



PRODUCT DOCUMENT PACK

Prepared and distributed by KW Commercial Kitchen

PRODUCT

B+S TF-451 Single Pan Turbo Fryer

Model / SKU: TF-451

KW COMMERCIAL KITCHEN

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INSTALLATION, OPERATING AND SERVICING INSTRUCTION MANUAL



TF SERIES TURBO FRYER AND RF SERIES RAPID FRYER

Model No's.: RF-400/KTF-451/KTF-452/KTF-453/TF-451/TF-452/TF-453/TF-454 /TF-601 /
TF-602 / TF-603 / TF-604/RF-1/RF-2/RF-3/RF-4

Approval No: GMK 10683

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

The reproduction on or copying of any part of this booklet via any means is strictly forbidden unless agreed to in writing by the manufacturer.

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.

Table of Contents

Installation, operating and servicing instruction manual	i
TF Series Turbo Fryer and RF series Rapid Fryer	i
Product Specifications & Introduction	4
IMPORTANT WARNINGS	5
TABLE 1: Nominal Terminal Input Rates & Injector Sizes (per pan)5	
TABLE 2: Standard Model General Information	6
FIGURE 1: Plumbing Connections-K plus TF-451	7
TABLE 3: Plumbing Connections	7
FIGURE 2: Plumbing Connections: Verro TF-451/Black TF 451	7
TABLE 4: Plumbing Connections	8
FIGURE 3: Plumbing Connections: Verro TF-451s	8
TABLE 5: Plumbing Connections	8
TABLE 5: Plumbing Connections	9
Installation Instructions	9
Regulations	10
Data Label	10
Ventilation	10
Combustible Surfaces	10
Gas Connection	11
Pressure test point	11
Burner Adjustment	12
Before Leaving - Commissioning	12
Operating Instructions	12
Figure 2: Thermostat Control	13
Figure 3: Main Gas Control	13
Figure 4: Fryer Range – Knowing your appliance	14
IMPORTANT WARNING!	15
Lighting Instructions	15
Shutdown Procedure	15

Boil Out Procedure	15
Maintenance and Care	15
Servicing Instructions	16
Abnormal Operation	16
Panel Removing	17
Controls	17
Thermostat.....	17
Pilot Assembly	17
Piezo Assembly	17
Burners	18
Gas Valve	18
TABLE 4: Troubleshooting	18
STANDARD WARRANTY CONDITIONS	19

PRODUCT SPECIFICATIONS & INTRODUCTION

Appliance Name: TF Series Turbo Fryer and RF series Rapid fryer
Unit is also marketed under the brand name B+S Black ,Verro and K plus

Manufactured By: Certificate Holder:	B&S Commercial Kitchens Pty Ltd 57 Plateau Road Reservoir Victoria 3073 Tel; + 61 3 9469 4754 Fax: +61 3 9469 4504 E-mail; info@bscommercialkitchens.com
Model Number/s:	Supplied in various configurations. How to read model numbers; <u>(V)(K)TF</u> – <u>45/60</u> – <u>1/2/3/4</u> – <u>P-s</u> ① ② ③ ④⑤ ① TF – Turbo Fryer ② No of rectangular baskets per pan 40 - 400mm per appliance width (2 baskets per pan) 45 – 450mm per appliance width (2 baskets per pan) 60 – 600mm per appliance width (3 baskets per pan) ③ Number of fryer pans per unit 1 – one pan 2 – two pan 3 – three pan 4 – four pan ④ P- Plinth mounted (VTF-601 and VTF-451s only) ⑤ s- split pan (VTF-451s) K indicates K plus model V at the beginning indicates Verro model RF indicates Rapid fryer RF 400 mean Rapid fryer 400mm wide E.G. TF-453 Is a fryer with three separate pans each holding up to two rectangular baskets per pan
Approval	GMK 10683

We are confident that you will be delighted with your B&S Turbo Fryer, 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 carefully follow the instructions given. Ensure that this booklet is kept in a safe and prominent location for future reference.
2. Should you be unsure 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



IMPORTANT WARNINGS

THIS APPLIANCE SHALL ONLY BE INSTALLED/SERVICED BY AN AUTHORISED INSTALLER.

THIS APPLIANCE MUST BE INSTALLED IN ACCORDANCE WITH THE SPECIFIED INSTRUCTIONS OUTLINED BY THE MANUFACTURER.

IMPROPER INSTALLATION OR OPERATION OF THIS APPLIANCE MAY RESULT IN PRODUCT FAILURE WHICH MAY LEAD TO PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

CAUTION MUST BE TAKEN WHEN OPERATING THIS APPLIANCE TO MINIMISE RISK OF FIRE. THE APPLIANCE **MUST NOT** BE LEFT ON

UNATTENDED.

REGULAR INSPECTIONS BY AN AUTHORISED SERVICE PERSON ARE STRONGLY RECOMMENDED TO ENSURE PROPER AND SAFE FUNCTIONING OF THIS APPLIANCE.

AFTER ANY SERVICING OR ADJUSTING OF GAS CONNECTED COMPONENTRY, GAS LEAK TEST MUST BE CARRIED OUT TO ENSURE THERE ARE NO GAS LEAKING HAZARDS.

NEVER STORE ANY FLAMMABLE LIQUIDS/VAPOURS IN THE VACINITY OF THIS APPLIANCE. NEVER SPRAY AEROSOLS IN THE VICINITY OF THIS APPLIANCE WHILE IT IS IN OPERATION.

ENSURE ANY TRANSIENT PROTECTION IS REMOVED BEFORE INSTALLING THE APPLIANCE ENSURING ANY POSSIBLE DAMAGE TO THE APPLIANCE OR COMPONENTS/PARTS THAT MAY HAVE BEEN SUSTAINED DURING TRANSPORTATION IS REPORTED TO THE MANUFACTURER.

THIS APPLIANCE IS NOT INTENDED TO BE USED IN A MARINE ENVIRONMENT.

ENSURE APPLIANCE IS INSTALLED IN A STABLE POSITION.

FAILURE TO FOLLOW THE INFORMATION PROVIDED IN THIS BOOKLET WILL VOID THE B&S WARRANTY AND MAY RESULT IN DAMAGE TO EQUIPMENT OR INJURY TO PERSONNEL

TABLE 1: NOMINAL TERMINAL INPUT RATES & INJECTOR SIZES (PER PAN)

Burner Type	Gas Type	Injector Size (mm)	MJ/h per burner	Test Point Pressure
TF-451	Natural Gas	1.55mm (x9)	86.6	1.00 kPa
	Propane Gas	0.95mm (x9)	86.6	2.60 kPa
TF-451s	Natural Gas	1.50mm (x8)	38	1.00 kPa
	Propane Gas	0.95mm (x8)	39	2.60 kPa
TF-601	Natural Gas	1.75mm (x9)	110	1.00 kPa
	Propane Gas	1.10 mm (x9)	105	2.20 kPa
RF-1	Natural gas	1.80mm(x11)	135	1.00Kpa
	Propane Gas	1.10mm(x11)	135	2.60KPa
RF-400	Natural Gas	1.80mm (x9)	115	1.00Kpa
	Propane Gas	1.10mm (x9)	115	2.60KPa

Please note that the minimum gas inlet pressure should be at least 1.13KPa (Natural Gas) and 2.75KPa (Propane). Gas pressure must be checked when all other equipment on the same line is turned ON high.

TF 451s is the 450 wide split tank fryer (can be Verro , Black or Kplus) (single pan split into two). It is 39 MJ/h (NG) and 38 MJ/h (LPG) per pan. When both the burner system in both section of the pan is used, total consumption would be 76MJ/h (NG) and 78MJ/h (LPG)

The rapid fryer unit (RF) is available with 1,2,3 and 4 pans according to the customer requirements

TABLE 2: STANDARD MODEL GENERAL INFORMATION

	Weight (kg)	Overall Height (mm)	Overall Depth* (mm)	Overall Width* (mm)
RF-400	100	1130	800	400
TF-451	100	1,130	800	450
TF-452	200	1,130	800	900
TF-453	300	1,130	800	1,350
TF-454	400	1,130	800	1,800
TF-601	120	1,130	800	600
TF-602	240	1,130	800	1,200
TF-603	360	1,130	800	1,800
TF-604	480	1,130	800	2,400

Unit	Length(mm)	Depth(mm)	Height(mm)
RF-1	625	970	1300
RF-2	1250	970	1300
RF-3	1875	970	1300
RF-4	2500	970	1300

*Denotes minimum all dimensions +/- 5mm tolerance

For Verro Units Overall height would be 1030mm

Overall Dimensions – Custom made appliances

Height overall splash back	1030mm - 1,130mm(including adjustable legs)
Width	1,800mm minimum with 4 pans (450mm wide pans)
	2400mm minimum with 4 pans (600mm wide pan)
Depth	800mm minimum

FIGURE 1: PLUMBING CONNECTIONS-K PLUS TF-451

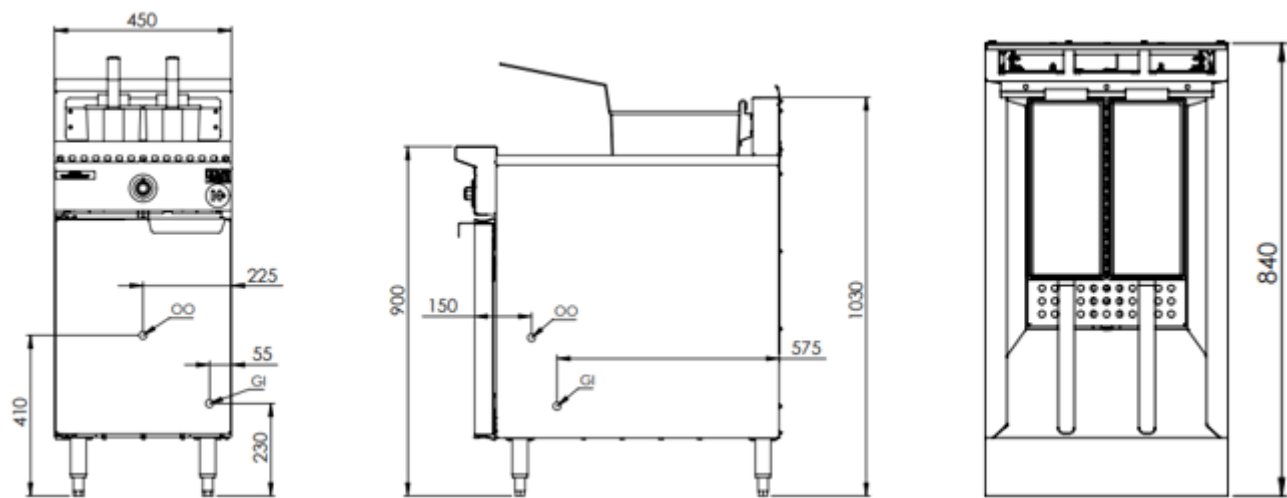


TABLE 3: PLUMBING CONNECTIONS

	Connection	Position from Floor (mm)	Position from Rear of Appliance (mm)	Position from LHS/RHS edge of Appliance (mm)
Gas Inlet (GI)	3/4" male BSP	230 (+/-5)	575(+/-5)	57 (+/-5) RHS
Oil drain valve	1 1/4" Ball valve	410(+/-5)	640(+/-5)	225(+/-5) RHS

FIGURE 2: PLUMBING CONNECTIONS: VERRA TF-451/BLACK TF 451

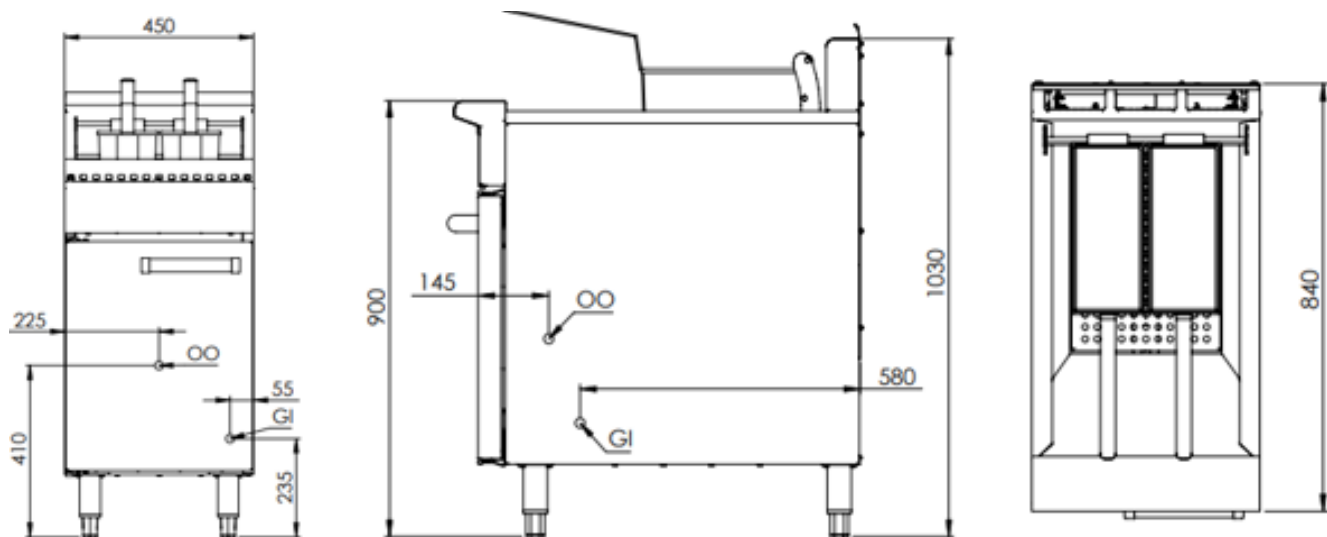


TABLE 4: PLUMBING CONNECTIONS

	Connection	Position from Floor (mm)	Position from Rear of Appliance (mm)	Position from LHS/RHS edge of Appliance (mm)
Gas Inlet (GI)	¾" male BSP	235 (+/-5)	580(+/-5)	55 (+/-5) RHS
Oil drain valve(OO)	1 ¼" Ball valve	410(+/-5)	620(+/-5)	225(+/-5) RHS

FIGURE 3: PLUMBING CONNECTIONS: VERR0 TF-451s

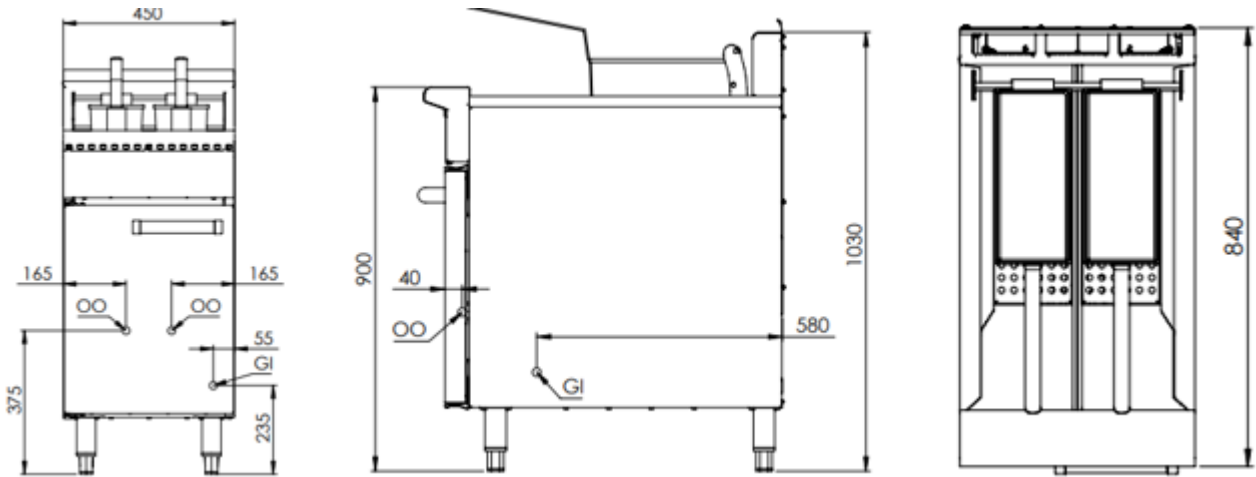


TABLE 5: PLUMBING CONNECTIONS

	Connection	Position from Floor (mm)	Position from Rear of Appliance (mm)	Position from LHS/RHS edge of Appliance (mm)
Gas Inlet (GI)	¾" male BSP	235 (+/-5)	580(+/-5)	60 (+/-5) RHS
Oil drain valve(OO)	1 ¼" Ball valve	375(+/-5)	540(+/-5)	165(+/-5) RHS
Oil drain valve(OO)	1 ¼" Ball valve	375(+/-5)	540(+/-5)	165(+/-5) LHS

VTF 451s is the Verro 450 wide split tank fryer (single pan split into two). It is 39 MJ/h (NG) and 38 MJ/h (LPG) per half section of the pan.

KTF 451s is the K plus 450 wide split tank fryer (single pan split into two). It is **39** MJ/h (NG) and **38** MJ/h (LPG) per half section of the pan.

FIGURE 4: PLUMBING CONNECTIONS: RF-1/2/3/4

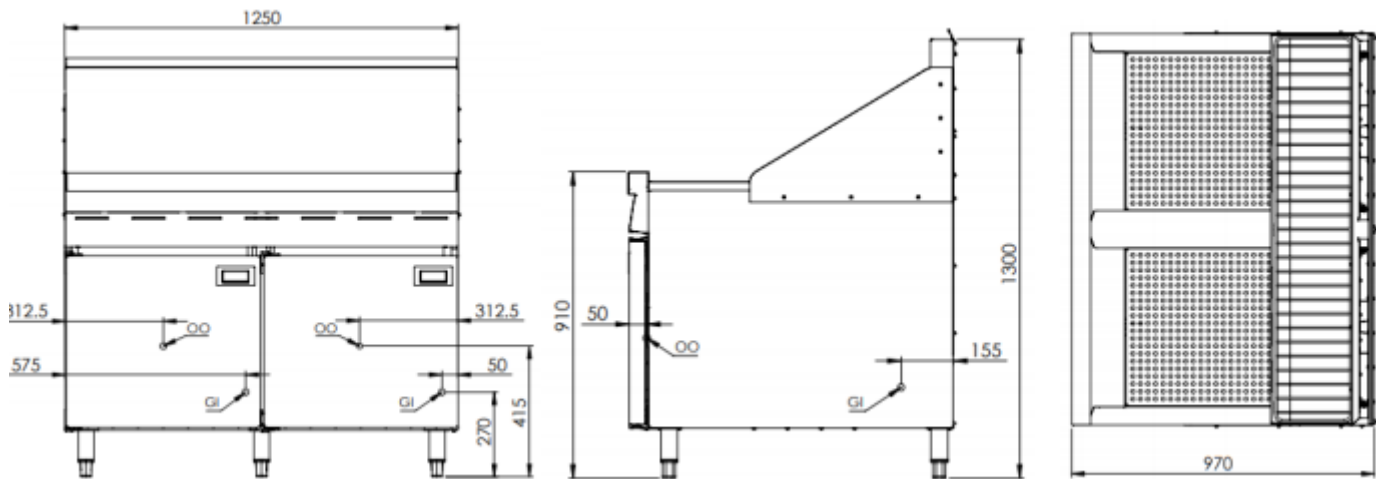
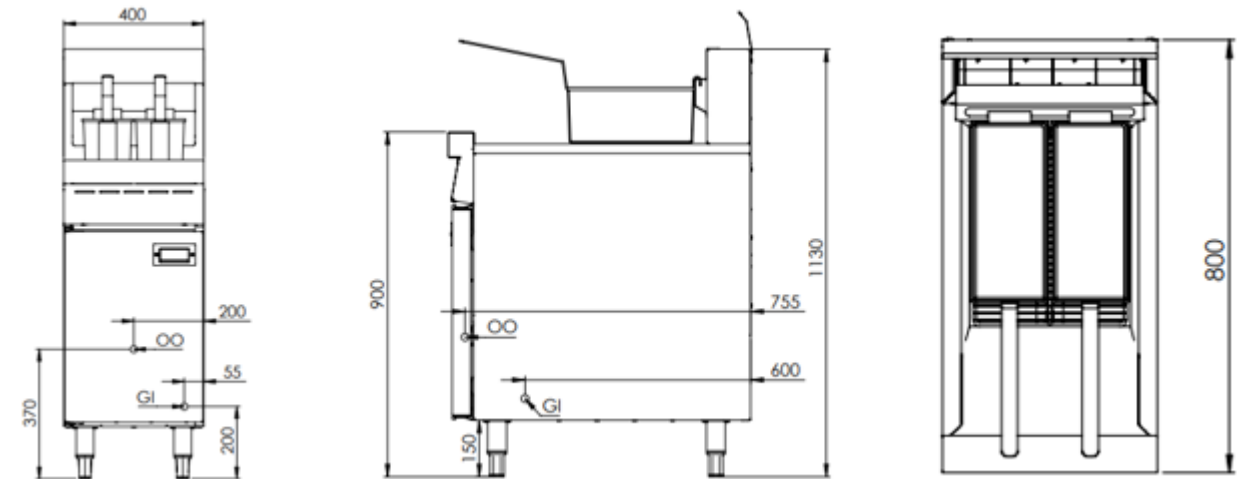


TABLE 5: PLUMBING CONNECTIONS

	Connection	Position from Floor (mm)	Position from Rear of Appliance (mm)	Position from LHS/RHS edge of Appliance (mm)
Gas Inlet (GI)	3/4" male BSP	270 (+/-5)	156(+/-5)	50 (+/-5) RHS
Oil drain valve(D1)	1 1/4" Ball valve	415(+/-5)	920(+/-5)	315(+/-5) LHS
Oil drain valve(D2)	1 1/4" Ball valve	415(+/-5)	920(+/-5)	315(+/-5) RHS

FIGURE 4: PLUMBING CONNECTIONS: RF-400



INSTALLATION INSTRUCTIONS

REGULATIONS

The appliance **must** be installed only by authorised person and in accordance with the manufacturer’s installation instructions, local gas fitting regulations, municipal building codes, AS 5601 – Gas Installations and any other local authority, gas, electrical any other statutory regulations.

DATA LABEL

The data label is located on the internal panel of the door which will be visible on your left once you open the door. This appliance is suitable for Natural Gas and Propane Gas. Please ensure that the gas supply matches the Data Label ensuring that the gas supply is correct for the appliance being installed and that adequate supply pressure and volume is available – refer to appliance data plate for MJ/h consumption, injector sizes of main burners/pilots, etc.

VENTILATION

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

(please refer to AS/NZS 5601 clause 6.10.2.2 to verify clearances for ventilation.)

B&S units can be installed in a domestic environment provided the installation is strictly in accordance with the manufacturer’s instructions and as per the AS/NZS5601.1 (please refer to the latest version when released). The installation of the unit must comply with clauses 6.2.4, 6.10.2 and 6.10.1.15 and an exhaust system shall be installed according to AS1668.1 and AS1668.2 interlocked to the gas supply. B&S shall not be responsible for any unauthorized and/or non-compliant installations and will void the warranty.

COMBUSTIBLE SURFACES

Ensure appliance is installed on a flat, solid, non-combustible floor.

At least 150mm clearance must be provided from all combustible materials around all areas of the appliance, also minimum clearance of 600mm from top of fryer to the ceiling or any combustible surface/grease filters above the appliance working area, unless a flue extractor canopy is installed. (for Turbo Fryers) (refer AS 5601 latest version for updates and more details)

If the unit is on plinth, it is ideal to give a clearance of 150mm from non combustible surfaces.

Rapid fryer unit must be given at least 50mm clearance from non-combustible surface at the rear and 350mm from combustible surface

Please refer to table 6.9 and 6.10 in AS5601.1. clause 6.1.2.2 and 6.10.2.3. table6.10 is given below.

TF and RF Series	10	B&S Commercial Kitchens
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MINIMUM CLEARANCE AROUND COOKING SURFACE AREA

The clearance to combustible surfaces from commercial catering equipment shall be as specified in the appliance manufacturer’s instructions and shall not be less than the clearance specified in the table below.

	Cooking surface area	Minimum clearance in mm
A	Above the cooking surface of a gas appliance	600
B	Subject to C from a cooking surface area having an open flame cooking appliance and no means of preventing cooking vessels from overhanging the edge of the gas appliance	250
C	From the side of a cooking appliance where the combustible surface is at least 100mm below a cooking surface area	50
D	From a gas appliance flue way or rear of the gas appliance with a splashback	50
E	From the rear or side of a gas appliance which is not an open flame gas cooking appliance	50

Notes:

1. The cooking surface area is defined as being that part of the gas appliance where cooking normally takes place and does not include those parts of the gas appliance containing control knobs.
2. These clearances do not apply where an adjacent surface is of a non-combustible material or is combustible but protected with a fire-resistant material. The fire-resistant material may be covered by ceramic tiles or stainless steel to meet appropriate requirements relating to health protection.
3. Care should be taken where a combustible surface is covered by a non-combustible material for example, covering a combustible surface with stainless steel will not prevent heat transfer, and in some circumstances hazardous situation could arise.

GAS CONNECTION

Unpack the appliance and remove any protective coating.

Place the appliance into its installed position and adjust the legs to the right height and stability.
The inlet is ¾” galvanized elbow. The gas inlet to the appliance is 570 mm from the rear, 50 mm from the RHS (when viewed from front) and 220 mm from the floor. For models fitted with wheels/castors an Australian certified stainless steel braided flexible hose of adequate internal diameter must be used. The fitting of the hose must comply with the relevant sections of gas installation code AS/NZS 5601. A restraining chain or wire must be fitted. We recommend a maximum length of 1.5 m for the flexible hose. Wheels or castors are fixed only on the rear support of the unit and the front of the unit is supported with 2 legs. An Australian certified isolating ball valve must also be fitted.

It is recommended to install an approved isolating gas valve to the main line to facilitate servicing the appliance.
This appliance is for fixed installations only.

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.

Connect to gas.
PRESSURE TEST POINT

All appliances that are dispatched from our factory are tested and adjusted according to the specifications for the required gas type. The pressure test point is located at the gas control on a frontal position to facilitate servicing operation. Check the burner pressure. The test point pressure should be adjusted to the nominal pressure depending on the fuel as specified in the data plate –with the burners operating at maximum.

The gas regulator is integrated in the gas control valve. For Propane gas, a special conversion kit is supplied. It is to be fitted to the SIT gas control valve (model 820).

BURNER ADJUSTMENT

The burner does not require any adjustments

Note: If any problems are experienced in maintaining the fryer burners, your local service agent should be contacted.

BEFORE LEAVING - COMMISSIONING

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 as prescribed below to 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. Ensure that this instruction manual is left with owner of the appliance.

- A.** Set thermostat to lowest setting.
- B.** Turn gas valve knob such that indicator knob points to "OFF" (solid circle) position and allow 5 minutes for any gas in combustion chamber to escape (propane gas being heavier than air, may require forced ventilation). **Note:** If knob is in "ON" (flame) position, turn clockwise to "PILOT" (spark) position. Then depress knob and turn to "OFF" position.
- C.** Turn gas valve knob clockwise so indicator points to "PILOT" position.
- D.** Then light the pilot using the piezo while depressing the gas valve knob.
- E.** Keep knob fully depressed for thirty seconds.
- F.** Release gas valve knob. Pilot flame should continue to burn. Observe pilot is established. If pilot goes out when knob is released, repeat steps **A.** to **F.** allowing more time for thermocouple or pilot generator to heat up.
- G.** When pilot stays alight, operation of gas valve may be given over to thermostat by turning gas valve knob counter clock-wise so indicator points to "ON" position (flame).
- H.** Set thermostat to desired temperature.

In the event the appliance fails to operate correctly, check the following;

1. Data plate to ensure correct gas type and pressure (adjust if necessary).
2. Injector sizes – check against data plate and installation manual.
3. View pilot size and adjust if required.

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

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OPERATING INSTRUCTIONS

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 the area surrounding the appliance for gas (please note that as some gas types are heavier than air, we recommend 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 the local gas supplier **immediately** and follow their instructions

FIGURE 2: THERMOSTAT CONTROL

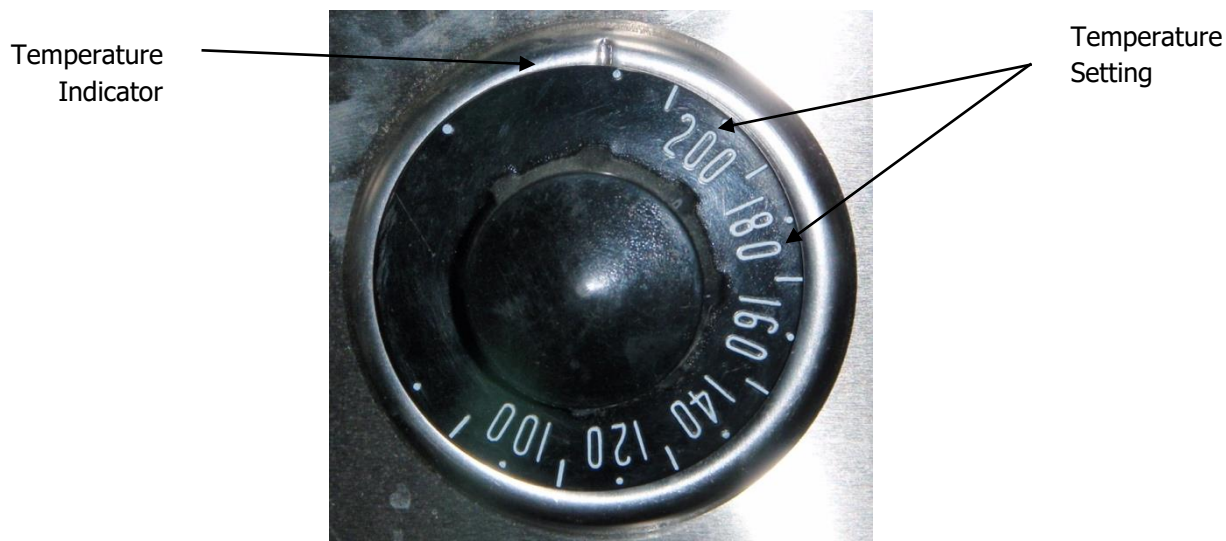


FIGURE 3: MAIN GAS CONTROL

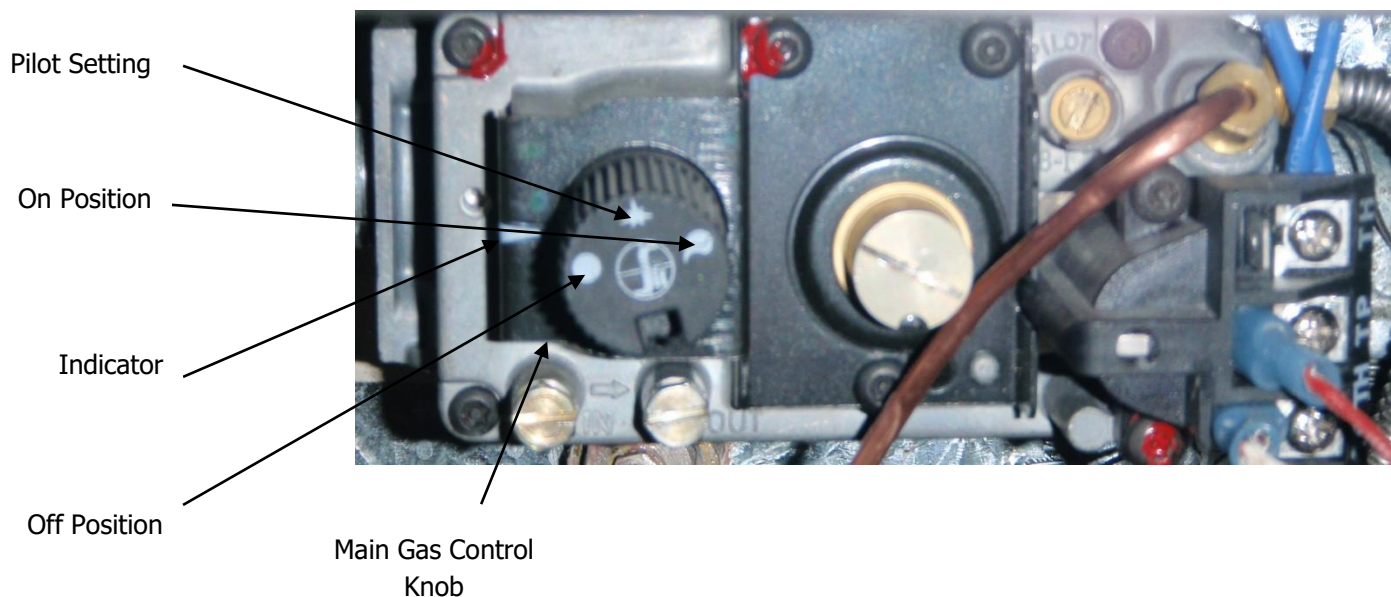
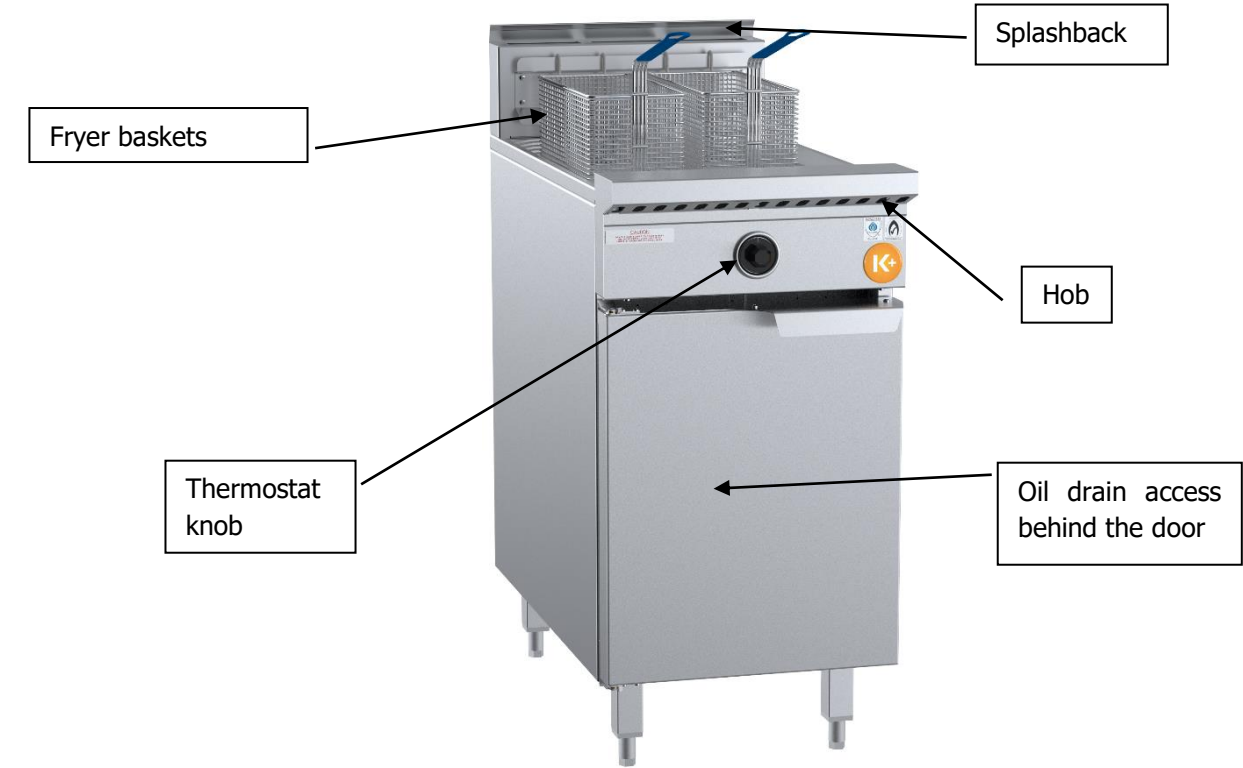


FIGURE 4: FRYER RANGE – KNOWING YOUR APPLIANCE



IMPORTANT WARNING!

ALWAYS ENSURE FRYER PAN HAS OIL IN IT WHEN MAIN BURNERS AND PILOT LIGHT ARE ALIGHT.

To ensure fry pan is clean from any contamination resulting from the appliances manufacture, shipping and installation, the fry pan must be boiled out before first use. The manufacturer also recommends boiling out the fry pan each time the oil or shortening is changed.

NEVER LEAVE THE APPLIANCE UNATTENDED DURING THE BOIL-OUT PROCESS. IF THE BOIL-OUT SOLUTION OVER BOILS, IMMEDIATELY TURN THE FRYER OFF AND LET THE SOLUTION COOL FOR A FEW MINUTES BEFORE RESUMING THE PROCESS.

BEFORE LIGHTING THE FRYER, MAKE SURE THE FRYER IS "OFF" AND THE FRY PAN DRAIN VALVE(S) IS/ARE CLOSED. NEVER ALLOW BURNER TO OPERATE WITH THE FRYER TANK EMPTY. LIGHT ONLY WHEN OIL AT OPERATING OIL MARK LOCATED ON REAR PANEL OF FRYER PAN (WHEN LOOKING INTO FRY PAN STANDING IN FRONT OF THE APPLIANCE).

LIGHTING INSTRUCTIONS

1. Set thermostat to lowest setting.
2. Turn gas valve knob such that indicator knob points to "OFF" (solid circle) position and allow 5 minutes for any gas in combustion chamber to escape (propane gas being heavier than air, may require forced ventilation). **Note:** If knob is in "ON" (flame) position, turn clockwise to "PILOT" (spark) position. Then depress knob and turn to "OFF" position.
3. Turn gas valve knob clockwise so indicator points to "PILOT" position.
4. Then light the pilot using the piezo while depressing the gas valve knob.
5. Keep knob fully depressed for one full minute.
6. Release gas valve knob. Pilot flame should continue to burn. Observe pilot is established. If pilot goes out when knob is released, repeat steps **A.** to **F.** allowing more time for thermocouple or pilot generator to heat up.
7. When pilot stays alight, operation of gas valve may be given over to thermostat by turning gas valve counter clock-wise so indicator points to "ON" position (flame).
8. Set thermostat to desired temperature.

SHUTDOWN PROCEDURE

1. Turn thermostat to lowest setting.
2. Turn gas valve knob such that indicator knob points to "OFF" (solid circle) position and allow 5 minutes for any gas in combustion chamber to escape
3. If knob is in "ON" (flame) position, turn clockwise to "PILOT" (spark) position.
4. Then depress knob and turn to "OFF" position.
5. Observe main burner and pilot have been extinguished.

BOIL OUT PROCEDURE

1. Prior to lighting burner, ensure fryer drain valve is closed.
2. Fill fry pan with a mixture of cold water and dishwashing detergent up to the bottom of the oil level line in the fry pan.
3. Operate the appliance as described in LIGHTING PROCEDURE above.
4. Simmer the solution for approximately one hour and turn off main burner and allow solution to cool.
5. Add approximately 5 liters of cold water into the pan and stir.
6. Open drain valve and drain the solution into a suitable container and then clean the pot thoroughly.
7. Close drain valve and rinse the fryer pan a couple of times by filling the pan with clean water and draining.
8. Dry the pan thoroughly with a clean/dry towel.

MAINTENANCE AND CARE

To ensure longevity and continued performance efficiency of your appliance, a good cleaning and maintenance program is paramount. In general, the use of steel wool, abrasive cloths/cleansers/powders **should not** be used to clean this appliance

DAILY CHECKS & SERVICE

- Look for any foreign materials in burner and fryer pan area, leaks, damaged knobs and any other signs that the unit is not ready and safe for operation.
- Inspect burner area and ensure pilots (if fitted) are in position near the burner, and that the pilot flame when ignited is blue in color and approximately 10-20mm in length.
- If fitted with thermocouple, ensure pilot flame is in contact with it. Call the manufacturer if you see any problems.
- Always ensure that area surrounding pilot and thermocouple (if fitted) is clear of any fats, oils or foodstuffs.
- Clean the outside of the fryer with a clean, damp cloth soaked with mild detergent to remove any food stuffs, oils, dust and any other materials.
- **NEVER ATTEMPT TO CLEAN THE FRYER WHILST THE APPLIANCE IS IN OPERATION OR WHEN FILLED WITH HOT OIL/SHORTENING. IF WATER COMES IN CONTACT WITH OIL/SHORTENING HEATED TO COOKING TEMPERATURE, SPATTERING CAN OCCUR, WHICH CAN RESULT IN SEVERE BURNS TO NEARBY PERSONS/OPERATORS.**
- Clean inside the fryer pan with a dry, clean cloth to remove any accumulations of oil and dust.
- Cooking oil/shortening used in your fryer should be filtered at least once a day (more if in constant use)
- Normal usage of your fryer will result in the buildup of carbonized cooking oil will gradually form on the inside of the fryer pan. We strongly advise this deposit is removed to ensure your fryer is operating efficiently.

YEARLY 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 manifold pressure is in accordance with that specified on the data plate of the appliance.
 - Inspect all gas connections for leaks and ensure all connections are tightened properly.
 - Check the calibration of thermostat.

In case of difficulties contact B&S Commercial Kitchen Pty Ltd or their authorized service agent.

SERVICING INSTRUCTIONS



WARNING!

- Servicing shall be carried out by authorised 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 THE 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/Burner failing to keep alight
- Pilot is not holding
 - Check connection of the thermocouple to the control is not loose.

- Check if pilot flame is in contact with thermocouple
- No pilot flame
 - Check main gas valve is in "ON" position.
 - Ensure pilot injector is not blocked
- Gas valves which are difficult to turn

PANEL REMOVING

1. It is not necessary to remove any side or back panels for servicing the unit.
2. To remove the front panel, it will be necessary to pull off the thermostat control knob then undo the two screws holding the panel to the front hob section.

CONTROLS

If gas control fails to operate, check the following;

1. The thermocouple is in the pilot flame. The thermocouple must be hot in order to generate energy to operate an electromagnetic system to lift and maintain open the control valve.
2. To do so, it is necessary to generate approximately 650 milli-volts. If not functioning correctly, the thermocouple should be replaced.
3. Check both main and safety thermostats switching systems. If thermostat is malfunctioning, it should be replaced.

THERMOSTAT

1. Pull thermostat knob off and unscrew thermostat from control panel.
2. Remove control panel.
3. Remove both terminals from the thermostat.
4. Remove thermostat capillary gland and remove thermostat bulb.
5. To fit new thermostat, reverse the above procedures.

PILOT ASSEMBLY

1. Undo the two screws holding the pilot bracket onto the burner mount bar.
2. Gently pull the pilot assembly bracket down and outwards.
3. To change thermopile
 - a. Undo locking screw holding thermopile to pilot assembly bracket and gently pull the thermopile down.
 - b. Undo terminal screws on located on 'TH TP' and 'TP' on main gas valve.
 - c. Replace with new thermopile and assemble in reverse order.
4. To change thermocouple
 - a. Undo locking screw holding thermocouple to pilot assembly bracket and gently pull the thermocouple down.
 - b. Undo thermocouple screw located in the main gas valve.
 - c. Replace with new thermocouple and assemble in reverse order.
5. To change new pilot assembly
 - a. Follow steps 1 and 2
 - b. Undo the two screws on the pilot mounting bracket and pilot bracket
 - c. Follow procedures 3. A. and 4. A. listed above
 - d. Remove piezo lead from piezo
 - e. Undo pilot gas flexible tube
 - f. Change pilot assembly over and reassemble in reverse order

PIEZO ASSEMBLY

1. To change piezo ignitor
 - a. Undo the piezo screw located on the back of the piezo ignitor located on the bottom right hand side of the main gas control
 - b. Gently remove piezo lead from rear of piezo ignitor
 - c. Replace piezo ignitor and replace in reverse order
2. To change piezo lead
 - a. Gently remove piezo lead from rear of piezo ignitor
 - b. Gently remove piezo ignitor lead from pilot assembly

- c. Replace with new lead and assemble in reverse order.

BURNERS

1. To change/service burner (ensure burner is cool to prevent injury to service person)
 - a. Undo the 4 wing nut(s) or screws located on the front and rear burner support channel.
 - b. Gently lift the front section on an angle and pull forwards so that the rear of the burner is removed off the burner injector.
 - c. Allow the rear section of the burner to fall outside the combustion chamber and move backwards so that burner is clear of the combustion area.
 - d. Reassemble in reverse order.

GAS VALVE

1. To remove/change/service main gas valve.
 - a. Undo the bolted clip assembly at the bottom right hand side.
 - b. Undo flexible tube to main gas valve from burner manifold.
 - c. Undo flexible tube from pilot assembly to main gas valve.
 - d. Undo terminals from thermostat on the main gas valve.
 - e. Undo thermocouple leading into main gas valve
 - f. Remove piezo igniter as described under PIEZO ASSEMBLY 1. a. above
 - g. Undo mounting screws on the gas valve support bracket.
 - h. Gently remove main gas valve
 - i. Reassemble in reverse order

TABLE 4: TROUBLESHOOTING

FAULT	POSSIBLE CAUSE	CHECKS
Pilot light not igniting	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	Check connection of the thermocouple to the control is not loose. Adjust positioning of thermocouple to ensure pilot flame is hitting thermocouple
	Faulty thermocouple	Contact manufacturer or authorised service agent
	Faulty flame failure control valve	Contact manufacturer or authorised service agent
Pilot established, main burner not lighting	Faulty thermocouple	Contact manufacturer
	Faulty Thermopile	Contact manufacturer
	Faulty flame failure control valve	Contact manufacturer

To obtain further service information concerning this appliance, please contact;

B&S Commercial Kitchens Pty Ltd

57 Plateau Road Reservoir VIC 3073

Tel.: + 61 3 9469 4754

Fax.: + 61 3 9469 4504

E-mail: info@bscommercialkitchens.com



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 - eighteen (18) months from date of installation/hand over for projects.

B+S Black Range – twenty four (24) months from date of installation/hand over for projects.

Verro Range – thirty six (36) months from date of installation/hand over for projects.

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.

IMPORTANT

Prior to requesting a service call, please be sure that cooking equipment is being used and maintained in accordance with the instruction manual provided with your cooking equipment. Please also be sure that your cooking equipment has been installed in accordance with the manual by a qualified installer. All cooking equipment must be commissioned by installer upon completion of installation. Failure of these procedures will result in non-warranty service costs.

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. Note: Any extra time spent on site due to required inductions etc. is not covered by warranty.

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. Warranty for New Zealand is twelve (12) months parts and labour for K+, B+S Black & Verro Ranges.
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.
9. All warranties are non-transferable and are only applicable to the original end user (purchaser).
10. All warranty work must be carried out by a B+S approved service technician.

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 endeavour 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 be emailing clientservices@bscommercialkitchens.com. Details of installer such as contact name, business name, telephone number and license number must be provided to avoid any delays.

11. 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.

12. SPECIAL PROVISIONS – NOT COVERED BY WARRANTY

- Cleaning of spark and ignition sensors is not covered by warranty. Damage caused by oils, water and foodstuffs falling into burners or pilots 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.

- Seizure of gas cocks and knobs.
- Cleaning of blocked drains.
- Damage caused by lime scale and/or corrosion.
- Parts not supplied by B+S or a B+S authorised service technician.
- Damage caused by rodents and insects.
- Scheduled general maintenance.
- Normal wear and tear of parts
- Filters for DSK Deck Steamers

Additional costs are payable for:

Accommodation, cost of transport such as flights/ferries, poor access and waiting times.

B+S Commercial Kitchens
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