This page might end up being little more than a collection of pictures. What is there to say? I did not do the installation myself. I hired a local plumbing and heating company to do it. I did take pictures, provide comment and ask questions
though. I will try to get the information in here. </p>

The company name was Bartingale Mechanical out of Eau Claire, Wisconsin. They were my third call in the yellow pages. The first two, if they could have dropped the phone and gone running away screaming I think they would have. They were not at all interested in trying something out of the norm. I talked to a guy named Mike Schummer at Bartingale and he seemed so calm -- compared to the reaction I got talking to the first two guys, that I was pretty sure that he didn't understand what I was talking about. He did in fact.

Mike called Traeger up in Canada and got some installation advice from them. What he came back with is a plan and a proposal for $4877 for installation. That included the chimney liner, 62 feet of insulated 6" stainless. All in all the installation experience was a good one.

On to the pictures.

Here is a shot of the two pumps. The larger (lighter colored) pump is the one for the main part of the house. It hooks into the 1-1/2" copper pipe that only runs for a little over a foot until it ties into the old cast iron radiator pipe. This is on the cold, or ruturn side of the radiators in my house. So, what I am doing essentually is pulling the cold water out. This will also be somewhat helped by convetion as the hot water rises out of the boiler.

One of the things I plan on getting around to one of these days is to wire in a small light bulb in with each one of these pumps. They run so quiet that I really can't tell which one of them is running. Even feeling them I have a hard time figuring out which one of them is vibrating more. A light on each pump would tell me which zone is calling for heat.

This is a shot of the stainless steel chimney liner as it pokes out of the old brick chimney. This shot was taken before they cut it off and put in the angle pipe that brings the pipe over to the furnace. I had hoped for a cleanout to be installed down below but for some reason the installers didn't want to do it that way. They felt it was better, perhaps less cold seeping in when the fire was out, if they capped the bottom end of the chimney liner. So, what I have to do at the end of each season is open the chimney pipe and use a shop vac to suck out any fly ash. I have also added a draft control to my chimney and this makes a perfect cleanout. I am able to just open the draft door on the control and I have a very long pipe attached to my shopvac. I can stick it through the bottom space on the draft door and it reaches all the way in to the T inside the brick chimney

Here are two shots of the roof work that had to be done installing the chimney liner. I really

wanted to go up in the lift but it was below zero with a wind the day they came to install it and since I was just going up for the view anyway, figured I would rather
stay on the ground.

I bet I could have got some great pictures of the whole river valley from up there though. Our house sits on the bluff overlooking the Chippewa River, but we have heavy tree cover so we can only *just* see the river. Sitting here in the comfort of my office (with my radiator putting out corn fed heat) I am regretting that I didn't go up. I don't remember having any second thoughts the day they were here though... :-)

On the top of the house they had to cut a hole though the large copper cap I have that covers over the three flues of the chimney. This hole had to be somewhat oversized to allow the 6" chimney liner to slide down through it. The liner they used was not the cheaper flex liner. The reason for this is twofold. For burning corn, you need to use a specific type of stainless steel. Check in the Corn Burner's Wiki for more information on the exact type of stainless to buy. Know this, it isn't cheap. And, you can't buy this type of stainless in the flex pipe.

The second reason, as I eluded to above, burning corn accumulates fly ash. With a smooth wall pipe there is less turbulence to collect fly ash. The corrigated, or flex tubing chimney liner is very rough walled. What happens is the hot rushing air goes up the chimney but with the rough walls of the pipe it slows the air flow down. When the airflow is slower it can no longer loft the fly ash up and out of your house. Additionally, the ash gets caught in the grooves of the

pipe and drops to the bottom of the chimney the the boiler is at idle. All of this leads to more and more buildup of fly ash in your chimney just where you don't want it.

After a half season of burning, I had enough fly ash in the trap of my chimney to reduce airflow down to about two inches. This is with the smooth wall chimney as I described. So, it is something you need to keep an eye on. Check it a couple of times a burning season to get some idea of how fast the fly ash is building up. If it plugs up, there will be a rapid and dangerous buildup of carbon monoxide inside your home.

Here is a shot of the relays on the wall. The thermostats up on the walls of the house, there are two in my house because I have two zones, are tied to these relays. The purpose of the relay is take the small amount of voltage coming back from the termostat and turn it into a larger amount of voltage that powers one of the two pumps. Now, though this is not one of my best pictures. Basically, there are two relays on the top, one for each pump. There is an electrical junction box in the middle. Hanging off the side is a transformer, I expect that powers the relays. Off to the bottom left corner there is a little box with a red L.E.D. that tells me if one of the thermostats is calling for heat. On the bottom is a regular wall switch that controls the power for the whole system.

These next three shots are of the baffles, this first one from the bottom. Looking up from the fire

chamber area, so looking at the bottom of the boiler area. This next shot is of the top of the boiler, looking down into the smoke box at the top of the baffles area. These are also called "Turbulators" and their purpose is to slow the rush of hot air from the firebox. The longer the hot air stays in contact with the inner tubes of the boiler, the more heat is transfered into the boiler. These turbulators have a rough and corrosive job. More so burning corn than wood pellets. The vapor coming off the burning corn seems very reactive to metals.

I am typing this in late March after I have run the unit for a couple of months. Now, After I have cleaned this smoke chamber out a
couple of times, I find it hard to believe that it was ever so clean.

Something that is a good idea, that I didn't find out about until after setting up this web site and I started getting suggestions from people is that it is a good idea to do a "pre-burn". Set the boiler up out in your driveway. Put a little corn in it. Run some electricty to the fans and motors and run it for an hour or so. The first time you light a fire in one of these stoves, there will be a huge amount of off-gassing. This is caused as the paint cures and oil bakes off hot-for-the-first-time parts. Do your body a favor and let this happen outside your house. Like I said, I didn't know this and never thought of it myself. It stunk up the whole house and I have my boiler sitting down in the basement., where I have a tuck under garage and could open up the garage door I can't imagine if I would have had a fireplace insert and it was sitting right there in my living room. It would have been far worse.

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