HellFire™

Floor Standing Dual Mode Burner

Operation, Assembly & Maintenance Manual

Congratulations on your purchase, and thank you for selecting the Hellfire™ burner from Blichmann Engineering. We are confident that it will provide you years of service and many gallons of outstanding beer. This manual will familiarize you with the assembly, installation procedures, and use of the TopTier™ burner and accessories.

****** PLEASE READ THOROUGHLY PRIOR TO USE FOR IMPORTANT SAFETY INFORMATION ******

IMPORTANT !!

Danger: Sections labeled "Danger" are critical to follow and understand to reduce risk of serious injury or death. Please read these thoroughly and understand them completely before use. If you do not understand them or have any questions, contact your retailer or Blichmann Engineering (www.BlichmannEngineering.com) before use. Do NOT at ANY time operate the product until you have thoroughly read and understood these instructions!

Warning: Sections labeled "Warning" can lead to serious injury if not followed. Please read these thoroughly and understand them completely before use. If you do not understand them or have any questions, contact your retailer or Blichmann Engineering (www.BlichmannEngineering.com) before use.

Caution: Sections labeled "Caution" can lead to equipment damage or unsatisfactory performance of the equipment. Please read these sections thoroughly. If you have any questions, contact your retailer or Blichmann Engineering (www.BlichmannEngineering.com) before use.

©Blichmann Engineering, LLC 2018
For replacement parts visit blichmannengineering.com/genuine-replacemnet-parts

Assembly:

The HellFire™ burner only requires the installation of only a few components.

Parts List:

The following items are shipped with each burner.

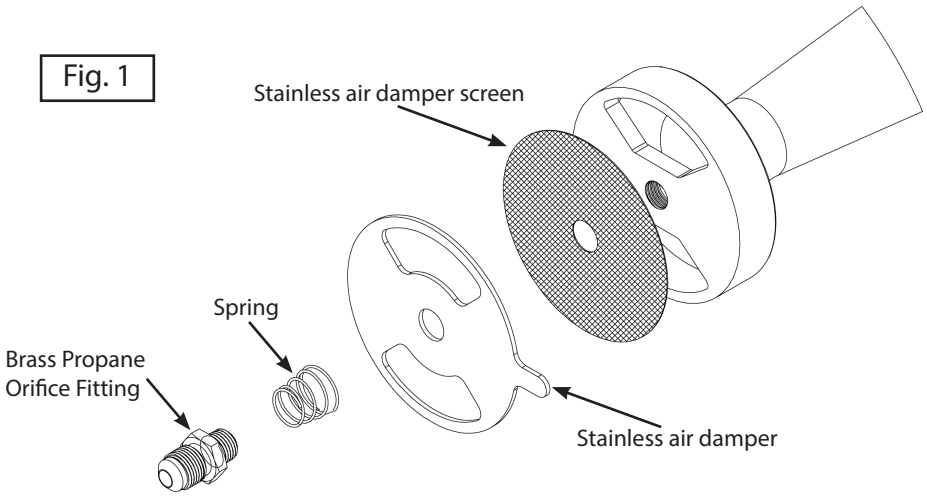
1 - Burner assembly
1 - Adjustable gas regulator
4 - Stainless pot retaining arms
8 - 6mm bolts
1 - Stainless air damper
1 - Stainless air damper screen
1 - Spring
1 - Brass propane orifice fitting

Assembling the Burner

Caution: Install the orifice fitting, spring, screen, and air damper exactly as shown in Fig 1. Failure to install correctly can cause unsatisfactory performance and potentially cause burning of fuel on the inside of the burner. Note that the stainless screen is placed directly on the face of the venturi and the damper is placed directly on the screen. Next, install the spring and the brass orifice. Tighten the brass orifice finger tight and ensure that the damper can be rotated.

Install the gas regulator hose to the brass propane orifice fitting.

Fig. 1



Lastly, install the 4 pot retaining arms as shown in Fig 2 using the 6mm with the arms. The arms can be moved in/out to accommodate pots up to 20" in diameter. Use the tick marks on the side of the arm to ensure that the kettle is centered on the burner.

©Blichmann Engineering, LLC 2018
For replacement parts visit blichmannengineering.com/genuine-replacemnet-parts

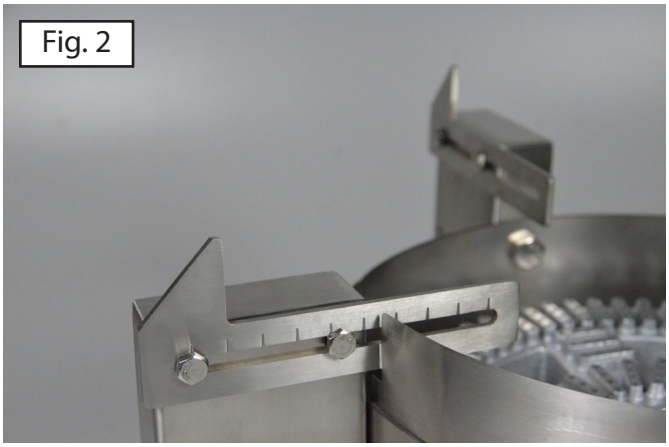


Fig. 2

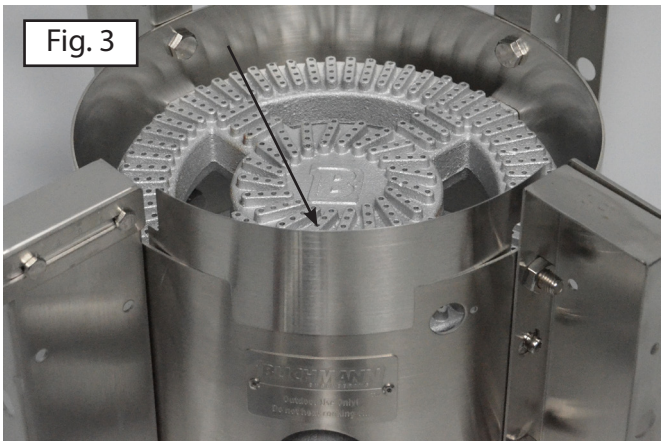


Fig. 3

The HellFire burner includes the patent pending heat shield as shown in Fig 3. This heat shield is intended to shield the ancillary equipment mounted to the kettle such as the valve, thermometer and level gauge. However, the user must ensure that during operation all equipment is operated in its intended temperature range.

This concludes the assembly of the burners.

Fig. 4

Optional Leg Extensions

Optional leg extensions are available to raise the height of the burner to 24" which allows gravity draining into your carboy or other fermentor. Simply remove the shorter legs and install the longer legs as shown in Fig 4. But be sure to save the shorter legs as these are required if you ever wish to install this burner on the TopTier™ modular brewing stand.

Danger: Do not exceed 175lb (about a 30 gal kettle) when using the leg extensions.

Operation:

This section of the manual discusses proper operational techniques for safety and successful operation.

***** Safety should be the highest priority of any brewer. Use common sense! *****

Danger!

It is vital for the safety of yourself, others, and personal property that you thoroughly read and understand and follow the important safety instructions in this manual. **If at any time you do not understand how to assemble, operate, locate, or install this equipment or have any questions about this manual do not operate the equipment.** Contact your Retailer or Blichmann Engineering for assistance.

***** By purchasing and operating this equipment you agree and understand that brewing beer has inherent dangers and risks that include, but are not limited to burns, scalds, fire, falling objects and property damage and you agree that Blichmann Engineering, LLC is not liable in any way for consequences arising from you personally accepting these risks. **If at any time you are not completely willing to accept personal responsibility for these risks DO NOT USE THE EQUIPMENT. In no situation should this equipment EVER be used indoors!**

©Blichmann Engineering, LLC 2018
For replacement parts visit blichmannengineering.com/genuine-replacemnet-parts

Do not use this equipment while drinking alcohol or while under the influence of alcohol or other drugs. This product, like any gas appliance, can be extremely dangerous and can cause burns, scalds or start a fire. Misuse of outdoor cooking equipment can result in personal injury and property damage. This product generates carbon monoxide gas. NEVER operate this product indoors or in any confined area where there is not adequate ventilation. **All surfaces of this product may become extremely hot during use.**

Never Do These Things!

NEVER LEAVE THIS EQUIPMENT UNATTENDED
NEVER EXCEED 250LB (113KG) PER BURNER ON STANDARD LEGS
NEVER EXCEED 175LB (80KG) PER BURNER ON LEG EXTENSIONS
NEVER HEAT COOKING OIL WITH THIS EQUIPMENT
NEVER ALLOW CHILDREN NEAR THIS EQUIPMENT DURING USE
NEVER operate on soft, combustible or uneven surfaces like dirt, gravel, wood or asphalt
NEVER operate indoors, in a garage, under an overhang, porch, deck, carport or similar structure
NEVER use near and combustible chemicals, gasoline or other flammable vapors or liquids
NEVER allow the flame to roll past the bottom of the pot
NEVER operate without pot retaining arms in place
NEVER lift or move a full pot of water onto or off of the stand

Always Do These Things!

ALWAYS OPERATE OUTSIDE ONLY, AT LEAST 30FT FROM OTHER STRUCTURES
ALWAYS USE ONLY ON LEVEL AND STABLE CONCRETE, BRICK OR SIMILAR HARD NON-FLAMMABLE SURFACES**.**
ALWAYS Keep the gas supply hose away from heated surfaces AT ALL TIMES
ALWAYS Check that all fasteners are properly tightened prior to each use
ALWAYS Check for gas leaks before each use using soapy water
ALWAYS Wear protective gloves, clothing, and boots to prevent burns and scalds
ALWAYS Have a fire extinguisher nearby at all times
ALWAYS Use a pump or gravity to move hot liquids from or into the pot
ALWAYS Use only Blichmann Engineering burner accessories on this burner
ALWAYS Let equipment cool completely after use before moving

Burner Operation

Operation Overview: This burner has two modes of operation.

High Efficiency Mode – this mode is the best match of fuel efficiency and performance. In this mode, the flames are pale blue, the base of the flames do not lift off of the nozzles on the surface of the burner, and the burner is extremely quiet. Maximum power under this mode is about 80,000 BTU/hr. This combination of power and efficiency provides very fast heating times.

HellFire™ Mode – this mode is extremely high power, but is noticeably less fuel efficient and is significantly louder than the high efficiency mode. The flames will be deep blue and will lift off of the nozzles. Approximate power in this mode is 140,000 BTU/hr. We recommend using this mode only when a faster heating speed is absolutely necessary.

Igniting the burner: Always use a long match or igniter to light the burners. Never light the burner at the venturi. An ignition/flame inspection hole (Fig 5) has been provided for this purpose.

©Blichmann Engineering, LLC 2018
For replacement parts visit blichmannengineering.com/genuine-replacemnet-parts

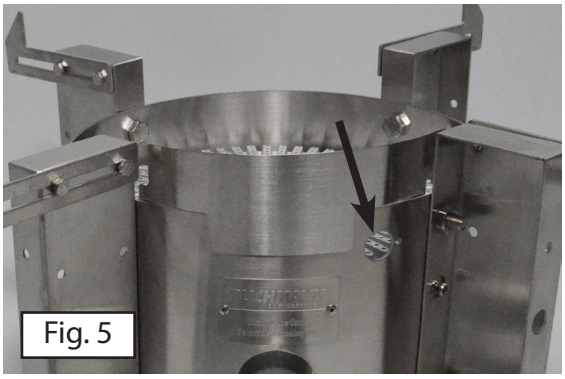


Fig. 5

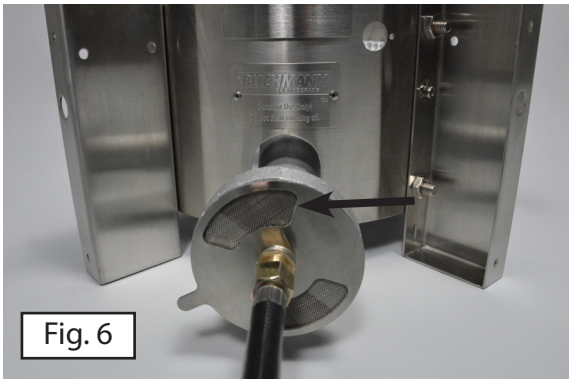


Fig. 6

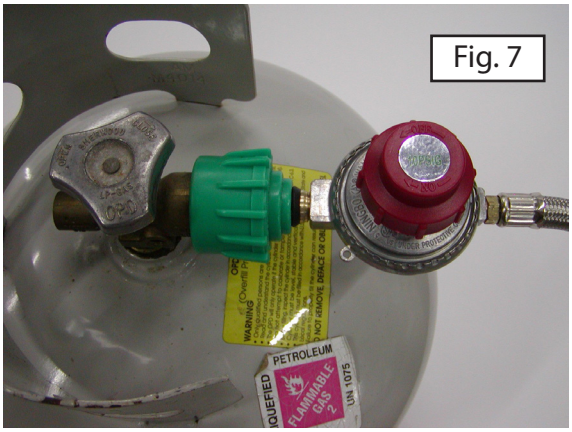


Fig. 7

Important: Prior to igniting the burners, turn the air damper so that it is about 1/3 open as shown in Fig 6. Starting the burner with the damper open too far can cause fuel to burn inside the burner. If this happens you will hear a grumbling noise from the burner. Turn off the fuel. Wait 30 seconds, move the damper further closed, and reattempt ignition.

Make sure you ignite the burner with a kettle on the burner and make sure it at least partially full of water to prevent damaging the pot. A variable pressure regulator (0-10 PSI) has been provided with the stand – ref Fig 7. Turn it fully counterclockwise to the "off" position. Then turn on the tank valve to the full on position. You will use the regulator to control the gas flow and power level of the burner by turning it clockwise to increase fuel flow.

Caution: Before each use ALWAYS check that all fittings are tight and that the hose is in good operating condition. Never use this burner with a different regulator!

To ignite the burner, start with the damper about 1/3 open. Place a long match or igniter through the flame inspection hole, then turn the regulator slowly clockwise until you hear the gas flowing and the flame ignites.

Efficiency Mode Adjustment: Looking through the flame inspection hole at the flame, turn the air damper until the flame is slightly yellow. Then slowly turn it back until the flame turns pale blue (the yellow will be gone) and the flame is still touching the nozzles on the burner casting. If the flame lifts off of the nozzles, or you hear a low grumbling from the flame, it is getting too much air through the damper and you will need to close it slightly. If it is yellow, there is not adequate air and you will need to increase the air flow. As you increase the gas flow via the regulator, it may be necessary to readjust the air damper. Note that optimum heating speed and efficiency can only be achieved with a properly adjusted flame.

HellFire™ Mode Adjustment: For maximum power output the fuel level will be increased near maximum. Accordingly, the air inlet damper will also need to be increased. The damper adjustment process is similar to the efficiency mode, however the flames will lift off the surface of the burner and the burner will become noticeably louder.

Caution: If at any time you hear a grumbling sound or see a flame inside of the burner inlet immediately turn off the burner, move the damper to a nearly closed position, and reignite the burner. Adjust the damper so that the yellow flames turn to blue.

©Blichmann Engineering, LLC 2018
For replacement parts visit blichmannengineering.com/genuine-replacemnet-parts

Maintenance

The HellFire™ burner requires little maintenance. Inspect fasteners and hoses regularly and replace as needed. After brewing and allowing the equipment to cool, wipe any drips off with ordinary soap and a soft sponge and allow to dry.

Optional 1BBL Legs

Optional 1BBL Legs are available to increase the width of the burner to 25" (to the ends of the retaining arms). This will allow the burner to hold a 55 gallon kettle. Be sure to save the shorter legs as these are required if you ever wish to install this burner on the TopTier™ modular brewing stand.

Do not use kettles with capacity greater than 55 gallons.

Blichmann Engineering Product Warranty

A. Limited Warranty

1. Blichmann Engineering warrants to the original purchaser that this product will be free from manufacturing defects in material and workmanship for a period of one (1) year from the date of purchase by the customer. Proof of purchase is required. Blichmann Engineering's obligation to repair or replace defective materials or workmanship is the sole obligation of Blichmann Engineering under this limited warranty.
2. This product is for home use only. The limited warranty covers only those defects that arise as a result of normal use of the product and does not cover any other problems, including, but not limited to, those that arise as a result of:
   a. Improper maintenance or modification;
   b. Damage due to incorrect voltage or improper wiring by customer;
   c. Operation outside of the product's specifications;
   d. Carelessness or neglect to operate the product in accordance with instructions provided with the product;
   e. Damaging the tamper label on the product;
   f. Damage by over-tightening the fasteners;
   g. Failure to follow cleaning and / or maintenance procedures; or
   h. Exceeding published operational temperatures.
3. Blichmann Engineering reserves the right to request delivery of the defective component for inspection before processing the warranty claim. If Blichmann Engineering receives, during the applicable warranty period, notice of a defect in any component that is covered by the warranty, Blichmann Engineering shall either repair or replace the defective component with a new or rebuilt component at Blichmann Engineering's option.
4. Blichmann Engineering must be notified within seven (7) days of the delivery date of any shipping damage. Customer is responsible for shipping damage outside of this time period. Approval for return must be provided by Blichmann Engineering prior to any return. Customer is responsible for keeping all original packaging material for warranty returns. Blichmann Engineering is not responsible for damage from improperly packaged warranty returns, and these repair costs will be the sole responsibility of the customer. Shipping costs for warrantee returns are covered only for the contiguous United States.
5. Blichmann Engineering's limited warranty is valid in any country where the product is distributed.

B. Limitations of Warranty

1. Any implied warranty that is found to arise by way of state or federal law, including any implied warranty of merchantability or any implied warranty of fitness, is limited in duration to the terms of this limited warranty and is limited in scope of coverage to this warranty. Blichmann Engineering disclaims any express or implied warranty, including any implied warranty of fitness for a particular purpose or merchantability, on items excluded from coverage as set forth in this limited warranty.
2. Blichmann Engineering makes no warranty of any nature beyond that contained in this limited warranty. No one has authority to enlarge, amend, or modify this limited warranty, and Blichmann Engineering does not authorize anyone to create any other obligation for it regarding this product.
3. Blichmann Engineering is not responsible for any representation, promise, or warranty made by any independent dealer or other person beyond what is expressly stated in this limited warranty. Any selling or servicing dealer is not Blichmann Engineering's agent, but an independent entity.

C. Limitations of Liability

1. The remedies provided in this warranty are the customer's sole and exclusive remedies.
2. Except for the obligations specifically set forth in this warranty, in no event shall Blichmann Engineering be liable for direct, indirect, special, incidental, or consequential damages, whether based on contract, tort, or any other legal theory and whether or not advised of the possibility of such damages.
3. This warranty does not cover, and in no event shall Blichmann Engineering be liable for, travel, lodging, or any other expense incurred due to manufacturing defects in material and workmanship, or any other reason.
4. Any performance of repairs after the warranty coverage period has expired or performance of repairs regarding anything excluded from coverage after this limited warranty shall be considered good-will repairs and they will not alter the terms of this limited warranty, or extend any warranty coverage period.
5. Venue for any legal proceedings relating to or arising out of this warranty shall be in Tippecanoe County, Indiana, United States, which courts will have exclusive jurisdiction.

D. Local Law

1. This warranty gives the customer specific legal rights. The customer may also have other rights that vary from state to state in the United States or other countries.
2. To the extent that this warranty is inconsistent with local law, it shall be deemed modified, only to the extent necessary to be consistent with such local law.

This product uses food grade materials anywhere the product touches the beverage.
Warning: This product contains or may contain chemical(s) known to the State of California to cause cancer, birth defects, or other reproductive harm.

©Blichmann Engineering, LLC 2018