

# Safety, Operations & Maint. Manual

## **Cleanfix® Raven** (RA 560 B)



This unit is intended for commercial use

This manual is furnished with each new **Raven (RA 560 B)**. It provides necessary operation and maintenance instructions.

**READ AND FOLLOW ALL INSTRUCTIONS, WARNINGS AND CAUTIONS BEFORE AND WHEN USING THIS AUTO-SCRUBBER. THE MACHINE MAY ONLY BE USED BY PERSONS WHO HAVE BEEN INSTRUCTED IN ITS HANDLING AND EXPRESSLY ENTRUSTED WITH THE OPERATION THEREOF.**

All information and specifications printed in this manual are current at the time of printing. However, because of Cleanfix' policy of continual product improvement, we reserve the right to make changes at any time without notice.

## WHEN THE MACHINE IS DELIVERED

This auto-scrubber will afford you many years of trouble-free operating satisfaction, provided it is given proper care. All parts are passed rigid quality control standards prior to their being assembled to the finished product. Prior to packaging, your auto-scrubber was again inspected for assurance of flawless assembly.

This auto-scrubber is protectively packed to prevent damage in shipment. When the machine is delivered carefully check the carton for signs of damage. Unpack the machine from the carton and inspect it for any possible damage.

Only a visual examination will reveal damage that may have occurred in transit. If damage is discovered, immediately notify the transportation company that delivered your auto-scrubber and request an inspection. As a shipper we are unable to report any claim for damage. You must origin any claim within 5 days of delivery. Be sure to keep the carton, packing inserts, packing list and carrier's receipt until the inspector has verified your claim. **CLEANFIX' LIABILITY CEASES WHEN THE SHIPMENT IS PICKED UP BY THE CARRIER.** Cleanfix will furnish any information needed to expedite the claim process.

## GENERAL PRECAUTIONS

FAILURE TO FOLLOW PRECAUTIONS AND WARNINGS MAY CAUSE SERIOUS INJURY TO THE OPERATOR AND CAUSE DAMAGE TO MACHINE, WHICH CAN VOID WARRANTY. TO REDUCE RISK OF FIRE, ELECTRIC SHOCK OR INJURY: READ ALL INSTRUCTIONS BEFORE AND WHEN USING THIS AUTO-SCRUBBER.

### WARNING

**To Avoid Electric Shock, Do Not Expose to Rain. Store Indoors.**

- Turn **OFF** all the controls before unplugging the batteries in the auto-scrubber.
- This is **NOT** a toy. Close attention is necessary when used around or near children.
- Use only as described in this safety/operations manual. Use only manufacturer's recommended attachments and accessories.
- **Do not** use this auto-scrubber with damaged cord or plug. If the auto-scrubber is not working as it should, because it has been dropped, damaged, left outdoors or dropped into water, contact authorized service center or factory.
- **Do not** handle the plugs of the auto-scrubber with wet hands.
- Store auto-scrubber indoors in a dry area. **Do not** expose to freezing temperatures.
- **Do not** put any objects into openings. **Do not** use with any opening blocked; keep free of dust, lint, hair and anything that may reduce air flow.
- Keep hair, loose clothing, fingers and all parts of body away from openings and moving parts.
- Any manner of working that represents a safety hazard must be refrained from.
- **Do not** use the auto-scrubber to pick up flammable or combustible liquids such as gasoline or use in areas where they may be present. **Do not** pick up anything that is burning or smoking, such as cigarettes, matches or hot ashes.
- **Do not** use where anesthetics or oxygen is used.
- Replace damaged or worn parts immediately with genuine original equipment parts to maintain safety and to protect your limited warranty.

## GENERAL PRECAUTIONS (continued)

- **Do not** pressure-wash the auto-scrubber, as it may cause a short circuit, damage to components and/or operator injury.
- **Never** drive over steps!
- **Never** drive over power cords! **Danger of electric shock!**
- In elevators always turn-off unit with key and lower brushes to prevent unit from moving.
- Whilst operating, caution is to be exercised with respect to third parties, especially children.
- Wear sturdy footwear.
- When cleaning and servicing the machine, changing parts or converting to a different function, turn off the drive and withdraw the key from the key switch.
- Besides the operating instructions and the national rules for safety in the work place, we also recommend that the unwritten rules of safe working should be respected. Using the auto scrubber on public roads, paths and any other outdoor surface is prohibited.

## TRANSPORT

- The applicable user and safety instructions/regulations, in particular for those pertaining to load-bearing capacity, must be observed when transporting the machine in elevators.
- Exercise care when moving the machine over thresholds and landings – this may damage wheels and the squeegee assembly. Please ensure that the brush unit and the squeegee assembly are raised.
- When transporting in elevators, their safety regulations and precautions are to be respected as well as the maximum load capacity of the elevator.

## GRADIENTS, STEPS AND THRESHOLDS

- **NEVER** drive auto-scrubber over steps.
- **Do not** use the auto-scrubber on inclines exceeding 4% unless higher inclines are approved in the operating instructions. Always use extreme caution when moving the auto-scrubber on ramps or inclines.
- **Do not** change directions on inclines.
- **Do not** park the auto-scrubber on inclines.
- Care should be taken when driving the machine over thresholds or sills as damage may occur to the brushes, wheels and squeegee assembly. It is advisable to lift the brushes and the squeegee assembly.

## CLEANING CHEMICALS AND HAZARDOUS DUST/LIQUID

- Attention must be paid to the manufacturer's safety instructions when using cleaning and care chemicals. Wear safety glasses and clothing if necessary.
- The danger of using easily flammable, toxic, health-damaging, caustic or irritating substances is expressly pointed out.
- Do not use the auto-scrubber for surfaces that can release dust and liquids that are hazardous to health.
- Only use low foaming and non-inflammable cleaning agents, which do not include hazardous components.

## GENERAL PRECAUTIONS (continued)

### SAFETY INSTRUCTIONS FOR BATTERY-OPERATED MACHINES

- **Observe** the safety and accident prevention regulations pertaining to the handling, installation and maintenance of batteries.
- **Observe** the operating and handling instructions of the battery manufacturer.
- Before charging, check the battery cables and the charger cable and replace them if necessary.
- Smoking is **strictly prohibited** when charging batteries.
- Avoid open flames, flying sparks and glowing objects.
- Keep the room well ventilated in which machine/batteries are charged. Highly explosive toxic gas is generated when the batteries are being charged.
- Open all cavities, covers, hoods, etc. in which the explosive gas can gather.
- Open recovery tank.
- Fire fighting/prevention equipment must be easy to access.
- Drinking and eating is **prohibited** in rooms where charging takes place.
- Wash hands thoroughly immediately after working on the batteries.
- **Do not** touch or pour away battery acid.
- **Risk of short circuit or fire! Do not** place metal objects on the batteries.

**SAVE THESE INSTRUCTIONS!**

## CARE OF AUTO-SCRUBBER

This auto-scrubber is designed to be safe when used to perform cleaning functions as specified. Should damage occur to electrical parts, the unit should **NOT** be used until the damage is repaired by the manufacturer or an authorized service center. This will avoid further damage to the auto-scrubber or injury to the user.

These instructions are for your protection and information.

**PLEASE READ CAREFULLY!** Failure to follow instructions or precautions could result in injury or damage to the user and/or the auto-scrubber.

## INTENDED USE

- **Only use** for wet cleaning of water-resistant floor coverings in building interiors.
- **Do not** use the auto-scrubber on public roadways.
- The autoscrubber is not to be used at temperatures **under 32°F (0°C)**.
- The water temperature may not exceed 122°F (50°C).
- **Any other use is considered to be improper.** The manufacturer is not liable for any resulting damage; all risks are the responsibility of the user.
- The appropriate accident prevention rules, as well as other known regulations for health and safety in operation, must be respected.
- Use for intended purpose also includes adherence to the manufacturer's operating, service and maintenance regulations.
- Modifications made to the auto-scrubber by the user releases Cleanfix from all liability for resulting damage.
- Floor coverings must be checked for suitability for this cleaning method before using the auto-scrubber!
- Pay attention to surface pressure in case of point-elastic floors such as gymnasium floors. Check that the wheels will not damage the surface.
- Cleanfix does not accept liability for damage caused to the machine and floor covering being cleaned if wrong brush and chemicals have been used

## BEFORE USING THE AUTO-SCRUBBER

### QUICKGUIDE

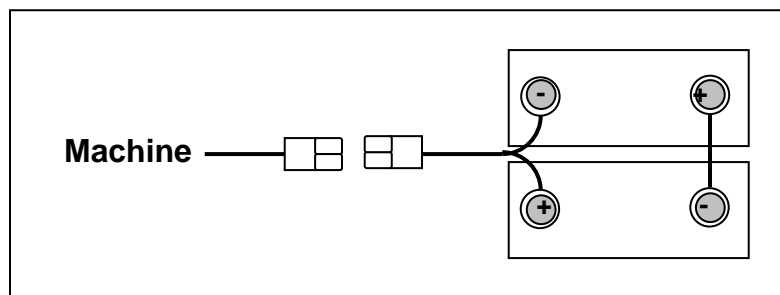
1. Check that the machine is in proper condition.
2. Remove obstacles, such as furniture etc. from the area to be cleaned. Large pieces can be removed to opposite end of the room from where you start cleaning.
3. All covers, hoods and lids must be correctly attached and closed. Make sure all switches are in the **OFF** position.
4. Fill the machine with clean water using a clean bucket or a hose attached to a water source.
5. Add the chemical required. Check the label for the correct dilution portions.
6. Before plugging the batteries in all switches must be in the **OFF** position. All cables and connectors must have proper protection from spray water.
7. Check all cables for damage and signs of aging at regular intervals. The auto-scrubber may only be used if the battery cables are in perfect condition.

### CHECK IF COMPLETE

- Machine
- Squeegee assembly
- Scrub brushes or pad driver
- Operations manual

### INSTALLING THE BATTERIES

- Open recovery tank by tilting sideways.
- Put in batteries with metal poles facing each other.
- Battery clamps are marked with either  $\oplus$  or  $\ominus$ . Connect  $\ominus$  clamp attached to black cable (coming from the machine) to the nearest  $\ominus$  pole on the batteries and tighten.
- Connect  $\oplus$  clamp attached to the red cable (coming from the machine) to the nearest  $\oplus$  pole on the batteries and tighten.
- Take the short, red jumper cable and connect the respective clamps ( $\oplus$  and  $\ominus$ ) to the remaining poles and tighten.
- Plug in red plug into machine plug.



### WARNING

**Metal parts in batteries and battery cells are always live. Exercise extreme caution when handling and installing batteries. Make sure that at no time a short circuit is created when installing the batteries.**

## BEFORE USING THE AUTO-SCRUBBER (cont.)

### CHARGING THE BATTERIES

- Turn machine off with the main switch and with the key.
- Empty recovery tank completely and tilt sideways.
- Remove charging plug from machine.
- Connect cable of charger with battery cable.
- Turn-on battery charger.

**When using gel batteries (maintenance free) the waste water tank can be left closed during the charging process. Using wet batteries (lead-acid batteries), the waste water tank must be kept tilted OPEN during the entire charging process.**

**ATTENTION! The manufacturer takes no responsibility when batteries spill occurs!**

### PREPARATIONS FOR WORK

Depending on the type of operation the machine must be equipped respectively with the correct brushes or pad drivers and pads.

- Fix squeegee assembly (A6) into holder for squeegee.
- Fix with the two locking levers (D2).
- Connect vacuum hose (D7) from the squeegee (A6) to the vacuum hose connection (D8) at the recovery tank.
- Lower the squeegee with lever (D5).
- Lower brushes (A4) by using the brush lever (D1).

The controls have universal symbols for the function they control.

- Fill the solution tank with clean water and add the chemical required for the specific task (Dilution rates will be on the label of the cleaning solution). The maximum capacity of the solution tank is 13 gallons (US).
- Set the solution flow rate with the buttons (B3, B4, B5)

## FUNCTIONAL PARTS AND ACCESSORIES

### A. General view

1. Controls/handle
2. Recovery tank
3. Solution tank
4. Brush housing
5. Drive wheel
6. Squeegee assembly

### B. Controls

1. Vacuum switch
2. Brush switch
3. Solution switch, standard volume on/off
4. Switch for more solution flow
5. Switch for less solution flow
6. Key switch
7. Speed knob
8. Operating LED

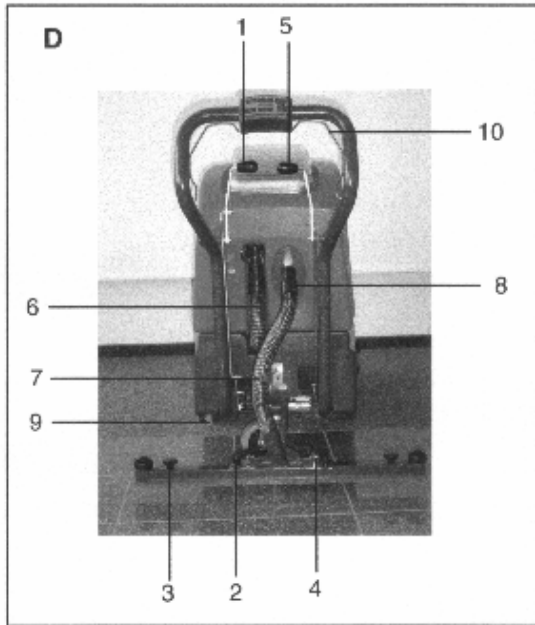
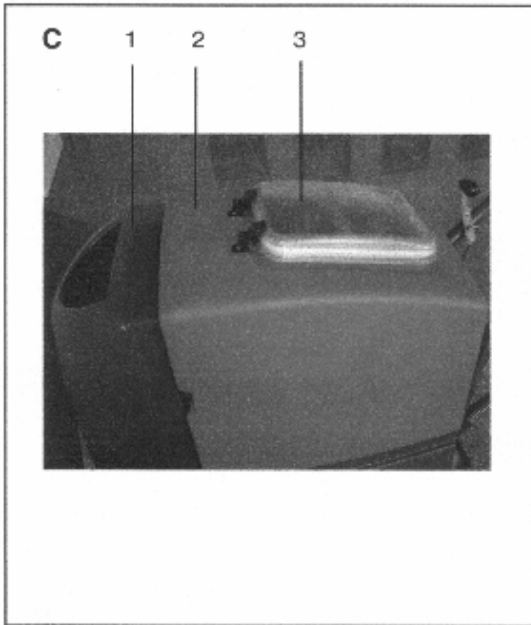
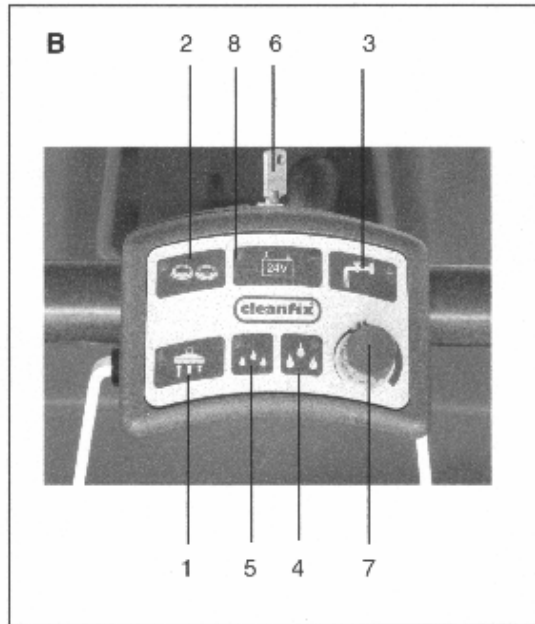
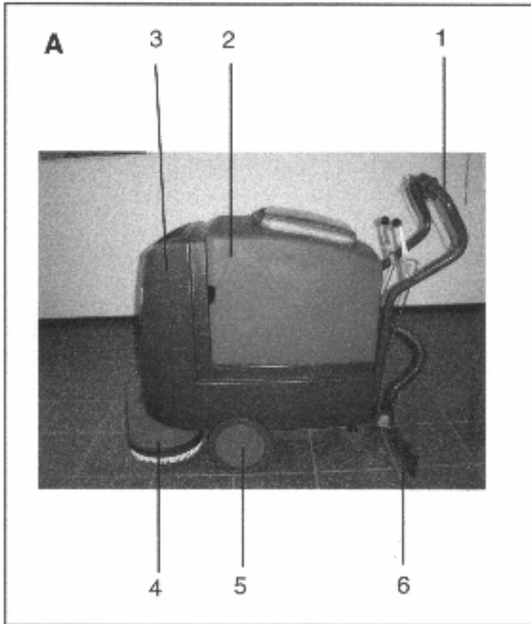
### C. Solution and recovery tank

1. Solution tank
2. Recovery tank
3. Dome and vacuum intake filter

### D. Rear view

1. Lever to raise/lower brushes
2. Squeegee locking lever
3. Clamp for fixation of squeegee
4. Screw for squeegee angle adjustment
5. Lever to raise/lower squeegee assembly
6. Recovery tank discharge hose
7. Vacuum hose
8. Vacuum hose connection
9. Solution tank discharge
10. Drive/Dead-man lever

# FUNCTIONAL PARTS AND ACCESSORIES



## OPERATING THE AUTO-SCRUBBER

Turn on the different applications in the following order by pressing switches:

1. Turn key (B6)
2. Push button for solution (B3), if necessary adjust water flow (B4, B5)
3. Push button for vacuum motor (B1)
4. Push button for brush operation (B2)
5. Pull the drive/dead man switch (D10)

Drive the first 10 to 15 feet to test the water flow as well as the chosen brushes or pads and make sure that these meet the requirements to properly clean the floor.

At the same time check the vacuuming performance. If necessary adjust the squeegee

angle by using the squeegee angle adjustment screw (D4).

To adjust the drive speed turn the speed knob (B7). For faster operation turn clockwise, for slower operation turn counter-clockwise.

### IMPORTANT INFORMATION

- When the machine is not being operated, immediately turn off the brush in order to avoid damage to floor surface.
- If either liquid or foam leaks from machine unintentionally, immediately switch off the machine. Add defoamer to prevent foam entering the tube of the vacuum motor.
- Check filling level regularly and empty recovered water in time. Make sure enough water is dispensed whilst running the brushes or pads as these should never be run dry.
- Use brushes, pads and accessories as described in this operations manual. Failure to comply with this can be hazardous.
- When leaving the machine unattended, disconnect cord/battery plug and safeguard machine from unauthorized use.
- The working place of the operator is behind the handle of the machine.

### ATTACHING AND REMOVING BRUSH OR PAD DRIVER

- Lift the brush housing (A4) with the brush lever (D1).
- Remove the brush or the padholder with a quick turn.
- The brushes or pad driver are attached by holding them under the brush housing and then turning them clockwise or counter-clockwise into the holding brackets.

### FINISHING THE JOB

- Turn off the solution flow (B3).
- Turn off brushes (B2).
- Raise brushes (A4) with lever (D1).
- Turn off vacuum motor (B1).
- Raise squeegee with lever (D5).
- Remove brushes or pads and pad driver and rinse thoroughly with clean water.
- Rinse recovery tank with clean water.
- Clean below the machine with a damp cloth.
- Clean entire unit with a damp cloth. Remove squeegee and clean thoroughly.



## APPLICATIONS AND WORKING METHODS

<b>1. Working methods</b>	Effective cleaning is achieved by following a few guidelines, combined with your own experience in particular areas.	Correct use of special accessories will increase the cleaning effect. Some basic instructions can be found below.
<b>2. Applications</b>	The machine is suitable for: <ul style="list-style-type: none"> <li>• Deep cleaning of water-resistant hard floors surfaces</li> <li>• Daily cleaning of non scratch-proof hard floor surfaces</li> <li>• Daily maintenance cleaning, normal soiled floors</li> <li>• Floor stripping. Removal of dirt layers and protective films.</li> </ul> <p><b>Warning :</b> Maximum temperature for solution <b>122°F / 50°C !</b></p>	
<b>3. Accessories</b>	<ul style="list-style-type: none"> <li>• Scrub brush</li> <li>• Pad driver &amp; pad white, red, blue, black, etc.</li> <li>• Nylon-grid brush</li> <li>• Battery (lead-acid or gel)</li> <li>• Battery charger</li> </ul>	

## FREEZING TEMPERATURE PRE-CAUTIONS

If it becomes necessary to store or transport the unit where temperatures could drop below freezing, 32° F, the solution lines and valves must be protected from freezing with a solution of automotive radiator anti-freeze.

1. Mix ½ gallon of water and ½ gallon of anti-freeze and pour into the solution tank.

2. Switch on machine with key switch (B6) and turn on solution pump (B3). Let pump run until anti-freeze is coming out of machine.
3. To prevent damage to unit, allow the auto-scrubber to reach room temperature before using. The anti-freeze **MUST** be flushed out of the solution system with clean water; otherwise, the floor may be damaged.

## STORAGE OF AUTO-SCRUBBER

This auto-scrubber should be stored in an upright position. Objects should not be stored or stacked on top of unit.

Always store the auto-scrubber in a dry, protected area at temperatures above freezing.

This unit should not be stored in vehicles or areas where extreme heat or cold occurs.

## MAINTENANCE AND REPAIR

- Only do maintenance work described in this manual.
- Always use original spare parts.
- **WARNING!** Do not make any technical alterations to auto-scrubber. This can put your safety at risk and will void the warranty.
- Always contact authorized service center or factory for other maintenance and repair work.

### WARNING

**Always disconnect cables before cleaning and maintaining the auto-scrubber.**

	After every use	Weekly	When required
Thoroughly flush solution lines with clean water	•		
Rinse solution and recovery tank with clean water	•		
Clean solution filter		•	
Clean recovery tank filter	•		
Clean squeegee assembly	•		
Inspect for wear; replace if necessary	•		
Replace brushes / pad drivers			•
Check battery	•		
Charge battery			•

If you maintain the machine carefully it will stay in good working condition for a long period of time. Regularly check the machine for any wear and tear.

- Before repairing machine disconnect any chargers attached and unplug batteries from machine.
- Repairs and any type of service may only be done by an authorized service center or factory personnel.

## INSTRUCTIONS FOR GEL AND LEAD-ACID BATTERIES

- Only carry out work on batteries according to battery manufacturer's instructions.
- Wear safety glasses and clothing when working on batteries.
- Observe the accident prevention rules and regulations.
- Smoking is strictly prohibited.
- Keep battery away from open flames, glowing objects and sparks, otherwise there is a danger of explosion and fire.
- Immediately rinse any acid splashed into eyes or onto skin out or off with plenty of clean water. Then immediately consult a physician.
- Wash out clothing contaminated with acid with water.
- Avoid short circuits! Explosion and fire hazard!
- WARNING! Metal parts in the battery cells are always live. Therefore, do not put/store objects or tools on the battery.
- Electrolyte is extremely caustic. Contact with the electrolyte is not possible during normal operation.
- In the event of destruction of the casing of maintenance-free gel batteries, the bound electrolyte released is just as caustic as the liquid electrolyte.
- Acid and/or batteries filled with acid must not be handled by children.
- Use only approved lifting and transport equipment.
- Lifting hooks must not cause damage to cells, connectors or connection cords/cables.

### 1. Preparing for operation

- The batteries are to be checked to ensure proper mechanical condition.
- Battery connectors and charging plugs are to be connected to the proper terminals, as otherwise the batteries and the charging set may be destroyed.
- The connection with the battery connectors of the machine and/or the charger may take place only with the key switch and/or the charger switch off.

#### **Maintenance-free, sealed gel batteries:**

The batteries are to be recharged before being put into operation.

#### **Lead-acid batteries:**

For reasons of durability unfilled, pre-charged lead-acid batteries should be charged immediately before insertion. Observe the battery manufacturer's instructions when doing so.

### 2. Discharging

- The vent openings in the machine must not be closed or covered.
- Opening or closing of electrical connections (e.g. plugs, connectors, etc.) may take place only in the currentless state with the main switches off.
- In order to reach an optimum service life, discharges are permissible only up to the point at which a certain residual capacity is reached.
- In order to avoid total discharge, the controls of the machine contain an automatic switch-off device which switches off the main feed line in time when cut-off voltage is reached and signals this by means of a red warning light. Discharged batteries are to be charged immediately and must not be left in the discharged state. This also applies after partial discharging.

### 3. Charging

#### **WARNING!**

**Only use chargers approved by Cleanfix for charging.**

## INSTRUCTIONS FOR GEL AND LEAD-ACID BATTERIES (cont.)

### 4. Maintenance

	Maintenance-free, sealed gel batteries	Lead-acid batteries
<b>Daily</b>	– Charge battery/batteries after every discharge or partial discharge	
<b>Weekly</b>	– Visual inspection for dirt and mechanical damage. – Grease terminals with terminal grease (Vaseline) and check to ensure firm fit.	
	– No topping with water is required for the entire service life.	– The water consumption is influenced by the operating conditions and the charger used. The water level should not fall below the minimum mark. If necessary, top-up with distilled water after charging.

### 5. Care

- Batteries are to be kept clean and dry at all times in order to avoid leak currents and sparking.
- For cleaning, remove batteries, wear safety glasses and protective clothing. Select the place of installation so that dirty water produced during cleaning is channeled to a suitable waste water treatment plant.
- The cell plugs must not be unscrewed.
- The plastic parts of the batteries may only be cleaned with water or cleaning cloths soaked in water without additives. After cleaning, the surface of the batteries is to be dried (compressed air, cleaning cloth).

### 6. Storage

- If batteries are taken out of service for any length of time, they are to be stored fully charged in a frost-free room.
- Due to the batteries' spontaneous discharging, recharging needs to be done at regular intervals.

#### **Maintenance-free, sealed gel batteries:**

Gel batteries are to be recharged at quarterly intervals.

#### **Lead-acid batteries:**

Lead-acid batteries are to be recharged at least once a month.

### 7. Faults

If faults are found, the customer service staff must be informed promptly.

### 8. Disposal

Old batteries showing recycling symbols are re-usable commercial goods and must be channeled to the recycling process.

All other batteries are to be disposed of as hazardous waste in accordance with existing regulations.

### 9. Warranty

Failure to comply with the operating and handling instructions, carrying out repairs using non-original spare parts and attempts to carry out the repairs by the user lead to a loss of the right to make claims under the warranty.

## TROUBLESHOOTING

### WARNING

**Service and repairs should only be performed by authorized personnel.**

**Symptom: Machine does not run! No power to the machine!**

**Problem:** Batteries not correctly installed in machine.

**Solution:** *Install batteries correctly in machine. Follow instructions give above (see page 8 + 11).*

**Problem:** Internal fuse or FI protection switch tripped.

**Solution:** *Check internal fuse and FI protection switch.*

**Problem:** Power supply interrupted.

**Solution:** *Have power supply checked by authorized technician.*

**Problem:** Frayed cables, damaged plug or loose internal wiring.

**Solution:** *Have an authorized service technician check cord and replace if necessary. Have an authorized service technician open switch panel and check for loose wire connection.*

**Problem:** Brush motor protection switch tripped.

**Solution:** *Allow motor to cool, press motor protection switch pushbutton, put less clean water into the tank.*

**Problem:** Discharge signal transmitter not activated.

**Solution:** *Charge batteries.*

**Symptom: Insufficient vacuuming power! Loss of vacuum!**

**Problem:** Tank cover/dome not properly seated or gasket on dome damaged/worn out.

**Solution:** *Reseat tank cover correctly or replace damaged gasket.*

**Problem:** Vacuum hose and squeegee assembly is clogged up with dirt, or hose is not correctly inserted into squeegee assembly.

**Solution:** *Remove dirt and re-attach vacuum hose.*

**Problem:** Filter in recovery tank is clogged up.

**Solution:** *Clean filter with clean water.*

**Problem:** Recovery tank drain hose not properly closed.

**Solution:** *Close properly.*

**Problem:** Wrong angle of squeegee assembly.

**Solution:** *Adjust angle of squeegee assembly.*

**Problem:** Defective vacuum motor.

**Solution:** *Have an authorized service technician replace vacuum motor.*

**Symptom: Poor cleaning performance!**

**Problem:** Worn brush or pads.

**Solution:** *Replace brush or pads.*

**Problem:** Improper chemical for cleaning job or improper dilution.

**Solution:** *Change chemical or adjust dilution.*

## TROUBLESHOOTING (cont.)

**Symptom: Motors (vacuum, brush & pump) will not run!**

Problem: Faulty **ON/OFF** switch.

*Solution: Have an authorized service technician replace switch or switches.*

Problem: Loose wiring.

*Solution: Have an authorized service technician trace and repair.*

Problem: Faulty motor.

*Solution: Have an authorized service technician replace motor.*

**Symptom: Little or no solution flow.**

Problem: Solution lines blocked.

*Solution: Flush out solution tank and lines with clean water.*

Problem: Solution tank filter clogged.

*Solution: Remove cover of solution line filter and clean filter screen.*

Problem: Solution tank supply hoses kinked.

*Solution: Inspect hoses.*

Problem: Solution tank empty.

*Solution: Refill solution tank.*

Problem: Water flow control incorrectly adjusted.

*Solution: Check switches for water flow.*

**Symptom: Squeegee assembly making stripes.**

Problem: Worn squeegee blades.

*Solution: Replace squeegee blades.*

Problem: Dirt clogged under squeegee blades.

*Solution: Clean out squeegee blades.*

Problem: Wrong angle of squeegee assembly.

*Solution: Adjust angle of squeegee blades.*

## TECHNICAL SPECIFICATIONS

Technical specifications  
 Technische Daten  
 Caracteristiques techniques  
 Caratteristiche tecniche

Technische gegevens  
 Tehniska data  
 Especificaciones técnicas  
 Dados Técnicos

Voltage Spannung Tension Tensione	Spanning Spänning Tensión Tensão	<b>24 Volt</b>
Brush motor Bürstenmotor Moteur de brosse Motore per le spazzole	Borstelmotor Borstmotor Motor cepillo Motor da escova	<b>550 Watts</b>
Theoretical cleaning capacity Theoretische Flächenleistung Surface possible à nettoyer Capacità di pulizia teorica	Theoretische reinigingscapaciteit Teoretisk ytkapacitet Rendimiento teórico Capacidade de limpeza teórica	<b>19,688 sq.ft./hr.</b> (based on solution flow rate of 0.2 gal./min.) <b>16,656 sq.ft./hr.</b> (based on solution flow rate of 0.55 gal./min.) <b>14,300 sq.ft./hr.</b> (based on solution flow rate of 0.9 gal./min.)
Vacuum Motor Saugmotor Moteur d'aspiration Motore d'aspirazione	Zuigmotor Sugmotor Motor aspiración Motor de aspiração	<b>400 Watts</b> <b>180 mbar</b> <b>26 l/s</b>
Capacity solution tank Inhalt Frischwassertank Contenance réservoir eau fraîche Portata del serbatoio dell'acqua pulita	Inhoud verswattentank Innehåll renvattentank Capacidad tanque de agua limpia Capacidade do reservatório de água limpa	<b>13 gal. / 50 lt</b>
Capacity recovery tank Inhalt Schmutzwassertank Contenance réservoir eau sale Portata del serbatoio dell'acqua sporca	Inhoud vuilwattentank Innehåll smutsvattentank Capacidad tanque de agua sucia Capacidade do reservatório de água suja	<b>13 gal. / 50 lt</b>
Squeegee width Saugbreite Largeur d'aspiration Larghezza d'aspirazione	Zuigbreedte Sugbredd Ancho de aspiración Largura da aspiração	<b>31.5 inches / 80 cm</b>
Overall length Gesamtlänge Longueur hors-tout Lunghezza complessiva	Totale lengte Total länge Longitud total Comprimento total	<b>51 inches / 130 cm</b>
Overall height Gesamthöhe Hauteur hors-tout Altezza complessiva	Totale hoogte Total höjd Altura total Altura total	<b>40 ½ inches / 103 cm</b>
Overall width (machine) Gesamtbreite (Gerät) Largeur hors-tout (machine) Larghezza complessiva (macchina)	Totale breedte (apparaat) Total bredd (maskin) Ancho total (máquina) Largura total (máquina)	<b>23 ½ inches / 60 cm</b>
Weight (complete) Gewicht Poids Peso	Gewicht Vikt Peso Peso	<b>485 lbs. / 226 kg</b>
Tellerbürsten Disc brushes Brosses plat Spazzola del disco	Schijfborstel Tallriksborste Cepillo propulsor Escova de disco	<b>Ø 11 inches / 28 cm</b>
Bürstendruck Brush pressure Pression des brosses Pressione della spazzola	Borsteldruk Borsttryck Presión cepillo Presão da escova	<b>73 lbs. / 33 kg</b>
Water quantity Wassermenge Quantité eau Quantità d'acqua	Waterhoeveelheid Vattenmängd Volumen de agua Quantidade de água	<b>0 – 1 gal./min</b>
Traction motor with differential Antriebsmotor mit Differential Moteur de traction avec différentielle Motore a trazione con il differenziale	Aandrijfmotor met differentieel Drivmotor med differential Tracción con diferencial Motor de accionamento com diferencial	

Subject to changes within the framework of technical progress

## New Machine Warranty



**1. Limited Warranty.** These terms and conditions of the New Machine Warranty are a material part of the agreement between Buyer and Cleanfix Cleaning Systems Inc., a New Jersey-based corporation (hereinafter "Cleanfix"), and supersede warranty terms and conditions in documentation submitted by Buyer to Cleanfix. Cleanfix warrants new machines of its manufacture against defects in material and workmanship under normal use and service to the original end-user purchaser. No person, agent, representative or distributor is authorized to give any warranties on behalf of Cleanfix, or to assume any other liability for Cleanfix in connection with any Cleanfix machine. Cleanfix reserves the right to make changes to its equipment without notice. The warranty coverage is subject to the conditions below.

**2. Registration of Warranty.** The warranty commences on the date of purchase by the original end-user from an authorized Cleanfix distributor or agent, subject to proof of purchase. The warranty commences latest, however, after six (6) months of the purchase date by the authorized distributor or agent of Cleanfix. Any new Cleanfix machine must be registered immediately with Cleanfix by the original end-user customer by fully completing and returning the warranty registration form to Cleanfix. If proof of purchase cannot be identified through a completed and returned warranty registration form, the warranty commences from the date of sale to the authorized Cleanfix distributor.

**3. Warranty Coverage.** Subject to conditions outlined below, Cleanfix warrants rotationally molded PE housings and tanks on all of its machines to be free from defects in material and workmanship, under normal use and service for ten (10) years to the original end-user.

Subject to conditions outlined below, Cleanfix warrants fiberglass housings and tanks on all of its machines to be free from defects in material and workmanship, under normal use and service for three (3) years to the original end-user.

Under this warranty Cleanfix warrants the performance of non-polyethylene and non-fiberglass components to be free from defects and workmanship for up to one (1) year to the original end-user. Parts replaced or repaired under this warranty are warranted for the remainder of the original warranty period. (See table below)

Rotationally molded PE housings and tanks	10 years
Fiberglass housings and tanks	3 years
Vacuum motors, brush motors, pump motors, boards and electronics	1 year
Battery and battery charger*	1 year

\* The 1 year period warranty commences with the purchase date by the authorized distributor or agent of Cleanfix.

Service labor charges are covered for up to one (1) year from the date of purchase through an authorized Cleanfix service provider. A total maximum of one (1) hour travel time - equal to one (1) hour labor rate - is covered for large machines, namely Falcon, Raven, Eagle and larger for 90 days. No coverage is extended for diagnosis time.

**4. Product Exceptions and Exclusions.** ALL vacuum cleaners and air movers are warranted for one (1) year. No warranty is extended for wear items, accessories and attachments including, but not limited to, belts, brushes, pad holders, capacitors, carbon brushes, wheels, casters, glides, clutches, cords, filters, filter bags, gaskets, hoses, rectifiers, switches, float switches, valves, squeegees, bearings, pulleys, relays, actuating cables, wheels, tires, vacuum cleaner attachments.

The purchaser is assured that meticulous care has been exercised in the selection, assembling and testing of these parts and components before shipping. No warranty is extended for machine finish, labels and other cosmetic parts or features.

**5. Stated Warranties.** Stated warranties are in lieu of all other warranties, expressed or implied. Any statutory implied warranties, including any warranty of merchantability or fitness for a particular purpose, are expressly limited to the duration of the written warranty. Cleanfix will not be liable for any other damages, including but not limited to incidental, indirect or special consequential damages arising out of or in connection with the furnishing, performance, use or inability to use the machine, including damages to persons or property. This remedy shall be the exclusive remedy of the buyer. The warranty is limited to the warranty.

**6. Warranty is null and void for the following.**

- Damage, defects, malfunction or other failures caused by not using the electric current indicated on the spec plate, including the use of improper extension cords.
- Damage or defect caused by accident, misuse, neglect, abuse, fire etc., including use of incompatible or corrosive chemicals or overloading of capacity.
- Failure caused by lack of proper maintenance and care, including proper machine clean-up after use, proper charging procedures for batteries.
- Failure caused by loss, damage or removal of protective components, including, but not limited to, filters and filter screens, tank covers and lids, skirts and bumpers, float shut-off assemblies.
- Freezing of any water or chemical related components (this will void all warranties on water or chemical related components, internal or external, of the product).
- Deposits and buildup in any water or chemical related systems due to hardness in water (this will void all warranties on affected systems).
- Any design alterations, adjustments and/or repairs performed on the equipment by an organization not authorized or specified by Cleanfix.
- Use of any parts not approved by Cleanfix, including, but not limited to, batteries, battery charger, filter bags, belts, electric components, motors.
- Use of machine for a purpose other than which it was designed and intended, and use of machine in excess of design duration.
- Damage in transit.

**7. Warranty Claim Procedure.** If a difficulty develops during the specified warranty period, contact the authorized Cleanfix distributor/partner from whom the machine was originally purchased. Do not return any products to Cleanfix unless explicitly authorized by Cleanfix. Cleanfix may elect to require the return of the machine or component(s) to validate the claim. Any defective machine or component to be returned must be shipped freight pre-paid to an authorized Cleanfix distributor/service center.

Cleanfix will provide and charge for replacement parts, including shipping and handling, to the original purchaser through an authorized service center. If the part is returned within 30 days and is found defective, the purchaser will be credited for the cost of the replacement part including shipping and handling.

**8. Term.** This warranty is valid for all products sold after January 1, 2006. A product sold before that date will be covered by the limited warranty in effect at the date of sale to the original purchaser.