



WALTER

Surface Technologies

BIO-CIRCLE™

PARTS CLEANING SYSTEM



Model COMPACT 300A

Owner's Manual

Thank you for choosing the **BIO-CIRCLE™ COMPACT
Parts Cleaning System (Model 300A)**

This operating instruction booklet has been designed to give you
all the information on the **BIO-CIRCLE™ MAXI**.

To ensure perfect functioning of your Parts Cleaning System,
carefully read these instructions before using the unit.

Familiarize yourself with this unit's operation, its particular
features, applications and limitations. You will also find useful
tips on safety and maintenance.

This unit is designed to function only with
genuine **Bio-Circle L™** cleaning solution.

The use of any other cleaning fluid will void any warranty,
cause malfunctions and may create a hazard.

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SAFETY INSTRUCTIONS

BIO-CIRCLE™ Parts Cleaning Systems are produced in accordance with applicable standards governing the manufacture, performance and safety of industrial products.

WARNING: Before using this machine, read all safety and operating instructions carefully and save this owner's manual for future reference. When using this parts cleaning system, basic safety precautions should always be observed to reduce the risk of fire, electric shock and personal injury, including the following:

1. Read this owner's manual to familiarize yourself with the unit's operation, its particular features, applications and limitations.
2. Parts that are damaged or otherwise defective should be repaired or replaced.
3. Adequate ventilation should be provided when operating the unit. Keep work areas clean. A cluttered environment invites accidents.
4. Keep children and other persons at a safe distance from the work area. Do not let unqualified persons handle this machine.
5. Your **BIO-CIRCLE™** machine is equipped with a magnet inserted underneath the grated receptacle in the sink. Always handle it with care, as it will shatter if dropped and may cause injuries. Keep magnet away from electronic devices and magnetic media such as floppy discs, credit cards and computer monitors. **Keep magnet away from pacemakers.**
6. Do not contaminate the cleaning solution with any flammable or combustible substances such as gasoline, alcohol, mineral spirits, solvents etc. Drain parts to be cleaned of any flammable or combustible material before placing them into cleaning sink. Even small quantities can create a fire hazard. Do not introduce into the unit any cleaning solution other than **Bio-Circle L™** as this will cause malfunctions.
7. The circulation pump & heater coil must always be immersed. Failure to keep the solution at the proper level can result in a burned-out pump or overheating heater coil thereby creating a potential fire hazard. To help prevent this, the unit is equipped with a liquid level sensor and a high temperature limit switch, which will shut off the pump or the heater coil when the liquid level is low.
8. **CAUTION:** Used cleaning solution may be irritating to skin and eyes. While working, always wear appropriate gloves and approved safety goggles.

First Aid: If used cleaning solution is splashed on clothing, change promptly. Thoroughly wash any body areas that have been in contact with the solution. Saturated clothing must not remain in contact with skin.

Eye Contact: Flush with water for 15 minutes, lifting eyelid often. See a physician if required.

Ingestion: Rinse mouth and drink plenty of water. See a physician if required.

Please refer to WALTER Bio-Circle L™ MSDS No.: L-78E for complete safety data information.

9. This unit is equipped with a 3-conductor power cord and 3-prong grounding plug. It must be connected to a correspondingly grounded power outlet protected by a class **A Ground Fault Circuit Interrupter (GFCI)** to prevent electric shock hazard. (Trip current < 6 mA)
10. Should you encounter any problems within the first year of purchase, contact the **BIO-CIRCLE™** Technical support center. See page 16

INTRODUCTION

Your **BIO-CIRCLE™** Parts Cleaning System is precision built to meet the highest industrial standards. For maximum performance and longest life, follow the operating instructions and maintenance procedures outlined in this manual.



This unit is **CSA** certified for both Canada and USA. It is supplied with a 3-conductor power cord and a 3-prong grounded plug. It must be connected to a grounded **receptacle protected by a Class A Ground Fault Circuit Interrupter (GFCI)**.

VOLTAGE

Before connecting this unit, check that the voltage shown on the rating plate is the same as that of the power source.

Operating this unit on a voltage other than specified on its rating plate may result in personal injury to the user and damage to the unit.

EXTENSION CORD

The use of an extension cord is not recommended, however if one must be used, use one that is heavy enough for the power requirement of the unit. Extension cords of inadequate wire size cause a serious drop in voltage and possible electrical component damage.

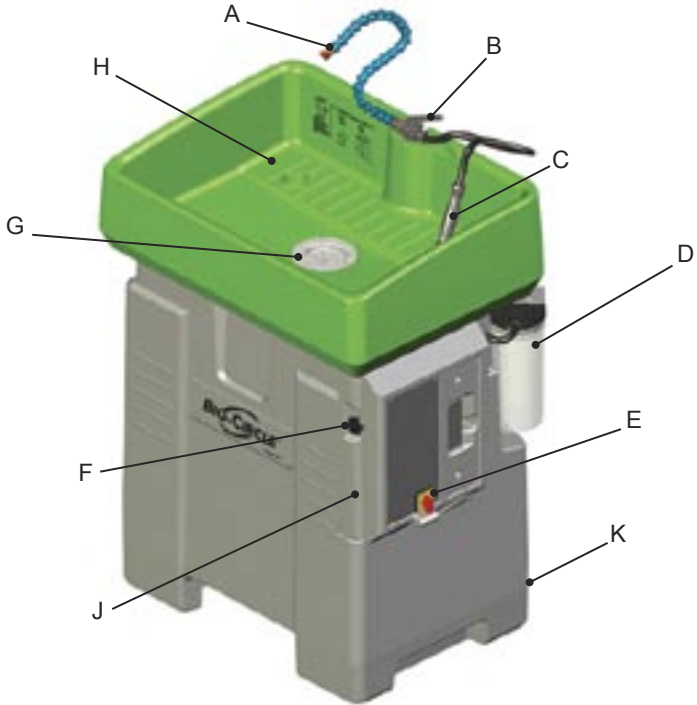
To limit line voltage drop to a safe level, refer to the following table:

| | | | | |
|------------------|----|----|----|-----|
| Length in Meters | 8 | 15 | 23 | 30 |
| Length in Feet | 25 | 50 | 75 | 100 |
| Wire Size AWG | 14 | 14 | 12 | 10 |

Note: Extension cords that are used outdoors must be approved for outdoor use.

COMPACT MODEL 300A ILLUSTRATION - FRONT

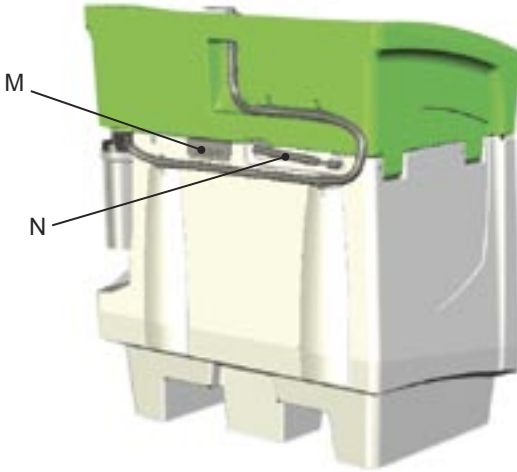
- A) Flexible faucet
- B) 3-way control valve
- C) Flow-through brush
- D) Filter housing
- E) Main ON/OFF switch
- F) Cleaning pump switch
- G) Grated receptacles & magnet
- H) Sink
- J) Removable multi-function unit (RMU)
- K) (Label present in image but not in legend)



MAXI MODEL 600A ILLUSTRATION – BACK

M) Evaporation barrier

N) Gas spring



AERATION

The air pump located inside the RMU (J) should always be heard and air bubbles should be visible at the surface of the liquid, close to the pump support tube, when the machine is under power.

This built-in aeration feature is vital to the high-quality performance of the bioremediation process.



SOLUTION TEMPERATURE

The temperature control is factory set to maintain the solution at $41^{\circ}\text{C} \pm 1^{\circ}$ ($106^{\circ}\text{F} \pm 2^{\circ}$). At this temperature the bioremediation process is at its most efficient level, cleaning is faster and operator comfort is at its best.

START UP INSTRUCTIONS

Please be sure to read and observe, the "SAFETY INSTRUCTIONS" at the beginning of this manual. Detailed start-up instructions can also be found at www.biocircle.com

1. Remove the **BIO-CIRCLE™** Parts Cleaning System from its packaging and check for any shipping damage. Should any be detected, DO NOT connect the machine but report the damage to the transport carrier and to J. Walter. The original packaging must be retained.
2. - Open the sink. A retainer bar at the back will maintain it in the open position.
 - Remove all packaging material around the unit and from inside the tank. (ex.: from underneath or behind pump/heater coil)
 - Ensure that drain valve (K) is closed.
 - Remove filter housing (D) from inside the base and slide the stainless bracket into the slot located in the back, right hand corner of the base.
 - Connect the hose to the valve intake fitting on the back of the sink and to the filter housing (D) OUT fitting.



- Connect the hose coming from the pump to the filter housing (D) IN fitting.



- Secure all connections with a hose clamp.

- Ensure filter bowl (D) is tightened. (Hand tighten only). Install the hose adapter onto the drain valve (K) using PTFE tape.

Place unit **indoor**, on a smooth **level** surface away from exposure to direct sunlight. **Use only genuine Bio-Circle L™ cleaning solution** (55-A 007, 20 liters/5.3 gal. or 55-A 008, 208 liters/ 55gal.).

When filling the unit from a drum, ensure the transfer pump being used is clean and close the drum once done.

Fill the tank to normal operating capacity of up to 100 liters/26.5 gal. Refer to level lines shown on page ?.

Note: Open the container's vent holes and pour slowly to prevent splashing and excessive foaming of Bio-Circle L™ liquid.

3. Plug power cord into properly grounded 3-prong, 120V, 60Hz, outlet protected by a class A GFCI.
4. Turn main power switch (E) to "I".

Note: Do not turn ON the main power switch (E) and the cleaning pump switch (F) with no liquid inside the machine.

5. Allow the heater coil to warm Bio-Circle L™ solution to working temperature for optimal cleaning efficiency. This may take up to 4 hours.

Once the solution has reached its proper working temperature of 41°C/106°F, periodically, the heater will turn itself ON automatically to maintain the proper working temperature.

Never turn OFF the BIO-CIRCLE™ unit except for servicing.

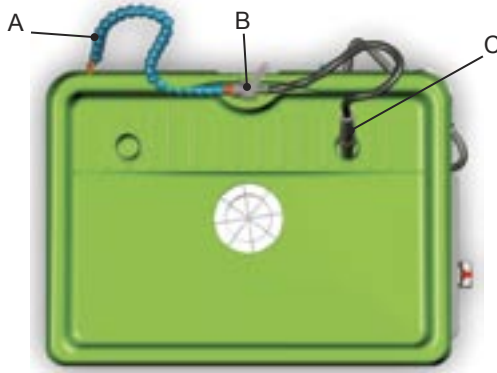
OPERATING INSTRUCTIONS

The **BIO-CIRCLE™** Parts Cleaning System is designed for the removal and bioremediation of biodegradable oil and grease from ferrous and non-ferrous parts and other washable surfaces. It is NOT recommended for cleaning other non-biodegradable substances.

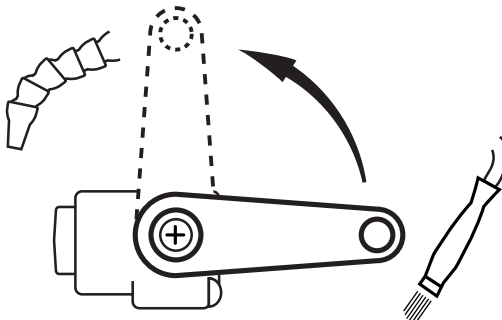
DO NOT INTRODUCE DISINFECTANTS, SOLVENTS, BRAKE FLUID, ENGINE COOLANT, CHLORINATED, ACIDIC OR ALKALINE SOLUTIONS OR ANY CLEANING SOLUTION OTHER THAN Bio-Circle L™ INTO THIS SYSTEM. DO NOT ADD WATER.

1. Place parts to be cleaned into sink (H). Maximum load capacity is 100 kg/220 lbs. Do not plug drain to fill cleaning sink. Use optional Parts Washing Basket (55-B 004) to contain small parts.

Note: Any parts susceptible to oxidation should not be left in the sink after cleaning.



2. Position 3-way Control Valve (B) toward desired direction of solution flow. Solution can flow through both the flexible faucet (A) and the flow-through brush (C) simultaneously when the handle is positioned mid-way between the two.



3. Turn the cleaning pump ON & OFF by pressing ON/OFF switch (F). To minimize fluid consumption, always turn the cleaning pump OFF after use by pressing the pump switch (F) again.

Wet the sink, parts to be cleaned and any brushes prior to cleaning; this will prevent grease and dirt from sticking to the surfaces.

The **BIO-CIRCLE™** unit is supplied with an efficient multi-jet flow-through brush, which is well suited for most cleaning applications. However, for best results, when cleaning smaller or intricate parts, it is recommended to run the cleaning solution through the flexible faucet (A) and use brushes that are well adapted to the shape of the part being cleaned. Always clean parts while holding them under the flow of liquid.

4. For optimum performance, always keep unit topped-up to the proper working level of at least 80 liters/21 gal., do not fill above the MAX level. Do not allow solution level to fall below 60 liters/16 gal. Observe fluid level lines molded into the tank wall.

When the solution level falls below minimum, the float switch will cut power to the cleaning pump and the heater coil. The air pump, however, will continue running. **Check the fluid level every other week and top-up to operating level.**

Note: The cleaning pump will start automatically after the fluid level has been topped up if the cleaning pump switch (F) is in the ON position. To prevent spills, always put switch (F) in the OFF position when the float switch has cut power to the cleaning pump.



5. The bioremediation process requires a favorable environment at all times, even when the unit is not in use. **Always keep the solution level topped-up and the unit turned on** to maintain proper temperature and oxygen supply through the built-in air pump and heater.
6. As with all parts cleaners, excess grease and oil should be disposed of prior to cleaning. **Do not use this unit as a waste dump.**
7. Inspect the grated receptacle (G) daily, it should be emptied of accumulated solid waste and disposed of outside the parts washer in order to extend the life of the solution.
8. A magnet is located underneath the grated receptacle (G) to separate all the ferrous particles, thus enhancing the bioremediation process. The magnet should be cleaned periodically with a clean rag to maintain its efficiency and ensure rapid draining of the sink.
9. This unit is equipped with a damper located underneath the grated receptacle (G) to slow down evaporation. If too much evaporation occurs, verify that the damper moves freely.

10. The **BIO-CIRCLE™** Parts Cleaning System is designed for removing oil and grease from parts and then remediating those substances. Any other use of this system, such as dumping waste oil, is not recommended and will cause damage to the system.

11. For stubborn grime and other hard to clean spots, first spray or soak parts using **WALTER X-Force™** (53-X 002, 500ml aerosol or 53-X 003, 500ml trigger sprayer) prior to cleaning with **Bio-Circle L™** solution.

DO NOT USE ANY OTHER TYPES OF CLEANERS, as they will reduce or prevent the bioremediation process and cause malfunctions to the unit. Also, adding water will considerably reduce the bioremediation process as well as the solution's ability to clean.

12. The built-in thermostat has been factory set to maintain an ideal environment for the bioremediation process as well as preventing skin burns to the user and damage to the pump. Do not attempt to alter this unit in any way.

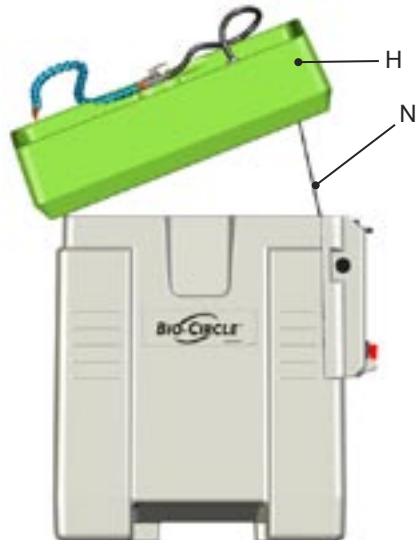
13. Condensation will accumulate underneath the sink top. This is normal due to the temperature of the cleaning solution. Always ensure that the sink is closed properly and that the gasket underneath the sink is not damaged to prevent excessive evaporation.

Note: After a power interruption, the machine will restart automatically, including the cleaning pump if pump switch (F) is in the ON position.

RECOMMENDED PREVENTIVE MAINTENANCE

Lift sink (H). A retainer bar at the back will maintain it the open position.

Do not open the sink while heavy objects are placed inside as the weight may exceed the force of the retainer bar.



1. If unit is to be idle during weekends or for several days, it should be topped up and the machine must remain ON.
2. If the unit is to be idle for more than one week, it is recommended to turn the unit off. Before doing so, lift sink (H) and skim off or absorb any accumulation of oil from the surface of the liquid. The unit should not remain turned off for more than 4 weeks.
3. If a high concentration of non-digestible contaminants remains in suspension inside the liquid, turn on the cleaning pump and let the fluid circulate for a couple of hours. The liquid will flow through the filter (D), which will remove the contaminants.
4. Liquid filter (D) should be inspected periodically. If filter is clogged or very dirty, (weak or no liquid flow through brush and flexible faucet) replace it. See the section "ACCESSORIES" for a listing of available filter cartridges.
5. Ensure that the float switch floats freely in the liquid.
6. The pH of the cleaning solution should always be between 6 and 9. If the pH of the solution is outside this range, please contact the BIO-CIRCLE™ technical support line. See page ? for contact information.
7. Inspect the electrical cord and plug regularly. Replace any damaged parts.

ANNUAL MAINTENANCE

Walter recommends that your MAXI 300A be inspected and cleaned annually to perform at optimal efficiency.

Depending on the application, non-digestible matter can accumulate as sludge at the bottom of the tank over time, which can negatively affect the bioremediation activity. To facilitate the removal of the sludge, the tank bottom is tapered towards the drain valve.

- Turn main power switch (E) to "0" and unplug unit.
- Connect a 1 in. hose to the barbed fitting of drain valve (K). Fully open the valve, wait a few seconds and then close the valve. Repeat these steps 3 times to remove most of the sludge.

If the sludge cannot be removed with this method, follow the instructions below:

- Open sink (H) and empty the unit of all the cleaning solution using a hand pump until the sludge becomes visible. If cleaning solution is still cleaning well, save it for re-use.
- Remove the sludge using a scoop and clean the tank walls and pumps.
- Visually inspect pumps, tubing and connections. Rinse the inside of the machine with clean water. Replace parts that show excessive wear.
- When everything appears to be in good working condition, fill unit to working level with Bio-Circle L™, turn it on and allow solution to warm-up to its proper working temperature of 41° C (106° F) before cleaning parts.

Note: A CLEANING KIT (No. 55-B 020) is available, which contains all the necessary items and instructions to make it easy to clean your **Bio-Circle™** unit.

WASTE DISPOSAL

Refer to **WALTER Material Safety Data Sheet for Bio-Circle L™** solution, MSDS No.: L-78E.

Used **Bio-Circle L™** can usually be added to your other oil-water waste (such as water soluble cutting fluids) for disposal. Always dispose of residual waste in compliance with Federal, Provincial, State and local environmental regulations. Check with local authorities for any special regulatory considerations. J. Walter accepts no responsibility or liability for user's failure to comply with governmental and other safety regulations.

TROUBLESHOOTING GUIDE

SINK FILLS UP

The sink will fill up if the grated receptacle or magnet (G) are dirty or clogged. Remove grated receptacle and clean all parts. Ensure the drain damper moves freely.

WEAK OR NO LIQUID FLOW FROM NOZZLE OR FLOW-THROUGH BRUSH

The rubber hose may be pinched along its length. Ensure the hose is not kinked or squeezed. Also, filter (D) could be dirty or clogged, remove filter cartridge and replace with a new one. See the section "ACCESSORIES" for a listing of available filter cartridges.

The cleaning pump intake may be clogged. Turn the unit off (E) and unplug it. Disconnect the rubber hose from the filter (D) intake fitting. Lift the RMU (J) out of the fluid, unscrew the pump intake screen and clean it.

CLEANING PUMP STOPS

The built-in float switch will cut power to the cleaning pump when solution level has reached the minimum of approx. 60 liters/16 gal. A **yellow** and/or **red** LED should be on at the front panel (L)

- Top-off tank to the proper working level of at least 100 liters/26.5 gal. with **Bio-Circle L™** (No. 55-A 007, 20 liters/5.3 gal. or 55-A 008, 208 liters/55 gal.).
- Lift the float switch vertically to reset it.

THE CLEANING FLUID IS COLD

If the cleaning fluid is cold although the unit has been turned on for several ours, only the green LED is on at the front panel and the fluid level is topped up, please ensure the large float switch can move freely and is in the “up” position.



If the fluid is still not being heated, please contact the **BIO-CIRCLE™** technical support line. See page 16 for contact information.

NO MORE AERATION

Aeration has stopped but air pump is still running.

- Check if the air hoses are pinched somewhere along their length.
- Check the air diffuser attached to the end of the air hose next to the pumps and clean or replace if necessary.
- Turn power switch (E) to “0”, unplug the unit, remove the cover of RMU (J) and check whether the air hose is not disconnected from the air pump or pinched somewhere along its length.

SOLUTION DOES NOT CLEAN WELL ANYMORE

If solution is dirty, refer to section “RECOMMENDED PREVENTIVE MAINTENANCE” and “ANNUAL MAINTENANCE”.

The bioremediation process may have been reduced or prevented by the introduction of harmful or incompatible substances or an unfavorable environment. Depending on the situation, replacing all or part of the cleaning solution to re-start the system may be required.

Please contact the **BIO-CIRCLE™** technical support before proceeding. See page 16 for contact information.

SOLUTION ODOR

It is normal that the solution may emit an apple odor at start-up. As oil and grease are introduced into the cleaning solution, this odor will quickly diminish leaving only a faint, pleasant scent. If the solution emits a strong foul odor, ensure that the aeration system is functioning properly. Call the **BIO-CIRCLE™** technical support. See page 16 for contact information.

REMOVING THE REMOVABLE MULTI-FUNCTION UNIT (RMU) (J)

To remove the RMU, follow these steps. Do so only for maintenance/troubleshooting as described in this manual or if you were instructed by Walter personnel.

- Turn the unit OFF (E) and unplug it
- Open the sink (H)
- Open the hose clamp that secures the hose to the filter (D) intake and pull the hose from the fitting
- Pull up the RMU

To put a RMU back in place, follow the above steps in reverse order.

- Notes:**
- Store the RMU only in the upside down position.
 - Ensure the RMU is completely drained once removed.

ACCESSORIES:



X-Force™

- Cleaner/degreaser, protects against corrosion
- 500ml trigger sprayer
 - Order No.: 53-X 003
 - MSDS L-74



45° angled multijet flow-through brush

- Order No.: 55-B 007



Replacement multijet flow-through brush

- Order No.: 55-B 005



Washing basket

- 1/4" galvanized wire mesh (W 9" x H 8-1/4")
- Order No.: 55-B 004



Re-usable filter cartridge 350 microns

- For removing non-digested particles in suspension **Bio-Circle L**
- Order No.: 55-B 011



Disposable filter cartridge 100 microns

- For removing non-digested particles in suspension **Bio-Circle L**
- Order No.: 55-B 012



Disposable filter cartridge 200 microns

- For removing non-digested particles in suspension **Bio-Circle L**
- Order No.: 55-B 021



Bio-Circle work lamp

- 24" flexible arm
- Compatible with lid 55-B 032
- Fits on all Bio-Circle machines
- * Bulb included
- Order No.: 55-B 014



Annual maintenance kit

- Contains a pump, absorbent pads, scoop, pH paper and cleaners.
- Step-by-step instructions with photos
- Makes sludge removal quick and easy
- Order No.: 55-B 020



Hand pump

- For effective fluid transfer
- Only for use with Bio-Circle L™
- Order no.: 55-B 051



Lid

- Installs without tools
- Protects sink from dust and dirt
- Order No.: 55-B 032



Sink insert

- Protects the sink from scratches and damage
- Perforated stainless steel
- Order No.: 55-B 031

TECHNICAL DATA

| | |
|--|---|
| Model: | 300A |
| Voltage: | 120V AC, 60 Hz |
| Amperage: | 7 A |
| Heater: | 750 Watts max. |
| Cleaning Pump: | Approx. 515 liters/hr (135 gal./hr) |
| Fluid Temperature: | 41°C (106°F) - Factory set |
| Overall Dimensions W x D x H: | 90 cm x 60 cm x 112 cm (35 x 24 x 44 in.) |
| Front Sink Edge Height: | 97 cm (38 in.) |
| Sink Dimensions W x D (inside): | 74 cm x 54 cm (30 x 20 in.) |
| Max. Load Capacity: | 100kg (220 lbs) |
| Max. Fluid Level: | 110 liters (29 gal.) |
| Min. Operating Fluid Level: | 60 liters (16 gal.) |
| Net Weight (Empty): | 45 kg (100 lbs.) |

For information only. Technical data may change without notice.

Made in Canada

WALTER SALES AND SERVICE

www.walter.com

CANADA

MONTREAL: 5977 Trans Canada Hwy. Tel: (514) 630-2801
Head Office Pointe-Claire, QC H9R 1C1 Toll free: 1-888-592-5837
Fax: (514) 630-2825

TORONTO: 151 Superior Blvd., Unit 12 Tel: (905) 795-8555
Mississauga, ON L5T 2L1 Fax: (905) 795-8558

EDMONTON: 18527-104 Avenue NW, Tel: 780-451-2053
Edmonton, AB T5S 2V8 Toll free: 877-366-9258
Fax: 780-453-1589

VANCOUVER: 1-1595 Cliveden Avenue Tel: (604) 540-4777
Delta, BC V3M 6M2 Fax: (604) 540-4778

U.S.A.

WINDSOR: J. Walter Inc. Tel: (860) 298-1100
810 Day Hill Road Fax: (866) 274-4435
Windsor, CT 06095

MEXICO

ZAPOPAN: Walter de México S.A. de C.V.
Blvd. La Carreta #835 Tel: (52) 33 1199-1515
Parque Industrial Belenes Norte Fax: (52) 33 1199-5119
Zapopan, Jalisco 45145

BIO-CIRCLE TECHNICAL SUPPORT:

Should you have any trouble with the operation of your **BIO-CIRCLE** Parts Cleaning System, please refer to the section "TROUBLESHOOTING".

Should you require further assistance:

In Canada: CALL TOLL FREE **1-877-BIO-DRUM** (1-877-246-8736)

In the USA: CALL TOLL FREE **1-888-246-2725**

In Mexico: CALL TOLL FREE **01 800 263 6310**

Visit us at: www.biocircle.com for additional information.

WARRANTY POLICY

All **BIO-CIRCLE™** Parts Cleaning Systems and accessories are inspected and tested before shipment and are warranted to be free from any defect in material and faulty workmanship. Should any malfunction occur within one year from the date of original purchase please call **WALTER** (see page 17 for contact information).

Should a component examination reveal that the malfunction was caused by defective material or faulty workmanship, **WALTER** will repair (or at our option, replace) without charge. This warranty does not apply when; normal maintenance is required, repairs or replacements have been made or were attempted by anyone other than **WALTER** authorized service personnel, and does not cover any damage caused by accidents, modifications, use of improper solutions, accessories, abuse or misuse as well as continued use after partial failure. No other warranty, written or verbal, is authorized.

In no event shall **WALTER** be liable for any indirect, incidental or consequential damages from the sale of the product. This disclaimer applies both during and after the term of this warranty.

This warranty gives you specific rights. The provisions contained in this warranty are not intended to limit, modify, take away from, disclaim or exclude any warranties set forth in any provincial or state legislation. To the extent required by law, the provisions in any provincial, state or federal legislation with respect to warranties take precedence over the provisions in this warranty.

