



Operation Manual

Strongbond Vacuum Cleaner

Model: VFG-2S

Flooring Wholesale Limited

T/A Look Floors

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Safety Precautions

WARNING! Read all instructions. As with all machinery there are certain hazards involved with operation and use of the machine. The following basic safety precautions should be followed at all times to reduce the risk of fire, electric shock and serious personal injury to you or others. Keep these important operating instructions with this product.

Must read this operating manual carefully before usage.

Warning symbol

	Operators must do not carry out the designated operating steps
	Operator must read the designated operating steps before usage.
	Safety precautions

-  People who do wiring and inspecting must have the professional experience and expertise.
-  The power lines must not be placed at the place where workers can easily step on; once some damages found on the power lines, they must be replaced with new ones. .
-  Must use the power cord originally installed in the machine; please contact the manufacturer in case of extending the power line.
-  Do not do wiring in a humid environment or with wet hands.
-  Be sure the power plug has ground wire and the power socket has circuit breaker
-  Please plug out if don't use the machine for a long time. Otherwise, it will reduce the insulating property and lead to electric shock, electric leakage or fire accident.
-  Do not climb, stand or place stuffs on the machine during its running
-  Do not try to repair or refit the machine personally if something wrong goes with it; please contact the manufacturer for discussing and choosing the best maintenance solution
-  Suggest using the original filter cartridge or bag if needed.
-  This operating manual should be placed with an unbroken condition near to the machine for the convenience of reading by the operator.
-  Please cut off the powder before the overhauling.
-  The casters must be in the state of being stopped before the machine runs.
-  This vacuum must not be plugged in the socket that other electric equipment are using, just in case of fire accident or electric shock due to the overloaded current.
-  The machine cannot suck up the kind of oily or flammable and combustibile smoke dust.
-  Never leave tool running unattended. Turn power "off" . Do not leave tool until it comes to a complete stop.

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1 Product Information

VFG-2S Vacuum cleaner is designed for the floor grinding and polishing industry for superfine dust collection. The characteristics of the machine include strong suction, two-stage filter units, stable and reliable, space saving, flexible mobility and easy operation. It is a single-phase machine that is compatible with diamond surface grinders and other floor grinding & polishing machines.

2 Working principle

2.1 Filtering process

The filter unit consists of one unit of a star shaped pre-filter and two units of HEPA filter cartridges. Under the action of the turbine blower, the dusty air will enter the pre-filter first. Directly the bigger particles will drop down to the bottom, whereas the superfine dust will go through the pre-filter and into the HEPA filter cartridge units. The clean air will come out from the air outlet and leaving the superfine dust behind which attaches to the HEPA filter cartridges.

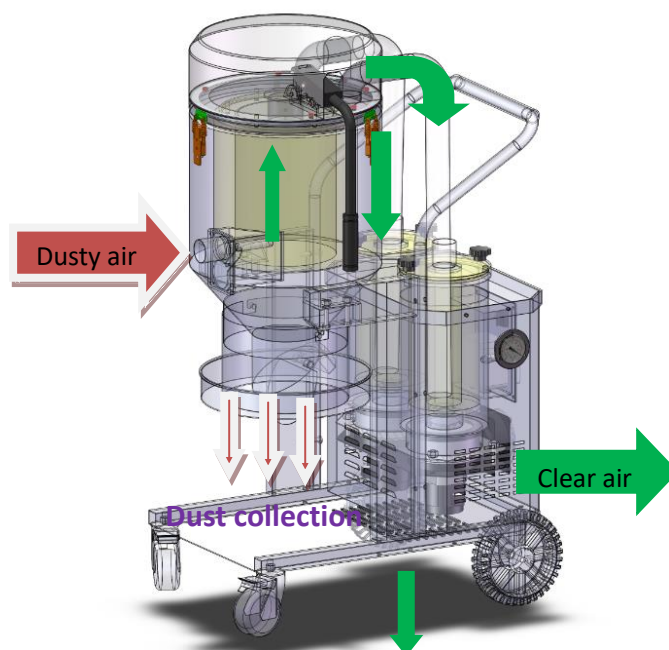


Fig 2.1 Filtering Process

2.2 Cleaning process of Filter

The pre-filters can be cleaned from outside the barrel by the air pulse negative pressure. Before the cleaning process, block the air inlet first, then pull the vibration lever over and over again. The HEPA filter cartridge should be cleaned regularly depending on usage. To clean the HEPA filter, take it out of the machine and tap the dust out. It is important to clean the filters to ensure the effective cleaning of the machine and to prolong the life of the machine

3 Product structure and characteristics

Main parts

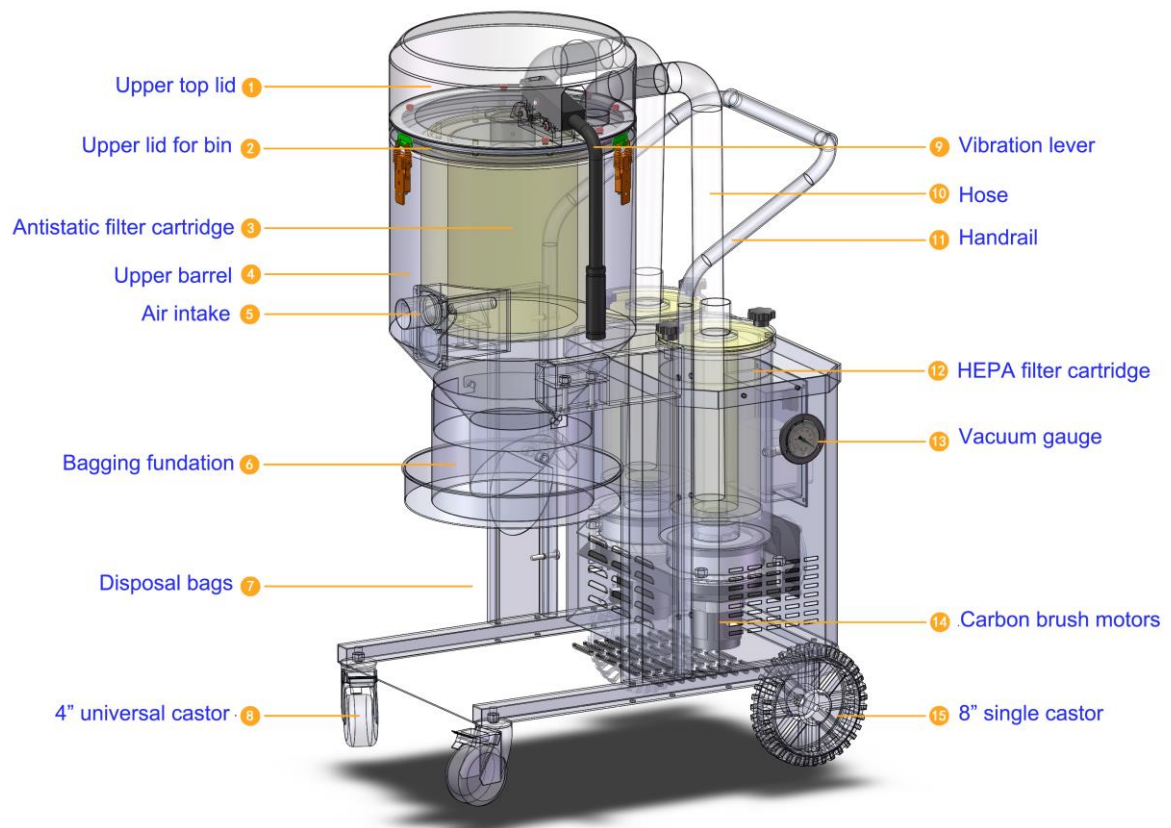


Fig. 3.1 structure diagram

3.1 Exterior Structure

VFG-2S industrial vacuum cleaner has compact and simplified design that gives excellent heat dissipation to the turbine. The prominent advantage of this model is the use of a designed continuous packing bag to collect the dust, which largely decrease the volume and weight, so that it could be easy for using. The main body adopts the SPCC metal plate with thickness of 2 mm. This ensures good endurance and heat resistance for the whole machine and thereby guarantees the structural strength. In addition, the metal plates are cut by laser cutting machine that greatly improve its size accuracy. For the machine surface preparation, we adopted the process of spraying and high temperature baking that provides a shining surface and a beautiful appearance with durability.

3.2 Manual Filter Cleaning Structure

VFG-2S is installed with a mechanical airflow reversing structure that conforms to the ergonomic design. Such unique manual filter cleaning system can effectively clean the dust accumulated on the surface of the filter cartridge over time. The user could easily clean up the filter cartridge according to the job requirements. It is a very cost-effective and handy design



Fig. 3.2 air pulse jetting device

3.3 Filtration System

VFG-2S vacuum has two-stage filtering units. The first stage will be the Anti-static Filter cartridge which can filter the dust particle size of $3.0\mu\text{m}$ with filter efficiency up to 99%. The secondary stage is the cartridge filters with polyester fiber material which is imported from Toray Industries in Japan. This cartridge filter coated with PTFE film can ensure the filter efficiency up to 99% for dust particle size of $0.3\mu\text{m}$. This kind of cartridge filter can effectively clean the PM2.5.



Fig. 3.3 - 1st stage Filter Cartridge



Fig. 3.4 - 2nd stage filter cartridge

3.4 Dust Collection Bag

VFG-2S uses the continuous packing bag that could be hooked and buckled up on a tube base that can be easily fixed on the dust outlet. The continuous packing bag is a foldable long tube plastic bag that can pull out continuously.



Fig. 3.5 dust collection bag

3.5 Control Board

The Control board is combined with the socket as a compact control box.



Fig. 3.6 Control box



Fig. 3.7 motor

3.6 Carbon Brush Motor

VFG-2S vacuum is equipped with 2-pc parallel type carbon brush motors, each motor is 1.2 kilowatt. The user of the machine can control the airflow depending on each job requirement.

3.7 Timer

The timer will start or stop automatically when the machine is on or off. When next time the machine is turned on, the timer will accumulate the time based on the data of the last time. The user can shake the vibration lever to clean the filter according to the dust flow and working hours. Since VFG-2S series vacuums are equipped with carbon brush motors, suggested continuous working hours do not exceed 3.5 hours at a time.



Performance parameter of the timer:

Model	ZYL03
Voltage	Self contained power supply
Accumulation scope	①99999.9h ①9999d23h ②99h59m59s ②9999h59m59s ③9999h59m ③999999h59m
Display mode	6/8 digits LED display
Accumulation error	≤0.1‰
Reset mode	Terminal short-circuited reset, panel button reset
Power failure memory	5 years
Environment temperature	-5°C~45°C
Installation way	Panel
Dimension	24×48×50mm
Hose size	22.5×45mm

4 Operations

4.1 Manual Air-pulse back Operation

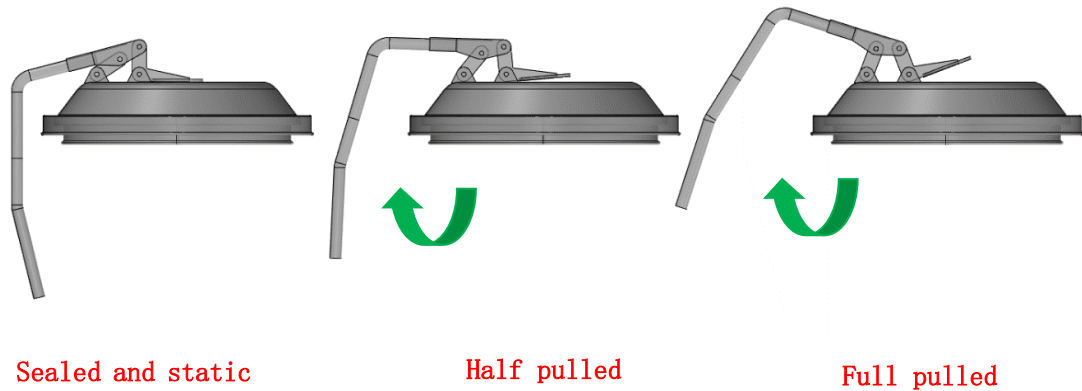


Fig. 4.1 operation

Close the inlet using the block plate on air inlet, let the machine build up vacuum for a few seconds and then pull the rod repeatedly. The filter will be pulsed sequentially by a sudden burst of air from the flow-back air inlet. This mechanical filter cleaning process ejects all the dust from the surface of the filter, allowing for a very effective dust cleaning result.

4.2 Operation of the Control Board



Fig. 4.2 Control board

Just simply connect the plug in the socket, then it will available to be used.

Connecting the power supply (t-pin plug)

Open the end cover of the four-pin socket on the machine and directly plug in the socket, and then connect the other end of wire to the power supply.

Start button

When the power is on, the indicator ①/② will be lit. Just simply press the button one by one, each motor will start working.

Stop button

Press the button to the off side, the motor will then stop working. Unplug the vacuum the light will be off.

Timer

The timer will start to accumulate time after turning on the carbon brush motor.

It will show:

XXXX hours, XX minutes, and XX seconds. The maximum data is 9999 hours, 59 minutes and 59 seconds. You can press the lower right button to clear the data.

4.3 Operation of Dust Cleaning

Two areas need to be cleaned: the first area to clean up is the 1st filter cartridge and collection bag; the second area to clean up is the 2nd filter cartridges.

4.3.1 Operation of the Collection Bag

To clean up the 1st filter cartridge, please refer to Fig. 4.3. As for the foldable long tube plastic bag, it could be continuously pulled out. When it collects a certain amount of dust, it could be sealed by the nylon cable tie and then cut it off with a scissor. See the photos below:



Step 1



Step 2

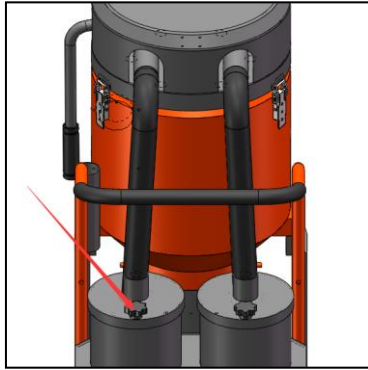


Step 3

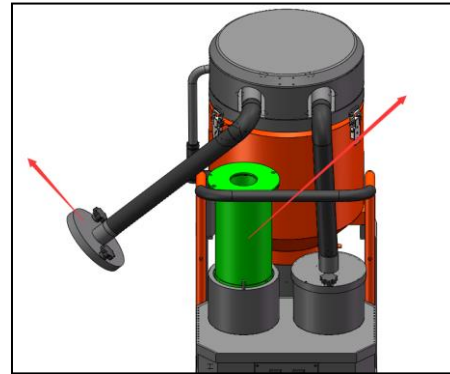
Fig 4.3 Operations

4.3.2 Cleaning for the 2nd stage filter (cartridge filter)

Take the cartridges out from the container and use gas gun or brush to clean the cartridge filter. Please refer to the steps in the below diagrams:



Step 1: Loosen the screws on the lid:
(as shown on Fig. 4.4)



Step 2: Take the cartridges out and use gas gun or brush to clean the filter cartridge. (as shown on Fig. 4.5)

Fig. 4.4 and 4.5 cartridge filter cleaning

5 VFG-2S Circuit Diagram

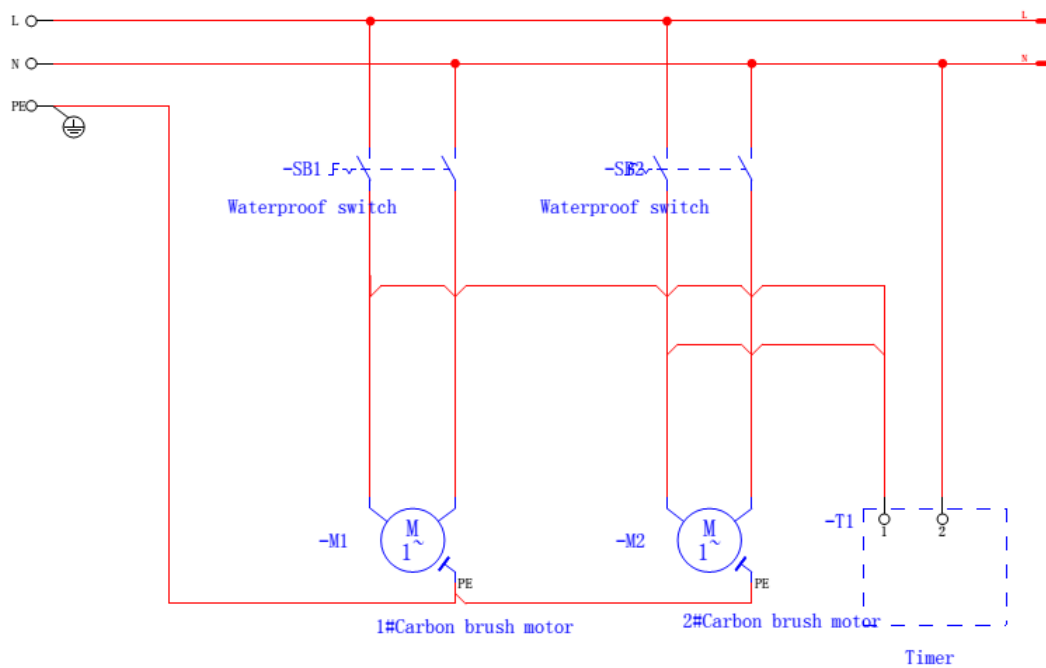


Fig. 5.1 Circuit diagram

6 Routine maintenance and inspection

6.1 Daily maintenance

(1) During the operation of the equipment, it is best to designate a person to clean and maintain all parts. The user must be trained in handling the machine and hazardous dust

(2) The designated person must be familiar on how to operate, service and check all electronic parts. They must have read the manual and how to deal with any issues of performance that may arise. All issues should be repaired or addressed in a timely manner.

(3) Test the technical parameters, such as air flow, temperature, pressure etc... on a regular basis. Any abnormal problems must be dealt with timely.

(4) Inspect the air system. The dust discharge system should be working properly and if any issues arise repair immediately.

(5) When done using the machine for the day it is best to leave the vacuum running for a few minutes to get rid of any dust inside the machine hose. You must also clean the filter cartridge and empty any dust in the bagging system. This will help keep the system properly maintained and avoid any filter blockage.

6.2 Troubleshooting and elimination method

Problem	Possible cause	Solution
Vacuum cleaner doesn't work	Phase sequence inversed	Exchange power cord L1 and L2
	Factory voltage fluctuation is too big, cause undervoltage or overvoltage	Factory provides solution themselves
	High electricity current cause thermal overload protector to disconnect.	Inspect if the motor is still working, if yes, the thermal overload device may disconnect.

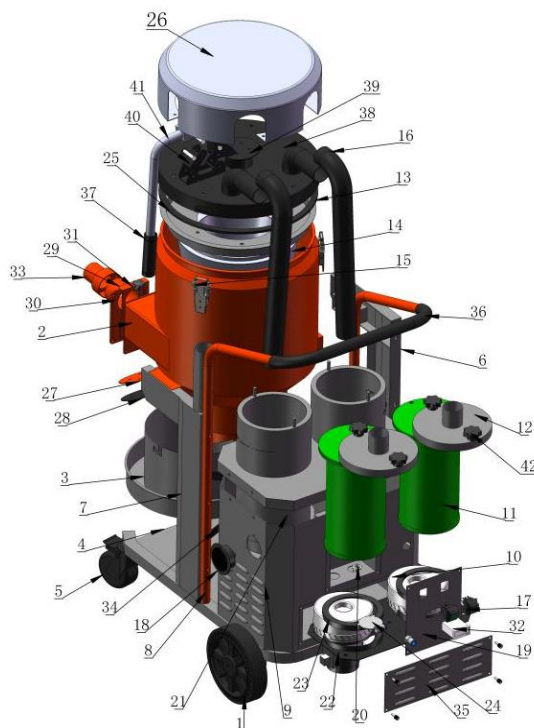
Abnormal running	Flue gas moisture condensation dust block the filter cartridge/bag	Blocking air leakage, increase the temperature of the flue gas.
	Resistance	Process system doesn't work
Lack of suction power	Suction hose blocked or damaged	Clean or replace
	Filter cartridge blocked	Clean or replace the filter
Emission concentration is too large	Filter cartridge/bag is with wrong installation	Install and adjust the position of the filter units.
	Filter cartridge/bag damaged	Replace
	The first time using after replacement of the filter	Use the filter continuously for about 15minutes.

7 Technical Parameter

Model	VFG-2S
Voltage/Hz	220V/50HZ
Power	3.4 HP
Airflow	258CFM
Max air pressure	100 in. H2O
QTY of 1st stage filters (unit)	1
QTY of 2nd stage filters (unit)	2
Air inlet	2 in. (standard)
Noise	82±2dB
Filter efficiency	99%
Material of 1st filter	Anti-static material
Material of 2nd Filter	Manufactured by Toray Industries in Japan
Filter fineness	0.3-3microns
Main filtering method	Outer-filtering type for 1st stage filter Inner-filtering type for 2nd stage filter
Dimension	787 x 584 x 1194 mm
Weight	82 Kg

8 Main Parts List

If you require any part in the machine, please contact Look Floors with the part number and name to supply it for you.



1.	8 inches castor	5.004.06.001	2.	Stainless steel barrel	B.B.035.001.00-01
3.	bagging foundation	B.B.021.021.00-04	4.	Bottom foundation	B.B.003.026.00-01
5.	4 inch M12 single screw universal wheel.	5.004.01.023	6.	The right post	B.B.006.007.01-01
7.	The left post	B.B.006.007.00-01	8.	Handrail	B.B.021.021.00-04
9.	Cabinet	B.B.002.022.00-01	10.	Ametek carbon brush motor	3.003.04.002
11.	Φ150*300*60 HEPA Toray cartridge filter without screw	2.002.01.013	12.	Filter cover	B.B.025.007.00-01
13.	Filter plate	B.B.026.004.00-01	14.	Anti-static filter cartridge	2.006.15.006
15.	Buckle (stainless steel spring).	5.008.05.014	16.	Anti-static hose.	4.001.02.002

17.	V3 water proof switch	3.012.07.005	18.	Pressure gauge	3.017.01.010
19.	VFG Control panel	B.B.038.004.00 -01	20.	PG21 Water-proof Connector	5.005.01.004
21.	Filter box	B.B.025.008.00 -01	22.	Motor assembling plate	B.B.027.004.00-01
23.	CB motor ring	4.003.01.001	24.	CB tripod cover	4.003.01.002
25.	VFG-S silicone sealing ring	4.002.03.007	26.	Top cover	B.B.017.024.01-01
27.	Block plate for barrel mouth	B.B.014.002.00 -04	28.	foaming board	4.002.07.013
29.	VFG block plate for air inlet	B.B.036.007.00 -04	30.	VFG air inlet	B.B.036.002.00-04
31.	Star handle —M6 thread rod	5.008.02.014	32.	Timer	3.015.02.012
33.	Connector for inlet and outlet	B.B.011.015.00 -04	34.	Fixed mount	B.B.020.026.00-01
35.	Heating dissipation panel (side)	B.B.010.016.00 -01	36.	Bend handrail drive pipe	4.004.05.001
37.	VFG series plastic handle gloves.	4.004.04.001	38.	Barrel cover	B.B.017.028.00-01
39.	Connecting rod -A	B.B.032.005.00 -01	40.	Connecting rod -B	B.B.032.006.00-01
41.	Dust vibration handle	B.B.032.001.00 -01	42.	through-hole M8 Star handle	5.008.06.003



9 Warranty

9.1 Scope and duration of warranty

From the date of purchase of this equipment, the warranty period is one year except for hose and filters where no warranty is provided for them.

9.2 Conditions of warranty

- (1) This warranty does not include the replacement for the complete machine.
- (2) The warranty will be terminated automatically if the machine was not used as specified or if the machine has been modified or the parts has been replaced without written permission
- (3) With strict compliance to this manual, not permitting improper operation or instances outside of our control, warranty parts are damaged within the warranty period, the manufacturer will provide free repair and replacement.
- (4) If the customer needs to repair by himself, it must be done under the manufacturer's permission and in accordance with the guidance plan, otherwise the manufacturer will not be legally liable.
- (5) If the equipment fails due to improper assembly or disassembly, we shall charge for maintenance.
- (6) Please keep this warranty card. Please attach it immediately after the warranty, otherwise it will not be handled.
- (7) If the machine or any vulnerable parts are judged to have been intentionally damaged during the warranty period, it is not within the scope of the warranty.
- (8) If the motor or control box is burned or damaged by an abnormal voltage during operation, it is not covered by the warranty.
- (9) When the machine cannot run normally due to the wrong wiring method, if it is necessary for the manufacturer to send people to overhaul, if the non-machine fault is checked by the maintenance people, the customer must pay the travel expenses and working fee within the warranty period.

Equipment warranty card for VFG-2S

After-sales service Site:			
Customer Name			
Contact person		Telephone	
Machine Type		Motor Model	
Invoice Number		Purchasing Date	
Fault Description			
Solution			
Remarks			
Customer's		Date	
Signature			
Repairman's		Date	
Signature			
Note:			
<p>1. The warranty period of VFG-2S is one year except for hose and filters where the warranty does not apply.</p> <p>2. Please do not refit or disassemble our equipment. If the equipment is refitted or disassembled, our company will not guarantee it.</p> <p>3. If there is any problem with the machine, you can consult Flooring Wholesale Ltd first.</p>			