

Non-Condensing Boilers

THERMIFIC VELOX™ & MFD™ SERIES



PATTERSON-KELLEY 



Increasing efficiency for a quicker return on investment

The improved P-K THERMIFIC VELOX™ & MODU-FIRE® boilers provide low operating, maintenance, and installation costs along with the highest achievable thermal efficiency level for a non-condensing gas-fired boiler, thus producing a quicker return on investment. All finned tubes are machined from solid copper tubes, providing the longest life and highest performance in the industry.

- Copper Finned Tube Heat Exchanger
- Lower fuel bills
- Ideal for retrofits in inaccessible locations
- Hybrid system design to maximize flexibility and efficiency
- 10 year guarantee

P-K THERMIFIC VELOX™ Boilers

The P-K THERMIFIC VELOX™ boiler's state-of-the-art vertical design utilizes a radial-fired, fan-assisted burner and heat exchanger, providing maximum efficiency and enabling operation at a CSA certified thermal efficiency of 85% as a Category I non-positive, non-condensing appliance.



FEATURES

- ✓ Compact/modular design allows multiple units to be installed in tandem
- ✓ Vertical burner/heat exchanger design
- ✓ Unique integral finned copper water tubes
- ✓ High heat transfer ratio
- ✓ Operates quietly, below OSHA standards
- ✓ CSA (AGA/CGA) certified and ASME approved

ADVANTAGES

- ✓ Compact to clear 30" doorway
- ✓ Suitable for indoor or outdoor placement
- ✓ Highest achievable thermal efficiency level for non-condensing, gas-fired boiler
- ✓ Sealed combustion design eliminates large air louvers and permits boiler installation in a negative pressure environment
- ✓ Needs only five connections to install
- ✓ Burner can be quickly and easily removed from the exchanger for cleaning or inspection
- ✓ Can replace larger boilers in a modular configuration using 2,000,000 BTU multiple units
- ✓ High heat transfer ratio and fast response to load requirements

Maximize efficiency with NURO® Touch-Screen Control System

The P-K THERMIFIC VELOX™ and the P-K MODU-FIRE® come standard with the NURO® touch-screen control system with NURO® Connect. The NURO® monitors and modulates the combustion and ignition of the boiler to maintain the desired outlet temperature, maximizing boiler efficiency.



Easy to Use:

Touch-screen interface provides simple step-by-step navigation for set-up, maintenance, custom configurations, efficiency, and more.



Easy to Set-up:

Whether installing a single boiler or cascading, with a simple touch, select from a variety of preconfigured settings for optimal system efficiency.



Easy to Maintain:

Software upgrades eliminate hardware replacement and costly service calls.

P-K MODU-FIRE® Forced Draft Boilers

The P-K MODU-FIRE® Forced Draft boiler combines full modulation control and forced draft advances with time-tested scale resistant construction to match boiler output to actual heat demand.



FEATURES

- ✓ Big output in a small, modular configuration
- ✓ Smooth 5:1 turndown can track varying loads down to 20% of rated capacity
- ✓ Eliminates short cycling in high variable speed pumping systems
- ✓ Dynamic air density compensation
- ✓ Small diameter Category IV venting
- ✓ Easy service construction

ADVANTAGES

- ✓ Simplified, low cost installation
- ✓ Suitable for indoor or outdoor placement
- ✓ Compact to clear 30" doorway; 2500 and 3000 Models clear 36" doorway
- ✓ Clean, efficient combustion across entire firing range of the boiler
- ✓ Perfect part-load performer, especially as part of a Hybrid system
- ✓ Easy to inspect and maintain

Water Heater Options

Both the THERMIFIC VELOX™ and MODU-FIRE® are available as Domestic Hot Water Heaters

BOILER RATINGS	750-MFD	1000-MFD	1500-MFD	2000-MFD	2500-MFD	3000-MFD	750-VX	1000-VX	1500-VX	1700-VX	2000-VX
EFFICIENCY	85.00%	85.00%	85.00%	85.00%	84.90%	84.90%	85.00%	85.00%	85.00%	85.00%	85.00%
MAX BTU/HR INPUT	750,000	1,000,000	1,500,000	2,000,000	2,500,000	3,000,000	750,000	1,000,000	1,500,000	1,700,000	2,000,000
MAX KW INPUT	219.8	293.1	439.6	586.1	732.7	879.2	219.8	293.1	439.6	498.2	586.1
MAX BTU/HR OUTPUT	637,500	850,000	1,250,000	1,700,000	2,122,500	637,500	637,500	850,000	1,275,000	1,445,000	1,700,000
MAX KW OUTPUT	186.8	249.1	373.7	498.2	622	746.5	186.8	249.1	373.7	423.5	498.2
MIN FLOW @ IGNITION (GPM)	60	80	90	170	165	165	60	80	90	100	120
MIN FLOW @ IGNITION (L/SEC)	3.8	5.1	5.7	10.8	10.5	10.5	3.8	5.1	5.7	6.3	7.6
MIN BTU/HR INPUT	150,000	166,000	250,000	335,000	500,000	500,000	604,000	610,000	1,005,000	1,050,000	1,100,000
MIN KW INPUT	44	48.6	73.3	98.2	146.5	146.5	177	178.8	294.5	307.7	322.4
MIN BTU/HR OUTPUT	127,500	141,100	212,500	284,750	424,500	424,500	513,000	518,500	854,250	892,500	935,000
MIN KW OUTPUT	37.4	41.4	62.3	83.5	124.4	124.4	150.5	152	250.4	261.6	274
TURNDOWN	5:1	6:1	6:1	6:1	5:1	6:1	1.2:1	1.6:1	1.5:1	1.6:1	1.8:1
FUEL- NG = NATURAL GAS, LP = PROPANE, DF = DUAL FUEL	NG,LP	NG,LP	NG,LP	NG,LP	NG	NG	NG,LP	NG,LP	NG,LP	NG,LP	NG
DEPTH (IN / MM)	34 / 864	34 / 864	34 / 864	34 / 864	54 / 1372	54 / 1372	34 / 864	34 / 864	34 / 864	34 / 864	34 / 864
WIDTH (IN / MM)	27 / 679	27 / 679	27 / 679	27 / 679	32 / 813	32 / 813	27 / 679	27 / 679	27 / 679	27 / 679	27 / 679
HEIGHT (IN / MM)	47 / 1,181	47 / 1,181	47 / 1,181	47 / 1,181	68 / 1,727	68 / 1,727	47 / 1,181	47 / 1,181	47 / 1,181	47 / 1,181	47 / 1,181
BOILER HP	19	25.4	38	50.8	63.4	76.1	19	25.4	38	43.2	50.8
MAX INLET GAS PRESSURE NG / LP (INCHES / WC)	14	14	14	14	14	14	14	14	14	14	14
MIN INLET GAS PRESSURE NG/LP (INCHES / WC)	3.5 / 7	3.5 / 7	3.5 / 7	3.5 / 7	4 / NA	4 / NA	3.5 / 7	3.5 / 7	4 / 7	3.5 / 7	3.5 / 7
SHIPPING WEIGHT (LBS / KILOS)	750 / 340	750 / 340	920 / 417	935 / 424	1200 / 544	1200 / 544	750 / 340	750 / 340	920 / 417	935 / 424	935 / 424
ELECTRICAL REQUIREMENTS	208-240V 1ph 60hz 10 amps	208-240V 1ph 60hz 10 amps	208-240V 1ph 60hz 15 amps	208-240V 1ph 60hz 15 amps	208-240V 1ph 60hz 20 amps	208-240V 1ph 60hz 20 amps	208-240V or 120V 1ph 60hz 10 amps	208-240V or 120V 1ph 60hz 10 amps	208-240V or 120V 1ph 60hz 15 amps	208-240V or 120V 1ph 60hz 15 amps	208-240V or 120V 1ph 60hz 15 amps
OPERATING WEIGHT (LBS / KILOS)	800 / 363	800 / 363	985 / 447	985 / 447	1,217 / 552	1,217 / 552	800 / 362	800 / 362	985 / 447	985 / 447	985 / 447
FLOW RATE 20°F AT GPM (LT/SEC)	65 / 4.1	85 / 5.4	130 / 8.2	170 / 10.7	212 / 13.4	255 / 16.1	65 / 4.1	85 / 5.4	130 / 8.2	145 / 9.2	170 / 10.7
Vent Materials											
AL29-4C	✓	✓	✓	✓	✓	✓	Note 1	Note 1	Note 1	Note 1	Note 1
316L SS	✓	✓	✓	✓	✓	✓	Note 1	Note 1	Note 1	Note 1	Note 1
CAT I	—	—	—	—	—	—	✓	✓	✓	✓	✓
CAT II	✓	✓	✓	✓	✓	✓	—	—	—	—	—
CAT IV	✓	✓	✓	✓	✓	✓	—	—	—	—	—

Note 1: Ensure flue material is suitable for Category 1 applications

THE PATTERSON-KELLEY EXPERIENCE

Patterson-Kelley, a division of the SPX Corporation, is the leading provider and producer of commercial hot water heating solutions. With over 135 years of experience and an innovative R&D pipeline, we provide a full line of condensing and non-condensing boilers, semi-instantaneous water heaters, and an array of commercial boiler and water heating products including gas fired, dual fuel and outdoor boilers.

Because we are continuously evolving our products, descriptions and technical data are subject to change without notice. Contact your local Patterson-Kelley representative for the most up-to-date information and product application support.

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