

Burner Booster comparison Test with Metro-Matic Model; LB200.

Traditional operation;

Becket AFG burner;  
 Nozzle 1.65 60B  
 Pump PSI 125.

Actual fuel rate;~ 1.75gph  
 Max BTU input rate of system 245,0000

Actual BTU input actual rate.... 245,055-----  
 Rated BTU output Max..... 204,000  
 Actual BTU Test results ..... 183,000-----

Rated AFUE at EST; Max ..... .82.17%  
 Stack Temp avg. high..... 585-618 F  
 Blower air output temp Avg. .... 126.4-136.1 F  
 Flame on Duration.....1:25-1:36  
 Cycles on/off in 30 minutes .....6.  
 Total flame time in 30 minutes .... .2487Hrs.  
 Cool down of blower air from max temp to 115 oF.

BURNER BOOSTER;

Wayne HS-Z10 Burner  
 Nozzle .50 80B  
 Pump Psi. 1,120

Actual Fire rate; ~1.38gph

Actual BTU input. 191,000  
 Actual BTU output 184.700

Stack temp avg. High..425-435.  
 Blower air output temp. 130.6-139.2 F  
 Flame duration ... 1:48-1:51  
 Cycles On/off, in 30 Min. ... 4.  
 Total flame time on..... .1563Hrs.  
 7:35. VS. 9:15

Heating degrees/minute output/gal rate used. 13,165 deg. VS. 16,374 deg.  
 Actual flame combustion Efficiency . (AHSRE std. Method 1.) ..... ~82.7% VS. 96.71%

Actual AFUE at max fire tested....(averaging both new and old math method) .. 81.03% VS. 90.75%

Combustion Values ; from flue stack;(using Bacharach flue gas analyzer; PCA-3) Smoke was 0.0 on both.

	O2	CO	CO2	EA	STK F.	A.EFF.	NO	NO(O)	SO2	SO2(O)	SO	Draft S.	O.F.
Tradition;	6.3%	0-1	10.8%	29.8	617	77.6%	75ppm	110	9	14	9	-.07	-.03
Burner B.	2.9%	0-0	13.6%	12	447	86.5	100	108	23	24	0	0.0	+.02

Lbs./BTU % reduced 24.4% 68.3% 27% 98%

Flue gas flow rate; in; "Meters /Minute"

Traditional..... 3.75m/m  
 Burner Booster; .... 1.32m/m

**Calculates to a fuel savings per gallon with same heat output of.....22.10 - 23.21%.**

Calculations show; that a max. BTU BB input at 1.58gph, should yield 224,000BTU/hr output,( 13.5% more than rated or actual from the same furnace.)