

GRILLWORKS®

Infierno 240 Tigre/166/100®

Installation & Use

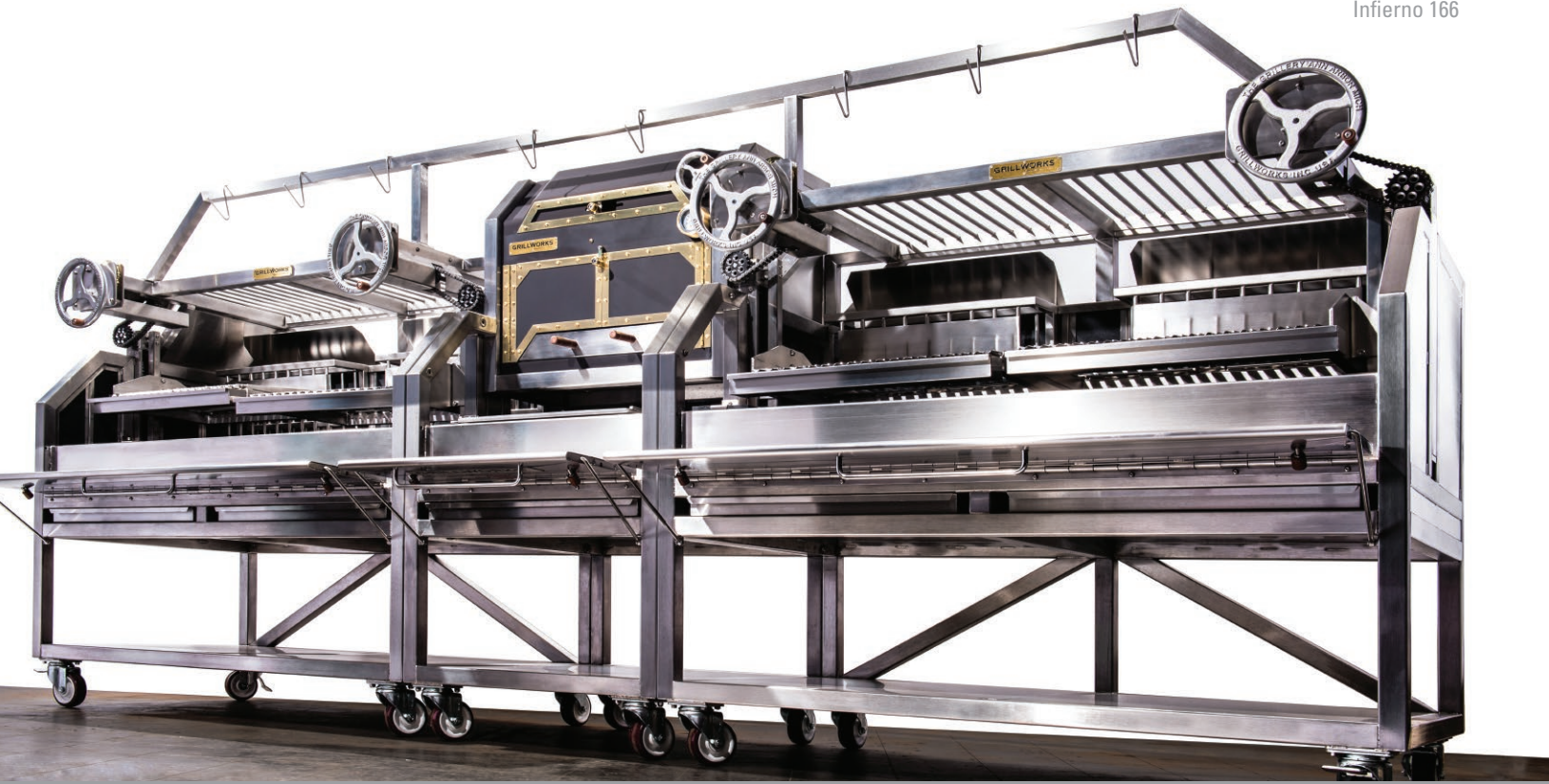


A MAJOR CAUSE OF GRILL-RELATED FIRES IS FAILURE TO MAINTAIN REQUIRED CLEARANCES (AIR SPACES) TO COMBUSTIBLE MATERIALS. IT IS OF UTMOST IMPORTANCE THAT THIS GRILL BE INSTALLED ONLY IN ACCORDANCE WITH THESE INSTRUCTIONS.

Infierno 240 Tigre/166/100®

Installation & Use

Infierno 166



INTRODUCTION	3
INSTALLATION	4
GETTING STARTED	6
FUEL & COOKING	7
CLEANING	9
COMPONENTS	10
MAINTENANCE	11

The Infierno 240 Tigre, Infierno 166 and 100 are designed to provide the ultimate stages for wood-fired flexibility, performance and showmanship. Operated and cared for correctly these units will thrill chefs and guests alike. There is no more powerful live-fire statement than an Infierno in a show kitchen.

In this guide you'll find recommendations for transport, preparation, operation and care of these two flagships. Please read every word here and ensure everyone working around the grill does too—rewarding Infierno operation is dependent on a skilled and informed restaurant team. Take care also to follow local codes regarding solid fuel installations and food safety guidelines.

If you have any questions or comments about your Infierno do not hesitate to call or email us. We want to hear from you.

Best regards,

A handwritten signature in white ink, appearing to be 'Benjamin Eisendrath', written in a cursive style.

Benjamin Eisendrath
President & CEO

GRILLWORKS

orders@grillworks.com / (855) 434-3473

READ ALL INSTRUCTIONS BEFORE INSTALLING AND USING THIS APPLIANCE

SAVE THESE INSTRUCTIONS

INSTALL AND USE ONLY IN ACCORDANCE WITH GRILLWORKS INSTALLATION AND OPERATING INSTRUCTIONS.

Contact your local building or fire officials about restrictions and installation inspections in your area.

IF THE INFIERNO IS IMPROPERLY INSTALLED A FIRE MAY RESULT. FOLLOW THE INSTALLATION MANUAL TO REDUCE RISK.

FOR USE WITH SOLID FUEL ONLY. KEEP FLAMMABLE ITEMS CLEAR OF THE AREA AROUND THE GRILL: Do not store flammable liquids such as gasoline, kerosene or lighter fluids in the vicinity of the Infierno. Always keep the area around it free and clear of any and all combustible materials.

MAINTENANCE AND SERVICE SAFETY: Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing, operating or servicing this appliance.

WARNING: Never use gasoline, kerosene, lighter or lantern fluid or similar accelerants to start or maintain a fire in this grill. Keep all such items well away from the grill when in use.

IMPORTANT: This grill must be installed, maintained, operated and serviced by authorized professionals.

A MAJOR CAUSE OF GRILL RELATED FIRES IS A FAILURE TO MAINTAIN REQUIRED CLEARANCES TO COMBUSTIBLE MATERIAL. IT IS CRITICAL THAT THIS GRILL BE INSTALLED IN ACCORDANCE WITH THESE INSTRUCTIONS.

USE SOLID FUEL ONLY DO NOT USE PRODUCTS NOT SPECIFIED FOR THIS GRILL.

UNLOADING & MOVING

Using a Crane

The Infiernos are modular and travel in large crates. The modules may be lifted while still in the crates using straps rated to at least 5,000 lbs. They also may be lifted after the crate is removed using the same type of straps. The modules are very top and backheavy due to the large amount of fire brick lining the floor and back. **TAKE THIS WEIGHT DISTRIBUTION INTO ACCOUNT WHEN LIFTING THE GRILL.**

Using a Forklift

You may use a pallet jack once the Infierno been removed from the delivery vehicle. Whether inside or removed from the crate, make sure to lift from the back, positioning the jack under the center of the grill spread as wide a possible. **TAKE WEIGHT DISTRIBUTION INTO ACCOUNT.** The grill weighs over 5,000 lbs, make sure the forklift is rated to lift well in excess of this weight.

Using a Pallet Jack

You may use a pallet jack once the Infierno has been removed from the delivery vehicle. Whether inside or removed from the crate, make sure to lift from the back, positioning the jack under the center of the grill spread as wide a possible. **ONLY USE ON A FLAT SURFACE MOVING THIS GRILL ON AN INCLINE WITH A PALLET JACK IS NOT SAFE AND CAN CAUSE INJURY OR DAMAGE TO PROPERTY OR THE GRILL.**

NEVER PUT THE INFIERNO ON ITS BACK, FRONT OR SIDE! SIGNIFICANT DAMAGE TO COMPONENTS OF THE GRILL CAN OCCUR. USE GREAT CARE WHEN MOVING AN INFIERNO.

IF YOU HAVE ANY QUESTIONS OR CONCERNS CONTACT GRILLWORKS AT (855) 434-3473. BE SAFE!

CLEARANCES

The Infierno should be installed with 2” clearance to noncombustible materials near the back of the unit. The sides should have 6” of clearance in case the gear lift system needs to be reached (if the unit is ordered on wheels this may be reduced to 4”) The front of the unit must have at least 36” clearance to other equipment or walls for proper operation.

WARNING DO NOT PACK REQUIRED AIR SPACES WITH INSULATION OR OTHER MATERIALS. The grill is adequately insulated and the best outer insulator is free air space.

Only install the Infierno on a non-combustible floor. This non-combustible floor must extend at least 48” at the front of the unit, 36” at the sides and 48” at the rear (if the grill is installed exposed at the back). If installed as a built-in (without legs) the base it is installed on must also be non-combustible.

THE ENTIRE AREA OVER THE INFIERNO MUST BE NONCOMBUSTIBLE EXTENDING 48” IN ALL DIRECTIONS (IF NOT ENCLOSED) AND THE GRILL MUST BE INSTALLED UNDER A SUITABLE TYPE 1 SOLID FUEL HOOD SYSTEM.

ANY FACADE MATERIALS AROUND THE GRILL MUST BE NON-COMBUSTIBLE.

IF THIS GRILL IS NOT PROPERLY INSTALLED A FIRE MAY RESULT. A MAJOR CAUSE OF GRILL RELATED FIRES IS A FAILURE TO MAINTAIN REQUIRED CLEARANCES (AIR SPACES) TO COMBUSTIBLE MATERIALS. IT IS CRITICAL THAT THE INFIERNO GRILL BE INSTALLED BY A QUALIFIED PROFESSIONAL AND ONLY IN ACCORDANCE WITH THESE INSTRUCTIONS. WARNING: DO NOT PACK AIR SPACES AROUND GRILL WITH INSULATION.

ALERT: Installation, operation and servicing of this appliance can expose you to ceramic dust. ALWAYS WEAR PROTECTIVE EYEWEAR AND RESPIRATORY PROTECTION AS A PRECAUTION AGAINST INHALATION OR EYE INJURY.

HAND PROTECTION IS ALSO RECOMMENDED AGAINST POSSIBLE SHARP EDGES. Please read this entire manual before you install the grill. Failure to follow the instructions may result in property damage, bodily injury or death. Contact your local building or fire officials about restrictions and installation inspection in your area.

PLEASE READ THIS ENTIRE MANUAL BEFORE YOU INSTALL THE INFIERNO GRILL. FAILURE TO FOLLOW INSTRUCTIONS MAY RESULT IN PROPERTY DAMAGE, BODILY INJURY OR EVEN DEATH. CONTACT YOUR LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA.

VENTING

THIS COOKING EQUIPMENT IS TO BE INSTALLED UNDER AN EXHAUST HOOD TESTED FOR COMPLIANCE WITH THE STANDARD FOR VENTILATION CONTROL AND FIRE PROTECTION OF COMMERCIAL COOKING OPERATIONS NFPA 96 OR WITH THE REQUIREMENTS IN THE STANDARD FOR EXHAUST HOODS FOR COMMERCIAL COOKING EQUIPMENT, UL 710.

As with all solid fuel cooking equipment and ductwork, REGULAR DUCTWORK CLEANING IS CRITICAL TO PREVENT FIRE.

A fire suppression system (ANSUL) is required for the Infierno grill. Refer to local and national requirements to determine the system required for your installation of this grill.

Creosote—Formation and need for removal: When wood or charcoal (SOLID FUEL) is burned slowly, it produces tar and other organic vapors that combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool exhaust. As a result, creosote residue accumulates on the flue lining and exhaust hood. THIS CREOSOTE BUILDUP CAN IGNITE. IF IGNITED THIS CAN CREATE AN EXTREMELY HOT AND DANGEROUS FIRE. Creosote build up should be removed regularly to reduce the risk of fire.

CANADA:
THIS COOKING EQUIPMENT IS TO BE INSTALLED UNDER AN EXHAUST HOOD TESTED FOR COMPLIANCE WITH THE NATIONAL BUILDING CODE OF CANADA AND THE NATIONAL FIRE CODE OF CANADA, OR WITH THE REQUIREMENTS IN CAN/ULC-S646.

CET APPAREIL DE CUISSON DOIT ETRE POURVU D'UNE HOTTE D'ASPIRATION QUI A ETE SOUMISE A L'ESSAI AUX FINS TO CONFORMITE AVEC LE CODE NATIONAL DU BATIMENT DU CANADA ET LE CODE NATIONAL DE PREVENTION DES INCIENDIES DU CANADA OU AVEC LES EXIGENCES DE LA NORME CAN/ULC-S646.

CONTACT LOCAL BUILDING OFFICIALS OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA.

COMMUNIQUER AVEC LES AGENTS DU BATIMENT OU LES AGENTS D SERVICE D'INCENDIE AU SUJET DES RESTRICTIONS ED DE L'INSPECTION DE L'INSTALLATION DANS LA REGION.

GETTING STARTED

DO NOT OVERFIRE—WHEN FLAME SPILLS OUT OF THE GRILL YOU ARE OVERFIRING.

Do not use products not specified for use with this grill.

In order to produce the most consistent results and get the most out of the flexible design of the Infierno, you'll need a good fire. There are two approaches to starting that fire.

Fire Cage Ignition

The Infierno is equipped standard with rear-mounted fire cages behind the grill stations.

This cage is based on the South American “brasero” which is a basket used to burn whole pieces of wood down to charcoal. Load the fire cage with paper, kindling and smaller pieces of wood in that order from the bottom LOOSELY to ensure good air flow. You may also use natural starters like “Fat Wood” or other nontoxic solid fuel starters in the fire cage. Place a few more pieces of wood and/or chunk charcoal underneath the cage. This fuel will be ignited by the coals that will begin falling out of the bottom of the cage once it is going. Light the cage from the bottom and feed it larger pieces of wood as the fire progresses. The combination of coals produced by the cage and the coals/wood ignited underneath the cage will fuel the Infierno's fire bed. Rake them forward under the cooking surfaces when you are ready to cook.

WARNING: THE FIRE CAGE PRODUCES A POWERFUL VERTICAL BURN. FLAME SHOULD NEVER EXTEND HIGHER THAN THE TOP OF THE GRILL'S FIRE BRICK BACK. MAINTAIN A SMALL FIRE TO REDUCE THE POTENTIAL FOR EMBER ESCAPE AND TO PREVENT TRIGGERING YOUR ANSUL SYSTEM.

Conventional Ignition

The Infierno can also be lit like a traditional solid fuel grill by starting the cooking fire on the hearth under the cooking surfaces. Using paper, kindling and smaller pieces of wood, build the fire over the ash grates in the middle of the Infierno's brick floor, they will aerate the young fire. You may use natural starters here too, like Fat Wood or natural starter bricks. Charcoal chimneys (found in many hardware stores) are also a good way to build a quick hot coal bed if not using the fire cage.

TIP: It is recommended that the Infierno be lit at least one hour before cooking to ensure the grill's fire box and brick has come up to uniform temperature.

If your Infierno is equipped with a Blanco Oven, this is lit underneath, or you may move coals from one of the flanking grill stations under it. Push the coals and fire to the back near the intake vent at the rear of the oven.

SOLID FUEL: WOOD VS CHARCOAL

Both wood and charcoal are instrumental in running a successful cooking fire in the Infierno.

Dry charcoal burns slowly over a long period, and is a reliable source of heat, but will not add much in the way of flavor to what is cooked over it.

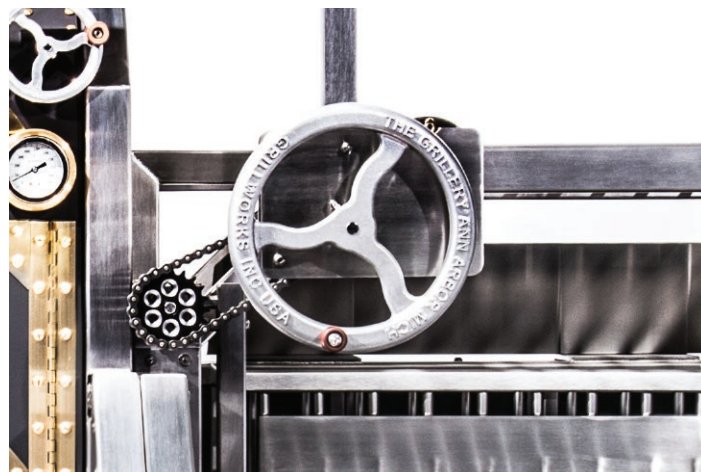
Well seasoned (10-15% moisture content) wood will burn relatively quickly and produce a moderate amount of flavorful smoke. You should consider the whole wood you burn to be the “seasoning” heat. The moisture left in the wood is what will carry the unique flavor of the wood type being used to the food and ultimately the diner.

In a restaurant setting, balance the use of high quality chunk charcoal with a supply of excellent whole wood to achieve both steady heat and high flavor. Consumption levels for both types of fuel can vary widely as the Infierno allows open air flow. The operator can control this by using more or less charcoal, building smaller fires, or lighting only a single grilling station when less cooking area is needed.

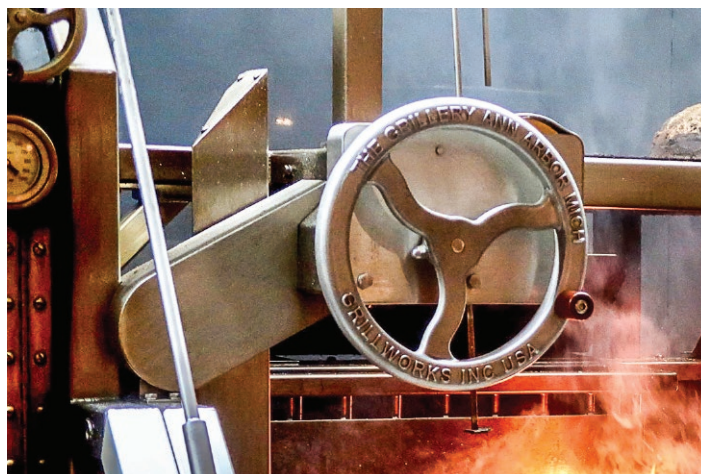
THE INFIERNO LIFT SYSTEM

The Infiernos have two or four crank wheel-controlled grilling stations. Cast aluminum wheels raise and lower the grilling frames through a wide vertical range over the fire to control cooking temperature. To raise the left frame the wheel is turned counterclockwise. The right frame is raised by turning the wheel clockwise.

The Infierno X lift system is comprised of a chain drive that is turned by the crank wheel, which in turn engages a vertical worm gear housed in the side of the Infierno body. This system raises and lowers the grill frames and holds them at infinite height levels—no catch or levers are required, you simply crank up or down until the desired height over the fire is reached, then let go. A brass height indicator shows the operator what level the grill surface has reached so this information can be easily recorded for future repeatable results or to communicate correct settings to another cook. The indicator is marked 1-10.



Chain and indicator system with chain guard removed.



Chain and indicator with chain guard in place.

COOKING ZONES

Air flow in the Infierno comes in from the front and up through the fire grates in the hearth base. This creates three distinct heat zones on the grilling surfaces, front to back. The difference in heat on the surface just a few inches forward or back can be dramatic.

Note: because the operator has a very large height range available for the cooking surfaces, temperatures can be controlled through a near-infinite range. The zones below are based on the grill surfaces positioned 4-8" above a wood/coal bed. For precise readings on surface temperature we recommend noting the temperature readings at the various height indicator levels (1-10) when the grill is underway, as every ventilation system varies in air flow and therefore temperature. A guntype infrared thermometer should be on hand at all times.

Basting Pans

Each grill surface empties into a removable basting pan attached to the front of the lift frame via a keyhole system, OR if equipped with our high volume funnel drain the juices will be directed into the floor slit. The V-Channel standard surfaces capture oils and juices to reduce flaring and to deliver them to the pans for use in basting and sauces, or into the floor catch for removal. **MAKE SURE THE PICKUP CONTAINER IS POSITIONED TO CATCH THE OILS.**

Low Heat Zone **L**

The front of the grilling surfaces, closest to the operator, are the warm zone. Under normal cooking circumstances, with the grill fired and running, this area comprising the first six inches of grill surface will be 200-300 degrees Fahrenheit when set 4-8" above the coal/wood bed.

Medium Heat Zone **M**

The center of the grill surface, the six inches positioned more completely over the bulk of the fire bed will range from 300-600 degrees at 4-8" high.

Searing Zone **S**

The rear six inches of the grilling surfaces, closest to the rear wall of the grill and to the fire cage, will be the hottest area, both because of their positioning and the flow of hot air up the rear wall of the grill. At 4-8" over the fire, this area will produce very high heat, ranging from 600-900 degrees depending on the intensity of the fire.

Surface Cooling

Once a grill surface is raised further from the fire, for example to rest an item, it will cool quickly. Remember this when lowering it again for high heat the stainless will need a couple minutes to come back up to searing temperatures.



CLEAN UP

WARNING DO NOT QUENCH HOT GRILL WITH WATER. The Infierno's grill surfaces and basting pans all lift off for cleaning. They are 304 stainless steel and can be washed by hand or in a commercial dishwasher. If using a dishwasher, the grill surfaces should be re-oiled (seasoned) again before cooking as they will be dry after going through the machine.

Ash collects in the drawers below the firebrick base. The ash falls through the fire grates placed in the fire brick. **WAIT UNTIL THE GRILL HAS COOLED BEFORE EMPTYING THE ASH DRAWERS.**

Disposal of ashes—ashes should be placed in a metal container with a tight-fitting lid. The closed container should be placed on a non-combustible floor well away from all combustible materials pending final disposal. The ashes should be retained in the closed container until all cinders have thoroughly cooled.

Excess grease or ash buildup around the grill's moving parts and external surfaces should be wiped off once the grill has cooled. If a drainage container is in use then it should be NSF approved, closed and removed and disposed of every day.





Infierno 100

1 Center Station / Blanco Oven

This central station is home to charcoal production or to the Grillworks Blanco Oven depending on how the unit was equipped at order. If open, or without the Blanco, this station is used for hearth cooking and charcoal production both directly on the hearth or using the standard fire cage at the rear. Once the station is lit, whole pieces of hardwood are placed in the cage to break down into coals to rake forward. **WARNING: NEVER ALLOW THE FLAME LEVEL TO EXCEED THE HEIGHT OF THE STATION!** If your Infierno includes a Blanco Oven, then fire and coals are built in front of the oven then pushed back toward the intake vent at the rear to power it.

2 Grill Station

Operated by an aluminum crankwheel, each lift frame carries two swappable grill surfaces. Heat is controlled both by grill surface height and by direct manipulation of the fire on the hearth below. **FOLLOW LUBRICATION INSTRUCTIONS FOR THE GEARBOX, VERTICAL SCREW AND ROLLERS (pages 12-14) ALWAYS CHECK THAT TRAVEL IS SMOOTH BEFORE OPERATION.**

3 Resting Shelf

A resting shelf with a drop-in bar surface is positioned over each grill station. This area can be used for resting, elevated smoking or for warm storage. The bars are designed to take hooks for suspending items over the grill station.

4 Grill Station Fire Cage

Each grill station has its own fire cage. These can be used to provide extra coals and fire directly to the grill station. **WARNING: KEEP FLAME LEVEL BELOW THE TOP OF THE GRILL STATION FRAME.**

5 Ash Drawers

Each grill station has an ash grate embedded in the fire brick floor. This aerates the fire above and allows fine ash to fall safely into the ash drawer below. When full the drawer can be removed for easy emptying.

6 Hearth Zone/Heat Door

The Infierno is designed to give chefs as large expanse of brick hearth to use as an improvisational baking or broiling area as possible. The brick is well suited to pot placement or direct-coal cooking. A drop-down door is hinged to the front of the hearth. When closed it provides additional heat protection for the operator. When open the door serves as a long staging zone or shelf. Make sure the hinge area is clean and clear before closing the door.

7 Drop-down Door Hinge and Heat Shield

The front of the Infierno's hearth is shielded by a brick-lined barrier and a hinged drop-down door, which doubles as a work shelf or staging area when open as shown.

MAINTENANCE & CARE

The Inferno's body is constructed entirely in 304 stainless steel. The tubular main frame is 2"x2" in 11 gauge. The side and bottom panels are 7 gauge. The back plate is 7 gauge. The grate supporting the fire brick is 1" x 3/16 19SW4. The fire brick floor is constructed of 2.3"x4.5"x9" brick, the sides are lined in 1.125"x4.5"x9" brick. Any brick can be individually replaced by lifting them out of the floor or loosening the back cap at the top of the grill with a hex key.

The Inferno's cooking system is designed for maximum motion and flexibility. All moving parts, especially the lift systems, need to be checked for free motion BEFORE EVERY USE. Ash and other normal side-products of cooking and fire can build up on the tracks the lift system travels on and can impede motion if left uncleaned. If care is taken to maintain your Inferno will thrill your dining room for years to come.



Installation & Use

BEFORE EVERY USE check that the lift system is free of debris or excess ash and that travel is smooth. Variations in resistance between grill stations are normal, each element is hand-made so small tolerances can make for varying feel. If there is any excessive resistance, questionable noises or big changes to how the lift system is functioning, call or email us for assistance.

BEFORE EVERY USE examine the brick base and the seams between the bricks, excess build up underneath the bricks can cause them to heave up and become uneven. If this occurs remove the bricks on an off night and do a thorough cleaning, replacing when done (they are removable).

BEFORE EVERY USE examine the vertical screw gear **A** and apply a small amount of food-safe lubricant if it is dry. Do not over-apply, it should only appear damp.

AFTER EVERY USE make sure the hinge area **B** between the hearth heat shield and drop-down door is clear of anything that could be trapped when the door is closed.

AFTER EVERY USE lift out the fluid collection pans and funnels **C** and clean thoroughly. Flush and clean the drainage tube with disinfecting cleaner.

WEEKLY remove the top plate of the lift system gear box **D** and check that the gears appear clean and damp with lubricant. If dry add a small amount of food safe oil.



LUBRICATION & MECHANICAL

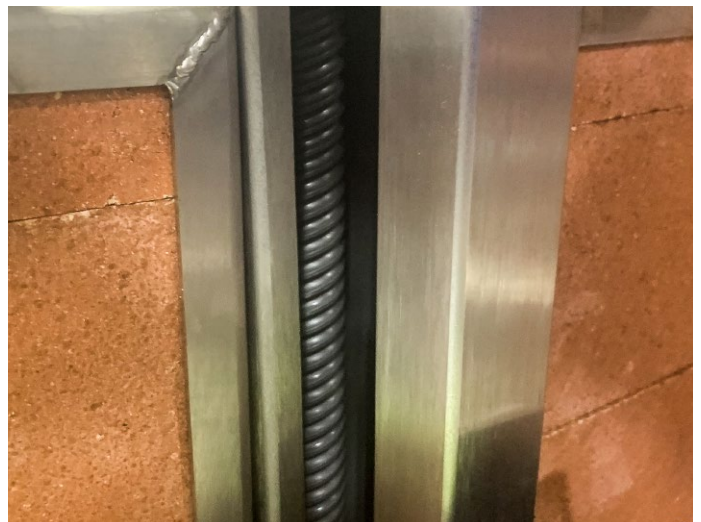
Daily

Open the top cap and check that the gears in the main gearbox are damp with lubrication (see recommended lube types).



Daily

Visually inspect the vertical lead screw, rollers and vertical track—all should be free of debris and damp with lube (add lube if dry). Clean the track with stainless steel cleaner.



REGULAR LUBRICATION AND CLEANING IS CRITICAL TO LONG TERM OPERATION

Weekly

Add recommended lube to the main gearbox (approximately 2 oz per gearbox).



Monthly

Remove chain housing and inspect drive chain, clean of any debris, add lube if dry.



REGULAR LUBRICATION AND CLEANING IS CRITICAL TO LONG TERM OPERATION



All professional Grillworks products are
NSF listed and approved for use in food service.

KEEP THESE INSTRUCTIONS!

Infierno 240 Tigre





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