

Unilux / Bryan

Comparison

Following is a comparison of Unilux boilers and Bryan boilers. Blesi-Evans Company represented Bryan for over 40 years and sold several thousands of their boilers - so we know their products very well. It is not our intent in giving this comparison to state that Bryan has a poor or deficient design. But there are significant and important differences in the design of Bryan boilers and Unilux boilers that are highlighted below.

Feature	Unilux	Bryan	Significance of the difference
Number of gas passages	Five	Four	Unilux' cataloged combustion efficiency is 5% higher than Bryan.
Casing	Refractory, 7 inch thick composite (9" in back wall)	Ceramic blanket, about 3" thick	Much more durable design for longevity (industrial vs. commercial would be a fair comparison)
Casing warranty	5 years	1 year	Obvious confidence difference between manufacturers
Combustion chamber housing material	11 gauge material with 3" insulation	16 gauge material with 2" insulation	Unilux has higher strength and durability and significantly lowered heat loss
furnace design	4-sided waterwall	3-sided waterwall with remaining side consisting ceramic fiber insulation	much more heat is absorbed in the furnace of a Unilux boiler than Bryan, leading to lowered operating cost for a Unilux boiler

While Unilux advertises a 5% higher catalog efficiency over Bryan, that 5% difference does not consider the differences in the above 4 factors. The Unilux heat losses are between 0.25% to 0.5% while the Bryan losses are in the range of 2.0% to 3.0%

Feature	Unilux	Bryan	Significance of the difference
Furnace pressure (maximum allowable)	5" water column	2" water column	This demonstrates that the Unilux design has far superior gas sealing capabilities than Bryan. Several Bryan boilers that Blesi-Evans sold have been removed because of irreparable furnace leaks that allowed gasses to go into the boiler room
tube attachment	each utilize tapered ferrules that are press fit into tapered holes in the drums		Unilux has designed a tube removal tool that is much more effective to use than Bryan's tool, especially in high pressure steam boiler designs
Boiler frame design (Tube configuration)	Balanced	Unbalanced	Unilux is less sensitive to experiencing combustion problems do to draft from chimney or wind affects because the balanced design gives a "straight" flame pattern as opposed to Bryan's unbalanced design that causes the flame to shift toward the tubes.
Cleaning	All surfaces cleanable	About 30% of the surfaces are inaccessible without removing tubes	Easier maintenance with Unilux, higher long-term efficiency with Unilux because it <i>can</i> be cleaned.