



Twinfire

Operating and Installation Instructions

Manufactured by: **XEOOS**[®]
TWINFIRE

Specht Modulare Ofensysteme GmbH & Co. KG
Bahnhofstraße 2
35116 Hatzfeld-Reddighausen DE
T.+49 6452 92988-0
info@xeoos.de www.xeoos.de

Imported by: **WITTUS**
FIRE BY DESIGN

PO Box 120
Pound Ridge NY 10576
T.914-764-5679 F.914-764-0465
info@wittus.com www.wittus.com

Tested and
Listed by: **O-T-L** Portland
C US Oregon USA

OMNI-Test Laboratories, Inc.

Models

Basic



Classic



Elegance



Pur



Read this manual carefully and save the instructions.

Table of Contents

Description	Page
General Information.....	3
Operational Description and Approvals	4
Installation of the Stove	5
Heating Capacity and Space Requirements	5
Outside Air Supply	5
Connection to the Chimney.....	5
Technical Specifications and Clearances	7
Protection of the Floor	8
Permitted Fuels	9
Initial Use	9
Starting the Fire.....	10
Operation	11
Shutdown and Restart.....	12
Appropriate Usage	12
Cleaning and Maintenance.....	13
Empty Out Ash Pan	13
Cleaning or Replacing the Glass Pane	13
Cleaning the Chimney and Baffle Plates.....	13
Maintenance Activities	13
Troubleshooting: Causes and Their Repair	14
"Snap-Sounds"	14
Twinfire Replacement Parts.....	15
Twinfire Warranty	15

General Information

Thank you very much for choosing the xeoos Twinfire[®] System, which is a remarkable product that utilizes two fires to create a most efficient product and it is easy to operate.

Specht from Germany has developed this stove with care and is happy to provide you with an exceptionally high-quality and ecological product.

The purpose of this manual is to guide and instruct Twinfire stove owners in proper burning to achieve environmentally friendly combustion and to minimize the risk of incorrect use and operation of the stove.

Please read these operating instructions carefully before the first initial use. It contains important and beneficial information for the operation of your new Twinfire stove. Failure to follow instructions may result in property damage, bodily injury, or even death. It is therefore very important to read this entire manual, and save the instructions. Correct operation is also vital with regard to our applicable warranty terms.

For more information on wood burning visit the website <http://woodheat.org/>.

Before you install your stove we recommend that you contact your dealer or local Building Inspector or Fire Marshall to help you follow the rules and regulations in your local area. We also recommend that your dealer check the stove before installation for completeness and functionality.

If your stove is not installed properly, a home fire may result. To reduce the risk of fire, follow the installation instructions. Contact local building or fire officials about restrictions and installation inspection requirements in your area. Not approved for use in a mobile home.

We wish you and your friends many enjoyable and comfortable hours with your xeoos Twinfire[®].

Follow the manual during installation and operating of the stove.



***Take particular note of this symbol throughout the manual.
This indicates special attention.***

Operational Description and Approvals

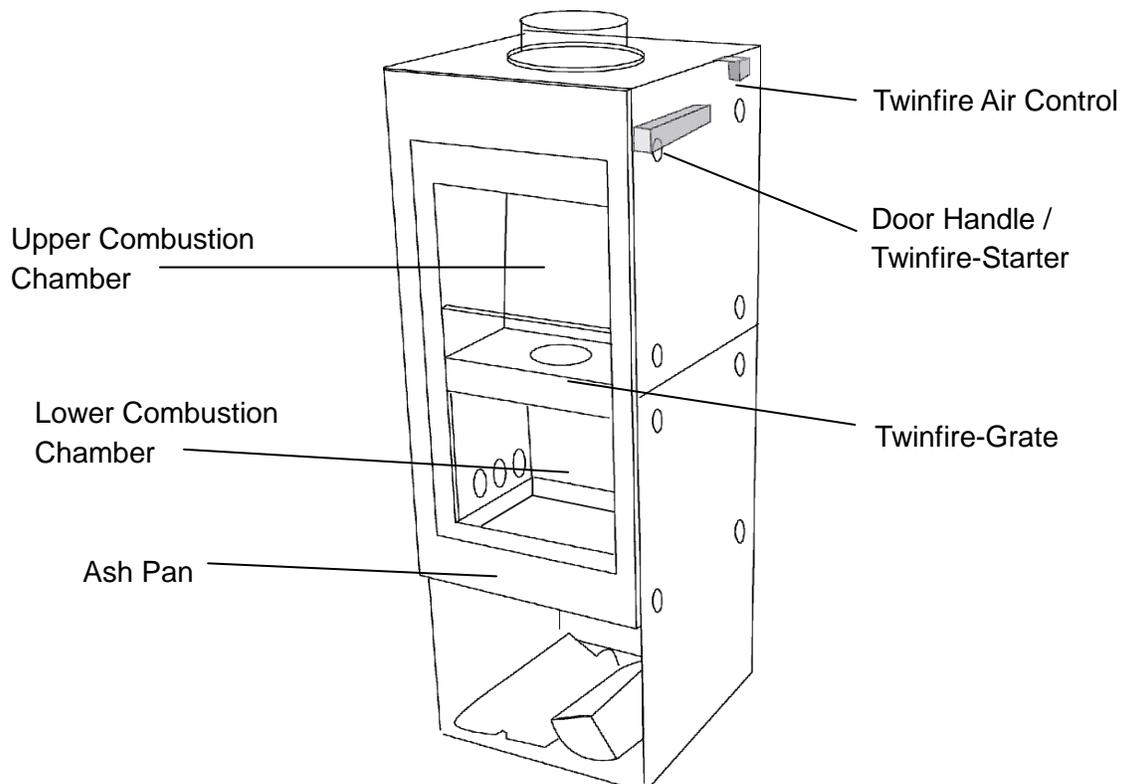
The patented Twinfire[®]-System of xeoos[®] is based on the principle of gasification with the use of the furnace. The four Twinfire models are tested by OMNI-Test Laboratories, Inc. of Portland, Oregon and are listed to UL 1482 and ULC S627. They are also EPA certified and meet the more stringent WA State Environmental standards.

All the products have been rated to 93% efficiency.

The upper combustion chamber is set to the desired heat output from the primary air control connected to the upper combustion chamber. In this process the energy efficient wood gases are drawn through the flames and burned with secondary air also at high temperatures (> 1832°F or 1000°C). Then the two-flame combustion in the upper and lower chambers can be seen through the large Robax-ceramic glass window.

With the second combustion level, the Twinfire reaches a very high degree of efficiency. This means a great heating output at low fuel consumption and with less ash. The two elements that control the combustion concept and the heating output are:

1. The door handle with its double-function makes locking the door and starting the Twinfire System possible. The setting “heat up” exhausts the gases like a normal stove directly upward. Switching to the second setting starts the low-emission and efficient operation of the gasification furnace.
2. By adjusting the Twinfire Air Control handle, the amount of primary air regulates the heat output (ranging from 40 to 100 percent of the nominal output).



Installation of the Stove

Heating Capacity and Space Requirements

The room-heating-capacity is highly dependent on the room's location and interior as well as on the operation method. In a newer air-tight building be prepared to calculate your heat demand. In older buildings, the nominal heating capacity of approximately 27kBTU's (8 kW's) heats an area from 430 - 1,076 ft² (40 -100 m²) based on various conditions.

Outside Air Supply

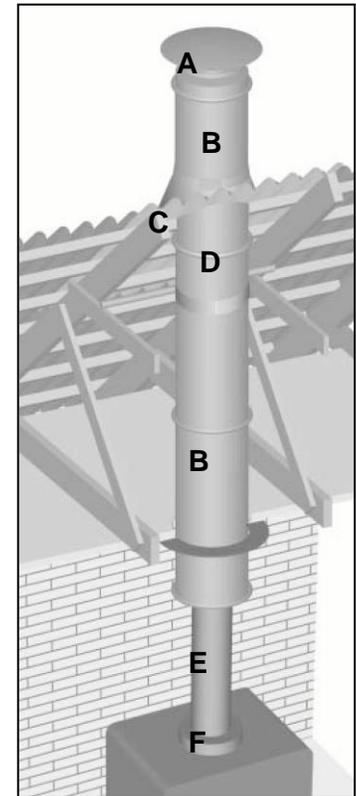
Ensure that there is sufficient combustion air in the room in which the stove is installed, and that there is an adequate supply of combustion air to the stove, which can be sourced from another room or from an outside air supply. Rooms with negative pressure (e.g. use of exhaust fan) or newer air-tight buildings are particularly suited for air supply from outside. An outdoor air supply to the Twinfire is available as an option, and should be installed by a qualified person.

Connection to the Chimney

The Twinfire stove can be connected from top or rear. The diameter of the stove pipe is 6" (15.2 cm). Do not use connector pipes and chimneys with smaller clearance diameters or less than 24 gauge steel. It must be installed using a Class A UL 103 HT approved factory-built chimney system or a code-approved masonry chimney with a flue liner. Aluminum and galvanized steel pipe is not acceptable. In Canada, the installation must conform to NFPA 211 or CAN/CSA-B365. The chimney must extend through the roof at least 3' (1m), and 2' (6 m) above any structure within 10' (3 m). The condition of the chimney and height is very important. We suggest a total minimum height of 10' (3 m).

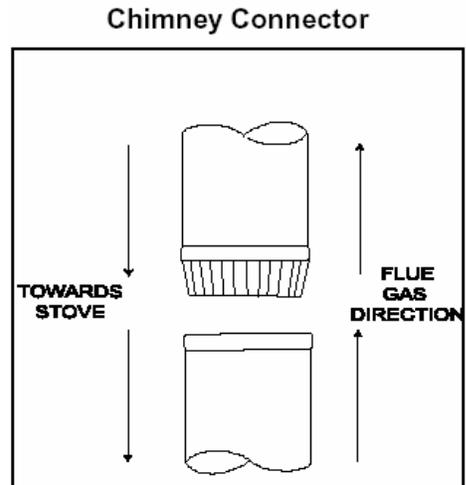
To reach the rated heat capacity, the minimum delivery pressure of the chimney must be 10 to 15 Pa (1.0 to 1.5 mm WC). Follow the rules and regulations in your local area.

Required Installation Components	
A	Chimney cap
B	Insulated chimney
C	Storm collar
D	Roof flashing
E	Ceiling support box
F	Chimney connector pipe



IT IS VERY IMPORTANT TO ENSURE THAT YOUR CHIMNEY HAS A GOOD DRAFT. YOUR DEALER OR CHIMNEY SWEEP WILL BE ABLE TO GUIDE AND ADVISE YOU ON YOUR CHIMNEY CONDITIONS.

Each chimney connector or chimney connector section must be installed to the stove flue collar and to each other with the male (crimped) end toward the stove. This prevents any amount of condensed or liquid creosote from running down the outside of the pipe or the stove top. The flue collar connector should be secured with sheet metal screws to ensure that the sections do not separate. For the best performance the chimney connector should be as short and direct as possible, with no more than two 90° elbows. The maximum horizontal run is 36" and a recommended total length of chimney connector should not exceed 10 feet. Always slope horizontal runs upward ¼" per foot toward the chimney. Note the chimney connector pipe should not pass through an attic or roof space, closet or similar concealed space, or a floor or ceiling.



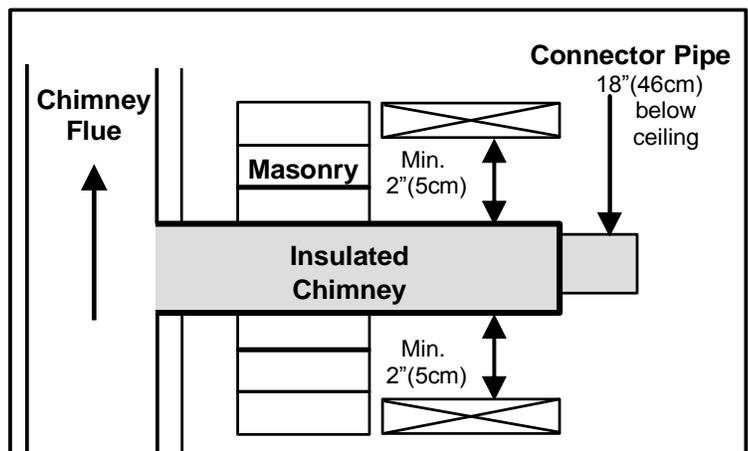
DO NOT CONNECT THIS STOVE TO A CHIMNEY FLUE OR AIR DISTRIBUTION DUCT OR ANY SYSTEM SERVING ANOTHER APPLIANCE.

For venting vertically into a Class A chimney, single wall black steel pipe (at least 24 gauge and 6" in diameter) must be used in the room where the stove is installed. Refer to the manufacturer's instructions for the connection to the listed chimney.

For venting directly into a masonry chimney or through a thimble, the top of the single wall pipe must be at least 18" (46 cm) below a combustible ceiling and conform to NFPA 211 or CAN/CSA-B365 guidelines and methods.

For rear venting or other not listed configurations, consult the local building codes and follow the NFPA 211 or CAN/CSA-B365 guidelines. To install the collar on the back, first unscrew the rear plate of the Twinfire stove and attach the collar to the back of stove. Then, attach the first stove pipe section to the connector pipe with screws, and replace the rear wall plate.

If the chimney connector is fitted with a baffle, it must be manually operated, visibly placed for ease of use, and must not close completely. Consult your chimney expert if you have any questions. Make sure that there is easy access to the chimney cleanout door. Floor protection is required under the chimney connector and 2" (51cm) beyond each side.



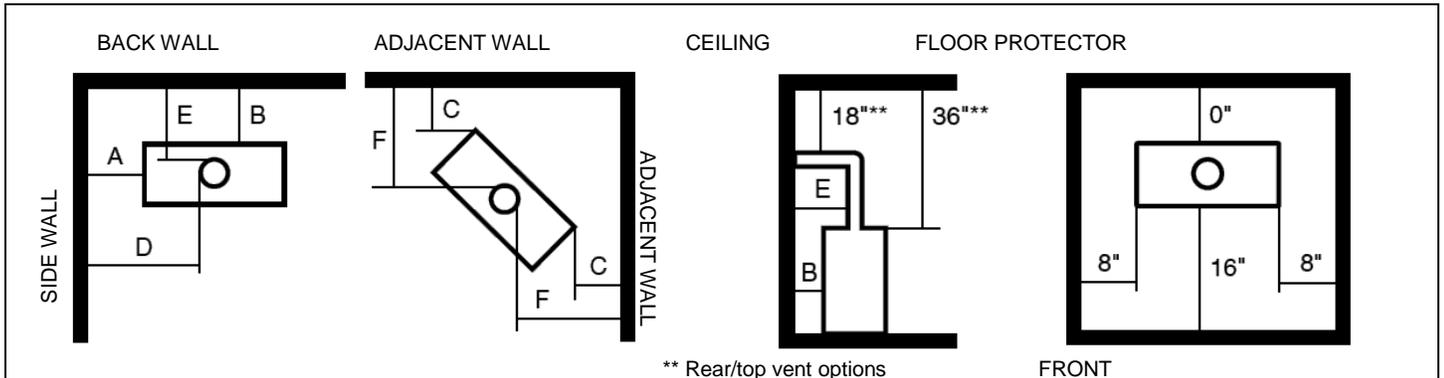
Technical Specifications and Clearances

Technical Specifications

Twinfire	Description		Data	
Test data:	Safety approval for United States		UL 1482	
	Safety approval for Canada		ULC S627	
	Environmental approval (EPA Certified)		2.4 gm/hr emission rate	
Heating:	Optimal heat output		27kBTU (8kW)	
	Heat output range (minimum-maximum)		14-41kBTU (4-12kW)	
	Heating capacity range		430-1,076ft ² (40-100m ²)	
	Efficiency		93%	
Stove dimensions:	Basic	Classic	Elegance	Pur
Height	48" (121cm)	52" (133cm)	50" (127cm)	51" (129cm)
Width	18.5" (47cm)	22" (56cm)	19" (48cm)	19" (48cm)
Depth	16" (40cm)	16" (40cm)	16" (40cm)	16" (40cm)
Weight:	469lbs. (213kg)	642lbs. (292kg)	442lbs. (201kg)	513lbs. (233kg)
Venting:	Optional venting outlets		top or back vent	
Stove pipe:	Basic	Classic	Elegance	Pur
Diameter of the stove pipe	6" (15cm)	6" (15cm)	6" (15cm)	6" (15cm)
Top vent – center of pipe to stove back	8" (20cm)	8" (20cm)	8" (20cm)	8" (20cm)
Back vent – height to center of pipe	43" (109cm)	47" (120cm)	45" (115cm)	45.5" (116cm)
Outside air supply:	Diameter of the air supply connector		4" (10cm)	
	Location of air supply outlet		Under the lower firebox at the center	

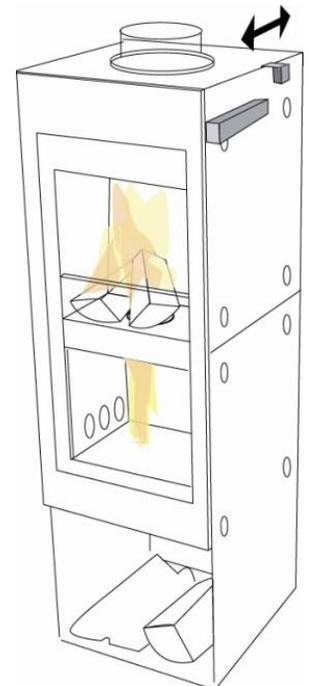
Clearances

The distances of the stove to combustible materials or walls are listed in the table below. These are the minimum clearances for installation, and any reductions must first be approved by the regulatory authority. Clearances to noncombustible materials are 2" (5cm), but note that "non-combustible" must be solid cement or block (not brick or tile over combustible material).



MINIMUM CLEARANCES FOR USA/CANADA		
Models	Basic/Classic/Elegance/Pur	Clearances
A.	SIDE WALL TO UNIT	15" (38 cm)
B.	BACK WALL TO UNIT	13" (33 cm)
C.	CORNER WALL TO UNIT	10" (25 cm)
D.	SIDE WALL TO CONNECTOR	21" (53 cm)
E.	BACK WALL TO CONNECTOR	18" (46 cm)
F.	CORNER WALL TO CONNECTOR	19" (48 cm)
	CEILING TO APPLIANCE	36" (91 cm)
	CEILING TO PIPE	18" (46 cm)

** Not Tested - NFPA Guidelines in the USA, CAN/CSA B365-M91 in Canada Floor protection must be minimum 3/8-inch non-combustible material extending beneath the stove, and to the front and sides from door opening and to the rear as indicated.



Protection of the Floor

Floor protection for Canada: 18" (46 cm) from unit to front of floor protector. Floor protector must be under connector pipe for a thru-the-wall configuration.



USE FLOOR PLATES UNDER THE STOVE MADE WITH NON-COMBUSTIBLE FIRE-RESISTANT MATERIALS SUCH AS STEEL, TILE, OR GLASS. BEFORE INSTALLATION, MAKE SURE THE FLOOR CAN CARRY THE WEIGHT OF THE STOVE.

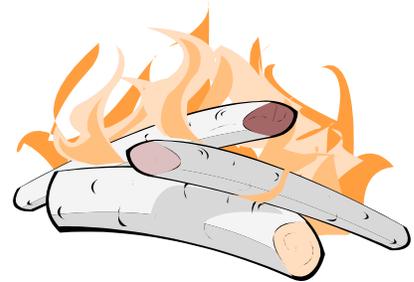
Permitted Fuels

Only natural, air-dried firewood may be burned. Under no circumstances should rubbish, other fuels, and treated or damp wood be burned.



NEVER BURN IMPREGNATED OR PAINTED WOOD, LAMINATED PLASTIC, PLYWOOD, CHIPBOARD, GARBAGE, FLAMMABLE FLUIDS SUCH AS GASOLINE, NAPHTHA, ENGINE OIL, REFUSE, MILK CARTONS, OR PRINTED MATTER. USE OF SUCH MATERIALS WILL INVALIDATE YOUR WARRANTY, AS THIS MAY EMIT TOXIC, CORROSIVE AND HAZARDOUS FUMES WHEN BURNED. THEY MAY ALSO CAUSE A BUILD-UP OF THE TOXIC GAS DIOXIN, WHICH IS DAMAGING TO THE STOVE AND THE ENVIRONMENT.

We recommend that firewood with less than 20 % moisture content be burned. Wood is an environmentally friendly and widely available solid fuel. To ensure that the wood has a moisture content of 20 % or less, store it under a roof or protected against heavy rain for a year or two. Use of wood with greater moisture content can cause soot and creosote in the pipe and chimney. This can lead to chimney fires.



Wood type	Heat value (kWh/kg)	Combustion involves conversion of the fuel from solid form into gases, water vapor, and charcoal. The heating value is an expression of the content of combustible gases. All wood has roughly the same heating value per kilogram. The lighter the wood, the more that must be used to achieve the same heat value as the heavier species of wood. Thus, preferred wood types are maple, elm, beech, oak, and ash.
maple, elm, willow	4.1	
poplar, beech	4.2	
oak, ash	4.2	
birch	4.3	
pine, fir	4.4	

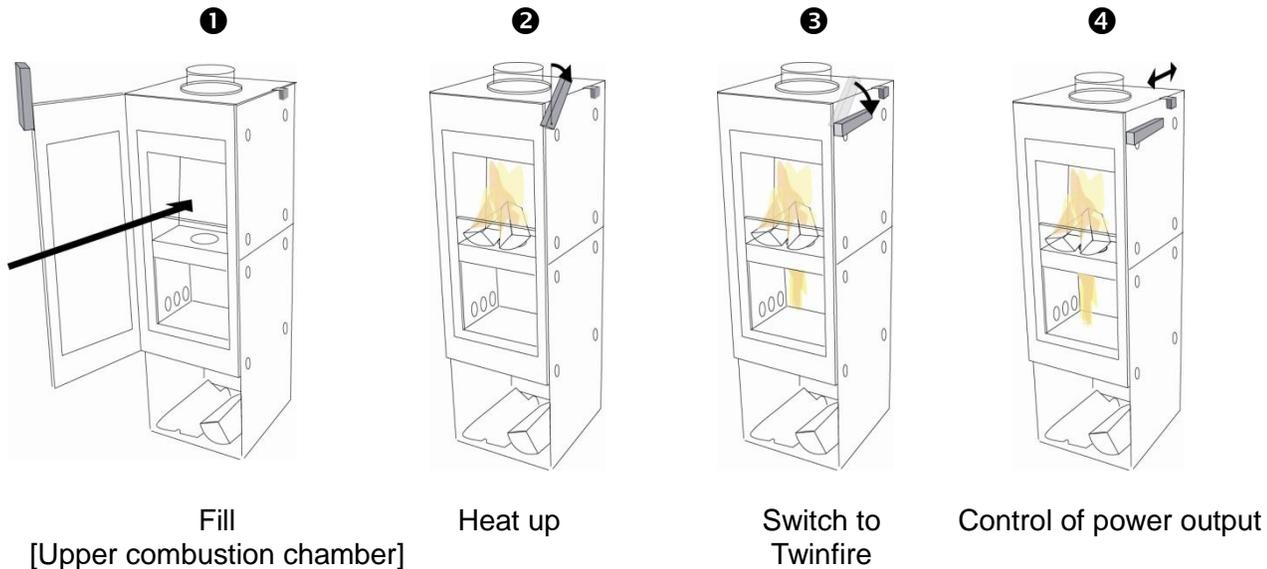
Initial Use



BEFORE STARTING UP THE STOVE, MAKE SURE TO REMOVE THE PACKAGING MATERIAL.

Although the Twinfire is carefully cleaned and inspected several times, remainders of the sand blasting or shavings of the Vermiculite plates in the fireplace can stay. We suggest before use that you vacuum and wipe clean all surfaces with a soft, dry cloth to avoid baking on film or dust particles. Please note also that the stove paint will harden during the first few initial fires. This means that the stove may generate some smoke and an odor of paint, which will dissipate after about an hour's operation. It is a good idea to insure effective ventilation during this phase. Also, avoid touching the stove during the curing process.

Starting the Fire



To start the fire, a small piece of wood can be used together with a regular lighter and kindling which can be layered in the upper combustion chamber [❶]. For safety reasons fluid fuels are categorically not allowed to be used.

To start the fire the control elements have to be put in the following positions [❷]:

- Door handle: "Heat up" (see arrow)
- Twinfire air control: "100 %" open (push all the way back)

Attention! The surface of the stove could be very hot.

As soon as the kindling has turned into a flame the permitted fuels can be put into the stove. One should not put more than one to two small pieces [a total of approximately 3-4 pounds (1.5-2 kg) in the upper combustion chamber. Until the necessary basic bed of fire is reached, the Twinfire handle has to be in the "Heat up" position and the air control knob fully open [❷].

After about 30-45 minutes a blaze should have ignited so you can switch the handle to the "Twinfire[®]" position [❸] (An indicator is that the firebox grate glows). The combustion occurs primarily downwards through the flame.

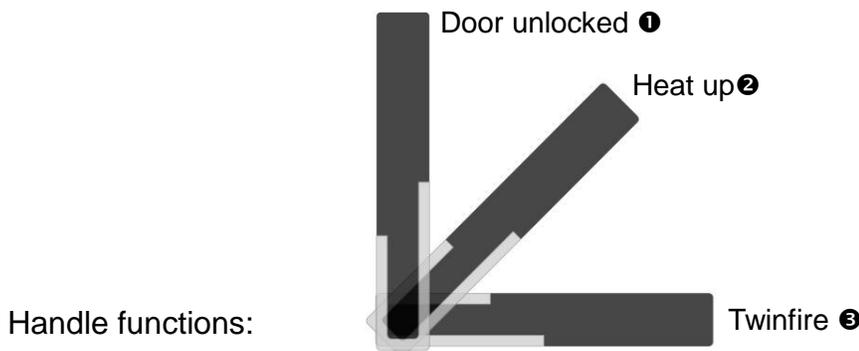


Note: The Twinfire[®] system achieves its optimal effect only when it has been burning for 30-45 minutes and there is enough fire bed with a temperature of approx. 1,832°F (1,000°C) available. Otherwise there is a danger of smoke development and smoldering. If there is no continuing flame in the lower combustion chamber yet, put the handle in the position "Heat up" [❷].

Once the lower chamber flame has a continuing flame, the output can now be regulated with the air control [❹], as necessary. The primary air supply should always be at least partly open when the stove is running! This improves the quality of combustion and avoids any environmental pollution. The primary air also helps to prevent soot build-up in the pipe and chimney.

Operation

For continued operation, additional wood fuel should be added to the fire when the flames in the upper combustion chamber have died down, but there are still enough hot coals available. Open the door slowly to prevent the flames and ashes from falling out. When opening the door the integrated door handle prevents the buildup of excessive smoke into the living space. The first 45° of the movement of the handle will turn the stove into the heating up mode. If you move the handle another 45° into the vertical position the door unlocks.



Again please open the stove door with caution - this enables a stable flow and avoids disruptive turbulence in the fire chamber. After loading the wood, close the door, and when there is enough flame, adjust the handle to the "Twinfire" position.



Caution: Do not strike or slam the glass door when closing.

If the Twinfire stove is operated continually at a high output rate in the position of "heat up" the danger of overheating exists. The handle setting serves, as the name states, exclusively for initial heating up the stove.

If the fire has burned down too far, put more fuel on the fire and leave the handle in the position of "Heat up" until more of a flame develops. If the firebox and chimney are still warm, it normally takes only a few minutes to restart.

The stove's output is regulated through the Twinfire air control; to reduce the heat output tilt the knob forward; to increase the heat output tilt the knob backward. The stove's heating output is mainly determined by the amount of burned wood.



ALSO NEVER ADD MORE THAN 3-4 POUNDS (1.5-2 KG) OF WOOD (ABOUT 1-2 LOGS). OTHERWISE THE STOVE COULD GET OVERHEATED, WHICH CAN CAUSE IRREPARABLE DAMAGE.

THIS KIND OF DAMAGE IS NOT COVERED BY WARRANTY.

If there is a situation of a poor draft, the stove should not be reduced to the lowest setting of the Twinfire air control, or heating up will take longer. Place small pieces of wood until the chimney is well heated. This can take up to one to two hours. The combustion is optimal when the flames glow light yellow to blue. If too high, use fewer and larger pieces of wood and adjust the air control. **Caution: Open the door only for short periods of time.**

Shutdown and Restart

To shut down the stove, let the fire extinguish and leave the stove closed until it has cooled down.

If the stove has not been in operation for an extended period, we recommend that you pre-heat the stove and the chimney by burning a couple of sheets of newspaper first. This improves the draft of the chimney during the heating up phase. Also insure that the chimney is free of dirt, birds nest or anything else.

Creosote - Formation and Need for Removal - When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire. The chimney and chimney connector should be inspected at least once every two months during the heating season to determine if a creosote buildup has occurred. If creosote has accumulated, it should be removed to reduce the risk of a chimney fire.



Appropriate Usage

- The surface is hot while in operation. Keep children, clothing and furniture away. Contact with the hot surfaces may cause skin burns.
- Do not store solid fuel within space heater installation clearances or within the area for loading and ash removal.
- Never use gasoline, gasoline-type, lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or 'freshen up' a fire in this stove. Keep all such liquids well way from the stove while it is in use.
- Do not place candles or other materials in or on the stove, which melt or burn at high temperatures (e.g. paper, plastics). The melted material cannot be removed and can cause permanent odors. Also, the burnt material could cause a house fire.
- DO NOT use a grate or andirons to elevate the fire – build it directly on the hearth.
- Burn a little at the time. Add fuel at regular intervals and run the stove over a period of several hours if possible. The stove should be observed during operation.
- The Twinfire stove is not suitable for cooking food.
- During room-air operation, the opening under the stove has to be free at all times. During operation with external air supply, insure that the air supply is always free and has not been cut off.
- The stove may not be opened with any tools or pokers.
- The ash pan needs to be emptied when the ash reaches the upper limits of the pan.
- Make no adjustments to the stove; otherwise the license and warranty are void.
- To replace broken or damaged parts, purchase authentic items through your dealer.

Cleaning and Maintenance

Cleaning the Twinfire stove is periodically necessary. Efficient combustion and optimized air through ducts can ensure the upkeep of your product. Insure that cleaning and maintenance have been done correctly and be sure to inspect your fire chamber. Empty the ash pan regularly.

Empty Out Ash Pan

To remove the ashes first let stove cool down. Then open the combustion chamber door and pull out ash pan. We recommend that you always leave a layer of ash approximately 1 inch (2 cm) deep in the upper fire chamber, since this allows better combustion during the heating.

Disposal of Ashes - Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a noncombustible floor or on the ground, well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.



Cleaning or Replacing the Glass Pane

The construction of the fire chamber glass makes it necessary to be cleaned after long usage or when improper fuel is burnt. If there is soot build up, we recommend using a glass cleaner or dip a damp paper towel into the cool ashes to clean the glass plate. Remember to clean the glass ONLY when the stove is cold. If the glass breaks, it is necessary to replace the glass (use only approved Twinfire glass and should be done by an approved professional) and gasket. First carefully unscrew and remove the top and bottom brackets, remove the old and insert the new glass and gasket, and replace the brackets.



Do not use any sharp articles or abrasive cleaners to clean the glass plate, in order not to damage the glass. Do not use aggressive cleaning agents for cleaning the glass plates, since sometimes they can cause damage to the gasket around the plate.

Cleaning the Chimney and Baffle Plates

The chimney and basic servicing should be cleaned annually by a qualified Chimney Sweep. The stove and baffle plates (vermiculite-plates) have to be removed cautiously to avoid breakage. Also you can easily do the cleaning of the supply air openings in the upper combustion chamber and the smoke gas openings in the lower combustion chamber yourself with a vacuum cleaner from time to time. Vacuum the port in the double bottom. Also clean the grate by knocking off the carbon crusts.

Maintenance Activities

Door-hinges and locks need occasional care. As needed the brass bearing on the door handle can be greased with heat-resistant graphite or Teflon-grease. Also, you can obtain spray cans from your dealer to touch-up scratches in the paint.

Troubleshooting: Causes and Their Repair

Problem	Cause	Remedy
Wood catches fire very slowly or not at all	<ul style="list-style-type: none"> - none or too little combustion air - logs are too thick - wood is too moist - blockage in grate 	<ul style="list-style-type: none"> - completely open the air control and put the handle into position "heat up" - use smaller diameter logs - use drier wood - jiggle grate with poker and remove debris
fire goes out or smolders	<ul style="list-style-type: none"> - none or too little combustion air - logs are too thick - wood is too moist - chimney damper is closed 	<ul style="list-style-type: none"> - completely open the air control and put the handle into position "heat up" - use smaller diameter logs - use drier wood - open the damper in chimney
soot films on the glass plate	<ul style="list-style-type: none"> - draft of the chimney is too weak - wood is too moist - draft of the chimney is too strong - primary air supply is incorrectly adjusted - stove is leaking - fuel quantity is too small - air baffle is not mounted properly 	<ul style="list-style-type: none"> - adjust the damper (more open) - use drier wood - adjust the damper (more closed) - adjust the air control system - contact the dealer - add fuel (more wood) - mount the air baffle correctly
wood burns down too quickly	<ul style="list-style-type: none"> - draft of the chimney is too strong - primary air supply is incorrectly adjusted - logs are too small 	<ul style="list-style-type: none"> - adjust the damper (more closed) - reduce the primary air - use greater diameter logs
smoke comes out into the room when the door is opened	<ul style="list-style-type: none"> - damper is closed - chimney not the right size for the firebox - other devices (e.g. exhaust fan) produces negative pressure in the area 	<ul style="list-style-type: none"> - open the damper - contact the dealer - check other devices / contact the dealer

"Snap-Sounds"

This effect is normal for stoves. It arises from the expansion of metal pieces. The tensions which occur with the heating up and cooling down between the different warm stove pieces adjust themselves in this process.

Twinfire Replacement Parts

- Vermiculite upper combustion chamber - 8 KW
- Vermiculite lower combustion chamber - 8 kW Basic or Pur
- Twinfire door glass
- Twinfire gasket
- High temperature glue for sealing
- Twinfire grate
- Teflon – lubricant
- Spray paint can - anthracite, black, silver, gray
- Top plate conversion kit - top vent à back vent (without a hole)
- Top plate conversion kit - back vent à top vent (with a hole)

Twinfire Warranty

The Twinfire stoves are built to the highest quality standards. They come with a 5-year warranty, which covers defects in materials or workmanship.

The warranty does not cover the following:

- Incorrect installation of the stove (not according to the Operating and Installation Manual)
- Rust or inappropriate treatment (such as scratches on the stove body, etc.)
- Improper operating or mishandling of the stove
- Normal wear of parts that are in contact with the fire, e.g. Vermiculite plates and door gaskets
- Costs of transport, assembly and disassembly, and glass breakage or cracks
- Any structural changes to the Twinfire stove are not covered by warranty
- Damage through the use of fuels which are not mentioned in the operating instruction
- Use non-authentic spare parts that are designed for the Twinfire stove.

Use only authentic Twinfire stove spare parts, and contact the dealer with any warranty issues.