Alpine Commercial

"C" Model

High Efficiency Gas Fired, Stainless Steel, Condensing Commercial Water Boiler
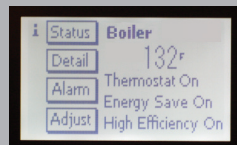
- Up to 97% thermal efficiency
- 399, 500, 600, 700, & 800 MBH
- **US** UNMATCHED ANYWHERE • Equipped with Sage2.2™ Control System, includes built-in sequencer for internal staging of up to eight Alpine boilers
- Stainless steel heat exchanger
- Natural or LP gas
- **US** UNMATCHED ANYWHERE • Unique, patented polypropylene condensate trap with internal cutoff switch prevents damage to heat exchanger from condensate backup
- Low waterside pressure drop
- Less than 20ppm NOx, meets requirements of South Coast Rule 1146.2
- Stackable
- Pre-installed temperature sensors: dual high limit/ supply, return, dual high limit flue gas
- Altitude-ready with de-rate
- Fast wiring to side access high voltage and low voltage connection panels

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US UNMATCHED ANYWHERE **Sage2.2™** boiler control system

- Backlit LCD touchscreen display provides diagnostic and troubleshooting information via intuitive text and menus, without cryptic codes or scrolling
- 5-to-1 turndown modulation and adaptable firing rate output
- Outdoor reset included, plus warm weather shutdown, and off season pump exercising
- DHW priority, control data logging, multiple & adjustable pump outputs
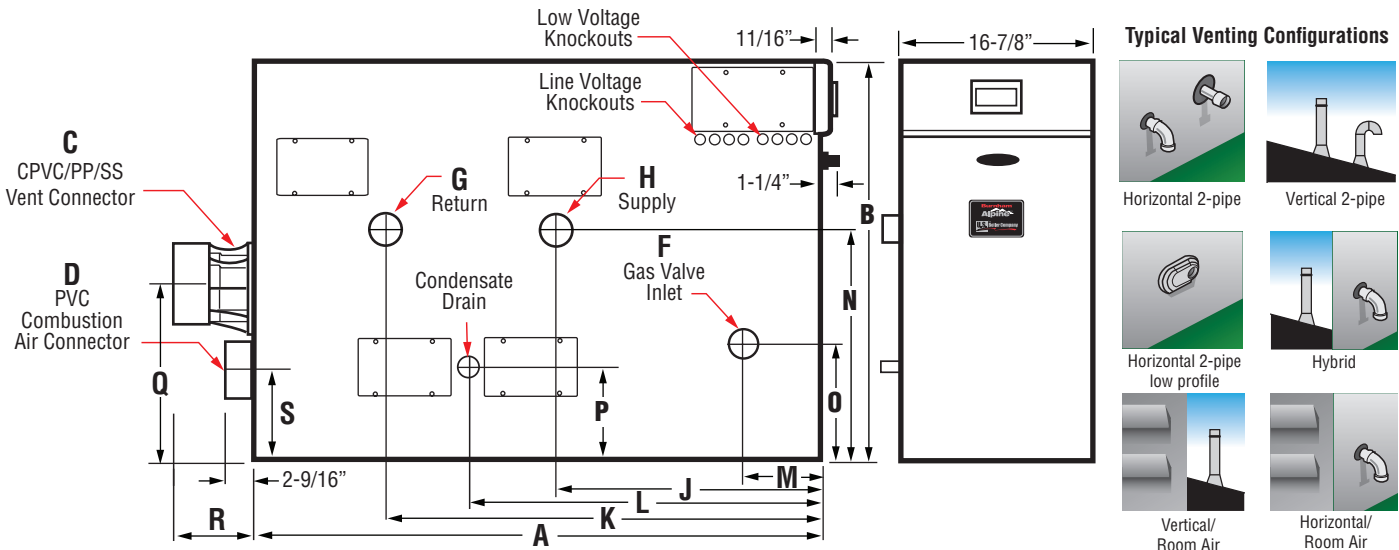- 4-20mA and modbus inputs

U.S. Boiler Company

Alpine Commercial: "C" Model Technical Information

AHRI CERTIFIED® www.ahridirectory.org — ASME H — ETL Intertek

Alpine Commercial Ratings & Specifications (sea level to 2000 feet)

Model	RATINGS			Net AHRI Water Rating (MBH)	Thermal Efficiency	Water Content (Gal.)	Heat Transfer Area (SQ. FT.)	(F) Gas Connection	Supply (H) & Return (G) Connection	Intake (D)/ Vent (C) Diameter	Approximate Shipping Weight (lbs.)
	Minimum Input (MBH)	Maximum Input (MBH)	Gross Output (MBH)								
ALP399C	80	399	375	326	94.1%	3.4	41.8	3/4" FPT	1-1/2" FPT	4"/4"	316
ALP500C	100	500	485	422	97.0%	4.3	58.1	3/4" FPT	2" MPT	4"/4"	368
ALP600C	125	625	594	517	95.0%	5.4	76.2	1" FPT	2" MPT	4"/6"	458
ALP700C	145	725	689	599	95.0%	5.4	76.2	1" FPT	2" MPT	4"/6"	458
ALP800C	160	800	760	661	95.0%	6.2	87.0	1" FPT	2" MPT	4"/6"	500

Net AHRI water ratings shown are based on an allowance of 1.15. The manufacturer should be consulted before selecting a boiler for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping systems, etc. For forced hot water heating systems where the boiler and all piping are within the area to be heated, the boiler may be selected on the basis of its Gross Output.

Alpine Commercial Dimensions

MODEL	A	B	C	D	F	G/H	J	K	L	M	N	O	P	Q	R	S
ALP399C	31-3/16"	43-1/2"	4"	4"	3/4" FPT	1-1/2" FPT	12-3/8"	23"	15-1/8"	7-13/16"	17-5/16"	32-1/2"	5-5/16"	12-1/2"	5-1/2"	5-1/8"
ALP500C	46-1/2"	35-1/16"	4"	4"	3/4" FPT	2" MPT	21-5/16"	34-13/16"	28-5/16"	5-3/8"	20-5/16"	12-3/8"	8-5/16"	15-1/2"	5-1/2"	8-1/8"
ALP600C	49-1/2"	35-1/16"	6"	4"	1" FPT	2" MPT	23-1/4"	38-1/16"	30-7/8"	6-7/8"	20-5/16"	10-5/16"	8-5/16"	15-9/16"	7-1/16"	8-1/8"
ALP700C	49-1/2"	35-1/16"	6"	4"	1" FPT	2" MPT	23-1/4"	38-1/16"	30-7/8"	6-7/8"	20-5/16"	10-5/16"	8-5/16"	15-9/16"	7-1/16"	8-1/8"
ALP800C	53-5/16"	35-1/16"	6"	4"	1" FPT	2" MPT	23-7/16"	41-3/16"	32-9/16"	6-7/8"	20-5/16"	10-5/16"	8-5/16"	15-9/16"	7-1/16"	8-1/8"

Low Voltage Knockouts
Line Voltage Knockouts
11/16"
16-7/8"
1-1/4"
B
N
O

C CPVC/PP/SS Vent Connector
D PVC Combustion Air Connector
G Return
H Supply
Condensate Drain
F Gas Valve Inlet
Q S R 2-9/16" P M J L K A

Typical Venting Configurations

Horizontal 2-pipe — Vertical 2-pipe
Horizontal 2-pipe low profile — Hybrid
Vertical/Room Air — Horizontal/Room Air

Standard Equipment

ASME stainless steel heat exchanger
Stainless steel mesh burner
5:1 turndown modulation
Variable speed combustion blower
Zero governor gas valve
Supply & return temperature sensors
Flue gas temperature sensor
Sealed control compartment
Negative pressure lower cabinet
Outdoor air temperature sensor
Low voltage PCB
Line voltage PCB
Condensate trap
Pressure relief valve, 50 psi for 500
Pressure relief valve, 60 psi for 600-800

3-in-1 Vent Connector – connects to CPVC, PolyPro, or stainless steel
Rear flue outlet
Stacking boiler brackets
Flow switch

VENT KIT:
30" CPVC, 90° elbow

SAGE2.2 BOILER CONTROL SYSTEM:
Touchscreen display
Built in diagnostics
Lead/lag and domestic hot water priority
Warm weather shutdown
4-20 mA inputs for external modulation

Optional Equipment

Part Number	Description
104590-01	Sage Zone Control Circulator Panel
104589-01	Sage Zone Control Valve Panel
80160718	120V LWCO/Manual reset kit
108182-01	24V LWCO Manual Reset
105591-01	24V LWCO Auto Reset with harness (ALP399C – residential only)
106605-01	CSD-1 kit (models, ALP 500C, ALP600C, ALP700C, ALP800C only), includes high and low gas pressure switches, gas valve harness, and instructions
104200-01	Pressure relief valve kit, 80PSI
104201-01	Pressure relief valve kit, 100PSI
108703-01	Header sensor kit
101867-01	Condensate neutralizer kit
80160852	High limit, manual reset, L4006E
80160426	High limit immersion well, 3/4" (80160456 for 1/2")
106432-01	Universal gateway - Modbus to BACnet
106433-01	Universal gateway - Modbus to LonWorks
107184-02	EMS signal converter kit - 0-10vdc to 4-20Ma
107216-01	Alarm buzzer/silencing switch

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