

### GVC-18000/ GVC-36000

Dry-Steam Cleaner

Operating and Maintenance Instructions



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Thank you for purchasing this Goodway Dry-Steam Cleaner. We appreciate your business and look forward to serving you in the future. As with all Goodway products, you can be assured that the finest quality components and workmanship have gone into this machine.

Please take a few minutes to read the following Operating and Maintenance Instructions. Please pay particular attention to the safety instructions and exercise caution when using this machine.

### GOODWAY® TECHNOLOGIES CORPORATION

**HVAC & FACILITY MAINTENANCE SOLUTIONS** 

For Sales Call: 1-800-333-7467 For Service Call: 1-800-370-2855

### **GENERAL**

The GVC-18000 and GVC-36000 Dry-Steam cleaners are the most powerful dry-steam cleaner in their class. They melt away grease and grime, and can kill bacteria and other microorganisms when high temperature is applied for extended periods. Please review these instructions prior to installation and operation of this dry-steam cleaner.









### IMPORTANT SAFETY INSTRUCTIONS

To prevent operator injury and damage to the equipment, please read and observe the following basic safety precautions:

- 1. Warning: Risk of severe injury keep clear of nozzle do not direct discharge steam at persons this product is to be used only by trained operators.
- 2. Read and understand all instructions before using.
- 3. Keep this manual with the unit at all times.
- **4.** Do not operate without eye protection or other necessary protective gear. Consult SDS for all chemicals and for CO<sup>2</sup> and OSHA exposure limits.
- 5. Warning: Hot accessories can lead to injuries, do not touch with bare skin.
- 6. Make sure that the water you fill into the water tank is clean. Avoid the use of buckets or canisters to fill the tank unless these are completely free of dirt or foreign objects.
- 7. Do not drag the machine by pulling the hose, this can damage the hose.
- **8.** Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.
- **9.** When using the optional vacuum accessory, do not use to pick up flammable or combustible liquids such as gasoline, or use in areas where they may be present.
- 10. Check the power supply cable before use for any damage. In the event of damage to the power supply cable, have it immediately replaced by the manufacturer or qualified personnel.
- **11.** Over length of power cord extension (longer than 82 ft or 25 m) may lead to insufficient voltage supply and malfunction.
- **12. Warning:** Inadequate extensions can be dangerous. Make sure that your extension is correctly dimensioned and constructed according to national legislation.
- **13.** Never immerse any part of the machine in water or other liquids.

- **14.** Check the steam hose and all accessories for damage before use and replace or have them repaired immediately.
- **15.** In the event of leakage of steam or liquid, switch off and disconnect power immediately. Contact the manufacturer or service center.
- **16.** Service must be performed by qualified persons.
- 17. Never use the machine in a tilted position, all 4 wheels must stand on a level surface.
- **18.** Do not clean heat sensitive materials with steam, the heat of the steam could cause damage.
- 19. Operate the machine only wearing appropriate PPE.
- **20.** Ventilate work area when using toxic or pungent additives to reduce your exposure to toxic fumes.
- **21.** Be careful of slippery floors. Some additives make a normally safe area extremely slippery and dangerous.
- **22.** Keep operation area clear of all persons. Do not use unit with children or visitors in the immediate area.
- **23.** Do not change nozzle size. An incorrect nozzle could cause excessive pressure resulting in equipment damage and possible personal injury.
- 24. Use only Goodway specified replacement parts and accessories.
- **25.** Keep objects, loose clothing, hair, body parts away from openings and moving parts.
- **26.** Do not operate unit when fatigued or under the influence of drugs or alcohol.
- **27.** Do not over reach or stand on unstable support. Keep good footing and balance at all times.
- 28. Stay alert and watch what you're doing.
- 29. Both front casters must be locked when unit is plugged into power supply.

### **GROUNDING INSTRUCTIONS**

This dry-steam cleaner must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This appliance is equipped with a cord having an equipment-grounding conductor. The cord must be wired into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances. **DANGER:** Improper connection of the equipment-grounding conductor can result in electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded.

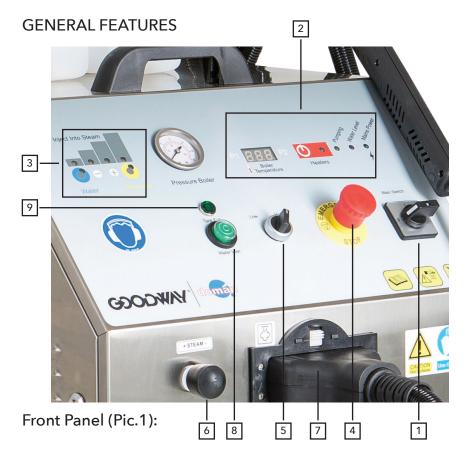
### SAVE THESE INSTRUCTIONS

### **USE OF DETERGENTS**

One of the principal advantages of steam is that it takes away the need to use detergents. However, we recognize that in certain situations the addition of detergent can assist the power of steam and speed up the cleaning process. Goodway offers approved detergent (GVC-500) to be used via the detergent facility for occasional use.

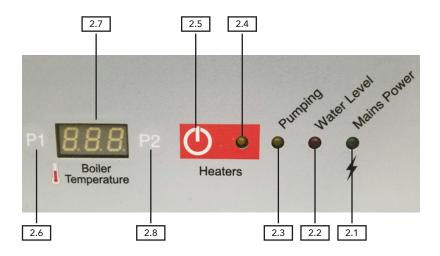
**WARNING:** other detergents should not be used as the chemical's reaction to heat is not always known. Heated chemicals can give off noxious fumes which can cause serious injury.

**WARNING:** Do not put any chemical in the water tank. This will cause damage to the boilers and pumps within the unit



- 1. Power Disconnect Switch
- 2. Boiler Control Panel
- 3. Wet Steam/Detergent Panel
- 4. Emergency Kill Switch
- 5. Steam Output Selector LOW/HIGH
- 6. Steam Regulator
- 7. Hose Connection Socket
- 8. Continuous Refill Water Inlet Button
- 9. Water Tank Full LED

### Boiler Control Panel (Pic.2):



- 2.1 Power On LED
- 2.2 Water Tank Low LED
- 2.3 Boiler Pump LED
- 2.4 Boiler Heating LED

- 2.5 Boiler On/Off Button
- 2.6 P1 Service Function
- **2.7** Temperature Display
- 2.8 P2 Service Function

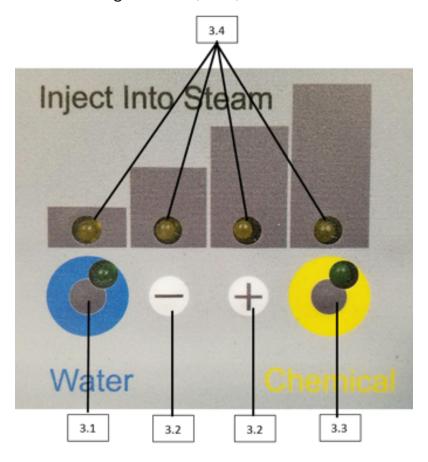
### Function of the P1 and P2 Buttons:

The buttons are used to read out the total hours run by the machine. To read total hours, do as follows:

- 1. Press P2 (2.8) to visualize the hours run up to 999 the display shows 3 digits
- 2. Press P1 (2.6) to visualize the hours up to 99000 the display shows 2 digits

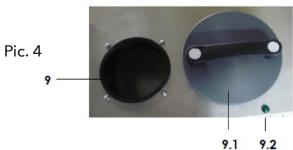
Now sum up both, for example if you press P2 and read 317 and then press P1 and read 04 then you have a total of 4317 hours which the machine has run.

### Wet Steam/Detergent Panel (Pic.3)



- 3.1 Wet Steam Button (Blue)
- 3.2 +/- Level Buttons
- 3.3 Detergent Button
- 3.4 Level Indication LED

### Top Inlet Water Tank D.160mm (Pic.4)



### Hand-grip (Pic.5)



### Hose-Grip Steam and Vacuum (Optional):



- 11 Steam Handle
- 11.1 Steam Trigger
- 11.2 Detergent Button

- 11.3 Vacuum On/Off Button
- 11.4 White Lever

### SET-UP

- Remove from packaging and inspect unit. Report any discrepancies to Goodway Technologies Corporation's Customer Service at (800) 370-2855.
- 2. Attach handle to rear of unit using four included fasteners w/orange handles
- 3. Position this Dry-Steam cleaner in the area it will be used.
- **4.** Connect the unit to the plant's wiring. See unit's nameplate for power requirements. It is imperative that the ground connection is properly made. See grounding instructions for more information.
- **5.** Connect water supply hose to connector on rear of unit. Water supply pressure must be between 1.5 psi and 100 psi.
- **6.** Insert the Steam Hose into Connection Socket on front of machine (note pull back slightly on ring of hose connector to allow insertion into socket).
- 7. Connect output end of hose to accessory or nozzle for cleaning application.

### OPERATING INSTRUCTIONS

**WARNING:** Always wear gloves, protective glasses and ear protection while operating this machine.

### **Steam Only Function:**

- 1. Turn the main switch 1 (Pic.1) to the ON position.
- 2. LED 2.1 (Pic.2) goes on to signal that the machine receives voltage
- 3. Remove the water tank cover 9.1 (Pic.4) and fill the tank 9 (Pic.4) with plain tap water until the LED 9 (Pic.1) lights up, this is possible only if the machine is turned on, or you see that the tank is full. Close the water tank. Also see 'Continuous Water Refill' section for optional continuous water refilling.
- Push the boiler ON button 2.5 (Pic.2) and the pump starts filling the boiler. LED
   2.3 (Pic.2) lights up. Filling is automatically preformed when requested by the water level sensor inside the boiler.
- When the pump stops, LED 2.3 (Pic.2) goes out and the heating phase begins, lasting approx. 5 minutes. During the heating phase LED 2.4 (Pic.2) will continue to blink.
- **6.** When LED **2.4** (Pic.2) stops blinking and stays on, the machine is ready for use. (During use this light will often blink to show that the heating elements are on).
- 7. Insert the hose into the hose connection socket 7 (Pic.1), ensuring that it is securely fitted.
- **8.** Fasten accessories to lances by firmly pushing them on to the tip (nozzle) **10.2** (Pic.5)
- **9.** Pull the trigger **10** (Pic.5) on the hand-grip to start the steam output and direct the steam jet towards the area to be cleaned.
- **10.** Regulate steam output by turning the manual output regulator **6** +/- (Pic.1) and/or by using selector **5** (Pic.1) for LOW or HIGH output. (Always select LOW with the vacuum hose!).

**NOTE:** Before beginning steam cleaning operations, evacuate the condensation left inside the steam hose into a bucket or other suitable place.

**WARNING:** In case of danger, injury of the operator, leakage of steam or anything that makes it difficult to regularly turn the machine off, immediately hit the emergency OFF button 3 (Pic.1). The switch will remain in the off position until manually reset by turning the switch so that it pops back up! Reset ONLY after having removed the cause of malfunction. See the troubleshooting section!

### Wet Steam or Detergent:

To optimize the cleaning action of the steam, water from the internal tank 9 (Pic.4) or detergent from one of the external canisters can be injected into the steam.

- 1. Enable the wet steam feature by pressing the blue button 3.1 (Pic.3) and then choose the level required with the +/- buttons 3.2 (Pic.3). Levels 1 & 2 are indicated for most jobs in which dry saturated steam is too dry, making cleaning slower than necessary. Levels 3 & 4 allow for a strong rinsing action of the steam but the steam temperature still stays above 120°C at the lances tip.
- 2. Now enable switch 10.1 (Pic.5) on the top of the hand grip to activate the injection of water into the steam while also pulling the steam trigger. The water pump will run only while pulling the trigger.
- 3. To use the detergent feature press the yellow button 3.3 (Pic.3). First fill one or both of the external canister on top of the machine with 5 liters of water and detergent and make sure that the transparent hose is connected properly to the chassis. You have 2 canisters available which you can fill as required for a total of 10lt.
- **4.** Choose the desired level of detergent required with +/- buttons **3.2** (Pic.3) and if necessary do tests to find the best level of detergent to inject.
- 5. Again enable switch 10.1 (Pic.5) on the top of the hand-grip to activate the injection of detergent into the steam while also pulling the steam trigger. The detergent pump will run only while pulling the trigger.
- 6. Priming the detergent pump: if the detergent canister runs empty the pump may take a while to suck up the detergent and purge the air in the hose.

  Observe the transparent hoses on the canister for visual feedback.

**ATTENTION!** Please use water with low levels of mineralization that has been filtered or softened in order to avoid mineral deposits which can obstruct the free flow of steam within the hose. For a correct use of the machine, do not use demineralized or distilled water with a value lower than 96 TDS or 200  $\mu$ s/cm. Also, remnants of detergent in the transparent hose or pump can cause blockage and or damage the pump, please flush the detergent circuit when not used regularly. **WARNING:**This Machine has been designed for use with non-foaming and noncorrosive detergent. Use of foaming and/or corrosive detergent will damage the machine! You are advised to use only the detergent specified by the manufacturer. Use of any other detergent may void warranty.

### WATER REFILL:

When the water in the tank finishes, the machine emits an acoustic signal and LED 2.2 (Pic.2), signaling "water tank low" lights up along with 9 (Pic.1). After a little more time the steam outlet is blocked until the tank is refilled.

### Perform the following operations:

- 1. Press button 2.5 (Pic.2) to turn off the boiler.
- 2. Open the plug 9.1 (Pic.5) and refill the tank with clean tap water. Close tank.
- 3. Press button 2.5 (Pic.2) and the pump will start filling up the boiler, LED 2.3 (Pic.2) and 2.4 (Pic.2) blink.
- **4.** Since the boiler is already under pressure, LED **2.4** (Pic.2) light up steady after a few seconds and the machine is ready to resume work.

### CONTINUOUS WATER REFILL

The internal water tank can be refilled with water automatically and continuously. Connect the machine to a water hose by using the supplied ¾" garden hose connector. Fasten the male part to the water inlet at the rear of the machine, fasten the female to the hose and then connect both.

- 1. Open the water from the tap.
- 2. Push the button 8 (Pic.1).
- **3.** The tank will now fill itself. Sensors ensure the correct water level.

ATTENTION: pressure of water supply for the continuous refill must not be greater than 145 PSI (10 Bar) or less than 14.5 PSI (1 Bar). WARNING: Never push the button 8 if the machine is not connected to the water hose. This would cause water to flow out of the tank and onto the floor. When done working, push the button 8 (Pic.1) OFF and disconnect the water hose. After Use:



**NOTE:** Output Power Selection Switch 5 (Pic.1) must be on 72kW to properly relieve pressure.

- Turn off the boilers 2.5 (Pic.2).
- Release steam from the boilers by squeezing the trigger. Do this until the
  pressure in the unit reaches 6 bar.
- Turn off the main power 1 (Pic.1). Now wait 30 seconds.
- Turn the machine back on 1 (Pic.1). Turn the boilers back on 2.5 (Pic.2). Wait for the pump to stop.
- Turn off the boilers 2.5 (Pic.2) as soon as the pump stops. Release steam until the unit reaches 6 bar again. Turn off the main power 1 (Pic 1).
- Dry all accessories and store them in a dry environment.
- Clean the machine with a cloth, warm water and if necessary use a neutral detergent.

### MAINTENANCE

**ATTENTION:** Maintenance should be done every 6 to 12 months or more often if used very heavily and/or if the water is very hard. Make arrangements with your dealer or distributor for professional maintenance and assistance. Only trained persons are allowed to perform the below procedure!

The amount of carbonates in the water (chalk, salts and other minerals) determine the hardness of the water you use with this machine. When water is heated up these carbonates will "fall out", that is they will become small particles that in the worst case can encrust your boiler, the heating element and other components. Please clean your boiler as described below regularly, more so if you have hard water from the tap. Do not use completely demineralized or distilled water with your machine because such water contains no minerals and carbonates and could lead to malfunction!

**DANGER:** Wear protective clothing, gloves and glasses while operating the below procedure, the hot water can cause injuries!

**DANGER:** Remove electrical power before servicing.

### **CLEANING THE BOILER:**

- Perform this task at least every month, but ideally at the end of each working week!
- Never bleed the boiler as long as any pressure is still inside the boiler!!!
- Make sure the water inside the boiler is not hot.
- Gently rock the machine to agitate carbonate deposits in the boiler.
- Open the drain valve over a gully/drain or a container with a suitable capacity to catch the water from the boiler.
- Empty the content of the boiler while gently shaking the machine.
- Close the drain valve

**Boiler Descaling:** Chemical scale removal may be necessary depending on use and water quality, contact Goodway Technologies for recommendations. Inspect and replace the water filter as necessary:



# **GVC-18000** Quick Start Guide

### STARTING THE MACHINE



for damage.



Inspect the machine and accessories



with clean water Fill the water tank NO chemicals). Check for leaks.



into a three phase power receptacle. Plug the machine



connect the spray to machine, and the steam hose wand to the steam hose. Connect



ight will start blinking.

On button. The LED

turn on the Boiler

switch, and then

heat up, release air pressure Once the machine starts to by pulling the trigger on stops coming out of the nozzle. Do this for a few the spray gun until air seconds. G







reads 10 bar, pull the trigger on the spray gun until all the water is purged from Once the pressure gauge



Turn on the Main Power

L.

up to operating temperature (350°F) and pressure (10 bar), and then use as Allow the machine to build recommended.

## TURNING OFF THE MACHINE



and release the steam until the unit reaches Shut down the boilers about 6 bar.



and wait 30 seconds. Shut the machine off



Now turn off the boilers and release steam until the unit reaches 5 bar and shut down the

machine again.





### **TECHNICAL INFORMATION**

Specification	GVC-18000	GVC-36000
Input Power:	22 amps, 480 V, 60 Hz AC, three phase (Maximum 18,000 W)	53 amps, 480 V, 60 Hz AC, three phase (Maximum 36,000 W)
Power Supply Cord:	33', 10-4	33', 6-4
Output Steam Pressure:	Adjustable, 0-145 PSI	Adjustable, 0-145 PSI
Output Steam Temperature:	290°F	290°F
Max Steam Output:	7 GAL/HR (dry) 9.5 GAL/HR (wet)	13.5 GAL/HR (dry) 17.5 GAL/HR (wet)
Dry Steam Regulation:	Manual 0-max	Manual 0-max
Wet Steam Regulation:	4 electronically regulated levels	4 electronically regulated levels
Detergent Function:	4 electronically regulated levels	4 electronically regulated levels
Boilers:	Two 2.4 gallons stainless steel	Four 2.4 gallons stainless steel
Heat Up Time:	5 min	5 min
Water Tank:	10.6 gallons stainless steel	10.6 gallons stainless steel
Chemical Tank:	Two 1.3 gallons	Two 1.3 gallons
Dimensions:	44" high x 28" wide x 41" deep	44" high x 28" wide x 41" deep
Weight:	194 lbs net dry	225 lbs net dry
Optional Vacuum Power:	1200 Watt	1200 Watt
Vacuum Container Volume:	5.28 gallons	5.28 gallons
Continuous Feeding Inlet:	YES - ¾" Female Garden Hose Connector	YES - ¾" Female Garden Hose Connector

### **TROUBLESHOOTING**

If the below solutions do not resolve your problem please contact your dealer or distributor.

Problem	Solution
All LED's and the display of the front panel start blinking and the display shows letters or numbers	The voltage is insufficient to run the machine
Steam leaks from accessories or it is hard to disconnect them	Replace the gaskets, clean and place a light film of silicone grease on the gasket
Hose plug hard to insert in the machine socket	Lubricate the steam socket connection with some silicone
No steam output but the machine is pressurized.	Make sure the manual output valve is open
Machine heating time too long	Remove scale from boiler as described in the maintenance section
The pressure drops rapidly during operation	Remove scale from boiler as described in the maintenance section
The pressure rises rapidly and the pump continues to fill the boiler	The machine needs to be serviced

### TROUBLESHOOTING THE OPTIONAL VACUUM

Problem	Solution
Vacuum does not turn on when enabled on the hose-grip	Check the vacuum is plugged in right and the vacuum is on.
The vacuum does not effectively suck up dirt	Clean or replace the filter, and check the housing for blockage
Leakage of steam or water into the machine	Push the emergency off button 4 and unplug the machine. Contact your service partner for instructions.

### STANDARD ACCESSORY LIST

Specification	GVC-18000	GVC-36000
9385(GVC-18000) 9386 (GVC-36000)	Quick-release pistol grip + 33' hose	
KIT0914/AR/3.5 (GVC-18000) KIT0914/AR/5.5 (GVC-36000)	SHORT DETAIL LANCE	
KIT0915/AR/3.5 (GVC-18000) KIT0915/AR/5.5 (GVC-36000)	ONE-PIECE 40" WAND WITH DETAIL LANCE	
KIT0916/AR/3.5 (GVC-18000) KIT0916/AR/5.5 (GVC-36000)	ONE-PIECE 20" WAND WITH DETAIL LANCE	
93-KIT0814/I	4X 21/4" CIRCULAR STAINLESS STEEL BRUSHES	
93-KIT0814/N	4X 21/4" CIRCULAR NYLON BRUSHES	Carre
93-KIT0814/O	4X 21/4" CIRCULAR BRASS BRUSHES	
93-KIT0815/I	4X 1½" CIRCULAR STAINLESS STEEL BRUSHES	Name.
93-KIT0815/N	4X 1½" CIRCULAR NYLON BRUSHES	
93-KIT0815/O	4X 1½" CIRCULAR BRASS BRUSHES	

93-KIT0816/I	4X 1" CIRCULAR STAINLESS BRISTLES	
93-KIT0816/N	4X 1" CIRCULAR NYLON BRISTLES	
93-KIT0816/O	4X 1" CIRCULAR BRASS BRISTLES	
93-KIT0020	SAFETY GLOVES	
93-KIT0021	SAFETY GOGGLES	

### NON-STANDARD ACCESSORY LIST

Part#	Description	Picture
9319-VAC-KIT	VACUUM KIT 1200W FOR INDUSTRIAL 3PHASEMACHIN ES KIT INCLUDES: - VACUUM WITH SUPPORT - STEAM & VACUUM HOSE 4 METER - ACCESSORY SET	
9387	1 STEAM/VAC HOSE 4 METER	
v93-KIT0801	2 EXTENSION TUBES L.500	
93-KIT0802	1 EXTENSION TUBE L.250	

### NON-STANDARD ACCESSORY LIST

Part#	Description	Picture
93-KIT0803	1 FLOOR BRUSH L.500	
93-KIT0823	1 TEFLON INSERT FLOOR BRUSH L.500	
93-KIT0825	1 RUBBER INSERT FLOOR BRUSH L.500	
93-KIT0804	1 FLOOR BRUSH L.300	
93-KIT0822	1 TEFLON INSERT FLOOR BRUSH L.300	
93-KIT0824	1 RUBBER INSERT FLOOR BRUSH L.500	
93-KIT0805	1 SQUEEGEE L.300	
93-KIT0808/DA/2.5	1 STEAM-VAC LANCE 2.5MM	
93-KIT0808/DA/350/2.5	1 STEAM-VAC LANCE L. 350 2.5MM	
93-KIT0810	1 ANGLED TUBE 45°	

### INSTRUCTIONS TO MOUNT THE VACUUM KIT:

- 1. Fit both ends of the vacuum support into the holes between the back wheels and fix it with the two supplied screws.
- **2.** Put the vacuum cleaner on the support.
- 3. Connect the vacuum cleaner to the vacuum socket behind the cleaner using the special short vacuum hose.
- **4.** Plug the vacuum into the receptacle on the rear, near the vacuum socket.
- 5. Enable the main ON/OFF switch located on the vacuum head.
- 6. Connect the steam and vacuum hose to the steam socket.
- 7. Start the steam machine as explained.
- 8. Determine the required steam output by regulating manually with valve 6 (Pic.1).
- 9. Press the trigger 11 (Pic.6) on the hose grip to enable steam output.



Provides innovative maintenance solutions for a wide variety of industries including commercial HVAC, food and beverage processing, power generation and manufacturing.

For Sales Call: 1-800-333-7467 For Service Call: 1-800-370-2855

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