3/8	91 3/8	19 5/8	18	1175	1623
1825	1825	1497	1 1/4-1 1/2	2 1/2	92 1/4	98 1/4	19 5/8	18	1270	1774
2000	2000	1640	1 1/2	4	55 1/2	63	24 1/4	22	1815	1968
2450	2450	2009	1 1/2-2	4	65 1/2	73	24 1/2	24	1950	2411
3050	3050	2501	1 1/2 - 2	4	78	85 1/4	24 1/2	26	2100	3001
3500	3500	2870	2	4	88	95 1/2	24 1/2	28	2237	3444
4050	4050	3321	2 - 2 1/2	4	100 1/2	108	24 1/2	30	2555	3985
4500	4500	3690	2 1/2	4	110 1/2	118	24 1/2	32	3075	4428
5000	5000	4100	2 1/2	4	123	130 1/2	24 1/2	34	3050	4920

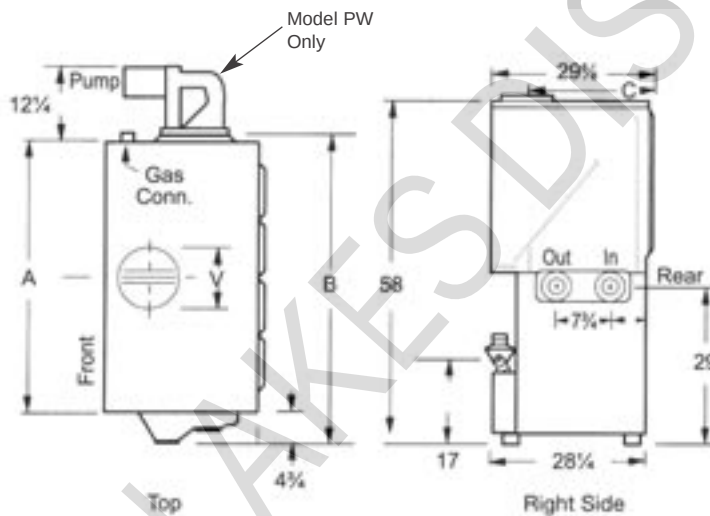
* When 2 gas connection sizes are shown, the smaller applies to the standard gas train, while the larger applies to optional trains. Consult factory for exact specifications.

MIGHTY THERM

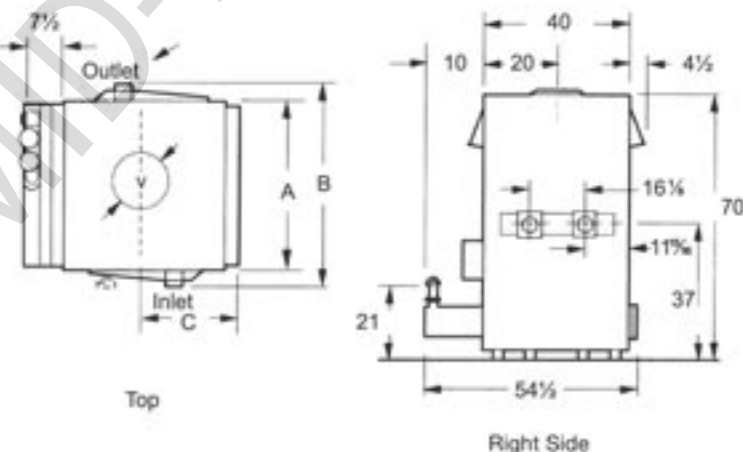
Copper Finned Gas-Fired Volume Water Heaters



SIZES 175-400



SIZES 500-1825



SIZES 2000-5000



PENNANT

Volume Water Heater

Features:

- Up to 85% efficiency
- Integral finned copper tube heat exchanger
- 160 PSI working pressure
- Fan-assisted combustion system with washable air filter
- Category III sidewall venting with optional vent kit
- ASME pressure relief valve
- Category 1 vertical venting
- Water flow switch
- Pump delay circuit
- Factory mounted pump



SIZING DATA

Indoor Model	Input BTU/H x1000	Output BTU/H x1000	IBR Net Rating BTU/H x1000	Firing Rate	Gas Conn. (inches)	Water Conn. (inches)	Shipping Weight (lbs.)
500	500	425	361	2-Stage	1 1/4	2	425
750	750	638	542	2-Stage	1 1/4	2	505
1000	999	849	722	3-Stage	1 1/2	2 1/2	615
1250	1250	1063	903	4-Stage	2	2 1/2	675
1500	1500	1275	1084	4-Stage	2	2 1/2	760
1750	1750	1488	1264	4-Stage	2	2 1/2	825
2000	1999	1699	1444	4-Stage	2	2 1/2	955

DIMENSIONAL DATA

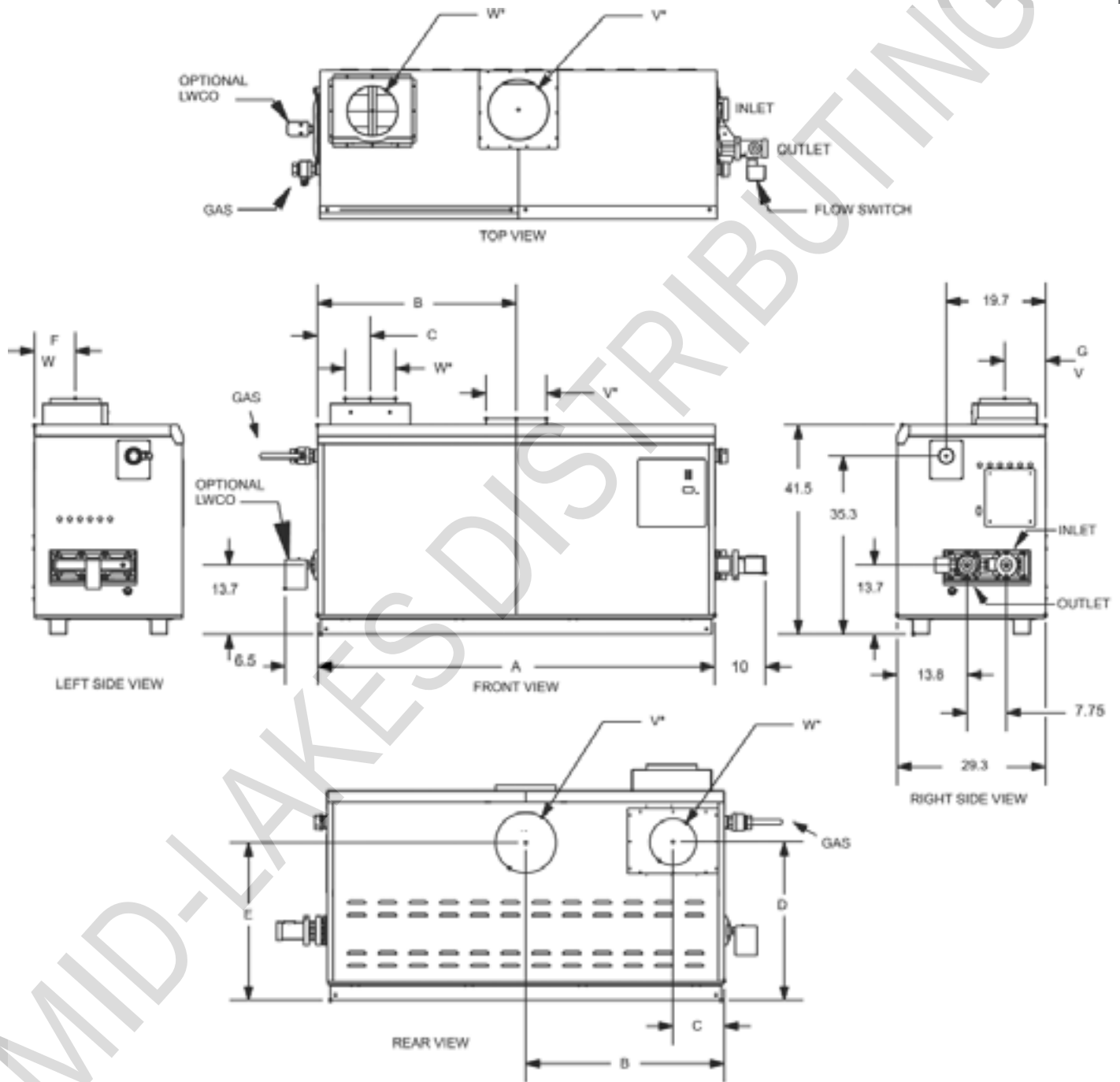
Size	A	C	D	E	F	G	H	Air Conn. W*	Vent Conn. V*	Horiz. Vent
500	33 1/2	15 3/4	5 3/4	29 3/4	32 3/4	7 3/4	8 3/4	6	6	6
750	45 1/2	21 3/4	5 3/4	29 3/4	32 3/4	7 3/4	8 3/4	6	8	6
1000	57 1/2	28 3/4	5 3/4	29 3/4	32 3/4	7 3/4	7	8	10	8
1250	68	34	10 1/8	30 3/4	29 1/2	8 3/4	8 3/4	8	10	8
1500	78 1/2	39 3/4	10 1/8	30 3/4	29 1/2	8 3/4	8 3/4	10	12	10
1750	89	44 1/2	10 1/8	30 3/4	29 1/2	8 3/4	8 3/4	12	14	12
2000	99 1/2	49 3/4	10 1/8	30 3/4	29 1/2	8 3/4	8 3/4	12	14	12

* Air and vent connections may be on top or back of the Pennant and are field convertible.



PENNANT

Volume Water Heater



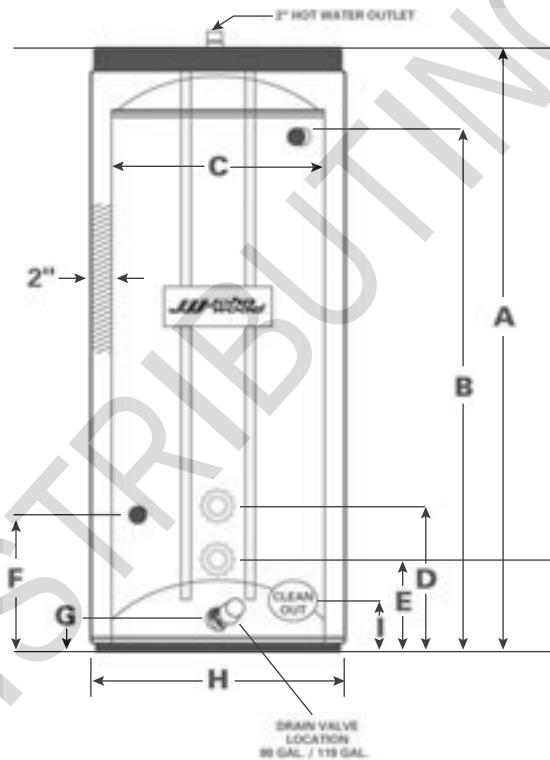


Commercial Hot Water Storage Tanks

Features:

- Patented TankSaver design. As glass within the tank wears, the stainless steel TankSaver virtually eliminates rust on the metal tank body.
- Glass-lined tanks
- Convenient hand-hole cleanout
- CFC-free foam insulation, R16.0
- Aquastat opening $\frac{3}{4}$ "
- Controls potable hot water storage up to 180°F
- High efficiency
- Jacketed models exceed ASHRAE/IES 90.1 – 1999 standards
- Side opening for T&P valve 1"
- Available in 80 and 119 gallon models, jacketed and insulated or bare and enamel painted

John Wood Limited Warranty: All John Wood storage tanks will be replaced free of charge in the case of tank leakage within five years from the date of installation on jacketed tanks.



JOHN WOOD COMMERCIAL HOT WATER STORAGE TANKS

Capacity and Performance	Model			Gallons			Working Pressure		Shipping Weight (lbs.)		
	S4120			119			150 psi		342		
	S4080			80			150 psi		195		
Dimensions		A	B	C	D	E	F	G	H	I	J
	Model	Unit Height	1" T&P Opening (inches)	Tank Diameter (inches)	Top 2" Nipple MPT (inches)	Bottom 2" Nipple MPT (inches)	3/4" Aquastat Opening (inches)	3/4" Drain Valve (inches)	Casing Diameter (inches)	Hand Hole Cleanout	Insulation (inches)
	S4120	65 3/8	55 3/8	24	15 1/2	10 1/2	15 1/2	6 3/4	28	8 1/2	2
	S4080	60 1/4	52 1/4	20	14	9	14	5	24	7	2

Model Number	Price
S4120	\$1,428.00
S4080	\$832.00

Commercial Hot Water Storage Tanks

ST-80-AS / ST-120-AS

Features:

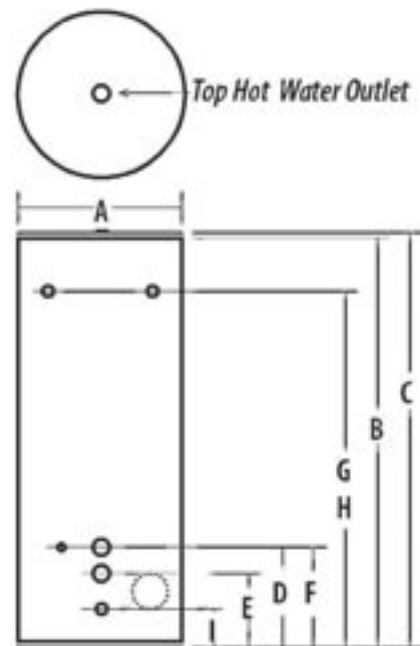
- Heavy gauge steel tank
- Inner tank glass lined with Dura-Glas – fired at 1600°F for optimum protection from the effects of corrosion
- Two full inches of non-CFC energy saving foam insulation
- Two anode rods to ensure longer tank life
- Easy removal of sediment and tank inspection – with a full-sized hand-hole clean-out
- Certified at 300 PSI test pressure and 150 PSI working pressure, and all tanks are 100% hydrostatically tested at the factory

American Standard Warranty: Five year limited warranty on inner glass-lined tank. One year limited warranty on all other component parts.



COMMERCIAL STORAGE TANKS SPECIFICATIONS & DATA

Dimensions (in inches)				
Model			ST-80-AS	ST-120-AS
Capacity in Gal.			80	119
Exterior Dimensions	A	Jacket Diameter	26 1/4	28 1/4
	B	Height to Top of Tank	56 1/8	67 7/8
	C	Height to Top of Hot Water Outlet	56 1/4	68
	D	Height to Top of Circ. Conn	16 1/4	16 1/4
	E	Height to Bottom of Circ. Conn.	11 1/4	11 1/4
	F	Height to Aquastat Conn.	16 1/4	16 1/4
	G	Height to Thermometer Conn.	48 9/16	60
	H	Height to T&P Right Side Outlet	48 9/16	60
	I	Height to Drain Valve	6 1/2	6 1/2
Connections	Top Hot Water Connection		2	2
	Circulation Line Connections		2	2
	Aquastat & Thermometer		3/4	3/4
	PTR Relief Valve		1	1
Shipping Weight			240	420
Price			Call for Pricing	\$1,428.00





Standard Hot Water Storage Tanks



Features:

- State commercial storage tanks are ideal for increasing storage capacity when used along with water heaters and domestic hot water heating boilers.
- Meets or exceeds ASHRAE 90.1-1999
- Foam insulation – thick foam insulation reduces stand-by heat loss and saves energy
- Glass-lined tank – alkaline borosilicate composition is permanently fused to steel to provide corrosion protection and dependable use at water storage temperatures up to 180F.
- Heavy gauge steel jacket – with baked enamel finish
- Threaded openings – all tanks furnished with threaded openings for thermometer, relief valve, 2" recirculation lines, tankstat and drain valve
- Five year warranty on all models
- Anode rod –all 80 and 120 gallon models are equipped with an anode rod. Model PVG 02000 OVSA has two anode rods.

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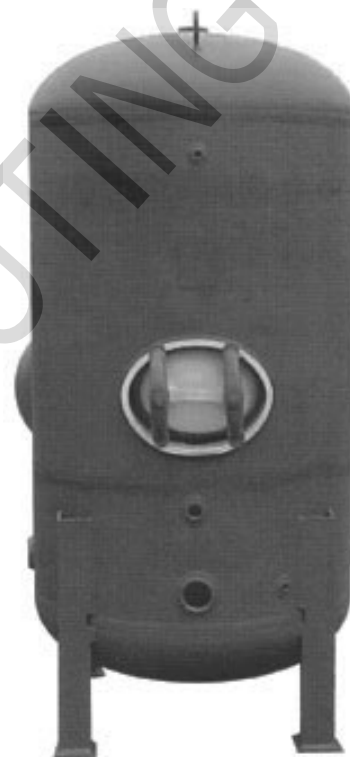
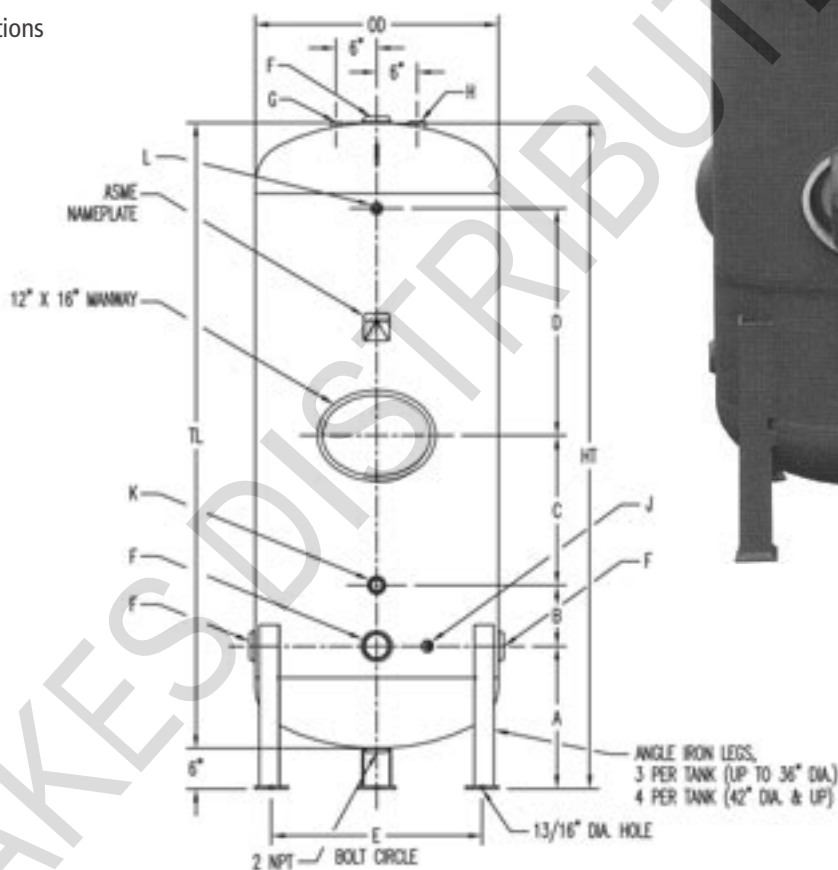
STATE STANDARD JACKETED STORAGE TANKS

Model	Nominal Gallon Capacity	ASME	Standard Working Pressure	Approx Shipping Weight	Dimensions in Inches							Water Conn (female N.P.T.)	Stat Opening	Relief opening
					A	B	C	D	E	F	G			
PVG 01200 OVT	119	No	150	320	62	29 3/8	4 1/8	6 7/8	54	2	42	2"	3/4"	1"

Commercial Hot Water Storage Tanks

Features:

- ASME rated
- 150 lbs. working press
- Un-insulated
- Available for horizontal applications
- Epoxy lined

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STORAGE TANK															
Nom Capacity		Shipping	Dimensions in Inches								N.P.T. Openings				
Gal.	CU.FT.	Weight	OD	TL	HT	A	B	C	D	E	F	G	H	J	K
140	18.72	350	24.00	75.00	81.00	16.88	10.00	16.63	28.13	24.00	2 1/2	3/4	1 1/2	1/2	1 1/4
190	25.4	460	30.00	66.00	72.00	18.75	8.00	16.25	17.75	30.00	2 1/2	3/4	1 1/2	1/2	1 1/4
225	30.08	510	30.00	78.00	84.00	18.75	10.00	16.25	27.75	30.00	2 1/2	3/4	1 1/2	1/2	1 1/4
268	35.83	810	36.00	68.00	74.00	20.94	6.69	16.38	16.88	36.00	3	3/4	1 1/2	1/2	1 1/4
320	42.78	890	36.00	80.00	86.00	21.06	8.69	16.25	26.75	36.00	3	3/4	1 1/2	1/2	1 1/4
388	51.87	900	36.00	93.00	99.00	21.19	9.06	22.25	33.75	36.00	3	3/4	1 1/2	1/2	1 1/4
375	50.13	980	42.00	70.75	76.75	23.38	6.00	14.00	18.00	42.00	3	3/4	1 1/2	1/2	1 1/4
450	60.16	1110	42.00	83.75	89.75	22.31	9.69	13.88	28.00	42.00	3	3/4	1 1/2	1/2	1 1/4
535	71.52	1225	42.00	96.00	96.00	22.44	9.69	13.88	41.38	42.00	3	3/4	1 1/2	1/2	1 1/4



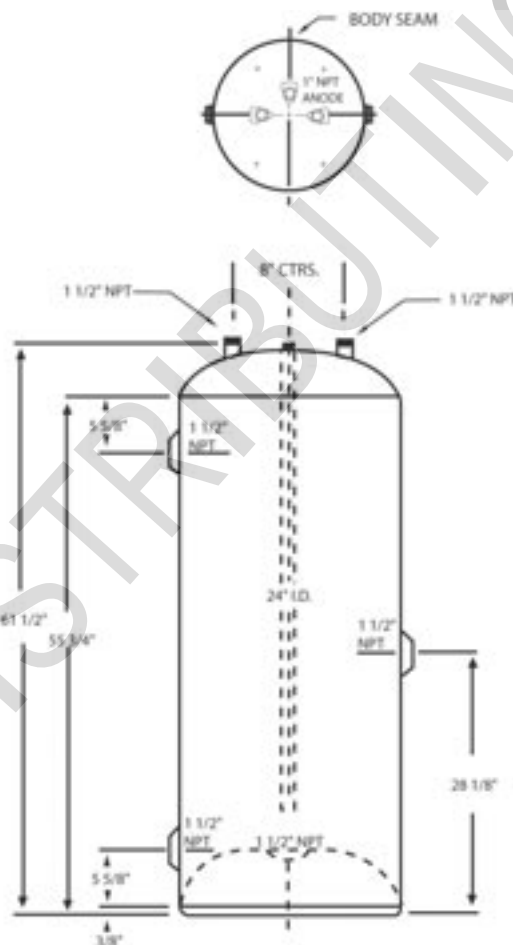
Painted Hot Water Storage Tank

MODEL T5120

Features:

- 119 U.S. Gal Cap/454 L
- 24" Diameter
- 150 PSI Working Pressure, 180° F
- Vertical or horizontal application
- Weight 245 lbs.
- Un-insulated
- Anode rod
- Price: \$1,548.00

John Wood Warranty: All John Wood glass lined bare tanks will be replaced free of charge in the case of tank leakage within one year from the date of installation.



ULTRA PLUS, GOLD PLUS and PLUS

High Efficiency Indirect Fired Water Heaters

Features:

- Tank-within-a-tank design - corrugated stainless steel inner tank; steel outer tank
- Unique self cleaning design resists liming
- Special wrap around design heats faster – no cold spots
- Lowest pressure drop in the industry – no high head pump required for residential applications
- Every tank is 100% leak-tested
- Automatic air vent
- Adjustable aquastat
- Drain valve assembly (Gold Plus only)
- Up to 87% Operating Efficiency

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SPECIFICATIONS

	Gold Plus 30	Ultra Plus & Gold Plus 40	Ultra Plus & Gold Plus 60	Ultra Plus & Gold Plus 80	Plus 100	Plus 102
	Single Wall					
	First Hour Ratings (Maximums)					
Boiler Heating Capacity	110 MBH	130 MBH	190 MBH	350 MBH	400 MBH	500 MBH
115° F	230 GPH	260 GPH	365 GPH	670 MBH	740 GPH	970 GPH
140°F	140 GPH	170 GPH	220 GPH	410 GPH	510 GPH	650 GPH
Circulator	8 GPM	9 GPM	13 GPM	20 GPM	22 GPM	28 GPM
Data	30	40	60	80	100	120
Domestic Water	28 gal.	36 gal.	46 gal.	56 gal.	76 gal.	120 gal.
Boiler Water	5 gal.	6 gal.	8 gal.	8 gal.	8 gal.	30 gal.
Heating Surface	13 sq. ft.	16 sq. ft.	20 sq. ft.	24 sq. ft.	28 sq. ft.	42 sq. ft.
Head Loss-Boiler Side	³ / ₄ ft.	1 ft.	1 ¹ / ₄ ft.	1 ¹ / ₂ ft.	2 ft.	2 ¹ / ₂ ft.
Working Pressure Inner Tank	150 PSI (maximum)					
Working Pressure Outer Tank	45 PSI (maximum)					
Operating Temp Domestic Water	160° F (maximum)				190° F (maximum)	
Approx Shipping Weight	135 lbs.	155 lbs.	180 lbs.	200 lbs.	370 lbs.	450 lbs.
Dimensions	30	40	60	80	100	120
Domestic Water Inlet/Outlet	³ / ₄ in.				1 ¹ / ₂ in.	
Boiler Water Supply/Return	1 in.		1 ¹ / ₄ in.		2 in.	
A Dimension	38 in.	45 in.	57 in.	66 ¹ / ₂ in.	62 ¹ / ₂ in.	73 ¹ / ₄ in.
B Dimension	9 in.				12 ¹ / ₄ in.	11 ³ / ₄ in.
C Dimension	30 in.	38 in.	49 in.	58 in.	53 in.	64 in.
D Dimension	14 ¹ / ₄ in.				10 ³ / ₄ in.	
E Dimension	NA				26 ³ / ₄ in.	32 ¹ / ₄ in.
F Dimension	NA				25 ³ / ₄ in.	31 ¹ / ₄ in.



Tankless Gas Water Heaters

194,00 Btu thru 380,000 Btu Models

Residential Models

Noritz tankless gas water heaters provide endless hot water. Our residential models can handle the entire home. For heavier demand, the N-069M offers a Quick-Connect Multi-System configuration to meet any hot water demand.

Model: N-063S - 6.3 gal/min

Model: N-069M - Quick-Connect Multi-System Compatible - 6.9 gal/min

Model: N-069M-DV (Two Pipe) - Quick-Connect Multi-System Compatible - 6.9 gal/min

Residential/Commercial & Direct Vent Models

N-084M, N-084M-DV & N-132M

To meet the heavier demands in residential applications, the N-084M, N-084M-DV, & N-132M offer high capacities and are best suited for these applications. All three units have coated copper heat exchangers to prevent corrosion and deterioration and the internal piping is 25% thicker than residential models to combat failures while extending the life of products. In addition, all 3 models are Quick-Connect or Multi-System (with a System Controller) capable for heavier hot water applications.

N-084M - Quick Connect & Multi-System Compatible - 8.4 gal/min

N-084M-DV (Two Pipe) - Quick Connect & Multi-System Compatible - 8.4 gal/min

Commercial Model

N-132M - The N-132M is the highest capacity tankless water heater in the world – 13.2 gal/min Quick Connect & Multi-System Compatible

Model	Price
N-063S	\$1,402.00
N-069M	\$1,792.00
N-069M-DV	\$1,870.00
N-084M	\$3,118.00
N-084M-DV	\$3,352.00
N-132M	\$6,238.00



Tankless Gas Water Heaters

194,00 Btu thru 380,000 Btu Models

NORITZ TANKLESS GAS WATER HEATERS							
		N-063S	N-069M	N-069M-DV	N-084M	N-084M-DV	N-132M
Gas Consumption	NG LP	Max. 194,000 Btu/h & Min 25,000 Btu/h			Max. 236,000 & Min. 21,000 Btu/h		Max. 380,000 Btu/h & Min. 21,000 Btu/h
Capacity Range		0.75 - 6.3 Gal/Min	0.75 - 7.9 Gal/Min		0.75 - 8.4 Gal/Min		0.75 - 13.2 Gal/Min
Type	Installation	Indoor or Outdoor Wall Hung		Indoor, Wall Hung	Indoor or Outdoor Wall Hung	Indoor, Wall Hung	Indoor or Outdoor, Wall Hung
	Air-supply / Exhaust	Power Vented, 4" Flue		Direct Vent (Sealed Combustion), 4" (intake and exhaust)	Power Vented, 4" Flue	Direct Vent (Sealed Combustion), 4" (intake and exhaust)	Power Vented, 5" Flue
Ignition		Direct Ignition					
Operating Water Pressure		15-150 PSI					
Minimum Flow Rate		0.75 GPM					
Gas Supply Pressure		NG: 4.0" - 10.5" LP: 8.0" - 14.0"			NG: 5.0" - 10.5" LP: 10.5" - 14.0"		NG: 5.0" - 10.5" LP: 10.5" - 14.0"
Dimensions		23.6" H x 13.8" W x 9.4" D		24.2" H x 18.3" W x 9.4" D		29.5" H x 18.9" W x 11.8" D	
Weight		44 pounds	46 pounds	63 pounds		105 pounds	
Water Holding Capacity		0.2 Gallon		0.3 Gallon		0.6 Gallon	
Connection Sizes	Water Inlet	3/4"					1"
	Hot Water Outlet	3/4"					1"
	Gas Inlet"	3/4"					
Power	Supply	120VAC(60Hz)					
	Consumption	NG: 71W LP: 71W Freeze Prevention 125W		NG: 86W LP: 92W Freeze Prevention 135W	NG: 80W LP: 93W Freeze Prevention 135W		NG: 137W LP: 142W Freeze Prevention 371W
Temperature Settings	No Controller	120°, 130°, 140°F (Original is 120° F)	100°-150° F (in 5° F intervals), 160°, 170°, 176° F (14 options)		100°-150° F (in 5° F intervals), 160°, 170°, 180° F (14 options)		100°-150° F (in 5° F intervals), 160°, 170°, 180° F (14 options)
	W/Controller	100°-150°F (In 5° intervals), 160° F (12 options)	120°, 130°, 140°, 176° F (original is 120° F)		120°, 130°, 140°, 180° F (original is 120° F)		120°, 130°, 140°, 180° F (original is 120° F)
Accessories		Anchoring Screws	Remote Controller, Remote Controller Cord, Anchoring Screws				Remote Controller, Remote Controller Cord, Exhaust Adapter, Anchoring Screws

Note: Stainless Steel (Category III) Venting



ULTRA PhD – PRECISION HYDRONIC DATA

Condensing High Efficiency Gas Boiler
80,000 Btu thru 310,000 Btu Models

92-98%
Efficiency

Features:

- Factory tested
- Limited 15 year heat exchanger warranty
- Ultra homeowner protection plan with 5 years parts and labor
- Cast aluminum heat exchanger
- Direct spark ignition
- 30 PSI ASME relief valve
- Stainless steel burner
- Variable speed blower assembly
- Gas/air ratio venturi with air silencer
- Negative pressure regulation gas valve
- Combination T&P gauge
- Outlet water temperature sensor
- Return water temperature sensor
- Flue gas temperature sensor
- Outdoor temperature sensor
- 12 AMP 110V circ relay (310 only)
- Ultra control module with
 - Digital display and data port
 - Ignition control
 - High limit and modulating temperature control
 - Low water protection
 - Outdoor reset
 - DHW priority
 - Two pump controls (heating and DHW)
- Taco 0011 boiler circulator
- Sidewall vent/air termination kit
- Condensate trap with drain tee assembly
- Propane conversion orifice (all except model 80)
- Category IV (PVC) Venting
- Sidewall vent/air termination kit



ULTRA PhD – PRECISION HYDRONIC DATA

Condensing High Efficiency Gas Boiler
80,000 Btu thru 310,000 Btu Models

BOILERS

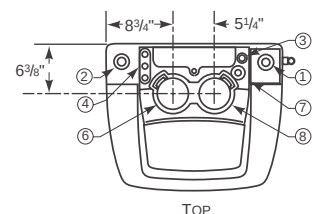
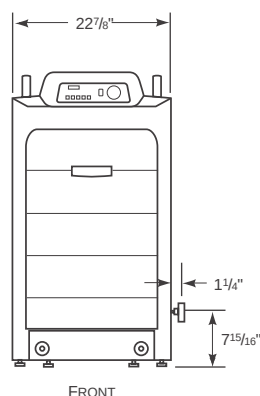
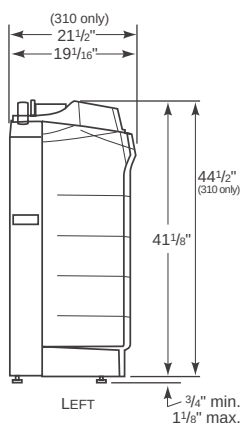
RESIDENTIAL

ULTRA PhD						
		Ultra 80	Ultra 105	Ultra 155	Ultra 230	Ultra 310
Part	Natural Gas	383-500-400	383-500-402	383-500-403	383-500-404	383-500-405
Number	Propane Gas**	383-500-401	N/A	N/A	N/A	N/A
Taco Pump		007		0011		
Optional Equipment	Wall Mounting Kit	389-900-180				N/A
	Alarm Control Kit	383-500-080				
	Indirect-Fired Water Heaters	Matching Ultra Plus 40, 60 and 80 Water Heaters Available				
Ratings	CSA Input (maximum)	80 MBH	105 MBH	155 MBH	230 MBH	310 MBH
	CSA Input (minimum)	16 MBH	21 MBH	31 MBH	46 MBH	62 MBH
	DOE Heating Capacity	71 MBH	94 MBH	139 MBH	207 MBH	289 MBH*
	Net I=B=R	62 MBH	81 MBH	123 MBH	183 MBH	252 MBH
	DOE AFUE	93.00%	92.00%	93.00%	92.80%	93.3%*
	Weil-McLain Low Temp	98.10%		98.00%		95.60%
Seasonal Efficiency		Boiler return water temp=90 deg F and boiler outlet water temp=110 deg F				
Data	Vent Size/Material	3" PVC/ABS			3" or 4" PVC/ABS	4" PVC/ABS
	Combustion Air Size	3 inches			3" or 4"	4"
	Approx Shipping Weight	149 lbs.	154 lbs.	193 lbs.	204 lbs.	254 lbs.
Dimensions	Supply Tapping	1"				1-1/4"
	Return Tapping	1"				1-1/4"
	Gas Connection Size	1/2"				3/4"

* 310 ratings are gross output and combustion efficiency

**Natural gas field convertible to LP as standard equipment except Ultra 80

Model Number	Price
Ultra 80	Call for Pricing
Ultra 105	\$6,398.00
Ultra 155	\$7,178.00
Ultra 230	\$8,118.00
Ultra 310	\$11,240.00



- TOP
- ① Supply Connection
 - ② Return Connection
 - ③ Low Voltage Wire Opening
 - ④ Electrical Entrance Openings
 - ⑤ Vent Connection
 - ⑥ Air Connection
 - ⑦ Gas Connection



CGa

Gas Boiler for Natural Draft Venting
52,000 Btu thru 245,000 Btu Models

81-84%
Efficiency

Features:

- Factory tested
- Insulated extended steel jacket
- Cast iron sections with built-in air separator
- Vertical draft hood
- Automatic vent damper
- Combination gas valve for 24 volt
- Wiring harness
- Non-linting pilot burner
- Stainless steel burners
- Electrical junction box
- Rollout thermal fuse element
- High-limit temperature control circulator (when ordered)
- Spill switch
- 30 PSI ASME relief valve and combination pressure-temperature gauge

High Efficiency Model - SPD:

- Constant burning, thermally-supervised pilot system
- Thermocouple
- Combination relay receptacle and 40VA transformer
- Plug-in circulator relay

Highest Efficiency Model - PID:

- Integrated boiler control module with intermittent electronic ignition system and indicator/diagnostic lights

CGa RATINGS

Boiler Model	Input MBH	DOE Heating Capacity MBH	Net I=B=R Water Ratings MBH	DOE Seasonal Efficiency Percent (AFUE)		Approx. Shipping Weight (lbs)	Chimney Size
				SPDN	PIDN		
CGa-25	52	44	38	81.5	84.0	200	4" I.D. x 20'
CGa-3	70	59	51	81.6	84.0	200	4" I.D. x 20'
CGa-4	105	88	77	81.7	84.0	240	5" I.D. x 20'
CGa-5	140	117	102	81.8	83.5	280	6" I.D. x 20'
CGa-6	175	146	127	81.9	83.2	325	6" I.D. x 20'
CGa-7	210	175	152	82.0	83.0	370	7" I.D. x 20'
CGa-8	245	204	177	82.1	82.7	425	7" I.D. x 20'

Note: CGa boilers are C.S.A. design certified for installation on combustible flooring. Tested for 50 psi working pressure

CGa

Gas Boiler for Natural Draft Venting
52,000 Btu thru 245,000 Btu Models

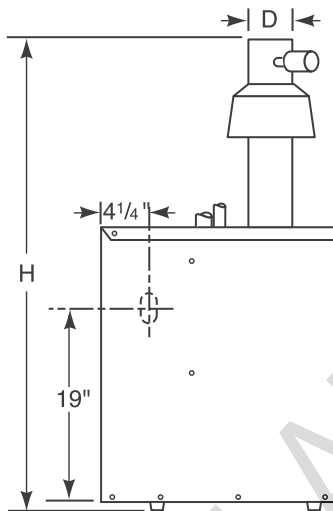
CGa DIMENSIONS

Boiler Model	Dimensions (inches)				Supply Piping (inches)	Return Piping (inches)	Nat or LP Gas Connection Size (inches)
	A	D	W	H			
CGa-25	5	4	10	45 ³ / ₈	³ / ₄	³ / ₄	¹ / ₂
CGa-3	5	4	10	52 ³ / ₈	1	1	¹ / ₂
CGa-4	6 ¹ / ₂	5	13	54 ³ / ₈	1	1	¹ / ₂
CGa-5	8	6	16	57 ⁷ / ₈	1	1	¹ / ₂
CGa-6	9 ¹ / ₂	6	19	60 ⁷ / ₈	1 ¹ / ₄	1 ¹ / ₄	¹ / ₂
CGa-7	11	7	22	62 ¹ / ₈	1 ¹ / ₄	1 ¹ / ₄	³ / ₄
CGa-8	12 ¹ / ₂	7	25	64 ⁷ / ₈	1 ¹ / ₂	1 ¹ / ₂	³ / ₄

PRICE

Model	Standing Pilot	Spark Ignition
CGa-25	\$1,954.00	\$2,324.00
CGa-3	\$2,230.00	\$2,614.00
CGa-4	\$2,456.00	\$2,870.00
CGa-5	\$2,820.00	\$3,240.00
CGa-6	\$3,306.00	\$3,738.00
CGa-7	\$3,732.00	\$4,224.00
CGa-8	\$3,792.00	\$4,626.00

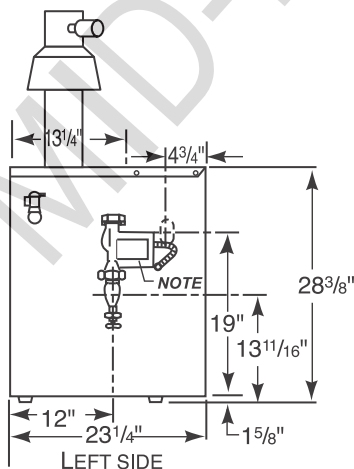
Note: Circulator flange supplied with boiler is same size as recommended pipe size.



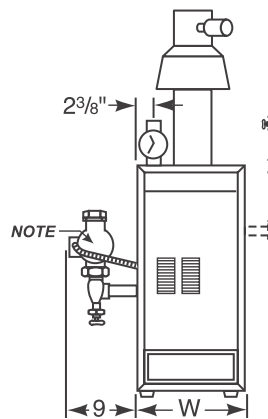
RIGHT SIDE

NOTE:

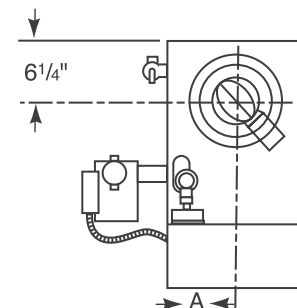
Boiler circulator is shipped loose. Circulator may be mounted on either boiler supply or return piping. See dimension chart for pipe size of circulator flange provided.



LEFT SIDE



FRONT



TOP VIEW



CGi

Gas Boiler for Direct Exhaust (Induced Draft)
50,000 Btu thru 233,000 Btu Models

Features:

- Up to 84% efficiency
- Factory tested
- Insulated extended steel jacket
- Cast iron sections with built-in air separator
- Integrated boiler control module with intermittent electronic ignition system and indicator/diagnostic lights
- Inducer assembly
- Wiring harness
- Air pressure switch
- Non-linting pilot burner
- High-grade stainless steel burners
- Rollout thermal fuse element
- High-limit temperature control
- 30 PSI ASME relief valve (boiler sections tested for 50 PSI working pressure)
- Combination pressure-temperature gauge
- Category I or III venting (chimney or direct venting)

Up to 84%
Efficiency

CGi RATINGS

Boiler Model	Input MBH	DOE Heating Capacity MBH	Net I=B+R Water Ratings MBH	DOE Seasonal Efficiency Percent (AFUE)	Approx. Shipping Weight (lbs)	Minimum Vent Connector Diameter
CGi-25	50	42	37	84.0	200	4" I.D.
CGi-3	67	57	50	84.3	200	4" I.D.
CGi-4	100	85	74	84.0	240	5" I.D.
CGi-5	133	112	97	83.7	280	5" I.D.
CGi-6	167	140	122	83.3	325	5" I.D.
CGi-7	200	167	145	83.0	370	5" I.D.
CGi-8	233	194	169	82.7	425	5" I.D.

Notes: Refer to National Fuel Gas Code, ANSI Z223.1-latest edition for chimney sizing and vent connector legnths. CGi boilers are C.S.A. design certified for installation on combustible flooring. Tested for 50psi working pressure.

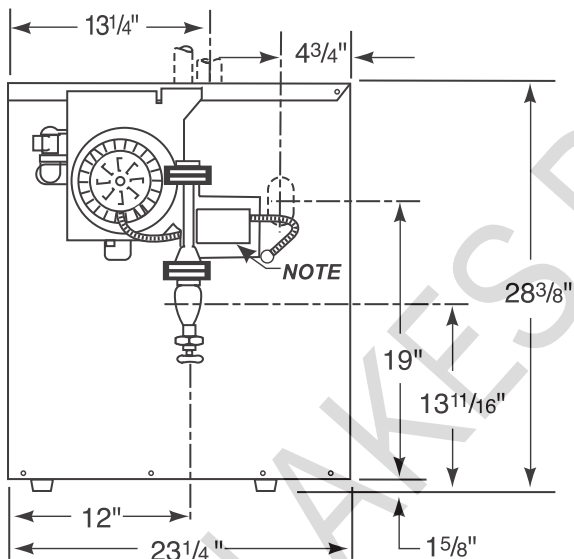
CGi

Gas Boiler for Direct Exhaust (Induced Draft)
50,000 Btu thru 233,000 Btu Models

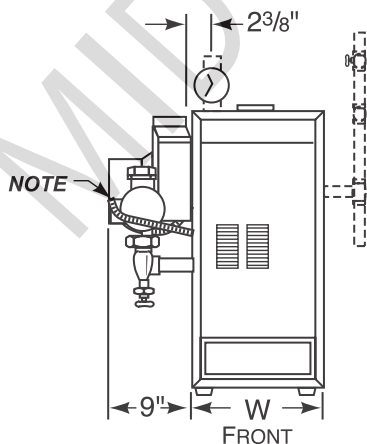
CGi DIMENSIONS				
Boiler Model	Dimensions Inches W	Supply Piping Inches	Return Piping Inches	Nat or PL Gas Connection Size Inches
CGi-25	10	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{1}{2}$
CGi-3	10	1	1	$\frac{1}{2}$
CGi-4	13	1	1	$\frac{1}{2}$
CGi-5	16	1	1	$\frac{1}{2}$
CGi-6	19	$1 \frac{1}{4}$	$1 \frac{1}{4}$	$\frac{1}{2}$
CGi-7	22	$1 \frac{1}{4}$	$1 \frac{1}{4}$	$\frac{3}{4}$
CGi-8	25	$1 \frac{1}{2}$	$1 \frac{1}{2}$	$\frac{3}{4}$

PRICE	
Model	Spark Ignition
CGi-25	\$2,324.00
CGi-3	\$2,614.00
CGi-4	\$2,870.00
CGi-5	\$3,240.00
CGi-6	\$3,738.00
CGi-7	\$4,222.00
CGi-8	\$4,628.00

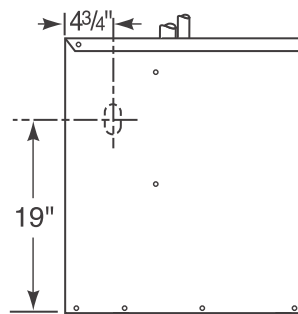
Notes: Circulator flange supplied with boiler is same size as recommended pipe size. For supply and return boiler tapping size, see installation manual.



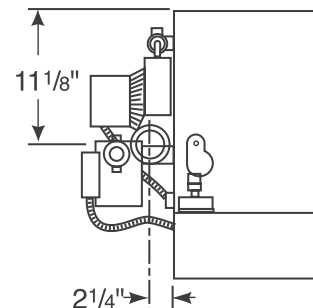
LEFT SIDE



FRONT



RIGHT SIDE



TOP VIEW



EG

High Efficiency Gas Boiler for Water or Steam
75,000 Btu thru 300,000 Btu Models

Features:

- Factory assembled section block
- Insulated extended jacket
- Horizontal to vertical draft hood with built-in diverter
- Automatic vent damper (additional for EG-75)
- Non-linting pilot burner
- Aluminized steel burners
- Electrical junction box
- Spill switch
- Rollout thermal fuse element
- Limited lifetime warranty on water boiler sections; 10 years on steam boiler sections
- Category I Venting

WATER BOILERS ONLY

- Built-in air separator
- 30 PSI ASME relief valve (boiler sections tested for 50 PSI water working pressure)
- Combination pressure-temperature gauge
- High-limit control

STEAM BOILERS ONLY

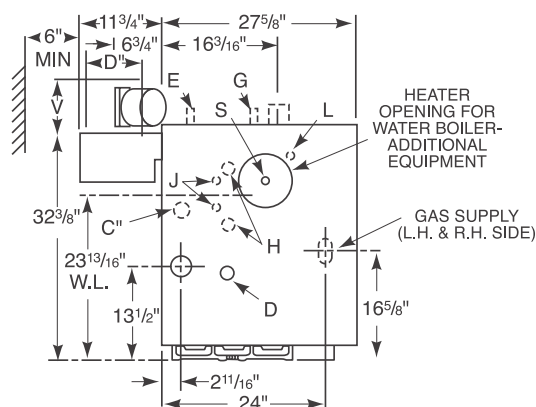
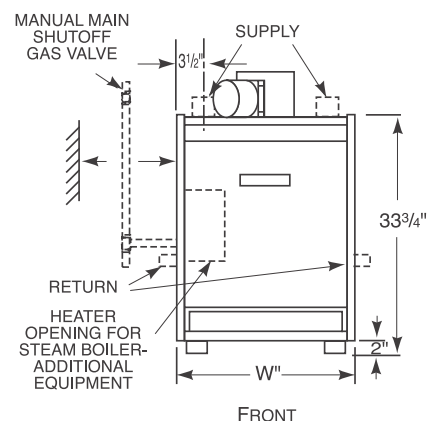
- 15 PSI ASME relief valve (boiler sections tested for 15 PSI steam working pressure)
- High limit pressure control
- Low water cut-off – electrode type
- Steam pressure gauge
- Syphon
- Gauge cocks and galss

HIGH EFFICIENCY MODEL – SPD

- Constant burning, thermally supervised pilot system

HIGHEST EFFICIENCY MODEL – PID

- Intermittent electronic ignition system with Weil-McLain UCM universal ignition control module



PRICE

Model	Steam		Water	
	Standing Pilot	Spark Ignition	Standing Pilot	Spark Ignition
EG-30	\$2,964.00	\$2,564.00	\$2,664.00	\$2,272.00
EG-35	\$3,208.00	\$2,808.00	\$2,906.00	\$2,516.00
EG-40	\$3,646.00	\$3,246.00	\$3,346.00	\$2,954.00
EG-45	\$3,924.00	\$3,524.00	\$3,622.00	\$3,232.00
EG-50	\$4,212.00	\$3,812.00	\$3,910.00	\$3,520.00
EG-55	\$4,552.00	\$4,316.00	\$4,252.00	\$4,024.00
EG-65	\$5,256.00	\$4,776.00	\$4,956.00	\$4,484.00
EG-75	\$5,066.00	\$4,778.00	\$4,766.00	\$4,506.00



High Efficiency Gas Boiler for Water or Steam 75,000 Btu thru 300,000 Btu Models

EG ENGINEERING DATA

Boiler Number	Number & Size of		Dimensions - Inches			Gas Connection Size Natural Gas*	Minimum Recommended Pipe Sizes			Approx. Shipping Weight (lbs.)
	Supply (NPT)	Return (NPT)	D	V	W		Forced Water Supply and Return	Steam Riser and Header	Steam Equalizer	
EG-30	2 - 3"	2 - 2 1/2"	5"	6"	17"	1/2"	1"	2"	1 1/2"	380
EG-35	2 - 3"	2 - 2 1/2"	5"	6"	17"	1/2"	1"	2"	1 1/2"	380
EG-40	2 - 3"	2 - 2 1/2"	6"	6 1/2"	21 1/4"	1/2"	1 1/4"	2 1/2"	1 1/2"	465
EG-45	2 - 3"	2 - 2 1/2"	6"	6 1/2"	21 1/4"	1/2"	1 1/4"	2 1/2"	1 1/2"	465
EG-50	2 - 3"	2 - 2 1/2"	7"	9"	25 1/2"	1/2"	1 1/4"	2 1/2"	1 1/2"	545
EG-55	2 - 3"	2 - 2 1/2"	7"	9"	25 1/2"	1/2"	1 1/2"	3"	1 1/2"	545
EG-65	2 - 3"	2 - 2 1/2"	8"	9 1/2"	29 3/4"	3/4"	1 1/2"	3"	1 1/2"	630
EG-75	2 - 3"	2 - 2 1/2"	8"	9 1/2"	34"	3/4"	2"	3"	1 1/2"	695

*Sizes shown are gas connection sizes. Gas piping from meter to boiler to be sized according to local utility requirements.

EG RATINGS

Boiler Number			Net I-B-R Ratings			DOE Seasonal Efficiency Percent (AFUE)				Chimney Size
	A.G.A. Input BTU/Hr	DOE Heating Capacity	Sq. Ft. Steam	Steam BTU/HR	Water BTU/HR	Water		Steam		
						SPDN	PIDN	SPDN	PIDN	
EG-30	75,000	61,000	192	46,000	53,000	80.7	83.4	79.5	81.6	5" I.D. x 20'
EG-35	100,000	81,000	254	61,000	70,000	80.3	82.2	79.1	82.0	5" I.D. x 20'
EG-40	125,000	101,000	317	76,000	88,000	80.8	82.8	79.8	81.3	6" I.D. x 20'
EG-45	150,000	122,000	383	92,000	106,000	80.6	82.2	79.2	81.4	6" I.D. x 20'
EG-50	175,000	142,000	446	107,000	123,000	81.0	82.2	80.1	81.1	7" I.D. x 20'
EG-55	200,000	163,000	508	122,000	142,000	80.8	82.3	79.3	80.9	7" I.D. x 20'
EG-65	250,000	203,000	633	152,000	177,000	81.0	82.3	79.4	80.4	8" I.D. x 20'
EG-75	300,000	240,000	750	180,000	209,000					8" I.D. x 20'

EG CONTROL TAPPINGS

Location	Size	Steam	Water
C	3/4"	Electrode-type low-water cutoff	Plugged
D	3/4"	Drain	Drain
E	3/4"	Safety Valve	Safety relief valve
G	3/4"	Plugged	Piping to compression tank or auto air vent
H	1/2"	Gauge glass and/or low-water cutoff	Plugged
J	3/8"	Try cock tappings	
L	1/4"	Syphon, pressure gauge, high-limit control	Combination pressure-temperature gauge
S	1 1/2" (steam)	Skim tapping	
	3/4" (water)		Limit control



GWA

Gas-Fired Water Boilers

52,000 Btu thru 245,000 Btu Models

Features:

- Factory-packaged and tested
- 52,000 to 245,000 Btuh input natural gas
- Atmospheric (chimney) venting
- Cast iron sections with built-in air separator
- Vertical draft hood
- Electrical junction box
- Stainless steel burners
- High temperature limit control
- Automatic vent damper
- 30 PSIG ASME relief valve
- Combination pressure/temperature gauge
- Standing pilot models - constant-burning pilot system, thermally supervised
- Intermittent pilot models - spark-ignited (intermittent) pilot system
- Limited lifetime warranty on heat exchanger
- Category I Venting

GWA BOILER RATINGS

Boiler Model Number	Input Btuh	Output (DOE Heating Capacity) Btuh	Net I=B=R Ratings Btuh	DOE Seasonal Efficiency % A.F.U.E.		Chimney/Breeching Size x 20' High	Circulator Flange Size (Recommended Supply & Return Pipe Size, NPT)
				N-S	N-I		
GWA-052	52,000	41,600	37,000	80.2	83.0	4 I.D. "	3/4"
GWA-070	70,000	56,400	50,000	80.1	82.2	4 I.D. "	1 "
GWA-105	105,000	84,000	77,000	80.4	82.9	5 I.D. "	1 "
GWA-140	140,000	112,800	102,000	80.4	82.5	6 I.D. "	1 "
GWA-175	175,000	140,000	126,000	80.5	82.2	6 I.D. "	1 1/4"
GWA-210	210,000	168,000	151,000	80.5	81.8	7 I.D. "	1 1/4"
GWA-245	245,000	196,000	176,000	80.5	81.4	7 I.D. "	1 1/2"



GWA

Gas-Fired Water Boilers 52,000 Btu thru 245,000 Btu Models

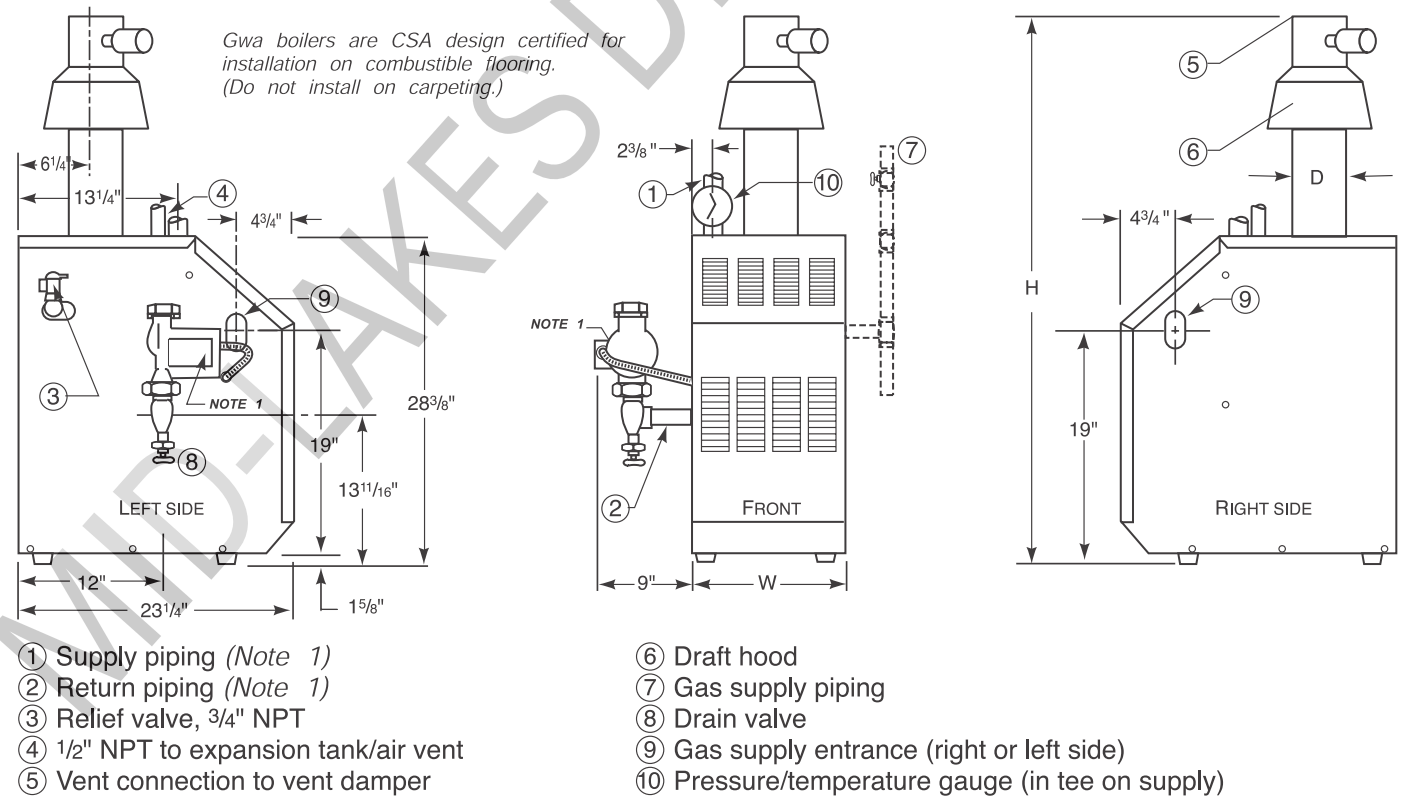
BOILERS

RESIDENTIAL

GWA BOILER DIMENSIONS			
	Dimensions (inches)		
	W	H	D
Boiler Model	width	height over vent damper	flue diameter
GWA-052	10	45 ³ / ₈	4
GWA-070	10	52 ³ / ₈	4
GWA-105	13	54 ³ / ₈	5
GWA-140	16	57 ⁷ / ₈	6
GWA-175	19	60 ⁷ / ₈	6
GWA-210	22	62 ¹ / ₈	7
GWA-245	25	64 ⁷ / ₈	7

PRICE		
Model	Standing Pilot	Spark Ignition
GWA-052	\$1,478.00	\$1,816.00
GWA-070	\$1,628.00	\$1,984.00
GWA-105	\$1,830.00	\$2,208.00
GWA-140	\$2,076.00	\$2,482.00
GWA-175	\$2,374.00	\$2,814.00
GWA-210	\$2,646.00	\$2,646.00
GWA-245	\$2,936.00	\$3,438.00

Note 1: Boiler supply and return tapings are 1 1/2" NPT. Circulator flanges shipped with boiler are sized to recommended pipe size listed in the ratings table. Boiler circulator is shipped loose. Circulator may be mounted on either boiler supply or return piping.





GSA

Gas-Fired Packaged Steam Boilers
75,000 Btu thru 250,000 Btu Models

Features:

- Factory packaged and tested
- 75,000 to 250,000 Btuh input
- Atmospheric (chimney) venting
- Factory assembled cast iron section assembled
- Integral horizontal draft diverter
- Gauge glass, pressure gauge and siphon assembly
- Pressure limit control
- Probe low water cutoff
- High temp limit control
- Automatic vent damper
- 15 PSIG ASME relief valve
- Constant- burning pilot system, thermally supervised
- 10 year limited warranty on boiler sections
- Category I Venting

GSA RATINGS

Boiler Number	0-2,000 Feet Altitude		Net I=B=R Ratings		Boiler Water Content (to water line)	DOE Seasonal Efficiency		Chimney and Breeching Size
	Input Btuh	Output Btuh (DOE Heating Capacity)	Square Feet	Btuh	Gallons	Natural	Propane	(x 20' high)
GSA-075	75,000	61,000	192	46,000	8.4	79.5	79.5	5" I.D.
GSA-100	100,000	81,000	254	61,000	8.4	79.1	79.7	5" I.D.
GSA-125	125,000	101,000	317	76,000	9.8	79.8	80.3	6" I.D.
GSA-150	150,000	122,000	383	92,000	9.8	79.2	80.3	6" I.D.
GSA-175	175,000	142,000	446	107,000	11.2	80.1	81.1	7" I.D.
GSA-200	200,000	163,000	508	122,000	11.2	79.3	81.0	7" I.D.
GSA-250	250,000	203,000	633	152,000	12.6	79.4	81.6	8" I.D.

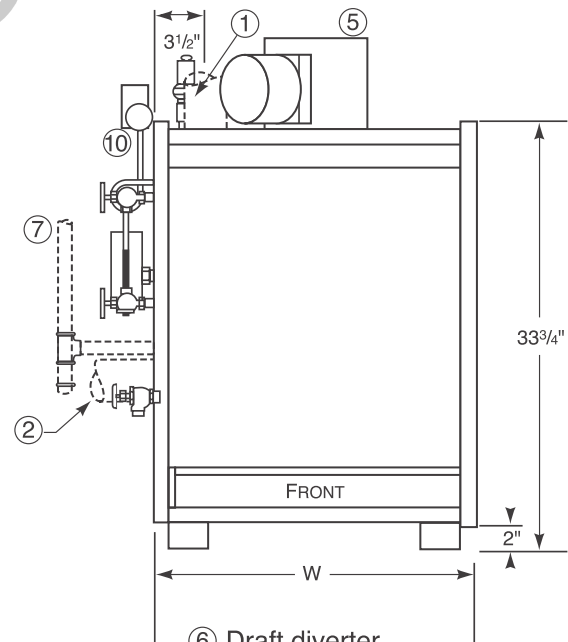
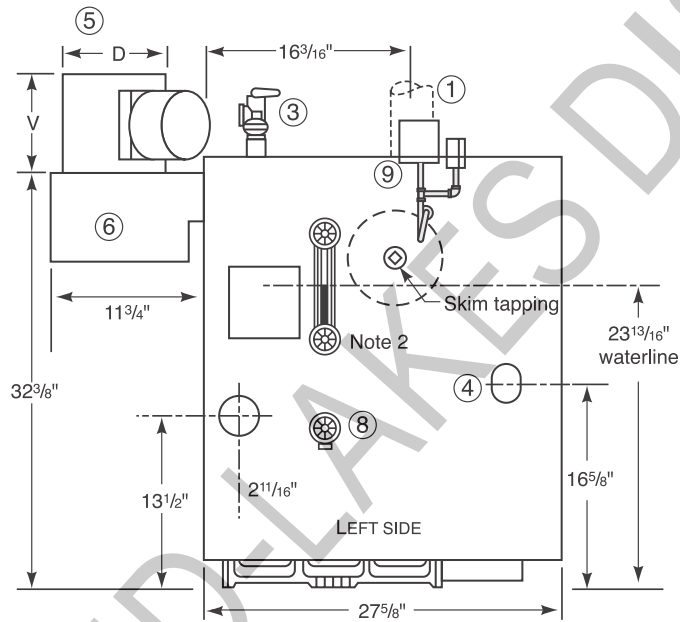

GSA

Gas-Fired Packaged Steam Boilers 75,000 Btu thru 250,000 Btu Models

GSA BOILER DIMENSIONS			
	V	D	W
Boiler Number	Damper Height	Vent Diameter	Jacket Width
GSA-075	6	5	17
GSA-100	6	5	17
GSA-125	6 1/2	6	21 1/4
GSA-150	6 1/2	6	21 1/4
GSA-175	9	7	25 1/2
GSA-200	9	7	25 1/2
GSA-250	9 1/2	8	29 3/4

Boiler supply and return tapplings can be found in the information at left. See boiler manual for recommended system supply and return piping sizes.

Model Number	Price
GSA-075	Call for Pricing
GSA-100	\$2,248.00
GSA-125	\$2,556.00
GSA-150	\$2,792.00
GSA-175	\$3,138.00
GSA-200	\$3,414.00
GSA-250	\$3,816.00



- ① Supply piping to boiler 3" NPT tapping (Note 1)
- ② Return piping to boiler 2 1/2" tapping (Note 1)
- ③ Relief valve 3/4" NPT
- ④ Gas supply entrance (right or left side)
- ⑤ Vent connection to vent damper

- ⑥ Draft diverter
- ⑦ Gas supply piping
- ⑧ Drain valve
- ⑨ Pressure limit control
- ⑩ Pressure gauge



MINI-THERM – JVS/JVT

Gas-Fired Residential Hydronic Boilers
50,000 Btu thru 225,00 Btu Models

Standard Equipment

- Standing pilot (JVT) or intermittent spark ignition (JVS)
- Up to 84.4% AFUE
- Compact design/small footprint
- Copper-finned tube heat exchanger with cast iron "wet walls"
- On-off firing 50 & 75 MBTU models
- 2 stage firing 100 MBTU to 225 MBTU
- Sleek jacket removes easily for quicker service
- Category I Venting

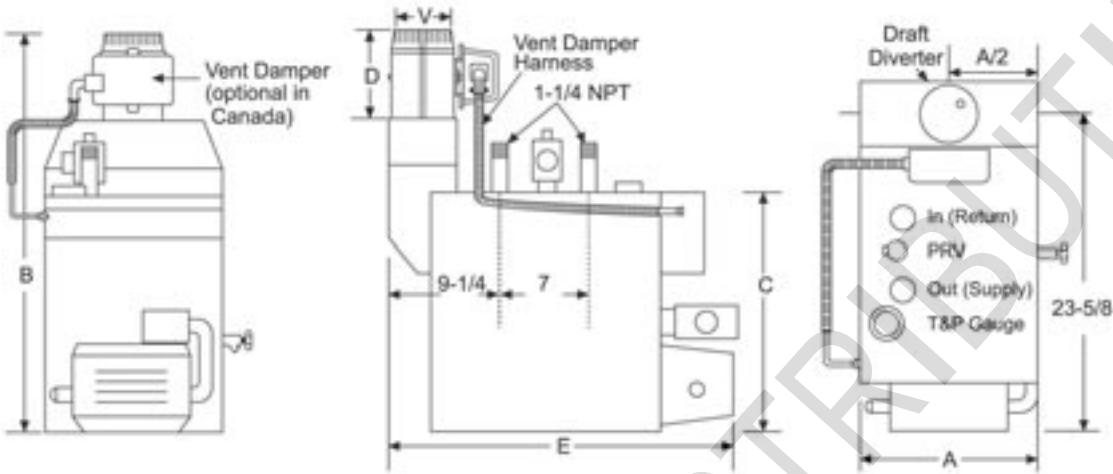
Model	Price
JVS 50	\$1,604.00
JVS 75	\$1,724.00
JVS 100	\$1,914.00
JVS 125	\$1,992.00
JVS 160	\$2,132.00
JVS 225	\$2,614.00

MINI-THERM SPECIFICATIONS							
Size	Input	JVT Firing Mode	JVS Firing Mode	Heat Capacity	Net IBR	JVT AFUE %	JVS AFUE %
	BTU/h x 1000			BTU/h x 1000	BTU/h x 1000		
50	50	On/Off	On/Off	42	36.5	80.2	84.4
75	75	On/Off	On/Off	63	54.8	80.5	84.0
100	100	On/Off	2-Stage	84	73.0	80.7	82.0
125	125	On/Off	2-Stage	105	91.3	80.7	81.9
160	160	On/Off	2-Stage	134	116.9	81.0	80.2
225	225	On/Off	2-Stage	189	164.3	81.5	81.8



MINI-THERM – JVS/JVT

Gas-Fired Residential Hydronic Boilers
50,000 Btu thru 225,00 Btu Models



MINI-THERM DIMENSIONS

JVT & JVS Size	Dimensions in inches							Water Conn. (in)	Gas Conn. (in)	Approx. Weight (lbs)
	A	B	C	D	E	F	V			
50	13 3/8	27 3/4	23 5/8	21 3/4	26 1/2	18	4	1 1/4	1/2	120
75	13 3/8	27 3/4	24 1/8	21 3/4	27 1/2	18	5	1 1/4	1/2	126
100	16 7/8	28 3/4	24 1/8	22 3/4	27 1/2	18	5	1 1/4	1/2	134
125	16 7/8	28 3/4	23 5/8	22 3/4	27 1/2	18	6	1 1/4	1/2	138
160	20 3/8	28 3/4	23 5/8	22 3/4	27 1/2	18	6	1 1/4	1/2	164
225	25 5/8	31 1/2	23 1/4	24 3/4	27 1/2	20	7	1 1/4	1/2	181



Ti

Ultra Efficient Hydronic Boiler (2 Pipe)
150,000 Btu thru 399,00 Btu Models

Product Features:

- Fully packaged and wired
- Available in both natural gas and propane versions with a modulation system that eliminates additional models
- Up to 92% efficiency
- Integrated outdoor reset control
- State-of-the-art sealed modulation combustion system with hot surface ignition
- Patented 316L stainless condensing heat exchanger provides ultimate efficiencies
- All connections are conveniently located for ease of installation
- Wall mount configuration saves valuable floor space
- Vents easily with conventional PVC plastic piping
- The Trinity is certified, designed and rated to strict CSA, AGA, ASME and CSAus codes
- Designed for primary/secondary pumping (2 pumps)
- Category IV Venting

Ultra Efficient Hydronic Boiler (2 Pipe)
150,000 Btu thru 399,00 Btu Models

Ti GENERAL SPECIFICATIONS

	Ti 150	Ti 200	Ti 400
Size (D x W x L)	14" x 15.5" x 22"	17" x 15.5" x 22"	22" x 30" x 46"
Weight	80 lbs	110 lbs	230 lbs
Max Pressure	30 PSI	30 PSI	30 PSI
Gas Type	Natural & Propane	Natural & Propane	Natural & Propane
Max Vent	105' equivalent	105' equivalent	80'-4", 100'-6"
Gas Line Size	1/2" NPT	1/2" NPT	1" NPT
Max Supply Water	200°F	200°F	200°F
Min Return Water	30°F	30°F	30°F
Oxygen Tube Barrier	Required	Required	Required
Certification	CSA, AGA, CSAus	CSA, AGA, CSAus, ASME	CSA, AGA, CSAus, ASME

Ti HEATING SPECIFICATIONS

	Ti 150	Ti 200	Ti 400
BTU Input x 1000	34 - 150	25 - 200	25 - 399
BTU Output x 1000	31.2 - 138	22.7 - 187	22.7 - 363
S.S. Efficiency	98%	97%	96%
AFUE	92%	91%	91%
Pressure Drop @ GPM	12' @ 8	13' @ 10	13' @ 20
Supply - Return	3/4" NPT	1" NPT	1" NPT*
Boiler Modulation Ratio	4.4:1	8:1	16:1
Flow & Level Switch	Optional	Optional	Installed

Model Number	Price
Ti 150	\$4,296.00
Ti 200	\$5,810.00
Ti 400	\$12,600.00

*Note: Ti400 comes standard with built-in primary loop. Connection indicated is for secondary loop connection.



PFG

Hot Water Gas Boiler

244,000 Btu thru 427,000 Btu Models

Features:

- Factory fire tested
- Automatic vent damper (standard with PFG-5, additional for PFG-6, 7 and 8)
- Built-in air separator
- Vertical draft hood (packaged separately)
- Combination gas valve for 24 volt
- Constant burning, thermally supervised pilot system and thermocouple (PFG-6 and 7 only)
- Intermittent electronic ignition pilot system (PFG-5 and 8 only)
- Aluminized steel burners
- Rollout thermal fuse element (PFG-5 only)
- High-limit temperature control
- 30 PSI ASME relief valve (boiler sections tested for 50 PSI working pressure) packed separately
- Combination pressure-temperature gauge (packed separately)
- Boiler drain valve (packed separately)
- Two or more PFG boilers can be used in place of one large capacity boiler to meet the space heating requirements of larger buildings

Optional Equipment:

- Intermittent electronic ignition pilot system for PFG-6 and 7 (standard for PFG-5 and 8)
- Automatic vent damper for PFG-6 through 8 (standard for PFG-5)

PFG RATINGS					
Water Boiler Number	Input BTU/Hr.	Gross Output BTU/Hr.	Net I-B-R Ratings BTU/Hr.	Boiler H.P.	Chimney Size
PFG-5-PIDN	244,000	199,000	173,000	5.9	7" I.D. x 20'
PFG-6-*	305,000	247,000	215,000	7.4	8" I.D. x 20'
PFG-7-*	366,000	296,000	257,000	8.8	9" I.D. x 20'
PFG-8-PIN	427,000	346,000	301,000	10.3	9" I.D. x 20'

* Add "-SPN-" for standing pilot or "PIN" for intermittent ignition. Note: Boilers are tested for 50 PSI working pressure

PFG

Hot Water Gas Boiler
244,000 Btu thru 427,000 Btu Models

PFG ENGINEERING DATA

Water Boiler Number	No. and Size of		Gas Connection Size Natural and Propane	Draft Hood Outlet Size	Dimensions of Crate (outside dimensions)			Approximate Shipping Weight (lbs)
	Supply	Return			Length	Width	Height	
PFG-5-PIDN	1 - 2"	1 - 2"	3/4"	7"	38 3/8"	25"	33 1/2"	500
PFG-6-*	1 - 2"	1 - 2"	3/4"	8"	38 3/8"	25"	33 1/2"	575
PFG-7-*	1 - 2"	1 - 2"	3/4"	9"	38 3/8"	31"	33 1/2"	635
PFG-8-PIN	1 - 2"	1 - 2"	1"	9"	38 3/8"	31"	33 1/2"	695

* Add "-SPN-" for standing pilot or "PIN" for intermittent ignition. Note: Boilers are tested for 50 PSI working pressure

BOILERS

COMMERCIAL

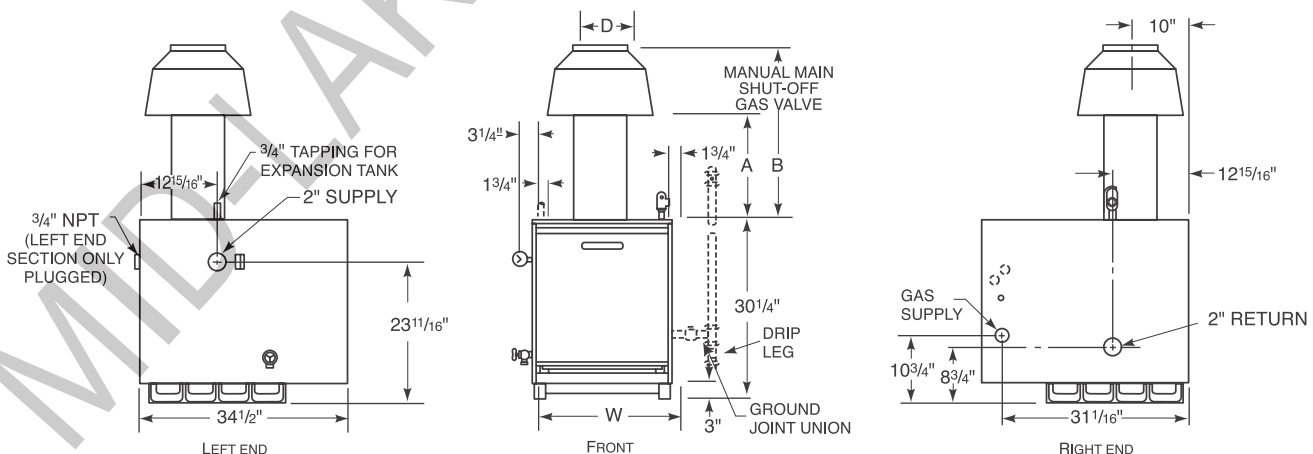
PFG RECOMMENDED
PIPING CONNECTIONS

Boiler Size	Minimum Pipe Size (inches)	
	Supply (A)	Return (B)
PFG-5	1 1/2	1 1/2
PFG-6	2	2
PFG-7	2	2
PFG-8	2	2

PFG DIMENSIONS

Water Boiler Number	Dimensions in Inches			
	A	B	D	W
PFG-5	15	23 3/4	7	17 11/16
PFG-6	17 1/4	27 1/16	8	20 11/16
PFG-7	19 1/2	30 3/8	9	23 11/16
PFG-8	25	35 7/8	9	26 11/16

Model	Price
PFG-5-PIN	\$3,862.00
PFG-6-PIN	\$4,278.00
PFG-7-PIN	\$5,166.00
PFG-8-PIN	\$6,018.00



EGH

Commercial Gas Boiler

349,000 Btu thru 550,000 Btu Models

Features:

- Factory assembled section block
- Horizontal to vertical draft hood
- Aluminized steel burners
- Combination gas valve for 24 volt
- Wiring harness designed to assure correct wiring
- Steel jacket

Highest Efficiency Model – PI w/ Damper

- Intermittent electronic ignition system and automatic vent damper

High-Efficiency Model – PI

- Intermittent electronic ignition system

Standard Efficiency Model (EGH-85 and 95 only)

- Constant burning, thermally supervised pilot system and thermocouple

For Water Boilers

- Built in air separator
- 30 PSI ASME relief valve
- Combination pressure-temperature gauge
- High limit control (dual limit control for standard-efficiency models)

For Steam Boilers

- 15 PSI ASME relief valve
- Steam pressure gauge
- High limit pressure control (two limit controls for standard efficiency models)
- Syphon
- Low-water cutoff – electrode type
- Gauge cocks and glass



**EGH**

Commercial Gas Boiler 349,000 Btu thru 550,000 Btu Models

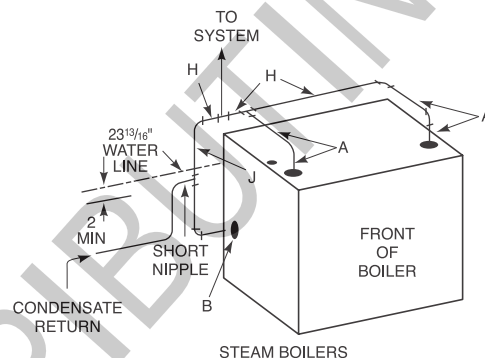
PRICE

Model	Steam		Water	
	Standing Pilot	Spark Ignition	Standing Pilot	Spark Ignition
EGH-85	\$5,818.00	\$6,084.00	\$5,364.00	\$5,640.00
EGH-95	\$6,350.00	\$6,616.00	\$5,898.00	\$7,612.00
EGH-105	N/A	\$7,034.00	N/A	\$7,476.00
EGH-115	N/A	\$7,514.00	N/A	\$7,958.00
EGH-125	N/A	\$8,068.00	N/A	\$8,512.00

RECOMMENDED PIPING CONNECTIONS

Water Boiler Size	Pipe Size			
	Supply	Return		
EGH-85 and EGH-95	2"	2"		
EGH-105 through EGH-125	2 1/2"	2 1/2"		
Steam Boiler Size	Riser Pipe Size		Header*	Equalizer
	A	B	H	J
EGH-85 and EGH-95	(2) 2"	2"	3"	1 1/2"
EGH-105	(2) 2 1/2"	2 1/2"	3"	1 1/2"
EGH-115 and EGH-125	(2) 2 1/2"	2 1/2"	4"	1 1/2"

*24 minimum from waterline to header



BOILERS

COMMERCIAL

EGH RATINGS

Boiler Number*	Input MBH+	Gross Output MBH+	Net I-B-R Ratings			Net Sq. Ft. Water	Boiler HP	Supply Tappings No. & Size	Return Tappings No. & Size	Dimensions in Inches		Gas Connection Size		Draft Hood Outlets No. & Size	I-B-R Chimney Size***	Approx Shipping Weight Lbs.
			Sq. Ft. Steam	Steam MBH+	Water MBH+					D	W	Natural	Propane			
EGH-85-	349	280	875	210	243	1620	8.4	2-3"	2 - 2 1/2"	9	38 1/4	3/4"	3/4"	1-9"	9" I.D. x 20'	845
EGH-95-	400	320	1000	240	278	1855	9.6	2-3"	2 - 2 1/2"	10	42 1/2	3/4"	3/4"	1-10"	10" I.D. x 20'	880
EGH-105-	450	360	1125	270	313	2085	10.8	2-3"	2 - 2 1/2"	10	46 3/4	1"	1"	1-10"	10" I.D. x 20'	975
EGH-115-	500	400	1250	300	348	2320	11.9	2-3"	2 - 2 1/2"	12	51	1"	1"	1-12"	12" I.D. x 20'	1065
EGH-125-	550	440	1375	330	383	2550	13.1	2-3"	2 - 2 1/2"	12	55 1/4	1"	1"	1-12"	12" I.D. x 20'	1145

*Add to boiler number "W" for water and "S" for steam. Add "PI" to designator for intermittent electronic ignition system (standard for EGH-105 through 125). Add "PI w/Damper" to designator for intermittent electronic ignition system with automatic vent damper. NOTE: Boiler is A.G.A. design certified for installation on noncombustible flooring only. Water boilers tested for 50 PSI working pressure.

EGH

Commercial Gas Boiler

349,000 Btu thru 550,000 Btu Models

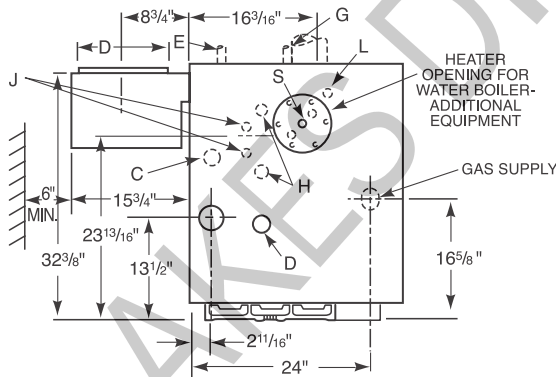
BOILERS

COMMERCIAL

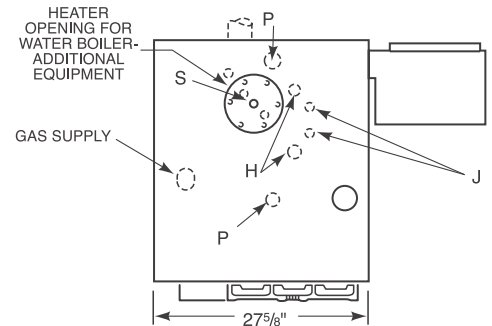
EGH CONTROL TAPPINGS

Location	Size	Steam	Water
C	3/4"	Probe type low water cut off	Probe type low water cut off (when used)
D	3/4"	Drain	Drain
E	3/4"	Safety valve	Safety relief valve
G	3/4"	Plugged	Piping to compression tank or auto air vent
H	1/2"	Gauge glass and/or optional low water cutoff	Combination pressure-temperature gauge
J*	3/8"	Try cock tapings	
L	1/4"	Plugged	Combination pressure-temperature gauge
P	1"	Float type low water cut off, pressure limit control and pressure gauge; or low water cut off and feeder combination; or low water cut off and pump control	Float-type low water cut off; or low water cut off and feeder combination; or low water cut off and pump control
S	1 1/2" (steam)	Skim tapping	Limit control
	3/4" (water)		Limit control

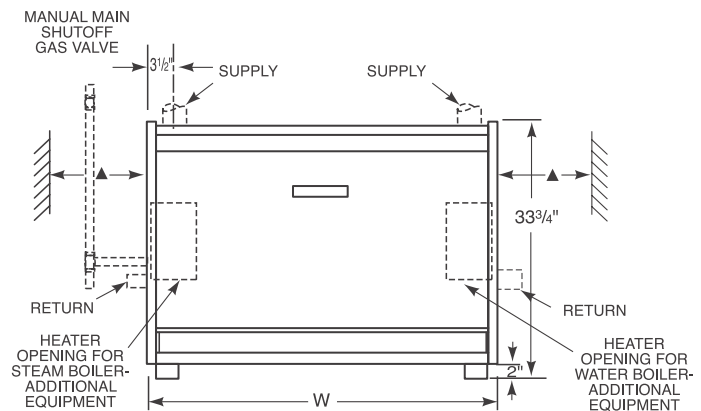
Note: Limit control and supply piping must be on the same end of the boiler



LEFT SIDE



RIGHT SIDE



FRONT

**LGB**

Gas Boiler for Natural Draft Venting 400,000 Btu thru 2,860,000 Btu Models

Applications:

- Commercial
- Residential
- Multiple boilers
- Schools and other institutions
- Indirect fired water heating
- Radiant heating

Features:

- Insulated extended jacket
- Cast iron sections
- Aluminized steel collector hood(s) and draft hood(s)
- Control transformer (120/24V)
- Factory assembled gas train
- Factory assembled burner and base unit(s):
 - One piece aluminized steel burners
 - Gas manifold
 - Aluminized steel base panels
 - High temperature insulation board
- Wiring harness: junction box and pre-wired flexible conduit
- 10 year limited warranty – covers cast iron sections

LGB-4 and 5

- Intermittent electronic ignition system:
 - Intermittent ignition control module
 - Electronically supervised pilot burner with ignition electrode and flame rod
 - Wire harness

LGB-6 through 23

- Flame guardian panel with flame rectification electronic control system for each base assembly:
 - Pre-wired control panel
 - Terminal block
 - Two ignition control modules having integral spark generators
- Intermittent electronic ignition pilot system
- Electronically supervised pilot burner with ignition electrode and flame rod
- Main flame sensor rod

Water Boilers

- Combination operating and high limit temperature control (LGB-4 through 20 only)
- Operating temperature control (LGB-21 through 23 only)
- High limit temperature control (LGB-21 through 23 only)
- Combination pressure temperature gauge
- 30 PSI ASME relief valve – side outlet
- Built-in air eliminator in end sections

Steam Boilers

- Operating pressure control
- High limit pressure control
- Compound pressure vacuum gauge
- Gauge cocks, glass and guards
- 15 PSI ASME relief valve – side outlet
- Float-type low water cutoff, MM No. 61 LWCO

Boiler Optional Equipment:

- Factory assembled sections (LGB-4 through 14 only)
- Fire tested packaged unit (LGB-4 through 14 only)
- 1 1/2" inspection tappings with brass plugs – two for each section
- 80 PSI working pressure test of sections
- Water level controls and low water cutoffs
- Low-high-low firing (LGB-6 through 12 only)
- Stage firing (LGB-13 through 23 only)
- Energy management control systems (EMCS)
- IRI, FM and CSD-1 control systems



BOILERS

COMMERCIAL

LGB

Gas Boiler for Natural Draft Venting

400,000 Btu thru 2,860,000 Btu Models

BOILERS

COMMERCIAL

LGB RATINGS												
Boiler Model (1)	A.G.A. Input MBH (2)	A.G.A. Gross Output MBH (2)	Net I=B=R Ratings (3)			Boiler H.P.	Boiler Water Content Gallons		Approx Shipping Weight (lbs)	Chimney Breeching Size (I.D.) Inches (4)	Price	
			Square Feet Steam	MBH Steam (2)	MBH Water (2)		Steam (to waterline)	Water			Steam	Water
LGB-4	400	324.0	1013	243	282	9.7	23.2	36.5	1185	10	\$7,090.00	\$6,514.00
LGB-5	520	421.2	1317	316	366	12.6	28.9	45.6	1455	12	\$8,090.00	\$7,516.00
LGB-6	650	526.5	1646	395	458	15.7	34.6	54.7	1725	12	\$9,928.00	\$9,482.00
LGB-7	780	631.8	1975	474	549	18.9	40.3	63.9	2005	12	\$11,170.00	\$10,724.00
LGB-8	910	737.1	2304	553	641	22.0	46.0	73.0	2290	14	\$12,664.00	\$12,156.00
LGB-9	1040	842.4	2633	632	733	25.2	51.9	82.1	2560	14	\$13,798.00	\$13,290.00
LGB-10	1170	947.7	2965	711	824	28.3	57.6	91.2	2800	16	\$15,242.00	\$14,806.00
LGB-11	1300	1053.0	3292	790	916	31.5	63.4	100.4	3105	16	\$16,496.00	\$16,060.00
LGB-12	1430	1158.3	3621	869	1007	34.6	69.1	109.5	3365	16	\$17,652.00	\$17,216.00
LGB-13	1560	1263.6	3954	949	1099	37.8	74.9	118.6	3785	16	\$19,312.00	\$18,754.00
LGB-14	1690	1368.9	4313	1035	1190	40.9	80.7	127.7	4085	16	\$20,424.00	\$19,994.00
LGB-15	1820	1474.2	4679	1123	1282	44.0	86.4	136.9	4355	16	\$21,506.00	\$21,076.00
LGB-16	1950	1579.5	5046	1211	1373	47.2	92.2	146.0	4725	17	\$22,622.00	\$22,192.00
LGB-17	2080	1684.8	5408	1298	1465	50.3	98.0	155.1	4975	17	\$23,738.00	\$23,308.00
LGB-18	2210	1790.1	5775	1386	1557	53.5	103.6	164.2	5270	18	\$25,426.00	\$24,996.00
LGB-19	2340	1895.4	6125	1470	1648	56.6	109.5	173.4	5540	18	\$26,864.00	\$26,434.00
LGB-20	2470	2000.7	6471	1553	1740	59.8	115.3	182.5	5820	19	\$27,902.00	\$27,592.00
LGB-21	2600	2106.0	6813	1635	1831	62.9	121.0	191.6	6080	19	\$29,594.00	\$29,396.00
LGB-22	2730	2211.3	7155	1717	1923	66.1	126.8	201.2	6365	19	\$30,884.00	\$30,684.00
LGB-23	2860	2316.6	7496	1799	2014	69.2	132.5	209.8	6625	20	\$32,172.00	\$31,974.00

Notes: 1. Add to boiler model "-S" for steam and "-W" for water 2. MBH refers to thousands of Btu per hour 3. Net I=B=R ratings are based on net installed radiation of sufficient quantity for the requirement of the building and nothing need be added for normal piping and pick-up. Water ratings are based on a piping and pick-up allowance of 1.15. Steam ratings are based on the following allowances: LGB 4-12: 1.33; LGB 13: 1.332; LGB 14: 1.322; LGB 15: 1.312; LGB 16: 1.304; LGB 17: 1.297; LGB 18: 1.292; LGB 19: 1.289; LGB 20-23: 1.288. An additional allowance should be made for gravity hot water systems or unusual piping and pick-up loads. Ratings shown are for elevations up to 2,000 feet. For elevations above 2,000 feet, reduce ratings at the rate of 4% for each 1,000 feet above sea level. 4. 20' chimney height may be used based on using a 6' length of connector for breeching of the size shown from the nearest draft hood outlet to the chimney or vent with not more than one standard sloping-type 90° elbow. If individual vertical vents are to be used, each vent diameter should be the same size as the respective draft hood outlet and the height may be reduced to 5 ft. measured above the draft hood outlet.

Note: Water boilers tested at 80 psi working pressure



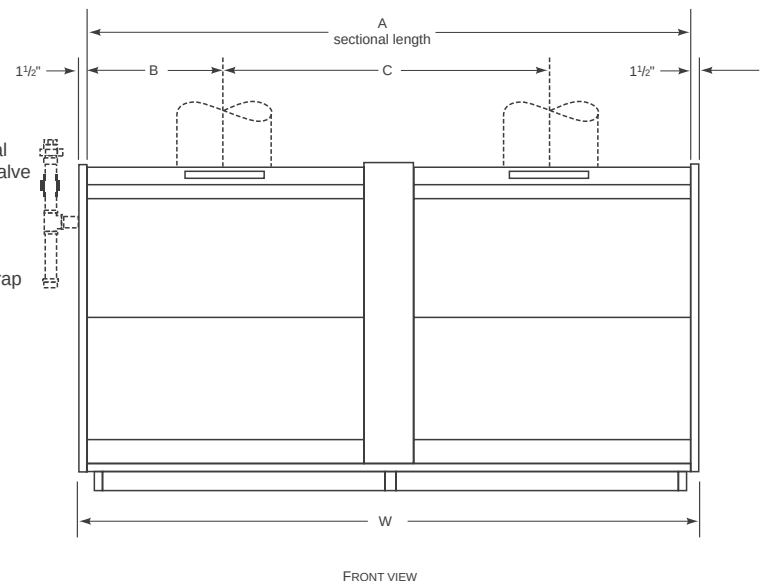
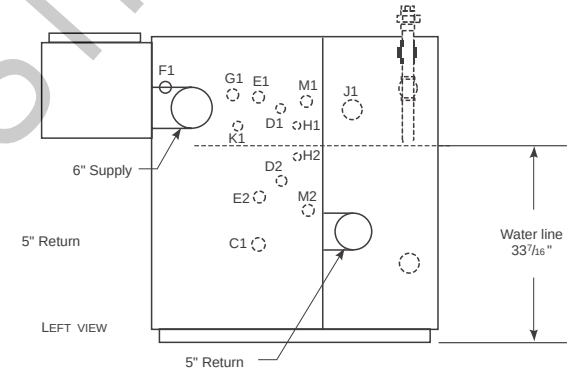
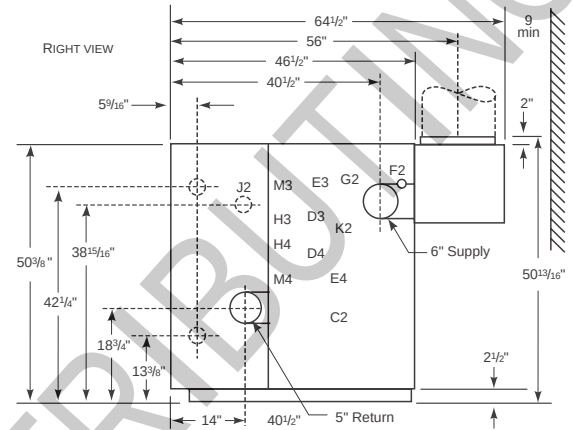
LGB

Gas Boiler for Natural Draft Venting
400,000 Btu thru 2,860,000 Btu Models

LGB DIMENSIONS

Boiler Model	Dimensions in Inches				Draft Hood Outlet(s) Number & Size
	A	B	C	W	
LGB-4	18	9		21	1 - 10"
LGB-5	23	11 1/2		26	1 - 12"
LGB-6	28	14		31	1 - 12"
LGB-7	33	16 1/2		36	1 - 12"
LGB-8	38	19		41	1 - 14"
LGB-9	43	21 1/2		46	1 - 14"
LGB-10	48	24		51	1 - 16"
LGB-11	53	26 1/2		56	1 - 16"
LGB-12	58	29		61	1 - 16"
LGB-13	63	16 1/2	30	66	2 - 12"
LGB-14	68	19	32 1/2	71	1 - 12" / 1 - 14"
LGB-15	73	19	35	76	2 - 14"
LGB-16	78	21 1/2	37 1/2	81	2 - 14"
LGB-17	83	21 1/2	40	86	2 - 14"
LGB-18	88	24	42 1/2	91	1 - 14" / 1 - 16"
LGB-19	93	24	45	96	2 - 16"
LGB-20	98	26 1/2	47 1/2	101	2 - 16"
LGB-21	103	26 1/2	60	106	2 - 16"
LGB-22	108	29	52 1/2	111	2 - 16"
LGB-23	113	29	55	116	2 - 16"

Notes: 1. For LGB 4-23 - return tapping size is 5" (qty 2) and supply tapping size is 6" (qty 2). 2. Gas trains on all IRI boilers and LGB 21-23 for CSD-1 & FM are located outside the boiler jacket. Allow additional clearances as required.



WATER BOILERS

Recommended Minimum Pipe Sizes (20° rise through boiler)

Boiler Model	Pipe Size Supply and Return
LGB-4	2"
LGB-5	2 1/2"
LGB-6 through 8	3"
LGB-9 through 16	4"
LGB-17 through 23	5"

Locate manual gas shut-off valve
Provide drip trap in gas line

LGB

Gas Boiler for Natural Draft Venting
400,000 Btu thru 2,860,000 Btu Models

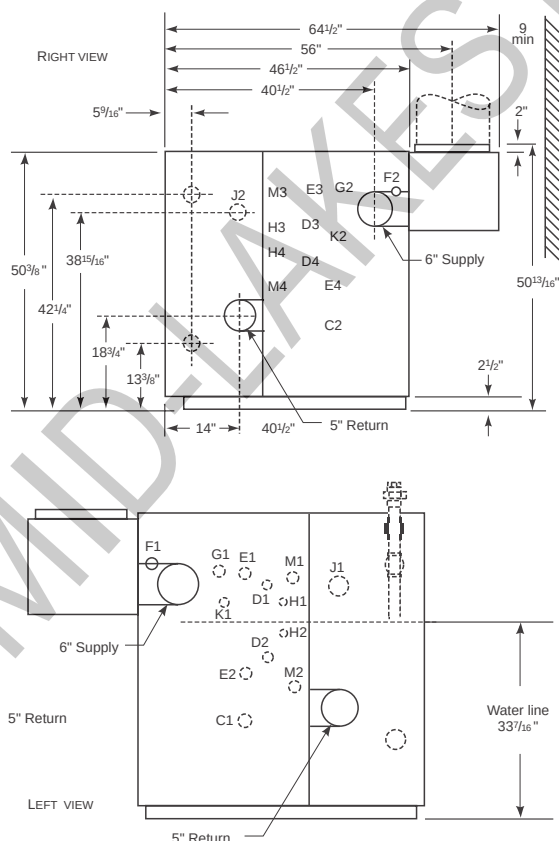
BOILERS

COMMERCIAL

LGB CONTROL TAPPING

Location		Size	Steam	Water (Note 4)
Left End	Right End			
C1	C2	1 1/4"	Boiler drain	Boiler drain
D1 & D2	D3 & D4	1/2"	Gauge glass (Note 3)	
E1 & E2	E3 & E4	1"	Low water cut off (Note 3)	Optional low water cut off
E1	E3	1"	Pressure operating & limit controls & pressure gauge	Limit control (Note 2)
F1	F2	1"		To expansion tank or automatic air vent (Note 2)
G1	G2	3/4"		Operating control (Note 2)
H1 & H2 (Note 1)	H3 & H4 (Note 1)	3/8"	Tri-cock	
J1	J2	2"	Steam relief valve and skim tapping	Water relief valve and skim tapping
K1	K2	1/2"		Combination pressure and temperature gauge (Note 2)
M1 & M2	M3 & M4	1"	Optional low water cut off (Note 3)	Optional low water cut off
M1	M3	1"	Firing rate control (when used)	Firing rate control (when used) of probe low water cut off

- Notes: 1. Available on special request only
2. Must be on same side as supply to system
3. Must be on same side as steam equalizer piping



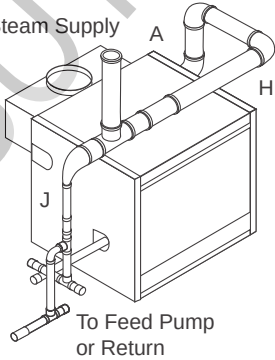
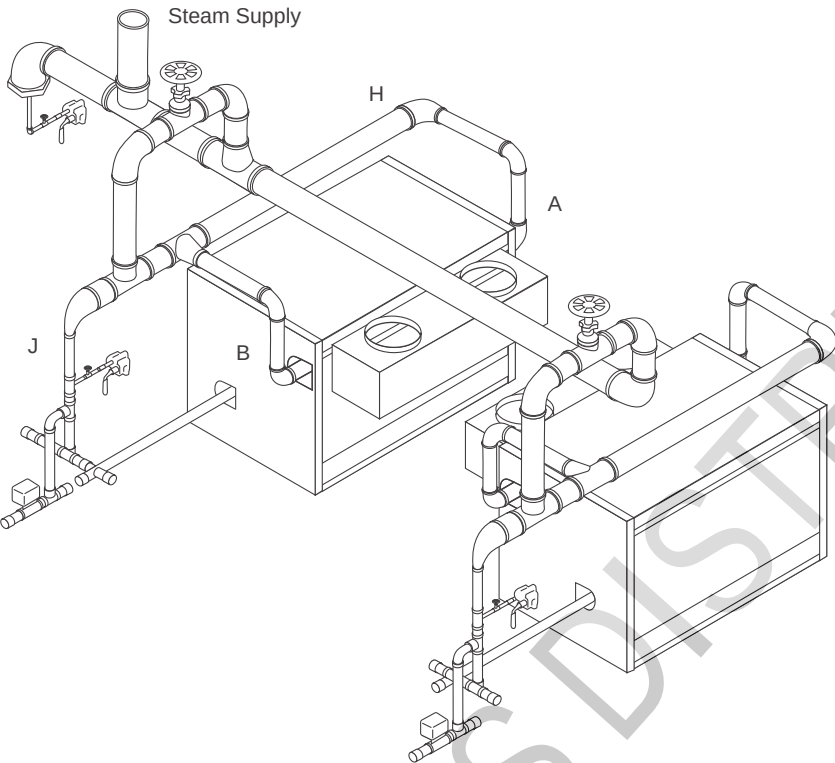
NATURAL GAS VALVE SUPPLY PIPING CONNECTION SIZES

Boiler Model	No. of Gas Trains	Standard A.G.A. 5" W.C.
LGB-4	1	1"
LGB-5	1	1"
LGB-6	1	1 1/4"
LGB-7	1	1 1/4"
LGB-8	1	1 1/4"
LGB-9	1	1 1/4"
LGB-10	1	1 1/2"
LGB-11	1	2"
LGB-12	1	2"
LGB-13	2	1 1/4"
LGB-14	2	1 1/4"
LGB-15	2	1 1/4"
LGB-16	2	1 1/4"
LGB-17	2	1 1/4"
LGB-18	2	1 1/2" / 1 1/4"
LGB-19	2	1 1/2"
LGB-20	2	1 1/2" / 2"
LGB-21	2	2"
LGB-22	2	2"
LGB-23	2	2"



LGB

Gas Boiler for Natural Draft Venting
400,000 Btu thru 2,860,000 Btu Models



STEAM BOILERS				
Recommended Minimum Pipe Sizes for Dual Risers				
Boiler Model	Riser		Header	Equalizer
	A	B	H	J
LGB-13 through 15	4"	4"	6"	4"
LGB-16 through 19	5"	5"	6"	4"
LGB-20 through 23	6"	6"	8"	4"

STEAM BOILERS			
Recommended Minimum Pipe Sizes for Single Risers			
Boiler Model	Riser A	Header H	Equalizer J
LGB-4 through 8	4"	4"	2"
LGB-9 through 11	5"	5"	2 1/2"
LGB-12	6"	6"	2 1/2"





88

Boiler-Burner Units – Light Oil, Gas and Gas-Light Oil
596,000 Btu thru 5,845,000 Btu Models

Features:

- Pressurized for forced draft venting or chimney draft
- Cast iron sections
- Insulated steel jacket
- Flame retention burner for light oil, gas or gas-light oil (except H-88)
- Burner mounting plate with refractory (except H-88)
- Cast iron flue collar with built-in breeching damper
- Observation ports on front and back sections
- Side cleanout plates
- Flue brush

**CALL FOR
PRICING**

Water Boilers:

- 30 PSI ASME relief valve (boilers tested for 50 PSI working pressure)
- Combination high-limit and low-limit control
- Combination pressure-temperature-altitude gauge
- Nipple and 5" x 6" reducing coupling (1288-1888 boilers only)
- Built-in air eliminator
- Water boilers available on special request at 80 PSI working pressure

Steam Boilers

- 15 PSI ASME side outlet safety valve
- Low-limit and high-limit pressure controls
- Steam pressure gauge
- Siphon
- Gauge cock, glass and guards

Boiler-Burner Units – Light Oil, Gas and Gas-Light Oil
596,000 Btu thru 5,845,000 Btu Models

88 RATINGS													
Boiler Unit Number Steam or Water	I-B-R Burner Capacity		Gross I-B-R Output MBH	Net I-B-R Ratings			Boiler H.P.	Net Firebox Volume Cu. Ft.	Stack Gas Volume CFM	Positive Pressure in Firebox	Approx. Shipping Wt. (lbs) Boiler Only	Boiler Water Content Gal. (water boiler)	I-B-R Vent Dia. Inches
	Light Oil GPH	Gas MBH		Steam Sq. Ft.	Steam MBH	Water MBH							
488R F	6.9	996	794	2,483	596	690	23.7	11.02	370	0.42	2,650	109	10
488 F	7.0	1,010	810	2,533	608	704	24.2	11.02	376	0.43	2,650	109	10
588 F	9.4	1,357	1,084	3,388	813	943	32.4	14.45	507	0.44	3,210	132	10
688 F	11.8	1,703	1,358	4,275	1,026	1,181	40.6	18.08	639	0.46	3,770	155	10
788 F	14.2	2,049	1,632	5,225	1,254	1,419	48.8	21.61	772	0.47	4,335	178	12
888 F	16.6	2,396	1,904	6,154	1,477	1,656	56.9	25.14	906	0.49	4,895	201	12
988R F	17.2	2,482	1,991	6,442	1,546	1,731	59.5	28.67	954	0.45	5,460	224	14
988 F	18.8	2,713	2,176	7,038	1,689	1,892	65.0	28.67	1,031	0.50	5,460	224	14
1088R F	20.0	2,887	2,304	7,454	1,789	2,003	68.8	32.20	1,101	0.49	6,020	247	14
1088 F	21.5	3,103	2,452	7,933	1,904	2,132	73.2	32.20	1,184	0.52	6,020	247	14
1188 F	23.5	3,392	2,724	8,813	2,115	2,369	81.4	35.73	1,299	0.53	6,580	270	14
1288 F	26.0	3,753	3,000	9,704	2,329	2,609	89.6	39.26	1,443	0.55	7,145	293	14
1388 F	28.5	4,113	3,270	10,579	2,539	2,843	97.7	42.79	1,588	0.56	7,705	316	14
1488 F	31.0	4,474	3,550	11,483	2,756	3,087	106.0	46.32	1,735	0.58	8,270	339	16
1588 F	33.0	4,763	3,820	12,358	2,966	3,322	114.1	49.85	1,854	0.59	8,830	362	16
1688R F	34.5	4,979	3,980	12,875	3,090	3,461	118.9	53.38	1,945	0.59	9,390	385	16
1688 F	35.5	5,124	4,090	13,229	3,175	3,557	122.2	53.38	2,002	0.61	9,390	385	16
1788 F	38.0	5,485	4,370	14,138	3,393	3,800	130.5	56.91	2,152	0.62	9,955	408	18
1888 F	40.5	5,845	4,640	15,008	3,602	4,035	138.6	60.44	2,303	0.64	10,515	431	18

88

Boiler-Burner Units – Light Oil, Gas and Gas-Light Oil
596,000 Btu thru 5,845,000 Btu Models

BOILERS

COMMERCIAL

RECOMMENDED PIPING CONNECTIONS

WATER BOILERS

Boiler Size	Pipe Size	
	Supply	Return
488	3"	3"
588 thru 788	4"	4"
888 thru 1188	5"	5"
1288 thru 1888	6"	6"

88 DIMENSIONS

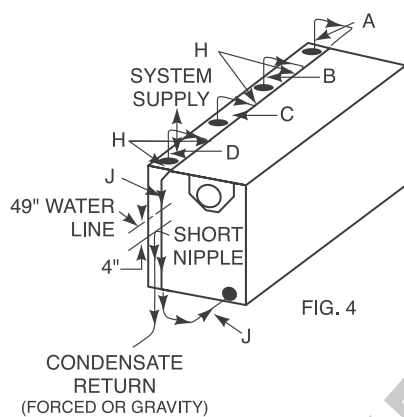
Boiler Number	Supply Tappings Number and Size		Return Tappings Number and Size		Dimensions (inches)							
	Steam	Water	Steam	Water	A	B	C	D	E	H	L	W
488	2-5"	2-5"	1-6"	1-6"	23			10	54 3/4	23 3/8	32 1/4	30
588	2-5"	2-5"	1-6"	1-6"	31			10	54 3/4	31 3/8	40 1/4	38
688	2-5"	2-5"	1-6"	1-6"	39			10	54 3/4	39 3/8	48 1/4	46
788	2-5"	2-5"	1-6"	1-6"	47			12	53 3/4	47 3/8	56 1/4	54
888	2-5"	2-5"	1-6"	1-6"	55			12	53 3/4	55 3/8	64 1/4	62
988	2-5"	2-5"	1-6"	1-6"	63			14	52 3/4	63 3/8	72 1/4	70
1088	2-5"	2-5"	1-6"	1-6"	71			14	52 3/4	71 3/8	80 1/4	78
1188	2-5"	2-5"	1-6"	1-6"	79			14	52 3/4	79 3/8	88 1/4	86
1288	3-5"	2-5"	1-6"	1-6"	87	39 1/2		14	52 3/4	87 3/8	96 1/4	94
1388	3-5"	2-5"	1-6"	1-6"	95	47 1/2		14	52 3/4	95 3/8	104 1/4	102
1488	3-5"	2-5"	1-6"	1-6"	103	55 1/2		16	51 3/4	103 3/8	112 1/4	110
1588	3-5"	2-5"	1-6"	1-6"	111	63 1/2		16	51 3/4	111 3/8	120 1/4	118
1688	3-5"	2-5"	1-6"	1-6"	119	47 1/2		16	51 3/4	119 3/8	128 1/4	126
1788	4-5"	2-5"	1-6"	1-6"	127	31 1/2	79 1/2	18	51 3/4	127 3/8	136 1/4	134
1888	4-5"	2-5"	1-6"	1-6"	135	39 1/2	87 1/2	18	51 3/4	135 3/8	144 1/4	142

88 CONTROL TAPPINGS

Location	Size	Steam	Water
A	2"	Safety valve and/or skim tapping	High-limit control
B	2"	Safety valve	Pressure relief valve
C1	1"		Combination high-limit and low-limit control
C1 & C2	1"	Alternate water level controls	Alternate low-water cutoff
D1 & D2	1"	Water level controls	Low-water cutoff
E1 & E2	1/2"	Gauge glass	
F1 & F2	3/8"	Try cock tappings	
G	3/4"*	Pressure limit control, pressure operating control and pressure gauge	Combination pressure-temperature-altitude gauge
H	3/4"	Drain	Drain
K	1"		Piping to compression tank or automatic air vent

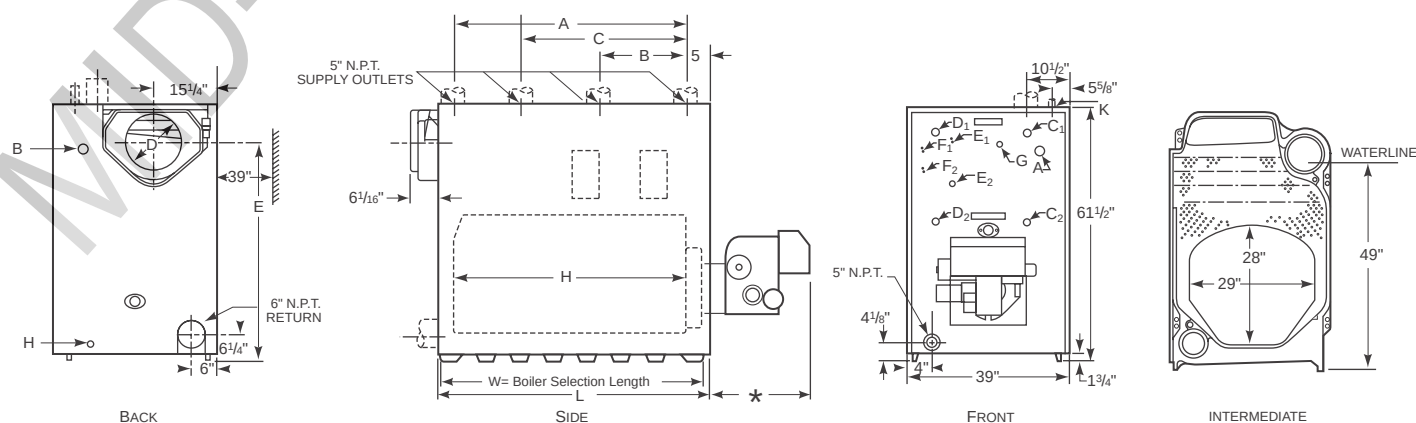
* bushed to 1/2"

RECOMMENDED PIPING CONNECTIONS



STEAM BOILERS							
Figure No.	Boiler Size	Riser Pipe Size				Header*	Equalizer
		A	B	C	D	H	J
1	488	4"				4"	2 ½"
1	588 and 688	5"				5"	2 ½"
2	788	4"	4"			6"	2 ½"
2	888	5"	5"			6"	2 ½"
2	988 and 1088	5"	5"			8"	2 ½"
2	1188	5"	5"			8"	4"
3	1288 thru 1488	5"	5"	5"		8"	4"
3	1588 and 1688	5"	5"	5"		10"	4"
4	1788 and 1888	5"	5"	5"	5"	10"	4"

* 24" minimum from the waterline to header





80

Boiler-Burner Units - Light Oil, Gas and Gas-Light Oil
346,000 Btu thru 1,674,000 Btu Models

Features:

- Cast iron sections
- Insulated steel jacket
- Flame retention burner (except H-80)
 - Burner mounting plate with refractory (except H-80)
 - Aluminized steel flue collector assembly
 - Steel flue collar and breeching damper
 - Refractory blanket and target wall in combustion area
- Side cleanout plates
- Flue brush
- Boilers available with either rear flue or top flue (rear flue standard)

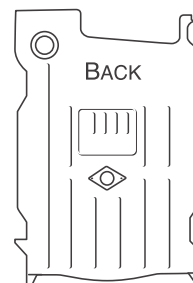
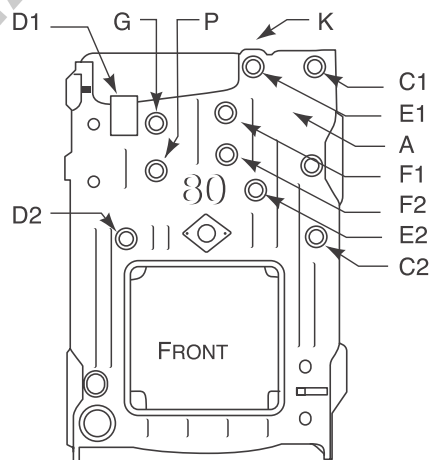
**CALL FOR
PRICING**

Water Boilers:

- 30 PSIG ASME safety relief valve (sections tested for 80 PSIG maximum working pressure)
- Combination high limit/low limit control
- Combination pressure/temperature gauge
- Built-in air eliminator

Steam Boilers

- 15 PSIG ASME safety valve (side outlet)
- Low limit and high limit pressure controls
- Steam pressure gauge
- Gauge glass, gauge cocks and gauge guards





Boiler-Burner Units - Light Oil, Gas and Gas-Light Oil
346,000 Btu thru 1,674,000 Btu Models

80 RATINGS

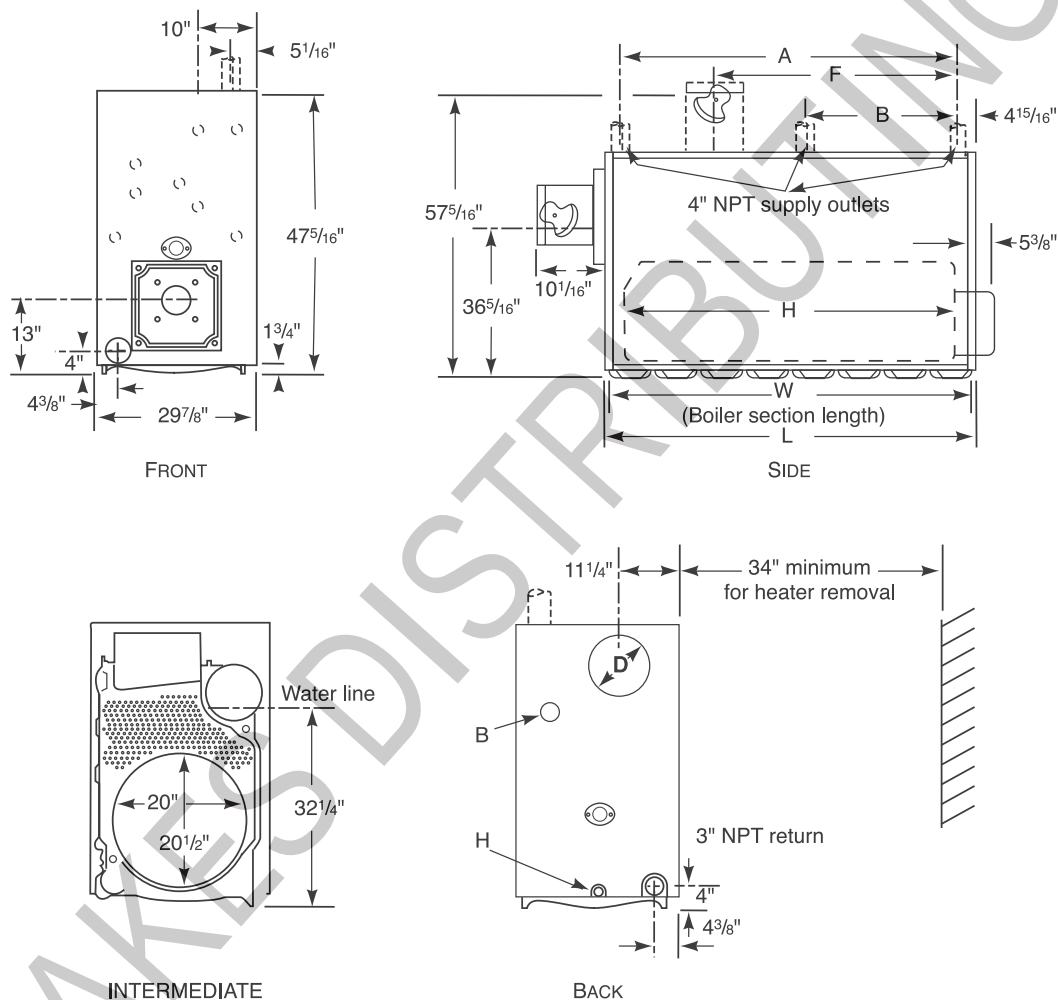
Boiler Model	I=B=R Burner Capacity		Gross I=B=R Output MBH	Net I=B=R Ratings			Boiler H.P.	Net Firebox Volume Cu. Ft.	Stack Gas Volume CFM	Positive Pressure in Firebox Inches W.C.	I=B=R Vent Size Inches	Boiler Water Content (gal)		Packaged Boiler Ship Wt. Lbs (approx)	Boiler Operating Weight Lbs (approx)
	Light Oil GPH	Gas MBH		Steam Sq. Ft	Steam MBH	Water MBH						Water	Steam (to waterline)		
380	2.4	346	278	867	208	242	8.3	2.61	139	0.28	8	37.5	27.5	1058	1170
480	3.4	491	396	1238	297	344	11.8	3.97	198	0.28	8	49	36	1203	1411
580	4.45	639	515	1608	386	448	15.4	5.33	259	0.28	8	60.5	44.5	1448	1752
680	5.5	787	634	1983	476	551	18.9	6.69	320	0.27	8	72	53	1843	2093
780	6.5	935	753	2354	565	655	22.5	8.05	378	0.27	10	83.5	61.5	2088	2434
880	7.5	1082	872	2725	654	758	26	9.41	436	0.27	10	95	70	2317	2774
980	8.5	1230	991	3096	743	862	29.6	10.77	494	0.27	10	106.5	78.5	2678	3115
1080	9.6	1378	1110	3471	833	965	33.2	12.13	558	0.26	10	118	87	2923	3456
1180	10.6	1526	1229	3842	922	1069	36.7	13.49	616	0.26	10	129.5	95.5	3068	3697
1280	11.6	1674	1348	4242	1018	1172	40.3	14.85	675	0.26	12	141	104	3313	4038

80 CONTROL TAPPINGS

80 CONTROL TAPPINGS						
		Water Boilers (with water level controls)			Steam Boilers (with water level controls)	
Tapping	Size (NPT)	Probe-type primary Probe-type secondary	Float-type primary Proble-type secondary	Float-type primary Float-type secondary	Float-type primary Probe-type secondary	Float-type primary Float-type secondary
A	1 ½"	Additional high/low limit control			Not used	
B	3"	Water relief vavle			Steam relief valve and skim tapping	
C1	1"	Firing rate control	Primary water level control		Primary water level control	
C2	1"	Not used	Primary water level control		Primary water level control	
D1	1"	Not used	Not used	Secondary level control	Not used	Secondary level control
D2	1"	Not used	Not used	Secondary level control	Not used	Secondary level control
E1	1"	Not used	Not used	Not used	Gauge glass	
E2	1"	Combination high/low limit control			Gauge glass	
F1	1"	Primary level control	Not used		Try cock tapping	
F2	1"	Not used	Firing rate control		Try cock tapping	
G	1"	Pressure-temperature gauge			Control tree (limit control, operating control and pressure gauge)	
H	1 ½"	Boiler drain			Boiler drain	
K	1"	Expansion tank piping or automatic air vent			Not used	
P	1"	Secondary level control		Not used	Secondary level control	Not used

80

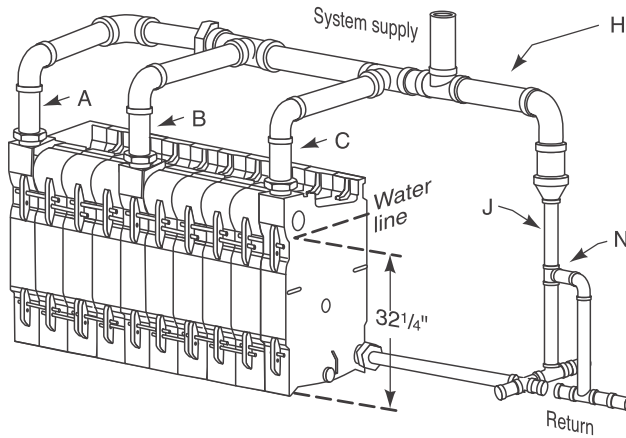
Boiler-Burner Units - Light Oil, Gas and Gas-Light Oil
346,000 Btu thru 1,674,000 Btu Models



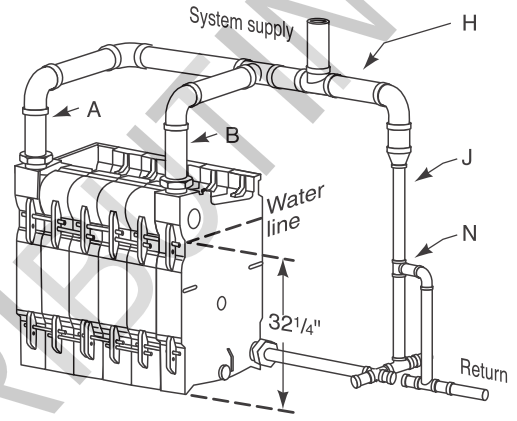
80 DIMENSIONS											
Boiler Model	Supply Tappings Qty - Size		Return Tappings Qty - Size		Dimensions (inches)						
	Water	Steam	Water	Steam	A	B	D	F	H	W	L
380	2 - 4"	2 - 4"	2 - 3"	2 - 3"	13 1/8		8	12 7/16	13 1/2	20 3/8	21 5/8
480	2 - 4"	2 - 4"	2 - 3"	2 - 3"	20 1/8		8	13 5/8	20 1/2	27 3/8	28 5/8
580	2 - 4"	2 - 4"	2 - 3"	2 - 3"	27 1/8		8	13 5/8	27 1/2	34 3/8	35 5/8
680	2 - 4"	2 - 4"	2 - 3"	2 - 3"	34 1/8		8	13 5/8	34 1/2	41 3/8	42 5/8
780	2 - 4"	2 - 4"	2 - 3"	2 - 3"	41 1/8		10	27 5/8	41 1/2	48 3/8	49 5/8
880	2 - 4"	2 - 4"	2 - 3"	2 - 3"	48 1/8		10	27 5/8	48 1/2	55 3/8	56 5/8
980	2 - 4"	2 - 4"	2 - 3"	2 - 3"	55 1/8		10	41 5/8	55 1/2	62 3/8	63 5/8
1080	2 - 4"	3 - 4"	2 - 3"	2 - 3"	62 1/8	27 9/16	10	41 5/8	62 1/2	69 3/8	70 5/8
1180	2 - 4"	3 - 4"	2 - 3"	2 - 3"	69 1/8	34 9/16	10	55 5/8	69 1/2	76 3/8	77 5/8
1280	2 - 4"	3 - 4"	2 - 3"	2 - 3"	76 1/8	34 9/16	12	55 5/8	76 1/2	83 3/8	84 5/8



Boiler-Burner Units - Light Oil, Gas and Gas-Light Oil 346,000 Btu thru 1,674,000 Btu Models



1080-1280

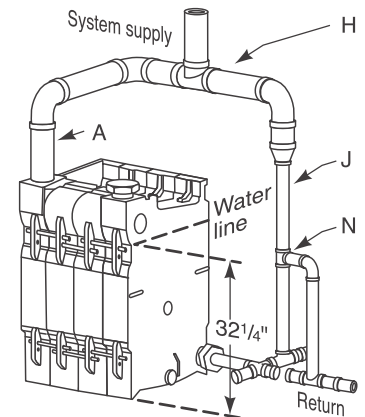


680-980

RECOMMENDED PIPING CONNECTIONS

WATER BOILERS		
	Pipe Size*	
Boiler Model	Supply	Return
380	2"	2"
480	2 1/2"	2 1/2"
580	3"	3"
680	3"	3"
780	4"	4"
880	4"	4"
980	4"	4"
1080	4"	4"
1180	4"	4"
1280	4"	4"

STEAM BOILERS						
	A	B	C	H	J	
Boiler Model	Riser	Riser	Riser	Header	Equalizer	
380	3"			3"	2"	
480	4"			4"	2"	
580	4"			4"	2 1/2"	
680	3"	3"		4"	2 1/2"	
780	4"	4"		4"	2 1/2"	
880	4"	4"		4"	3"	
980	4"	4"		6"	3"	
1080	4"	4"	4"	6"	3"	
1180	4"	4"	4"	6"	3"	
1280	4"	4"	4"	6"	3"	



380-580

* Pipe sizes are minimum for 20°F or higher temperature drop

N Connect return to equalizer with close nipple, no lower than 4 inches below boiler water line

H Header must be at least 24 inches above boiler water line. Maintain pipe size for no less than 10 pipe diameters from boiler.



94

Heavy Duty Boiler-Burner Units – Light Oil, Gas-Light Oil and Gas
2,526,000 Btu thru 8,660,000 Btu Models

Features:

- Flame retention oil, gas or gas/oil burner
- Insulated flush jacket
- Burner mounting plate with refractory
- Flue collar with built-in breeching damper
- Front cleanout doors and wing nuts
- Front cleanout plates and wing nuts
- Back access door
- Flue brushes and handles
- Two close nipples and caps for washout tappings on front section
- Supply elbow(s) or top outlet(s)

**CALL FOR
PRICING**

Water Boilers

- ASME safety relief valve
- Combination high limit and low limit control
- Combination pressure-temperature-altitude gauge

Steam Boilers

- ASME side outlet safety valve
- Low limit and high limit pressure controls
- 4 1/2" steam pressure gauge
- Siphon
- Gauge glass and gauge cocks



Heavy Duty Boiler-Burner Units – Light Oil, Gas-Light Oil and Gas
2,526,000 Btu thru 8,660,000 Btu Models

94 RATINGS										
Boiler Unit Number Steam or Water	I-B-R Burner Capacity		Gross I-B-R Output BTU/Hr.	Net I-B-R Ratings			Net Sq. Ft. Water	Boiler H.P.	Draft Loss Through Boiler-in. Water	I-B-R Chimney Size Vent Dia. Inches
				Steam Sq. Ft.	Steam BTU/Hr.	Water BTU/Hr.			Light Oil & Gas	
894	17.50	2526	2,028,000	6,560	1,574,500	1,763,500	11,755	60.6	0.175	14
994	20.00	2887	2,320,000	7,505	1,801,200	2,017,400	13,450	69.3	0.215	14
1094	22.50	3247	2,612,000	8,450	2,028,000	2,271,300	15,140	78.0	0.255	16
1194	25.00	3608	2,904,000	9,395	2,254,700	2,525,200	16,835	86.7	0.295	16
1294	27.50	3969	3,190,000	10,320	2,476,700	2,773,900	18,490	95.3	0.335	16
1394	30.00	4330	3,480,000	11,260	2,701,900	3,026,100	20,175	104.0	0.375	18
1494	32.50	4691	3,770,000	12,195	2,927,000	3,278,300	21,855	112.6	0.415	18
1594	35.00	5052	4,070,000	13,165	3,159,900	3,539,100	23,595	121.6	0.455	18
1694	37.50	5412	4,360,000	14,105	3,385,100	3,791,300	25,275	130.2	0.485	18
1794	40.00	5773	4,650,000	15,045	3,610,200	4,043,500	26,955	138.9	0.525	20
1894	42.50	6134	4,940,000	15,980	3,835,400	4,295,700	28,640	147.6	0.565	20
1994	45.00	6495	5,230,000	16,920	4,060,600	4,542,800	30,285	156.2	0.605	20
2094	47.50	6856	5,520,000	17,855	4,285,700	4,800,000	32,000	164.9	0.650	20
2194	50.00	7216	5,810,000	18,795	4,510,900	5,052,200	33,675	173.6	0.750	20
2294	52.50	7577	6,100,000	19,735	4,736,000	5,304,300	35,360	182.2	0.850	22
2394	55.00	7938	6,390,000	20,670	4,961,200	5,556,500	37,045	190.9	0.950	22
2494	57.50	8299	6,680,000	21,610	5,186,300	5,808,700	38,725	199.6	1.050	22
2594	60.00	8660	6,970,000	22,550	5,411,500	6,060,900	40,406	208.2	1.150	22



SERIES 19A

Cast Iron Boilers

375,000 Btu thru 2,165,000 Btu Models

Features:

- Cast iron wet-base sections tested for 80 PSI
- Insulated metal jacket
- Cast iron smokehood with integral damper
- Burner mounting plate with insulation block
- Front and rear flame observation ports
- Steel angle floor rails
- Hi-temp hydronic port seals
- Flue brush
- Target wall (3-6 sections)

Water Boiler/Burner Units

- ASME relief valve, 40 PSI
- Theraltimeter
- Manual reset, hi-limit control
- Lo-limit operating control

Steam Boiler/Burner Units

- ASME side outlet safety valve, 15 PSI
- Steam gauge (0-30 psig)
- Gauge glass with gauge cocks and guards
- Manual reset, hi-limit control
- Lo-limit operating control

19A I B R RATINGS, BURNER CAPACITIES

Boiler Number	Boiler Horsepower	I=B=R Gross Output	Net I=B=R Rating		I=B=R Burner Capacity		Water Content (Gals.)		Shipping Weight (lbs)
			Steam Sq. Ft.	Water MBH	Oil GPH	Gas MBH	Steam Sq. Ft.	Water MBH	
19A - 3	9	297	929	258	2.60	375	33.2	38.6	1325
19A - 4	12	413	1292	359	3.60	520	41.1	49.2	1652
19A - 5	17	575	1796	500	5.00	725	49.0	59.8	2000
19A - 6	22	738	2308	642	6.50	931	56.8	70.3	2351
19A - 7	27	901	2817	783	7.90	1137	64.7	80.9	2691
19A - 8	32	1063	3321	924	9.30	1342	72.6	91.5	3038
19A - 9	37	1226	3833	1066	10.80	1548	80.5	102.0	3274
19A - 10	42	1388	4383	1207	12.20	1754	88.3	112.6	3725
19A - 11	46	1551	4946	1349	13.60	1989	96.2	123.1	4064
19A - 12	51	1713	5508	1490	15.00	2165	104.0	133.7	4429

Designed and tested to the ASME boiler and pressure vessel code, section IV for maximum allowable working pressure, steam 15 psig, water 80 psig

CALL FOR PRICING

DIMENSIONS (IN INCHES)

Boiler Number	Overall Length "A"		"B"	"C"	Burner Length "D"		"E" Distance Between Supply Tappings	"F" Flue Pipe Diameter
	PF/J	PF/C			PF/J	PF/C		
19A - 3	44		9	18	21		12	7
19A - 4	50	59	15	24	21	30	18	7
19A - 5	56	65	21	30	21	30	24	8
19A - 6	62	71	27	36	21	30	30	8
19A - 7	68	82	33	42	21	35	36	9
19A - 8	74	88	39	48	21	35	42	10
19A - 9	80	94	45	54	21	35	48	10
19A - 10	86	100	51	60	21	35	54	10
19A - 11		106	57	66		35	60	10*
19A - 12		112	63	72		35	66	10*

* 11 and 12 section requires 12" diameter vent pipe. Transition collar provided by Smith.

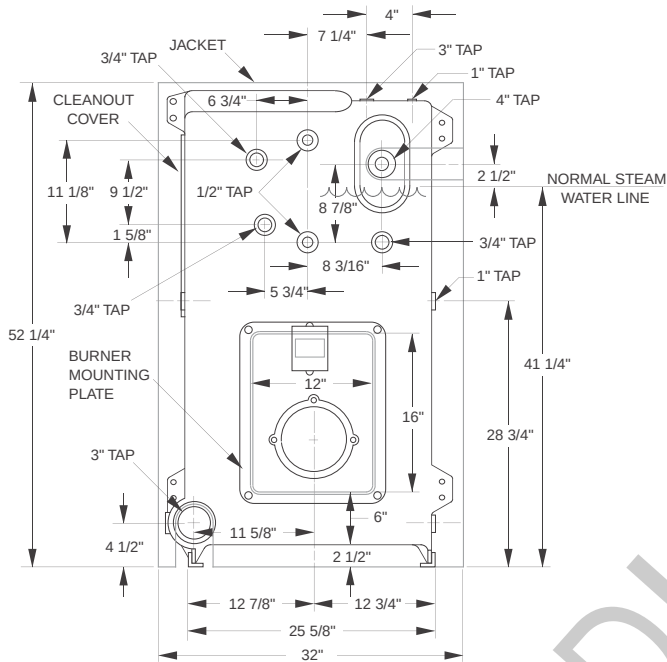
SERIES 19A

Cast Iron Boilers

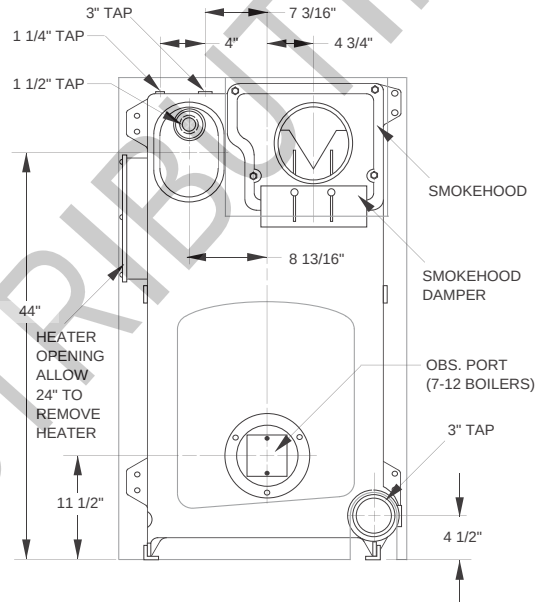
375,000 Btu thru 2,165,000 Btu Models

BOILERS

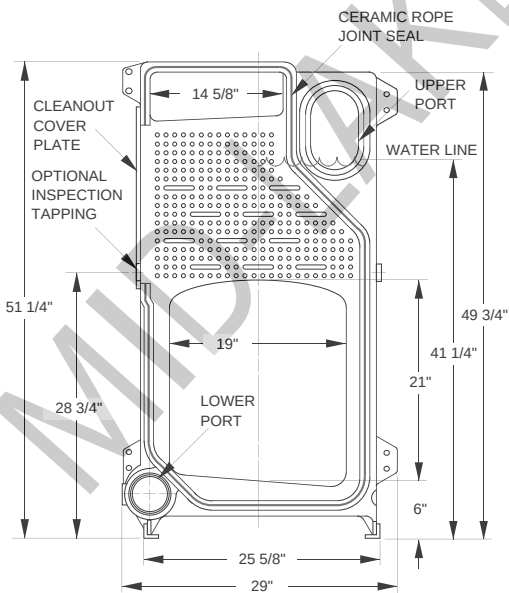
COMMERCIAL



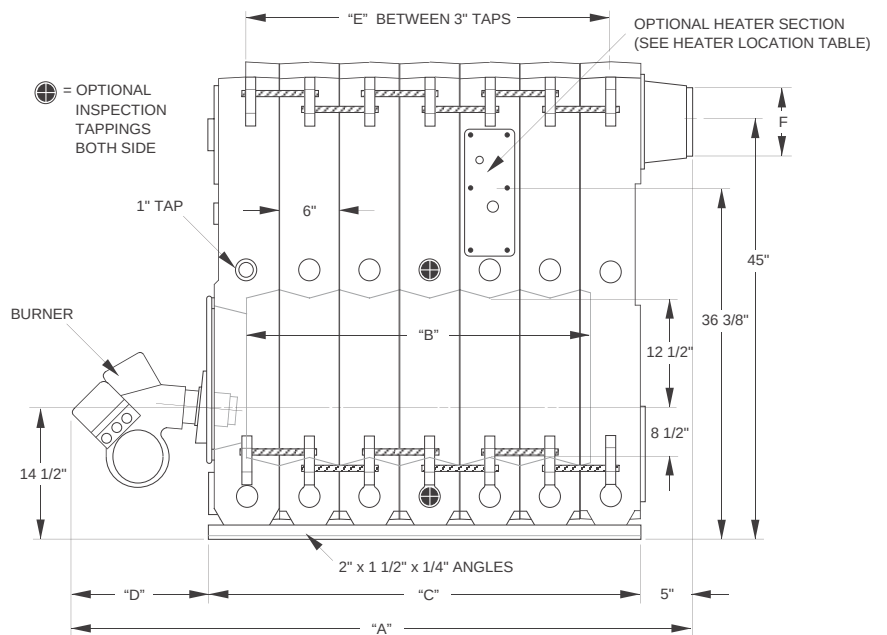
FRONT VIEW



REAR VIEW



INTERMEDIATE SECTION



SIDE VIEW

SERIES 28A

Cast Iron Boilers

375,000 Btu thru 2,165,000 Btu Models

CALL FOR PRICING

BOILERS

COMMERCIAL



Features:

- Cast iron wet-base sections
- Insulated metal jacket
- Cast iron smokehood with integral damper
- Burner mounting plate with insulation block
- Front and rear flame observation ports
- Steel angle floor rails
- Ceramic fiber rope seal
- Graphite port connectors
- Flue brush

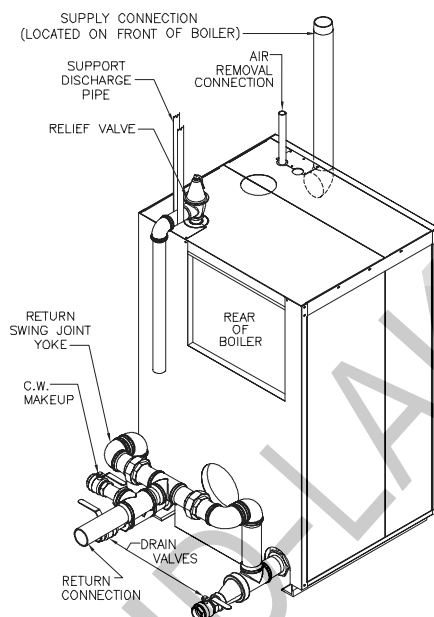
Water Boilers:

- 80 PSI working pressure sections
- ASME relief valve, 40 PSI
- Theraltimeter
- Manual reset, high limit control (boiler/burner units only)

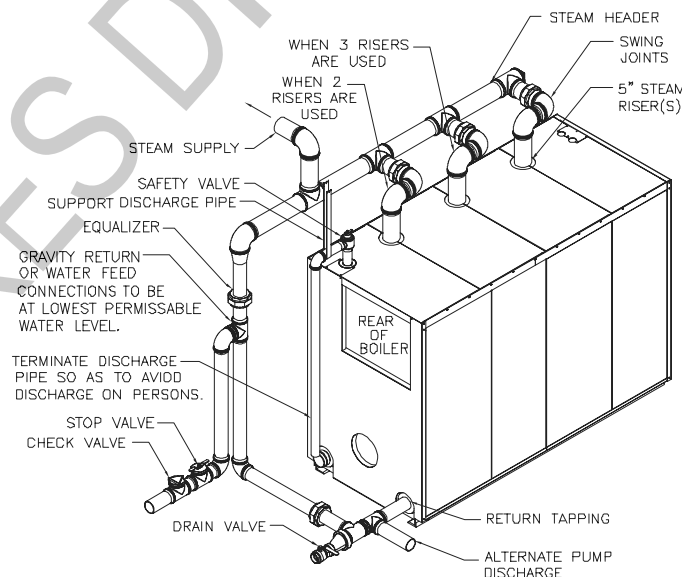
Steam Boilers:

- ASME side outlet safety valve, 15 PSI
- Steam gauge
- Gauge glass with gauge cocks and guards
- Manual reset, high limit control (boiler/burner units only)
- Operating control (boiler/burner units only)

STEAM PIPING



WATER PIPING



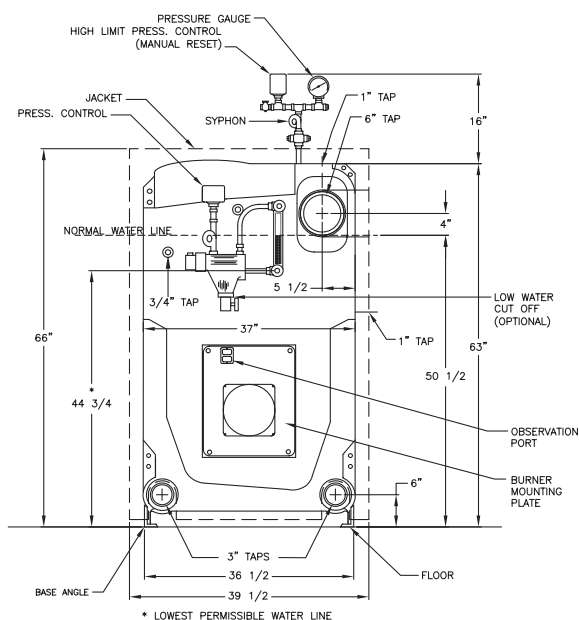
RECOMMENDED PIPING CONNECTIONS

TABLE OF STEAM PIPING SIZES			
Boiler Section	No. of 5" Risers	Header	Equalizer (inches)
28A-S-4 & 5	1	5"	2 1/2
28A-S-6 & 7	2	5"	2 1/2
28A-S-8 thru 10	2	6"	4
28A-S-11 thru 18	3	8"	4

WATER BOILERS		
Boiler Size	Pipe Size	
	Supply	Return
4 and 5	3"	3"
6 and 9	4"	4"
10 and 18	5"	5"

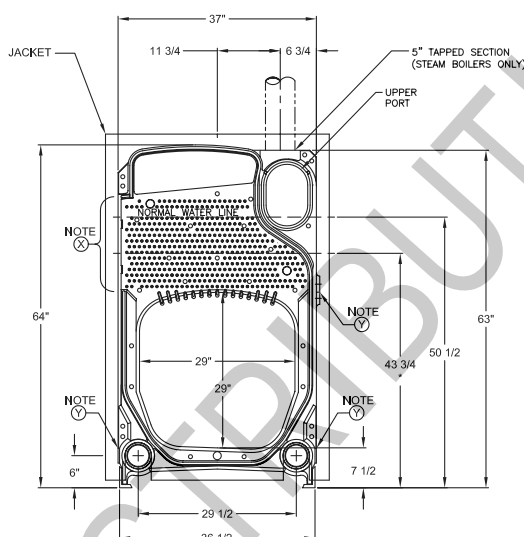
Cast Iron Boilers

375,000 Btu thru 2,165,000 Btu Models

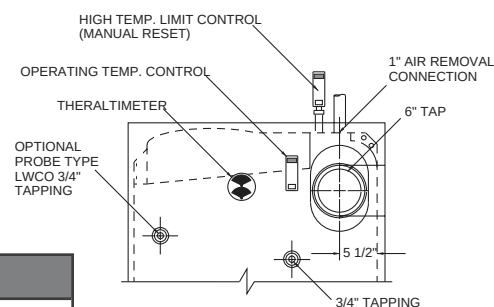


FRONT VIEW

Steam Boiler



INTERMEDIATE SECTION



FRONT VIEW

Water Boiler

28A RATINGS							
Boiler Number	Boiler Horse Power	I=B=R Gross Output (MBH)	Net I=B=R Ratings			Water Contents (gals)	Shipping Weight
			Steam Sq. Ft.	Water MBH	I=B=R Burner Cap Gas MBH	Steam	
28A - 4	27	900	2813	783	1154	103.8	3102
28A - 5	35	1166	3646	1014	1491	125.8	3730
28A - 6	43	1433	4538	1246	1827	147.8	4368
28A - 7	51	1699	5458	1477	2163	169.8	5005
28A - 8	59	1965	6358	1709	2499	191.8	5653
28A - 9	67	2232	7221	1941	2836	213.8	6293
28A - 10	75	2498	8079	2172	3172	235.8	6971
28A - 11	83	2764	8942	2403	3508	257.8	7609
28A - 12	91	3031	9804	2636	3844	279.8	8249
28A - 13	98	3297	10667	2867	4180	301.8	8885
28A - 14	106	3563	11525	3098	4517	323.8	9524
28A - 15	114	3830	12392	3330	4853	345.8	10224
28A - 16	122	4096	13250	3562	5189	367.8	10948
28A - 17	130	4362	14113	3793	5525	389.8	11669
28A - 18	138	4629	14975	4025	5862	411.8	12390

Designed and tested to the ASME boiler and pressure vessel code, section IV for maximum allowable working pressure, steam 15 psig, water 80 psig

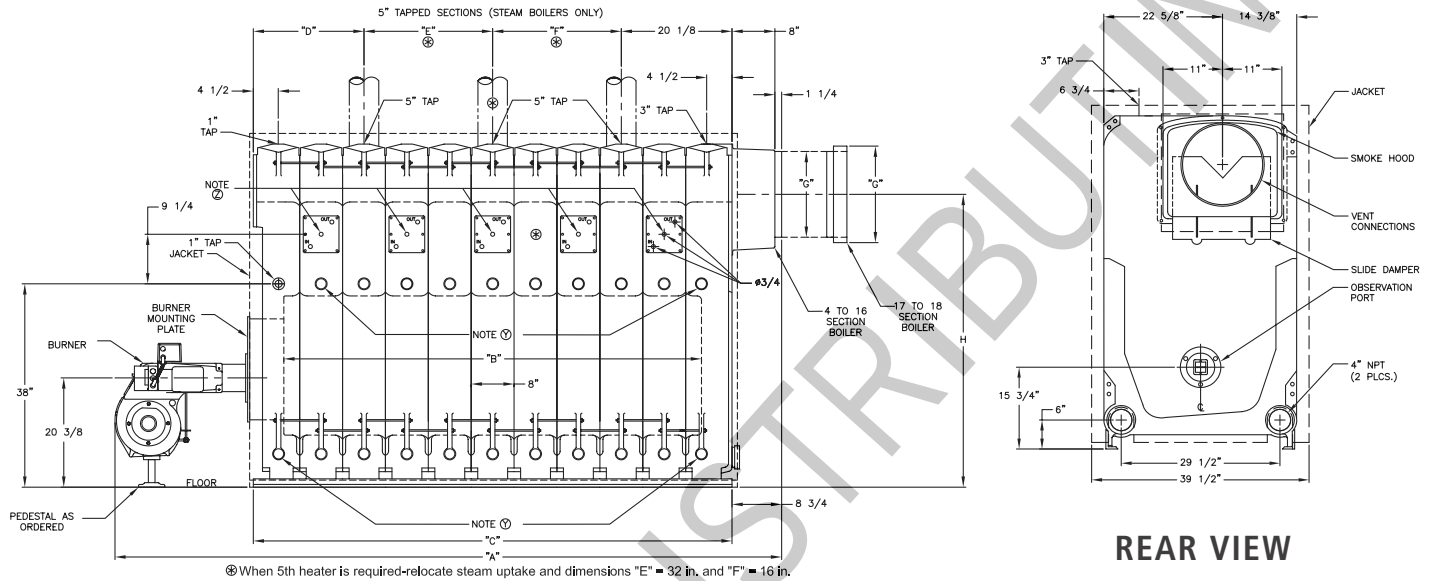
SERIES 28A

Cast Iron Boilers

375,000 Btu thru 2,165,000 Btu Models

BOILERS

COMMERCIAL



REAR VIEW

SIDE VIEW

28A DIMENSIONS								
Boiler Number	Overall Length "A"	Furnace Length "B"	Boiler Length "C"	Steam Uptake Locations			Dia. Vent Conn. "G"	Height Vent Conn. "H"
	Power Flame			"D"	"E"	"F"		
28A - 4	71 ⁵ / ₈	23 ¹ / ₃	33	12 ¹ / ₂			10	57 ⁵ / ₈
28A - 5	83 ¹ / ₈	31 ¹ / ₃	41	20 ¹ / ₂			10	57 ⁵ / ₈
28A - 6	91 ¹ / ₈	39 ¹ / ₃	49	12 ¹ / ₂	16		10	56 ⁵ / ₈
28A - 7	99 ¹ / ₈	47 ¹ / ₃	57	12 ¹ / ₂	24		12	56 ⁵ / ₈
28A - 8	107 ¹ / ₈	55 ¹ / ₃	65	12 ¹ / ₂	32		12	55 ⁵ / ₈
28A - 9	115 ¹ / ₈	63 ¹ / ₃	73	12 ¹ / ₂	40		14	55 ⁵ / ₈
28A - 10	128	71 ¹ / ₃	81	20 ¹ / ₂	40		14	55 ⁵ / ₈
28A - 11	137 ¹ / ₈	79 ¹ / ₃	89	20 ¹ / ₂	24	24	14	55 ⁵ / ₈
28A - 12	145 ¹ / ₈	87 ¹ / ₃	97	20 ¹ / ₂	24	32	14	54 ⁵ / ₈
28A - 13	153 ¹ / ₈	95 ¹ / ₃	105	20 ¹ / ₂	32	32	14	54 ⁵ / ₈
28A - 14	161 ¹ / ₈	103 ¹ / ₃	113	20 ¹ / ₂	32	40	16	54 ⁵ / ₈
28A - 15	169 ¹ / ₈	111 ¹ / ₃	121	20 ¹ / ₂	40	40	16	54 ⁵ / ₈
28A - 16	177 ¹ / ₈	119 ¹ / ₃	129	20 ¹ / ₂	48	40	16	54 ⁵ / ₈
28A - 17	191 ¹ / ₈	127 ¹ / ₃	137	20 ¹ / ₂	48	48	18	54 ⁵ / ₈
28A - 18	199 ¹ / ₈	135 ¹ / ₃	145	20 ¹ / ₂	56	48	18	54 ⁵ / ₈

Condensate Return Units

TYPE EC

Features:

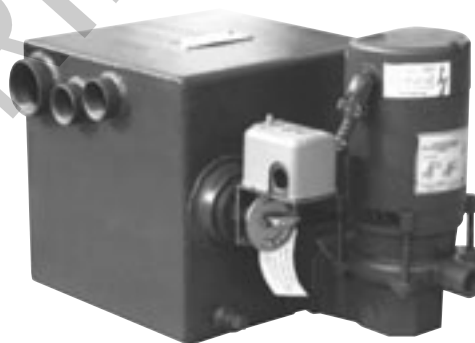
- Small economical condensate return units for temperatures to 200°F
- For systems up to 20,000 sq. ft. EDR
- Discharge pressures to 25 PSIG
- Units available in simplex or duplex style
- 3500 RPM single phase motors
- Cast iron receivers



TYPE LP

Features:

- Small economical condensate return units for temperatures to 200°F
- Standard 3/16" thick black steel receiver
- Units designed for up to 20,000 sq. ft. EDR
- Discharge pressures up to 25 PSIG
- Units available in simplex or duplex style
- 3500 RPM single phase motors
- Steel receivers



TYPE CSC

Features:

- Large condensate return units for temperatures to 200°F
- Heavy gauge black steel receivers
- 300 series stainless steel receivers also available
- Numerous sizes of receivers to permit flexibility and economical selections
- CSC floor mounted style for low gravity returns
- 1750 RPM, 3500 RPM, single phase or three phase motors



SHIPCO PUMPS CONDENSATE RETURN UNITS PRICING

Model Number	Price
120EC	\$1,648.00
SC80EC	\$1,368.00
SC80LP	\$1,172.00
Replacement Pump and Motor	
SH110D	
1/3 hp B Pump and Motor Assembly	\$950.00

Boiler Feed Units

BOILERS

CONDENSATE/BOILER FEED/VACUUM PUMPS

**EMH**

TYPE EMV/EMH

Features:

- Economical boiler feed return units for temperatures to 200°F
- Single or three phase 3500 RPM motors
- All pumps bronze fitted with industry standard motors
- EMV styles for small floor space problems
- EMH styles for low inlet returns
- Numerous sizes of receivers in each style
- Heavy gauge black steel receivers

**EMV**

TYPE CS-B

Features:

- Cylindrical steel boiler feed units
- All pumps bronze fitted with industry standard motors
- Heavy gauge black steel receivers
- 300 series stainless steel receivers available
- Single or three phase motors, 1750 RPM or 3500 RPM available

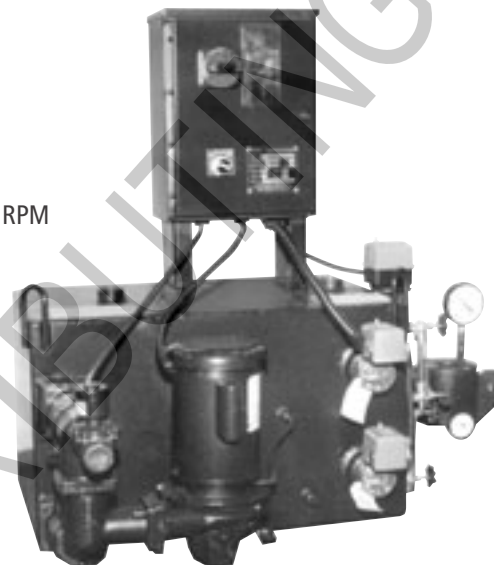
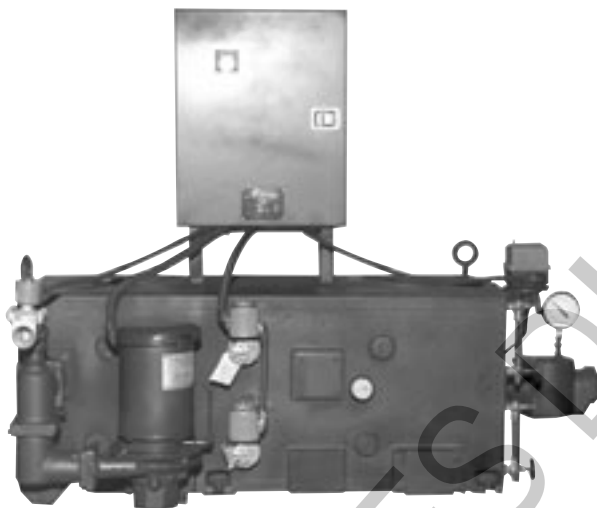
**CALL FOR
PRICING**

Vacuum Condensate Units

TYPE LRV/LRV-S

Features:

- Low return vacuum pumps with cast iron or steel receivers
- Vacuum unit for fast and even distribution of steam throughout system
- Simplex or duplex style available in single or three phase motors, 1750 RPM or 3500 RPM
- Standard close coupled bronze fitted pumps with industry standard motors



CALL FOR
PRICING

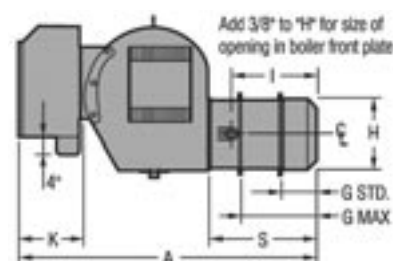
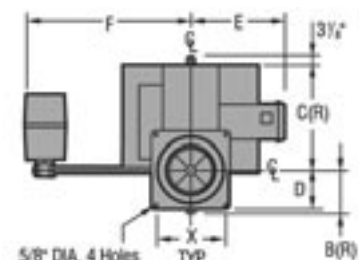
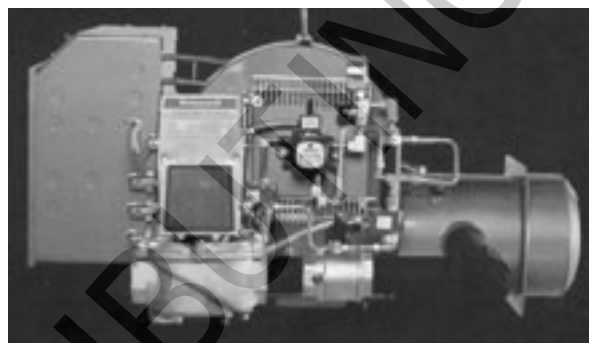
MID-LAKES DISTRIBUTING



**CALL FOR
PRICING**

Features:

- 3450 RPM Motor, squirrel cage blower, panel with 2 lights (power and main fuel) and control switch
- Gas electric pilot and gas ignition transformer
- Leakage test cock, pilot cock and main gas cock
- Pilot and main gas pressure regulators
- Air safety switch
- Flame safeguard with UV scanner
- On-off diaphragm gas valve with fixed air control manual adjustment
- Low-high-off motorized gas valve with automatic air control
- Low-high-low motorized gas valve with automatic air control
- Modulation with automatic air control
- Dual gas safety valves
- High and low gas pressure switches
- NOVA Low NOx systems
- Customized control systems and accessories



CR DIMENSIONS

Model Number	A	B	C	D	E	F	Std G	Max G	H	S	X
CR1-G-12	34.12	5.62	14.50	4.62	12.25	20.00	3.25	4.75	7.25	12.38	7.25
CR2-G-15	34.12	6.12	14.00	5.25	14.00	20.00	4.00	6.75	8.75	13.38	8.50
CR2-G-20A	39.12	6.12	14.00	5.25	14.00	20.00	4.00	6.75	8.75	13.38	8.50
CR2-G-20B	39.12	6.12	14.00	5.25	14.00	20.00	4.00	6.75	8.75	13.38	8.50
CR3-G-20	44.00	7.00	15.25	6.00	16.00	22.38	4.50	8.00	10.12	15.50	10.00
CR3-G-25	44.00	7.00	15.25	6.00	16.00	22.38	4.50	8.00	10.12	15.50	10.00
CR3-G-25B	44.00	7.00	15.25	6.00	16.00	22.38	4.50	8.00	10.12	15.50	10.00

CR RATINGS

Model Number	Max MBH	Nominal Boiler H.P.	Motor H.P. 3450 RPM	Gas Train Size	Min Gas Press (in. W.C.)
CR1-G-12	1491	35	1/2 hp	1 1/4	5.0
CR2-G-15	2050	48.5	1/2 hp	1 1/2	5.0
CR2-G-20A	2396	57	3/4 hp	2	5.0
CR2-G-20B	3100	73	1 hp	2	5.0
CR3-G-20	3753	89	1 1/2 hp	2	5.0
CR3-G-25	4500	106	1 1/2 hp	2 1/2	5.0
CR3-G-25B	4753	113	3 hp	2 1/2	5.0



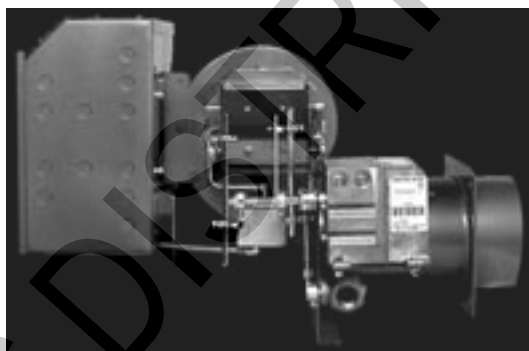
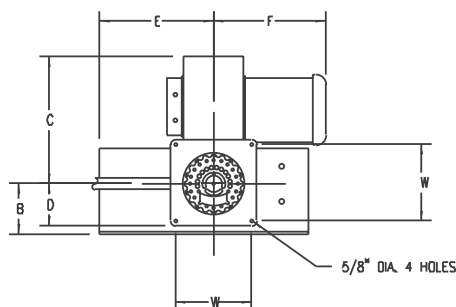
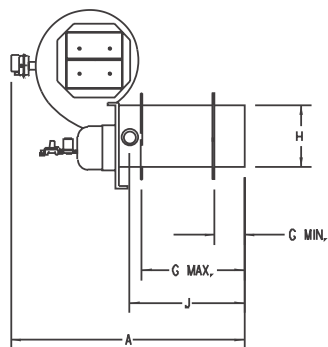
TYPE JR

Forced Draft Burners

CALL FOR
PRICING

Features:

- 3450 RPM motor and squirrel cage blower
- Leakage test, pilot and main gas cocks
- Gas electric pilot and gas ignition transformer
- Pilot and main gas pressure regulators (14" W.C. inlet max)
- Flame safeguard with flame rod, intermittent pilot and prepurge (for natural gas only)
- Air safety switch
- One (1) combination diaphragm valve with pressure regulator and one (1) auxiliary valve



JR DIMENSIONS

Model Number	A	B	C	D	E	F	G (Std)	G (Max)	H	J	W
JR15A-10	24.25	5	12.5	4.62	11.25	10.25	3	10.5	6.12	11.5	7.25
JR30A-10	24.25	5	12.5	4.62	11.25	11.75	3	10.5	6.12	11.5	7.25
JR30A-12	24.25	5	12.5	4.62	11.25	11.75	3	10.5	6.12	11.5	7.25
JR50A-15	27.75	5.62	14	5.25	11.25	11.75	3.75	12.25	8.12	13.62	8.25
JR50A-20	27.75	5.62	14	5.25	11.25	11.75	3.75	12.25	8.12	13.62	8.25

JR RATINGS

Model Number	Max MBH	Nominal Boiler HP	Motor HP 3450 RPM	Gas Train Size (Inch)	Min Gas Pressure (inches W.C.)
JR15A-10	700	16.7	1/4 hp	1	5.0
JR30A-10	1075	25.6	1/3 hp	1	5.0
JR30A-12	1260	30.0	1/3 hp	1.25	5.0
JR50A-15	1703	52.3	1/2 hp	1.50	5.0
JR50A-20	2049	52.3	1/2 hp	2	5.0

ECONOMITE

Burners

Features:

- Combustion air blower with 120 volt, 60 Hz motor
- Blower safety switch
- Automatic gas valve
- Manual gas shut-off valve
- Adjustable gas pressure regulator
- Adjustable floor legs (omitted on RE4000 series and EC series)
- 4" diameter tube
- All models are equipped with 100% safety shut-off controls
- E20B(P), 400B-02, 400B-02P – constant pilot with manual ignition, thermo-electric safety
- RE32, 400-33, 400B-33, F400-33, F400B-33, RE4400B, RE4700BA, RE4850BA, RE4400 and RE4850A – intermittent pilot with automatic spark ignition, electronic safety
- EC200, EC300, RE4400DS, DS24A DS45B – direct spark ignition of main flame, electronic safety

CALL FOR
PRICING

POWER GAS CONVERSION BURNER

Model Number	Burner Input MBH		Minimum Gas Pressure inches W.C.	14" W.C. Burner Tube Length
	Minimum	Maximum		
EC 200	70	200	6"	7.5"
EC 300	90	300	6"	7.5"
RE4400DS	132	400	7"	9"
RE4400B	132	400	7"	9"
RE4700BA	230	700	7"	9"
RE4850BA	280	850	7"	9"
RE4400	132	400	5"	9"
RE4850A	280	850	7"	9"
E20B	50	225	5"	8"
DS24A	50	225	5"	8"
RE32	50	300	4"	Adjustable 2.5" - 6.25"
400B-02	200	400	5"	9"
DS45B	200	400	5"	9"
400-33	185	400	5"	9"
400B-33	185	400	5"	9"
F400-33	300	700	5"	9"
F400B-33	300	700	5"	9"

Electrical supply 120V/60Hz standard as shown - 230 volt 50/60Hz available - contact factory

Approval agency acceptance: all burners design certified by C.S.A. or ANSI Z21.17

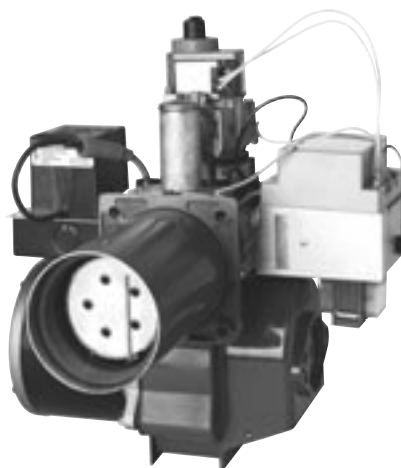
U.L. listed



MODEL HSG 200/400

Gas Burner

CALL FOR
PRICING



Features:

- HSG 200 – 60M Btu to 200M Btu
- HSG 400 – 200M Btu to 400M Btu

Capacities:

Firing rates from 60M through 400M Btu

Fuel:

Natural or LP Gas 2" to 4" water column – adjustable

Controls:

24-volt combination control $\frac{3}{4}$ " IPS, with redundant valve
Flamerod sensor 4 second safety shutdown

Ignition:

Direct spark ignition 7300-volt ignition transformer
Remove top cover for easy access to ignition components

Motor:

3450 RPM – 115V – 2.4A

Fan Housing:

Aluminum alloy, die cast housing
Maintains alignment of all moving parts throughout the lifetime of the burner

Mounting:

Adjustable flange (pedestal mount available)

Air Tube:

4" OD available in standard lengths of 6", 9" and 12"

Combustion Head:

Stainless Steel, precision stamping. No change for entire firing range

ORDERING INFORMATION

Model Number	Tube Length	Capacity - M Btu
HSG 200	6", 9", 12"	60-200
HSG 400	6", 9", 12"	200-400



MODEL EH, HS and FH

Oil Burners

Features:

Flamelock assures positive stability, resulting in a clean, uniform high temperature flame. High static pressure for better air/oil mixture. Clean, smooth ignition and sharp, positive, no-drip shut-off prevents carbon soot from forming. Nozzle operating temperatures remain low. Economy results from high carbon dioxide readings, providing a high combustion efficiency that saves fuel.

- Model HS – 0.50 – 3.00 GPH
- Model EH – 3.00 – 6.00 GPH
- Model FH – 4.00 – 13.00 GPH
- 3450 RPM pump and motor assembly
- 10,000 V ignition transformer
- Adjustable mounting flange



HA

Inshot Burners

Features:

- Rugged cast iron adjustable venturi – places the flame in optimum location for oil furnaces
- Readily removable pilot, flame spreader and pilot lighter
- Durable pre-drilled steel mounting flange – for easy mounting
- Adjustable orifice included

**CALL FOR
PRICING**

ADAMS GAS BURNERS				
Model Number	BTU/Hr. Input		Gas Pipe Connection	Approx Shipping Weight
	Maximum	Minimum		
HA-300	290,000	50,000	3/4"	16 lbs
HP-225	225,000	50,000	3/4"	26 lbs
HP-400BPS	400,000	100,000	3/4"	31 lbs

HP

Spacesaver Power Burner

Features:

- Compact design saves space
- Adjustable orifice
- Fits the smallest enclosures
- Easily accessible air and firing rate adjustment
- Completely factory wired with motor, transformer and terminal block mounting on slide out chassis
- Slide out gas valve and manifold
- Rugged steel mounting flange, 5" or 8" extension sleeve optional
- HP225 – Standing pilot
- HP400BPS – Spark ignition

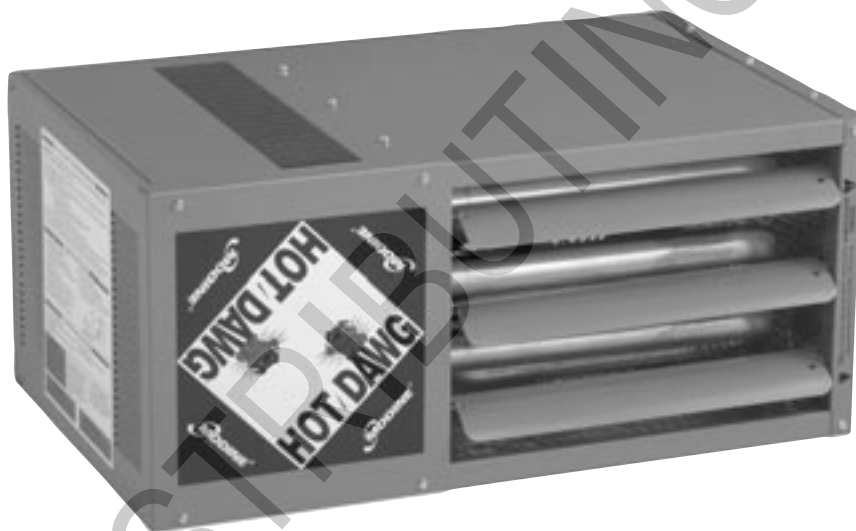


MODEL HD - HOT DAWG

Gas Fired, Power-Exhausted, Low Profile Unit Heater
30,000 Btu thru 75,000 Btu Models

Features:

- 80% thermal efficiency
- Horizontal or vertical venting
- Field convertible to propane
- Low profile casing
- Hot surface ignition
- Mounting brackets supplied
- Commercial or residential applications
- Quiet operation
- Standard power exhauster simplifies side-wall or roof venting with small diameter vent-pipe
- Light weight, allows suspension from ceiling with only 2 angle brackets (included)
- Heat exchanger made from corrosion-resistant aluminized steel
- Full 10 year warranty on heat exchanger



UNIT HEATERS

MODEL HD PERFORMANCE DATA

	Model Number			
	HD 30	HD 45	HD 60	HD 75
Btu/Hr Input	30,000	45,000	60,000	75,000
Btu/Hr Output	24,000	36,000	48,000	60,000
Vent Dia. (in.)*	3 or 5	3 or 5	3 or 5	3 or 5
CFM @ 70° F	505	720	990	1160
Air Temp. Rise (° F)	44	46	45	48
Maximum Mounting Height (ft.)	10	10	12	14
Heat Throw (ft.)	25	27	36	38
Motor HP	¹ / ₂₅	¹ / ₁₅	¹ / ₁₂	¹ / ₁₂
Price	\$1,004.00	\$1,060.00	\$1,110.00	\$1,156.00

* Vent size varies depending upon application

NOTE: Do not locate any gas-fired unit in areas with chlorinated, halogenated or acidic vapors in atmosphere.



MODEL PD and BD

Gas Fired, Gravity-Vented Unit Heaters
30,000 Btu thru 400,000 Btu Models

Features:

- 80% thermal efficiency
- Gravity-vented
- 12 propeller models and 11 blower models
- Available with intermittent pilot ignition
- Power exhaust optional
- Model PD is a gas fired, gravity vented propeller unit heater
- Propeller fan units are classified as zero static pressure type and should not be used with velocity generating discharge nozzles or ductwork connections
- The Model BD blower is a gas fired, gravity vented blower unit heater and is usually selected in place of the PD to overcome static pressures
- Equipment options include:
 - Blower and motor enclosures
 - Combination filter-rack and duct connections
 - Velocity generating nozzles
 - Deflector hoods



PERFORMANCE DATA

PROPELLER	Model Number											
	PD 30	PD 50	PD 75	PD 100	PD 125	PD 150	PD 175	PD 200	PD 250	PD 300	PD 350	PD 400
Btu/HR Input	30,000	50,000	75,000	100,000	125,000	150,000	175,000	200,000	250,000	300,000	350,000	400,000
Btu/Hr Output	24,000	40,000	60,000	80,000	100,000	120,000	140,000	160,000	200,000	240,000	280,000	320,000
Vent Dia. (in.)	3	4	5	6	6	7	7	7	8	9	10	10
CFM @ 70°F	440	740	1100	1460	1850	2180	2550	2870	3700	4460	4870	5440
Air Temp. Rise (°F)	51	50	51	51	50	51	51	52	50	50	53	54
Maximum Mounting Height (ft.)	7	9	12	14	14	16	17	15	19	21	20	19
Heat Throw (ft.)	25	33	41	49	51	55	59	51	67	74	70	69
Motor HP	¹ / ₄₀	¹ / ₄₀	¹ / ₁₂	¹ / ₁₂	¹ / ₈	¹ / ₈	¹ / ₆	¹ / ₆	¹ / ₃	¹ / ₂	³ / ₄	³ / ₄
Price	\$840.00	\$878.00	\$938.00	\$1,110.00	\$1,214.00	\$1,282.00	\$1,542.00	\$1,600.00	\$1,864.00	\$2,204.00	\$2,640.00	\$2,774.00
BLOWER	Model Number											
	BD 50	BD 75	BD 100	BD 125	BD 150	BD 175	BD 200	BD 250	BD 300	BD 350	BD 400	
Btu/HR Input	50,000	75,000	100,000	125,000	150,000	175,000	200,000	250,000	300,000	350,000	400,000	
Btu/Hr Output	40,000	60,000	80,000	100,000	120,000	140,000	160,000	200,000	240,000	280,000	320,000	
Vent Dia. (in.)	4	5	6	6	7	7	7	8	9	10	10	
Motor HP (Std 115V/60Hz/1Ph)	¹ / ₄	¹ / ₄	¹ / ₄	¹ / ₄	¹ / ₄	¹ / ₃	¹ / ₄	¹ / ₃	³ / ₄	1	1 ¹ / ₂	
Air Flow CFM Range	529 - 926	794 - 1389	1058 - 1852	1323 - 2315	1587 - 2778	1852 - 3241	2116 - 3704	2646 - 4630	3175 - 5556	3704 - 6481	4233 - 7407	
Air Temp Rise Range (°F)	40-70	40-70	40-70	40-70	40-70	40-70	40-70	40-70	40-70	40-70	40-70	40-70
Price	**** CALL FOR PRICING ****											

82 NOTE: Do not locate any gas-fired unit in areas with chlorinated, halogenated or acidic vapors in atmosphere.



MODEL PDP and BDP

Gas Fired, Power-Exhausted, High Efficiency II Unit Heaters
30,000 Btu thru 400,000 Btu Models

Features:

- 80% thermal efficiency
- Horizontal or vertical venting
- Intermittent pilot ignition
- Power exhaust that can be rotated 180°
- Can be vented vertically or horizontally
- Level hanging mechanism for easy field adjustments
- Field convertible to propane

High Efficiency II



UNIT HEATERS

PERFORMANCE DATA

PROPELLER	Model Number											
	PDP 30	PDP 50	PDP 75	PDP 100	PDP 125	PDP 150	PDP 175	PDP 200	PDP 250	PDP 300	PDP 350	PDP 400
Btu/HR Input	30,000	50,000	75,000	100,000	125,000	150,000	175,000	200,000	250,000	300,000	350,000	400,000
Btu/Hr Output	24,000	40,000	60,000	80,000	100,000	120,000	140,000	160,000	200,000	240,000	280,000	320,000
Vent Dia. (in.)	3 or 4	3 or 4	4	4	4	5	5	5	6	6	6	6
CFM @ 70°F	440	740	1100	1460	1850	2180	2550	2870	3700	4460	4870	5440
Air Temp. Rise (°F)	51	50	51	51	50	51	51	52	50	50	53	54
Maximum Mounting Height (ft.)	7	9	12	14	14	16	17	15	19	21	20	19
Heat Throw (ft.)	25	33	41	49	51	55	59	51	67	74	70	69
Motor HP	1/40	1/40	1/12	1/12	1/8	1/8	1/6	1/6	1/3	1/2	3/4	3/4
Price	Call for Pricing	\$1,022.00	\$1,168.00	Call	\$1,366.00	\$1,726.00	\$1,880.00	\$1,962.00	\$2,318.00	Call	\$2,748.00	
BLOWER	Model Number											
	BDP 50	BDP 75	BDP 100	BDP 125	BDP 150	BDP 175	BDP 200	BDP 250	BDP 300	BDP 350	BDP 400	
Btu/HR Input	50,000	75,000	100,000	125,000	150,000	175,000	200,000	250,000	300,000	350,000	400,000	
Btu/Hr Output	40,000	60,000	80,000	100,000	120,000	140,000	160,000	200,000	240,000	280,000	320,000	
Vent Dia. (in.)	3 or 4	4	4	4	5	5	5	6	6	6	6	
Motor HP (Std 115V/60Hz/1Ph)	1/4	1/4	1/4	1/4	1/4	1/3	1/4	1/3	3/4	1	1 1/2	
Air Flow CFM Range	529 - 926	794 - 1389	1058 - 1852	1323 - 2315	1587 - 2778	1852 - 3241	2116 - 3704	2646 - 4630	3175 - 5556	3704 - 6481	4233 - 7407	
Air Temp Rise Range (°F)	40-70	40-70	40-70	40-70	40-70	40-70	40-70	40-70	40-70	40-70	40-70	
Price	**** CALL FOR PRICING ****											

NOTE: Do not locate any gas-fired unit in areas with chlorinated, halogenated or acidic vapors in atmosphere.



MODELS PSH and BSH (2 Pipe)

Gas Fired, Separated Combustion, High Efficiency Unit Heaters
130,000 Btu thru 340,000 Btu Models



Features:

- 82% thermal efficiency
- Separated combustion – high efficiency
- Horizontal or vertical venting
- 100% outside air for combustion
- Stainless steel secondary heat exchanger tubes
- Horizontal or vertical concentric venting

PERFORMANCE DATA

PROPELLER	Model Number					
	PSH 130	PSH 150	PSH 170	PSH 225	PSH 280	PSH 340
Btu/HR Input	130,000	150,000	170,000	225,000	280,000	340,000
Btu/Hr Output	106,600	123,000	139,400	184,500	229,600	275,400
Vent Dia. (in.)	4	4	4	4	6	6
CFM @ 70°F	2540	2900	2900	4275	4400	5300
Air Temp. Rise (°F)	39	39	45	40	48	48
Maximum Mounting Height (ft.)	12	16	16	20	20	20
Heat Throw (ft.)	50	50	50	65	65	65
Motor HP	1/6	1/6	1/6	1/3	1/2	1/2
Price	\$2,742.00	\$2,980.00	\$3,078.00	\$3,440.00	\$4,114.00	\$4,628.00
BLOWER	Model Number					
	BSH 130	BSH 150	BSH 170	BSH 225	BSH 280	BSH 340
Btu/HR Input	130,000	150,000	170,000	225,000	280,000	340,000
Btu/Hr Output	106,600	123,000	139,400	184,500	229,600	275,400
Vent Dia. (in.)	4	4	4	4	6	6
Motor HP (Std 115V/60Hz/1Ph)	1/4	1/2	1/2	3/4	1	1
Air Flow CFM Range	1161- 1795	1340- 2071	1591- 2347	1985- 3068	2501- 3865	3000- 4636
Air Temp Rise Range (°F)	55-85	55-85	55-85	55-85	55-85	55-85
Price	**** CALL FOR PRICING ****					

NOTE: Do not locate any gas-fired unit in areas with chlorinated, halogenated or acidic vapors in atmosphere.



MODEL DFG

Gas Fired, Indoor, Gravity Vented Duct Furnaces
75,000 Btu thru 400,000 Btu Models

Features:

- 75,000 to 45,000 Btu/Hr input capacity
- Heating and/or make-up air applications

Optional:

- 409 stainless steel heat exchanger and burner
- 409 stainless steel drip pan
- Two stage, mechanical modulation and electronic modulation controls
- Building management compatible gas controls using 0 – 10 Vdc or 4 – 20 mA input

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MODEL DFG PERFORMANCE DATA

Model Number	Btu/Hr		Without Air Baffle		With Air Baffle	
	Input	Output	Temp Rise Range (°F)	CFM Range	Temp Rise Range (°F)	CFM Range
DFG 75	75,000	60,000	20 - 60	926 - 2,778	20 - 100	556 - 2,778
DFG100	100,000	80,000	20 - 60	1,235 - 3,704	20 - 100	741 - 3,704
DFG125	125,000	100,000	20 - 60	1,543 - 4,630	20 - 100	926 - 4,630
DFG150	150,000	120,000	20 - 60	1,852 - 5,556	20 - 100	1,111 - 5,556
DFG175	175,000	140,000	20 - 60	2,160 - 6,481	20 - 100	1,296 - 6,481
DFG200	200,000	160,000	20 - 60	2,469 - 7,407	20 - 100	1,481 - 7,407
DFG225	225,000	180,000	20 - 60	2,778 - 8,333	20 - 100	1,667 - 8,333
DFG250	250,000	200,000	20 - 60	3,086 - 9,259	20 - 100	1,852 - 9,259
DFG300	300,000	240,000	20 - 60	3,704 - 11,111	20 - 100	2,222 - 11,111
DFG350	350,000	280,000	20 - 60	4,321 - 12,963	23 - 100	2,593 - 11,111
DFG400	400,000	320,000	20 - 60	4,938 - 14,815	27 - 100	2,963 - 11,111

NOTE: Do not locate any gas-fired unit in areas with chlorinated, halogenated or acidic vapors in atmosphere.



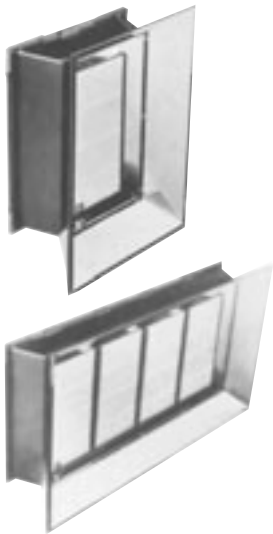
MODEL MT

Gas Fired, High Intensity Infrared Units
27,500 Btu thru 160,000 Btu Models

Features:

- High intensity Model MT – 13 models available
- Simple chain mounting
- High heat transfer diamond-faced ceramic tiles
- Unvented operation
- Ideal for spot heating
- Aluminized steel frame

**CALL FOR
PRICING**



UNIT HEATERS

MODEL MT PERFORMANCE DATA

Model Number	Btu/Hr Input	Recommended Mounting Height (ft.) @ 10° Angle
MT 28	27,500	8 - 14
MT 30	30,000	8 - 14
MT 33	33,500	8 - 14
MT 56	55,000	14 - 20
MT 60	60,000	14 - 20
MT 66	67,000	14 - 20
MT 84	82,500	20 - 26
MT 90	90,000	20 - 26
MT 99	100,500	20 - 26
MT 112	110,000	26 - 32
MT 120	120,000	26 - 32
MT 132	132,000	26 - 32
MT 160	160,000	26 - 40

NOTE: Do not locate any gas-fired unit in areas with chlorinated, halogenated or acidic vapors in atmosphere.



MODEL MV

Gas Fired, Low Intensity, Vacuum Infrared Units
75,000 Btu thru 150,000 Btu Models

Features:

- Vacuum Type, single burner low-intensity heaters
- 75,000 to 150,000 Btu/Hr input
- 20 to 60 foot system lengths
- Straight or u-tube configurations
- Simple chain mounting
- Designed for indoor vented installation
- Available in natural gas only
- Polished aluminum reflector directs infrared rays efficiently to desired area
- Utilizes low voltage controls

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MODEL MV PERFORMANCE DATA			
Model Number	Btu/Hr Input	System Lengths (ft.)	Recommended Mounting Height (ft.)
MV 75	75,000	20, 30, 40, 50	12 - 14
MV 100	100,000	30, 40, 50	12 - 14
MV 125	125,000	40, 50, 60	15 - 22
MV 150	150,000	40, 50, 60	15 - 22

NOTE: Do not locate any gas-fired unit in areas with chlorinated, halogenated or acidic vapors in atmosphere.

UNIT HEATERS





MODEL HS

Steam/Hot Water, Horizontal Delivery Unit Heaters
12,600 Btu thru 340,000 Btu Models



Features:

- Totally enclosed motor
- Adjustable horizontal blades
- Top and bottom inlet and outlet piping
- Built-in fan safety guard
- Thermal overload protection

MODEL HS PERFORMANCE DATA

Model Number	Motor Data		Standard Models										
			Steam (2# Steam, 60°F Ent. Air)			Hot Water (200°F in 180°F out, 60°F Ent Air)				CFM	Max Mounting Height (ft.)	Heat Spread (Ft.)	Price
	Btu/Hr	Condensate (lbs/hr)	Final Air Temp. (°F)	Btu/Hr	Water Flow (GPM)	Final Air Temp (°F)	Press. Drop (Ft of Water)						
HS 18	1/60	1550	18,000	18	107	12,600	1.3	93	0.5	340	8	17	\$556.00
HS 24	1/25	1550	24,000	25	119	16,200	1.7	100	0.8	370	9	18	\$600.00
HS 33	1/25	1550	33,000	35	108	21,700	2.3	91	0.2	630	10	21	\$728.00
HS 47	1/12	1550	47,000	49	119	30,900	3.2	98	0.4	730	12	28	\$850.00
HS 63	1/12	1550	63,000	66	111	45,600	4.7	97	0.6	1,120	14	29	\$938.00
HS 86	1/8	1625	86,000	89	118	60,200	6.3	101	1.0	1,340	15	31	\$1,004.00
HS 108	1/8	1625	108,000	111	109	83,700	8.7	98	2.8	2,010	17	31	\$1,236.00
HS 121	1/5	1075	121,000	126	122	93,000	9.7	107	3.3	1,775	16	25	\$1,326.00
HS 165	1/3	1075	165,000	170	106	130,900	13.6	96	8.6	3,240	19	40	\$1,644.00
HS 193	1/3	1075	193,000	200	121	143,000	14.9	105	1.4	2,900	18	38	\$1,872.00
HS 258	1/2	1075	258,000	267	111	201,900	21	100	5.7	4,560	19	44	\$2,538.00
HS 290	1/2	1075	290,000	300	117	228,600	23.8	105	7.1	4,590	20	46	\$2,622.00
HS 340	1/2	1075	340,000	352	120	271,100	28.2	108	11.3	5,130	20	46	\$3,010.00



MODEL V

Steam/Hot Water, Vertical Delivery Unit Heaters
30,100 Btu thru 952,000 Btu Models

Features:

- 15 standard models
- Totally enclosed motors
- 33,000 to 952,000 Btu/Hr input
- Built-in fan safety guard



MODEL VS PERFORMANCE DATA

Model Number	Motor Data		Standard Models										
			Steam (2# Steam, 60°F Ent. Air)			Hot Water (200°F in 180°F out, 60°F Ent Air)				CFM	Max Mounting Height (ft.)	Heat Spread (Ft.)	Price
	HP	Approx RPM	Btu/Hr	Condensate (lbs/hr)	Final Air Temp. (°F)	Btu/Hr	Water Flow (GPM)	Final Air Temp (°F)	Press. Drop (Ft of Water)				
V 42	1/30	1050	42,000	43	103	30,100	3.1	90	0.6	950	15	11	\$832.00
V 59	1/30	1050	59,000	61	111	42,600	4.4	96	0.5	1,155	19	14	\$934.00
V 78	1/15	1050	78,000	81	109	57,000	5.9	95	0.5	1,590	20	15	\$1,062.00
V 95	1/15	1050	95,000	99	118	69,300	7.2	101	0.5	1,665	20	15	\$1,124.00
V 139	1/5	1075	139,000	144	112	106,600	11.1	99	2.6	2,660	24	18	\$1,310.00
V 161	1/3	1075	161,000	167	115	123,200	12.8	101	2.2	2,940	27	20	\$1,556.00
V 193	1/3	1075	193,000	200	116	147,200	15.3	101	2.2	3,500	30	22	\$1,690.00
V 212	1/3	1075	212,000	219	120	161,700	16.8	104	1.5	3,610	30	22	\$1,910.00
V 247	1/2	1075	247,000	256	111	188,700	19.7	98	2.1	4,820	34	26	\$2,164.00
V 279	1/2	1075	279,000	288	111	212,600	22.2	98	2.1	5,460	37	30	\$2,230.00
V 333	3/4	1140	333,000	345	116	260,100	27.1	102	3.8	5,980	37	30	\$3,084.00
V 385	1	1140	385,000	398	110	302,100	31.5	98	5.0	7,680	36	30	CALL FOR PRICING
V 500	1 1/2	1140	500,000	518	108	391,700	40.8	96	4.8	10,390	44	37	
V 610	1 1/2	1140	610,000	631	112	450,400	46.9	97	1.0	11,750	43	36	
V 952	2	1140	952,000	986	139	721,600	75.2	120	1.1	12,170	45	56	



MODEL C and CW

Steam/Hot Water Cabinet Unit Heaters

Features:

- One or two row copper tube
- Motor with built-in thermal overload protection, 115v/60/1 phase
- Unit mounted, solid state speed control
- Permanent, cleanable air filter
- Sound dampening insulation on front panels

CALL FOR
PRICING

MODEL C & CW PERFORMANCE DATA

Unit Size	Hot Water (200°F in 180°F out, 60°F Ent. Air)								Steam (2# Steam, 60°F Ent. Air)			
	Standard Coil				High Capacity Coil				Standard Coil			
	Btu/Hr	GPM	CFM	Final Air Temp. (°F)	Btu/Hr	GPM	CFM	Final Air Temp. (°F)	Btu/Hr	GPM	CFM	Final Air Temp. (°F)
2	12,400	1.28	250	106	23,200	2.4	250	146	19,800	250	21	133
3	21,100	2.23	330	121	33,400	3.6	325	155	28,300	330	29	133
4	28,100	2.87	450	117	45,800	4.7	440	156	42,500	450	44	147
6	44,300	4.43	620	126	59,700	6.0	615	150	52,100	620	54	137
8	48,800	5.00	840	113	71,900	7.4	835	139	67,700	840	70	134
10	55,700	5.70	1050	108	84,600	8.7	1040	135	76,000	1050	79	126
12	72,300	7.40	1240	113	105,600	10.8	1220	140	95,400	1240	99	130
14	79,200	8.10	1430	111	118,300	12.1	1410	137	102,600	1430	106	126

Model C: Exposed floor mounted unit

Model CW: Exposed wall or ceiling unit (also available recessed (full or partial))



**CALL FOR
PRICING**

WEATHER HAWK

Weatherproof Gas Fired System Units
75,000 Btu thru 1,200,000 Btu Models
Heating, Cooling, Ventilating and Make-Up Air Units

Features:

- Applications cover: heating only, heating/ventilating, cooling, and/or make-up air
- 75,000 to 1,200,000 Btu/hr input capacity
- ETL certification of the entire system unit
- 18 gauge insulated aluminized steel cabinet
- Blower performance up to 3.0" W.C. external static pressure
- Side or bottom (through a roof curb) gas and electrical connection access

Optional Features:

- DX or chilled water section with factory installed cooling coil
- Double wall construction for blower, cooling cabinet, and/or downturn plenum sections
- Dead-front disconnect switches
- Two-position, modulating, building pressure sensing, three position, building management (0 – 10 Vdc or 4 – 20 mA input) damper actuators
- Blower and motor vibration insulation



PERFORMANCE DATA - MODELS HBG/HCG/HDG/HPG

Model Number	Btu/Hr Input	Btu/Hr Output	Temperature Rise Range (°F)	CFM Range	Total Static Pressure Range (inches w.c.)
75	75,000	60,000	20 - 100	556 - 2,778	0 - 3.0
100	100,000	80,000	20 - 100	741 - 3,704	0 - 3.0
125	125,000	100,000	20 - 100	926 - 4,630	0 - 3.0
150	150,000	120,000	20 - 100	1,111 - 4,630	0 - 3.0
175	175,000	140,000	23 - 100	1,296 - 5,556	0 - 3.0
200	200,000	160,000	23 - 100	1,481 - 6,500	0 - 3.0
225	225,000	180,000	26 - 100	1,667 - 6,500	0 - 3.0
250	250,000	200,000	20 - 100	1,852 - 9,259	0 - 3.0
300	300,000	240,000	20 - 100	2,222 - 11,111	0 - 3.0
350	350,000	280,000	22 - 100	2,593 - 12,000	0 - 3.0
400	400,000	320,000	25 - 100	2,963 - 12,000	0 - 3.0
500	500,000	400,000	40 - 120	3,086 - 9,259	0 - 3.0
600	600,000	480,000	40 - 120	3,704 - 11,111	0 - 3.0
700	700,000	560,000	40 - 120	4,321 - 12,963	0 - 3.0
800	800,000	640,000	41 - 120	4,938 - 14,500	0 - 3.0
840	1,050,000	840,000	60 - 120	6,481 - 12,963	0 - 3.0
960	1,200,000	960,000	63 - 120	7,401 - 14,500	0 - 3.0



MODEL MDB/MRB

Direct Fired Make-Up Air Units

Features:

- ETL Certified
- Btu/hr outputs from 42,000 to 7,862,000
- CFM ranges from 1,600 to 60,000
- 100% make-up air and recirculating configurations
- 100% thermal efficiency (92% sensible) results in lower fuel bills
- Designed for indoor or outdoor mounting
- MDB - single and two speed 100% make-up air
- MRB - fresh and return air
- Factory wired electrical panel
- 100% factory flame testing
- Adjustable drives through 10 HP
- 22:1 firing rate turndown for optimum temperature control

CALL FOR
PRICING





Other Available Modine Applied Products

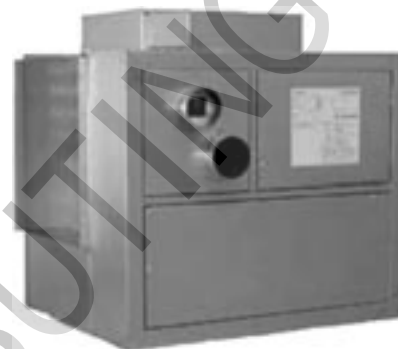
Outdoor Models

- Model HFG/HFP Weatherhawk Weatherproof Duct Furnaces
75,000 to 400,000 Btu Input
Gravity or power vented models

Indoor Models

- Model DFS Duct Furnace
Separated combustion
75,000 to 400,000 Btu input
- Model DBS/DCS – Heating, Ventilating and Make-Up Air
75,000 to 1,200,000 Btu input
Separated combustion systems
Large selection of fan/drive and motors
CFM range from 600 CFM to 14,500 CFM
DX or chilled water coil section available
- Model DBG/DCG – Atmospheric (gravity vented) Heating, Ventilating, Make-Up Air
75,000 to 1,200,000 Btu input
Large selection of fan/drive and motors
CFM range from 600 CFM to 14,500 CFM
DX or chilled water coil section available

CALL FOR
PRICING

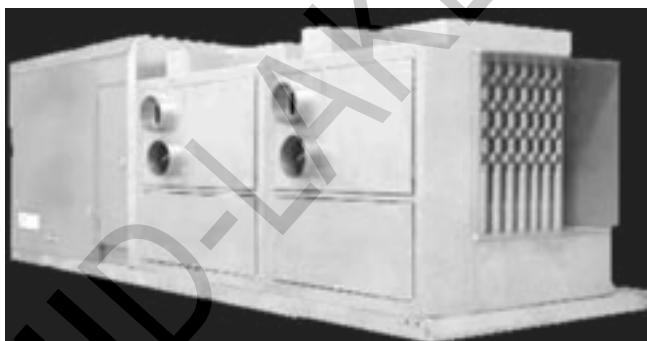


DFS



HFG

UNIT HEATERS



DBS



DBG



Vented Room Heaters

Console and Visual Flame Heaters

50,000 Btu and 65,000 Btu Models



Features:

- Heats without electricity
- Console or visual flame design
- Draft diverter install to either horizontal or vertical position
- Matchless piezo ignition
- Automatic blower included on RH-50B and RH-65B
- Combustion chamber carries a 10-year limited warranty and all other parts carry a 1-year limited warranty

EMPIRE VENTED ROOM HEATERS					
Model		RH-50B	RH-50CB	RH-65B	RH-65CB
Color		Beige	Beige	Beige	Beige
Btu Input		50,000	50,000	65,000	65,000
Dimensions (W x D x H)		34" x 16" x 23 ³ / ₁₆ "	34" x 16" x 23 ³ / ₁₆ "	34" x 20" x 27 ¹¹ / ₁₆ "	34" x 20" x 27 ¹¹ / ₁₆ "
Depth Including Diverter		29 ⁹ / ₁₆ "	29 ⁹ / ₁₆ "	29 ⁹ / ₁₆ "	29 ⁹ / ₁₆ "
Shipping Weight		124	124	142	142
Hydraulic Thermostat		Yes	Yes	Yes	Yes
Accessories	Blower Kit	Included	Included	Included	Included
	Output (cu ft/min)	100	100	100	100
Min Clearances to Combustibles from:	Top	55"	55"	55"	55"
	Each Side	6"	6"	6"	6"
	Opposite Side	18"	18"	18"	18"
	Bottom of Unit to Wood Floor	0"	0"	0"	0"
	Draft Diverter to Wall	2"	2"	2"	2"
Nat Gas Inlet	Iron Pipe Size	¹ / ₂ "	¹ / ₂ "	¹ / ₂ "	¹ / ₂ "
	Wall to Valve Inlet	8 ¹ / ₁₆ "	8 ¹ / ₁₆ "	8 ¹ / ₁₆ "	8 ¹ / ₁₆ "
	Floor Covering to Valve Inlet	4 ¹ / ₂ "	4 ¹ / ₂ "	4 ¹ / ₂ "	4 ¹ / ₂ "
	Center of Heater to Valve Inlet	Left 6 ¹³ / ₁₆ "	Left 6 ¹³ / ₁₆ "	Left 6 ¹³ / ₁₆ "	Left 6 ¹³ / ₁₆ "
Venting	Size Flue Collar (vertical or horizontal)	5"	5"	5"	5"
	Floor to Collar on Draft Diverter in Vertical Position	27 ³ / ₁₆ "	27 ³ / ₁₆ "	27 ³ / ₁₆ "	27 ³ / ₁₆ "
	Floor to Center of Collar on Draft Diverter in Horizontal Position	22 ⁹ / ₁₆ "	22 ⁹ / ₁₆ "	22 ⁹ / ₁₆ "	22 ⁹ / ₁₆ "
Price		\$1410.00	\$1146.00	\$1540.00	\$1296.00

NOTE: B designates visual flame heater
CB designates closed front heater

FLOORBOARDS		
Model		Price
4163	Black for 50,000 and 65,000 Btu/hr models	\$70.00

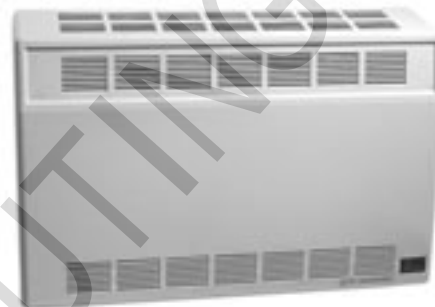


Direct Vent Wall Furnaces

10,000 Btu and 15,000 Btu Models

Features:

- Matchless piezo ignition
- No electricity needed for wall thermostat operation
- Heats without electricity
- Optional automatic blower available
- Includes vent kit to vent through outside wall
- Pilot and main burners include automatic shut off
- Combustion chamber carries a 10-year warranty; all other parts carry a 1-year limited warranty



EMPIRE DIRECT VENT WALL FURNACES			
Model		DV-210-SG	DV-215-SG
Color		Beige	Beige
Btu Input		10,000	15,000
Dimensions (W x D x H)		16 1/4" x 9 3/8" x 21 3/8"	20 1/4" x 9 3/8" x 24 7/8"
Shipping Weight (lbs)		42	60
Millivolt Wall Tstat with Positive Off		Yes	Yes
Accessories	Blower Kit	DVB-1	DVB-1
	Output (cu ft/min)	60	60
	Vinyl Siding Vent Kit	DV-822	DV-822
Min Clearances to Combustibles from:	Top	12"	12"
	Each Side	1"	1"
	Bottom of Unit to Floor Covering	0	0
Nat Gas Iron Pipe Size (N.P.T.)		1/2"	1/2"
Wall to Valve Inlet		6 3/16"	6 3/16"
Right Side to Valve Inlet		6 7/8"	6 7/8"
Center of Vent to Valve Inlet		N/A	N/A
Valve Inlet to Floor Covering		2 11/16"	2 11/16"
Venting	Min Wall Depth	4 1/2"	4 1/2"
	Max Wall Depth	13"	13"
	Vent Opening in Wall	6 1/4" Diameter	6 1/4" Diameter
	Center of Vent to Nearest Outside Corner of Bldg or Obstruction	16"	16"
	Center of Vent from Any Opening Through which Flue Gases Could Enter a Bldg	6"	9"
	Bottom of Vent Above Grade	12"	12"
	Edge of Vent to Nearest Projecting Surface	6"	6"
	Vent Projection from Outside Wall	4"	4"
	Center of Flue to Floor Covering	15 7/8"	19 3/8"
Price		\$768.00	\$862.00



Direct Vent and Vented Counterflow Wall Furnaces 35,000 Btu thru 55,000 Btu Models

Features:

- DVC-35 and FAW-40 may be recessed between standard wall studs
- DV-55 and DVC-35 install on outside walls (direct vent)
- FAW-55 and FAW-40 install on inside or outside walls (chimney vent)
- Matchless piezo ignition
- Convenient 24-volt wall thermostat
- Counterflow blower circulates warm air at floor level
- Multi-room heating capacity with optional outlet kits
- 76% AFUE



Direct Vent and Vented Counterflow Wall Furnaces

EMPIRE DIRECT VENT AND VENTED COUNTERFLOW WALL FURNACES

Model		DVC-35-SPP	DV-55-SP	FAW-40-SPP	FAW-55-SPP
Color		Beige	Beige	Beige	Beige
Btu Input		35,000	55,000	40,000	55,000
Overall Dimensions (W x D x H)		14 1/8" x 10 3/8" x 72 1/2"	16" x 11 5/16" x 82 3/8"	14 1/8" x 10 3/8" x 72 1/2"	16" x 11 5/16" x 82 3/8"
Shipping Weight (lbs)		115	140 (two cartons)	110	135
Electric 24-volt Wall Tstat Positive Off Setting		Yes	Yes	Yes	Yes
Blower Output (cu ft/min)		275	400	275	400
Accessories	Side Outlet Register	SOR-1	SOR-1	SOR-1	SOR-1
	10" Side Outlet Kit	SOK-1	SOK-1	SOK-1	SOK-1
	10" Rear Outlet Kit	N/A	N/A	ROK-1	ROK-1
	Vent Enclosure	N/A	N/A	FVE-24(24")	DV-651(14")
	Vent Enclosure	N/A	N/A	FVE-34(34")	DV-665(24")
	Vent Enclosure	N/A	N/A	FVE-46(46")	DV-666(36")
	Vinyl Siding Vent Kit	DV-822	DV-822	N/A	N/A
Min Clearances to Combustibles from:	Vent Tube Extension Kit (fits wall up to 19")	Please call for info	Please call for info	N/A	N/A
	Top (to ceiling)	4"	4"	4"	7 1/2"
	Each Side (to nearest adj wall)	4"	4" without register	4" without register	4" without register
	Bottom of Unit to Wood Floor	Zero	Zero	Zero	Zero
	Center of Vent Conn Opening to Combustibles	N/A	N/A	1 3/4"	1 9/16"
Gas Inlet (nat gas)	Depth Unit May Be Recessed	9 1/2"	4"	9 1/2"	4"
	Iron Pipe Size	1/2"	1/2"	1/2"	1/2"
	Wall to Valve Inlet	7 3/4"	6 1/2"	7 3/4"	6 1/2"
	Center of Heater to Center of 1/2" Inlet Elbow	N/A	3"	N/A	3"
Venting	Floor Covering to Valve Inlet	4"	3 3/4"	4"	3 3/4"
	Size of Flue Collar	N/A	N/A	4" Oval	4" Oval
	Size of Flue with Oval-to-Round Adapter	N/A	N/A	4" Round	4" Round
	Min Vent Opening in Ceiling	For Oval Type "B" Flue Pipe	N/A	4 1/2" x 9 1/4"	4 1/2" x 9 1/4"
		For Round Type "B" Flue Pipe	N/A	6 1/2" Diameter	6 1/2" Diameter
	Min Wall Depth	3/4"	4 1/2"	N/A	N/A
	Max Wall Depth	10"	13"	N/A	N/A
	Vent Opening Inside Wall Surface	7 1/2" Diameter	7 1/2" Diameter	N/A	N/A
	Vent Opening Outside Wall Surface	7 1/2" Diameter	7 1/2" Diameter	N/A	N/A
	Center of Vent to Nearest Outside Corner of Bldg	12"	24"	N/A	N/A
	Edge of Vent to Nearest Projecting Surface	6"	6"	N/A	N/A
	Vent Protection from Outside Wall	6"	6"	N/A	N/A
	Center of Flue to Floor Covering	59 1/4"	64 7/8"	N/A	N/A
Price		\$1,478.00	\$1,706.00	\$1,284.00	\$1,510.00

Pilot and main burners include automatic shut-off. Combustion chamber carries a 10-year limited warranty. All other parts carry a 1-year limited warranty.



Gravity Wall Furnace

25,000 to 50,000 Btu Models

Features:

- 70% AFUE
- GWT-25/35 furnace recesses into wall or mounts flush with GWTW-2
- Optional blower available
- Heat two rooms with dual wall unit GWT-50
- Combustion chamber carries a 10-year limited warranty, all other parts carry a 1-year limited warranty
- Pilot and main burners include automatic shutoff



SPACE/WALL HEATERS

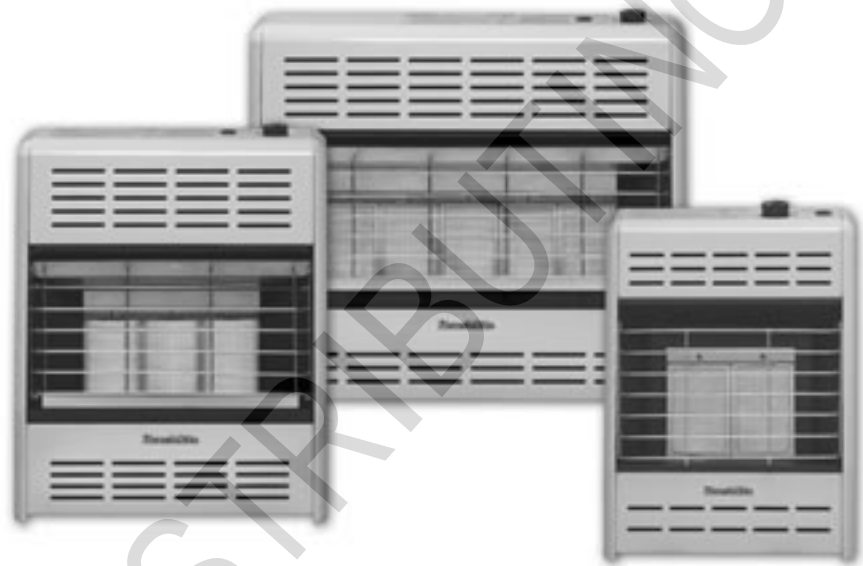
EMPIRE GRAVITY WALL FURNACE

Model	GWT-25	GWT-35	GWT-50 Dual Wall
Color	Beige	Beige	Beige
Btu Input	25,000	35,000	50,000 (total) 25,000 (Each Room)
Casing Width	16"	16"	16"
Casing Depth	6"	6"	6"
Height	66 1/8"	66 1/8"	66 1/8"
Height (with optional blower kit)	71 7/8"	71 7/8"	71 7/8"
Shipping Weight (lbs)	92	98	156
Accessories	Blower Kit	GWTB-2	GWTB-2
	Output (cu ft/min)	75	75
Minimum Clearance to Combustibles from	Top	12"	12"
	Each Side	4"	4"
	Bottom of Unit to Floor Covering	1 1/2"	1 1/2"
Nat Gas Inlet Iron Pipe Size	1/2"	1/2"	1/2"
Size of Flue Collar (Type B)	4" Oval	4" Oval	4" Oval
Price	\$694.00	\$748.00	\$1,042.00

Ventless Radiant Gas Heaters
10,000 Btu thru 30,000 Btu Models

Features:

- 99.9% efficiency – turns more gas into heat
- Pushbutton piezo ignition and standing pilot
- Heats even when electric power fails
- Oxygen depletion sensor shuts off heater before oxygen drops to unsafe level
- Wall mount or floor stand
- 3-year limited warranty on parts



EMPIRE GRAVITY WALL FURNACE

Model	Btu	Natural Gas	Controls	Dimensions (L x W x D)	Weight (lbs)	Price
HR10MN	10,000	Yes	Manual 2 Settings	19 1/4" x 14 5/8" x 5 5/8"	16	\$250.00
HR18TN	18,000	Yes	Thermostat	23 1/2" x 19 1/2" x 7"	35	\$366.00
HR30TN	30,000	Yes	Thermostat	23 1/2" x 27" x 7"	33	\$430.00

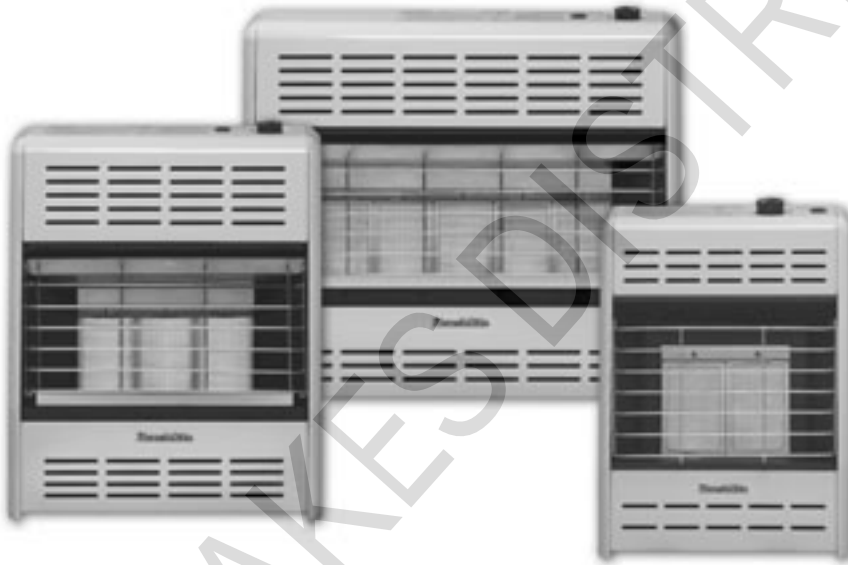
ACCESSORIES

HAB01	Blower - Thermostat and Manual Control	HAS02	Floor Stand for 6,000 Btu to 10,000 Btu Models	\$64.00
		HAS03	Floor Stand for 15,000 Btu to 30,000 Btu Models	\$64.00

BLUE FLAME Gas Heaters – Ventless 10,000 Btu thru 30,000 Btu Models

Features:

- 99.9% efficiency – turns more gas into heat
- Pushbutton piezo ignition and standing pilot
- Heats even when electric power fails
- Oxygen depletion sensor shuts off heater before oxygen drops to unsafe level
- Wall mount or floor stand
- 3-year limited warranty on parts



SPACE/WALL HEATERS

HEARTHRITE BLUE FLAME GAS HEATERS

Model	Btu	Natural Gas	Controls	Dimensions (L x W x D)	Weight (lbs)	Price
HB10MN	10,000	Yes	Manual 2 Settings	19 1/4" x 14 5/8" x 5 5/8"	17	\$270.00
HB20TN	20,000	Yes	Thermostat	23 1/2" x 19 1/2" x 7"	25	\$330.00
HB30TN	30,000	Yes	Thermostat	23 1/2" x 27" x 7"	33	\$392.00

ACCESSORIES

HAB01	Blower - Thermostat and Manual Control	HAS02	Floor Stand for 6,000 Btu to 10,000 Btu Models	\$64.00
		HAS03	Floor Stand for 15,000 Btu to 30,000 Btu Models	\$64.00



Direct Vent Furnaces

22,000 Btu and 30,000 Btu Models

Features:

- No electricity required
- "Matchless" pilot igniter
- Easy installation – all vent material included
- Long-life, ceramic coated combustion chamber
- Heavy-duty, cast iron burners
- Automatic temperature and safety controls

Direct Vent Safety

For clean, comfortable heat when and where you want it. The gas flame is completely sealed inside, away from all contact with room air. Air necessary for combustion is drawn into the chamber from outside through direct wall vent and all combustion products are vented directly to the outside. Only clean, gentle heat in continuous circulation is delivered into the room. Windows can stay closed because no room air is used for combustion.

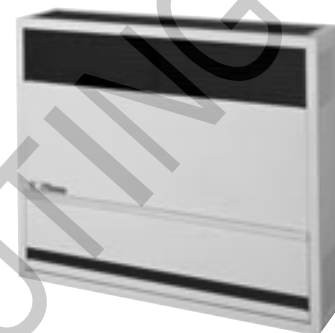
Recommended Minimum Clearances

- 2" from intersecting wall
- 18" from top of appliance to ceiling or other obstruction for 14,000 Btu/hr models
- 24" from top of appliance to ceiling or other obstruction for 22,000 and 30,000 Btu/hr models

Accessories

High Capacity Blower – blower is easily added to the furnace. Comes with a fully automatic fan switch. Model 2302 for 22,000 and 30,000 Btu/hr.

Vent Extensions – to meet your installation needs all models accommodate optional through-the-wall vent which may extend up to a 24" maximum. Shipping weight 10 lbs.



WILLIAMS DIRECT VENT FURNACES

Model Number (nat gas)	Btu/hr Input Rating	Btu/hr Output Rating	Thermal Efficiency %	AFUE %	Width x Depth	Overall Height	Maximum Wall Thickness	Type of Control	Shipping Weight (lbs)	Price
2203622	22,000	16,462	75	67	32 1/8" x 10 1/4"	28"	24"	Millivolt Wall	98	\$1,076.00
3003622	30,000	21,849	73	66	32 1/8" x 10 1/4"	28"	24"	Millivolt Wall	100	\$1,146.00

VENT EXTENSIONS

Model No.	Length	Application	Price
9301	15"	22036 & 30036 Series	\$100.00
9302	24"	22036 Series	\$120.00
9303	24"	30036 Series	\$120.00



Vented Hearth Heaters

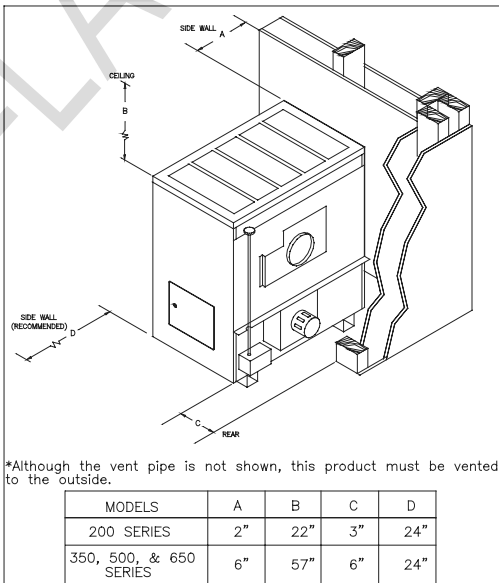
Enclosed Front and Glass Front "Fireplace-Look" Models
35,000 Btu thru 65,000 Btu Models



Features:

- No electricity required
- Burners engineered for quiet ignition and maximum heat efficiency
- Louvered-top design and front grill for improved heat circulation
- Built-in draft diverter to permit close-to-wall installation
- "Matchless" pilot igniter
- Automatic temperature and safety controls
- Resettable vent-limit safety switch
- Thermostat included, may be wall mounted or cabinet mounted

WILLIAMS VENTED HEARTH HEATERS											
Model Number (nat gas)	Btu/hr Input Rating	Btu/hr Output Rating	Color	Thermal Efficiency %	AFUE %	Width x Depth	Overall Height	Vent Size	Center Vent to Floor	Shipping Weight (lbs)	Price
Enclosed Front Models											
3501522	35,000	26,250	Black	75	68	25" x 15 3/8"	28 7/8"	4"	21 3/8"	74	\$902.00
3501922	35,000	26,250	Black	75	68	25" x 15 3/8"	28 7/8"	4"	21 3/8"	83	\$1,056.00
5001922	50,000	34,500	Black	69	64	30" x 16"	32 7/8"	4"	22 3/4"	112	\$1,224.00
6501922	65,000	50,400	Black	78	71	34" x 19 5/8"	32 7/8"	5"	24 3/4"	137	\$1,438.00
Glass Front "Fireplace-Look" Models											
3502522	35,000	26,250	Black	75	68	25" x 15 3/8"	28 7/8"	4"	21 3/8"	74	\$966.00
5002922	50,000	34,500	Black	69	64	30" x 16"	32 7/8"	4"	22 3/4"	112	\$1,414.00
6502922	65,000	50,400	Black	78	71	34" x 19 5/8"	32 7/8"	5"	24 3/4"	137	\$1,600.00



ACCESSORIES		
Model	Description	Price
Vent Collars		
9102	Black for 3" vents	\$12.00
9104	Black for 4" vents	\$12.00
Floorboards		
4163	Black for 50,000 and 65,000 Btu/hr models	\$70.00
4167	Black for 20,000 and 35,000 Btu/hr models	\$58.00



MID-LAKES DISTRIBUTING

SPACE/WALL HEATERS

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FORSAIRE FURNACES

Top Vent, Direct Vent and Electric Counterflow Models
35,000 Btu thru 65,000 Btu Models

Features:

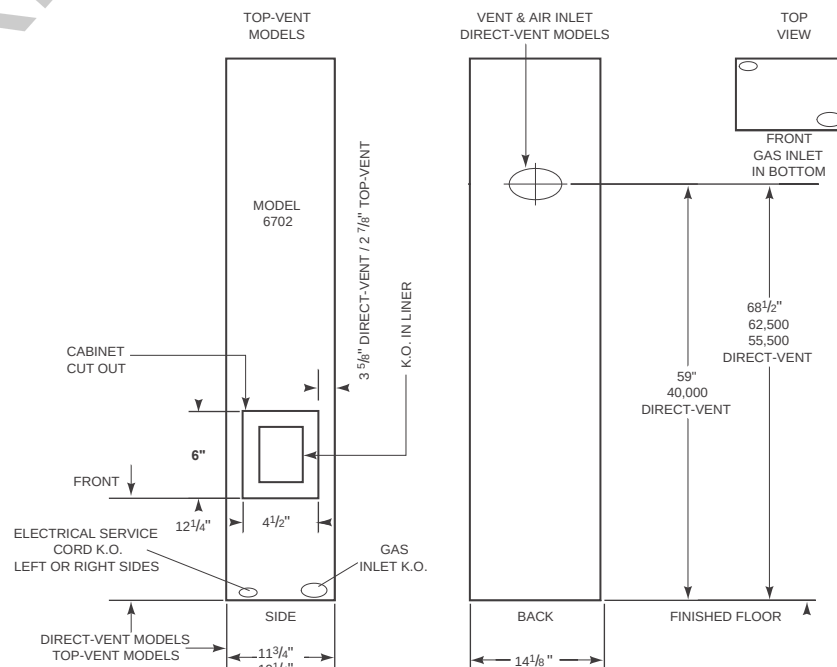
- Top Vent models receive air at ceiling level, warms it and quietly delivers it at floor level to give and equalized floor-to-ceiling temperature
- Direct Vent models use forced air circulation and use outside air for combustion. Combustion is discharged outdoors through the wall eliminating the chimney
- The electric counterflow is thermostatically controlled, providing floor-to-ceiling comfort where propane or natural gas is unavailable.
- Freestanding or recessed, forsaire furnaces are ideal for homes, apartments, offices, schools, cabins and more
- Counterflow blower system circulates ceiling-to-floor warm air
- Multi-room heating with optional outlet kits – heats up to three rooms
- Automatic temperature and safety controls

Recommended Minimum Clearances

- Top/Direct Vent
4" to intersecting wall
4" from top of appliance to ceiling; 2" on 60085 Series
0" to finished floor
- Direct Vent
18" from centerline of vent cap on all sides



SPACE/WALL HEATERS





FORSAIRE FURNACES

Top Vent, Direct Vent and Electric Counterflow Models
35,000 Btu thru 65,000 Btu Models

FORSAIRE COUNTERFLOW

Model Number (nat gas)	Btu/hr Input Rating	Btu/hr Output Rating	Thermal Efficiency %	AFUE %	Overall Height	Blower Speed	CFM 115V	Amps	Pilot Type	Type of Control	Shipping Weight (lbs)	Price
Top-Vent Counterflow with Electrical Service Cord												
3508332	35,000	28,000	80	75	72 1/2"	1	240	0.8	Intermittent	24V Wall	95	\$1,534.00
3508732	35,000	28,000	80	75	72 1/2"	1	240	0.8	Standing	24V Wall	90	\$1,274.00
5008732	50,000	40,000	80	74	81"	2	350	2.2	Standing	24V Wall	99	\$1,392.00
6508732	65,000	52,000	80	74	87"	2	440	3.0	Standing	24V Wall	107	\$1,444.00
Top-Vent Counterflow Magnum High Efficiency with Electrical Service Cord												
6008532	60,000	49,200	82	78	80 1/4"	2	440	3.0	Standing	24V Wall	121	\$1,462.00
Direct Vent Counterflow with Electrical Service Cord - Includes 9" Vent Material												
4007332	40,000	32,000	80	75	77 3/8"	1	325	2.0	Intermittent	24V Wall	126	\$1,776.00
4007732	40,000	32,000	80	75	77 3/8"	1	325	2.0	Standing	24V Wall	126	\$1,444.00
5507332	55,000	44,000	80	76	87"	2	440	3.0	Intermittent	24V Wall	140	\$1,964.00
6257732	62,500	50,000	80	76	87"	2	440	3.0	Standing	24V Wall	140	\$1,662.00

ELECTRIC COUNTERFLOW

Model Number	KW Input	Btu/hr Output		Minimum Voltage	Maximum Voltage	Dimensions H x W x D	CFM 115V	Amps	Type of Control	Shipping Weight (lbs)	Price
		At 240V	At 208V								
3144030	9.2	31,400	23,600	207	253	72 1/2" x 14 1/8" x 7"	375	40	24V wall	60	\$582.00

ACCESSORIES

Model	Application	Description	Price
6701	DV, TV	Side-outlet register 10" boot	\$128.00
6702	DV, TV	Side-outlet register	\$46.00
6703	DV, TV	Two-way diffusing grille	\$48.00
6704	DV, TV	One-way diffusing grille	
6801	TV	Rear outlet register 10" boot w/damper	\$94.00
6802	TV	Rear outlet register 1" boot w/damper	\$94.00
9807	DV	15" vent tube extension	\$62.00
9812	TV	12" vent enclosure kit (for surface mount installation)	\$45.00
9824	TV	24" vent enclosure kit (for surface mount installation)	\$48.00
9836	TV	36" vent enclosure kit (for surface mount installation)	\$58.00
9901	TV	Oval vent starter kit	

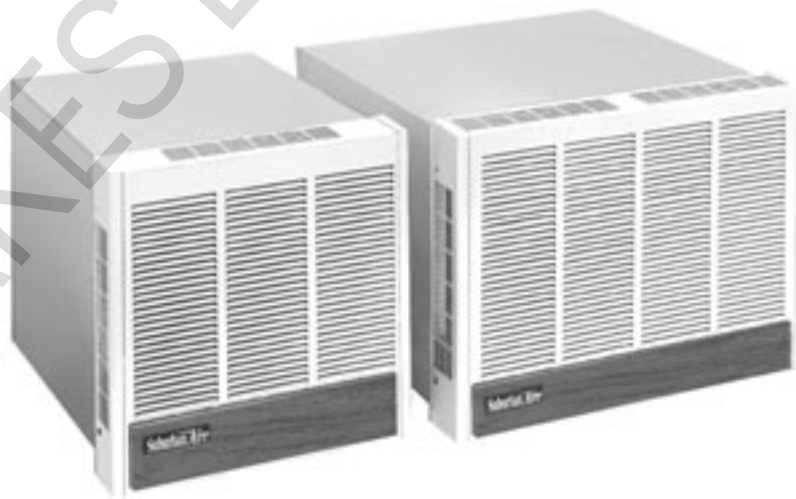


SUBURBANAIRE

Space-Saving, High Efficiency
Through-the-Wall or Window Gas Heater

Features:

- Zone temperature control with the versatility of through-the-wall or window installation
- Warm, comfortable gas heat
- Quiet centrifugal blower system delivers warmth evenly throughout the room
- Dependable solid state ignition
- Easy installation through any exterior wall or window
- Two sizes available: 25,000 and 40,000 Btu/hr input
- Wall thermostat control included, can be wall or unit mounted
- 77% heating efficiency
- Front or rear gas connection
- Natural or propane gas models available
- Direct vent design consumes only outside air for combustion and vents exhaust gases directly to the outside
- Self contained vent system requires no separate chimney or flue



SUBURBANAIRE

Space-Saving, High Efficiency
Through-the-Wall or Window Gas Heater

SUBURBANAIRE SPECIFICATIONS

General Data	SA25	SA40
Rated Heating Unput (Btu/hr)	25,000	40,000
Gas Type	Natural or LP	Natural or LP
Gas Connection	$\frac{3}{8}$ " NPT	$\frac{3}{8}$ " NPT
Heating Efficiency	77%	77%
Operating Amps	1.5	2
Volts/Cycles	120/60	120/60
Main Burner	1	2
Ignition System	Solid state hot surface	Solid state hot surface
Shipping Weight	65 lbs	98 lbs

SUBURBANAIRE SIZING CHART

Model	Front Cover			Overall Depth	Chassis		
	Width	Height	Depth		Width	Height	Depth
SA25	16 $\frac{1}{8}$ "	15 $\frac{3}{32}$ "	3 $\frac{5}{32}$ "	23 $\frac{5}{8}$ "	14 $\frac{1}{16}$ "	13 $\frac{1}{16}$ "	20 $\frac{15}{32}$ "
SA40	21 $\frac{3}{4}$ "	15 $\frac{3}{32}$ "	3 $\frac{5}{32}$ "	23 $\frac{5}{8}$ "	20 $\frac{1}{16}$ "	14 $\frac{3}{16}$ "	20 $\frac{15}{32}$ "

SUBURBANAIRE CLEARANCES

	SA25	SA40
Cabinet to Combustible Construction		
Top-sides bottom	0"	0"
Cabinet to Exterior Obstructions		
Top-sides	6"	6"
Rear	36"	36"
Grille Clearances		
Top to ceiling	12"	12"
Adjacent side wall	12"	12"
Floor	6"	6"
Front	8'	8'
Max wall thickness	18"	18"
Min wall thickness	4"	4"
Wall opening size (w x h)	14 $\frac{1}{4}$ " x 13 $\frac{5}{8}$ "	20 $\frac{5}{16}$ " x 14 $\frac{3}{8}$ "

**2" if non combustible



FITS-ALL 80

Upflow, Horizontal and Downflow
50,000 thru 125,000 Btu Inputs

Features:

- 80% A.F.U.E.
- Cooling capacity supported 1 1/2 -5 ton
- Electronic air cleaner connection (115V)
- Humidifier connection (115V)
- 5 amp fused low voltage circuit protection
- Time delay off for air conditioner SEER enhancement
- Twinning compatible
- Venting
 - Category I appliance
 - 4" venting-vertical or horizontal with approved power venter
- Controls – integrated furnace control with LED diagnostics
- Indoor air blower – three speed PSC blower motor

Limited Warranty:

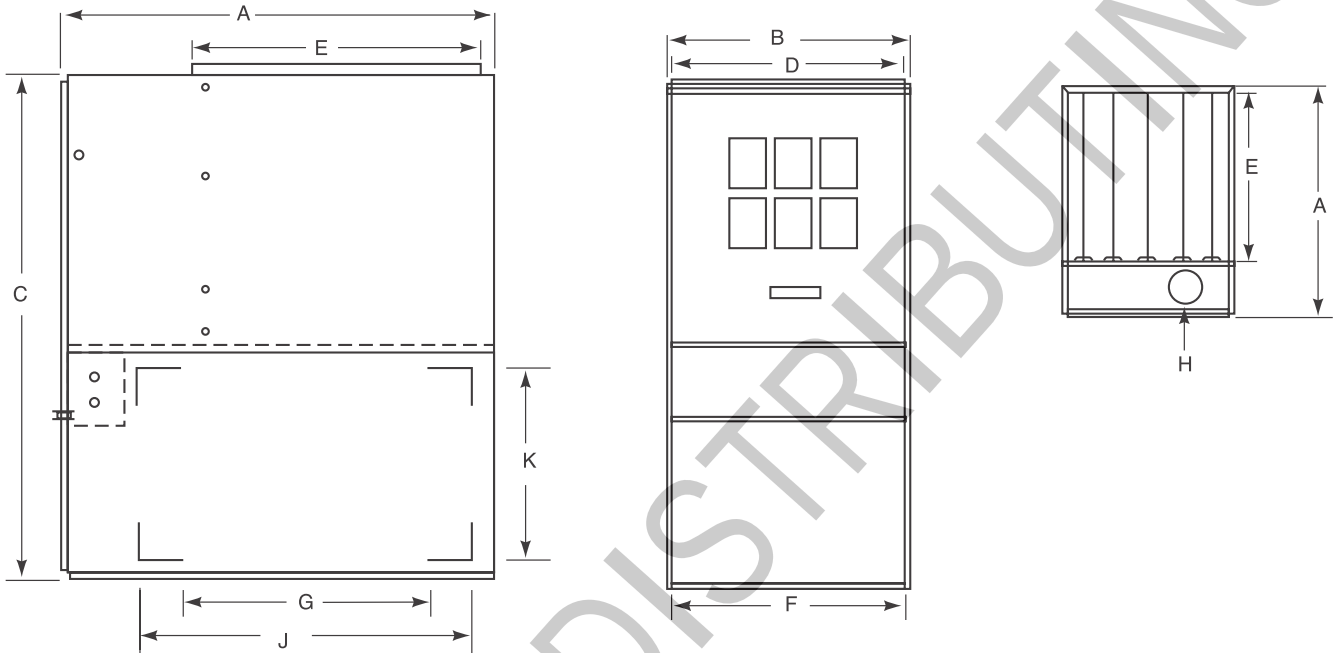
- 25-year limited warranty on heat exchanger
- 5-year limited warranty on covered components (see warranty certificate)





FITS-ALL 80

Upflow, Horizontal and Downflow
50,000 thru 125,000 Btu Inputs



DUCANE FITS-ALL 80 FURNACE SPECIFICATIONS

Model Number	Unit Dimensions			Supply Duct Opening		Return Duct Opening*		Flue Dia.	Side Return Cut-Out		CFM	Price
	Length	Width	Height									
	A	B	C	D	E	F	G	H	J	K		
MPGA050B3A	29 1/2	13 1/2	38 1/4	11 1/2	20 3/8	11 5/8	21 3/8	4	23 1/4	15	1200	\$776.00
MPGA075B3A	29 1/2	13 1/2	38 1/4	11 1/2	20 3/8	11 5/8	21 3/8	4	23 1/4	15	1200	\$832.00
MPGA075B4A	29 1/2	17	38 1/4	15	20 3/8	15 1/8	21 3/8	4	23 1/4	15	1600	\$866.00
MPGA100B3A	29 1/2	17	38 1/4	15	20 3/8	15 1/8	21 3/8	4	23 1/4	15	1200	\$866.00
MPGA100B4A	29 1/2	17	38 1/4	15	20 3/8	15 1/8	21 3/8	4	23 1/4	15	1600	\$930.00
MPGA100B5A	29 1/2	20 1/2	38 1/4	18 1/2	20 3/8	18 5/8	21 3/8	4	23 1/4	15	2000	\$946.00
MPGA125B5A	29 1/2	20 1/2	38 1/4	18 1/2	20 3/8	18 5/8	21 3/8	4	23 1/4	15	2000	\$1,024.00

*Bottom door removed
NOTE: Dimensions are in inches



FITS-ALL 92 (1 or 2 Pipe)

Upflow, Horizontal-Left Models

50,000 thru 125,000 Btu Inputs

Features:

- 92.1% A.F.U.E.
- Cooling capacity supported 1 1/2 -5 ton
- Electronic air cleaner connection (115V)
- Humidifier connection (115V)
- 5 amp fuse low voltage circuit protection
- Time delay off for air conditioner SEER enhancement
- Twinning compatible
- Heat exchanger assembly
 - Crimp-tite crimped aluminized steel primary heat exchanger
 - Stainless steel secondary heat exchanger maximizes durability and efficiency
- Venting
 - Category IV appliance
 - Can be vented horizontally or vertically using 2" or 3" Schedule 40 PVC
 - Approved for 2-pipe (direct vent) or single-pipe applications
 - Approved for installations with listed concentric vent kit
- Controls – integrated furnace control with LED diagnostics
- Indoor air blower – three speed PSC blower motor

Limited Warranty:

- Limited lifetime warranty on heat exchanger
- 5-year limited warranty on covered components (see warranty certificate)

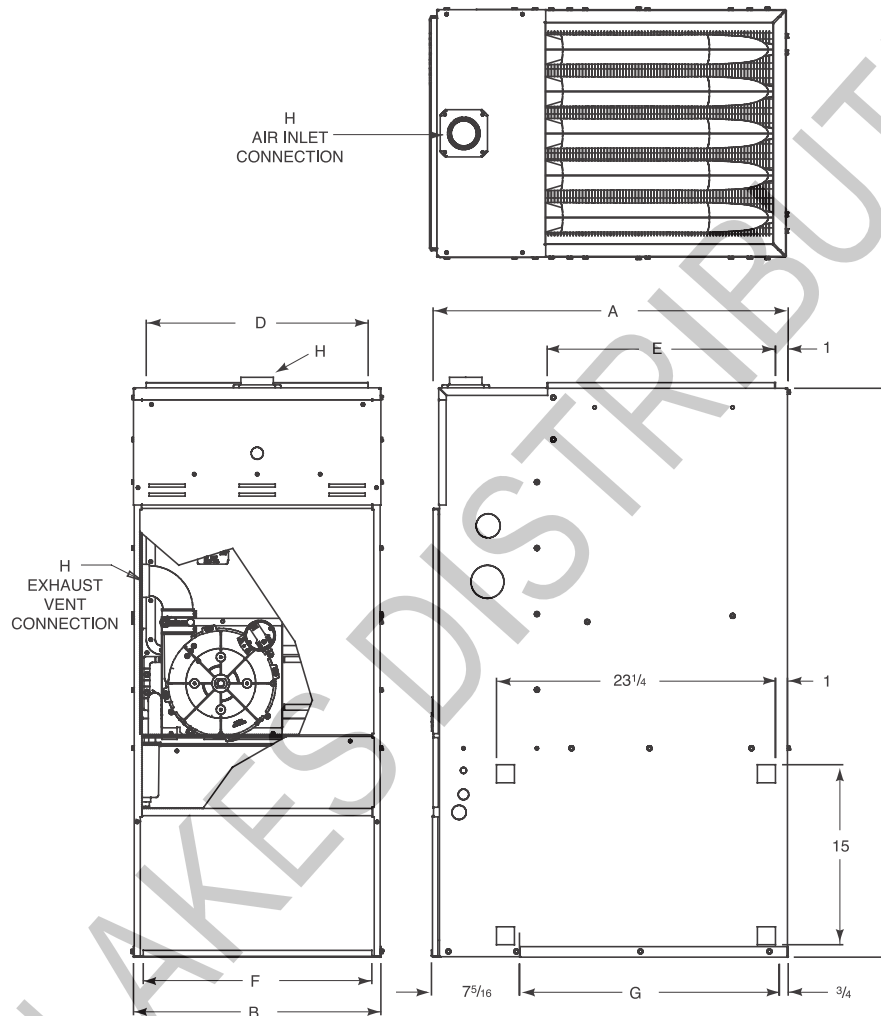




FITS-ALL 92 (1 or 2 Pipe)

Upflow, Horizontal-Left Models

50,000 thru 125,000 Btu Inputs



DUCANE FITS-ALL 92 FURANCE SPECIFICATIONS

Model Number	Unit Dimensions			Supply Duct Opening		Return Duct Opening		Vent & Air Connections	Price
	Length A	Width B	Height C	D	E	F	G		
CMPE050U2B	29 1/2	13 1/2	47 3/8	11 1/2	18 15/16	12	21 5/8	2	Call for Price
CMPE050U3B	29 1/2	13 1/2	47 3/8	11 1/2	18 15/16	12	21 5/8	2	\$1,236.00
CMPE075U2B	29 1/2	13 1/2	47 3/8	11 1/2	18 15/16	12	21 5/8	2	Call for Price
CMPE075U3B	29 1/2	13 1/2	47 3/8	11 1/2	18 15/16	12	21 5/8	2	\$1,332.00
CMPE100U3B	29 1/2	17	47 3/8	15	18 15/16	15 1/2	21 5/8	2	Call for Price
CMPE100U4B	29 1/2	17	47 3/8	15	18 15/16	15 1/2	21 5/8	2	\$1,510.00
CMPE125U5B	29 1/2	20 1/2	47 3/8	18 1/2	18 15/16	19	21 5/8	2	\$1,676.00

NOTE: Dimensions are in inches



FITS-ALL 92 (1 or 2 Pipe)

Upflow, Horizontal-Left Models

50,000 thru 125,000 Btu Inputs

DUCANE FITS-ALL 92 FURNACE CMPE MAXIMUM VENT LENGTHS					
Application	Allowable Max Vent Lengths of 2" Dia. PVC, ABS or CPVC Sch 40 Pipe				
Number of Elbows	1	2	3	4	5
Non-direct Vent (1 pipe) System					
CMPE050U2 CMPE050U3	60	58	55	53	50
CMPE075U2 CMPE075U3					
Direct Vent (2 pipe) System					
CMPE050U2 CMPE050U3	60	58	55	53	50
CMPE075U2 CMPE075U3					
Non-direct Vent (1 pipe) System					
CMPE100U3 CMPE100U4	35	30	24	18	12
Direct Vent (2 pipe) System					
CMPE100U3 CMPE100U3	35	30	24	18	12
Non-direct Vent (1 pipe) System					
CMPE125U5	20	15	9	4	NA
Direct Vent (2 pipe) System					
CMPE125U5	20	15	9	4	NA
Application	Allowable Max Vent Lengths of 3" Dia. PVC, ABS or CPVC Sch 40 Pipe				
Number of Elbows	1	2	3	4	5
Non-direct Vent (1 pipe) System					
CMPE050U2B CMPE050U3B	80	76	73	70	65
CMPE075U2B CMPE075U3B					
Non-direct Vent (1 pipe) System					
CMPE100U3B CMPE100U4B	65	61	58	55	50
CMPE125U5B					
Direct Vent (2 pipe) System					
CMPE100U3B CMPE100U4B	80	76	73	70	65
CMPE125U5B CMPE075U3B					
Direct Vent (2 pipe) System					
CMPE100U3 CMPE100U4	65	61	58	55	50
CMPE125U5					

**FITS-ALL 92V (1 or 2 Pipe)**

Upflow, Horizontal Left

50,000 thru 125,000 Btu Inputs

Features:

- 92.1% A.F.U.E.
- Cooling capacity supported 1 ½ -5 ton
- Upflow/horizontal-left application flexibility
- Electronic air cleaner connection (115V)
- Humidifier connection (115V)
- Fused low voltage circuit protection
- Time delay for air conditioner SEER enhancement
- Field selectable low fire run time
- Controls – integrated furnace control and 2-stage gas control system with LED diagnostics for fast, accurate troubleshooting
- Indoor air blower – GE ECU variable speed motor with adjustable air flow in 200 CFM increments

**2 STAGE
VARIABLE SPEED****Heat exchanger assembly:**

- Crimp-tite crimped aluminized steel primary heat exchanger
- Stainless steel secondary heat exchanger

Venting:

- Category IV appliance
- Can be vented horizontally or vertically using 2" or 3" Schedule 40 PVC
- Approved for 2-pipe (direct vent) or single-pipe applications

Limited Warranty:

- Limited lifetime warranty on heat exchanger
- 5-year limited warranty on covered components (see warranty certificate)



FURNACES



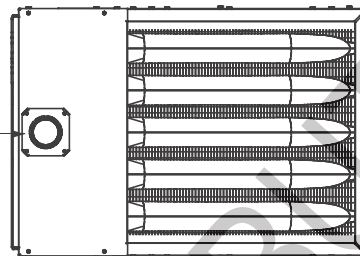
FITS-ALL 92V (1 or 2 Pipe)

Upflow, Horizontal Left

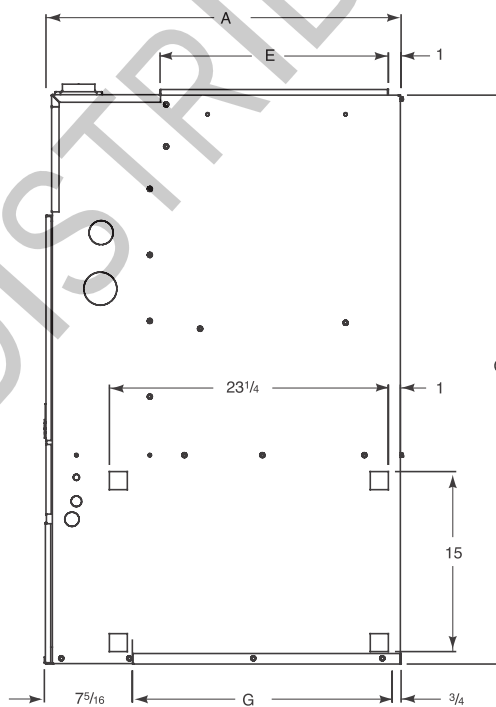
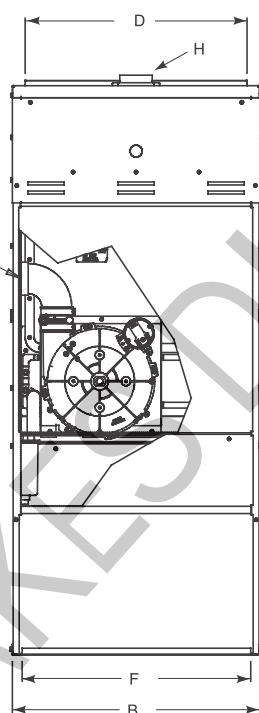
50,000 thru 125,000 Btu Inputs

**2 STAGE
VARIABLE SPEED**

H
AIR INLET
CONNECTION



H
EXHAUST
VENT
CONNECTION



DUCANE FITS-ALL 92V FURANCE SPECIFICATIONS

Model Number	Unit Dimensions			Supply Duct Opening		Return Duct Opening		Vent & Air Connections	Price
	Length	Width	Height						
	A	B	C	D	E	F	G	H	
CMPEV050U3	29 1/2	13 1/2	47 3/8	11 1/2	18 15/16	12	21 5/8	2	Call for Price
CMPEV075U3	29 1/2	13 1/2	47 3/8	11 1/2	18 15/16	12	21 5/8	2	\$1,790.00
CMPEV100U4	29 1/2	17	47 3/8	15	18 15/16	15 1/2	21 5/8	2	\$1,982.00
CMPEV125U5	29 1/2	20 1/2	47 3/8	18 1/2	18 15/16	19	21 5/8	2	\$2,162.00

NOTE: Dimesions are in inches



FITS-ALL 92V (1 or 2 Pipe)

Upflow, Horizontal Left

50,000 thru 125,000 Btu Inputs

**2 STAGE
VARIABLE SPEED**

DUCANE FITS-ALL 92V FURNACE CMPE MAXIMUM VENT LENGTHS					
Application	Allowable Max Vent Lengths of 2" Dia. PVC, ABS or CPVC Sch 40 Pipe				
Number of Elbows	1	2	3	4	5
Non-direct Vent (1 pipe) System					
CMPEV050U3	60	58	55	53	50
CMPEV075U3					
Direct Vent (2 pipe) System					
CMPEV050U3	60	58	55	53	50
CMPEV075U3					
Non-direct Vent (1 pipe) System					
CMPEV100U4 Upflow Only	35	30	24	18	12
Non-direct Vent (1 pipe) System					
CMPEV100U4 Horizontal Only	20	15	9	4	NA
Direct Vent (2 pipe) System					
CMPEV125U5 Upflow or Horizontal	20	15	9	4	NA
Application	Allowable Max Vent Lengths of 3" Dia. PVC, ABS or CPVC Sch 40 Pipe				
Number of Elbows	1	2	3	4	5
Non-direct Vent (1 pipe) System					
CMPEV050U3	80	76	73	70	65
CMPEV075U3					
Non-direct Vent (1 pipe) System					
CMPEV100U4	65	61	58	55	50
CMPEV125U5					
Direct Vent (2 pipe) System					
CMPEV050U3	80	76	73	70	65
CMPEV075U3					
Direct Vent (2 pipe) System					
CMPEV100U4	65	61	58	55	50
CMPEV125U5					

MODEL 310AAV

4-Way Multipoise, Induced Combustion, Gas Furnace
45,000 thru 155,000 Btu Input

**Features:**

- 80% A.F.U.E.
- Noise elimination combustion system
- Microprocessor based control center
- Adjustable heating air temperature rise
- LED diagnostics and self test feature
- Four position furnace: upflow, horizontal right, horizontal left, downflow
- Shorter in height, only 33 1/3" tall
- Hot surface ignition (HSI)
- Twinning in upflow, downflow and horizontal
- Category I Venting

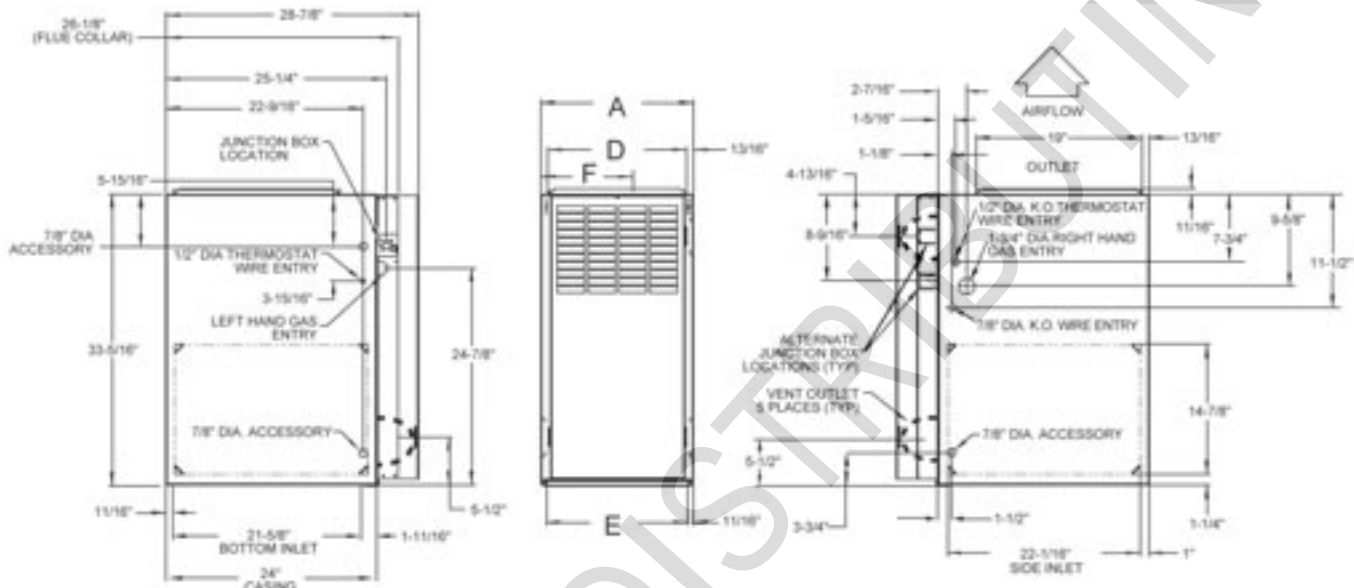
Limited Warranty:

- 20 year warranty on "Super S" heat exchanger
- 5-year parts warranty on all other components



MODEL 310AAV

4-Way Multipoise, Induced Combustion, Gas Furnace
45,000 thru 155,000 Btu Input



* For airflow requirements above 1800 CFM, see Air delivery table in product data literature for specific use of single side inlets. The use of both side inlets, a combination of 1 side and the bottom, or the bottom only will ensure adequate return air openings for airflow requirements above 1800 CFM.

BRYANT MODEL 310AAV FURNACE							
310AAV Unit Size	A (Cabinet Width)	D (Supply Width)	E (Bottom Return Width)	F (C.L. Top and Bottom Vent Outlet)	Vent Connection Size*	CFM	Price
024045	14 3/16	12 9/16	12 11/16	9 5/16	4	800	\$954.00
036045	14 3/16	12 9/16	12 11/16	9 5/16	4	1200	\$992.00
024070	14 3/16	12 9/16	12 11/16	9 5/16	4	800	\$960.00
036070	14 3/16	12 9/16	12 11/16	9 5/16	4	1200	\$992.00
048070	17 1/2	15 7/8	16 1/8	11 9/16	4	1600	\$1,066.00
042090	17 1/2	15 7/8	16 1/8	11 9/16	4	1400	\$1,026.00
048090	21	19 3/8	19 1/2	13 5/16	4	1600	\$1,080.00
060090	21	19 3/8	19 1/2	13 5/16	4	2000	Call for Price
036110	17 1/2	15 7/8	16 1/8	11 9/16	4	1200	\$1,126.00
048110	21	19 3/8	19 1/2	13 5/16	4	1600	\$1,142.00
066110	21	19 3/8	19 1/2	13 5/16	4	2000	\$1,170.00
048135	21	19 3/8	19 1/2	13 5/16	4*	1600	\$1,216.00
066135	24 1/2	22 7/8	23	15 1/16	4*	2000	\$1,264.00
060155	24 1/2	22 7/8	23	15 1/16	4*	2000	\$1,426.00

*135 and 155 size furnaces require five-inch vents. Use a 4-5 inch vent adapter between furnace and vent stack

MODEL 312AAV

Two Stage, 4-Way Multipoise, Induced Combustion, Gas Furnace
45,000 thru 155,000 Btu Input



Features:

- 80% A.F.U.E.
- Perfect heat operation
- Two-stage heating
- Very low operating sound through low-stage operation and noise elimination combustion system
- Four position furnace: upflow, horizontal right, horizontal left, downflow
- Shorter in height – only 33 1/3" tall
- Media filter cabinet included
- Insulated blower compartment
- Microprocessor based "smart" control center
- Adapts heating stages to meet demand
- Continuous fan speed adjustable from thermostat
- Adjustable heating air temperature rise
- LED diagnostics, non-volatile fault code memory and self test failure
- Hot surface ignition (HSI)
- Category I Venting

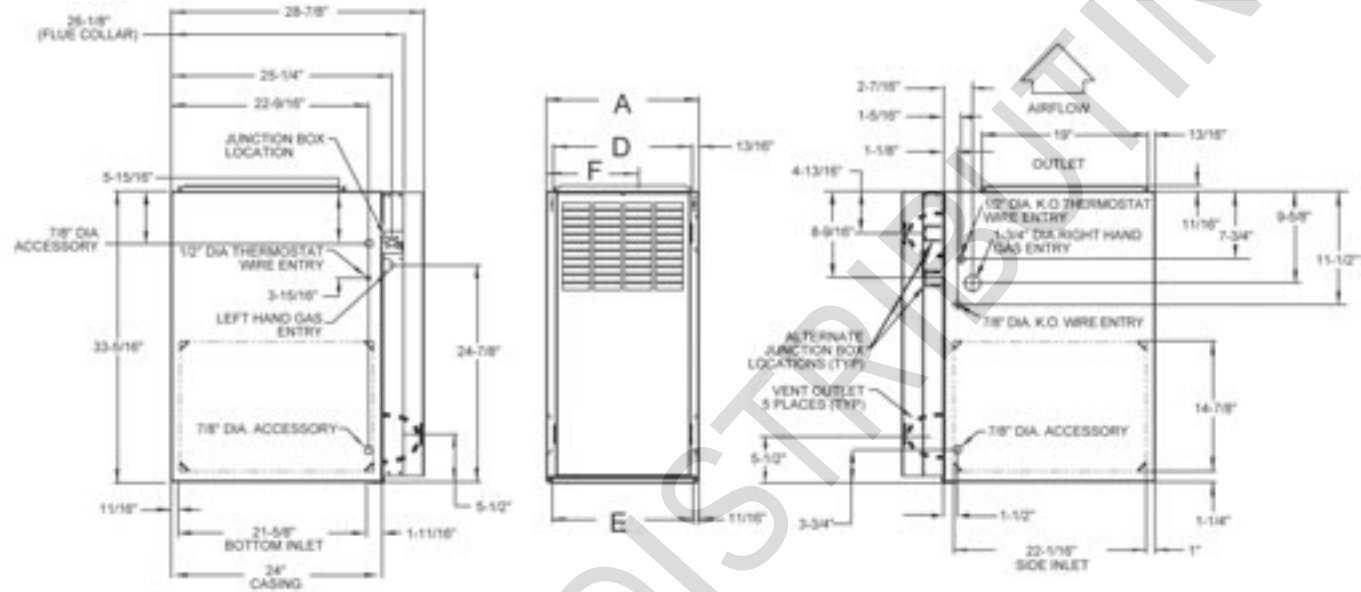
Limited Warranty:

- 20-year warranty on "Super S" heat exchanger
- 5-year parts warranty on all other components



MODEL 312AAV

Two Stage, 4-Way Multipoise, Induced Combustion, Gas Furnace
45,000 thru 155,000 Btu Input



* For airflow requirements above 1800 CFM, see Air delivery table in product data literature for specific use of single side inlets. The use of both side inlets, a combination of 1 side and the bottom, or the bottom only will ensure adequate return air openings for airflow requirements above 1800 CFM.

BRYANT MODEL 312AAV FURNACE							
312AAV Unit Size	A (Cabinet Width)	D (Supply Width)	E (Bottom Return Width)	F (C.L. Top & Bottom Vent Outlet)	Vent Connection Size*	CFM	Price
024045	14 3/16	12 9/16	12 11/16	9 5/16	4	800	Call for Price
036045	14 3/16	12 9/16	12 11/16	9 5/16	4	1200	Call for Price
024070	14 3/16	12 9/16	12 11/16	9 5/16	4	800	Call for Price
036070	14 3/16	12 9/16	12 11/16	9 5/16	4	1200	Call for Price
048070	17 1/2	15 7/8	16 1/8	11 9/16	4	1600	Call for Price
042090	17 1/2	15 7/8	16 1/8	11 9/16	4	1400	Call for Price
048090	21	19 3/8	19 1/2	13 5/16	4	1600	Call for Price
060090	21	19 3/8	19 1/2	13 5/16	4	2000	Call for Price
036110	17 1/2	15 7/8	16 1/8	11 9/16	4	1200	Call for Price
048110	21	19 3/8	19 1/2	13 5/16	4	1600	Call for Price
066110	21	19 3/8	19 1/2	13 5/16	4	2000	Call for Price
048135	21	19 3/8	19 1/2	13 5/16	4*	1600	Call for Price
066135	24 1/2	22 7/8	23	15 1/16	4*	2000	Call for Price
060155	24 1/2	22 7/8	23	15 1/16	4*	2000	Call for Price

*135 and 155 size furnaces require 5" vents. Use a 4-5 inch vent adapter between furnace and vent stack.

FURNACES



MODEL 340MAV (2 Pipe)

Single Stage, 4-Way Multipoise, Direct Vent, Condensing Gas Furnace
40,000 thru 140,000 Btu Input

Features:

- 4-Way multipoise design – allows this model to be installed in an upflow, downflow, or horizontal orientation
- Sealed combustion (direct vent) system
- 3-pass primary heat exchangers
- Flow-through secondary heat exchangers
- Combustion air and ventilation allows Schedule 40 PVC
- Insulated casing – foil-faced insulation in the heat exchanger section cuts heat loss
- Category IV Venting

Control Center:

- The printed-circuit board and all internal wiring are factory installed
- Convenient terminals permit quick-connection of a thermostat and air conditioning control circuits
- Connections for a humidifier and air cleaner are also provided

Limited Warranty:

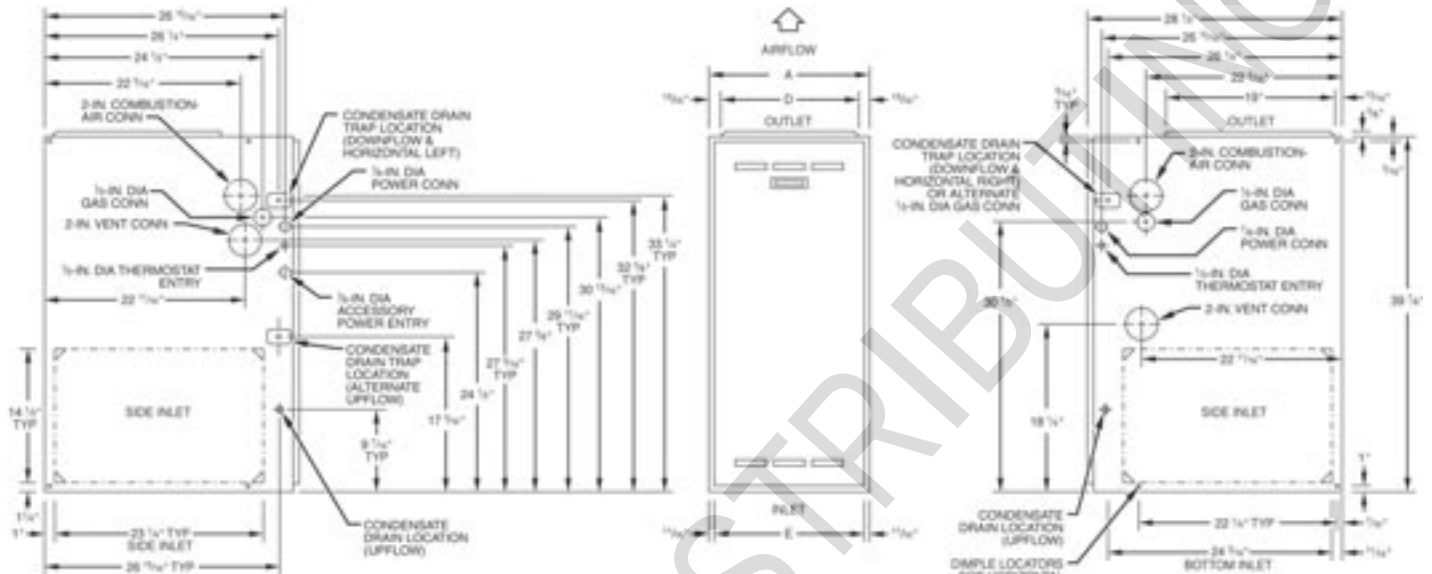
- 20-year on the heat exchangers
- 1-year on all other parts

340MAV COMBUSTION-AIR AND VENT PIPING MAXIMUM ALLOWABLE PIPE LENGTH (FT)

Unit Size	Termination Type	Pipe Dia (in)*	Number of 90° Elbows					
			1	2	3	4	5	6
024040 036040	2 Pipe or 2-In. Concentric	1	5	NA	NA	NA	NA	NA
		1 1/2	70	70	65	60	60	55
		2	70	70	70	70	70	70
024060 036060 048060	2 Pipe or 2-In. Concentric	1 1/2	20	15	10	5	NA	NA
		2	70	70	70	70	70	70
036080 048080 060080	2 Pipe or 2-In. Concentric	1 1/2	10	NA	NA	NA	NA	NA
		2	55	50	35	30	30	20
		2 1/2	70	70	70	70	70	70
048100 060100	2 Pipe or 3-In. Concentric	2	5	NA	NA	NA	NA	NA
		2 1/2	40	30	20	20	10	NA
		3	70	70	70	70	70	70
060120	2 Pipe or 3-In. Concentric	2 1/2 one disk	10	NA	NA	NA	NA	NA
		3	45	40	35	30	25	20
		3 no disk	70	70	70	70	70	70
060140	2 Pipe or 3-In. Concentric	2 1/2 one disk	5	NA	NA	NA	NA	NA
		3 one disk	40	35	30	25	20	15
		3 no disk	60	56	52	48	44	40
		4 no disk	70	70	70	70	70	70

MODEL 340MAV (2 Pipe)

Single Stage, 4-Way Multipoise, Direct Vent, Condensing Gas Furnace
40,000 thru 140,000 Btu Input



- NOTES:**
- Minimum return-air openings at furnace, based on metal duct. If flex duct is used, see flex duct manufacturer's recommendations for equivalent diameters.
 - Minimum return-air opening at furnace:
 - For 800 CFM—16-in. round or 14 1/2 x 12-in. rectangle.
 - For 1200 CFM—20-in. round or 14 1/2 x 19 1/2-in. rectangle.
 - For 1600 CFM—22-in. round or 14 1/2 x 23 1/2-in. rectangle.
 - For airflow requirements above 1800 CFM, see Air Delivery table in Product Data literature for specific use of single side inlets. The use of both side inlets, a combination of 1 side and the bottom, or the bottom only will ensure adequate return air openings for airflow requirements above 1800 CFM at 0.5" W.C. ESP.

340MAV SPECIFICATIONS

Unit Size	A	D	E	CFM	Price
024040	17 1/2	15 7/8	16	800	\$2,210.00
036040	17 1/2	15 7/8	16	1200	\$1,780.00
024060	17 1/2	15 7/8	16	800	\$1,812.00
036060	17 1/2	15 7/8	16	1200	\$1,812.00
048060	17 1/2	15 7/8	16	1600	Call for Price
036080	17 1/2	15 7/8	16	1200	\$1,908.00
048080	17 1/2	15 7/8	16	1600	\$1,940.00
060080	21	19 3/8	19 1/2	2000	\$2,050.00
048100	21	19 3/8	19 1/2	1600	\$2,054.00
060100	21	19 3/8	19 1/2	2000	\$2,224.00
060120	24 1/2	22 7/8	23	2000	\$2,250.00
060140	24 1/2	22 7/8	23	2000	\$2,448.00

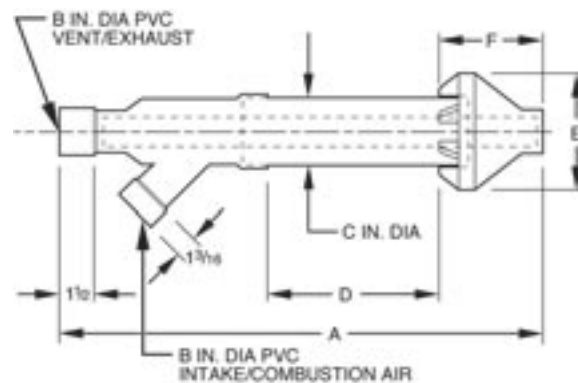
NOTE: Dimensions are in inches

OPTIONAL:

CONCENTRIC VENT DIMENSIONS (INCHES)

Part No.	A*	B	C	D†	E	F
KGAVT0501CVT	33 3/8	2	3 1/2	16 5/8	6 1/4	5 3/4
KGAVT0601CVT	38 7/8	3	4 1/2	21 1/8	7 3/8	6 1/2

*Dimension A will change accordingly as dimension D is lengthened or shortened
†Dimension D may be lengthened to 60" maximum. Dimension D may also be shortened by cutting the pipes provided in the kit to 12" min.





MODEL 58STA

Single Stage, 4-Way Multipoise, Induced-Combustion, Gas Furnace
45,000 thru 155,000 Btu Inputs



Features:

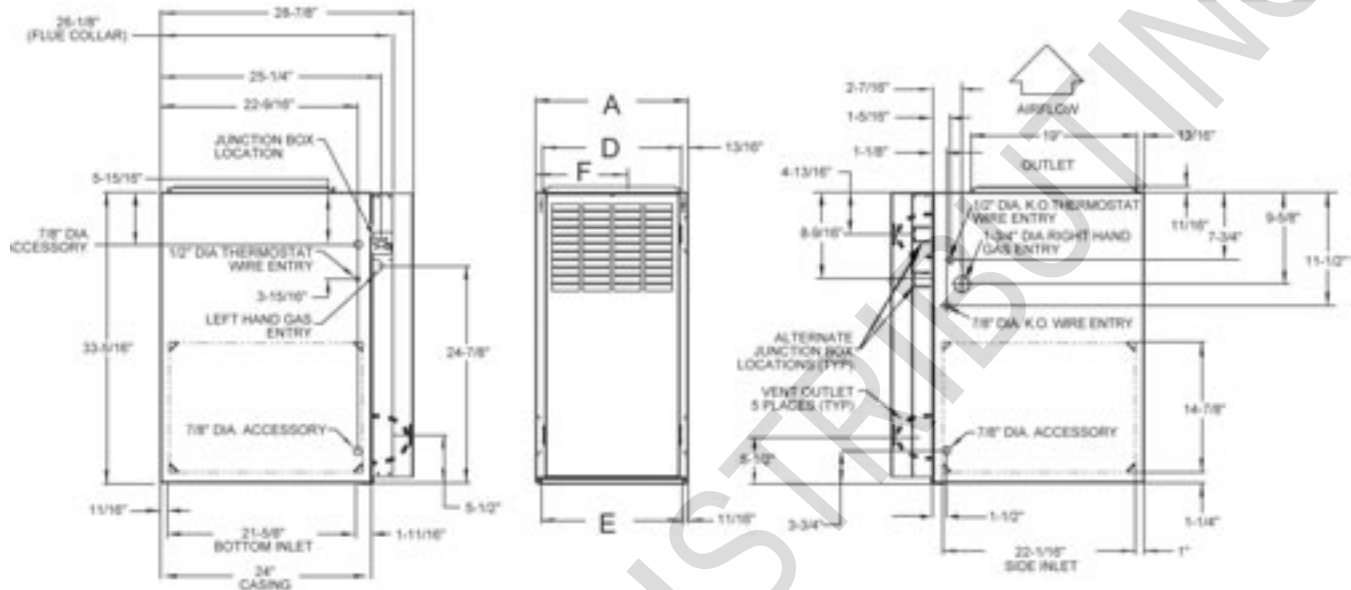
- 80% A.F.U.E
- Quietech system noise reduction system
- Microprocessor based control center
- LED diagnostics and self test feature
- Adjustable heating air temperature rise
- Adjustable cooling airflow
- 4-way multipoise furnace
- Compact design – only 33 1/3" tall
- Hot surface ignition (HSI)
- Inner door for tighter sealing
- Category I Venting

Limited Warranty:

- 20-year warranty on "Super S" heat exchanger
- 5-year parts warranty on all other components

MODEL 58STA

Single Stage, 4-Way Multipoise, Induced-Combustion, Gas Furnace
45,000 thru 155,000 Btu Inputs



CARRIER MODEL 58STA FURNACE SPECIFICATIONS

58STA Unit Size	A (Cabinet Width)	D (Supply Width)	E (Bottom Return Width)	F (Top Vent Outlet)	Vent Connection Size	CFM	Price
045-08	14 ³ / ₁₆	12 ⁹ / ₁₆	12 ¹¹ / ₁₆	9 ⁵ / ₁₆	4	800	\$1,088.00
045-12	14 ³ / ₁₆	12 ⁹ / ₁₆	12 ¹¹ / ₁₆	9 ⁵ / ₁₆	4	1200	\$1,128.00
070-08	14 ³ / ₁₆	12 ⁹ / ₁₆	12 ¹¹ / ₁₆	9 ⁵ / ₁₆	4	800	\$1,094.00
070-12	14 ³ / ₁₆	12 ⁹ / ₁₆	12 ¹¹ / ₁₆	9 ⁵ / ₁₆	4	1200	\$1,128.00
070-16	17 ¹ / ₂	15 ⁷ / ₈	16 ¹ / ₈	11 ⁹ / ₁₆	4	1600	\$1,200.00
090-14	17 ¹ / ₂	15 ⁷ / ₈	16 ¹ / ₈	11 ⁹ / ₁₆	4	1400	\$1,158.00
090-16	21	19 ³ / ₈	19 ¹ / ₂	13 ⁵ / ₁₆	4	1600	\$1,212.00
090-20	21	19 ³ / ₈	19 ¹ / ₂	13 ⁵ / ₁₆	4	2000	Call for Price
110-12	17 ¹ / ₂	15 ⁷ / ₈	16 ¹ / ₈	11 ⁹ / ₁₆	4	1200	\$1,258.00
110-16	21	19 ³ / ₈	19 ¹ / ₂	13 ⁵ / ₁₆	4	1600	\$1,274.00
110-22	21	19 ³ / ₈	19 ¹ / ₂	13 ⁵ / ₁₆	4	2000	\$1,304.00
135-16	21	19 ³ / ₈	19 ¹ / ₂	13 ⁵ / ₁₆	4 (note 1)	1600	\$1,348.00
135-22	24 ¹ / ₂	22 ⁷ / ₈	23	15 ¹ / ₁₆	4 (note 1)	2000	\$1,394.00
155-20	24 ¹ / ₂	22 ⁷ / ₈	23	15 ¹ / ₁₆	4 (note 1)	2000	\$1,554.00

1. 135 and 155 size furnaces require 5" vents. Use a 4-5" vent adapter between furnace and vent stack.
2. See installation instructions for complete installation requirements.
3. Dimensions are in inches



58CTA – PERFORMANCE 80

Two-Stage, 4-Way Multipoise, Induced-Combustion Furnace
45,000 thru 155,000 Btu Inputs



Features:

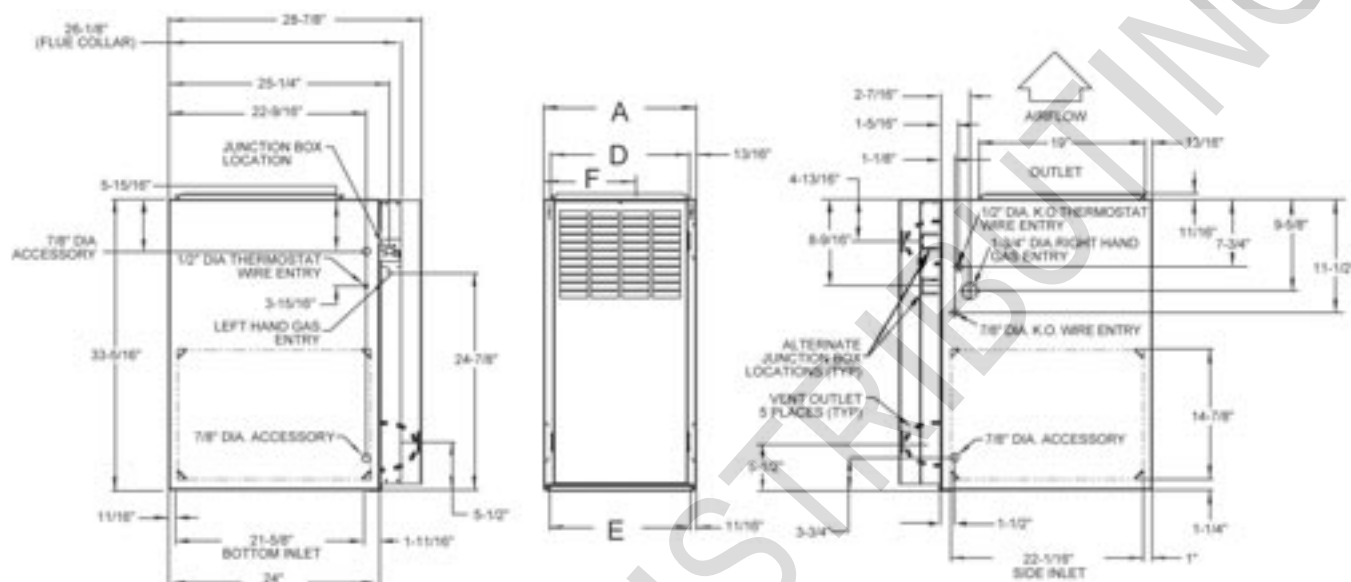
- 80% A.F.U.E.
- ComfortHeat technology intelligent microprocessor control
- LED diagnostics and self test feature
- Adjustable heating air temperature rise
- Adjustable cooling airflow
- Two-stage heating with single-stage thermostat with patented adaptive control technology
- Very low operating sound through low-stage operation and Quietech system
- 4-way multipoise furnace
- Compact design – only 33 1/3" tall
- Hot surface ignitor (HSI)
- Insulated blower compartment
- Inner door for tighter sealing
- Category I Venting
- Media filter cabinet included

Limited Warranty:

- 20-year warranty on "Super S" heat exchanger
- 5-year parts warranty on all other components

58CTA – PERFORMANCE 80

Two-Stage, 4-Way Multipoise, Induced-Combustion Furnace
45,000 thru 155,000 Btu Inputs



CARRIER MODEL 58CTA FURNACE SPECIFICATIONS

58CTA Unit Size	A (Cabinet Width)	D (Supply Width)	E (Bottom Return Width)	F (Top Vent Outlet)	Vent Connection Size	Media Cabinet Size (inches)	CFM	Price
045-08	14 ³ / ₁₆	12 ⁹ / ₁₆	12 ¹¹ / ₁₆	9 ⁵ / ₁₆	4	16	800	\$1,774.00
045-12	14 ³ / ₁₆	12 ⁹ / ₁₆	12 ¹¹ / ₁₆	9 ⁵ / ₁₆	4	16	1200	Call for Price
070-08	14 ³ / ₁₆	12 ⁹ / ₁₆	12 ¹¹ / ₁₆	9 ⁵ / ₁₆	4	16	800	\$1,912.00
070-12	14 ³ / ₁₆	12 ⁹ / ₁₆	12 ¹¹ / ₁₆	9 ⁵ / ₁₆	4	16	1200	\$1,974.00
070-16	17 ¹ / ₂	15 ⁷ / ₈	16 ¹ / ₈	11 ⁹ / ₁₆	4	16	1600	\$2,150.00
090-14	17 ¹ / ₂	15 ⁷ / ₈	16 ¹ / ₈	11 ⁹ / ₁₆	4	16	1400	\$2,120.00
090-16	21	19 ³ / ₈	19 ¹ / ₂	13 ⁵ / ₁₆	4	20	1600	\$2,210.00
090-20	21	19 ³ / ₈	19 ¹ / ₂	13 ⁵ / ₁₆	4	20	2000	Call for Price
110-12	17 ¹ / ₂	15 ⁷ / ₈	16 ¹ / ₈	11 ⁹ / ₁₆	4	16	1200	\$2,182.00
110-16	21	19 ³ / ₈	19 ¹ / ₂	13 ⁵ / ₁₆	4	20	1600	\$2,304.00
110-22	21	19 ³ / ₈	19 ¹ / ₂	13 ⁵ / ₁₆	4	20	2000	\$2,394.00
135-16	21	19 ³ / ₈	19 ¹ / ₂	13 ⁵ / ₁₆	4*	20	1600	\$2,516.00
135-22	24 ¹ / ₂	22 ⁷ / ₈	23	15 ¹ / ₁₆	4*	24	2000	\$2,708.00
155-20	24 ¹ / ₂	22 ⁷ / ₈	23	15 ¹ / ₁₆	4*	24	2000	\$2,902.00

*135 and 155 size furnaces require 5" vents. Use a 4-5" vent adapter between furnace and vent stack.



MODEL 58MXA (2 Pipe)

Highly Efficient, 4-Way Multipoise, Fixed-Capacity,
Direct Vent, Deluxe Condensing Gas Furnace
40,000 thru 138,000 Btu Inputs



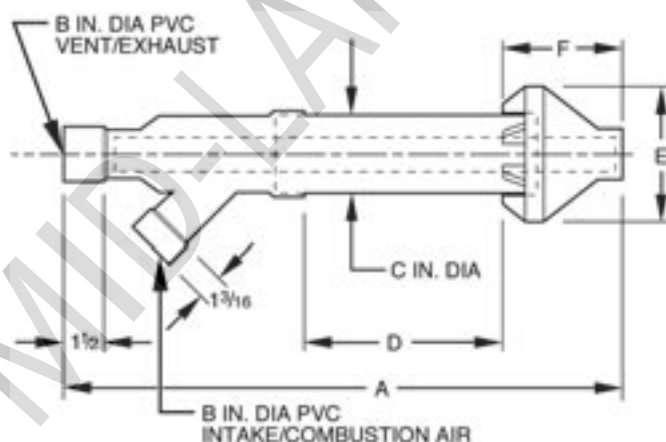
Features:

- Media filter cabinet allows for easy addition of a high efficiency air filter
- Insulated blower compartment
- Combustion products venting – the combustion air and vent pipes can terminate through a side wall or through the roof when used with a factory authorized vent termination kit
- Hot surface igniter (HSI)
- Control center – microprocessor controls sequencing and furnace operation
- Adjustable blower speed – precise airflow selection of heating or cooling operation
- Direct vent sealed combustion system
- Cleanable filter with retainer is standard
- Category IV Venting

Limited Warranty:

- Limited lifetime warranty on the heat exchangers
- 5-year parts warranty on all other components

OPTIONAL CONCENTRIC VENT KIT



CONCENTRIC VENT DIMENSIONS (INCHES)

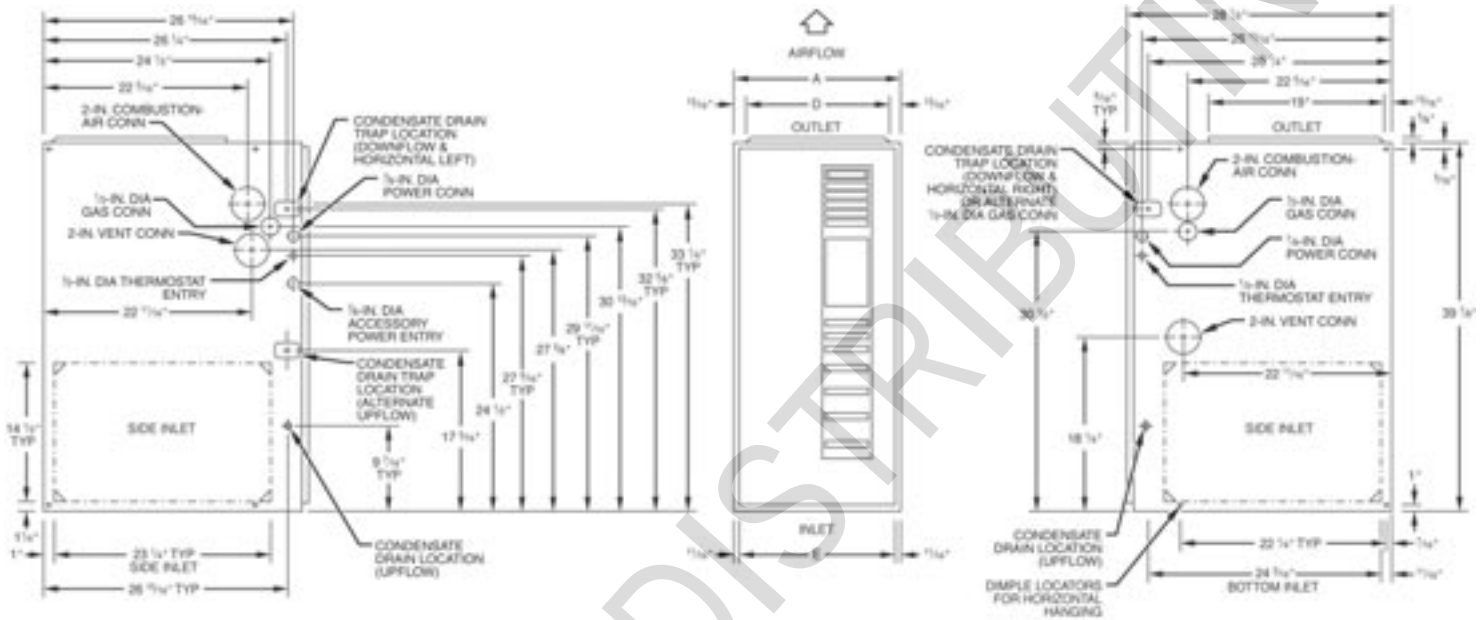
Kit Part No.	A*	B	C	D†	E	F
KGAVT0501CVT	33 ³ / ₈	2	3 ¹ / ₂	16 ⁵ / ₈	6 ¹ / ₄	5 ³ / ₄
KGAVT0601CVT	38 ⁷ / ₈	3	4 ¹ / ₂	21 ¹ / ₈	7 ³ / ₈	6 ¹ / ₂

*Dimension A will change accordingly as dimension D is lengthened or shortened.

†Dimension D may be lengthened to 60" maximum. Dimension D may also be shortened by cutting the pipes provided in the kit to 12" minimum.

MODEL 58MXA (2 Pipe)

Highly Efficient, 4-Way Multipoise, Fixed-Capacity,
Direct Vent, Deluxe Condensing Gas Furnace
40,000 thru 138,000 Btu Inputs



- NOTES:**
1. Minimum return-air openings at furnace, based on metal duct. If flex duct is used, see flex duct manufacturer's recommendations for equivalent diameters.
 2. Minimum return-air opening at furnace:
 - a. For 800 CFM—16-in. round or 14 1/2 x 12-in. rectangle.
 - b. For 1200 CFM—20-in. round or 14 1/2 x 19 1/2-in. rectangle.
 - c. For 1600 CFM—22-in. round or 14 1/2 x 23 1/2-in. rectangle.
 - d. For airflow requirements above 1800 CFM, see Air Delivery table in Product Data literature for specific use of single side inlets. The use of both side inlets, a combination of 1 side and the bottom, or the bottom only will ensure adequate return air openings for airflow requirements above 1800 CFM at 0.5" W.C. ESP.

58MXA SPECIFICATIONS

Unit Size	A	D	E	CFM	Price
040-08	17 1/2	15 7/8	16	800	Call for Price
040-12	17 1/2	15 7/8	16	1200	\$2,436.00
060-08	17 1/2	15 7/8	16	800	Call for Price
060-12	17 1/2	15 7/8	16	1200	\$2,496.00
060-16	17 1/2	15 7/8	16	1600	\$2,570.00
080-12	17 1/2	15 7/8	16	1200	\$2,586.00
080-16	17 1/2	15 7/8	16	1600	\$2,734.00
080-20	21	19 3/8	19 1/2	2000	\$2,846.00
100-16	21	19 3/8	19 1/2	1600	\$2,884.00
100-20	21	19 3/8	19 1/2	2000	\$3,090.00
120-20	24 1/2	22 7/8	23	2000	\$3,154.00
140-20	24 1/2	22 7/8	23	2000	\$3,264.00

NOTE: Dimensions are in inches



MODEL 58MXA

Highly Efficient, 4-Way Multipoise, Fixed-Capacity,
Direct Vent, Deluxe Condensing Gas Furnace
40,000 thru 138,000 Btu Inputs

MAXIMUM ALLOWABLE EXPOSED VENT PIPE LENGTH (FT) WITH AND WITHOUT INSULATION IN WINTER DESIGN TEMPERATURE AMBIENT*				
Unit Size	Winter Design Temperature (°F)	Max Pipe Diameter (in)	Without Insulation	With 3/8-in. or Thicker Insulation†
040-08 040-12	20	1 1/2	51	70
	0	1 1/2	28	70
	-20	1 1/2	16	70
060-08 060-12 060-16	20	2	65	70
	0	2	35	70
	-20	2	20	70
080-12 080-16 080-20	20	2 1/2	70	70
	0	2 1/2	47	70
	-20	2 1/2	28	70
100-16 100-20	20	3	70	70
	0	3	50	70
	-20	3	28	70
120-20	20	4	70	70
	0	4	48	70
	-20	4	23	70
140-20	20	4	70	70
	0	4	57	70
	-20	4	30	70

*Pipe length (ft) specified for maximum vent pipe lengths located in unconditioned spaces. Vent pipes located in unconditioned space cannot exceed the total allowable pipe length as specified in maximum allowable pipe length table.

†Insulation thickness based on R value of 3.5 per in.

MODEL 58MXA

Highly Efficient, 4-Way Multipoise, Fixed-Capacity,
Direct Vent, Deluxe Condensing Gas Furnace
40,000 thru 138,000 Btu Inputs

**58MXA COMBUSTION -AIR AND VENT PIPING
MAXIMUM ALLOWABLE PIPE LENGTH (FT)**

Unit Size	Termination Type	Pipe Dia (in)*	Number of 90° Elbows					
			1	2	3	4	5	6
040-08 040-12	2 Pipe or 2-In. Concentric	1	5	NA	NA	NA	NA	NA
		1 1/2	70	70	65	60	60	55
		2	70	70	70	70	70	70
060-08 060-12 060-16	2 Pipe or 2-In. Concentric	1 1/2	20	15	10	5	NA	NA
		2	70	70	70	70	70	70
080-12 080-16 080-20	2 Pipe or 2-In. Concentric	1 1/2	10	NA	NA	NA	NA	NA
		2	55	50	35	30	30	20
		2 1/2	70	70	70	70	70	70
100-16 100-20	2 Pipe or 3-In. Concentric	2	5	NA	NA	NA	NA	NA
		2 1/2	40	30	20	20	10	NA
		3	70	70	70	70	70	70
120-20	2 Pipe or 3-In. Concentric	2 1/2 one disk	10	NA	NA	NA	NA	NA
		3†	45	40	35	30	25	20
		3† no disk	70	70	70	70	70	70
140-20	2 Pipe or 3-In. Concentric	2 1/2 one disk	5	NA	NA	NA	NA	NA
		3† one disk	40	35	30	25	20	15
		3† no disk	60	56	52	48	44	40
		4† no disk	70	70	70	70	70	70

RC2100 WI-CON

Wireless Heating Control for Steam and Hot Water Boilers

Features:

- No sensor wiring required
- Intelligent sensing algorithm saves energy
- Low limit control and alarm alert operator of problems
- Uses spread spectrum wireless technology to provide control in multi-tenant steam or hot water heating applications
- Cycles boiler based on wireless outdoor air sensor value and the averaged input of up to 12 wireless indoor space sensors
- Wireless outdoor air sensor can be installed without penetrating the building, allowing sensor location to be optimized
- Wireless indoor sensors can be easily relocated for fine tuning and balancing of system
- Two temperature setpoints (day/night)
- Individual sensors can be selected to be included or excluded in the averaging calculation
- Adjustable time delay for control output
- Manual/auto system switch
- Built-in real time clock
- Selectable external clock input
- Optional wireless clock/EMS interface
- Low battery and lost sensor alarms
- Space temperature low limit alarm and control output
- One or more signal repeaters can be added to system if longer signal is desired

WIRELESS


**SIGNAL
REPEATER**



**INDOOR
SPACE SENSOR**



**OUTDOOR
AIR SENSOR**

RC2100 PRICING

Model	Price
RC-2100*	\$4,094.00
Additional Indoor Space Sensor	\$280.00 (each)
Signal Repeater RR1552A	\$1,200.00 (each)

*Includes the control, 1 outdoor sensor and 4 indoor space sensors



HEAT TROL ELITE SERIES

HWE-Single Stage, HWE-MOV, HWE-Mult Stage

Hot Water Reset Control for Light Commercial and Residential Applications

Features:

- Provides quick and accurate system status at the press of a button
- Indicates pump and boiler status at a glance
- ½ inch LED Display flashes to indicate sensor problems
- Accepts an optional thermostat or switch signal to control system
- Provides domestic hot water priority
- Monitors boiler loop temperature
- Temperatures displayed in 1 degree increments
- Adjustable outdoor system start point (can be disabled)
- Control settings are stored if power is lost
- Dry contact for remote enable/disable
- Adjustable minimum water temperature in HWE-Single Stage and HWE Multi Stage models
- Adjustable maximum water temperature adjustment for HWE-MOV



HEAT-TROL PRICING	
Model	Price
HWE Multi Stage*	\$1,026.00
HWE MOV*	\$678.00
HWE Single Stage*	\$594.00

*Includes sensors





EPU-CH

Outdoor/Indoor Heating Controls for Steam Boilers



Features:

- Effectively regulates ambient indoor temperatures according to outdoor temperatures by automatically cycling boiler operation
- Runs on cycle concept, meaning that as outdoor temperatures fall, the heating system runs longer keeping the ambient indoor temperatures constant
- A reliable, easily installed "weatherhead" sensor monitors outdoor temperature and can be run up to 500' from the panel
- A heating system sensor to signal the panel that heat has been circulated to all parts of the building. This sensor is strapped onto a system return pipe and can be run up to 500' from the panel
- Time clock to provide three different heat levels:
 - Day or normal heat levels for when the building is occupied and active
 - Night or save heat levels for when the building is empty or inactive
 - Morning warm up to quickly return the building to comfortable temperatures after the night or save period
- Separate day and night adjustable outdoor temperature cutoff set points
- Separate day and night heat adjustments
- Easy to read lights show what the status of the panel is at all times
- Thermal lockout prevents a new cycle from starting if there is sufficient heat circulating in the building
- Lights indicate heating system sensor status

Controls follow the weather: (see chart)

The chart shows the approximate number of minutes of heat per hour after heat has been established. C on the chart refers to continuous operation. The standard cycle is one hour. However, 30 minute cycles are available on special order. If you use a 30 minute cycle, divide all figures in the chart by half.

EPU-CH PRICING	
Model	Price
Heat Timer EPU-CH Control*	\$3,474.00

*Includes sensors

Run Time in Minutes Based on a 60 Min Cycle															
Heat Adjustment	Outdoor Temperature														
	-20	-15	-10	-5	0	5	10	15	20	25	30	35	40	45	50
A	34	32	30	28	26	24	22	20	18	16	14	12	10	8	6
B	38	36	34	32	30	28	26	24	22	20	18	16	14	12	10
C	42	40	38	36	34	32	30	28	26	24	22	20	18	16	14
D	46	44	42	40	38	36	34	32	30	28	26	24	22	20	18
E	50	48	46	44	42	40	38	36	34	32	30	28	26	24	22
F	C	52	50	48	46	44	42	40	38	36	34	32	30	28	26
G	C	C	C	52	50	48	46	44	42	40	38	36	34	32	30
H	C	C	C	C	C	52	50	48	46	44	42	40	38	36	34
I	C	C	C	C	C	C	C	52	50	48	46	44	42	40	38
J	C	C	C	C	C	C	C	C	C	52	50	48	46	44	42

C = constant run

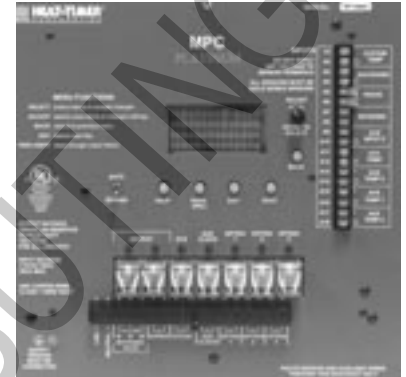


MPC PLATINUM

Cycling and Sequencing Controls for Steam Heating Systems

Features:

- Microprocessor based control to manage a steam boiler or a two way steam valve in steam heating applications based on system temperature and outdoor temperature
- Designed to utilize either a steam boiler or district steam
- Multiple day (normal) and night (save) schedules to reduce steam consumption
 - Built in 7-day programmable save mode with 4 "on" settings and 4 "off" settings per day to customize operation
- Boost and vari-boost to bring building quickly to comfortable temperatures after night (save) period
- Vari-boost with early shut down allows office buildings to switch to night (save) mode earlier than scheduled, taking into consideration residual heat and outdoor temps
- Output relay and multiple auxiliary outputs
- Adaptable to energy management systems
- Digital display for all system settings
- Settings are stored and will not be lost if power is lost
- Optional remote communication add-on with modem or internet connection package
- Use existing sensors and/or wireless sensors
- Connect as many as 64 sensors to the panel
- Thermal lockout helps eliminate short cycling
- Day (normal) and night (save) modes
- Built in prove and system relay (combustion air and end switch) connections
- Manual shift allows for a temporary override
- Fast cycle for troubleshooting allows control to cycle on seconds rather than minutes
- Can connect to a Multi Mod or SEQ sequencing control
- Bypass allows installers and contractors to test and override the control settings when needed



MPC PRICING	
Model	Price
MPC Platinum*	\$4,798.00

*Includes strap-on sensors and relays



HWR PLATINUM SERIES

Reset and Sequencing Controls for Hydronic Heating Systems

Features:

HWR Platinum

- To control a single boiler or motorized valve – operating with either a 2,3 or 4 way valve or by direct ON/OFF boiler action
- Adjustable outdoor temperature cutoff
- Multiple setback schedules
- Optimum start/stop
- Adjustable reset ratios
- Digital display
- Auxiliary clock

HWR-Q Platinum

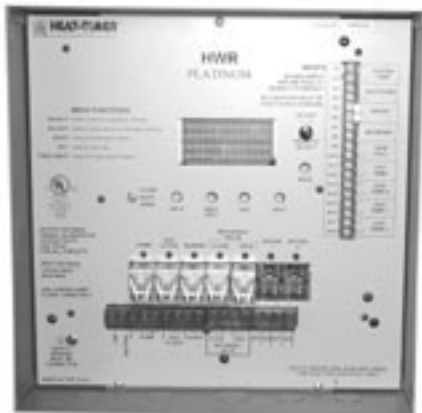
- To sequence up to 8 boiler stages by direct boiler action
- Adjustable outdoor temperature cutoff
- Multiple setback schedules
- Optimum start/stop
- Adjustable reset ratios
- Digital display
- Up to 8 stages of control
 - 8 on/off boilers
 - 4 low/hi fire boilers
- Automatic or manual rotation of lead stage
- Domestic hot water priority mode

HWR-Q Platinum w/ SEQ12

- To sequence up to 12 boiler stages – utilizing model HWR-Q Platinum and output panel SEQ operating together by direct boiler action
- Adjustable outdoor temperature cutoff
- Multiple setback schedules
- Optimum start/stop
- Adjustable reset ratios
- Digital display
- Auxiliary clock
- Up to 12 stages of control
 - 12 on/off boilers
 - 6 lo/hi fire boilers
- Automatic, manual rotation of lead stage
- Domestic hot water priority mode
- Individual override switches (on/auto/off)
- 2 N.O. contacts per stage (2 N.O. & 1 N.C. on 8th stage)

HWR-Q Platinum w/SEQ24

- To sequence up to 24 boiler stages – utilizing model HWR-Q Platinum and output panel SEQ operating together by direct boiler action
- Up to 24 stages of control
 - 24 on/off boilers
 - 12 lo/hi fire boilers
- All other specs same as HWR-Q Platinum w/SEQ12



HWR CONTROL PRICING

Model	Price	NOTES
HWR Platinum	\$3,372.00	Relays and sensors included
HWR-Q Platinum	\$3,704.00	Relays and sensors included
HWR-Q Platinum w/SEQ 12	\$5,812.00	Stage Relays not included
HWR-Q Platinum w/SEQ 24	\$8,464.00	Stage Relays not included

*Includes strap-on sensors

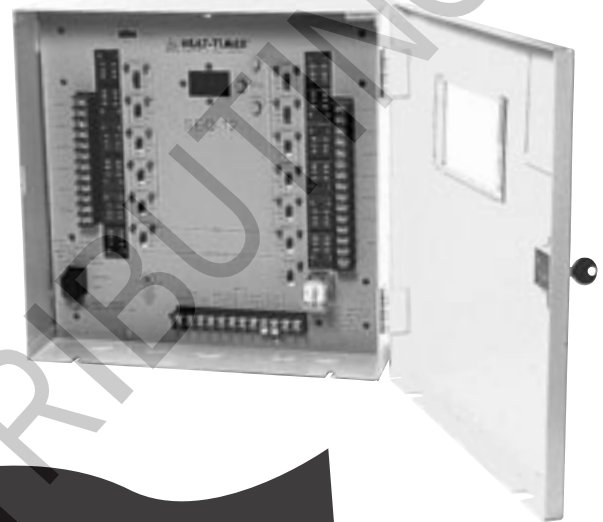


SEQ – SEQUENCING SET POINT CONTROL

For On/Off, 2 thru 12 Stage or Hi-Lo Units
for Heating or Cooling Applications

Features:

- Sequences up to 12 stages for temperature, pressure or humidity systems
- Only one sensors
- Digital display of all system settings
- Automatic rotation among stages
- Built in multi stage control
- System output is active when any stage is active
- Remote shutdown and remote temperature set point control
- Built in outdoor reset with adjustable reset ratios



Lead Lag Control
for up to 12 Stages

SEQ PRICING	
Model	Pricing
SEQ-6 Sequencer*	\$1,618.00
SEQ-12 Sequencer*	\$2,108.00

*Does not include sensors or stage relays



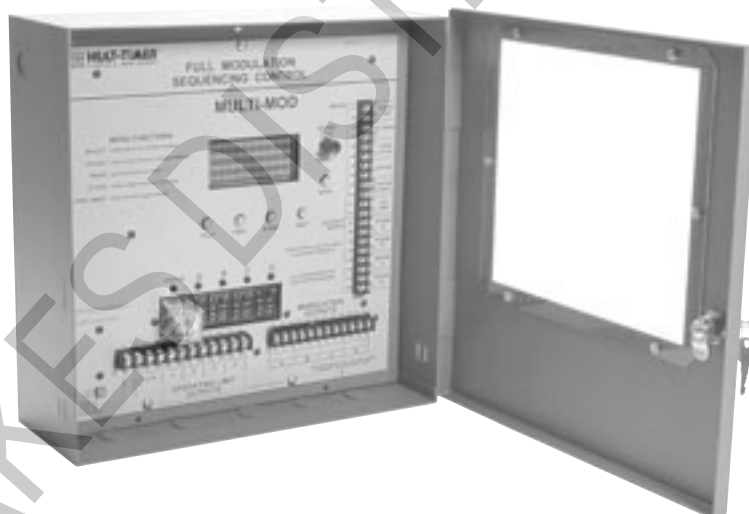
Lead lag Control
for up to 4 Stages

MULTI MOD

Modulating Set Point Control for Boilers and Chillers

Features:

- Sequences up to 4 fully modulating stages for temperature or pressure systems
- Controls 0-5, 0-10, 4-20 mA, or 135 modulating motors
- Only one sensor
- Digital display of all system settings
- Automatic rotation among stages
- Outdoor reset capability
- Connects to energy management systems
- Monitors stage status
- System output is active when any stage is active



MULTI MOD PRICING

Model	Price
Multi Mod*	\$5,442.00

*Does not include sensors