



USER GUIDE
JVC70BCT
28" Autoscrubber With Traction

Each new model shall be equipped with this operator manual to provide necessary instructions for operation and maintenance.

Please read this manual carefully before operating or using this machine.

An illustrated sourcebook of parts is provided for each new model of machine, so please follow the this sourcebook whenever replacing parts. To guarantee timely delivery, place your order following the specifications on "HOW TO ORDER" in the sourcebook.

In spite of the excellent services this machine provides with, adhesion to the following precautions will bring more benefit with less endeavour:

- Operate the machine with caution.the machine.
- Maintain the machine periodically according to maintenance instructions for the machine.

PROTECT THE ENVIRONMENT

Please dispose of the pack materials, old machine parts, used battery cells, and toxic liquids like freezing agents and oil following local waste disposal regulations.

PROTECT THE ENVIRONMENT

Please dispose of the pack materials, old machine parts and used battery cells following local waste disposal regulations.

Inquire about the transport and about the recycling of this device.

MACHINE DATA

Please fill this form at the time of installation for future references.

Model No: _____

Serial No: _____

Installation Date: _____

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SAFETY PRECAUTIONS

This machine is a commercial product designed solely for the scrubbing of indoor hard surfaces. Any operation other than those stated in the operator manual is not recommended. See to it that the recommended cleaning pads, brushes as well as commercial floor cleaners applicable to this machine be used.

Signs and content titled with "FOR SAFETY" are applied universally in this manual, and their meaning is given as follows:



WARNING: To warn the hazards or unsafe operations that may cause severe personal injury or death.

- FOR SAFETY: To indicate the notes that should be followed for safe use of the machine.
- The following signs mean warning of danger for the machine or operators who should read, understand and carry out the following safety precautions.



WARNING: To warn the danger of fire or explosion.

- Do not use inflammable liquids; do not operate the machine near or in places with inflammable liquids, gas, or combustible dust.
- Since this machine is not equipped with an explosion-proof motor, the stops generated by its electro-motor may cause a flash fire or explosion if it is operated in places with inflammable liquids, gas, or combustible dust.
- Do not pick up any inflammable materials or reactive metal.



WARNING: To warn electric shock hazard.

- Disconnect the batteries and unplug the charger plug before repairing the machine.
- Do not charge the batteries with damaged cables. Any modification of the plug is not allowed. In case the charge cable is damaged or broken, to avoid risks, it must be replaced by its manufacturer, the servicing agents or similar qualified personnel.



WARNING: The revolving brush is working, do not touch. Switch off the power before repairing

SAFETY PRECAUTIONS

FOR SAFETY:

1. Do not operate the machine:

- Near or in places with inflammable liquids or gas in case of explosion or flash fire.
- Unless trained or authorized.
- Unless operation manual is carefully read and fully understood.
- When operator is not in an appropriate working conditions.

2. Before operating the machine:

- Make sure all the safety devices are in place and operate properly.

3. When operating the machine:

- Go slowly on inclines and slippery surfaces.
- Wear non-slip shoes.
- Slow down before turning.
- Report machine damage or fault operation immediately.
- Children are forbidden to play on or near the machine.
- Follow the mixing and handling instructions on chemical containers.
- Do not operate the machine on inclines exceeding 5% (3°).

4. Before leaving or servicing the machine:

- Stop the machine on level surfaces.
- Turn off the machine.
- Remove the key.

5. When servicing the machine:

- Avoid moving parts. Do not wear loose jackets, shirts or sleeves when working on the machine.
- Disconnect the battery before working on the machine.
- Wear safety gloves and eye protective devices before working on the batteries or battery connection.
- Do not power spray or hose off the machine. Electrical malfunction may occur.
- Use the parts provided or approved by JohnnyVac.
- Maintenance must be carried out by qualified maintenance staff.
- Do not refit the any part of the machine that is different from its original design.

SAFETY PRECAUTIONS

6. When loading/unloading the machine onto/off the truck or trailer:

- Drain the tanks before loading machine.
- Use the suggested cargo handling apron when loading/unloading the machine onto/off the truck or trailer.
- Remove the batteries before loading the machine.
- Carry the machine with the assistance of other personnel.
- Turn off the machine.
- Lower the brush motor.
- Tie the machine to the truck or trailer.

SAFETY LABELS

Safety labels are marked on appropriate surfaces according to their contents.

Please replace the labels in case they are missing, damaged or difficult to recognize.

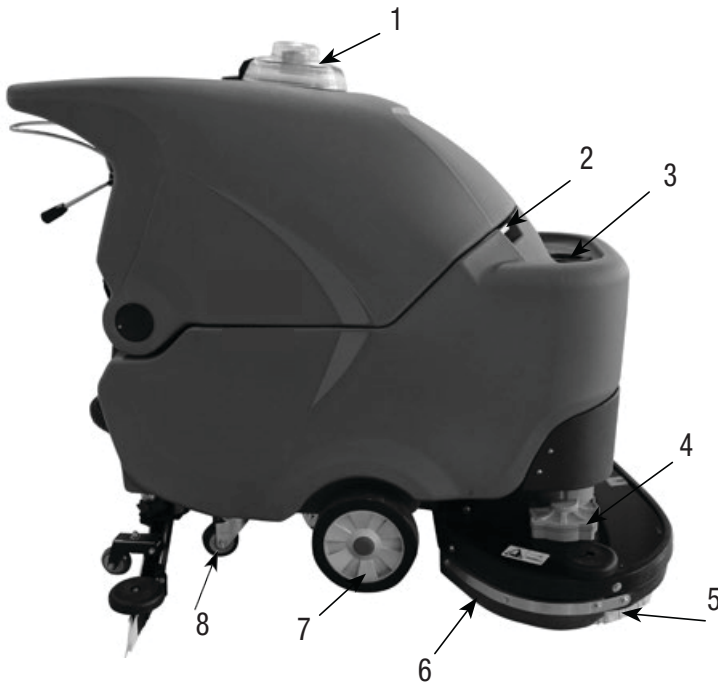
Caution Label--located on the cover of recovery tank.

Caution: Do not use foamy detergents.
Inflammable liquids must not be sucked.
The filter in the solution tank and the filter
for the vacuum motor must be kept clean.
See instruction manual

Charging label on the bottom of
recovery tank

Revolving brush label on the top of brush
head **Warning:** Revolving brush working,
do not touch. Switch off the machine
before repairing.

MACHINE COMPONENTS



- 1. Recovery tank cover
- 2. Main handle
- 3. Water injection opening
- 4. Brush motor
- 5. Brush
- 6. Scrubber head skirt
- 7. Duty caster
- 8. Universal wheel
- 9. Motor switch handle
- 10. Water valve handle
- 11. Charge couple
- 12. Squeegee lifting handle



- 13. Vacuum hose
- 14. Wash water filter
- 15. Squeegee assembly
- 16. Brush lifting pedal
- 17. Solution tank water outlet
- 18. Discharge hose
- 19. Water gauge tube

MACHINE COMPONENTS



20. Main power switch

21. Battery electricity meter

22. Overload Protector

23. Speed switch

24. Forward/backward switch

25. Brush motor switch

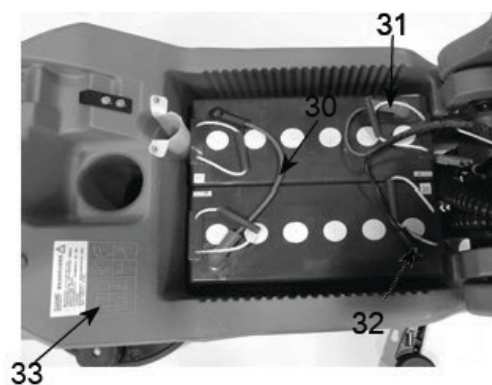


26. Vacuum motor

27. Control panel

28. Battery

29. Water injection filter



30. Battery connection cables

31. Battery anode line (red)

32. Battery cathode line (black)

33. Battery connection diagram

SYMBOLS ON CONTROL PANEL



Main power switch



Brush motor switch



Speed control



Brush motor switch

MACHINE INSTALLATION

UNPACK THE MACHINE

1. Check the packing case for breakage, if any, report to the freight agent immediately.
2. Check the freight list for missing parts, components or package, if any, contact the distributor.

Freight List:

- 2-12V batteries --optional
- 220V, 15A intelligent charger
- 8 connecting cable, 37 cm
- 4 rubber covers for battery connection
- 1 set of squeegee assembly
- 2 brushes and 2 pad holder
- cleaning pad should otherwise purchase

3. Remove the steel fixed block before unpacking the machine. Unload the machine off the rack carefully with the assistance of other personnel.

NOTE: Do not push the machine directly without using the cargo handling apron in case of damages.

NOTE: To avoid damages to the machine, fix the batteries after the machine is unloaded from the rack.

MACHINE INSTALLATION

INSTALL THE BATTERY

FOR SAFETY: Wear safety gloves and eye protective devices before working on the batteries or battery connection.

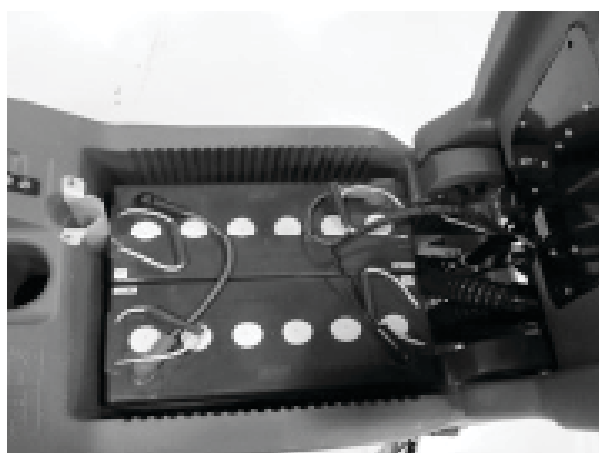
Suggested specifications of batteries:

Two sets of 12V, 120Ah Chil-Wee maintenance-free batteries.

Maximum size of battery: 176mm×332mm× 214 mm (w×l×h).

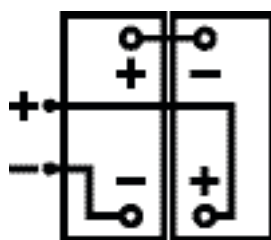
1. Stop the machine on a level surface, turn off all the power switches and remove the key.
2. Lift the recovery tank so that it can reach the battery cabin. (Figure 1).

Figure 1



3. Fix the batteries into the compartments of battery cabin with care, and lay battery connecting posts following the diagram below (Figure 2).
4. Connect battery cables to battery posts following the diagram below (Figure 2) with red cable to the anode post (+) and black cable to cathode post (-).

Figure 2



HOW THE MACHINE WORKS

CLEANING METHOD

Water and the detergent flow the rotating brush and ground through the water valve and battery valve, and this is the way how the machine does the cleaning. The sewage will be absorbed to recovery tank by squeegee assembly and vacuum motor.

CLEANING BRUSH & PADS

Use appropriate brushes for optimal cleaning effect.

Specifications of recommended brushes and pads are given as follows:

Pad holder: 330 mm / 13" Malish pad holders

Brush: 350 mm / 13" Malish Brush

Specifications of recommended brushes and pads are given as follows:

Pad holder: 380mm / 15" Malish pad holder

Brush: 405mm / 15" Malish Brush

Polishing pad (white) - this pad is for maintenance of highly smooth or polished surfaces.

Buffing pad (red) - this pad is for scrubbing fouling without doing damage to the surfaces.

Scouring pad (blue) - this pad is for scrubbing medium and heavy fouling, capable of wiping the fouling, stain and scratches to make the surface clean enough for recoating.

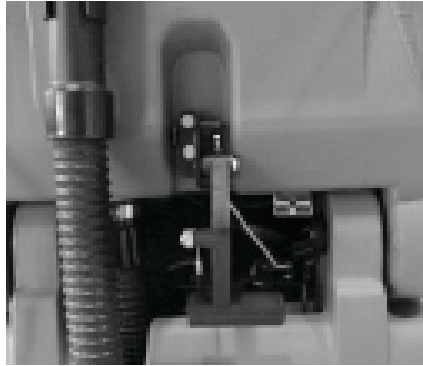
Stripping pad (brown) - this pad is for cutting through old and heavy finishes to prepare the floor for recoating.

Heavy duty stripping pad (black) - this pad is for stripping floors by cutting through old heavy finishes to prepare the surfaces for recoating. Also it can be used for heavy-duty cleaning.

MACHINE INSTALLATION

1. Stop the machine on a level surface, turn off all the power switches and remove the key.
2. Pull the squeegee lifting rod upwards (Figure 3).

Figure 3



3. Fix the squeegee assembly to squeegee installation bracket following the diagram below (Figure 4). Place the fastening knob into the socket completely before tightening.

Figure 4



4. Connect vacuum hose to the squeegee assembly as is shown below (Figure 5).

Figure 5



5. Check squeegee blade and make proper adjustment if necessary (please refer to "Squeegee Blade Adjustment" in page 30).

MACHINE INSTALLATION

INSTALL BRUSH / PADS

FOR SAFETY: Stop the machine on a level surface, turn off all the power switches and remove the key before installing the brushes or pad holder.

1. Stop the machine on a level surface, turn off all the power switches and remove the key.
2. Push the lifting pedal down while moving it rightwards (as indicated by the arrow) to lift the brush motor (Figure 6).

Figure 6



3. Place the pad on the pad holder before fixing the pad holder. Center the pad holder/ brush on brush buckles; turn it clockwise to load it. Conversely, unload the pad holder/brush (as indicated by the arrow). The smaller is ----- pad holder/brush, correspondingly, the bigger is ----- pad holder/brush (Figure 7)

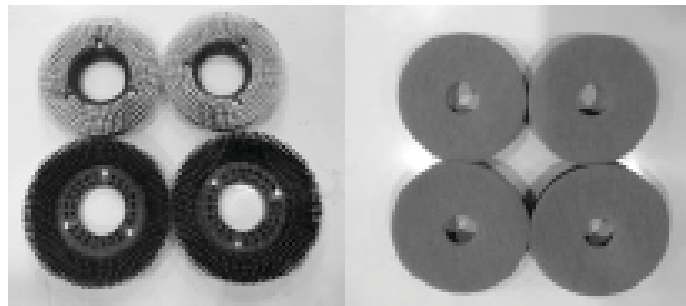
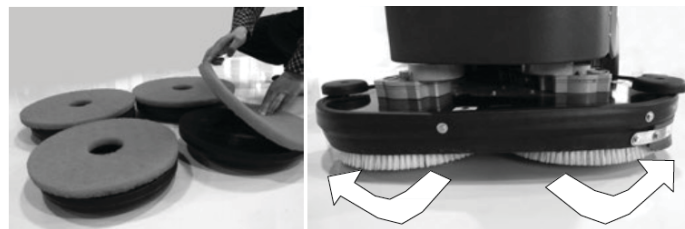


Figure 7

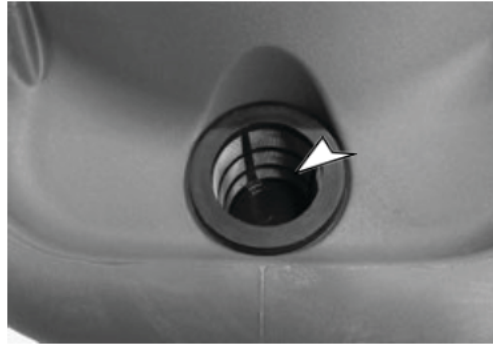


MACHINE INSTALLATION

FILL THE SOLUTION TANK

Use the water injection hole in the front of the machine to fill the solution into the solution tank (Figure 8).

Figure 8



Scrubbing method: hot water (not higher than 60°C) is required. Pour a suggested amount of detergent and water into the solution tank for mixing according to instructions on the container.

NOTE: When filling the solution tank with a bucket, make sure that it is clean. Do not use the same bucket for filling and draining the machine.

ATTENTION: For conventional scrubbing, only use recommended cleaning detergents. Machine damage due to improper detergent usage (such as washing powder) will void the manufacturer's warranty.

WARNING: Do not use inflammable liquids in case of fire or explosion.

FOR SAFETY: Follow the mixing and handling instructions on chemical containers.

MACHINE OPERATION

FOR SAFETY: Do not operate the machine before fully reading and understanding this operator manual.

WARNING: Do not operate the machine near or in places with inflammable liquids, gas, or combustible dust in case of fire or explosion.

Pre-operational Check

- Clean up the dust on the floor.
- Check battery power indicator (please refer to "Battery Electricity Meter "

in page 22 for

- Check for the abrasion of pads/brush.
- Check for the abrasion of squeegee blade and make appropriate adjustment.
- Make sure the recovery tank is empty, and that the screen filter has been installed and is clean.

START THE MACHINE

1. Turn the main power switch on, adjust the forward/backward switch on the forward position
2. Press brush motor button and adjust the proper speed (Figure 9).

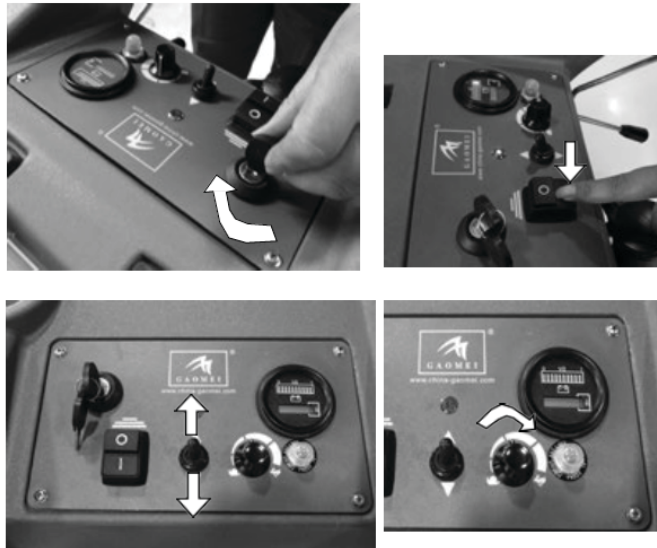
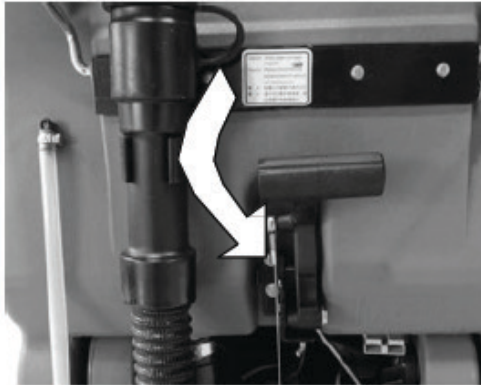


Figure 9

MACHINE OPERATION

3. Lay squeegee lifting handle down, so that the squeegee assembly descends to the ground (Figure 10) and vacuum motor starts to work.

Figure 10



4. Push brush motor pedal down while moving it leftwards (as indicated in the arrow) to lay the brush down to the floor (Figure 11).

Figure 11



5. Release water valve handle and lift motor switch handle to start scrubbing



Figure 12

MACHINE OPERATION

6. Adjust water flow by lifting water valve upward and downward to fit different scrubbing requirements (Figure 13).

Figure 13



7. When stopping scrubbing, turn off the brush motor and squeegee motor switches as well as the main power switch to lift the brush and squeegee assembly.

DURING OPERATION

WARNING: Do not pick up any inflammable materials or reactive metal in case of fire or explosion.

FOR SAFETY: Go slowly on inclines and slippery surfaces and wear non-slip shoes.

1. Overlap the two scrub paths for 51 centimeters.
2. Keep the machine running to avoid damages to the ground.
3. Clean up the scrubbing area in advance to avoid scuff marks, if any, wipe the squeegee blade with a piece of rag to remove the debris on it.
4. Do not operate the machine on inclines exceeding 5% (3°).
5. Add a moderate quantity of defoamer to recovery tank to remove additional foam.

NOTE: Keep the foam away from sewage screen filter in the recovery tank in case of motor failure.

6. A dual cleaning method is recommended when scrubbing heavily dirty area. Do scrubbing with the squeegee lifted, wait 3-5 minutes for the solution to soak before scrubbing again with squeegee down.

7. Lift the squeegee and brush, turn off all the power switches and remove the key before operators leave.

MACHINE OPERATION

BATTERY ELECTRICITY METER

Battery electricity meter display battery capacity. When the battery is fully charged, all the indicators will be on and then go out in sequence from right to left.

NOTE: To prolong batteries' service life, charge them timely after use.

It is best to stop scrubbing and charge the battery cells when the left light is blinking. Scrubbing function will be automatically shut off during excessive operations with left light blinking to prevent the battery cells from running out. Charge the battery cells immediately in this case (Figure 14).



Figure 14

OVERLOAD PROTECTOR

This model is equipped with a restorable overload protector with a button located on the control panel (Figure 15) to avoid damages to brush motor. When the overload protector is activated and triggers blackout, please check the reason, then press the overload protector button manually after the motor cools down.

Contact an authorized service center for machine maintenance.



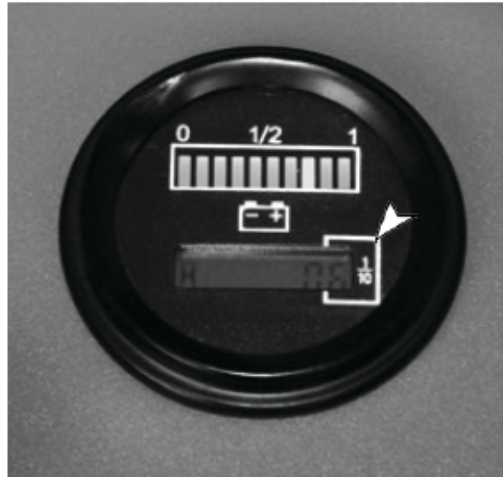
Figure 15

MACHINE OPERATION

TIMER

The time is used to count the total working hours of brush motor. Refer to the timer to judge when to carry out recommended maintenance procedures and record maintenance history (Figure 16).

Figure 16



DRAIN THE TANKS

Drain and clean the recovery tank after each time of using.

FOR SAFETY: Stop the machine on a level surface when leaving or servicing it, turn it off and remove the key..

DRAIN RECOVERY TANK

1. Carry the machine to a place for drainage and turn the power off.
2. Hold the drain pipe upward, remove its cap and lower the hose down for drainage (Figure 17).

Figure 17



DRAIN THE TANKS

NOTE: Do not use the same bucket for filling and draining the machine.

3. Remove and rinse the sewage screen filter within the recovery tank (Figure 18).

Figure 18



4. When cleaning the recovery tank, be careful about the filter; do not let clean water in (Figure 19).

Figure 19



DRAIN THE SOLUTION TANK

Remove solution tank drainpipe cap to drain the rest of water (Figure 20).



Figure 20

BATTERY CHARGE

The charger attached to this machine conforms to the charge instructions below.

NOTE: To prolong batteries' service life, charge them timely after use in case of damages due to long-term insufficient voltage.

SPECIFICATIONS FOR CHARGER

- Charger type: Automated intelligent charger
- ChilWee maintenance free battery
- Output voltage - 24V
- Output current - 15Ah

USE OF CHARGER

Please refer to the charger operation manual attached to the machine for detail information of charger operation.

1. Stop the machine in a well-ventilated place.

WARNING: For safety, keep away from sstops or open fire to avoid fire or explosion.

2. Stop the machine on a level and dry surface, lift the squeegee and brush, turn off all the power switches and remove the key.
3. Open recovery tank cover for ventilation while charging.
4. Plug the charger's AC power cable into a well-grounded power socket.
5. Connect the charger's DC cable to the battery charging port on the back of the machine (Figure 21).

NOTE: The machine stops working once the charger is connected to batteries.



Figure 21

BATTERY CHARGE

NOTE: Do not disconnect the DC cable with the charging port during charging period to avoid arc strike. Unplug the AC power cable in case of forced charging disable.

PRECAUTIONS FOR BATTERY INSTALLATION AND USE

1. Check each battery for damages, cleanliness, and mark clearness before using, clean battery surface with a piece of dry clothes; check the battery cells for open-circuit voltage whether anode/cathode is marked clearly and whether they are connected reversely.
2. Make sure each battery is fixed uprightly without inversion in accordance with drawings; interval between two neighboring battery cells should be at least 5 mm. Check whether the anode/cathode is correct according to the drawings after installation, then connect the battery cells with cables.
3. Check each part of all the battery cells for looseness after installation. Do not tighten the joints with excessive force (not more than 15 N•M) in case of damages to poles.
4. When fixing the whole set of battery cells to the machine, adjust the chocks between two neighbouring battery cells to make sure all the battery cells stand uprightly. Tighten the battery to avoid shock or bumping.
5. Isolate the components that generate sparks such as main switch, fuse holder, etc., from the battery cells.
6. The battery cells can be fixed to the machine directly since they are at the state of charge before delivery; when out of service for a long period (more than 2 months), please recharge the battery cells before use.
7. Keep batteries away from fire , heat, or direct sunlight during summer, nor can the battery cells be shocked or bumped violently, or short-circuited.
8. Battery capacity is measured at an environmental temperature of 25 . The capacity will drop by 1% every 1 the temperature declines. So take the impact temperature variation into consideration during use. Do not use batteries when the temperature declines below -10 .
9. No arbitrary disassembly of the battery is allowed in case of danger.
10. Waste batteries must be recycled. Do not abandon them to avoid pollution to the environment.
11. Notice battery temperature when charging in case of danger and damages to the batteries cause by excessive heat.
12. Do not use batteries at insufficient voltage. Charge the batteries to full capacity before using.
13. DO not charge the machine frequently or use it at insufficient voltage for a long time. Wich damages to the batteries in such cases will void the manufacturer's warranty.

BATTERY CHARGE

INTELLIGENT CHARGER LED INDICATOR

LED Indicator	Indication Status	Working Status
LED1, LED2	Blink, fan stops	Pre-charge status [charging time: 3h]
LED1, LED2	Turn RED, fan running	Constant current status [charging time: 7-8h]
LED1, LED2	Turn RED, fan running	Constant voltage status [charging time: 4.5 h]
LED1, LED2	LED1 turns RED, LED2 turns GREEN, Fan stops	Float charging status [charging time: 4.5h]
LED1, LED2	LED1 goes out, LED2 turns GREEN, fan stops	Charge complete
Note		
Situations when LED2 turns RED	1.Load short-circuits	
	2. Reversed connection	
	3. Battery cable short-circuit	
	4. Over-heat—LED2 turns ORANGE	

MACHINE MAINTENANCE

Follow the daily, monthly and monthly maintenance procedures faithfully to keep the machine working at the best condition.

WARNING: disconnect the battery connection before machine maintenance to avoid electricity shock hazard.

DAILY MAINTENANCE *(after each time of use)*

1. Drain and rinse the recovery tank (Figure 22)



Figure 22

2. Remove and rinse the sewage screen filter within the recovery tank (Figure 23).



Figure 23

3. Make sure that the brush motor is able to rotate when it is lifted and brush motor button is pressed. Remove the pads and brush for cleaning. Rotate the direction or replace for a new one if the pad is worn (Figure 24).

MACHINE MAINTENANCE



Figure 24

4. Cleaning squeegee blade (Figure 25). Lift the squeegee assembly to avoid damages to the blade.



Figure 25

5. Check the abrasion at the edge of squeegee blade (Figure 26), if any, rotate its direction (refer to "Squeegee Blade Replacement" in page 29).

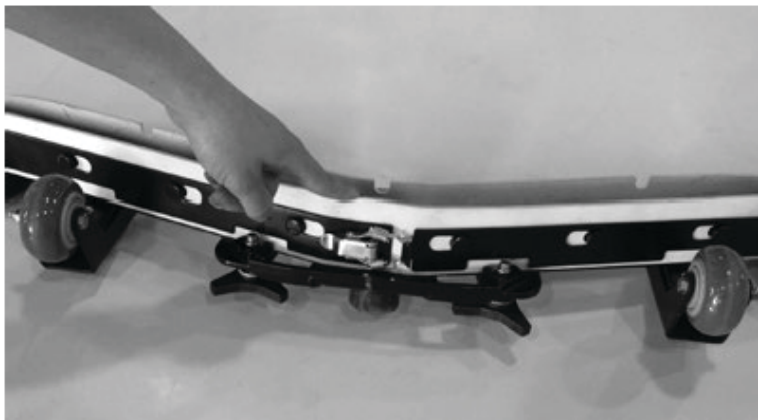


Figure 26

MACHINE MAINTENANCE

6. Clean the machine with multipurpose detergent and wet cloth (Figure 27).

FOR SAFETY: do not power spray or hose off the machine. Electrical malfunction may occur.



Figure 27

7. To prolong batteries' service life, charge them timely after use in case of damages due to long-term insufficient voltage(Figure 28)



Figure 28

MONTHLY MAINTENANCE

1. Remove the screen filter from solution tank and clean it (Figure 29). Make sure the solution tank is emptied in advance.



Figure 29

MACHINE MAINTENANCE

2. Clean the battery surface to avoid electrode corrosion, and check the battery connection for slack (Figure 30)

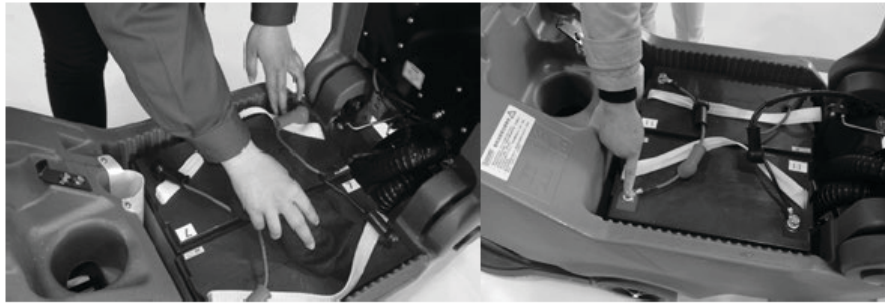


Figure 30

HALF-YEARLY MAINTENANCE ... *Check the circuit system of machine*

Maintenance Form

The following form specifies the person in charge of each procedure.

O= Operator

T= Personnel with specialized training

Intervals	Person in charge	Descriptions	Procedures
Daily	O	Blink, fan stops	Check the height of brush/pad holders
	O	Turn RED, fan running	Check for damages, abrasion or debris
200 h	T	Maintenance free battery electrode and wiring	Check and clean
500h	T	Vacuum motor	Check the motor brush (check every 100 operating hours after 500-hour initial operation and examination)
	T	Brush motor	Check the motor brush (check every 100 operating hours after 500-hour initial operation and examination)
	T	Driving motor	Check the motor brush (check every 100 operating hours after 500-hour initial operation and examination)
	T	Duty caster	Check damages or abrasion

MACHINE MAINTENANCE

SQUEEGEE BLADE REPLACEMENT

Every squeegee blade has four sides. Exchange its direction if half of the blade is worn out or replace for a new blade if all the four sides are worn out.

1. Remove squeegee assembly from the machine (Figure 31).



Figure 31

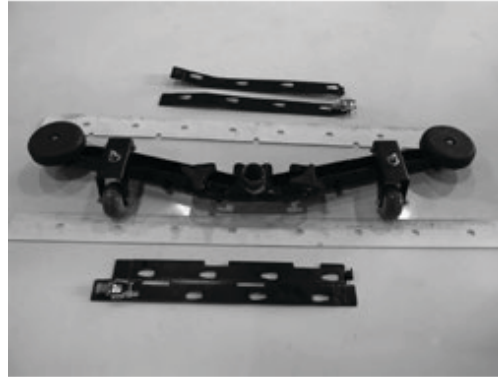


Figure 32

2. Release blade fixation clamp and remove the black blade (Figure 32).

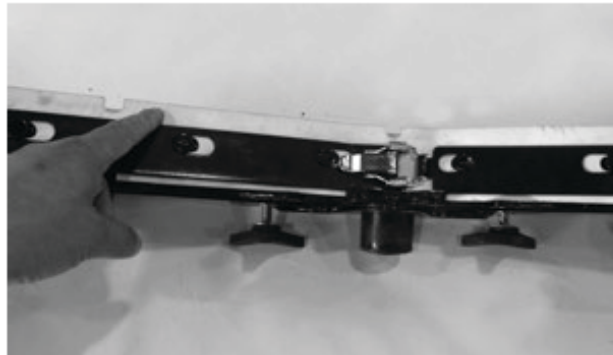
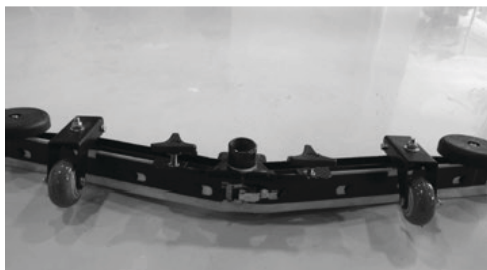


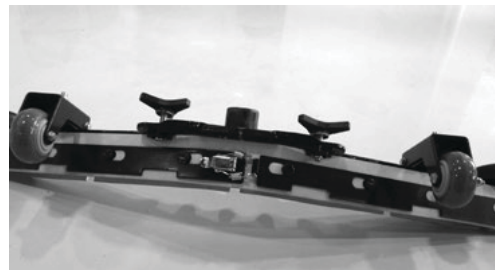
Figure 33

3. Rotated the existing blade to the new edge, and install the rotated blade to squeegee assembly. Be sure the holes in the squeegee blade are completely slid down (Figure 33).

ATTENTION: Comparison between proper and improper installation of squeegee and blade clamp.



Proper installation



Improper installation

MACHINE MAINTENANCE

SQUEEGEE BLADE ADJUSTMENT

Squeegee blade has been tuned before delivery. It needs adjustment only when its position deviates.

To obtain optimal effect, squeegee assembly caster must be adjusted to a certain height and inclination following the instructions below.

1. Check whether squeegee blade totally contacts, make sure the distance between wheel and ground is about 2 mm. After then squeegee is adjusted properly, squeegee blade should bend as is shown in the follows during machine operation.



Figure 34

2. Adjust the regulating nut as indicated by arrow 2 in the following diagram if squeegee blade does not contact the ground or there is a small gap between them. Clockwise rotate the regulating nut to lift the squeegee blade; anticlockwise rotate the regulating nut to lower the squeegee blade. Adjust the squeegee blade to an optimal status according to actual demands (Figure 35).

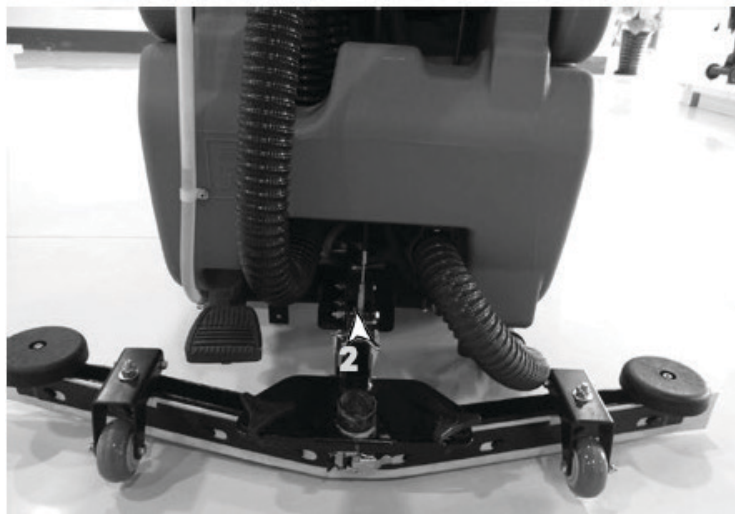


Figure 35

MACHINE MAINTENANCE

3. Adjust the regulating nut as indicated by arrow 1 in the following diagram if the middle of squeegee blade contacts the ground well but there is a small gap between the left side of the blade and the ground. Clockwise rotate the regulating nut to lift the left squeegee blade; anticlockwise rotate the regulating nut to lower the left squeegee blade. Adjust the squeegee blade to an optimal status according to actual demands (Figure 36).



Figure 36

4. Adjust the regulating nut as indicated by arrow 3 in the following diagram if the middle of squeegee blade contacts the ground well but there is a small gap between the right side of the blade and the ground. Clockwise rotate the regulating nut to lift the right squeegee blade; anticlockwise rotate the regulating nut to lower the right squeegee blade. Adjust the squeegee blade to an optimal status according to actual demands (Figure 37).

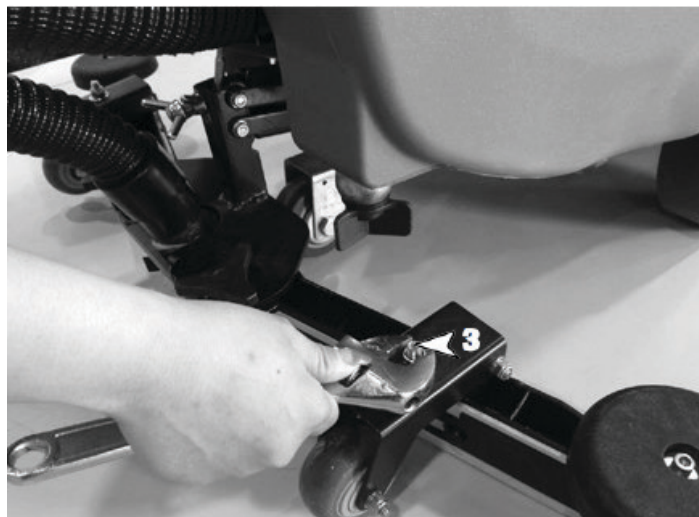


Figure 37

MACHINE MAINTENANCE

5. Anticlockwise rotate the regulating nut as indicated by arrow 2 in the following diagram if both sides of squeegee blade contact the ground well but there is a small gap between middle of blade and the ground. Be sure the blade contacts the ground well or it forms an inclined angle of 45° with the ground (Figure 38). Adjust the squeegee blade following step 3 or 4 if either side of blade needs adjusting.

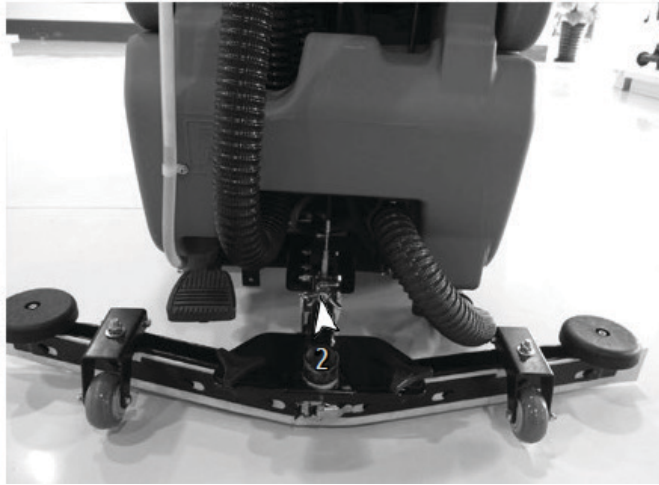


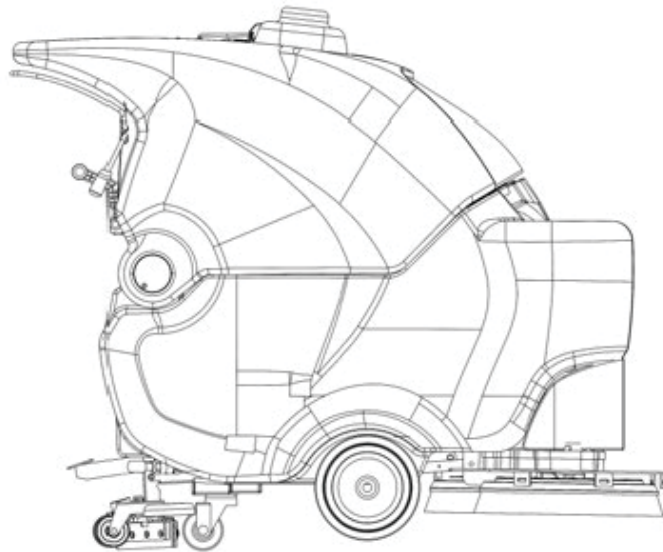
Figure 38

PUSH, TOW AND TRANSPORT THE MACHINE

Be certain to follow the procedures below when transporting the machine by the trailer or truck:

1. Lift the squeegee and brush head.
2. Load/unload the machine using recommended cargo handling apron.
3. Fix the front of the machine close to the front position of the truck or trailer. Lower the brush head and squeegee after the machine is fixed tight.
4. Place a block behind each driving wheel to avoid machine sliding.
5. Fasten the rack of the machine with ropes to avoid inclination. A bracket must be installed on the floor of the truck or trailer (Figure 48).

FOR SAFETY: Use the recommended cargo handling apron to load and unload the machine onto and off the truck or trailer. Fasten the machine to the truck or trailer with ropes.



MACHINE STORAGE

1. Charge the batteries before storage. Do not store the machine with the battery exhausted. For long-term storage, be sure the batteries are charged every 2-3 months to avoid battery damages due to insufficient voltage.
2. Drain and clean the solution tank and recovery tank.
3. Store the machine at a dry area, keep the squeegee and brush lifted.
4. Open the recovery tank for ventilation.

ATTENTION: Keep the machine away from rain, store it indoor.

5. Follow the frost protection instructions below if the machine is stored at a freezing temperature

PUSH, TOW AND TRANSPORT THE MACHINE

Frost Protection

1.Add 1 gallons (4L) recreational vehicle (RV) anti-freezing agent to the solution tank without dilution.

FOR SAFETY: Wear goggles to avoid contact with eyes.

ATTENTION: Before operating the machine next time, rinse the solution tank thoroughly to remove the anti-freezing agent.

TROUBLESHOOTING

Trouble	Cause	Solution
Machine inoperable	Switch off or switch damaged	Turn switch on or replace it
	Brush motor button off or damaged	Turn switch on or replace it
	Vacuum motor button off or damaged	Turn switch on or replace it
	Motor switch handle failure	Replace the micro-switch
	Battery exhausted or damaged	Charge or replace batteries
	Overload protector activated	Solve short circuit fault and press overload protector
Charger failure	Plug disconnected with power	Check for plug connection
	False connection of battery terminals	Connect terminals properly
	Charger breakdown	Refers to charger fault code
Brush motor failure	Brush lifted above ground or its button damaged	Replace brush motor micro-switch
	Motor switch damaged	Replace motor micro-switch
	Overload protector activated	Solve short circuit fault and press overload protector
	Brush motor connector loosens	Refix the connector
	Brush motor damaged	Replace the motor
Machine won't move	Universal wheel damaged	Replace the universal wheel
	Duty caster damaged	Replace duty caster
	Brush adjustment nut loosens	Readjust brush adjustment nut

PUSH, TOW AND TRANSPORT THE MACHINE

Vacuum motor failure	Vacuum motor handle micro-switch damaged	Replace micro-switch
	Micro-switch disconnected	Re-plug the joint
	Motor micro-button damaged	Replace micro-switch
	Vacuum motor damaged	Replace vacuum motor
	Recovery tank full	Drain the sewage
Little or no solution flow in brush	Solution tank screen filter blocked	Clean solution tank screen filter
	Water valve switch damaged	Replace water valve switch
	Solenoid valve damaged	Replace solenoid valve
Drain valve failure	Contamination in solenoid valve	Full of the solution tank adjust the water valve to max, start the machine and use the pressure of water to wash the contamination in solenoid valve (Doing this many times)
	solenoid valve damaged	Replace solenoid valve
Inadequate suction	Recovery tank full or vacuum hose damaged	Drain recovery tank or replace a vacuum hose
	Blow-off hose cap not sealed	Re-cover the cap
	Recovery tank screen filter clogged	Clean screen filter
	Debris at the seal of sewage cap	Remove debris and re-cover the cap
	Squeegee blade worn out	Replace or rotate the direction of squeegee blade
	Squeegee blade cannot bend	Adjust the height of blade
	Vacuum motor damaged	Replace vacuum motor
	Debris on sewage guide housing	Remove the debris
	Insufficient voltage of batteries	Charge the batteries
Running time shortened	Insufficient voltage of batteries	Get the batteries fully charged
	Battery failure	Replace batteries
	Batteries need maintenance	Refer to "Battery Maintenance"
	Battery charger failure	Repair or replacing the charger

PUSH, TOW AND TRANSPORT THE MACHINE

FAULT CODES OF THE CHARGER

Code	Fault	Solution
LED2 turns GREEN and blink	Battery voltage <22V	Charge the battery with 24V, 15-25Ah mode, then continue normal charging with intelligent charger.
	Battery voltage cannot reach 22.4V	
LED2 turns RED	Battery voltage <12V	Battery terminals are not well connected; battery connection failure.
Note	1. Charger for liquid-adding batteries mustn't adapt to maintenance-free batteries to avoid charger burning-out	
	2. Charger for maintenance-free batteries adapts to liquid-adding batteries. But the battery cannot be fully charged	
	3. If battery voltage is lower than 22V, the intelligent charger won't work	
	4. Voltage lower than 23V will activate an alarm to warn for timely charge	
	5. Faults above are only practical for new batteries. In terms of old batteries, please replace or maintain them	
	6. In general, the operation interface will raise the alarm in the event of insufficient voltage. In this case, please get the batteries charged time, otherwise faults above will occur.	

SPECIFICATIONS

MACHINE DIMENSION / CAPACITY

Item	Dimension/Capacity	
	JVC70BCT	
Length	1280 mm	
Height	1020 mm	
Width/Frame (rolleroller)	800 mm	
Width/Squeegee assembly (rolleroller)	960 mm	
Brush diameter	350 mm	
Cleaning path	700 mm	
Solution tank capacity	70 L	
Recovery tank capacity	75 L	
Weight (battery not included)	146 kg	
Weight (battery included)	232 kg	

SPECIFICATIONS

Sound pressure level (Lpa)	58 dB
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Type

Type	Quantity	Voltage	Rated Current	Weight (each)
Battery	2	12 V	120 Ah 3 hr	43 kg

Type	Usage	VDC		KW (hp)	
		JVC70BCT		JVC70BCT	
Electric motor	Brush motor	24		0.4 x 2	
	Vacuum motor	24		0.45	
	Driving motor	24		0.4	

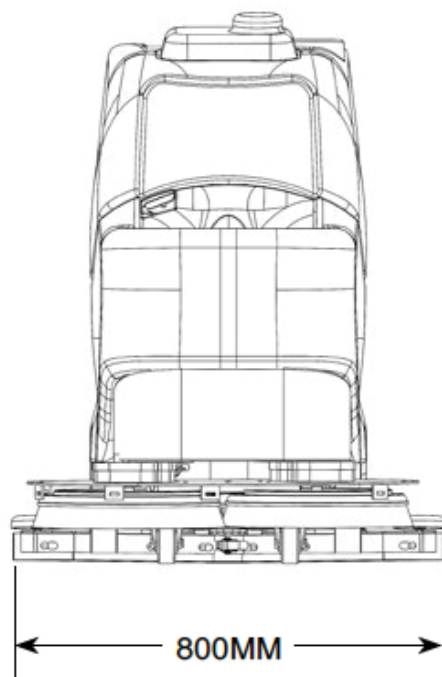
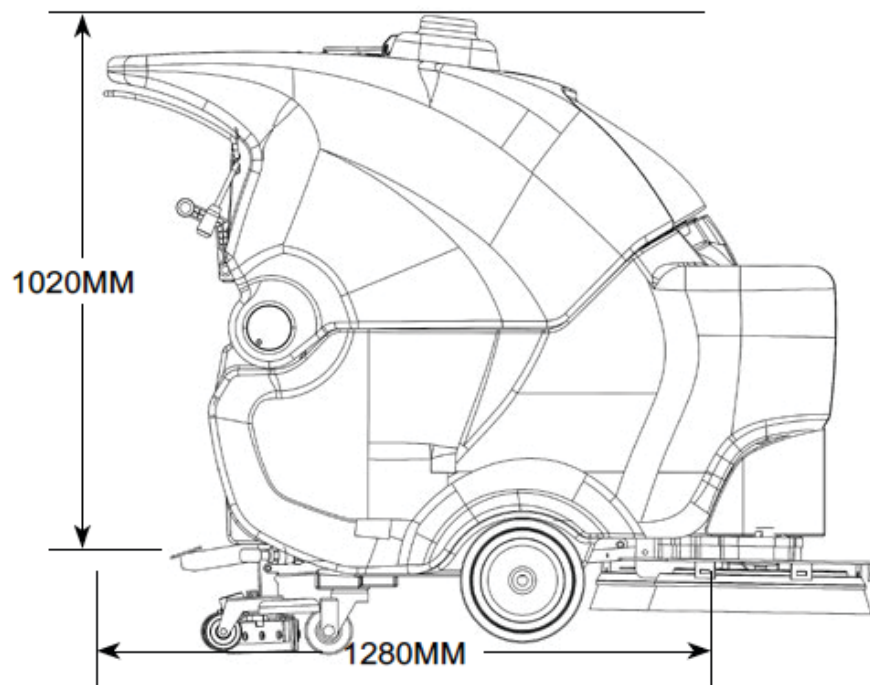
Type	VDC	A	HZ	VAC
Charger(intelligent)	24	25	50	220

Duty Caster

Position	Type	Dimension
Front wheel (1)	Solid	235 mm (0D)×80 mm width
Rear wheel	Solid	270 mm (0D)×80 mm width

SPECIFICATIONS

MACHINE DIMENSION



[illegible]

***Residential and commercial
vacuum cleaner specialist***



FOR
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