## XP High Efficiency Condensing Water Heaters







# High Efficiency, High Input Commercial XP Models

With their combination of innovative control features and modulating capabilities, XP Water Heater models are the latest in high efficiency fully condensing products from A. O. Smith, offering high outputs for demanding, large-volume commercial applications. Thanks to state-of-the-art stainless steel heat exchanger, the XP models can achieve thermal efficiencies up to 99% when used in low-temperature water heating applications.

#### **Designed For A Great Range Of Applications**

XP models are designed to be used in potable hot water applications, including large-volume, full-service hotels and high-rise apartment complexes to casinos, resorts, government buildings, schools, hospitals and more.







#### XP At A Glance

- Top-of-the-line control with touchscreen
- Thermal efficiencies up to 99% in low-temperature applications
- High output models ranging from 920,000 to 3.4 Million Btu/Hr
- Vents in inexpensive PVC/CPVC pipe (can also be vented in AL29-4C® when specified or required by local codes)
- Models are CSA certified to the ANSI Z21.10.3-CSA 4.3 water heater standard and are AHRI listed with thermal efficiency ratings of up to 96% @ 100% fire and 140°F outlet temperature
- Fully modulating with turndown rates up to 20:1 (See spec sheet for further details)
- Ready for immediate connection to existing building management using MODBUS protocol

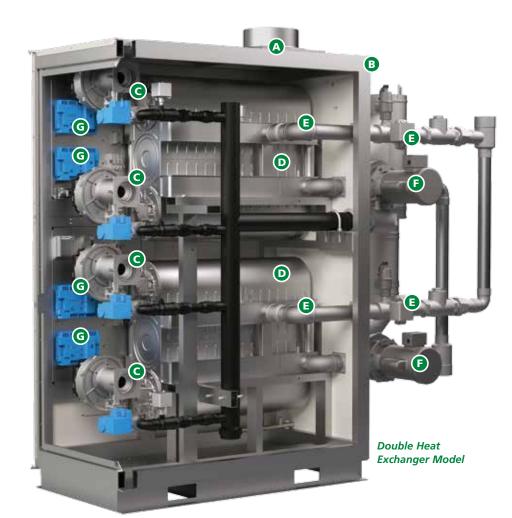
- Built-in redundancy helps to improve overall performance
- ENERGY STAR® Qualified



#### The Heat Exchanger

Thanks to its leading-edge technology, the XP features a multi-pass/multi-burner stainless steel heat exchanger designed to optimize efficiency while delivering long and trouble-free service. Simply put, the XP is both fuel efficient and capable of minimizing operating costs with every heating cycle.

- Utilizes leading-edge, multi-pass water tube heat exchanger to maximize heat transfer
- Designed for fully condensing operation throughout the heating range
- All heating surfaces are 316L stainless steel to provide a long and trouble-free service life
- Saves both fuel and operating costs with every cycle
- Impervious to thermal shock
- A Washable intake air filter.
- B Rugged welded and extruded aluminum alloy frame with removable heavy gauge steel jacket panels that allow easy access and service.
- Multiple modulating burners capable of modulating between 20% and 100% fire while providing smooth starts and clean combustion. Each burner is a premix design, constructed of high temperature stainless steel and utilizing a woven metal fiber mesh covering. Each burner is also warranted for 5 years and fires in a radial 360-degree flame pattern. Burner ignition is direct spark with flame monitoring via a flame sensor.



- The stainless steel construction of the XP's water tube heat exchangers allows it to operate in a continuous condensing mode while maximizing longevity and delivering exceptional energy-saving performance.
  - All XP models have factory-installed flow switches and low water cutoffs as standard features, providing redundant flow and low water protection.
- mounted, wired, and managed by the heater's control.

  Redundant ignition controls

Factory-sized and-mounted all-

bronze pump(s) are integrally

**G** Redundant ignition controls (one per burner) allow individual burner operation.



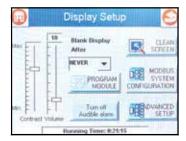
Single Heat Exchanger Model

#### **Superior Control**

Talk about having total control at your fingertips! The XP's intuitive touch control features the industry's most current technology, touch screen user interface, and the latest in energy savings algorithms. The control operates each of the burners as a separate water heater, which means that it is able to send error messages about problems with one burner while activating another—thus preventing system shutdowns. And since building management communications are a standard feature on every unit, the XP is ready for immediate connection to existing building management systems.







Additional screen images shown above.



## Modulating Fire Up to 20:1 Turndown

The secret to the stunning performance of the XP is its flexibility, thanks in part to the fully modulating burners featuring up to 20:1 turndown ratio. Because of the unique multi-burner design that allows load-equalizing firing rates, the XP takes temperature management to new levels of comfort and fuel efficiency by matching exact output to the building needs or requirements.

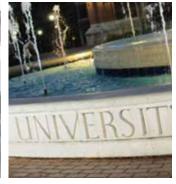


### XWH Recovery Capacities Table

Models	Input Rating	AHRI	Water	Temperature Rise °F (°C)		
	(Btu/hr)	Thermal %	Flow	40 (22)	100 (56)	140 (78)
XWH-1000	920,000	95.5	GPH LPH	2,662 10,078	1,065 4,031	761 2,880
XWH-1300	1,300,000	95	GPH LPH	3,742 14,167	1,497 5,667	1,069 4,048
XWH-1700	1,700,000	95.2	GPH LPH	4,904 18,565	1,962 7,426	1,401 5,304
XWH-2000	1,999,900	95.6	GPH LPH	5,794 21,931	2,317 8,773	1,655 6,266
XWH-2600	2,600,000	95.2	GPH LPH	7,501 28,393	3,000 11,357	2,143 8,112
XWH-3400	3,400,000	96	GPH LPH	9,891 37,441	3,956 14,976	2,826 10,697







#### Direct Venting up to 100 Equivalent Feet of Piping (CPVC/PVC venting material)

The XP and Water Heater models provide flexible and lower cost installation because they permit direct-vent air intake and exhaust runs up to 100 equivalent feet using CPVC/PVC venting material. Vent runs use CPVC for the first 10 feet and PVC thereafter. The XP's (Category IV) venting system's intake and exhaust runs can terminate horizontally through a sidewall or vertically through the roof. Please consult the latest edition of the Installation Manual for detailed venting information and maximum/minimum venting distances.



DIRECT VENT VERTICAL



DIRECT VENT, VERTICAL VENT HORIZONTAL INTAKE



DIRECT VENT HORIZONTAL



VERTICAL VENTING



HORIZONTAL VENTING



Contact your A. O. Smith representative for more information on the wide range of available combinations using the Ac-U-Temp system.

## Ac-U-Temp—A total hot water supply system

With Ac-U-Temp, A. O. Smith makes it as easy as possible to install a complete packaged system. A. O. Smith Ac-U-Temp systems are custom designed and built to fit your heating needs with tank sizes available from 80 gallons up to 10,000 gallons to meet your specifications and application requirements. Ac-U-Temp systems are shipped as complete systems, pre-piped and pre-wired. All the installer has to do is make the flue, gas, electrical, and water connections, so field errors are minimized.

For complete specifications on the XP, consult the specification sheets at www.hotwater.com or contact your local A. O. Smith sales representative.



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