

# COMMERCIAL HYDRONIC HEAT PRESSURE FIRED, WET BASE, OIL, GAS OR COMBINATION

**Burnham**  
AMERICA'S BOILER COMPANY  
[www.burnham.com](http://www.burnham.com)

## V11 SERIES



Heating Capacities  
667 to 4551 MBH Output



# V11 SERIES HOT WATER OR STEAM BOILER

Maximum Water Working Pressure: 80 PSI-Water; 15 PSI-Steam

## Your Heating Solution

Available in twenty sizes with gross output ratings from 667 to 4551 MBH, the V11 Series fires gas, oil or combination gas/oil and is available equipped with either steam or water trim. The product meets the energy efficiency requirements of ASHRAE 90.1 with combustion efficiencies of up to 85%.

Cast iron construction, ease of assembly, various venting options, and stringent testing methods make the V11 Series boiler by Burnham your heating solution.

## Cast Iron Dependability and Installation Flexibility

Cast iron has the unique ability to absorb and transfer heat quickly and efficiently while providing unmatched durability. That's why the cast iron design of the V11 is the best choice for long lasting, trouble-free operation in commercial and industrial applications.

The cast iron sectional design of the V11 boiler makes it ideal for installations where the boiler room is not easily accessible. The sections and individual components fit through standard doorways and are assembled on-site. In addition to being shipped as loose sections, the boiler is available with factory-assembled sections or as a completely packaged and fire-tested unit.



## Burnham's Cast Iron Nipple Difference

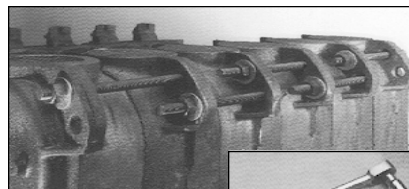
While gaskets used by other manufacturers can break down from oils, contaminants and the boiler flue gases, the V11's cast iron nipples remain unaffected, ensuring long life and eliminating costly repairs.

The V11 utilizes a cast iron nipple for sectional assembly. The cast iron nipples expand and contract along with the sections they join providing integrity to the entire section assembly. Additionally, cast iron nipples resist petroleum based chemicals, including corrosion inhibitors, pump lubricants and antifreeze.



## Hassle-free Section Assembly

The sectional construction of the V11 boiler makes it easy to maneuver through doorways and into the boiler room. The sections can then be assembled together



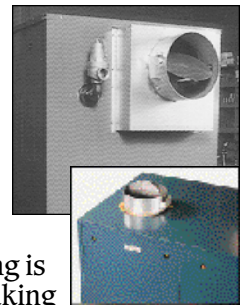
using two common tools — a  $\frac{3}{4}$ " drive ratchet with a  $1\frac{1}{4}$ " deep socket and a wrench.

V11 boiler sections have reinforced lugs that are used to assemble the sections with short individual draw rods resulting in fast, strain-free assembly.

## Top or Rear Venting

As a forced draft boiler, the Burnham V11 provides optimum draft for controlled combustion and maximum efficiency, eliminating the need for high chimneys or induced draft fans. A unique feature of Burnham's V11 boiler is that it can be **vented from either the top or rear**. This enables easy chimney or outside-wall venting for maximum installation flexibility.

Top outlet venting saves floor space and reduces installation time and materials. A plugged tapping is provided for taking flue outlet pressure readings.



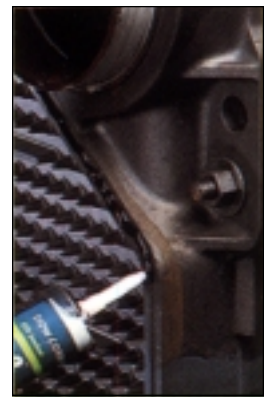
## Extensive Testing Methods

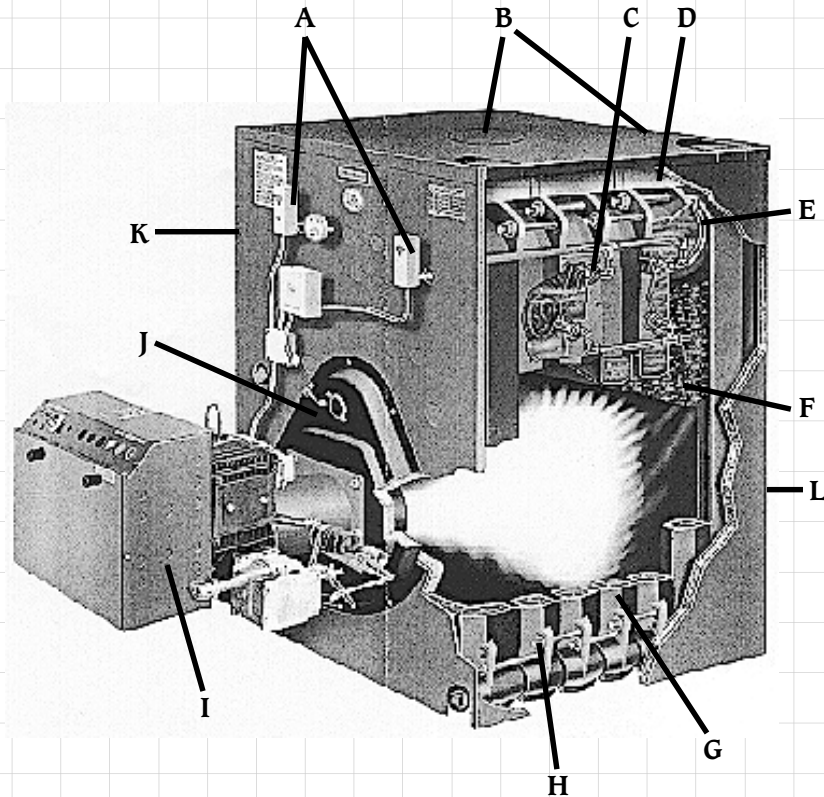
To guarantee that Burnham's cast iron sections are free from manufacturing

defects, each boiler section is first hydrostatically tested at two and one half times the rated working pressure in the foundry.

Then, factory-assembled sections are tested at one and one half times the rated working pressure.

Next, sections are grounded to ensure smooth surface mating



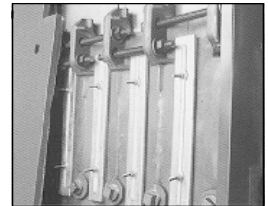


- A. Front-mounted controls for easy adjustment and maintenance
- B. Top or rear flue outlet with adjustable lock-type damper (not shown); includes plugged tapping for outlet pressure readings
- C. Tankless heater for optimum domestic hot water
- D. Aluminized steel flue canopy for long life
- E. Cast iron nipples ensure integrity of section assembly and resist petroleum based chemicals and boiler flue gases
- F. Cast iron vertical flue-design with pinned heating surface for maximum heat extraction
- G. Wet base, thermal pump construction for improved circulation
- H. Reinforced lugs and individual draw rods for assembly
- I. Four burner manufacturer options to best fit your needs
- J. Burner mounting plate with flame observation port
- K. Left side jacket panels and cleanouts for easy access to all flue surfaces
- L. Rear observation port (not shown); includes plugged tapping for over-fire draft readings

and sealed tight with an elastic compound. This sealant is used on all section joints to guarantee a completely sealed and pressure-tight assembly required for optimum forced draft operation. The sealant applies faster and lasts longer than conventional gasketing materials.

### Quick and Easy Maintenance

Removable jacket panels and flue cover plates simplify access to the heating surfaces for easy maintenance.



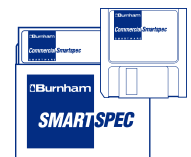
Optional brass plugs are available to provide inspection of the boiler crown sheet.

### Manufactured with Quality

To ensure quality and availability, castings for the V11 boiler and all other Burnham boilers are produced at our own in-house modern foundry - a claim no other boiler manufacturer can make.

### The "Smart" Choice

Specifying a heating system in CSI (Construction Specifications Institute) format is made easy with Burnham's Smartspec computer program. Simply specify the variables of the heating system and Smartspec gives you a selection and writes the spec. Built-in editing features let you create a customize CSI specification. Consult your local Burnham sales representative for details.

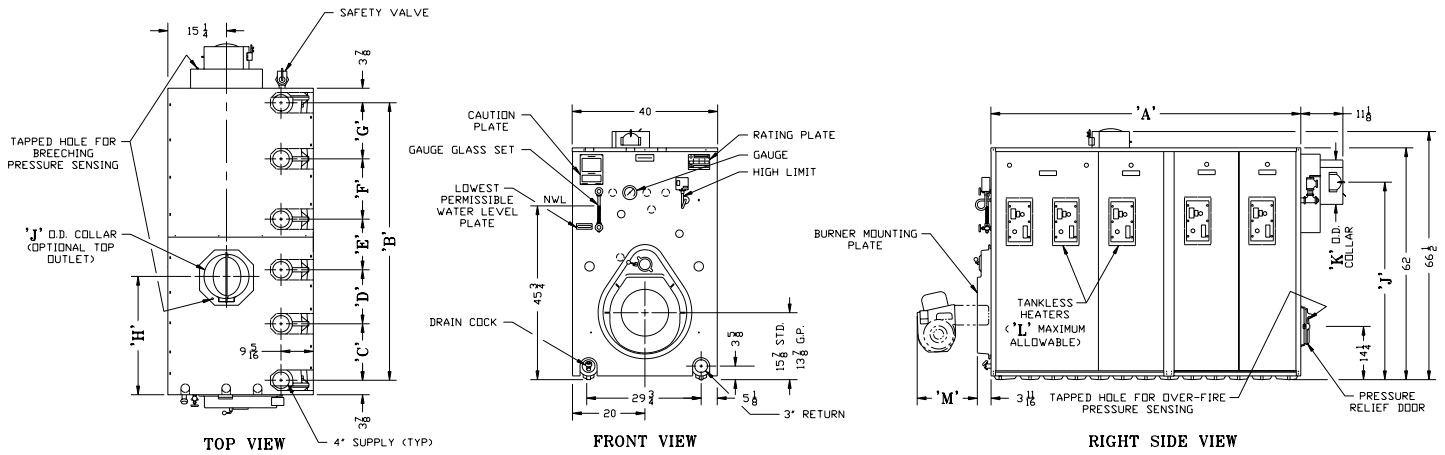




# V11 SERIES DIMENSIONS (in inches)

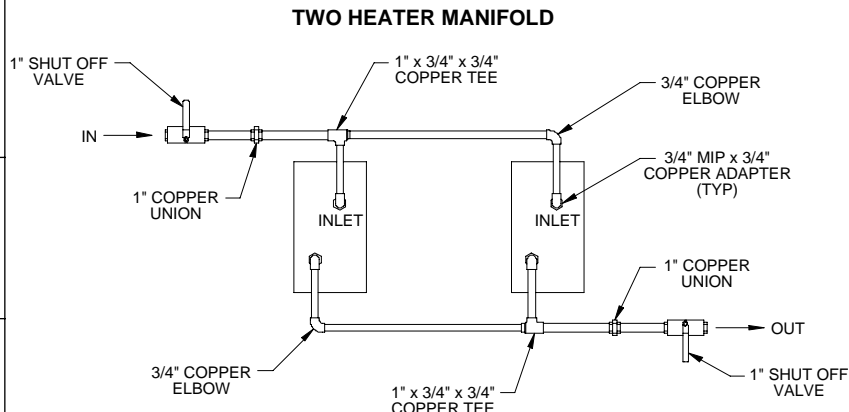
BOILER NUMBER	NUMBER OF SECTIONS	BURNER DIMENSION - M													APPROX. WEIGHT OF SECTION ASSEMBLY ONLY	APPROX. SHIPPING WEIGHT LBS			
		BECKETT CF			CARLIN			G-P R			POWERFLAME								
		CF	CARLIN	G-P R	CR	JR'	CR	JR'	CR	JR'	CR	JR'							
V1104	4	26-5/8	18-7/8	—	—	—	—	—	13-13/16	55	8	1	24-3/4	—	27-1/2	30	20-1/4	1833	2105
V1105	5	32-3/4	25	—	—	—	—	—	19-15/16	55	8	2	24-3/4	19-3/4	27-1/2	30	20-1/4	2226	2510
V1106	6	38-7/8	31-1/8	—	—	—	—	—	26-1/16	55	8	2	24-3/4	19-3/4	27-1/2	35	23-3/4	2618	2920
V1107	7	45	37-1/4	37-1/4	—	—	—	—	32-3/16	54	10	3	24-1/4	20-1/2	30	35	23-3/4	3010	3325
V1108	8	51-1/8	43-3/8	43-3/8	—	—	—	—	38-5/16	54	10	3	24-1/4	20-1/2	30	35	23-3/4	3403	3733
V1109	9	57-1/4	49-1/2	49-1/2	—	—	—	—	44-7/16	54	10	4	24-1/4	20-1/2	30	35	—	3795	4147
V1110	10	63-3/8	55-5/8	24-3/4	30-7/8	—	—	—	50-9/16	53	12	4	24-1/4	25-5/8	30	35	—	4188	4557
V1111	11	69-1/2	61-3/4	37	24-3/4	—	—	—	56-11/16	53	12	4	24-1/4	25-5/8	30	40	—	4580	4964
V1112	12	75-5/8	67-7/8	37	30-7/8	—	—	—	56-5/8	53	12	5	25-3/4	25-5/8	30	40	—	4972	5374
V1113	13	81-3/4	74	37	37	—	—	—	53-5/16	53	12	5	25-3/4	26-1/8	30	40	—	5365	5771
V1114	14	87-7/8	80-1/8	24-3/4	24-1/2	30-7/8	—	—	53-5/16	52	14	5	27	26-1/8	30	40	—	5757	6184
V1115	15	94	86-1/4	24-3/4	24-1/2	37	—	—	53-5/16	52	14	6	27	26-1/8	30	40	—	6150	6601
V1116	16	100-1/8	92-3/8	30-7/8	36-3/4	24-3/4	—	—	53-5/16	52	14	6	26	26-1/8	30	40	—	6542	7008
V1117	17	106-1/4	98-1/2	30-7/8	36-3/4	30-7/8	—	—	53-5/16	52	14	6	26	26-1/8	30	40	—	6934	7417
V1118	18	112-3/8	104-5/8	30-7/8	24-1/2	24-1/2	24-3/4	—	53-5/16	51	16	7	—	—	31-3/4	40	—	7327	7823
V1119	19	118-1/2	110-3/4	30-7/8	24-1/2	24-1/2	30-7/8	—	53-5/16	51	16	7	—	—	31-3/4	40	—	7719	8231
V1120	20	124-5/8	116-7/8	30-7/8	24-1/2	36-3/4	24-3/4	—	53-5/16	51	16	8	—	—	31-3/4	40	—	8112	8638
V1121	21	130-3/4	123	30-7/8	24-1/2	36-3/4	30-7/8	—	53-5/16	51	16	8	—	—	31-3/4	40	—	8504	9053
V1122	22	136-7/8	129-1/8	30-7/8	24-1/2	24-1/2	24-1/2	24-3/4	53-5/16	50	18	9	—	—	31-3/4	46	—	8896	9456
V1123	23	143	135-1/4	30-7/8	24-1/2	24-1/2	24-1/2	30-7/8	53-5/16	50	18	9	—	—	31-3/4	46	—	9289	9865

\*Add 10 inches when equipped with optional control panel.



## TANKLESS HEATER RATINGS\* (Water and Steam)

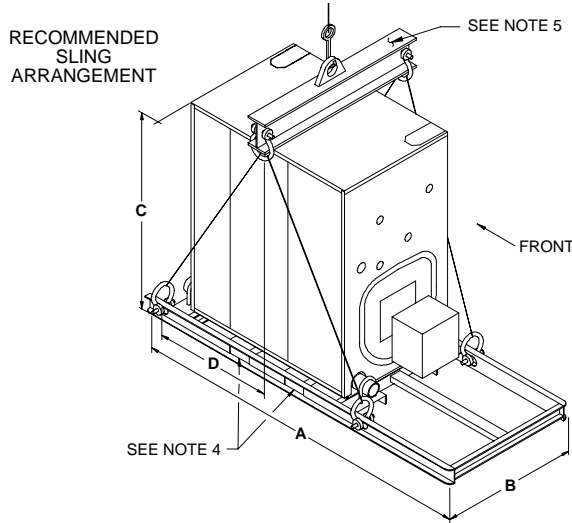
BOILER NUMBER	NUMBER OF V11-2 TANKLESS HEATERS INSTALLED								
	1	2	3	4	5	6	7	8	9
V1104	8								
V1105	8	16							
V1106	8	16							
V1107	8	16	24						
V1108	8	16	24						
V1109	8	16	24	32					
V1110	8	16	24	32					
V1111	8	16	24	32					
V1112	8	16	24	32	40				
V1113	8	16	24	32	40				
V1114	8	16	24	32	40				
V1115	8	16	24	32	40	48			
V1116	8	16	24	32	40	48			
V1117	8	16	24	32	40	48			
V1118	8	16	24	32	40	48	56		
V1119	8	16	24	32	40	48	56		
V1120	8	16	24	32	40	48	56	64	
V1121	8	16	24	32	40	48	56	64	
V1122	8	16	24	32	40	48	56	64	72
V1123	8	16	24	32	40	48	56	64	72



\*Ratings are given in gallons per minute continuous draw of water heated from 40°F to 140°F with 200°F boiler water.

## PACKAGED BOILER INFORMATION

In addition to being shipped as individual sections, the boiler is available with factory-assembled sections or as a completely packaged unit. The packaged unit is fastened to a steel skid to facilitate lifting with a fork truck or crane. The skid can serve as the boiler foundation, replacing the need for a concrete pad. A factory fire-test is also available on all packaged units.



BOILER NUMBER	NUMBER OF SECTIONS	LENGTH A	WIDTH B*	HEIGHT C**	APPROX. CENTER OF GRAVITY D***	APPROX. SHIPPING WEIGHT LBS*
V1104	4	71-1/4	48	68	22	2438
V1105	5	77-1/2	48	68	25-1/4	2899
V1106	6	89-1/2	48	68	28-1/4	3360
V1107	7	95-1/2	48	68	31-3/4	3806
V1108	8	101-3/4	48	68	35	4254
V1109	9	108	48	68	38-1/2	4689
V1110	10	114	48	68	41-1/2	5129
V1111	11	120	48	68	44-1/2	5597
V1112	12	130-1/4	48	68	47-1/2	6029
V1113	13	136-1/2	48	68	50-3/4	6537
V1114	14	142-1/2	48	68	53-3/4	6880
V1115	15	148-1/2	48	68	56-3/4	7408
V1116	16	154-3/4	48-1/2	70	59-3/4	7835
V1117	17	161	48-1/2	70	63	8265
V1118	18	167	48-1/2	70	67	8691
V1119	19	173	48-1/2	70	70	9140
V1120	20	179-1/4	48-1/2	70	73	9567
V1121	21	185-1/2	48-1/2	70	76-1/4	10005
V1122	22	197-1/2	48-1/2	70	79-1/4	10429
V1123	23	203-1/2	48-1/2	70	82-1/4	10859

- \* Width can vary with gas train configuration.
- \*\* Add 6-1/2" to dimension C when equipped with optional top outlet.
- \*\*\* Varies slightly with burner and gas train configuration.

1. Do not tilt. Exercise caution when lifting to avoid damage.
2. This boiler can be lifted by fork truck. Do not truck from front.
3. When lifting from rear, forks must extend beyond center of gravity and second skid cross bar.
4. When lifting from side, forks must extend to opposite skid rail and straddle center of gravity.
5. Cable spreader is to prevent jacket damage. Spreader width should equal B (width of skid) + 12". Adjust cable lengths to lift at approximate center of gravity per chart.

## BURNER MOUNTING PLATES and ADAPTER PLATES

### POWER FLAME ("CR" SERIES) BURNER ADAPTER PLATE

BOILER MODEL	PART NO.	LD. NO.	"A" DIA.	"B" DIA.
V-1104 and 1105	602263401	40	7-1/2	10-1/4
V-1106 thru 1110	602263411	41	9	12
V-1111 thru 1121	602263421	42	10-3/8	14-1/8
V-1122 and 1123	Adapter furnished with burner			

### BECKETT ("CF" SERIES) BURNER ADAPTER PLATE

BOILER MODEL	PART NO.	LD. NO.	"A" DIA.	"B" DIA.
V-1104 thru 1109 V1112 and 1113	602263001	00	6-3/4	10
V-1110, 1111, 1114 and 1115	602263011	01	8-1/4	10
V-1116	602263021	02	10-1/4	11

### POWER FLAME ("JR" SERIES) BURNER ADAPTER PLATE

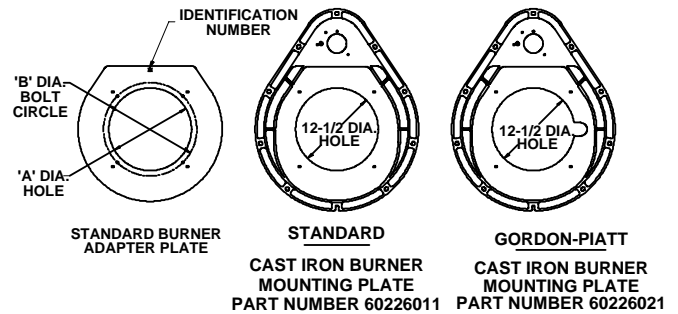
BOILER MODEL	PART NO.	LD. NO.	"A" DIA.	"B" DIA.
V-1104 and 1105	602263451	45	6-3/8	10-1/4
V-1106 thru 1108	602263461	46	6-3/8	11-11/16

### CARLIN ("CRD" & "FFD" SERIES) BURNER ADAPTER PLATE

BOILER MODEL	PART NO.	LD. NO.	"A" DIA.	"B" DIA.
V-1105 thru 1109	602263301	30	6-1/8	10
V-1110 thru 1113	602263311	31	9	10
V-1114 thru 1117	602263321	32	10-1/4	11

### GORDON-PIATT ("R" SERIES) BURNER

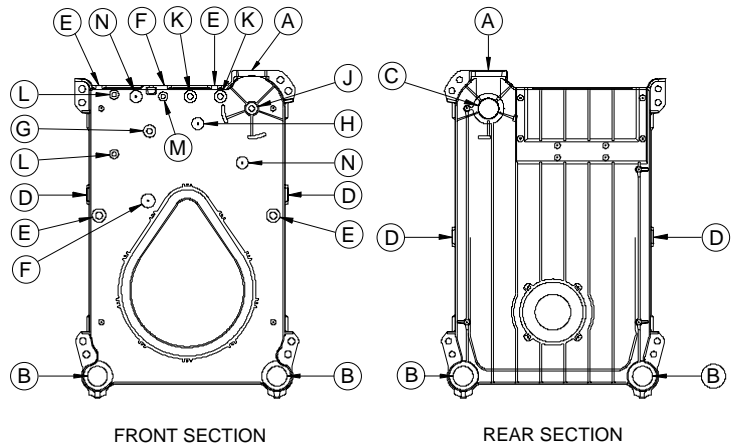
BOILER MODEL	Adapter is plate furnished with burner
V-1104 thru 1123	R8 Burner - mounted on burner R10 Burner - loose in burner carton



Note: A mounting plate and adapter plate are needed for each unit. All CR3 & CR4 burners have a diamond shaped adapter plate.

## CONTROL TAPPINGS

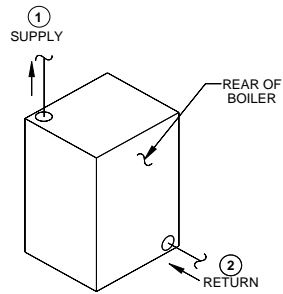
LOCATION	SIZE OF TAPPINGS	STEAM	WATER
A	4	Supply	Supply
B	3	Return	Return
C	3	Safety Valve	Relief Valve
D	1-1/2	Crown Inspection/Washout (Special Order Only)	Crown Inspection/Washout (Special Order Only)
E	1	Float L.W.C.O.	Float L.W.C.O.
F	1	Auxiliary Float L.W.C.O. (Special Order Only)	—
G	3/4	Probe L.W.C.O.	Probe L.W.C.O.
H	3/4	Auxiliary Probe L.W.C.O. (Special Order Only)	—
J	3/4	Pressure Limit Control	Temperature Limit Control
K	3/4	Auxiliary Pressure Limit Control	Auxiliary Temperature Limit Control
L	1/2	Gauge Glass	Not Used - Plug
M	1/2	Steam Gauge (Bush to 1/4")	Temperature/Pressure Gauge
N	3/4	Auxiliary Tapping (Special Order Only)	Auxiliary Tapping (Special Order Only)



# V11 SERIES MINIMUM PIPING RECOMMENDATIONS

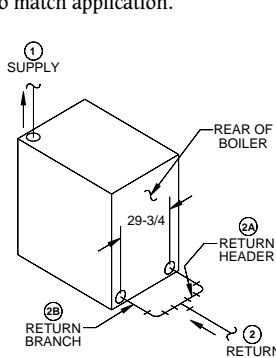
## WATER BOILER

BOILER MODEL	SUPPLY PIPING SIZE IN INCHES						RETURN PIPING SIZE IN INCHES					
	(1) SUPPLY		(1A) SUPPLY HEADER		(1B) SUPPLY RISER (QT. SIZE)		(2) RETURN		(2A) RETURN HEADER		(2B) RETURN BRANCH (QT. SIZE)	
	20°F DROP	40°F DROP	20°F DROP	40°F DROP	20°F DROP	40°F DROP	20°F DROP	40°F DROP	20°F DROP	40°F DROP	20°F DROP	40°F DROP
V1104	2-1/2	2	—	—	—	—	2-1/2	2	—	—	—	—
V1105	2-1/2	2	—	—	—	—	2-1/2	2	—	—	—	—
V1106	2-1/2	2	—	—	—	—	2-1/2	2	—	—	—	—
V1107	3	2	—	—	—	—	3	2	—	—	—	—
V1108	3	2	—	—	—	—	3	2	—	—	—	—
V1109	4	2-1/2	—	—	—	—	4	2-1/2	3	—	(2) 3	(2) 3
V1110	4	2-1/2	—	—	—	—	4	2-1/2	3	—	(2) 3	(2) 3
V1111	4	2-1/2	—	—	—	—	4	2-1/2	3	—	(2) 3	(2) 3
V1112	4	3	—	—	—	—	4	3	3	—	(2) 3	(2) 3
V1113	4	3	—	—	—	—	4	3	3	—	(2) 3	(2) 3
V1114	4	3	—	—	—	—	4	3	3	—	(2) 3	(2) 3
V1115	4	3	—	—	—	—	4	3	3	—	(2) 3	(2) 3
V1116	5	3	3	—	(2) 3	—	5	3	3	—	(2) 3	(2) 3
V1117	5	3	3	—	(2) 3	—	5	3	3	—	(2) 3	(2) 3
V1118	5	4	4	—	(2) 4	—	5	4	4	3	(3) 3	(2) 3
V1119	5	4	4	—	(2) 4	—	5	4	4	3	(3) 3	(2) 3
V1120	5	4	4	—	(2) 4	—	5	4	4	3	(3) 3	(2) 3
V1121	5	4	4	—	(2) 4	—	5	4	4	3	(3) 3	(2) 3
V1122	5	4	4	—	(2) 4	—	5	4	4	3	(3) 3	(2) 3
V1123	5	4	4	—	(2) 4	—	5	4	4	3	(3) 3	(2) 3

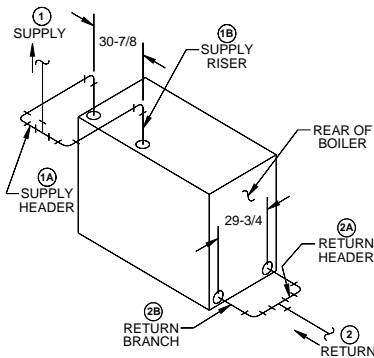


V-1104 THRU V-1108 (W/20° F DROP)  
V-1104 THRU V-1117 (W/40° F DROP)

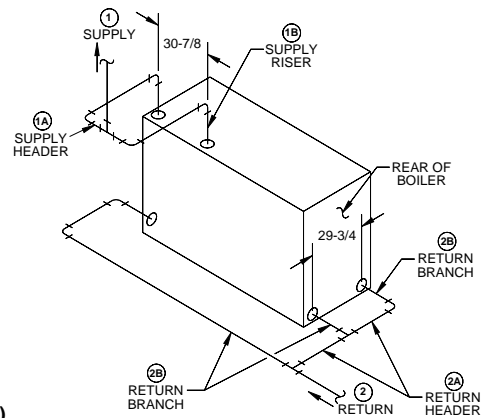
All piping is schedule 40.  
Pipe sizes listed are based on a 20° F or 40° differential (temperature drop).  
Select one to match application.



V-1109 THRU V-1115 (W/20° F DROP)  
V-1118 THRU V-1123 (W/40° F DROP)



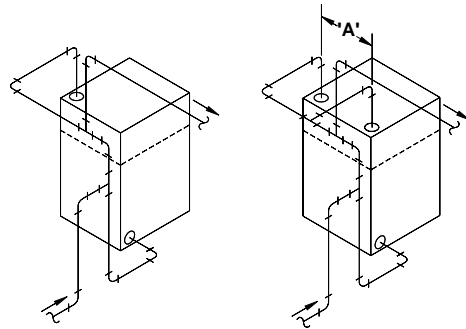
V-1116 AND V-1117 (W/20° F DROP)



V-1118 THRU V-1123 (W/20° F DROP)

## STEAM BOILER

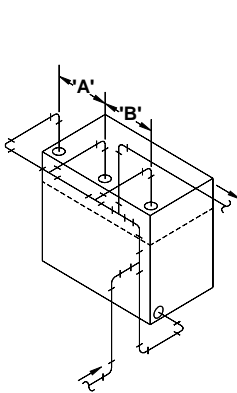
BOILER MODEL	PIPING SIZE IN INCHES				RISER SPACING IN INCHES				
	(1) RISER (QT. SIZE)	(2) RETURN	(3) HEADER	(4) EQUALIZER	'A'	'B'	'C'	'D'	'E'
V1104	(1) 4	2	4	2-1/2	—	—	—	—	—
V1105	(1) 4	2	4	2-1/2	—	—	—	—	—
V1106	(2) 4	2-1/2	6	2-1/2	31-1/8	—	—	—	—
V1107	(2) 4	2-1/2	6	2-1/2	37-1/4	—	—	—	—
V1108	(2) 4	2-1/2	6	2-1/2	43-3/8	—	—	—	—
V1109	(2) 4	2-1/2	6	2-1/2	49-1/2	—	—	—	—
V1110	(3) 4	2-1/2	6	2-1/2	24-3/4	30-7/8	—	—	—
V1111	(3) 4	3	8	4	37	24-3/4	—	—	—
V1112	(3) 4	3	8	4	37	30-7/8	—	—	—
V1113	(3) 4	3	8	4	37	37	—	—	—
V1114	(4) 4	3	8	4	24-3/4	24-1/2	30-7/8	—	—
V1115	(4) 4	3	8	4	24-3/4	24-1/2	37	—	—
V1116	(4) 4	3	8	4	30-7/8	36-3/4	24-3/4	—	—
V1117	(4) 4	3	8	4	30-7/8	36-3/4	30-7/8	—	—
V1118	(5) 4	3	8	4	30-7/8	24-1/2	24-1/2	24-3/4	—
V1119	(5) 4	3	10	4	30-7/8	24-1/2	24-1/2	30-7/8	—
V1120	(5) 4	3	10	4	30-7/8	24-1/2	36-3/4	24-3/4	—
V1121	(5) 4	3	10	4	30-7/8	24-1/2	36-3/4	30-7/8	—
V1122	(6) 4	3	10	4	30-7/8	24-1/2	24-1/2	24-1/2	24-3/4
V1123	(6) 4	3	10	4	30-7/8	24-1/2	24-1/2	24-1/2	30-7/8



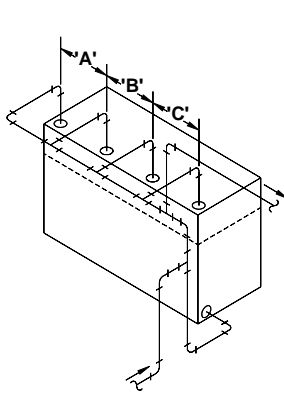
V-1104 AND V-1105

V-1106 THRU V-1109

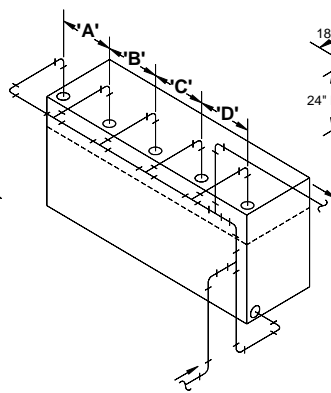
All piping is schedule 40.



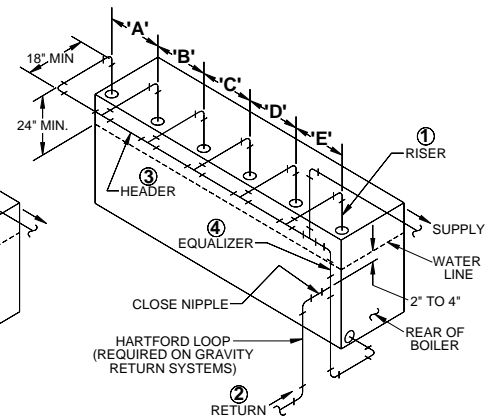
V-1110 THRU V-1113



V-1114 THRU V-1117



V-1118 THRU V-1121



V-1122 AND V-1123

# V11 SERIES BURNER SCHEDULE



## OIL BURNERS

BOILER NUMBER	BECKETT			CARLIN			GORDON-PIATT			POWER FLAME		
	BURNER MODEL	STD. MOTOR VOLTAGE	H.P.	BURNER MODEL	STD. MOTOR VOLTAGE	H.P.	BURNER MODEL	STD. MOTOR VOLTAGE	H.P.	BURNER MODEL	STD. MOTOR VOLTAGE	H.P.
V1104	CF1400	120/60/1	1/2	N/A	N/A	N/A	R8.9-O	120/60/1	1/2	CR1-OS	120/60/1	1/2
V1105	CF1400	120/60/1	1/2	702CRD	240/60/1	1/2	R8-O	120/60/1	1/2	CR1-OS	120/60/1	1/2
V1106	CF1400	120/60/1	1/2	702CRD	240/60/1	1/2	R8.1-O	120/60/1	3/4	CR2-OAS	240/60/1	3/4
V1107	CF2300	120/60/1	3/4	801CRD	240/60/1	3/4	R8.2-O	120/60/1	1	CR2-OAS	240/60/1	3/4
V1108	CF2300	120/60/1	3/4	801CRD	240/60/1	3/4	R8.3-O	240/60/3	1-1/2	CR2-OAS	240/60/1	3/4
V1109	CF2300	120/60/1	3/4	801CRD	240/60/1	3/4	R8.3-O	240/60/3	1-1/2	CR2-OAS	240/60/1	3/4
V1110	CF2300	120/60/1	3/4	105OFFD	240/60/1	1	R8.4-O	240/60/3	2	CR2-OAS	240/60/1	1
V1111	CF2300	120/60/1	3/4	105OFFD	240/60/1	1	R10-O	240/60/3	1-1/2	CR3-O	240/60/3	2
V1112	CF2500	240/60/3	2	105OFFD	240/60/1	1-1/2	R10-O	240/60/3	2	CR3-O	240/60/3	2
V1113	CF2500	240/60/3	2	105OFFD	240/60/1	1-1/2	R10.1-O	240/60/3	2	CR3-O	240/60/3	2
V1114	CF3500	240/60/3	2	115OFFD	240/60/1	1-1/2	R10-O	240/60/3	2	CR3-O	240/60/3	2
V1115	CF3500	240/60/3	2	115OFFD	240/60/1	1-1/2	R10-O	240/60/3	2	CR3-O	240/60/3	2
V1116	CF3500	240/60/3	2	115OFFD	240/60/1	1-1/2	R10.1-O	240/60/3	3	CR3-O	240/60/3	3
V1117	N/A	N/A	N/A	115OFFD	240/60/1	1-1/2	R10.1-O	240/60/3	3	CR3-O	240/60/3	3
V1118	N/A	N/A	N/A	N/A	N/A	N/A	R10.2-O	240/60/3	5	CR3-OB	240/60/3	3
V1119	N/A	N/A	N/A	N/A	N/A	N/A	R10.2-O	240/60/3	5	CR3-OB	240/60/3	3
V1120	N/A	N/A	N/A	N/A	N/A	N/A	R10.2-O	240/60/3	5	CR3-OB	240/60/3	3
V1121	N/A	N/A	N/A	N/A	N/A	N/A	R10.2-O	240/60/3	5	CR3-OB	240/60/3	3
V1122	N/A	N/A	N/A	N/A	N/A	N/A	R10.2-O	240/60/3	5	CR4-OA	240/60/3	5
V1123	N/A	N/A	N/A	N/A	N/A	N/A	R10.2-O	240/60/3	5	CR4-OA	240/60/3	5

## GAS BURNERS\*

BOILER NUMBER	GORDON-PIATT				POWER FLAME - CR SERIES			POWER FLAME - JR SERIES				
	BURNER MODEL	STD. MOTOR VOLTAGE	H.P.	MIN. GAS PRES. IN.	BURNER MODEL	STD. MOTOR VOLTAGE	H.P.	BURNER MODEL	STD. MOTOR VOLTAGE	H.P.	MIN. GAS PRES. IN.	INLET GAS CONNECTION IN.
V1104	R8.9-G	120/60/1	1/2	4.6	CR1-G-12	120/60/1	1/3	JR30A-10	120/60/1	1/3	4.3	1
V1105	R8-G	120/60/1	1/2	4.2	CR1-G-12	120/60/1	1/2	JR30A-12	120/60/1	1/3	4.9	1
V1106	R8.1-G	120/60/1	3/4	6.8	CR2-G-15	120/60/1	1/2	JR50A-15	120/60/1	1/3	5.6	1
V1107	R8.2-G	120/60/1	1	6.7	CR2-G-15	120/60/1	1/2	JR50A-15	120/60/1	1/2	6.5	1
V1108	R8.3-G	240/60/3	1-1/2	6.8	CR2-G-15	120/60/1	1/2	JR50A-15	120/60/1	1/2	5.0	1-1/4
V1109	R8.3-G	240/60/3	1-1/2	6.8	CR2-G-15	120/60/1	1/2	N/A	N/A	N/A	N/A	N/A
V1110	R8.4-G	240/60/3	2	5.8	CR2-G-20A	240/60/1	1	N/A	N/A	N/A	N/A	N/A
V1111	R10-G	240/60/3	1-1/2	5.7	CR3-G-20	240/60/3	1-1/2	N/A	N/A	N/A	N/A	N/A
V1112	R10-G	240/60/3	2	6.4	CR3-G-20	240/60/3	1-1/2	N/A	N/A	N/A	N/A	N/A
V1113	R10.1-G	240/60/3	2	6.5	CR3-G-20	240/60/3	1-1/2	N/A	N/A	N/A	N/A	N/A
V1114	R10-G	240/60/3	2	5.9	CR3-G-20	240/60/3	1-1/2	N/A	N/A	N/A	N/A	N/A
V1115	R10-G	240/60/3	2	6.0	CR3-G-20	240/60/3	1-1/2	N/A	N/A	N/A	N/A	N/A
V1116	R10.1-G	240/60/3	3	6.6	CR3-G-25	240/60/3	3	N/A	N/A	N/A	N/A	N/A
V1117	R10.1-G	240/60/3	3	6.5	CR3-G-25	240/60/3	3	N/A	N/A	N/A	N/A	N/A
V1118	R10.2-G	240/60/3	5	7.2	CR3-G-25B	240/60/3	3	N/A	N/A	N/A	N/A	N/A
V1119	R10.2-G	240/60/3	5	6.1	CR3-G-25B	240/60/3	3	N/A	N/A	N/A	N/A	N/A
V1120	R10.2-G	240/60/3	5	5.3	CR3-G-25B	240/60/3	3	N/A	N/A	N/A	N/A	N/A
V1121	R10.2-G	240/60/3	5	6.1	CR3-G-25B	240/60/3	3	N/A	N/A	N/A	N/A	N/A
V1122	R10.2-G	240/60/3	5	6.3	CR4-G-25	240/60/3	3	N/A	N/A	N/A	N/A	N/A
V1123	R10.2-G	240/60/3	5	6.2	CR4-G-25	240/60/3	3	N/A	N/A	N/A	N/A	N/A

\*For gas connection size on Gordon-Piatt and Power Flame CR burners and minimum gas pressure for CR burner see Gas/Oil Burner chart.

## GAS/LIGHT OIL BURNERS

BOILER NUMBER	GORDON-PIATT*				POWER FLAME - CR SERIES				
	BURNER MODEL	STD. MOTOR VOLTAGE	H.P.	INLET GAS CONNECTION IN.	BURNER MODEL	STD. MOTOR VOLTAGE	H.P.	INLET GAS CONNECTION IN.	MIN. GAS PRES. IN.
V1104	R8.9-GO	120/60/1	1/2	1	CR1-GO-12	120/60/1	1/2	1	4.7
V1105	R8-GO	120/60/1	1/2	1-1/4	CR1-GO-12	120/60/1	1/2	1	4.8
V1106	R8.1-GO	120/60/1	3/4	1-1/4	CR2-GO-15	240/60/1	3/4	1	5.4
V1107	R8.2-GO	120/60/1	1	1-1/2	CR2-GO-15	240/60/1	3/4	1	6.4
V1108	R8.3-GO	240/60/3	1-1/2	1-1/2	CR2-GO-15	240/60/1	3/4	1	7.5
V1109	R8.3-GO	240/60/3	1-1/2	1-1/2	CR2-GO-15	240/60/1	3/4	1-1/4	6.4
V1110	R8.4-GO	240/60/3	2	2	CR2-GO-20A	240/60/1	1-1/2	1-1/4	5.8
V1111	R10-GO	240/60/3	1-1/2	2	CR3-GO-20	240/60/3	2	2	5.8
V1112	R10-GO	240/60/3	2	2	CR3-GO-20	240/60/3	2	1-1/2	6.0
V1113	R10.1-GO	240/60/3	2	2-1/2	CR3-GO-20	240/60/3	2	1-1/2	6.8
V1114	R10-GO	240/60/3	2	2	CR3-GO-20	240/60/3	2	1-1/2	7.4
V1115	R10-GO	240/60/3	2	2-1/2	CR3-GO-20	240/60/3	2	1-1/2	7.3
V1116	R10.1-GO	240/60/3	3	2-1/2	CR3-GO-25	240/60/3	3	2	6.6
V1117	R10.1-GO	240/60/3	3	2-1/2	CR3-GO-25	240/60/3	3	2	7.1
V1118	R10.2-GO	240/60/3	5	3	CR3-GO-25B	240/60/3	3	2	7.7
V1119	R10.2-GO	240/60/3	5	2-1/2	CR3-GO-25B	240/60/3	3	2-1/2	6.5
V1120	R10.2-GO	240/60/3	5	3	CR3-GO-25B	240/60/3	3	2-1/2	7.0
V1121	R10.2-GO	240/60/3	5	3	CR3-GO-25B	240/60/3	3	2-1/2	7.0
V1122	R10.2-GO	240/60/3	5	3	CR4-GO-25	240/60/3	5	2-1/2	6.3
V1123	R10.2-GO	240/60/3	5	3	CR4-GO-25	240/60/3	5	2-1/2	6.9

\*For minimum gas pressure requirements see Gas Burner chart.

# SPECIFICATIONS

## V11 RATINGS



BOILER MODEL (1)	BOILER H.P.	GROSS OUTPUT MBH (2)	I=B=R NET RATING (3)			BURNER INPUT		NET FIREBOX VOLUME (CU. FT.)	PRESSURE IN FIREBOX (IN. WTR. COLUMN)	I-B-R VENT DIA. (IN.)	APPROX. SHIPPING AND LIFTING WEIGHT LBS
			STEAM		WATER MBH (3)	OIL GPH (4)	GAS MBH				
			MBH	SQ. FT.							
V1104	19.9	667	500	2083	580	5.8	837	7.9	.35	8	2105
V1105	25.6	857	643	2679	745	7.4	1068	10.6	.36	8	2510
V1106	31.9	1069	802	3342	930	9.2	1328	13.2	.37	8	2920
V1107	38.3	1281	963	4013	1114	11.0	1588	15.9	.42	10	3325
V1108	45.3	1517	1159	4829	1319	13.0	1876	18.5	.42	10	3733
V1109	51.7	1729	1335	5563	1503	14.8	2136	21.1	.39	10	4147
V1110	58.0	1941	1507	6279	1688	16.6	2396	23.8	.42	12	4557
V1111	64.3	2154	1672	6967	1873	18.4	2656	26.5	.40	12	4964
V1112	69.7	2334	1812	7550	2030	20.0	2887	29.1	.42	12	5374
V1113	74.8	2503	1943	8096	2177	21.5	3103	31.8	.40	12	5771
V1114	81.6	2730	2120	8833	2374	23.5	3392	34.4	.38	14	6184
V1115	88.3	2957	2296	9567	2571	25.5	3680	37.1	.36	14	6601
V1116	93.4	3126	2427	10113	2718	27.0	3897	39.7	.38	14	7008
V1117	100.2	3353	2603	10846	2916	29.0	4186	42.4	.41	14	7417
V1118	106.9	3580	2780	11583	3113	31.0	4474	45.0	.39	16	7823
V1119	111.7	3739	2903	12096	3251	32.5	4691	47.7	.38	16	8231
V1120	118.2	3957	3072	12800	3441	34.5	4979	50.3	.38	16	8638
V1121	124.7	4174	3241	13504	3630	36.5	5268	53.0	.40	16	9053
V1122	129.5	4334	3365	14021	3769	38.0	5485	55.6	.41	18	9456
V1123	136.0	4551	3533	14721	3957	40.0	5773	58.3	.43	18	9865

- Suffix "S" indicates steam boiler, "W" indicates water boiler. Suffix "G" indicates gas-fired, "O" indicates oil fired and "GO" indicates combination gas/oil fired.
- Boiler ratings are based on 13% CO<sub>2</sub> on oil, and .10 in. water column pressure at boiler flue outlet.
- I=B=R net ratings shown are based on piping and pick up allowances which vary from 1.333 to 1.288 for steam and 1.15 for water. Consult manufacturer for installations having unusual piping and pick up requirements, such as intermittent system operation, extensive piping systems, etc.
- The I=B=R burner capacity in GPH is based on oil having a heat value of 140,000 BTU per gallon.

Ratings shown above apply to altitudes up to 1000 feet for oil and 2000 feet for gas. For altitudes above those indicated, the ratings should be reduced at the rate of 4% for each 1000 feet above sea level.

**NOTE:** Maximum allowable working pressure  
 Steam: 15 PSI W.P.  
 Water - USA: 50 PSI W.P. standard, 80 PSI W.P. (Optional), 30 PSI W.P. (Optional)  
 Water - Canada: 50 PSI W.P. standard

### STANDARD EQUIPMENT

**ALL BOILERS:** Sections unassembled, flush insulated jacket, burner mounting plate, rear observation port cover, fire wall plates, target wall (V1104-1106 only), **rear flue outlet damper** (top outlet optional), flue canopy, trim, and miscellaneous plugs, bushing and fittings

**STEAM TRIM:** 15 PSI safety valve, PA404A pressuretrol, gauge glass assembly, boiler drain valve, steam gauge

**WATER TRIM:** 50 PSI safety relief valve, L4006A high limit, pressure temperature gauge, boiler drain valve

**OIL BOILERS:** Flange mounted flame retention oil burner furnished with 2 stage fuel unit, primary control and dual oil valves

**GAS BOILERS:** Flange mounted gas burner with standard controls meeting the latest UL requirements, dual gas valves, gas-electric ignition with proven gas pilot, flame rod on JR burner, ultra violet flame detector on others, electronic programming controls and components are factory wired in a burner mounted control cabinet (except JR - cabinet available as an option)

**GAS/OIL BURNERS:** Flange mounted combination gas/oil burner with standard controls meeting latest UL requirements, manually operated fuel transfer switch for dual fuel changeover, dual gas valves and oil valves, electric ignition with proven gas pilot on both fuels (direct spark ignition of oil is optional), ultra-violet flame detector, electronic programming controls and components are factory wired in a burner mounted control cabinet

### OPTIONAL EQUIPMENT

Assembled sections; completely packaged (includes high limit with manual reset and a probe low water cutoff); packaged and fire-tested; **top outlet flue damper**; tankless heaters; side inspection tappings with brass plugs; pressure relief door; 30 PSI and 80 PSI safety relief valves; combustion and hydronic controls to meet special applications including F.M., I.R.I., and ASME CSD-1.