

SENDING THE WARMTH OF A FIREPLACE TO THE RADIATORS WITH A COIL



The cauldron of fireplaces Sierra (Granada)

With the onset of winter, and increasing energy bills (gas, electricity) should **look ways to warm up cheaper and more efficient**, as the use of biomass (wood, forest waste, olive pits, etc).

In conventional wall mounted fireplaces, as already mentioned earlier in this blog, **80% of the heat is lost up the chimney** if they have no heat recovery system (either by movement of air or water).

In a wood stove cast iron outdoor setting this is not necessary, already have a lot of performance (depending on the oven).



Image: Cassette flush with heat fans with 85% yield

If you buy an insert with fans will get an almost perfect performance, but only will warm a room, but it can be noted throughout the house.

If we want to better distribute the rest of the house, though losing some performance or take advantage of an insert without fans, **we have several options.** On the one hand we can add a pan as the Sierra Fireplaces , located in Granada (Thanks to Carlos Trillo for comment me page), and install a chimney appropriate measure



Paila with two inlets and outlets threaded 3/4 "

We need a good plumber will install it (placing the upper exit straight out as straight as possible to prevent the accumulation of air or put the circulation pump with enough power to pull water bubbles along with a trap Automatic air at some high point in the system), with all necessary accessories.

It has **two possible inputs and two outputs 3/4 inch, all threaded**, I commented that Sierra Fireplaces bring manufacturing for many years and performs well within its limits (not much contact area as a stove heating obviously).

It is made of tubular steel hull stretched thick (Seamless) and structural tube 40 x 40 x 4mm. You make several tightness testing with air pressure and water before putting on sale.

I did not install with open expansion vessel (that they have Sierra Chimney sale of domestically produced), but I guess if they do it's pretty respondent plus it is mandatory for safety (or should not install a thermal discharge); but **bear in mind that being an open system, there is a continuous fresh oxygen**, which shortens the life of the pan much to be normal carbon steel. Install PB pipes with oxygen barrier is a good option to avoid expensive copper tubing.

It can be used safely packless or Teflon (recommend 3M, works very well), and that being in contact with water, never exceed temperatures that may damage the board, hence **the importance of not accumulate air at the top; at the time they make the board can burn and lose tightness.**

It seems a better design than that of Etxeguren Zerbitzuak (Amurrio, Basque Country):



The model Paila BELD-15000 is built with stainless steel tube AISI 304 2mm thick TIG Standard measures 700 wide x 500 deep x 700 high.

This pan delivers better water for all tubes (looks a lot like the one I made for my fireplace as), and appears to have automatic safety valve or trap in the top left, which is welcome, as well as being made of stainless steel, but its price will go up enough, I guess.

If we use fireplace with doors closed, it is important not to leave any gap between the plate and the inlet / outlet through which air can enter and alter the quality of wood combustion.

Another option that anyone can install are air extraction systems ; grilles on a pan for circulating air, activated by a fan, extracting enough heat are placed. Obviously pipe heat resistant plastic where air is injected, must be protected from fire.



It remains to be seen how far it will be good for the temperature and combustion quality (and reduced smoke in the chimney).

Source: <http://crecimiento-sostenible.blogspot.in/2014/10/sending-warmth-of-fireplace-to.html>