

ELECTRIC BOILER
22,5 KW TO 408 KW

voltmax



COMMERCIAL



CONCENTRATED ENERGY

The VoltMax line of electric boilers was developed to efficiently supply hydronic heating systems in **commercial, institutional and industrial applications**. This boiler is offered under different voltages to respond to any single-phase or three-phase electrical supply. Its easy-to-use electronic controller provides precise temperature and power control to minimize energy costs and to optimize the boiler's performance. VoltMax's compact design is great for small spaces and requires minimal clearance around the unit.



Peak-performance
heating systems



Efficient kW Management

The controller can modulate the power of the unit from 0 to 100%, based on heating demand through the use of a solid-state SCR relay. The benefits of this operating mode are increased temperature control and reduced wear on the power relays. In addition, it very precisely limits the maximum electrical power required for the boiler in order to prevent wasteful and costly peaks in consumption.

Energy at your fingertips

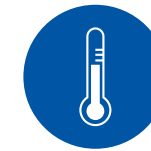
The VoltMax electronic controller makes it easy to control the boiler's operating settings related to the application in order to obtain optimal performance.

Its large backlit screen provides the boiler's operating status at a glance. The controller keys provide quick management menu navigation to access the system's various functions.



The display screen includes the following information :

- Heat demand ;
- Set point temperature ;
- Boiler outlet temperature ;
- Outdoor temperature when the sensor is connected ;
- Boiler power in real time ;
- Stage status ;
- Operating pressure ;
- Operating modes: electric, auxiliary or dual-energy ;
- Boost mode in operation ;
- Boiler OFF when the outdoor temperature is high WWSD ;
- Visual and audible alarm with alarm code ;
- Operating status indicator lights: green, yellow or red ;
- Choice of temperature units (°F/°C) and languages (English/French) ;
- Maximum allowed power.



Increased Temperature Control

The VoltMax boiler provides maximum comfort through accurate, efficient temperature control of these different modes :

- A «fixed» set point temperature.
- Water temperature modulation with external temperature sensor.
- Remote control the water temperature using an external BACnet IP or MSTP controller.
- Variable water temperature based on a building occupancy schedule.
- 0-10 VDC external temperature control.

For all these modes, you can use the controller to set a second «fixed» set point temperature, adjusted to a greater value, to use an indirect water heater.



Increased Power Control

To maximize savings without compromising comfort, the VoltMax boiler provides efficient power control according to these different modes :

- The controller acts without constraint or limitation.
- The maximum power is determined manually.
- Maximum power modulation based on the outdoor temperature sensor.
- Remote power control (through an external BACnet IP or MSTP controller).
- Variable maximum power based on an hourly schedule.
- 0-10 VDC external power control.
- Auxiliary energy source used as a backup or master source.



- Ethernet and BACnet network communication ports enable remote communication.
- Ability to view operating status and to modify the settings remotely through a webpage.
- Information about operating anomalies and history.
- Can be configured to send alarms by email.



VoltMax 408 kW – 600 V
with main disconnect switch option

22,5 to 400 KW

- 1- Digital controller.
- 2- Heating water connections and inspection ports.
- 3- Easily-replaceable immersion-type “incoloy” heating elements.
- 4- Low voltage fuse protection. (control circuit)
- 5- High voltage fuse protection. (power circuit)
- 6- Power contactor.
- 7- Solid state SCR relay.
- 8- Control circuit on/off switch.
- 9- Low-water cut-off control with automatic reset, test button and indicator lights.
- 10- Current transducers.
- 11- Main disconnect switch (optional equipment).
- 12- Anti-seismic anchors.



Standard features

- A first adjustable high-limit with automatic reset.
- A second fixed high-limit with manual reset.
- 1 1/4" NPT drain valve.
- ASME safety valve.
- 3" insulation.

Optional equipments

- Main disconnect switch with or without built-in fuses (three-phases models only, some exceptions)¹
- Low water cutoff, test button and indicator lights (models of 60 kW and less)
- Maximum operating pressure (see features table: A-B-C).

¹ Three-phases models only, some exceptions apply, please see technical specifications.

4 CONNECTIONS
INLET AND OUTLET
(MULTIPOSITION)



VOLTMAX IS AVAILABLE IN DIFFERENT
POWERS AND VOLTAGES

SINGLE-PHASE 60Hz

208 VAC	22,5 kW to 72 kW
240 VAC	30 kW to 96 kW

THREE-PHASE 60Hz

208 VAC	22,5 kW to 108 kW
240 VAC	30 kW to 144 kW
480 VAC	30 kW to 408 kW
600 VAC	30 kW to 408 kW

For 100 % Efficiency

- Compact vertical boiler to optimize space.
- Easy access to component parts.
- Operates only when needed.
- Set point temperature adjustable from 50 °F to 200 °F (10 °C to 93 °C).
- Silent, clean and requires little maintenance.
- Robust industrial-grade construction.
- Water temperature and boiler power modulation.
- Temperature and power control via a 0-10Vdc remote controller.
- Contact to activate an external alarm.
- Presence of dry contacts to start-up pumps with or without domestic hot water priority.
- Amperage measurements to detect anomalies and to estimate electrical consumption.
- Boiler return temperature and boiler flow readings.
- Can be easily connected with an auxiliary boiler as a power backup or for a dual-energy configuration.
- Temperature-lowering function via an external contact when building is unoccupied.



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FEATURES OF THE THREE CONFIGURATIONS OF VOLTMAX ELECTRIC BOILERS



VoltMax	Features - A	Features - B	Features - C
Model	22,5 to 90 kW	99 to 180 kW	58 to 408 kW
Weight	310 lb	550 lb	1200 lb
Volume	11 US gallons	30 US gallons	62 US gallons
Connections	1 1/2" NPT male	2 1/2" NPT male	3" NPT male
Maximum working pressure	70 PSI	125 PSI	160 PSI
Safety valve pressure	125 PSI*	-	150 PSI

*A safety valve having a lower set pressure - of 60 PSI or 125 PSI - can be installed as an option.

VoltMax 208 VAC / 60 Hz / 1 phase¹

Model	Power			Elements 240 V	SCR Series Relay Stages	SCR Stage	Configuration
	kW	BTU/h	Amps				
VoltMax 23	22,5	76 770	108,4	6 x 5 kW	2 x 7,5 kW	1 x 7,5 kW	A
VoltMax 27	27	92 124	130,1	6 x 6 kW	2 x 9 kW	1 x 9 kW	A
VoltMax 30	30	102 360	144,5	8 x 5 kW	3 x 7,5 kW	1 x 7,5 kW	A
VoltMax 36	36	122 832	173,4	8 x 6 kW	3 x 9 kW	1 x 9 kW	A
VoltMax 41	41	139 892	198,7	5 x 5 kW + 5 x 6 kW	4 x 8,25 kW	1 x 8,25 kW	A
VoltMax 45	45	153 540	216,8	10 x 6 kW	4 x 9 kW	1 x 9 kW	A
VoltMax 50	49,5	168 894	238,4	6 x 5 kW + 6 x 6 kW	5 x 8,25 kW	1 x 8,25 kW	A
VoltMax 54	54	184 248	260,1	12 x 6 kW	5 x 9 kW	1 x 9 kW	A
VoltMax 58	57,8	197 043	278	7 x 5 kW + 7 x 6 kW	6 x 8,25 kW	1 x 8,25 kW	C
VoltMax 60	60	204 720	288	16 x 5 kW	7 x 7,5 kW	1 x 7,5 kW	C
VoltMax 63	63	214 956	303	14 x 6 kW	6 X 9 kW	1 X 9 kW	C
VoltMax 66	66	225 192	317	8 x 5 kW + 8 x 6 kW	7 x 8,25 kW	1 x 8,25 kW	C
VoltMax 72	72	245 664	346	16 x 6 kW	7 x 9 kW	1 x 9 kW	C

¹ 208 V 1-phase electrical supply (L1-L2) with two 90 °C conductors and a ground.

VoltMax 240 VAC / 60 Hz / 1 phase¹

Model	Power			Elements 240 V	SCR Series Relay Stages	SCR Stage	Configuration
	kW	BTU/h	Amps				
VoltMax 30	30	102 360	125	6 x 5 kW	2 x 10 kW	1 x 10 kW	A
VoltMax 36	36	122 832	150	6 x 6 kW	2 x 12 kW	1 x 12 kW	A
VoltMax 40	40	136 480	166,7	8 x 5 kW	3 x 10 kW	1 x 10 kW	A
VoltMax 48	48	163 776	200	8 x 6 kW	3 x 12 kW	1 x 12 kW	A
VoltMax 55	55	187 660	229,2	5 x 5 kW + 5 x 6 kW	4 x 11 kW	1 x 11 kW	A
VoltMax 60	60	204 720	250	10 x 6 kW	4 x 12 kW	1 x 12 kW	A
VoltMax 66	66	225 192	275	6 x 5 kW + 6 x 6 kW	5 x 11 kW	1 x 11 kW	A
VoltMax 72	72	245 664	300	12 x 6 kW	5 x 12 kW	1 x 12 kW	A
VoltMax 77	77	262 724	321	7 x 5 kW + 7 x 6 kW	6 x 11 kW	1 x 11 kW	C
VoltMax 80	80	272 960	333	16 x 5 kW	7 x 10 kW	1 x 10 kW	C
VoltMax 84	84	286 608	350	14 x 6 kW	6 X 12 kW	1 X 12 kW	C
VoltMax 88	88	300 256	366	8 x 5 kW + 8 x 6 kW	7 x 11 kW	1 x 11 kW	C
VoltMax 96	96	327 552	400	16 x 6 kW	7 x 12 kW	1 x 12 kW	C

¹ 240 V 1-phase electrical supply (L1-L2) with two 90 °C conductors and a ground.

VoltMax 208 VAC / 60 Hz / 3 phases¹

Model	Power			Elements 240 V	SCR Series Relay Stages	SCR Stage	Configuration
	kW	BTU/h	Amps				
VoltMax 23	22,5	76 770	62,6	2 x 15 kW	1 x 11,25 kW	1 x 11,25 kW	A
VoltMax 27	27	92 124	75,1	2 x 18 kW	1 x 13,5 kW	1 x 13,5 kW	A
VoltMax 34	34	116 008	93,9	3 x 15 kW	2 x 11,25 kW	1 x 11,25 kW	A
VoltMax 41	40,5	138 186	112,6	3 x 18 kW	2 x 13,5 kW	1 x 13,5 kW	A
VoltMax 45	45	153 540	125,1	4 x 15 kW	3 x 11,25 kW	1 x 11,25 kW	A
VoltMax 54	54	184 248	150,2	4 x 18 kW	3 x 13,5 kW	1 x 13,5 kW	A
VoltMax 56	56	191 072	156,4	5 x 15 kW	4 x 11,25 kW	1 x 11,25 kW	A
VoltMax 68	67,5	230 310	187,7	5 x 18 kW	4 x 13,5 kW	1 x 13,5 kW	A
VoltMax 79	78,8	268 695	219	7 x 15 kW	6 x 11,25 kW	1 x 11,25 kW	C
VoltMax 90	90	307 080	250	8 x 15 kW	7 x 11,25 kW	1 x 11,25 kW	C
VoltMax 95	94,5	322 434	263	7 x 18 kW	6 x 13,5 kW	1 x 13,5 kW	C
VoltMax 108	108	368 496	300	8 x 18 kW	7 x 13,5 kW	1 x 13,5 kW	C

¹ 208 V 3-phase electrical supply (L1-L2-L3) with three 90 °C conductors and a ground.

VoltMax 240 VAC / 60 Hz / 3 phases¹

Model	Power		Amps	Elements 240V	SCR series		Configuration
	kW	BTU/h			Relay Stages	SCR Stage	
VoltMax 30	30	102 360	72	2 x 15 kW	1 x 15 kW	1 x 15 kW	A
VoltMax 36	36	122 832	86,6	2 x 18 kW	1 x 18 kW	1 x 18 kW	A
VoltMax 45	45	153 540	108,3	3 x 15 kW	2 x 15 kW	1 x 15 kW	A
VoltMax 54	54	184 248	129,9	3 x 18 kW	2 x 18 kW	1 x 18 kW	A
VoltMax 60	60	204 720	144,3	4 x 15 kW	3 x 15 kW	1 x 15 kW	A
VoltMax 72	72	245 664	173,2	4 x 18 kW	3 x 18 kW	1 x 18 kW	A
VoltMax 75	75	255 900	180,4	5 x 15 kW	4 x 15 kW	1 x 15 kW	A
VoltMax 105	105	358 260	253	7 x 15 kW	6 x 15 kW	1 x 15 kW	C
VoltMax 120	120	409 440	289	8 x 15 kW	7 x 15 kW	1 x 15 kW	C
VoltMax 126	126	429 912	303	7 x 18 kW	6 x 18 kW	1 x 18 kW	C
VoltMax 144	144	491 328	347	8 x 18 kW	7 x 18 kW	1 x 18 kW	C

¹ 240 V 3-phase electrical supply (L1-L2-L3) with three 90 °C conductors and a ground.

VoltMax 480 VAC¹ and 600 VAC² / 60 Hz / 3 phases

Model	Power		Amps		Elements 480 V ¹ or 600 V ²	SCR series		Configuration
	kW	BTU/h	480 VAC	600 VAC		Relay Stages	SCR Stage	
VoltMax 30	30	102 360	36,1	28,9	2 x 15 kW	1 x 15 kW	1 x 15 kW	A
VoltMax 36	36	122 832	43,3	34,6	2 x 18 kW	1 x 18 kW	1 x 18 kW	A
VoltMax 45	45	153 540	54,1	43,3	3 x 15 kW	2 x 15 kW	1 x 15 kW	A
VoltMax 54	54	184 248	65	52	3 x 18 kW	2 x 18 kW	1 x 18 kW	A
VoltMax 60	60	204 720	72,2	57,7	4 x 15 kW	3 x 15 kW	1 x 15 kW	A
VoltMax 72	72	245 664	86,6	69,3	4 x 18 kW	3 x 18 kW	1 x 18 kW	A
VoltMax 75	75	255 900	90,2	72,2	5 x 15 kW	4 x 15 kW	1 x 15 kW	A
VoltMax 90	90	307 080	108,3	86,6	5 x 18 kW	4 x 18 kW	1 x 18 kW	A
VoltMax 99	99	337 788	119,1	95,3	3 x 15 kW + 3 x 18 kW	2 x 33 kW	1 x 33 kW	A
VoltMax 108	108	368 496	129,9	103,9	6 x 18 kW	2 x 36 kW	1 x 36 kW	B
VoltMax 120	120	409 440	144,3	115,5	8 x 15 kW	3 x 30 kW	1 x 30 kW	B
VoltMax 132	132	450 384	158,8	127	4 x 15 kW + 4 x 18 kW	3 x 33 kW	1 x 33 kW	B
VoltMax 144	144	491 328	173,2	138,6	8 x 18 kW	3 x 36 kW	1 x 36 kW	B
VoltMax 150	150	511 800	180,4	144,3	10 x 15 kW	4 x 30 kW	1 x 30 kW	B
VoltMax 165	165	562 980	198,5	158,8	5 x 15 kW + 5 x 18 kW	4 x 33 kW	1 x 33 kW	B
VoltMax 180	180	614 160	216,5	173,2	10 x 18 kW	4 x 36 kW	1 x 36 kW	B
VoltMax 192	192	655 104	231	185	8 x 15 kW + 4 x 18 kW	3 x 48 kW	1 x 48 kW	C
VoltMax 204	204	696 048	246	197	8 x 18 kW + 4 x 15 kW	3 x 51 kW	1 x 51 kW	C
VoltMax 216	216	736 992	Ø	208	12 x 18 kW	3 x 54 kW	1 x 54 kW	C
VoltMax 225	225	767 700	271	217	15 x 15 kW	4 x 45 kW	1 x 45 kW	C
VoltMax 240	240	818 880	289	231	10 x 15 kW + 5 x 18 kW	4 x 48 kW	1 x 48 kW	C
VoltMax 255	255	870 060	307	246	10 x 18 kW + 5 x 15 kW	4 x 51 kW	1 x 51 kW	C
VoltMax 270	270	921 240	Ø	260	15 x 18 kW	4 x 54 kW	1 x 54 kW	C
VoltMax 288	288	982 656	347	277	12 x 15 kW + 6 x 18 kW	5 x 48 kW	1 x 48 kW	C
VoltMax 306	306	1 044 072	368	295	12 x 18 kW + 6 x 15 kW	5 x 51 kW	1 x 51 kW	C
VoltMax 315	315	1 074 780	379	303	21 x 15 kW	6 x 45 kW	1 x 45 kW	C
VoltMax 324	324	1 105 488	Ø	312	18 x 18 kW	5 x 54 kW	1 x 54 kW	C
VoltMax 336	336	1 146 432	405	324	14 x 15 kW + 7 x 18 kW	6 x 48 kW	1 x 48 kW	C
VoltMax 357	357	1 218 084	430	344	14 x 18 kW + 7 x 15 kW	6 x 51 kW	1 x 51 kW	C
VoltMax 378	378	1 289 736	Ø	364	21 x 18 kW	6 x 54 kW	1 x 54 kW	C
VoltMax 384	384	1 310 208	462	370	16 x 15 kW + 8 x 18 kW	7 x 48 kW	1 x 48 kW	C
VoltMax 408	408	1 392 096	491	393	16 x 18 kW + 8 x 15 kW	7 x 51 kW	1 x 51 kW	C

¹ 480 V 3-phase electrical supply (L1-L2-L3) with three 90 °C conductors and a ground.

² 600 V 3-phase electrical supply (L1-L2-L3) with three 90 °C conductors and a ground.

10-YEAR WARRANTY
ON THE RESERVOIR

2-YEAR WARRANTY
ON ELECTRICAL AND MECHANICAL PARTS



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