



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.

With the release of DST650-DST1000, the STORM now offers DHW or comfort heat in the same powerful package!



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.*

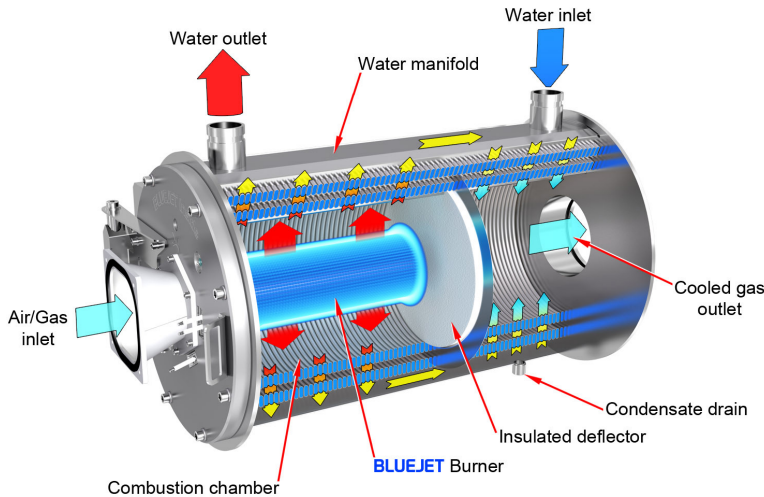
*5:1 on LP DST650-1000

FEATURES

- ✓ 650-8000 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 (5:1 on LP DST650-1000)
- ✓ 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 (5" for LP)
- ✓ Pressure drops as low as 4.7' at 40° ΔT
- ✓ The compartmentalized design produces efficiency of heat transfer in each section

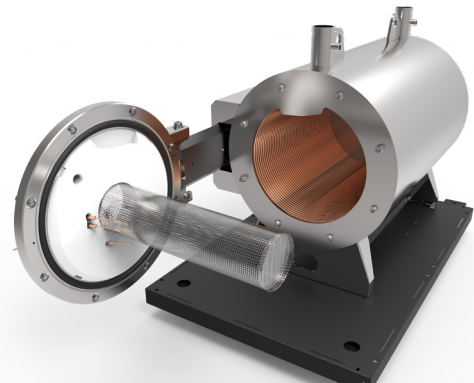
Compartmentalized Heat Exchanger Design

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 ST650 - 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.



PK Solutions

Patterson-Kelley provides solutions for all indoor and outdoor applications. Visit www.pattersonkelley.com for more information on your heating needs.



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



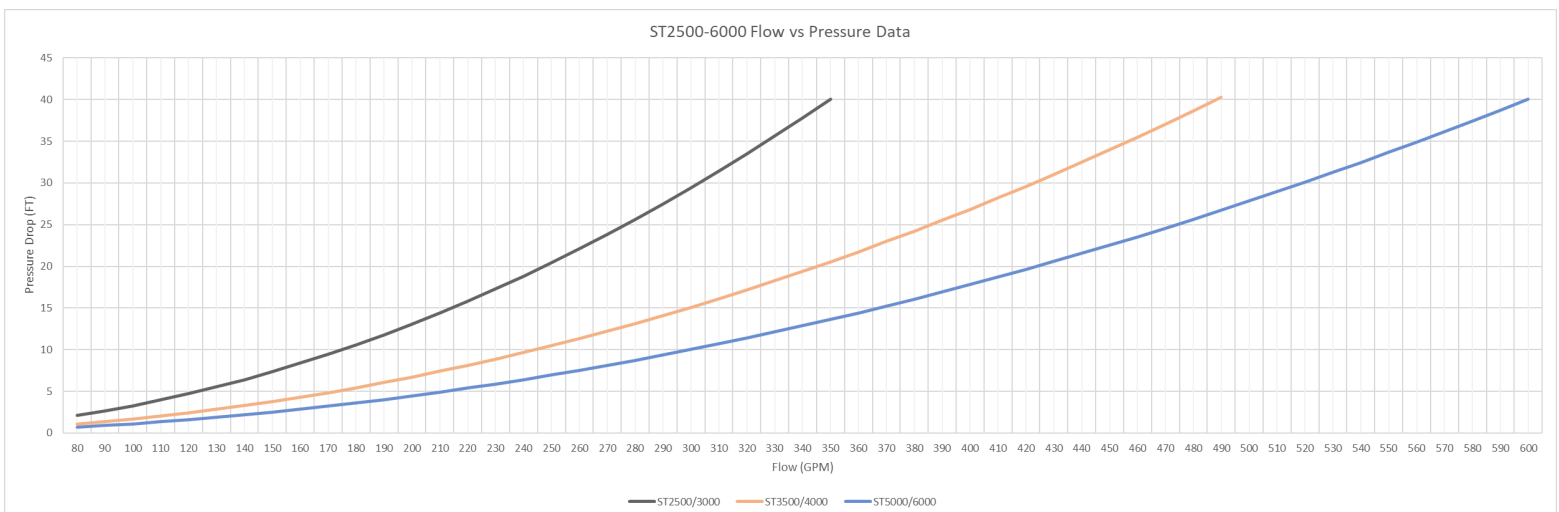
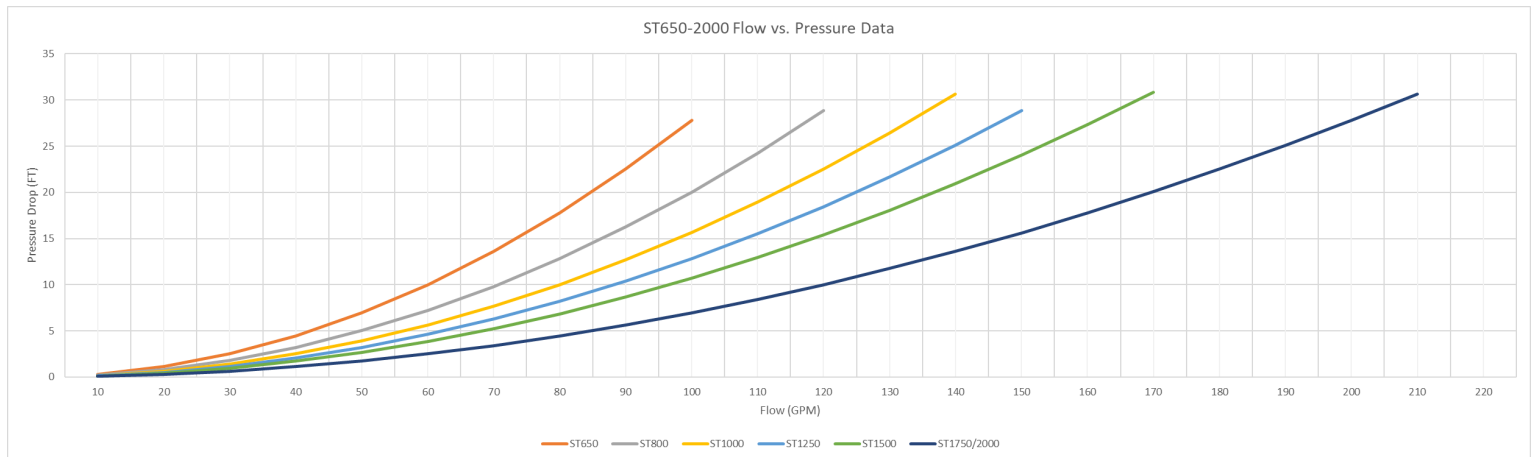
10:1 MECHANICAL TURNDOWN:
ALLOWS
FLEXIBILITY TO
MATCH INPUT
TO BUILDING
LOADS, AND
DOES NOT
INTRODUCE
EXCESS AIR
ALLOWING
MAXIMUM
THERMAL
EFFICIENCY



AHRI Certified
Up to
97% efficiency



Pressure Drop Data



PK Outdoor Solutions

Patterson-Kelley provides outdoor solutions to safely and efficiently mitigate space restraints and allows outdoor placement of equipment.

Outdoor Products from the Factory



STORM®*

- ✓ Outdoor Capabilities on models 650 - 2000 MBTU
- ✓ Fuel Options: Natural Gas (NG) & Liquid Propane (LP)
- ✓ Unique stainless alloys resist corrosive condensation
- ✓ Full modulation burner with up to 10:1 mechanical turndown*
- ✓ Front accessibility reduces repair and maintenance costs
- ✓ Cabinet and heat exchanger design reduce repair and maintenance costs

*5:1 on LP DST650-1000



AHRI
Certified
Up to
97%
efficiency



Outdoor Bundles Available



MACH®*

- ✓ Available on models 750 - 2000 MBTU
- ✓ Fuel Options: Natural Gas (NG), Liquid Propane (LP), Dual Fuel
- ✓ All-purpose boiler suitable for condensing and non-condensing systems
- ✓ Cast Aluminum Heat exchanger resists corrosive condensate
- ✓ Compact design fits through a standard 36" doorway
- ✓ Full modulation burner with 5:1 turndown
 - + 10:1 Mechanical turndown available on Indoor Natural Gas (NG) models C750, C900, C1050, C1500, C2000
- ✓ Automatically compensates for changes in air temperature and pressure

AHRI
Certified
Up to
95%
efficiency



MODU-FIRE®* Forced Draft

- ✓ Available on models 750 - 2000 MBTU
- ✓ Venting: Category II or IV
- ✓ Eliminates short cycling in high variable speed pumping systems
- ✓ Fuel options: Natural Gas (NG), Liquid Propane (LP)

AHRI
Certified
Up to
88%
efficiency



Created with space constraints in mind, Patterson-Kelley has made these industry-trusted solutions available for outdoor use. Whether it is on top of the penthouse or installed on the ground outside, PK outdoor solutions can withstand the elements.

P-K STORM®

	COMING SOON	COMING SOON	COMING SOON	AVAILABLE NOW	AVAILABLE NOW	AVAILABLE NOW	AVAILABLE NOW	AVAILABLE NOW	AVAILABLE NOW	AVAILABLE NOW	AVAILABLE NOW	AVAILABLE NOW	AVAILABLE NOW	AVAILABLE NOW
BOILER RATINGS	ST650	ST800	ST1000	ST1250	ST1500	ST1750	ST2000	ST2500	ST3000	ST3500	ST4000	ST5000	ST6000	ST8000
EFFICIENCY	96%	96%	96%	97%	97%	97%	97%	97%	97%	97%	97%	97%	97%	95.5%
MAX BTU/HR INPUT	650,000	800,000	1,000,000	1,250,000	1,500,000	1,750,000	2,000,000	2,500,000	3,000,000	3,500,000	4,000,000	4,999,999	6,000,000	8,000,000
MAX KW INPUT	190.5	234.46	29307	366	439.6	512.8	586	1250	732.6	1025.7	1172.2	1465.4	1758.4	2344.6
MAX BTU/HR OUTPUT	624,650	765,600	964,000	1,212,500	1,455,000	1,697,500	1,940,000	2,425,000	2,910,000	3,395,000	3,880,000	4,849,999	5,820,00	7,640,000
MAX KW OUTPUT	183.07	224.38	282.5	355.3	426.4	497.4	568.5	710.6	852.8	994.9	1137.1	1421.4	1705.7	2239.1
MIN FLOW @ IGNITION (GPM)	17.85	21.87	27.5	35	42	49	55	69	83	97	111	139	166	172
MIN FLOW @ IGNITION (LITRES/SEC)	1.13	1.4	1.7	2.2	2.6	3.1	3.5	4.4	5.3	6.1	7	8.8	10.5	10.9
MIN BTU/HR INPUT	65,00	80,000	100,000	125,000	150,000	175,000	200,000	250,000	300,000	350,000	400,000	500,00	600,000	800,000
MIN KW INPUT	19.05	23.4	29.3	36.6	43.9	51.2	58.6	73.2	87.9	102.5	117.2	146.5	176	234.5
MIN BTU/HR OUTPUT	62,465	76,560	96,400	121,250	145,500	169,750	194,000	242,500	291,00	339,500	388,000	485,000	582,000	764,000
MIN KW OUTPUT	18.31	22.4	28.2	35.3	42.4	49.5	56.6	71	85.2	99.4	113.7	142.1	170.6	223.9
INDOOR/OUTDOOR	INDOOR/OUTDOOR	INDOOR/OUTDOOR	INDOOR/OUTDOOR	INDOOR/OUTDOOR	INDOOR/OUTDOOR	INDOOR/OUTDOOR	INDOOR/OUTDOOR	INDOOR	INDOOR	INDOOR	INDOOR	INDOOR	INDOOR	INDOOR
MECHANICAL TURNDOWN	10:1 / 5:1	10:1 / 5:1	10:1 / 5:1	10:1	10:1	10:1	10:1	10:1	10:1	10:1	10:1	10:1	10:1	10:1
LP=Liquid Propane NG=NATURAL GAS	NG / LP	NG / LP	NG / LP	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
DEPTH (IN / MM)	58.3 / 1482	58.3 / 1482	58.3 / 1482	62 / 1581	62 / 1581	62 / 1581	62 / 1581	68 / 1736	68 / 1736	90 / 2286	90 / 2286	103 / 2616	103 / 2616	103 / 2616
WIDTH (IN / MM)	26.1 / 664	26.1 / 664	26.1 / 664	34 / 867	34 / 867	34 / 867	34 / 867	44 / 1121	44 / 1121	44 / 1121	44 / 1121	44 / 1118	44 / 118	44 / 1118
HEIGHT (IN / MM)	45.7 / 1164	45.7 / 1164	45.7 / 1164	59 / 1504	59 / 1504	59 / 1504	59 / 1504	67 / 1697	67 / 1697	67 / 1697	67 / 1697	73 / 1854	73 / 1854	73 / 1854
BOILER HP	19.4	23.9	23.9	36	43	50	57	72	87	101	116	149	179	239
MAX INLET GAS PRESSURE NG (INCHES WC)	14	14	14	14	14	14	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	3.5	3.5	3.5	3.5	3.5	3.5
SHIPPING WEIGHT (LBS/KILOS)	663 / 301.3	705 / 320.5	770 / 350	1070 / 485.3	1150 / 521.6	1220 / 553.3	1220 / 553.3	2200 / 998	2200 / 998	2600 / 1179	2600 / 1179	3200 / 1452	3200 / 1452	3200 / 1452
ELECTRICAL REQUIREMENTS	120V 1ph 60hz <6 amps	120V 1ph 60hz <6 amps	120V 1ph 60hz <10 amps	208-240V 1ph 60hz 20 amps	208-240V 1ph 60hz 20 amps	208-240V 1ph 60hz 20 amps	208-240V 1ph 60 hz 20 amps	208-240/480V 3ph 60hz 20 amps	208-240/480V 3ph 60hz 20 amps	208-240/480V 3ph 60hz 20 amps	208-240/480V 3ph 60hz 20 amps	208-240/480V 3ph 60hz 30/15 amps	208-240/480V 3ph 60hz 30/15 amps	208-240/480V 3ph 60hz 30/15 amps
OPERATING WEIGHT (LBS/KILOS)	625	660 / 301	705 / 320.5	1112 / 504.3	1208 / 547.9	1305 / 592	1305 / 592	2329 / 1056	2329 / 1056	2772 / 1257	2772 / 1257	3700 / 1678	3700 / 1678	3700 / 1678
FLW RATE 20°F ΔT GPM (LT/SEC)	62.5 / 4	76.6 / 4.8	96.4 / 6.1	121 / 7.7	145 / 9.2	170 / 11	194 / 12	242 / 15	291 / 18.4	339.5 / 21.5	388 / 25	485 / 31	582 / 37	764 / 48
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

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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