



P-K STORM™

RELIABLE EQUIPMENT FOR DEMANDING
CONDITIONS



PATTERSON-KELLEY 

Designed for Maximized Comfort Without Sacrificing Savings

The P-K STORM™ is built to transform the commercial boiler market. This top of the line, highly efficient condensing boiler is designed to maximize comfort during those long cold winter days without sacrificing savings. The P-K STORM™ water-tube boiler operates at up to 97% thermal efficiency with 10:1 mechanical turndown capabilities.



Advanced Design

The advanced design of the P-K STORM™ heat exchanger has the end user in mind when it comes to performance and longevity of a boiler. Between headache-free annual maintenance, available outdoor units, and higher turndown capability to match input building loads, the P-K STORM™ is ready for any forecast that may be in its future.

10:1 Mechanical Turndown Standard

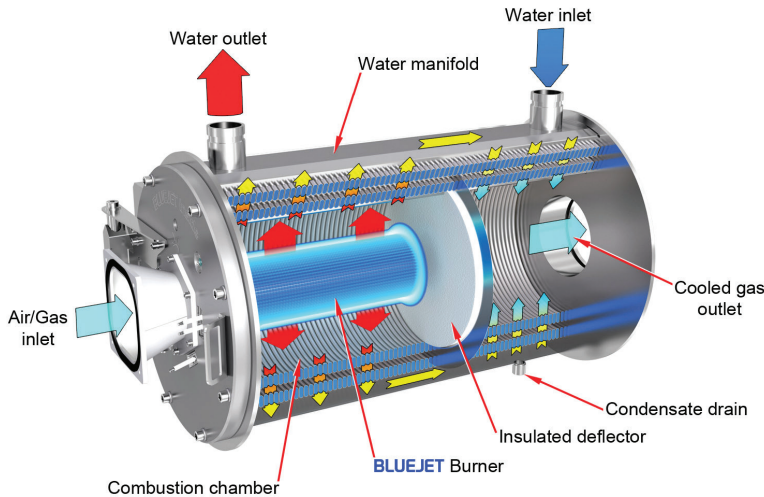
10:1 mechanical turndown is standard on all P-K STORM™ units. Patterson-Kelley has achieved higher turndown with a unique process that allows the gas valves to reliably turn down without adding excess air. This allows designers the ability to match input to building loads without sacrificing reliability.

FEATURES

- ✓ 1250-4000 MBTU
- ✓ Up to 97% thermal efficiency
- ✓ 316L Stainless steel coil ensures maximum corrosive resistance and durability
- ✓ Full modulation burner with up to 10:1 mechanical turndown
- ✓ Cabinet and heat exchanger design reduce repair and maintenance costs
- ✓ Outdoor Capabilities
- ✓ Variable speed combustion air blower
- ✓ Certified at 3.5 inch Water Column minimum gas pressure
- ✓ Pressure drops as low as 4.7' at 40° ΔT
- ✓ The compartmentalized design produces efficiency of heat transfer in each section

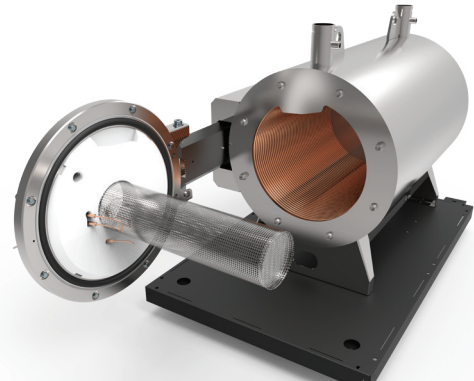
Compartmentalized Heat Exchanger Design

The stainless-steel heat exchanger in the PK STORM™ is designed to allow water to efficiently flow through two separate sections. This optimizes the transfer of heat by using temperature differential to its advantage. The insulated deflector lets combustion air run over the warmest water exiting the unit, and as the flue gas condenses, pass over the second section. This allows for efficient passage of heat, supporting the largest potential for heat transfer across the entire exchanger. Condensate drains freely out of the bottom of this condensing section while cooled combustion gas freely exits through the outlet.



Simplified Serviceability

The heat exchanger is designed to provide ease of access for simplified and quick maintenance. The heat exchanger door swivels open for full access to the tubes and burner inside the unit. This makes maintenance, including cleaning, a quick and cost effective process..



EQUIP OUTDOOR TECHNOLOGY

Factory assembled and tested for outdoor installations with efficiencies up to 97% and 10:1 mechanical turndown rate. Available on models ST1250 - ST2000

NURO® Touch-screen control system

The NURO® Touch-Screen Control System with NURO® Connect provides the most intuitive interface in the industry. Designed to maximize efficiency, the NURO® monitors and modulates the combustion and ignition of the boiler to maintain the desired outlet temperature. The lead/lag setup and boiler start rotation ensures run times are equally distributed across each unit in the system, extending the life of the boilers. Whether using a desktop or mobile device, NURO® Connect allows for quick, easy modification of system parameters of optimal efficiency.



BOILER RATINGS	ST1250	ST1500	ST1750	ST2000	ST2500	ST3000	ST3500	ST4000
EFFICIENCY	97%	97%	97%	97%	97%	97%	97%	97%
MAX BTU/HR INPUT	1,250,000	1,500,000	1,750,000	2,000,000	2,500,000	3,000,000	3,500,000	4,000,000
MAX KW INPUT	366	439.6	512.8	586	1250	732.6	1025.7	1172.2
MAX BTU/HR OUTPUT	1,212,500	1,455,000	1,697,500	1,940,000	2,425,000	2,910,000	3,395,000	3,880,000
MAX KW OUTPUT	355.3	426.4	497.4	568.5	710.6	852.8	994.9	1137.1
MIN FLOW @ IGNITION (GPM)	41	40	43	41	62	74	86	99
MIN FLOW @ IGNITION (LITRES/ SEC)	2.59	2.55	2.73	2.61	3.9	4.6	5.4	6.2
MIN BTU/HR INPUT	125,000	150,000	175,000	200,000	250,000	300,000	350,000	400,000
MIN KW INPUT	36.6	43.9	51.2	58.6	73.2	87.9	102.5	117.2
MIN BTU/HR OUTPUT	120,625	144,750	168,875	193,000	242,500	291,000	339,500	388,000
MIN KW OUTPUT	35.3	42.4	49.5	56.6	71	85.2	99.4	113.7
INDOOR/OUTDOOR	INDOOR/ OUTDOOR	INDOOR/ OUTDOOR	INDOOR/ OUTDOOR	INDOOR/ OUTDOOR	INDOOR	INDOOR	INDOOR	INDOOR
TURNDOWN	10:1	10:1	10:1	10:1	10:1	10:1	10:1	10:1
FUEL NG=NATURAL GAS	NG	NG	NG	NG	NG	NG	NG	NG



SIMPLIFIED SERVICEABILITY:
HEAT EXCHANGER DOOR SWIVELS OPEN TO PROVIDE FULL ACCESS TO THE TUBES AND BURNER INSIDE THE UNIT



SIGNIFICANTLY LOWER WATER PRESSURE DROPS:
REDUCES COST BY REQUIRING SMALLER PUMPS AND LESS ELECTRICAL ENERGY



10:1 MECHANICAL TURNDOWN:
ALLOWS FLEXIBILITY TO MATCH INPUT TO BUILDING LOADS, AND DOES NOT INTRODUCE EXCESS AIR ALLOWING MAXIMUM THERMAL EFFICIENCY

DIMENSIONS	ST1250	ST1500	ST1750	ST2000	ST2500	ST3000	ST3500	ST4000
DEPTH (IN / MM)	62 / 1581	62 / 1581	62 / 1581	62 / 1581	68 / 1736	68 / 1736	90 / 2148	90 / 2148
WIDTH (IN / MM)	34 / 867	34 / 867	34 / 867	34 / 867	44 / 1121	44 / 1121	44 / 1121	44 / 1121
HEIGHT (IN / MM)	59 / 1504	59 / 1504	59 / 1504	59 / 1504	67 / 1697	67 / 1697	67 / 1697	67 / 1697
OPERATING PARAMETERS	ST1250	ST1500	ST1750	ST2000	ST2500	ST3000	ST3500	ST4000
BOILER HP	36	43	50	57	72	87	101	116
MAX INLET GAS PRESSURE NG (INCHES WC)	14	14	14	14	14	14	14	14
MIN INLET GAS PRESSURE NG (INCHES WC)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
SHIPPING WEIGHT (LBS/KILOS)	780 / 354	780 / 354	800 / 363	810 / 367	2200 / 998	2200 / 998	2600 / 1179	2600 / 1179
ELECTRICAL REQUIREMENTS	208/240V 1ph 60hz 20 amps	208/240V 1ph 60hz 20 amps	208/240V 1ph 60hz 20 amps	208/240V 1ph 60hz 20 amps	220V/480V 3ph 60hz 20 amps	220V/480V 3ph 60hz 20 amps	220V/480V 3ph 60hz 20 amps	220V/480V 3ph 60hz 20 amps
OPERATING WEIGHT (LBS/KILOS)	780 / 354	780 / 354	800 / 363	810 / 367	2329 / 1056	2329 / 1056	2772 / 1257	2772 / 1257
FLOW RATE 20°F ΔT GPM (LT / SEC)	121	146	170	194	242.5	291	339.5	388

ACCEPTABLE VENT MATERIALS	ST1250	ST1500	ST1750	ST2000	ST2500	ST3000	ST3500	ST4000
AL29-4C	✓	✓	✓	✓	✓	✓	✓	✓
316L SS	✓	✓	✓	✓	✓	✓	✓	✓
PVC	—	—	—	—	—	—	—	—
CPVC	✓*	✓*	✓*	✓*	✓*	✓*	✓*	✓*
POLYPROPYLENE ^{NEW}	*/**	*/**	*/**	*/**	*/**	*/**	*/**	*/**
CAT II	✓	✓	✓	✓	✓	✓	✓	✓
CAT IV	✓	✓	✓	✓	✓	✓	✓	✓

*Canada: When this material is used for venting, it must be listed ULC-S6236 **USA: When this material is used for venting, it must be listed UL-1738

The Patterson-Kelley Experience

Patterson-Kelley, a division of 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 Harsco Industrial Patterson-Kelley representative for the most up-to-date information and product application support.*

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