

**CAUTION – READ THESE INSTRUCTIONS BEFORE USING THE MACHINE**

## **User instructions**

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### **HM 55/100 and 55/400**

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## **Carpet Soil Extraction Machines**



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# IMPORTANT

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## BEFORE USE READ THESE INSTRUCTIONS AND RETAIN FOR FUTURE REFERENCE

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### 1. General information

The HM 55 litre range of upright carpet soil extraction machines are designed for the efficient cleaning of carpets and upholstery. They have been designed for the professional user to ensure long service life and safe operation.

We recommend that any user not familiar with carpet cleaning should read these user instructions fully before using the machine. If you have any queries please contact the supplier who you purchased the machine from or Truvox International on the contact details provided at the back.

These machines must only be used for the manufacturer's approved application. The HM 55 litre range is designed for the cleaning and removal of normal carpet soil. **Do not use** the machine where it is suspected that the carpet or upholstery contains health endangering dust or debris such as asbestos or chemical waste. If this is suspected **do not proceed**, contact your supervisor, supplier or Truvox International for advice.

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

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:  
**HM 55/100 and HM 55/400.**

#### 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.
- **Do not** operate switches or touch the mains plug with wet hands as this may cause electric shock.
- 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 must be regularly inspected for signs of damage.
- **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.
- **Do not** use where hazardous dust is present.
- **Do not** use in an explosive atmosphere.
- **Do not** pick up oil or other flammable material with the machine.
- 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.
- Operators should be physically capable to manoeuvre, transport and operate the machine.
- Operators should be able to recognise unusual operation of the machine and report any problems.
- 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** leave the machine running unattended.
- **Do not** allow children to crawl on carpets until thoroughly dry.
- Keep cleaning solutions away from children and pets at all times.
- **Do not** smoke when using the machine.
- **Do not** put any objects into openings. **Do not** use with any opening blocked: keep free of duct, lint, hair, or anything that may reduce air flow.
- **CAUTION** - This machine is for indoor use only and should not be used or stored outdoors or in wet conditions.
- **WARNING** – Should water or foam emit from the machine exhaust **switch off immediately** and refer to instructions for **Using the Machine**.

#### 1.3 Transporting the machine

When transporting the machine ensure that all components, tanks and removable parts are securely fastened, and that the supply cord and plug are not trailing. Detach hose and wand from machine for ease of carriage.

**Do not** lift or transport the machine whilst containing liquid as this will add considerably to the weight.

Take extreme care when moving the machine up or down steps or stairs.

**CAUTION** – Incorrect lifting techniques may result in personal injury. We advise that the manual handling regulations are followed.

#### 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 rear of the machine.

#### UK only

- The supply cord is fitted with a non rewirable 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.

Should an extension cord be used, ensure cord rating is adequate for the equipment. Do not use extension cord in coiled condition as this could result in overheating of the cord.

## 2 Controls



- 1 Vacuum
- 2 Vacuum
- 3 Pump
- 4 Heater (HM 55/400 model only)

### 3 Preparing the machine

- Fill the fresh water solution tank with water and approved carpet cleaning chemical to a maximum of 30 litres (Fig 1). Warm water can be used to aid cleaning however this can increase the risk of colour fastness and carpets to shrink.
- When inserting the power cord ensure that it is quarter turned clockwise to ensure it is locked in place.

**NOTE:** Ensure chemical is diluted correctly according to instructions on container.

Fig 1



## 4 Operation

### 4.1 Priming and starting the machine

HM 55/100

- Connect the solution and vacuum hoses to the machine and the other end to either the carpet or upholstery wand / tool.
- Switch on the pump and one by one the vacuum switches to begin operation.

HM 55/400

- Connect the priming hose into the solution outlet and the other end into the solution tank.
- Switch on the heater (if required) and pump on to circulate the solution to remove air from system. Let the heater heat up for approximately 3 to 5 minutes.

**NOTE:** When the heater is on, the orange indicator light on the switch panel will be lit.

- Remove the prime hose and connect the vacuum and solution hose to the machine and the other end to either the carpet or upholstery tool.
- Adjust the pressure gauge to the required level.
- Switch the vacuum switches on one by one to begin cleaning.

**NOTE:** use only one vacuum for more delicate fabrics and upholstery.

### 4.2 Using the machine

- Using the wand drag the head slowly over the carpet whilst at the same time squeezing the solution lever thus releasing the spray. Repeat using overlapping strokes. There is no need to apply downward pressure to the wand as no improvement in performance is obtained.
- For best results, clean an area approx. 1 metre × 1 metre as above, and then go over the same area with only the vacuum running, and not releasing any solution. Proceed to the next area.
- The machine should be switched off periodically to check there is no excess foam in the recovery tank. If foam is present, either add defoamer or if using an all in one product, empty the recovery tank, rinse out and continue, checking regularly for foam build up.

- When solution spray ceases the solution tank is empty. Switch off the machine, empty the recovery tank and refill the solution tank.

**IMPORTANT** – Ensure recovery tank is emptied whenever solution tank is filled.

**IMPORTANT** – Do not run the pump motor when the solution tank is empty, as this will damage the motor.

**IMPORTANT** – Should solution seep from the drain hose cap, stop work immediately and drain recovery tank.

#### 4.3 Cleaning Carpet

**Colour fastness** - Before using cleaning solution or pre-spotter, test carpet for colour fastness on an inconspicuous area. Apply solution to a small piece of clean white material or tissue, and then rub on carpet vigorously. Excessive amounts of dye showing on the material indicate that the colours are not fast, and the carpet should not be wet cleaned. Please note temperature of cleaning solution will also affect colour fastness.

- Move furniture around to give a clear working area. Cover bottoms of furniture legs where necessary (aluminium cooking foil is ideal). Pin up curtains and drapes.
- Vacuum carpet thoroughly to remove any residual dust or debris.
- Areas of heavy carpet soiling can be removed more easily if first treated with a concentrated cleaning solution or pre-spotting solution.
- Rate of cleaning will depend upon the thickness of the carpet and the degree of dirt in the area being cleaned.
- **Do not** over wet carpets. Carpets may shrink if they are over-wet or not properly fixed down.

#### 4.4 Cleaning Stairs

- **CAUTION** – when cleaning on stairs exercise great care to ensure that the machine is stable and cannot overbalance, possibly causing injury to either operator or third party. Use the upholstery tool for cleaning in place of the wand assembly.

#### 4.5 Cleaning Upholstery

This is done in the same way as carpet cleaning except using the upholstery tool in place of the wand assembly. Cleaning is achieved using a gentle dragging motion of the upholstery tool over the material.

- An inconspicuous area of the item to be cleaned should always be tested for colour fastness prior to cleaning. Should doubt exist as to the suitability of the fabric for wet cleaning, the chemical manufacturer should be consulted for advice.
- Loose cushions should be removed and cleaned separately.
- **Do not** over-wet upholstery.

### 5 When Cleaning is Finished

#### 5.1 Draining and Cleaning

- When the recovery tank is full, empty by using the drain hose at the rear of machine (Fig 2). If a bucket is used to empty the recovery tank, do not use the same bucket to fill the solution tank as this can result in putting dirt and grit into the solution line that can block filters, orifices, and generally degrade the solution line system (do not reuse solution). Take care if using a bucket to empty the machine. Stop flow before bucket overflows. Empty bucket and repeat.

Fig 2



- To empty solution tank, detach the wand from the end of the vacuum hose and insert the vacuum hose into the solution tank. Turn the vacuum switches to the "on" position and transfer solution to recovery tank and dispose of as outlined above. Clean recovery filter at this time.

#### 5.2 Storage

- After use check that water tanks are empty and clean. Dry the machine as described below.
- We recommend running the vacuum motor for approx. 2 minutes after use to eliminate condensation within the machine body, thus ensuring the motor and particularly the bearings remain dry.
- Store machine with recovery tank lid removed and dump valve open (Fig 3). Deodoriser may be left in the tank to prevent unpleasant odours.

Fig 3



- Wrap supply cord around handle ensuring that plug is not trailing on the floor.
- Store extractor indoors in a dry area.
- Do not store in freezing temperatures.

### 5.3 Maintenance

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

To receive reliable service from this equipment, regular daily maintenance is a requirement. Cleaning carpet and upholstery is a very dirty environment for any equipment.

The following recommendations are offered.

- Keep the equipment clean, both inside and out.
- **Supply cord** - Regularly inspect sheath, plug and cord anchorage for damage or loose connection.
- **Solution tank** – check filter is clean and undamaged. A damaged filter must be replaced or damage to pump head and spray jet could occur.
- **Vacuum head** – Check and remove any debris or lint build-up from the head.
- **Spray jet** – Check jet for blockage and full spray pattern. Blow through jet to clean. **Do not** use a pin, as this could damage the jet.
- Lubricate brass quick disconnects and drain valves with a quality lubricant such as WD-40.
- Flush solution systems after use with clear, clean water. (A white vinegar solution may also be used). This will counter-act hard water and alkaline deposits and aid in keeping orifices clean.
- Do not allow fluid either in solution or waste tank to sit overnight. The unit should be emptied and cleaned daily.
- Clean the filter in the solution tank, the filters on the vacuum stack in vacuum tank and all lint filters in the inlet or vacuum tanks daily.
- Do not use the same bucket to fill solution tank that is used to remove waste from recovery tank.
- When the unit is not in use, leave the recovery tank lid open.
- At the end of each day, run the vacuum for 2 minutes with lid open and filter off.

**IMPORTANT** – All other servicing and repairs should only be performed by a Truvox engineer or Authorised Service Agent.

**IMPORTANT** – Should the machine fail to operate please refer to the fault diagnosis section in the back of this instruction manual. If the problem / remedy is not listed please contact Truvox Customer Service Department for rapid attention.

### 6 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.

Enquire about the Truvox low cost and efficient Maintenance Contract.

## 7 Guarantee

Your product is guaranteed for **one** year from the date of original purchase, or hire purchase, against defects in materials or workmanship during manufacture. Within the guarantee period we undertake at our discretion, to repair or replace free of charge to the purchaser, any part found to be defective, subject to the following conditions.

### CONDITIONS

1. Claims made under the terms of the guarantee must be supported by the original invoice/bill of sale issued at the time of sale, or the machine Serial Number.
2. For claims under this guarantee contact the supplier from whom you purchased the product who will arrange the appropriate action. Do not initially return the product as this could result in transit damage.
3. Neither Truvox nor its distributors shall be liable for any incidental or consequential loss.
4. This guarantee is governed by the laws of England.
5. This guarantee does not cover any of the following:
  - Periodic maintenance, and repair or replacement of parts due to normal wear and tear.

- Damage caused by accident, misuse or neglect, or the fitting of other than genuine Truvox parts.
- Defects in other than genuine Truvox parts, or repairs, modifications or adjustments performed by other than a Truvox service engineer or authorised service agent.
- Costs and risks of transport relating directly or indirectly to the guarantee of this product.
- Consumable items and wear parts such as drive belts and filters.

This guarantee does not affect your statutory rights, nor your rights against the supplier arising from their sales or purchase contract.

## 8 Waste Electrical & Electronic Equipment

Do not dispose of this device with unsorted waste. Improper disposal may be harmful to the environment and human health.

Please refer to your local waste authority for information on return and collection systems in your area.

## 9 Technical Specification

230 V ~ 50 Hz, Class I construction. Enclosure to IPX4. With 15m supply cord.

Model		HM 55/100	HM 55/400
<b>Code</b>		HM55/100	HM55/400
Voltage	v	230	230
Pump power	W	240	500
Pump Pressure	Bar / psi	6.8/100	27.6/400
Flow rate	l/min	6.8	3.8
Vac hose length	m	6	6
Vac motor	W	2 x 1200	2 x 1200
Water lift	mm	5400	5400
Solution tank capacity (max) *	litre	55	55
Recovery tank capacity (max) *	litre	45	45
Sound pressure level	dB(A)	86	86
In-line heater	W	N/A	3000
Size ( L x W x H)	cm	87 x 61 x 115	87 x 61 x 115
Cable length	m	15	15
Weight empty	kg	47	60.5
Warranty		1 year	1 year

Truvox International is a BSI Registered Company and our policy is one of continuous development. We reserve the right to change specifications without prior notification.

\* NOTE combined operational solution and recovery tank capacity 76 litres

## 10 Accessories and Cleaning Chemicals

Machine	Accessory	Part Number	Description
HM 55	Cleaning Wand Double Bend Single jet	20-0177-0000	Single brass tip low pressures up to 125 p.s.i. One piece stainless steel tube and head. Adjustable stainless steel handle.
	Cleaning Wand Double bend Double jet	20-0178-0000	Double brass tips for up to 400 p.s.i. One piece stainless steel tube and head with adjustable padded grip.
	Drain hose valve	02-3893-0000	PVC-U Compact ball valve that fits onto the drain hose and allows for easy emptying of the recovery tank.
HM 55/100	15m Low Pressure Hose	20-0176-0000	15m vac and hose assembly
	Upholstery tool	20-0179-0000	Clear plastic 89mm head for up to 120 p.s.i
HM 55/400	15m High pressure Hose	20-0181-0000	15m vac and hose assembly
	Stainless steel upholstery tool	20-0182-0000	Stainless steel 89mm head for up to 400 p.s.i., width.

Chemical	Bottle size	Bottles per case	Part No.	Description
HM Carpet Cleaning Solution	500ml	10	HMC01005	The quality way to beautify carpets and upholstery. Formulation lifts dirt and stains out of your carpets and helps prevent re-soiling. Leaves carpets and upholstery soft and fresh.
	1 litre	10	HMC01010	
	5 litre	4	HMC01050	
HM Pre-spotter	500ml trigger spray	10	HM003005	Formulated to help remove stubborn stains from carpet and upholstery

IMPORTANT: Genuine accessories and chemicals are only available from authorised Service Agents or the Truvox Customer Service Department.



## 11 Fault Diagnosis

Problem	Reason	Remedy
<b>ELECTRICAL SYSTEM</b>		
No electrical power	<ol style="list-style-type: none"> <li>1. Defective power cord.</li> <li>2. Fuse blown.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace</li> <li>2. Replace fuse. Unplug any equipment using the same circuit.</li> </ol>
Switch is turned on. Intermittent power to motor(s).	<ol style="list-style-type: none"> <li>1. Faulty electrical cable.</li> <li>2. Defective switches.</li> <li>3. Loose terminal</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace cable</li> <li>2. Contact service agent</li> <li>3. Contact service agent.</li> </ol>
<b>VACUUM SYSTEM</b>		
Vacuum motor on Little or no vacuum on wand head.	<ol style="list-style-type: none"> <li>1. Drain valve open</li> <li>2. Defective vacuum hose</li> <li>3. Vacuum disconnected</li> </ol>	<ol style="list-style-type: none"> <li>1. Close drain valve. Recovery tank lid must be closed</li> <li>2. Repair or replace hose. Remove kinks in vacuum hose.</li> <li>3. Open machine, connect vacuum hose to recovery tank.</li> </ol>
Not enough vacuum power at the machine.	<ol style="list-style-type: none"> <li>1. Damaged recovery tank lid.</li> <li>2. Lint clogging ball - type shutoff screen</li> <li>3. Vacuum hose connection between stand pipe and vacuum motor.</li> <li>4. Vacuum motor exhaust blocked.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace</li> <li>2. Remove screen. Clean out fibres and accumulated dirt.</li> <li>3. Check for leaks around clamps and cuffs (tighten). Replace damaged hose(s).</li> <li>4. Check air flow by removing hose from machine and feel the exhaust under the machine. Remove obstruction.</li> </ol>
Motor running and no vacuum. No exhaust from the blowport	<ol style="list-style-type: none"> <li>1. Faulty vacuum motor.</li> <li>2. Float valve blocked.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace.</li> <li>2. Clean water shutoff screen.</li> </ol>
Premature closing of ball type shutoff. Ball type shutoff failing to release after ball recovery tank is drained.	<ol style="list-style-type: none"> <li>1. Dirty or clogged shut off filter screen.</li> <li>2. Ball coated with detergent or other foreign material.</li> <li>3. Screen slightly out of round.</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove and clean screen.</li> <li>2. Remove and rinse ball with clean water.</li> <li>3. Bend screen by squeezing slightly by hand until there is an obvious space between ball and inside of screen.</li> </ol>
Foam/dirty solution - coming out of vacuum exhaust port.	<ol style="list-style-type: none"> <li>1. Foam from carpet by passing water shutoff.</li> <li>2. Elbow in vacuum tank is not positioned correctly</li> </ol>	<ol style="list-style-type: none"> <li>1. Use additional defoamer.</li> <li>2. The elbow should be pointed directly at the side wall of the tank away from the ball type shutoff.</li> </ol>
<b>SOLUTION SYSTEM</b>		
Pump motor on – no spray through jets.	<ol style="list-style-type: none"> <li>1. Clogged or faulty solution control valve.</li> <li>2. Clogged or faulty quick disconnect on housing.</li> <li>3. Punctured pump diaphragm.</li> <li>4. Clogged jets</li> </ol>	<ol style="list-style-type: none"> <li>1. Check intake on valve and remove lint or other foreign material.</li> <li>2. Depress plunger on solution hose against inside wall of solution tank. If solution is flowing at this point, the system is O.K. If no solution flows, check the quick disconnect for lint and other foreign matter.</li> <li>3. Replace with diaphragm repair kit.</li> <li>4. Clean jets on wand or tool.</li> </ol>
Uneven spray from jet. Spray weak or uneven.	<ol style="list-style-type: none"> <li>1. Clogged strainer in solution tank.</li> <li>2. Clogged jet.</li> </ol>	<ol style="list-style-type: none"> <li>1. Unscrew strainer and remove lint and any other foreign material from screen.</li> <li>2. Remove and clean.</li> </ol>
Leaking or stuck solution	<ol style="list-style-type: none"> <li>1. Foreign material in valve.</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove brass hex plug, clean</li> </ol>

valve.	<ol style="list-style-type: none"> <li>2. Loose brass hex nut.</li> <li>3. Valve worn or seals worn.</li> </ol>	<ol style="list-style-type: none"> <li>valve and replace.</li> <li>2. Reseal hex and plug.</li> <li>3. Replace worn parts with solution valve repair kit.</li> </ol>
Pump motor not working.	<ol style="list-style-type: none"> <li>1. Loose wiring</li> <li>2. Defective pump pressure switch</li> <li>3. Motor burnout</li> </ol>	<ol style="list-style-type: none"> <li>1. Check and replace connections</li> <li>2. Replace with new pressure switch assembly</li> <li>3. Replace pump motor</li> </ol>
Pump pressure low	<ol style="list-style-type: none"> <li>1. Clogged filters</li> <li>2. Punctured pump diaphragm.</li> <li>3. Defective rectifier or motor.</li> <li>4. Pump not primed</li> </ol>	<ol style="list-style-type: none"> <li>1. Unscrew in solution tank remove lint and any other foreign material from screen.</li> <li>2. Replace with diaphragm repair kit.</li> <li>3. Replace.</li> <li>4. Plug priming hose into solution connection and place end in solution tank. Run pump for 4 minutes</li> </ol>
Pump pressure varies.	<ol style="list-style-type: none"> <li>1. Worn carbon brushes.</li> <li>2. Defective pump pressure control switch.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace brushes.</li> <li>2. Replace.</li> </ol>

## 12 EC Declaration of Conformity

We Truvox International Ltd.

Of Third Avenue  
Millbrook  
Southampton  
SO15 0LE  
England

declare that the machinery

Make Carpet Soil Extraction Machines  
Type HM  
Model HM 55/100  
HM 55/400

Serial Number:

Year of Construction: 2008

has been manufactured using the following transposed harmonized European Standards and technical specifications.

BS EN 61000-6-2, BS EN 61000-6-3, BS EN 60335-1 and BS EN 60335-2-68, and is in conformity with:

the Machinery Directive 98/37/EEC and subsequent amendments,

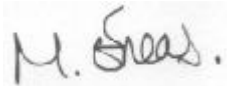
the Low Voltage Directive 73/23/EEC and subsequent amendments,

and the EMC Directive 89/336/EEC and subsequent amendments.

Signed in: SOUTHAMPTON, England

on the 1<sup>st</sup> day of March 2008

Signature



Name M. R. Eneas  
Position New Product Development Manager

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