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Operator & Parts Manual

Automatic Scrubber



I18B
I18C

The
Peoples
COMPANY

8019001
REV.05(06-2014)

INTERNATIONAL CLEANING EQUIPMENT



READ OPERATOR MANUAL MANUALLY CAREFULLY

IMPORTANT: To ensure full warranty protection, Please fill out & return your warranty card.

Please fill out at time of installation for future reference.

Model No. _____

Serial No. _____

Machine Options _____

Sales Rep. _____

Sales Rep. phone no. _____

Customer ID Number _____

Installation Date _____

HOW TO ORDER PARTS

Only use ICE Company supplied or equivalent parts. Parts and supplies may be ordered online, by phone, by fax or by mail.

1. Identify the machine model.
2. Identify the machine serial number from the data label.
3. Ensure the proper serial number is used from the parts list.
4. Identify the part number and quantity.
Do not order by page or reference numbers.
5. Provide your name, company name, customer ID number, billing and shipping address, phone number and purchase order number.



PROTECT THE ENVIRONMENT

Please dispose of packaging materials, old machine components such as batteries, hazardous fluids, including antifreeze and oil, in an environmentally safe way according to local waste disposal regulations.

Always remember to recycle.



International Cleaning Equipment
XiangShi Road, LiaoBu, DongGuan, GuangDong, China
Tel: 0769-8186 9000
Fax: 0769-8186 3000

Specifications and parts are subject to change without notice.

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SAFETY PRECAUTIONS

FOR I18B

This machine is intended for commercial use. It is designed exclusively to scrub hard floors in an indoor environment and is not constructed for any other use. Only use recommended accessories.

All operators should read, understand and exercise the following safety precautions:

1. Do not operate machine:

- Unless trained and authorized.
- Unless you have read and understood the operator's manual.
- In flammable or explosive areas.
- If not in proper operating condition.
- In outdoor areas and standing water.

2. Before operating machine:

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

3. When using machine:

- Go slow on inclines and slippery surfaces.
- Follow all safety guidelines.
- Report and fix any damage to machine prior to operating it.
- Never allow children to play on or around the machine.
- Do not operate on inclines that exceed 2%(3°).

4. Before leaving or servicing machine:

- Stop on level surface.
- Turn off machine.

5. When servicing machine:

- Read operator's manual thoroughly prior to operating or servicing this machine.
- Use manufacturer supplied or approved

- replacement parts.
- Secure machine with wheel blocks prior to jacking the machine up.
- Use approved jack or hoist to safely elevate the machine.
- Disconnect batteries prior to working on machine.
- Wear gloves when handling batteries or battery cables.
- Avoid any contact with battery acid.
- Avoid moving parts. Do not wear loose fitting clothing while servicing machine.



Batteries may emit hydrogen gas. Explosion or fire can result from hydrogen gas. Keep sparks and open flames away! Keep battery compartment open when charging(except maintenance-free batteries).



Flammable materials can cause an explosion or fire. Do not use flammable materials in tanks.



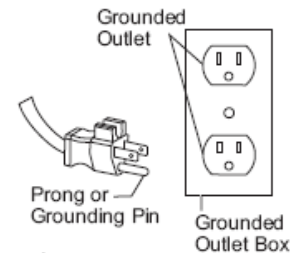
Flammable materials or reactive materials can cause explosion or fire. Do not pick them up.

SAFETY PRECAUTIONS**FOR I18C**

**Carefully read and understand this manual before operating this machine.
This machine must be grounded!**

This scrubbing machine shall be grounded while in use to protect the operator from electric shock. Grounding provides a path of least resistance for electric current. This machine is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances. Do not remove the ground pin under any circumstances.

This machine is for use on a nominal 220 volt circuit and has a grounding plug that resembles the plug illustrated in Figure. Make sure that the machine is connected to an outlet having the same configuration as the plug. No adapter should be used with this machine.



This machine is intended for commercial use. It is constructed for use in an indoor environment and is not intended for any other use. Use only recommended accessories.

1. Do not operate machine:

- Unless trained and authorized.
- In flammable or explosive areas.
- With a damaged cord or plug
- If not in proper operating condition.
- Unless you have read and understood the operator's manual.
- With the use of extension cords.
- In outdoor areas and standing water.

2. Before operating machine:

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

3. When using machine:

- Do not run machine over cord.
- Do not pull cord around sharp edges or corners.
- Do not handle plug with wet hands.
- Report machine damage or fault operation immediately.
- Do not pull machine by cord or plug.
- Do not unplug by pulling on the cord.
- Do not stretch cord.
- Keep cord away from heated surfaces.

4. Before leaving or servicing machine:

- Turn off machine.
- Unplug cord from outlet.

5. When servicing machine:

- Unplug cord from outlet.
- Use manufacturer supplied or approved replacement parts.



To avoid electrical shock, please replace the power cord immediately if any damage is being detected. The replacement must be performed only by an authorized person or by our customer service center.

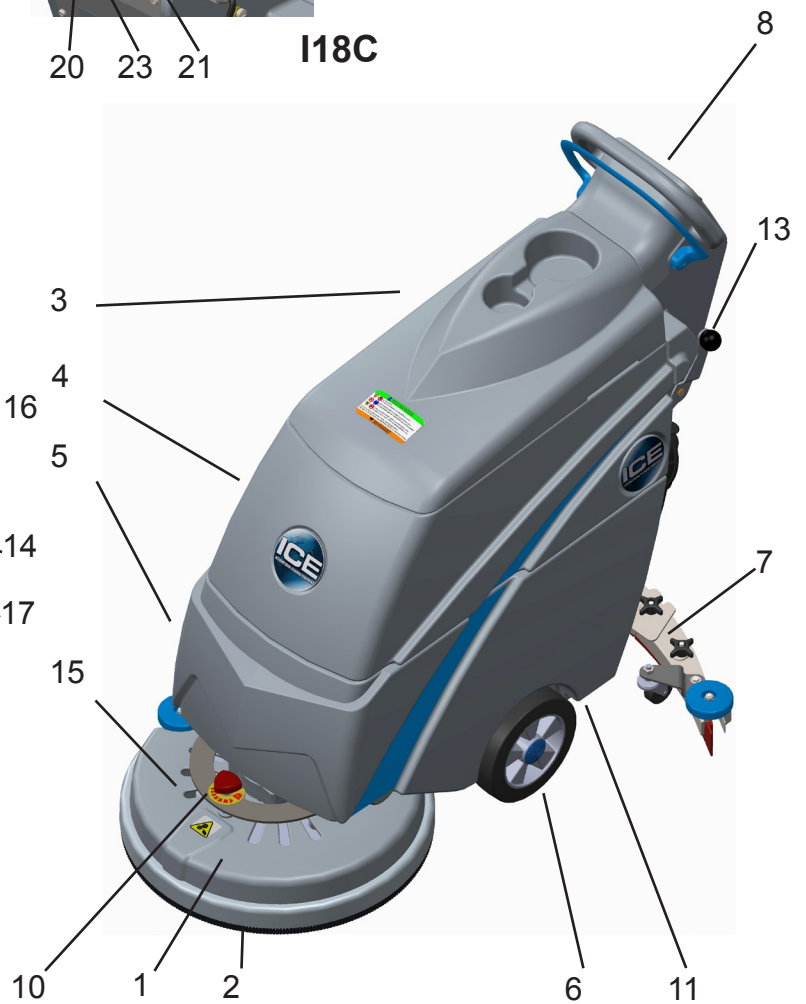
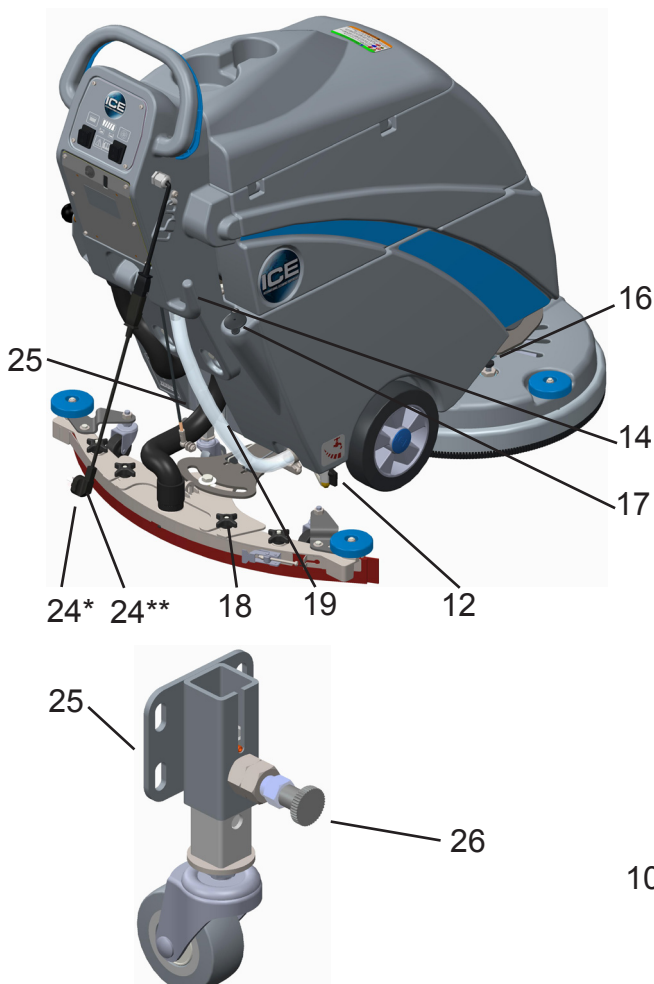
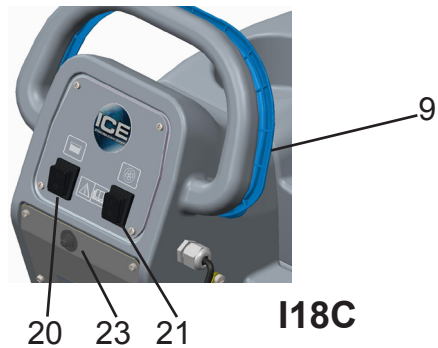
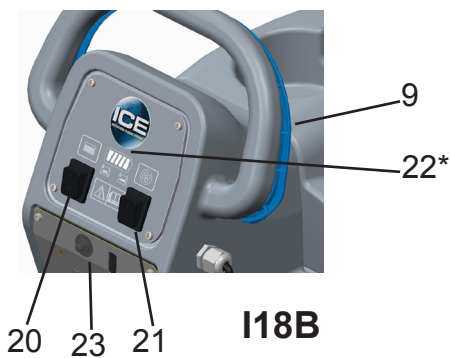


Flammable materials can cause explosion or fire. Do not use flammable materials in tanks or pick them up.

MACHINE COMPONENTS

Machine Structure

- | | | | | | | | | |
|----------------|------------------|----------------|----------------------|-----------------------------|--------------------------------|-----------------------------|-------------------------|-----------------------|
| 1. Brush cover | 4. Recovery tank | 7. Squeegee | 10. Adjusting handle | 13. Squeegee lifting handle | 16. Brush plunger | 19. Clear tube | 22*. Battery monitor | 24**. Power cord |
| 2. Brush | 5. Solution tank | 8. Control box | 11. Water filter | 14. Power cord hook | 17. Plug of water filling port | 20. Switch for brush motor | 23. Circuit breaker | |
| 3. Cover tank | 6. 8" wheels | 9. Trigger | 12. Ball valve | 15. Brush/pad driving hub | 18. Knob | 21. Switch for vacuum motor | 24*. Charger power cord | 26. Adjusting plunger |



* : only for I18B ** : only for I18C

MACHINE SET UP & INSTALLATION

UNPACK MACHINE:

Be sure and check packing carton for any damage. Immediately report any damage to carrier. Be careful not to let machine vibrate while carrying, Check contents of package to ensure that the following items are included: Machine, squeegee assembly, brush/pad driver, charger cord.

MACHINE SET UP & PRE-OPERATION CHECKS:

- 1) Sweep the outside of the machine.
- 2) Check battery meter to make sure batteries are fully charged (see battery charging, only for I18B).
- 3) Check that squeegee and brush / pad is properly installed.
- 4) The forward speed of machine can be controlled by turning the handle(10). Turn the handle clockwise to speed up machine. or turn the handle anticlockwise to slow down machine.
- 5) Make sure the working surface can support the machine weight, the gradient of the floor can't exceed the limit that machine allowed(2%).

INSTALLING PAD DRIVER OR BRUSH:

- 1) Turn off machine.
- 2) Tilt the machine backwards, line up the driving hub with the hole of brush or pad driver, make sure the three blocks are fitted into the three slots of the drive hub.
*If a pad driver is being used, the appropriate pad should be attached to the pad driver first.
- 3) Push the plunger which on the brush cover to prevent the driving hub from rotating, then spin the brush/pad clockwise with your another hand till the clip clamp the block on the brush/pad.

NOTE: There are 2 positions for the adjustable wheel (pull out the plunger (26) for adjusting).
Position 1: machine can be tilted backwards and the brush / pad driver can be installed.
Position 2: for normal operation and transportation.

INSTALLING THE SQUEEGEE:

- 1) Loosen the two knobs(18) on the squeegee and slide the squeegee into the slots at the rear of the squeegee bracket. (the wheels on the squeegee point to the machine.)
- 2) Tighten the knobs securely.

FILLING THE SOLUTION TANK:

- 1) The fill port is located at the rear of machine, pull the plug out of the hole.
- 2) Fill solution tank with water. (use a hose which link to a water faucet, water temperature should not exceed 50° C) The clear tube(19) in the back right of the machine has gallon markers to help determine the water level in the solution tank(5).
*Depending on the dirty level of the ground, add the proper amount of detergent into the solution tank.



Do not put any flammable materials into solution tank. This can cause an explosion or a fire. Only use recommended cleaning chemicals. Contact your janitorial supply distributor for recommendations on proper chemicals.

MACHINE OPERATION



Do not operate machine unless you have read and understand this manual.

- 1) Lower squeegee assembly to the floor by spin the squeegee lifting handle(13).
- 2) Turn brush motor switch(20) to “on” position.
- 3) Turn vacuum motor switch(21) to “on” position.
- 4) Rotate the ball valve(12) handle to vertical position. Solution will not begin to flow until the operating triggers (9) are pulled.
- 5) To begin scrubbing, pull on the blue operating trigger(9), when this triggers is pulled, the pad driver will begin to spin and the solution will begin to flow.
- 6) Begin scrubbing by moving the machine forward



Do not keep the machine in the same position with the pad / brush spinning, or you might damage the floor.

- 7) Adjust solution flow by adjusting the position of ball valve knob.

WHILE OPERATING MACHINE

- 1) Occasionally open the cover tank(3) to see if there is any foam build-up. If excessive foam is found, add defoamer to the recovery tank.



Foam must not enter the float shut-off screen, or damage can occur to the vacuum motor. Foam will not activate the machine's float shut-off device.

- 2) Occasionally view the clear tube at the back left of the machine to check the amount of cleaning solution that is left in the machine.

If the squeegee assembly leaves streaks on the floor, raise the squeegee off the floor and wipe the blades down with a damp cloth.



Do not use your fingers to wipe or remove debris from the blades, as injury may occur.

When the solution tank runs empty, turn off the brush switch and ball valve of solution tank. Keep the squeegee down and continue to vacuum until all the dirty water is picked up.

TANK DRAINING

- 1) Turn the switches on the control panel to “off ” position.
- 2) Raise the squeegee, transport machine to approved area for draining tank(s).



Any time scrubbing is completed, or when refilling solution tank, the recovery tank should be drained and cleaned.



If the recovery tank is not drained when the solution tank has been refilled, foam or water may enter the float shut-off mechanism and cause damage to the vacuum motor.

DRAINING THE RECOVERY (DIRTY) TANK

- 1) Remove the drain hose from the holder, and place the drain hose over the floor drain. Twist off the drain hose plug to begin the draining process.
- 2) Clean the recovery tank after every use. Use a fresh water hose to rinse out the recovery tank. Be careful not to spray water into the float shut-off mechanism.



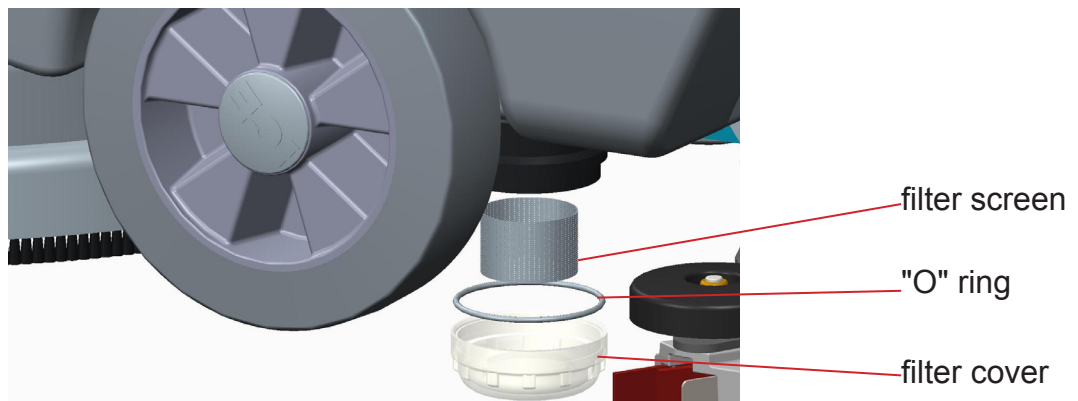
If you are storing the machine for any period of time, keep the cover tank open so the tank can dry completely and smell fresh.

DRAINING THE SOLUTION (CLEAN) TANK



Any time scrubbing operation is completed, the solution tank should be drained and cleaned.

- 1) Pull down on the clear tube (back left of the machine) to remove it from the hose barb. This will allow the solution to flow freely into a bucket or floor drain.
- 2) Rinse the solution tank with clean water after every use. This will help prevent chemical buildup and clogging of the solution lines.
- 3) Once tank is rinsed, flushed and drained, reconnect the clear tube to the hose barb. Be sure the tube is pushed all the way up on the hose barb.
- 4) Screw off the cover of the water filter(11) to completely exhaust the tank and check the filter screen, clean it up if necessary.
- 5) Screw up the cover of the water filter(11), but sure to install the screen and the "O" ring in the correct position.



BATTERY CHARGING (ONLY FOR I18B)

Each machine was equipped with on-board charger and batteries, please use original parts only.

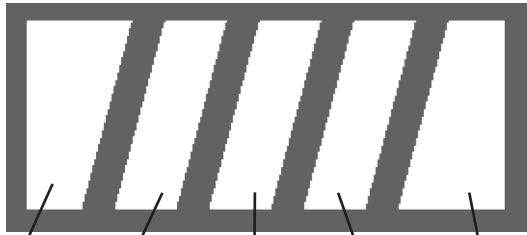


WARNING: Fire or explosion hazard. Batteries may emit hydrogen gas. Keep sparks and open flame away. Keep battery compartment open when charging.

NOTE: Use only approved chargers with the following specifications:

- Automatic shut off circuit.
- Deep cycle charging.
- Output current of 8-15 Amps.
- Output voltage of 24 volts.

Battery Indicator Description:



Red Yellow 2 Yellow 1 Green 2 Green 1

Green lights on: full power.
 Yellow lights on, green lights off : medium power.
 Red light on, other lights off: 20% power, the machine should be stopped and the batteries should be recharged.
 Red light flash: the batteries have already been discharged deeply.

NOTE: Frequently deep discharging will reduce the life of the batteries, charge the batteries when the red light is on.

- 1) Place the machine in a well ventilated area.
- 2) Turn the machine off.
- 3) If charging wet (lead acid) batteries, check the fluid level before charging.
- 4) Connect the charger's AC power supply cord to a properly grounded receptacle.
- 5) The charger will automatically begin to charge and will automatically shut off once the batteries are fully charged.
- 6) Upon completion of charging, disconnect the AC power supply cord.

NOTE: The charging status can be seen through the lights behind the transparent panel:
 Yellow light on: Normal charging
 Green light flash: 80% charged
 Green light on: Fully charged, batteries ready for use.
 Yellow lights flash: No batteries or incorrect wiring.

PREVENTATIVE MAINTENANCE



WARNING: Before performing any maintenance on the machine, be sure that the power is turned off, or the batteries are disconnected!



WARNING: Repairs are to be completed by authorized service centers only. Any repairs completed by unauthorized persons will void the warranty.

DAILY MAINTENANCE

- 1) Remove pad driver / brush and clean with approved cleaner.
- 2) Drain recovery and solution tanks completely and rinse out with clean water. Visually check the recovery tank for debris and clean out as necessary.
- 3) Raise squeegee assembly off floor and wipe it down with a damp towel. Be sure to store the squeegee in the up position.
- 4) Remove the float shut-off assembly and rinse it out with clean water.
- 5) Clean machine with an approved cleaner and a damp towel. Don't spray water to clean the outside of machine to avoid damage to motor and wiring.
- 6) Unplug vacuum motor from power source and hose cuff & remove the drain hose from the holder prior to removing the recovery tank when performing maintenance.
- 7) Check the condition of the squeegee blade wiping edge, rotate blade or replace it if worn.

MONTHLY MAINTENANCE

- 1) Clean the battery tops to prevent corrosion (only for I18B).
- 2) Check for loose battery cable connections (only for I18B).
- 3) Inspect and clean the recovery tank cover seal. Replace it if damaged.
- 4) Lubricate all grease points and pivot points with silicon spray and approved grease.
- 5) Check the machine for loose nuts and bolts.
- 6) Check the machine for leaks.

MOTOR MAINTENANCE

- 1) Contact your local ICE Distributor for any motor maintenance.
- 2) Check the motor brushes every 250 hours, Replace the brushes when they are worn to a length of 10mm or less.

BATTERY MAINTENANCE (ONLY FOR I18B)



WARNING: Batteries may emit hydrogen gas and an explosion or fire can result. Keep sparks and fire away from batteries at all times.



WARNING: Whenever servicing batteries, be sure to wear protective gloves. Avoid contact with battery acid at all times.

Note: For the best machine performance, keep batteries charged at all times. Do not let them sit in a discharged condition.

- 1) Always follow the battery charging direction as outlined in the BATTERY CHARGING section of this manual.
- 2) Keep battery tops and terminals free from corrosion. A strong solution of baking soda and water is the best way to keep the batteries corrosion free. **DO NOT ALLOW THE BAKING SODA / WATER SOLUTION TO ENTER THE BATTERY CELLS.**
- 3) Use a wire brush with the baking soda solution to properly clean the battery posts and connections.
- 4) Check battery connections for wear and loose terminals. Replace them if necessary.

MACHINE STORAGE

- 1) Always store the machine indoors and in its upright position.
- 2) Always store the machine in a dry area.
- 3) Always take off the pad driver / brush before storage.
- 4) Always store the machine with the squeegee assembly raised off the floor.
- 5) If storing in an area which may reach freezing temperatures, be sure to drain all fluids from the machine prior to storage(include the filter). Any damage caused by freezing temperatures will not be covered by the warranty.
- 6) Drain the recovery tank and keep the cover tank open so that it can "breathe" during storage.
- 7) Drain the solution tank of all fluid.

BASIC TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
No Power	The wiring not connected correctly or bad wiring	Check the wiring or contact ICE Distributor
	Bad brush motor	Contact ICE Distributor
	Carbon brushes worn out	Contact ICE Distributor
Vacuum motor does not run	The wiring not connected correctly or bad wiring	Check the wiring or contact ICE Distributor
	Bad vacuum motor	Contact ICE Distributor
	Carbon brushes worn out	Contact ICE Distributor
Little or no solution flow	Bad ball valve	Contact ICE Distributor
	Bad solution valve	Contact ICE Distributor
	Ball valve position in need of adjustment	When ball valve is in horizontal position, the amount of solution flow is maximum.
Poor water pick up	Squeegee clogged	Clean debris off squeegee with a damp towel
	Squeegee blades worn	Install new squeegee blades
	Squeegee not mounted correctly	Confirm that the squeegee assembly is securely fastened to the machine and not loose fitting.
	Vacuum hoses have a hole or are loose	Check hose connections and make sure they are firm. Replace hose if damaged.
	Vacuum hose may be clogged	Check hose for debris and remove any clog.
	Drain hose stopper is loose	Tighten drain plug.
	Vacuum motor is loose	Tighten vac motor mounting screws. Do not over tighten or damage will occur.
	cover tank is loose	Confirm the cover tank is securely in its place.
	Recovery tank is full	Drain recovery tank
	Float shut off is clogged	Remove float shut off from inside recovery tank and remove any debris
short runtime*	Low battery charge	Fully recharge batteries
	Defective batteries	Replace batteries
	Batteries need maintenance	See BATTERY MAINTENANCE
	Faulty battery charger	Repair or replace battery charger

* ONLY FOR I18B

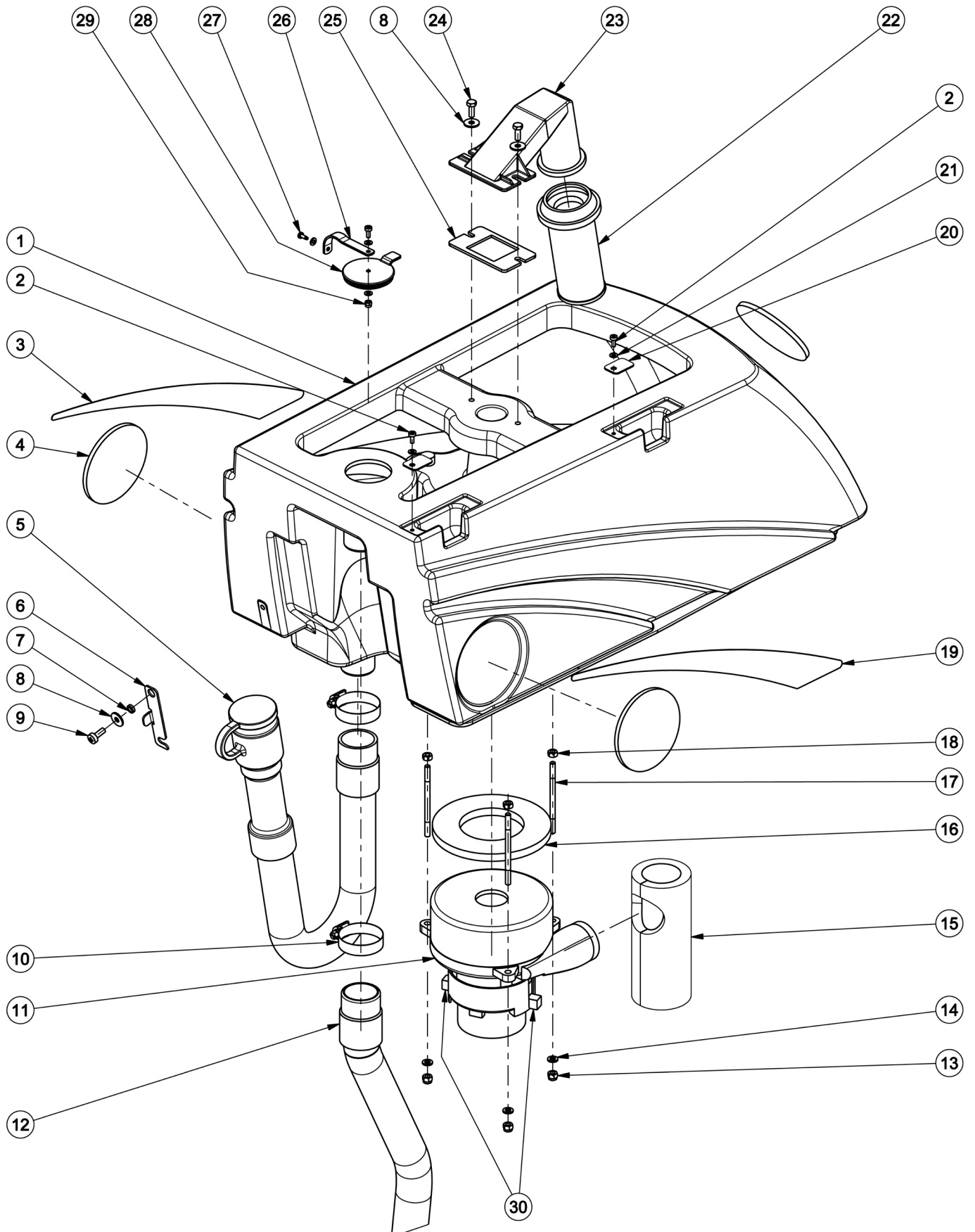
TECHNICAL SPECIFICATION/ 技术规格

ITEM/ 项目	UNITS/ 单位	DATA/ 数据
Working Width/ 工作宽度	mm/ 毫米	450
Squeegee Width/ 水刮宽度	mm/ 毫米	780
Efficiency/ 工作效率	m ² /h / 平方米 / 小时	1100
Brush Dia. / 刷盘直径	mm/ 毫米	450
Brush Speed/ 刷盘转速	rpm / 转 / 分	180
Max Pad Pressure/ 最大针座压力	Kg / 千克	30
Brush Motor / 刷盘电机电压及功率	V / W / 伏 / 瓦	I18B: 24 / 550
		I18C: 220 / 550
Vacuum Motor/ 吸力泵电机电压及功率	V / W / 伏 / 瓦	I18B: 24 / 500
		I18C: 220 / 500
Batteries / 电池电压及容量 *	V / AH@20hr	2-12 / 85
Solution Tank Capacity/ 清水箱容量	L/ 公升	35
Recovery Tank Capacity/ 污水箱容量	L/ 公升	40
Machine Weight (without batteries) / 机器净重 (无电池)	Kg/ 千克	62.5
Batteries Weight/ 电池重量 *	Kg/ 千克	2×25
Machine Length/ 机器长度	mm/ 毫米	1165
Machine Height/ 机器高度	mm/ 毫米	1025
Machine Width/ 机器宽度	mm/ 毫米	520
Cable Length / 电线长度 **	m/ 米	25
Charger cord/ 充电器电线长度 *	m/ 米	2
Max Gradient/ 最大容许坡度	%	2
Type of Drive/ 驱动方式	-	Brush assisted / 刷盘助动
Noise Level/ 噪音等级	dB/ 分贝	70
Working Vacuum/ 工作吸力	mbar/ 毫巴	155

* ONLY FOR I18B

** ONLY FOR I18C

RECOVERY TANK ASSEMBLY/ 污水箱组件



RECOVERY TANK ASSEMBLY/ 污水箱组件

DIA NO	PART NUMBER	DESCRIPTION	NO REQ'D
1	8011001	RECOVERY TANK 污水箱	1
2	1221410	PH SCREW M4×10,SS 不锈钢十字盘头螺钉 M4×10	3
3	8011011	DECAL,LEFT 污水箱左贴纸	1
4	4010316	ICE LOGO "ICE" 标牌	3
5	8011030	DRAIN HOSE 放污管	1
6	8012007	CONNECTING PLATE 连接板	1
7	8012008	BUSHING 轴套	1
8	1421618	PLAIN WASHER 6×18×1.6 不锈钢平垫圈 6×18×1.6	3
9	1221616	PH SCREW M6×16, SS 不锈钢十字盘头螺钉 M4×10	1
10	1962050	HOSE CLAMP 27-51mm 喉箍 27-51mm	2
11	8112002*	VACUUM MOTOR 24V, 500W 吸力泵, 24V, 500W	1
	8011020	VACUUM MOTOR 220V, 500W 吸力泵, 220V, 500W	1
12	8011003	VACUUM HOSE 吸水管	1
13	1113608	SELFLOCKING NUT M6 防松螺母 M6	3
14	1411612	PLAIN WASHER 6×12×1.6 平垫圈 6×12×1.6	3
15	8011007	MUFFLER 消音管	1
16	8112005	GASKET 吸力泵密封垫	1
17	8112006	BOLT 双头螺柱	3
18	1111605	HEX NUT M6 六角螺母 M6	3
19	8011012	DECAL,RIGHT 污水箱右贴纸	1
20	8011009	PLATE 小压板	2
21	1421409	PLAIN WASHER 4×9×0.8,SS 不锈钢平垫圈 4×9×0.8	5
22	8111015	FLOAT CAGE 浮球滤网	1
23	8111014	FLITER COUPLING 滤网接头	1
24	1021616	HEX HEAD BOLT M6×16 不锈钢六角头螺栓 M6×16	2
25	8111001	GASKET 密封垫	1
26	8113007	RUBBER STRIP 橡胶带	1
27	1321110	AUTO TAPPING SCREW ST3.5×10 十字盘头自攻螺钉 ST3.5×10	1
28	8131003	CAP 封堵	1
29	1123406	SELFLOCKING NUT M4, SS 不锈钢防松螺母	1
30	8112008*	CARBON BRUSH 碳刷	2
	8011022	CARBON BRUSH 碳刷	2

* ONLY FOR I18B

COVER TANK ASSEMBLY/ 污水箱盖组件

COVER TANK ASSEMBLY/ 污水箱盖组件

DIA NO	PART NUMBER	DESCRIPTION	NO REQ'D
1	8012001	COVER TANK 污水箱盖	1
2	8111022*	WARNING LABEL 警告贴纸	1
	8012003	WARNING LABEL 警告贴纸	1
3	8011005	CAP 封堵	1
4	8012002	GASKET 密封圈	1

* ONLY FOR I18B

SOLUTION TANK ASSEMBLY/ 清水箱组件

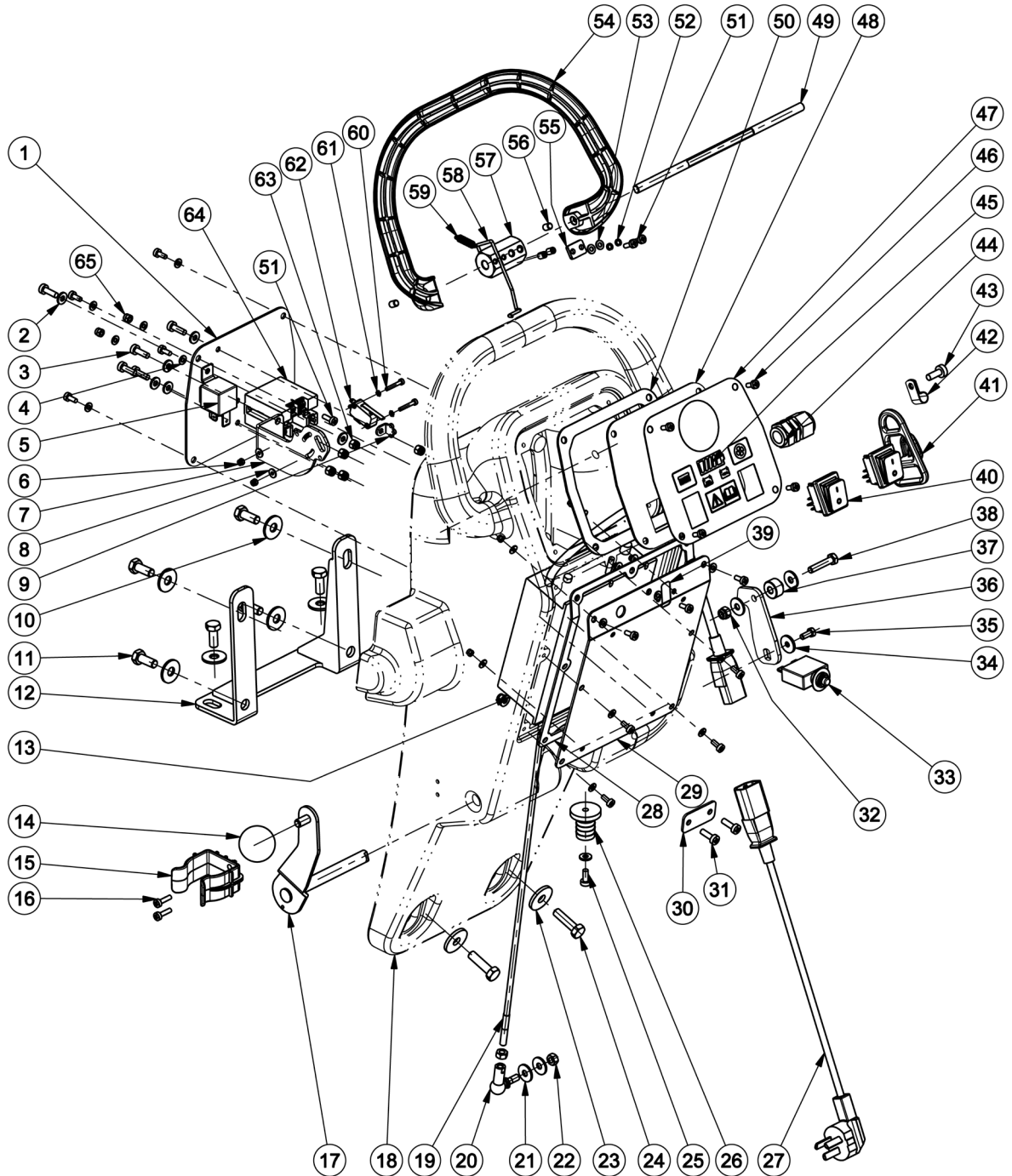
SOLUTION TANK ASSEMBLY/ 清水箱组件

DIA NO	PART NUMBER	DESCRIPTION	NO REQ'D
1	8013001	SOLUTION TANK 清水箱	1
2	8013010*	12V BATTERY 12V 蓄电池	2
3	1321110	AUTO TAPPING SCREW ST3.5×10 十字盘头自攻螺钉 ST3.5×10	1
4	8210531	KNOB, M6 把手	1
5	1221640	PH SCREW M6×40, SS 不锈钢十字盘头螺钉 M6×16	1
6	1421409	PLAIN WASHER 4×9×0.8 不锈钢平垫圈 4×9×0.8	1
7	8133002	PLUG 注水孔堵	1
8	8013003	TRANSPARENT HOSE 透视管	1
9	8013017	DECAL 调节贴纸	1
10	8013019	BOLT WITH SHOULDER 台阶螺钉	4
11	8013011	SLIDER HOUSING 滑轨座	1
12	8013021	PLUNGER 定位柱塞	1
13	1123608	SELF-LOCKING NUT M6 SS 不锈钢防松螺母 M6	4
14	1421618	PLAIN WASHER 6×18×1.6 不锈钢平垫圈 6×18×1.6	6
15	1647320	PING 3×20 弹性圆柱销 3×20	1
16	8013013	SLIDER 轮支架	1
17	1411030	PLAIN WASHER 10×30×2.5 不锈钢平垫圈 10×30×2.5	1
18	8013016	2" CASTOR 2" 万向轮	1
19	1421020	PLAIN WASHER 10×20×2 不锈钢平垫圈 10×20×2	1
20	1422026	SPRING WASHER 10 SS 不锈钢弹簧垫圈 10	1
21	1031032	HEX HEAD SCREW M10×32 不锈钢六角头螺栓 M10×32	1
22	8016010	WHEEL SHAFT 8" 轮轴	1
23	1411816	PLAIN WASHER 8×16×1.6 不锈钢平垫圈 8×16×1.6	2
24	1432821	SPRING WASHER 8 弹簧垫圈 8	2
25	1021820	HEX HEAD SCREW M8×20,SS 不锈钢六角头螺栓 M8×20	4
26	8115200	8" WHEEL 8" 轮	2
27	1421828	PLAIN WASHER 8×28×3 不锈钢平垫圈 8×28×3	2
28	8115203	WHEEL CAP 轮端盖	2
29	1962025	HOSE CLAMP 喉箍 16-25mm	1
30	8013004	DECAL,BALL VALVE 球阀贴纸	1
31	8013009	DECAL,RIGHT 清水箱右贴纸	1
32	1021616	HEX HEAD SCREW M6×16,SS 不锈钢六角头螺栓 M6×16	2
33	1422616	SPRING WASHER 6 SS 不锈钢弹簧垫圈 6	2
34	8013002	BACKET 拉簧支架	1
35	1221510	PH SCREW M5×10,SS 不锈钢十字盘头螺钉 M5×10	4
36	1421510	PLAIN WASHER 5×10×1,SS 不锈钢平垫圈 5×10×1	4
37	8113009	WIRE CLAMP 尼龙电缆固定夹	4
38	8114751*	WIRING BOOT 接线柱护套	4
39	8013008	DECAL,LEFT 清水箱左贴纸	1

* ONLY FOR I18B

CONTROL BOX ASSEMBLY/ 控制箱组件

I18B



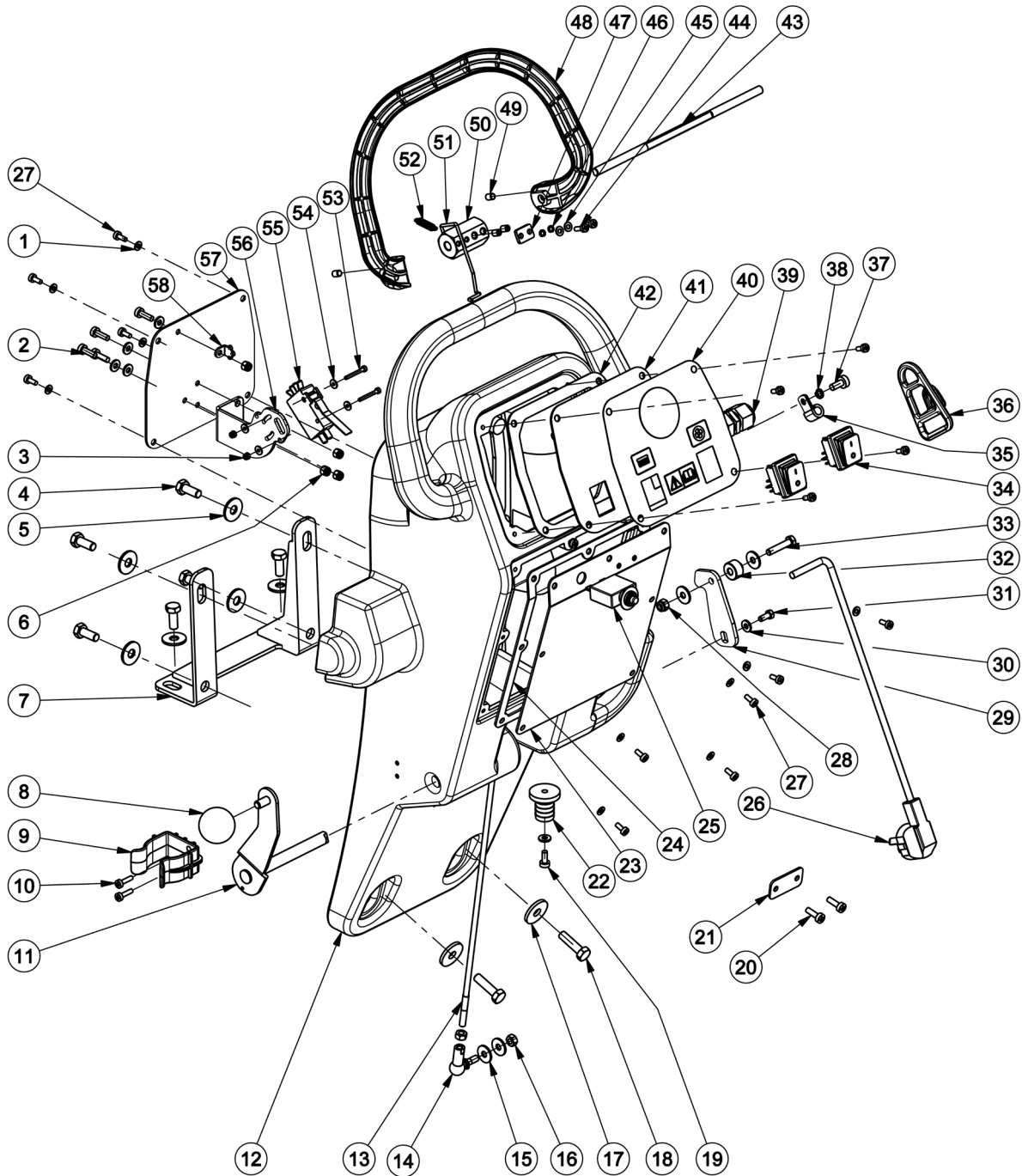
CONTROL BOX ASSEMBLY/ 控制箱组件

DIA NO	PART NUMBER	DESCRIPTION		NO REQ'D
1	8014062	REAR PANEL	控制箱后面板	1
2	1421512	PLAIN WASHRE 5×12×1.5	不锈钢平垫圈 5×12×1.5	9
3	1211516	PH SCREW M5×16	十字盘头螺钉 M5×16	5
4	1421409	PLAIN WASHER 4×9×0.8	平垫圈 4×9×0.8	13
5	8114707	RELAY	继电器	1
6	1113305	SELFLOCKING NUT M3	防松螺母 M3	8
7	8014061	SWITCH BRACKET	开关支架	1
8	1411309	PLAIN WASHER 3×9×0.8	平垫圈 3×9×0.8	8

DIA NO	PART NUMBER	DESCRIPTION	NO REQ'D	
9	8014034	BRCKET	拉簧支架	1
10	1411824	PLAIN WASHER 8×24×2	平垫圈 8×24×2	6
11	1021820	HEX HEAD BOLT M8×20	不锈钢六角头螺栓 M8×20	6
12	8114030	FIXING BRACKET,CONTROL BOX	控制箱安装支架	1
13	8014066	BATTERY CHARGER 24V	24V 充电器	1
14	8113104	HANDLE	球形把手	1
15	6210111	HOSE CLAMP	放污管夹	1
16	1221416	PH SCREW M4×16 SS	不锈钢十字盘头螺钉 M4×16	2
17	8014010	SQUEEGEE LIFTING HANDLE	水刮提升手柄	1
18	8014008	CONTROL BOX	控制箱	1
19	8014013	SQUEEGEE LIFTING ROPE	水刮拉绳	1
20	8114511	JOINT BEARING SQ6	球头关节轴承 SQ6	1
21	1421618	PLAIN WASHER 6×18×1.6,SS	不锈钢平垫圈 6×18×1.6	4
22	1121605	HEX NUT M6	不锈钢六角螺母 M6	2
23	1421828	PLAIN WASHER 8×28×3	平垫圈 8×28×3	2
24	1021830	HEX HEAD BOLT M8×30	六角头螺栓 M8×30	2
25	1221512	PH SCREW M5×12,SS	不锈钢十字盘头螺钉 M5×12	1
26	8114005	PIPE COUPLING	管接头	1
27	8014052	CHARGER CORD	充电线	1
28	8014038	GASKET	防水垫	1
29	8014036	PANEL	面板	1
30	8014044	PLATE	挡板	1
31	1221516	PH SCREW M5×16 SS	不锈钢十字盘头螺钉 M5×16	2
32	1123608	SELFLOCKING NUT M6,SS	不锈钢防松螺母 M6	1
33	8114703	OVERLOAD PROTECTOR 35A	过载保护器 35A	1
34	1421518	PLAIN WASHER 5×18×2	平垫圈 5×18×2	1
35	1021512	HEX HEAD BOLT M5×12,SS	不锈钢六角头螺栓 M5×12	1
36	8014012	BAFFLE	水刮提升挡板	1
37	8014101	LIFTING ROPE SPACER	水刮拉绳套	1
38	1021630	HEX HEAD BOLT M5×12,SS	不锈钢六角头螺栓 M6×30	1
39	8014045	TRANSPARENT PLATE	透视窗	1
40	8014006	WATERPROOF SWITCH 250V 16A	防水开关 250V, 16A	2
41	8014043	WIRE BUFFER	挂线板	1
42	8014041	WIRE CLAMP	线夹	1
43	1221616	PH SCREW M6×16,SS	不锈钢十字盘头螺钉 M6×16	1
44	2320403	STRAIN RELIEF	电缆固定头	1
45	8014063	BATTERY CAPACITY INDICATOR	蓄电池电量指示器	1
46	1221410	PH SCREW M4×10,SS	不锈钢十字盘头螺钉 M4×10	15
47	8014067	PANEL DECAL	面板贴纸	1
48	8014069	FRONT PANEL	控制箱前面板	1
49	8114101	SHAFT	轴	1
50	8014004	GASKET	面板防水垫	1
51	1221412	PH SCREW M4×12, SS	不锈钢十字盘头螺钉 M4×12	4
52	1432411	SPRING WASHER 4	弹簧垫圈 4	2
53	1411409	PLAIN WASHER 4×9×0.8	平垫圈 4×9×0.8	2
54	8014022	CONTROL TRIGGER	控制手柄	1
55	8014033	PLATE	压板	1
56	1534608	SET SCREW M6×8	内六角平端紧定螺钉 M6×8	4
57	8014031	HEX BUSHING	六方轴套	1
58	8014032	SPRING ROD	弹簧臂	1
59	8014035	SPRING	拉伸弹簧	1
60	1211320	PH SCREW M3×20	十字盘头螺钉 M3×20	2
61	1434300	WASHER WITH TOOTH 3	齿形垫圈 3	2
62	8114712	MICROSWITCH	微动开关	1
63	1113507	SELFLOCKING NUT M5	防松螺母 M5	7
64	8014076	RELAY 24VDC 30A	继电器 24VDC 30A	1
65	1123406	SELFLOCKING NUT M4, SS	不锈钢防松螺母 M4	2

CONTROL BOX ASSEMBLY/ 控制箱组件

I18C

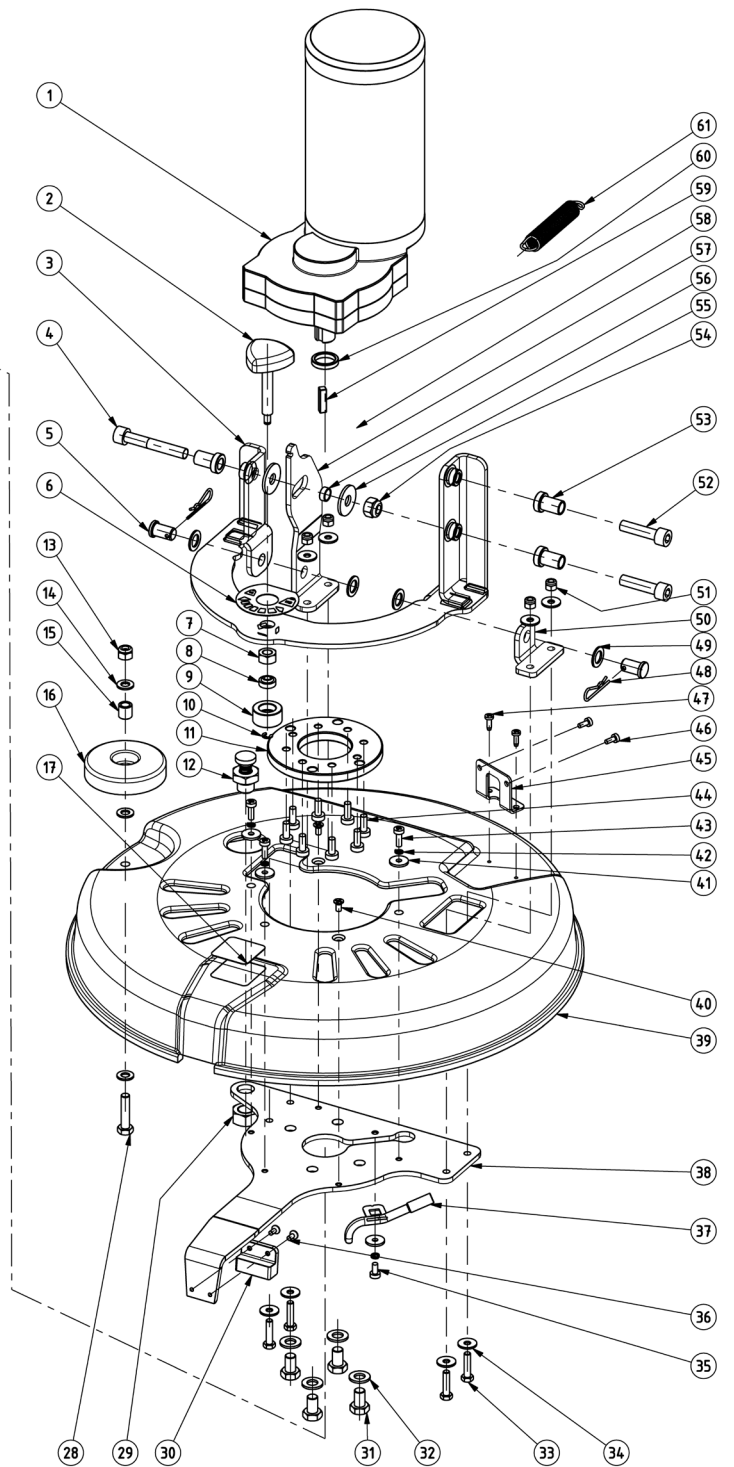
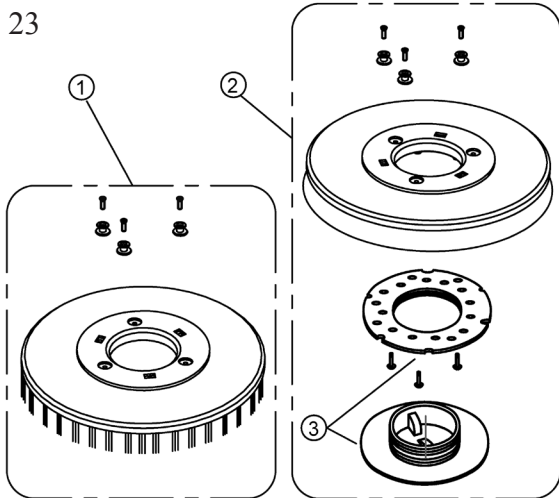
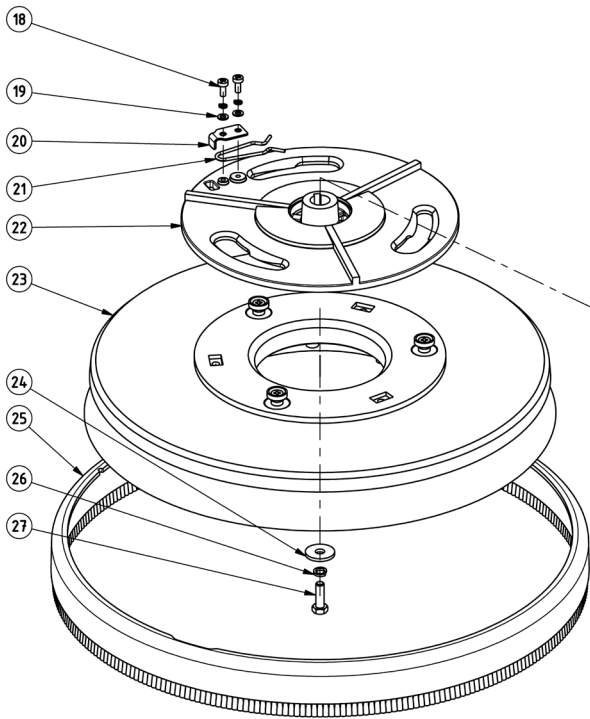


CONTROL BOX ASSEMBLY/ 控制箱组件

DIA NO	PART NUMBER	DESCRIPTION		NO REQ'D
1	1421409	PLAIN WASHER 4×9×0.8	不锈钢平垫圈 4×9×0.8	11
2	1211516	PH SCREW M5×16	十字盘头螺钉 M5×16	4
3	1113305	SELFLOCKING NUT M3	防松螺母 M3	2
4	1021820	HEX HEAD BOLT M8×20	不锈钢六角头螺栓 M8×20	6
5	1411824	PLAIN WASHER 8×24×2	平垫圈 8×24×2	6
6	1113507	SELFLOCKING NUT M5	防松螺母 M5	4
7	8114030	FIXING BRACKET,CONTROL BOX	控制箱安装支架	1
8	8113104	HANDLE	球形把手	1

DIA NO	PART NUMBER	DESCRIPTION	NO REQ'D
9	6210111	HOSE CLAMP 放污管夹	1
10	1221416	PH SCREW M4×16 SS 不锈钢十字盘头螺钉 M4×16	2
11	8014010	SQUEEGEE LIFTING HANDLE 水刮提升手柄	1
12	8014008	CONTROL BOX 控制箱	1
13	8014013	SQUEEGEE LIFTING ROPE 水刮拉绳	1
14	8114511	JOINT BEARING SQ6 球头关节轴承 SQ6	1
15	1421618	PLAIN WASHER 6×18×1.6,SS 不锈钢平垫圈 6×18×1.6	4
16	1121605	HEX NUT M6 不锈钢六角螺母 M6	2
17	1421828	PLAIN WASHER 8×28×3 平垫圈 8×28×3	2
18	1021830	HEX HEAD BOLT M8×30 六角头螺栓 M8×30	2
19	1221512	PH SCREW M5×12 不锈钢十字盘头螺钉 M5×12	1
20	1221516	PH SCREW M5×16 SS 不锈钢十字盘头螺钉 M5×16	2
21	8014044	PLATE 挡板	1
22	8114005	PIPE COUPLING 管接头	1
23	8014037	PANEL, BOTTOM 下面板	1
24	8014038	GASKET 下面板防水垫	1
25	8014068	OVERLOAD PROTECTOR 10A 过载保护器 10A	1
26	8014051	POWER CORD 电源线	1
27	1221410	PH SCREW M4×10,SS 不锈钢十字盘头螺钉 M4×10	15
28	1123608	SELFLOCKING NUT M6,SS 不锈钢防松螺母 M6	1
29	8014012	BAFFLE 水刮提升挡板	1
30	1421512	PLAIN WASHRE 5×12×1.5 不锈钢平垫圈 5×12×1.5	8
31	1021512	HEX HEAD BOLT M5×12,SS 不锈钢六角头螺栓 M5×12	1
32	8014101	LIFTING ROPE SPACER 水刮拉绳套	1
33	1021630	HEX HEAD BOLT M6×30,SS 不锈钢六角头螺栓 M6×30	1
34	8014006	WATERPROOF SWITCH 250V 16A 防水开关 250V, 16A	2
35	8014041	WIRE CLAMP 电源线夹	1
36	8014043	WIRE BUFFER 挂线板	1
37	1221614	PH SCREW M6×14 不锈钢十字盘头螺钉 M6×14	1
38	1422616	SPRING WASHER 6 不锈钢弹簧垫圈 6	1
39	2320403	STRAIN RELIEF 电缆固定头	1
40	8014007	PANEL DECAL 面板贴纸	1
41	8014005	FRONT PANEL 控制箱前面板	1
42	8014004	GASKET 面板防水垫	1
43	8114101	SHAFT 轴	1
44	1221412	PH SCREW M4×12,SS 不锈钢十字盘头螺钉 M4×12	2
45	1411409	PLAIN WASHRE 4×9×0.8 平垫圈 4×9×0.8	2
46	1432411	SPRING WASHER 4 不锈钢弹簧垫圈 4	2
47	8014033	PLATE 压板	1
48	8014022	CONTROL TRIGGER 控制手柄	1
49	1534608	SET SCREW M6×8 内六角平端紧定螺钉 M6×8	4
50	8014031	HEX BUSHING 六方轴套	1
51	8014032	SPRING ROD 弹簧臂	1
52	8014035	SPRING 拉簧	1
53	1211325	PH SCREW M3×25 十字盘头螺钉 M3×25	2
54	1411309	PLAIN WASHER 3×9×0.8 平垫圈 3×9×0.8	4
55	4010308	SWITCH 四脚开关	1
56	8014061	SWITCH BRACKET 开关支架	1
57	8014002	REAR PANEL 控制箱后面板	1
58	8014034	BRACKET 拉簧支架	1

BRUSH ASSEMBLY/ 刷盘组件



BRUSH ASSEMBLY/ 刷盘组件

DIA NO	PART NUMBER	DESCRIPTION	NO REQ'D
1	8015088*	MOTOR 24V 550W 电机 24V 550W	1
	8015089	MOTOR 220V 550W 电机 220V 550W	1
2	8015020	ADJUSTING HANDLE 调节手柄	1
3	8015010	BRUSH HANGER 刷盘悬挂架	1
4	1511065	HEX SOCKET SCREW M10×65 内六角螺钉 M10×65	1
5	1644220	PIN 12×20 销轴 12×20	2
6	8015101	DECAL 调速贴纸	1
7	1111008	HEX NUT M10 普通六角螺母 M10	1
8	8015104	BEARING GEC6C 自润滑关节轴承 GEC6C	1
9	8015105	BEARING HOUSING 关节轴承座	1
10	1439005	DETENT RING 5 开口挡圈 5	1
11	8015087	ASSAMBLRY BOARD 电机连接板	1
12	8015050	BRUSH PLUNGER 刷盘弹簧柱塞	1
13	1123810	SELFLOCKING NUT M8,SS 不锈钢防松螺母 M8	1
14	1421816	PLAIN WASHER 8×16×1.6,SS 不锈钢平垫圈 8×16×1.6	3
15	8115404	SPACER 隔套 12.7×8.2×12.7	1
16	8116009	BUMPING WHEEL 防撞轮	1
17	8111023	WARNING DECAL 警告贴纸	1
18	1221512	PH SCREW M5×12 不锈钢十字盘头螺钉 M5×12	2
19	1421510	PLAIN WASHER 5×10×1,SS 不锈钢平垫圈 5×10×1	2
20	8116002	WASHER 弹簧夹垫	1
21	8116003	SPRING CLAMP 刷盘弹簧夹	1
22	8116008	BRUSH HUB 定位盘	1
23Δ	9050018	BRUSH 18" 18吋刷盘	1
24	1421828	PLAIN WASHER 8×28×3 不锈钢平垫圈 8×28×3	1
25	8015090	SPLASH GUARD 挡水裙边	1
26	1422821	SPRING WASHER 8 不锈钢弹簧垫圈 8	1
27	1023810	HEX HEAD BOLT 5/16×1",SS 不锈钢六角头螺栓 5/16×1"	1
28	1021835	HEX HEAD BOLT M8×35,SS 不锈钢六角头螺栓 M8×35	1
29	1111215	HEX NUT M16 普通六角螺母 M16	1
30	8015108	SUPPORTER 支撑块	1
31	1011016	HEX BOLT M6×16 六角头螺栓 M10×16	1
32	1411020	PLAIN WASHER 10×20×2 平垫圈 10×20×2	4
33	1011625	HEX HEAD BOLT M6×25 六角头螺栓 M6×25	4
34	1421618	PLAIN WASHER 6×18×1.6,SS 不锈钢平垫圈 6×18×1.6	8
35	1221510	SH SCREW M5×10 不锈钢十字盘头螺钉 M5×10	1
36	1212410	SH SCREW M4×10 十字沉头螺钉 M4×10	2
37	8015060	WATER INLET 进水管	1
38	8015041	MOTOR BRACKET 电机支撑板	1
39	8015005	BRUSH COVER 刷盘罩	1
40	1222510	SH SCREW M5×10 不锈钢十字沉头螺钉 M5×10	2
41	1421518	PLAIN WASHER 5×18×2,SS 不锈钢平垫圈 5×18×2	4
42	1422513	SPRING WASHER 5 不锈钢弹簧垫圈 5	5
43	1221515	PH SCREW M5×15 不锈钢十字盘头螺钉 M5×15	3
44	1221616	PH SCREW M6×16 不锈钢十字盘头螺钉 M6×16	8

BRUSH ASSEMBLY/ 刷盘组件

DIA NO	PART NUMBER	DESCRIPTION	NO REQ'D
45	8015103	VALVE BRACKET 放水阀支架	1
46	1221410	PH SCREW M4×10,SS 不锈钢十字盘头螺钉 M4×10	2
47	1321213	AUTO TAPPING SCREW ST4.2×13 十字盘头自攻螺钉 ST4.2×13	2
48	1646240	COTTER PIN 2×40 异型开口销 2×40	2
49	8015116	NYLON WASHER 12.5×20×1.5 尼龙垫圈 12.5×20×1.5	4
50	8015001	BRACKET 刷盘旋转支架	1
51	1123608	SELFLOCKING NUT M6,SS 不锈钢防松螺母 M6	4
52	1511040	HEX SOCKET SCREW M10×40 内六角螺钉 M10×40	2
53	8015007	BUSHING 电机安装套	3
54	1113012	SELFLOCKING NUT M10 防松螺母 M10	1
55	8015115	NYLON WASHER 10.5×30×2.5 尼龙垫圈 10.5×30×2.5	2
56	8015121	SPACER 13×10.5×5.5 隔套 13×10.5×5.5	1
57	8015002	BRACKET 旋转支架	1
58	8116004	DETENT RING 挡圈	1
59	1656432	KEY 6.35×32 平键 6.35×32	1
60	8015003	SPACER 25.5×19.5×5 隔套 25.5×19.5×5	1
61	8115004	SPRING 拉伸弹簧	1

23Δ

DIA NO	PART NUMBER	DESCRIPTION	NO REQ'D
1	9050018	BRUSH 18" 18吋刷盘	1
2	9040017	PAD DRIVER 17" 17吋针座	1
3	9000001	BIG MOUTH 中心定位器	1

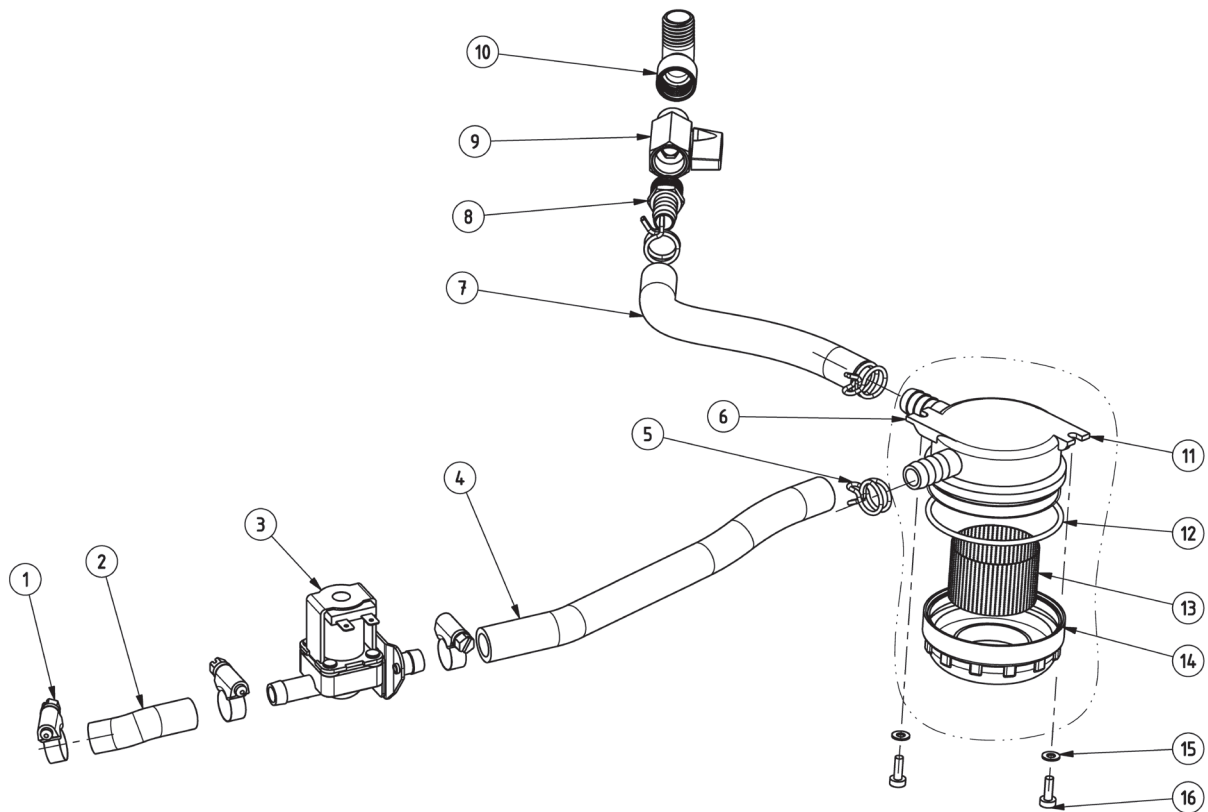
* ONLY FOR I18B

SQUEEGEE HOLDER ASSEMBLY/ 水刮托架组件

SQUEEGEE HOLDER ASSEMBLY/ 水刮托架组件

DIA NO	PART NUMBER	DESCRIPTION	NO REQ'D
1	8017003	SPRING 水刮扭簧	1
2	1411816	PLAIN WASHER 8×16×1.6 平垫圈 8×16×1.6	3
3	1432821	SPRING WASHER 8 弹簧垫圈 8	3
4	1021820	HEX HEAD BOLT M8×20,SS 不锈钢六角头螺栓 M8×20	3
5	1021230	HEX HEAD BOLT M12×30,SS 不锈钢六角头螺栓 M12×30	2
6	8015117	NYLON WASHER 12.5×32×1.5 尼龙垫圈 12.5×32×1.5	4
7	8115001	SQUEEGEE SUPPORT 水刮托架	1
8	1123115	SELFLOCKING NUTS M12 不锈钢防松螺母 M12	2
9	8017010	SQUEEGEE BRACKET 水刮摆动架	1
10	8117006	CUSHION 胶垫	2
11	8115005	SPACER 16×12×6.5 隔套 16×12×6.5	2
12	8017002	SPRING 水刮扭簧	1
13	1644248	PIN 12×48 销轴 12×48	1
14	1645324	COTTER PIN 开口销 3.2×24	3
15	8017024	SUPPORTING PIPE 支撑管	1
16	8017020	SQUEEGEE HOLDER 水刮固定架	1
17	1221550	PH SCREW M5×50 十字盘头螺钉 M5×50	1
18	8017005	BUSHING 缓冲套管	1
19	1123507	SELF-LOCKING NUT M5 不锈钢防松螺母 M5	1

SOLUTION SYSTEM ASSEMBLY/ 清水系统组件



SOLUTION SYSTEM ASSEMBLY/ 清水系统组件

DIA NO	PART NUMBER	DESCRIPTION	NO REQ'D
1	1962016	HOSE CLAMP 喉箍 10-16mm	2
2	8018004	HOSE 清水管	1
3	8018007*	SOLENOID VALVE, 24V 放水电磁阀, 24V	1
	8018001	SOLENOID VALVE, 220V 放水电磁阀, 220V	1
4	8018003	HOSE 请水管	1
5	8119006	HOSE CLAMP 水管夹(小)	4
6	8119100	WATER FILTER 清水过滤器	1
7	8018002	HOSE 清水管	1
8	8013007	JOINT 直接头	1
9	8018006	BALL VALVE 微型球阀	1
10	8013006	90° JOINT 90度接头	1
11	8119101	FILTER BODY 过滤器体	1
12	1622765	O RING O形圈	1
13	8119103	FILTER SCREEN 过滤网	1
14	8119102	FILTER COVER 过滤器盖	1
15	1421409	PLAIN WASHER 4×9×0.8,SS 不锈钢平垫圈 4×9×0.8	2
16	1221412	PH SCREW M4×12, SS 不锈钢十字盘头螺钉 M4×12	2

* FOR I18B

SQUEEGEE ASSEMBLY/ 水刮组件

SQUEEGEE ASSEMBLY/ 水刮组件

DIA NO	PART NUMBER	DESCRIPTION	NO REQ'D
1	8116009	BUMPING WHEEL 防撞轮	2
2	8115404	SPACER 隔套 12.7×8.2×12.7	2
3	1021616	HEX HEAD BOLT M6×16,SS 不锈钢六角头螺栓 M6×16	2
4	1421618	PLAIN WASHER 6×18×1.6,SS 不锈钢平垫圈 6×18×1.6	2
5	1111008	HEX NUT M10 普通六角螺母 M10	2
6	8118400	2" CASTER 2" 万向轮	2
7	8118004	SQUEEGEE BRACKET 水刮架	1
8	8118003	HANDLE 星形把手	4
9	8118300	BRACKET,RIGHT 右支架	1
10	1021835	HEX HEAD BOLT M8×35,SS 不锈钢六角头螺栓 M8×35	2
11	1121807	HEX NUT M8,SS 不锈钢六角螺母 M8	4
12	1021860	HEX HEAD BOLT M8×60 不锈钢六角头螺栓 M8×60	4
13	8118600	CLAMP ASSEMBLY 夹条组件	1
14	1123507	SELFLOCKING NUT M5 不锈钢防松螺母 M5	1
15	1221570	PH SCREW M5×70 不锈钢十字盘头螺钉 M5×70	1
16	8118610	CLAMP ASSEMBLY 短夹条组件	1
17	8118022	REAR SQUEEGEE 后刮条	1
	8118002	REAR SQUEEGEE, PU (OPTIONAL) PU 后刮条 (选配)	1
	8118012	REAR SQUEEGEE, CR (OPTIONAL) 氯丁橡胶后刮条 (选配)	1
18	8118021	FRONT SQUEEGEE, LINATEX LINATEX 前刮条	1
	8118001	FRONT SQUEEGEE, PU (OPTIONAL) PU 前刮条 (选配)	1
	8118011	FRONT SQUEEGEE, CR (OPTIONAL) 氯丁橡胶前刮条 (选配)	1
19	8118005	SQUEEGEE HOLDER 水刮保持架	1
20	8118200	BRACKET,LEFT 左支架	1
21	1421816	PLAIN WASHER 8×16×1.6,SS 不锈钢平垫圈 8×16×1.6	4
22	1123810	SELFLOCKING NUT M8 不锈钢防松螺母 M8	2

WEAR & TEAR PARTS LIST / 易损件清单

PART NO.	DESCRIPTION		QTY.
8115200	8 INCH WHEEL	8" 轮	2
8116009	BUMPING WHEEL	防撞轮	3
8118022	REAR SQUEEGEE	后刮条	1
8118021	FRONT SQUEEGEE	前刮条	1
9040017	PAD HOLDER 17"	17" 针座	1
9050018	BRUSH 18"	18" 刷盘	1

安全预防

适用于 I18B



警告：在操作和使用本机器前，请仔细阅读并理解本操作手册。

本机器仅作商业用途，并限于户内使用，只能使用推荐的附件。

所有操作人员必须阅读、理解并掌握以下安全预防措施。

1，以下情况下请勿操作机器：

- 未经培训或取得相应的资格。
- 未认真阅读并理解本操作手册。
- 在易燃易爆的场所。
- 机器存在故障隐患而不适宜操作。
- 户外作业。

2，操作本机器前：

- 确保所有安全装置工作正常。

3，使用本机器时：

- 在斜坡和打滑的地面时请低速操作。
- 请遵照安全指引作业。
- 机器损坏或操作失灵时，请立即报告。
- 切勿让儿童在机器上或附近玩耍。
- 不要在超过 3 度的斜坡上作业。

4，离开或维修机器之前：

- 将机器停放在平稳的地面上。
- 关闭机器电源。

5，维修机器之前：

- 请仔细阅读本操作手册。
- 请使用原厂配件。
- 在轮子前放置挡块。
- 维修机器前先断开电池连接。
- 处理电池或电池接线时，请戴上防护手套。
- 避免接触电池酸性物资。
- 避免移动零件。请勿穿着宽松的衣服或手套。



警告：电池可能会释放出氢气，可能会导致燃烧和爆炸，请远离火花和开放式火源。非免维护电池充电时请保持电池仓开启。



警告：易燃物质可能会导致燃烧和爆炸，请勿使用易燃性物质。



警告：请勿拾取易燃性物质或活性金属。

安全预防

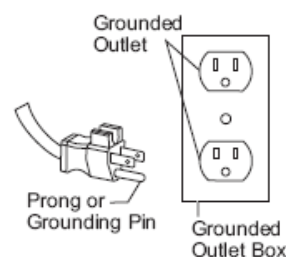
适用于 I18C



**在使用本机器前请仔细和理解操作手册！
本机必须接地！**

为减少机器因故障而引起的触电危险，本机电源线插头带有一接地插脚，任何情况下不得去除该插脚。

本机使用额定 220 伏电路和有接地插头的供电系统。其结构类似于附图。确保本机连接到具有相同配置的插头插座，并且不要使用适配器。



本机仅作商业用途，并限于户内使用。务必使用推荐的附件，操作者应阅读、理解并掌握以下安全预防措施：

1、以下情况下不得操作本机：

- 未经培训和取得相应资格；
- 在易燃易爆场所；
- 机器存在问题不适合操作；
- 在水中；
- 未仔细阅读和理解操作手册；
- 电源线或插头损坏；
- 在户外时；
- 使用延长线；

2、操作机器前：务必确保所有安全装置动作正常；

3、使用机器时：

- 不得碾压电线；
- 不得将电线置于物件锋利的边、角；
- 切勿用湿手拔取插头；
- 应立刻报告机器任何之异常及损坏情况；
- 不得靠牵拉电线的方式移动机器；
- 不得用拉电线的方式拔取插头；
- 始终使电源线远离发热的物件表面；

4、离开机器或进行维护前：务必关机并拔下电源插头；

5、进行维护时：

- 应拔下电源插头；
- 使用制造商推荐或认可的配件；

储存时：1、拔下电源插头；2、取下针座或刷盘；3、直立存放于干燥的场所；



为了防止发生电击的危险，一旦检查到电线有破损，请马上更换。更换程序必须要由被授权的专业人员或客户服务中心来完成。



可燃性的材料可能会导致爆炸或起火，不要在容器里使用可燃性材料或拾取这些材料。

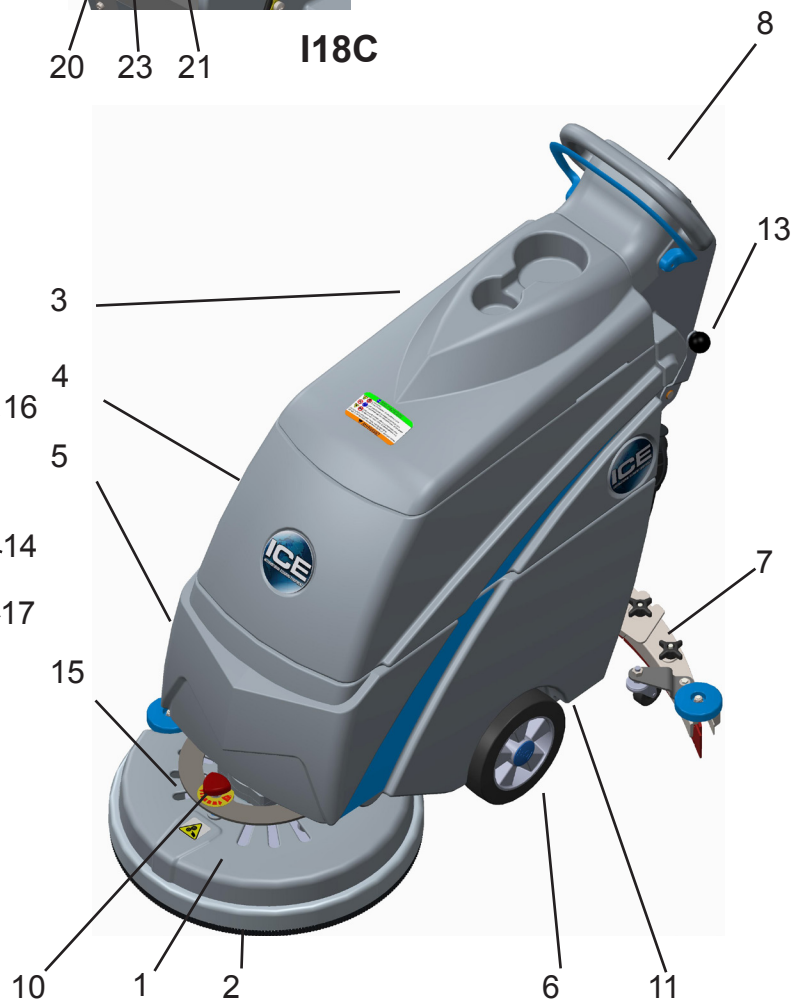
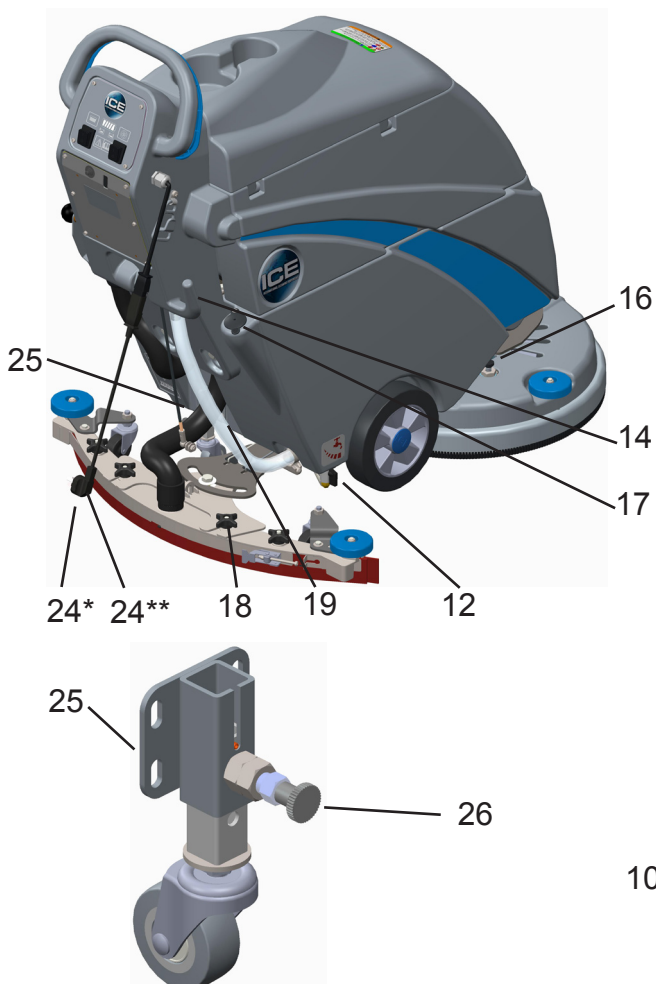
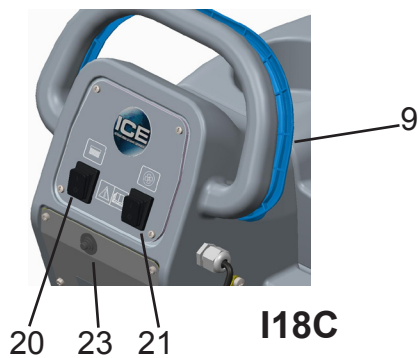
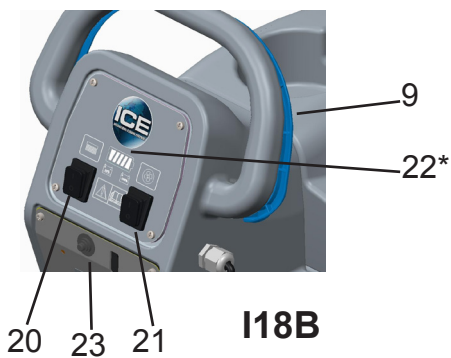
机器组件

机器结构

- 1. 刷盘罩
- 4. 污水箱
- 7. 水刮
- 10. 调节把手
- 13. 水刮提升手柄
- 16. 刷盘柱塞
- 19. 透视管
- 22*. 电池电量指示器
- 24**. 电源线

- 2. 刷盘
- 5. 清水箱
- 8. 控制箱
- 11. 清水过滤器
- 14. 电源线挂钩
- 17. 注水孔堵
- 20. 刷盘电机开关
- 23. 过载保护器
- 25. 调节轮

- 3. 污水箱盖
- 6. 8" 轮
- 9. 控制手柄
- 12. 球阀
- 15. 刷盘 / 针座驱动器
- 18. 把手
- 21. 吸力泵电机开关
- 24*. 充电器电源线
- 26. 调节手柄



* : 仅适用于 I18B ** : 仅适用于 I18C

机器调试及安装

机器拆包：

拆包前请仔细检查包装箱，如有损坏，请立即反馈给货物运输者，拆包和搬运过程中要小心，不要让机器承受剧烈震动。检查包装内是否有如下物品：

机器；水刮组件；刷盘 / 针座，充电线。

机器准备及操作前检查：

- 1) 清扫机器外部。
- 2) 检查电量指示器以确定电池是否充满电（见电池充电部分）。
- 3) 检查水刮和刷盘 / 针座是否已经正确安装。
- 4) 机器的前进速度可以通过调节把手（10）来调节，顺时针旋转把手可以使机器加速，逆时针旋转把手可以减速。
- 5) 确定工作地面可以支撑起机器的重量，另外地面的倾斜度不能超过机器能承受的极限 (2%)。

安装刷盘或针座：

- 1) 关掉机器。
- 2) 使机器向后翘起，将刷盘或针座上的定位孔对准驱动盘，将刷盘 / 针座安装到驱动盘上，确定刷盘或针座上的 3 个定位块都已插入到驱动盘上的 3 个槽中。
* 如果使用的是针座，请先将合适的抛光垫安装到针座上。
- 3) 按下刷盘罩上的柱塞，这样可以防止驱动盘转动，然后用另一只手顺时针转动刷盘或针座直到位于驱动盘上的弹簧夹卡住刷盘或针座上的定位块。

备注： 可调节轮一共有 2 个位置（拔出调节手柄 (26) 就可以调节了）。

位置 1: 机器可以向后翘起，便于安装刷盘 / 针座。

位置 2: 用于正常的操作和运输。

安装水刮：

- 1) 松开水刮上的两个旋钮 (18)，然后将水刮装入水刮托架后部的两个槽中（水刮上的轮子应对着机器的方向）。
- 2) 拧紧两个旋钮 (18)。

清水箱注入清水：

- 1) 注水孔位于机器的后部，首先将注水孔盖从注水孔中拔出来。
- 2) 往清水箱 (5) 里注水。（请使用一根软管，一端连接到水龙头上，一端插入注水孔里，水温不要超过 50° C），位于机器后部右边的透视管 (19) 上有刻度，可以帮助指示清水箱里的水位。
* 视地面的脏污程度，可在清水箱中加入适量的清洁剂。



请不要将易燃的物质注入清水箱，因为这样可能会引起爆炸或火灾，只能使用推荐的清洁用化学品。可以与当地的清洁用品经销商联系以得到合适的化学品清单。

机器操作

 **除非你已经阅读和理解了本说明书，否则请不要操作机器。**

- 1) 向下旋转提升手柄 (13)，这样水刮组件将被放到地面上。
- 2) 把刷子电机开关 (20) 打到“开 (on)”的位置。
- 3) 把吸力泵电机开关 (21) 打到“开 (on)”的位置。
- 4) 将球阀 (12) 的手柄向垂直位置旋转以打开清水，但是直到控制手柄 (9) 被拉住后，清水才会流出来。
- 5) 要开始洗地，握住机器操作手柄的同时拉住蓝色的控制手柄 (9)，当控制手柄被拉住后，刷子 / 针座将会开始旋转，清水也将开始流出。
- 7) 向前推动机器，机器开始洗地。

 **刷子 / 针座在旋转时，不要让机器一直停留在同一地点，否则有可能会损坏地板。**

- 8) 可以通过调节球阀手柄的位置来调节流出的清水的流量。

机器操作过程中

- 1) 经常打开污水箱盖 (3) 看看污水箱里是否有过量的泡沫，如果有过量的泡沫，在污水箱里加入消泡剂。

 **一定不能让泡沫进入浮球滤网中，否则有可能会损坏吸力泵电机，因为泡沫不会激活机器的水满自动关闭装置。**

- 2) 经常观察机器后部的清水透视管，就可以知道机器的清水箱里还剩下多少水。

如果水刮在地面上形成了条纹，请停下机器，将水刮从地面上提起来，用一块抹布将水刮条的边缘擦拭干净。

 **不要试图直接使用手指去擦拭水刮条或者除掉其上的碎片，因为这样可能会伤害手指。**

当清水箱里的水用完后，关掉刷子电机开关和放水球阀，先不要关掉吸力泵电机，继续吸水直到所有的污水都被吸干。

排干水箱

- 1) 将控制面板所有的开关打到“关”的位置。
- 2) 提起水刮组件，把机器推到指定的排放区域。

 **每次洗地工作结束后，或者清水箱被重新灌满后，都应该排干污水箱并且洗干净它。**

 **如果清水箱被重新灌满后，没有排干污水箱，泡沫或者水可能会进入到水满自动关闭装置里，从而有可能损坏吸力泵电机。**

排干污水箱

- 1) 将污水排放管从挂钩上拿下来，将污水排放管放在地漏上，拿掉排放管的堵头，开始排放污水。
- 2) 每次使用后污水箱都要清洗，可以使用一根水管冲洗污水箱，但是注意不要将水冲入到浮球滤网里面。



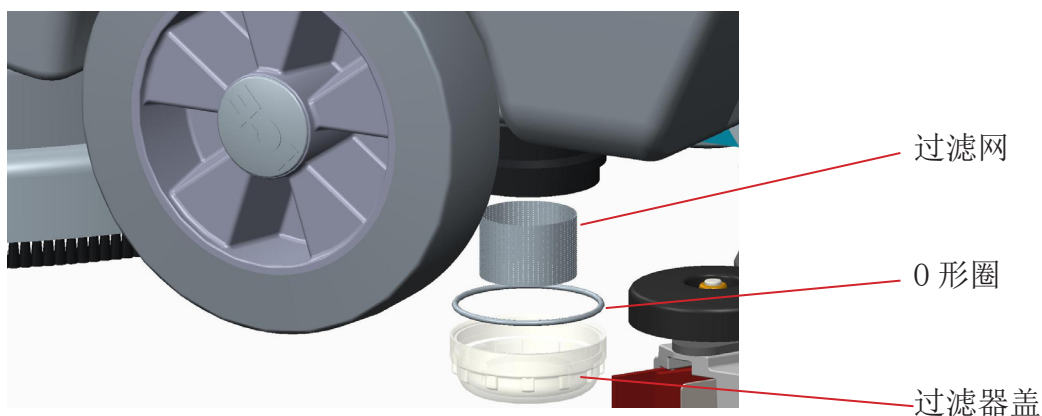
如果需要长时间储存机器，请保持污水箱盖开着，这样污水箱可以彻底干燥，不会有异味。

排干清水箱



每次洗地工作完成后，都应该排干清水箱后再存放。

- 1) 从上面的管接头上拔下清水透视管（位于机器后部），就可以排放了，可以将排出来的水放入水桶或是地漏中。
- 2) 每次使用污水箱后都要冲洗，这样可以防止水箱里清洁剂的堆积和堵塞水箱。
- 3) 清水箱冲洗完并排干后，再将清水透视管插入到管接头上，要确定透视管充分插入到管接头的底部。
- 4) 拧下清水过滤器（11）的盖子可以完全排干清水箱，顺便检查过滤网是否堵塞，如有必要，彻底冲干净过滤网。
- 5) 拧上清水过滤器（11）的盖子，安装时须确定 O 形圈和过滤网都正确地装到位。



电池充电（仅适用于 I18B）

机器配有车载充电器及免维护蓄电池，请使用原厂充电器及蓄电池。

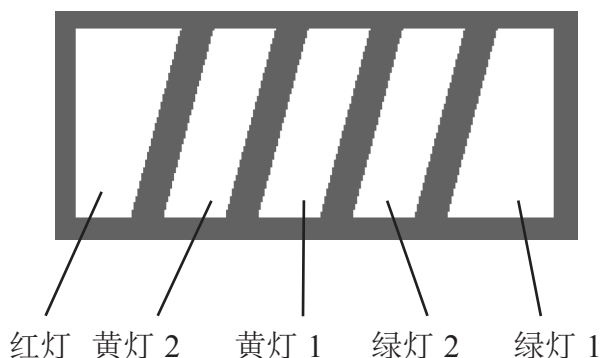


警告：火灾或爆炸危险。蓄电池可能会释放出氢气，请远离火花或开放式火源。如果使用非免维护电池，充电时请保持电池仓开启。

注意：仅可以使用符合以下条件的充电器：

- 自动断路
- 深循环充电
- 输出电流 8-15 安培
- 输出电压 24 伏

蓄电池电量显示器如图：



绿灯常亮：电量充足。
 黄灯常亮，绿灯灭：中等电量。
 红灯常亮，其余灯灭：20% 电量，此时应该停机充电。
 红灯闪烁：蓄电池已经深度放电。

注意： 蓄电池经常深度放电会导致其寿命缩短。当红灯亮时，请及时给蓄电池充电。

- 1) 将机器置于良好通风处。
- 2) 关闭机器电源。
- 3) 如果是对湿蓄电池充电，充电前请检查电池液面高度。
- 4) 将充电器的电源线插入到接地良好的电源插座上。
- 5) 充电器自动开始充电，蓄电池充满后，充电器会自动关闭。
- 6) 充电结束后，拔掉接到交流电源上的插头。

备注： 从透明面板后的指示灯可以看到充电状态如下：

- 黄灯常亮：充电正常
- 绿灯闪烁：充电完成 80%
- 绿灯常亮：充电完成，蓄电池可以使用
- 黄灯闪烁：没有连接电池或接线不正确。

维护和保养



警告： 机器维修前，请确认机器已经关闭或断开与蓄电池的连接。



警告： 只能由授权的维修中心进行维修。未经授权的维修将使保修失效。

每日维护与保养

- 1) 取下刷盘 / 针座，用合适的工具清洗它。
- 2) 彻底排干污水箱和清水箱，用清水洗干净。检查污水箱里是否有碎片等杂物，如果有必要，清除这些杂物。
- 3) 提起水刮组件，用一块抹布擦拭干净它。在储存时确定水刮处于被提起的状态。
- 4) 取下浮球滤网，用清水彻底冲洗干净。
- 5) 使用经认可的清洁剂和湿抹布清洁机器，不要用水直接喷洗机器外部，这样可能会损坏电机和线路。
- 6) 进行维护保养时，如果要从机器上拿走污水箱，必须先拔掉吸力泵电机连接器和污水排放管。
- 7) 检查刮条边缘是否磨损，如有破损，请掉转使用或更换。

每月维护与保养：

- 1) 检查蓄电池顶部是否清洁以防止腐蚀。
- 2) 检查蓄电池连接线是否松动或腐蚀。
- 3) 检查污水箱盖密封条，如果有破损请更换。
- 4) 用特定的润滑脂润滑所有的须润滑部位和转轴。
- 5) 检查机器的螺栓、螺母是否松脱。
- 6) 检查水箱是否漏水。

电机维护与保养

- 1) 要对电机进行维护保养，请联系当地的 ICE 经销商。
- 2) 机器每运行 250 小时，就需要检查吸力泵电机碳刷，当碳刷磨损到短于 10mm 时，必须更换新品。

蓄电池维护与保养（仅适用于 I18B）



警告：火灾或爆炸危险。电瓶可能会释放出氢气，请远离火花或开放式火源。如果使用非免维护电池，充电时请保持电池仓开启。



警告：保养蓄电池时，请佩戴防护手套，始终避免与电瓶酸性物质接触。

注意：为使本机保持良好的性能，应使蓄电池始终处于有电状态，勿使蓄电池长时间处于放电状态。

- 1) 请遵照本手册中电瓶充电章节中的步骤进行保养。
- 2) 蓄电池顶端和电极须防腐蚀，可以用小苏打溶液防腐蚀。但不得让此溶液进入电池内部。
- 3) 用沾有小苏打溶液的刷子对蓄电池和电池接线部分进行擦拭。
- 4) 检查蓄电池连接线是否磨损，端子是否松脱。必要时请更换。

机器储存

- 1) 机器必须直立存放于室内。
- 2) 机器必须存放在干燥的区域。
- 3) 机器存放前须先取下刷盘 / 针座。
- 4) 机器存放前须提起水刮组件。
- 5) 如果存放机器的区域温度会低至冰点，请确保存放前排干机器内所有的水（含过滤器），任何因为低温造成的损害将不在保修之列。
- 6) 排干污水箱内的水，保持污水箱盖敞开，这样机器存放后才不会有异味。
- 7) 排干清水箱内的水。

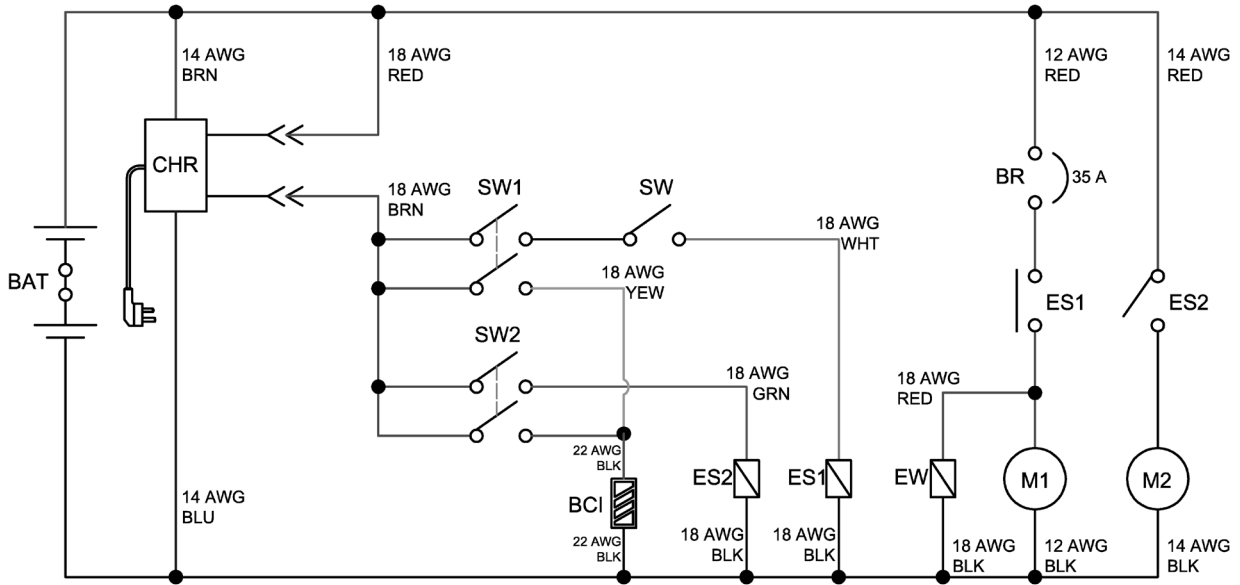
简单故障排除

故障	原因分析	解决办法
机器不能运行	线路连接不正确或损坏	检查线路或联系 ICE 经销商
	刷盘电机损坏	联系 ICE 经销商
	电机碳刷磨损	联系 ICE 经销商
吸力泵电机不能运行	线路连接不正确或损坏	检查线路或联系 ICE 经销商
	吸力泵电机损坏	联系 ICE 经销商
	电机碳刷磨损	联系 ICE 经销商
清水溶液流量小或没有	球阀损坏	联系 ICE 经销商
	放水电磁阀损坏	联系 ICE 经销商
	球阀手柄位置需要调整	球阀手柄在水平位置时，流量最大。
吸水性能差	水刮堵塞	用抹布清除水刮上的碎片等杂物
	水刮条已磨损	更换新的水刮条
	水刮组件安装不正确	确定水刮组件安装正确并紧固
	吸水软管破损或松脱	检查吸水软管，确定连接紧固，如有破损，请即刻更换。
	吸水软管堵塞	检查吸水软管，如有堵塞，请立即清理。
	放污管堵头松脱	装好放污管堵头
	吸力泵电机松脱	拧紧吸力泵电机的安装螺栓，但不要太紧，否则可能会造成损坏。
	污水箱盖没有盖好	确定污水箱盖已盖好
	污水箱污水已满	排干污水箱
	浮球滤网堵塞	从污水箱中取出浮球滤网，清理干净再装上去。
运行时间太短 *	蓄电池充电不足	充分充满蓄电池再使用
	蓄电池损坏	更换新的蓄电池
	蓄电池需要维护	见蓄电池维护章节
	蓄电池充电器故障	维修或更换充电器

* : 仅适用于 I18B

WIRING DIAGRAM / 电路图

I18B



- | | | |
|------|-----------------------------|-----------|
| BAT: | 2-12V battery | 2-12V 蓄电池 |
| CHR: | On board charger | 车载充电器 |
| SW: | Control handle switch | 拉把开关 |
| SW1: | Brush motor switch | 刷盘电机开关 |
| SW2: | Vacuum motor switch | 吸力泵电机开关 |
| ES1: | Brush motor solenoid switch | 刷盘电机电磁开关 |
| ES2: | Vacuum motor relay | 吸力泵电机继电器 |
| BCI: | Battery capacity indicator | 电池容量指示器 |
| BR: | Circuit breaker | 过载保护器 |
| EW: | Solution solenoid valve | 放水电磁阀 |
| M1: | Brush motor | 刷盘电机 |
| M2: | Vacuum motor | 吸力泵电机 |

- | | | |
|------|--------|----|
| BLK: | Black | 黑色 |
| BLU: | Blue | 蓝色 |
| BRN: | Brown | 棕色 |
| GRN: | Green | 绿色 |
| RED: | Red | 红色 |
| WHT: | White | 白色 |
| YEW: | Yellow | 黄色 |

