

4-INS-804



INSTALLATION, OPERATION AND CARE MANUAL

REMEMBER TO COMPLETE THE ONLINE
WARRANTY REGISTRATION TO
RECEIVE YOUR FULL TWO YEAR WARRANTY.

WARRANTY

All Scientific equipment comes with a standard ONE year warranty, The 1 Year Extended Warranty is only valid for customers who have registered their warranty online at www.scientific.co.za within the first year after making their purchase.

MANUFACTURED
IN SOUTH AFRICA





ALL SCIENTIFIC EQUIPMENT COMES WITH A TWO
YEAR WARRANTY ON COMPONENTS AND
DEFECTIVE WORKMANSHIP - Ts & Cs APPLY.

REGISTER ONLINE TODAY

- Register your warranty on-line at www.scientific.co.za today and learn how to get the best out of your Scientific product.

NO WEB ACCESS?

- If you do not have access to the Web, register by completing this form and Email it to the Scientific head office in South Africa. Email: sales@scientific.co.za

ONLY COMPLETE IF YOU DO NOT HAVE WEB ACCESS

Company _____

Name _____

Surname _____

Telephone _____

Cellphone _____

Email Address _____

Country _____

Postal address _____

Scientific products purchased _____

Product Code (see box label) _____

Serial number (see back of machine) _____

INTENDED USE

- | | | |
|---------------------------------------|--|---|
| <input type="checkbox"/> Agriculture | <input type="checkbox"/> Genetics | <input type="checkbox"/> Pharmaceutical Physics |
| <input type="checkbox"/> Automotive | <input type="checkbox"/> Industrial | <input type="checkbox"/> Power Generation |
| <input type="checkbox"/> Biochemistry | <input type="checkbox"/> Medical | <input type="checkbox"/> Special Metals |
| <input type="checkbox"/> Botony | <input type="checkbox"/> Microbiology | <input type="checkbox"/> Sugar |
| <input type="checkbox"/> Chemistry | <input type="checkbox"/> Mining | <input type="checkbox"/> Water |
| <input type="checkbox"/> Cosmetics | <input type="checkbox"/> Nuclear | <input type="checkbox"/> Zoology |
| <input type="checkbox"/> Electronics | <input type="checkbox"/> Paper/Packaging | <input type="checkbox"/> Other (Specify): _____ |
| <input type="checkbox"/> Food | <input type="checkbox"/> Petrochemical | _____ |



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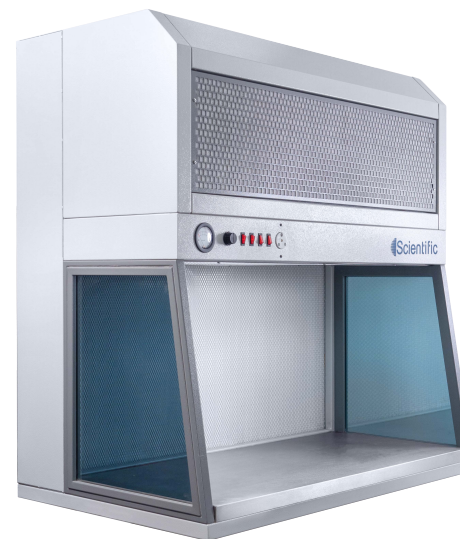
LIMITED WARRANTY

The manufacturer guarantees that this unit is free from defect in materials and workmanship when it leaves the factory and undertakes to replace or repair the unit if it proves defective in normal use or during servicing for a period of 1(one) year. The date of original installation and is for the benefit of the original purchaser only. The liability under this warranty is limited to repairing the defective unit or any part of the unit provided it is sent carriage paid to an authorized dealer. All other Warranties ,expressed or implied , statutory or otherwise, including without limitations any implied Warranty of Merchantability or fitness for purpose are excluded .The Seller shall in no event be liable for direct,indirect or consequential damages in connection with the products.

This unit is at all times to be used according to the instruction manual and for its normal purpose.

This Warranty is not effective if damage occurs because of accident, carelessness,improper installation,lack of proper set-up,supervision when required or if the equipment is installed or operated in any manner contrary to the installation and operating instructions. In these cases,repairs will be made at a reasonable cost. Work performed by unauthorized personnel or unauthorized service agencies voids this Warranty.

LAMINAR FLOW



**INSTALLATION OPERATION AND CARE OF
LAMINAR FLOW CLEAN BENCHES
MODELS: 804/805/806/807**

UNPACKING

Unpack the product and check for any damage incurred during transit. This should be reported to the responsible carrier, railway or postal authority, and a request for a damage report should be made.



THESE INSTRUCTIONS MUST BE FOLLOWED FOR US TO GUARANTEE OUR FULL SUPPORT OF YOUR CLAIM FOR PROTECTING AGAINST LOSS FROM CONCEALED DAMAGE. THE FORM FOR FILING SUCH A CLAIM WILL BE PROVIDED BY THE CARRIER.

GENERAL INSTALLATION AND OPERATION INFORMATION

The cabinet should be located in the laboratory, out of the traffic pattern and away from air disturbance such as doors, windows, air-conditioning, etc. This is very important because strong air current can disturb the air flow in the cabinet. Whenever possible, a minimum clearance of $\pm 450\text{mm}$ should be allowed on the top of the cabinet to allow for accessibility.

OPERATION

- Before operating for the first time, ensure that the unit has been validated by a certified inspection authority and a compliance certificate issued.
- Plug unit into standard 220-240 VAC 50Hz.
- Switch on the unit using "MAINS" illuminated rocker switch on the control panel.
- The fan will switch on and should an airflow alarm be fitted (optional extra), an audible alarm will sound. Only once the correct airflow has been reached will the audible alarm stop sounding. Adjust to the correct airflow using the variable speed control knob on the control panel. For cabinets not fitted with an airflow alarm, it is recommended to operate the unit at setting 4 on the fan speed control (this will give the optimum flow conditions on a new unit). As the filters gradually become clogged, the pressure drop across them will increase, requiring an increase in fan speed to maintain the optimum airflow.

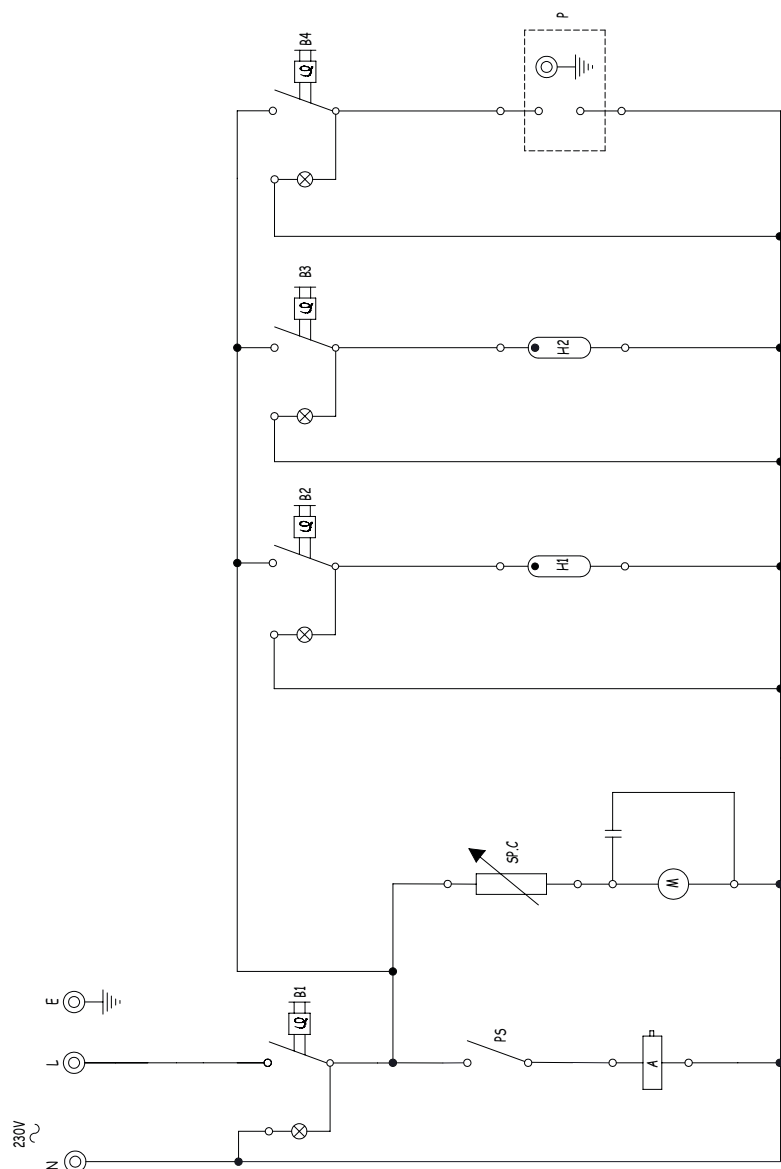
WIRING DIAGRAM LEGEND

MODEL: LAMINAR FLOW

MODEL CODES: 804/805/806/807

LEGEND	DESCRIPTION	PART NUMBER
A	ALARM (OPTIONAL)	1-ALARM-BELL
B1	MAIN SWITCH	1-17TAF
B2	LIGHT SWITCH	1-17TAF
B3	LIGHT SWITCH	1-17TAF
B4	PLUG SOCKET SWITCH	1-17TAF
H1	FLUORESCENT LIGHT	1-4"-TUBE
H2	FLUORESCENT LIGHT	1-4"-TUBE
M	220V MOTOR AND CAP	1-LF-FAN
P	15 AMP PLUG SOCKET	1-PLUG-SQ-MRT
PS	PRESSURE SWITCH	1-PRESS-SWITCH

MODEL CODES: 804/805/806/807



- Allow the unit to run at least 30 minutes prior to use. This ensures a clean workspace environment. It is preferable to leave the unit running for 24 hours per day.
- The two fluorescent lights may be switched on independently via the 2-illuminated rocker switches marked "LIGHTS".

- Both the Horizontal and Vertical Laminar flow units are self contained, clean air benches. All units are guaranteed 99.99% free of particles and microbial contamination 0.3 microns larger.
- The fans used are fully speed controllable with a built in electronic speed control. The fans used have been specially selected due to their low noise and vibration characteristics.
- The condition of the prefilter and H.E.P.A filters can be constantly monitored by means of the integral Minihelic differential pressure gauge.
- The pre filters, which have an efficiency of 96% using British standard number 2 dust as described by ASHRAE, are readily removable. The pre filters are mounted vertically to reduce the effects of settling dust.

1. Control panel

The control panel consist of an illuminated mains switch, independent fluorescent light switches, and a switched 10A plug socket for auxiliary use.

All H.E.P.A filters are protected in the work area by means of a plastic diffuser. A choice of work surfaces are available either panelyte or grade 304 stainless steel.

3. H.E.P.A Filters

All H.E.P.A filters are leak tested using EMERGY 3004 Aerosol and guaranteed to be 99.99% free of particles 0.3 microns or larger.

4. Lighting

Readily changeable, recessed lighting is provided on all units. Two independent light fittings are used with the option of fitting germicidal UV lamps as an extra.

5. Fan

The variable speed fan gives a work area air speed of between 0,25 - 0.65m/sec. The optimum flow rate for laminar flow conditions being 0.45m/sec. \pm 0,1m/sec.

6. Audible Airflow Alarm (Optional extra)

Warns the operator that the optimum airflow rate is incorrect in the workspace either due to speed control setting or clogging of filters.

7. Loading Material and equipment

Only load material and product required for the procedure. Do not overload the cabinet.

8. Work Techniques

Avoid the use of an open flame in the cabinet as this may damage grilles and H.E.P.A filters.

Avoid using techniques or procedures that disrupt the airflow pattern of the cabinet.

ELECTRICAL CONNECTION INFORMATION

MODEL	DESCRIPTION	VOLTS (V/Hz)	POWER (WATTS)
804	LAMINAR AIR FLOW (PANELYTE)	230/50	600
805	LAMINAR AIR FLOW (STAINLESS)	230/50	600
806	LAMINAR AIR FLOW (PANELYTE)	230/50	600
807	LAMINAR AIR FLOW (STAINLESS)	230/50	600

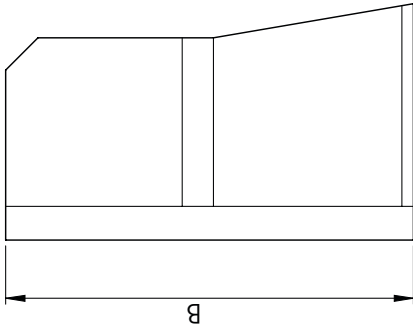


THE CONTROL COMPARTMENT OF THIS UNIT CONTAINS DANGEROUS VOLTAGES. MAINTENANCE AND SERVICING REQUIRING THE REMOVAL OF ANY PANELS OR COVERS SHOULD BE DONE BY QUALIFIED SERVICE PERSONNEL ONLY.

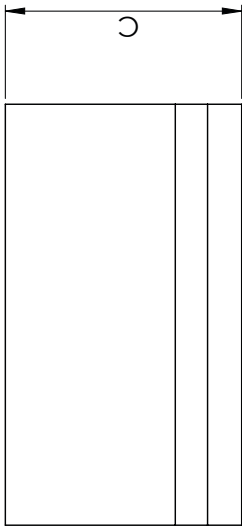
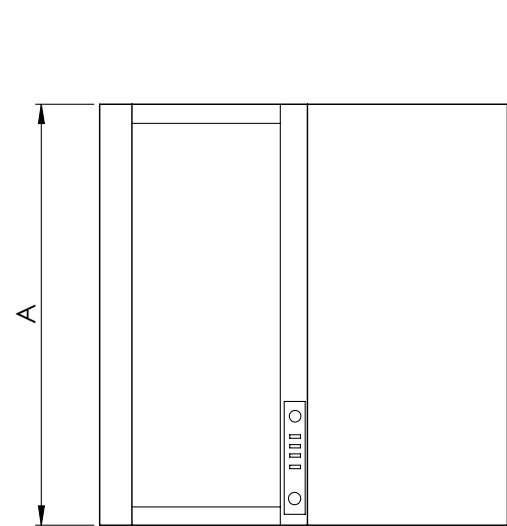


IT IS ESSENTIAL TO MAKE SURE THAT THE INCOMING VOLTAGE IS THE SAME AS THE RATED VOLTAGE OF THE OF THE UNIT AS FOUND ON THE SERIAL PLATE. THE SERIAL PLATE IS LOCATED AT THE REAR OF THE UNIT ADJACENT TO THE INCOMING CABLE ENTRY.

**POSITIONING DIAGRAM
LAMINAR FLOW CLEAN BENCHES
MODEL: 804/805/806/807**



	A	B	C
MODEL			
804	1250	1300	730
805	1250	1300	730
806	1860	1300	730
807	1860	1300	730



CLEANING /MAINTENANCE

BEFORE CLEANING THE UNIT, DISCONNECT THE POWER PLUG FROM THE MAINS SOCKET!

- Clean the unit using a damp cloth with soapy water.
- Do not submerge in water or subject the unit to water spray.
- The laminar flow benches are designed for continuous operation. Periodic maintenance is not required.
- On a weekly basis, wipe down the inside of the cabinet with a disinfectant.
- On a biannual basis, the cabinet needs to be revalidated by a certified inspection authority.
- The H.E.P.A filters will gradually accumulate airborne particulate matter from the room. The rate of accumulation will depend on the cleanliness of the room air and the amount of time the cabinet is used.
- In the case of the unit fitted with an airflow alarm, the audible tone will indicate clogging of the filters to the user. To overcome the clogging, one can adjust the fan speed to counteract the filter loading.



CLEAN THE STAINLESS STEEL PARTS WITH A DAMP CLOTH AND SOAP. AVOID THE USE OF DETERGENTS CONTAINING ABRASIVE SUBSTANCES. DRY CAREFULLY AFTER CLEANING. DO NOT USE PRODUCTS CONTAINING AGGRESSIVE CHEMICALS, ACIDS OR PRODUCTS WITH CHLORINE TO CLEAN THE STAINLESS STEEL EVEN IF DILUTED



WARNING

Electric Shock Hazard.

Keep water and other liquids from entering the inside of the equipment. Liquid inside the equipment could cause an electrical shock

Do not spray water or cleaning products. Liquid could contact the electrical components and cause a short circuit or an electrical shock. Do not use equipment if power cord is damaged or has been modified

SAFETY

READ ALL INSTRUCTIONS BEFORE USE. FAILURE TO FOLLOW THESE PRECAUTIONS COULD RESULT IN INJURY TO YOURSELF AND OTHERS

1. Use the Laminar Flow Benches on an individual 15A mains outlet only. **DO NOT OVERLOAD THE CIRCUIT.**
2. Ensure that the equipment and the power supply cord does not come into contact with hot surfaces.
3. This unit is only to be used by properly trained laboratory staff.
4. If the supply cord is damaged, it must be replaced with a new cord assembly available from the suppliers agent.
5. Use only earthed outlets matching the serial plate voltage.
6. Have equipment installed by a qualified personnel in accordance with local codes and ordinances.
7. Use equipment in a flat level position.
8. Do not operate if equipment has been damaged or is malfunctioning in any way.
9. These units are designed to run only on alternating current (A.C.) **DO NOT CONNECT TO DIRECT CURRENT (D.C)**
10. Care should be taken to ensure against any concentration of flammable or explosive chemicals.
11. When using a Bunsen burner in the cabinet, be careful to open only slightly. Open flames in the cabinet may not only melt the plastic diffuser griller on the vertical flow units but also physically damage the H.E.P.A. filters or the adhesive, resulting in a dangerous situation.
12. Do not accidentally cover the primary filter perforated panel. This will effect the airflow.
13. The surface of the H.E.P.A filters is fragile and should not be touched. Care must be taken to avoid puncturing the H.E.P.A filters during installation and normal operation. If damage to the H.E.P.A filters is suspected, do not use the cabinet.
14. The cabinet should be validated whenever it is relocated or serviced and biannually thereafter