
Electro-HELPS XV

 **Made in USA**



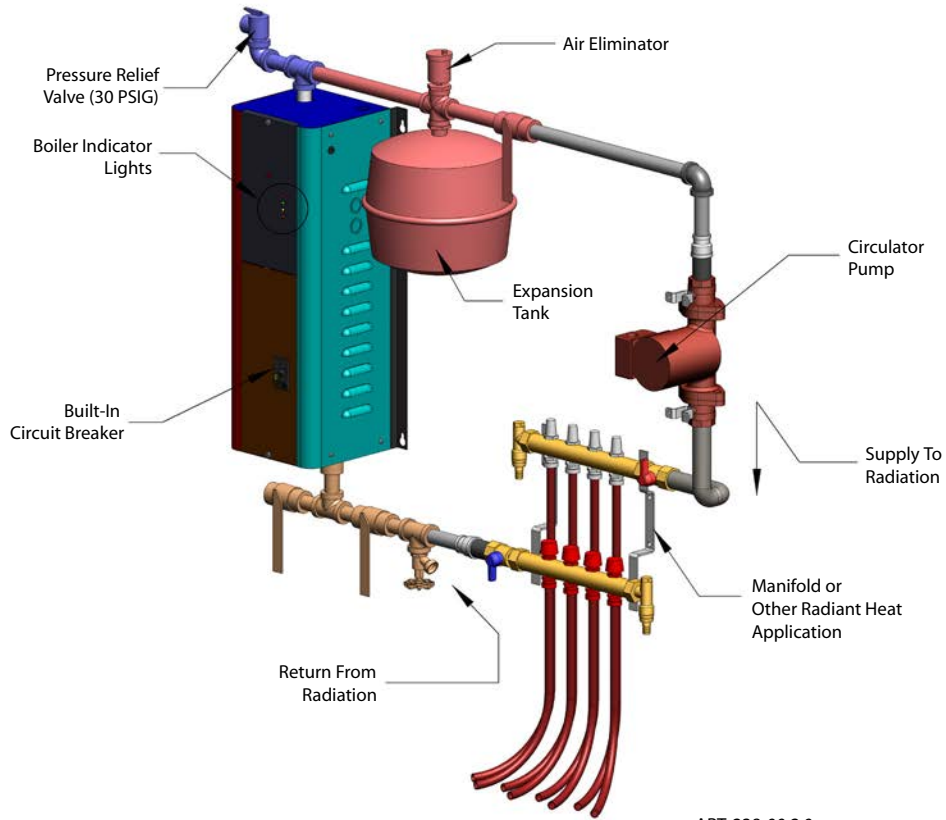
ELECTRO-BOILER® SPECIFICATIONS

A complete product line to fit all your application needs

The Electro-Boiler has been heating America's homes and businesses since 1980. We take pride in our craftsmanship and we use only the best materials to ensure a high quality product. We are committed to you and we are confident that you will be completely satisfied with the Electro-Boiler.

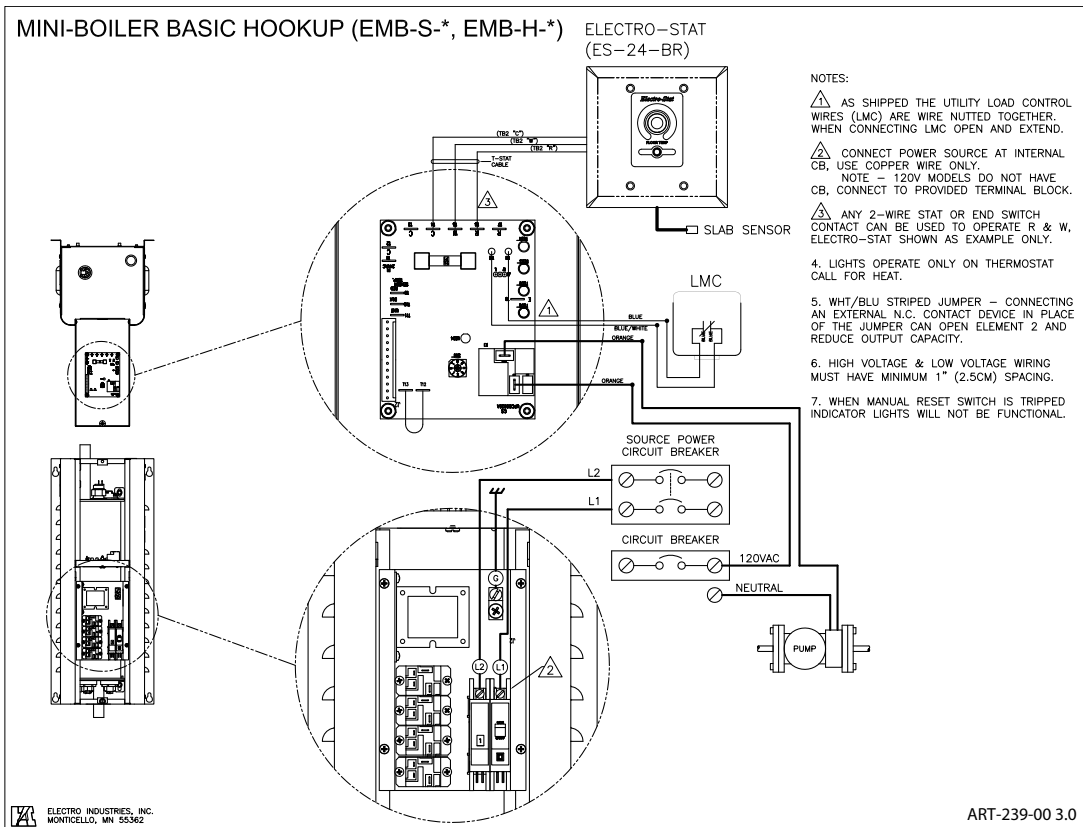


MINI-BOILER & TS MIDSIZE SERIES MECHANICAL



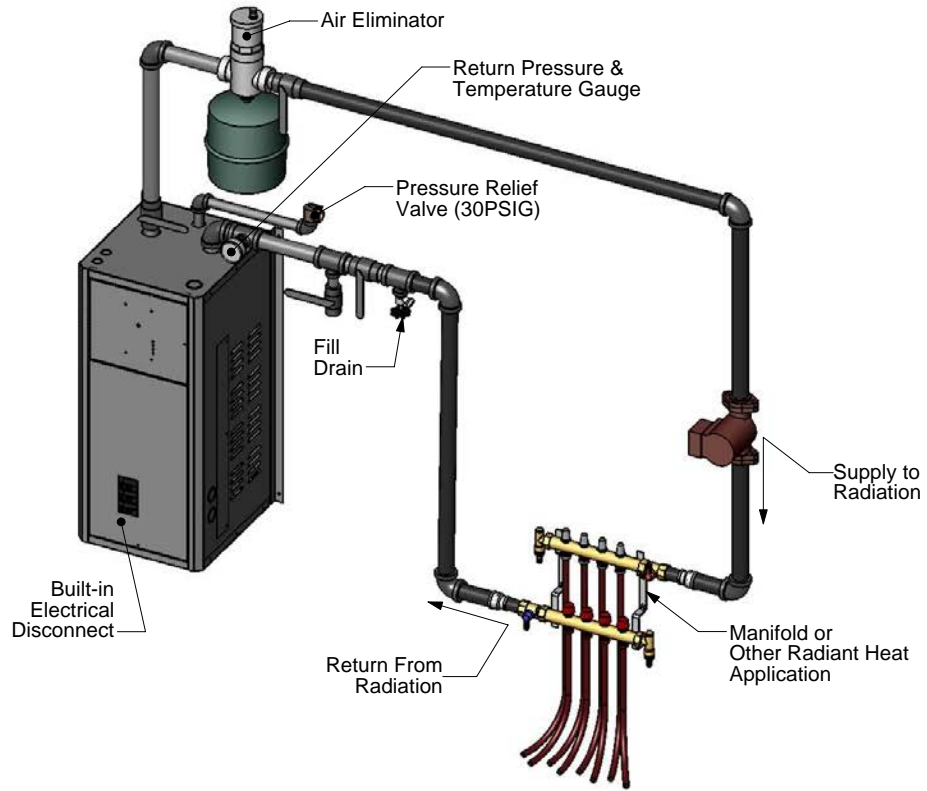
ART-238-00 2.0

MINI-BOILER SERIES ELECTRICAL

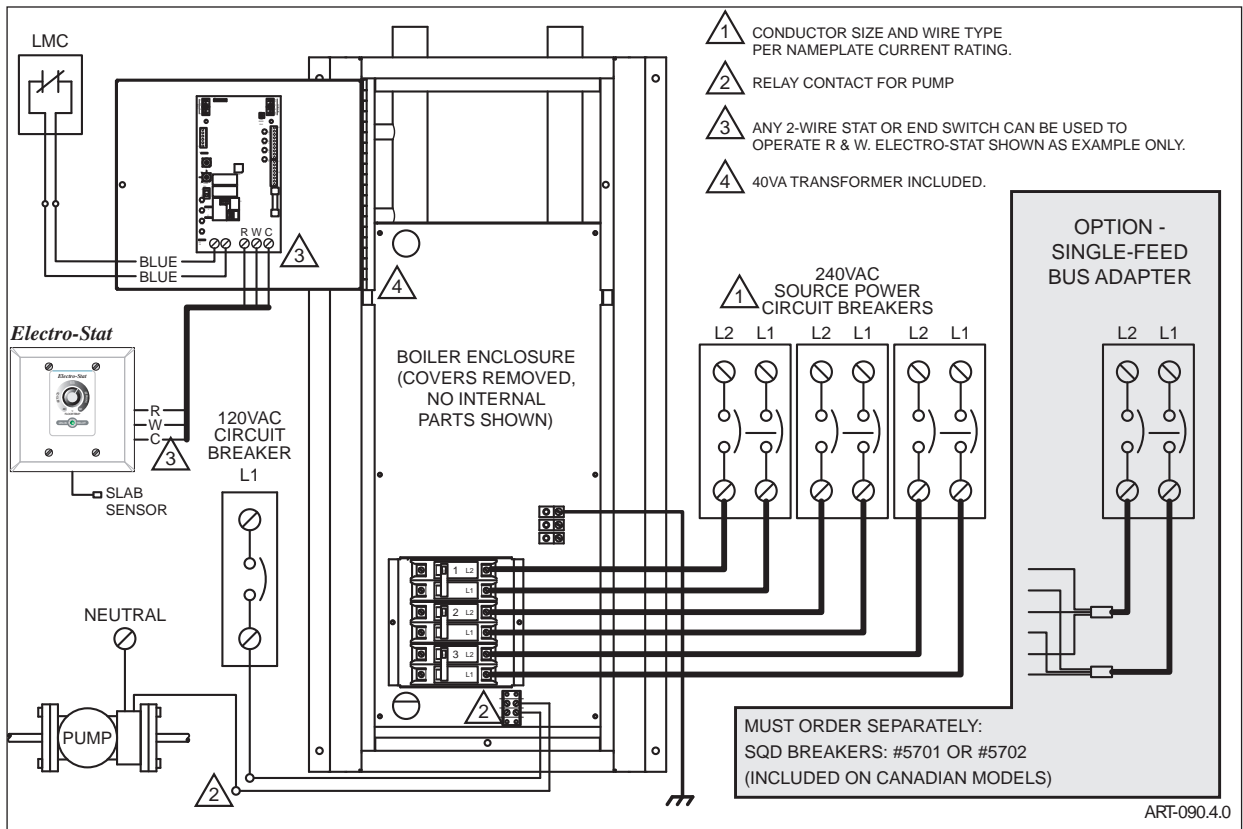


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TS STANDARD & TS COMMERCIAL SERIES MECHANICAL

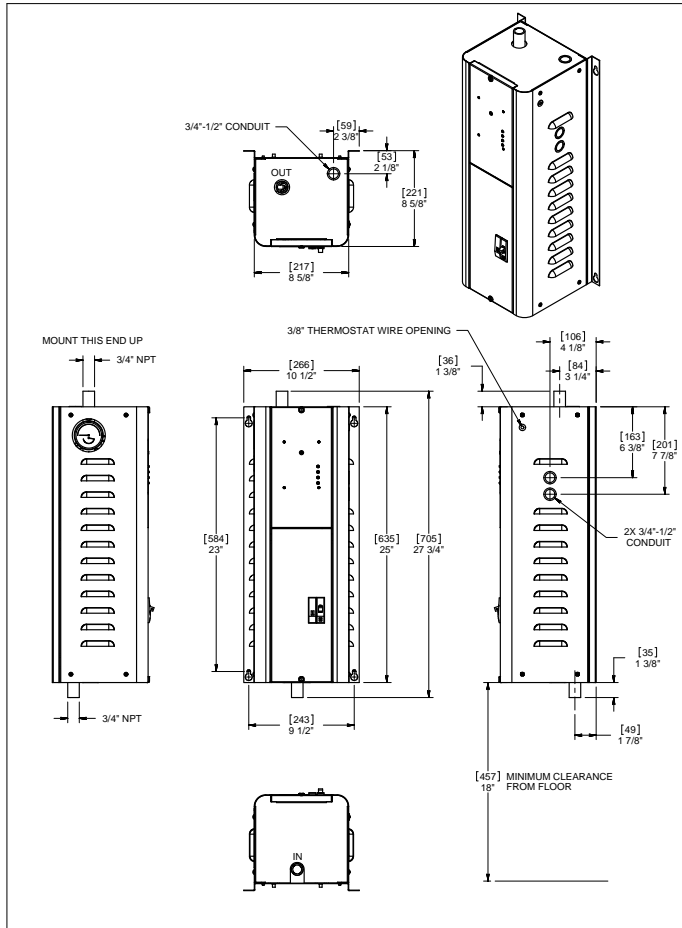


TS MIDSIZE, TS STANDARD, & TS COMMERCIAL SERIES ELECTRICAL





MINI-BOILER SERIES



STANDARD EQUIPMENT

- Controls and control wiring terminals
- LED indicator lights
- DC Power Relays
- Hi-limits: 1st - automatic reset
2nd - manual reset
- Circulator switching relay - 10-amp maximum
- Thermostat or end switch connection (R and W)
- Load management control provisions
- Heavy duty sheet metal enclosure
- 1 gl. Steel vessel ASME "H" Stamp (20-year warranty)
- Supply pressure/temperature gauge
- Safety relief valve (30 PSI)
- Heating elements (20-year warranty)
- 2-year parts warranty
- Supply water sensing
- Temperature range 90° F to 160° F

EMB-H-**

- Senses target supply temperature and modulates electric element
- Temperature range 90° F to 180° F

WATER FLOW REQUIREMENTS (MINIMUM 0.3 GPM PER KW WATER FLOW THROUGH BOILER)

Model	Water Temperature Rise											
	Flow - 10° F/6° C		Head Loss		Flow - 20° F/11° C		Head Loss		Flow - 30° F/16° C		Head Loss	
	gpm	lpm	ft	m	gpm	lpm	ft	m	gpm	lpm	ft	m
EMB-*-1	.75	2.83	.01	.003	.37	1.39	.003	.001	.25	1.89	.003	.001
EMB-*-2	1.7	6.43	.01	.006	.85	3.21	.02	.006	.56	2.11	.004	.001
EMB-*-4	3.41	12.88	.08	.024	1.70	6.42	.04	.012	1.13	4.27	.02	.006
EMB-*-5	3.07	11.60	.06	.018	1.53	5.78	.02	.006	1.02	3.85	.02	.006
EMB-*-7	4.78	18.06	.12	.036	2.39	9.03	.06	.01	1.59	6.01	.02	.006
EMB-*-9	6.14	23.20	.23	.07	3.07	11.60	.10	.03	2.04	7.71	.06	.018

* = S or H

Note: Head Loss based on 110° F return temperature.

ELECTRIC SUPPLY

Model	Volts	Phase	kW	Watts	Btu/h	Amps	CB
EMB-*-1	120	1-60	1.1	1,100	3,753	9.2	N/A
EMB-*-2	120	1-60	2.5	2,500	8,530	20.8	N/A
EMB-*-4	120	1-60	5	5,000	17,060	41.7	N/A
EMB-*-5	240/208	1-60	4.5/3.5	4,500/3,500	15,354/11,942	18.8/16.8	30A
EMB-*-7	240/208	1-60	7/5.3	7,000/5,300	23,885/17,913	29.2/25.2	45A
EMB-*-9	240/208	1-60	9/7	9,000/7,000	30,709/23,885	37.5/33.7	60A

* = S or H

CLEARANCES

	MINIMUM CLEARANCE FROM COMBUSTIBLE SURFACES		SUGGESTED MINIMUM SERVICE CLEARANCE	
	INCH	MM	INCHES	MM
BACK	0	0	0	0
LEFT	1	25	12	305
RIGHT	1	25	12	305
FRONT	1	25	24	610
TOP	1	25	24	610
BOTTOM	REQUIRED CLEARANCE - 18 INCHES/457 MM			



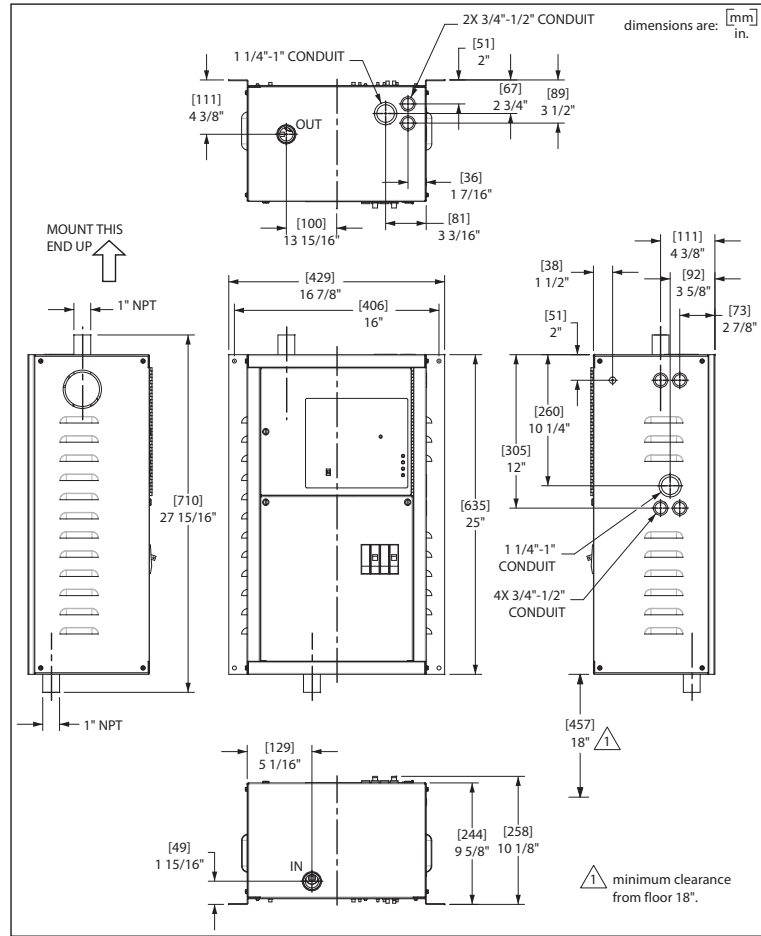
STANDARD EQUIPMENT

Staging - EB-MS-**

- Supply water sensing
- Regulates to front panel selected temperature
- Staging indicator lights
- DC Power Relays
- Hi-limits: 1st - automatic reset at 190° F
2nd - manual reset at 205° F
- Circulator switching relay - 10-amp maximum
- Thermostat or end switch connection (R and W)
- Utility load control provisions
- 2.2 gl. Steel vessel ASME "H" Stamp (20-year warranty)
- Supply temperature/pressure gauge
- Safety relief valve (30 PSI)
- Standby switch and boiler contact

Modulating - EB-MX-**

- Same as EB-MS-** PLUS
- Modulates at a tighter temperature control
- Outdoor sensing with outdoor reset capability. The target supply temperature ramps up as it is colder outside.



WATER FLOW REQUIREMENTS (MINIMUM 2 GPM WATER FLOW THROUGH BOILER)

Model	Water Temperature Rise											
	Flow - 10° F/6° C		Head Loss		Flow - 20° F/11° C		Head Loss		Flow - 30° F/16° C		Head Loss	
	gpm	lpm	ft	m	gpm	lpm	ft	m	gpm	lpm	ft	m
EB-M*-10	6.82	25.82	.01	.003	3.41	12.91	.004	.001	2.27	8.59	.001	.001
EB-M*-12	7.8	29.53	.02	.006	3.92	14.84	.007	.002	2.6	9.84	.002	.001
EB-M*-15	10.23	38.73	.03	.009	5.11	19.34	.01	.003	3.41	12.91	.004	.001
EB-M*-17	11.9	45.05	.05	.015	5.97	22.6	.01	.003	3.98	15.02	.007	.002
EB-M*-20	13.65	51.66	.07	.02	6.82	25.01	.02	.006	4.55	17.22	.01	.003

* = S or X

Note: Head Loss based on 110° F return temperature.

ELECTRIC SUPPLY

Model	Volts	Phase	kW	Watts	Btu/h	Amps	CB†
EB-M*-10	240/208	1-60	10/7.5	10,000/7,500	34,121/25,591	41.7/36.1	60A
EB-M*-12	240/208	1-60	11.5/8.6	11,500/8,600	39,239/29,429	47.9/41.5	60A
EB-M*-15	240/208	1-60	15/11.3	15,000/11,300	51,182/38,386	62.5/54.1	60A + 30A
EB-M*-17	240/208	1-60	17.5/13.1	17,500/13,100	59,712/44,784	72.9/63.1	60A + 45A
EB-M*-20	240/208	1-60	20/15	20,000/15,000	68,242/51,182	83.3/72.1	60A + 60A

* = S or X

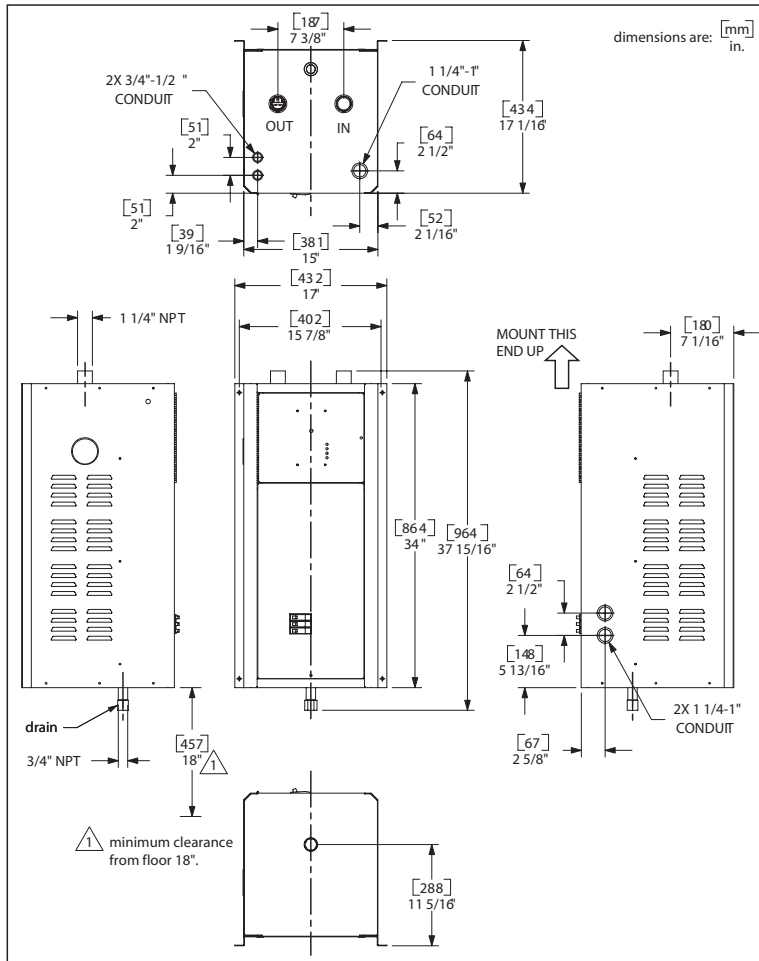
† Canadian models include single feed bus option where applicable.

CLEARANCES

	MINIMUM CLEARANCE FROM COMBUSTIBLE SURFACES		SUGGESTED MINIMUM SERVICE CLEARANCE	
	0 INCH	0 MM	0 INCH	0 MM
BACK	0 INCH	0 MM	0 INCH	0 MM
LEFT	1 INCH	25 MM	12 INCHES	305 MM
RIGHT	1 INCH	25 MM	12 INCHES	305 MM
FRONT	1 INCH	25 MM	24 INCHES	610 MM
TOP	1 INCH	25 MM	24 INCHES	610 MM
BOTTOM	REQUIRED CLEARANCE - 18 INCHES/457 MM			



TS STANDARD SERIES



STANDARD EQUIPMENT

Staging - EB-S-**

- Supply water sensing
- Regulates to front panel selected temperature
- Staging indicator lights
- DC Power Relays
- Hi-limits: 1st - automatic reset at 190° F
2nd - manual reset at 205° F
- Circulator switching relay - 10-amp maximum
- Thermostat or end switch connection (R and W)
- Utility load control provisions
- 6.5 gal. Steel vessel ASME "H" Stamp (20-year warranty)
- Supply temperature/pressure gauge
- Safety relief valve (30 PSI)
- Standby switch and boiler contact

Modulating - EB-WX-**

- Same as EB-S-** PLUS
- Modulates at a tighter temperature control
- Outdoor sensing with outdoor reset capability. The target supply temperature ramps up as it is colder outside.

WATER FLOW REQUIREMENTS (MINIMUM 2 GPM WATER FLOW THROUGH BOILER)

Model	Water Temperature Rise											
	Flow - 10° F/6° C		Head Loss		Flow - 20° F/11° C		Head Loss		Flow - 30° F/16° C		Head Loss	
	gpm	lpm	ft	m	gpm	lpm	ft	m	gpm	lpm	ft	m
EB-**-13	9.21	34.86	.03	.009	4.60	17.41	.01	.003	3.07	11.62	.004	.001
EB-**-18	12.28	46.49	.06	.018	6.14	23.24	.02	.006	4.09	15.48	.01	.003
EB-**-23	15.35	58.11	.09	.027	7.67	29.03	.02	.006	5.11	19.34	.01	.003
EB-**-27	18.43	69.77	.13	.039	9.21	34.86	.03	.009	6.14	23.24	.02	.006
EB-WX-13-2	9.21	34.86	.03	.009	4.60	17.41	.01	.003	3.07	11.62	.004	.001
EB-WX-27-2	18.43	69.77	.13	.039	9.21	34.86	.03	.009	6.14	23.24	.02	.006

** = S or WX

Note: Head Loss based on 110° F return temperature.

ELECTRIC SUPPLY

Model	Volts	Phase	kW	Watts	Btu/h	Amps	CB [†]
EB-**-13	240/208	1-60	13.5/10.1	13,500/10,100	46,063/34,547	56.3/48.7	60A + 30A
EB-**-18	240/208	1-60	18/13.5	18,000/13,500	61,418/46,063	75.0/64.9	60A + 60A
EB-**-23	240/208	1-60	22.5/16.9	22,500/16,900	76,773/57,579	93.8/81.1	60A + 60A + 30A
EB-**-27	240/208	1-60	27/20.3	27,000/20,300	92,127/69,095	112.5/97.4	60A + 60A + 60A
EB-WX-13-2	208	3-60	13.5	13,500	46,063	37.5	50A
EB-WX-27-2	208	3-60	27	27,000	92,127	74.9	100A

** = S or WX

[†] Canadian models include single feed bus option where applicable.

CLEARANCES

	MINIMUM CLEARANCE FROM COMBUSTIBLE SURFACES		SUGGESTED MINIMUM SERVICE CLEARANCE	
	BACK	LEFT	RIGHT	FRONT
BACK	0 INCH	0 MM	0 INCH	0 MM
LEFT	1 INCH	25 MM	12 INCHES	305 MM
RIGHT	1 INCH	25 MM	12 INCHES	305 MM
FRONT	1 INCH	25 MM	24 INCHES	610 MM
TOP	1 INCH	25 MM	24 INCHES	610 MM
BOTTOM	REQUIRED CLEARANCE - 18 INCHES/457 MM			

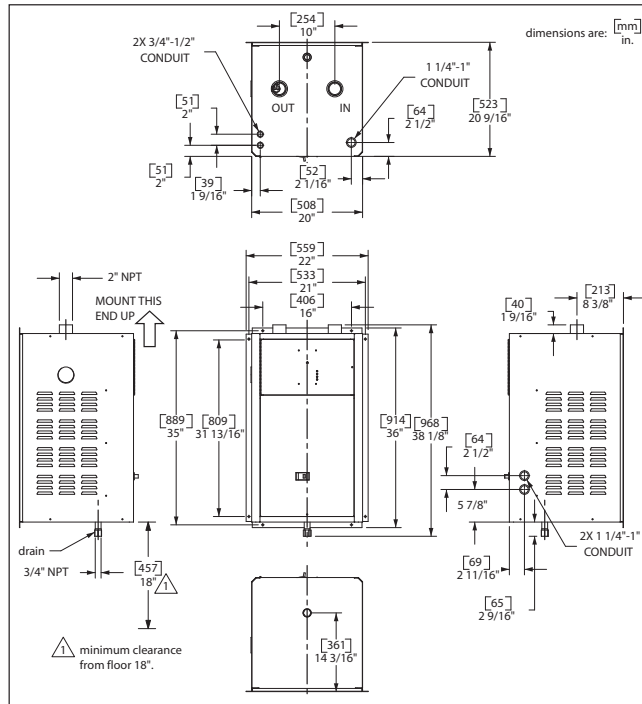
TS COMMERCIAL SERIES



STANDARD EQUIPMENT

Staging - EB-CX-**

- Supply water sensing
- Regulates to front panel selected temperature
- Staging indicator lights
- Heavy duty contactors
- Hi-limits: 1st - automatic reset at 190° F
2nd - manual reset at 205° F
- Circulator switching relay - 10-amp maximum
- Thermostat or end switch connection (R and W)
- Utility load control provisions
- 13.1 gal. Steel vessel ASME "H" Stamp (20-year warranty)
- Supply temperature/pressure gauge
- Safety relief valve (30 PSI)
- Standby switch and boiler contact
- Outdoor reset capability



WATER FLOW REQUIREMENTS (MINIMUM 4 GPM WATER FLOW THROUGH BOILER)

Model	Water Temperature Rise											
	Flow - 20° F/6° C		Head Loss		Flow - 30° F/11° C		Head Loss		Flow - 40° F/16° C		Head Loss	
	gpm	lpm	ft	m	gpm	lpm	ft	m	gpm	lpm	ft	m
EB-CX-18-60	6.14	23.24	.002	.0006	4.09	15.48	.001	.0003	3.07 [†]	11.62 [†]	.0008	.0002
EB-CX-24-60	8.19	31.00	.002	.0006	5.46	20.66	.001	.0003	4.09	15.48	.0008	.0002
EB-CX-30-60	10.23	38.72	.06	.018	6.82	25.81	.07	.021	5.11	19.34	.07	0.21
EB-CX-36-60	12.28	46.49	.01	.003	8.19	31.00	.004	.001	6.14	23.24	.002	.0006
EB-CX-45-60	15.35	58.10	.02	.006	10.23	38.72	.01	.003	7.67	29.03	.01	.003
EB-CX-54-60	18.43	69.77	.02	.006	12.28	46.49	.01	.003	9.21	34.86	.01	.003
EB-CX-18-48	6.14	23.24	.002	.0006	4.09	15.48	.001	.0003	3.07	11.62	.0008	.0002
EB-CX-24-48	8.18	31.00	.002	.006	5.45	20.66	.002	.006	4.05	15.33	.002	.006
EB-CX-30-48	10.23	38.72	.06	.018	6.82	25.81	.06	.018	5.11	19.34	.06	.018
EB-CX-36-48	12.28	46.49	.01	.003	8.19	31.00	.004	.001	6.14	23.24	.002	.0006
EB-CX-42-48	14.33	54.24	.02	.006	9.55	36.15	.02	.006	7.16	27.1	.02	.006
EB-CX-48-48	16.37	61.97	.02	.006	10.91	41.3	.02	.006	8.18	30.96	.02	.006
EB-CX-54-48	18.43	69.77	.02	.006	12.28	46.49	.01	.003	9.21	34.86	.01	.003
EB-CX-27-20	9.21	34.86	.01	.003	6.14	23.24	.002	.0006	4.60	17.41	.001	.0003
EB-CX-31-20	10.74	40.66	.01	.003	7.16	27.1	.01	.003	5.37	20.33	.01	.003
EB-CX-36-20	12.28	46.48	.01	.003	8.18	30.96	.01	.003	6.14	23.24	.01	.003
EB-CX-40-20	13.82	52.32	.01	.003	9.21	34.86	.01	.003	6.91	26.16	.003	.0009
EB-CX-27-24	9.21	34.86	.01	.003	6.14	23.24	.002	.0006	4.60	17.41	.001	.0003
EB-CX-31-24	10.74	40.66	.01	.003	7.16	27.1	.01	.003	5.37	20.33	.01	.003
EB-CX-36-24	12.28	46.48	.01	.003	8.18	30.96	.01	.003	6.14	23.24	.01	.003
EB-CX-40-24	13.82	52.32	.01	.003	9.21	34.86	.01	.003	6.91	26.16	.003	.0009
EB-CX-31	10.75	40.69	.06	.018	7.16	27.10	.07	.021	5.37	20.33	.07	.021
EB-CX-36	12.28	46.49	.06	.018	8.19	31.00	.06	.018	6.14	23.24	.07	.021
EB-CX-40	13.65	51.67	.01	.003	9.10	34.44	.01	.003	6.82	25.81	.003	.0009
EB-CX-44	15.01	56.82	.02	.006	10.01	37.89	.01	.003	7.50	28.39	.01	.003

[†] Result below minimum required flow of boiler, make sure system design provides minimum flow requirements of boiler.
Note: Head Loss based on 110° F return temperature.



TS COMMERCIAL SERIES (continued)

CLEARANCES

	MINIMUM CLEARANCE FROM COMBUSTIBLE SURFACES		SUGGESTED MINIMUM SERVICE CLEARANCE	
	0 INCH	0 MM	0 INCH	0 MM
BACK				
LEFT	1 INCH	25 MM	12 INCHES	305 MM
RIGHT	1 INCH	25 MM	12 INCHES	305 MM
FRONT	1 INCH	25 MM	24 INCHES	610 MM
TOP	1 INCH	25 MM	24 INCHES	610 MM
BOTTOM	REQUIRED CLEARANCE - 18 INCHES/457 MM			

ELECTRIC SUPPLY

Model	Volts	Phase	kW	Watts	Btu/h	Amps	CB†
EB-CX-18-60	600	3-60	18	18,000	61,418	17.3	30A
EB-CX-24-60	600	3-60	24	24,000	81,891	23.1	30A
EB-CX-30-60	600	3-60	30	30,000	102,364	28.9	45A
EB-CX-36-60	600	3-60	36	36,000	122,837	34.6	45A
EB-CX-45-60	600	3-60	45	45,000	153,546	43.3	60A
EB-CX-54-60	600	3-60	54	54,000	184,255	52.0	70A
EB-CX-18-48	480	3-60	18	18,000	61,418	21.7	30A
EB-CX-24-48	480	3-60	24	24,000	81,891	28.9	40A
EB-CX-30-48	480	3-60	30	30,000	102,364	36.1	50A
EB-CX-36-48	480	3-60	36	36,000	122,837	43.3	60A
EB-CX-42-48	480	3-60	42	42,000	143,310	50.5	70A
EB-CX-48-48	480	3-60	48	48,000	163,782	57.7	80A
EB-CX-54-48	480	3-60	54	54,000	184,255	65.0	80A
EB-CX-27-20	208	3-60	27	27,000	92,127	74.9	100A
EB-CX-31-20	208	3-60	31.5	31,500	107,482	87.4	110A
EB-CX-36-20	208	3-60	36	36,000	122,837	99.9	125A
EB-CX-40-20	208	3-60	40.5	40,500	138,191	112.4	150A
EB-CX-27-24	240	3-60	27	27,000	92,127	65.0	80A
EB-CX-31-24	240	3-60	31.5	31,500	107,482	75.8	100A
EB-CX-36-24	240	3-60	36	36,000	122,837	86.6	110A
EB-CX-40-24	240	3-60	40.5	40,500	138,191	97.4	125A
EB-CX-31	240/208	1-60	31.5/23.6	31,500/23,600	107,482/80,611	131.3/113.6	100A + 80A
EB-CX-36	240/208	1-60	36/27	36,000/27,000	122,837/92,127	150.0/129.8	100A + 100A
EB-CX-40	240/208	1-60	40/30	40,000/30,000	136,485/102,364	166.7/144.2	125A + 125A
EB-CX-44	240/208	1-60	44/33	44,000/33,000	150,134/112,600	183.3/158.7	125A + 125A

† Canadian models include single feed bus option where applicable.

All specifications subject to ELECTRO INDUSTRIES STANDARD TERMS AND CONDITIONS, download at www.electromn.com/terms.pdf.

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