

Diagrama del circuito de cableado

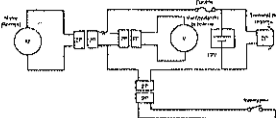
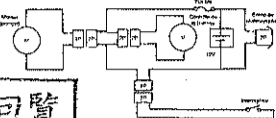


Schéma de câblage



Specifications

Description	Model	Description	Value
Weight	MS40B (GUARDIAN)	Capacity	12 V 5.0 Ah
Dimensions (L x W x H)	260x100x100 mm	Dimensions (L x W x H)	260x100x100 mm
Capacity	1.5 L (0.4 gal)	Capacity	1.5 L (0.4 gal)
Chemical Tank Capacity	2.0 gal (7.6 L)	Capacity	1.5 L (0.4 gal)
Pump	Diaphragm pump (chemical resistant)	Capacity	1.5 L (0.4 gal)
Pressure	1.0 MPa (10 kg/cm ²)	Capacity	1.5 L (0.4 gal)
Motor	DC	Capacity	1.5 L (0.4 gal)
Power	10 A	Capacity	1.5 L (0.4 gal)

Especificaciones

Descripción	Modelo	Descripción	Valor
Peso	MS40B (GUARDIAN)	Capacidad	12 V 5.0 Ah
Dimensiones (L x W x H)	260x100x100 mm	Dimensiones (L x W x H)	260x100x100 mm
Capacidad	1.5 L (0.4 gal)	Capacidad	1.5 L (0.4 gal)
Capacidad del depósito químico	2.0 gal (7.6 L)	Capacidad	1.5 L (0.4 gal)
Bomba	Bomba de membrana (resistente a productos químicos)	Capacidad	1.5 L (0.4 gal)
Presión	1.0 MPa (10 kg/cm ²)	Capacidad	1.5 L (0.4 gal)
Motor	CC	Capacidad	1.5 L (0.4 gal)
Potencia	10 A	Capacidad	1.5 L (0.4 gal)

Caractéristiques techniques

Description	Modèle	Description	Valeur
Poids	MS40B (GUARDIAN)	Capacité	12 V 5.0 Ah
Dimensions (L x W x H)	260x100x100 mm	Dimensions (L x W x H)	260x100x100 mm
Capacité	1.5 L (0.4 gal)	Capacité	1.5 L (0.4 gal)
Capacité du réservoir chimique	2.0 gal (7.6 L)	Capacité	1.5 L (0.4 gal)
Pompe	Pompe à membrane (résistante aux produits chimiques)	Capacité	1.5 L (0.4 gal)
Pression	1.0 MPa (10 kg/cm ²)	Capacité	1.5 L (0.4 gal)
Moteur	CC	Capacité	1.5 L (0.4 gal)
Puissance	10 A	Capacité	1.5 L (0.4 gal)

Cautions when using this product

This product can be used for the following agricultural work. Avoid use for purposes other than the following.

- Spraying chemicals for blight or harmful insects on general farm crops.
- Spraying chemicals for blight or harmful insects on fruit trees.
- Spraying chemicals for blight or harmful insects on crops cultivated in greenhouse.
- Spraying chemicals for blight or harmful insects on flowers.
- Spraying disinfecting liquid or insecticide on farm house or chicken house.
- Spraying chemicals and water for blight or harmful on garden trees, bonsai, or lawns.
- Spraying disinfecting liquid and insecticide for urban sanitation.
- Spraying chemicals for blight or harmful insects on flower beds and in parks.
- Spraying weed killer to control weeds.
- Cleaning and spraying water for vegetables or root vegetables.

When transporting by automobile, take action to prevent the machine from falling.

CAUTION
Do not use this machine when there are people, especially children, near the site.
Because the tank when completely filled with the chemical is very heavy, pay careful attention not to hurt your lower back when carrying it.
Always adopt a safe working posture when carrying the tank.
Do not walk on elevated sites using stairs or ladders while carrying the tank.

Check prior to work

- When transporting the unit by vehicle, take necessary measures to prevent falling of it.
- When loading and unloading heavy objects, neither act in an unnatural posture nor work alone.
- Conduct inspection, maintenance services and cleaning in a flat area.
- Ensure that each pin is free from loosened bolts and nuts and damage.
- Properly mount every removed cover for protecting part and the life for inspection and maintenance services.
- Connect each connector for electric wiring and take necessary measures to prevent the wires from being rubbed.
- Protect electric wiring from oil, water, and dirt.

Switching the pressure-regulating valve

Note: At shipping, the valve is set to low pressure.

Method for using the measuring cup
Note: Use the measuring cup (10 ml) attached to the back of the strainer.

3. Cleaning, Recharging, and Storage

Cleaning the inside of chemical tank
After recovering the remnant solution, clean the inside of chemical tank by using clean water, stop this unit.

CAUTION
Before cleaning, inspection and recharging, be sure to stop this unit.

Cleaning the pump inside with water

CAUTION
After cleaning the inside of chemical tank, pour water into the tank again, run the pump, and clean the pump inside and the nozzle until the sprayed mist of chemical solution is completely replaced with clean water.

Leaving the pump inside without water-cleaning will cause failure of the pump and nozzle.

Cleaning the strainer

Clean the strainer.

Water draining

CAUTION
Do not let the drain the tank. Otherwise the leaking of water may damage the pump in winter.
After draining the chemical tank, grip the grip lever to run the pump without tank as far as the remaining water in the tank is completely discharged. Never continue the no-load run of the pump for longer than 1 minute. Otherwise the pump may be damaged.

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Prefacio

Gracias por comprar este producto. Este manual de operación explica el método para utilizarlo de manera correcta, para realizar verificaciones especiales y el mantenimiento del equipo. Por favor lea este manual con cuidado, asegúrese de comprender su contenido y utilícelo para lograr el mejor rendimiento del producto. Cuéntele cuidadosamente después de leerlo y úselo para explicar las operaciones del mismo. Pueden estar disponibles antes del producto y el contenido de este manual ya que, de manera constante, mejoramos algunas partes en el producto de acuerdo a nuestras ideas.

Por favor envíe cualquier duda sobre este producto al centro de ventas más cercano a nuestra oficina de ventas.

Por favor guarde este manual de operación con cuidado.

Si lo pierde, compre otro en el puesto de ventas más cercano a un negocio electrónico de venta al por menor.

Modificar el producto hace que se torne inseguro y su funcionamiento sea poco confiable, por lo tanto, no lo modifique.

¡Advertencias!

A continuación, se indican en este manual importantes medidas de precaución para su manejo:

PRECAUCIÓN Es posible que suceda la muerte o que se produzca una lesión seria si no se cumple esta advertencia.

PRECAUCIÓN Es posible que ocurra la muerte o que se produzca una lesión seria si no se cumple esta advertencia.

PRECAUCIÓN Es posible dañar la máquina si no se cumple esta advertencia.

Rótulo de advertencia

- Siempre extienda la susección o el tubo para que sea visible leer las indicaciones.
- Siempre extienda la susección o el tubo para que sea visible leer las indicaciones.
- Use el manual de operación en detalle. Asegúrese de leer el manual de operación en detalle antes de utilizarlo.
- Use equipo de protección personal. Use abrigo de protección contra gases, lentes de seguridad, protección para los ojos durante la tarea.
- Prohibición de hacer fuego. No fumar en áreas cercanas al equipo de trabajo.
- Prohibición de hacer fuego. No fumar en áreas cercanas al equipo de trabajo.

Cautions during operation

- In normal operation, avoid a continuous work for a stretch of 2 hours or more to maintain health.
- An operating Battery-driven Sprayer unit loaded with a solution of chemicals is a heavy object. Tidy up the farm field and avoid any unstable and unreasonably hard work.
- Pay attention to clothes, field conditions, and the direction of wind to prevent exposure to agricultural and environmental pollution.
- During operation, do not allow any unauthorized person to approach the spraying site.
- Ensure that the gasket of the lid for chemical tank and tighten the lid securely so that it keeps the solution from spilling out.
- An operating Battery-driven Sprayer unit loaded with a solution of chemicals is a heavy object. Tidy up the farm field and avoid any unstable and unreasonably hard work.
- Before taking a break or meal, gargle well and wash hands and face with soap water.
- If a person feels abnormally in physical condition, stop the operation, allow himself to receive a doctor's examination.

Precautions after use

- Thoroughly remove the remnant solution in the tank, put it in the original container, and store away from the reach of infants. Also densely remove the residual solution deposited on the machine surface. Observe the residue will cause rusting and failure.
- Clean the inside of chemical tank, spraying hose and nozzle with clean water.
- If any area is damaged, repair it before storage. Totally use the specified genuine parts and supplies available from us.
- Keep the storage place from humidity, dust and other foreign matters.

Functions of the operating section

- Grip
- Mode select lever
- Release button
- Pushing the release button

Recharging the battery

- Insert charge the plug of charger to sprayer. Check, fit the plug.
- Insert input plug to AC voltage. Standard at charging time.
- After full charge, pull out input plug.
- Pull out plug of charger.

CAUTION
Use the genuine charger and battery. Otherwise the battery may be ruptured.

CAUTION
1. Charge in the room, charge in cool area.
2. Do not put anything on the charger.
3. Avoid water to plug, electrical line and charger.
4. Do not run sprayer during charging battery.
5. Do not remodeling anything.
6. Do not give charger vibration.
7. Pull out AC input plug as long as does not charging.

How to exchange the battery assy.

When you exchange the battery assy, ask to distributor or dealer. Do not open the bracket in yourself.

CONSUMPTION PARTS LIST

PARTS POSITION	PARTS NAME	PARTS NUMBER	PARTS POSITION	PARTS NAME	PARTS NUMBER
BRACKET (REAR)	BATTERY	107191	GRIP	O RING	104610
BRACKET (REAR)	PISTON	110380	GRIP	O RING	14114
BRACKET (FRONT)	MANIFOLD	108347	LAJUE	LAJUE	127523
BRACKET (FRONT)	CAP	22847	VARIABLE NOZZLE HEAD	VARIABLE NOZZLE HEAD	117968
BRACKET (FRONT)	CLIP	19340	VARIABLE NOZZLE HEAD	VARIABLE NOZZLE HEAD	137480
BRACKET (FRONT)	BATTERY CHECKER	103030	CHEMICAL TANK	CHEMICAL TANK LID	129272
PUMP SEAL SET	SEAL SET	44000	CHEMICAL TANK	STRAINER	123217
PUMP	SEAL PADDER REPAIRS	42352	BACK COVERING BATH	BACK COVERING BATH	123205
PUMP SEAL SET	SEAL SET	44000	BACK PAD	BACK PAD	123207
PUMP	PISTON PADDING	121404	RECHARGING UNIT	RECHARGING UNIT	437394
PUMP SEAL SET	B BLOCK ASSEMBLY	50030			
RECHARGING UNIT (OPTION)	O RING	11480			

1. Para trabajar de manera segura

Precauciones a tener en cuenta antes de comenzar la tarea

¡Vista ropa de trabajo apropiada y dispositivos de protección!

Operar una máquina de pulverización utilizando ropa adecuada y utilizando dispositivos de protección.

No permita que los niños jueguen con la máquina o que se acerquen a ella.

Una persona no puede realizar la tarea de pulverización debido a la alta presión por exceso de trabajo, por lo tanto, los usuarios de drogas o cualquier otro usuario, no deben utilizarla.

PRECAUCIÓN
Personas que no tienen la responsabilidad de realizar las tareas de pulverización.

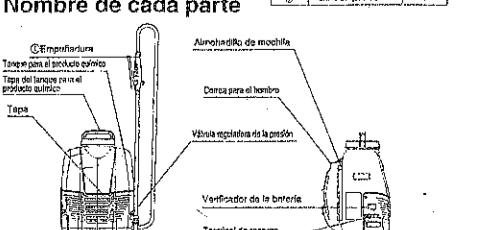
ADVERTENCIA
En forma periódica, revise y realice el mantenimiento de los elementos de protección para garantizar que funcionen en forma normal y utilícelos de modo adecuado.

Verificación de las partes estándar

Después de abrir el paquete, verifique que todas las partes estén presentes. Si faltan accesorios o estuvieran dañados, informe al puesto de ventas donde compró el producto.

①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
Llave	1	1	1	1	1	1	1	1	1
Manifoldo de conexión	1	1	1	1	1	1	1	1	1
Manifoldo de conexión	1	1	1	1	1	1	1	1	1
Manifoldo de conexión	1	1	1	1	1	1	1	1	1
Manifoldo de conexión	1	1	1	1	1	1	1	1	1
Manifoldo de conexión	1	1	1	1	1	1	1	1	1
Manifoldo de conexión	1	1	1	1	1	1	1	1	1
Manifoldo de conexión	1	1	1	1	1	1	1	1	1
Manifoldo de conexión	1	1	1	1	1	1	1	1	1
Manifoldo de conexión	1	1	1	1	1	1	1	1	1

Nombre de cada parte



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Preface

Thank you for purchasing this product. This operation manual explains the correct handling method, simple checks and maintenance of this product.

Please read this operation manual carefully, understand its contents, and maintain the proper performance of this product. Keep this manual carefully after you read it and use it for extended operation of this product. Note that discrepancies between the actual product and the content of this manual may be found as we are continually making improvements to provide better quality products to our customers.

Please send any inquiries about this product to your nearest sales outlet or sales office.

- Please keep this operation manual carefully.
- If you lose this operation manual, purchase a replacement at your nearest sales outlet or our sales office.
- Modifying this product prevents safe and comfortable operation, and is very dangerous.

Warnings

- In this manual, important handling cautions are indicated as follows:
- CAUTION** Death or serious injury may occur when not complying with the warning.
 - WARNING** Possibly death or serious injury may occur when not complying with the warning.
 - CAUTION** Possibly injury may occur when not complying with the warning.
 - CAUTION** Machine will possibly be damaged if not complying with the warning.

Warning label

- Always remove dirt or mud to make the indications legible.
- The following placards are attached.
- Read operation manual thoroughly. Make sure you read the operation manual thoroughly prior to use.
- Wear personal protective equipment. Wear protectors such as hat, safety glasses, ear plugs during work.
- Prohibition of fire. Do not put a closed flame close to a place where some materials or things may be stored.
- Cautions for electrical shock. There are danger of electric shock during operation, so do not touch the electric parts.

2. Shoulder band

- Adjust the hand length as follows:
- To shorten the hand
 - To lengthen the band
- Full the strap downward along the front hanging band.
- Insert the front hanging band upward.

2. handling and operating method

Nozzle assembling
First, ensure that the gasket is put in place, screw the lance into the gun, and tandem nozzle head into the lance. In that step, check the gasket in place to prevent water leakage, and then tighten the screw securely. Be sure to tighten it while retaining the excessive tightening, which will cause the gasket to split out.

Checking the battery remainder

- Battery remainder determination method**
- Pour approximately 1 liter of water into the chemical tank.
 - Turn the switch ON, wait until the pump starts water to raise the pressure, and then check the graduation of the battery balance meter.
-
- CAUTION**
Do not use a solution in the chemical tank before inspection. Otherwise, the pump runs without load and causes a failure.
Make it a rule to recharge the battery if the pointer approaches the yellow zone, even if it is still in the green area.

The battery

- Be sure to observe the following. Otherwise electrolyte leakage, heat generation, or rupture may occur.
- Do not disassemble or remold the battery.
- Do not use soldering in the battery.
- Do not use any unauthorized recharging unit, but the dedicated one.
- Do not put the battery in fire or heat it up.
- Do not connect the terminals and together with metal object.
- Do not connect any strange unit, but the specified one.
- Ensure that terminals and are correctly connected with the corresponding ones of the battery and other units.
- Do not directly connect the battery with the receptacle of power supply and cigarette lighter of a vehicle.
- Do not let the battery electrolyte enter in your eyes, rinse it with clean water without rubbing it, and immediately receive a doctor's examination. Otherwise you may lose sight.
- Do not allow the battery to be immersed in or wet with sea water. Otherwise it may be heated or rusted.
- Do not scratch the outer surface of the battery or remove the tube. Otherwise electrolyte leakage, heat generation, or rupture may occur.
- Do not touch the battery electrolyte on human skin or clothes, rinse it off with clean water immediately. Otherwise skin disorder may result.
- Do not give a strong shock to the battery or throw an object to it. Otherwise electrolyte leakage, heat generation, or rupture may occur.
- Do not use or leave the battery in an environment at a high temperature. Otherwise electrolyte leakage, heat generation, or rupture may occur.
- Store the battery in a place beyond the reach of babies and infants.
- When not using the battery, store it in a discharged state, and recharge it immediately before using it next time.
- When the battery is only slightly discharged, repeated recharging may decrease the service duration to an extremely short period of time.
- During storage for a long time, exercise the recharging/operating operation. Otherwise the battery performance will be degraded.
- Do not store the battery in such a place where it is subjected to direct sunlight or in a high-temperature and high-humidity ambience. Otherwise the battery service life will be shortened.

1. In order to work safely

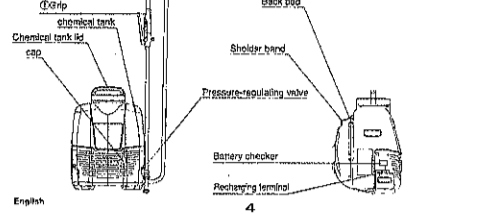
- Cautions prior to work**
- Wear proper work clothes and protective gear.
-
- Do not allow the following persons to perform spraying:
- A person who cannot perform normal spraying operation because of extreme fatigue due to work, stress, drug influence, or any other similar reason.
 - Drunk person
 - Pregnant woman
 - Persons not responsible for the spraying work.
- WARNING**
Regularly inspect and maintain these protective items to ensure that they can work normally and use them properly.

Confirmation of standard parts

After opening the package, confirm that all accessories are present. If accessories are missing or damaged, inform the sales outlet where you purchased the product.

①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
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Name of each part



Starting

- Choose the spray mode "spot spraying" or "continuous spraying".
- Push the release button.
-

Stopping

- Refer to the description on the functions of operating section (described on Page 5).
- When the mode select lever is set at continuous spraying position.
 - When the mode select lever is set at spot spraying position.
- Pushing the release button releases the grip lever, and stops the spraying.
- Releasing the grip lever stops the spraying.

