

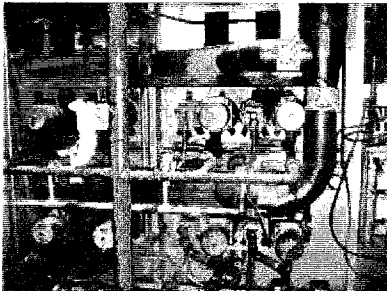
## Application brief

**Eclipse Product:** ThermThief (TFB Burner) & Bayonet Ultra Recuperators

**Submitted by:** John Davisson

**Application:** 3 Zone Surface Combustion Belt Furnace

**Description:** Customer: Rexnord Corporation  
Furnace: Surface Combustion, Belt 3 zone  
Production increase by tube design change.  
More burners mean fewer problems.

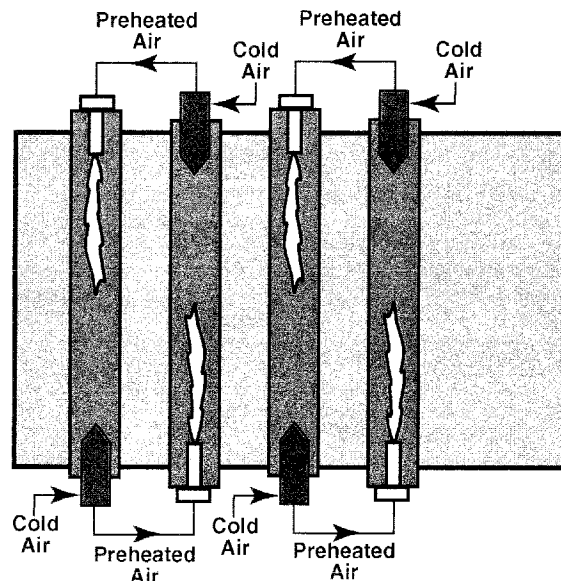


### Zone One Conversion List

Only zone one was converted due to dissipation rates exceeding the radiant tube limits of old "W" tube design. New straight tubes offer much longer life with lower dissipation rates.

- 12 each TFB030 burners (4 each were existing)
- 16 each straight 6 inch X 83 inch Overall Length Tubes
- 12 each 4 BU Bayonet Ultra Recuperators and exhaust extension housing (4 each were existing on the old "W" tubes)
- 12 each 105 BV 1-1/2" Butterfly valves
- 12 each 1/2" X 1/2" adjustable orifice gas cocks
- 12 each ignition transformers 120V/ 6000V
- 12 each FRG 507 biasing gas proportionator valves
- 12 each metal flex pipe nipples, (12) air and (12) gas

ThermThief Burners	Capacity Per Tube	BU Recuperator
<i>Model TFB030NPA2NNAK</i> <b>BEFORE CONVERSION</b> HEATING SURFACE WAS 13,571.8 SQ. INCHES <b>AFTER CONVERSION</b> HEATING SURFACE WAS 14,476.5 SQ. INCHES	62,000 TO 65,000 BTU EA <b>INPUT PER ZONE AFTER CONVERSION – GROSS –</b> 1.45 MILLION BTU/HR <b>ZONE 1</b> 1500 LBS .5 HOURS 1530° F	MODEL 4 BU BAYONET-ULTRA EXTENSION FLANGE STRAIGHT RADIANT TUBE



New firing arrangement replaces "W" tube design. Each recuperator supplies hot air directly to the adjacent burner minimizing hot air duct work and associated heat losses.