Yorkleen Limited

WV100 INSTRUCTION MANUAL

Yorkleen Ltd
Unit 16, Holme Industrial Estate
Skiff Lane
Holme Upon Spalding Moor
York
YO43 4BB
Tel: 01430 861943
Fax: 01430 861493

www.yorkleen.co.uk

WV100 INSTRUCTION MANUAL

Before using your dust extraction equipment please read all of the instructions in this manual.

Incorrect operation of this machine could lead to personal injury.

Incorrect operation can lead to damage of the machine.

Eye protection should be worn when using any woodworking machinery.

RoHS

Restriction of Hazardous Substances Directive 2011/65/EU

Waste Electrical and Electronic Equipment Directive 2002/96/EC

Purpose / Intended Use –

The Yorkleen dust extractors are designed to extract all types of dust and waste materials produced by various types of woodworking machinery.

This is achieved by low volume, high velocity vacuum motors that create suction at the hose connection and can be used in conjunction with any extraction hood / cowl on most woodworking machinery.

Safe Operation –

For your own safety please read the instruction manual before operating the dust extractor.

High Voltage -
Switch off the power supply and isolate the extractor before inspecting, servicing or emptying the equipment.

Reconnection –
Ensure the switch is in the off position ‘0’ before connecting to the power supply.

Voltage Warning –

This machine uses a single phase supply 230v @ 50Hz
All extractors are fitted with a BS1363 3 pin moulded plug approved by ASTA to BS1362.

General Safety Instruction –

Always ensure filters are fitted correctly.
This machine is for dry use only and should not be used or stored outside in damp or wet conditions.
Suitable for wood dust and shaving particles.
Do not use for the extraction of vapour, fumes or gases.
Do not completely cover the end of the machine inlet or hose. If this occurs the extractor may be drawn over as the hose compresses under the vacuum, this could result in personal injury or machine damage.
Note : - ***These machines are designed to run for a maximum of 4 hours with a 15-20 min interval of rest.***

Getting Started –

Remove all packaging from the extractor.
Once the packaging is removed the machine body needs to be emptied of all the spares which are packed within it.
Undo the transit strap by releasing the clamp lever.
The spares packed inside the extractor should include 2m of 63mm crush proof hose complete with ends, one heat shrink adaptor and 6 paper filters.
Remove all the products from the extractor.
Connect the purpose hose end to the machine inlet and connect the other end to the dust generator.
Now once the unit is assembled connect to the power source and switch on.
The extractor is now ready for use.

Heat Shrink Adaptor -

This ingenious device is a perfect solution for odd sized dust extraction outlets and mismatched hose & fittings.
Fit the adaptor over the hose end and the dust outlet of the machine.
If the heat shrink adaptor is to be used for other applications then assemble accordingly.

Apply heat evenly with a hot air gun or hair dryer.
Keep applying heat until the adaptor has fully shrunk. Do not over heat.

Maintenance –

BEFORE ANY TYPE OF MAINTENANCE IS CARRIED OUT, IT IS IMPORTANT THAT THE MACHINE IS SWITCHED OFF AND DISCONNECTED FROM THE POWER SUPPLY.

Always remember that the filters fitted to your extractor enable it to perform the job for which you bought it – i.e. Dust Control. If the filters become clogged it is because the extractor has successfully removed the potentially hazardous dust from your workshop atmosphere. Clogged filters cause reduced airflow poor performance and potential reduced motor life. Follow the simple and inexpensive procedures outlined to maximise the performance and lifespan of your unit.

1. **Primary Filter** (Paper filter) The motor is fitted with a filter cage over which is stretched two stages of filter. The paper filter is made from a special paper which is designed to trap the very fine dust particles.
   These filters should be checked each time the machine is emptied, cleaned of excess dust by use of a vacuum or soft brush and changed on a regular basis, especially if a reduction in performance is detected. These items are not expensive and represent the main maintenance expense of the extractor.

   Never use the extractor without these filters fitted, always use genuine replacements.

2. **Motor Cloth Filter** (Safety filter) The second stage of filter is fully covered by the paper filter when the machine is in use. They are designed to offer protection should the paper filter become torn or damaged. These filters should be checked each time the paper filters are renewed, generally require little attention but they can be vacuum cleaned if contaminated and must be renewed if damaged.

Note : - ***The cloth filters on this machine can be washed at 20^{o} with general detergents.***

Motor Brush (Carbon brush) Replacement -

In order to achieve the high speeds required to give the high vacuum and airflow of your extractor, the motor used is a brush motor.
These carbon brushes should not need replacing for at least 1,000 hours use.

Checking Carbon Brushes for damage or wear –

Dismantle the motor unit as listed below and withdraw the carbon brush.
If the carbon brush is worn down to within 4mm of the brass housing then they will require replacement.
Care should also be taken to inspect the commutator for signs of scoring or excessive heat transferal**.**

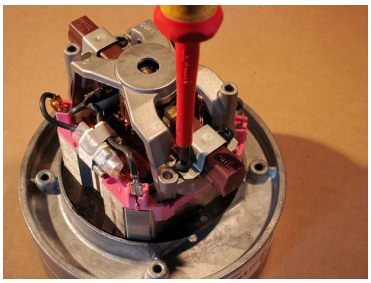
Replacement carbon brushes should only be fitted by a suitably qualified person.

The brushes and holders are clamped to the top of the motor by a metal clamp held by two screws. Replacements are supplied complete with new holders.

To replace –

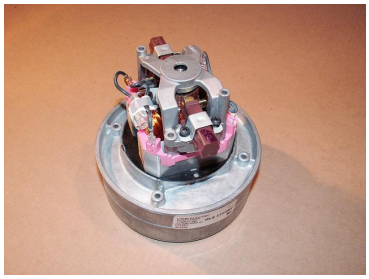
1. Remove the motor unit lid from the body of the machine and invert.
2. The metal acoustic lid is removed by undoing the four 6mm bolts fitted to the underside of the metal plate.
3. Carefully turn the unit over and raise the acoustic cover to expose the motor.
4. The carbon brushes and holders may now be removed by undoing the retaining clamps held by two screws. The electrical connections to the motor windings need to be carefully disconnected.
5. Having re - connected the electrical wires to the new carbons and holders the unit can be re -assembled.

NOTE: *New carbons brushes need to 'bed in' so there may be a few sparks at first. If this persists - consult Yorkleen Ltd.*



Remove screws + clamp

New carbon brush



Complete motor assy

Empting the WV100 -

This unit collects waste material inside the drum body, simply remove the head unit and empty the drum in a suitable manner.
Always remember to wear personal protective equipment before exposing yourself to wood dust.

Detailed Technical Information for Service Providers & Maintenance Engineers -

The purpose of the WV100 dust extractor is to effectively remove unwanted dust particles at source of generation. Service providers and engineers must be aware that the integrity of the system is of paramount importance and the extractor will only work effectively if the machinery it is connected to has adequate cowling to aid the extraction process.
Because the extractor works on a high vacuum principle this must be maintained to the source of dust generated.
Once installed the dust extractor is a very simple machine to operate.
It can be used for a variety of application.
The WV100 is designed to require minimum maintenance and provided the filters of the unit are kept in good order and the unit is emptied regularly then the extractor should require little further attention.

Materials of Construction -

Main body of unit - Steel, powder coated
Motor head unit - Steel, powder coated
Motor - Steel casing with plastic insert, aluminium fans, copper windings
Filters - Cotton, paper
Wiring - Multi strand copper cable 3183Y, moulded plastic plug brass pins
Hose - Polyurethane with steel wire

Machine Performance / Technical Specification -

Motor - Single phase 1 x 1200W vacuum motors
Speed - 24000 rpm
Supply - 230V 50Hz on a 13A 3 pin BS approved moulded plug
Collection Capacity – 35 ltr (approx)
Filters - Three stage up to 0.5 micron
Suction - 2500mmH2O (+/- 10 %)
Air flow rate – 70 l/s (+/- 5%) - Free installation conditions
Inlet size - 58mm ID
Noise emission - « 75 dBa
Overall Height - 510mm
Overall Width - 370mm
Overall Depth - 400mm
Approximate weight (empty) – 10kgs

Spare Parts List -

1	WV100CA	CARCASS WV100 STEEL BODY - COMPLETE
2	WV1000S/BOX	ABS SINGLE SWITCH BOX
3	WV1000CABLE	SINGLE MOTOR UNITS 3 CORE CABLE - COMPLETE
4	SWITCH	DOUBLE POLE 16A HI INRUSH SWITCH
5	SUPPRESSOR	SUPPRESSION CAPACITOR – DELTA TYPE
6	WVN050	STANDARD DIRECT AIRFLOW MOTOR C/W GASKET & SCREWS
7	WVH101	CLOTH MOTOR FILTER
8	WVU100	2 PLY PAPER FILTERS (Packs of 6)
9	WV100INLET	ONE PIECE INLET FLANGE
10	FOAMKITSML	ACOUSTIC FOAM KIT

	OPTIONAL EXTRA	
11	WV1000F	NEEDLEFELT DRUM FILTER

The details and illustrations provided are accurate at the time of going to press however the manufacturer continuously improve their products and may modify the specification without notice. E. & O. E.

Signs of Wear and Control Failure -

The extractor must be check on a regular basis to ensure safe use. The mechanical integrity of the unit is paramount and any external damage or seal failure needs to be repaired.
The flexible duct needs to be in good condition with no visible signs of damage or fatigue.
Noise levels should be monitored and if the unit becomes abnormally loud it should be stopped and investigated immediately.
Any monitors such as flow indicators must be within normal parameters ie, the green section, during working operation.

Fault Finding –

Problem	Causes	Action
Machine will not start	Worn carbon brushes	Check brushes and replace if necessary
	Faulty power supply	Check supply
	Unit is switched off	Switch unit on
	Faulty switch or cable	Check components and replace if necessary
Machine runs then just stops	Worn carbon brushes	Check brushes and replace if necessary
	Faulty switch	Check switches and replace if necessary
	Thermal overload	Leave the machine to cool for 15 mins and switch on. If the motor still will not run it will have to be replaced
System has no suction at dust generator	Incorrect assembly of motor unit	Check assembly for obvious signs of incorrect assembly
	Filters are blocked	Clean / change filters
	Hose / ducting is blocked	Clear blockage
	Machine is full	Empty machine
Excessive motor noise	Worn or damaged components	Replace motor assembly
Warm air is blowing from the motor cover	-	Don't panic, this is quite normal as the motors exhaust warm air whilst in use

Maintenance Log Sheet – (Page 11)

Once the WV100 unit is installed it should be commissioned and all test data should be logged for future referral.
Every 12 - 14 month cycle the extractor / system should be tested to ensure compliance to current HSE and COSHH regulations.
Comparisons with the initial commissioning results are advised to maintain system integrity and control.

Notes : -

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Annual Examination and Test Due …… ….	**WOODVAC EXTRACTOR INSPECTION and MAINTENANCE LOG SHEET**	Sheet No.

1. **External visual inspection of unit/system for physical damage or degradation.**
   - Connection hoses, ducting, joints, hoods, seals
   - Electrical supplies, cables, connections
2. **Collection***
   - Empty Drum/bag if required
   - Check/replace filters if required
3. **Function Test**
   - Activate unit system and check for effective removal of dust at source. (Check Gauges if applicable)

Week No.	Visual Inspection	Collection + Filter Inspection	Function Test	Inspection Notes	Gauge Pass/Fail	Date	Signature
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

Notes/Comments

***CAUTION-**Any person carrying out the inspection, cleaning of filters, emptying of the extractors and any similar procedure should wear appropriate personal respiratory protection.

To obtain spares & replacement parts, call
Tel. 01430 861943
Fax. 01430 861493