



ST 360



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TABLE OF CONTENTS

.....	1
TABLE OF CONTENTS	2
DELIVERY OF THE MACHINE	3
INTRODUCTION	3
TECHNICAL DATA	4
SYMBOLS USED ON THE MACHINE	5
PREPARATION OF THE MACHINE	6
MOVING THE MACHINE WHEN PACKED	6
UNPACKING THE MACHINE	6
CONNECTING THE BATTERY CHARGER	7
RECHARGING THE BATTERIES	7
BATTERY LEVEL INDICATOR	7
SQUEEGEE	8
FITTING THE DISC BRUSH	9
DETERGENT SOLUTION	9
RECOVERY TANK	9
GENERAL SAFETY RULES	10
CONTROLS	11
MAIN CONTROLS	11
OPERATING THE GEAR LEVERS	13
SUCTION	15
HORN	15
SOLUTION LEVEL	15
UPON COMPLETION OF WORK	16
DAILY MAINTENANCE	17
CLEANING THE RECOVERY TANK	17
CLEANING THE SQUEEGEE	17
REPLACING SQUEEGEE RUBBER BARS	18
RELEASING THE DISC BRUSH	18
CLEANING THE FILTER AND THE SOLUTION TANK	18
CLEANING THE SUCTION HOSE	19
CLEANING THE SUCTION MOTOR FILTER	19
OPERATION CONTROL	20
NOT ENOUGH WATER ON THE BRUSH	20
MACHINE DOES NOT CLEAN EFFECTIVELY	20
SQUEEGEE DOES NOT DRY PERFECTLY	20
SUCTION DOES NOT WORK	21
BRUSH MOTOR DOES NOT WORK	21
TRACTION MOTOR DOES NOT WORK	21
TOO MUCH FOAM FORMATION	21
THERMAL PROTECTIONS	21
TRANSPORTING THE MACHINE	22

Delivery of the machine

When the machine is delivered, please check immediately that all materials match the delivery documents and that the machine has not been damaged during transport. If so, ask your shipping agent to assess the extent of the damage and inform our customer care service at once. Prompt and appropriate action is the only way to obtain the missing parts and to be able to claim damages.



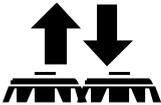
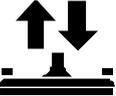
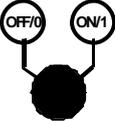
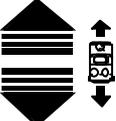
		FIMAP			
S.p.A. Viale del Lavoro 58 San Martino Buon Albergo (Verona) Italy					
2004	V	W	kg		
		IP			
Mod. / Type		N° 000000 0000			
					

TECHNICAL DATA

ST360

TECHNICAL DATA	UNIT	
Working width	Inches	21"
Squeegee width	Inches	25.5"
Working capacity	Sq feet/h	31,500
Brushes	Inches	1 x 21"
Brush rpm	RPM	200
Brush pressure	LBS	100
Brush motor Volts	V	24
Brush motor Watts	W	400
Traction speed	mph	0 - 4.5
Max grade capability	%	10%
Suction motor Volts	V	24
Suction motor Watts	W	480
Solution tank	Gallon	24
Recovery tank	Gallon	27
Turning radius	Inches	53"
Machine length	Inches	48.5"
Machine width	Inches	25.5"
Machine height	Inches	62"
Batteries (No.)	V/AH	24/240AH 4x6V
Battery weight	Lbs	71lbs x 4
Machine weight without batteries	Lbs	496

SYMBOLS USED ON THE MACHINE

	<p>Symbol for brush head up/down. It indicates the brush head up/down pedal.</p>
	<p>Symbol for battery charge level.</p>
	<p>Symbol for squeegee up/down. It indicates the up/down pedal of the squeegee.</p>
	<p>Symbol for water flow.</p>
	<p>Symbol for the horn button.</p>
	<p>Symbol for on/off switch.</p>
	<p>Symbol for forward and reverse switch. Its position shows the direction of the machine, either forwards or reverse.</p>
	<p>Symbol for maximum temperature of solution.</p>
	<p>Symbol for drain hose on the recovery tank.</p>
	<p>Symbol for fuse panel</p>
	<p>Symbol for levers in brake position</p>
	<p>Symbol for the hourmeter</p>

PREPARATION OF THE MACHINE

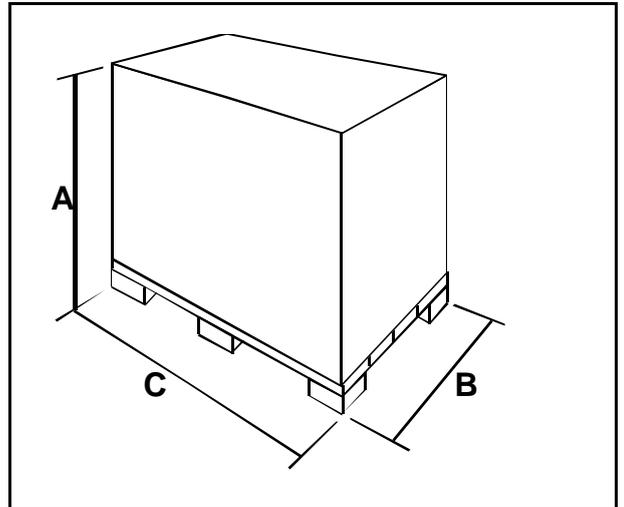
MOVING THE MACHINE WHEN PACKED

The machine comes in special packaging which includes a platform for fork-lift transport. Do not place skids one on top of the other.

The overall weight is 540Lbs.

Packing size is:

- A : 60"
- B : 29"
- C : 52.5"

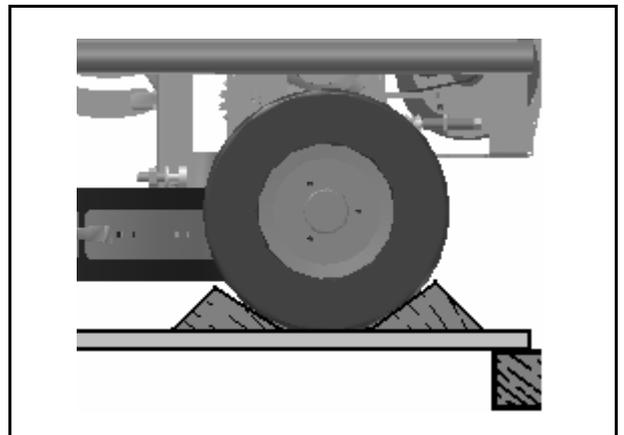


UNPACKING THE MACHINE

Remove the box.

The machine is fixed to the skid by wheel-blocks.

Remove the wheel blocks.



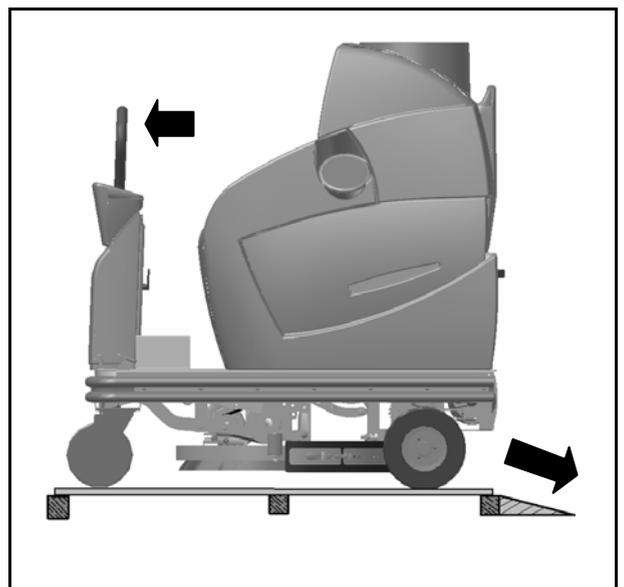
Push the machine backwards off of the skid using a ramp.

Avoid hitting the brush head on the skid.

Keep the skid for future transport.

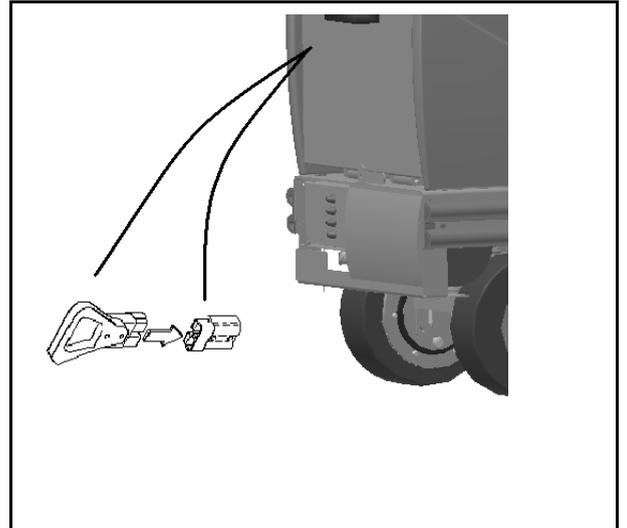
The suction head, is located inside the battery compartment.

NOTE: to move the machine without batteries push the drive levers forward.



CONNECTING THE BATTERY CHARGER

The connectors are fitted on the battery compartment. Plug the connector of the battery charger cables into the socket on battery compartment. The battery connector is delivered inside the bag where you found this instruction booklet.

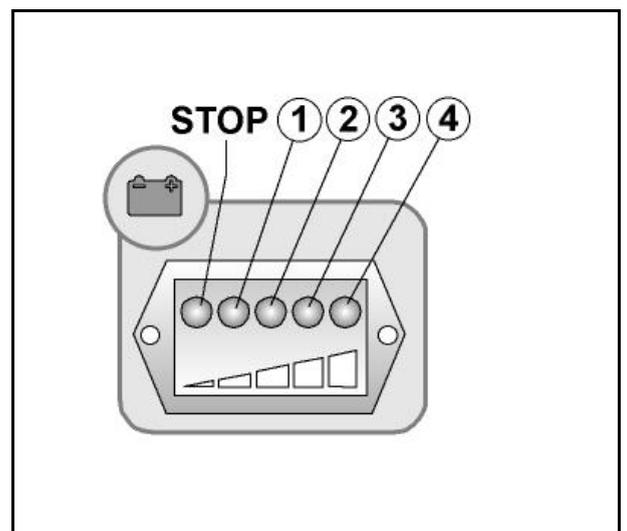


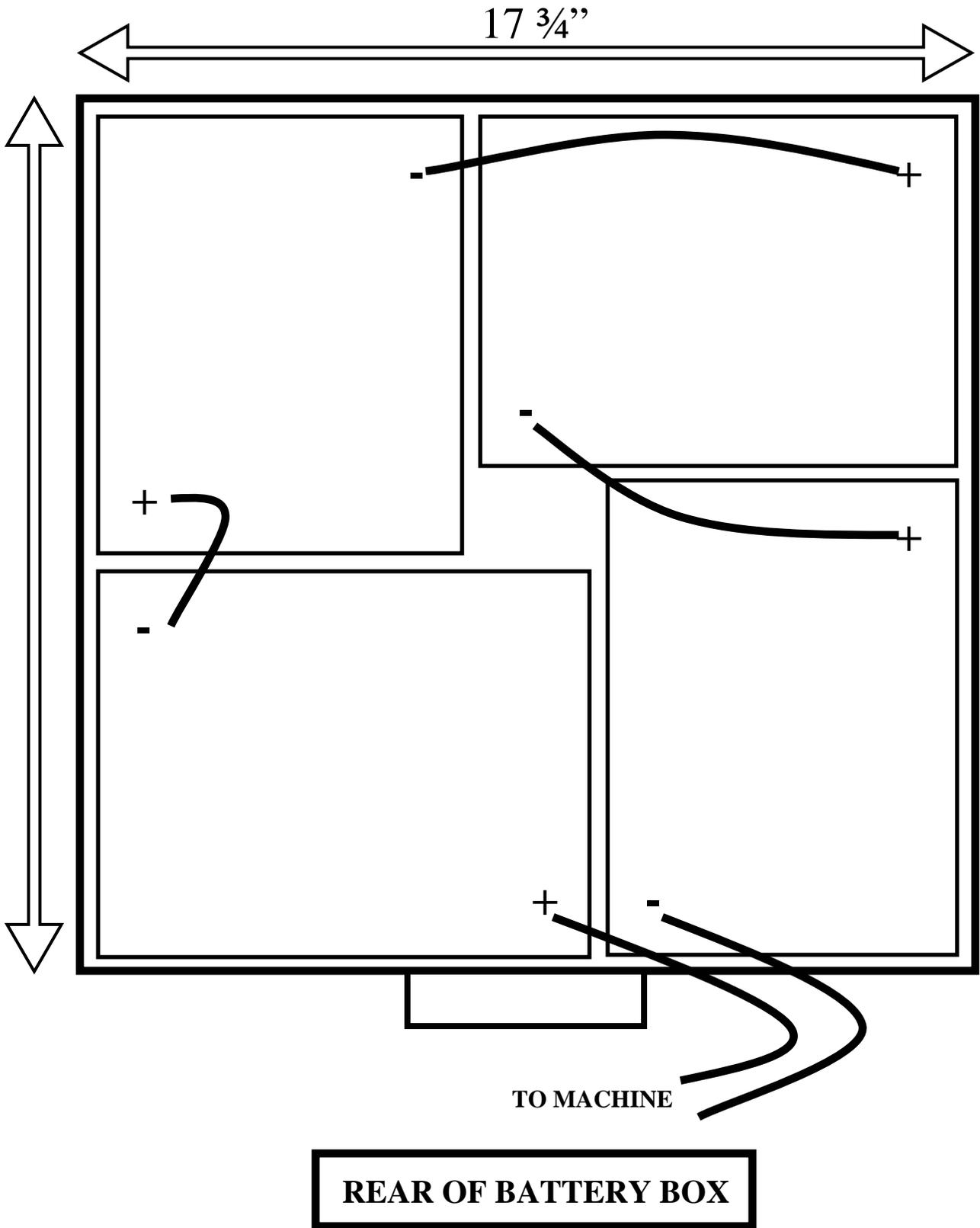
BATTERY LEVEL INDICATOR

The battery level indicator is operated by a microprocessor. The LEDs display the approximate level of charge:

4 = max. charge level, **3** = $\frac{3}{4}$ charge level,
2 = $\frac{1}{2}$ charge level, **1** = $\frac{1}{4}$ charge level,
0 = flat batteries (blinking light).

ATTENTION: a few seconds after the “=” is shown, the brush motor switches off automatically. However, with the residual charge, the floor can be dried before recharging





NOTE: Battery box will accept Trojan T125 Batteries (10 3/8" L x 7 3/8" W)

PREPARATION OF THE MACHINE

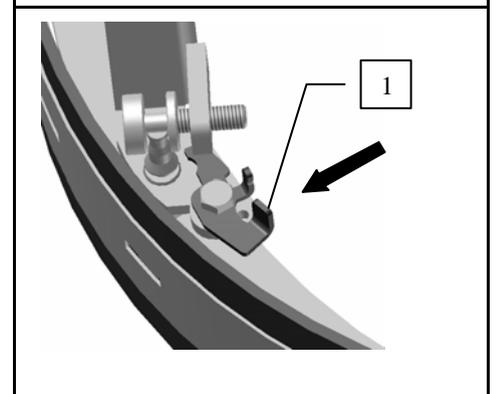
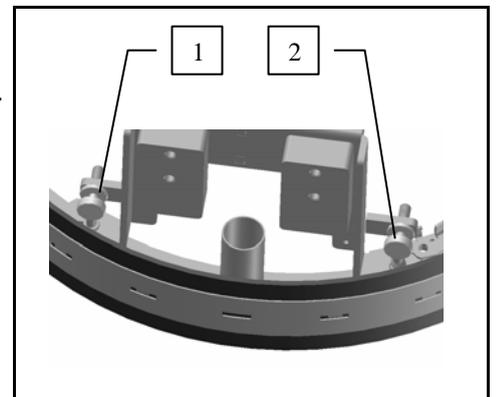
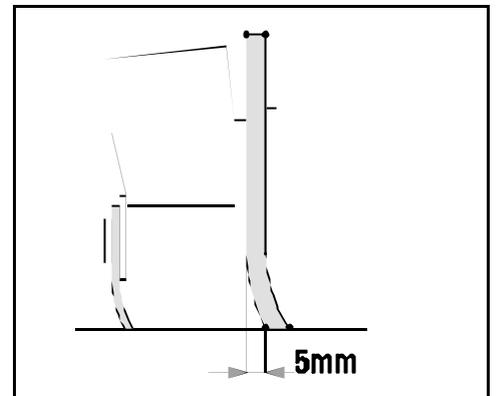
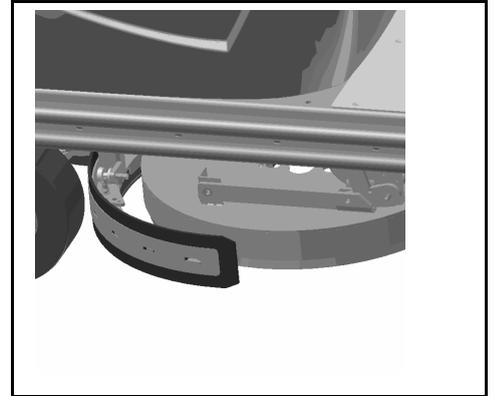
SQUEEGEE

The squeegee is supplied already assembled on the machine and with the adjustments made during machine testing.

When operating the machine, the rear rubber should be slightly tilted back 5mm all along its length. you can use the squeegee on all 4 edges before replacing it with a new one.

To adjust the squeegee blade down, just tilt back the squeegee body by turning the knobs counter-clockwise. To adjust the squeegee blade up, turn the knobs clock-wise. When adjustment is completed, thighten the lock-nut.

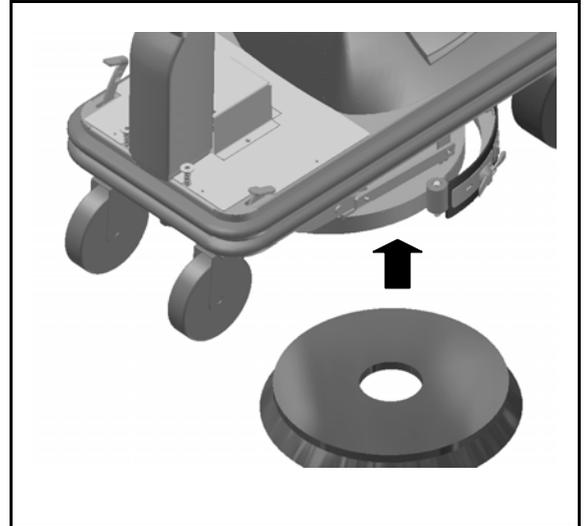
To release the squeegee from the machine, use the lever (1) and the squeegee is immediately released from its holder. Disconnect the suction hose and push it towards the inside of the machine to release the opposite side.



PREPARING THE MACHINE

FITTING THE DISC BRUSH

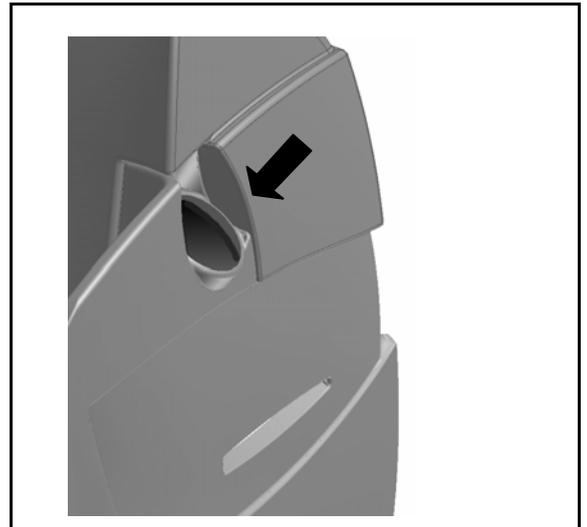
1. With the brush head lifted, centre the brush under the brush deck
2. When lowering the brush head, the brush will lock automatically.



DETERGENT SOLUTION

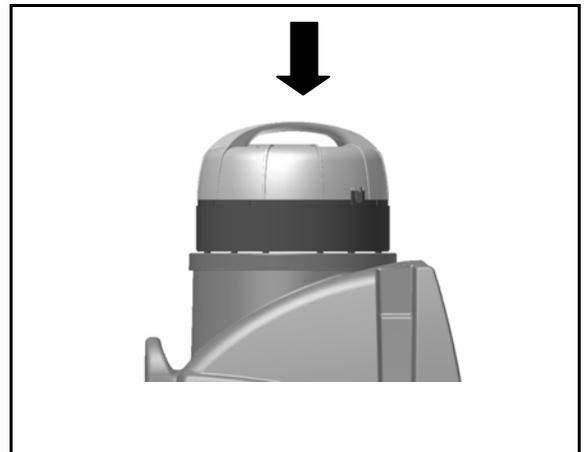
Fill up the solution tank with fresh water at a temperature not exceeding 50°C and add the liquid detergent according to the concentrations and instructions that are provided by the manufacturer.

NOTE: Always use low-foam detergents. To be sure to avoid any foam formation, before starting to operate, pour a minimum quantity of antifoaming agent into the recovery tank. **Do not ever use pure acids.**



RECOVERY TANK

Make sure the vacuum unit is properly fitted and the drain hose cap is closed.



GENERAL SAFETY RULES

Keep to the following rules in order to prevent any operator injury or machine damage.

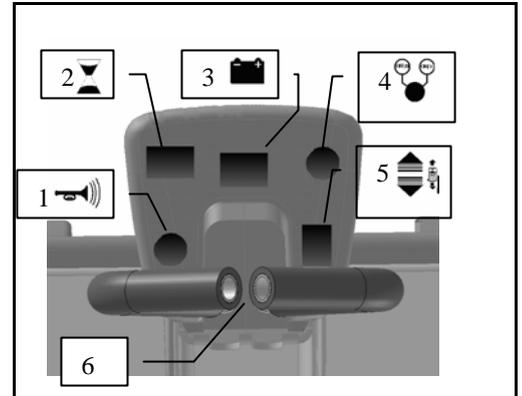
- Read thoroughly the labels on the machine, do not cover them for any reason and replace them immediately if they are damaged
- The machine should be operated only by authorised and trained personnel
- When operating the machine, beware of other people and especially to children
- Do not mix different types of detergent in order to prevent formation of harmful gases
- No Do not place any liquid container onto the machine
- Storage temperature should be between -25°C and $+55^{\circ}\text{C}$
- The optimum operating temperature should be between 0°C and 40°C
- The humidity level should be between 30 and 95%
- Do not operate the machine in explosive environment
- Do not use the machine as means of transport
- Do not use any acid solution which could damage the machine
- Stop brush rotation when the machine is not moving to prevent floor damage
- Avoid suction of inflammable liquids
- In the event of fire, use powder extinguishers. Do not use water.
- Do not bump against shelving or scaffolding to prevent any risk of object falling
- Adjust operating speed to wheel grip conditions
- Do not exceed the maximum stated gradient to avoid instability
- When the machine is parked, take the key out
- The machine has to scrub and dry at the same time. If otherwise operated, cleaning tasks should only take place in areas that are restricted to authorised personnel. Mark the wet floor areas with proper signs
- Should any anomalies be detected in machine operation, make sure they are not due to lack of ordinary maintenance. Otherwise, ask the Fimap customer care service for assistance.
- Should any part be replaced, ask an authorised dealer and/or retailer for ORIGINAL spare parts.

- For any maintenance procedure, unplug the machine from the mains supply.
- Do not remove any protection which requires the use of tools to be removed
- Do not wash the machine with direct jets of water or under pressure, nor with corrosive substances.
- Every 200 operating hours have the machine checked by a Fimap customer care service
- The machine doesn't cause any harmful vibration
- In order to prevent the solution tank filter from developing scaly deposits, do not pour in the detergent solution hours before operating it.
- Before operating the machine, make sure that all caps and covers are properly positioned as indicated in this operator's manual.
- Before lifting the recovery tank, make sure it is empty.
- Dispose of any consumables in strict accordance with the relevant regulations in force.
- When, after years of valuable usage, you have to dispose of your FIMAP machine, make sure you dispose correctly of all the materials it consists of, especially oils, batteries and electrical components considering that the machine itself has been manufactured with completely recyclable materials.
- Attention: reconnect all electric connections after every maintenance procedure.
- The machine is not intended for children nor for unsupervised use by persons whose physical, sensory or mental conditions could make the use of the machine unsafe. Keep the machine away from children.

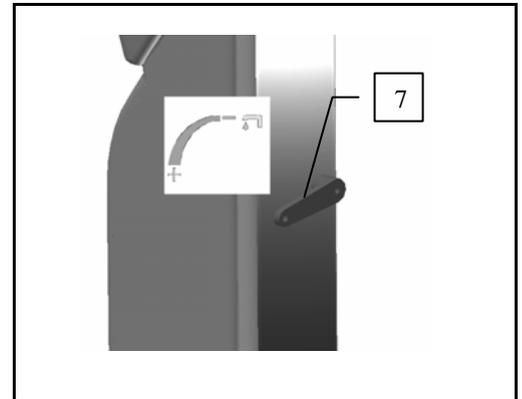
CONTROLS

MAIN CONTROLS

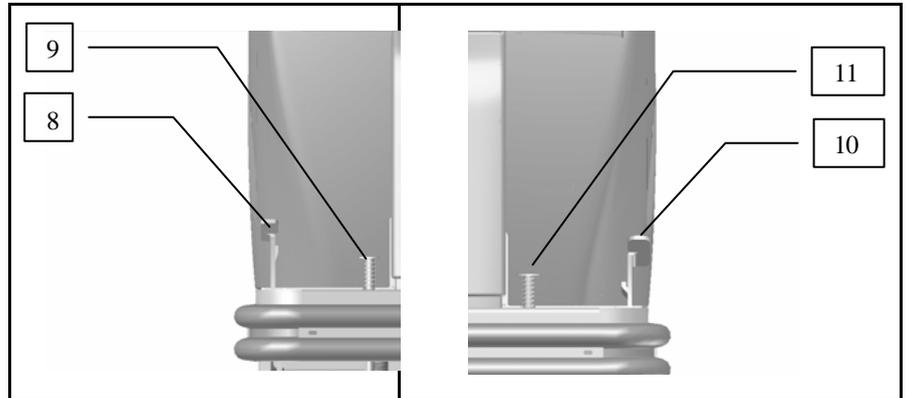
1. Horn
2. Digital hourmeter
3. Battery level indicator
4. On/Off key switch
5. Forward/reverse switch
6. Forward/reverse levers



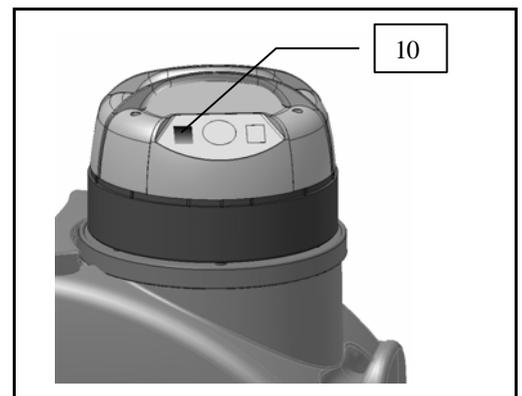
7. Solution lever



8. Squeegee control pedal: the squeegee is working when the pedal is lifted.
9. Pedal for right wheel directional lock.
10. Brush control pedal, the brush is working when the pedal is lifted.
11. Pedal for left wheel directional lock.



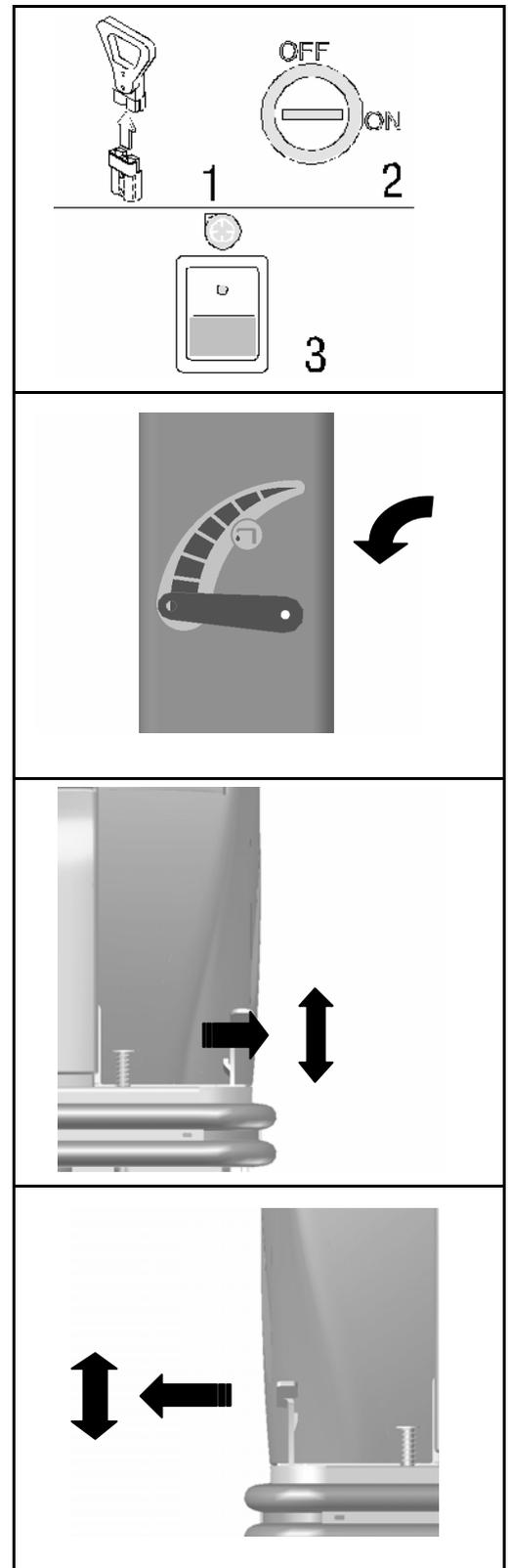
12. Button to de-activate the vacuum motor.



OPERATING

Follow the operations as instructed under PREPARATION OF THE MACHINE

1. Plug in the battery connector
2. Sit on the seat
3. Turn the key switch on.
4. Drop the brush deck down and the vacuum motor will start automatically.
5. Open the tap by turning the knob counter clock-wise. Water only flows when the brush motor is on.
6. To lower the brush head, push the pedal left and up. Brush and suction start automatically. For higher pad pressure, lift the pedal further until it locks in place. To lift the brush head, push the pedal down until it locks in place.
7. To lower the squeegee, push the pedal right and up. To lift it, press the pedal down until it locks in place.



OPERATING

OPERATING THE DRIVE LEVERS

Each lever is directly connected to the corresponding traction wheel (right lever with right wheel and vice-versa).

Operating in forward gear:

1. Press the forward switch on the instrument board
2. Push both levers forwards simultaneously

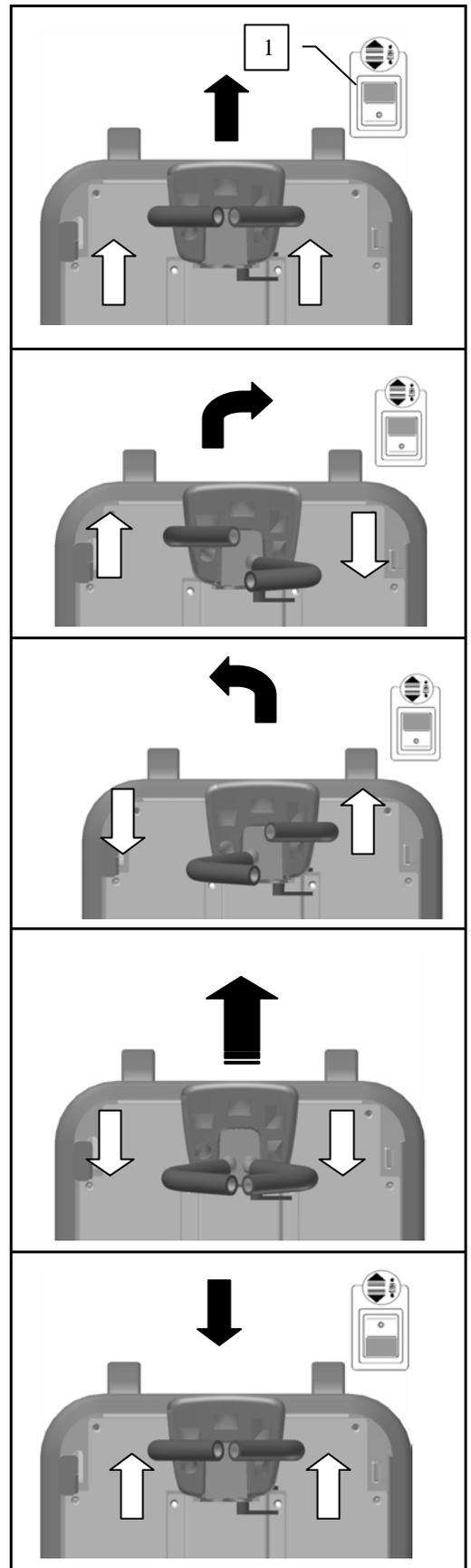
To turn right, move the left lever forwards and the right one backwards.

To turn left, move the right lever forwards and the left one backwards

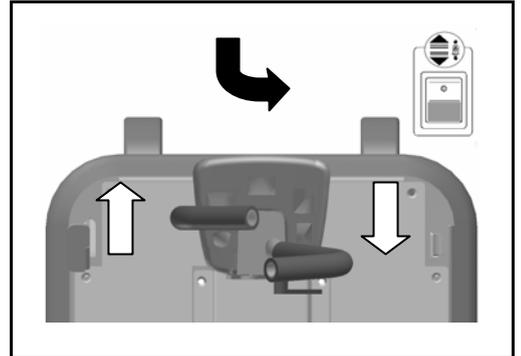
To brake, pull back both levers simultaneously.

Operating in reverse gear:

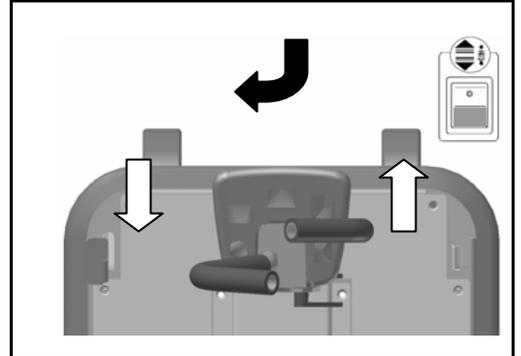
1. Press the switch on the instrument board
2. Push both levers forward simultaneously



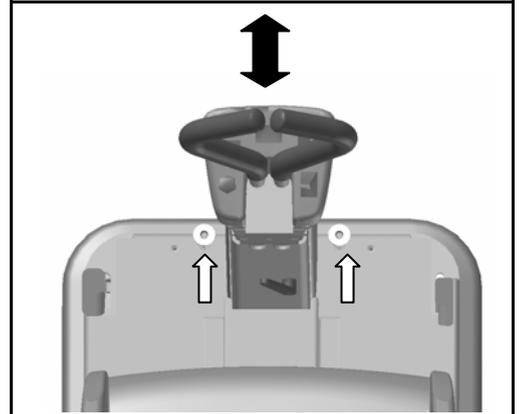
To turn right, move the left lever forwards and the right one backwards.



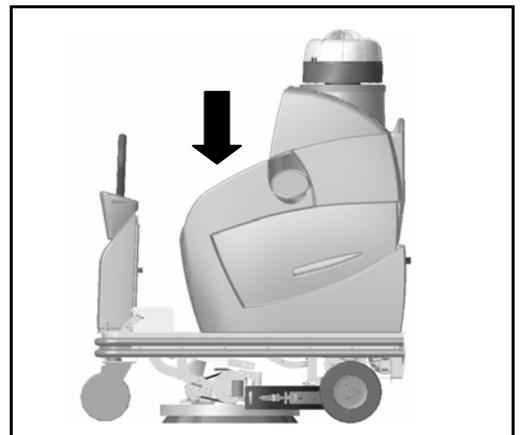
To turn left, move the right lever forwards and the left one backwards.



These pedals are meant to lock the direction of the front wheels to ensure straight drive when operating in forward or reverse gear.



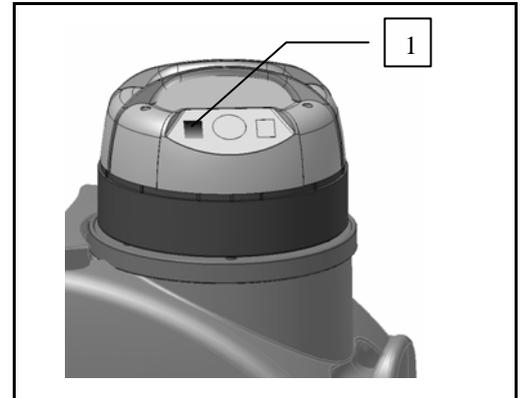
NOTE: the machine is fitted with a deadman microswitch. The machine does not work if the operator is not seated properly.



OPERATING

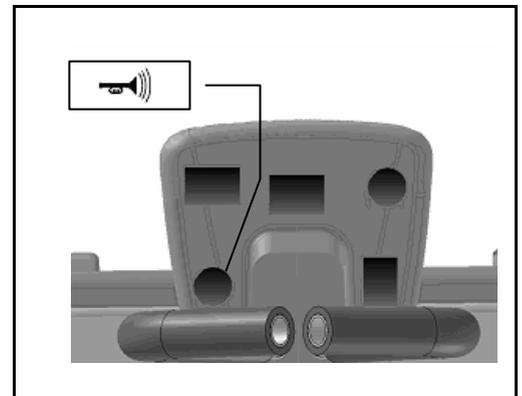
SUCTION

The vacuum motor starts automatically as the squeegee is lowered. The motor does not switch off automatically when the squeegee is lifted to prevent any water leaking from the suction hose. Wait a few seconds and press the button (1) on the vacuum unit.



HORN

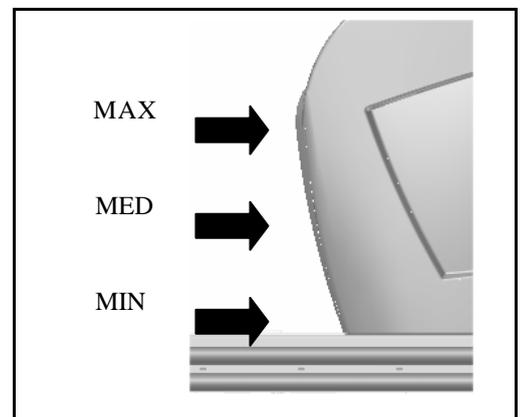
The machine is fitted with a horn switch. To sound the horn, press the button as shown in the picture.



SOLUTION LEVEL

The solution tank has 3 water level indicators:

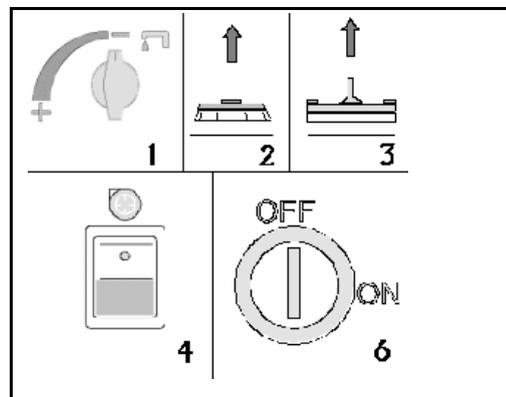
MIN
MED
MAX



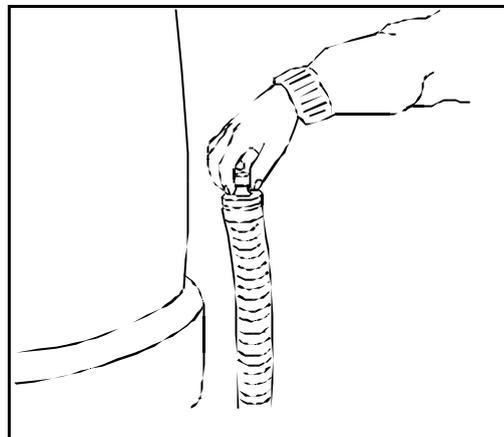
UPON COMPLETION OF WORK

Upon completion of work and prior to any type of maintenance procedure, carry out the following operations:

1. Close the water valve
2. Lift the brush head
3. Lift the squeegee
4. Switch the suction motor off
5. Take the machine where you intend to drain the water out
6. Turn the key to "OFF"



Take the hose off the hook, unscrew the drain plug and empty the recovery tank. To make this operation easier, keep the hose higher than the tank water level with one hand and with the other hand unscrew the knob and take off the cap. By slowly lowering the hose, the liquid will come out at the desired speed. Do this only when wearing protection gloves to prevent contact with dangerous solutions.



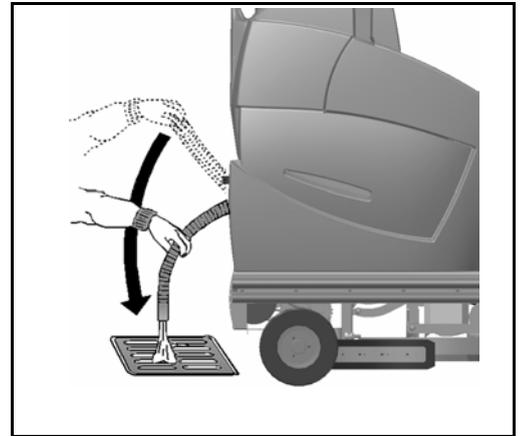
When the machine is not operating lift the squeegee to prevent rubber bars from losing their shape.

Release the brush and clean it with a hose (For brush release, see the following chapter "BRUSH RELEASE").

DAILY MAINTENANCE

CLEANING THE RECOVERY TANK

Empty the tank through the drain hose. Turn the knob a few turns to unscrew it and remove the plug.



CLEANING THE SQUEEGEE

Clean the squeegee with a hose. Check for rubber blade wear conditions and, if necessary, turn or replace them. Accurate cleaning of the whole suction assembly ensures longer suction motor life.

DAILY MAINTENANCE

REPLACING SQUEEGEE RUBBER BARS

If the squeegee blades are worn out and do not dry properly, change the drying side as follows:

Pull the squeegee assembly out as illustrated under "PREPARATION OF THE MACHINE"

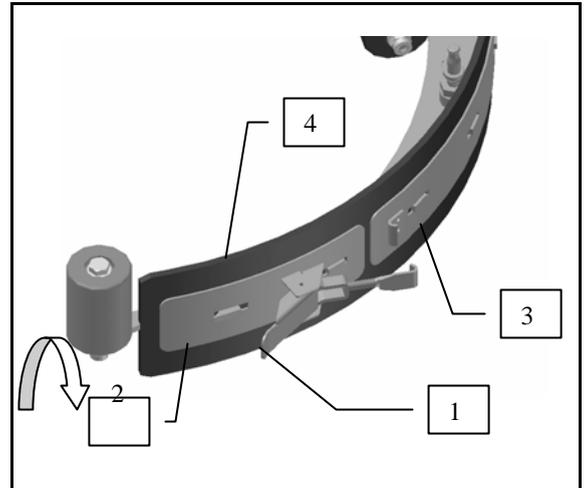
Unlock the clamp (1) between the two rear blades

Pull out the blades (2/3) and the rubber bar (4)

Flip the rubber blade or, if necessary, replace it

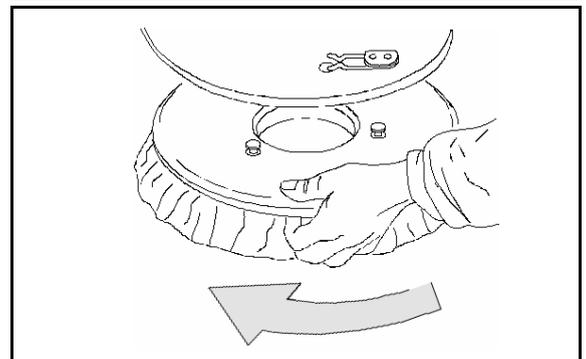
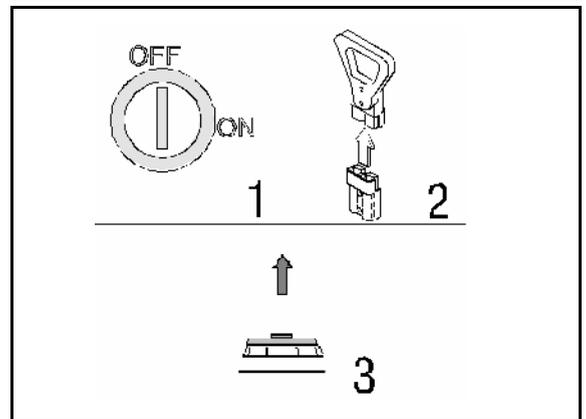
Adjust squeegee height as illustrated under "HEIGHT ADJUSTMENT OF THE SQUEEGEE SUPPORT" at chapter "PREPARATION OF THE MACHINE"

Reassemble it all by following the above procedure in reverse



RELEASING THE DISC BRUSH

1. Turn the key to "OFF" and remove it from the instrument board. (releasing the brush when the machine is on may cause serious injury)
2. Disconnect the battery connector
3. Lift the brush head
4. Keeping the brush head lifted, rotate the brush to release it from the brush holder plate as illustrated in the picture.

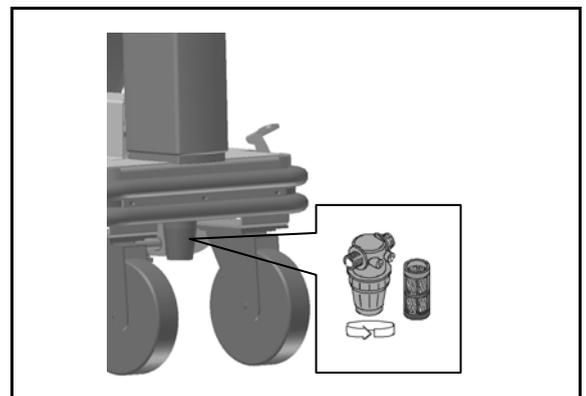


CLEANING THE FILTER AND THE SOLUTION TANK

Close the solution tap:

1. Unscrew the solution filter to empty the tank
2. Remove the cartridge and clean it

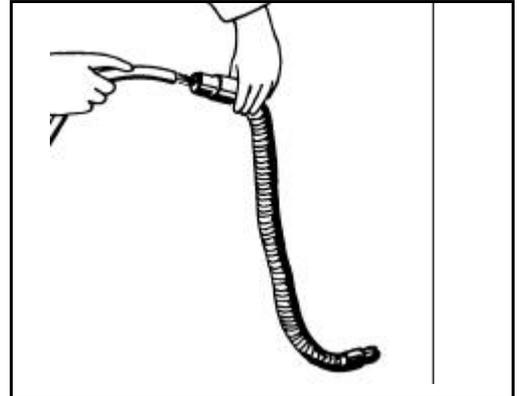
Reassemble it all by following the above procedure the other way round



WEEKLY MAINTENANCE

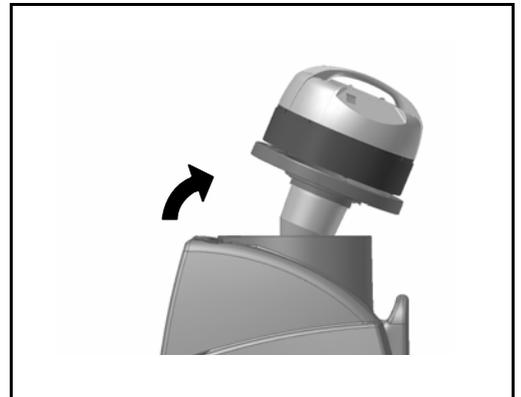
CLEANING THE SUCTION HOSE

1. In case of poor suction, make sure the suction hose is not clogged. Clean it with a garden hose from where the hose is connected to the tank.

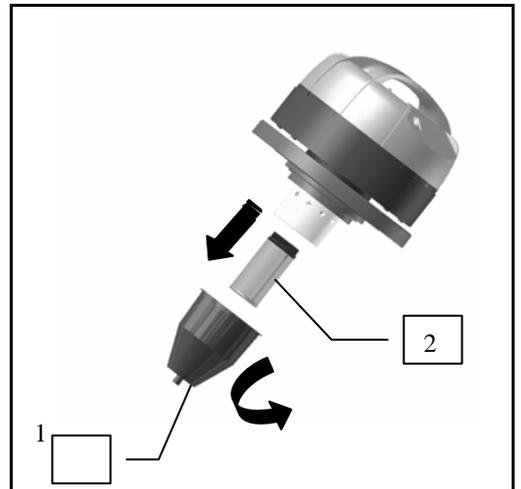


CLEANING THE SUCTION MOTOR FILTER

1. Disconnect the main connector between the suction cover and the recovery tank
2. Remove the suction unit from the tank.



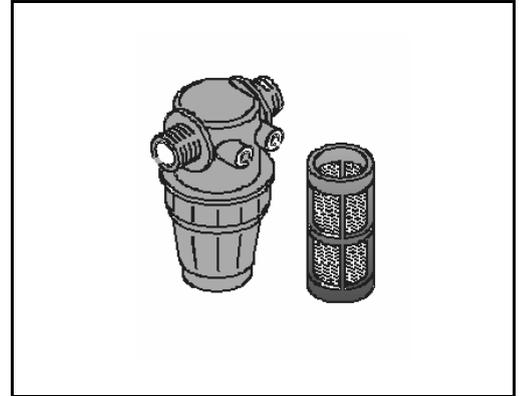
3. With a circular movement, remove the black cover (1).
4. Remove the filter (2) and clean it thoroughly with a garden hose.
5. Reassemble it all by following the above procedure in reverse



OPERATION CONTROL

NOT ENOUGH WATER ON THE BRUSH

1. Make sure the tap is open
2. Make sure there is water in the solution tank
3. Clean the solution filter



MACHINE DOES NOT CLEAN EFFECTIVELY

1. Check for brush wear and, if necessary, replace it (the brush should be replaced as the bristles are about 15 mm long).
2. Use another type of brush and not the standard one. For cleaning tasks on floors with stubborn dirt, special brushes are recommended, which can be supplied on request according to individual requirements.

SQUEEGEE DOES NOT DRY PERFECTLY

1. Make sure the squeegee is clean
2. Adjust the height of the squeegee support (see under "PREPARATION OF THE MACHINE")
3. Clean the whole suction unit (see under "WEEKLY MAINTENANCE")
4. Replace the rubber blades, if worn out

OPERATION CONTROL

SUCTION DOES NOT WORK

1. Make sure the connector of the suction unit is properly connected.
2. Make sure that thermal protection has not been activated (see under THERMAL PROTECTION).

BRUSH MOTOR DOES NOT WORK

1. Make sure the brush head was lowered.
2. Make sure that batteries are charged by checking on the indicator.
3. Make sure that thermal protection has not been activated (see under THERMAL PROTECTION).

TRACTION MOTOR DOES NOT WORK

4. Make sure that batteries are charged by checking the indicator.
1. Make sure that thermal protection has not been activated (see under THERMAL PROTECTION).

TOO MUCH FOAM FORMATION

Make sure that low-foam detergent has been used. If necessary, add a minimal quantity of antifoaming agent into the recovery tank. Keep in mind that there is more foam formation when the floor is not very dirty. In this event, use a more diluted detergent solution.

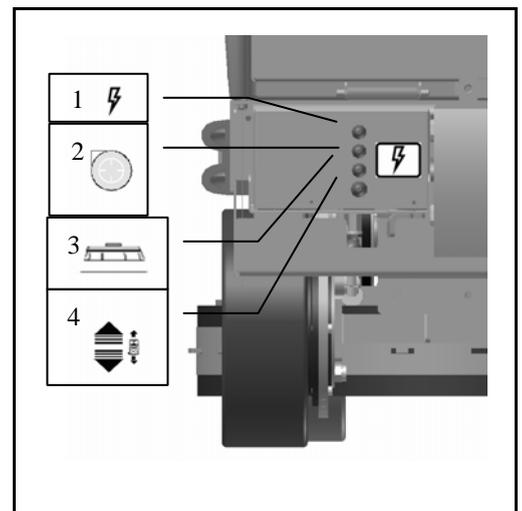
THERMAL PROTECTIONS

There is a THERMAL PROTECTION system for the following functions:

1. Main.
2. Suction.
3. Brushes.
4. Traction.

Should any of these functions stop, resume operation by pressing the relevant button.

The breaker panel is built-in to the rear left of the machine.



ST360 LOADING AND UNLOADING USING A RAMP



When going down a ramp with the ST360, always go down the ramp forwards.



Note: If you must unload the machine in reverse, stand in front of the machine and pull the drive levers towards you. Push the machine down the ramp in reverse while continuing to hold the drive levers. **Never** drive the machine down a ramp in reverse. Also, ensure that the battery box is well secured when unloading in reverse.

Never attempt to drive down a ramp backwards with the ST360. If the brakes are applied while driving down a ramp in reverse, the machine may tip and cause serious injury to the operator and bystanders.

ST360 TRANSPORT INSTRUCTIONS

When transporting the ST360, to prevent any damage to the machine follow these guidelines:

1. Make sure that both the solution and recovery tanks are empty.
2. Ensure the machine is strapped down and well secured inside the trailer.
3. Remove the vacuum head to prevent any possible damage.
4. Transport the battery box and trolley separately, or put one strap around the entire machine (from front to back) to prevent the battery box from coming loose during transport.
5. If transporting the battery box on the trolley, lock the trolley wheels and ensure the trolley is well secured in the trailer.
6. Ensure that the brakes on the machine are in the locked position using the locking rod provided with the machine.