INTENDED FOR USE BY PROFESSIONAL EQUIPMENT OPERATORS

OPERATING INSTRUCTIONS

908 W. Main • P.O. Box 368
Laurel, MT USA 59044
(1) 800-548-7341
(1) 406-628-8231
www.wpg.com

READ AND UNDERSTAND BEFORE OPERATING THIS EQUIPMENT

APPLICABLE TO SERIAL NUMBERS 20240487 AND LATER. FOR EARLIER NUMBERS, SEARCH WPG'S ARCHIVE.

MANUAL TILTER, DC-VOLTAGE

Model numbers: MT1HV11DC (shown), MT2HV11DC

TABLE OF CONTENTS

TABLE OF CONTENTS

SPECIFICATIONS

Product Description	Designed for use with hoisting equipment, MT1(2)HV11DC lifters support loads using vacuum and manipulate loads using manual 90° tilt motions.	
Model Number	MT1HV11DC	MT2HV11DC
Vacuum Pad (standard rubber[1])	One 10" [25 cm] nominal diameter, lipped (Model HV11)	Two 10" [25 cm] nominal diameter, lipped (Model HV11)
Pad Spread (to outer edges)	11" x 11" [28 cm x 28 cm]	11" x 25½" [28 cm x 65 cm]
Maximum Load Capacity[2, 3]		
For vertical or tilted lifting	150 lbs [70 kg]	300 lbs [135 kg]
For flat lifting	300 lbs [135 kg][4]	300 lbs [135 kg]
Lifter Weight	50 lbs [23 kg]	60 lbs [27 kg]
Power Source	12 volts DC, 3.5 amps	
Battery Capacity	9 amp-hours	
Tilt Capability	Manual, 90°	
Product Options	When applicable, see separate instructions.	
Operating Elevation	Up to 6,000' [1,828 m]	
Operating Temperatures	32° — 104° F [0° — 40° C]	
Service Life	16,000 lifting cycles, when used and maintained as intended.[5]	
ASME Standard BTH-1	Design Category "B", Service Class "0"	
Troubleshooting Guide	TST-008_DC-CHANNEL-SVS	

1..... Available with other rubber compounds for special purposes.

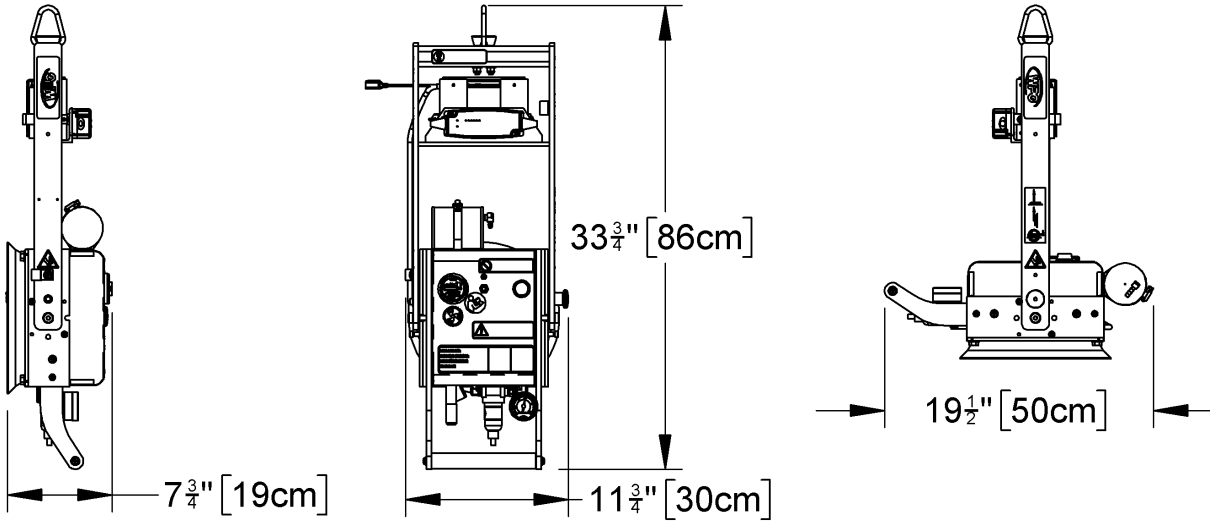
2..... The Maximum Load Capacity is rated and verified at a vacuum of 16" Hg [-54 kPa] on clean, smooth, nonporous flat surfaces with a friction coefficient of 1. Rating is verified by testing on polycarbonate (or metal with a painted surface) with a coefficient of friction similar to plain (non-coated) glass and a surface temperature at approx. 70° F [21° C].

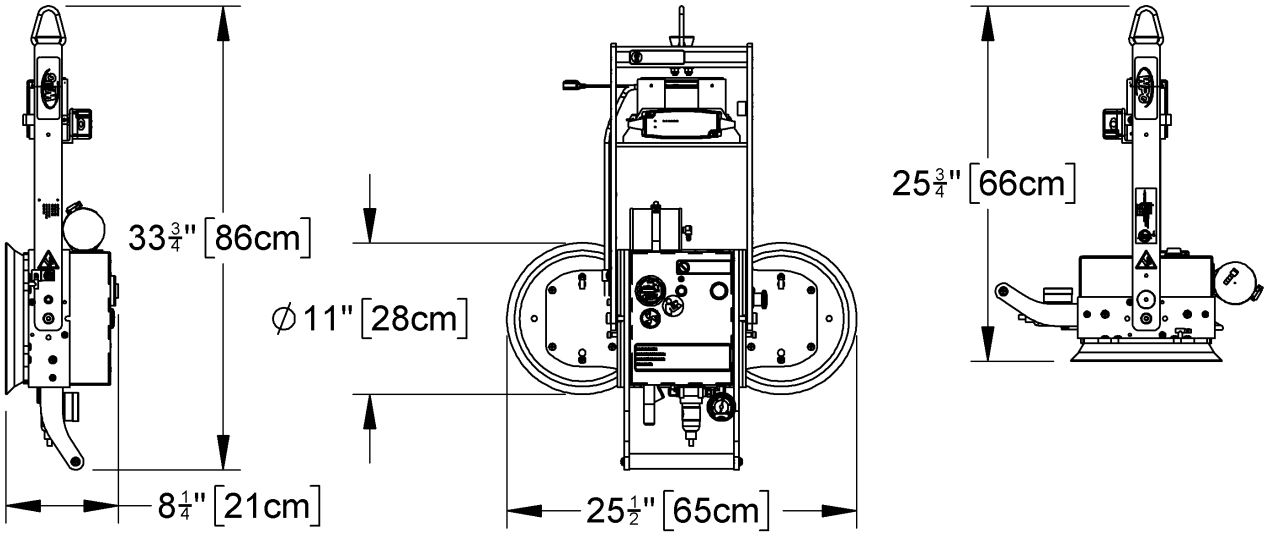
3..... Pad compound, load rigidity, strength, surface conditions, overhang, angle, center of gravity and temperature affect lifting capacity. A "qualified person" should evaluate the effective lifting capacity for each use (see definition under "Rated Load Test").

4. .... Caution: Loads ranging from 151 lbs [70 kg] to 300 lbs [135 kg] can be lifted only when the tilt latch is engaged in the flat lifting orientation. Do not disengage the latch at any time when flat lifting.

5..... Vacuum pads, filter element and other wear-out items are excluded.

SPECIFICATIONS





Note: A standard MT1HV11DC (top) and a standard MT2HV11DC (bottom) are shown.

SAFETY

Wear personal protective equipment that is appropriate for the load material. Follow trade association guidelines.

Do not remove or obscure safety labels.

Do not make any modifications to the lifter. Modifying the lifter will void the “LIMITED WARRANTY”.

Use the lifter only in an approved “OPERATING ENVIRONMENT” (see “INTENDED USE”).

Make sure to consider all possible effects of “INDIRECT LOADING” on lifting capacity (see “INTENDED USE”).

Do not use a lifter that is damaged, malfunctioning, or missing parts.

Do not use a lifter if the sealing edge of any vacuum pad is cut or otherwise damaged.

Do not use a lifter to lift cracked or broken glass.

Do not exceed the Maximum Load Capacity or lift loads the lifter is not designed for (see “INTENDED USE”).

Do not use a lifter if the Maximum Load Capacity or any safety label appears to be missing or obscured.

Make sure the contact surfaces of loads and vacuum pads are clean before attaching lifters (see “MAINTENANCE”).

Position vacuum pads correctly on the loads before lifting (see “OPERATION”).

Do not lift a load if any vacuum indicator shows inadequate vacuum.

Keep unauthorized personnel away from the lifter, to avoid injury in case of an unintended load release.

Do not touch the vacuum release controls during a lift.

Do not allow people to ride on the lifter or the load.

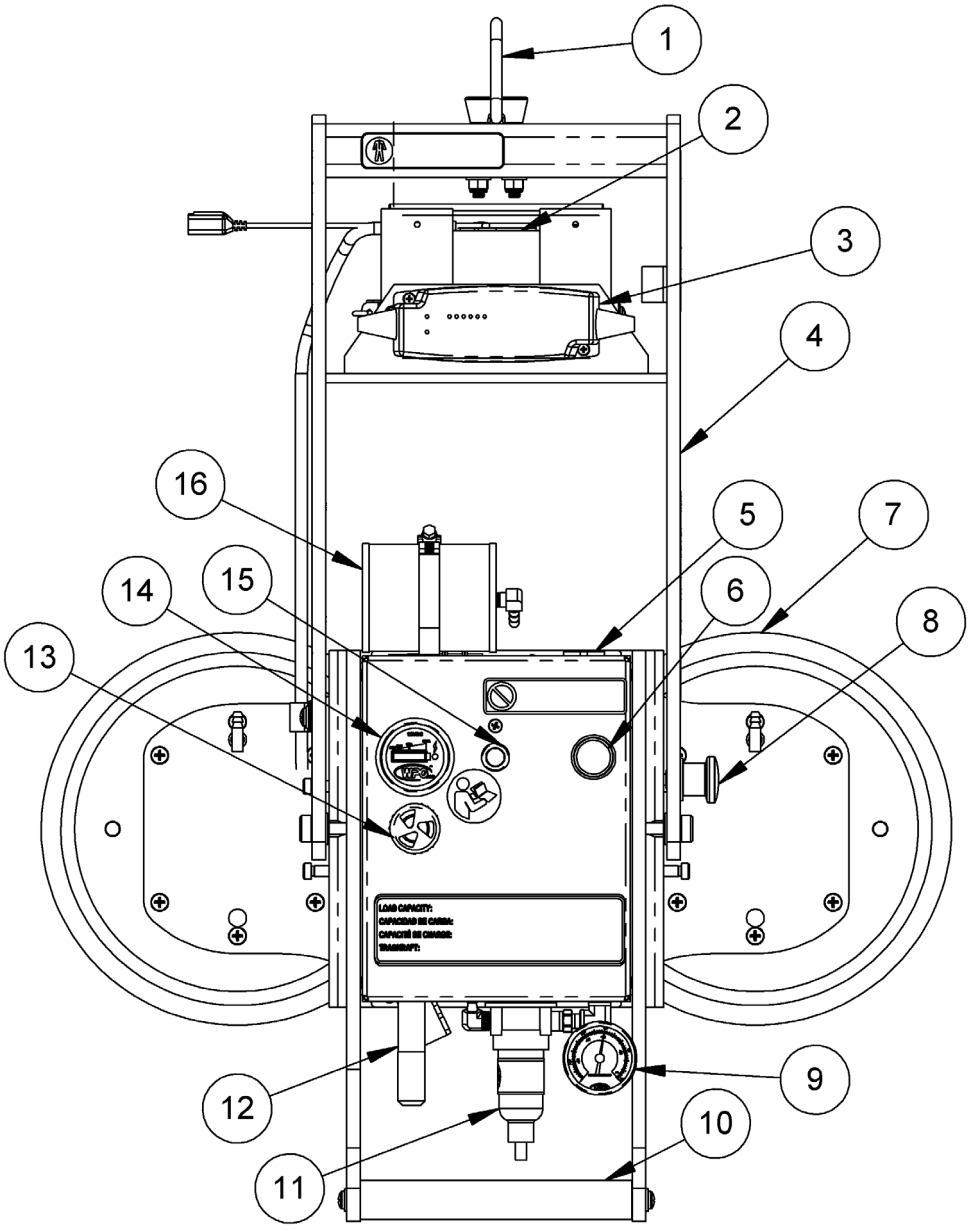
Do not lift a load higher than necessary or leave suspended loads unattended.

Do not position a loaded or unloaded lifter over people.

Before servicing a powered lifter, place the power control in the inactive position and, when possible, disconnect the power source.

OPERATING FEATURES

Features shown here are underlined on their first appearance in each section following.



1 LIFT POINT
2 BATTERY
3 BATTERY CHARGER
4 LIFT BAR
5 9V BATTERY HOLDER
6 LOW VACUUM WARNING LIGHT
7 VACUUM PAD
8 TILT RELEASE KNOB
9 VACUUM GAUGE
10 CONTROL HANDLE
11 AIR FILTER
12 VALVE HANDLE
13 WARNING BUZZER
14 BATTERY GAUGE
15 TEST BUTTON
16 VACUUM RESERVE TANK

Note: A standard MT2HV11DC is shown.[1] Although some of the following photos do not show this specific lifter, they all illustrate how this kind of lifter functions.

For information about specific parts, see "REPLACEMENT PARTS" and/or any separate instructions for Product Options.

1..... Features for a standard MT1HV11DC are similar.

ASSEMBLY

1) Remove all shipping materials and save them with the shipping container for future use.

2) Suspend the lifter from appropriate hoisting equipment:

2.1) Select a crane and/or hoist rated for the Maximum Load Capacity plus the Lifter Weight.

Note: Any lifter use must comply with all statutory or regulatory standards for hoisting equipment in your region.

2.2) Pull the tilt release knob outward, to disengage the tilt latch, and raise the lift bar until it latches in the vertical position.

2.3) Attach the hoisting hook to the lift point (fig. 2A).

Make sure hook has restraining latch (see arrow in fig. 2A).

Note: Use rigging as needed to make sure the hook does not interfere with the load (fig. 2B).

Only use rigging rated for Maximum Load Capacity plus Lifter Weight.

2A

2B

2.4) Use the hoisting equipment to remove the lifter from the shipping container. Avoid damaging the vacuum pad(s).

3A

3B

3) Connect the electrical connectors:

3.1) To connect the battery: Remove the strap that secures the battery to the lift bar, to access the terminals. Next, slide the connectors onto the battery terminal posts, starting with the negative terminal (note the color coding). Then secure the battery to the lift bar with the strap.

3.2) To connect the battery charger: Connect the electrical connectors as shown in fig. 3A-B.

4) Install the 9-volt battery for the warning buzzer, as directed in "WARNING BUZZER BATTERY REPLACEMENT".

5) Remove the pad cover(s) and save for future use (fig. 4A).

4A

6) Perform tests as required under "TESTING".

LOAD CHARACTERISTICS

Make sure the vacuum lifter is intended to handle each load according to these requirements:

Do NOT lift explosives, radioactive substances or other hazardous materials.

- The load weight must not exceed the Maximum Load Capacity.
- The load must be a single piece of relatively nonporous material with a flat and relatively smooth contact surface.[1, 2] To determine whether the load is too porous or rough, perform the "Lifter/Load Compatibility Test".
- The load's contact surface must be able to obtain a friction coefficient of 1 with the lifter's vacuum pad(s) (see "Pad-to-Load Friction Coefficient"). Otherwise, the capacity should be derated appropriately.

- The load's surface temperature must not exceed the Operating Temperatures.[3]
- The load's *minimum* length and width are determined by the current Pad Spread (see "SPECIFICATIONS").
- The load's *maximum* length and width are determined by its allowable overhang.[4]
- 1" [2.5 cm] is the allowable thickness at Maximum Load Capacity.[5]

Note: Standard vacuum pads can stain or deform load surfaces with light colors or soft coatings. Test such surfaces for damaging effects before using the lifter on them.[6]

1..... Although concave vacuum pads can also attach to some curved loads, curvature can reduce lifting capacity. Contact WPG for more information.

2..... A "single piece" of material includes curtainwall assemblies, unitized glazing systems and similar construction units.

3..... Vacuum pads made from a heat-resistant rubber compound can enable you to lift loads with higher surface temperatures. Contact WPG or an authorized dealer for more information.

4..... The allowable overhang is the amount of load material that can extend sideways beyond vacuum pads without breaking or otherwise being damaged. This depends on the load material, its thickness, and the angle of handling (if any). Since every material has different physical properties, the allowable overhang must be evaluated separately for each load type. Contact WPG or an authorized dealer for more information.

5..... However, the allowable thickness increases as load weight decreases. Contact WPG for more information.

6..... Alternative rubber compounds are available for these purposes. Contact WPG or an authorized dealer for more information.

INDIRECT LOADING

Make sure to account for dynamic loading or other inadvertent loading that can negatively affect lifting capacity, such as:

Indirect loading can reduce lifting capacity.

- Weight amplification that results when a loaded vacuum lifter abruptly starts/stops moving, changes direction or bounces up and down (eg, when a telehandler transports a loaded lifter across rough terrain).
- External force that effectively increases the weight of a lifter's attached load (eg, when a load of sheet material reacts to wind gusts).

OPERATING ENVIRONMENT

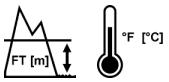
Make sure the lifter is suitable for each work environment, given the following restrictions:

Never use lifter in dangerous environments.

- This lifter is not intended for any environment that is dangerous to the operator or damaging to the lifter. Avoid environments containing explosives, caustic chemicals and other dangerous substances.

Metal particles and similar environmental contaminants could result in <u>vacuum pump</u> failure.

- The work environment is limited by the Operating Elevation and Operating Temperatures.[1, 2]



- The lifter is not designed to be watertight. Do not use it in rain or other unsuitable conditions.

Moisture can reduce lifting capacity.

CE/UKCA *— A secondary positive holding device is required to lift loads on constructions sites or in other "high risk zones" (see EN 13155).*

DISPOSAL OF THE LIFTER

After the Service Life of the lifter has ended (see "SPECIFICATIONS"), dispose of it in compliance with all local codes and applicable regulatory standards.

Note: Special disposal regulations may apply to the <u>battery</u>.

1..... Although lifter use may be possible at higher elevation, lifting capacity is reduced whenever the lifter is unable to attain vacuum in the green range on the vacuum gauge. Contact WPG for more information.

2..... Special provisions may allow the lifter to operate outside the specified temperature range. Contact WPG for more information.

BEFORE USING THE LIFTER

Determine whether the vacuum lifter is capable of each intended task (see "SPECIFICATIONS" and "INTENDED USE"). Then complete the following preparations:

Taking Safety Precautions

- Be trained in all industry and regulatory standards for lifter operation in your region.
- Follow trade association guidelines about precautions needed for each load material.

Read all directions and safety rules before using lifter.

Always wear appropriate personal protective equipment.

Performing Inspections and Tests

- Follow the "INSPECTION SCHEDULE" and "TESTING".
- Service the air filter whenever its bowl contains liquid or other contaminants, or its element appears dirty (see "AIR FILTER MAINTENANCE" in *SERVICE MANUAL*).

Examine air filter regularly and service when needed.

- Use the test button to sound the warning buzzer (fig. 1A) and verify it is clearly audible at the maximum distance between the operator and the lifter, despite any barriers or obstacles.[1, 2]

Make sure warning buzzer can be heard over noise at operator position.

1..... Maximum buzzer volume is 103 dBA at 2' [60 cm]. If CE or UKCA Standards apply, consult EN 7731 to make sure the warning buzzer is compliant.

2..... The "Vacuum Test" provides a convenient opportunity to check this.

Checking the Battery

> ***Always check battery energy before every lift.***

Use the battery gauge to determine whether the battery needs to be charged (see "BATTERY RECHARGE").[1] Never use the lifter unless battery energy appears in the green range.

- While the valve handle is in the "attach" position (|⇠ / power on), the battery gauge automatically shows battery energy.[2]
- While the valve handle is in the "release" position (|⇢ / power off), use the test button (circled) to check the battery energy.[3]

1..... If the vacuum pump is running or the battery charger is connected to an AC power source, the battery gauge will shown an inaccurate energy level.

2..... After the pump stops running, the battery gauge requires a few moments to stabilize before it shows an accurate energy level.

3..... If the lifter has not been used since the battery was charged, the battery gauge may falsely show a high energy level. This "surface charge" dissipates after the pump runs for about 1 minute, allowing the gauge to show accurate energy.

To Attach the Lifter to a Load

Make sure the contact surfaces of the load and vacuum pad(s) are clean (fig. 1A — see "Pad Cleaning").

1A

Positioning the Lifter on the Load

1) Center the pad frame on the load (fig. 1B), to avoid unexpected load movement or release.

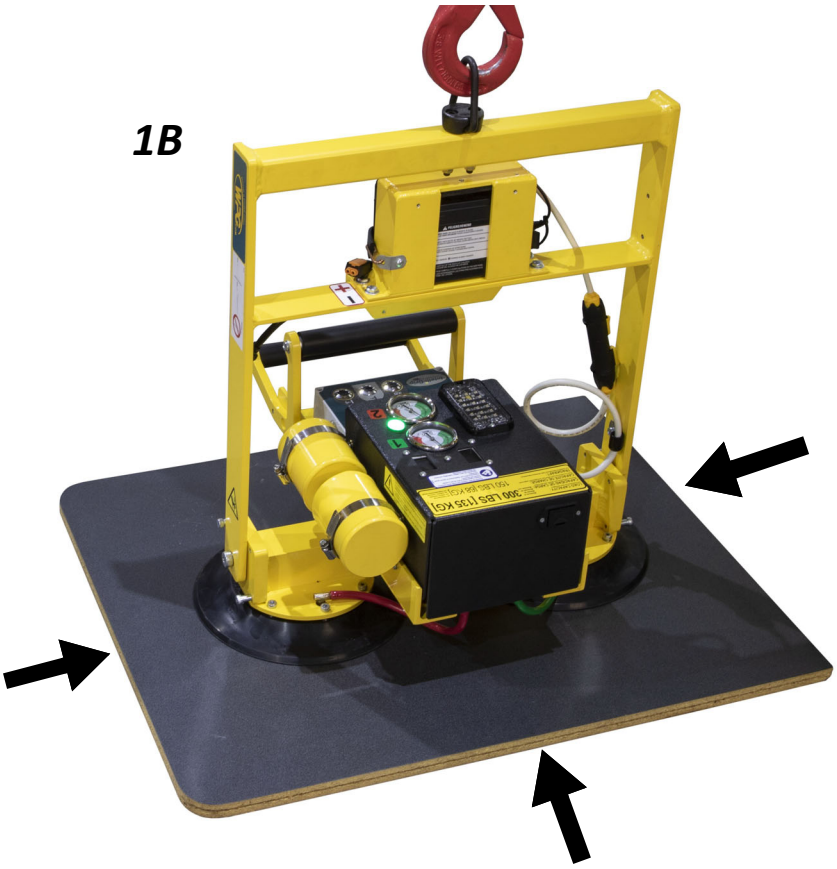
> ***Always center pad(s) on load.***

   Off-center loading could result in personal injury, as well as damage to the lifter or load.[1]

2) Make sure the vacuum pad(s) will fit on the load.

3) Place the vacuum pad(s) in contact with the load surface.

1B



1..... The lifter is designed to handle the maximum load weight when the load's center of gravity is positioned within 3" [7.5 cm] of the pad frame's center point.

Sealing the Pad(s) on the Load

1) Pull the valve handle outward ***until it latches*** (circled in fig. 1A) in the "attach" position (▮←).

> ***Keep valve handle in "attach" position throughout lift.***

The vacuum pump will turn on, the low vacuum warning light will remain lit, and the warning buzzer will sound until each vacuum pad seals. This is normal.

2) Press the lifter firmly against the load to help the pad(s) begin to seal.[1]

Reading the Vacuum Gauge

A vacuum gauge shows the current vacuum level in positive inches of Hg and negative kPa:

- *Green* range (≥16" Hg [≤ -54 kPa]): Vacuum level is sufficient to lift the maximum load weight (fig. 1B).
- *Red* range (<16" Hg [> -54 kPa]): Vacuum level is ***not*** sufficient to lift the maximum load weight (fig. 1C).

If it takes more than 5 seconds for the vacuum level to reach 5" Hg [-17 kPa], press on each vacuum pad until it has sealed.

Once each pad has sealed, the lifter should be able to maintain sufficient vacuum for lifting, except when used above the maximum Operating Elevation.[2] If it does not:

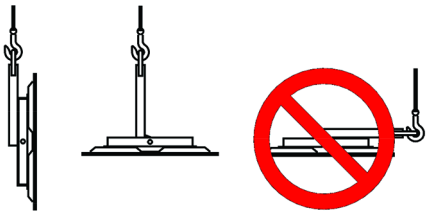
- Make sure the vacuum switch is adjusted correctly (see *SERVICE MANUAL)*.
- When necessary, perform the "Vacuum Test".

1..... Although a vacuum pad may become distorted during shipping or storage, this condition should correct itself with continued use.

2..... If the lifter is used above the maximum Operating Elevation (see "SPECIFICATIONS"), it may not be able to maintain sufficient vacuum for lifting. Contact WPG for more information.

To Lift and Move the Load

Lift bar must be vertical to lift load.



Interpreting the Warning Light and Warning Buzzer

When vacuum is sufficient to lift the Maximum Load Capacity, the vacuum pump, the low vacuum warning light, and the warning buzzer turn off temporarily, to conserve battery energy.

Never lift load unless warning devices turn off, because this could result in load release and personal injury.

When air leaks into the vacuum system, the vacuum pump turns on and off (along with the warning light and warning buzzer) as necessary to maintain sufficient vacuum for lifting.

Monitoring Vacuum Indicators

Monitor the low vacuum warning light and the vacuum gauge (fig. 1A) throughout the entire lift.

1A

Make sure vacuum indicators remain completely visible.

If the warning light and the warning buzzer turn on and the ***vacuum gauge shows a level less than 16" Hg [greater than -54 kPa]***:

1) Keep everyone away from a suspended load until it can be safely lowered to a stable support.

   Stay clear of any suspended load while indicators warn of low vacuum.

2) Stop using the lifter until the cause of the vacuum loss can be identified: Conduct the "Pad Inspection" and perform the "Vacuum Test".

3) Correct any faults before resuming normal operation of the lifter.

Controlling the Lifter and Load

When the lifter is ready, use the hoisting equipment to raise the lifter and load as needed.

Use the control handle (fig. 1A) to keep the lifter and load in the required position.

Once there is enough clearance, you may move the load as required.

In Case of a Power Failure

A vacuum reserve tank helps maintain vacuum temporarily in the event of a battery failure. Although the lifter is designed to support the load for at least 5 minutes without power, this depends on many factors, including the "LOAD CHARACTERISTICS" and the condition of the vacuum pad(s) (see "VACUUM PAD MAINTENANCE").

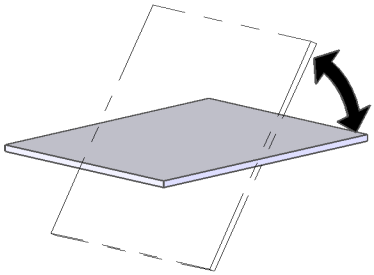
If a power failure occurs, the warning buzzer will sound. Keep everyone away from a suspended load until it can be safely lowered to a stable support. Correct any faults before resuming normal operation of the lifter.

Stay clear of any suspended load during power failure.

TO TILT THE LOAD

Tilted lifting and vertical lifting may reduce Maximum Load Capacity.

Make sure load is positioned correctly on lifter (as previously directed).



1) Make sure the load has enough clearance to tilt without contacting anyone or anything.
2) Use the control handle to keep the load under control at all times.
3) Disengage the tilt latch by pulling the tilt release knob outward. Lift upward or press downward on the control handle to tilt the load as required (fig. 3A).

Note: See "LOAD CHARACTERISTICS" about allowable load overhang.

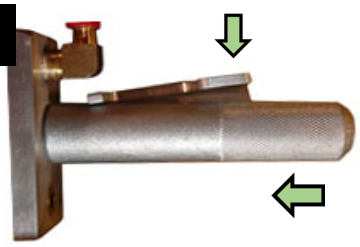
3A

To Release the Lifter from the Load

> ***Make sure load is at rest and fully supported before releasing lifter from load.***

1) Press the lever to release the latch and push the valve handle inward (fig. 1A) to the "release" position (|→).

1A



> ***Do not move lifter until lifter releases completely, because such movement could result in load damage or personal injury.***

2) Before you lift another load, perform the Every-Lift Inspection (see "Inspection Schedule").

After Using the Lifter

1) Leave the valve handle in the "release" position (|→ / power *off*).
2) Charge the battery after each workday as needed (see "Battery Recharge").[1]
3) Use the hoisting equipment to lower the vacuum lifter gently onto a stable support. Then detach the hoisting hook from the lift point.

   Caution: *Do not set the lifter on surfaces that could soil or damage vacuum pad(s).*

Storing the Lifter

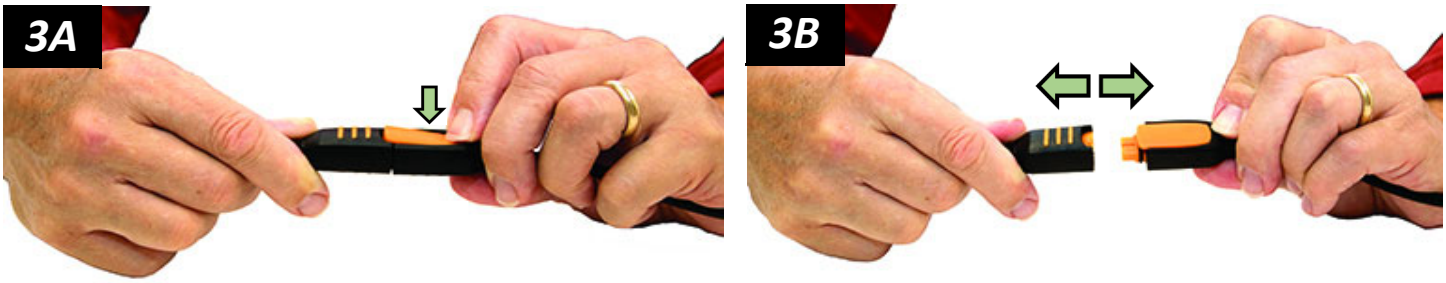
1) Use the cover(s) supplied to keep the vacuum pad(s) clean (fig. 1B).

1B

CE/UKCA *— To prevent the lifter from tipping over on relatively horizontal surfaces, place the vacuum pad(s) facedown on a clean, smooth, flat surface. Then lower the lift bar and place a support under the lift point.*

2) Charge the battery completely and repeat every 6 months (see "Battery Recharge").

1..... To maximize battery life, charge it promptly after each use.



3) Disconnect the electrical connectors, to prevent battery discharge:

   3.1) To disconnect the battery: Remove the strap that secures the battery to the lift bar, to access the terminals. Next, slide the connectors off the battery terminal posts, starting with the positive terminal. Then secure the battery to the lift bar with the strap.

   3.2) To disconnect the battery charger: Disconnect the electrical connectors as shown in fig. 3A-B.

4) Store the lifter in a clean, dry location.

   Store the battery between 32° and 70° F [0-21° C]. Avoid storage above 100° F [38° C].

Transporting the Lifter

Secure the lifter in the original shipping container with the original shipping materials or equivalent.

INSPECTION SCHEDULE

Perform inspections according to the following frequency schedule. If any fault is found, correct it and perform the next most frequent inspection before using the vacuum lifter.

Note: If a lifter is used less than 1 day in a 2-week period, perform the Periodic Inspection before using it.

Action	Every Lift	Frequent[1] (every 20-40 hrs)	Periodic[2] (every 250-400 hrs)
Examine vacuum pad(s) for contaminants or damage (see "Pad Inspection").	✓	✓	✓
Examine load surface for contaminants or debris.	✓	✓	✓
Examine controls and indicators for damage.	✓	✓	✓
Check battery for adequate charge (see "Checking the Battery").	✓	✓	✓
Examine lifter's structure for damage.		✓	✓
Examine vacuum system for damage (including vacuum pad[s], fittings and hoses).		✓	✓
Examine air filter for conditions requiring service (see "AIR FILTER MAINTENANCE" in *SERVICE MANUAL*).		✓	✓
Perform "Vacuum Test".		✓	✓
Check for unusual vibrations or noises while operating lifter.		✓	✓
Examine entire lifter for evidence of: • looseness, excessive wear or excessive corrosion • deformation, cracks, dents to structural or functional components • cuts in vacuum pad(s) or hoses • any other hazardous conditions			✓
Inspect entire electrical system for damage, wear or contamination that could be hazardous, in compliance with all local codes and regulatory standards. *Caution: Use appropriate cleaning methods for each electrical part, as specified by codes and standards. Improper cleaning can damage parts.*			✓

1..... The Frequent Inspection is also required whenever the lifter has been out of service for 1 month or more.

2..... The Periodic Inspection is also required whenever the lifter has been out of service for 1 year or more. Keep a written record of all Periodic Inspections. If necessary, return the lifter to WPG or an authorized dealer for repair (see "REGISTRATION AND LIMITED WARRANTY").

TESTING

Perform the following test to determine whether or not a load surface is too porous or rough:

Lifter/Load Compatibility Test[1]

1) Make sure the vacuum generating system is functioning correctly (see "Vacuum Test").
2) Clean the load surface and the vacuum pad(s) (see "Pad Cleaning").[2]
3) Place the load in the upright position on a stable support.
4) Attach the vacuum pad(s) to the load as previously directed.
5) After the vacuum pump stops running, disconnect the battery connector (see "AFTER USING THE LIFTER").[3]
6) Raise the load a minimal distance, to make sure it is supported by the lifter.

> ***Take precautions in case load should fall during test.***

7) Watch the vacuum gauge: ***Starting from a vacuum level of 16" Hg [-54 kPa], the lifter must maintain a vacuum level greater than 12" Hg [less than -41 kPa] for 5 minutes.***[4] If not, lifting this load requires additional precautions (eg, a load sling). Contact WPG for more information.
8) Lower the load *after* 5 minutes or *before* the vacuum level diminishes to 12" Hg [increases to -41 kPa].

1..... The "Pad-to-Load Friction Coefficient" can affect the outcome of this test.

2..... Contaminated loads can cause the vacuum pump to run frequently or continuously. Since excessive pumping quickly reduces battery energy, clean the load whenever possible.

3..... Move the valve handle to the "release" position (power *off*) before reconnecting the battery.

4..... Under CE and UKCA requirements, the lifter must maintain a vacuum level ***greater than 8" [less than -27 kPa]***.

INSPECTIONS AND TESTS

Perform the following tests before placing the lifter in service *initially, following any repair,* when directed in the *"INSPECTION SCHEDULE"*, or *whenever necessary*:

Operational Tests

Test all features and functions of the lifter (see "OPERATING FEATURES" and "OPERATION").

Vacuum Test

1) Clean the face of the vacuum pad(s) (see "Pad Cleaning").
2) Use a test load with weight equal to the Maximum Load Capacity, a clean, smooth, nonporous surface and other appropriate "LOAD CHARACTERISTICS".[1]

3) Attach the lifter to the test load as previously directed. After the vacuum pump stops running, the vacuum level should appear in the green range on the vacuum gauge (if not, see "VACUUM SWITCH ADJUSTMENT" in *SERVICE MANUAL*).
4) Raise the load a minimal distance and disconnect the battery connector (see "AFTER USING THE LIFTER").[2]

Take precautions in case load should fall during test.

5) Watch the vacuum gauge: *The vacuum level should not decrease by more than 4" Hg [-14 kPa] in 5 minutes.*
6) Lower the load after 5 minutes or whenever a lifter fails the test, and release the load as previously directed.

Never use lifter that has failed test.

7) Qualified service personnel must correct any fault in the vacuum system before the lifter can be returned to service.

This service must be performed by qualified service personnel.

1..... The load should have either a flat surface or no more curvature than the lifter is designed for, if any.

2..... Move the valve handle to the "release" position (power *off*) before reconnecting the battery.

Rated Load Test[1]

The following steps must be performed or supervised by a qualified person:[2]

1) Use a test load that weighs 125% (± 5%) of the Maximum Load Capacity and has the appropriate "LOAD CHARACTERISTICS".

2) Attach the vacuum pad(s) to the load as previously directed.
3) Position the load to produce the greatest stress on the lifter consistent with "INTENDED USE".
4) Raise the load a minimal distance and leave it suspended for 2 minutes.
5) Once the test is completed, lower and release the load as previously directed.
6) Inspect the lifter for any stress damage, and repair or replace components as necessary to successfully pass the test.
7) Prepare a written report of the test and keep it on file.

Take precautions in case load should fall during test.

Never use lifter that has failed test.

1..... An equivalent simulation may also be used. Contact WPG for more information.

2..... A "qualified person" has successfully demonstrated the ability to solve problems relating to the subject matter and work, either by possessing a recognized degree in an applicable field or a certificate of professional standing, or by possessing extensive knowledge, training and experience.

*Note: Refer to **SERVICE MANUAL #36110** when applicable.*

VACUUM PAD MAINTENANCE

Pad-to-Load Friction Coefficient

The friction coefficient represents the lifter's ability to resist load slippage. The Maximum Load Capacity is based on a friction coefficient of 1, as determined by testing of clean, new, standard rubber vacuum pads on clean, dry, regular glass. ***If the lifter is used under any other conditions, a qualified person must first determine the effective lifting capacity.***[1]

Long-term exposure to heat, chemicals or UV light can damage vacuum pads. Replace pad(s) every 2 years or more often when necessary.

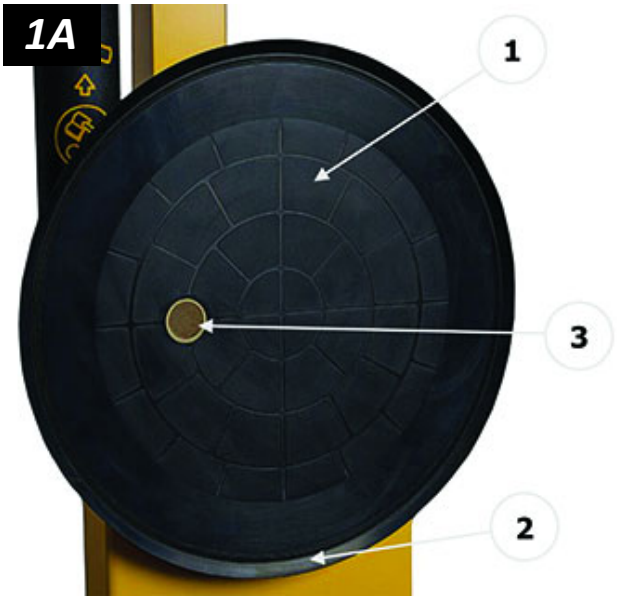
Pad Inspection

Inspect the vacuum pad(s) according to the "INSPECTION SCHEDULE" and correct the following faults before using the lifter (see "REPLACEMENT PARTS", when applicable):

- Contaminants on the face (item 1 in fig. 1A) or sealing edges (item 2 in fig. 1A).
- Filter screen (item 3 in fig. 1A) missing from face.

> ***Replace any pad that has damaged sealing edges.***

- Nicks, cuts, deformation or abrasions in sealing edges.
- Wear, stiffness or glaze.



1..... A "qualified person" has successfully demonstrated the ability to solve problems relating to the subject matter and work, either by possessing a recognized degree in an applicable field or a certificate of professional standing, or by possessing extensive knowledge, training and experience.

Pad Cleaning

1) Regularly clean the face of the vacuum pad(s) (fig. 1A), using soapy water or other mild cleansers to remove oil, dust and other contaminants.

1A

> ***Never use harsh chemicals on vacuum pads.***

Solvents, petroleum-based products (including kerosene, gasoline and diesel fuel) or other harsh chemicals can damage vacuum pads.

> ***Never use rubber conditioners on vacuum pads.***

Many rubber conditioners can leave a hazardous film on vacuum pads.

2) Prevent liquid from entering the vacuum system through the suction hole on each pad face.

3) Wipe each pad face clean, using a clean sponge or lint-free cloth to apply the cleanser.[1]

4) Allow the pad(s) to dry completely before using the lifter.

1..... A brush with bristles *that do not harm rubber* can help remove contaminants clinging to sealing edges. If these cleaning methods are not successful, contact WPG or an authorized dealer for assistance.

BATTERY RECHARGE

Charge the battery whenever the battery gauge shows reduced energy.[1] ***Caution:*** *Make sure valve handle is in "release" position (|→▯ / power off).*

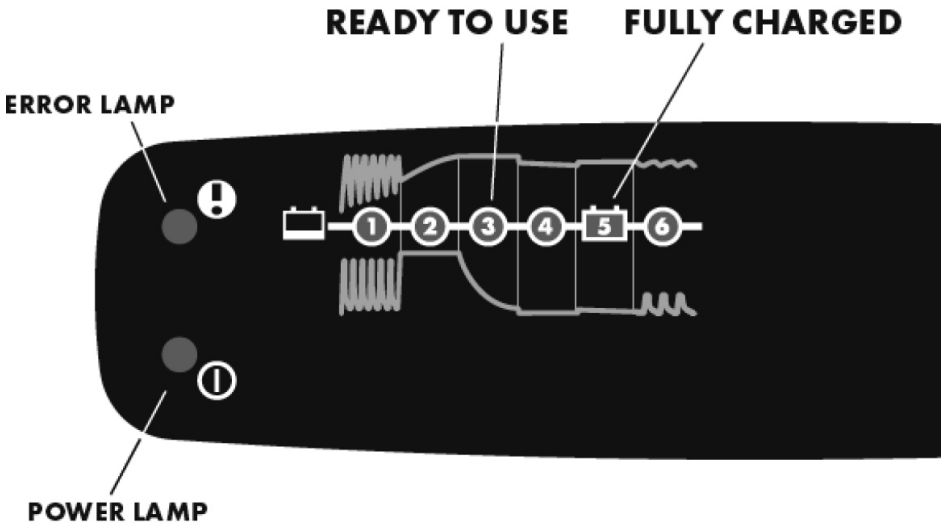
Identify the input voltage marked on the battery charger, and plug it in to an appropriate power source.[2]

Make sure power source has ground fault circuit interrupter.

The power lamp (Φ) turns on when the charger is functioning. Consult the six-stage display to determine the charging status. The battery can be used after stage 3 and is fully charged at stage 5.

Normally, the battery should take no more than 8 hours to charge completely.[3] If not, check for the following faults:

- Power lamp (Φ) flashes: Charger is not connected to battery; reconnect charger (see "ASSEMBLY").
- Error lamp (!) turns on immediately: Battery leads connected to wrong poles; reverse battery leads.
- Charging stops at stage 1 or 4, and error lamp (!) turns on: Battery is no longer functioning; replace battery (see "REPLACEMENT PARTS").



Before you return the lifter to service, recheck the battery as previously directed.

1..... To maximize the battery's lifespan, charge it promptly after each use.

2..... Any external power supply must conform to all applicable local codes. The lifter is not intended for use while the charger is connected to AC power.

3..... The charger automatically reduces the charging rate when the battery is fully charged.

WARNING BUZZER BATTERY REPLACEMENT

1) Power down the lifter.
2) Release the 9V battery holder by pressing inward and sideward in the direction marked on the holder.
3) Slide the battery tray out (fig. 3A).
4) Install a new 9-volt battery according to the polarity markings.
5) Slide the battery tray back into position.
6) Power up the lifter again. Then press the test button to sound the warning buzzer and verify the new battery is functioning.

REPLACEMENT PARTS

Stock No.	Description	Qty.
65440	Vacuum Hose – 0.245" ID x 3/8" OD	*
64716	Battery Charger – 0.8 A – 240 V AC – Australian Type	1
64715	Battery Charger – 0.8 A – 240 V AC	1
64714	Battery Charger – 0.8 A – 100 / 120 V AC	1
64664	Battery – 12 V DC – 7 Amp-Hours	1
64283	Bulb – 13 V – Bayonet (for low vacuum warning light)	1
59086NC	Battery Connector – Twin Lead	1
53132	Hose Fitting – Tee – 5/32" ID	1
53120	Pad Fitting – Elbow – 3/64" ID	1 / 2
49605T	Vacuum Pad – Model HV11 / 10" [25 cm] Diameter – Lipped	1 / 2
36110	Service Manual – 12V DC – 1 SFCM – Single Vacuum System – Manual Valve	1
29353	Pad Cover	1 / 2
15630	Pad Filter Screen – Large	1 / 2
10384	Bolt – Flat Head – 3/4" x 1/4-20 Thread (for mounting pad on MT1HV11DC)	6
10003	Bolt – Pan Head – 3/4" x 1/4-20 Thread (for mounting pads on MT2HV11DC)	12

*Length as required; sold by the inch (approx. 2.5 cm).

*See **SERVICE MANUAL #36110** for additional parts.*

SERVICE ONLY WITH IDENTICAL REPLACEMENT PARTS,
AVAILABLE AT WPG.COM OR THROUGH AN AUTHORIZED WPG DEALER

REGISTRATION AND LIMITED WARRANTY

To Register this WPG Product

Go to the *PRODUCT REGISTRATION* page at wpg.com and complete the form. Registration keeps you advised of important updates and notifications, and simplifies inquiries to WPG regarding your product. Registration is ***not*** required to activate your Limited Warranty (see next section).

About the Limited Warranty

Note: Read the WARRANTY RETURN FORM at wpg.com for important details about the Limited Warranty.

Wood's Powr-Grip® (WPG) products are warranted to be free from defects in manufacturing and materials for 1 year from the date of purchase.

If a problem develops during the warranty period, follow the instructions below to obtain warranty service. If inspection shows that the product has a defect, WPG will repair or replace the product without charge.

Obtaining Warranty Service or Repair Service

For customers *in the U.S. and Canada*: Go to the *EXCHANGES, REPAIRS, & WARRANTIES* page at wpg.com and click the applicable link. Alternatively, you may contact the WPG Technical Service Department (see contact information below).

For customers *in all other localities*: Contact the WPG Technical Service Department (see contact information below) or your dealer for assistance.

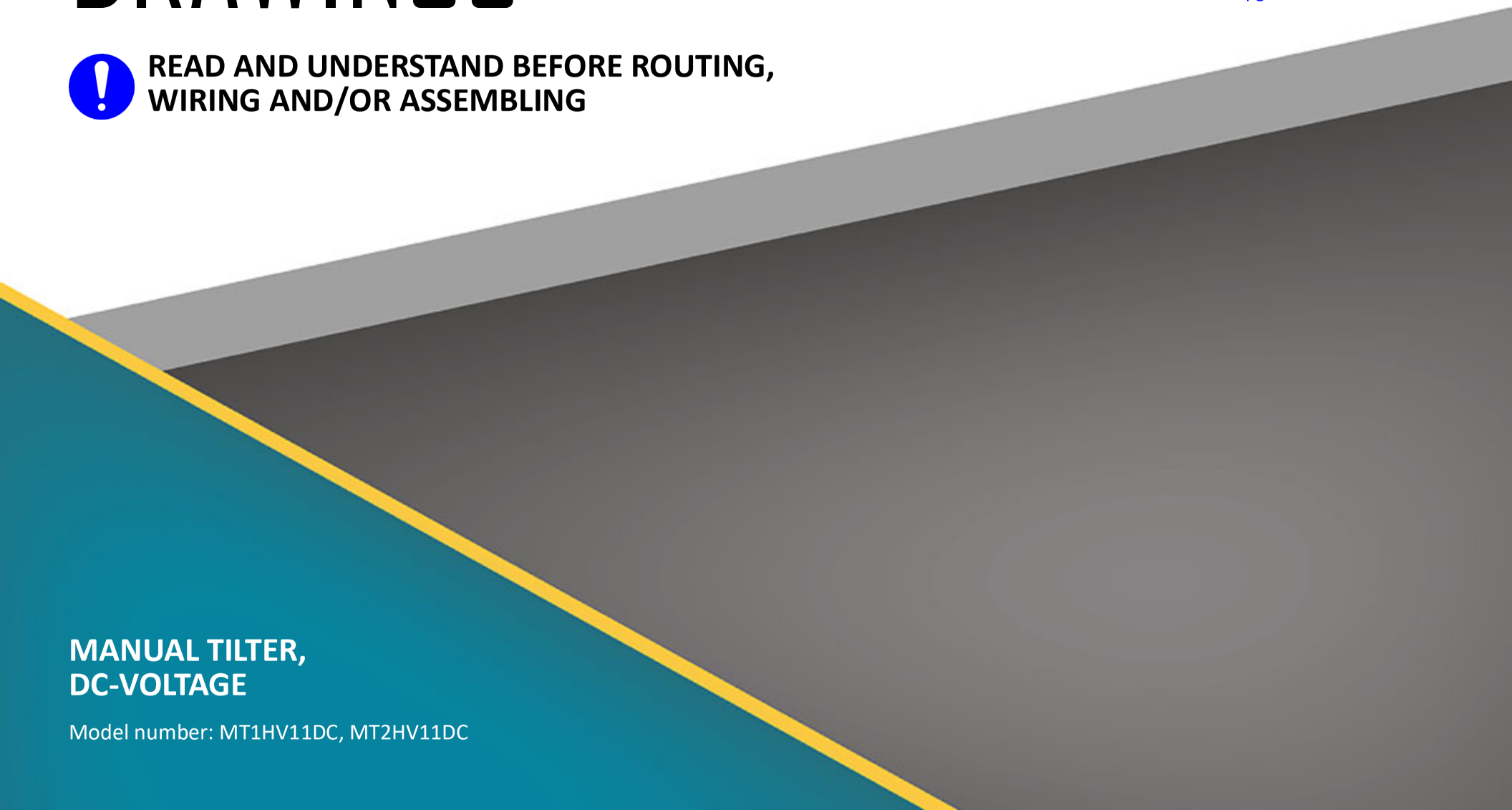
ADDRESS	EMAIL	PHONE
Wood's Powr-Grip Co., Inc. 908 West Main St. Laurel, MT USA 59044	contactus@wpg.com	(1) 800-548-7341 (1) 406-628-8231

INTENDED FOR USE BY QUALIFIED SERVICE PERSONNEL

ENGINEERING DRAWINGS

READ AND UNDERSTAND BEFORE ROUTING, WIRING AND/OR ASSEMBLING

908 W. Main • P.O. Box 368
Laurel, MT USA 59044
(1) 800-548-7341 • (1) 406-628-8231
www.wpg.com



MANUAL TILTER, DC-VOLTAGE

Model number: MT1HV11DC, MT2HV11DC

NOTES:
1) 16AWG OR 20AWG WIRE, BASED ON VACUUM PUMP USED.

WIRE LEGEND: CONTROLLED BY WIRING SYMBOLS DRAWING EXCEPT AS NOTED AND BELOW.

LINE STYLES AND WIDTHS FOR WIRE UNLESS NOTED OTHERWISE.

N/A	14AWG	NOTE #1	20AWG
N/A	N/A	N/A	16AWG

PRODUCT MANAGER: KELLY K.	DATE: 10/28/2024
CHECKED:	
APPROVED:	

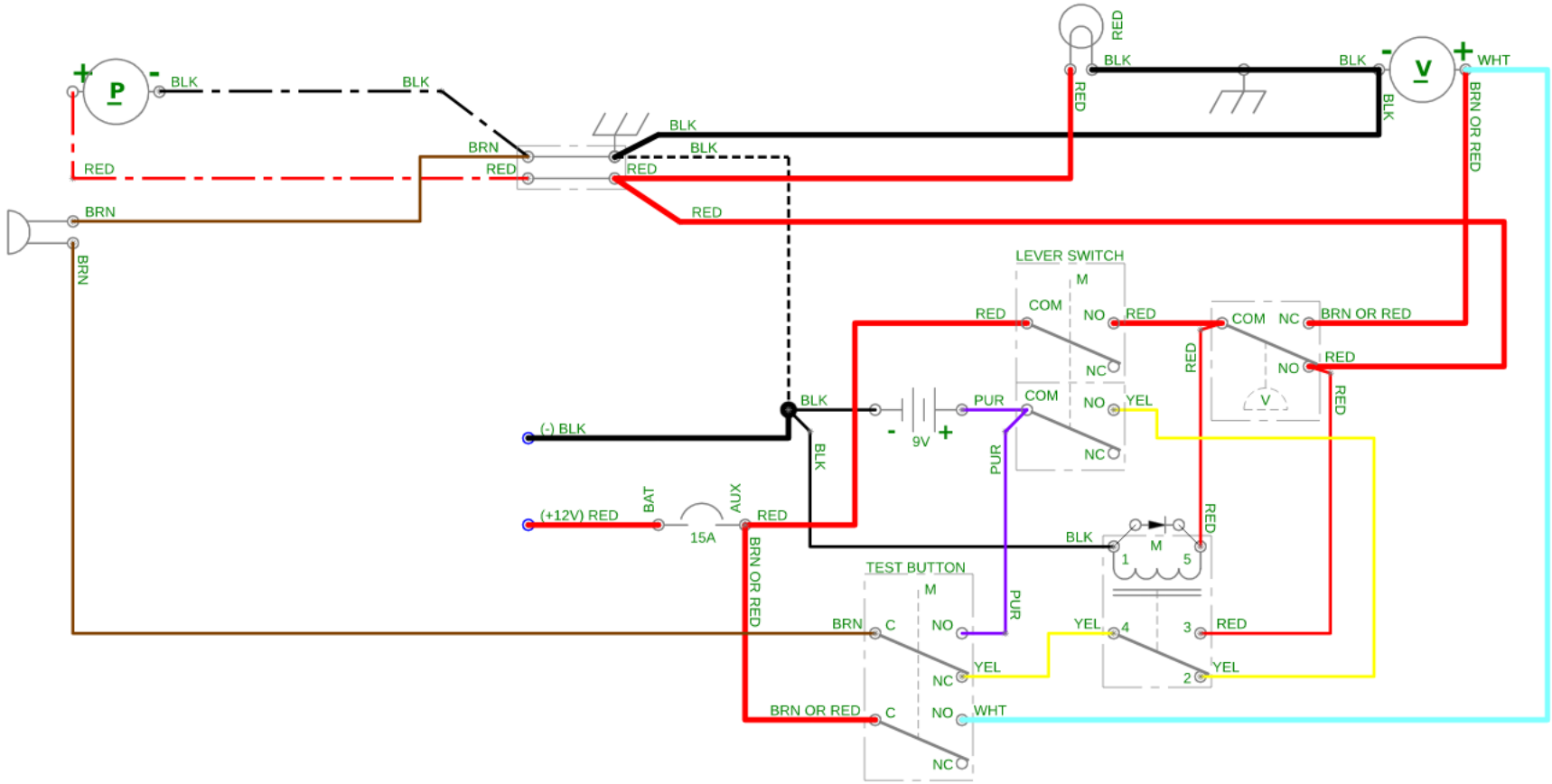
TYPE: PROJECT

FILE DIRECTORY: 20180501.06.00
FILE [SHEET]: SO104581-01-01-W01 [W01]

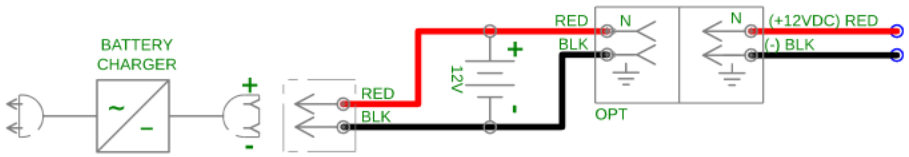
LAUREL, MONTANA U.S.A.

300LB FL/MT POWER LOSS PIEZOELECTRIC BUZZER WIRING DIAGRAM SO104581-01-01-W01 [W01]

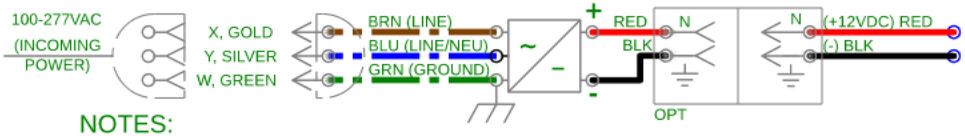
SIZE:	SCALE:	REVISION:	ECN NUMBER:	ECN DATE:	ECN BY:	EST. WEIGHT:
A	NONE	00.A	N/A	10/28/2024	KMK	N/A



POWER SOURCE: 12V BATTERY OPTION



POWER SOURCE: 12V POWER SUPPLY OPTION



NOTES:
(1) INSTALL THE POWER WIRE CONNECTOR PER CONTACT LABELS (WHEN AVAILABLE), USE SCREW COLOR CONVENTION OTHERWISE.