COMBINED ELECTRIC BOILER AND
INSTANTANEOUS WATER HEATER
4,5 KW TO 60 KW

combomax

120-9 commercial

THE ULTIMATE COMBINATION

The ComboMax 120-9 is an electric boiler designed to provide domestic hot water while integrating easily with any hydronic heating network. Virtually maintenance-free, it is a smart choice for multi-unit residential or commercial applications.

THERMO 2000 | Peak-performance heating systems

combomax 120-9

A COMBINATION WITHOUT COMPROMISE

COMBOMAX 120-9 is an electric boiler compatible with any hydronic heating system. It has been designed for multi-unit or commercial installations. Its instantaneous water heating system uses the heat transfer liquid from the reservoir to indirectly heat domestic water in less than 7 seconds. Domestic water circulates through completely independent copper coils connected to the water supply. Hot water is refreshed at every use to prevent the formation of bacteria, such as legionella, to ensure exceptional water quality.

GESTION EFFICACE DES KW

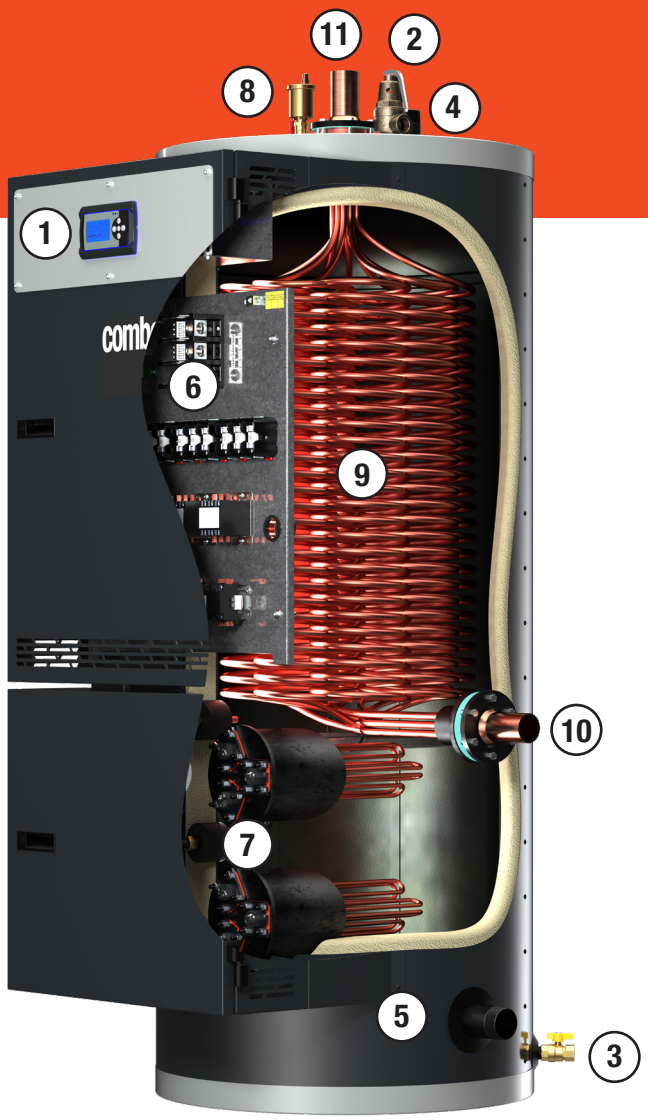
The Combomax electronic controller makes it easy to control the boiler's operating settings related to the application in order to obtain optimal performance. The controller can modulate the power of the unit from 0 to 100%, based on heating demand through the use of a solid-state SCR relay. This modulation provides improved temperature control while reducing 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.

Combomax 120-9

GENERAL FEATURES

Weight	630 lbs
Height	78''
Width	36''
Depth	36,5''
Volume	120 gal US
Max. pressure - Heating	100 PSI
Max. pressure - Domestic hot water	100 PSI
Max. pressure - Boiler connections	2'' NPT mâle
Max. pressure - Drink water connections	2'' sweat M

COMBINED ELECTRIC BOILER AND INSTANTANEOUS WATER HEATER
4,5 KW TO 60 KW



STANDARD FEATURES

1. Digital controller
2. Boiler pressure relief valve
3. Drain valve
4. Heating water supply
5. Heating water return
6. Electrical panel
7. Electrical elements
8. Automatic air vent
9. Copper heat exchanger
10. Domestic cold water supply
11. Domestic hot water output

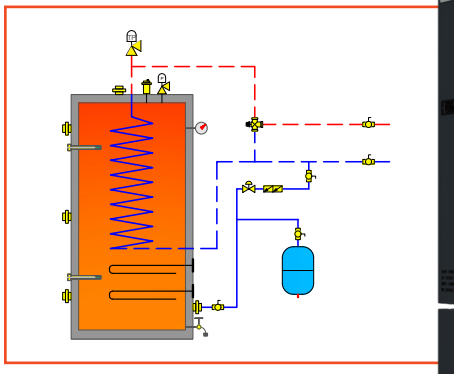
FOR 100 % EFFICIENCY

- Easy access to component parts.
- Set point temperature adjustable from 10 °C to 93 °C (50 °F to 200 °F)
- 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.
- Control and/or reading of variables using external BACnet IP or MS/TP protocol.
- Contact to activate an external alarm.
- Presence of dry contacts to start-up pumps.
- Amperage measurements (Three phase models only) to detect anomalies and to estimate electrical consumption.
- Boiler return temperature and boiler flow estimation.
- Can be easily connected with an auxiliary boiler as a power backup or for a dual-energy configuration.

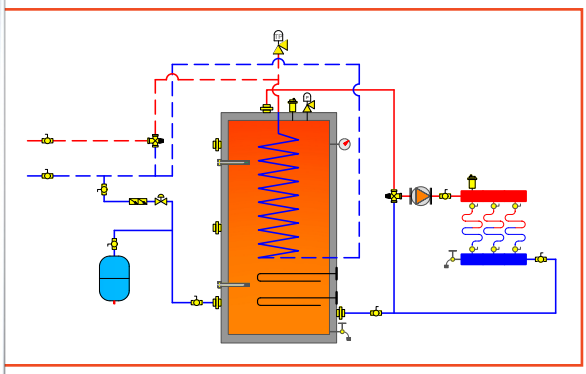
COMBINED SAVINGS AT ALL LEVELS

The ComboMax 120-9 takes up the same space as conventional water heaters. It is installed in one easy step and requires less material and labour than products that would have been installed separately. What's more: this combination will last over 30 years, which means the water heater will not have to be replaced every 7 to 10 years. The electric boiler and instantaneous water heater combination can be used for domestic hot water only or connected to any hydronic heating system to meet the demands of a multi-unit or commercial building. This system is practically maintenance-free and guaranteed for 10 years and is intended for those seeking exceptional water quality and long-lasting equipment.

Domestic hot water only



Domestic hot water and Heating



COMBOMAX 120-9 IS AVAILABLE IN DIFFERENT POWERS AND VOLTAGES

SINGLE-PHASE 60Hz

208 VAC	4,5 kW to 45 kW
240 VAC	6 kW to 60 kW

THREE-PHASE 60Hz

208 VAC	6,8 kW to 54 kW
240 VAC	9 kW to 60 kW
480 VAC	9 kW to 60 kW
600 VAC	9 kW to 60 kW

3 PHASE-MODEL

208V - 3 Phase[1]	BTU/h	kW	Amps	Stages	Element 240V	Relays Stages	SCR Stage
Combomax 120-9 7KW 208V 3PH	23065	6,8	19	1	3 x 3 kW	N.A.	1 x 6.8 kW
Combomax 120-9 10KW 208V 3PH	34598	10,1	28	1	3 x 4.5 kW	N.A.	1 x 10.1 kW
Combomax 120-9 11KW 208V 3PH	38442	11,3	31	1	3 x 5 kW	N.A.	1 x 11.3 kW
Combomax 120-9 14KW 208V 3PH	46130	13,5	37	1	3 x 6 kW	N.A.	1 x 13.5 kW
Combomax 120-9 20KW 208V 3PH	69195	20,3	56	2	6 x 4.5 kW	1 x 10.1 kW	1 x 10.1 kW
Combomax 120-9 23KW 208V 3PH	76884	22,5	62	2	6 x 5 kW	1 x 11.3 kW	1 x 11.3 kW
Combomax 120-9 27KW 208V 3PH	92260	27,0	75	2	6 x 6 kW	1 x 13.5 kW	1 x 13.5 kW
Combomax 120-9 30KW 208V 3PH	103793	30,4	84	3	9 x 4.5 kW	2 x 10.1 kW	1 x 10.1 kW
Combomax 120-9 34KW 208V 3PH	115326	33,8	94	3	9 x 5 kW	2 x 11.3 kW	1 x 11.3 kW
Combomax 120-9 41KW 208V 3PH	138391	40,6	113	3	9 x 6 kW	2 x 13.5 kW	1 x 13.5 kW
Combomax 120-9 45KW 208V 3PH	153767	45,1	125	4	12 x 5 kW	3 x 11.3 kW	1 x 11.3 kW
Combomax 120-9 54KW 208V 3PH	184521	54,1	150	4	12 x 6 kW	3 x 13.5 kW	1 x 13.5 kW

[1] 208 V 3-phase electrical supply (L1-L2-L3) with three 75 °C conductors and a ground.

240V - 3 Phase[1]	BTU/h	kW	Amps	Stages	Element 240V	Relays Stages	SCR Stage
Combomax 120-9 9KW 240V 3PH	30708	9	22	1	3 x 3 kW	N.A.	1 x 9 kW
Combomax 120-9 13KW 240V 3PH	46062	13,5	32	1	3 x 4.5 kW	N.A.	1 x 13.5 kW
Combomax 120-9 15KW 240V 3PH	51180	15	36	1	3 x 5 kW	N.A.	1 x 15 kW
Combomax 120-9 18KW 240V 3PH	61416	18	43	1	3 x 6 kW	N.A.	1 x 18 kW
Combomax 120-9 27KW 240V 3PH	92124	27	65	2	6 x 4.5 kW	1 x 13.5 kW	1 x 13.5 kW
Combomax 120-9 30KW 240V 3PH	102360	30	72	2	6 x 5 kW	1 x 15 kW	1 x 15 kW
Combomax 120-9 36KW 240V 3PH	122832	36	87	2	6 x 6 kW	1 x 18 kW	1 x 18 kW
Combomax 120-9 41KW 240V 3PH	138186	40,5	97	3	9 x 4.5 kW	2 x 13.5 kW	1 x 13.5 kW
Combomax 120-9 45KW 240V 3PH	153540	45	108	3	9 x 5 kW	2 x 15 kW	1 x 15 kW
Combomax 120-9 54KW 240V 3PH	184248	54	130	3	9 x 6 kW	2 x 18 kW	1 x 18 kW
Combomax 120-9 60KW 240V 3PH	204720	60	144	4	12 x 5 kW	3 x 15 kW	1 x 15 kW

[1] 240 V 3-phase electrical supply (L1-L2-L3) with three 75 °C conductors and a ground.

480V - 3 Phase[1]	BTU/h	kW	Amps	Stages	Element 277V	Relays Stages	SCR Stage
Combomax 120-9 9KW 480V 3PH	30708	9	10,8	1	3 x 3 kW	N.A.	1 x 9 kW
Combomax 120-9 15KW 480V 3PH	51180	15	18,0	1	3 x 5 kW	N.A.	1 x 15 kW
Combomax 120-9 18KW 480V 3PH	61416	18	21,7	1	3 x 6 kW	N.A.	1 x 18 kW
Combomax 120-9 30KW 480V 3PH	102360	30	36,1	2	6 x 5 kW	1 x 15 kW	1 x 15 kW
Combomax 120-9 36KW 480V 3PH	122832	36	43,3	2	6 x 6 kW	1 x 18 kW	1 x 18 kW
Combomax 120-9 45KW 480V 3PH	153540	45	54,1	3	9 x 5 kW	2 x 15 kW	1 x 15 kW
Combomax 120-9 54KW 480V 3PH	184248	54	65	3	9 x 6 kW	2 x 18 kW	1 x 18 kW
Combomax 120-9 60KW 480V 3PH	204720	60	72,2	4	12 x 5 kW	3 x 15 kW	1 x 15 kW

[1] 480 V 3-phase electrical supply (L1-L2-L3) with three 75 °C conductors and a ground.

600V - 3 Phase[1]	BTU/h	kW	Amps	Stages	Element 347V	Relays Stages	SCR Stage
Combomax 120-9 9KW 600V 3PH	30708	9	8,7	1	3 x 3 kW	N.A.	1 x 9 kW
Combomax 120-9 15KW 600V 3PH	51180	15	14,4	1	3 x 5 kW	N.A.	1 x 15 kW
Combomax 120-9 18KW 600V 3PH	61416	18	17,3	1	3 x 6 kW	N.A.	1 x 18 kW
Combomax 120-9 30KW 600V 3PH	102360	30	28,9	2	6 x 5 kW	1 x 15 kW	1 x 15 kW
Combomax 120-9 36KW 600V 3PH	122832	36	34,6	2	6 x 6 kW	1 x 18 kW	1 x 18 kW
Combomax 120-9 45KW 600V 3PH	153540	45	43,3	3	9 x 5 kW	2 x 15 kW	1 x 15 kW
Combomax 120-9 54KW 600V 3PH	184248	54	52	3	9 x 6 kW	2 x 18 kW	1 x 18 kW
Combomax 120-9 60KW 600V 3PH	204720	60	57,7	4	12 x 5 kW	3 x 15 kW	1 x 15 kW

[1] 600 V 3-phase electrical supply (L1-L2-L3) with three 75 °C conductors and a ground.

1 PHASE-MODEL

208V - 1 Phase[1]	BTU/h	kW	Amps	Stages	Element 240V	Relays Stages	SCR Stage
Combomax 120-9 5KW 208V 1PH	15377	4,5	22	1	1 x 6 kW	N.A.	1 x 4.5 kW
Combomax 120-9 9KW 208V 1PH	30753	9	43	1	2 x 6 kW	N.A.	1 x 9 kW
Combomax 120-9 13KW 208V 1PH	46130	13,5	65	2	4 x 4.5 kW	1 x 6.8 kW	1 x 6.8 kW
Combomax 120-9 18KW 208V 1PH	61507	18	87	2	4 x 6 kW	1 x 9 kW	1 x 9 kW
Combomax 120-9 23KW 208V 1PH	76884	22,5	108,2	3	6 x 5 kW	2 x 7.5 kW	1 x 7.5 kW
Combomax 120-9 27KW 208V 1PH	92260	27	129,8	3	6 x 6 kW	2 x 9 kW	1 x 9 kW
Combomax 120-9 32KW 208V 1PH	107637	31,5	151,4	4	4 x 4.5 kW 4 x 6 kW	3 x 7.9 kW	1 x 7.9 kW
Combomax 120-9 36KW 208V 1PH	123014	36,1	173,6	4	8 x 6 kW	3 x 9 kW	1 x 9 kW
Combomax 120-9 41KW 208V 1PH	140954	41,3	199	5	5 x 5 kW 5 x 6 kW	3 x 8.3 kW	1 x 8.3 kW
Combomax 120-9 45KW 208V 1PH	153767	45,1	216,8	5	10 x 6 kW	3 x 9 kW	1 x 9 kW

[1] 208 V 1-phase electrical supply (L1-L2) with two 75 °C conductors and a ground.

240V - 1 Phase[1]	BTU/h	kW	Amps	Stages	Element 240V	Relays Stages	SCR Stage
Combomax 120-9 6KW 240V 1PH	20472	6	25	1	1 x 6 kW	N.A.	1 x 6 kW
Combomax 120-9 12KW 240V 1PH	40944	12	50	1	2 x 6 kW	N.A.	1 x 12 kW
Combomax 120-9 18KW 240V 1PH	61416	18	75	2	4 x 4.5 kW	1 x 9 kW	1 x 9 kW
Combomax 120-9 24KW 240V 1PH	81888	24	100	2	4 x 6 kW	1 x 12 kW	1 x 12 kW
Combomax 120-9 30KW 240V 1PH	102360	30	125,0	3	6 x 5 kW	2 x 10 kW	1 x 10 kW
Combomax 120-9 36KW 240V 1PH	122832	36	150,0	3	6 x 6 kW	2 x 12 kW	1 x 12 kW
Combomax 120-9 42KW 240V 1PH	143304	42	175,0	4	4 x 4.5 kW 4 x 6 kW	3 x 10.5 kW	1 x 10.5 kW
Combomax 120-9 48KW 240V 1PH	163776	48	200,0	4	8 x 6 kW	3 x 12 kW	1 x 12 kW
Combomax 120-9 55KW 240V 1PH	187660	55	229,2	5	5 x 5 kW 5 x 6 kW	4 x 11 kW	1 x 11 kW
Combomax 120-9 60KW 240V 1PH	204720	60	250	5	10 x 6 kW	4 x 12 kW	1 x 12 kW

[1] 240 V 1-phase electrical supply (L1-L2) with two 75 °C conductors and a ground.

Domestic hot water production at 110°F* (US gallons)

kW	1 hour	Continuous
4,5	146	26
6	155	35
6,8	160	40
9	173	53
10,1	179	59
11,3	186	66
12	190	70
13,5	199	79
15	208	88
18	226	106

kW	1 hour	Continuous
20,3	239	119
22,5	252	132
24	261	141
27	279	159
30	296	176
30,4	299	179
31,5	305	185
33,8	318	198
36	331	211
36,1	332	212

kW	1 hour	Continuous
40,5	358	238
41,3	363	243
42	367	247
45	384	264
48	402	282
54	437	317
55	443	323
60	472	352

* Based on a 40°F domestic cold water supply and a heating water temperature of 180°F

ASME H

OUR PRODUCTS ARE CERTIFIED CSA® C US

10-YEAR WARRANTY
ON THE TANK AND THE COILS

2-YEAR WARRANTY
ON ELECTRICAL AND MECHANICAL PARTS

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