



Clemas & Co Ltd

Industrial Cleaning Equipment
Sales - Hire - Service

ORBIS 200 & 400 SCRUBBER POLISHER OPERATOR MANUAL



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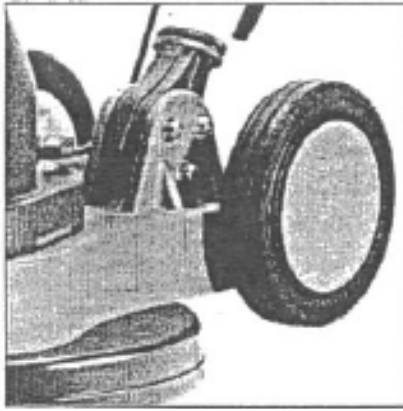


Fig. 1

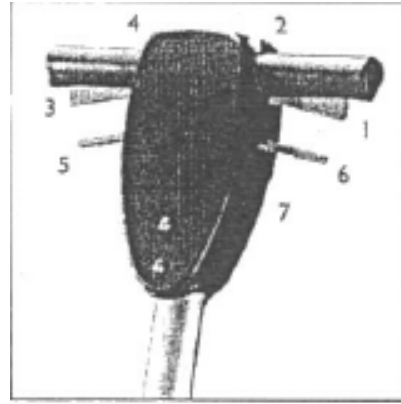


Fig. 2

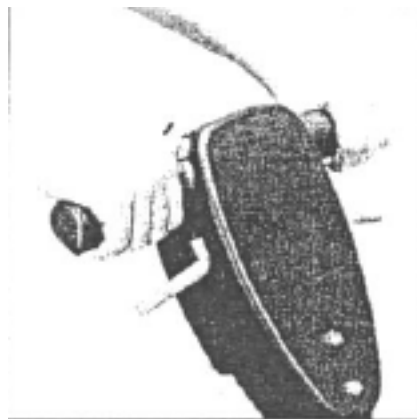


Fig. 3



Fig. 4

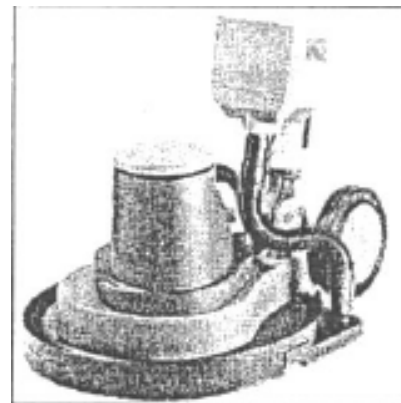


Fig. 5

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IMPORTANT

READ THESE INSTRUCTIONS CAREFULLY AND RETAIN FOR FUTURE REFERENCE

1 General Information

These floor cleaning machines are designed for the scrubbing and polishing of hard floors and/or shampooing of carpets in indoor areas. They should not be used in outdoor areas or where excessive moisture is present.

The following instructions contain important information about the machines and safety advice for the operator.

NOTE - To protect the machine from possible damage during transit, the machine base and handle are packed separately. Ensure that both items are present and follow the simple assembly instructions to bring the machine into service.

Equipment must be operated, serviced and maintained in accordance with the manufacturer's instructions.

If in doubt contact the supplier of your machine.

These instructions are valid for the following models.

Orbis – OB45200, OB45400, OB452/400

1.1 Important Safety Advice

When using electrical equipment basic safety precautions should be followed including the following.

- Read all instructions carefully before use.
- Keep children and unauthorised persons away from the machine when in use.
- **Do not** leave the machine connected to the electricity supply when not in use, always remove the plug from the socket-outlet.
- Switch off the machine before removing the plug.
- When unplugging pull the plug, not the supply cord.
- Keep the power supply cord clear of moving parts. During operation hazard may occur when running the machine over the power supply cord.
- **Do not** operate the machine with a damaged supply cord or plug, or after the machine malfunctions or is damaged in any way. Contact an authorised Service Agent for repair or adjustment.
- The plug of the power supply cord must be removed from the socket-outlet before commencing cleaning of the machine or undertaking maintenance operations.
- The power supply cord is to be regularly inspected for signs of damage. If the power supply cord is damaged, it has to be replaced.
- **Do not** use where hazardous dust is present.
- **Do not** use in an explosive atmosphere.
- Take care when using a machine near the top of stairs to avoid overbalancing.

1.2 Guidelines for the operator

- Operators must be fully trained in the use of the machine in accordance with these instructions, able to perform user maintenance and the correct selection of accessories, i.e. brushes and pads etc.
- Operators should be physically capable to manoeuvre, transport and operate the machines.
- Operators should be able to recognise unusual operation of the machine and report any problems.
- Let the machine do the work. Grip the handle as lightly as possible.
- Stand with feet slightly apart to maintain good balance. Avoid twisting the body more than 45 degrees.
- Wear suitable footwear to avoid slipping.
- Wear suitable clothing to keep dry and warm.
- Where possible implement job rotation and adequate rest periods to avoid continuous use of the same muscles.
- **Do not** smoke when using the machine.
- **CAUTION** - This machine is for dry use only and should not be used or stored outdoors in wet conditions.

1.3 Transporting the machine

CAUTION - THIS MACHINE IS HEAVY
Do not attempt to lift the machine without

assistance. Incorrect lifting techniques may result in personal injury.

When transporting the machine the handle should be locked in the upright position.

1.4 Electrical connection

Before connecting the machine to the power supply, check that your supply voltage corresponds with that marked on the rating label on the handle of the machine.

The supply cord is fitted with a non-rewireable plug containing a 13 amp fuse. Should the fuse require replacement it must only be replaced by a 13 amp fuse conforming to BS1362, and the fuse cover **must** be refitted. If the fuse cover is lost the plug **must not** be used until the correct replacement cover is fitted.

IMPORTANT - If the supply cord is damaged, it must only be replaced by a special cord available from the manufacturer or an authorised service agent.

WARNING -THIS APPLIANCE MUST BE EARTHED

2 Preparing for use

2.1 Fitting the handle

1. Carefully remove the machine base and handle from their respective packaging.
2. Check that the following items are present with the base and remove them from their transit position.
 - M8 x 70 Hex.Hd. bolt (3)
 - M8 Nyloc Hex. nut (3)
 - M8 Plain washer (6)
 - 13mm A/F Spanner (2)
3. Take handle and check that 'O' rings on either side of the knuckle pivot are seated in their grooves, and that the datum mark on the pivot gear is aligned with the handle tube. If this is not the case, raise the handle adjustment lever and rotate the pivot gear until the datum mark is in line with the handle tube, and release the adjustment lever.
4. With the handle held vertically and cable winder to the rear, lower pivot between the raised flanges on the machine base.
5. Align holes in pivot with those on base and fit the three M8 bolts, washers and nuts, and tighten using the spanners supplied (Fig.1).
6. Connect supply lead from handle to socket on motor housing.

3 Controls

The operating controls for all models are located on the handle (Fig. 2).

1 - Switch trigger, left hand

Used to switch motor ON and OFF. Can only be operated with handle in working position, and if left hand interlock button (2) has previously been depressed.

2 - Interlock button, left hand

This must be depressed initially to enable left hand switch trigger to switch motor on.

3 - Switch trigger, right hand

Used to switch motor ON and OFF. Can only be operated with handle in working position, and if right hand interlock button (4) has previously been depressed.

4 - Interlock button, right hand

This must be depressed initially to enable right hand switch trigger to switch motor on.

5 - Handle adjustment lever

Used to adjust handle to comfortable working height. Note for safety reasons the machine cannot be operated unless the handle is moved to a working height.

6 - Solution feed lever

Operates flow valve in solution tank (if fitted).

- Pull lever to release solution.
- Release lever to stop flow.

7 - Socket connector

Connection point for vacuum unit lead.

Drive plate

Attachment point for brush or drive disc and pad.

Cable winder

Used to hold supply cord in place on handle when machine is not in use. Can be turned to enable quick release of cord.

Motor overload cut-out

Protects motor from overload and possible damage. The cut-out will reset automatically when cooled sufficiently, enabling the motor to restart.

Neon indicator (on handle)

Lights when the machine is connected to the power supply.

3.1 Fitting a brush or drive disc

Always ensure machine is unplugged before fitting or removing parts.

- Adjust handle to the fully upright position.
- Pull handle down until it rests on the floor and the brush guard is raised.
- Fit the brush/drive disc onto the drive plate and rotate it anti-clockwise until secure.
- Return machine to its normal upright position in readiness for starting.

3.2 Adjusting the handle height

Select the most comfortable handle height using the adjustment lever as previously described (see Controls) and lock in position.

4 Operation

The normal movement of a machine in use is from side to side across the floor. This is achieved automatically by raising or lowering the handle whilst it is engaged in the normal working position.

Lowering the handle thereby increasing the pressure at the rear of the brush/drive disc, moves the machine to the left. Raising the handle increasing the pressure on the front of the brush/drive disc moves the machine to the right.

Effective cleaning and polishing is achieved by moving the machine in a backwards direction.

Do not leave the machine standing on a brush or pad when not in use.

4.1 Starting the machine

- Fully unwind the supply cord from the handle and plug into a convenient socket outlet. The neon indicator on the handle should light showing that power is available.
- With the handle set at a convenient working height and with both left and right hands on the handle, depress both interlock buttons with the thumbs and squeeze both switch triggers to start the machine (Fig.3).

- Once the machine has started the interlock buttons should be released.
- To stop the machine release both switch triggers.

4.2 Orbis 452/400 dual speed

The speed selector switch on the dual speed model is located on the motor housing. Ensure machine is switched off before changing the speed setting.

4.3 Polishing

- Fit polishing brush or drive disc and pad suitable for the speed of the machine and the surface to be polished. (see **Accessories**).
- Apply polish to the floor in accordance with the manufacturers instructions.
- **Do not** keep the machine rotating on one spot for more than 3 seconds, as this could cause overheating and damage the floor surface.

4.4 Scrubbing and Shampooing

- For scrubbing or shampooing the solution tank must be fitted as described (see **Fitting the solution tank**).
- Fit a brush or drive disc and pad suitable for the surface to be cleaned. (see **Accessories**).
- **WARNING - This appliance has been designed for use with the brushes specified by the manufacturer. The fitting of other brushes may affect its safety.**
- Fill the solution tank with water and an appropriate measure of detergent.
- **IMPORTANT** - Use only cleaning agents suitable for automatic machines i.e. low foaming, and follow the chemical manufacturers' directions regarding use, handling, disposal and health and safety provisions.
- Before starting the machine release a liberal amount of cleaning solution from the tank to the floor. The flow of solution from the tank is controlled by moving the left hand lever. Releasing the lever stops the flow.
- Proceed to operate the machine in the normal manner, releasing more cleaning solution from time to time as required.
- **Do not** keep the machine rotating on one spot for more than 3 seconds, as this could cause overheating and damage the floor surface.
- Dirty water should not be allowed to accumulate on the floor, it should be removed to prevent dirt from settling. We suggest using a suction dryer for this purpose.
- When scrubbing/shampooing is complete, unplug the machine from the power supply, empty the solution tank and clean and dry the machine.
- **IMPORTANT** - Dispose of unused cleaning solution in accordance with the manufacturer's directions.

4.5 Fitting the solution tank

NOTE - The solution tank is supplied as an accessory item, complete with attachments and fitting instructions.

- Move the handle to the upright position and clamp the tank support bracket to the handle tube in the specified position (Fig.4). (Refer to the instructions supplied with the tank).
- Take the solution tank and pass the ring on the tank chain over the left hand operating lever and locate the ring in the inside slot on the top of the lever. Rest the solution tank on the support bracket with the handle tube in the groove on the back of the tank.
- To secure the tank in position, engage the locking bar on the back of the tank.
- Adjust the length of the chain by means of the screw and nut adjuster to ensure there is no tension on the chain when the flow control lever is not being used.
- Take the plastic tube supplied and push rigid end of tube into the connector on the underside of the solution tank, and the other end onto the tube at the rear of the motor housing. The tank connector is of the sealed lock-in type once the tube is connected. To release, press down on the orange collar of the connector with the finger tips and pull out tube.

4.6 Removing the solution tank

- Pull off plastic tube from machine base.
- Raise locking bar on back of tank.
- Lift off tank and detach chain ring from lever.

4.7 The vacuum unit

NOTE - The vacuum unit and vacuum skirt are supplied as accessory items, complete with attachments and fitting instructions. The vacuum unit combined with the vacuum skirt provides full dust control, eliminating the need to pre-dust or post dust the floor. The unit is designed to fit readily to all Orbis models.

IMPORTANT - The vacuum unit is NOT suitable for any form of wet cleaning.

4.8 Fitting the vacuum skirt

- Unplug and lay the machine down with the handlebar resting on the floor. Remove the brush or drive disc.
- Stretch and fit the rubber buffer around the brush guard.
- The flexible section of the skirt has a special spring sewn into the fabric. Fit this spring section into the groove in the rubber buffer.
- The spring is a reasonably tight fit to prevent accidental movement in use and therefore must be pulled onto the buffer by stretching.
- With the skirt on the buffer it can be moved in its groove to bring the hose connector to the rear, ensuring the base moulding lies in the cut-out

provided in the outer ring of the skirt, enabling free movement when in use (Fig.5).

4.9 Fitting the vacuum unit

- Stand machine upright, and clamp the vacuum unit support bracket to the handle tube in the specified position. (Refer to the instructions supplied with the unit).
- Rest the vacuum unit on the support bracket with the control switch to the rear, and engage the locking bar on the back of the unit to secure it in position.
- Push the flexible hose on to the vacuum unit and skirt.
- Plug the electrical lead from the vacuum unit into the socket situated on the left side of the handle moulding.
- The machine is now ready for use. The switch controlling the vacuum unit is located on the back of the unit. The OFF position is marked O.

4.10 Using the vacuum unit

IMPORTANT - For maximum suction the sliding shutter on the top of the unit must be closed.

- Dust collected by the unit is contained within the filter bag located behind the front cover.
- To replace the filter bag, switch off vacuum unit, release front cover catch and lift off cover.
- Remove and dispose of used bag. Fit new bag and replace front cover.

5. Storage

Always unplug and wipe down and dry the machine after use. The machine should normally be stored with the handle in the fully upright position.

Wrap supply cord around the handlebar and cable winder ensuring that the plug is not trailing on the floor. Store the machine in a dry indoor area only.

Never store the machine with a pad fitted as this causes distortion, and results in instability during operation.

6. Maintenance

WARNING - Before undertaking maintenance operations or adjustments switch off machine and unplug from the electricity supply.

The machine requires minimum maintenance apart from the following checks by the operator.

- **Supply cord** - Regularly inspect sheath, plug and cord anchorage for damage or loose connection.
- **Solution tank** - Check water flow, if restricted inspect hoses and tubes for blockage or kinks. Dismantle control valve to clean if necessary. Check switch interlock for correct operation.
- **Vacuum unit** - All dust bags must be changed regularly and hoses and connectors checked for blockage to avoid unsatisfactory results.
- **Motor overload cut-out** - All machines are fitted with an automatic reset motor overload cut-out.

The cut-out will operate to protect the motor from overheating by switching the machine off when there is excessive friction/resistance to the cleaning head on the floor. This is usually caused by the stickiness of the pad or floor. Turn the cleaning pad over or if both sides are dirty replace with a clean pad. It is not possible to obtain a good finish on the floor using a dirty pad. Should the cut-out operate it will reset automatically when the motor has cooled sufficiently, usually after 15 - 30 mins.

IMPORTANT - Should the machine fail to operate contact the supplier from whom you purchased the machine.

7 After sales service

Should you require after sales service please contact the supplier from whom you purchased the machine, who will arrange service. Repairs and servicing of Truvox products should only be performed by trained staff. Improper repairs can cause considerable dangers to the user.

8 Guarantee

Your product is guaranteed for two years from the date of purchase, or hire purchase, against defects in materials or workmanship during manufacture. Within the guarantee period we undertake to repair or replace free of charge to the purchaser, any part found to be defective, excluding brushes, drive discs and vacuum skirts.

No liability is accepted for damage caused by accident, misuse or neglect, or the fitting of other than genuine Truvox parts. Truvox International Limited cannot accept responsibility for repairs performed by persons other than a Truvox service engineer or an authorised service agent.

This guarantee is in addition to your statutory rights and does not affect your rights under the Supply of Goods (Implied Terms) Act 1973, or in general.

Truvox International Limited policy is one of continual product development and we reserve the right to alter specifications without prior notice.

9 Technical specification

All models : 230-240V ~ 50Hz, Class I construction. Enclosure to IPX4. Fitted with 15m supply cord type and 13A fused plug.

Model		45cm 200	45cm 400	45cm 2/400
Pad diameter	cm	43	43	43
Pad pressure	gm/cm ²	22	22	27,5
Speed	rpm	190	380	190/380
Motor rating	W	1100	1100	1100
Max. start current	A	12	25	12/25
Average running current	A	3	5	3/5
Weight	kg	32	32	40
Weight with vacuum unit and skirt	kg	38	38	46
Noise level (<i>see note 1</i>)	dB(A)	53	53	53
Noise level with vacuum unit	dB(A)	69	69	69
Handle vibration (<i>see note 2</i>)	m/s ²	< 2.5	< 2.5	< 2.5

- 1 - Noise levels measured at a distance of 1 metre from machine and 1,6 metres above floor, when scrubbing a hard floor. Measurements recorded using a hand held meter.
- 2 - Handle vibration does not exceed 2,5 m/s², when operating on any surface with brush or pads. Measurements recorded by an independent test laboratory.

CE Mark

This equipment is manufactured in accordance with European Safety Standards BS EN 60335-1 and BS EN 60335-2-67 and conforms with Directives 98/37/EC, 73/23/EEC and subsequent amendments.

10 Accessories

Item	Part No.	Usage
Polypropylene scrubbing brush	5-3431	wet scrubbing
Tynex scrubbing brush	5-3432	heavy duty wet scrubbing
Shampoo brush	5-3433	carpet cleaning
Bassine polishing brush	5-3434	polishing and spray cleaning
Gumati polishing brush	5-3435	polishing and spray cleaning
Standard drive disc <i>(see note 1)</i>	5-3436	retains cleaning pads
Flexi-drive disc	5-3437	retains cleaning pads
Solution tank	5-3438	scrubbing/shampooing
Anti-splash water skirt	5-3439	prevents splashing when wet scrubbing
Vacuum unit and hose	5-3440	dust extraction
Vacuum skirt	5-3441	dust extraction
Paper filter bags (10 pack)	2-3526	dust collection

1 - Suitable for 45cm 200 machine only.

IMPORTANT : Genuine accessories are only available from authorised Service Agents or Truvox Customer Services Dept.

11 Fault diagnosis

The following simple checks may be performed by the operator.

Trouble	Reason	Remedy
Machine not working, neon indicator not lit.	Lack of voltage/electrical supply.	Check fuse *, supply cord, plug and socket outlet.
Machine not working, neon indicator lit.	Switch interlock incorrectly operated. Motor overload cut-out operated.	Check operating procedure in instructions. Check brush/pad for good condition. Check correct liquid type & quantity. Check liquid dilution. Allow motor to cool.
Vacuum unit not working, neon indicator lit.	Motor overload cut-out operated.	Replace filter bag. Clear blocked hoses / connectors.
Machine wobbles or vibrates excessively.	Brush/pad worn or damaged. Pad not centered on drive disc. Pad dirty.	Renew brush/pad. Place pad in correct position. Clean the pad.

* If the fuse blows several times, the machine should be checked by an authorised Service Agent.