COOKE Fire Feature Rough In Guide
(To be given to the Plumber and Electrician prior to Rough In)

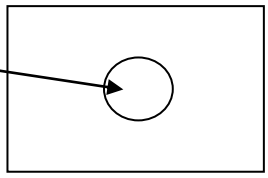
Plumbing

1. Gas Plumbing Pipe Size. The size of the gas line providing gas to your fire features is determined by three factors; the gas consumption rate (btu/hr) of the appliance (fire pit), the length of the gas line run and the pressure at which the gas is being delivered. In most natural gas applications you have little to no control of the gas pressure due to the fact this is set at the meter and cannot be changed. In most LP (propane) applications however you do have control of the pressure. For the purposes of this guide we will not discuss gas pressures – this is best left up to the plumber working on the project. We will however look at Gas Consumption rate of fire pit burners and gas line length.

Gas Consumption for Fire Rings: For planning purposes use the information in the table below to determine the amount of gas required for each of the fire features you have planned for your project.

Fire Ring Size	**Gas Consumption** (Btu/hr) +/- 10%
Long Liner burners per foot	25,000-45,000
6”/VFM/Tiki Torch	25,000
Standard 8”x24” rectangle fire pit using 24” liner burner	40,000
Standard 17”x17” Square fire pit using 12” star burner	60,000-75,000
Standard 24”x24” Square fire pit using 17” star burner	125,000
24” Ring	150,000
30” Ring	175,000
36” Ring	250,000
48” Ring	300,000

Location: The gas line should be stubbed up in the center of the table location. Most models have plenty of room so a +/- 6” variance off center will work.



Gas Line Length: The table below shows the amount of gas (btu/hr) a gas line can deliver over a specified distance. As an example if you look in the row corresponding with “3/4” (meaning ¾” pipe) and follow it to the right to the column corresponding with “150” (meaning a 150’ gas line run) you see the number “77K”. This means a ¾” pipe that is 150’ long will deliver 77,000 Btu/hr.

Gas Capacity of Pipe (Btu/hr)

Pipe Size (in)	**Pipe Length (ft)**					
	10	**20**	**40**	**80**	**150**	**300**
½	132K	93K	66K	46K	34K	24K
¾	300K	210K	150K	105K	77K	55K
1	600K	425K	300K	210K	155K	110K
1 ¼	1320K	934K	660K	466K	340K	240K
1 ½	2045K	1445K	1020K	720K	525K	375K
2	4130K	2920K	2060K	1460K	1060K	750K

2. **Manual Gas Shutoff**. Code requires a manual gas shutoff within 6' of the fire feature whether electronic ignition is used or not.

Types of Manual Gas Shutoff Valves:

1. Ball Valve
2. ¼ Turn Key Valve (Identical to a ball valve with a Key Stem on it)
3. Key Valve (Gate Style Valve not recommended)

We **HIGHLY** recommend using a Ball Valve like the one pictured below, with a 1/2" flare exit to make connecting and servicing your fire pit save and easy. The gas line and valve should sticking straight up but should not exceed 12" above the floor. The stub up should be located near center to the desired location of the fire pit table. Cooke Fire pit tables have a large open base allowing a good amount room for plumbing. Custom units may require an off center stub up make sure to check your prints before finalizing gas line location.

3. **Drainage.** Drainage must be planned for in all fire features, regardless whether electronic ignition is used or not. The fire pit should be covered when it is raining or to protect from sprinklers however if water does collect in the fire pit it should drain from the pan and be able to run out the bottom of the fire pit table. If the fire pit becomes flooded it may require shutting the service valve and disconnecting all the gas lines and any flame adjustment valve or electronic ignition system to drain any water.

Electrical

Some fire features require electrical service for ignition systems, heaters, sound systems or lighting. When electricity is needed make sure your electrician knows about all the requirements before running conduit or construction. Some components might be low voltage and direct-burial wire can be used while others may need multiple circuits with high amperage capacity.

ALL ELECTRICAL CIRCUTS MUST BE SWITCHED THERE ARE NO SWITCHES ON THE FIRE PIT TABLE

Common requirements:

Switching: Make sure your electrician knows you need to have some way to switch the powder on and off. There is no switch on the fire pit. Use a home control system, light switch, timer switch or common switching application. In common area applications the rotary style timer is recommended.

Timer or light switch 

Creston Home control  Remote switching system 

Electronic ignition: Requires switched power. Systems vary per unit, most commonly used is the AWEIS which is 24 volts AC, 3 amps , then the HPC system which requires a standard 120v outlet below the table.

Heater vents: Requires a standard switched 120v outlet below the table and each heater box draws 15 amps (1 box per 4 vents).
LED lights: Requires a standard switched 120v outlet below the table or low voltage ran back to transformer. 12v 3 amp
Sound systems: May require speaker wire run from amplifier or WiFi/Bluetooth signal from the house.