



# Clemas & Co Ltd

Industrial Cleaning Equipment  
Sales - Hire - Service

## GANSOW TITAN 95 RIDE ON SCRUBBER DRYER OPERATOR MANUAL



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## 1. IMPORTANT WARNINGS

- 1.1 **Important warning!** Do not use this appliance without first reading the operating instructions.
  - 1.2 **Important warning!** This appliance is not suitable for removing dusts hazardous to health.
  - 1.3 **Important warning!** This appliance is to be used for the wet cleaning of non-textile floors only.
  - 1.4 **Important warning!** This appliance is not authorised for use outdoors, on public footpaths or on highways.
  - 1.5 **Important warning!** This appliance may be used on floors with a maximum slope of 8% only.
  - 1.6 This appliance can be switched on only when the operator is sitting in the driver's seat. The driver's seat is fitted with a microswitch which enables starting up of all functions when activated by the weight of the operator.
  - 1.7 This appliance may be used by fully trained personnel only.
  - 1.8 In order to prevent unauthorised use of the machine, always remove the key from the key switch.
  - 1.9 When using the machine, the operator should take care not to endanger any third persons, particularly children.
  - 1.10 Before any cleaning or servicing work is carried out on the machine and before any parts are replaced, the following precautions must be taken: the charging plug must be removed from the wall socket and the key must be removed from the key switch.
- IMPORTANT! Before changing the main fuse, it is ESSENTIAL that the battery cabling is disconnected from the batteries.**
- 1.11 We expressly draw your attention to the fact that original parts and accessories which are not supplied by us have neither been tested nor cleared by us. The installation and/or use of such items may therefore adversely affect the efficiency and characteristics of your floor cleaning machine, jeopardising its active and passive safety.

The manufacturer declines all liability for damage occurring as a result of the use of non-original parts or accessories.

- 1.12 Under no circumstances may the charger leads (connecting the charger to the wall socket) supplied be modified. They must under no circumstances be prolonged.
- 1.13 All electrical functions of the machine are interrupted immediately as soon as the charging plug is inserted into the wall socket.
- 1.14 **Caution!** This appliance may only be used with the brushes supplied or with the brushes listed in the operating instructions. The safety of the appliance will be jeopardised by the use of other brushes.
- 1.15 **Caution!** Battery gas is highly explosive! Avoid sparks and open fire close to the batteries!

In order to avoid the build-up of dangerous gas inside the machine, the seat above the battery compartment must be removed whilst charging is in progress. The battery cell caps must also be removed or at least unscrewed (does not apply to gel batteries).

- 1.16 **Important!** Rooms where batteries are being charged should always be well ventilated.
- 1.17 The suitable temperature for the use of the machine ranges between +4°C and +35°C; when the machine is not used, the temperature range is between +0°C e +50°C.  
The humidity range for the machine under any conditions varies between 30% and 95%.
- 1.18 This product is classified according to the directive about electronic waste as special waste and is covered by the requisites of the new environmental protection regulations (WEEE-directive 2012/19/EU). It must be disposed of separately from ordinary waste in compliance with current legislation and standards.

**Special waste. Do not dispose of with ordinary waste.**

## 2. INSTRUCTIONS BEFORE OPERATING

- 2.1 Please read the following instructions on the use of the batteries and the battery charger (included with the batteries and/or battery charger) before operating battery powered machines:
- 2.2 New batteries supply full capacity after the first 8 - 10 charging cycles only. During this period, the machine should not therefore be used for excessively heavy cleaning.
- 2.3 To protect your battery, the machine is equipped with a computer aided charge indicator (BEM). This built-in safeguard incorporates a row of eight yellow light emitting diodes (LEDs) showing the state of charge at any time (capacity indicator). Once the battery reaches the programmed permissible remaining capacity, the brush motor is automatically switched off. This is indicated by a red LED.

When the battery is connected, the BEM performs a power-on self-test for approximately 3 seconds. Afterwards machine operating hours are shown with a resolution of 0.1h.

The capacity indicator is activated by turning the key switch to the "1" position.

The lit yellow LEDs indicate the remaining capacity. Each LED corresponds to a capacity window of approximately 10 %.

Once the permissible remaining capacity is reached, the left yellow LED flashes to indicate that the brush motor is about to stop.

The red LED indicates that the permissible remaining capacity has been reached. At the same time the brush motor is switched off.

- 2.4 Before operating the machine, make sure the cowling is completely closed.
- 2.5 The driver's seat is equipped with an "operator present" security device in the form of a microswitch which disables all functions when the operator gets off the seat.

- 2.6 The direction of motion is selected by the selector switch on the left side of the control panel.  
Position forward = forward drive  
Position backward = backward drive  
The direction of motion corresponds to the position of the selector switch.

When reversing with the squeegee lowered (in the working position), the electronic controls prevent motion until the squeegee has been completely raised. After the manoeuvre has been completed and forward motion has been resumed, the squeegee will return to the previous position.

**ATTENTION! The squeegee can be lowered during forward motion only.**

### 3. PRACTICAL GUIDE FOR THE OPERATOR

- 3.1 After the charger has gone off automatically the charger plug has to be removed from the wall socket.
- 3.2 Close the seat plate (raised during charging).
- 3.3 Remove the tank lid and fill the clean water tank with COLD water, preferably using a hose. To obtain the cleaning liquid, add Gansow low foam detergent. If using other brands, refer to the producer's instructions or use your experience. Finally, close the tank lid.

**IMPORTANT!** Detergents which produce a lot of foam may greatly impair the efficiency of the machine.

**IMPORTANT!** Make sure the gasket is free of holes, cracks or damage of any kind which could jeopardise the efficiency of the vacuum created by the motor, reducing the suction force and the quality of the cleaning obtained.

- 3.4 The operator must not switch on the machine before sitting on the driver's seat.

- 3.5 The brushes are lowered by pressing the button with the corresponding icon at the bottom left.

The brushes are lowered until they touch the ground and rotate automatically at the slightest pressure on the forward motion pedal. To increase the flow of detergent to the brushes, turn the potentiometer on the switch board clockwise to regulate the quantity (to reduce, turn anticlockwise).

**IMPORTANT!** The brushes will not turn or the detergent flow until light pressure is exerted on the forward motion pedal.

- 3.6 The squeegee is lowered by pressing the button with the suction motor icon at the bottom on the right side.  
It is lowered until it touches the ground, while suction is activated automatically by a micro switch during lowering the squeegee.

**IMPORTANT!** When the direction of motion is reversed, the squeegee is automatically raised and suction is turned off. When forward movement is resumed, the setting is reset.

- 3.7 The direction of motion corresponds to the position of the selector switch on the left marked with arrows indicating the movement selected. The pedal electrically controls an electronic board and is spring loaded. When it is released, it therefore springs back immediately to the zero-current position. With the standard programme on the electronic board, reverse speed is half forward speed.
- 3.8 The machine has a safety system (level electrodes) to switch the vacuum motor off if the foam or dirty water reach a critically high level inside the tank.

**IMPORTANT!** If the level electrodes are triggered while operating in manual mode and suction shuts down, switch off the the button with the suction motor icon at the bottom on the right side and empty the tank (or resolve the fault).

## 4. INSTRUCTIONS:

- 4.1 After switching on the machine, the operator must wait about 3 seconds before all functions are verified and ready for use.

**IMPORTANT!** Before turning or driving around corners the speed should be reduced considerably. To do this the operator simply exerts less pressure on the accelerator.

- 4.2 Floors should be cleaned and dried in parallel strips overlapping by 5 - 10 cm.

Our after-sales service technician or demonstrator will show you how to use your machine as efficiently as possible.

- 4.3 Thanks to the vacuum created inside the collection tank, the used water and dirt are completely absorbed and conveyed to the dirty water tank. In order to ensure that neither dirty water nor foam can find their way into the vacuum motor, the tank is equipped with a foam cut-off system and the intake pipe is fitted with a filter to catch fluff. This filter stops the material several centimetres above the maximum possible water level inside the tank.
- 4.4 When the liquid in the clean water tank has been used up or after cleaning has been completed, switch off the brush motor by pressing the switch with the brush icon. This automatically causes the solenoid valve to shut off the supply of detergent to the brush, switches off the pump and raises the brush unit to the rest position.

Allow the machine to keep moving for another 5 or 6 m to suck up the remaining dirty water.

By pressing the button with the suction motor icon, the squeegee will be raised to the rest position and the suction motor will be turned off.

- 4.5 When the accelerator pedal is released, the drive motor slows down and stops.
- 4.6 To switch off the machine, press the red mushroom button of the key switch.



- 4.7 Empty the dirty water tank into a recipient or a drain using the drain hose. Remove the cap, release the hose from the hose clip at the back of the machine and drain the fluid.
- 4.8 At the end of cleaning, clean the machine (without using a water jet) and rinse the tank.
- 4.9 Our machines are fitted with a quick brush change system.

#### BRUSH CHANGE:

1. Make sure the brush head is raised, no function is active.
  2. Take hold of the brush with both hands and turn sharply in the normal brush rotation direction (they rotate towards the centre).
  3. Remove the old brushes from underneath the brush head and place the new ones as near as possible to the bayonet fitting lined up with each motor.
  4. Lower the head and press the pedal lightly briefly (about 2-3 secs)
  5. Switch the brushes off, raise the brush head and make sure the brushes are correctly attached. If not, then repeat operations 3, 4 and 5, making sure each brush is centred and lined up with the motor.
- 4.10 Before connecting the charger to the wall socket, make sure the key switch is off (the plug is under the seat, above the battery compartment). After 15 seconds, the charger comes on and recharging begins.

Please read the instructions on use of the batteries and battery charger (included with the batteries and/or battery charger) before operating battery powered machines:

- 4.11 In order to avoid build-up of dangerous gas inside the machine during recharging, the seat over the battery compartment must be removed whilst charging is in progress (does not apply to gel batteries).

## 5. TROUBLESHOOTING

### 5.1 No water is delivered.

- Check the water pump fuse.
- Turn the delivery knob clockwise.
- Clean the filter in the water tank.
- Fill the clean water tank.
- Check feed pipes for kinks.
- Check operation of the pump.

### 5.2 The vacuum motor does not start.

- Check the vacuum motor fuse.
- Clean the dirty water tank around the sensor electrodes and the electrodes themselves.
- Do not move the electrodes from their original position; make sure they are not out of position.
- If the distance between them, or between the electrodes and the side of the tank, is modified, the power cut-off mechanism may be activated by mistake.
- Observe how much foam is generated by the detergent used.
- Use Gansow's low foam detergent.

### 5.3 Water is not sucked up, although the vacuum motor is operating.

- Make sure the drain hoses are closed.
- Check the tank lid is properly in place and lying flat on the water tank.
- Check the state of the tank gasket. Replace if necessary.
- Check the state of the squeegee blades (see also points 5.4 and 5.5)
- Check that the suction tubes leading from the squeegee to the dirty water tank and the connectors inside the dirty water tank are not blocked.

### 5.4 The squeegee with suction is leaving smears.

- Clean the rear squeegee blade.
- Check the rear squeegee blade and if necessary turn or replace. The rear squeegee blade may be used four times.
- See also 5.8.
- Use the wheels to adjust the height of the squeegee from the ground.

### **5.5 The squeegee is stuck to the floor.**

- Check the state of the front squeegee blade, in particular, that the slits are not blocked. If necessary, cut 1 to 3 additional slits.
- If excessively worn, turn the squeegee blades or replace them. The front squeegee blade may be used two times.

### **5.6 The brush motors switch off.**

- Check the automatic switches (thermal circuit breakers).
- Batteries are flat, charge immediately (red LED of the BEM is on).

### **5.7 The dirty water does not drain out through the hose.**

- Remove any blockages from around the drain hose coupling in the dirty water tank.
- Remove any blockages in the drain hose itself.

### **5.8 The machine is leaving a smeary film behind it (the flow of liquid to the brush has either been cut off or greatly reduced).**

- Turn the delivery knob clockwise. (See also 5.1)
- Clean the filters in the clean water tank.
- The clean water tank is empty. Fill it.

### **5.9 The machine will not move forwards or backwards.**

- The switch in the driver's seat is broken.
- Check the fuses.
- Turn key switch.
- This machine has an electromagnetic brake and therefore no separate parking brake. As soon as the accelerator pedal is pressed, the brake opens and the machine starts to move. If the accelerator pedal is relieved, the brake closes and the machine is braked to a standstill. Now the machine cannot be moved anymore.
- To unlock the machine mechanically, lock the lever on the left side of the traction unit.

**ATTENTION!** If the brake lock is not removed, the electromagnetic brake remains ineffective. Never switch-on the machine, if the electromagnetic brake is locked.

### **5.10 Eco-select switch**

- These models are equipped with an Eco-select switch on the switch board. As soon as this switch is pressed (switch lights), the driving speed and the suction motor power are reduced, in order to save energy and detergents if there is only a low pollution on the floor.
- Press the Eco-select switch again to return to the standard mode.

## 6. SERVICE AND MAINTENANCE

- 6.1 Before any cleaning or servicing work is carried out on the machine and before any parts are replaced, the following precautions must be taken: the charging plug must be removed from the wall socket and the key must be removed from the key switch.

**IMPORTANT!** Before changing the main fuse, it is ESSENTIAL that the battery cabling is disconnected from the batteries.

- 6.2 The tyres should be examined at regular intervals and any foreign matter such as fragments of metal, splinters of broken glass etc should be removed.
- 6.3 Check the state of the squeegee blades regularly and turn or replace if worn. See also 5.4 and 5.5.
- 6.4 The filter in the clean water tank should be cleaned regularly at least twice a week.
- 6.5 The vacuum motor, water pump and solenoid valve are below the water tank. The vacuum motor ventilation slits must be checked regularly for blockages and cleaned if necessary. This is especially important when the dirt includes large amounts of fluff.
- 6.6 The dirty water tank should be rinsed out regularly with the drain hose open (to drain the washing water), to prevent the formation of bacteria. After finishing cleaning, leave the lid open to allow drying.

**IMPORTANT!** After each cleaning cycle, the tank should be raised and left open in order to avoid damage to the lid gasket.

- 6.7 If not used for long periods, leave the machine with the battery charged and the charging plug unplugged.
- 6.8 A general control by authorised IPC GANSOW personnel is recommended at least once every six months.
- 6.9 Faulty or unused batteries should be disposed of correctly.
- 6.10 **IMPORTANT!** Rooms where batteries are being charged should always be well ventilated.

## 7. OPTIONAL ACCESSORIES

7.1. Depending on the type of floor and dirt, you may want to use brushes other than those supplied as standard.

The following are available from your Gansow Distributor:

- Black soft and PES brushes for delicate floors (gyms, sealed wood, etc);
- in polycarbonate of various hardnesses for a more energetic and deep treatment.

7.2. As an alternative to the brushes, you can use a pad, available in three versions with different colours:

- black = abrasive
- red/green/purple = medium hard
- brown/yellow/white = soft.

The brush does not need to be removed to use the pad, which can be fitted directly to the brush itself. Alternatively, a special pad holder can be provided.

7.3 Rotating flash light

## **8. Disposal**

Render the machine inoperable. It must not represent a potential source of danger for children. Dispose of the device according to the applicable local regulations. For further information on handling and recycling, please contact your authorized Gansow dealer where you purchased the de-vice. Used batteries with the recycling symbol contain reusable commodities. The heavy metals contained simultaneously represent a serious risk to health and to the environment. Never open batteries or damage them. Never touch, inhale or swallow any material inside batteries. Health hazard! Never allow batteries to pollute the environment. Risk of contaminating the ground and water! In accordance with the symbol with the crossed out bin, these batteries must not be disposed of in domestic waste. The return and recycling of old batteries must be agreed on with your authorized Gansow dealer in accordance with the Battery Law § 6 and § 8 (BattG).

## 9. TECHNICAL SPECIFICATION

		<b>Titan 95 BF 68 OL</b>
Cleaning width	<b>mm</b>	680
Squeegee width	<b>mm</b>	920
Capacity per hour theor.	<b>m<sup>3</sup>/h</b>	4080
Maximum speed	<b>km/h</b>	6
Number of brushes	<b>Stck.</b>	2
Brush diameter	<b>mm</b>	345
Max. brush pressure	<b>kg</b>	31
Pressure of brush head on the ground	<b>g/cm<sup>2</sup></b>	124
Brush rotation speed	<b>1/min</b>	215
Brush motor power	<b>W</b>	2 x 300
Drive	-	ELECTRONIC
Nominal drive motor power	<b>W</b>	500
Suction motor power	<b>W</b>	550
Sound pressure	<b>dB(A)</b>	79
Solution tank	<b>l</b>	95
Collection tank	<b>l</b>	100
Diaphragm	/	-
Drive wheel diameter	<b>mm</b>	230
Pivoting wheel diameter	<b>mm</b>	260
Net weight without batteries	<b>kg</b>	237
Number of batteries	<b>Stck.</b>	4
Voltage of batteries in series	<b>V</b>	24
Machine size	<b>cm LXWXH</b>	144,5 x 68 x 120,5
Vibration level (arm)	<b>m/s<sup>2</sup></b>	<2,5
Vibration level (hand-arm)	<b>m/s<sup>2</sup></b>	<2,5

Subject to technical modifications

# 10. CE CONFORMITY DECLARATION



**IP Gansow GmbH**  
Dreherstraße 9  
59425 Unna  
Deutschland / Germany



<b>IT</b>	<b>DICHIARAZIONE DI CONFORMITA' "CE"</b> Dichiaro sotto la nostra esclusiva responsabilità che il prodotto al quale questa dichiarazione si riferisce è conforme alle seguenti Direttive Comunitarie.	<b>FI</b>	<b>YHDENMUKAISUUSVAKUUTUS "CE"</b> Vakuutamme olemme vastuullamme, että seuraava laite jota tämä vakuutus koskee, on yhdenmukainen seuraavassa Euroopan yhteisön direktiivit.
<b>EN</b>	<b>"CE" CONFORMITY DECLARATION</b> We declare on our own responsibility that the product to which this declaration refers is in accordance with the following European Community Directives:	<b>EL</b>	<b>Δηλώνω εμπιστοσύνη ότι το προϊόν στο οποίο αναφέρεται η δήλωσή αυτή είναι σύμφωνα με τις ακόλουθες οδηγίες της Ευρωπαϊκής Κοινωνίας:</b>
<b>FR</b>	<b>DECLARATION DE CONFORMITE "CE"</b> Nous déclarons sous notre exclusive responsabilité que le produit auquel cette déclaration se réfère est conforme aux directives européennes suivantes communautaires.	<b>SK</b>	<b>PREHLÁSENIE "EU" O ZHODNOSTI</b> Prehlasujeme na vlastnú zodpovednosť, že výrobok, na ktorý sa vzťahuje toto prehlásenie je zhodný s nasledujúcimi Európskymi smernicami.
<b>D</b>	<b>"CE" KONFORMITÄTSERKÄRUNG</b> Wir erklären, dass das Produkt, auf welches sich diese Erklärung bezieht den folgenden Richtlinien der Europäischen Gemeinschaft entspricht.	<b>HU</b>	<b>"CE" MEGFELELŐSÉGI NYILATKOZAT</b> Saját felelősségünk alatt kijelentjük, hogy a termék, amelyre a nyilatkozat vonatkozik, megfelel az következő európai közösségi irányelvnek:
<b>ES</b>	<b>DECLARACIÓN "CE" DE CONFORMIDAD</b> Bajo nuestra exclusiva responsabilidad, declaramos que el producto, al que esta declaración se refiere, es conforme con las siguientes directivas comunitarias.	<b>CS</b>	<b>PROHLÁŠENÍ "CE" O SHODĚ</b> Prohlasujeme vylučně na vlastní zodpovědnost, že výrobek, na který se vztahuje tato prohlášení je ve shodě s následujícími Evropskými směrnicemi.
<b>PT</b>	<b>DECLARAÇÃO "CE" DE CONFORMIDADE</b> Declaramos sob a nossa exclusiva responsabilidade que o produto ao qual esta declaração se refere está em conformidade com as seguintes directivas comunitárias.	<b>ET</b>	<b>"CE" VASTAVUSDEKLARATSIOON</b> Deklarime meie ainuvastutuse juures, et see toode vastab järgmistele standarditele ja Euroopa Ühenduse direktiividele.
<b>NL</b>	<b>KONFORMITEITSEVERKLARING "CE"</b> Wij verklaaren onder onze exclusieve verantwoordelijkheid dat het product, waarop deze verklaring betrekking heeft, conform is aan de volgende Europese richtlijnen van de Gemeenschap.	<b>LT</b>	<b>"CE" ATITIKTIES DEKLARACIJA</b> Prisiimdami visą atsakomybę, mes pareiškiame, kuriam taikoma ši deklaracija, atitinka šiuos Europos Bendrijos direktyvas:
<b>DA</b>	<b>ØVERENSSTEMMELSESESKLÆRING "CE"</b> Vi forklarer under eget ansvar at følgende produkt som omfattes af denne erklæring er i overensstemmelse med villkørene i følgende EU direktiver.	<b>SL</b>	<b>IZJAVA O SKLADNOSTI "CE"</b> Izjavljamo na našo odgovornost, da je zabele, na katero se nanaša ta deklaracija, v skladu s sledajočimi direktivami Evropske skupnosti:
<b>SV</b>	<b>FÖRSÄKRAN OM ÖVERENSSTÄMMELSE "CE"</b> Vi försäkrar under eget ansvar att följande produkt som omfattas av denna försäkran i överensstämmelse med villkoren i följande Europeiska gemenskapens direktiv.	<b>PL</b>	<b>DEKLARACJA ZGODNOSCI "UE"</b> Oświadczamy na naszą wyłączną odpowiedzialność, że produkt, którego dotyczy niniejsze kartę gwarancyjną, jest zgodny z następującymi dyrektywami Wspólnoty Europejskiej.
<b>N</b>	<b>BEKREFTELSE OM ØVERENSSTEMMELSE "CE"</b> Vi forklarer under eget ansvar at følgende produkt som omfattes af denne erklæring er i overensstemmelse med villkørene i følgende EU-direktivens.	<b>LV</b>	<b>"CE" ATITIKTIES DEKLARACIJA</b> Prisiimdami visą atsakomybę, mes pareiškiame, kuriam taikoma ši deklaracija, atitinka šiuos Europos Kopienos direktyvas.

2006/42/EG - 2014/30/EU - 2014/35/EU

<b>Angewendete harmonisierte Normen - Applied harmonised standards:</b> EN 50106:2009-07-01, EN 55014-1:2012-05	<b>Angewendete nationale Normen - Other applied standards:</b> DIN EN ISO 12100, DIN EN 60335-2-72:2014-09, DIN EN 60335-1:2012-10, DIN EN 60529:2014-09
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Produkt:  
**SCHIEBERAUGMASCHINE - AUTOMATIC SCRUBBER DRIER**  
Modello-Modal-Modelle-Modell-Modelo-Modelli-Matli-Montelo-Mudel-Modelis:

Matrikula-Serial n - Matrícula-Matrichinennummer-Matrícula-Serialnummer-Serialnumero-Registrierungsnummer -  
(Aizkrāso) Mārkvārds-Vārdslo - Sorozatszám-Vyrobni číslo-Serial n°-Serijos Nr.-Serija ka štoviška-Nr serijny-  
Serijos Nr.:

Verantwortliche Person für die Technische Dokumentation.  
Person authorised to compile the Technical File.

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Testado - Checked - Essayé - Öpröft - Testado - Provkort - Koostattu - Otestet - Laverans -  
Dokimama - Vyskušeno - Bevizgati - Testovano - Kontrollitid - Patricinta - Prøukvænto -  
Sprawdzono - Patiskinta

CE-Authorized Representative

Serial n°



## 11. SPECIAL INFORMATION FOR USING THE BATTERIES AND CHARGER

Do you know how much a set of batteries costs?

Between about 650 and 3.000,- € according to the size of your machine. Should you have armoured tube batteries, the cost of a set is between 2.500,- and 21.000,-€.

Reason enough, we think, to give these expensive energy units the necessary daily attention required, in order to achieve the greatest possible working life from them.

To ensure even greater protection for your batteries, we stock a battery condition indicator which shows the state of the battery at any given time. This instrument (type: BEM) is a panel type and can be fitted in the panel on any of our battery-powered machines.

Luminous diodes of various colours are used to indicate the different levels of voltage. The device can also be used to switch the brush motor(s) off automatically as soon as the battery reaches a fix state of discharge. Please feel free to consult the staff at our local sales depots or dealers for information on using and fitting these instruments as well as on the way they work.

**Points you really must take notice of:**

***- Never discharge the batteries too low.***

Every battery should only be discharged to 70 or 80% of its rated capacity. You will overburden the batteries,

- a) if you use your machine too long, too often. How long you can safely work your machine, will be explained to you, when our service personnel install your equipment. You can ask our service personnel at any time, or call our nearest service depot. For machines fitted with a BEM the brushes will automatically be switched off when the battery voltages become too low.

- b) if you use your machine regularly more than once within 24 hours to a certain extent. A good battery charger requires continuously approx. 10 - 12 hours (according to type) to recharge empty batteries. If you interrupt the charging process, the batteries will never become fully charged, and will be quickly ruined.
- c) if you do not recharge the batteries immediately after having used them to about 70 or 80% of their rated capacity. Empty batteries do not have the power for a further operation, and will be quickly ruined. For machines fitted with a BEM the brushes will automatically be switched off when the battery voltages become too low.  
If you use your machine daily for (a) short period(s) only, ask at your nearest agency, or our service personnel. We will inform you as to the most practical way to use your charger to avoid premature corrosion of the battery.

#### **- Storage of batteries**

if batteries are taken out of service for a lengthy period they should be stored fully charged in a dry, frost-free room. To ensure the battery is always ready for use a choice of charging methods can be made:

- a) **A quarterly full charge.**  
If loads are connected, e.g. BEM, a full charge could be needed after 3 weeks.
- b) Float charging at the instructed charging voltage.

#### **- Correct connection of the battery charger.**

Please take careful note that:

- d) the plug of the charger cable is firmly plugged into the machine;
- e) the mains plug is firmly fitted into the wall socket. Confirm that the wall socket has electrical feed overnight and hang a notice on the plug, saying, that during the charging period the plug, must not be removed;
- f) the battery charger will switch itself on automatically after 15 seconds.

Before leaving the machine, please check carefully, that all connections are properly made and that the charger is switched on. Many batteries have been damaged prematurely because something has been overlooked. Please read the operating instructions of the type of charger in use with you.

***- Secure seating of the post terminals on the cables, that join the batteries together.***

Loose battery post terminals are dangerous because a layer builds up that hinders the flow of electricity. When recharging the batteries, full electrical charge cannot flow, the batteries will not become fully charged and are therefore damaged prematurely. Should you find loose post terminals, please do not simply tighten them, but remove them, clean the post and the terminal inside and out, smear with battery grease and refit tightly.

***- Run-in instruction***

Note that brand-new batteries need a running-in period and thus can not yet supply full power during the first 8 - 10 discharges. Therefore, the machine should be kept off heavy duty jobs during that time.

Should you have any further questions about the handling of your battery machine, please call our nearest office or agency.

***- \*Never let the batteries get dry.***

The electrolyte must cover the cell plates at all times, it should be at least 5/8 ths of an inch over the plates. Cell plates that are continuously dry or part dry, build up a layer that prevents the cells from charging, rendering the battery useless within a short time.

***- \*Never overfill the batteries.***

Too much electrolyte is as bad as too less. Only top up to approx. 5/8 ths of an inch above the cell plates.

**Important in breaching with battery acid - corrosive!**

***- \*Always top up the batteries with distilled water, never acid.***

The only thing that vaporises when the batteries are warm, is the distilled water, therefore it is only necessary to top up with distilled water. Topping

up with acid, makes the electrolyte too strong, and causes corrosion on the cell plates.

**Important in breaching with battery acid - corrosive!**

\*this does not apply to maintenance-free batteries

**- *\*Never top up with tap water.***

Tap water has an electrical conductivity and will destroy the batteries. You can purchase distilled water at Electrical Wholesalers, from us, or from Petrol Stations.

If you have any further questions about the handling of our battery machines then please contact your nearest **Gansow** representative or our head quarter in Unna / Germany.

\*this does not apply to maintenance-free batteries

## 12. CONTROL AND MAINTENANCE OPERATIONS

**IMPORTANT!** Repairs should preferably be performed by qualified personnel.

Only original spare-parts may be used. Modification of the machine without the approval of the manufacturer or the use of unauthorised materials invalidates the warranty as the structural condition of the machine may differ from that described in the certificate

After any repair work by unauthorised personnel the machine must be officially approved by Gansow or a technician authorised by the company to confirm conformity with the original conditions and therefore the validity of the general terms of the warranty.

Before any cleaning or servicing work is carried out on the machine, disconnect the charger cable and remove the key from the key switch to guarantee operator safety

The following tasks should be carried out daily before or after each work session:

- remove dirty water and rinse out the tank,
- clean the machine (do not use water jets or water cleaners),
- rinse the suction hose by running water from inside the tank,
- charge battery and check that the battery terminals and power plug are securely in position,
- clean the electrodes and check the level of the dirty water and foam,
- make sure the tank lid fits correctly to the tank.

**Table of recommended checks, inspections and maintenance and schedule, based on daily use of about four hours;**

Description of control	interval	interval	interval	interval	interval
	WK.LY	MTH.LY	4/MTH	6/MTH	YR.LY
<b>1. General controls</b>					
Check position and condition of brushes	X				
Check the brush head is horizontal and flat when in the operating position	X				
Check clean water tank and dirty water tank for leaks			X		
Clean the solution tank filter	X				
Check that switches are working and lights are not blown	X				
Check the squeegee blades	X				
Check the squeegee is in the correct position on the floor when suction is on	X				
Grease the head raising and squeegee lever rotation pins		X			
Check the drive motor gearbox for leaks ( <b>if there are leaks please call the Service immediately</b> )				X	
Check tyres for the presence of foreign matter or wear		X			
<b>2. Motors</b>					
Check the vacuum motor is working properly	X				
Check the carbon brushes of the traction motor			X		
Check the carbon brushes of the brush motor			X		
Check the carbon brushes of the suction motor			X		

Description of control	interval	interval	interval	interval	interval
	WK.LY	MTH.LY	4/MTH	6/MTH	YR.LY
<b>3. Drive</b>					
Check whether the drive pedal is moving smoothly (without play)			X		
Check whether the motor cables are damaged or loose			X		
<b>4. Collection tank</b>					
Clean electrodes	X				
Check outlet hose for damage	X				
Check suction pipes and hoses for blockages	X				
<b>5. Batteries</b>					
Check the condition of the cables and the seal of the cell caps.		X			
If the machine is not used and the batteries are active, recharge every three months			X		
Top up the level of battery fluid in all cells. (not necessary with gel batteries)	X				
Grease the battery terminals (not necessary with gel batteries).			X		
<b>6. Control unit</b>					
Blow out control unit with compressed air					
Check that contacts are clean and weld free					
Check that automatic fuses are firmly in position					
Check connectors are firmly connected				X	
<b>7. General inspections</b>					
Have the machine checked by an electrician				X	
Call the authorised Gansow technical assistance service for a full control				X	