

# Atlas™ **A-Series** Condensing Boiler

---



# Atlas™ A Series High Efficiency Condensing Boiler

Atlas™ “A” Series condensing boilers perform dependably and quietly, offering the highest efficiency solution for space heating, domestic and process hot water, as well as low temperature applications such as snow melting, pool heating and low temp building loops. The flagship Atlas™ A Series is an extremely versatile condensing boiler design developed in response to heavy market demand with plenty of input from the design-build engineering field. Modular design, low emissions, advanced controls, and easy start-up and maintenance make the A Series the clear choice for all your high efficiency needs.

The Atlas™ A Series boiler combines solid engineering and innovative design with the highest quality components in the industry. With a thermal efficiency of up to 98%, fully modulating up to 7.5:1 turndown, and a sealed combustion chamber, A Series boilers offer feature rich, high performance with low NOx operation.

**Heat Exchanger & Combustion Design.** At the core of the A Series’ highly efficient operation is its high copper-finned tube, ceramic coated heat exchanger design and double layer of AL29-4C stainless steel jacketing.

The sealed combustion chamber effectively maintains heat transfer, increases efficiency, and reduces noise and emissions. To insure trouble-free operation, the A Series condensing boiler uses a Honeywell air-fuel ratio valve and venturi combined with a linkageless variable speed combustion blower control and speed feedback signal to assure consistent low-fire light off as well as high-fire pre- and post- purge. The blower allows up to 100 feet of equivalent vertical exhaust venting without adjustment.

- All copper and bronze construction
- ASME Section IV H-Stamped or HLW-Stamped
- Rated to 160psig, 250°F / 210°F
- AHRI certified models
- Front removable heat exchanger
- Honeywell air-fuel ratio valve and venturi
- Sealed combustion chamber
- Replaceable air intake filter
- Variable speed combustion blower motor
- Ceramic coated heat exchanger for enhanced thermal and corrosion resistance
- Single pass copper finned heat exchanger
- Low NOx, high efficiency knit metal fiber burner
- Available in natural gas, LP gas, or combination



**Advanced Premix Burner.** The A Series burner is made from a special iron-chromium alloy metal fiber material. The three-dimensional knitted structure increases heat transfer while maintaining a low surface temperature. It is elastic and highly flexible, which reduces stress and increases its resistance to thermal expansion. The structure also has relatively large pores that prevent it from becoming clogged by contaminants. The result is a robust and reliable burner that will last the life of the boiler.



**Advanced Controls.** Atlas™ A Series condensing boilers feature Honeywell's advanced SOLA controls. SOLA provides the user with full control of boiler settings from a single, user friendly interface. By integrating numerous functions into a single compact device, SOLA offers an increased range of programming functionality while reducing the need for excessive wiring and cutting installation time. The unit offers central heating and domestic hot water modes, both with demand prioritization. Among the many programmable features are flame safeguard, pump control, central heating / domestic hot water high limits, PID load control and operating controls, as well as lead-lag programming of up to 8 individual boilers. SOLA's advanced capabilities and numerous programming options allow you to increase efficiency, lower your costs and emissions, and reduce your environmental impact.

To further enhance user control, functionality and ease of operation, the A Series also comes standard with the enhanced SOLA D'finity® Operator Interface display. This latest 7", high-resolution color LCD touch screen provides the user clear, quick and easy access to all of the system's features and capabilities, putting all of the SOLA controller's functions within easy reach of the operator. SOLA even offers you you language choices of English, Spanish and French.

**Communication Gateway** A multi-protocol communication gateway designed to support effortless intergration with Atlas™ Series products and the end user Building Controller / Energy Management Systems.

All three protocols are preloaded into the gateway from the factory. Dip switch is used to select desired protocol by the end user. Protocol mapping program was designed to provide necessary control points for remote monitoring and control of Atlas™ products. A custom program option, to support customer selected control points is also available.



## Control Specification

- Flame safe guard controller with integrated operating, modulating & high limit safety controls
- Touchscreen Operator Interface Panel to monitor boiler status, lockouts, alerts, flame signal, and control temperatures as well as configure boiler settings.
- 4-20mA signal input for remote modulation
- Digital input for remote reset and time of day setback
- Modbus RS485 communication allows access to operating, safety and burner data
- Lockout and safety alerts history record contains up to 15 detailed snapshots of the system when lockout occurred
- Dual PID Load Combination control system for Central Heat DHW loop
- Interrupted pilot with spark ignition & air cooled UV scanner for monitoring pilot & main flame
- Two single element temperature sensor for: inlet & outdoor temperature
- Three dual element safety limit (UL 353) temperature sensor for: outlet, stack & DHW temperature
- Outdoor reset control with programmable heating curve
- Algorithm prioritization for burner demand (central heating, DHW and frost protection) and firing rate limit (stack and boiler delta-T)
- Programmable safety and boiler protection features for: frost protection, slow start, delta-T limit, stack-T limit, boiler-T limit, and DHW-T limit
- Pump control contacts for central heat, DHW & system pumps with purge time control and frost protection (pump included as additional option)
- Three levels of password protection for end user, installer/service engineer and manufacturer
- Additional interlock terminals for pre-ignition, recycle and lockout interlocks

## Control Options (Optional)

- Smart Boiler Control System™
- Communication gateway package
- Annunciation lamp package
- SPDT fault relay
- Alarm bell with silencing circuit
- Remote enable/disable relay
- Boiler status relay
- Sensor package



## Jacketing and Installation

- Standard stainless steel indoor
- Hinged front and top access panels
- Easy installation with just a pallet jack
- Stainless steel or galvanized outdoor (Optional)

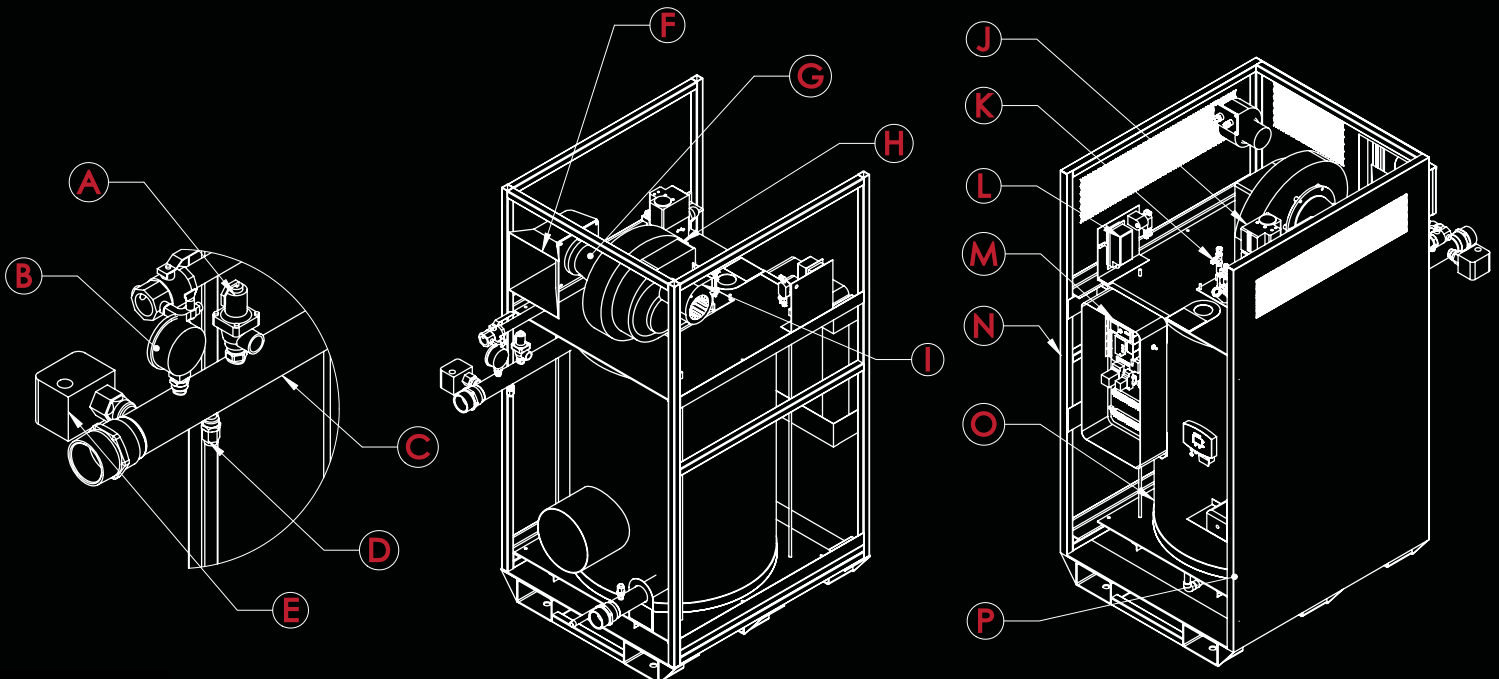
## Description of Items

- A. Relief Valve
- B. Temp and Press Gauge
- C. Manifold
- D. Temperature Sensor

- E. Flow Switch
- F. Air Intake
- G. Venturi
- H. Blower

- I. Pilot Blower
- J. Fuel-Air Ratio Valve
- K. Pilot Assembly
- L. Air Flow Switch

- M. Control Box
- N. Steel Frame
- O. Heat Exchanger Jacket
- P. Outside Jacketing



## Listings, Certifications & Specifications

Atlas™ A Series condensing boilers are designed and manufactured according to ASME Code Section IV. They are ETL tested and certified to the UL 795 and Canadian 1-3.1 Standard.

SPECIFICATIONS	A050	A075	A100	A150	A200	A250	A300
Input (BTU/hr)	500,000	750,000	1,000,000	1,500,000	2,000,000	2,500,000	3,000,000
Output (BTU/hr) @ 50°F Input	470,000	705,000	940,000	1,410,000	1,880,000	2,350,000	2,820,000
Dimension (W x D x H)	29"x34"x54"	29"x34"x54"	29"x34"x54"	29"x34"x69"	34½"x39"x70"	34½"x39"x79"	34½"x39"x87"
Footprint (Sq.ft.)	6.85	6.85	6.85	6.85	9.35	9.35	9.35
Recommended Flow Rate	50 gpm				100 gpm		
Minimum Flow Rate	20 gpm				60 gpm		
Pressure Drop	9 feet	12.5 feet	14 feet	15 feet	15 feet	17 feet	18 feet
Turndown <sup>1</sup>	3.5:1	5:1	7:1	7.5:1	6.5:1	7:1	7.5:1
NOx Emissions @ 3% O <sub>2</sub>					<9 ppm		
Min. Inlet Water Temp. Req.					NONE		
Max. Equivalent Exhaust Venting					100ft.		
Vent Size (Intake / Exhaust)	4" / 6"	4" / 6"	6" / 8"	6" / 8"	8" / 10"	10" / 12"	10" / 12"
Gas Connection Size	1"	1"	1"	1¼"	1¼"	1¼"	1¼"
Water Connection Size	2"	2"	2"	2"	2½"	2½"	2½"
Gas Pressure Required	5-14" WC				7-14" WC		9-14" WC
Firing Mode	Full Modulation						
Condensing	YES						
Max. Thermal Efficiency (25%)	98% <sup>1</sup>	98% <sup>1</sup>	98% <sup>1</sup>	98% <sup>1</sup>	98% <sup>2</sup>	98% <sup>2</sup>	98% <sup>2</sup>
Max. Thermal Efficiency (100%)	94% <sup>1</sup>	94% <sup>1</sup>	94% <sup>1</sup>	94% <sup>1</sup>	94% <sup>2</sup>	94% <sup>2</sup>	94% <sup>2</sup>
Electrical Requirements	120V 60Hz 1Ph						
Amperage (Without/With pump)	10A / 18A	10A / 18A	10A / 18A	15A / 23A	15A / 23A	15A / 23A	15A / 23A
Shipping Weight (lbs.)	875	915	1000	1125	1550	1692	1945

<sup>1</sup>Based on 50°F inlet water at 50GPM. Actual efficiency may vary with operating conditions.

<sup>2</sup>Based on 50°F inlet water at 100GPM. Actual efficiency may vary with operating conditions.

All dimensions are inches are approximate and subject to change. For weight critical application, consult factory.



ETL  
Canadian Listed  
(GAS & LPG Only)

CSA  
CAN1-3.1-77  
Compliant

UL 795  
Compliant



## Atlas™ A Series Feature Summary

- Up to 98% Thermal Efficiency
- Seven models from 0.5 to 3.0 MBTU input
- Up to 7.5:1 Turndown
- AHRI Certified Models Available
- Single Pass Copper Finned Heat Exchanger
- Air cooled Interrupted Pilot w/ UV Scanner
- Full modulation, Consistent Emissions with NOx <9 ppm and Clean Light Off
- Small Footprint

A front replaceable heat exchanger and clip-on jacket give access to all components, while the sealed combustion system allows for complete flexibility in installation. The modular design allows for simple multiple unit installations, and the on-board controls are readily interfaced with various communications systems. The full-featured, dependable and economical performance of the Atlas™ A Series makes it the ideal solution for all of your water heating needs.



Made With Pride In The USA.