

RADIANT APPLICATIONS

Hydronics Radiant Floor, Emphasizing Electric Boiler

	<u>EMB</u>	<u>EMB-W</u>	<u>EB-S</u>	<u>EB-WO</u>
1. Lower level, 1 zone - warm floor, also has forced air heating system	✓			
2. Lower level, small and large zones - warm floor, also has forced air heating system		✓		
3. Garage, residential, 1,000 sq. ft. max.	✓			
4. Lower level, large zones - warm floor, also has forced air heating system				✓
5. Lower level, large, unequal and many zones - warm floor, also has forced air heating system				✓*
6. Slab on grade - only heating system				✓
7. Slab on grade, unequal and many zones - only heating system				✓*
8. Whole house, zones - all radiant, two temp. requirement				✓*
9. Whole house hydronics, zones - air handler coil, etc. - two temp. req.				✓*
10. Garage or shop, zones - only heating system				✓
11. Garage or shop, unequal and many zones - only heating system				✓*
12. Large building, multi-boilers, large and many small zones - add EB-C-STG5				✓* ✓*
13. Dual heat, standby gas boiler				✓

* Suggest adding EB-ZTS-* zone controller board (installed within boiler cabinet).

Zone Controller

This will simplify your wiring and make zone applications much easier. In addition to wiring convenience and troubleshooting, the Electro units include intelligence to stage the electric boiler based upon connected zone capacity.

TS Series:

EB-ZTS-1 - TS Series 4 zone control kit, includes priority and two temp. feature - fits inside TS boiler

EB-ZTS-2 - zone 5-8 for above EB-ZTS-1, includes 2nd 40VA transformer

Other boilers:

EB-ZS-4 - automatic staging system for Brand X boilers or dual EB-*

EB-ZR-4 - automatic staging system for Electro Industries' EB-R and EB-L

EB-ZC-4 - wiring and convenience interface, isolated boiler end switch

EB-5415A - low cost, 2 or 3 zone, sheds one boiler stage

Two Supply Water Temperature Requirement

- Handled as the priority zone on multi-zone (EB-ZTS-1) or two pump (EB-Z2P) controllers
- Priority switch on, zone 1 active - TS boiler automatically changes to 150° (or selection 176°) supply water setting
- All other zones are held off
- With zone 1 satisfied or 60-minute timeout, the boiler automatically returns to the preset temperature and reacts to the other zones

Low Temp	High Temp
Radiant, slab	Radiant, staple up
Radiant, slab	Baseboard
Radiant, slab	Fan coil
Radiant, slab	Water heater, side arm
Radiant, slab	Hanging unit heater (garage, shop, etc.)

Providing Comfort Through Efficient Energy Solutions



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Tube Placement & Spacing

Depending upon the electric rate requirements, off-peak rates, length of on-peak interrupt, etc.; tube placement and spacing needs to be a prime consideration. Electro Industries has various training tools or insulation guides relating to length of interrupt and ETS storage requirements. The following is a summary of various diagrams, other installation possibilities are also available.

If application is ETS daily interrupt, boiler needs to be oversized accordingly and tube spacing may need to be 9”.

