APEX™

Stainless Steel, Condensing, Gas-Fired Commercial Boiler

- **95% Thermal efficiency**
- **425, 525, 625, 725, 825 Models**
- **Advanced stainless steel heat exchanger**
- **Lowest waterside pressure drop in class**
- **Minimized electrical consumption**
- **5-to-1 modulation**
- **Less than 20ppm NOx**
- **Stackable; space savings with no stands**
- **EMS compatible**

THERMAL SOLUTIONS®
Innovative Equipment for Hot Water Systems

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Refined Commercial Condensing

Robustly designed for commercial environments, the Apex, with thermal efficiency ratings of 95%, combines durability and performance. Coupled with an intuitive, multi-function boiler control with touchscreen display designed to optimize boiler and system efficiency, the Apex delivers longevity with top-rated efficiency.

Heat Exchanger

The latest Apex models are equipped with next generation watertube technology which minimizes water side pressure drop by over 40%. The heat exchanger reduces pump motor sizes by 30%, which curtails electrical comsumption and triples yearly operational savings.

| Boiler	Pump HP	Amp Draw	Watts	Yearly Operating Cost (US-$)*
Apex**	1/6	1.9	218.5	58.44
Competitor	1/2	4.9	563.5	150.73

*Based upon AHRI runtime of 2,500 hourse and 10.7¢ per KW/hr.

** Apex 625

Selecting an APEX designed with low waterside pressure drop permits a pump selection of 1/6 HP vs. competitive models at 1/2 HP or higher. The smaller pump will provide up-front savings on installation costs, and the lower electrical cost will provide savings year-after-year for the life of the boiler. The end result is a quicker payback on investment.

- 40% Less Waterside Pressure Drop
- 30% Smaller Pumps
- 40% Less Watts
- Triples Yearly Operating Savings!
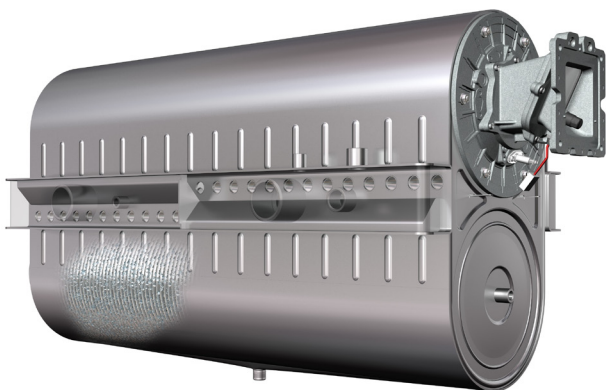
OPERATING SAVINGS
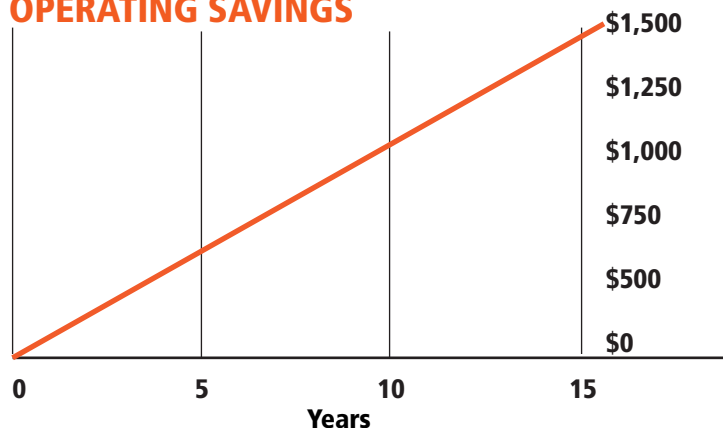
Boiler Control System

The "brains" behind the brawn of our commercial heat exchanger is incredibly advanced, yet uncomplicated to operate. It requires just four inputs for set-up, but is programmable to optimize efficiencies over the broad spectrum of virtually all heating parameters.

SIMPLE

- Four (4) inputs for set-up
- [a] RJ45 ethernet cord for peer-to-peer boiler connection
- Paragraph formatted diagnostic read-outs – no codes
- Advanced touchscreen
- Slide-out drawer for easy access
- 4-20mA heat demand contact for external control correction
  - Modbus protocol (optional BACnet™ or LonWorks™gateway
  - EMS controls set-point or firing rate

SMART

- Data logging in cycles and hours for pump operations offering advanced system optimization
- Three (3) pump outputs
- Outdoor reset
- Warm weather shutdown
- Freeze protection & pump exercising
- Built-in brown-out protection
- Stackable for speace savings with no extra stands

MORE SAVINGS

- Advanced modulating control with baseloading
  - Maximizes low-fire rates with multimple boilers
- Anti-cycling programming
  - Capable of of limiting fan speeds and output based on delta Ts

Specifications & Ratings

| MODEL | RATINGS | | | NET RATING (MBH) | THERMAL EFFICIENCY | WATER CONTENT (Gal.) | HEAT TRFR. AREA (SQ. FT.) | GAS CONN. | SUPPLY & RETURN CONN. | INTAKE/ VENT DIAMETER | APPROX. SHIPPING WEIGHT (LBS.) |
	MIN. INPUT (MBH)	MAX. INPUT (MBH)	GROSS OUTPUT (MBH)								
APX425	80	399	375	326	94.1%	3.4	41.8	3/4" NPT	1-1/2" NPT	4"	304
APX525	100	500	475	413	95%	4.2	50.8	3/4" NPT	1-1/2" NPT	4"	350
APX625	125	625	594	517	95%	5.5	76.2	!" NPT	2" NPT	6"	455
APX725	145	725	689	599	95%	5.5	76.2	1" NPT	2" NPT	6"	455
APX825	160	800	760	661	95%	5.0	65.3	1" NPT	2" NPT	6"	430

Dimensions

MODEL	A	B	C/D	E	F	G/H	I	J	K	L	M	N	O	P	Q
APX425	28-7/8"	43-7/16"	4"	Note 4	3/4" NPT	1-1/2" NPT	6-3/16"	13-1/16"	23-3/4"	15-13/16"	8-5/16"	17-5/16"	32-7/16"	5-9/16"	12-3/16"
APX525	44-7/8"	35"	4"	Note 4	3/4" NPT	1-1/2" NPT	22-1/8"	29"	39-11/16"	29-3/8"	7-7/16"	17-5/16"	14-29/32"	5"	12-1/4"
APX625	50-1/4"	35"	6"	Note 4	1" NPT	2" NPT	24"	24"	38-7/8"	31-5/8"	7-1/2"	20-1/4"	10-1/4"	8-1/2"	15-1/4"
APX725	50-1/4"	35"	6"	Note 4	1" NPT	2" NPT	24"	24"	38-7/8"	31-5/8"	7-1/2"	20-1/4"	10-1/4"	8-1/2"	15-1/4"
APX825	54-9/10"	35"	6"	Note 4	1" NPT	2" NPT	28-3/8"	33-1/4"	48-1/16"	33-3/16"	7-1/2"	17-1/4"	7-1/4"	5"	12-1/4"

APX-425 MODEL

APX-525 THRU 825 MODELS
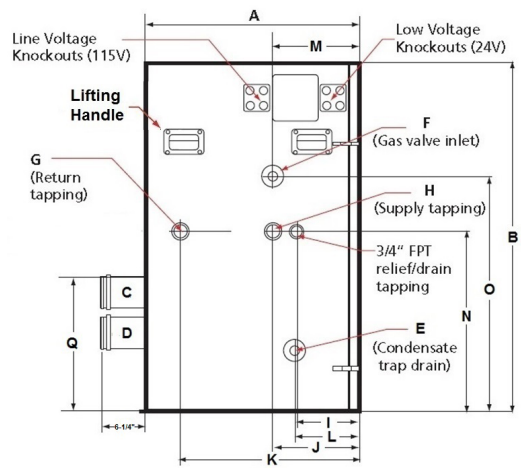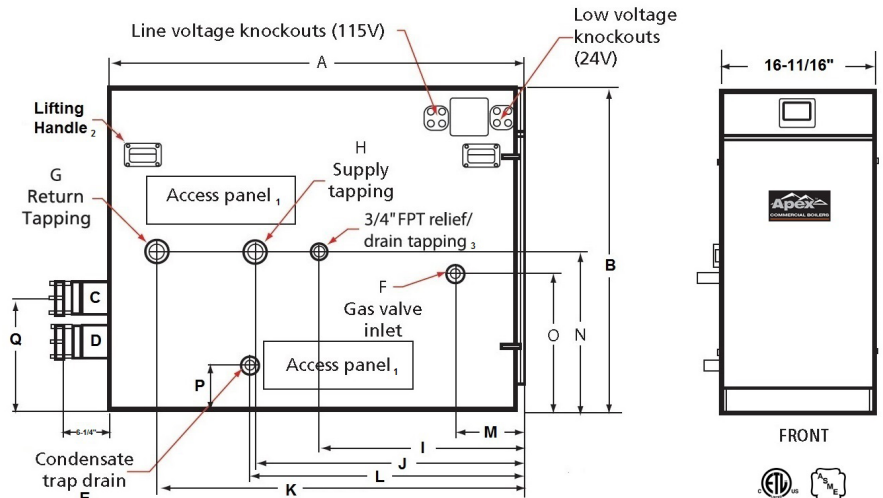
FRONT

Notes:
1. Access panels – qty. of (2) on Model 525 and qty. of (4) available on Models 625 - 825
2. Lifting handles – available on Model 525 but NOT on Models 625 - 825
3. Relief/Drain Tapping – Not available on Models 625 & 725; Relief/Drain piped off the Supply Piping
4. Factory provided socket end compression pipe joining clamp for 3/4" schedule 40 PVC pipe

Standard Equipment

ASME stainless steel heat exchanger
Stainless steel mesh burner
Full modulation, 5:1 turndown
Variable speed combustion blower
Zero governor gas valve
Supply & return temperature sensors
Flue gas temperature sensor
Sealed control compartment
Negative pressure lower cabinet
Outdoor air temperature sensor
Front-mounted terminal strip
Low voltage terminal strip
Line voltage junction box
Condensate trap
Pressure relief valve, 50 psi for 525

Pressure relief valve, 60 psi for 625, 725, 825
Rear flue outlet
Stacking boiler brackets
Flow switch

PVC VENT KIT:
30" CPVC, 90° elbow
(2) vent terminals w/ rodent screens

SAGE2.1 BOILER CONTROL:
Touchscreen display
Built in diagnostics
Slide-out drawer
Lead/lag and domestic hot water priority
Warm weather shutdown
4-20 mA inputs for external modulation

Optional Equipment

Condensate neutralizer
Header sensor - required for
   multiple burner systems
Header sensor, alternative immersion
RJ45 cable splitter
80 psi relief valve (all models)
100 psi relief valve (all models)

ASME CSD-1 kit –includes high limit
   (manual reset), high and low gas
   pressure switches (manual reset), gas
   valve seat leakage test harness
Low water cutoff
Universal gateway -BACnet, Meatasys,
   Modbus, or LonWorks compatible

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