know That soot **HAPPENS**
by Eiklor Flames®

Eiklor Flames® gas logs are fully vented only (not ventless and not direct vent) which means soot will accumulate on the logs and interior firebox. This is normal and expected, ESPECIALLY with LP as it is "dirtier" than NG. Soot is not the same as woodburning produced *creosote* which is flammable and collects inside your flue. For LP, we add an air shutter to the burner to add more air to the gas, making it cleaner. We don't want the flames to be too clean as that would mean a blue fire.

Soot forms as a result of incomplete combustion which is what makes a robust, yellow flame. That flame touching anything is called flame impingement and when that happens, it leaves a soot spot. To add realism, we want the flames to touch some of the logs and we can do this because we are fully vented only.

The amount of soot can be worse if: logs are not stacked correctly (twigs should criss-cross with space between them), embers are not placed properly (embers are strategic!), the air shutter is blocked or the LP mix is dirtier than usual.

Beware of soot **SPILLING**

Many things can cause soot to spill/chimney draw to suffer. A lot of people are quick to blame the burner but try thinking about like this: **when you have a leak in your roof, you don't blame the rain. You know about the leak BECAUSE of the rain.** That being said, an improperly sized or placed burner can add to or cause an issue. This is why Eiklor Flames® goes the extra mile to talk about the TRUE depth measurement when sizing.

We always want the burner to be pushed back as far as possible but it helps to understand why. The placement of the burner needs to work WITH the design of the fireplace/chimney to promote the best draw that is available. Remember that the Sootprint exists because the soot and fumes are traveling. If the soot encounters any obstacles, it will take the path of least resistance. A lintel in masonry fireplaces is flat, if soot hits something flat, it may redirect and go towards the room. A smokeguard is a lip, if a burner is placed in front of the lip, the soot may stay in front of the lip and go towards the room. So yes, we want the burner to be pushed back as far as possible because that should be within the TRUE depth area.

On the diagram, the blue dotted line is the firebox front to back depth (the usual depth given and one we still need!). The green dotted line is the True depth and it tells us where we can actually place the burner safely. True depth should be taken at the floor as

follow your soot **PRINT**

The soot that accumulates on your interior firebox walls is your Sootprint! Your Sootprint can give you some insight into where your soot is traveling aka your chimney draw. We want to see the soot on the back wall/back part of the sidewalls because that would show its path up to the flue and out of your home.

If the Sootprint looks like its moving towards the fireplace front opening/inside the home, then that would indicate possible soot spilling. The fireplace should not be used until checking that the damper is FULLY open and that the chimney draw is proper. Soot can spill 100% of the time or just some of the time, either way means carbon monoxide and soot are entering your home (this would be smoke if you were to burn a wood fire).

Flue
Smoke Chamber
Damper w/ Clamp
Smoke Shelf
Lintel/Smoke Guard
Firebox
Hearth
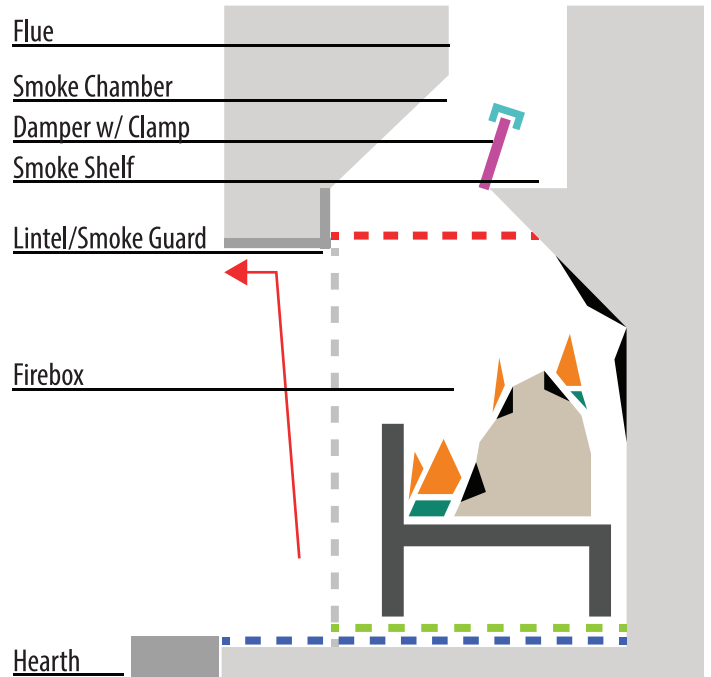
some back walls slant forward which can give a false true depth (see red dotted line).

If your true depth is a bit too shallow, we can easily alter the burner for you. We call this a Thinline customization and it does not affect the logs. If true depth is very shallow, we can make it an Extra Thinline and remove so much depth that we remove the back log and add a bar for log stacking. The back log is rarely seen after the stack is finished and is solely there for stacking support so removing it doesn't change the overall look too much.

There are often other factors working against the chimney draw. These factors have nothing to do with the burner or with Eiklor Flames® but we have learned some things over the years that we are happy to share with anyone that is on a frustrating soot spilling journey. Inquire about soot questionnaire for more details.