



## INSTALLATION, OPERATING AND SERVICING INSTRUCTION MANUAL



### Commercial Deck Steamer **Model No's.: DSK Series** **DSK-2/DSK-3**

AGA Approval No. AGA 8778 G

**B&S Commercial Kitchens Pty Ltd**

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Please ensure this booklet is kept in a safe and prominent location for future reference.

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Owing to continual product development and improvements to its products, B&S Commercial Kitchens Pty Ltd reserves the right to change the product specifications and design without prior notice.

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# Product Specifications & Introduction

**Appliance Name:** Commercial Deck Steamer  
Also marketed under the brand name B&S Black, & K plus

<b>Manufactured By:</b>	Foshan Zhongtian Guhuang Kitchen Equipment Manufacturing Co.Ltd
<b>Certificate Holder:</b>	B&S Commercial Kitchens Pty Ltd 57 Plateau Road Reservoir Victoria 3073 Tel; + 61 3 9469 4754 Fax: +61 3 9469 4504
<b>Approval Number:</b>	AGA 8778 G
<b>Gas Type/s:</b>	Natural Gas & Propane gas

We are confident that you will be delighted with your B&S equipment, and that it will become the backbone of your kitchen. To ensure you receive the utmost benefit from your new B&S appliance, there are two important things you can do.

1. Ensure you read this booklet carefully and follow the instruction given. Ensure that this booklet is kept in a safe and prominent location for future reference.
2. Should you be ensure of any aspect of the operation/performance, servicing and installation of the appliance, please contact your B&S dealer immediately. In most instances a phone call could answer your question.

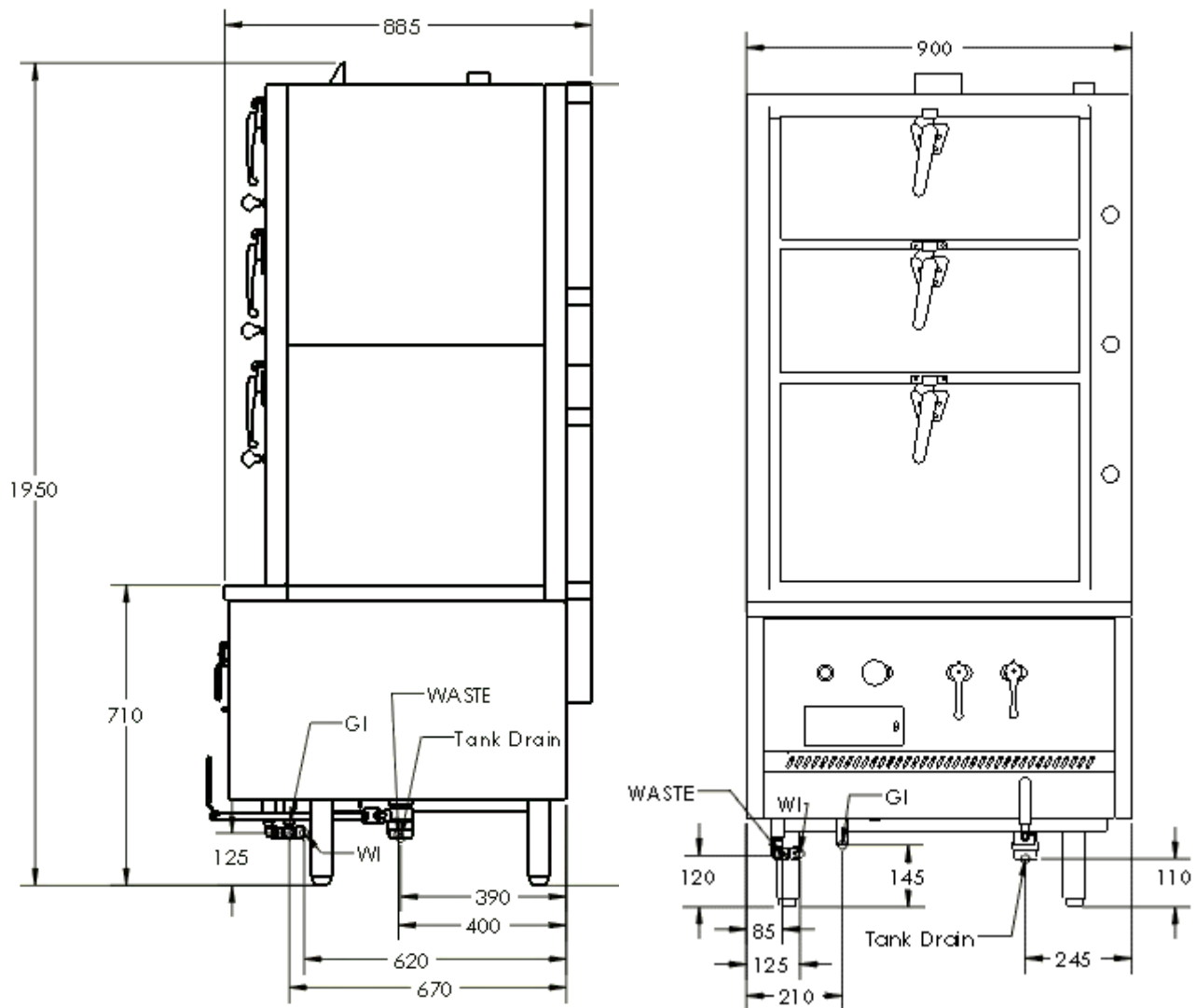
**Table 1: Nominal Terminal Input Rates & Injector Size Orifices**

Gas Type	Injector Size Main Burner/Pilot (mm)	Gas Test Point Pressure (kPa)	MJ/h Rating per Burner	Total Nominal Gas Consumption
DS-2,3 (LPG)	2.00/1.00	2.60	150	150 MJ/h
DS-2,3 (NG)	3.10/1.55	1.0	150	150 MJ/h

Pilot gas consumption: 7.5MJ/h

Number of burners: 3

Each burner gas consumption: 47.5MJ/h



**Appliance specifications:**

Height : 1900 mm

Depth : 885mm

Width : 900mm

**Table 2: Dimensions**

	Connection	Position from Floor (mm)	Position from Rear of Appliance (mm)	Position from LHS/RHS edge of Appliance (mm)
Water Inlet (WI)	½" nonreturn valve	120 (+/-5)	620 (+/-5)	125 (+/-5) LHS
Gas Inlet (GI)	¾" male BSP	145 (+/-5)	670 (+/-5)	210 (+/-5) LHS
Tank drain (D1)	1½" male BSP	110 (+/-5)	390 (+/-5)	245 (+/-5) RHS
Waste (D2)	1½" BSP	120 (+/-5)	400 (+/-5)	85 (+/-5) LHS

## IMPORTANT WARNINGS



**ENSURE ANY TRANSIT PROTECTION IS REMOVED BEFORE INSTALLING THE APPLIANCE.**

**THIS APPLIANCE IS NOT INTENDED TO BE INSTALLED OR USED IN A MARINE ENVIRONMENT. ENSURE APPLIANCE IS INSTALLED IN A STABLE POSITION.**

**INSTALLATION AND SERVICING SHALL BE CARRIED OUT ONLY BY AUTHORISED PERSONNEL.**

**FAILURE TO DO SO WILL VOID B&S WARRANTY AND MAY RESULT IN DAMAGE TO EQUIPMENT OR INJURY TO PERSONNEL.**

Please note that checking and adjusting of burner pressures on commercial catering appliances is an obligation of gasfitters.

The relevant legislation is as follows from the **Plumbing Regulations 2008** administered by the **Victorian Building Authority**:

### **Gas fitting work defined**

- (1) Gas fitting work is the construction, installation, replacement, repair, alteration, maintenance, testing or **commissioning** of any pipe, **appliance**, flue, fitting, apparatus, control or other item that is involved with the supply or use of gas and that is fitted downstream of the outlet of a customer billing meter or a consumer's gas storage container

As per **AS/NZS5601.1**, clause 6.11.1, this gas appliance must be **commissioned** by a suitably authorized person who;

- (a) Installed the appliance when gas is available at the time of installation; or
- (b) Makes gas available to the appliance if gas was not available at the time of installation

As per **AS/NZS5601.1**, clause 6.11.3, the commissioning of this appliance shall take **full account of special design features, the manufacturer's instructions and the appliance safety requirements.**

As per **AS/NZS5601.1**, clause 6.11.4, the commission of this appliance shall include all of the following;

- (a) **Testing and purging** of the appliance and installation as appropriate.
- (b) Checks to ensure the appliance is in **safe working order.**
- (c) Ignition of each **burner** of the appliance and where necessary adjustment, in accordance with the **manufacturer's instructions.**
- (d) Testing of **flue** performance.
- (e) Testing of all **safety devices** for correct operation.
- (f) **Instruction** of the consumer, where available, on the safe and correct operation of the appliance and any auxiliary equipment.
- (g) Handing of the appliance **operating instructions** to the consumer, or if the consumer is not present, leaving the instructions in a suitable location on the premises.

## Installation Instructions

### **Regulations**

This appliance shall be installed only by authorized persons and in accordance with the manufacturer's installation instructions, local gas fitting regulations, municipal building codes, AS 5601 – Gas Installations and any other statutory regulations.

## **Data Label**

The data label is located on the top left-hand side of the front panel or on the inside of the door. Please ensure that the gas supply matches the data label

## **Ventilation**

Ventilation must be in accordance with AS5601 - Gas Installations. In general, the appliance should have adequate ventilation for complete combustion of gas, proper flueing and to maintain temperature of immediate surroundings within safe limits. It is **strongly** recommended that this appliance is installed under an extraction hood.

The appliance shall be installed with an exhaust system comprising a hood and duct system. The hood shall be made of a material which is impervious to fat, grease and vapour. It shall be constructed so it can be readily and efficiently cleaned. Its inside faces shall be smooth and free of obstructions and all joints shall be grease tight.

The hood shall be located so as to effectively ventilate the steamer and shall extend at least 150 mm beyond the perimeter of the steamer. The exhaust duct system shall be adequately sized and shall not get connected to any other ventilating or exhaust system.

As suitable grease trap shall be provided to prevent grease vapour entering the exhaust system and shall be located to avoid constituting a fire hazard and be readily accessible for regular cleaning.

Unless adequately protected a hood and a duct shall be fitted at least 450 mm from any combustible material and so that the lower edge of the grease filter is no less than 1.1 meters above the cooking surface.

## **Combustible Surfaces**

Clearances to combustible surfaces must be in accordance with AS/NZS 5601.1 - *Gas Installations, clause 5.12.4.5*. Install on a flat, solid, fire proof base.

Leave at least 200mm between the appliance and the side and rear walls.

The Steamer shall be installed so that a clear space of 200mm is maintained between the sides of the steamer and any other appliance.

No combustible material shall be located within 200mm of the steamer.

## **Gas Connection**

The gas connection is male 3/4" BSP and is situated at the front of the appliance below the main body frame. It is situated 210mm from the left-hand side of the appliance, 670mm from the rear of the appliance and approximately 145mm from the floor. The appliance can be connected with rigid pipe as specified in AS5601. For fixed installation models we recommend connection with 20mm copper tube and an Australian certified isolating valve.

**BEFORE CONNECTING NEW PIPE TO THIS APPLIANCE, THE PIPE MUST BE BLOWN OUT THOROUGHLY TO REMOVE ALL FOREIGN MATERIAL. FOREIGN MATERIAL IN THE BURNER AND GAS CONTROLS WILL CAUSE IMPROPER AND DANGEROUS OPERATION.**

## **Water and Drainage Connection**

The water inlet and water drains can be routed through the base of the unit. Water isolation valves are fitted to all water inlets. Ensure water is flushed through before final connection.

Water waste outlet is located on the left-hand side of the waste gutter of the appliance. The water inlets and water drains should be connected with rigid copper pipes. **We strongly advise against the usage of plastic/PVC piping for connection of waste outlet.**

**We advise that the unit must be connected along with a water filtration system to ensure optimum performance of the unit and failure to do so may void the B&S warranty.**

## Pressure Test Point

The pressure test point is located on the regulator. The test point pressure should be adjusted to 1.00 kPa for Natural Gas or 2.60 kPa for Propane Gas with the burners operating at maximum.

## **Before Leaving**

Check **all** connections for gas leaks with soap and water. **Do not** use a naked flame for detecting leaks. Ignite the pilot and main burners ensure correct operation of gas valves, burners and ignition. When satisfied with the operation of the appliance, please instruct the user on the correct method of operation.

In case appliance fails to operate correctly after all checks have been carried out, please contact;

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## **Operating Instructions**

1. Turn on the ventilation system of the room to ensure adequate ventilation.
2. Make sure all other switches are off before turning on the gas supply.
3. Make sure water supply and power supply are normal.
4. To switch on the pilot, turn the black knob anti-clockwise to the flame position as indicated on the knob decal. Then press the black safety switch to allow gas supply to the pilot burner. Whilst holding down the safety switch, open the door located beneath the safety switch, on the control panel to access the electronic ignitor. Hold down both the safety switch and the switch located in the centre of the opening to ignite the pilot. Hold down both the safety switch and ignition until the pilot burns well (this can be observed by looking through the opening, beneath the tank when the control panel door is opened).
5. Make sure pilot burns well and then switch on the burners by rotating the relevant ball valve anti-clockwise to the "ON" position as indicated. The left Ball Valve operates the left-hand-side burner whilst the right Ball Valve operates the two right hand-side burners.
6. If the burner extinguishes, wait at least 5 minutes to relight and repeat from step 2 to step 5.
7. Use the red knobs located on the right hand-side of the appliance (next to the deck steamer doors) to control the amount of steam that is emitted into each compartment/level of the unit.
8. Stop the appliance and inform authorized personnel to conduct service if there is gas leakage or abnormal combustion.

**Note:** There are **two** gas control valves provided to operate **three burners**. The valve on the left controls one burner on the left and the valve on the right controls 2 burners. To control the pilot flame, gas cock with knob is provided.

The red knobs adjacent to the steam compartments are provided to control the flow of steam into each compartment. When the knob is pulled outwards, valve is closed and no steam flows into the adjacent deck while if the knob is pushed in completely, valve is open which allows maximum flow of steam.

## **WARNING!**



- **DO NOT** spray aerosols in the vicinity of this appliance while it is in operation.
- **DO NOT** store or use flammable liquids or items in the vicinity of this appliance.
- Prior to lighting, smell area surrounding the appliance for gas (please note that as some gas types are heavier than air, we recommended the operator to also smell the floor around the appliance).
- In the event you smell gas: **DO NOT** light any appliance. **DO NOT** touch/ operate any electrical switch or phone in your building. Call local gas supplier **immediately** and follow their instructions.



## Warning!

**ENSURE WATER TANK DRAIN VALVE IS FULLY CLOSED AND WATER TANK DRAIN VALVE IS ACCESSED BY TURNING GATE VALVE HANDLE CLOCKWISE (LOCATED UNDERNEATH THE RIGHT-HAND SIDE OF THE APPLIANCE) BELOW MAIN WATER TANK.**

### Shutdown Procedure

1. Turn main gas valve to 'OFF'.
2. Turn pilot control valve clockwise to turn off.
3. Observe pilot flame is extinguished.

## Warning!

**WHEN OPENING DOORS FROM STEAMING AREAS, ALWAYS ENSURE MAIN STEAM CONTROL IS PULLED TO THE 'OFF' POSITION. THIS IS TO ENSURE THAT THE FLOW OF STEAM IS MINIMISED WHILST THE DOORS ARE OPENED. FAILURE TO DO SO MAY RESULT IN PERSONAL INJURY.**

### Maintenance Schedule

#### **Daily Checks & Service**

- Look for any foreign materials in burner area, leaks, damaged knobs and any other signs that the steamer is not ready and safe for operation.
- Inspect burner area and ensure pilot is in position near the burner, and that the pilot flame when ignited is blue in color and approximately 10-20mm in length. Ensure pilot flame is in contact with thermocouple. Call the manufacturer if you see any problems. Always ensure that area surrounding pilot and thermocouple is clear of any fats, oils or foodstuffs.
- Clean the exterior surfaces of the steamer with a clean, damp cloth soaked with mild detergent to remove any food stuffs, oils, dust and any other materials.
- Ensure the primary water drain and steam outlet are cleared of any food stuffs.

#### **Weekly Checks & Service**

- Ensure water tank is emptied on a weekly basis. Water tank drain valve is accessed from underneath the appliance and turning gate valve handle anti-clockwise (located on the right hand side below main water tank). Turn drain valve clockwise to stop.
- Inspect burner area and ensure pilot is in position near the burner, and that the pilot flame when ignited is blue in color and approximately 10-20mm in length. Ensure pilot flame is in contact with thermocouple. Call the manufacturer if you see any problems. Always ensure that area surrounding pilot and thermocouple is clear of any fats, oils or foodstuffs.
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#### **Yearly Periodic Checks & Service**

- **The appliance should be inspected and adjusted periodically by a qualified service person as part of any kitchen maintenance program. B&S recommends that this appliance is inspected at least annually by an authorized service technician as follows:**
- Inspect the table inside-out for excessive build-up of any fats, oils and foodstuffs.
- Inspect that the burners and other components (i.e. pilots, thermocouples, etc.) are in good condition and functioning properly.
- Inspect all gas connections for leaks and ensure all connections are tightened properly.
- Ensure burner pressure is in accordance with that specified on the data plate of the appliance.

In case appliance fails to operate correctly after all checks have been carried out, please contact;

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# **SERVICING INSTRUCTIONS**



## **WARNING!**

- Servicing shall be carried out by authorized personnel **only**. Failure to do so will void the B&S warranty and may result in damage to equipment or injury to personnel.
- Before commencing any disassembly/ assembly of gas controls, please ensure the gas supply is turned off (isolated).

**FAILURE TO DO SO WILL VOID B&S WARRANTY AND MAY RESULT IN DAMAGE TO EQUIPMENT OR INJURY TO PERSONNEL.**

### **Abnormal Operation**

Any of the following are considered to be abnormal operation and may require servicing; □

Incomplete ignition of burner.

- Yellow tipping of the burner flame.
- Burner failing to keep alight.
- Gas valves which are difficult to turn.

### **Gaining Access to Gas System**

To gain access to gas system/components;

- Remove the knob by slightly pulling them out
- Remove the handles of the gas valve and drain valves by undoing the screw at the centre.
- Undo the screws at the four corners of the front panel and slowly pull the panel outwards.
- Reassemble the panel in the reverse order.

### **Removal of Burner for Service**

Follow procedure described under GAINING ACCESS TO GAS SYSTEM

- Remove burner by undoing bolt assembly located on the burner support bracket.
- Gently lift burner upwards slightly and pull burner outwards.
- REASSEMBLE IN REVERSE ORDER.

### **Pilot and Flame Safeguard**

- Access to the D3 unit pilot assembly is gained by removing the front control panel and then removing the D3 support bracket.
- To service/remove the thermocouple;
  1. Undo the nut located on the thermocouple at the pilot assembly and gently pull thermocouple outwards.
  2. Remove thermocouple from flame failure valve by unscrewing.
  3. Reassemble in reverse order.
- To service/remove pilot burner;
  1. Undo the nut located at the pilot injector to remove the injector and gas hose from the injector support bracket.
  2. Undo the brackets at the rear of the pilot where the ignitor and thermocouple are attached.
  3. Gently pull out pilot flexible gas tube.
  4. Remove injector from pilot and clean (if required).
  5. Reassemble in reverse order.

### **Over-Temperature Cut-Out Device on D3 Unit**

To service/remove over-temperature cut-out device;

1. Remove front panel as described under GAINING ACCESS TO GAS CONTROLS.
2. Remove the screws at the corners of the electrical control panel.
3. Detach the wires

4. Reassemble in reverse order.

### **Water Supply Tank**

- Turn off water supply valve to the appliance.
- Empty water tanks as described in the appliance operating instructions.
- To service the water feed tank;
  1. Open the bottom deck door to gain access to the top of the feed tank.
  2. Remove the wing nut located on the top of the feed tank cover.
  3. Reassemble in reverse order.

To service/remove main water tank, please contact the manufacturer:

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### **Adjustments**

- **Pilot**
  1. Remove front panel as described under GAINING ACCESS TO GAS CONTROLS.
  2. To increase gas pressure to pilot, turn adjustment screw located at the top right hand side of the flame failure device anti-clockwise.
  3. To decrease gas pressure to pilot, turn adjustment screw located at the top right hand side of the flame failure device clockwise.
  4. REASSEMBLE IN REVERSE ORDER.
- **Aeration**

Aeration to burner is fixed and cannot be adjusted.
- **Ignition**
  1. Spark gap is fixed at 8mm from the top of the ignition electrode rod to the head of the pilot.
  2. Should adjustment be required, follow steps outlined under IGNITION SYSTEM in these servicing instructions.

**Table 3: Troubleshooting**

Fault	Possible Cause	Checks
Pilot light not igniting	Spark ignition faulty	Check ignition systems as described under servicing instructions - adjustments
	Blockage of Pilot	Check pilot injector is not blocked as described in servicing instructions - pilot and flame safeguard
	Adjustment of pressure from flame failure control	Check gas pressure to pilot as described under servicing instructions - adjustments
Pilot light not establishing	Positioning of thermocouple	Adjust positioning of thermocouple to ensure pilot flame is hitting thermocouple
	Faulty thermocouple	Contact manufacturer
	Faulty flame failure control valve	Contact manufacturer
Pilot established, burner not lighting	Faulty ball valve	Contact manufacturer
	Faulty flame failure control valve	Contact manufacturer
Burner turning off	Activation of over-temperature control valve	Ensure water tank is full, undo protective cover for over-temperature cut-out devise and press red button to reset

In case of difficulties or for spare parts, please contact:

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## STANDARD WARRANTY CONDITIONS

B+S Commercial Kitchens Pty Ltd of 57 Plateau Road, Reservoir, Victoria (hereinafter called 'B+S') undertakes by this warranty, that B+S or its agent will pay for the cost of labour and parts which B+S or its agent find defective for:

K+ Range - fifteen (15) months from date of installation.

B+S Black Range - eighteen (18) months from date of installation.

Verro Range - twenty four (24) months from date of installation.

The liability of B+S under this warranty is limited to the repair or replacement of defective goods or components. All other costs including, without limitation, cartage, carriage and installation shall be borne by the purchaser.

**Warranty labour is supplied free of charge during business hours (8 a.m. to 4 p.m. AEDST) Monday to Friday. Should warranty work be requested outside of our normal working hours, a labour charge will be applied equivalent to a normal hour rate, with out of hours penalty rates. Penalty rates amount must be borne by the purchaser. Claims for non-covered parts, no faults found, travel over 100km or other items outside our standard terms and conditions will be chargeable.**

1. This warranty applies only for mainland Australia and Tasmania, and does not cover any service consequent upon accident, alterations, misuse, fire, flood or act of God.
2. This warranty is valid only if the appliance has been installed in accordance with local regulations by a duly authorised person, and the B+S installation instructions provided with the appliance. If in doubt, please contact B+S or their representative for further information. No responsibility will be accepted for defects or damages by improper installation, for changes to the product not authorised by B+S or for the operation outside the technical specifications of the appliance.
3. This warranty is conditional upon the appliance being used in normal commercial catering operations.
4. This warranty is the only express warranty given by the Company. No person has authority to change or to add to these obligations and liabilities.
5. The Company has the right to determine whether or not a fault is caused by faulty workmanship or material or that any part is defective.
6. This warranty does not apply to any loss suffered through or resulting from the non-operation or the ineffective operation of the cooking appliance or any part of the cooking appliance.
7. This warranty does not extend to goods and components thereof manufactured either entirely or substantially of glass or similar substances, light globes, infrared or quartz tubes and electrical controls or elements.
8. While the goods are in custody of the seller for investigation or repair, they shall be at the risk of the purchaser and no liability shall attach to the Company, its servants or agents for any damage occasioned to, or loan of, the goods whatsoever.

**The Purchaser must give notice to the Company immediately upon it becoming aware of the alleged defect and in any event before the expiration of the appropriate warranty period.**

**B+S will endeavor to have a service technician on site for all warranty service requests within a 24 hour period or by end of next business day at the latest. All warranty requests must be in writing by either lodging a warranty request through B+S website or by emailing [clientservices@bscommercialkitchens.com](mailto:clientservices@bscommercialkitchens.com). Details of installer such as contact name, business name, telephone number and license number must be provided to avoid any delays.**

9. Nothing in this warranty, however, shall be construed as affecting any rights you may have under the Trades Practices Act or any other Commonwealth or State Legislation which gives you rights which cannot be modified or excluded by agreement.

### 10. SPECIAL PROVISIONS

- Cleaning of spark and ignition sensors is not covered by warranty. Damage caused by oils, water and foodstuffs falling into burner area will not be covered under warranty.
- Cleaning of burners due to blockage of burner orifices caused by foodstuffs and/or oils is not covered by warranty.
- Breakage of pilot knobs, knee valve handles and knee wands are not covered under warranty.
- Thermocouples, piezo leads and ignitors are only covered by twelve (12) months parts and labour across K+, B+S Black and Verro ranges.

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