

## **Manual**

### **GBZ-350B**

#### **Product Descriptions and Instructions**

The contained descriptions in the present publication are not binding. The manufacturer therefore reserves itself the right to bring some necessary changes; the partial reproduction of the text and diagram contained in the present manual is forbidden by law.

#### **SUMMARY**

<b>THE</b>	<b>DELIVERY</b>	<b>OF</b>	<b>THE</b>
<b>MACHINE.....</b>			<b>3</b>
<b>INTRODUCTORY</b>			
<b>COMMENT.....</b>			<b>3</b>
<b>TECHNICAL</b>			
<b>DESCRIPTION.....</b>			<b>3</b>
<b>SYMBOLGY</b>	<b>USED</b>	<b>ON</b>	<b>THE</b>
<b>MACHINE.....</b>			<b>4</b>
<b>MACHINE</b>			
<b>PREPARATION.....</b>			<b>5</b>
<b>HANDLING</b>	<b>OF</b>	<b>THE</b>	<b>PACKED</b>
<b>MACHINE.....</b>			<b>5</b>
<b>HOW</b>	<b>TO</b>	<b>UNPACK</b>	<b>THE</b>
<b>MACHINE.....</b>			<b>5</b>
<b>BATTERY TYPE.....</b>			<b>5</b>
<b>THE</b>			<b>BATTERIES</b>
<b>INSTALLATION.....</b>			<b>6</b>
<b>CONNECT THE BATTERY.....</b>			<b>7</b>
<b>RECHARGING THE BATTERIES.....</b>			<b>7</b>
<b>BATTERY</b>	<b>CHARGE</b>		<b>LEVEL</b>
<b>GAUGE.....</b>			<b>7</b>
<b>FASTENING THE HANDLEBAR.....</b>			<b>8</b>
<b>RECOVERY</b>			
<b>TANK.....</b>			<b>8</b>
<b>SOLUTION</b>			
<b>WATER.....</b>			<b>8</b>
<b>SOLUTION TANK.....</b>			<b>9</b>
<b>WORK.....</b>			<b>9</b>
<b>PREPARATION.....</b>			<b>9</b>
<b>OPERATION.....</b>			<b>9</b>
<b>FORWARD</b>			
<b>MOVEMENT.....</b>			<b>10</b>
<b>COMPLETION</b>			
<b>WORK.....</b>			<b>10</b>
<b>DAILY</b>			
<b>MAINTENANCE.....</b>			<b>11</b>
<b>RECOVERY</b>			<b>TANK</b>
<b>CLEANING.....</b>			<b>11</b>
<b>CLEANING</b>			<b>THE</b>
<b>SQUEEGEE.....</b>			<b>11</b> <b>REPLACING</b>
<b>THE SQUEEGEE RUBBERS.....</b>			<b>11</b>
<b>BRUSHES DISASSEMBLY .....</b>			<b>12</b>
<b>WEEKLY</b>			
<b>MAINTENANCE.....</b>			<b>12</b>

SQUEEGEE HOSE CLEANING.....	12
SOLUTION	TANK
CLEANING.....	13
<b>COMMON</b>	<b>FAULTS</b>
<b>MEASURES.....</b>	<b>AND</b>
	<b>PROCESSED</b>
INSUFFICIENT	WATER
BRUSH.....	TO
	THE
THE MACHINE DOES NOT CLEAN WELL.....	13
THE SQUEEGEE CAN NOT DRY THE FLOOR PERFECTLY.....	13
TOO	MUCH
FOAM.....	14
<b>CHOICE</b>	<b>AND</b>
<b>BRUSHES.....</b>	<b>USE</b>
	<b>OF</b>
<b>GENERAL</b>	<b>SECURITY</b>
<b>RULES.....</b>	<b>15</b>

### **THE DELIVERY OF THE MACHINE**

When the customer received the machine, an immediate check must be performed to ensure all the material mentioned in the shipping documents have been received and moreover to find out that the machine has not suffered damage during transportation. If damage has occurred, get the shipping agent to verify immediately the amount and nature of the damage suffered and at the same time inform our service department. It is only by prompt action of this type that compensation for damage may be successfully claimed.

## INTRODUCTORY COMMENT

This is a sweep & scrubbing machine which use the mechanic abrasive action of a rotary brush and the chemical action of a solution water detergent is able to clean any type of floor, picking up during its advance movement, the removed dirt and the detergent solution which has not been absorbed from the floor.

We would impress upon you that any machine will function efficiently and operate successfully, only if used correctly and maintained in fully efficient working order. We therefore suggest you to read this manual carefully and re-read it whenever difficulties arise in the course of machine use. Our service department is at your disposal for all such advice and servicing as may prove necessary.

## SYMBOLGY USED ON THE MACHINE



Brush symbol, indicates the brush motor switch

## TECHNICAL DESCRIPTION

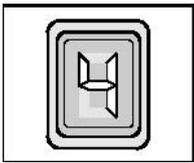
TECHNICAL DATA	U/M	GBZ-350B
Cleaning width	Mm	350
Squeegee width	Mm	420
Working capacity, up to	Sqm/h	850
Brushes diameter	Mm	1x350
Brushes speed	Rpm	180
Brushes pressure	Kg	18 max
Brush motor power	W	400
Drive type		Semi-auto.
Max. movement speed	km/h	3,5
Max. gradient		2%
Suction motor power	W	370
Suction vacuum	Mbar	100
Solution tank capacity	L	11
Recovery tank capacity	L	13
Machine length	Mm	720
Machine height	Mm	900
Machine width(without squeegee)	Mm	440
Batteries voltage	V	24
Batteries max. capacity	Ah	35
Batteries compartment	Mm	286x185x228
Batteries weight	Kg	20
Machine weight(without batteries)	Kg	45
Acoustic radiation pressure level	db (A)	<70
Vibration level	m/sqs	1.00



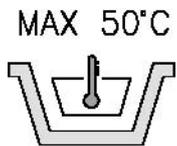
Vacuum motor symbol, indicates the vacuum motor switch



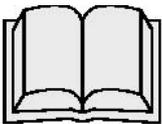
Battery switch symbol, indicates the power on/off



Batteries charging level symbol, indicates the batteries charging level



Indicates the detergent solution maximum temperature; it is placed close to the solution tank inlet opening



Open book symbol, indicates the operator to read the manual before using the machine



Hook symbol, indicates anchoring points and lift direction.

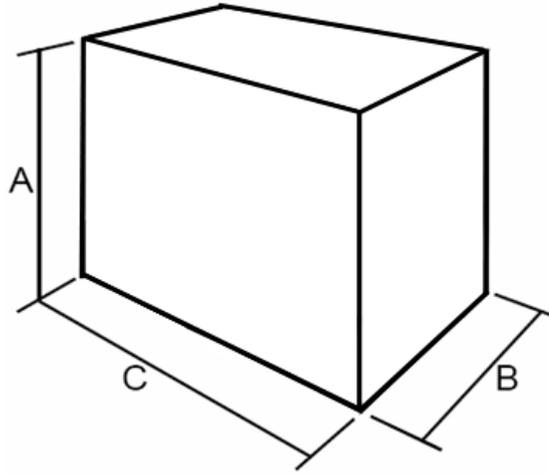


Warning symbol, carefully read the sections marked with this symbol, for the security of both operator and the machine

### **MACHINE PREPARATION**

#### **HANDLING OF THE PACKED MACHINE**

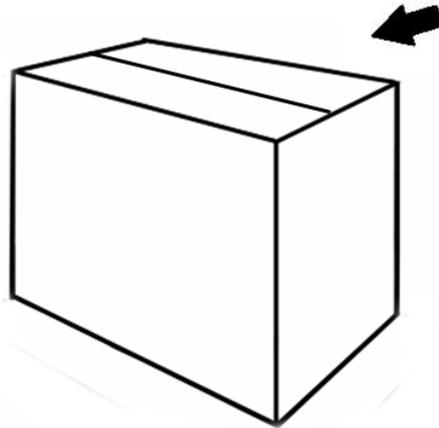
The machine is contained in specific packing with a carton box. No more than four packages can be stacked on each other, packing dimensions are as following:



A : 510 mm    B : 465 mm    C : 950 mm

### HOW TO UNPACK THE MACHINE

1. Open the packing on the top indicated.
2. Remove the machine from the packing.
3. Take out the recovery tank.



### BATTERY TYPE

For the energy supply of the machine uses two:

1. Lead batteries for traction use and tubular plates and electrolyte free.
2. Battery hermetically sealed for traction recombination of gas with gel technology.

The maximum dimensions of every battery should be: length 275mm, width 90mm, height 200mm.

The maximum weight of every battery should be 12kg.

In order to achieve a tension of 24v the batteries must be connected with a serial connection between them and the connection process has to be carried out by specialized person, which are trained by our service department.

**ATTENTION: when you choose GEL batteries, the PCB board has to be reset by specialized person!**

### THE BATTERIES INSTALLATION

The batteries must be housed in the battery compartment located under the solution tank. To install the batteries you must:

- 1 Remove the solution tank
- 2 Open the two rear hinges that close the battery compartment
- 3 Rotate the handlebar by lifting the handlebar control lever



4 Place the batteries in the compartment

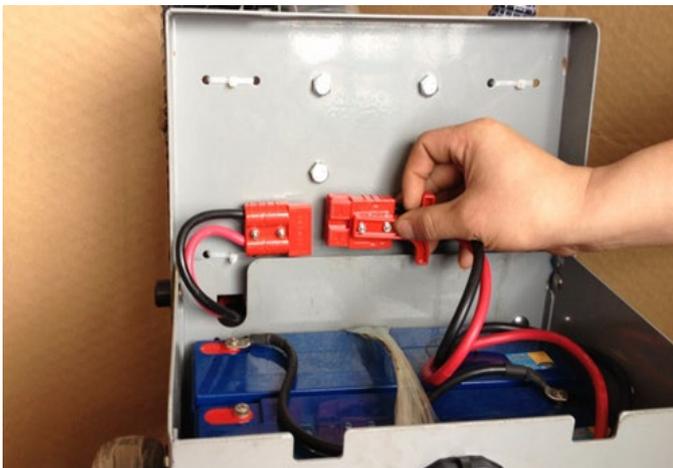
5 Connect the cables



**ATTENTION:** We recommend using exclusively sealed batteries to avoid acid spillage.

#### CONNECT THE BATTERY

1. Connect the battery connector to the machine connector.
2. Re-assemble everything.



**ATTENTION! THE INSTALLATION PROCESS HAS TO BE CARRIED BY SPECIALISTS. A WRONG OR DEFECTIVE CONNECTION CAN CAUSE SERIOUS DAMAGE TO PERSONS AND MACHINE.**

#### RECHARGING THE BATTERIES

Carry out a battery charge cycle before using the machine.

Make sure that the battery charger is suitable to the installed battery, both in capacity and in type.

**Warning! Never charge a GEL battery with an unsuitable battery charger. Strictly follow the instructions provided by the battery and battery charger manufacturer.**

In order to avoid permanent damage to the battery, they should never be totally discharged. To do this, they should be recharged within a few minutes after the battery discharge signal start to flash.



#### ATTENTION:

1. Never left the battery completely discharged, even if the machine is not being used.
2. For the daily recharging of the battery it is necessary to strictly follow the instructions provided by the manufacturer or dealer.
3. Danger of exhalation of gas and emission of corroding substances.

#### BATTERY CHARGE LEVEL GAUGE

The batteries' indicator is digital with 4 fixed positions and a blinking one. The numbers, which appear on the display, show the approximate charge level.

4=maximum charge      3=3/4 charge      2=2/4 charge      1=1/4 charge      0=discharged batteries (blinking)

**Warning! 8 seconds after the "0" blinks, the brush motor automatically switches off. Anyway, the machine can finish drying before recharging the batteries.**



#### FASTENING THE HANDLEBAR

In order to save space for parking and packing, the handlebar is supplied folded and must be put into its working position. Proceed as follows to do this:

1. Lift the handlebar by pulling up the lever indicated by the arrow
2. Place the machine in its working position
3. Mount the recovery tank on the handlebar tube using the two hooks
4. Insert the tubes into the fittings that exit from the ring of the recovery tank



## RECOVERY TANK

Make sure that the recovery tank is properly inserted in its housing and that the tubes are properly inserted in the tank elbows. Check that the plug is properly closed.



## SOLUTION WATER

Fill the solution tank with clean water at a temperature not exceed 50°C. Add liquid detergent should follow the instruction of the detergent manufacturer. Use only a minimal percentage of detergent to prevent formation of an excessive quantity of foam, as this could damage the suction motor.

**ATTENTION! NEVER USE PURE ACIDS!**

### Solution tank

1. Check that the plug is properly inserted in its seat
2. Check that the cock connection is ok.



## WORK

### PREPARATION

The following procedures must be done before installing the tanks:

1. Open the two rear hinges on the battery compartment
2. Connect the connector to the batteries
3. Close the battery compartment

Now install the tanks and prepare the machine for operation



### Operation

1. Turn the flow control valve to proper position.
2. Lower the squeegee control lever.
3. Press the power switch and check that the display lamp is shows "4"
4. Press the brush motor switch and solenoid valve switch (the upper right button).
5. Press the vacuum motor switch



### FORWARD MOVEMENT

Forward movement by these machines is done using the brush. When the brush is slightly inclined it pulls the machine forward.



**ATTENTION!**

**WHILE GOING INTO REVERSE, EVEN BRIEFLY, MAKE SURE THAT THE SQUEEGEE IS LIFTED.**

**COMPLETION WORK**

**AT THE END OF WORK, PLEASE MAKE MAINTENANCE AS FOLLOWING:**

1. Turn off the power switch.
2. Raise squeegee by lifting lever 5



3. Move the machine to where water is to be drained
4. Remove the recovery plug and empty the tank
5. Dismantle the brush and clean it with a jet of water



**ATTENTION! Always wear gloves during this procedure, to avoid any contact with dangerous substances.**

**DAILY MAINTENANCE**

**RECOVERY TANK CLEANING**

1. Remove the pipes from the elbows.
2. Open the recovery tank cover by turning it anticlockwise.
3. Take out the filter and clean it with a jet of water.

4. Rinse the recovery tank with a jet of water.

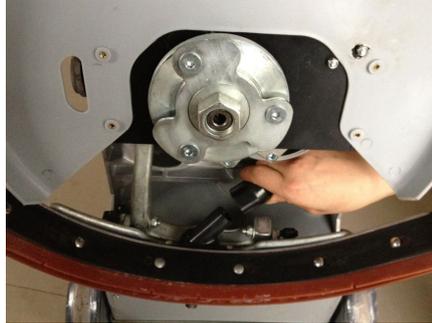


**ATTENTION! Always wear gloves during this procedure, to avoid any contact with dangerous substances.**

### **CLEANING THE SQUEEGEE**

The squeegee must be in perfect working condition to achieve a good drying process, when you found dirty on the rubber surface you need to clean them:

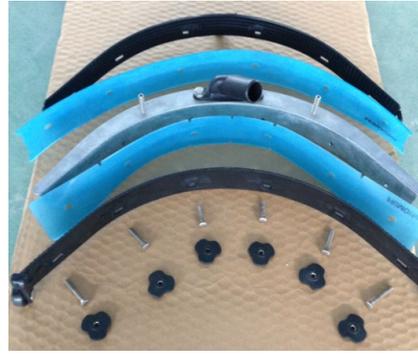
1. Lift the machine
2. Remove the pipe from the squeegee
3. Loose the knobs 1 shown in the picture to remove the squeegee
4. Carefully clean the inside of the squeegee
5. Carefully clean the rubbers
6. Reassemble everything.



### **REPLACING THE SQUEEGEE RUBBERS**

Check the condition of the squeegee rubbers. Replace as necessary. To replace the rubbers:

1. Lift the machine and remove the pipe from the squeegee
2. Loose the 2 knobs to remove the squeegee
3. Unscrew the squeegee knobs that clamp the blades and pull them out
4. Remove the blades
5. Replace the rubbers
6. Reinstall everything by performing these procedures in reverse



### **BRUSHES DISASSEMBLY**

1. Lift the squeegee
2. Lift the machine by pressing down on the handlebar
3. When the base is lifted jog the brush control. The brush releases automatically



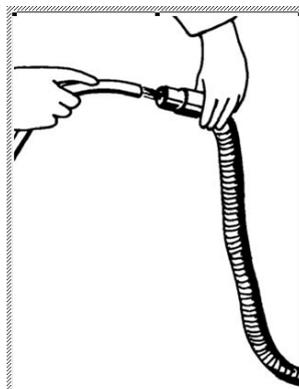
**ATTENTION: Make sure there are no objects or persons near the brush when doing this operation**

### **WEEKLY MAINTENANCE**

#### **CLEANING SQUEEGEE HOSE**

Weekly or whenever the suction is insufficient, it is necessary to clean the squeegee hose, proceed as following procedures:

1. Remove the pipe from the squeegee sleeve.
2. Take out the other end from the recovery tank.
3. Wash the inside of the pipe with a jet of water, from the side it is plug to the tank.



4. Reassemble the pipe.

**ATTENTION! DO NOT WASH THE PIPE THAT CONNECTS THE VACUUM MOTOR AND RECOVERY TANK!**

#### **CLEANING SOLUTION TANK**

1. Unscrew the plug on the suction tank

- 
2. Flush the inside of the solution tank by a jet of water
  3. Reinstall the plug



**ATTENTION! Always wear gloves during this procedure, to avoid any contact with dangerous substances.**

### **COMMON FAULTS AND PROCESSED MEASURES**

#### **INSUFFICIENT WATER ON THE BRUSHES**

1. Check there is water in the solution tank or not
2. Check that the solenoid valve switch is turned on ,check the flow control valve is open or not.
3. Check the quick fitting connection is properly engages



#### **THE MACHINE DOES NOT CLEAN WELL**

1. Check the brushes wear and replace them if necessary; Brushes must be replaced when bristles are about 15mm high

#### **THE SQUEEGEE DOES NOT DRY THE FLOOR PERFECTLY**

1. Check if the squeegee rubbers are clean.
2. Check the connection between the suction pipe and recovery tank.
3. Remove the whole suction unit and clean it.
4. Replace the rubbers if worn.
5. Check if the suction motor switch is turn on.

#### **FOAM OVER-FORMATION**

1. Check if the low-foam detergent is used, if necessary add little anti-foam liquid to the recovery tank.
2. Please remember that more foam is generated when the floor is clean, in this case use a more diluted detergent.

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## CHOICE AND USE OF BRUSHES

### POLYPROPYLENE BRUSH (PPL)

It is used on all floor types and offers good resistance to wear and to hot water (not over 60°C). PPL is not hygroscopic, and then preserves its character even when working on wet floors.

### NYLON BRUSH

It is used on all floor types and offers excellent resistance to wear and to hot water (not over 60°C). NYLON is hygroscopic and tends, over a period of time, to lose its character when working on wet floors.

### PAD HOLDER

Pad holder is recommended for cleaning polished surface, there are two types of pad holders:

1. Traditional pad holders with set of anchor stubs that retain and drive abrasive disk during operation.
2. CENTER LOCK Pad holders which, in addition to anchor stubs, also have a plastic snap-in centre lock system. This permits perfect centering of the abrasive disk and ensures it is kept anchored without detaching. This type of pad holder is best for machines with several brushes.

### LIST FOR THE CHOICE OF BRUSHES

Machine	Quantity	Bristles	Bristle diameter	Brush diameter
GBZ-350B	1	PPL PPL PPL Abrasive Pad holder	0.35mm 0.5mm 0.7mm	354.6mm

## GENERAL SECURITY RULES

Please carefully follow the listed below rules in order to avoid harm to the operator and damage to the machine:

1. Read the labels on the machine carefully. Never cover them for any reason and always immediately replace them

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if they are damaged.

2. The machine is to be used only by authorized and trained person.
3. Pay attention to other people particularly to children while the machine is working.
4. The machine is not suitable for cleaning carpets.
5. Never mix different types of detergent: this could generate noxious gases.
6. Never load the machine into container with liquids in it.
7. Never put the machine in lateral and invert placement.
8. Machine storage temperature must be between -25°C and +55°C.
9. Operating conditions: room temperature between 0°C and +40°C with respective humidity between 30 and 95.
10. Never use the machine in an explosive environment.
11. Never use the machine to transport goods.
12. Never use acid solutions, which could damage people or the machine.
13. Avoid running the brushes with the machine stopped: it could damage the floor.
14. Never use flammable liquids.
15. The machine is not suitable for cleaning hazardous dust.
16. Use a powder fire extinguisher in case of fire, do not use water.
17. Do not hit against shelving or scaffolding when there is danger of falling objects.
18. Do not exceed over the limit gradient stated on the machine plate, to avoid conditions of instability.
19. Never running the machine on uneven floor or in the area with big dust.
20. The machine must perform washing and drying operations at the same time, operating on wet floor with suitable signs.
21. Whenever the machine has operating troubles please make sure they are not caused by insufficient maintenance, then contact the nearest GREATBULL service centre.
22. When replacing machine parts, always ask for original GREATBULL spare parts from authorized agent or dealer.
23. Use only original GREATBULL brushes indicate in the chapter “CHOICE AND USE OF BRUSHES”.
24. Always cut off the electric power of the machine whenever maintenance is performed.
25. Restore all electrical connections after any maintenance operation.
26. Never remove guards that require tools for removal.
27. Never wash the machine with direct pressured jet of water or with corrosive substances.
28. Send your machine to the nearest GREATBULL service centre to check after 200 operating hours.
29. Do not fill the detergent solutions many hours before using the machine.
30. Before using the machine, make sure that all the covers and caps are positioned as shown in this manual.
31. Deal with the consumption materials according to the local laws.
32. After years of efficient work your machine will be ready to “scrap”, deal with its composing materials in proper way, and please remember that the machine has been built using totally recyclable materials.
33. Children should be supervised to ensure that they do not play with the appliance.